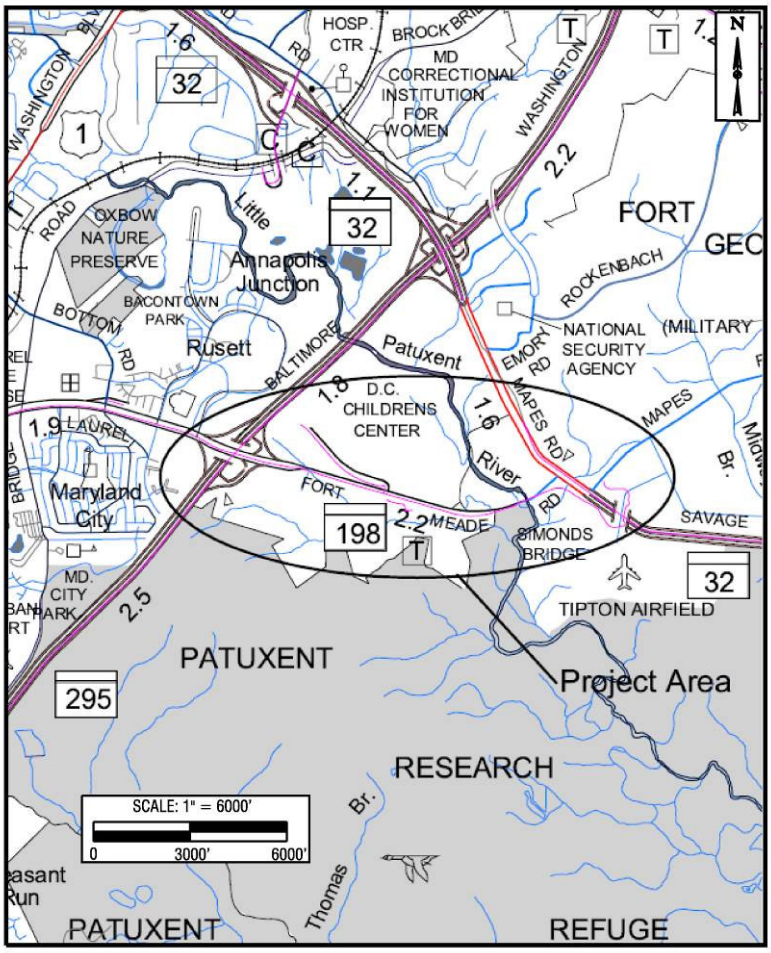
ENVIRONMENTAL ASSESSMENT
&
DRAFT
SECTION 4(f) EVALUATION

SHA Project Number AA510A11

MD 198 Project Planning Study

From MD 295 to MD 32 in Anne Arundel County



September 2011

prepared by:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

FEDERAL HIGHWAY ADMINISTRATION
DELMAR DIVISION

MD 198 PROJECT PLANNING STUDY

MD 295 to MD 32
Anne Arundel County, Maryland

ADMINISTRATIVE ACTION

ENVIRONMENTAL ASSESSMENT

&

DRAFT

SECTION 4(f) EVALUATION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Submitted Pursuant to: 42 U.S.C. 4332(2)(c); 49 U.S.C. 303
23 CFR 771, 23 CFR 774 and CEQ Regulations (40 CFR 1500 et seq)

Darrell B. Mobley
Acting Administrator

9/9/11
DATE

Gregory I. Slater
Director
Office of Planning and
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9/28/11
DATE

FOR Gregory Murrill
Division Administrator
Federal Highway Administration

Summary

SUMMARY

A. Administrative Action

( ) Environmental Impact Statement
(X) Environmental Assessment
( ) Finding of No Significant Impact
(X) Draft Section 4(f) Evaluation

B. Additional Information

Additional information concerning this project may be obtained by contacting the following individuals:

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C. Description of Proposed Action/Purpose and Need

The purpose of the MD 198 project is to improve the existing capacity and traffic operations, and to increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the study area. MD 198 provides direct access to the Fort George G. Meade Military Reservation (Fort Meade) from MD 32, MD 295, and generally points south and west of the study area. The Federal Highway Administration (FHWA) and the Maryland State Highway Administration (SHA) are the lead agencies for the project.

Improvements in the study area are needed to address rapid growth and traffic volumes in one of the fastest growing areas in Anne Arundel County. Fort Meade and the National Security Agency (NSA), a tenant of the Fort Meade, have contributed to increased traffic volumes in the area. As a result of the 2005 Base Realignment and Closure (BRAC) process, Fort Meade and the surrounding area are expected to experience considerable growth in traffic volumes. In addition to increased traffic, the study area is expected to see substantial increases in population, housing, and commercial activity as a result of BRAC.

During the planning process of this project, Anne Arundel County Council rezoned the Arundel Gateway parcel immediately adjacent to the MD 198 corridor. In coordination with County staff, the project team completed a traffic sensitivity analysis to assess this

change in trip generation potential along MD 198. The rezoned parcel was shown to generate a much greater amount of traffic when compared to the demographic forecast for the traffic analysis zone in the adopted Baltimore Metropolitan Council Round 7C Cooperative Forecast. This project will address projected operational and safety deficiencies resulting from the expected growth within and adjacent to the project area.

D. Alternatives Retained for Detailed Study

The proposed improvements involve widening MD 198 from a two-lane roadway to a four-lane divided roadway with two through lanes in each direction. The additional width would include a median, on-road bicycle lane, and a shared use pedestrian/bicycle path, from west of the MD 295/MD 198 Interchange to the MD 32/MD 198 Interchange. The western portion of the project includes some minor ramp improvements to the MD 295/MD 198 Interchange. In addition to the widening of MD 198, the project includes a range of improvements to the MD 32/MD 198 Interchange.

Alternatives retained for further study include:

- Alternative 1: No-Build
- Alternative 2: Transportation Systems Management (TSM)
- Alternative 4 Modified: Divided Roadway with Off-Road, Shared-Use Facility and a Sidewalk

The MD 32/MD 198 Interchange Options retained for further study include:

- Option A: Flyover Ramp
- Option C: Diamond Interchange at Existing Interchange
- Option D: Two Bridge

E. Summary of Environmental Impacts

The build alternatives and interchange options will enhance the quality of life in the study area by decreasing traffic congestion and improving the movement of national defense generated travel. The build alternatives and interchange options will also benefit businesses in the area by potentially increasing drive-by business. There will be no impacts to schools, churches, or heath care facilities resulting from the build alternatives. **Table S-1** contains a comparative summary of impacts associated with the No-Build Alternative, build alternatives, and interchange options. These impacts are briefly described below.

- No residential displacements would be required by any of the alternatives and no commercial displacements would be required by the interchange options; however, a maximum of one commercial displacement would occur with the build alternatives.
- A maximum of 35 commercial parcels and one residential parcel would be impacted by the build alternatives and a maximum of two commercial parcels would be impacted by the interchange options.

- The build alternatives and interchange options would have no adverse or disproportionate impacts to any Environmental Justice communities.
- Alternatives 2 and 4 Modified would have direct impacts to the Baltimore-Washington Parkway, which is listed on the National Register of Historic Places (NRHP). The impacts would range from 1.02 to 3.8 acres.
- There are no significant archeological resources that will be impacted by the build alternatives and interchange options.
- The build alternatives would permanently impact between 71 and 459 linear feet of Waters of the U.S. (WUS) and the interchange options would permanently impact between 93 and 252 linear feet of WUS.
- The build alternatives would permanently impact between 0.7 and 1.4 acres of wetlands and the interchange options would impact between 0.9 and 2.6 acres of wetlands.
- Alternatives 1 and 2 would not impact any floodplains within the study area. Alternative 4 Modified would encroach on 0.1 acre and each interchange option would impact 2.4 acres of the 100-year floodplain.
- There would be no project related impacts to fish under any of the build alternatives and interchange options. No instream work is anticipated, however it is not permitted in Use I streams during the period of March 1st through June 15th, of any given year.
- Woodland impacts range from 4.5 to 19.4 acres for the build alternatives. For the interchange options, woodland impacts range from 4.6 to 5.9 acres.
- The study area contains Green Infrastructure composed of hubs, corridors, and gaps. The build alternatives would impact a maximum of 4.1 acres of hubs, 9.4 acres of corridors, and 3.9 acres of gaps, while the interchange options would impact a maximum of 5.5 acres of hubs and 4.3 acres of gaps.
- There are 37 sites with potential for hazardous materials that could be affected by the build alternatives. Depending on the amount of right-of-way required, further investigations of some or all of the sites could be required and would be conducted prior to acquisition.
- The State/National Ambient Air Quality Standards would not be exceeded by the build alternatives or interchange options.
- Noise Sensitive Areas 03 and 06 would be impacted by Alternative 4 Modified.

Table S-1: Summary of Environmental Impacts

Category	MD 198 Mainline Alternatives*				MD 198 / MD 32 Interchange Options*		
	1	2	4 Modified		A	C	D
Socio-Economic & Cultural Resources							
1. Potential Displacements (No.)							
A. Residential	0	0	0		0	0	0
B. Commercial	0	0	1		0	0	0
Total	**0**	**0**	**1**		**0**	**0**	**0**
2. Properties Affected (No.)							
A. Residential	0	0	1		0	0	0
B. Commercial	0	7	35		2	2	2
C. Fort Meade Property	0	0	1		1	1	1
D. Tipton Airport Authority	0	0	0		1	1	1
E. Federal Lands	0	0	0		1	1	1
F. U.S. Fish & Wildlife Service	0	0	0		1	1	1
G. Archeological Site(s)	0	0	0		0	0	0
H. Historic Structure(s)**	0	1	1		0	0	0
Total	**0**	**8**	**38**		**6**	**6**	**6**
3. Right-of-Way Required (Acres)							
A. Residential	0	0	0.1		0	0	0
B. Commercial	0	3.1	19.3		0.4	0.4	0.4
C. Fort Meade Property	0	0	0.1		8.3	6.4	7.2
D. Tipton Airport Authority	0	0	0		4.0	4.0	3.7
E. Federal Lands	0	6.7	11		0.05	0.8	0.5
F. U.S. Fish & Wildlife Service	0	0	0		0.05	0.1	0.1
G. Archeological Site(s)	0	0	0		0	0	0
H. Historic Structure(s)**	0	1.02	3.8		0	0	0
Total	**0**	**10.82**	**34.3**		**12.8**	**11.7**	**11.9**
Natural Environment							
Wetlands (Acres)	0	0.7	1.4		1.9	0.9	2.6
Wetlands of Special State Concern (Acres)	0	0	0		0	0	0
Total Wetlands (Acres)	**0**	**0.7**	**1.4**		**1.9**	**0.9**	**2.6**
Stream Crossings (No.)	0	1	1		3	3	3
Stream Impacts (LF)	0	71	459		93	190	252
100-Year Floodplain (Acres)	0	0	0.1		2.4	2.4	2.4
Woodland (Acres)	0	4.5	19.4		5.1	4.6	5.9
Parks** (Acres)	0	3.6	6.0		0	0	0
Potential Hazardous Waste Sites	0	6	33		4	4	4
Cost* **							
Preliminary Engineering	$ 0	$ 2.5 - $ 3.2	$ 9.9 - $ 12.7		$ 13.6 - $ 17.4	$ 12.8 - $ 16.4	$ 10.7 - $ 17.4
Right-of-way	$ 0	$ 1.3 - $ 2.1	$ 16.3 - $ 25.5		$ 1.0 - $ 1.6	$ .8 - $ 1.3	$ 1.2 - $ 1.9
Construction	$ 0	$14.7 - $ 18.9	$ 65.9 - $ 84.3		$ 90.6 - $ 116.0	$ 85.2 - $ 109.0	$ 71.7 - $ 91.7
Total Cost in Millions	$ 0	$ 18.5 - $ 24.1	$ 92.1 - $ 122.5		$ 105.2 - $ 135.0	$ 98.8 - $ 126.7	$ 83.6 - $ 107.4

*A complete build alternative for the MD 198 Project Planning Study will include one main line alternative paired with one interchange concept. The total impacts will be the summation of the two pieces.

**The MD 198 crossing of the Baltimore-Washington Parkway is owned by the National Park Service. In addition, the Baltimore-Washington Parkway is listed on the National Register of Historic Places.

***Cost Range includes an inflation adjustment through 2020.

Environmental Assessment Form

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use is in keeping with the provisions of 1500.4 (k) and 1506.2 and .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 checklist identifies specific areas of the natural and social-economic environment which have been considered while preparing this environmental assessment. 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 natural or social-economic environment within the proposed project area. It will also highlight any potential impacts, beneficial or adverse, that the action may incur. The "No" column indicates that during the scoping and early coordination processes, that specific area of the environment was not identified to be within the project area or would not be impacted by the proposed action.

ENVIRONMENTAL ASSESSMENT FORM

		YES	NO	COMMENTS
A.	Land Use Considerations			
1.	Will the action be within the 100 year floodplain?	X		See Section III. E.3. b.
2.	Will the action require a permit for construction or alteration within the 50 year floodplain?		X	
3.	Will the action require a permit for dredging, filling, draining or alteration of a wetland?	X		See Section III. E. d.
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	
6.	Will the action require a grading plan or a sediment control permit?	X		See Section III. E. 1.
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	

		YES	NO	COMMENTS
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 wildland?	X		See Section III. B. 6. a. & Section IV.
12.	Will the action affect the use of any natural or manmade 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 Section III. D.
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 Section III. E. 3. d.
15.	Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	X		See Section III. E. 3. d.

		YES	NO	COMMENTS
16.	Will the action change the overland flow of stormwater or reduce the absorption capacity of the ground?	X		See Section III. E. 3. a.
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 Section III. E. 3. a.
22.	If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	X		See Section III. E. 3. a.

	YES	NO	COMMENTS
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		See Section III. F.
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?		X	
25. Will the action generate additional noise which differs in character or level from present conditions?	X		See Section III. G.
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 Section III. E. 6. b.
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?		X	See Section III. E. 6. c.

		YES	NO	COMMENTS
30.	Will the action require a permit for the 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 Section III. A. 4. b.
32.	Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	X		See Section III. A. 4. b.
33.	Will the action alter land values?	X		See Section III. C. 5.
34.	Will the action affect traffic flow and volume?	X		See Section I. C.
35.	Will the action affect the production, extra-action, 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	

		YES	NO	COMMENTS
37.	Is the action in accord with federal, state, regional and local comprehensive or functional plans-including zoning?	X		See Section III. A. 1.
38.	Will the action affect the employment opportunities for persons in the area?	X		See Section III. C. 3.
39.	Will the action affect the ability of the area to attract new sources of tax revenue?	X		See Section III. C. 4.
40.	Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?		X	
41.	Will the action affect the ability of the area to attract tourism?		X	

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	

		YES	NO	COMMENTS
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 health, safety, welfare, or environment?	X		See Section III.
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 EA

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Purpose and Need

I. PURPOSE AND NEED

A. Project Location and Description

The Maryland State Highway Administration (SHA) and the Federal Highway Administration (FHWA) are conducting a Project Planning Study for improvements to MD 198 (Laurel-Fort Meade Road) from MD 295 to MD 32. The MD 198 planning project is located in northwestern Anne Arundel County, Maryland, almost midway between Baltimore City and Washington D.C. (**Figure I-1**).

MD 198 is on the State's Secondary System of Highways and is functionally classified as an Urban Other Principal Arterial under the Federal Functional Classification System. It is an east-west route that extends from Montgomery County to the west, through the City of Laurel in Prince George's County and terminates at MD 32/Fort Meade at the eastern end of the roadway limits. As part of the regional grid, it connects to major north-south arterials such as U.S. 29, I-95, U.S. 1 and MD 295. Within the study limits (**Figure I-2**), MD 198 has grade-separated interchanges with MD 295 and MD 32 and several at-grade intersections with local roadways. MD 198 serves as a primary gateway to Fort Meade from the south side of the installation. The existing typical sections for MD 198, within the project limits, primarily have one lane in each direction with shoulders. The posted speed limit from east of the MD 295 interchange area to Bald Eagle Drive is 50 mph, while the posted speed limit from Bald Eagle Drive to east of the MD 32 interchange is 40 mph.

The MD 198 project is consistent with the goals and objectives of State, regional and local planning documents. Improvements to MD 198 within the project study area are included in SHA's long range plan, the Highway Needs Inventory (HNI) and the Baltimore Metropolitan Planning Organization's 2004 Long Range Plan, Transportation 2030 – The Baltimore Regional Transportation Plan. The project is identified in the Anne Arundel County Executive's 2006 Transportation Priority Letter as a top priority and continues to be listed as a top priority in subsequent letters.

B. Purpose of the Project

The purpose of the project is to improve the existing capacity and traffic operations, and to increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to the Fort George G. Meade Military Reservation (Fort Meade) from MD 32, MD 295 and generally points south and west of the study area. Improving MD 198 would enhance access to Fort Meade and accommodate future transportation needs in the project area.

C. Need for the Project

The area around Fort Meade is one of the fastest growing areas of Anne Arundel County. Fort Meade and the National Security Agency (NSA), a tenant of the Fort, combined represent the largest employers in the State of Maryland. Fort Meade's workforce is comprised of more than 42,000 military, civilian, and contractor personnel. As a result of the 2005 Base Realignment and

Closure (BRAC) process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2011, approximately 5,695 additional new on-base jobs are expected to be relocated to Fort Meade, along with 4,000 new jobs at NSA. As many as 20,000 or more private sector jobs are also anticipated as a result of the new jobs, primarily in the defense and support industries. These jobs would be located both on and in the vicinity of Fort Meade.

MD 198 provides a continuous connection between the City of Laurel and its suburbs with Fort Meade. The Laurel area has been a traditional community of Fort Meade and this relationship will continue as the Fort and its various tenant organizations increase in population and employment. MD 198 is also the route to convey Odenton area-generated travel demand to the Baltimore Washington Parkway (especially southbound) toward the Capital Beltway and the Washington Metropolitan area.

D. Travel Demand/Level of Service (LOS)

The Average Daily Traffic (ADT) volumes compiled along MD 198 between MD 295 and MD 32 are relatively even throughout, ranging from 21,600 to 24,000 ADT. Just west of the MD 295 interchange the existing ADT is considerably higher, at 42,850. At the other end of the study area the ADT drops to 14,800 at the MD 32 interchange (**Table I-1**).

The 2030 projected ADT was developed from the adopted Baltimore Metropolitan Council (BMC) Cooperative Forecast – Round 7C which includes BRAC traffic. During the Purpose and Need analysis, the forecast for the study area showed that the ADT is expected to increase approximately 26 percent west of MD 295, with future volumes ranging between 57,900 ADT just west of MD 295 to 33,450 ADT just west of the MD 32 interchange.

Table I-1: Average Daily Traffic

Location	Average Daily Traffic		
	Existing Volume (2006)	Future Volume (2030)	Percent Growth
MD 295 South of MD 198	93,600	122,500	24%
MD 295 North of MD 198	90,500	115,000	21%
MD 198 West of MD 295	42,850	57,900	26%
MD 198 East of MD 295	23,950	41,300	42%
MD 198 Over MD 32	14,800	33,450	56%
MD 32 North of MD 198	46,150	63,425	27%
MD 32 South of MD 198	58,500	76,600	24%

[1]AM and PM peak hour volumes represent the highest volumes in the peak direction that occur on an average weekday (Monday through Friday). AM peak hour times are from 6 AM to 9 AM and PM peak hour times are from 4 PM to 7 PM.

Level of Service (LOS) is a scale measuring the freedom of mobility or severity of congestion experienced by drivers. The LOS scale ranges from A to F. LOS A represents free flow movements of traffic with little or no congestion. LOS F represents failure with stop-and-go conditions and long queues of traffic. LOS D occurs near a critical boundary where traffic flows become unstable. This level is generally considered acceptable during peak hours of traffic flow on streets and highways in urban and suburban areas. At LOS E, the roadway is operating near capacity with unpredictable daily delays. LOS is normally determined for the peak hours of the

typical weekday. These levels have been determined through traffic research and are related to measurable traffic characteristics such as delays, speeds, or traffic density.

The LOS as shown in the *Purpose and Need Statement* (2007) reflect both AM (6AM to 9AM) and PM (4 PM to 7 PM) peak hours for the entire study area have a LOS E. By 2030, the LOS will fail during both AM and PM peak hours (**Table I-2**). Three intersections within the study area limits operate at LOS E or F, under current traffic conditions, during both the AM and PM peak hours. These intersections include: MD 198/Tischer Entrance, MD 198/Ourisman Entrance, and MD 198/Welch's Court. The intersection at MD 216 B (Old Portland Road) operates at LOS E in the AM peak; the Bald Eagle Drive intersection operates at LOS F in the PM peak.

Table I-2: Levels of Service (Including Vehicle/Capacity Ratios)

LIMITS	2006 LOS		2030 LOS	
	AM	PM	AM	PM
MD 198 Mainline (MD 295 to MD 32)	E	E	F	F
Market Place Corridor/ Russett Green East	B	C	D	F
Tischer Entrance	F	F	F	F
Ourisman Entrance	F	F	F	F
Arundel Gateway	A	B	C	C
MD 216 B	E	D	F	F
Welch's Court	E	F	F	F
Center Avenue	B	D	C	F
Bald Eagle Drive	A	F	C	F
Airfield Road	A	A	A	D
MD 32 Eastbound Ramps	A	A	B	D
MD 32 Westbound Ramps	B	A	F	F

In addition to jobs, the study area is expected to see substantial increases in population, housing, commercial activity and vehicular traffic as a result of the Arundel Gateway Development which is a large mixed land use parcel south of MD 198. The Anne Arundel County Council approved a zoning change for the Arundel Gateway parcel in 2010 based on the Anne Arundel County General Development Plan – 1997. Much of this land use will also serve the BRAC implementation in this area. The MD 198 Project Planning Study will address projected operational and safety deficiencies resulting from the expected growth. A traffic sensitivity analysis was completed for the corridor to reflect the changes to the traffic demand along the corridor.

Although additional locations have been added, the revised existing Average Daily Traffic (ADT) volumes which include traffic related to the Arundel Gateway parcel and BRAC along MD 198 between MD 295 and MD 32 are relatively even throughout, ranging from 21,600 to 24,000 ADT. At the west end of study area, the existing ADT is considerably higher, at 42,850 west of MD 295. At the other end of the study area the ADT drops to 7,900 east of the MD 32 interchange entrance to Fort Meade (**Table I-3**).

By 2030, the projected ADTs in the study area are expected to increase by over 100 percent within the majority of the MD 198 corridor, with future volumes ranging between 67,500 ADT west of MD 295 to 16,000 ADT east of MD 32.

Table I-3: Average Daily Traffic (ADT) Along MD 198

MD 198 Segment	Existing (2006) ADT	Projected (2030) ADT	Percent Growth
West of MD 295 Interchange	42,900	67,500	57%
East of MD 295 Interchange	24,000	57,500	140%
East of Arundel Gateway Blvd.	22,700	52,400	131%
West of MD 216B	22,700	48,400	113%
West of Welch's Court	21,900	48,400	121%
West of Center Avenue	21,900	48,100	120%
West of Bald Eagle Drive	21,600	47,800	121%
West of Airfield Road	21,600	47,800	121%
West of MD 32 Interchange	21,800	47,900	121%
East of MD 32 Interchange	7,900	16,000	103%

A Level of Service (LOS) analysis was conducted for existing (2006) and forecasted (2030) No-Build conditions for the study area intersections and roadway segments based on the traffic sensitivity analysis.

The existing LOS analysis shows that the study area intersections have LOS that ranges from "A" to "F", with five intersections operating at failing LOS in either the AM or PM peak hours. In the 2030 design year, nine intersections are projected to operate at a failing LOS in either the AM or PM peak hours, and the mainline roadway segment of MD 198 between MD 295 and MD 32 is also projected to operate at a failing LOS during both peak periods (**Table I-4**).

Table I-4: Existing and No-Build Level of Service (LOS) and Volume-to-Capacity Ratio

Mainline	2006 AM	2006 PM	2030 AM	2030 PM
MD 198 - from MD 295 to MD 32	E (0.77)	E (0.87)	F (1.57)	F (1.68)
Intersections with MD 198	**2006 AM**	**2006 PM**	**2030 AM**	**2030 PM**
Corridor Market Place / Russett Green East	B (0.63)	C (0.78)	E (0.98)	E (1.00)
MD 295 Southbound Ramp	F	F	F	F
Tischer Entrance	F	F	F	F
Ourisman Entrance	F	F	F	F
Arundel Gateway Boulevard	A	B	F	F
MD 216B (Old Portland Road)	E	D	F	F
Welchs Court	E	F	F	F
Center Avenue (Woodlands Job Corps Ctr)	B	D	F	F
Bald Eagle Drive	A	F	F	F
Airfield Road	A (0.28)	A (0.49)	A (0.56)	C (0.76)
MD 32 Eastbound Ramps (Roundabout)	A	A	B	C
MD 32 Westbound Ramps (Roundabout)	B	A	F	F

Note: For unsignalized intersections, LOS is based on delay, and V/C ratio is N/A.

E. Safety

The Maryland State Highway Administration, Office of Traffic and Safety (SHA-OOTS) provided crash data for the 3.5-mile study area from 2003 to 2005. During that three-year period, a total of 155 crashes were reported resulting in one fatality and 87 injuries.

Table I-5 summarizes reported crashes within the MD 198 study area by crash type for the years 2003, 2004, and 2005. The crash information in **Table I-5** indicates that the crash rate falls well below the statewide average rate for both MD 32 and MD 295 sections.

Table I-5: Crash Report Data

Severity	2003	2004	2005	Total	Study Rate	Statewide Average Rate
MD 32: From Rogue Harbor Road to North of Mapes Road						
Fatal	-	-	-	-	0.0	0.6
Injury	-	-	-	-	0.0	35.7
Property Damage	2	4	5	11	10.3	48.5
Total Crashes	2	4	5	11	10.3	84.7
MD 198: From west of MD 295 to east of MD 32						
Fatal	1	0	0	1	N/A	N/A
Injury	18	15	26	59	N/A	N/A
Property Damage	38	16	41	95	N/A	N/A
Total Crashes	57	31	67	155	N/A	N/A
MD 295: From the Prince George's County Line to the Little Patuxent River						
Fatal	-	-	-	-	0.0	0.4
Injury	2	3	1	6	1.7	21.5
Property Damage	3	3	3	9	2.6	32.8
Total Crashes	5	6	4	15	4.3	54.7

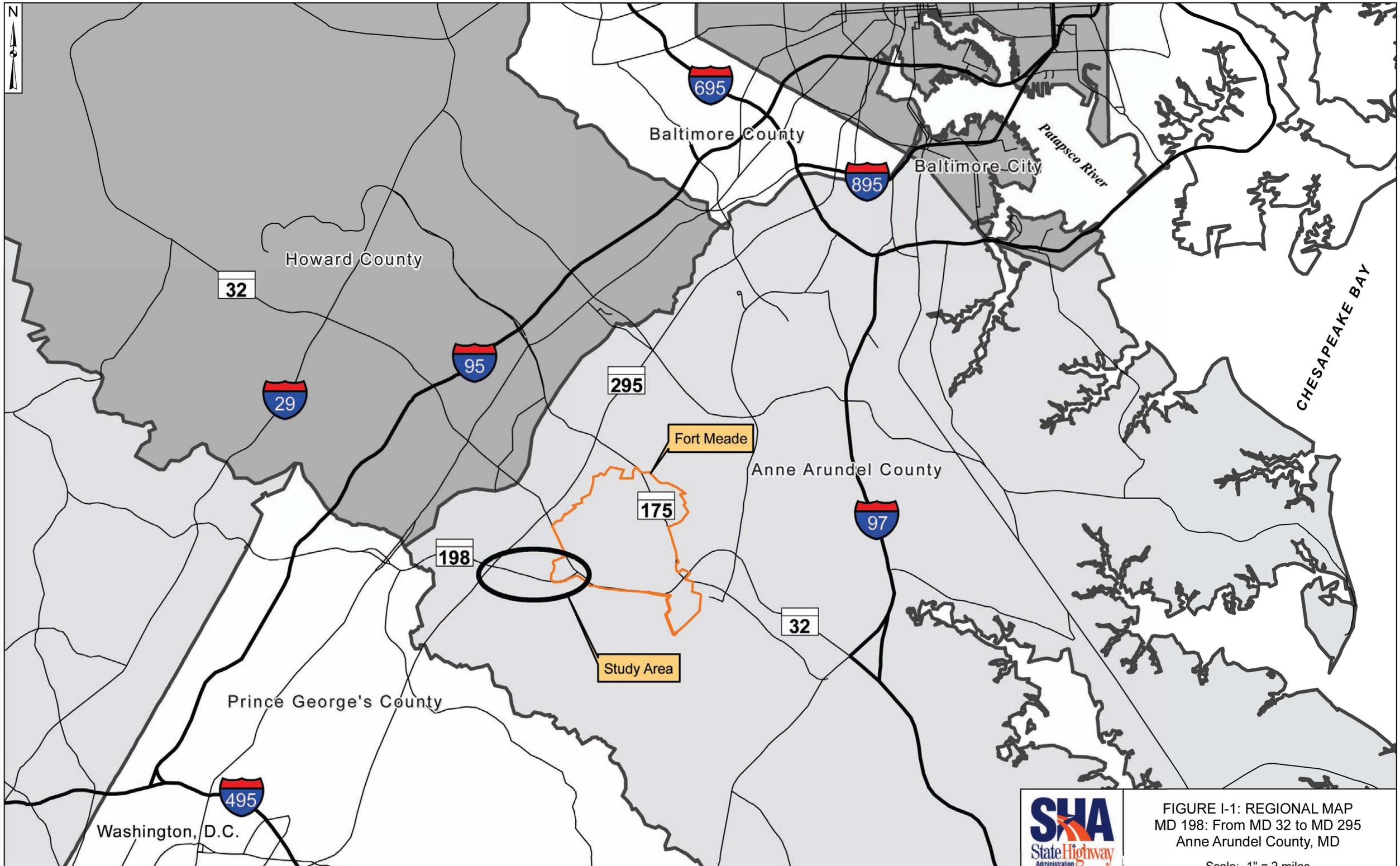

FIGURE I-1: REGIONAL MAP
MD 198: From MD 32 to MD 295
Anne Arundel County, MD

Scale: 1" = 2 miles

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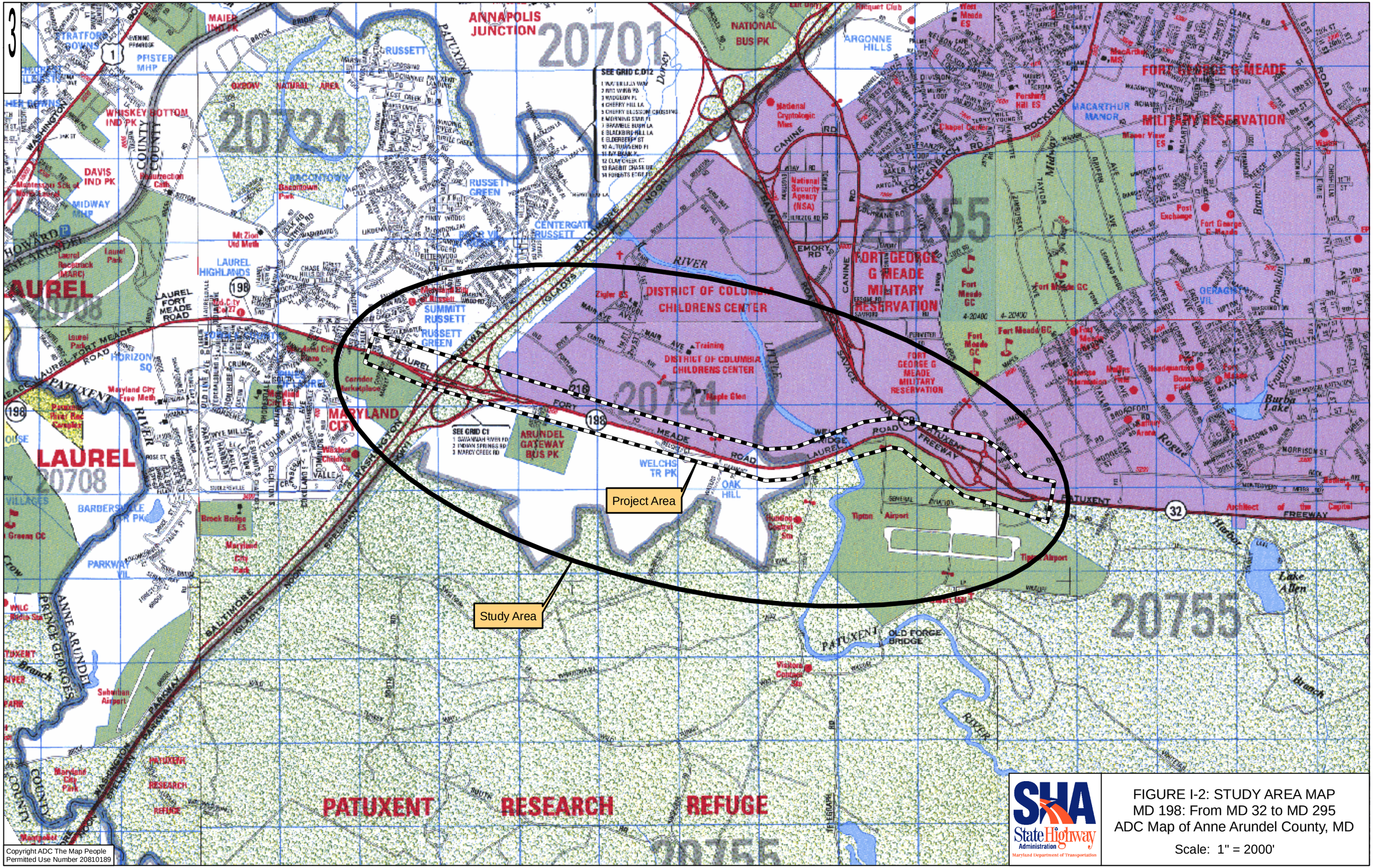

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FIGURE I-2: STUDY AREA MAP
MD 198: From MD 32 to MD 295
ADC Map of Anne Arundel County, MD

Scale: 1" = 2000'

Alternatives Considered

II. ALTERNATIVES CONSIDERED

A. Alternatives Presented to the Public at the Alternates Public Workshop

An Alternates Public Workshop was held on June 24, 2008 to present two mainline build alternatives, five interchange options, and the Traffic Systems Management (TSM) and No-Build Alternatives. Mapping for alternatives and options presented in this section is depicted in the Alternatives Retained for Detailed Study (ARDS) document (SHA 2009). The following alternatives were presented:

All of the mainline build alternatives include three basic elements:

- MD 198 mainline widening to include a grass median separating two lanes in either direction
- MD 198/MD 295 Interchange modifications
- Pedestrian and bicycle accommodations

Each of the mainline build alternatives includes the widening of MD 198 to improve safety, traffic capacity, and overall operations and is compatible with any of the five interchange options presented at the workshop.

Two mainline alternatives (Alternatives 3 and 4) and two interchange options (Options B and E) were dropped from further consideration. The description of the alternatives and options dropped and the rationale for dropping them are provided below.

Alternative 3 – Divided Roadway with Off-Road, Shared-Use Facility

Alternative 3 provided for two lanes in both directions (eastbound and westbound) divided by a 20-foot-wide grass median. On-road bicycle facilities were provided in both directions adjacent to the outside travel lane. A five-foot-wide grass buffer along the south-side curb separated the on-road bicycle lane from the shared-use pedestrian/bicycle path. The existing northern edge of the roadway was held and widening was proposed along the south side.

This alternative was dropped due to the lack of a sidewalk on the north side of the roadway. With proposed development along the corridor, the lack of a sidewalk would not promote pedestrian safety and connectivity.

Alternative 4: Divided Roadway with Off-Road, Shared-Use Facility and a Sidewalk

This alternative provided for two lanes in both directions (eastbound and westbound) divided by a grass median that varied throughout the corridor from 20 feet to 6 feet in width. On-road bicycle facilities were provided in both directions adjacent to the outside travel lane. A five-foot-wide grass buffer along the south-side curb separated the on-road bicycle lane from the shared-use pedestrian/bicycle path. This path extended from just east of the bridge over MD 295 to the ball-fields located adjacent to Bald Eagle Drive. East of Bald Eagle Drive, this path became a five-foot-wide sidewalk to the eastern limits of the project. There was also a five-foot-wide grass buffer along the north side of the curb that separated the on-road bicycle lane from the five-foot-

wide sidewalk. This sidewalk extended from the western limits of the project area to the businesses located just east of the new location of Old Portland Road.

This alternative was dropped because it no longer provided improved traffic operations as a result of the increased traffic projections associated with redevelopment along the corridor.

Option B: Loop Ramp Option

This option maintained the existing configuration for the MD 198/MD 32 Interchange for the southern portion (the existing roundabout closest to Tipton Airport). However, the northern portion (the ramps closest to Fort Meade) was reconfigured. The existing roundabout was removed and replaced with a signalized intersection. All traffic from northbound MD 32 that was destined for Fort Meade would have utilized the ramp as it does today. All traffic from northbound MD 32 that was destined for westbound MD 198 would have utilized the proposed loop ramp. This configuration separated the traffic from Fort Meade from the traffic destined for Laurel.

This option was dropped because it no longer provided acceptable traffic operations due to an increase in the traffic projections.

Option E: Diamond Interchange with New Bridge

Option E created a signalized intersection along either side of MD 32 for drivers exiting and entering MD 32 from MD 198. However, the crossing of MD 32 was moved to a new bridge location to allow for a more direct connection. With this option, all traffic accessing MD 198 and Fort Meade would have used the same bridge. Airfield Road would need to be reconfigured to provide access to MD 198 under Option E.

This option was dropped because it did not separate traffic heading to Fort Meade from traffic on MD 32. It provided only one bridge that allowed all traffic on MD 198 direct access to Fort Meade. The option also required a significant amount of additional right-of-way for the relocation of Airfield Road. Although this option had the fewest wetland impacts, the relocation of Airfield Road and the interchange configuration would result in impacts on additional, high-quality wetlands.

B. Alternatives Retained for Detailed Study

1. Alternative 1: No-Build

No major improvements are proposed under the No-Build Alternative. Minor short-term improvements would occur as part of routine maintenance and safety improvements. This alternative does not address the Purpose and Need for the project. However, it serves as a baseline for comparing the impacts and benefits associated with the other alternatives.

2. Alternative 2: Transportation Systems Management (TSM)

This alternative involves the implementation of TSM strategies to optimize the existing transportation system by providing improvements with minimal capital cost (**Figures II-1A and II-1B**). The TSM strategies being considered for this corridor include:

- Improvements to the off-ramps from MD 295 to MD 198 to alleviate confusion and increase merge distance
- Access management – combining several of the driveways and access points along MD 198 to provide for fewer turns off of the main road
- Left-turn lanes – including left-turn lanes for the combined access points to decrease the left-turn conflict with the through movement

3. Alternative 4 Modified: Divided Roadway with Off-Road, Shared-Use Facility and a Sidewalk

The proposed typical section for Alternative 4 Modified includes two lanes in either direction: a 12-foot-wide inside lane and a 16-foot-wide outside shared-use lane to accommodate bicyclists (**Figures II-2 and II-3**). The two directions are separated by a 20-foot-wide median. The proposed typical section includes a five-foot-wide buffer adjacent to the travel lane in both directions. On the westbound side, the buffer includes a five-foot-wide sidewalk with a two-foot-wide grass buffer outside the sidewalk. On the eastbound side, the buffer includes an eight-foot-wide shared-use pedestrian/bicycle path with a two-foot-wide grass buffer outside the path. Alternative 4 Modified will have a total width of 105 feet, an increase of approximately 61 to 81 feet over the dimensions of the existing roadway.

The proposed typical section from the northbound on/off ramps for the Baltimore-Washington Parkway to the second access point of Arundel Gateway also includes a 12-foot-wide eastbound auxiliary lane which will widen MD 198 in this area to 117 feet, an increase of approximately 7 to 67 feet over the dimensions of the existing roadway in this area.

On-road bicycle facilities are provided in both directions adjacent to the outside travel lane. A five-foot-wide grass buffer along the south-side curb separates the on-road bicycle lane from the shared-use pedestrian/bicycle path. This path extends from just east of the bridge over MD 295 to the ball fields located adjacent to Bald Eagle Drive. East of Bald Eagle Drive, the path becomes a five-foot-wide sidewalk that extends to the eastern limits of the project. A five-foot-wide grass buffer along the north side of the curb separates the on-road bicycle lane from the five-foot-wide sidewalk that extends from the western limits of the project to the businesses just east of relocated Old Portland Road.

4. MD 198/MD 32 Interchange Options

i. Option A: Flyover Ramp

This option maintains the existing configuration of the MD 198/MD 32 Interchange. However, a flyover ramp is introduced that allows traffic from northbound MD 32 to access westbound MD 198 directly, completely separating this traffic from the roundabouts (**Figures II-4, II-5A and II-5B**). All other traffic through the interchange would operate as it does today.

ii. Option C: Diamond Interchange at Existing Bridge

This option reconfigures the existing MD 198/MD 32 Interchange from two roundabouts to two signalized intersections (**Figures II-4, II-6A and II-6B**).

iii. Option D: Two Bridge

This option maintains the existing MD 198/MD 32 Interchange configuration and adds a second crossing of MD 32 with access into Fort Meade (**Figures II-4, II-7A and II-7B**). Vehicles would exit northbound MD 32 as they do under existing conditions, utilizing the ramp to the roundabout and exiting the roundabout in the direction in which they wish to proceed. Vehicles coming from eastbound MD 198 would access Fort Meade from the second crossing of MD 32.

C. Travel Demand/Level of Service (LOS) for Build Alternatives

A Level of Service (LOS) analysis was conducted for future (year 2030) conditions for each of the Build alternatives. Alternative 2 (TSM) is projected to improve operations by consolidating access points along the corridor. However, the analysis results indicate that five intersections would still be projected to operate at failing LOS in the year 2030 under Alternative 2, and the mainline segment of MD 198 would also be projected to continue to operate at LOS F during both peak periods (**Table II-1**).

Table II-1: 2030 Build Alternative 2 (TSM) Level of Service (LOS) and Volume-to-Capacity Ratios (shown in parenthesis)

Mainline		
MD 198 - from MD 295 to MD 32	F (1.57)	F (1.68)
Corridor Market Place / Russett Green East	E (0.98)	E (1.00)
MD 295 Southbound Ramp	F (1.20)	F (1.16)
Arundel Gateway Boulevard / Tischer / Ourisman	F (1.63)	F (1.74)
MD 216B / Welchs Court / Center Avenue	F (1.42)	F (1.37)
Bald Eagle Drive	F (1.37)	F (1.37)
Airfield Road	A (0.56)	C (0.76)
MD 32 Eastbound Ramps (Roundabout)	B	C
MD 32 Westbound Ramps (Roundabout)	F	F

Note: For unsignalized intersections, LOS is based on delay, and V/C ratio is N/A.

Alternative 4 Modified (Four-lane Divided Roadway) is projected to improve operations along the mainline segment of MD 198 between MD 295 and MD 32 to LOS D during both the AM and PM peak hours in the design year of 2030. Alternative 4 Modified is also projected to improve all intersections within the study area to LOS E or better (**Table II-2**).

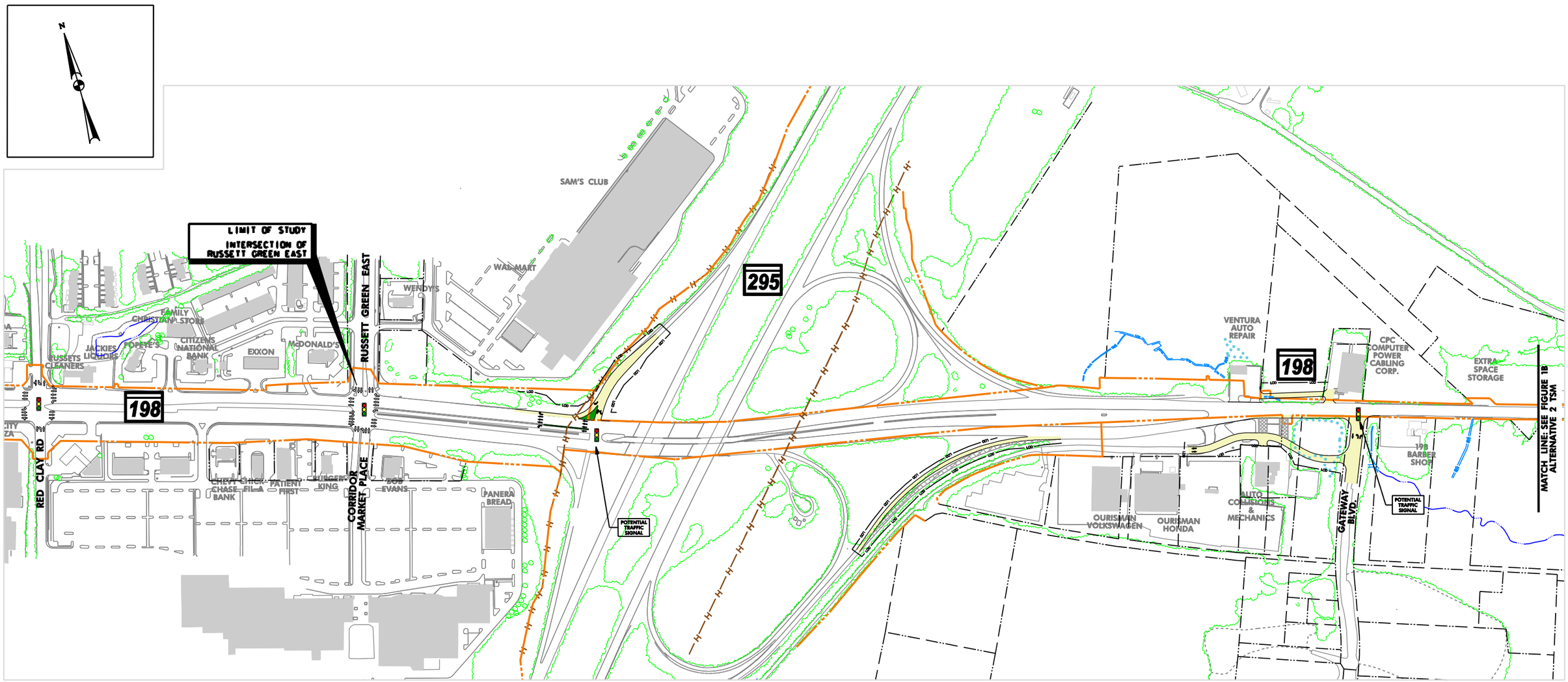
Table II-2: 2030 Build Alternative 4 Modified Level of Service (LOS) and Volume-to-Capacity Ratios (shown in parenthesis)		
Mainline		
MD 198 - from MD 295 to MD 32	D (0.70)	D (0.69)
Corridor Market Place / Russett Green East	E (0.98)	E (1.00)
MD 295 Southbound Ramp	D (0.83)	D (0.82)
Arundel Gateway Boulevard	E (0.95)	E (0.93)
Arundel Gateway – Second Access	D (0.90)	D (0.89)
MD 216B (Old Portland Road) / Welchs Court	D (0.81)	C (0.76)
Center Avenue / Liberty Valley Access	D (0.82)	D (0.81)
Bald Eagle Drive	C (0.75)	C (0.77)
Airfield Road	A (0.56)	C (0.76)

The MD 198 / MD 32 interchange improvement options were also analyzed to determine the LOS for each intersection under year 2030 conditions. The results indicate that all intersections are projected to operate at LOS E or better for each of the three retained interchange options (**Table II-3**).

Table II-3: 2030 Build Interchange Options Level of Service (LOS) and Volume-to-Capacity Ratios (shown in parathesis)		
Option A (Flyover)		
MD 198 at MD 32 Eastbound Ramps (Roundabout)	B	D
MD 198 at MD 32 Westbound Ramps (Roundabout)	A	A
MD 198 at MD 32 Eastbound Ramps (Signal)	E (0.96)	B (0.70)
MD 198 at MD 32 Westbound Ramps (Signal)	E (0.97)	D (0.90)
MD 198 at MD 32 Eastbound Ramps (Roundabout)	C	B
MD 198 Westbound at Mapes Road (Signal)	D (0.88)	D (0.86)

Note: For unsignalized intersections, LOS is based on delay, and V/C ratio is N/A.

MD 198 Mainline Alternative 2: Transportation System Management (TSM)



LEGEND

- Proposed Roadway
- Proposed Median
- Proposed Sidewalk
- Removal of Existing Pavement
- Existing Right of Way
- Property Lines
- Existing Lane Configuration
- Proposed Traffic Flow
- LOD — Proposed Limit of Disturbance
- Bridge Structure
- (B) Potential Displacement
- WUS — 2009 Delineated Waters of the US
- Streams
- 2009 Delineated Wetlands
- Forest
- Historic Boundary
- 100-Year Floodplain
- SWM / ESD — Proposed SWM / Environmental Site Design

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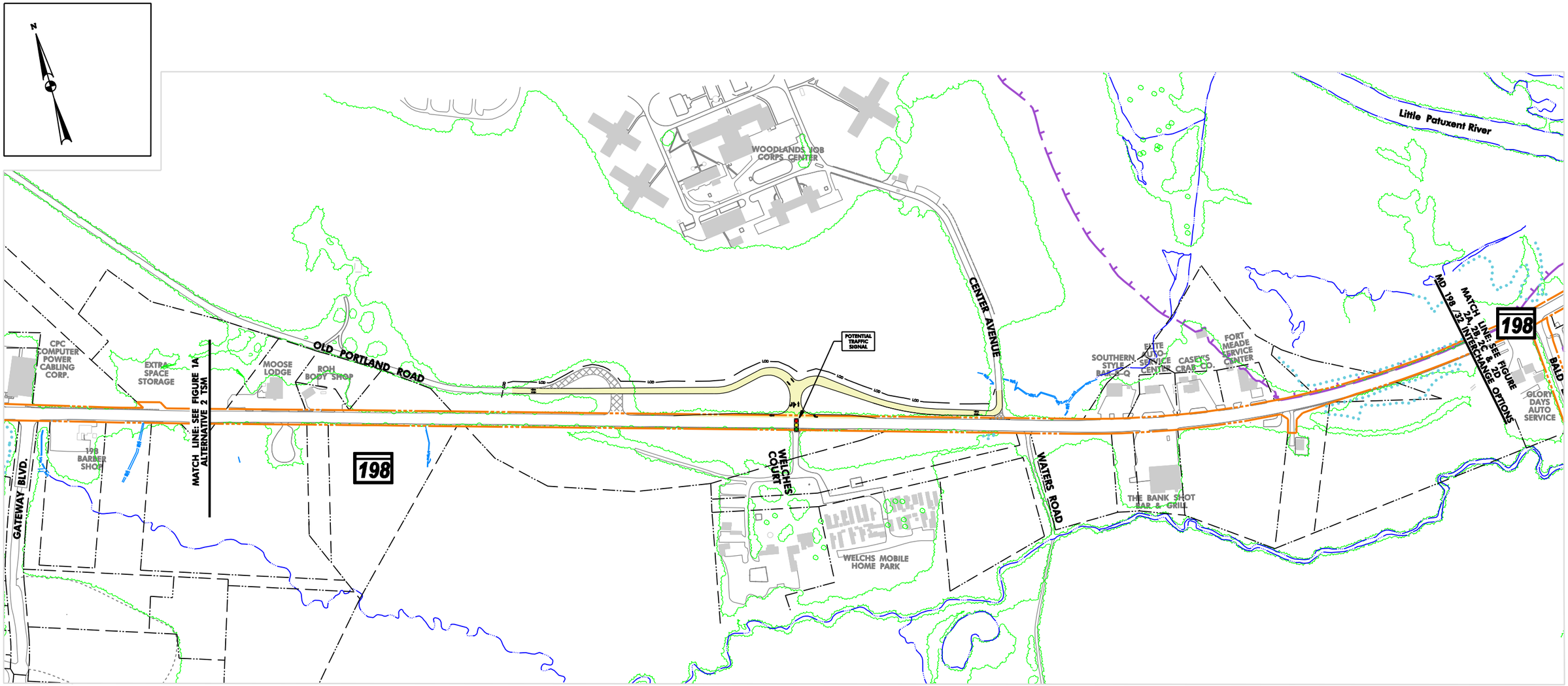
SCALE IN FEET
0 100 200
50 150 400

SCALE 1" = 400'

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-1A

MD 198 Mainline Alternative 2: Transportation System Management (TSM)



LEGEND

- Proposed Roadway
- Proposed Median
- Proposed Sidewalk
- Removal of Existing Pavement
- Existing Right of Way
- Property Lines
- Existing Lane Configuration
- Proposed Traffic Flow
- LOD — Proposed Limit of Disturbance
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SCALE IN FEET
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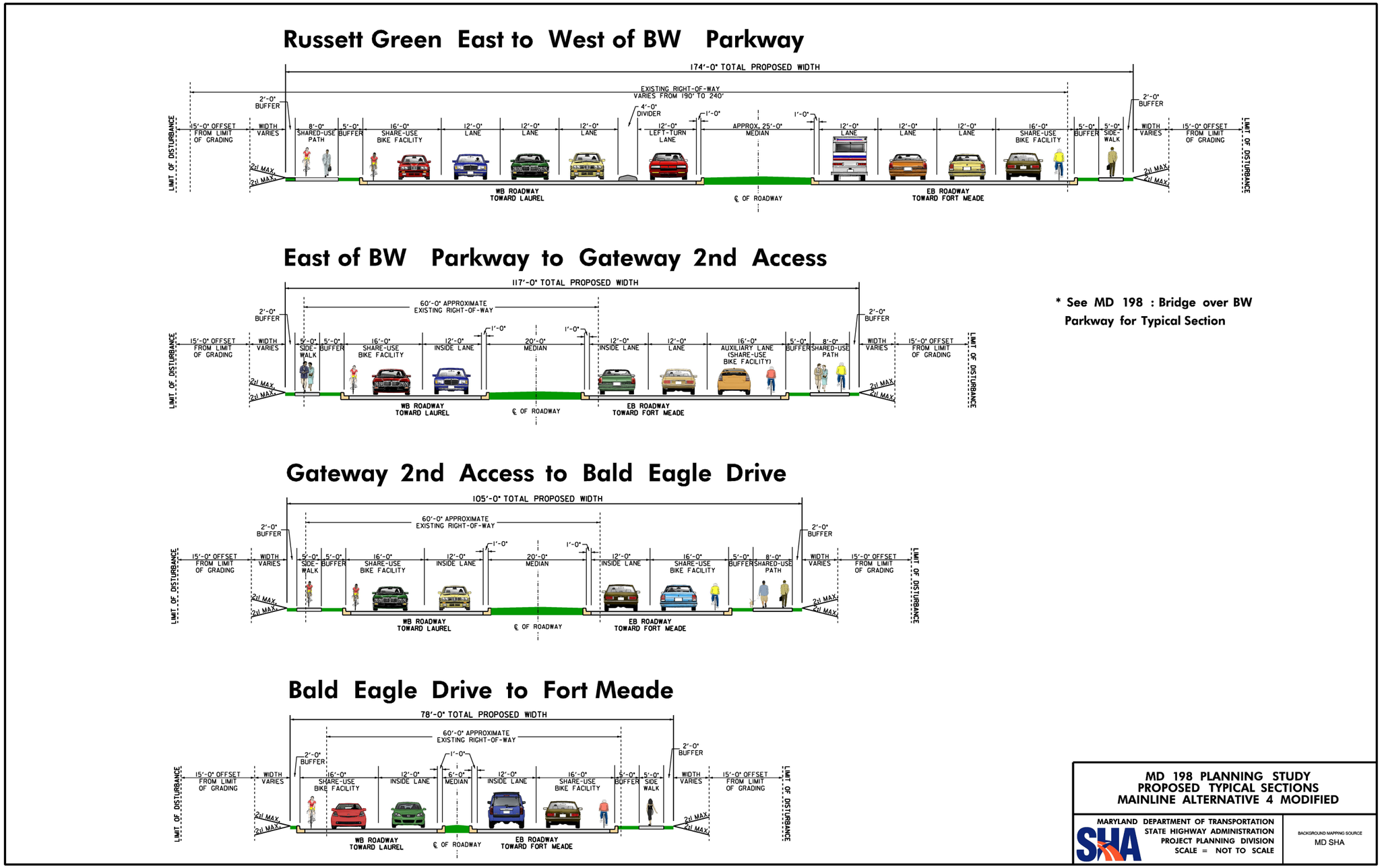
50 150 400

SCALE 1" = 400'

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

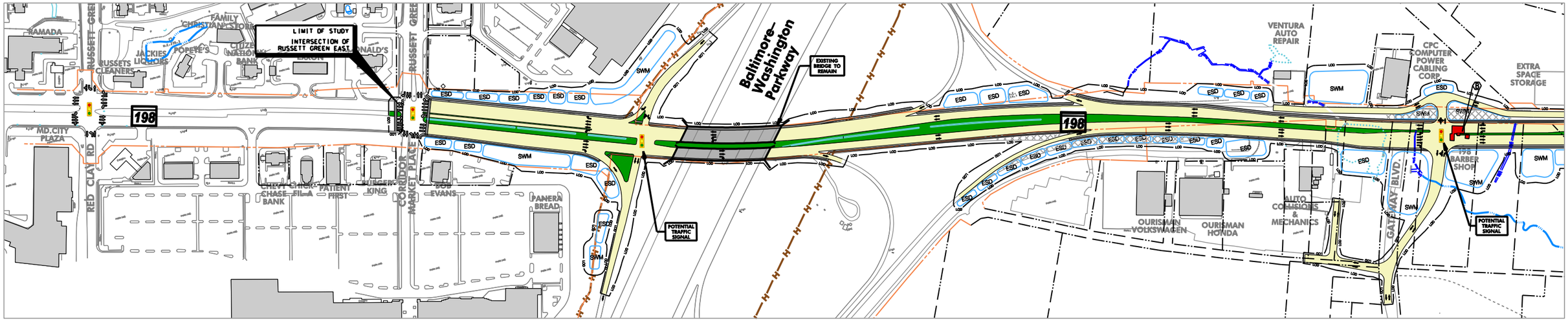
FIGURE II-1B

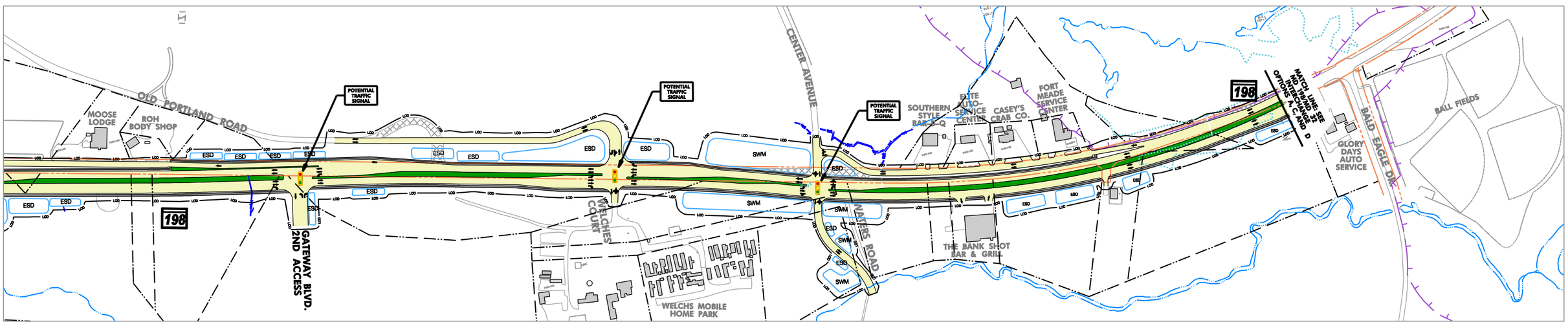


* See MD 198 : Bridge over BW Parkway for Typical Section

Figure II-2: Proposed Typical Sections for Mainline Alternative 4 Modified

MD 198 Mainline Alternative 4 Modified: Divided Roadway with Off–Road Shared–Use and a Sidewalk





LEGEND

- Proposed Roadway
- Proposed Median
- Proposed Sidewalk
- Removal of Existing Pavement
- Existing Right of Way
- Property Lines
- Existing Lane Configuration
- Proposed Traffic Flow
- Proposed Limit of Disturbance
- Bridge Structure
- Potential Displacement
- 2009 Delineated Waters of the US
- Streams
- 2009 Delineated Wetlands
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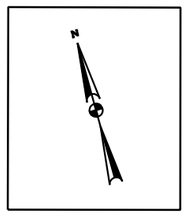

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STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION
SCALE 1" = 400'

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-3

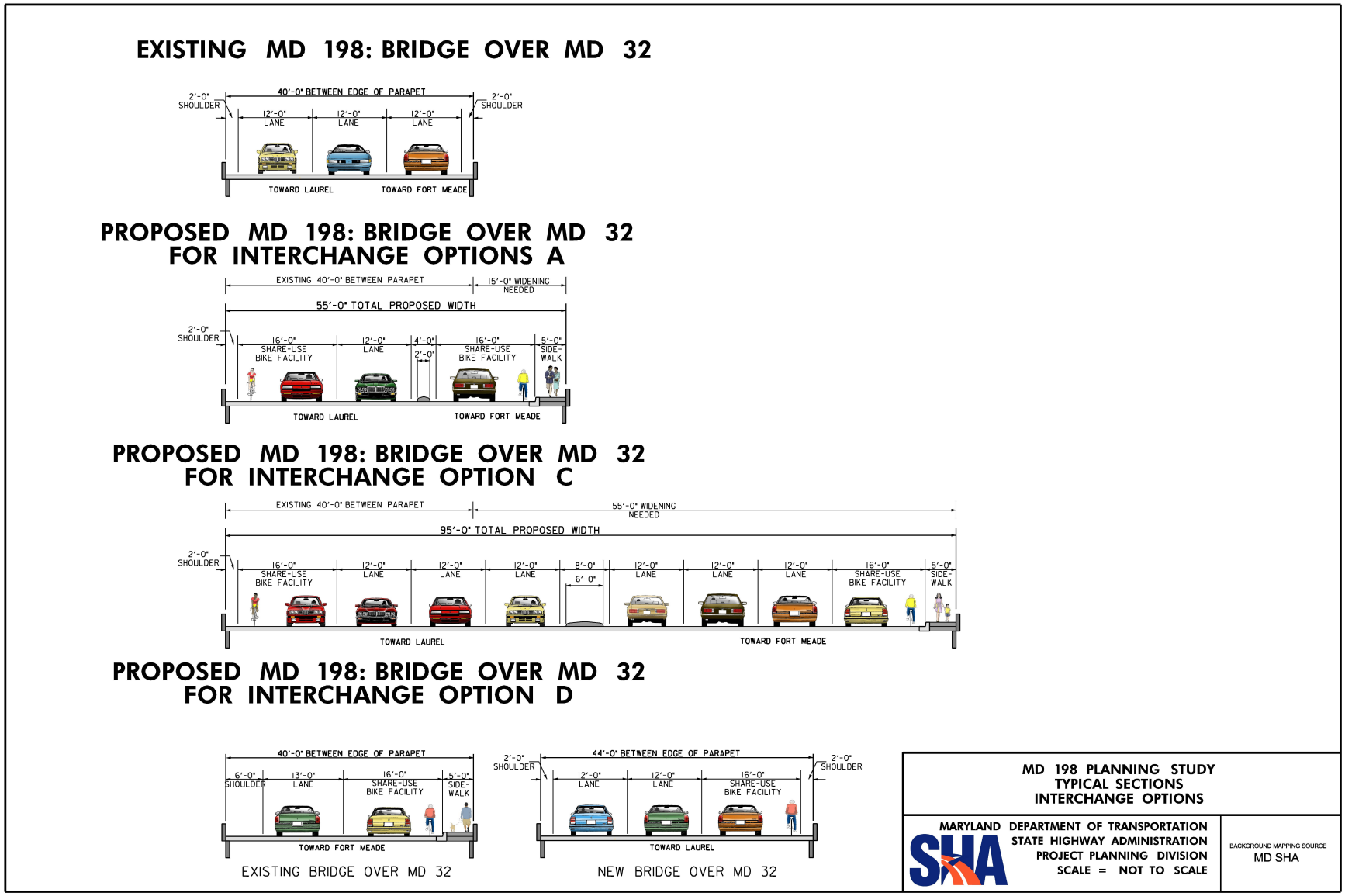
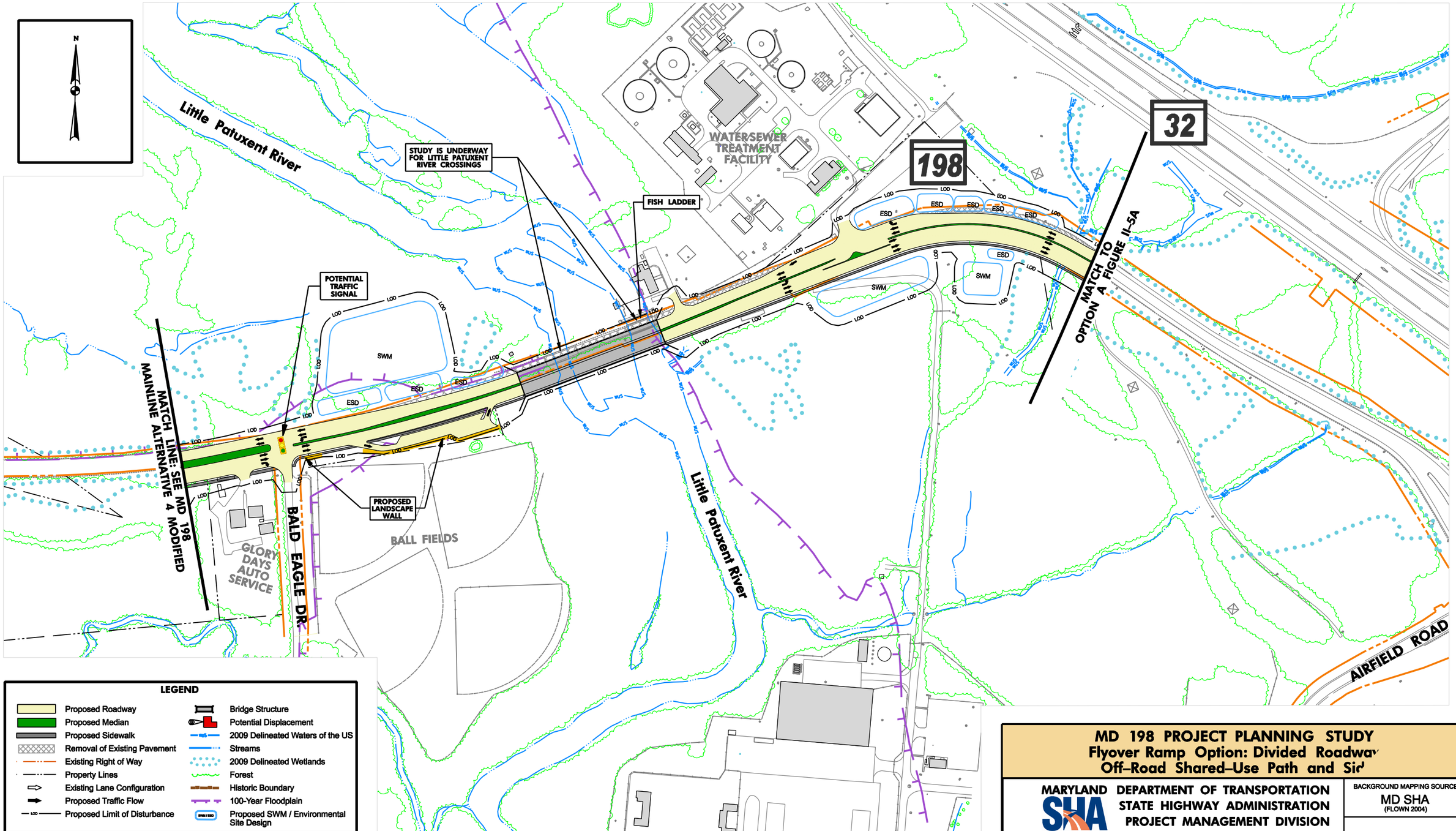


Figure II-4: Proposed Typical Section for Interchange Options A, C & D

OPTION A:
FLYOVER RAMP



MD 198 PROJECT PLANNING STUDY
Flyover Ramp Option: Divided Roadway
Off-Road Shared-Use Path and Sid

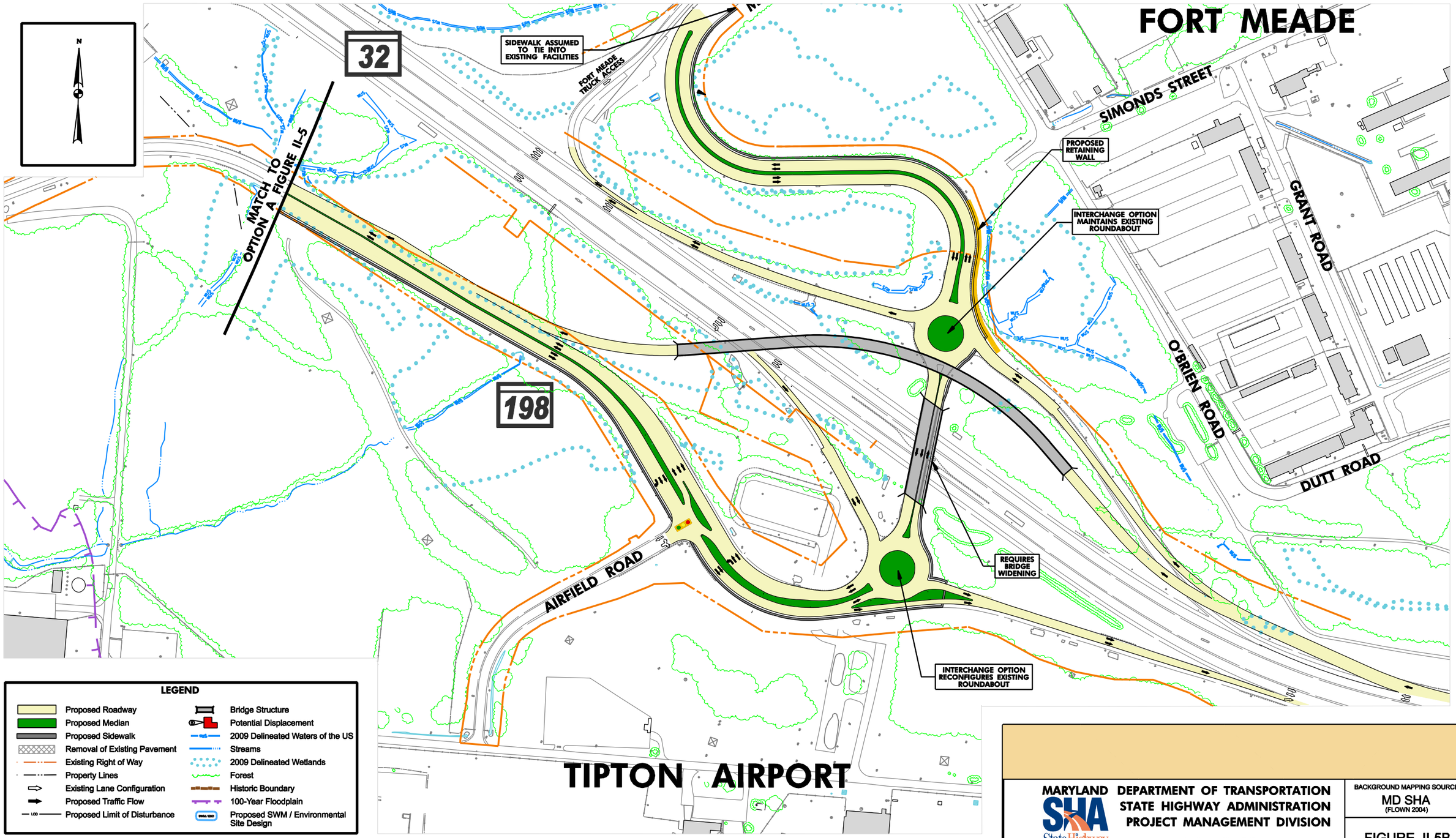
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-5A

OPTION A:
FLYOVER RAMP



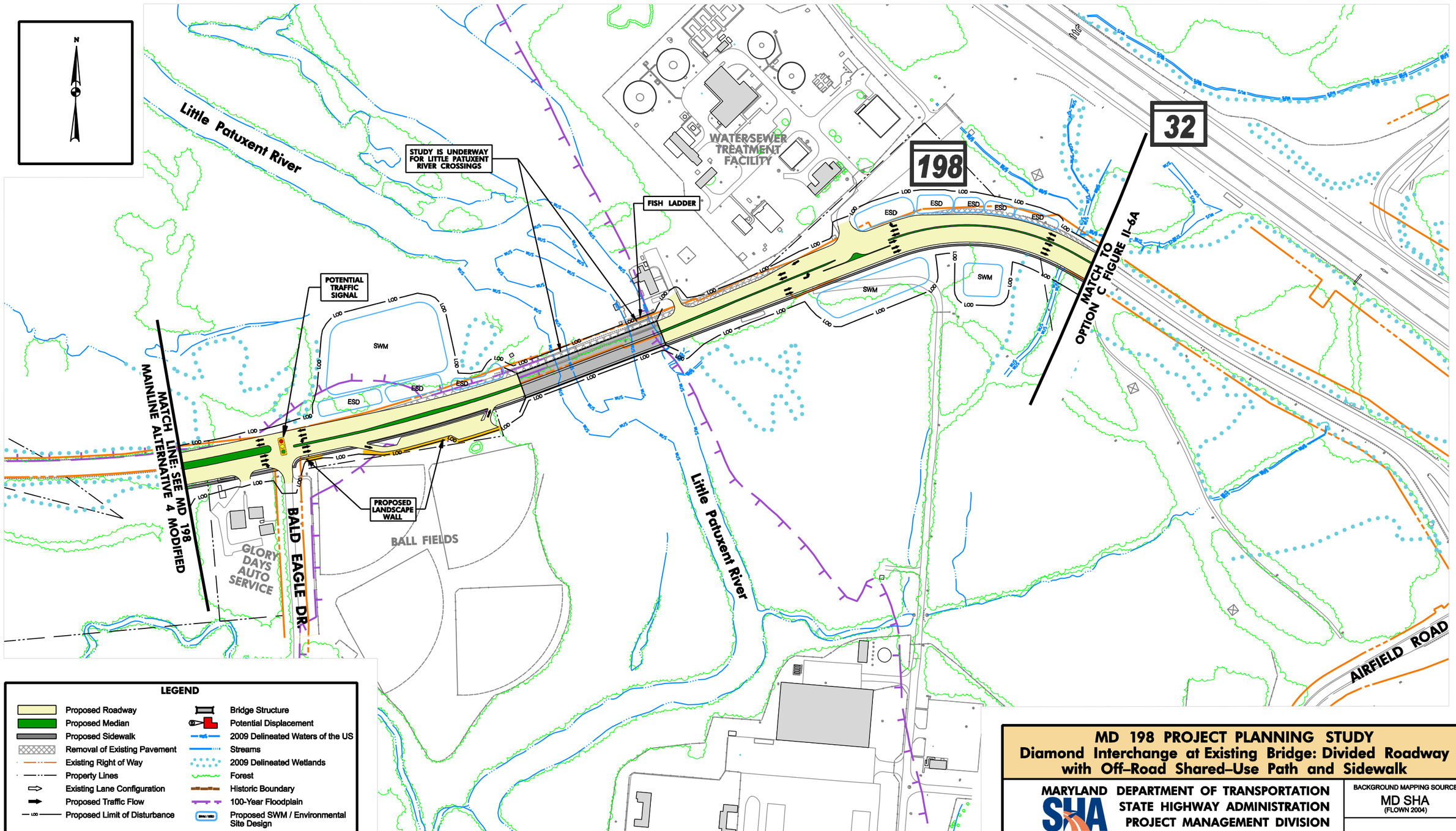
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-5B

OPTION C:
DIAMOND INTERCHANGE AT EXISTING BRIDGE



MD 198 PROJECT PLANNING STUDY
Diamond Interchange at Existing Bridge: Divided Roadway with Off-Road Shared-Use Path and Sidewalk

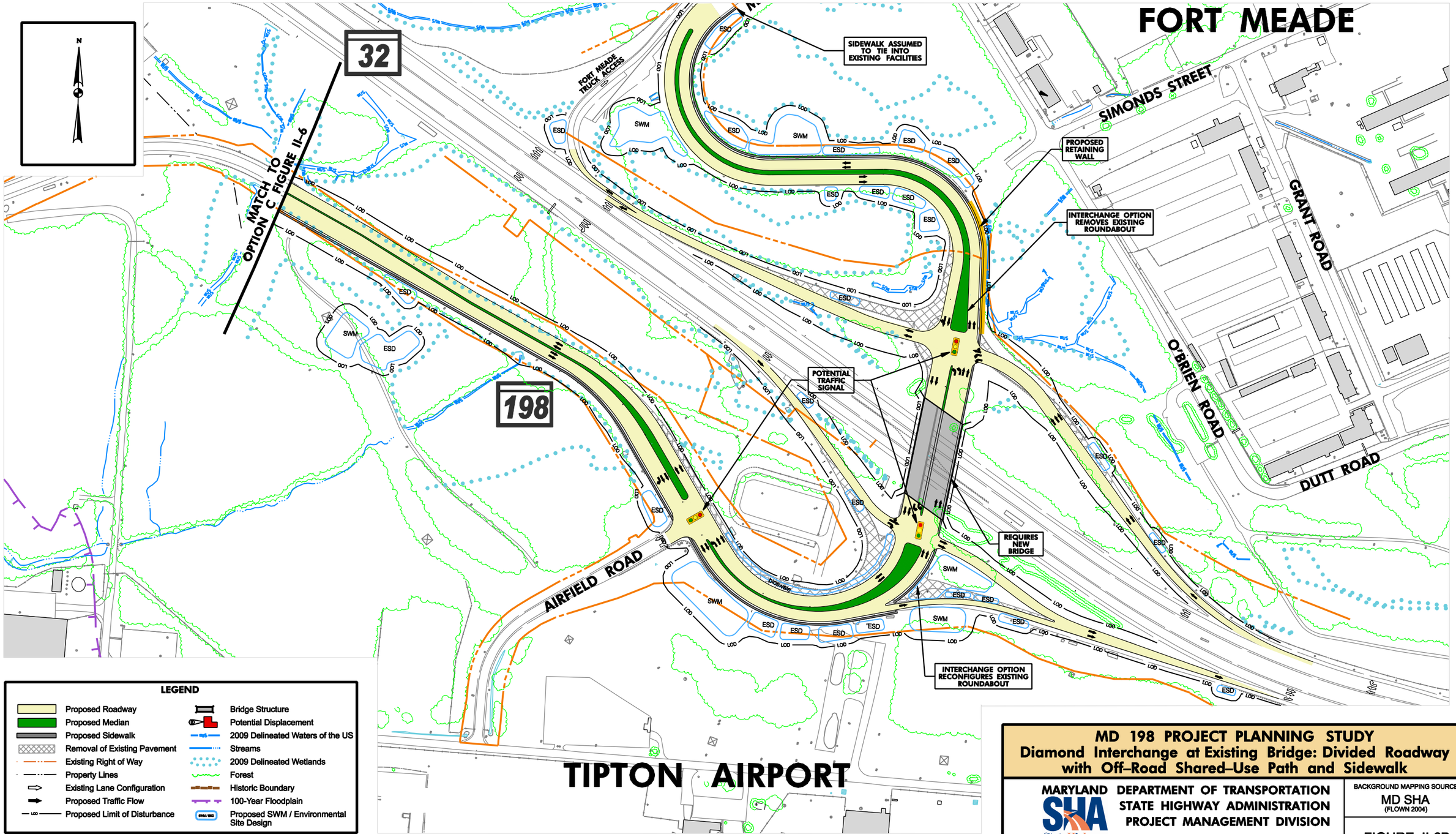
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-6A

OPTION C:
DIAMOND INTERCHANGE AT EXISTING BRIDGE



MD 198 PROJECT PLANNING STUDY
Diamond Interchange at Existing Bridge: Divided Roadway with Off-Road Shared-Use Path and Sidewalk

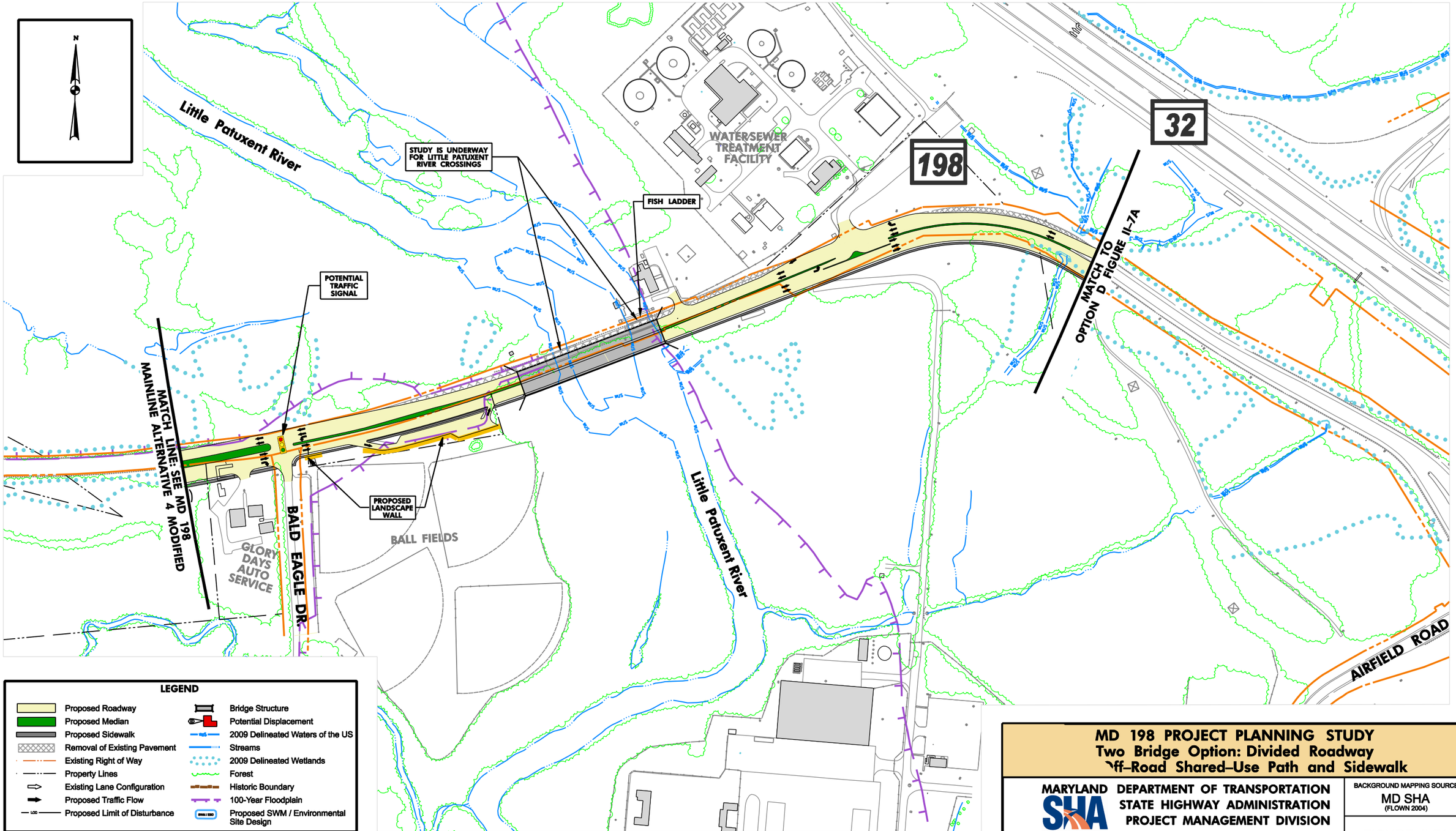
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-6B

OPTION D:
TWO BRIDGE



MD 198 PROJECT PLANNING STUDY
Two Bridge Option: Divided Roadway
Off-Road Shared-Use Path and Sidewalk

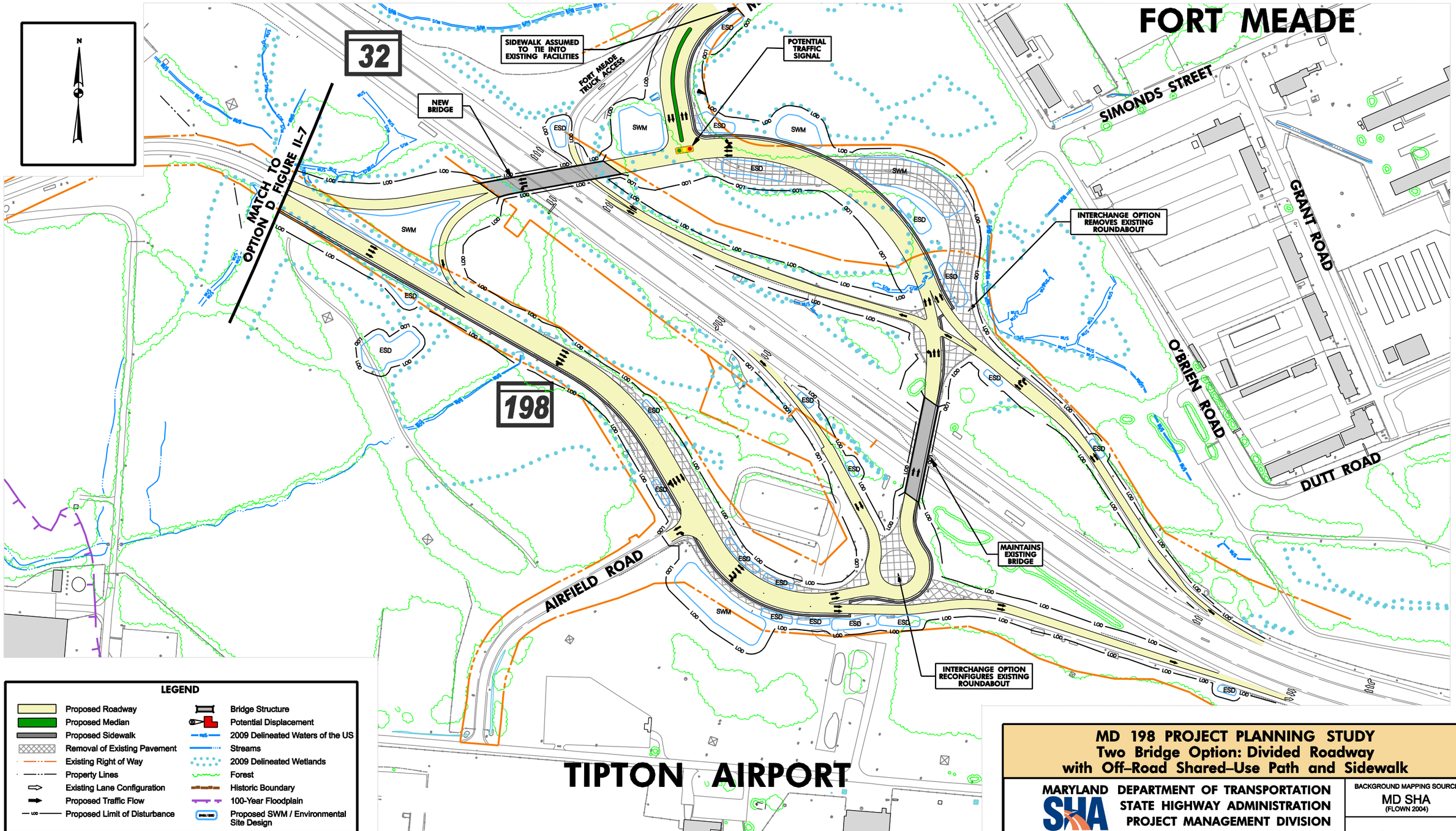
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-7A

OPTION D:
TWO BRIDGE



MD 198 PROJECT PLANNING STUDY
Two Bridge Option: Divided Roadway with Off-Road Shared-Use Path and Sidewalk

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT MANAGEMENT DIVISION

NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA
(FLOWN 2004)

FIGURE II-7B

Existing Environment and Environmental Consequences

III. EXISTING ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing conditions in the study area and the potential impacts of the proposed improvements to MD 198. The categories presented affect relevant environmental disciplines identified in the Federal Highway Administration (FHWA) 23 Code of Federal Regulations (CFR) Part 771, "Environmental Impact and Related Procedures" and all other appropriate federal, state, and local laws.

A. Land Use

1. Existing and Future Land Use

The study area is primarily composed of forest and institutional lands, with smaller areas classified as commercial, industrial, and residential (**Figure III-1**). The large amount of institutional land use is a result of the project's proximity to Fort Meade and the District of Columbia Children's Center on the north side of MD 198, between MD 295 and MD 32. Other institutional uses include the Patuxent Research Refuge and the Tipton Airport along the south side of MD 198. Commercial and industrial facilities are sparsely scattered along the MD 198 corridor. The majority of these facilities are concentrated along the western edge of the study area, east of MD 295. A single residential community, Welch's Mobile Home Park, is located within the study area, with direct access to MD 198. A few single-family homes are scattered along the study area but are not part of a community.

Three master plans govern land use in the study area: the *Anne Arundel County General Development Plan (GDP)* (2009), the *Jessup/Maryland City Small Area Plan* (2004), and the *Odenton Small Area Plan* (2003). The project falls mostly within the Jessup/Maryland City Small Area Plan. Both the GDP and the Jessup/Maryland City Small Area Plan recommend capacity improvements along MD 198 through the study area. **Figure III-2** displays the projected land use for the study area.

MD 198 provides a continuous connection between the City of Laurel and its suburbs with Fort Meade. The Laurel area has been a traditional community of Fort Meade, and this relationship will continue as the Fort and its various tenant organizations increase in population and employment. Based on SHA's estimate, the Base Realignment and Closure (BRAC) process is expected to generate 2,000 additional daily trips through the study area along MD 198 and approximately 34,000 average daily trips (ADT) by 2015: a 77.3 percent increase over the existing 22,000 ADT. Also, traffic generated within the Odenton area uses MD 198 to reach the Baltimore-Washington Parkway (especially the southbound lanes), along which it travels toward the Capital Beltway and the Washington Metropolitan Area.

The study area and the surrounding region expect considerable growth. Projected regional growth trends indicate an increased need for housing, services, and businesses. Arundel Gateway is a mixed-use village planned for construction on the south side of MD 198, just east of the MD 198/MD 295 Interchange. The 300-acre mixed-use property, as proposed in the bond bill, would include approximately 150,000 square feet retail space, 300,000 square feet office space, 150 hotel rooms and 1,650 apartment/condominium space. The traffic impact studies completed

in March 2011 show the following breakdown for the proposed development: a) Arundel Gateway – 150,000 square foot shopping center, 100,000 square foot office space, 1,050 townhouse/condominiums and 360 apartments, and b) Liberty Valley (originally part of Arundel Gateway, but now a separate development) – 440 apartments. Specifics of the development will be finalized as the land development approval process is completed.

2. Effects on Land Use

The No-Build Alternative requires no land-use changes from displacements or right-of-way (ROW) acquisitions. Alternative 2 would result in the transfer of 10.8 acres from commercial land use to transportation use through ROW acquisition. Future land-use projections are shown in **Figure III-2**.

Alternative 4 Modified and the interchange options each require conversion of residential and commercial land to transportation uses, whether through displacement or ROW acquisition. The minimum amount of land use conversion would be 48.2 acres with the combination of Alternative 4 Modified and Interchange Option C. The maximum amount of land use conversion would be 49.3 acres with the combination of Alternative 4 Modified and Interchange Option A. The mainline alternative and the interchange options are consistent with local land-use plans. The expansion of MD 198 and the addition of accessible, user-friendly pedestrian and bicycle facilities should attract residents and businesses to locations in and around the study area.

B. Social Characteristics

A socio-economic land use inventory was conducted as part of the MD 198 study and is summarized in the following narrative. For additional details, refer to the *MD 198 Community Effects Assessment* (SHA, 2010).

The inventory involved the identification of communities, community facilities, and commercial and industrial facilities within the study area. In addition, data regarding population, ethnicity, economics, and other demographics, which were available through the U.S. Census Bureau's Census 2000, were compiled and evaluated. Data was collected at the census tract block group level. The census tract block groups that encompass the study area are depicted in **Figure III-3**.

1. Population and Housing

Table III-1 shows the population statistics for the State of Maryland, Anne Arundel County, and the study area. The population for Maryland is expected to increase by 1,387,764 or approximately 26 percent while Anne Arundel County's population is expected to increase by 83,144 or approximately 17 percent. Approximately four percent of the study area is over the age of 65, less than half that of the State and County. The percent of persons within the study area with one or more disabilities is 12, the same as the county but lower than the State. The median household income for the study area is $66,962, which is more than Maryland ($52,686) and Anne Arundel County ($61,768). Approximately four percent of the study area is over the age of 65, less than half that of the State and County. The population for Maryland is expected to

increase by approximately 26 percent while Anne Arundel County's population is expected to increase by approximately 17 percent.

Table III-2 gives the housing statistics for Maryland and Anne Arundel County. Information on the housing characteristics for the study area has not been included due to changes in the census tract boundaries between 1990 and 2000. The number of households in Anne Arundel County has increased by 19 percent between 1990 and 2000; during the same period, the State experienced an increase of 13 percent.

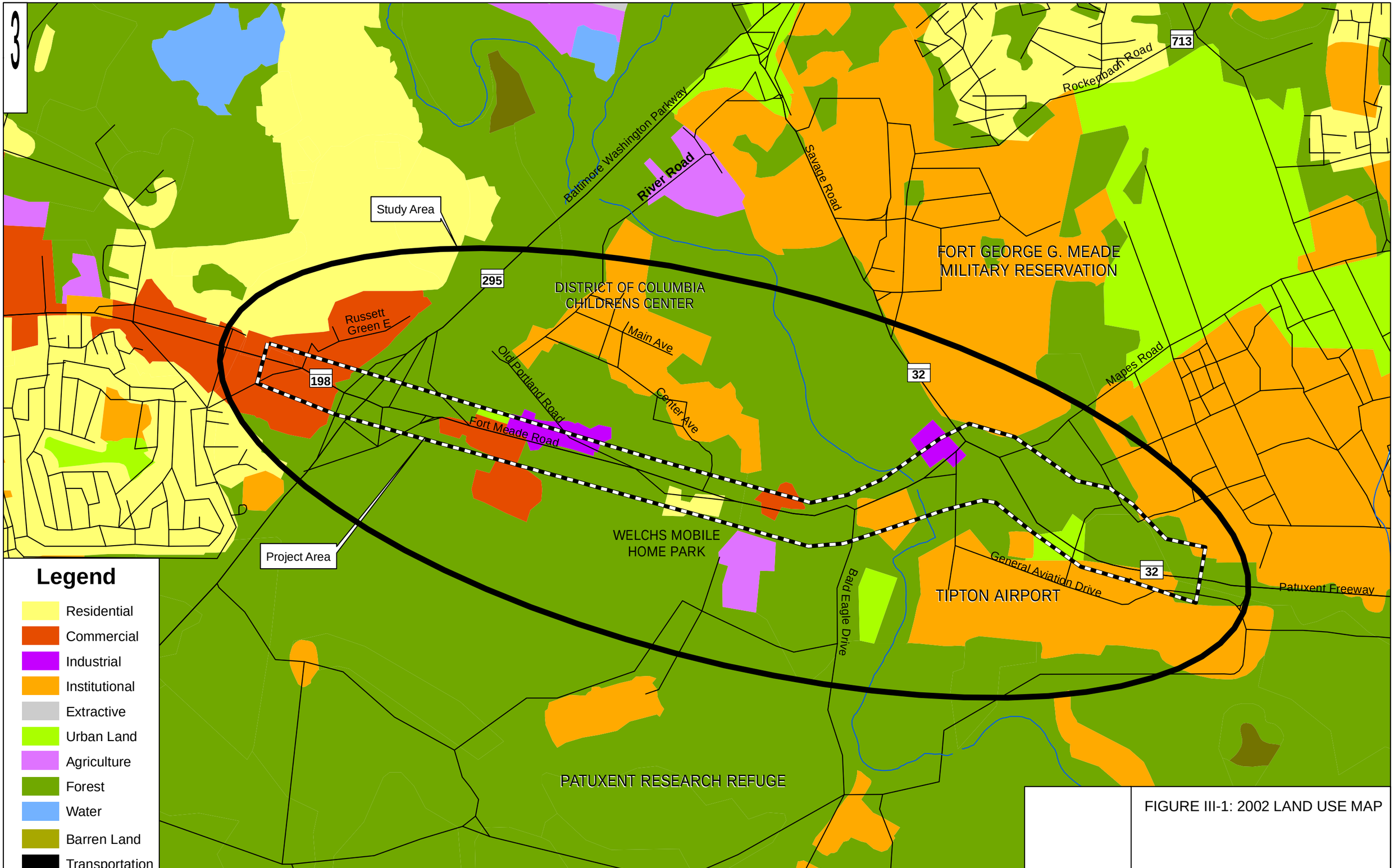


FIGURE III-1: 2002 LAND USE MAP

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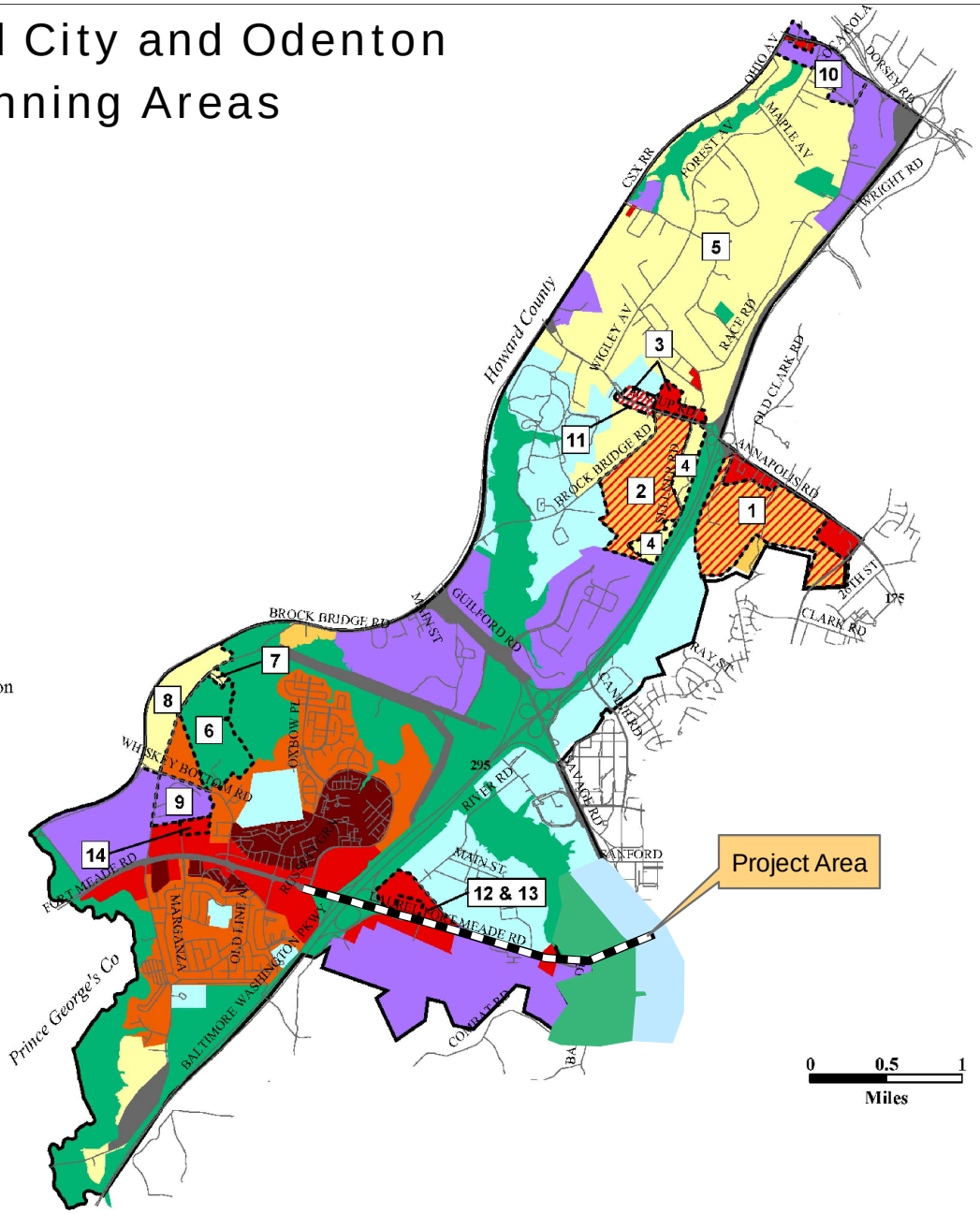
Jessup/Maryland City and Odenton Small Planning Areas

3

Proposed Land Use

Legend

- L - Residential Low Density
- LM - Residential Low-Medium Density
- M - Residential Medium Density
- H - Residential High Density
- COM - Commercial
- IND - Industrial
- OSR - Natural Features
- MUR - Mixed Use Residential
- GOV - Government Institution
- UTL - Transportation/Utility
- RCT - Residential-Commercial Transition



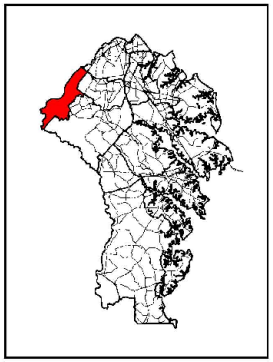


Figure III-2

MD 198 - Anne Arundel County Future Land Use

*Recommended land use changes from areas 12 and 13 are industrial to commercial (Jessup/Maryland Small Area Plan, 2004) .

File: N:/mapdata/smallap.bi/jcs/projects/jcs_prop_landuse_adopted.mxd
Map Production: Office of Planning & Zoning, GIS Section
Copyright 2004

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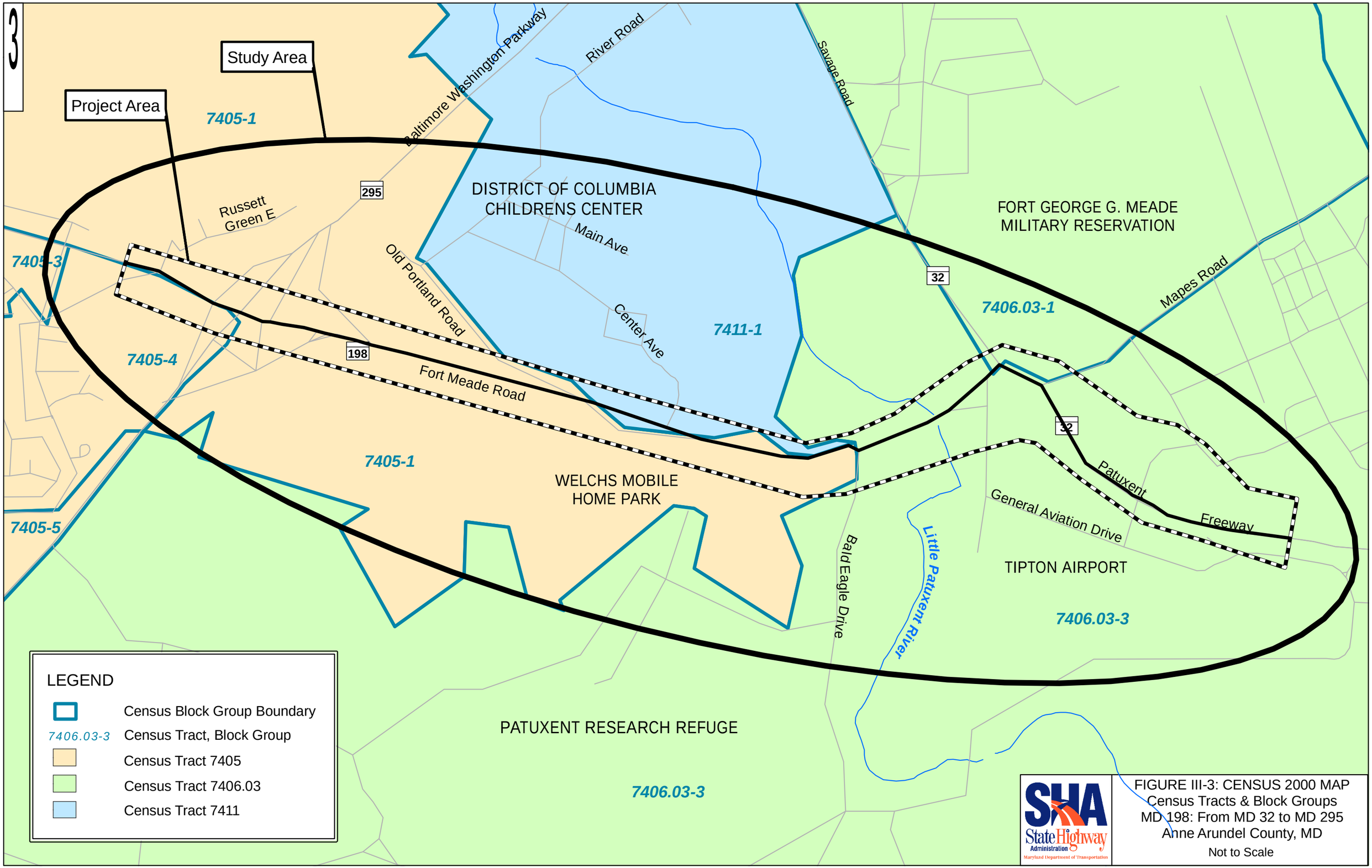

FIGURE III-3: CENSUS 2000 MAP
Census Tracts & Block Groups
MD 198: From MD 32 to MD 295
Anne Arundel County, MD
Not to Scale

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Table III-1: Population Characteristics

Characteristic		Maryland	Anne Arundel County	Study Area
Total Population		*5,296,486*	*510,778*	N/A[1]
Projected Population by 2030		*6,684,250*	*572,800*	N/A[1]
Percent of Population 65 Years or Older*		11.3	11.1	4.4
Percent of Population in Poverty*		*8.5*	*5.1*	*8.4*
Median Household Income[2]		*$70,005*	*$83,398*	*$66,962**
Percent of Population with One or More Disabilities*		28	12	12
Racial Distribution (%)	White	*64*	*75.7*	*51.1**
	Black	*28*	*14.6*	*37.7**
	Alaska Native/ American Indian	*<1*	*0.2*	*0.4**
	Asian/ Pacific Islander	*4*	*3*	*4.4**
	Hispanic[3]	*2*	*4.2*	*3.6**
	Minority[4]	*2*	*1.4*	*48.9**

[1]Changes in the census tract boundaries between 1990 and 2000 resulted in the inability to estimate the overall population of the study area.
[2]A household, as defined by the U.S. Census, is a place (structure) where one or more persons reside on a regular basis. A family is defined as two or more persons related by birth, marriage, or legal adoption who occupy a place on a regular basis.
[3]Hispanic is an origin, not a racial designation. Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.
[4]Percent Minority includes populations of two or more races and populations of one race alone other than the races listed above in addition to Black, Alaska Native/American Indian, Asian/Pacific Islander, and Hispanic populations.
*Figures from Census 2000 only. Information was not available in the *2006-2008 American Community Survey 3-year Estimates* data

Table III-2: Housing Characteristics

	Households in 1990	Households in 2000	Percent Change from 1990 to 2000	Housing Units in 1990	Housing Units in 2000	Percent change from 1990 to 2000
Maryland	*1,748,991*	*1,980,859*	*13.3%*	*1,891,917*	*2,145,283*	*13.4%*
Anne Arundel County	*149,114*	*178,670*	*19.8%*	*157,194*	*186,937*	*18.9%*

2. Environmental Justice

Based on a review of census data and coordination with churches and schools in the vicinity of the study area, no Environmental Justice (EJ) populations were identified. A field review conducted on February 15, 2007, also did not identify minority or low-income populations within the MD 198 study area.

a. Methodology

The SHA obtained baseline demographic information at the block group level from Census 2000 and used it to identify potential locations of minority and low-income populations. Project team members compared that block group data to the overall study area minority and poverty level totals to identify concentrations of minority and low-income populations and consulted local planning officials to identify other potential EJ populations within the study area.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, defines minority persons as follows:

- Black (a person having origins in any of the Black racial groups of Africa);
- Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture origin, regardless of race);
- Asian American (a person having origins in any of the original peoples of the Far East, South East Asia, the Indian subcontinent, or the Pacific Islands);
- American Indian and Alaska Native (a person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition).

A person whose median household income is at or below the Department of Health and Human Services (DHHS) poverty guidelines is defined as "low income." The DHHS guidelines are derived from the poverty thresholds updated each year by the U.S. Census Bureau. DHHS 2008 poverty guidelines are $10,400 for the first person in a household and $3,600 for each additional person, up to $21,200 for a family of four.

b. Findings

According to the criteria above, Census 2000 indicates that minority populations make up 48.9 percent of the study area. Approximately 51 percent are White; 37.7 percent are Black; 3.6 percent are Hispanic; 4.4 percent are Asian, Hawaiian, or Pacific Islander; and 0.4 percent is American Indian or Alaska Native (**Table III-3**).

The Anne Arundel County Office of Planning and Zoning and the Maryland Department of Planning did not have any information about low-income or minority communities within the study area. The D.C. Children's Center, a federal facility providing training and residential services for juveniles in the court system, is 600 feet north of MD 198.

SHA guidelines (**Appendix D**) define a minority block group as a 'block group with a meaningfully greater percentage of minorities than the study area as a whole." SHA's analysis of the Census 2000 data determined that no minority block groups exist in the study area.

SHA uses the following criterion to determine low-income block groups: a block in which the percentage of families below the poverty level exceeds the percentage of families below the poverty level in the greater geographic area. In addition to its review of census information, SHA conducted a field review in attempt to identify minority and/or low-income communities within

or adjacent to the project area. The field review identified no minority or low-income communities within the project corridor. The study area has relatively the same percentage of population considered below the poverty level as the State, but is higher than the County.

On October 12, 2007, SHA mailed 7,306 newsletters (**Appendix B**) to notify all potentially affected populations (including EJ populations) about the project. To date, no EJ communities have contacted SHA. Based on the population characteristics within the study area low percentage of non-English speaking population), the newsletter was not translated into any other languages. Project team members met with the owners of Welch's Mobile Home Park on December 8, 2008 to discuss the project. SHA provided a description of the MD 198 Project Planning Study, alternatives, and project schedule and a definition of Environmental Justice populations. SHA interviewed the Welch's Mobile Home Park owners to determine EJ eligibility. The answers to the interview questions obtained by SHA at this meeting indicated that Welch's Mobile Home Park could not be confirmed as an EJ community.

Table III-3: Racial Distribution, Median Household Income, and Population Below Poverty Status for Anne Arundel County and the Study Area

Census Block Group	White (%)	Black (%)	Alaska Native/ American Indian (%)	Asian/ Pacific Islander (%)	Hispanic (%)[1]	Minority (%)[2]	Median Household Income[3] (1999)	Population Below Poverty (%) (1999)
Anne Arundel County	***79.8***	***13.4***	***0.3***	***2.4***	***2.6***	***20.3***	***$61,768***	***5.1***
Study Area[3]	***51.1***	***37.7***	***0.4***	***4.4***	***3.6***	***48.9***	***$66,962***	***8.4***
7405 / 1	48.7	36.8	0.2	8.0	3.3	51.3	$77,620	5.7
7405 / 4	62.1	24.4	0.3	5.4	5.5	38.0	$59,412	3.6
7406.03 / 1	65.7	22.9	0	2.9	2.9	34.4	N/A	N/A
7406.03 / 3	50.2	36.7	0.9	5.9	3.2	49.9	$35,278	32.8
7411 / 1	29.0	67.7	0.4	0	2.9	71.0	$162,500	0

Source: U.S. Census Bureau, Census 2000

[1]Hispanic is an origin, not a racial designation. Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.

[2]Percent Minority includes populations of two or more races and populations of one race alone other than the races listed above in addition to Black, Alaska Native/American Indian, Asian/Pacific Islander, and Hispanic populations.

[3]A household, as defined by the U.S. Census, is a place (structure) where one or more persons reside on a regular basis. A family is defined as two or more persons related by birth, marriage, or legal adoption that occupy a place on a regular basis.

[4]The figures shown for the study area were determined by calculating the average value of the census tract block groups in the study area.

*Information was not available for the representative block groups in the *2006-2008 American Community Survey 3-year Estimates* data

c. Effects on Minority and Low-Income Populations

Analysis of census data and field reviews and coordination with churches and schools in the vicinity of the study area have identified no known concentrations of minority or low-income (Environmental Justice/EJ) populations.

No direct impacts are expected for the residents of Welch's Mobile Home Park community, but they would benefit from the project's improved access, safety, and roadway capacity. The shared-use pedestrian/bicycle path, bicycle lanes, and sidewalk proposed under the build alternatives would provide Welch's residents with safe alternatives to vehicular travel. SHA will continue to coordinate with the owner and residents of the mobile home park community to update them on project status and offer the opportunity for comments and questions about the project.

Title VI Statement

It is the policy of the SHA 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 SHA programs and projects funded in whole or in part by the FHWA. The SHA will not discriminate in highway planning, highway design, highway construction, right of way acquisitions, or the provision of relocation advisory assistance. This policy has been incorporated in all levels of the highway planning processes to ensure that proper consideration may be given to the social, economic, and environmental effects of all highway projects. Alleged discriminatory actions should be addressed for investigation to the Equal Opportunity Section of the SHA, to the attention of Ms. Jennifer Jenkins, Director, Office of Equal Opportunity, 707 North Calvert Street, Baltimore, Maryland 21202.

3. Public Participation

Outreach strategies for the MD 198 Project Planning Study are ongoing. SHA has documented the public's concerns about current congestion along MD 198, the impacts of BRAC, and the expansion of MD 198. These and other project-related concerns were expressed at the November 7, 2007, Informational Open House and the June 24, 2008, Alternates Public Workshop. A list of the stakeholders and summaries of the meetings are included in **Section IV** and **Appendix B**.

The Informational Open House was held on November 7, 2007. The open house provided the opportunity for residents, business owners, and community members to review and comment on the conceptual designs. Approximately 80 people attended the meeting and four comment cards were returned during or after the meeting. Many citizens are concerned about the BRAC improvement and want the MD 198 improvement to take place as soon as possible. Several citizens suggested that clearer signage on I-295, MD 32, MD 198, and other major roadways is needed for trucks and visitors traveling to Fort Meade. Many citizens and business owners want to be better informed and involved about project status and meetings. The comments received from the meeting are included in **Appendix B**.

The Alternates Public Workshop was held on June 24, 2008. The workshop provided the opportunity for residents, business owners, and community members to review and comment on the mainline alternatives and MD 198/MD 32 Interchange options. Many citizens commented on the project's ability to maintain pedestrian and bicycle access and expressed concerns about the MD 198/MD 32 Interchange roundabouts and the environmental impacts associated with the widening of MD 198. The comments received from the meeting are included in **Appendix B**.

4. Neighborhoods/Communities

a. Existing Conditions

The following communities/developments were identified during a study area field review: Summitt Russett, Russett Green, and Welch's Mobile Home Park (**Figure III-4**). One residential community, Welch's Mobile Home Park, is located within the study area. The communities of Summitt Russett and Russett Green are located just outside the study area's western limits and consist of condominiums, townhouses, and single- and multi-family homes, which are representative of other residential communities surrounding the project study area. Welch's Mobile Home Park consists of 25 units, with portions of the property leased for use as an upholstery store, a mechanic shop and a storage facility.

b. Effects

Impacts on communities and neighborhoods typically fall into three categories: community cohesion/isolation/accessibility; community social values/quality of life; and effects on community visual and aesthetic resources.

Community Cohesion/Isolation/Accessibility

Community cohesion refers to a personal recognition of belonging to a neighborhood or community through social interaction. Isolation of a community is similar to a reduction in community cohesion. It can result from residential structure displacements or from a physical barrier dividing or isolating a neighborhood or community.

The No-Build Alternative would result in no residential displacements, ROW acquisitions, or property impacts. This alternative would have no effect on community and neighborhood cohesion or isolation.

Alternative 2 does not require any displacements, but does result in the acquisition of 10.8 acres of ROW from seven commercial properties. The acquisitions would be minor linear sliver takes, which would not affect accessibility to the businesses or community cohesion.

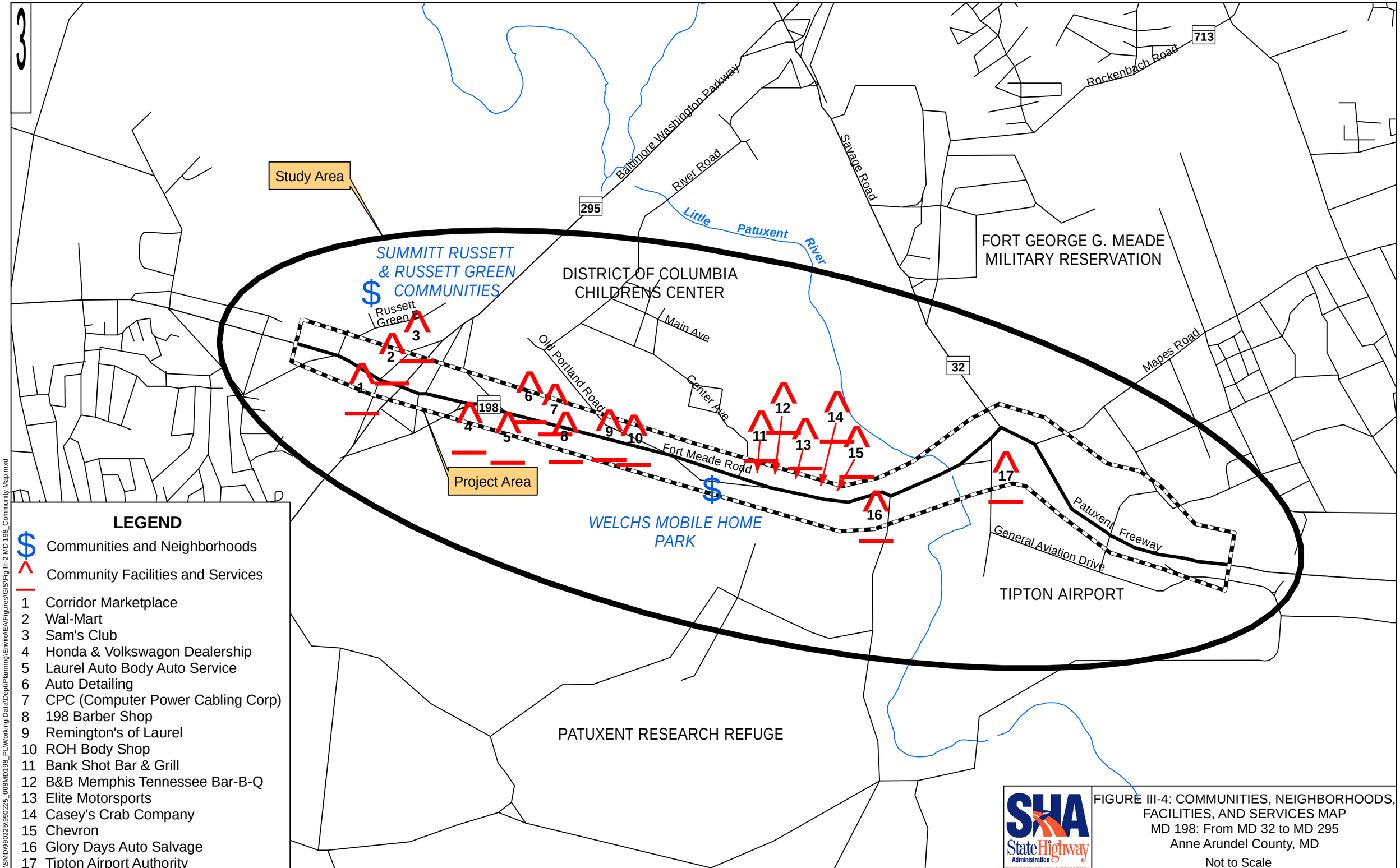
Alternative 4 Modified would require one commercial displacement, 36.5 acres of ROW acquisitions and 37 property impacts (**Table III-4**). Impacts associated with this alternative would neither displace residents within the study area nor affect community and neighborhood cohesion or isolation. Alternative 4 Modified proposes integrating a traffic signal at the entrance to Welch's Mobile Home Park and Arundel Gateway, which would allow the residents safe access to and from the community, as there are no signals there today. The proposed relief in traffic congestion would improve accessibility to study area residences and businesses. Although there would be one commercial displacement, the 198 Barber Shop located at the corner of Gateway Boulevard and MD 198, the remaining businesses are expected to benefit from the improved accessibility to and within the study area. Upgrades to MD 198 have been designed to add an American Disabilities Act (ADA) compliant shared-use pedestrian/bicycle path on the south side of MD 198, a sidewalk along the northern edge of the roadway, and bicycle lanes in either direction, thereby improving access for both pedestrians and bicyclists. The design

includes widening the existing MD 198 roadway to add an additional lane in each direction, which would provide additional capacity to handle projected growth.

Interchange Options A, C, and D result in commercial ROW acquisition and property impacts, but no displacements. These impacts are similar in nature to those of Alternative 4 Modified and would not cause community or neighborhood isolation or loss of cohesion. The proposed upgrades to the MD 198/MD 32 Interchange would create a more accessible, user-friendly interchange with the additional capacity to handle projected growth and growth due to BRAC. The interchange designs offer improved traffic movement, in some cases separating Fort Meade traffic to reduce traveler confusion and unintentional arrival at the Fort Meade gate.

Table III-4: Displacements/Right-of-Way Impacts

	Alt. 1 (No-Build)	Alt. 2 (TSM)	Alt. 4 Modified	Option A	Option C	Option D
Number of Potential Displacements						
Residential	0	0	0	0	0	0
Commercial	0	0	1	0	0	0
Total	**0**	**0**	**1**	**0**	**0**	**0**
ROW Required (acres)						
Residential	0.0	0.0	0.1	0.0	0.0	0.0
Commercial	0.0	10.8	36.4	12.8	11.7	11.9
Total	**0.0**	**10.8**	**36.5**	**12.8**	**11.7**	**11.9**
Number of Properties Impacted						
Residential	0	0	1	0	0	0
Commercial	0	7	35	2	2	2
Fort Meade Property	0	0	1	1	1	1
Tipton Airport Authority	0	0	0	1	1	1
Federal Property	0	0	0	1	1	1
U.S. Fish & Wildlife Services	0	0	0	1	1	1
Total	**0**	**7**	**37**	**6**	**6**	**6**


3
Study Area
Project Area
Baltimore Washington Parkway
295
River Road
Little Patuxent River
Savage Road
713
Rockenbach Road
FORT GEORGE G. MEADE
MILITARY RESERVATION
SUMMITT RUSSETT
& RUSSETT GREEN
COMMUNITIES
Russett
Green
DISTRICT OF COLUMBIA
CHILDRENS CENTER
Main Ave
Old Portland Road
Center Ave
198
32
Mapes Road
Fort Meade Road
WELCHS MOBILE HOME
PARK
Patuxent Freeway
General Aviation Drive
TIPTON AIRPORT
PATUXENT RESEARCH REFUGE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
LEGEND
Communities and Neighborhoods
Community Facilities and Services
1 Corridor Marketplace
2 Wal-Mart
3 Sam's Club
4 Honda & Volkswagon Dealership
5 Laurel Auto Body Auto Service
6 Auto Detailing
7 CPC (Computer Power Cabling Corp)
8 198 Barber Shop
9 Remington's of Laurel
10 ROH Body Shop
11 Bank Shot Bar & Grill
12 B&B Memphis Tennessee Bar-B-Q
13 Elite Motorsports
14 Casey's Crab Company
15 Chevron
16 Glory Days Auto Salvage
17 Tipton Airport Authority
SHA
State Highway
Administration
Maryland Department of Transportation
FIGURE III-4: COMMUNITIES, NEIGHBORHOODS,
FACILITIES, AND SERVICES MAP
MD 198: From MD 32 to MD 295
Anne Arundel County, MD
Not to Scale
Q:\SMD\99022\5990225_008MD198_PL\Working Data\Dept\Planning\Enviro\EA\Figures\GIS\Fig III-2 MD 198_Community Map.mxd

Social Values/Quality of Life

Quality of life is a combination of community cohesion, accessibility, health and safety concerns, and social changes. Health and safety concerns that can affect quality-of-life include changes in the response time of police, fire, and other emergency services providers. Social change that can affect quality-of-life includes the displacement of neighbors, community facilities, and businesses.

The impacts associated with Alternative 2, Alternative 4 Modified, and the interchange options would have a positive effect on the quality-of-life in and around the study area through reduced roadway congestion, increased traffic safety, and improved pedestrian and bicyclist access. Alternative 4 Modified requires no residential displacements and only results in one commercial displacement, a barber shop located along MD 198, adjacent to the Arundel Gateway Development. The owner of the barber shop plans to relocate the business to the proposed Anne Arundel Gateway Center when it is completed, regardless of whether or not Alternative 4 Modified is constructed. Because plans exist to relocate the barber shop and additional barber shops are located in Maryland City, impacts to the surrounding community from displacement of this business would be minimal (**Figure I-2**). Since no residential displacements are required, social change associated with the build alternatives would be minor. The interchange options require no commercial or residential displacements.

The proposed upgrades to MD 198 have been designed to add an ADA-compliant shared-use pedestrian/bicycle path on the south side, a sidewalk along the northern edge of the roadway, and an on-road bicycle lane in both directions, to improve access for pedestrians and bicyclists. The additional lane capacity on MD 198 provided by Alternative 4 Modified would reduce current traffic congestion and prevent an increase in congestion as the roadway absorbs the projected study area growth and the additional growth expected as a result of BRAC. The interchange design offers improved traffic movement, in some cases separating Fort Meade traffic to reduce traveler confusion and unintentional arrival at the Fort Meade gate.

5. Effects on Aesthetics and Visual Resources

Although there are some minor improvements associated with Alternative 2, the changes are so minor relative to the existing visual landscape that it is not considered to have any aesthetic or visual impacts. The improvements proposed in Alternative 2 are associated with the existing transportation system, which would not impact the viewshed or physical nature of the MD 198 corridor.

Alternative 4 Modified would alter the visual landscape by widening MD 198 to a four-lane highway with on-road bicycle lanes, a shared-use pedestrian/bicycle path, and a sidewalk. The proposed typical section for Alternative 4 Modified includes two lanes in either direction with the inside lane being 12 feet wide and the outside lane being a 16-foot shared-use lane with bicycles. The two directions are separated by a 20-foot-wide median. The proposed typical section includes a five-foot-wide buffer adjacent to the travel lane in both directions with a five-foot-wide sidewalk with a two-foot grass buffer outside the sidewalk on the westbound side and an eight-foot-wide shared-use pedestrian/bicycle path with a two-foot grass buffer outside the

path on the eastbound side. Alternative 4 Modified will have a total width of 105 feet, an increase of approximately 61 to 81 feet over the dimensions of the existing roadway.

The proposed typical section from the northbound on/off ramps for the Baltimore-Washington Parkway to the second access point of Arundel Gateways also includes a 12-foot-wide eastbound auxiliary lane which will widen MD 198 in this area to a total width of 117 feet, an increase of approximately seven to 67 feet over the dimensions of the existing roadway in this area.

Interchange Option A includes a flyover ramp to allow traffic from northbound MD 32 to merge onto westbound MD 198, completely separating that traffic from the roundabouts. Under Interchange Option D, a second bridge crossing MD 32 is added for vehicles accessing Fort Meade from eastbound MD 198. Under each of these options, the new structures (the flyover ramp and the bridge) would be approximately 32 feet taller than dominant features in the landscape.

Interchange Option C reconfigures the existing MD 198/MD 32 Interchange from two roundabouts to two signalized intersections. This option's visual impact under existing conditions is minimal, and it has the fewest visual impacts of the four proposed options.

Roadway widening along MD 198 is not proposed in the vicinity of the Summitt Russett and Russett Green residential communities; therefore, there would be no visual impacts to these communities. Although widening is planned for MD 198 adjacent to Welch's Mobile Home Park, the existing forested buffer would be maintained and there would be no visual impacts to this community.

Roadway widening along MD 198 and the proposed interchange options would have minor visual impacts on the businesses located within the study area. Although newer, larger visual elements associated with the proposed alternatives and interchange options would be introduced into the landscape, the modified views would remain consistent with the existing highway corridor. In addition to the improved accessibility and safety features, the new pedestrian and bicycle facilities provide a more aesthetically pleasing quality to the MD 198 corridor.

Aesthetic treatments would be considered once an alternative and interchange option are selected and detailed design work begins. If SHA selects an alternative that includes a new bridge or flyover ramp, aesthetic treatments can be incorporated into the final design of the structures to make them more visually pleasing to the adjacent homes, businesses, and roadway commuters - and more consistent with the overall study area landscape.

6. Community Facilities and Services

Community facilities and services were identified and inventoried by reviewing census data, geographical information systems (GIS) mapping, ADC maps, discussions with local planners, and field reconnaissance. There were no public schools, places of worship, libraries, health care facilities, or emergency service provider facilities identified within the study area.

a. Parks and Recreational Areas

No community recreation centers lie within the study area. The closest recreation facility is Emancipation Community Park, in Laurel, Maryland, west of the study area and east of the I-95/MD-198 interchange. The study area contains portions of the Patuxent Research Refuge and the Baltimore-Washington (BW) Parkway which will be impacted by the proposed improvements. Proposed impacts to the refuge and parkway are discussed below.

Patuxent Research Refuge

The Patuxent Research Refuge is located within the southern section of the study area, south of MD 198, but outside the project area. The Refuge owns and manages wildlife refuge lands and four ball fields located at the southeast corner of the MD 198/Bald Eagle Drive intersection. The Patuxent Research Refuge is one of more than 540 Refuge areas in the National Wildlife Refuge System, administered by the U.S. Fish and Wildlife Service (USFWS). The Refuge area totals 12,641 acres and consists of three tracts. Portions of the North Tract are located in the study area off MD 198, 1.4 miles east of the Baltimore-Washington Parkway. The North Tract includes 8,100 acres of a former military training area transferred from the Department of Defense by Congressional mandate in 1991.

The Refuge permits activities compatible with research and wildlife management objectives, including hiking, bicycling, horseback riding, hunting, fishing, wildlife observation, and environmental education. The ball fields can be utilized by the public and by governmental agencies.

Baltimore-Washington Parkway

The Baltimore-Washington Parkway is a 29-mile scenic highway that extends from Baltimore to the eastern boundary of the District of Columbia. The National Park Service manages a 19-mile section of the BW Parkway between Fort Meade (MD 32) and the District of Columbia. There are no active recreational activities within the Parkway, but there are several places of interest along the Parkway that the public can visit. The Parkway is encompassed by a historic boundary and is listed as a historic district on the National Register of Historic Places (NHRP).

Effects to Parks and Recreational Facilities

Both the Patuxent Research Refuge and the BW Parkway are considered Section 4(f) resources under the U.S. Department of Transportation Act of 1988 (49 USC 3030(c)). Section 4(f) permits the use of land from a significant publically-owned public park, recreation area, wildlife or waterfowl refuge, or land of a historic site of national, state, or local significance (as determined by federal, state, or local officials having jurisdiction over the resource), only if there is no feasible or prudent alternative to the use of such land and if the action includes all possible planning to minimize harm to the protected property resulting from such use. A Section 4(f) "use" occurs when a property from a Section 4(f) resource is permanently acquired and incorporated into a transportation project or when there is occupancy of land that is adverse in terms of the statute's preservationist purposes of maintaining the integrity of the resource, or when there is a constructive use of land. In some cases, the project proponent(s) and the reasonable official(s) with jurisdiction over the resource may agree that a particular use of

Section 4(f) land would have no adverse affect on the protected resources, resulting in a *de minimis* impact finding.

The FHWA "Guidance for Determining *De Minimis* Impacts to Section 4(f) Resources" indicates that the following criteria must be met in order to satisfy the requirements of a *de minimis* impact finding.

1. The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

2. The official(s) with jurisdiction over the property are informed of FHWA's intent to make the *de minimis* impact finding based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

3. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource.

The project would have no direct impacts on the Patuxent Research Refuge or the associated ball fields located at the intersection of MD 198 and Bald Eagle Drive. However, there is a small area owned by Fort Meade, which is located between MD 198 and the ball fields that will be impacted by the proposed interchange options. This area is currently undeveloped and is used informally for overflow parking during ballgames. All four interchange options propose improvements to this area that create a paved parking lot that would provide 28 parking spaces.

The primary parking area for the ball fields is a gravel lot along Bald Eagle Drive, which is one of the access points to the Patuxent Research Refuge. This lot contains approximately 47 parking spaces. To offset the loss of the informal pull-over parking lot along MD 198, an improvement and expansion of the primary parking lot that is Patuxent Research Refuge-owned is proposed. These improvements to the lot would result in a paved 62 space lot and would result in no net change in parking spaces. In addition, further improvements at Bald Eagle Drive include a new traffic signal, with a median break and turn lanes onto MD 198.

As previously mentioned, FHWA has established three main criteria to determine whether a project will have a *de minimis* impact on Section 4(f) resources. Upon selection of the preferred alternative, the SHA plans to seek FHWA's concurrence on a *de minimis* finding for the proposed impacts to the parking area of the ball fields. The SHA has determined that the proposed impacts meet the *de minimis* criteria for the following reasons.

1. The proposed improvements would impact the overflow parking area for the ball fields. As part of the project, the SHA intends to enhance the parking area and improve access to MD 198.

2. In the September 17, 2009 letter to USFWS, SHA requested USFWS concurrence that the proposed improvements to the parking lot along Bald Eagle Drive would be a temporary use and not require evaluation under Section 4(f). USFWS concurred on April 6, 2010. Also, in a letter to Fort Meade dated October 7, 2009, SHA discussed their intent to pursue a *de minimis* impact finding and requested agreement from Fort Meade (as the property owner of the parking area adjacent to the Patuxent Research Refuge ball fields), that the proposed impacts would not adversely affect the activities, features, and attributes of the ball fields. Fort Meade concurred on March 17, 2010.

3. The public will be offered the opportunity to review and comment on SHA's intention to pursue a *de minimis* impact finding at the Public Hearing in the Fall of 2011.

4. Based on coordination with the agency with jurisdiction over the property and in consideration of comments from the public, the FHWA will make a *de minimis* determination which will be reported in the final environmental document prepared for this project.

Refer to **Section IV – Section 4(f)** for the completed Draft Section 4(f) Evaluation that was completed for the impacts to Baltimore-Washington Parkway.

b. Emergency Services

SHA anticipates emergency response times would improve from the improvements associated with the build alternatives. SHA requested several emergency services within the study area to review the proposed alternatives and options for the project in terms of possible impacts on response times for emergency services. Anne Arundel County Fire and Police Departments stated that Alternative 4 appeared to provide the best response time for emergency vehicles. The Anne Arundel County Office of Emergency Management did not foresee any issues regarding emergency response, as the area in question has very limited service population and the proposed alternatives allow access for emergency vehicles. The emergency services correspondence is included in **Appendix B.** The signals proposed under Alternative 4 Modified will have signal preemption functions and therefore act the same as Alternative 4 did for emergency vehicles.

c. Pedestrians and Bicyclists

Between the Little Patuxent River and MD 32, MD 198 is signed as a designated bicycle route. This designation extends onto MD 32, east of the MD 198/MD 32 Interchange, to MD 175 and provides bicycle-compatible connectivity to the Odenton MARC Station and the Odenton Town Center. Bicycles and pedestrians are prohibited from MD 32 west of the MD 198/MD 32 Interchange. SHA plans to designate MD 198 as a bicycle route from MD 32 to Old Columbia Pike in Montgomery County. The Anne Arundel County Pedestrian and Bicycle Master Plan (2003) recommends improvements to enhance bicycle and pedestrian compatibility along MD 198 through the project limits.

There are no established pedestrian or bicycle facilities in the study area. The No-Build Alternative and Alternative 2 provide no pedestrian or bicycle facilities and make no

improvements to study area access. Alternative 4 Modified proposes adding on-road bicycle lanes, a sidewalk and a shared-use pedestrian/bicycle path, which would improve access to MD 198 and increase pedestrian and bicyclist safety.

d. Transportation Facilities and Other

Bus service is not available along the MD 198 corridor from MD 295 to MD 32. The closest bus route is west of MD 295 in Maryland City.

MARC commuter-train service is not available in the study area, but the Odenton MARC Station and the Laurel MARC Station are located within a few miles of the project limits.

Tipton Airport is located in the study area along the south side of the MD 198/MD 32 Interchange. Plans indicate that Tipton will be redeveloped as a state-of-the-art general aviation facility.

The local transportation system should benefit under the build alternatives and interchange options as they allow more reliable travel through the study area, reducing congestion and increasing traveler safety along MD 198 and through the MD 198/MD 32 Interchange. Expanding the existing roadway would allow drivers to use the additional lanes during emergencies and construction and maintenance activities. Since roadway closures during those activities should be unnecessary, continuous service would be maintained.

e. Public Utilities

Public water and wastewater service along MD 198 is unavailable within the study area with two exceptions. First, Fort Meade has a federally owned water and wastewater treatment plant near the MD 198/MD 32 Interchange, adjacent to the Little Patuxent River. Both systems actively support Fort Meade, the NSA Complex, D.C. Children's Center, the Woodland Job Center, Sarah's House, all Anne Arundel County Public Schools located on Fort Meade property, and Tipton Airport. Second, the National Park Service has recently approved a finding of no significant impact document for a water and sewer extension across the Baltimore-Washington Parkway. This system would be used by the proposed Arundel Gateway development.

Electric service is available in the study area through the Baltimore Gas and Electric Company. The study area contains no natural gas service.

Neither the water or the wastewater system would be impacted by any of the build alternatives or interchange options. However, gas and electric lines would be relocated under the build alternatives.

C. Economic Environment

The following information is summarized from the *MD 198 Community Effects Assessment* (SHA, 2009):

1. Employment Characteristics

Based on the Census 2000 data in **Table III-5**, the average per capita income for Maryland and Anne Arundel County is $25,614 and $27,578, respectively, and the average per capita income for the study area is $31,408. The per capita income for the study area is slightly higher than for the state and the county.

The Census 2000 data shows that 80 percent of the study area is employed. This employment rate is slightly higher than in Maryland (65 percent) and Anne Arundel County (71 percent).

The top two occupations, in descending order, in Maryland and Anne Arundel County are (1) management, professional, and related occupations; and (2) sales and office occupations. The State and County differ in their third-largest occupations: professional and related occupations in the state, and service occupations in the county. The top three occupations, in descending order, within the study area are (1) management, professional, and related occupations; (2) sales and office occupations; and (3) service occupations. Employers within the study area include Fort Meade, NSA, Tipton Airport, and a number of smaller businesses.

The majority of State, County, and study area residents drive a car, truck, or van to work without carpooling. Carpooling represents the second-highest mode of workforce transportation and public transportation represents the third-highest mode in the state, county, and study area.

Table III-5: Employment Characteristics

Characteristics	Maryland	Anne Arundel County	Study Area
Average Per Capita Income	$25,614	$27,578	$31,408
Percent of Population Employed	64.6	71.1	80.1
Primary Industries Employing Residents	Educational, health and social services; professional, scientific, management, administrative, and waste management services; and public administration	Educational, health and social services; professional, scientific, management, administrative, and waste management services; and public administration	Educational, health and social services; professional, scientific, management, administrative, and waste management services
Primary Occupations of Residents	Management, professional, and related occupations; sales and office occupations; and professional and related occupations	Management, professional, and related occupations; sales and office occupations; and service occupations	Management, professional, and related occupations; sales and office occupations; and service occupations.
Primary Modes of Transportation	Drive a car, truck, or van without carpooling (73.7 percent); carpooling (12.4 percent); and public transportation (7.2 percent)	Drive a car, truck, or van without carpooling (80.3 percent); carpooling (10.7 percent); and public transportation (2.5 percent)	Drive a car, truck, or van without carpooling (78.6 percent); carpooling (13.2 percent); and public transportation (4.5 percent)

2. Effects on Regional Employment Characteristics

The MD 198 corridor should experience increased use resulting from study area growth. Under the No-Build Alternative and Alternative 2, the current highway configuration would remain unchanged, and capacity and safety concerns would continue to grow, resulting in additional congestion and increased traffic hazards. Continuing traffic concerns could increase commute times and discourage trips along this portion of MD 198, as travelers choose less-congested routes. Changes in traffic patterns would affect regional economy and employment by reducing drive-by business in some areas and increasing it in others. Ultimately, the effect on businesses in the study area would be negative and regional growth patterns would be altered.

The implementation of build alternatives and any of the interchange options should affect regional economy and employment by decreasing congestion, increasing accessibility, and improving safety along the MD 198 corridor. The reduction in congestion could increase regional use of MD 198, resulting in increased drive-by business and higher rates of employment. Commuters and travelers from more congested routes within the region might choose to travel MD 198, thus decreasing drive-by business in some areas and altering regional growth patterns.

3. Effects on Local Employment Characteristics

The SHA anticipates a substantial increase in the use of the MD 198 corridor as a result of the projected growth of the study area and the additional growth expected from BRAC. Under the No-Build Alternative and Alternative 2, the current highway configuration would remain unchanged, and capacity and safety concerns would continue to grow, resulting in additional congestion and increased traffic hazards. Repeated traffic delays could increase commute times or discourage trips along this portion of MD 198, as travelers choose other routes. The reduction in drive-by business could negatively impact study area businesses and future growth.

The SHA expects that the implementation of the build alternatives and interchange options would have varying effects on the local economy and employment. Alternative 4 Modified would decrease congestion and increase safety and accessibility more than any of the other alternatives by widening the roadway and adding shared-use pedestrian/bicycle facilities, bicycle lanes, and sidewalks. The reduction in congestion could increase local and regional use of the MD 198 corridor, resulting in increased drive-by business opportunities and promoting future growth within the study area. Alternative 4 Modified would result in one commercial displacement, a barber shop located adjacent to the Arundel Gateway Development.

4. Tax Base

The 2009 property-tax rates for Anne Arundel County and the City of Laurel are identified below:

Anne Arundel County: $0.888 per $100 of assessed value of real property

City of Laurel: $0.71 per $100 of assessed value of real property

39The general revenue for general property taxes collected for Fiscal Year 2007 was $470,163,256. The County expected growth in the property-tax revenue for Fiscal Year 2008. The property tax collected from the City of Laurel in Fiscal Year 2008 was $13,690,678. The City of Laurel projected that Fiscal Year 2009 property-tax revenue would increase to $16,248,217.

As a result of the 2005 BRAC, the study area anticipates substantial increases through 2010 in population, housing, and commercial activity, and expects to add approximately 5,695 new on-base jobs at Fort Meade.

5. Effects to Tax Base

Because the No-Build Alternative and Alternative 2 would involve few, if any, roadway improvements beyond routine repairs and require no property acquisitions, the local tax base should experience no direct effects. Alternative 2 would require 10.8 acres of commercial ROW acquisition, which would reduce the value of the land from which they would be acquired by reducing the size of the properties.

Alternative 4 Modified would displace one commercial property and the acquisition of commercial and residential ROW. By using commercial land for transportation purposes, the project would reduce the tax base, and by reducing property sizes, the ROW acquisitions would reduce the value of the land from which they are acquired. The minor reduction in tax base would be offset in the future as tax revenue increases with study area growth.

As a result of the proposed expansion, MD 198 should become a well-traveled, congestion-free corridor with the potential to increase commercial growth. To take advantage of the improved conditions, regional businesses may relocate and new businesses may establish themselves within the study area.

6. Compliance with Smart Growth Initiatives

The Smart Growth Initiative requires direct funding from the state for highways and economic development in areas designated as Priority Funding Areas (PFA). The MD 198 project limits are entirely within a PFA; therefore, regardless of the alternative selected, the project is in compliance with Smart Growth initiatives.

7. Livability Principles and Sustainability

As part of its Every Day Counts initiative, FHWA has established six principles of livability. Departments of Transportation are encouraged to be mindful of the following principles during project planning.

- **Provide more transportation choices** to decrease household transportation costs, reduce our dependence on oil, improve air quality, and promote public health.

- **Expand location and energy-efficient housing choices** for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- **Improve economic competitiveness of neighborhoods** by giving people reliable access to employment centers, educational opportunities, services and other basic needs.
- **Target federal funding toward existing communities** through transit-oriented mixed-use development and land recycling to revitalize communities, reduce public works costs, and safeguard rural landscapes.
- **Align federal policies and funding** to remove barriers to collaboration, leverage funding and increase the effectiveness of programs to plan for future growth.
- **Enhance the unique characteristics of all communities** by investing in healthy, safe, and walkable neighborhoods, whether rural, urban, or suburban.

In early 2009, an intermodal working group was formed to start shaping the U.S. Department of Transportation's (USDOT) vision of livability. Initial steps included the identification of all existing programs and authorities within the USDOT that already supported livability and drafting possible changes to these programs that would allow the USDOT to make livability a priority and make real improvements in the lives of American citizens.

In June 2009, the U.S. Department of Housing and Urban Development, USDOT, and the EPA united to form the Partnership for Sustainable Communities, an unprecedented agreement to coordinate federal housing, transportation, and environmental investments, protect public health and the environment, promote equitable development, and help address the challenges of climate change. The three agencies are working together to coordinate federal policies, programs, and resources to help urban, suburban, and rural areas and regions build more sustainable communities, to make those communities the style of development in the United States, and to remove policy or other barriers that have kept Americans from doing so.

a. Effects on Livability Principles and Sustainability

The purpose of the MD 198 project is to improve capacity and traffic operations, increase vehicular and pedestrian safety, and support development in the study area. The proposed improvements will improve economic competitiveness of neighborhoods by giving people reliable access to Fort Meade and to the Baltimore-Washington Parkway, educational opportunities, services and other basic needs. It will also support existing communities by supporting mixed-use development within an existing Priority Funding Area and by enhancing the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods. SHA has worked extensively with the Anne Arundel County officials to address local and regional transportation needs with respect to the development trends and setting of the communities.

Alternative 4 Modified will widen MD 198 to provide improved capacity and traffic operations to and from the commercial center of Fort Meade. It will provide a 16-foot-wide outside shared-use lane to accommodate bicyclists on the roadway as well as a five-foot-wide sidewalk (westbound) and an eight-foot-wide shared-use pedestrian/bicycle path (eastbound) for walkers and recreational bicyclists from the bridge over the Baltimore Washington Parkway to the ball fields. At this point the project narrows so that only a single sidewalk extends eastward to Fort Meade. In total, these features will provide a more walkable neighborhood.

These design efforts ensure that the project is being developed in concert with the growth elements of the three master plans: the GDP, the Jessup/Maryland City Small Area Plan, and the Odenton Small Area Plan. The project falls mainly within the Jessup/Maryland City Small Area Plan which recommends capacity improvements along MD 198 as a means to achieve its future land use goals. The project will address the needs identified in the land use plans by alleviating the predicted traffic congestion throughout the study area. In addition to improving community and commercial access, the project will provide improvements to pedestrian facilities.

D. Cultural Resources

Identification and evaluation of historic architectural and archeological resources were conducted in accordance with federal and state laws, which protect significant cultural resources. Background research and field surveys were conducted to facilitate identification of cultural resources. An Area of Potential Effect (APE) was delineated in which to identify resources and evaluate the potential impacts of those resources.

All cultural resources identified during the architectural and archeological surveys were evaluated for their eligibility to be included on the National Register of Historic Places (NRHP). The NRHP criteria evaluates the significance of properties based on their integrity, and determine if those properties are associated with broad patterns of our history (Criterion A); or are associated with the lives of persons significant in our past (Criterion B); or that embody the distinctive characteristics of a type, period, or method of construction representing the work of a master, or have artistic value (Criterion C); or that yield information important in prehistory or history (Criterion D) (36 CFR 60.4, and National Register Bulletin No. 15).

A compliance report containing a historic context and property evaluations was submitted by EHT Traceries Inc. to Maryland Historic Trust (MHT) for eligibility evaluations in August 2007; this report only included architectural history evaluations. After final plans were decided upon in the Spring of 2009, architectural and archeological cultural resource evaluations were continued. The architectural survey has been finished, but problems with land access at the D.C. Children's Center/Oak Hill Property have delayed the completion of archeological survey. A preliminary report on the completed survey "Phase I Archeological Survey of Portions of MD 198 between MD 295 and MD 32, Anne Arundel County, Maryland" was completed in October of 2009.

All cultural resources identified were documented and submitted to MHT for eligibility determinations or to comment on the need for further evaluation.

1. Historic Standing Structures

"Historic standing structures" refers to any above-ground building, structure, district, or object that attributes to our cultural past. When these resources meet the criteria for listing in the NRHP, they are historic properties that must be considered under the requirements of the National Historic Preservation Act of 1966. The BW Parkway is listed on the NRHP and the Post Core of Fort Meade was determined to be eligible for listing in 2001. The D.C. Forest Center was determined to be eligible in 2007. The MHT concurred on November 4, 2009 that the project would have no adverse effect on the D.C. Children's Center - Forest Haven District and the BW Parkway **(Appendix B)**. Please refer to **Section IV – Draft Section 4(f) Evaluation** for additional information concerning the *de minimis* determination for the BW Parkway.

The proposed build alternatives will affect the D.C. Children's Center - Forest Haven District by closing the existing entrance and constructing a new shared entrance for the property, which will be located east of the existing entrance. Neither existing nor proposed entrances are located within the historic boundary of the D.C. Children's Center; therefore, there will be no impacts from the proposed project.
The concrete and stone structure of the MD 198 bridge over the BW Parkway will not be altered; the proposed improvements are to the travel surface. Both build alternatives would minimally widen the off ramp from southbound BW Parkway at the intersection of MD 198, potentially add a signal, and maintain the ramp profile. Alternative 4 Modified would add an additional lane to the BW Parkway southbound on ramp. Signage and guardrail will be retained and either reinstalled or replaced in-kind. Landscaping along the ramps currently consists of a grass area leading to vine and tree covered slopes; additional native plantings will maintain the quantity of vegetation at the intersection. Thus, the minor increase in the roadway section proposed by the build alternatives will not adversely impact the character defining features of the BW Parkway.

2. Archeological Resources

Archeological resources relate to evidences of past human occupation that can be used to reconstruct the lifeways of past peoples. These include sites, artifacts, environmental and all other relevant information, as well as the contexts in which they occur. All archeological (prehistoric and historic) sites must be evaluated for their eligibility for the NRHP by the MHT.

A Phase I Archeological Survey in June and September of 2009 identified no archeological sites. The MHT concurred on November 4, 2009 that the project would have no adverse effect on archeological resources within the maximum limits of disturbance for the build alternatives **(Appendix B)**.

E. Natural Environment

The following information is summarized from the *MD 198 Natural Environmental Technical Report* (SHA, 2009):

1. Topography, Geology, and Soils

The study area lies within the Coastal Plain Province. Underlying geology includes a thin layer of Quaternary gravel, and sand covers the older formations. Mineral resources of the Coastal Plain are mostly sand and gravel. The landscape in this area consists primarily of level to gently rolling topography ranging from 100 feet in the Little Patuxent floodplain to about 220 feet above sea level.

The No-Build Alternative would have no anticipated impacts to topography or geology in the study area. The improvements associated with Alternative 2 would have only minor cut/fill requirements. The interchange options, roadway widening and ramp configuration changes with Alternative 4 Modified would require larger quantities of cut/fill. The use of two to one slopes and/or retaining walls along the roadway embankments would minimize the footprints of the mainline alternatives and interchange options on the topography and geology of the study area. **Table III-6** shows the estimated cut/fill amounts for each alternative.

The study area contains hydric soils, prime farmland soils, and soils of statewide importance. However, as a result of extensive disturbance to study area soils, actual soil types may differ from the Soil Survey. Original soils within the area, especially those near the MD 198/MD 295 and MD 198/MD 32 Interchanges, have been graded, filled, paved or removed since the *Anne Arundel County Soil Survey* was published in 1975.

The No-Build Alternative and Alternative 2 would not increase erosion or sedimentation. Alternative 4 Modified and the interchange options would increase erosion and sedimentation primarily during the construction phase. Most erosion would be caused by the removal of vegetation and impervious surfaces during construction, which may lead to increased exposure of soils to weathering and stormwater runoff potential. Areas that remain exposed to stormwater runoff during the construction phase would have the greatest erosion and sedimentation potential.

Table III-6: Estimated Cut/Fill Amounts

Alternative	Estimated Cut/Fill (cubic yards)		
	Cut	Fill	Net Fill
Alternative 1	0	0	0
Alternative 2	4,373	8,294	3,921
Mainline Alternatives			
Alternative 4 Modified	59,000	83,000	24,000
Interchange Options			
Option A	38,169	49,253	11,084
Option C	34,104	45,569	11,465
Option D	23,042	70,955	47,913

In accordance with the Farmland Protection Policy Act (FPPA), since the soils that are being impacted are not on land that is agriculturally zoned, a Farmland Conversion Impact Rating form is not required for this project. Therefore, Prime Farmland Soils and Soils of Statewide Importance located/mapped within the study area are exempt from FPPA coordination.

For all of the build alternatives, keeping erosion and sedimentation to a minimum would be a priority. Several methods could be implemented to decrease erosion effects, including structural, vegetative and operational methods during construction. These control measures may include:

- seeding, sodding, and stabilizing slopes as soon as possible to minimize the exposed area during construction,
- stabilizing ditches at the tops of cuts and at the bottoms of fill slopes before excavation and formation of embankments,
- the proper use of sediment traps, silt fences, slope drains, water holding areas and other control measures, and
- the use of diversion dikes, mulches, netting, energy dissipaters, and other physical erosion controls on slopes where vegetation cannot be supported.

A grading plan and erosion and sediment (E&S) control plan would be prepared and implemented in accordance with Maryland Department of the Environment (MDE) regulations. The grading and E&S control plans would minimize the potential for impacts to water quality from erosion and sedimentation that would occur before, during, and after construction. Furthermore, temporary and permanent controls would be reviewed and approved by MDE prior to initiation of construction. Measures to prevent erosion in highly susceptible areas (i.e., steep slopes) would be included in the E&S control plans when necessary.

2. Water Resources

a. Water Quality

The study area falls within one 8-digit watershed, the Little Patuxent River sub-watershed (02-13-11-05). According to the Code of Maryland Regulations (COMAR), the Little Patuxent River and its tributaries are classified as a Use I stream.

Water quality data were measured at each monitoring station including four stations upstream of MD 198 and four stations downstream of MD 198. The results are summarized in **Table III-7**. The water quality is consistent with general expectations based on the type of stream and uses within the watershed.

Table III-7: Surface Water Quality Data (2009)

Parameter	Temperature (° C)	Conductivity (ms/cm)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)
UPSTREAM STATIONS					
Station # 1	11.09	0.514	13.32	6.92	9.08
Station # 2	10.21	0.473	12.26	6.70	8.36
Station # 3	10.3	0.477	12.37	6.64	8.43
Station # 4	10.11	0.469	12.14	6.52	8.28
AVERAGE	10.43	0.483	12.52	6.70	8.54
DOWNSTREAM STATIONS					
Station # 1	12.41	0.557	12.83	8.21	8.11
Station # 2	11.73	0.503	11.58	7.4	9.31
Station # 3	10.78	0.484	11.15	7.13	10.18

Parameter	Temperature (° C)	Conductivity (ms/cm)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)
Station # 4	9.87	0.443	10.21	6.52	7.22
AVERAGE	11.20	0.497	11.44	7.32	8.71
TOTAL AVERAGE	**10.81**	**0.490**	**11.98**	**7.01**	**8.62**

Overall, in situ water quality measurements collected during the Spring 2009 baseline monitoring were all found to be within the acceptable limits set forth by COMAR for this area of the Little Patuxent River.

Surface water grab samples were also collected at each sampling station (**Table III-8**). The parameters of the analysis were selected according to the *Specifications for Consulting Engineers' Services, Volume II: Section IV, Project Development; Stage II, Final Project Planning.*

Table III-8: Surface Water Analytical Data (2009)

Monitoring Station		Upstream Stations				Downstream Stations			
Parameter	**Units**	**#1**	**#2**	**#3**	**#4**	**#1**	**#2**	**#3**	**#4**
Turbidity	NTU	8.5	7.8	2.6	2.3	2.4	2.1	1.9	1.7
Inorganic Anions									
Nitrate	mg/L	1.6	ND	1.6	1.5	1.6	2.1	1.8	1.8
Phosphorus	mg/L	ND	ND	ND	ND	ND	0.14	0.09	0.08
Residue									
Total Solids	mg/L	230	140	110	160	240	230	130	360
Suspended Solids	mg/L	17	9	4	3	2	2	1	2
RCRA Metals									
Barium	ug/L	80	35	76	75	77	43	55	57
Fecal Coliform									
E-Coli	MPN/100ml	11.9	326	9.6	8.4	16.1	7.5	12.1	10.9

The acceptable standard for turbidity in the Little Patuxent River is less than 150 NTUs. Therefore, the turbidity levels observed in the laboratory analysis are minimal and do not pose a major concern. The levels of nitrates and phosphorus observed within the study area are consistent with levels observed throughout the watershed. The barium detections in the Little Patuxent surface water samples ranged from 35 ug/L to 80 ug/L. Therefore, the levels of barium detected in the laboratory analysis are minimal and do not pose a major concern. The barium detections in the Little Patuxent surface water samples ranged from 35 ug/L to 80 ug/L. Therefore, the levels of barium detected in the laboratory analysis are minimal and do not pose a major concern. Extremely low E. Coli levels were detected at all monitoring stations except Station #2 of the upstream section where the laboratory analysis detected the presence of E. coli at 326 MPN/100ml. According to COMAR 26.08.02.03-3, this level is unsuitable for moderately frequent and frequent full body contact during recreation in the stream; however, this level would be suitable for occasional to infrequent full body contact during recreation in the stream.

Maryland Biological Stream Survey (MBSS) sampling data was available for the Little Patuxent River sub-watershed. Five sample locations were located within this sub-watershed. Based on these samples recorded by the MBSS between 2000 and 2004, Fish Index of Biotic Integrity (IBI) scores ranged from good to poor with two sites rated as good (40 percent), two sites rated as fair (40 percent), and only one site rated as poor (20 percent). However, mostly all sample locations were rated as having poor Benthic IBI scores (80 percent), with only one site rated as fair (20 percent) (**Table III-9**).

Table III-9: Descriptions of Stream Biological Integrity Associated with IBI Scores

IBI Score	Narrative Integrity Class	Characteristics
4.0-5.0	Good	Comparable to reference streams considered to be minimally impacted. Falls within upper 50% of reference site conditions.
3.0-3.9	Fair	Comparable to reference conditions, but some aspects of biological integrity may not resemble the qualities of these minimally impacted streams. Falls within the lower portion of the range of reference sites (10th to 50th percentile).
2.0-2.9	Poor	Significant deviation from reference conditions, with many aspects of biological integrity not resembling the qualities of these minimally impacted streams, indicating some degradation.
1.0-1.9	Very Poor	Strong deviation from reference conditions, with most aspects of biological integrity not resembling the qualities of these minimally impacted streams, indicating severe degradation.

Alternative 2 would increase the impervious area in the project area by 1.5 acres, Alternative 4 Modified would add 13.9 acres, and the interchange options would add 2.4 to 7.3 acres. These changes to impervious surfaces within the drainage area of the watershed would be minimal and are unlikely to impact surface water quality. Water quality data collected in the field is well within the acceptable limits set forth in COMAR.

While this study demonstrates that the proposed improvements to MD 198 would have minimal effects on the surrounding natural resources, and particularly surface water quality, the construction practices utilized during the actual construction of the roadway have the potential to create impacts beyond those demonstrated here. In order to address and minimize these potential impacts, the usage of Best Management Practices (BMPs) must be adhered to. Included in these actions are sediment and erosion control practices, stormwater management controls, environmental site design practice, minimization of vegetation impacts particularly to those within riparian or wetland buffers, and other general construction practices.

The standard operating procedures of SHA provide consideration for BMPs for roadway construction. Utilization of these standards and compliance with all relevant Federal, State, and local guidelines addressing protection of natural resources would provide assurances that the surface water quality of the Little Patuxent River will remain consistent with pre-construction conditions.

b. Floodplains

A review of the Federal Emergency Management Agency (FEMA) 100-year floodplain mapping reveals that the 100-year floodplain of the Little Patuxent River crosses the project area.

The proposed project was evaluated with respect to potential impacts on regulated floodplains. Alternatives 1 and 2 would not impact any floodplains within the study area. The anticipated permanent impacts to the Little Patuxent River floodplain for Alternatives 4 Modified and the interchange options are presented in **Table III-10**.

Table III-10: Estimated Impacts to 100-Year Floodplains

Alternative	Impact (acres)
Alternative 1	0
Alternative 2	0
Mainline Alternatives	
Alternative 4 Modified	0.1
Interchange Options	
Option A	2.4
Option C	2.4
Option D	2.4

c. Aquatic Habitat

One single fish blockage (a dam) was identified within the study area at the bridge where MD 198 crosses two sections of the Little Patuxent River. The dam is located beneath the bridge, and utilizes a working fish ladder to facilitate the free passage of fish within the stream channel. There were no other fish blockages observed within the vicinity of the study area.

Several areas of woody debris were observed within the stream channel that would benefit the fish habitat; however there was nothing that would create a fish blockage. A significant amount of trash was observed within and around the stream channel from illegal dumping and roadside debris. The trash does pose a minimal threat to the overall health of the fish population within the study area.

On August 12, 2009, SHA conducted fish sampling collections at two locations in Little Patuxent River. One location was upstream (Upstream Station #1) and the other was downstream (Downstream Station #4) of the MD 198 crossing. Fish sampling methods outlined in the *Maryland Biological Stream Survey Sampling Manual: Field Protocols* were followed. The upstream and downstream sites represent the reaches of the Little Patuxent that most closely resembled the low flow conditions described in the manual.

At the Upstream Station #1, located approximately 3,000 feet upstream from the intersection of the Little Patuxent and MD 198, the sample consisted of 14 unique species and 158 individuals collected. The most dominant species in the collection was *Rhinichthys atratulus* (Blacknose Dace) with 47 individuals collected. Fish IBI scores for the upstream sample collection are summarized in **Table III-11**.

Table III-11: IBI Scores for Upstream Station #1 (2009)		
Metrics	**Value**	**Score**
Number of Native Species (adjusted by stream size)	9	5
Number of Benthic Fish Species (adjusted by stream size)	2	5
Number of Intolerant Species (adjusted by stream size)	3	5
Percent Tolerant Fish	50%	5
Percent Abundance of Dominant Species	29%	5
Percent Generalists, Omnivores, and Invertivores	85%	5
Number of Individuals per Square Meter	.185	1
Biomass (g) per Square Meter	3.175	1
Final IBI Score	4.00 (Good)	

At the Downstream Station #4 site, located approximately 1,600 feet downstream from the intersection of the Little Patuxent and MD 198, the total fish capture included 10 unique species and 109 individuals. *Lepomis macrochirus* (Bluegill) was the most dominant species in the collection at a total of 53 individuals. Fish IBI scores for the downstream sample collection are summarized in **Table III-12**.

Table III-12: IBI Scores for Downstream Station #4 (2009)		
Metrics	**Value**	**Score**
Number of Native Species (adjusted by stream size)	7	5
Number of Benthic Fish Species (adjusted by stream size)	1	3
Number of Intolerant Species (adjusted by stream size)	1	5
Percent Tolerant Fish	60%	3
Percent Abundance of Dominant Species	49%	3
Percent Generalists, Omnivores, and Invertivores	100%	1
Number of Individuals per Square Meter	.127	1
Biomass (g) per Square Meter	3.175	1
Final IBI Score	2.75 (Poor)	

Upon calculation of the Fish IBI scores at the collection sites, it was determined that the upstream reach is minimally impacted, whereas the downstream reach was observed to be in poor condition and demonstrates a significant deviation from a minimally impacted site.

There would be no project related impacts to fish under any of the build alternatives and interchange options. No instream work is anticipated, however it is not permitted in Use I streams during the period of March 1st through June 15th, of any given year.

d. Waters of the United States (WUS)

Wetland identification and delineation efforts occurred during December 2008 in accordance with the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*

(Department of the Army Waterways Experiment Station, 1987) and supplemental guidance (**Figures III-5A** thru **III-5K**).

Impacts to WUS and wetlands for each of the build alternatives and interchange options are summarized in **Tables III-13** and **III-14**. Alternative 2 would have 0.7 acre of permanent impacts to wetlands and 71 linear feet of permanent WUS impacts. Alternative 4 Modified would permanently impact 1.4 acres of wetlands and 459 linear feet of WUS. The interchange options would permanently impact between 0.9 and 2.6 acres of wetland and between 93 and 445 linear feet of WUS.

Table III-13: Estimated Impacts to Waters of the United States*

Alternative	WUS Impacts			
	Permanent (linear feet)	Permanent (square feet)	Temporary** (linear feet)	Temporary** (square feet)
Alternative 1	0	0	0	0
Alternative 2	71	356	0	0
Mainline Alternative				
Alternative 4 Modified	459	1,994	105	505
Interchange Options				
Option A	93	976	266	10,569***
Option C	190	1,476	460	11,375***
Option D	252	2,169	304	10,723***

*For a detailed breakdown of WUS types for all permanent and temporary impacts refer to Appendix A.
**All temporary impacts were calculated using a 15 foot offset from the cut/fill line.
***All temporary impacts square footage includes the bridge span crossing over Little Patuxent River.

Table III-14: Estimated Impacts to Wetlands*

Alternative	Wetland Impacts			
	Permanent (acres)	Permanent (square feet)	Temporary** (acres)	Temporary** (square feet)
Alternative 1	0	0	0	0
Alternative 2	0.7	28,181	0	270
Mainline Alternatives				
Alternative 4 Modified	1.4	58,631	0	0
Interchange Options				
Option A	1.9	83,382	1.1	46,156
Option C	0.9	38,018	0.8	34,392
Option D	2.6	112,747	1.3	55,308

*For a detailed breakdown of wetland types for all permanent and temporary impacts refer to Appendix A.
**All temporary impacts were calculated using a 15 foot offset from the cut/fill line.

DNR indicated that there is a Non-Tidal Wetland of Special State Concern (NTWSSC) (WET-19) and associated 100-foot upland buffer located south of MD 198 along the Little Patuxent River. The 100-foot buffer would be impacted by each of the interchange options.

Approximately 11,380 square feet of the 100-foot buffer would be permanently impacted, while temporary impacts would total 3,295 square feet.

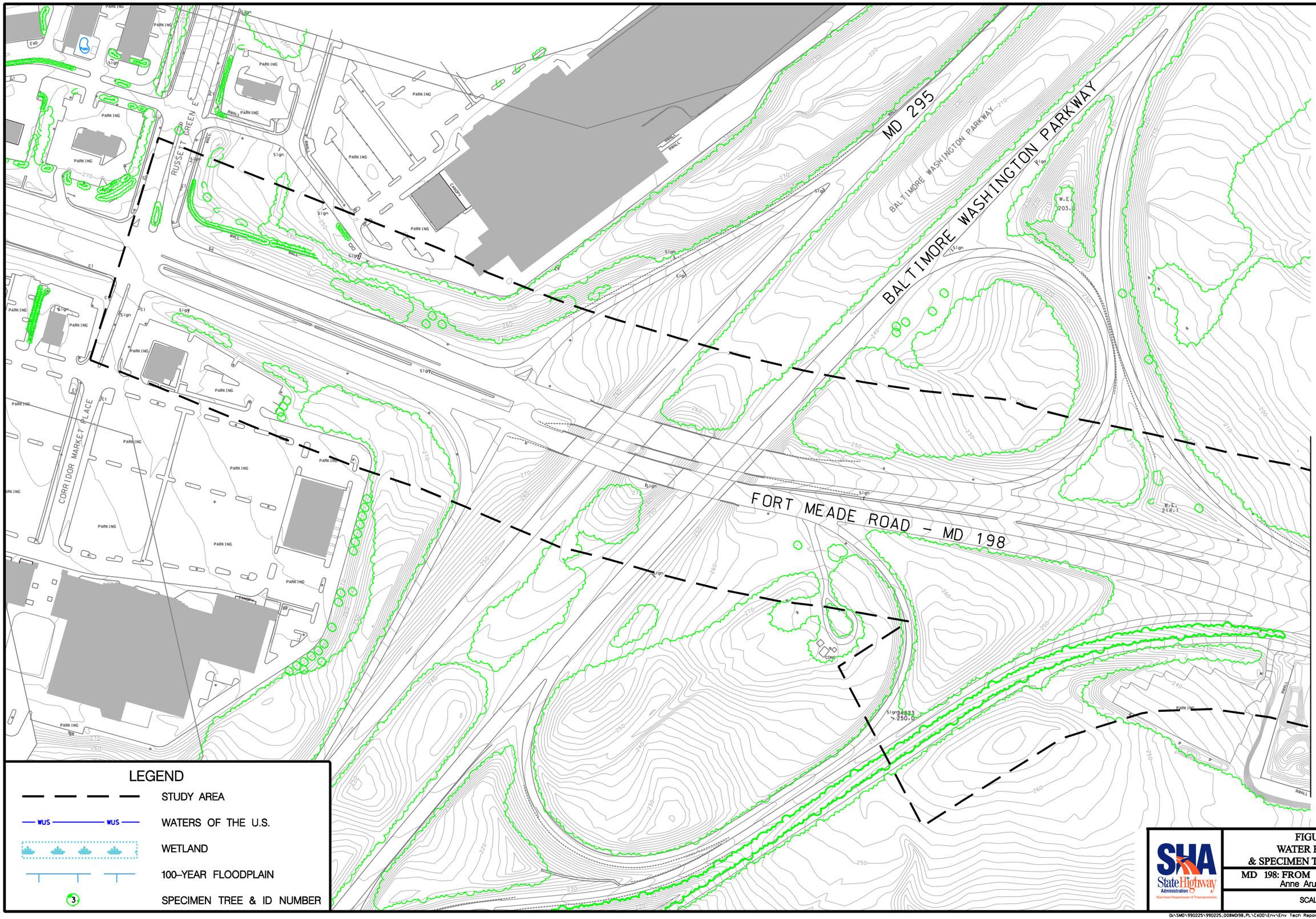
Avoidance and Minimization

For the build alternatives and interchange options, avoiding and minimizing impacts to wetlands and WUS will be a priority as the project progresses through design. Avoidance and minimization of impacts to wetlands and WUS may involve the design of steeper fill slopes and/or a retaining wall in the vicinity of the wetlands and/or WUS identified along the mainline and within and around the MD 198/MD 32 Interchange. Minimization efforts at this stage of the planning process have included decreasing right-of-way impacts through design and construction techniques as allowed under the American Association of State Highway and Transportation Officials guidelines. Specifically, total shoulder widths were reduced from 12 feet to 4 feet wherever feasible.

Wetland mitigation could involve creating wetlands of comparable function and value to those impacted by construction, or restoration and/or enhancement of existing wetlands. Mitigation for waterways could involve creation or restoration of waterways, creation or enhancement of riparian buffers, and/or removal of fish passage impediments and creation or enhancement of fish habitat. A mitigation site search will be conducted during the next stage of project planning, and summarized in the FONSI, which is the anticipated final document for this project. Mitigation would target both on-site and off-site locations within the watershed.

Aquatic resources and water quality would be protected by the Use I in-stream work restriction, proper application of an approved Erosion and Sediment Control Plan, and other Best Management Practices (BMPs) that meet the 2000 Maryland Stormwater Design Manual. Generally, no in-stream work is permitted in Use I streams from March 1 to June 15, inclusive, during any year.

Short and long term impacts would also be avoided and minimized through strict adherence to the *Maryland Stormwater Management Guidelines for State and Federal Projects.* The stormwater management guidelines became effective on July 1, 2001, and supplement the Stormwater Management Regulations (COMAR 26.17.02) and the *Maryland Stormwater Design Manual, Volumes I and II*. The stormwater guidelines provide information necessary for submittal of stormwater management plans to the MDE Water Management Administration for review and approval. Additional avoidance, minimization and mitigation measures will be identified in the final environmental document.



MATCHLINE FIGURE III-5B

SHA State Highway Administration
Maryland Department of Transportation

FIGURE III-5A:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1" = 200'

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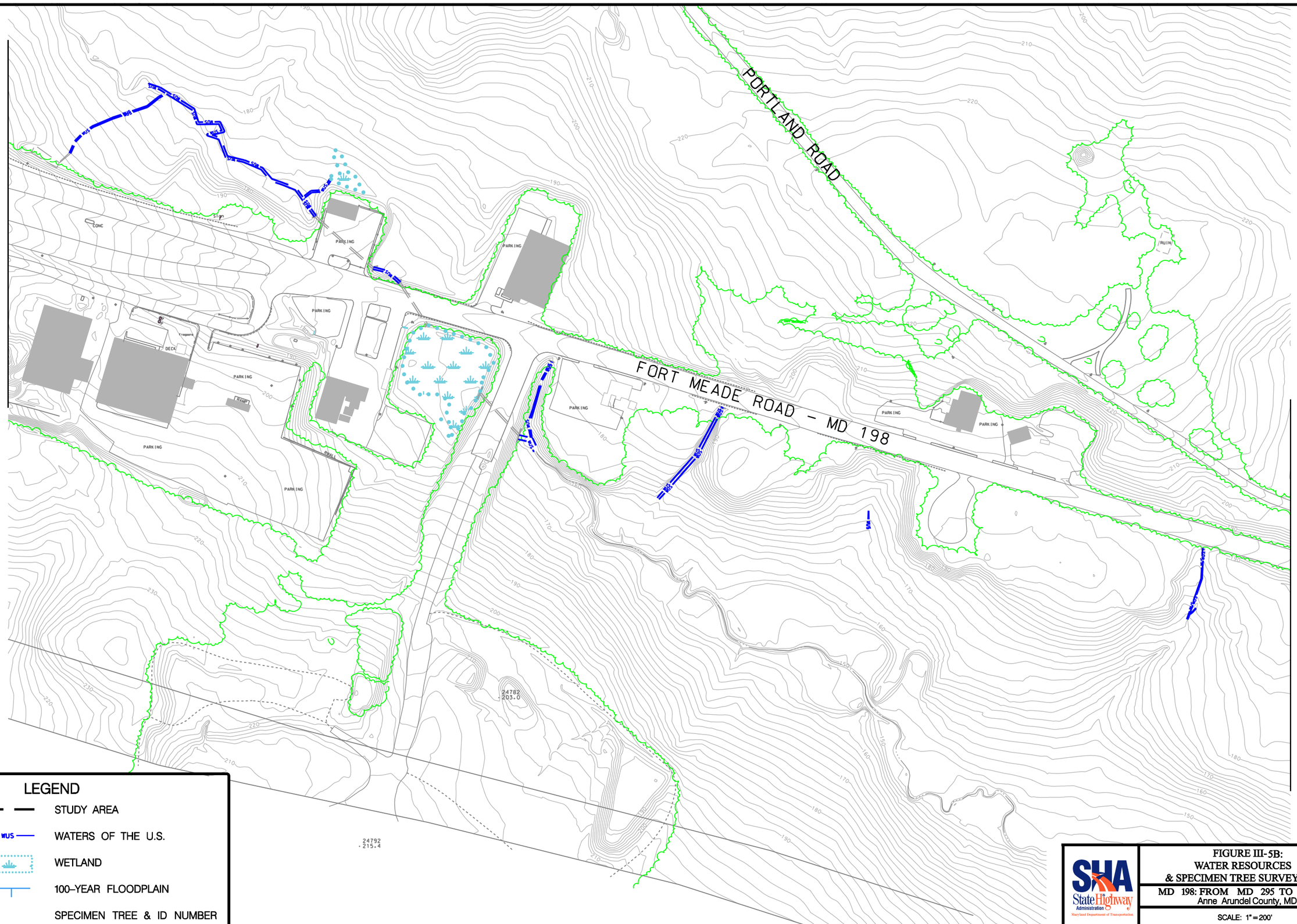
MATCHLINE FIGURE III-5A



MATCHLINE FIGURE III-5C

LEGEND

- STUDY AREA
- WUS — WATERS OF THE U.S.
- WETLAND
- 100-YEAR FLOODPLAIN
- 3 — SPECIMEN TREE & ID NUMBER

SHA State Highway Administration
Maryland Department of Transportation

FIGURE III-5B:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1"=200'

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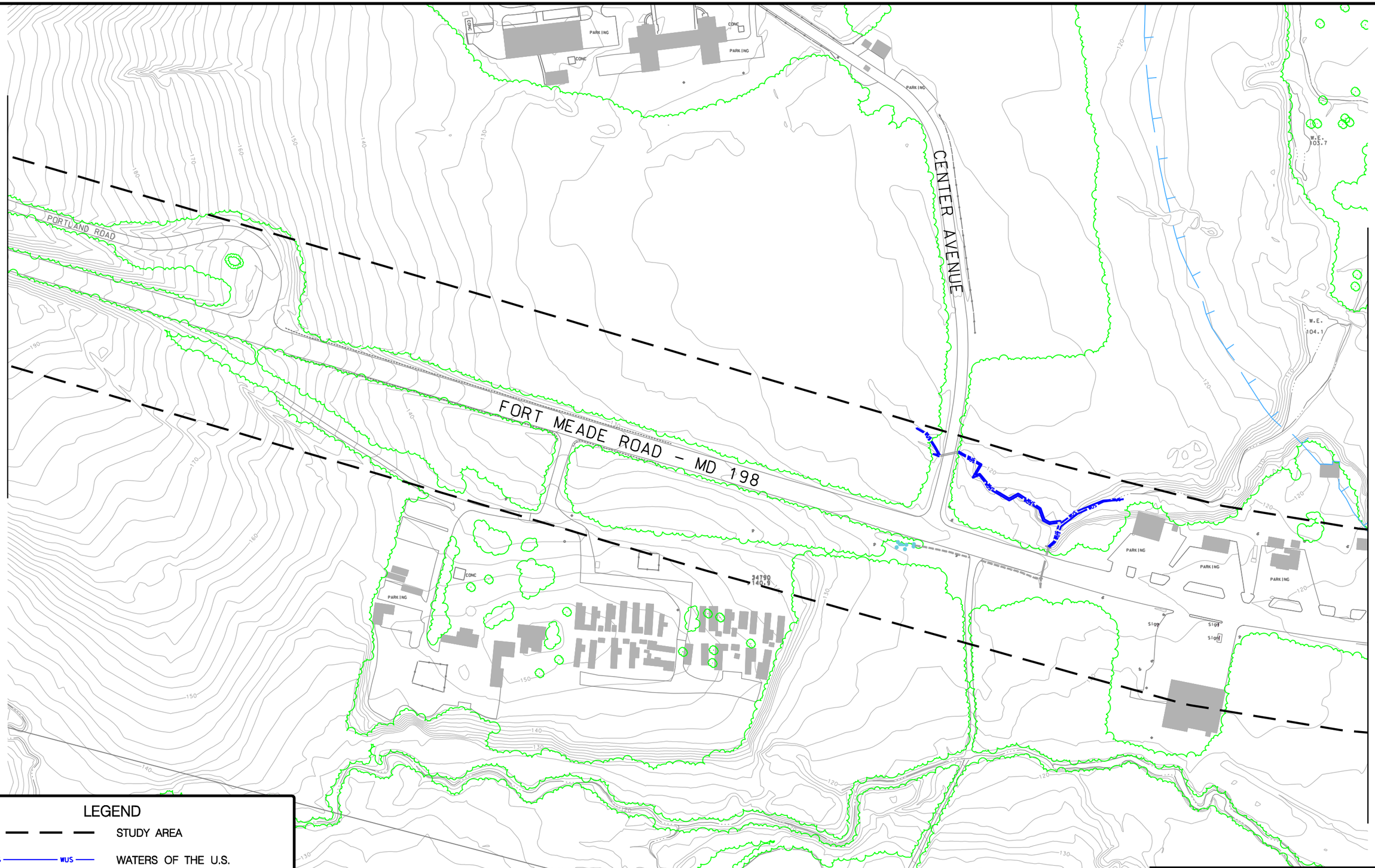
MATCHLINE FIGURE III-5B



MATCHLINE FIGURE III-5D

LEGEND

- STUDY AREA
- WATERS OF THE U.S.
- WETLAND
- 100-YEAR FLOODPLAIN
- SPECIMEN TREE & ID NUMBER

SHA State Highway Administration
Maryland Department of Transportation

FIGURE III-5C:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1"=200'

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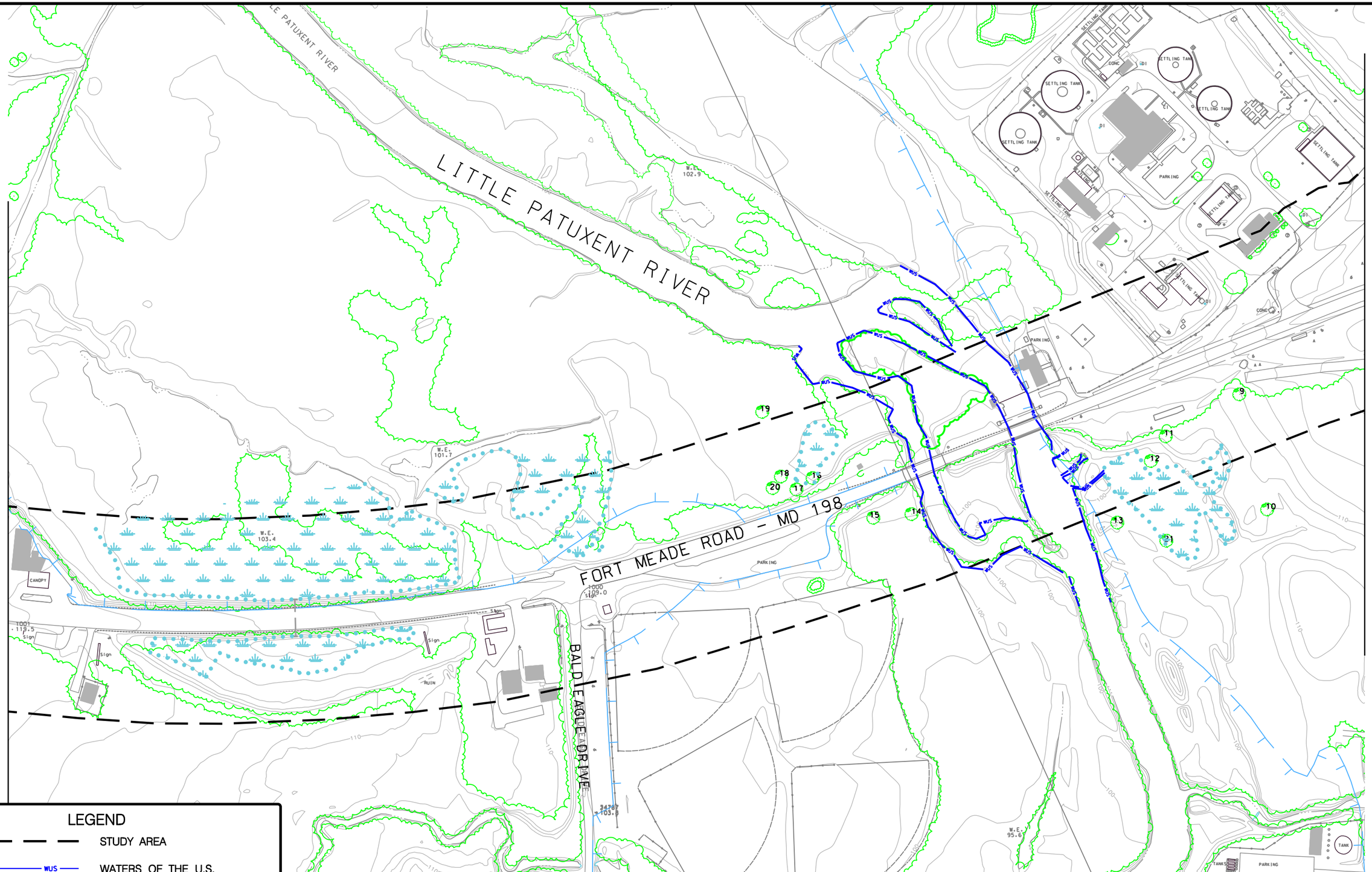
MATCHLINE FIGURE III-5C



MATCHLINE FIGURE III-5E

LEGEND

- STUDY AREA
- WATERS OF THE U.S.
- WETLAND
- 100-YEAR FLOODPLAIN
- SPECIMEN TREE & ID NUMBER

SHA State Highway Administration
Maryland Department of Transportation

FIGURE III-5D:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1"=200'

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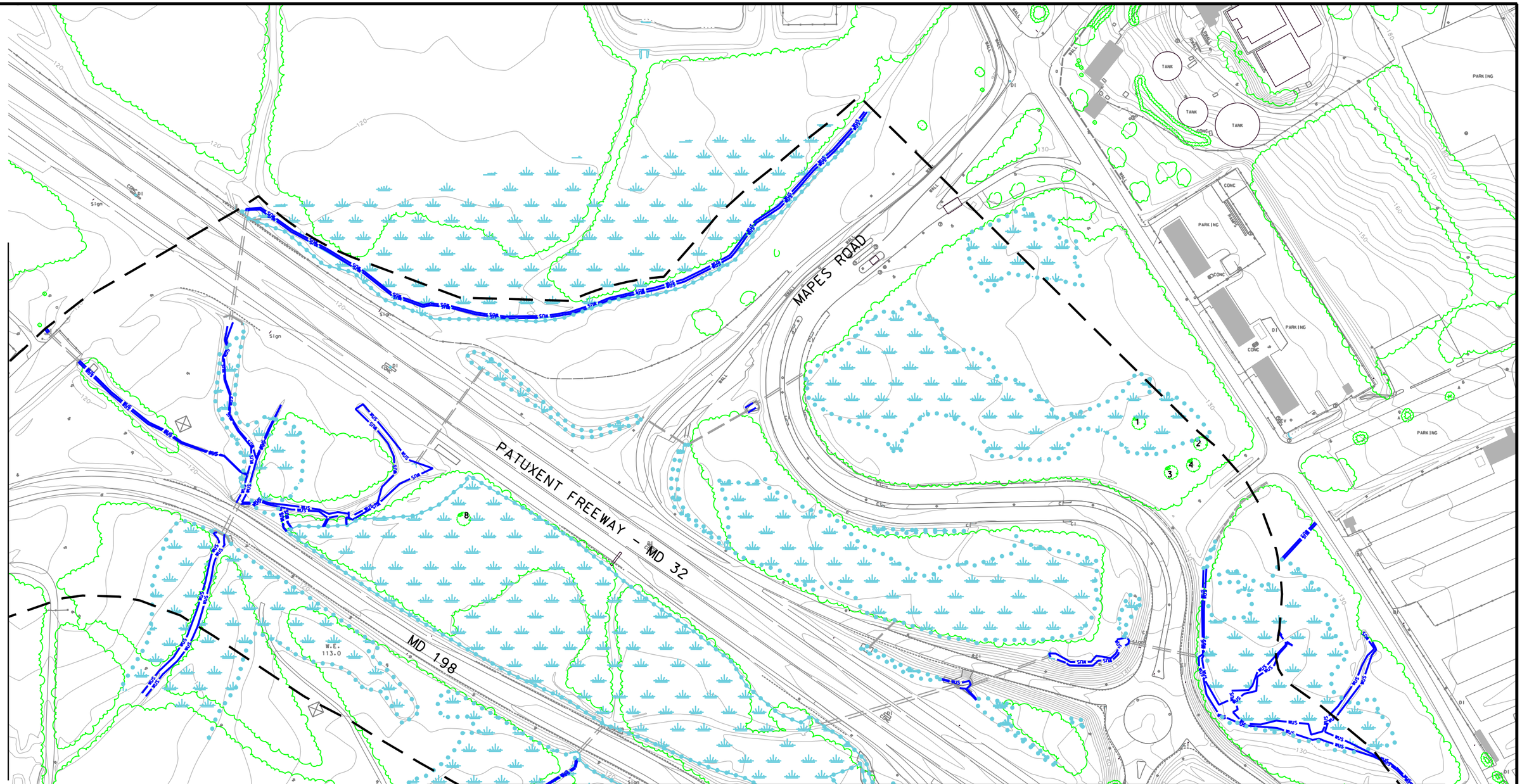
MATCHLINE FIGURE III-5D



MATCHLINE FIGURE III-5F

LEGEND

- STUDY AREA
- WATERS OF THE U.S.
- WETLAND
- 100–YEAR FLOODPLAIN
- SPECIMEN TREE & ID NUMBER

SHA State Highway Administration Maryland Department of Transportation

FIGURE III- 5E:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1"=200'

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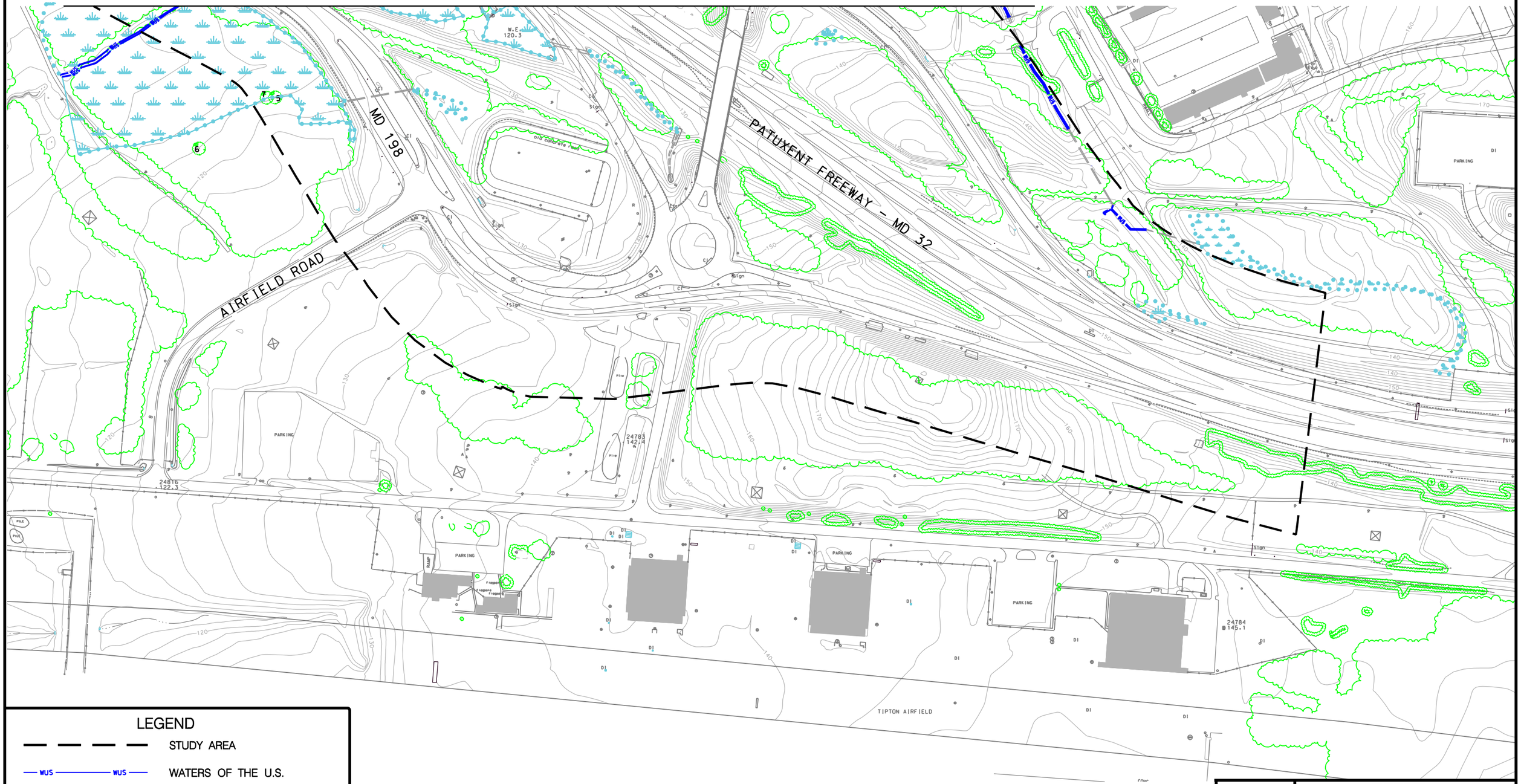
MATCHLINE FIGURE III-5E



SHA State Highway Administration
Maryland Department of Transportation

FIGURE III-5F:
WATER RESOURCES
& SPECIMEN TREE SURVEY MAP

MD 198: FROM MD 295 TO MD 32
Anne Arundel County, MD

SCALE: 1"=200'

O:\SMD\990225\990225_008MD98_PL\CADD\Env\Env Tech Reports\EA\FIGS III-5_Water Resources\FIG III-5F.dgn

3. Groundwater

The groundwater in the study area is obtained from the Patapsco aquifer. Groundwater contamination from construction activities would be minimized by implementation of BMPs. Temporary BMPs that would be utilized during construction activities include: using silt fence, re-vegetating disturbed areas, and designing grassed channels to control sediment and erosion from the work site. Permanent BMPs that would be utilized during construction activities and remain in place afterward would include stormwater management ponds and biofiltration systems, such as grassed medians and grassed drainage swales.

4. Terrestrial Habitat

a. Forest/Woodlands

Forest stands within the study area exist but have been fragmented directly or indirectly by agriculture, urbanization, timber harvesting and natural factors. There are no old-growth forests identified within the study area. The largest blocks of continuous forests are located along the Little Patuxent River floodplain and along the southern portion of the study area adjacent to the Patuxent Research Refuge. Forest land within the study area is primarily associated with stream buffers, wetlands, and undeveloped areas on private lands. The forest stands in the eastern portion of the study area are smaller in size because of the Ft. Meade base and associated development in this area. The study area contains four associations; the Willow Oak-Loblolly Pine Association, the Tulip Poplar Association, the River Birch-Sycamore Forest Association, and the Sycamore-Green Ash-Box Elder–Silver Maple Forest Association.

Permanent impacts to forests would involve the conversion of forested habitat to impervious road and associated infrastructure, and forest fragmentation where new roads would bisect existing habitat (**Table III-15**). However, because Alternatives 2, 4 Modified, and the interchange options are generally along the existing alignment, the majority of these impacts would occur to the existing forest edge and/or to narrow rows of trees next to the roadway. Worst-case permanent forest impacts would be 25.3 acres.

Table III-15: Estimated Forest Impacts

Alternative	Forest
Alternative 1	0
Alternative 2	4.5
Alternative 4 Modified	19.4
Option A	5.1
Option C	4.6
Option D	5.9

Avoidance and Minimization Measures

The project would comply with applicable laws and regulations regarding forest impacts. Per Natural Resources Article 5-103, "Reforestation Law," adopted 1989, amended 1990 and 1991, the construction of a highway by a unit of the state:

1. May cut or clear only the minimum number of trees and other woody plants that are necessary and consistent with sound design practices, and
2. Shall make every reasonable effort to minimize the cutting or clearing of trees and other woody plants

The Reforestation Law also requires the replacement, on public land, for removed wooded areas or contribution to the State Reforestation Law Fund. These mitigation measures are required on an acre-for-acre (1:1) basis for impacts to one acre or more of forest.

b. Large and Significant Trees

A large and significant tree survey was conducted concurrent with the wetland investigation during December 2008. There were 20 significant trees identified within the study area.

There would be no large or significant trees impacted by Alternatives 1, 2, or 4 Modified. Interchange Option A would impact nine and Interchange Options C and D will impact 10 significant trees. A significant tree is considered impacted if any portion of the Critical Root Zone (CRZ), the region measured outward from a tree trunk representing the area of the roots that must be maintained or protected for the tree's survival, is disturbed in any fashion. Significant trees are removed when more than 30% of the CRZ is impacted, as the tree will not be able to survive.

5. Wildlife

a. Terrestrial Wildlife

Wildlife was observed throughout the study area, primarily in naturally forested areas, fields, wetlands and wildlife corridors occurring along floodplains and greenways. Observations in the study area indicate the presence of white-tailed deer (*Odocoileus virginianus*), raccoon *(Pyrocon lotor*), beaver *(Castor canadensis),* opossum *(Didelphis marsupialis*), eastern chipmunk (*Tamias striatus*), gray squirrel *(Sciurus carolinensis*), woodchuck *(Marmota monax*), red fox (*Vulpes fulva*), gray fox (*Urocyon cinereoargenteus*) and eastern cottontail (*Sylvilagus floridanus).* Herptiles present within the study area include green frog (*Rana clamitanc*), spring peeper (*Psuedacris crucifer*), gray tree frog (*Hyla versicolor*), garter snake (*Thamnophis sirtalis*), American toad (*Bufo americanus*), wood frog (*Rana sylvatica*), black ratsnake (*Elaphe obsoleta*) and snapping turtle (*Chelydra serpentina*). Observed signs of mammals and herptiles included actual sighting, observed tracks and scat, road-kill, habitat, dwellings and breeding calls.

The No-Build Alternative and Alternative 2 would have no impact on terrestrial habitat and therefore no effect on terrestrial wildlife within the study area. Since Alternative 4 Modified and the interchange options would only expand the existing roadway, minimal impact on the wildlife communities within the study area is anticipated. Generally, road widening pushes back existing

roadside edge area. Roadside edge habitat is broadly defined as the area influenced by roadway drainage, slope limits, sun light penetration or maintenance activity. However, roadway widening is of special concern when improvements impair the passage of wildlife between areas of adjacent habitat. Alternative 4 Modified and the interchange options would not affect the passage of wildlife in or out of the good habitat areas.

b. Rare, Threatened, and Endangered Species

On December 28, 2006, the Maryland Department of Natural Resources (DNR) Environmental Review Unit indicated that the Fisheries Service has documented spawning activities of both white perch (*Morone americana*) and herring (*Alosa sp.*) in the Little Patuxent River near the project area. These fish species should be adequately protected by the Use I instream work prohibition period (March 1st through June 15th). Additional correspondence from DNR on December 28, 2006 indicated the presence of state threatened *Etheostoma vitreum* (glassy darter) and *Lampetra appendix* (American brook lamprey) in the area where MD 198 crosses the Little Patuxent River. The DNR recommended a time of year restriction from March 1st to June 15th for any in-stream work. Coordination with the U.S. Fish and Wildlife Service (USFWS) on January 19, 2007, indicated that there were no federally proposed or listed endangered or threatened species known to exist in the project area. Please refer to **Section V** and **Appendix B** for all correspondence between SHA, DNR, and USFWS referencing rare, threatened, and endangered species in the study area.

6. Benthic Macroinvertebrates

Benthic samples were collected at eight monitoring locations in accordance with the Maryland Biological Stream Survey (MBSS) protocols developed by the DNR. Sampling was performed in a riffle area when present. Sampling also occurred in habitats such as gravel/broken peat and/or clay lumps in a run area, snags/logs that create a partial dam or in a run habitat, undercut banks and associated root mats in moving water, submerged aquatic vegetation and associated bottom substrate in moving water, and detrital/sand areas in moving water.

Results of the benthic macroinvertebrate analysis identified an average of 76 individuals in each samples collected in the Little Patuxent River upstream of MD 198. There were an average of 127 individuals in each of the samples collected downstream of MD 198. A Hilsenhoff Biotic Index (HBI) score was calculated using tolerance values for each individual sample that was collected. **Table III-16** summarizes the data that was received from the benthic macroinvertebrate laboratory analysis for the upstream and downstream stations. All analytical results can be found in the *MD 198: MD 32 to MD 295, Water Quality and Aquatic Habitat Survey*.

Table III-16: HBI Score for MD 198 Stations (2009)

Station		
Upstream 1	7.51	Poor
Upstream 2	8.08	Poor
Upstream 3	6.40	Fair
Upstream 4	6.91	Fairly Poor
Downstream 1	8.03	Poor

Table III-16: HBI Score for MD 198 Stations (2009)

Station		
Downstream 2	8.29	Poor
Downstream 3	8.20	Poor
Downstream 4	7.99	Poor

The HBI scores show that the upstream water quality is slightly better than the downstream water quality. The average of the upstream HBI Scores is 7.22 (fairly poor) and the downstream HBI scores average 8.21 (poor). Upstream stations exhibited greater numbers of individuals that are sensitive to pollution, such as the *Maccafertium* (mayfly). The dominance of pollution tolerant taxons at all stations signifies that water quality is impaired throughout this portion of the Little Patuxent; however this is consistent with the water quality for the remainder of the watershed.

While this study demonstrates that the build alternatives and interchange options would have minimal effects on the surrounding natural resources, and particularly surface water quality, BMPs must be adhered to in order to minimize potential impacts due to construction. Included in these actions are sediment and erosion control practices, stormwater management controls, environmental site design practice, minimization of vegetation impacts particularly to those within riparian or wetland buffers, and other general construction practices.

The standard operating procedures of SHA provide ample consideration for BMPs for roadway construction. Utilization of these standards and compliance with all relevant federal, state and local guidelines addressing protection of natural resources will provide assurances that the surface water quality of the Little Patuxent River will remain consistent with pre-construction conditions.

7. Unique and Sensitive Areas

a. Maryland's Green Infrastructure

The GreenPrint Program (2001) was established by the Maryland General Assembly in an effort to "preserve the most ecologically valuable natural lands in Maryland" (Maryland's Green Infrastructure Assessment, 2003). These areas haves been identified in DNR's Green Infrastructure data set, which was created using satellite imagery, road and stream locations, and biological data. Identified areas include unfragmented natural areas, called "hubs", which include large blocks of contiguous interior forest and large wetland complexes; linear stretches of land, called "corridors", such as stream valleys that allow animals and seeds to move between "hubs"; and areas of disconnect between the "hubs" and "corridors", called "gaps".

The SHA, in coordination with County planners and the regulatory agencies, will use green infrastructure data in the planning process to locate areas of land that could be targeted for protection or restoration to help ensure habitat for Maryland's plants and wildlife, as well as to promote a healthier environment including improved outdoor recreation, clean drinking water, and erosion prevention. At the time Maryland's Green Infrastructure Assessment (2003) was published, it was determined that 74 percent of Maryland's Green Infrastructure is unprotected;

and 13 percent of hubs and less than one percent of corridors were in areas managed primarily for natural values.

The study area contains green infrastructure hubs, corridors, and gaps. All of the impacts associated with the Alternatives 2, 4 Modified, and the interchange options are from the proposed widening of MD 198 and the ramp improvements to the MD 198/MD 32 Interchange. Alternative 4 Modified would result in the most impacts to green infrastructure. All interchange option impacts are similar. Green infrastructure impacts resulting from Interchange Options A through D are shown in **Table III-17** below.

Table III-17: Impacts to Green Infrastructure

Alternative			
Alternative 1	0.0	0.0	0.0
Alternative 2	0.0	1.7	0.6
Alternative 4 Modified	4.1	9.4	3.9
Interchange Option A	5.5	0.0	4.3
Interchange Option C	5.5	0.0	4.3
Interchange Option D	5.4	0.0	4.2

The project's total mitigation package (wetlands, WUS, and forest) would prioritize sites that are within or in close proximity to Maryland's green infrastructure network, focusing on the obvious gap areas first. Part of the mitigation package could include protecting areas of the green infrastructure network that are not currently protected.

b. Scenic River and Research Refuge

The Little Patuxent River is recognized as a scenic river under the Maryland Scenic and Wild Rivers Program. Also, the Patuxent Research Refuge is a nationally recognized wildlife refuge that is located to the south of the project area.

The current crossing over the Little Patuxent River floods the roadway during heavy rain events. All of the interchange options include a new bridge span across the Little Patuxent River that would eliminate the flooding that currently occurs at this crossing. The new bridge span would also allow the current fish ladder located at the crossing to remain intact. It is not anticipated that any in-stream work is necessary for the construction of the proposed bridge span. Other than the wider and longer span over the Little Patuxent River, there are no other improvements associated with interchange options that would impact the Little Patuxent River. SHA will continue to coordinate with DNR during the project planning phase to ensure that all measures are taken to avoid and/or minimize impacts to the Little Patuxent River.

None of the interchange options would impact the Patuxent Research Refuge.

F. Air Quality

A project-level air quality analysis was conducted in accordance with U.S. Environmental Protection Agency (EPA) and Federal Highway Administration (FHWA) guidelines. The purpose of this project-level air quality analysis was to evaluate the potential effects of the

proposed alternatives on the air quality, including the analysis of carbon monoxide (CO), fine particulate matter 2.5 microns or smaller in size ($PM_{2.5}$), and Mobile Source Air Toxics (MSATs). Refer to the Air Quality Technical Report MD 198: Russett Green (West Of MD 295) To MD 32 (May, 2009) for details on the technical analysis and its components.

1. Attainment Status

Under the authority of the CAA, the U.S. Environmental Protection Agency (EPA) has developed National Ambient Air Quality Standards (NAAQS) for certain air pollutants (criteria pollutants) deemed harmful to public health and the environment. These criteria pollutants include: nitrogen dioxide (NO_2), sulfur dioxide (SO_2), CO, ozone (O_3), $PM_{2.5}$, $PM_{10,}$ and lead (Pb).

The EPA designates areas where ambient concentrations are below the NAAQS as being in "attainment" and designates areas where a criteria pollutant level exceeds the NAAQS as being in "nonattainment." Ozone (O_3) nonattainment areas are categorized based on the severity of pollution: marginal, moderate, serious, severe, or extreme. The project area is designated as moderate nonattainment for O_3 under the eight-hour standard and as nonattainment for $PM_{2.5}$[1]. In addition, although the area is an attainment area for CO, the Baltimore Central Business District is under a CO Maintenance Plan, which provides for continued attainment of the CO standard through December 15, 2015.

The Baltimore Regional Transportation Board (BRTB) is the regional agency that prepares the State Implementation Plan (SIP), which documents how the Baltimore, MD region will meet the NAAQS. The SIP provides an inventory of existing air emissions and accounts for planned projects within the region that have potential to increase pollutant emissions. The SIP accounts for general increases in vehicular travel throughout the region, as well as anticipated changes in land use and demographic/employment patterns.

2. Carbon Monoxide Micro-scale Evaluation

Carbon monoxide (CO) impacts were analyzed as the accepted indicator of vehicle-generated air pollution. The EPA CAL3QHC (1993) dispersion model was used to predict CO concentrations for air quality sensitive receptors for the Open to Traffic (2015) year and Design year (2030). The detailed analyses predicted air quality impacts at each receptor location from CO vehicular emissions for the No-Build and build alternatives. Modeled one-hour and eight-hour average CO concentrations were added to background CO concentrations (1.4 ppm one-hour and 0.9 ppm eight-hour) for comparison to the State and National Ambient Air Quality Standards (S/NAAQS). The objective of the analysis is to evaluate the effect(s) of the proposed improvements to the MD 198 in Anne Arundel County, Maryland on the local ambient air quality relative to the NAAQS. Air quality is assessed to determine whether the proposed transportation improvement project conforms to the 1990 Clean Air Act Amendments (CAAA).

[1] U.S. Environmental Protection Agency. *Six Common Air Pollutants – Designations.* Website Address: http://www.epa.gov/air/urbanair/designations.html.

Air quality receptors were selected to represent air quality sensitive locations within the study area These consist of 25 at the MD 198/MD 295 Interchange, 11 at the MD 198/MD 32 Interchange, and 25 at the MD 198/Russett Green Intersection. In addition one receptor was selected to represent the Welch's Trailer Park and two were selected to represent baseball fields at Bald Eagle Road. The analysis indicates that the one-hour and eight-hour concentration of CO would not exceed the NAAQS at any receptor locations within the project area for any of the design alternatives and options. The one-hour CO NAAQS is 35 ppm and the eight-hour NAAQS is nine ppm.

The CAL3QHC model comparisons between the build alternatives and the No-Build Alternative demonstrate that the highest CO concentrations occur at the same location in both 2015 and 2030. The maximum calculated one-hour No-build CO concentration is 7.3 ppm in 2015 and 7.2 ppm in 2030. The maximum calculated eight-hour No-build CO concentration is 4.4 ppm in 2015 and 4.3 ppm in 2030. These maximum concentrations occur at the MD 198/Russett Green intersection. The maximum calculated one-hour Build CO concentration is 6.1 ppm in 2015 and 6.0 ppm in 2030. The maximum calculated eight-hour Build CO concentration is 3.3 ppm in 2015 and 3.3 ppm in 2030. These maximum concentrations occur at the MD 198/MD 295 Interchange.

3. $PM_{2.5}$ Regional and Hot-Spot Conformity Determination

The project area is located in Anne Arundel County, Maryland, which is in the Baltimore, MD $PM_{2.5}$ nonattainment area. The area was designated as nonattainment for $PM_{2.5}$ on January 5, 2005 by the EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the $PM_{2.5}$ standards applied on April 5, 2006, after the one-year grace period provided by the Clean Air Act.

The Baltimore Regional Transportation Board (BRTB) of the Baltimore Metropolitan Council (BMC) is the federally recognized Metropolitan Planning Organization (MPO) for transportation planning in the Baltimore region. Annually, the BMC and the BRTB develop the region's Constrained Long Range Plan (CLRP) and the Transportation Improvement Program (TIP). The CLRP for the region is called "The Transportation Outlook 2035". The CLRP is a comprehensive plan of transportation projects and strategies that the Transportation Board realistically anticipates can be implemented over the next 20 years. The 2008-2012 TIP is a five-year program that describes the time frame for federal funds to be obligated to state and local projects. Each year the TIP is approved after the BRTB ensures that it meets the federal requirements relating to air quality and is in conformity with the SIP. The Transportation Outlook 2035 and 2008-2012 TIP were adopted by the Baltimore Regional Transportation Board (BRTB) on November 27, 2007. The MD 198 project is included in the Maryland Department of Transportation's (MDOT) Consolidated Transportation Program (CTP) as Anne Arundel County Line 8. Although it is currently referenced as a study[2] in the CLRP, it is not included as a

[2] *Transportation Outlook 2035* (page 18) states: "This is a study to address capacity needs on MD 198 from MD 295 to MD 32 (2.66 miles). Bicycle and pedestrian access will be provided where appropriate. MD 198 is a key link to Fort Meade from points south and west. The area in and around Fort Meade will likely experience substantial growth as a result of BRAC project planning underway. Anne Arundel County will be contributing $4.5 million for the planning phase.

specific project in the currently approved CLRP or in the current TIP. Upon determination of a Selected Alternative and the provision of federal funding, the project will be analyzed as part of the BRTB regional emissions analysis.

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*[3] as enumerated in 40 CFR 93.123(b)(1).

SHA has prepared the following assessment of the proposed improvements:

- The MD 198 Project is considered under 40 CFR 93.123(b)(1)(i), as amended, which includes *"New or expanded highway projects that have a significant number of or significant increase in diesel vehicles*
- The MD 198 Project is also considered under 40 CFR 93.123(b)(1)(ii), as amended, which includes *"Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project*
- The proposed construction would improve the operation and safety of MD 198, and provide sufficient capacity to address existing and projected travel demands throughout $PM_{2.5}$ emissions.
- Section 176(c) of the Clean Air Act and the federal conformity rule require that transportation plans and programs conform to the intent of the state implementation plan (SIP) through a regional emissions analysis in $PM_{2.5}$ nonattainment areas. The Baltimore Regional Transportation Board (BRTB) of the Baltimore Metropolitan Council (BMC) is the federally recognized Metropolitan Planning Organization (MPO) for transportation planning in the Baltimore region. The BMC and the BRTB develop the region's Constrained Long Range Plan (CLRP) and the Transportation Improvement Program (TIP). The CLRP for the region is called "The Transportation Outlook 2035". The 2008-2012 TIP is a five-year financial program that describes the schedule for obligating federal funds to planned state and local transportation projects. Each year the TIP is approved after the BRTB ensures that it meets the federal requirements relating to air quality and is in conformity with the SIP. The Transportation Outlook 2035 and 2008-2012 TIP were adopted by the Baltimore Regional Transportation Board (BRTB) on November 27, 2007. The MD 198 project is included in the Maryland Department of Transportation's (MDOT) Consolidated Transportation Program (CTP) as Anne Arundel County Line 8. Although it currently referenced as a study[4] in the CLRP, it is not included as a specific project

[3] Criteria for identifying *projects of air quality concern* is described in 40 CFR 93.123(b)(1), as amended.
[4] *Transportation Outlook 2035* (page 18) states: "This is a study to address capacity needs on MD 198 from MD 295 to MD 32 (2.66 miles). Bicycle and pedestrian access will be provided where appropriate. MD 198 is a key link to Fort Meade from points south and west. The area in and around Fort Meade will likely experience substantial growth as a result of BRAC project planning underway. Anne Arundel County will be contributing $4.5 million for the planning phase.

in the currently approved CLRP or the current TIP. Upon determination of a Selected Alternative and the provision of federal funding, BRTB will include the project as part of their regional emissions analysis.

Based on the above preliminary review and analysis, SHA proposes that the MD 198 Project (including all options) is **not a project of air quality concern** as defined under 40 CFR 93.123(b)(1)(i) & (ii). Since the project would meet the Clean Air Act and 40 CFR 93.109 requirements, the project would not be expected to cause or contribute to a new violation of the $PM_{2.5}$ NAAQS, or increase the frequency or severity of a violation. Upon determination of a Selected Alternative and the inclusion of the project in the BRTB regional emissions analysis, the $PM_{2.5}$ discussed herein analysis will be updated and a final $PM_{2.5}$ Conformity Determination will be provided for Interagency Consultation.

4. Mobile Source Air Toxics Analysis (MSATs)

The Federal Highway Administration (FHWA) *Guidance on Air Toxic Analysis in NEPA Documents*[5] requires analysis of Mobile Source Air Toxics (MSAT) under specific conditions. The EPA has designated six prioritized MSATs, which are known or probable carcinogens or can cause chronic respiratory effects. The six prioritized MSATs are: Benzene; Acrolein; Formaldehyde; 1,3-Butadiene, Acetaldehyde; and Diesel Exhaust (Diesel Exhaust Gases and Diesel Particulate Matter). Per SHA traffic analysis, the Build traffic volumes (ADT) and truck percentages are equal to the No-build traffic volumes (ADT) and truck percentages. Also, the maximum 2030 traffic volume (ADT) is 42,300 on MD 198 and 96,500 on MD 32; both of which are less than 140,000. Therefore the MD 198 project would be a "*minor widening project[s] and new interchange[s, such as those] that replace(s) a signalized intersection on a surface street*" … "*that serves to improve operations of highway…..without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions*"[6] and would be considered a ***Project with Low Potential MSAT Effects***.

Included herein is a basic analysis of the likely MSAT emissions 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 any of the build alternatives. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information. Evaluating the environmental and health impacts from MSAT on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure 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. The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSAT in the context of highway projects. The tools to predict how MSAT disperse are also limited. Even if emission levels and concentrations of

[5] Interim Guidance on Air Toxic Analysis in NEPA Documents
[6] ibid

MSAT could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude reaching meaningful conclusions about project-specific health impacts. Research into the health impacts of MSAT 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. The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants.

Even though reliable methods do not exist to accurately estimate the health impacts of MSAT at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSAT, it can give a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the build alternatives. For each alternative, the amount of MSAT emitted would be proportional to the annual average daily traffic (AADT), or vehicle miles traveled (VMT). Although the Build traffic volumes (ADT) and truck percentages are equal to the No-build traffic volumes (ADT) and truck percentages, the VMT within the study area estimated for the build alternatives may be slightly greater than that of the No-build, because the build alternatives would reduce congestion and increase efficiency of the roadway, and may attract additional trips from elsewhere in the transportation network. This slight increase in VMT may lead to slightly higher MSAT emissions along the MD 198 corridor for the build alternatives. The emissions increase due to increased VMT is offset somewhat by lower MSAT emission rates due to increased speeds, since according to EPA's MOBILE 6.2 emissions model, emissions of all of the priority MSAT, except for diesel particulate matter, decrease as speed increases. The extent to which these speed-related emissions decreases would offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models. The additional lanes would have the effect of moving some traffic closer to nearby homes and businesses; therefore, there may be localized areas where ambient concentrations of MSAT could be higher under the build alternatives than the No-build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the side where the roadways shift towards the residences and businesses. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-build alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In summary, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the build alternatives could be higher relative to the No-build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT would be lower in other locations when traffic shifts away from them. Furthermore, at both the project location and regionally, MSAT concentrations would decrease in future years due to EPA's vehicle emission and fuel regulations (**Figure III-6**). MSAT dispersion studies have shown that air toxics from the roadway start to drop off at about 100 meters, and that by 500 meters, most studies have found it very difficult to distinguish the roadway air toxic concentrations from background air toxic concentrations in any given area. Sensitive receptors are those facilities most likely to contain large concentrations of the more sensitive population. There does not appear to be any sensitive receptors within this project area.

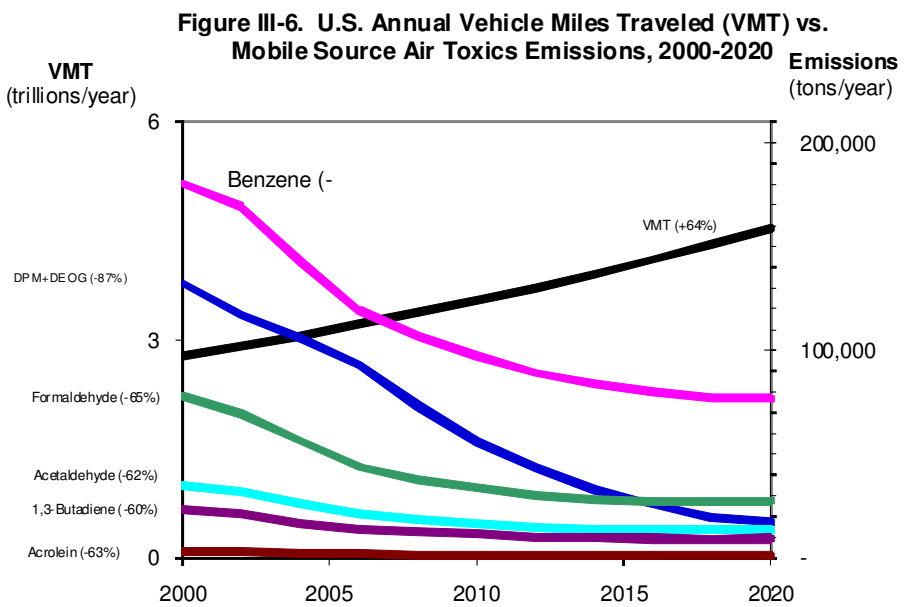


Figure III-6. U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020

Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: *Highway Statistics 2000*, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO4 from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

5. Construction Emissions

The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The SHA has addressed this possibility by establishing "Specifications for Construction and Materials" which specifies construction procedures to be followed by contractors involved in site work. The Maryland Air and Radiation Management Administration has been consulted to determine the adequacy of SHA's specifications in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland." The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 26.11.06.03D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area.

G. Noise

This project-level noise analysis has been completed in accordance with FHWA and SHA guidelines, including Title 23 of the CFR, Part 772 *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR, Part 772) and the MDOT – SHA Sound Barrier Policy (April 2011). This analysis has been based on the revised federal and state regulations, which become effective July 13, 2011, concerning the Procedures for Abatement of Highway Traffic Noise and Construction Noise. Refer to the *MD 198 Noise Technical Report* (SHA, 2011) for a detailed discussion of the component portions of the noise analysis.

1. Noise Abatement Criteria and Noise Sensitive Areas

The determination of traffic noise impacts is based on the relationship between the ambient noise levels and the established noise abatement criteria (NAC) for the study area. The effects of noise are judged in accordance with the Federal Highway Administration guidelines as established by 23 Code of Federal Regulations (CFR), Part 772 and current SHA Policies. The State Highway Administration Noise Abatement Criteria provided in **Table III-18** are derived from Federal criteria, which are based on specific land uses and are used in determining the need for studying noise attenuation measures. The majority of the study area evaluated in this report is Land Use Category B, however the area also includes Land Use Categories C, E, and G. FHWA guidelines require that states define their impact criteria as being at least 1 dB(A) less than the NAC. The State Highway Administration has set the noise impact levels at 1 dB(A) less than the NAC as shown in **Table III-18**.

Table III-18: State Highway Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)[1]

Activity		
A	56 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (Exterior)	Residential.
C	66 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	51 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	71 (Exterior)	Hotels, motels, offices, restaurants/ bars, and other developed lands, properties or activities not included in A-D or F.
F	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, ship yards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	Undeveloped lands that are not permitted.

1. *Activity Categories and Description of Activity Categories are from the FHWA Noise Abatement Criteria. The Noise Abatement Criteria Noise Levels are established at one dB(A)less than the FHWA noise levels.*

For a Type I project, SHA considers a sensitive land use to be impacted if:

- The design year noise levels are projected to equal or exceed the Noise abatement criteria in **Table III-18**, or
- The projected noise levels are anticipated to increase over existing year noise levels by the amount shown in **Table III-19** below.

Table III-19: SHA Substantial Noise Increase Criteria Hourly A-Weighted Sound Level in Decibels (dBA)

Existing Noise Level	
45 dB(A) or less	15 dB(A)
46 dB(A)	14 dB(A)
47 dB(A)	13 dB(A)
48 dB(A)	12 dB(A)
49 dB(A)	11 dB(A)
50 dB(A) or greater	10 dB(A)

Noise Sensitive Areas (NSAs) can be residential or non-residential. Residential NSAs include single-family residences, single-family attached residences (townhouses), multi-family residences (condominiums and apartments), motels and hotels. Non-residential NSAs include recreation areas, playgrounds, active sports areas, parks, schools, places of worship, libraries, restaurants, bars, medical facilities, and hospitals. Country clubs and golf courses are not considered noise sensitive areas. There are six NSAs in the study area.

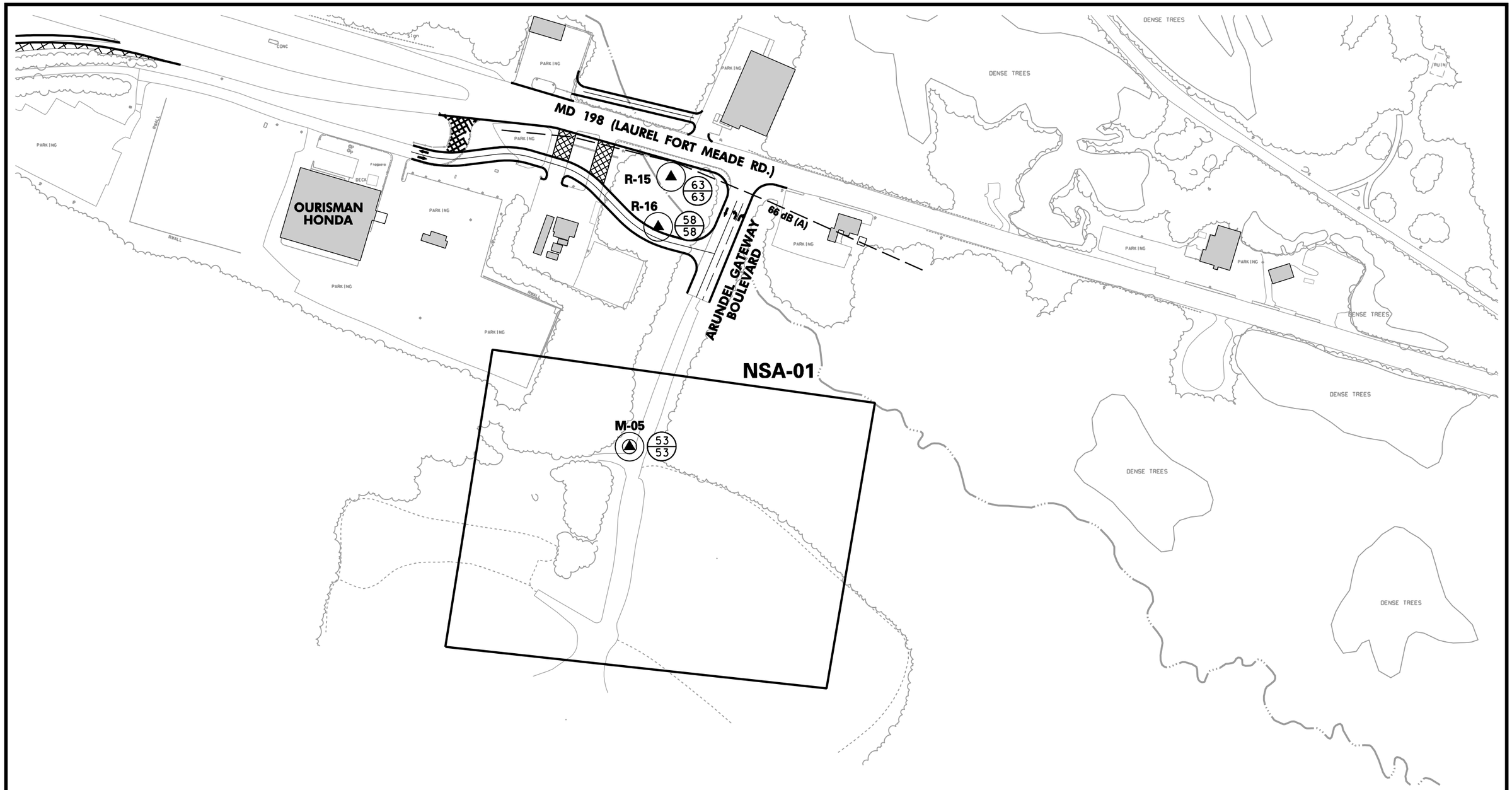
Noise has been measured and/or modeled at selected points throughout the study area within the NSAs and these locations are referred to as 'Receptors'. In this study, receptors have been labeled according to the following convention: 'M' receptors were measured in the field and modeled, 'R' receptors were only modeled.

2. Analysis

Worst case noise levels were predicted using Traffic Noise Model (TNM) Version 2.5 for the following conditions: Existing, 2030 No-Build, 2030 Build Alternative 2, and 2030 Build Mainline Alternative 4 Modified. Calibration is used to validate the accuracy of a particular noise model (TNM 2.5), using measured highway traffic noise levels and the concurrent highway traffic counts. SHA considers a TNM Model to be properly calibrated when the modeled noise levels are within ± three dB(A) of the measured noise levels for most of the receptors. In order to bring a model into calibration, modifications such as additional terrain and structural elements can be added to the model and re-tested until the SHA calibration criteria are met.

Locations of the six NSAs determined what portions of Alternative 2 (**Figures III-7A:7F**) and Alternative 4 Modified (**Figures III-8A:8F**) were modeled. The interchange options were not modeled because they are not in the vicinity of the NSAs. To predict worst case traffic noise levels and sound barrier performance, predicted 2030 traffic volumes were used in the analysis. Both AM and PM traffic conditions were analyzed to determine which produced the loudest noise levels. The traffic condition which produced the highest noise levels for each of the receptors was used in the model.

Twenty-two measurement receptors (M-01 thru M-09 and M-11 thru M-23) were used for predicting the TNM noise levels, barrier design, and analysis. In addition, sixteen receptors (R-01 thru R-16) were added in order to establish the 66 dB(A) and 71 dB(A) contours. **Table III-19** indicates the predicted noise levels for the Existing Worst Case, 2030 No-Build, 2030 Build Alternative 2, and 2030 Build Mainline Alternative 4 Modified conditions.



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

Legend

67/65 Alt. 2 Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/-3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 2 Level > 66 dB(A)

Impacted Residence, 2030 Build Alt. 2 Level > 71 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 2 Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32 PROJECT PLANNING STUDY

FINAL NOISE ANALYSIS TECHNICAL REPORT

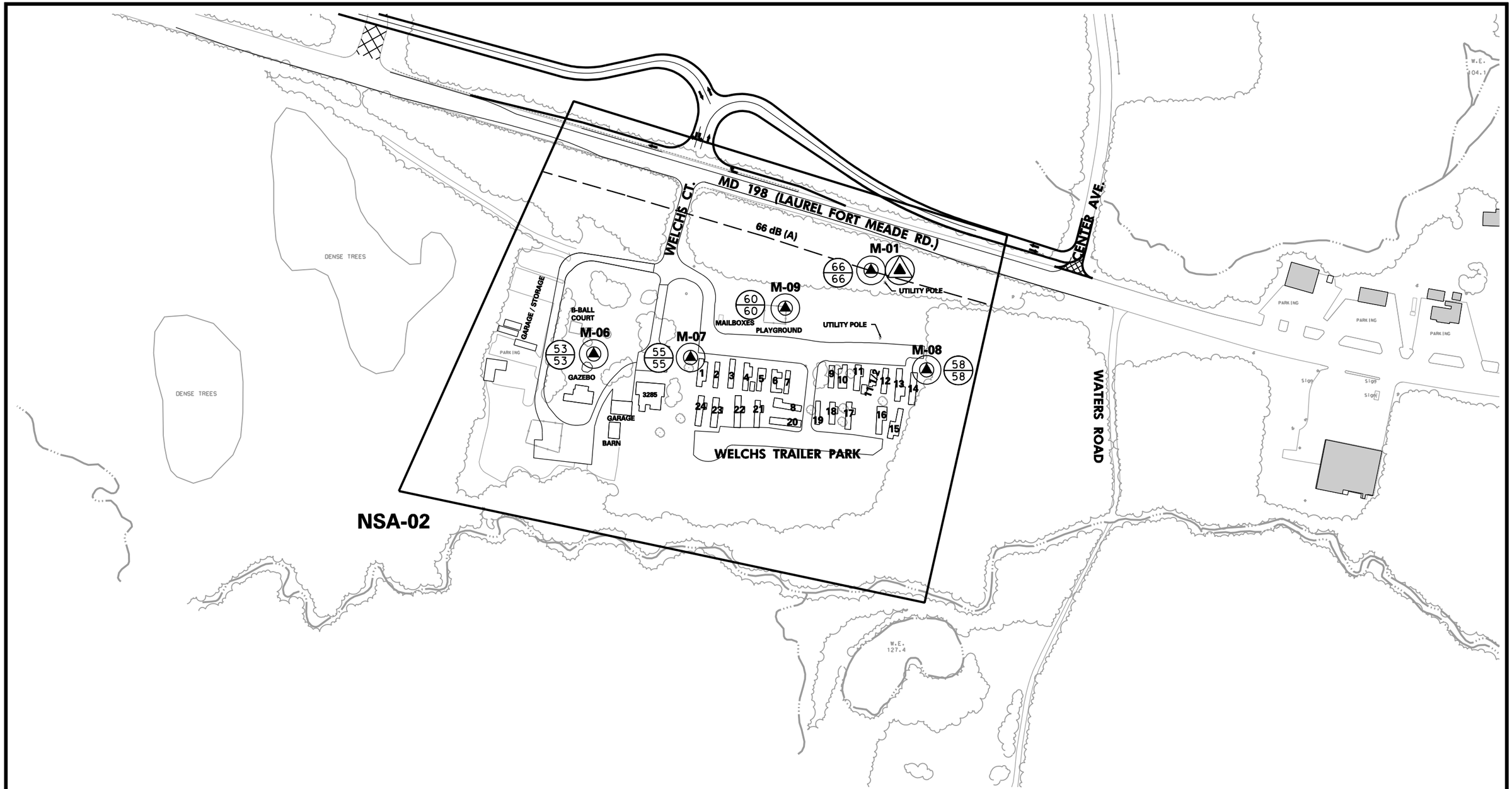
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7A

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 5

G:\SMD\990225\990225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7A NSA 1_BALT-2.dgn
Tuesday, June 21, 2011 AT 10:09 AM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

67/65 No-Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/-3 No-Build Noise Level Increase Over EWC Noise Level (dB[A]) / No-Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, Existing Worst Case Noise Level > 66 dB(A)

Impacted Residence, Existing Worst Case Noise Level ≥ 71 dB(A)

66 dB(A) Contour Line, Existing Worst Case Noise Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
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MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7B

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 5a

Q:\SMD\990225\990225_009MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7B NSA 2_BALT-2.dgn
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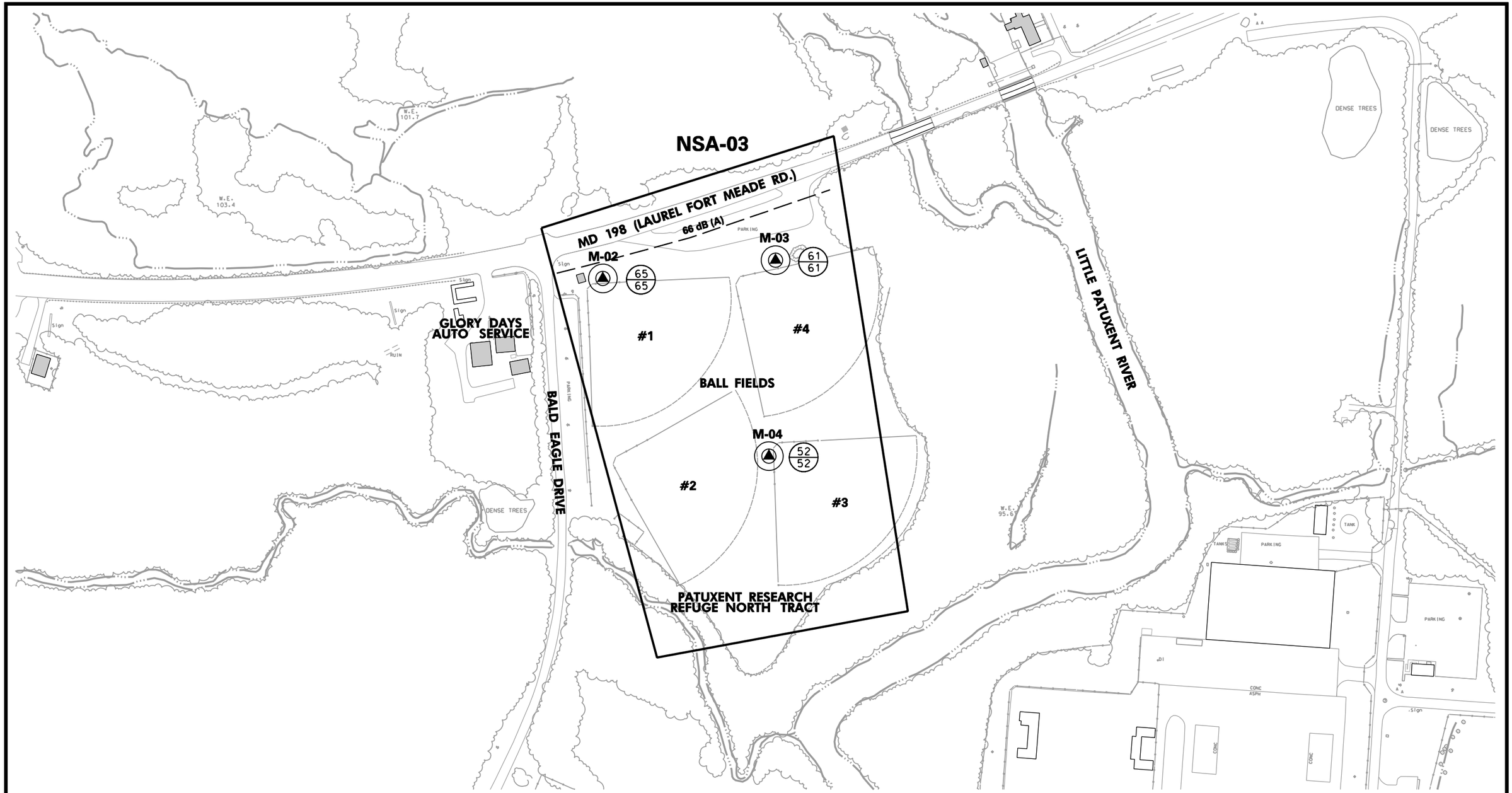


Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

Legend

67/65 Alt. 2 Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3 / −3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 2 Level > 66 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 2 Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

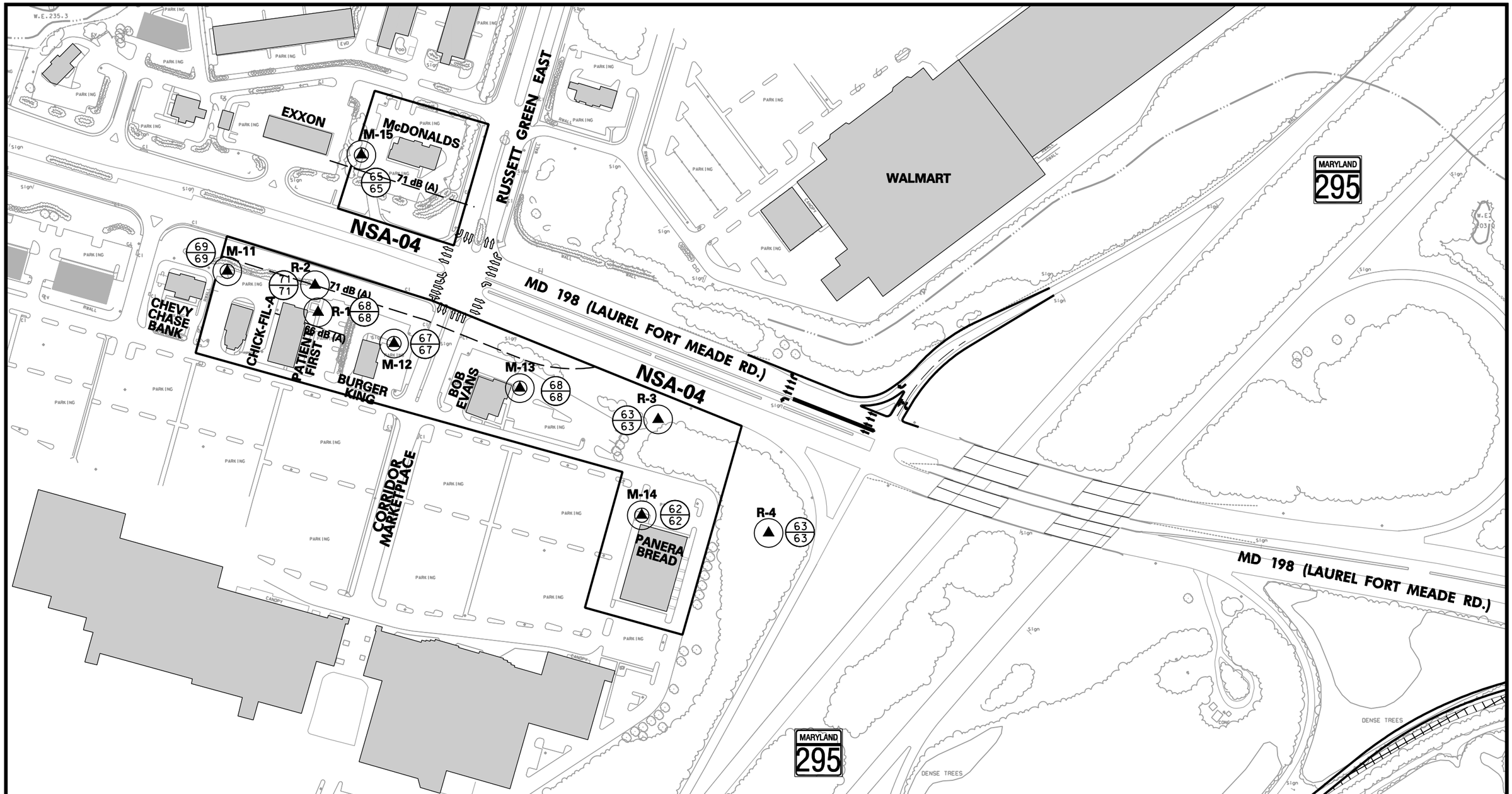
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7C

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

Q:\SMD\999225\999225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7C NSA 3_BALT-2.dgn
Friday, June 03, 2011 AT 11:26 AM

Map No. 5b



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

- M-01 Short-term Noise Measurement Site and Model Receptor
- M-01 24-hour Noise Measurement Site and Model Receptor
- R-01 Modeled Receptor
- 67/65 Alt. 2 Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])
- +3 / −3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])
- Impacted Residence, 2030 Build Alt. 2 Level > 66 dB(A)
- 66 dB(A) Contour Line, 2030 Build Alt. 2 Level
- NSA-01 Noise Study Area
- 123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

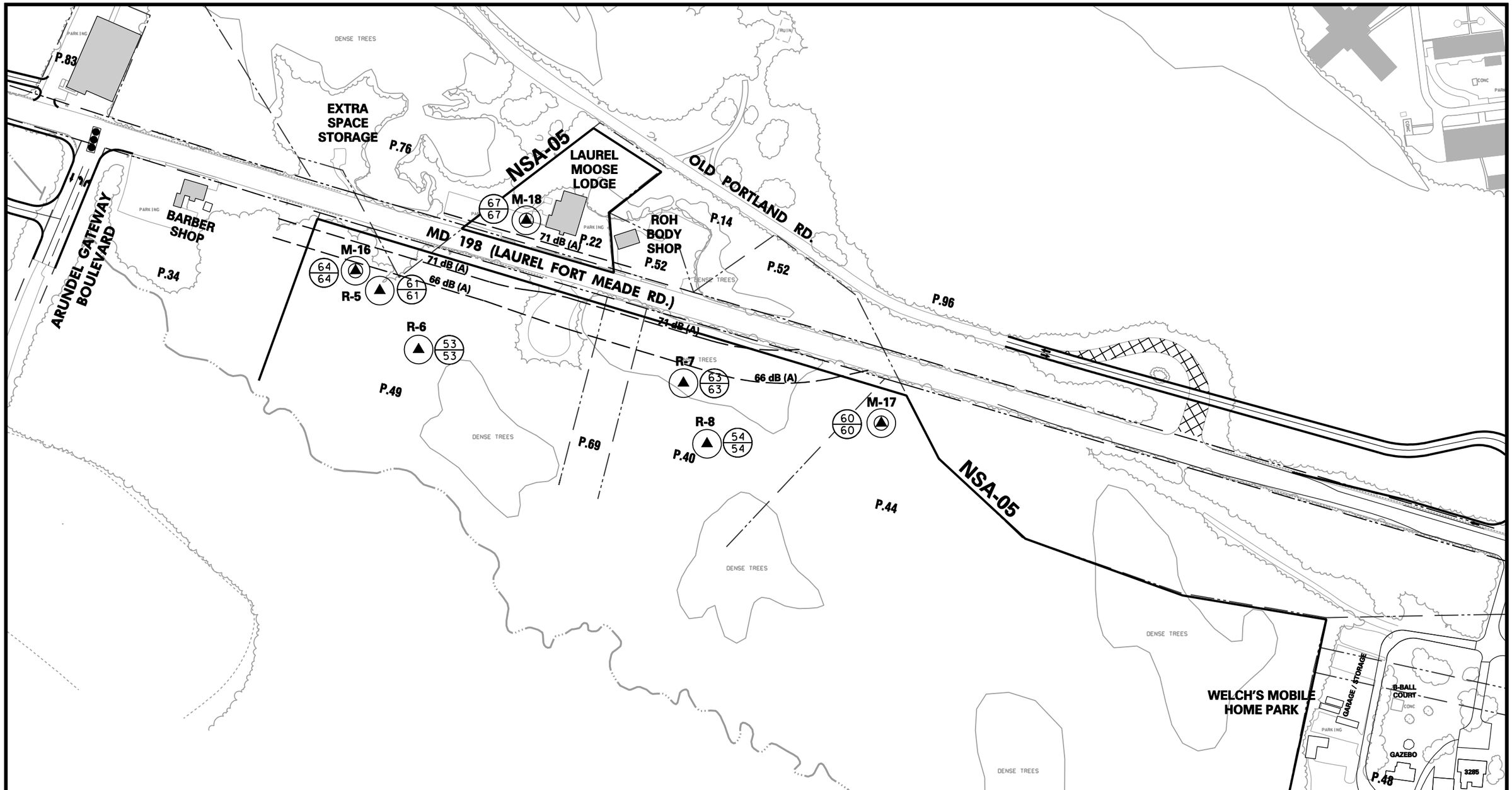
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7D

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

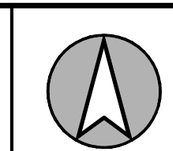
Q:\SMD\999225\999225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7D NSA 4_BALT-2.dgn
Friday, June 03, 2011 AT 11:30 AM

Map No. 5c



Anne Arundel County

Vicinity Map



0 100 200
Scale in Feet

Legend

- M-01 Short-term Noise Measurement Site and Model Receptor
- M-01 24-hour Noise Measurement Site and Model Receptor
- R-01 Modeled Receptor
- 67/65 Alt. 2 Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])
- +3/−3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])
- Impacted Residence, 2030 Build Alt. 2 Level > 66 dB(A)
- 66 dB(A) Contour Line, 2030 Build Alt. 2 Level
- NSA-01 Noise Study Area
- 123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

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MD 198 FROM MD 295 TO MD 32 PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7E

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 5d

Q:\SMD\990225\990225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7E NSA 6_BALT-2.dgn
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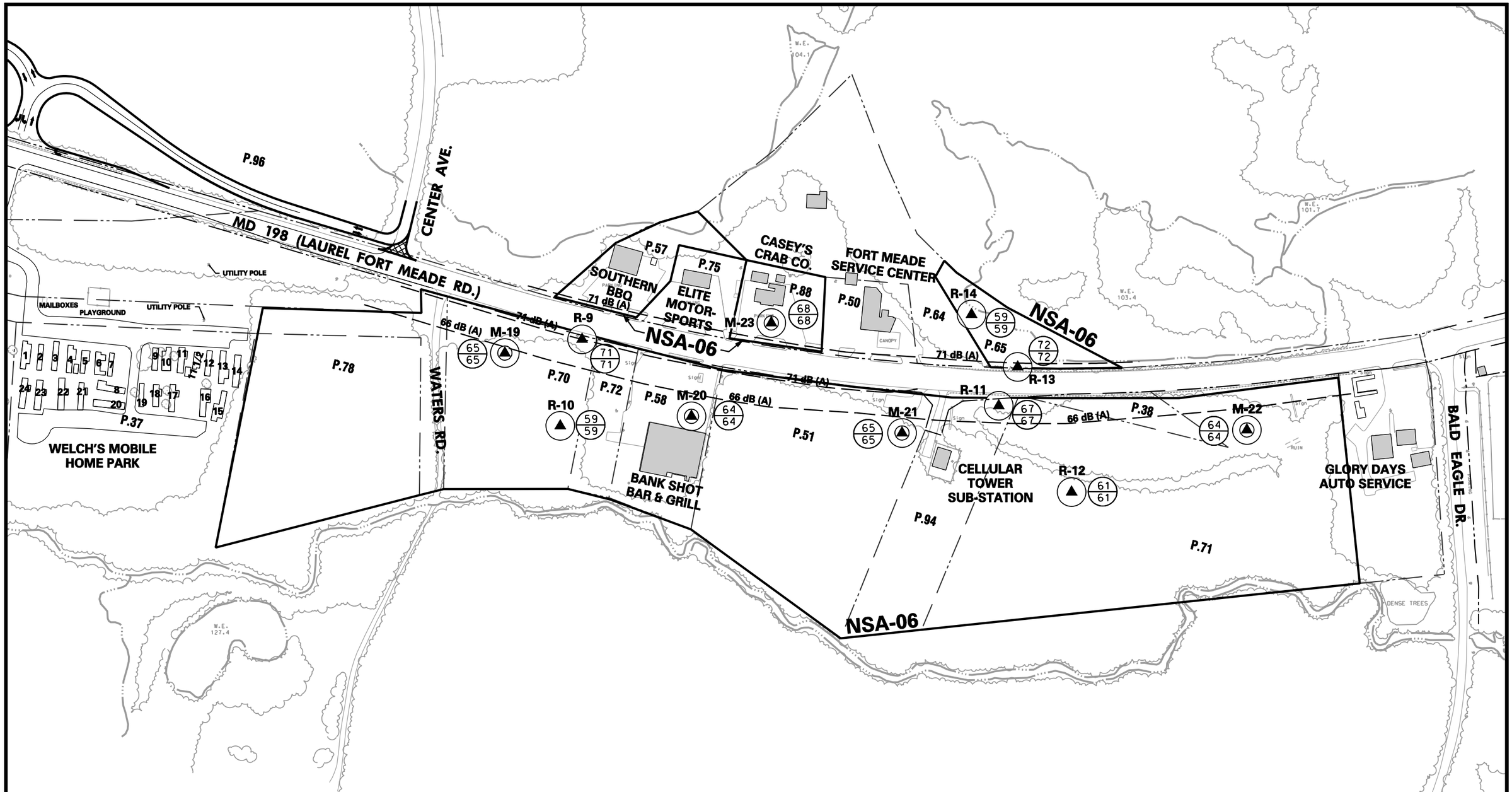


Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

- M-01 Short-term Noise Measurement Site and Model Receptor
- M-01 24-hour Noise Measurement Site and Model Receptor
- R-01 Modeled Receptor
- 67/65 Alt. 2 Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])
- +3/-3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])
- Impacted Residence, 2030 Build Alt. 2 Level > 66 dB(A)
- Impacted Residence, 2030 Build Alt. 2 Level > 71 dB(A)
- 66 dB(A) Contour Line, 2030 Build Alt. 2 Level
- NSA-01 Noise Study Area
- 123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

FINAL NOISE ANALYSIS TECHNICAL REPORT

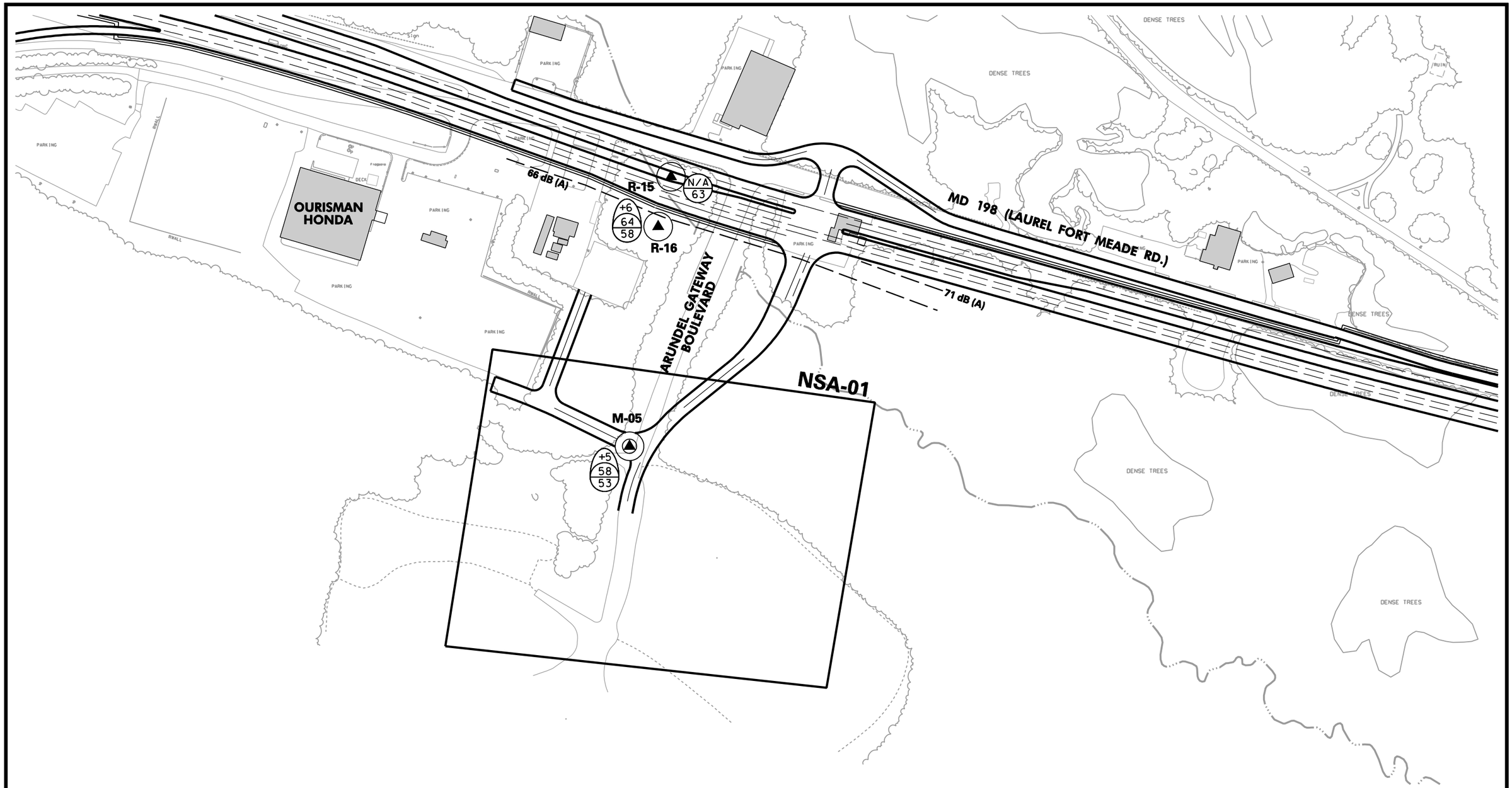
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-7F

2030 BUILD ALT. 2 OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 5e

G:\SMD\990225\990225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-7F NSA 6_BALT-2.dgn
Tuesday, June 21, 2011 AT 10:24 AM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

67/65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/−3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)

Impacted Residence, 2030 Build Alt. 4M Level > 71 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 4M Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

FINAL NOISE ANALYSIS TECHNICAL REPORT

MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8A

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6

Q:\SMD\90225\90225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8A NSA 1_BALT-4.dgn
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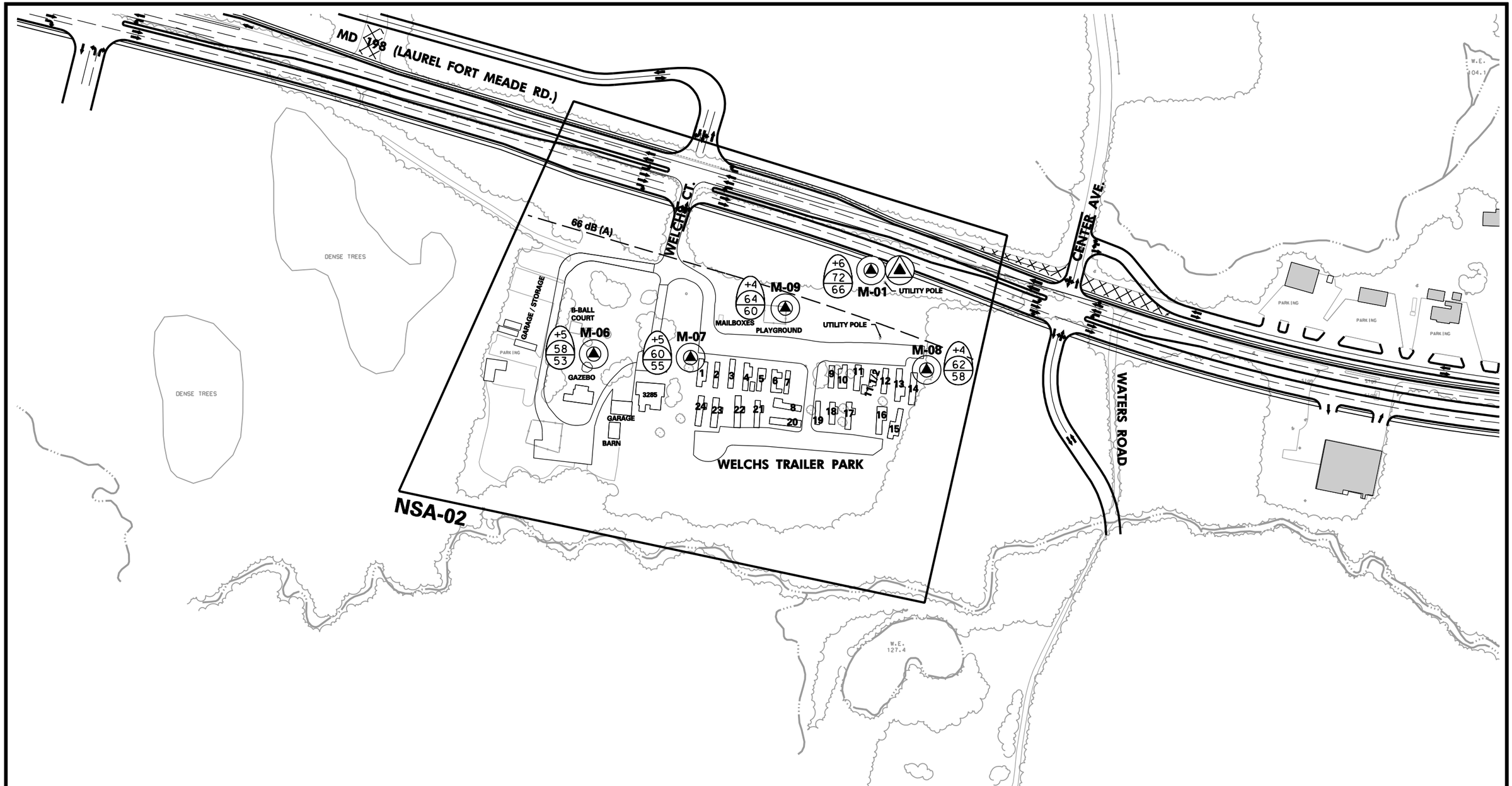

Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

Legend

67/65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/−3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)

Impacted Residence, 2030 Build Alt. 4M Level > 71 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 4M Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

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MD 198 FROM MD 295 TO MD 32 PROJECT PLANNING STUDY

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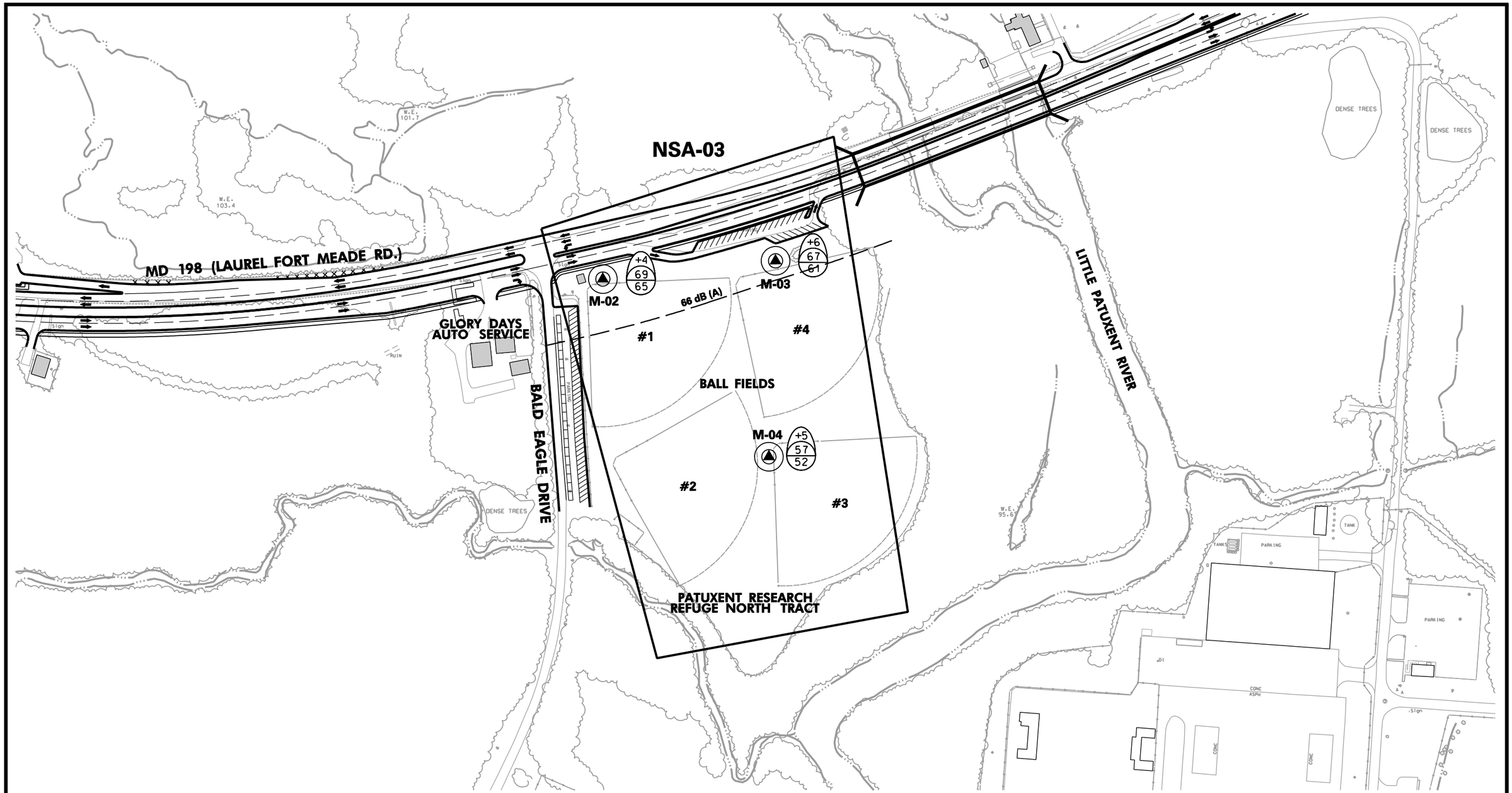
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8B

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6a

Q:\SMD\990225\990225_009MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8B NSA 2_BALT-4.dgn
Tuesday, June 21, 2011 AT 10:43 AM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

Legend

67/65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/−3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 4M Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

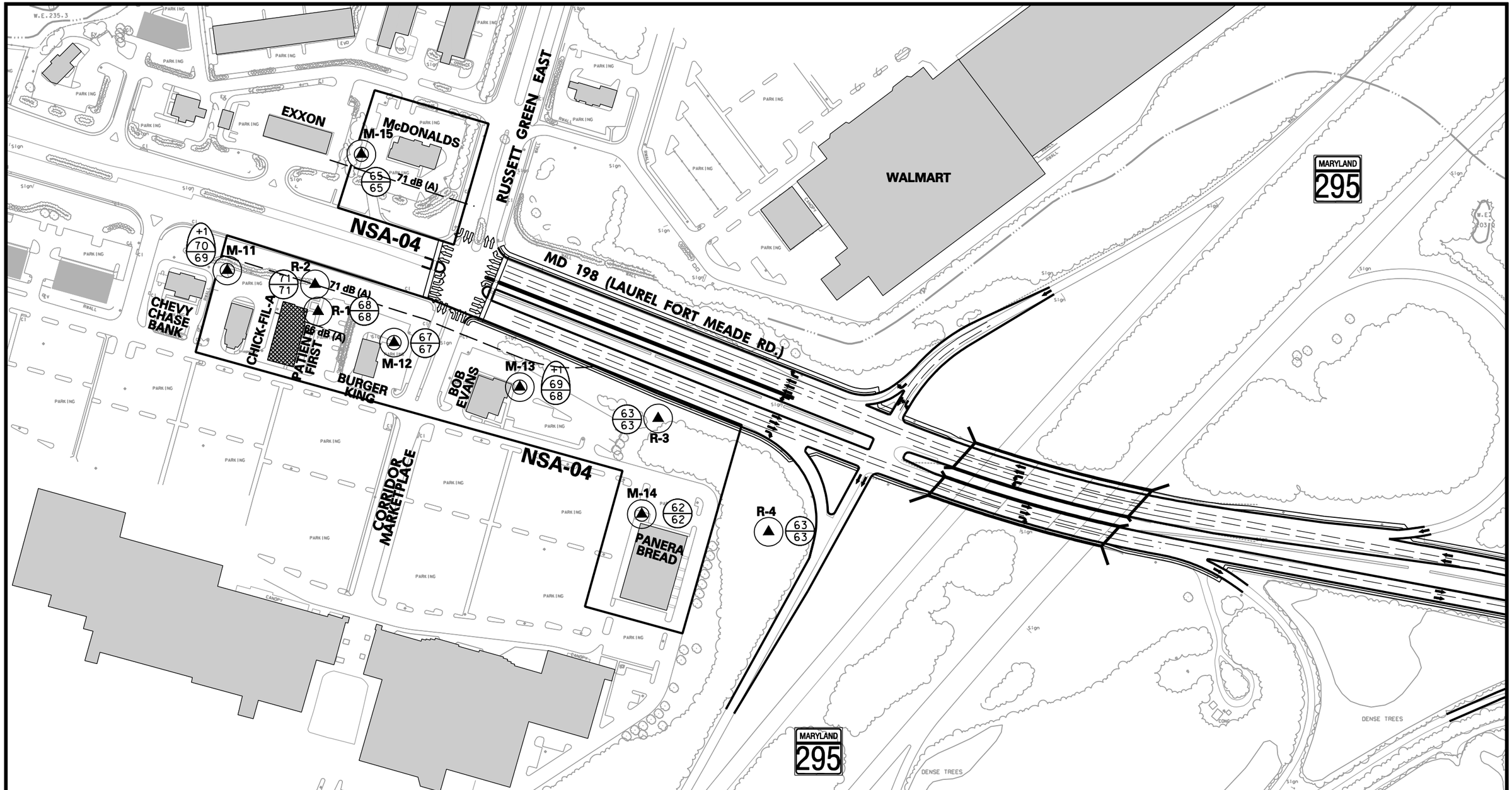
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8C

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6b

Q:\SMD\990225\990225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8C NSA 3_BALT-4.dgn
Friday, June 03, 2011 AT 11:55 AM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

- M-01 Short-term Noise Measurement Site and Model Receptor
- M-01 24-hour Noise Measurement Site and Model Receptor
- R-01 Modeled Receptor
- 67 / 65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])
- +3 / −3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])
- Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)
- 66 dB(A) Contour Line, 2030 Build Alt. 4M Level
- NSA-01 Noise Study Area
- 123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32 PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

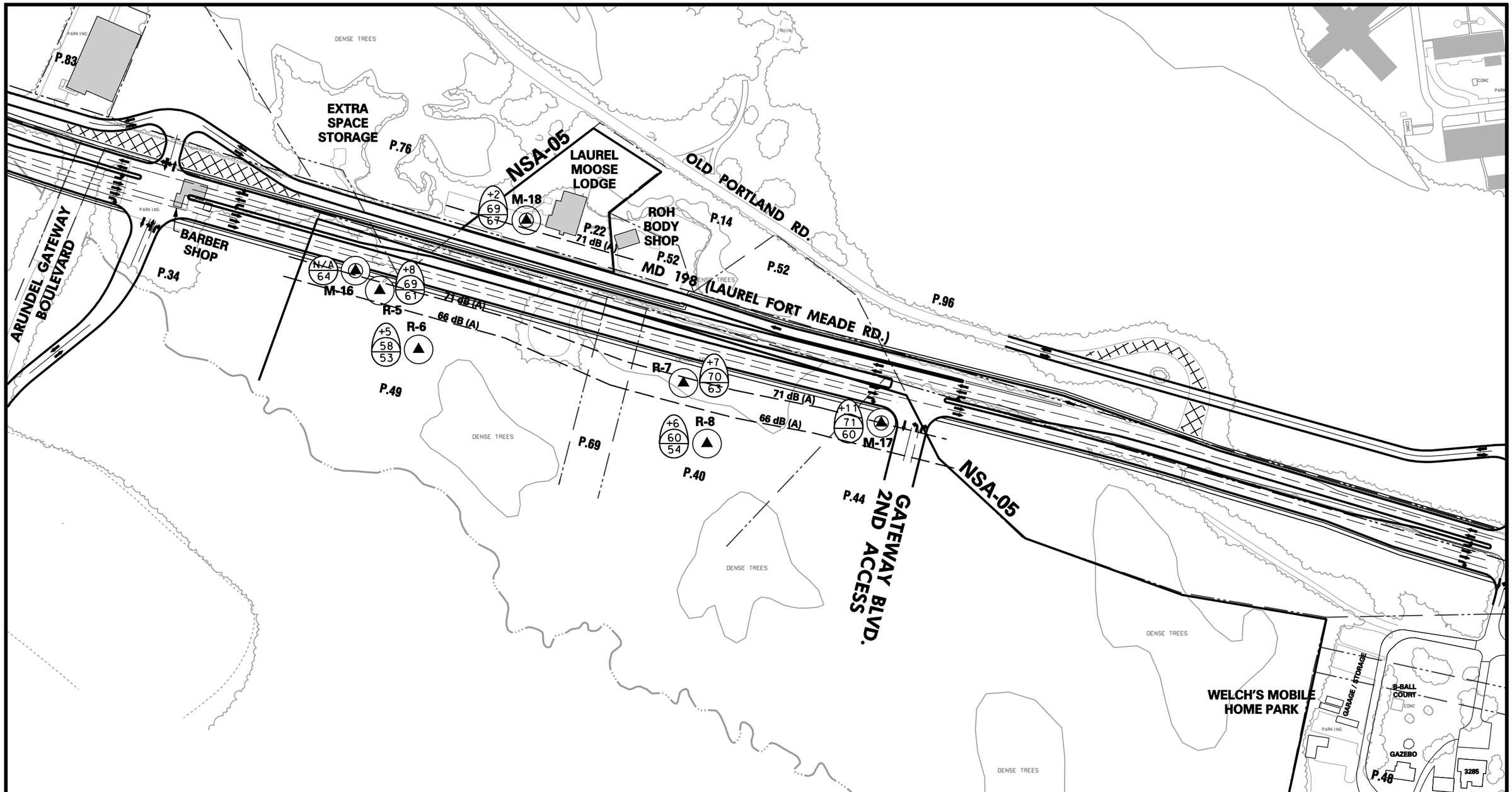
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8D

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6c

Q:\SMD\990225\990225_009MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8D NSA 4_BALT-4.dgn
Friday, June 03, 2011 AT 11:54 AM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

M-01 Short-term Noise Measurement Site and Model Receptor

M-01 24-hour Noise Measurement Site and Model Receptor

R-01 Modeled Receptor

Legend

67/65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])

+3/-3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])

Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)

66 dB(A) Contour Line, 2030 Build Alt. 4M Level

NSA-01 Noise Study Area

123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

Environmental Technical Analysis

MD 198 FROM MD 295 TO MD 32 PROJECT PLANNING STUDY

DRAFT NOISE ANALYSIS TECHNICAL REPORT

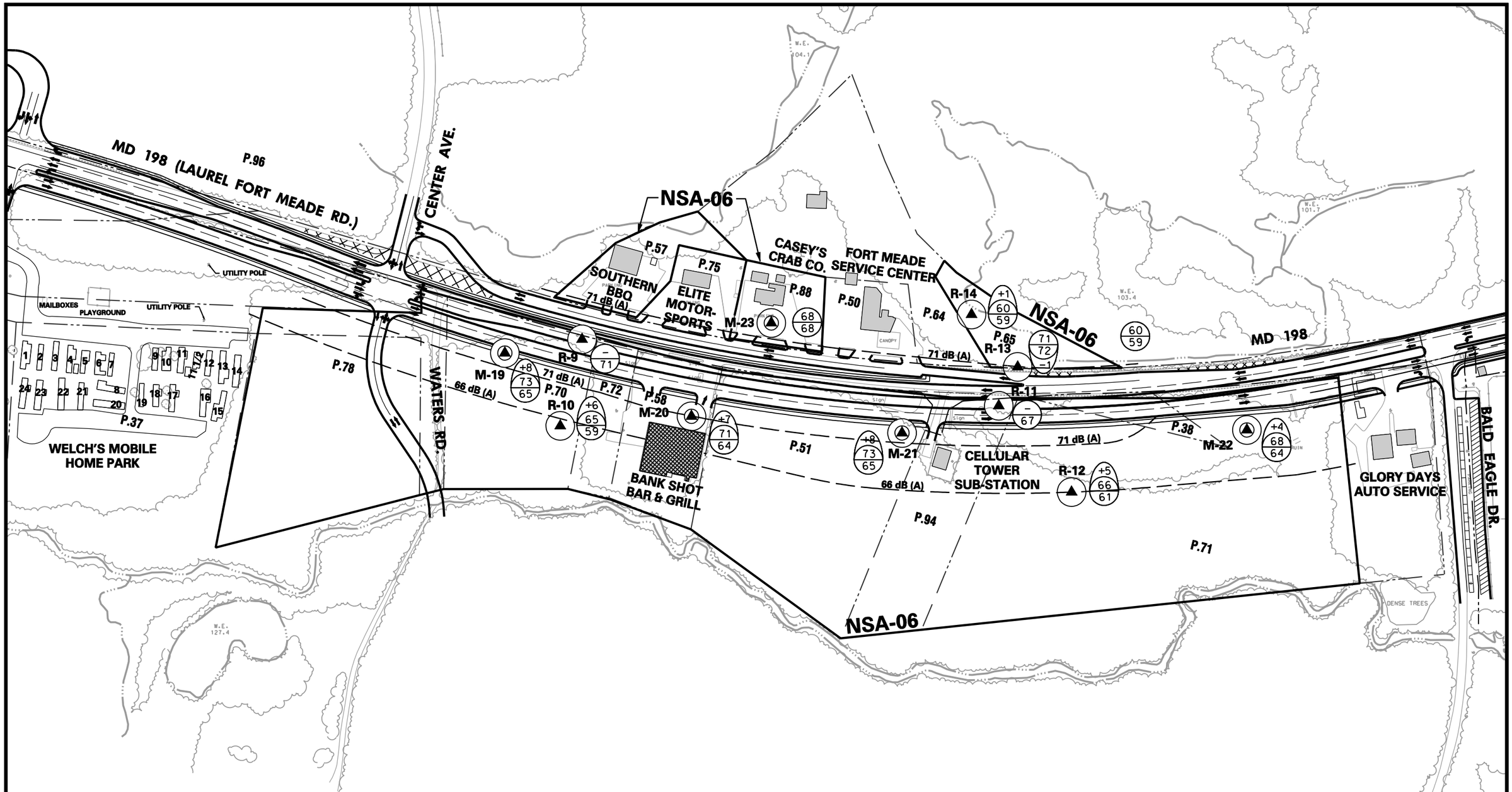
MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8E

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6d

G:\SMD\690225\690225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8E NSA 5_BALT-4.dgn
Friday, June 03, 2011 AT 01:15 PM



Anne Arundel County

Vicinity Map

0 100 200
Scale in Feet

Legend

- M-01 Short-term Noise Measurement Site and Model Receptor
- M-01 24-hour Noise Measurement Site and Model Receptor
- R-01 Modeled Receptor
- 67 / 65 Alt. 4M Build Noise Level (dB[A]) / 2008 EWC Noise Level (dB[A])
- +3 / -3 Build Noise Level Increase Over EWC Noise Level (dB[A]) / Build Noise Level Decrease Below EWC Noise Level (dB[A])
- Impacted Residence, 2030 Build Alt. 4M Level > 66 dB(A)
- 66 dB(A) Contour Line, 2030 Build Alt. 4M Level
- NSA-01 Noise Study Area
- 123 Residential Address

Maryland State Highway Administration

Office of Planning and Preliminary Engineering

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MD 198 FROM MD 295 TO MD 32
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DRAFT NOISE ANALYSIS TECHNICAL REPORT

MD 295 INTERCHANGE TO MD 32 INTERCHANGE (FROM BW PARKWAY TO PATUXENT FREEWAY)

FIGURE III-8F

2030 BUILD ALT. 4 MODIFIED OVER EWC PREDICTED NOISE LEVEL MAP

Map No. 6e

G:\SMD\690225\690225_008MD198_PL\CADD\Env\Env Tech Reports\EA\EA Noise Maps\Fig III-8F NSA 8F NSA 6_BALT-4.dgn
Friday, June 03, 2011 AT 01:21 PM

Table III-20: Noise Impacts for Alternatives 2 and 4 Modified

Receptor Number[1]	Land Use Type	Existing Worst Case Traffic Noise Level[2]	2030 No Build Predicted Noise Level[2]	Difference from Existing Worst Case to 2030 No- Build	ALTERNATIVE 2		ALTERNATIVE 4 MODIFIED	
					2030 Build Predicted Noise Level [2,3]	Difference from Existing Worst Case to 2030 Build[3,5]	2030 Build Predicted Noise Level [2,3]	Difference from Existing Worst Case to 2030 Build[3,5]
NSA -01								
M-05	Future Development / Commercial	53	53	0	53	0	58	+5
R-15	Future Development / Commercial	63	63	0	63	0	NA[7]	----
R-16	Future Development / Commercial	58	58	0	58	0	64	+6
NSA-02								
M-01	Residential	66[4]	66[4]	0	66[4]	0	72	+6
M-06	Residential	53	53	0	53	0	58	+5
M-07	Residential	55	55	0	55	0	60	+5
M-08	Residential	58	58	0	58	0	62	+4
M-09	Recreation Area/ Residential	60	60	0	60	0	64	+4
NSA-03								
M-02	Recreation Area/ Institutional	65	65	0	65	0	69	+4
M-03	Recreation Area/ Institutional	61	61	0	61	0	67	+6
M-04	Recreation Area/ Institutional	52	52	0	52	0	57	+5
NSA-04								
M-11	Commercial	69[4]	69[4]	0	69[4]	0	70[4]	+1
M-12	Commercial	67[4]	67[4]	0	67[4]	0	67[4]	+0
M-13	Commercial	68[4]	68[4]	0	68[4]	0	69[4]	+1
M-14	Commercial	62	62	0	62	0	62	+0
M-15	Commercial	65	65	0	65	0	65	+0
R-01	Commercial	68[4]	68[4]	0	68[4]	0	68[4]	+0
R-02	Commercial	71	71	0	71	0	71	+0
R-03	Commercial	63	63	0	63	0	63	+0
R-04	Forest	63	63	0	63	0	63	+0
NSA-05								
M-16	Forest	64	64	0	64	0	NA[7]	-----
M-17	Forest	60	60	0	60	0	71[5]	+11
M-18	Industrial	67[4]	67[4]	0	67[4]	0	69[4]	+2

Table III-20: Noise Impacts for Alternatives 2 and 4 Modified

Receptor Number[1]	Land Use Type	Existing Worst Case Traffic Noise Level[2]	2030 No Build Predicted Noise Level[2]	Difference from Existing Worst Case to 2030 No- Build	ALTERNATIVE 2			
					2030 Build Predicted Noise Level [2,3]	Difference from Existing Worst Case to 2030 Build[3,5]	2030 Build Predicted Noise Level [2,3]	
R-05	Forest	61	61	0	61	0	69[4]	
R-06	Forest	53	53	0	53	0	58	
R-07	Forest	63	63	0	63	0	70[4]	
R-08	Forest	54	54	0	54	0	60	
M-19	Forest	65	65	0	65	0	73[5]	
M-20	Commercial	64	64	0	64	0	71	
M-21	Forest	65	65	0	65	0	73[5]	
M-22	Forest	64	64	0	64	0	68[4]	
M-23	Commercial	68[4]	68[4]	0	68[4]	0	68[4]	
R-09	Forest	71	71	0	71	0	NA[7]	
R-10	Forest	59	59	0	59	0	65	
R-11	Forest	67[4]	67[4]	0	67[4]	0	NA[7]	
R-12	Forest	61	61	0	61	0	66[4]	
R-13	Forest	72	72	0	72	0	71[5]	
R-14	Forest	59	59	0	59	0	60	

LEGEND

Impact[3]

1. *A Receptor Number beginning with "M" represents a measured location and a Receptor Number beginning with "R" represents a modeled receptor only.*

NSA-01

NSA-01 is located in the vicinity of a proposed mixed-use development which will include residences. As of June 2011, plans are not available for this proposed development. Receptors M-05, R-15, and R-16 were used to establish the 66 dB(A) and 71 dB(A) contours on this undeveloped property. The 66 dB(A) contour varies from 20' to 60' from the edge of proposed MD198 and the 71dB(A) contour varies from 0 to 20' from the edge of proposed MD 198. Assuming that the proposed improvements in this development are situated at least as far from MD 198 as the appropriate contour shown, then this NSA is not impacted under the worst-case

2030 No-Build or 2030 Build conditions for either Alternate 2 or Alternate 4 modified. See **Table III-19** for the predicted noise levels.

NSA-02
The existing residences in this NSA are not impacted under the worst-case 2030 No-Build or 2030 Build Conditions for either Alternate 2 or Alternate 4 modified. See **Table III-19** for the predicted noise levels. Receptor M-01 shows an impact, but was not in an area of frequent human use. Receptor M-01 was used to assist in developing the 66 dB(A) contour.

NSA-03
Two of the ball fields in NSA-03 are impacted under Alternative 4 Modified, as the predicted noise levels equal or exceed 66dB(A). See **Table III-19** for the predicted noise levels.

In addition to peak hour traffic, non-peak hour traffic (7 to 8 pm) was modeled in the PM condition to verify that impacts occurred later in the evening when the ballfields were in use. The study indicated that there was an impact at receptor M-02 during the non-peak hour.

NSA-04
Noise levels at Receptor R-02 meet the Noise Abatement Criteria (NAC) noise level of 71 dB(A) in **Table III-18** for medical facilities. Receptor R-02 is located between the Patient First medical facility parking lot and MD 198. It was placed to assist in developing the 66 dB(A) contour line at the facility. The 66 dB(A) line crosses the Patient First parking lot under Alternate 2 and Alternate 4 Modified; however, the parking lot is not impacted because the parking lot is not considered to be an area of frequent human use. There are no other outdoor uses at this facility.

Because there is no exterior impact and the FHWA NAC criterion lists an interior noise threshold for medical facilities (Category D), a preliminary interior impact investigation was performed. The analysis was performed using the *FHWA Highway Traffic Noise Analysis and Abatement Guidance* dated January 2011 (page 30). Assuming masonry construction and double-glazed windows, the transmission loss through the building exterior would be 35 dB(A). Using the exterior level of 68 dB(A) at R-01 and subtracting the 35 dB(A) transmission loss yields an interior noise level of 33 dB(A). This is well below the interior NAC level of 51 dB(A) and therefore there are no interior impacts. Noise levels generated within the building itself would well exceed 33 dB(A).

The adjacent fast food restaurants are not impacted because impact does not occur for those facilities unless the noise level reaches 71 dB(A).

Receptors in areas of frequent human use in this NSA are not impacted under the worst-case 2030 No-Build or 2030 Build Conditions for either Alternate 2 or Alternate 4 Modified.

NSA-05
The receptors at this NSA are not impacted under the worst-case 2030 No-Build or 2030 Build conditions except at M-17 which is located on undeveloped land. M-17 was modeled in order to determine the location of the 66 dB(A) line and the 71 dB(A) line. The 66 dB(A) contour varies

from 60 - 100 feet from the edge of proposed MD198 and the 71dB(A) contour varies from 20 - 40 feet from the edge of proposed MD 198.

NSA-06
Because restaurants/ bars impact occurs at 71 dB(A), neither the Southern Barbeque building (currently vacant) nor Casey's Crab Co. are impacted under the worst-case 2030 No-Build or 2030 Build conditions for either Alternate 2 or Alternate 4 modified. Southern Barbeque and Casey's Crab House are both represented by Receptor M-23.

There is an outside eating area in the vicinity of receptor M-20 at the Bank Shot Bar & Grill which is impacted under the Alternate 4 Modified 2030 Build Conditions.

Other receptors in this NSA (M-19, M-21, R-12 and R-13) were also impacted, but are on undeveloped parcels. These receptors were placed in order to determine the location of the 66 dB(A) and 71 dB(A) contours.

3. Noise Abatement

According to the SHA *Sound Barrier Policy*, decisions concerning the provision of sound barriers will be made after evaluation of the feasibility and reasonableness criteria. Sound barrier feasibility is defined as the engineering and acoustical ability to provide effective noise reduction. The determination of the feasibility of a sound barrier is dependent upon the relationship of the highway to the adjacent community. The elevations of the highway and adjacent development must be such that a barrier of reasonable height can be constructed to provide a desirable noise reduction. Other factors such as available right-of-way, constructability, and safety are also considered in determining sound barrier feasibility. Reasonableness includes such factors as cost, desires of the affected community, the relationship of existing worst-case to build noise levels, aesthetics, and environmental considerations.

a. Feasibility

The design of a sound barrier may be feasible provided the following criteria can be met:

- Noise levels can be reduced by at least 5 dB(A) at 50% of the impacted receptors in any given noise sensitive area.
- Placement of a sound barrier does not restrict vehicular or pedestrian access.
- Construction of a sound barrier does not cause any safety or maintenance problems.
- A sound barrier can be constructed given topography, drainage, utilities, etc.
- There are no non-highway noise sources that would reduce or limit barrier effectiveness.

b. Reasonableness

A sound barrier may be considered to be reasonable when the following criteria are met:

- At least 50% of the benefitted property owners and residents are in favor of noise abatement.
- At least 50% of benefitted residences will receive a 7 dB(A) or greater noise reduction in a defined NSA.
- The noise barrier will not have adverse impacts on Section 4(f) resources.
- The square footage of noise abatement is equal to or less than 2,700 square feet per benefitted residence.

4. Summary of Results

It was determined that for Build Alternative 2 noise mitigation is not warranted for any of the six NSAs. Noise mitigation is not warranted for Build Alternative 4 Modified in NSA-01, NSA-02, NSA-04, or NSA-05 as there are no impacted areas of frequent human use. Noise mitigation is warranted at NSA 3 for Build Alternative 4 Modified though it is not feasible since it would restrict pedestrian access to the ball field. Noise mitigation is warranted at NSA-06 though it is not reasonable because 7dB(A) noise reduction cannot be obtained at the impacted receptor due to openings in the barrier required for ingress/egress at the outside eating area.

The following provides the noise analysis in NSA-03 and NSA-06 for Build Alternative 4 Modified:

NSA-03

At NSA-03, a sound barrier was investigated to determine the feasibility of providing noise abatement to the ball fields which are impacted in the design year 2030 under Alternative 4 Modified.

Two barrier options were investigated to provide abatement. Option 1 provides a continuous barrier along the proposed parking lot along the north side of the ballfields. Under this option, a door would be placed in the noise barrier to provide access from the parking lot to the ballfield rather than accessing the ballfields from the end of the barrier. While Option 2 would provide a barrier with a physical break in the barrier and an overlap between the two barrier segments in lieu of providing a door.

Although, results indicated the following regarding a sound barrier:

- It can provide 10 dB(A) reduction at the most severely impacted portions of the ball fields, namely the spectator areas for ball fields #1 and #4.
- It would be approximately 600 feet long and vary in height from 8 to 14 feet with an area of 7,553 square feet for Option 1 or approximately 670 feet long and vary in height from 8 feet to 15 feet with an area of 7,799 square feet for Option 2.
- The linear footage of the ballfields along MD 198 is approximately 630 feet. Using the SHA Linear Footage Factor of 125 feet of linear footage per one residence, the resulting number of equivalent residences is 5. Counting the ball fields as 5 equivalent residences,

the area of noise abatement provided per benefitted residence would be either 1,511 square feet for Option 1 or 1,560 square feet for Option 2 per benefitted residence.

Noise mitigation is warranted at NSA-03; however, SHA determined that it would not be feasible to include a noise barrier at the ball fields (NSA-03) due to the access constraints that a barrier located between the parking area and the ball fields would cause. In addition, use of the fields is limited to those with permits on weekdays during approximately half the year (from April through August). Additional complications include potential negative visual impacts to a Section 4(f) resource.

NSA-06

At NSA-06, a sound barrier was investigated to determine the feasibility of providing noise abatement to the outside eating area at the Bank Shot Bar & Grill which is impacted in the design year 2030 under Alternate 4 Modified**.** The results indicated that a sound barrier can provide at least 5 dB(A) reduction, but cannot provide 7 dB(A) reduction due to openings in the barrier necessary for ingress/egress. The barrier would be approximately 377 feet long and vary in height from 24 to 32 feet with an area of 11,653 square feet. The linear footage of the Bank Shot Bar & Grill property along MD 198 is approximately 185 feet. Using the SHA Linear Footage Factor of 125 feet of linear footage per one residence, and rounding up, the resulting number of equivalent residences is 2. Counting the property as 2 equivalent residences, the area of noise abatement provided per benefitted residence would be 5,827 square feet per benefitted residence.

Noise mitigation is warranted at NSA-06, but is not reasonable, because 7 dB(A) noise reduction cannot be obtained at the impacted receptor due to openings in the barrier required for ingress/egress. Additional complications include potential negative visual impacts to the facility, as well as limiting access to and from the restaurant.

H. Hazardous Materials

An Initial Site Assessment was conducted for the MD 198 study area to identify locations with a likely presence of hazardous materials, wastes, or petroleum products. A summary of the assessment is below. For further information refer to the *Initial Site Assessment for MD 198: MD 32 to MD 295, Anne Arundel County, Maryland* (SHA, 2009).

There were 51 sites identified within the study area ranging in levels of severity of environmental concern. Fourteen sites received a high impact ranking based on SHA Project Impact Ranking Criteria (PIRC) requirements.

A partial investigation, due to access restrictions, was conducted at three (District Training School/ DC Children's Center, Fort George G. Meade and Tipton Airport) of the 51 sites. These sites were investigated within the area of MD 198 that would be impacted by the build alternatives and options. It is of best practice to conduct full investigations after a preferred alternative is selected; therefore, if warranted, investigations can be completed during a future stage of the project.

1. Impacts and Minimization/Mitigation

Thirty-Seven of the 51 sites, ranking from medium to high severity, would be impacted by the build alternatives and interchange options (**Table III-20**). A Preliminary Site Investigation (PSI) Screening is recommended for the 14 sites ranked as high severity in order to gather additional information regarding contamination of total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCB's), Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds (VOC's), and semi-volatile organic compounds (SVOC's). Further investigation such as soil sampling of the remaining 23 impacted sites could be required. Should soil contamination be present on site, excavation and proper removal/disposal of the material will be required.

SHA has coordinated with Fort Meade to identify probable locations of unexploded ordinances (UXOs) within the project area. Based on the information provided by Fort Meade, there are no anticipated impacts to UXOs by Alternative 2, 4 Modified, and the interchange options.

Table III-21: Sites Impacted by the Alternatives and Interchange Options

Site # (Parcel #) & Location	Risk Ranking	Impact Type	Alternative
Site 1 (**Parcel # 12**) is located on the south side of Laurel Fort Meade Road (MD 198) west of the MD 198/MD 32 Interchange. The parcel consists of the Tipton Airport.	High	Minimal property impacts	Interchange Options A, C, and D
Site 2 (**Parcel # 71**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a radio tower with an emergency generator and a diesel AST.	Medium	Minimal property impacts	Alternative 4 Modified
Site 3 (**Parcel # 86**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Interchange Options A, C, and D
Site 4 (**Parcel # 94**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternative 4 Modified
Site 5 (**Parcel # 65**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a gas station and auto service center.	High	Minimal property impacts	Alternative 4 Modified
Site 6 (**Parcel # 64**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a gated house.	Medium	Minimal property impacts	Alternative 4 Modified

Site # (Parcel #) & Location	Risk Ranking	Impact Type	Alternative
Site 7 (**Parcel # 51**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a wooded area and an abandoned concrete structure.	Low	Minimal property impacts	Alternative 4 Modified
Site 8 (**Parcel # 50**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a crab shop.	High	Minimal property impacts	Alternative 4 Modified
Site 9 (**Parcel # 88**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of an auto service center.	High	Minimal property impacts	Alternative 4 Modified
Site 10 (**Parcel # 58**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a commercial building.	Medium/High	Minimal property impacts	Alternative 4 Modified
Site 11 (**Parcel # 75**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a restaurant.	Medium	Minimal property impacts	Alternative 4 Modified
Site 12 (**Parcel # 57**) is located on the north side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a wooded area.	Low	Minimal property `impacts	Alternative 4 Modified
Site 13 (**Parcel # 72**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternative 4 Modified
Site 14 (**Parcel # 70**) is located on the south side of Laurel Fort Meade Road (MD 198) east of Waters Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternative 4 Modified
Site 15 (**Parcel # 78**) is located on the south side of Laurel Fort Meade Road (MD 198) west of Waters Road. The parcel consists of a wooded area.	Medium	Property impacts	Alternative 4 Modified
Site 16 (**Parcel # 96**) is located on the north side of Laurel Fort Meade Road (MD 198) east of Old Camp Meade Road. The parcel consists of the D.C. Children's Center.	High	Minimal property impacts	Alternatives 2 and 4 Modified

Site # (Parcel #) & Location	Risk Ranking	Impact Type	Alternative
Site 17 (**Parcel # 44**) is located on the south side of Laurel Fort Meade Road (MD 198) between Welch's Court and Arundel Gateway Boulevard. The parcel consists of a wooded area.	Medium	Minimal property impacts	Alternative 4 Modified
Site 18 (**Parcel # 40**) is located on the south side of Laurel Fort Meade Road (MD 198) between Welch's Court and Arundel Gateway Boulevard. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternative 4 Modified
Site 19 (**Parcel # 52**) is located on the north side of Laurel Fort Meade Road (MD 198) west of Old Camp Meade Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternatives 2 and 4 Modified
Site 20 (**Parcel # 69**) is located on the south side of Laurel Fort Meade Road (MD 198) between Welch's Court and Arundel Gateway Boulevard. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternative 4 Modified
Site 21 (**Parcel # 62**) is located on the north side of Laurel Fort Meade Road (MD 198) west of Old Camp Meade Road. The parcel consists of an auto body shop and paint booth.	High	Minimal property impacts	Alternative 4 Modified
Site 22 (**Parcel # 14**) is located on the north side of Laurel Fort Meade Road (MD 198) west of Old Camp Meade Road. The parcel consists of a wooded lot.	Low	Minimal property impacts	Alternative 4 Modified
Site 23 (**Parcel # 22**) is located on the north side of Laurel Fort Meade Road (MD 198) west of Old Camp Meade Road. The parcel consists of a restaurant and bar.	Low	Minimal property impacts	Alternative 4 Modified
Site 24 (**Parcel # 49**) is located on the south side of Laurel Fort Meade Road (MD 198) between Welch's Court and Arundel Gateway Boulevard. The parcel consists of an auto salvage yard.	Medium	Property impacts	Alternative 4 Modified
Site 25 (**Parcel # 76**) is located on the north side of Laurel Fort Meade Road (MD 198) west of Old Camp Meade Road. The parcel consists of a storage facility.	Medium	Minimal property impacts	Alternative 4 Modified
Sites 26 and 27 (**Parcel # 34**) is located on the south side of Laurel Fort Meade Road (MD 198) east of Arundel Gateway Boulevard. The parcel	Low	Displacement	Alternative 4 Modified

Site # (Parcel #) & Location			
consists of a barber shop.			
Site 28 (**Parcel # 33**) is located on the south side of Laurel Fort Meade Road (MD 198) west of Arundel Gateway Boulevard. The parcel consists of a wooded lot.	Low	Property impacts	Alternatives 2 and 4 Modified
Site 29 (**Parcel # 83**) is located on the north side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Old Camp Meade Road. The parcel consists of a commercial building.	High	Minimal property impacts	Alternative 4 Modified
Site 30 (**Parcel # 89**) is located on the north side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Old Camp Meade Road. The parcel consists of a wooded area.	Low	Minimal property impacts	Alternatives 2 and 4 Modified
Site 31 (**Parcel # 84**) is located on the north side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Old Camp Meade Road. The parcel consists of an auto service center.	High	Minimal property impacts	Alternative 4 Modified
Site 32 (**Parcel # 20**) is located on the south side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Arundel Gateway Boulevard. The parcel consists of an open lot.	Low	Minimal property impacts	Alternatives 2 and 4 Modified
Site 33 (**Parcel # 85**) is located on the south side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Arundel Gateway Boulevard. The parcel consists of a car dealership and an auto service center.	High	Minimal property impacts	Alternative 4 Modified
Site 34 (**Parcel # 32**) is located on the south side of Laurel Fort Meade Road (MD 198) between the Baltimore-Washington Parkway (MD 295) and Arundel Gateway Boulevard. The parcel consists of an auto body and paint shop.	High	Minimal property impacts	Alternatives 2 and 4 Modified
Site 48 (**Parcel # 38**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and Waters Road. The parcel consists of an open lot with a radio tower.	Medium	Minimal property impacts	Alternative 4 Modified

Site # (Parcel #) & Location	Risk Ranking	Impact Type	Alternative
Site 49 (**Parcel # 12**) is located on the south side of Laurel Fort Meade Road (MD 198) between Bald Eagle Drive and the Little Patuxent River. The parcel consists of an auto salvage yard.	High	Minimal property impacts	Interchange Options A, C, and D
Site 50 is located on the north side of Laurel Fort Meade Road (MD 198) at the eastern end of the study area, adjacent to the MD 198/MD 32 Interchange. The parcel consists of Fort Meade.	Low	Minimal property impacts	Interchange Options A, C, and D
Site 51 is located on Laurel Fort Meade Road (MD 198) at the MD 198/MD 295 Interchange. This is a listed site of a spill on the highway resulting from an accident.	Low	Minimal property impacts	Alternative 4 Modified

I. Indirect and Cumulative Effects Analysis

An Indirect and Cumulative Effects (ICE) Analysis was conducted for the MD 198 study area in compliance with the guidelines established by SHA, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations. The following narrative is a summary of the analysis; for further information refer to the *MD 198: from MD 195 to MD 32, Anne Arundel County, Maryland, Indirect and Cumulative Effects (ICE) Analysis* (SHA, 2009).

1. ICE Analysis Objective and Scoping

The ICE analysis is required to investigate past, present, and reasonable foreseeable future actions. ICE scoping involved identifying environmental resources in the project area and ICE issues for consideration, such as data availability, geographic boundaries, and time frame analysis. Indirect and Cumulative Effects are defined below:

> *Indirect Effects:* "Effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." (40 CFR 1508.8(b))
>
> *Cumulative Impacts:* "Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions." (40 CFR 1508.7)

a. Resources

In order to determine which environmental resources should be considered in the ICE, the resources that would be directly impacted by the possible improvements were first identified. Resources directly impacted by the project formed the basis for the resources that were examined in the ICE. **Table III-21** summarizes the resources that were analyzed in the MD 198 ICE, and their representative sub-boundaries. These sub-boundaries were used to form the overall ICE boundary.

Table III-22: Summary of ICE Resource Impacts

Resources	Incorporation into	
Socioeconomic		
Communities/Businesses	Yes	Direct and/or Indirect Impacts
Park and Recreation Facilities	Yes	Direct and/or Indirect Impacts
Cultural		
Historic Sites	Yes	Direct and/or Indirect Impacts
Natural Environmental		
Floodplains	Yes	Direct and/or Indirect Impacts
Surface Water	Yes	Direct and/or Indirect Impacts
Wetlands	Yes	Direct and/or Indirect Impacts
Terrestrial Habitat (forests)	Yes	Direct and/or Indirect Impacts

b. Time Frame

The time from 1970 to 2030, a period of 60 years, was used to represent the ICE time frame, as there was a significant increase in population within the ICE boundary in 1970 and the MD 198 project's design year is 2030.

Table III-22 shows historical and projected population growth trends within the ICE boundary and Anne Arundel County from 1920 to 2010. The table indicates that the population in the ICE boundary nearly doubled from 1960 to 1970 and the population in Anne Arundel County increased dramatically between 1950 and 1960.

Table III-23: Historical and Projected Populations

	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010*
ICE Boundary	11,370	16,496	24,106	50,531	73,074	131,852	169,963	214,060	247,024	N/A
District 2	6,489	8,885	13,168	24,212	14,082	32,755	39,430	51,239	67,147	N/A
District 3	4,881	7,611	10,938	26,319	58,992	99,097	130,533	162,821	179,877	N/A
Anne Arundel County	43,406	55,167	68,375	117,392	206,634	297,539	370,775	427,239	489,656	532,500

Source: U.S. Census data
*Projections based on Round 7B from the Baltimore Metropolitan Council Cooperative Forecasting Committee

Choosing the ICE past time frame of 1970 was not only based on population growth (it nearly doubled from 1960 to 1970), but also on the implementation of the National Environmental Policy Act (NEPA) and development of significant land use management plans. In 1969, NEPA was instituted by the Federal government. In 1997, the *Anne Arundel County General Development Plan* (GDP) was adopted, the *Odenton Small Area Plan* was adopted by Anne Arundel County in 2003, and the *Jessup/Maryland City Small Area Plan* adopted by Anne Arundel County in 2004. Another significant event that occurred in the ICE boundary includes the opening of Tipton Airport in 1999.

c. Geographic Boundary

Using the environmental resources that may be affected by direct and indirect impacts of the project as a guide (**Table III-21**), multiple resource boundaries were reviewed to determine appropriate ICE sub-boundaries that were joined to create a single ICE boundary in which all indirect and cumulative effects will be analyzed. Because indirect and cumulative effects are farther removed from the project alternatives than direct impacts, the geographic limits for the analysis of indirect and cumulative effects extend well beyond the MD 198 project limits. The sub-boundaries considered in establishing the ICE boundary are described below:

i. Sub-Boundary Considerations

a) Election Districts and Census Tract Block Groups

Census tract block group boundaries were identified from the United States Census Bureau 2000. The census tract block group sub-boundary was established by identifying all census tract block groups completely or partially within the MD 198 project limits which included census tract 7405, block groups 1 and 4, census tract 7406.03, block groups 1 and 3, and census tract 7411, block group 1. Census tracts block groups were used as a resource sub-boundary to represent the socioeconomic resources affected by the project. The census tract boundaries form portions of the eastern and western portions of the ICE boundary. Election District boundaries were not specifically used in the ICE boundary; however, they were used to evaluate population trends since 1920.

b) Traffic Analysis Zones and Area of Traffic Influence

A Traffic Analysis Zone (TAZ) is a special area delineated by state and/or local transportation officials used for tabulating traffic-related data especially journey-to-work and place-of-work

statistics. The TAZs are used to develop the Area of Traffic Influence (ATI). The ATI represents the geographic extent to which the project will affect traffic levels on nearby roadways. The TAZ and ATI boundaries were used to represent socioeconomic resources, including communities and businesses and parks and recreational facilities. They form a majority of the entire ICE boundary.

c) Sub-watersheds

Sub-watershed boundaries were established by identifying all DNR 8-digit sub-watersheds completely or partially within the MD 198 project limits. The study area includes three sub-watershed boundaries. Sub-watersheds boundaries were used to represent natural environmental resources such as floodplains, surface water, wetlands, terrestrial (forest) habitat, and rare/threatened and endangered species affected by the project. They form the southeast portion of the ICE boundary.

d) Historic Resource Areas

Based on preliminary data, there are five potential historic resources within the project area that may be directly impacted by the proposed improvements. The limits and boundaries of these individual resources are relatively small and fall within larger census tract block group boundaries. For that reason, cultural resource boundaries were not used to represent any portion of the overall ICE boundary.

e) County Planning Areas and Priority Funding Areas

Although the ICE boundary intersects three of Anne Arundel County's small planning areas (Jessup-Maryland City, Severn, and Odenton), the planning area boundaries were not used to define the ICE boundary. These planning area boundaries are much larger than the study area affected by the project. Also, the ICE boundary intersects the Priority Funding Area (PFA) that encompasses the study area. At the time the ICE Scoping was completed, the PFA boundary that encompasses the study area was not completely defined by the Maryland Department of Planning (MDP). Therefore, the PFA boundary was not used to define the ICE boundary.

ii. Overall ICE Boundary

The ICE involves natural environmental, socioeconomic, and cultural resources. Much of the ICE focuses upon natural environmental and socioeconomic resources, based upon the potential for direct natural, socioeconomic, and cultural impacts. Therefore, census tract block groups and the Area of Traffic Influence form much of the overall ICE boundary. Sub-watershed boundaries were used to represent impacts to natural environmental features; therefore, forming a portion of the ICE boundary (**Figure III-9**).

This rationale for establishment of the ICE boundary allows for assessment of indirect and cumulative effects in accordance with CEQ regulations (40 CFR 1508.7 and 1508.8 (b)). For example, the extent of the sub-watershed sub-boundary included all sub-watersheds that would experience not only direct project impacts, but also other potential indirect and cumulative effects. Similarly, the TAZ/ATI sub-boundary includes the geographical extent to which the MD 198 project would affect traffic levels on nearby roadways, and the census tracts selected for consideration in the ICE include all tracts that would be affected by the proposed alternatives.

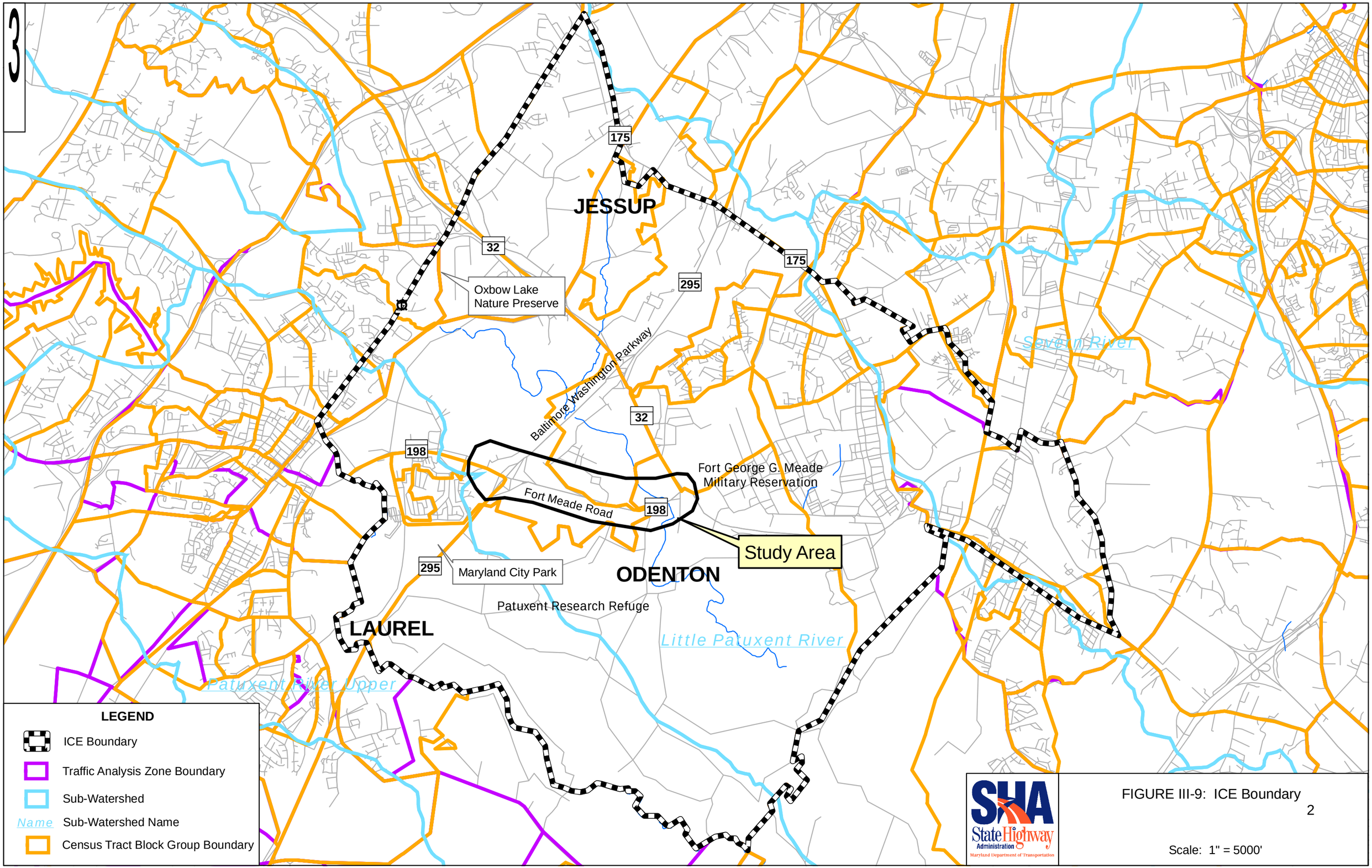

FIGURE III-9: ICE Boundary
2

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d. Land Use Cover

In order to evaluate the potential effects of the proposed transportation alternatives, it is useful to identify the pattern, intensity, and pace of development in the area. Past, existing, and future land uses in the ICE boundary were evaluated. This comparison allowed for the observation of trends that, in conjunction with local comprehensive plans and anticipated development, assisted in predicting future land use and potential cumulative effects of the project. Land use for the ICE boundary is shown for 1973 and 2002 in **Table III-23**.

Table III-24: Land Use/Land Cover within the ICE Boundary, 1973 and 2002

Land Use	1973 (acres)	Percent of Total Land	2002 (acres)	Percent of Total Land	Change from 1973 to 2002 (acres)	Change from 1973 to 2002 (%)
Agriculture	2319	9%	798	3%	-1521	-66%
Barren Land	24	0%	82	0%	58	242%
Commercial	1606	6%	1194	4%	-412	-26%
Extractive	200	1%	102	0%	-98	-49%
Forest	17895	67%	15719	59%	-2176	-12%
Industrial	74	0%	2031	8%	1957	2645%
Institutional	2,389	9%	3157	12%	768	32%
Residential	1801	7%	2881	11%	1080	60%
Transportation	0	0%	0	0%	0	0%
Urban Land	482	2%	713	3%	231	48%
Water	46	0%	90	0%	44	96%
Wetlands	10	0%	7	0%	-3	-30%
TOTAL	**26,846**	--	**26,774**	--	--	--

i. Past Land Use

The past land use is based on 1973 land use maps generated by the Maryland Department of Planning (MDP) (**Figure III-10**).

Based on the same 1973 land use maps, the parcels of land within the ICE boundary encompassed approximately 26,811 acres. Approximately 5,871 acres of that land were developed, which is 22 percent of the total area inside the ICE Boundary. The dominant land uses within the ICE boundary were forest (17,895 acres), institutional (2,389 acres), and agricultural (2,319 acres).

ii. Existing Land Use

Existing land use was determined through a review of 2002 land use maps generated by the Maryland Department of Planning (MDP) (**Figure III-11**), and supplemental field reviews of the

ICE boundary. The MD 198 ICE study area is comprised of primarily forest (59 percent) and institutional lands (12 percent) with some smaller areas classified as commercial, industrial, and residential areas. Compared to 1973, the ICE boundary industrial and residential land use has increase dramatically, while the forest and agriculture land uses have decreased significantly (**Table III-20**).

iii. Future Land Use

Future land use is expected to be similar to existing land use in the ICE boundary. Future land use in the ICE boundary will be primarily influenced by the recommendations of the existing land use plans and zoning as identified in the *Anne Arundel County General Development Plan* (2009), the *Jessup/Maryland City Small Area Plan* (2004), the *Odenton Small Area Plan* (2004), and the *Howard County General Plan* (2000). Future land use identified by Howard and Anne Arundel Counties within the ICE boundary is depicted on **Figures III-12** and **III-13**. All of the future developments proposed within the ICE boundary consist of commercial and residential developments (**Table III-24 and Figure III-13**). These developments range from less than an acre to over 300 acres in size.

Table III-25: Near Future Development

Project Name	Location	and Size	Status
Arundel Gateway Development	Fort Mead Rd, Laurel	Mixed Use (300 acres)	Conceptual site plan Approved
Jefferson @ Odenton Town Center	Lokus Rd, Odenton Tax Map 21, Parcels 497, 373, 208 and 255	Mixed Use (6.97 acres)	Site plan submitted
Grimmius Inc.	8213 Brock Bridge Rd, Laurel Near Annapolis Junction Tax Map 13, Parcel 235	Commercial (4.3 acres)	Site plan approved
Ascherl / Jaffe Property	Mayfield Rd / Telegraph Rd, Odenton Tax Map 21 Parcels 83, 84, 483, 482, and 300	Commercial (9 acres)	Site plan approved
Winward Aviation / Tipton Airfield	962 Generals Hwy, Crownsville Tax Map 30, Parcel 12	Commercial (1.3 acres)	Site plan approved
Meade Center	Annapolis Rd / Berger St., Odenton Tax Map 21, Parcels 297, 299, 315	Commercial (3 acres)	Site plan approved
Centralia Lots 24-27/ Jack of Arts Studio	Market Space St, Laurel Tax Map 13, Parcel 39	Commercial (0.5 acre)	Site plan approved
Arundel Crossing West	Blair Dr, Odenton Tax Map 21, Parcel 166	Commercial (11 acres)	Site plan approved
Boat Lifts Unlimited	Betson Ave, Odenton Tax Map 21, Parcels 96 and 20	Commercial (0.4 acre)	Site plan approved
National Business Park	Forest Ave, Jessup Tax Map 13, Parcel 71	Commercial (11.4 acres)	Site plan approved
Russet East	Laurel / Fort Mead Rd, Laurel Tax Map 20, Parcel 18	Commercial (16.9 acres)	Site plan approved
Parkside Parcel 12	Rockenbach Rd, Jessup Tax Map 13, Parcel 70	Commercial (30 acres)	Site plan approved

Table III-25: Near Future Development

Project Name	Location	Description and Size	Status
Robinson Property	Brock Bridge Rd, Laurel Tax Map 13, Parcel 244	Commercial (5.5 acres)	Site plan approved
Rappaport, Max & Lillian Rev	7871 Max Blobs Park Rd, Jessup Tax Map 13, Parcel 35	Residential (14.5 acres)	Minor Subdivision approved
Twenty Nine Twenty One Jessup Road	2921 Jessup Road, Jessup, Lot 1 Tax Map 13, Parcel 4	Residential (0.9 acre)	Minor Subdivision approved
Seven Oaks Parcel 21	Odenton Tax Map 21, Parcel 53	Residential (2,6 acres)	Preformal Phase approved
Seven Oaks Parcel 10	Private Rd, Odenton Tax Map 21, Parcel 516	Residential (6.6 acres)	Final Phase approved
Nevamar Corp Lt 2RA – Waiver	Telegraph Rd, Odenton Tax Map 21, Parcel 23	Residential (31.5 acres)	Preformal Phase approved
Laurel Race Track	3600 Laurel / Ft Meade Rd, Laurel Tax Map 19, Parcel 86	Residential (287 acres)	Sketch Phase approved
Bonaventure Lt 168R	Annapolis Rd, Odenton, Lot 168R Tax Map 29, Parcel 241	Residential (10 acres)	Final Phase approved
National Business Park	Sentinel Drive, Annapolis Junction Tax Map 13, Parcel 38	Residential (63 acres)	Final Phase approved
Jacobs Forest	Jacobs Rd, Severn Tax Map 21, Parcel 1	Residential (19 acres)	Final Phase approved
Ascherl Property, Mayfiels Ave	Lokus Rd, Odenton Tax Map 21, Parcels 3, 414, 824, 838, and 380	Residential (4.5 acres)	Final Phase approved
Telegraph Commerce Center	Telegraph Road, Odenton Tax Map 21, Parcels 86 and 179	Residential (5.2 acres)	Preformal Phase approved
Kanaris 1215 LLC Property	Annapolis Rd, Odenton Tax Map 29, Parcel 34	Residential (3.9 acres)	Preformal Phase approved
Eighteen Eighty Five Lamont	1885 Lamonte Ave, Odenton Tax Map 21, Parcel 111	Residential (0.3 acre)	Preformal Phase approved
Jennifer Meadows	8376 Jacobs Road, Severn Tax Map 21, Parcel 33	Residential (5.3 acres)	Final Phase approved
Reecewood Estates	Reece Rd, Odenton, Near Camp Meade Tax Map 14, Parcel 140	Residential (10.7 acres)	Final Phase approved
Parkside Phase 2, Infrastructure	Rockenbach Rd, Jessup Tax Map 13, Parcel 70	Residential (13.5 acres)	Final Phase approved
Parkside Phase 1, Infrastructure	Rockenbach Rd, Jessup Tax Map 13, Parcel 70	Residential (17.8 acres)	Final Phase approved
Parkside Phase 3A, Parcels 1,2	Max Blobs Park Rd, Jessup Tax Map 13, Parcel 70	Residential (17.8 acres)	Final Phase approved
Parkside Phase 3B, Parcels 9,10,11	Max Blobs Park Rd, Jessup Tax Map 13, Parcel 70	Residential (5 acres)	Preformal Phase approved
Waskey Peter	Jessup Rd, Jessup Tax Map 13, Parcels 153 and 154	Residential (9.2 acres)	Final Phase approved
Rhodes / Roberts Property	Annapolis Rd, Jessup Tax Map 13, Parcels 59 and 101	Residential (25 acres)	Sketch Phase approved

Table III-25: Near Future Development

Project Name	Location	Description and Size	Status
National Business Park Phase 2	Brock Bridge Rd, Jessup Tax Map 13, Parcels 871, 181 and 263	Commercial (121 acres)	Final Phase approved
Alta at Town Center	Nevada Ave, Odenton Tax Map 21, Parcels 138 - 140, and 336	Residential (7 acres)	Sketch Phase approved
Walgreens Store #12559	Odenton Rd, Odenton Tax Map 21, Parcels 442, 175, 180 and 390	Commercial (2.4 acres)	Final Phase approved
Otto-Baldwin Property	Annapolis Rd, Odenton Tax Map 29, Parcels 112, 214 and 353	Mixed Use (20 acres)	Sketch Phase approved
Odenton Business Park, Lot 4	Odenton Tax Map 21, Parcel 548	Commercial (5.21 acres)	Site plan approved
Royal Farm Store #149	Odenton Tax Map 21, Parcels 475,158	Commercial	Site plan approved
National Business Park / BGE Substation	Jessup Tax Map 20, Parcels 90,192	Commercial (6.14 acres)	Site plan approved
Base Realignment and Closure (BRAC)	Fort Meade/ National Security Agency (NSA)	Not Available	Working Plan Only
Loving Property	Tax Map 14, Parcel 142, Block 23	Residential (23.2 acres)	Sketch Phase approved
Howard County			
Rushing Property	South Side of Washington St, East of Baldwin St.	Residential (2 acres)	Signed Plan submitted
Savage Town Center, Phase 1&2	Dorsey Run Rd, Laurel	Residential (30 acres)	Signed Plan submitted
Jessup Ready Mix Concrete	Between Waterloo Rd & Jessup Rd, Jessup	Residential (10 acres)	Final plan approved

e. Transportation Projects

There are currently two transportation projects, MD 175 and MD 732, within the ICE boundary. MD 175 (Annapolis Road) from MD 295 to MD 170 is a traffic flow improvement project that is in the project planning phase. MD 732 (Guilford Road) is a bridge replacement project that is currently under construction.

The improvements along MD 175 from MD 295 to MD 170 are expected to impact socioeconomic, cultural and natural resources. The estimated impacts range from 92 acres of right-of-way including four residential and eight commercial displacements, up to 730 linear feet of stream, 1.34 acres of wetland, 0.01 acre of floodplain, 27.1 acres of woodland, and 2.3 acres of Section 4(f) property will be impacted.

The MD 732 (Guilford Road) bridge replacement construction project is not anticipated to impact any socioeconomic, cultural, or natural environmental resource impacts.

2. Analysis/Conclusion

Anne Arundel and Howard counties are expected to experience continued growth regardless of the improvements associated with the MD 198 project. The proposed improvements to MD 198 are consistent with the *Anne Arundel County GDP*, the *Jessup/Maryland City Small Area Plan*, and the *Howard County General Plan*. All of the currently planned developments will occur regardless of the MD 198 improvements.

This ICE Analysis examined the two sections of the MD 198 project study area, the mainline and the MD 198/MD 32 Interchange. Alternatives 2 and 4 Modified have been designed to function the same with any of the three interchange options. Alternatives 2 and 4 Modified would not change the access of MD 198 to any other roads within the study area. Alternative 4 Modified includes access improvements to existing roadways within the study area. There are three different interchange options, Option A, C, and D, for the MD 198/MD 32 Interchange. All of the interchange options provide the same access to both MD 32 and MD 198 as it currently exists today.

Based on the direct impacts associated with the build alternatives and the interchange options, all natural resources within the ICE boundary, including surface water, forest/terrestrial habitat, floodplains, and wetlands may experience direct impacts. No indirect impacts on floodplains associated with Alternative 2 are expected. The build alternatives and interchange options may also cause minor indirect impacts on communities and businesses, but only the build alternatives may cause indirect impacts on recreational facilities and historic structures in the ICE boundary.

The build alternatives and interchange options may impose cumulative effects on all of the natural resources in the ICE boundary, including water quality, surface water, forest/terrestrial habitat, floodplains, and wetlands as a result of the MD 198 project, as well as other proposed development within the ICE boundary. Alternative 2 could impose cumulative effects on all natural resources listed above with the exception of floodplains. However, some of these impacts will be minimal because of state, local, and federal laws for avoidance, minimization and/or mitigation. Future development within the ICE boundary will stimulate the local economy, attracting more people and business, and creating more jobs. Development is expected to be concentrated in residentially, commercially, and industrially zoned areas which will decrease impacts on environmentally sensitive resources.

Alternatives 2 and 4 Modified could cause adverse cumulative effects on parks and recreational facilities due to the planned increases in development within the ICE boundary. Increased planned development and population could increase business within the ICE boundary, resulting in beneficial cumulative effects on other socioeconomic resources such as improved traffic flow and accessibility to residences and businesses. Cumulative effects on historic sites and structures are expected to be minimal within the ICE boundary as a result of current state and federal regulations.

All impacts to resources resulting from the potential future development within the ICE boundary would occur independently of the improvements to MD 198 and would be minimized by existing environmental regulations. It is understood that BRAC will play a major role in

determining the amount of residential and commercial development in the ICE boundary, but at this time the indirect and cumulative effects of BRAC cannot be accurately identified/quantified because the full extent of BRAC related improvements has not been fully determined within this area. It's expected that all development related to BRAC will be regulated by resource agencies and guided by the Howard County and Anne Arundel County comprehensive land use plans; thus indirect and cumulative effects associated with BRAC will be minimized.

3. ICE Mitigation

As required by SHA guidelines, avoidance and minimization strategies were incorporated into the MD 198 design to reduce impacts to environmental resources. SHA will recommend mitigation for any direct impacts that remain following avoidance and minimization efforts.

Future development and growth within the ICE boundary will be determined by state and county development plans. SHA will continue to work with local governments and state agencies to promote beneficial controls and suggest that local jurisdictions develop resource preservation plans. However, efforts to avoid, minimize, and mitigate impacts caused by cumulative development impacts within the ICE boundary are beyond the control and funding authority of SHA. Anne Arundel and Howard Counties are ultimately responsible for monitoring and applying growth management techniques that result in development at a consistent pace with roadways and other necessary infrastructure. Mitigation for cumulative effects to environmental resources must be considered by the responsible parties and regulatory agencies.

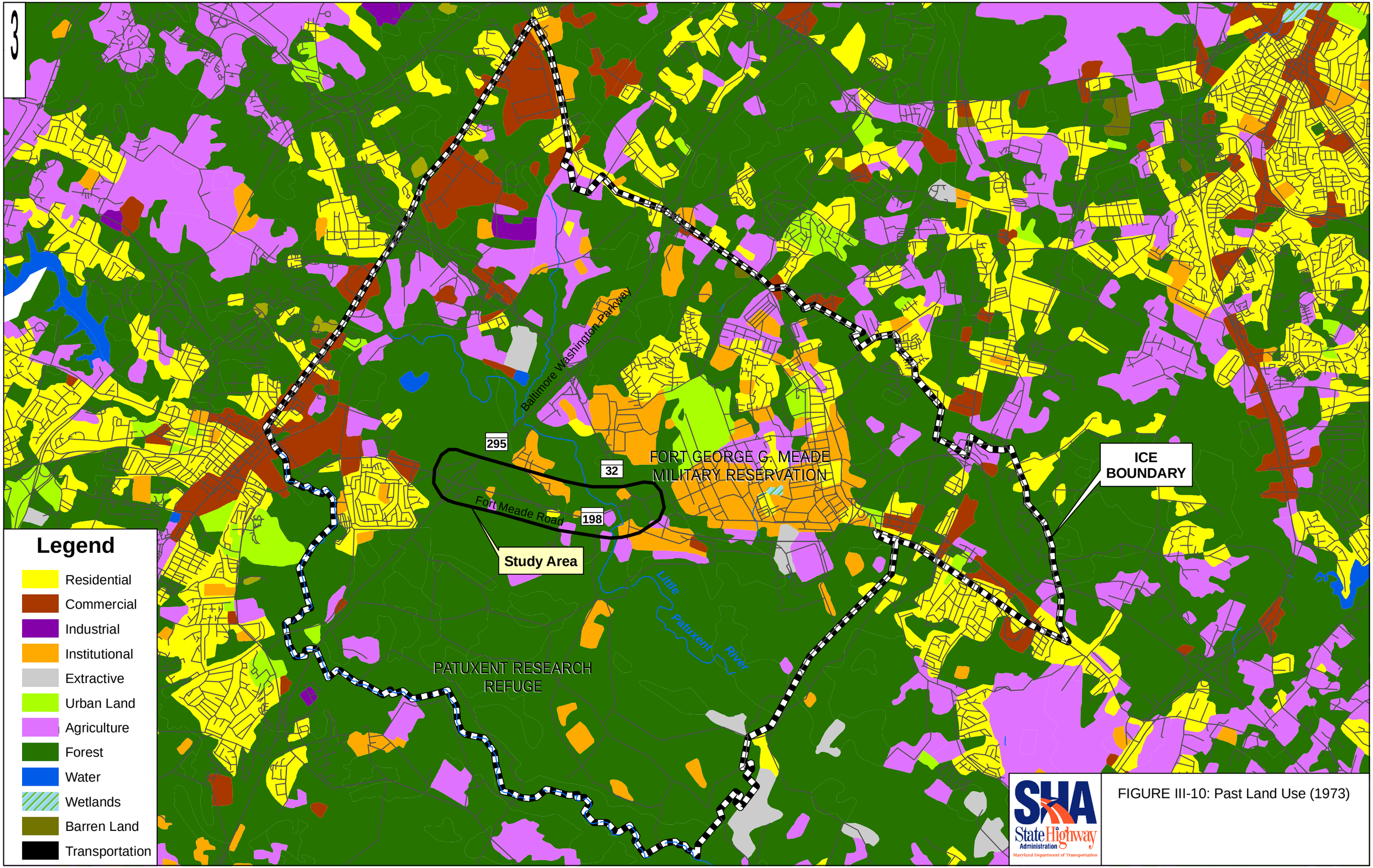

FIGURE III-10: Past Land Use (1973)

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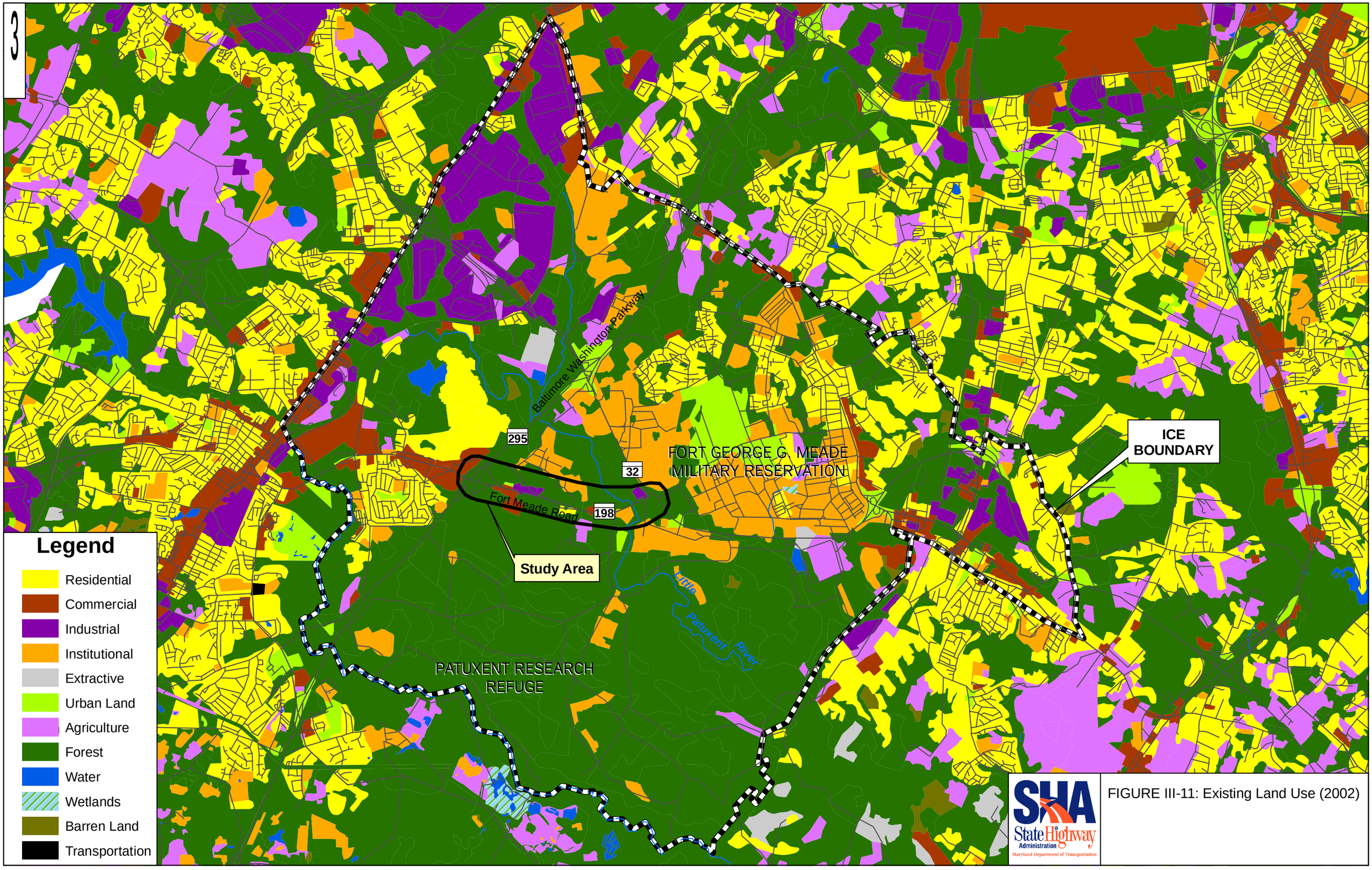

FIGURE III-11: Existing Land Use (2002)

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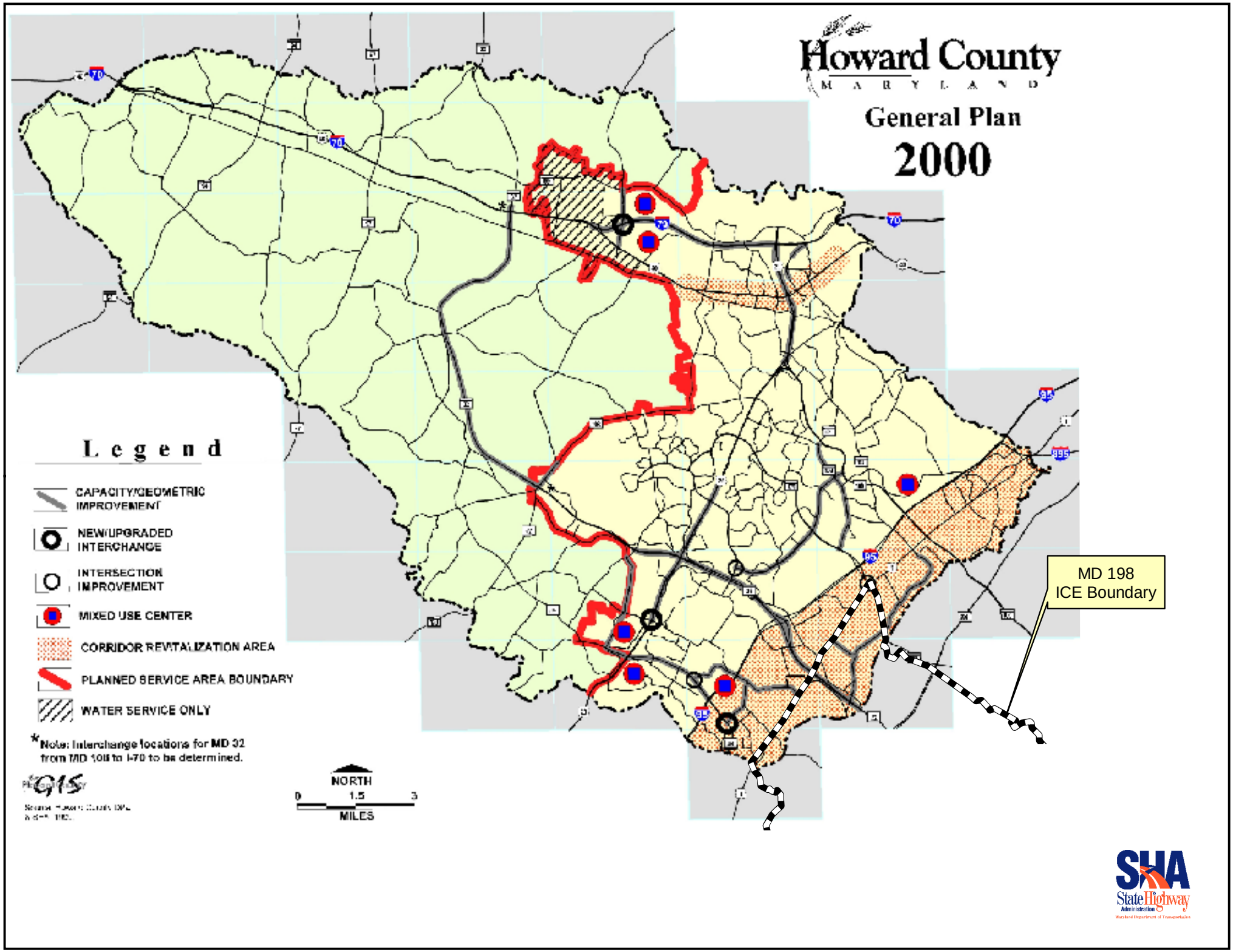

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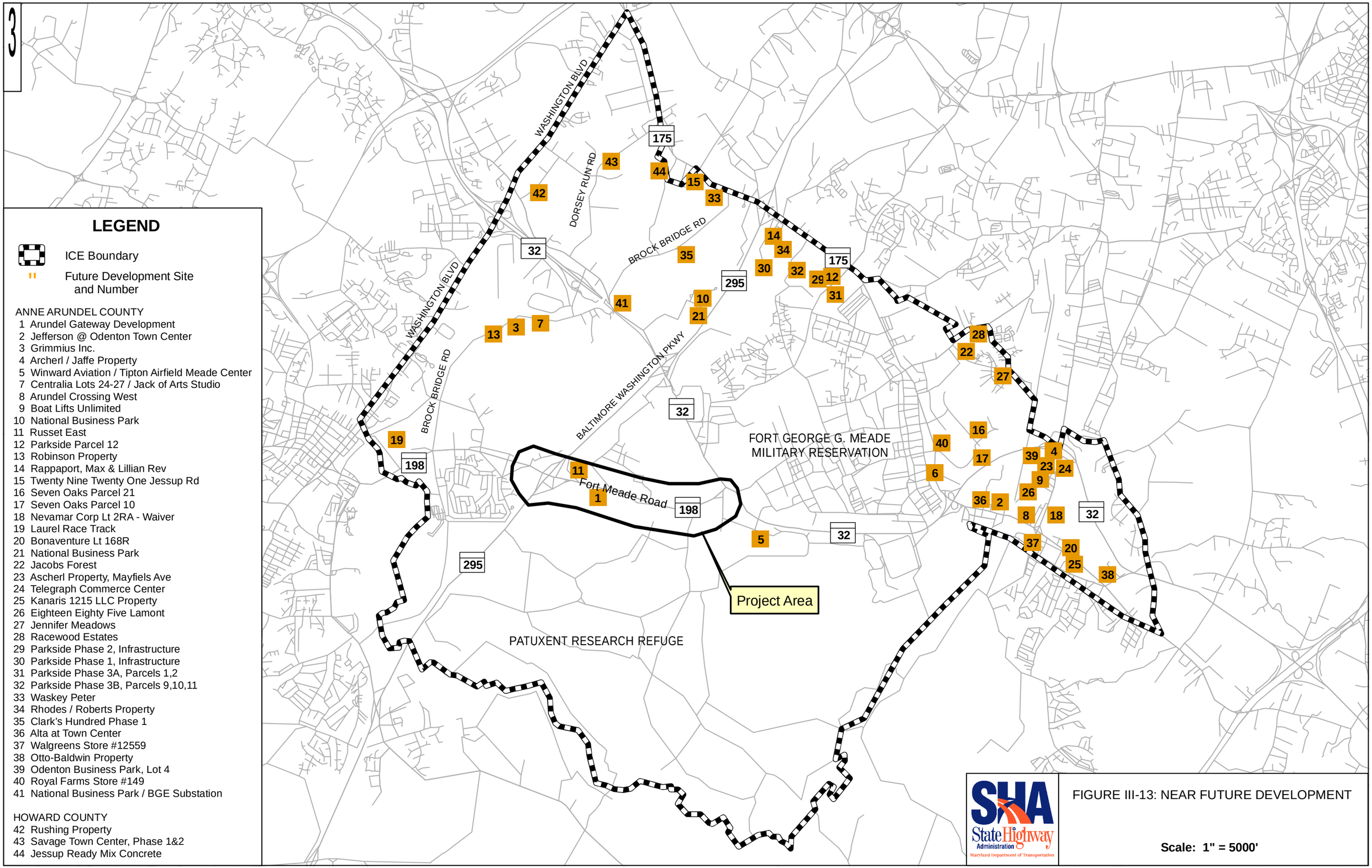

FIGURE III-13: NEAR FUTURE DEVELOPMENT

Scale: 1" = 5000'

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DRAFT Section 4(f) Evaluation

IV. DRAFT SECTION 4(f) EVALUATION

A. Introduction

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303(c)) permits the use of land from a publicly-owned public park, recreation area, wildlife or waterfowl refuge, or land of a historic site of national, state or local significance (as determined by federal, state and local officials having jurisdiction over such resources), only if there is no prudent or feasible alternative to the use of such land and if the action includes all possible measures to minimize harm in accordance with the FHWA Section 4(f) regulations, 23 CFR 774, as well as FHWA's Section 4(f) Policy Paper (March, 2005), and is consistent with the criteria for a Section 4(f) Evaluation (discussed therein).

A Section 4(f) "use" occurs when property identified as a Section 4(f) resource is permanently acquired and incorporated into a transportation project, or when there is occupancy of land that is adverse in terms of the integrity of the Section 4(f) resource. The requirements of Section 4(f) apply to the MD 198 Project Planning study because the proposed build alternatives would require the use of land from the Baltimore-Washington Parkway (Parkway), which is owned by the National Park Service (NPS) and is a significant historic resource listed in the National Register of Historic Places.

This Section 4(f) Evaluation describes the one property within the study area for which Section 4(f) is applied, as well as the location and design of alternatives developed to avoid and minimize harm to it. Right-of-way (ROW) needed from the Parkway, as well as impacts to aspects of the resource that may contribute to its historical significance are described, as are any potential temporary uses of the Section 4(f) resource.

B. Description of Proposed Action and Purpose and Need

The purpose of the proposed project is to improve existing capacity and traffic operations, as well as increase vehicular and pedestrian safety along MD 198. The area around Ft. Meade is one of the fastest growing areas of Anne Arundel County. A Level of Service (LOS) analysis was conducted for the study area for both existing (2006) and projected (2030) conditions. The analysis determined a failing operating capacity for the mainline during both AM and PM peak hours, while five of the intersections for the existing conditions and nine of the intersections for the projected conditions were also determined to operate at a failing LOS.

In addition to the No-Build Alternative (Alternative 1), the Maryland State Highway Administration (SHA) is evaluating two primary build alternatives (as well as several MD 32 interchange options) for improving the mainline MD 198 roadway improvement near the Fort George G. Meade Military Reservation in Odenton, Maryland. The alternatives being considered include:

- Alternative 2: this Transportation Systems Management (TSM) Alternative provides no increase in through roadway capacity, but makes improvements to the off-ramps from

the Parkway to MD 198, combines driveways and access points, and includes left turn lanes at the combined access points.

- Alternative 4 Modified: this Alternative would provide two through lanes in both directions, a grassy median, with a shared use path and sidewalk. For a more complete description of the alternatives considered, please refer to Section II.

C. Description of Section 4(f) Resources

SHA coordinated with the Maryland Historical Trust (MHT) in November 2007 to identify historic sites and archeological resources within the area of potential effect for the MD 198 project. The MHT determined that the Parkway was eligible for listing in the National Register of Historic Places (NRHP) and that the project would have no adverse effect on historic standing structures (**Figure IV-1**).

Baltimore-Washington Parkway

The portion of the Parkway south of MD 175 is contained within a 19-mile long, 1,353 acre parkway facility owned by the NPS, and is a significant historic resource listed on the NRHP. This segment of the Parkway extends from the eastern border of the District of Columbia to just south of MD 175 and achieves state and local significance in the areas of transportation and landscape architecture. The Parkway is associated with urban development of the National Capital as a federal center, and is the only fully developed parkway of its kind in Maryland. It is a contributing element to the National Capital Park and Parkway system developed during the first half of the 20th century.

The Parkway maintains original integrity of setting, design and associations characteristic of the earliest parkways designed for pleasure motoring, the preservation of natural topography and vegetation for scenic purposes coupled with "high-speed" elements of modern freeway design. Currently, the Parkway consists of a four-lane divided highway in a linear park boundary 400 to 800 feet wide, connecting the two metropolitan regions of Baltimore and Washington D.C. The resource is listed on the NRHP under Criteria A and C – it is associated with events that have made a significant contribution to the broad patterns of our history and it embodies distinctive characteristics of a type, period or method of construction.

D. Use of the Section 4(f) Resource

The proposed build alternatives for this project, specifically the improvements associated with the mainline widening of MD 198, would require the use of the Parkway. The following is a description of the physical and functional impacts to this resource resulting from the MD 198 build alternatives. **Table IV-1** provides a quantified breakdown of permanent and temporary impacts for each build alternative.

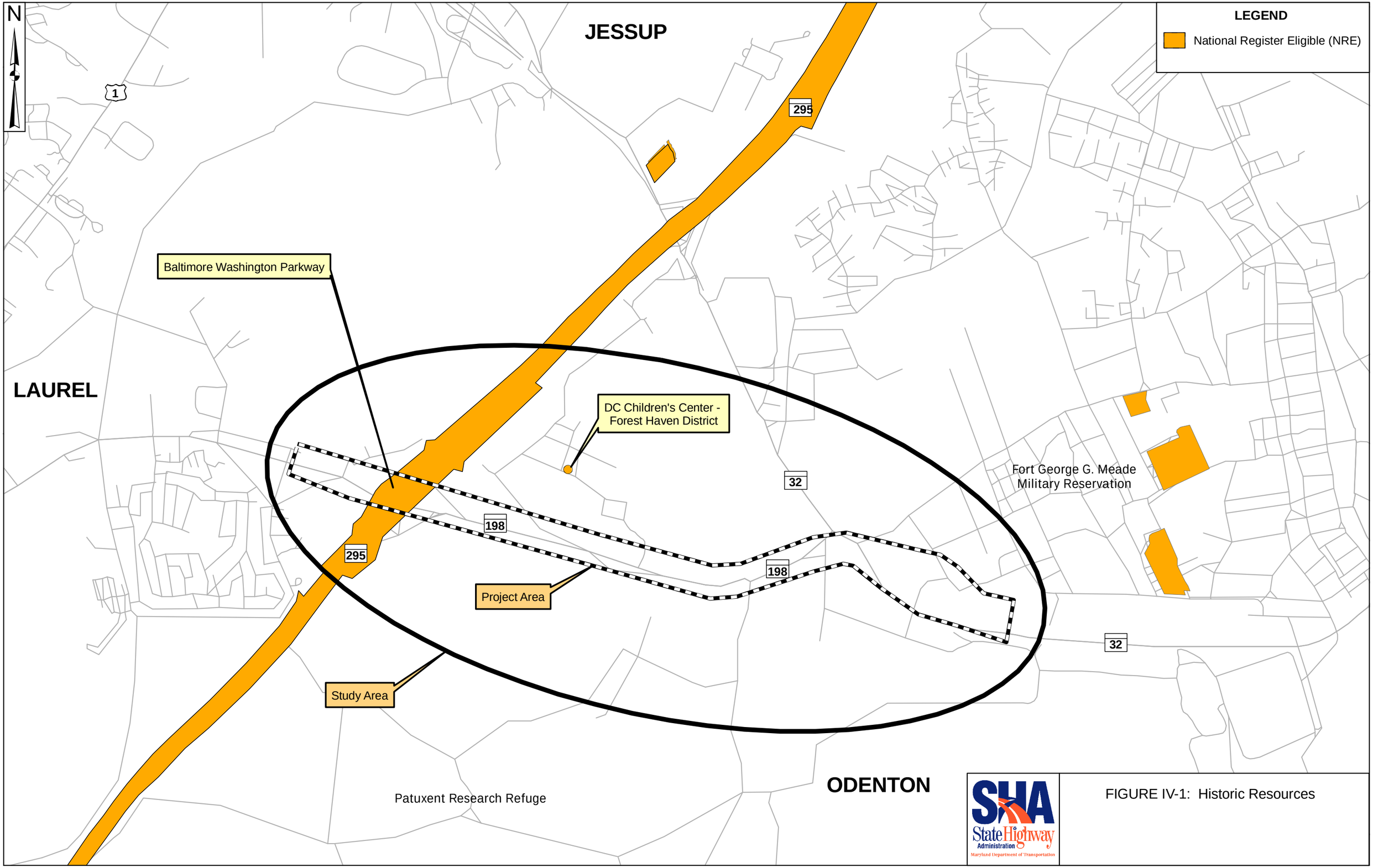

FIGURE IV-1: Historic Resources

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Table IV-1: Impacts to Baltimore-Washington Parkway (Acres)

Alternative 1 (No-Build)	0.0	0.0	0.0	0.0	N/A	**0.0**
Alternative 2 (TSM)	0.02	1.0	1.02	2.2	N/A	**2.2**
Alternative 4 Modified	0.4	3.4	3.8	2.2	2.25	**4.45**

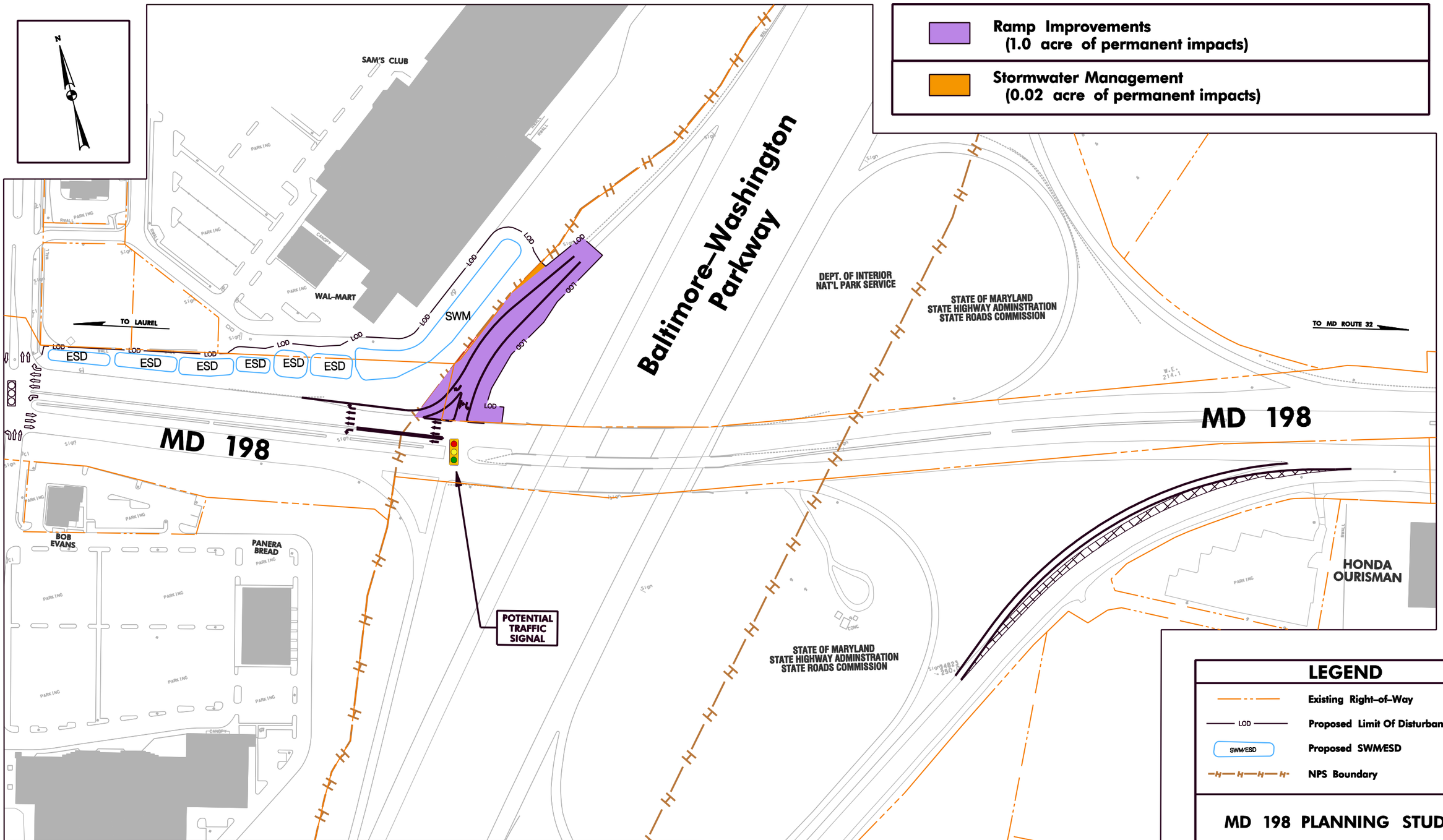
The Parkway would be impacted by both Alternatives 2 and 4 Modified. The proposed sidewalk and median improvements along the MD 198 Bridge over the Parkway and modifications to the southbound Parkway ramps to and from MD 198 would cause permanent impacts to existing parkland.

Alternative 2 would result in approximately one acre of permanent impacts from the proposed improvements to the ramp from the southbound Parkway to MD 198 and required storm water management ponds (**Figure IV-2**). There is no landscaping proposed to mitigate the impacts associated with Alternative 2.

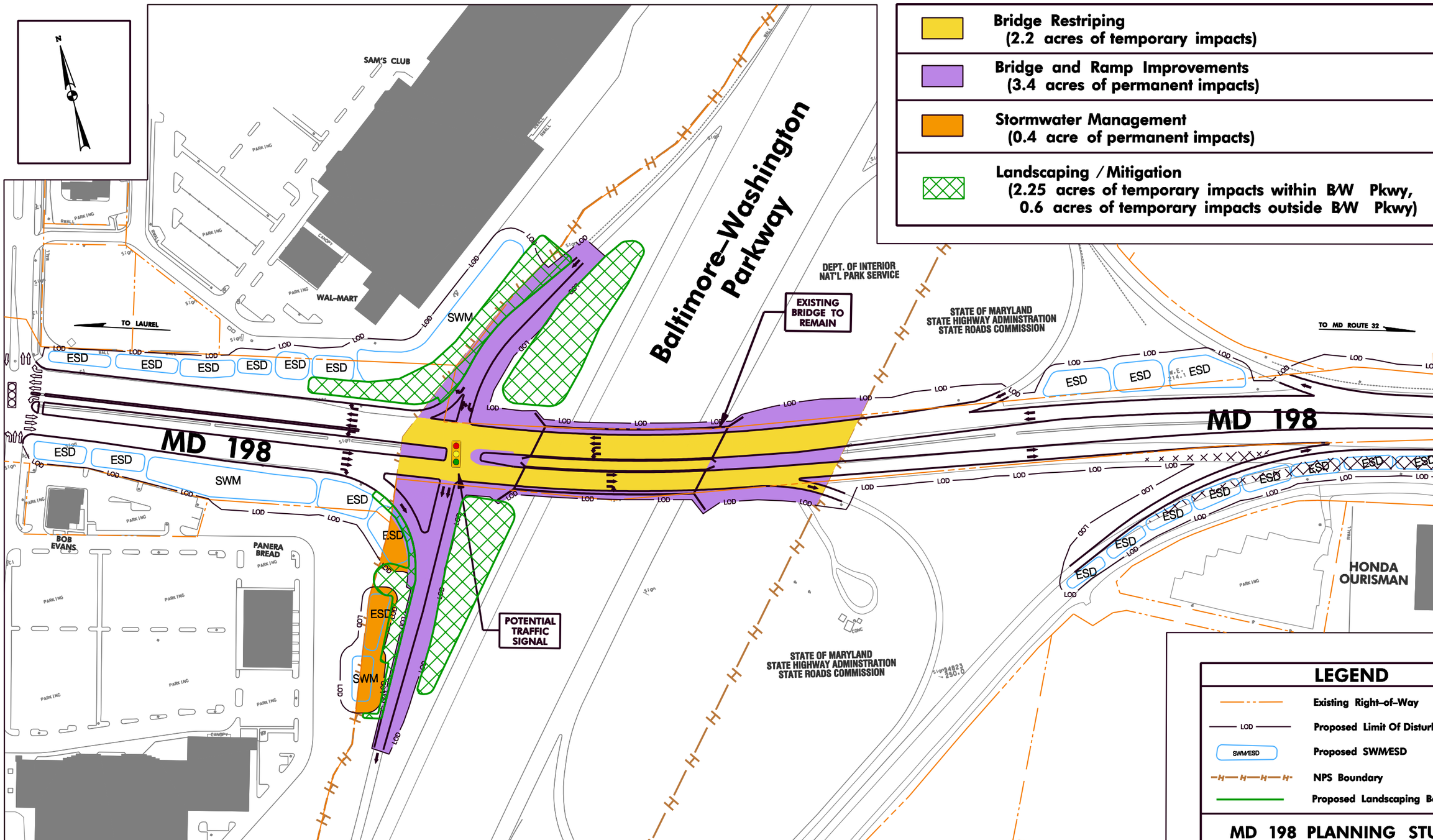
Alternative 4 Modified would have the greatest acreage of impacts, mostly due to the 3.4 acres of permanent impacts associated with the addition of a sidewalk and median improvements on the MD 198 Bridge and ramp modifications. The remaining 0.4 acre of impacts associated with Alternative 4 Modified would occur from the required storm water management ponds. The bridge restriping (2.2 acres) and landscaping (2.25 acres) necessary to mitigate the impacts associated with Alternative 4 Modified (**Figure IV-3**) are temporary impacts.

The Parkway is a historic four lane transportation facility and park that serves to preserve the historic integrity of a right-of-way with heavy slope vegetation, curvilinear road alignments, stone-faced bridge abutments, and contour grading fitting to the topography. The property accommodates an access controlled highway facility and has no other defined uses near the proposed improvements. The proposed build alternatives affecting the Parkway address safety and operational concerns of the existing transportation facility and will not impinge upon the historic context or park values of the property on which the Parkway's National Register status is based. Consideration for how roadway lighting and traffic signals may affect the character of the park will be addressed through further coordination with the NPS.

Baltimore-Washington Parkway Impacts
Alternative 2 TSM



Baltimore-Washington Parkway Impacts
Alternative 4 Modified



MD 198 PLANNING STUDY

NOT TO SCALE

FIGURE IV-3

E. Section 4(f) Avoidance Alternatives

The study team investigated relocating the proposed roadway alignments in order to fully avoid and/or minimize potential impacts. The north-south linear alignment of the Section 4(f) resource is bisected perpendicularly by MD 198. Within the project area, the NPS boundary completely surrounds the MD 198 Bridge over the Parkway and all four ramps, and extends north and south for 19 miles. Thus the only impact avoidance alternative possible would be the No-Build Alternative. This alternative would result in no environmental or community impacts, incur no cost, and have no impact on Section 4(f) Resources. However, by not improving the existing roadway, capacity increases, traffic operations, pedestrian safety, and the planned development could not be supported and the purpose and need would not be addressed.

An avoidance alternative was investigated that would maintain No-Build conditions through the limits of the NPS boundary and tie into the proposed build alternatives for the mainline and interchange options.

1. No-Build Alternative within NPS Boundary with Alternative 2

Constructing the consolidated access points and left turn lanes along mainline MD 198 in Build Alternative 2 without making the Parkway off-ramp improvements would avoid impacting the Parkway, but would raise safety concerns associated with the lack of traffic signal at the ramps. The cost of combining the No-Build Alternative within the NPS Boundary with Alternative 2 would be no less than 24 million dollars.

This alternative has a combination of improved safety and operations on the built mainline section and of unimproved safety and operations on the adjacent Parkway section (lack of sidewalk on the bridge, and the potential turn conflicts at MD 198 and the Parkway ramps). This alternative would result in environmental impacts (9.8 acres of right-of-way from wetland, stream, floodplain, woodland, and hazardous waste material sites). This alternative has no impact to the Section 4(f) resource and is the least costly alternative (a minimum of $24 million), but without the capacity, safety, operational, pedestrian improvements, and support of planned development necessary to address the purpose and need.

2. No-Build Alternative within NPS Boundary with Alternative 4 Modified

The No-Build condition within the NPS boundary with construction of Alternative 4 Modified would require reconfiguring the lane assignments to MD 198 in order to tie-in to the bridge from both the east and west approaches. This alternative would cause the proposed sidewalk and shared-use path to be disconnected at the MD 198 Bridge over the Parkway due to insufficient right-of way width. Although the LOS at either end of the NPS boundary would improve, the LOS within the Parkway would remain at a failing operating capacity, thus creating a bottle-neck at the NPS boundary. This proposed alternative would not improve through roadway capacity and/or traffic operations, or increase vehicular and pedestrian safety along MD 198. The cost of combining the No-Build Alternative within the NPS Boundary with Alternative 4 Modified would be no less than 91 million dollars. Though the cost would be approximately 6 million dollars less than building Alternative 4 Modified, the roadway would continue to operate at failing capacity.

This alternative would result in environmental impacts (32.7 acres of right-of-way from wetland, stream, floodplain, woodland, and hazardous waste material sites). It has a combination of improved safety and operations on the built mainline section, and of unimproved safety and operations on the adjacent Parkway section (the lack of sidewalk on the bridge and the lane drop, and potential turn conflicts at MD 198 and the Parkway ramps). This alternative has no impact to the Section 4(f) resource and is the second most expensive alternative (a minimum of $91 million), but could not support planned development or the project's purpose and need.

F. Measures to Minimize Harm

A series of minimization techniques have been evaluated for each of the MD 198 build alternatives at the Parkway. The team investigated reducing right-of-way impacts to the Parkway through design and construction techniques as allowed under the American Association of State Highway and Transportation Officials (AASHTO) guidelines and proposed mitigation in the form of landscaping to maintain the vegetative community disturbed by the proposed build alternatives.

1. Engineering

As a means of minimizing the amount of publicly owned park being converted to transportation use, several measure were investigated. The team studied specific locations for the Stormwater Management (SWM) and Environmental Site Design (ESD) treatment facilities, implementation of narrower travel lanes and shoulders, and temporary construction easements. AASHTO minimum standards for travel lanes and shoulder widths, as well as the relocation off the park property of SWM/ESD facilities near the southbound parkway ramp to MD 198 will provide the greatest reduction in transportation use of the Parkway.

The initial improvements to the ramps for Alternatives 2 and 4 Modified were designed to have 12-foot travel lanes and 8-foot outside shoulders and 4-foot inside shoulders (**Figures IV-4** and **IV-5**). By reducing the travel lanes to 10 feet and the shoulders to two feet (outside and inside), the permanent impacts to park property were reduced for Alternative 2 and 4 Modified by 0.68 and 1.4 acres, respectively (**Table IV-2**).

The narrow lanes create less impervious surface requiring smaller SWM ponds and less ROW. In addition, SWM/ESD facilities initially proposed within the boundary of the Parkway were relocated outside park property on the ramp to MD 198 from the southbound Parkway. A ravine adjacent to the southbound Parkway ramp from MD 198 prevented the relocation of those SWM/ESD facilities outside the park boundary. Refer to **Figures IV-2 through IV-5** which displays the locations of SWM/ESD facilities before and after minimization efforts.

Alternative 2 does not impose temporary impacts to the bridge, which is a contributing element to the Parkway. The temporary impacts associated with Alternative 4 Modified, for both the bridge restriping and the landscaping at the southbound Parkway ramps, would remain the same before and after minimization efforts (2.2 and 2.25 acres, respectively). See **Table IV-1**.

The transportation systems management approach in Alternative 2 has the fewest permanent impacts to the Section 4(f) resource (1.02 acres) and the least environmental impacts (9.8 acres)

of the two build alternatives. It improves safety and operations within the project area, is the second least expensive alternative (a minimum of $30 million), but does not support planned development or the purpose and need of the project.

The second travel lane on the ramp to the Parkway southbound causes Alternative 4 Modified to have the greatest impact on the Section 4(f) resource (3.8 acres). The officials with jurisdiction over this resource (MHT and NPS) have agreed that there will be no adverse impacts to the Parkway contingent on the landscaping plan being acceptable. This alternative has the greatest amount of environmental impact (32.7 acres) and is the most expensive (no less than $97 million), but is the only alternative that supports planned development, and provides the operations, capacity and safety improvements in the purpose and need.

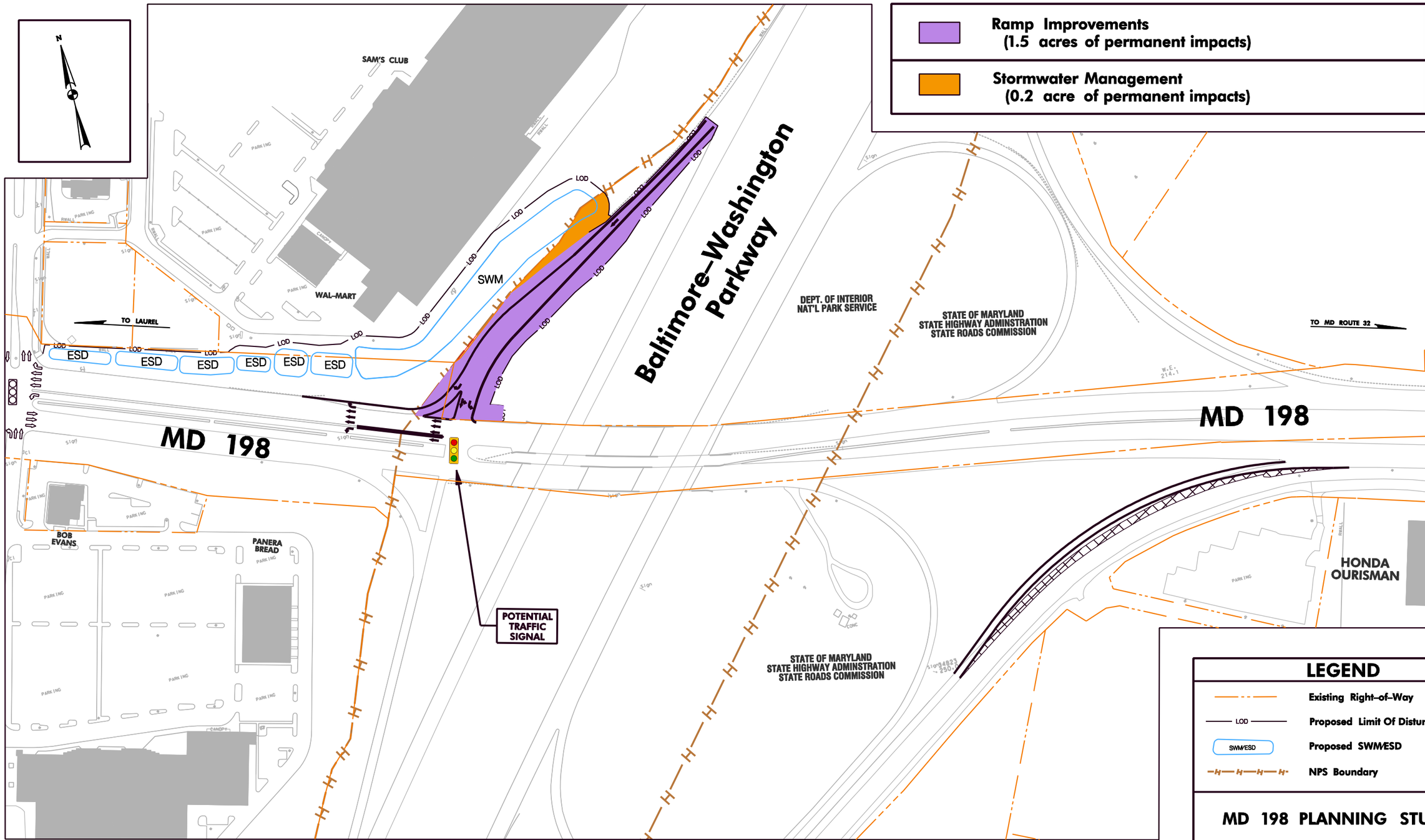
2. Mitigation

In order to preserve the character-defining features of the Parkway as a modern highway running through a native and landscaped woodland setting, additional landscaping is proposed with Alternative 4 Modified at the MD 198/southbound Parkway ramp. Landscaping goals are to maintain the overall quantity of vegetation, including screening of adjacent commercial development from the Parkway, and to use native plants. Final landscape plans will be coordinated with MHT and NPS when complete. Proposed landscape locations are located on **Figures IV-3** and **IV-5.**

Table IV-2: Summary of Project Alternatives

	Significance of Section 4(f) property	Can impacts on Section 4(f) resource be mitigated?	Relative harm to Section 4(f) property after mitigation	View of the Section 4(f) resource official about impact	Does design meet Purpose and Need?	Magnitude of right-of-way impacts to non-4(f) resources after mitigation	Approxi-mate Cost
No Build	Historic, Scenic Parkway	NA	NA	NA	No	NA	$0
No Build within NPS (ROW) with Alternative 2	Historic, Scenic Parkway	NA	NA	NA	No	9.78 acres	$24 million
No Build within NPS (ROW) with Alternative 4 Modified	Historic, Scenic Parkway	NA	NA	NA	No	32.7 acres	$91 million
Alternative 2	Historic, Scenic Parkway	No	1.02 acres permanent impacts	MHT concurred with no adverse effect determination. NPS concurs with MHT determination contingent on consultation of SWM design, landscaping plans and bridge modifications.	No	9.78 acres	$30 million
Alternative 4 Modified	Historic, Scenic Parkway	Yes	3.8 acres permanent impacts before landscaping mitigation	MHT concurred with no adverse effect determination. NPS concurs with MHT determination contingent on consultation of SWM design, landscaping plans and bridge modifications.	Yes	32.7 acres	$97 million

Baltimore-Washington Parkway Impacts
Alternative 2 TSM (Before Minimization Efforts)



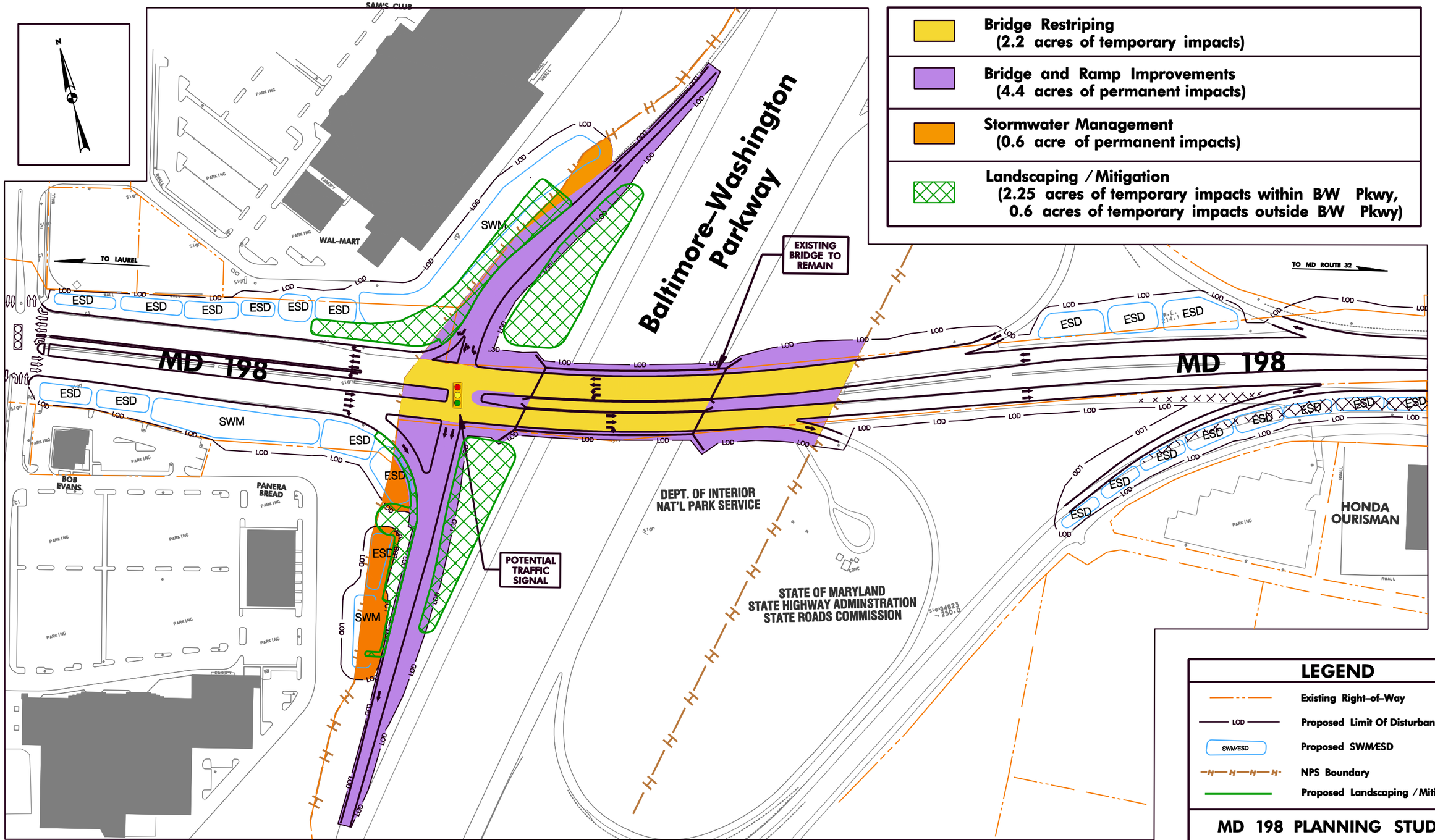
LEGEND

	Existing Right-of-Way
LOD	Proposed Limit Of Disturbance
SWM/ESD	Proposed SWM/ESD
	NPS Boundary

MD 198 PLANNING STUDY

NOT TO SCALE | FIGURE IV-4

Baltimore-Washington Parkway Impacts
Alternative 4 Modified (Before Minimization Efforts)



MD 198 PLANNING STUDY

NOT TO SCALE

FIGURE IV-5

G. Consultation and Coordination

Coordination with the NPS was initiated as part of the alternatives development process. The preliminary site meeting December 18, 2008 was followed by submission of preliminary project plans June 25, 2009. An August 17, 2009 letter and March 12, 2010 site meeting were held to discuss the project and to request concurrence that there was no adverse effect to the Parkway. On May 17, 2010 the NPS expressed concern with the design and asked to be consulted about the SWM and landscaping plans, and modifications to the MD 198 bridge over the Parkway. (They also noted that a NPS permit would be needed to install a traffic signal within the Parkway.) The NPS did not concur with the *de minimis* finding. This coordination discussed the impacts to the Parkway from Alternative 4, a design that was revised (into Alternative 4 Modified described previously) to reflect changes in the SWM/ESD regulations and additional development within the corridor.

The major difference between Alternative 4 and Alternative 4 Modified within the Parkway is the inclusion of a 0.5 mile auxiliary lane on eastbound MD 198. This additional lane continues through the MD 198/Parkway southbound ramp and increases impacts to the Parkway. After SHA received the no adverse effect determination from the MHT for Alternative 4 Modified, conditioned on implementation of the landscaping plan at the ramp, SHA communicated with the NPS March 16, 2011 about the increased park impacts. The NPS concurred with the determination of no adverse impacts to the Parkway April 7, 2011, but asked that vegetation removed by SWM/ESD construction be replaced through a NPS and MHT approved landscape plan using native species in a 1:1 replacement ratio, noted concern with the potential for cumulative impacts from the additional road surface at the on-ramp from the Parkway to MD 198, and asked that these impacts be addressed in the Environmental Assessment and Section 4(f) documentation. Additional coordination with the NPS will occur throughout the remaining phases of the planning study, as well as during design and construction, if a build alternative is selected and funded for design and construction.

MHT initially concurred on November 4, 2009 that the proposed impacts from the MD 198 build alternatives (Alternatives 2 and 4) would be considered *de minimis* impacts to the Parkway, conditioned on the landscape plantings. Through additional coordination with MHT on March 16, 2011, MHT concurred that the proposed impacts from the MD 198 build alternatives (Alternatives 2 and 4 Modified) would also be considered *de minimis* impacts to the Parkway. SHA will continue to coordinate with MHT throughout the planning and design phases of the project.

Coordination and correspondence with these aforementioned consulting agencies is located in **Appendix B**.

Coordination and Comments

V. COORDINATION AND COMMENTS

A. Process Coordination

1. Purpose and Need

The Purpose and Need Statement for the MD 198 Project Planning Study was presented to the agencies for review and comment in June 2007. Each agency concurred on the Purpose and Need. **Table V-1** provides a list of the agency correspondence regarding the approval of the Purpose and Need Statement.

Table V-1: Purpose and Need Statement Coordination

Correspondence			
Concurrence on Purpose and Need	SHA	USACE	7/18/07
Concurrence on Purpose and Need	SHA	USFWS	7/16/07
Concurrence on Purpose and Need	SHA	FHWA	7/20/07
Concurrence on Purpose and Need	SHA	EPA	9/11/07
Correspondence on Purpose and Need	SHA	MDP	7/18/07
Correspondence on Purpose and Need	SHA	MHT	8/9/07
Correspondence on Purpose and Need	SHA	BMC	7/5/07
Correspondence on Purpose and Need	SHA	DNR	8/22/07
Correspondence on Purpose and Need	SHA	NMFS	8/10/07
Correspondence on Purpose and Need	SHA	MDE	11/13/07
Correspondence on Purpose and Need	SHA	NPS	2/4/08

2. Alternatives Retained for Detailed Study

The Alternatives Retained for Detailed Study (ARDS) was presented to the agencies for review and comment in August 2008. Each agency concurred with minor comments. **Table V-2** provides a list of agency correspondence regarding the ARDS.

Table V-2: ARDS Coordination

Correspondence			
Concurrence on ARDS	SHA	FHWA	1/27/09
Concurrence on ARDS	SHA	EPA	2/6/09
Concurrence on ARDS	SHA	USACE	12/22/08
Concurrence on ARDS	SHA	USFWS	1/14/09
Concurrence on ARDS	SHA	NPS	11/21/08
Concurrence on ARDS	SHA	NMFS	12/24/08
Concurrence on ARDS	SHA	DNR	2/18/09
Concurrence on ARDS	SHA	MDE	1/22/09
Concurrence on ARDS	SHA	MHT	12/12/08
Concurrence on ARDS	SHA	MDP	12/22/08
Concurrence on ARDS	SHA	BMC	1/28/09
Concurrence on ARDS	SHA	BMC	12/30/08

The Maryland Department of Planning (MDP) indicated that the project is within the priority funding area and that it addresses the need for improving transportation access to Fort Meade to support BRAC related expansion.

The National Park Service (NPS) indicated that they would like to see Option E (Diamond Interchange with New Bridge) be retained with further study addressing road design features that reduce the security risk of a "straight connection," such as retractable hydraulic bollards, speed tables, etc. If Option E were implemented along with the removal of the existing interchange at Airfield Road/MD 198, the project would have the potential for substantial wetlands restoration and reduction in the overall impervious surface. Dismissal of Option E is justified in the ARDS package because Fort Meade objects to the direct bridge access, due to security concerns. Option D, which has the same direct access, has been re-worked through other comments received during the ARDS process to evolve into a "one-way pair" such that the new bridge moves all traffic away from Ft. Meade.

The Baltimore Metropolitan Council (BMC) noted that the Central Maryland Transit Operations Center (CMTOC) project is not discussed. The location has not been identified but has been proposed adjacent to MD 198. SHA responded by indicating that there has been coordination between the SHA MD 198 Project Planning Study representatives and representative for the CMTOC project. During these meetings, it was discussed that the location for the CMTOC along Airfield Road is one of several potential locations. If this location is selected, the preliminary design that was shared during those meetings would fit within the various interchange options, as all improvements are located off of Airfield Road, and the proposed ramp from MD 198 Eastbound to MD 32 Southbound does not widen past the existing limits.

The U.S. Fish and Wildlife Service (USFWS) feels the gravel parking area along MD 198, used during soft ball games, poses a safety hazard and would like to see the gravel lot used for upgrades to MD 198. The project now includes creating a formal parking lot at the existing gravel parking area, which can be used for the ball fields.

An informational presentation was made to the Interagency Review Meeting May 18, 2011 about a modification to the ARDS. Only minor comments were received.

The presentation discussed why Alternative 4 Modified was substituted as a build alternative in place of Alternative 4. Since the scope of the environmental impacts from the addition of an approximately 0.5 mile auxiliary lane on the mainline and an additional lane to the ramp onto MD 295 were similar to those associated with Alternative 4, additional concurrences from the agencies were need needed. The presentation ended with the USACOE expressing a desire for the fall 2011 Public Hearing to be jointly sponsored.

3. Resource Agency Coordination

Table V-3 lists all of the additional agency coordination and correspondence that has occurred during the project to this point.

Table V-3: Agency Coordination

Correspondence			
Anne Arundel County Public School Inquiry	SHA	A.A. Co. Public Schools	1/29/07
Patuxent Research Refuge	SHA	FWS	3/23/07
Rare, Threatened and Endangered Species Inquiry	DNR	SHA	12/20/06
Rare, Threatened and Endangered Species Inquiry	USFWS	SHA	12/20/06
DNR response to Rare, Threatened and Endangered Species Inquiry	SHA	DNR	2/5/07
USFWS response to Rare, Threatened and Endangered Species Inquiry	SHA	USFWS	1/19/07
DNR response to Finfish Species Inquiry	SHA	DNR	12/28/06
Request to MHT for a Determination of Eligibility and/or Effects	MHT	SHA	10/16/07
Maryland Historic Trust Determination of Eligibility and/or Effects response	SHA	MHT	12/4/07
Fort Meade Preferred Option Access	SHA	Fort Meade	6/4/09
NSA Traffic Comments	SHA	NSA	6//11/09
Request to MHT for a Determination of Eligibility and/or Effects (revised for Alternative 4 Modified)	MHT	SHA	3/16/11
Coordination regarding B/W Parkway	NPS	SHA	3/16/11
Coordination regarding B/W Parkway	SHA	NPS	4/7/11

4. Streamlined Process Meeting Minutes

Meetings were held with local, state, and federal agencies at critical points in the project planning process to keep involved parties informed and solicit feedback. These meetings are listed in **Table V-4** and the minutes are included in **Appendix B**.

Table V-4: Meetings

Meeting			
Scoping Meeting	Discuss the scope of the MD 198 Project Planning Project Study and obtain feedback from team members.	3/28/07	SHA, FHWA, Anne Arundel Co., Fort Meade
Interagency Review Meeting (IRM)	Provide an update on the project prior to the Alternatives Public Workshop and present alternatives and options for additional comments from agencies.	5/21/08	SHA, FHWA, MDE, MHT, USACE, MDP, DNR, NPS, M-NCPPC, ACHP, EPA, BMC, CAC
IRM	Update agencies on Alternative 4 Modified and provide a venue for questions	5/18/11	SHA, FHWA, MDE, MHT, USACE, MDP, DNR, M-NCPPC, EPA, BMC

B. Elected Officials Correspondence

Letters were mailed to local elected officials which provided initial project planning information. Copies of these letters are located in **Appendix B**.

C. Public Coordination/Comments

1. Stakeholders

The project team has identified the following stakeholders for the MD 198 project:

- Fort Meade Military Reservation
- Patuxuent Research Refuge
- DC Children's Center/Woodlands Job Corps Center
- Arundel Gateway
- NSA
- Greater Odenton Improvement Association
- West County Federation
- Welch's Mobile Home Community
- Tipton Airfield
- National Park Service
- Communities of Maryland City and Russett
- Anne Arundel County

There has been ongoing coordination with the stakeholders and SHA, please refer to **Appendix B** for correspondence.

Outreach strategies for the MD 198 Project Planning Study are ongoing. SHA has distributed mailings that include a newsletter and a postcard informing the public of the

project as well as inviting them to attend public workshops. Through comment response cards provided by newsletters and public workshops, SHA has documented the public's concerns about current congestion along MD 198, the impacts of BRAC, and the expansion of MD 198.

2. Public Workshop

An Alternatives Public Workshop was held on June 24, 2008 to present the results of the preliminary planning study to the public. SHA presented four mainline alternatives and five MD198/MD 32 interchange options at the workshop, along with information on each alternative/option, including estimated cost, right-of-way requirements, displacements, number of properties impacted, and an estimation of natural environmental impacts. A total of 87 people attended this workshop including local residents, community leaders and county representatives.

The largest number of favorable responses was for mainline Alternative 4 and interchange option E. There were no overwhelming comments received against any of the alternatives or interchange options. The following is a summary of the comments received at the June 24, 2008 Alternatives Public Workshop:

- Want improvement at ramp from 295 Northbound to 198 Westbound, especially to Corridor Market Place;
- Do not want roundabouts;
- Would like bike/walking trail;
- Requested more information on wetland and stream impacts to each alternative and option;
- Stop road construction, need alternative to cars;
- Want safe biking infrastructure that is separate from traffic;
- Would like traffic light at Welch's Court;
- Would like sound barrier and wildlife fencing at Welch's Mobile Home Community;
- Fire Department requests wide road area with sidewalks and direct access to Fort Meade;
- Minimize traffic lights;
- Reduce footprint of improvements;
- Maintain safe bike/pedestrian facilities during construction;
- Would like traffic lights that bike/pedestrian could trigger sensors;
- Concerned with bridge heights and proximity to airport: winter freezing and plane avoidance;
- Minimize wetland impacts;
- Would like sky-walks rather than cross-walks;
- Do not want off-road trails;

- Would like bicycle tunnels rather than cross-walks.

Please refer to **Appendix B** for all the comments received from the June 2008 Public Workshop.

3. Other Outreach

SHA met with the owner of Welch's Mobile Home Community on December 8, 2008 to discuss the MD 198 Project Planning Study, as well as to determine whether the mobile home community qualified as an Environmental Justice (EJ) Community. The mobile home community owner agreed to distribute information to residents.

SHA conducted a meeting with the residences of Welch's Mobile Home Park on November 17, 2009 and on November 19, 2009 with local business owners to present the MD 198 Project Planning Study. During these meetings, both access and property impacts based on the proposed alternatives were discussed, as well as the project development and the environmental document processes. SHA also discussed how a Public Hearing would be conducted in the Spring of 2010 in order to offer the public a formal opportunity to comment on the alternatives. As the project moves forward SHA will continue to coordinate with the mobile home community and the local business owners (Refer to **Appendix B** for detailed meeting minutes).

References

VI. REFERENCES

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Appendix A: Aquatic Features Impact Matrices

MD 198 Wetland Impact Matrix				
Wetland ID	Permanent Impacts (SF)	Temporary Impacts (SF)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Alternative 2 TSM				
PFO				
WET 26	28,181	270	0.65	0.01
PFO TOTAL	**28,181**	**270**	**0.65**	**0.01**
PSS				
PSS TOTAL	**0**	**0**	**0.00**	**0.00**
PEM				
PEM TOTAL	**0**	**0**	**0.00**	**0.00**
ALTERNATIVE 2 TOTAL	**28,181**	**270**	**0.65**	**0.01**
Mainline Alternative 4 Modified				
PFO				
WET 26	28,645	0	0.66	0.00
PFO TOTAL	**28,645**	**0**	**0.66**	**0.00**
PSS				
WET 25	430	0	0.01	0.00
PSS TOTAL	**430**	**0**	**0.01**	**0.00**
PEM				
WET 23	29,556	0	0.68	0.00
PEM TOTAL	**29,556**	**0**	**0.68**	**0.00**
ALTERNATIVE 4 MOD TOTAL	**58,631**	**0**	**1.35**	**0.00**
Interchange Option A: Flyover				
PFO				
WET 3	61	1,101	0.00	0.03
WET 6	0	3,079	0.00	0.07
WET 15	494	6,719	0.01	0.15
WET 17	4,803	1,567	0.11	0.04
WET 20	0	0	0.00	0.00
WET 21	0	138	0.00	0.00
PFO TOTAL	**5,358**	**12,604**	**0.12**	**0.29**
PSS				
PSS TOTAL	**0**	**0**	**0.00**	**0.00**
PEM				
WET 2a	2,293	0	0.05	0.00
WET 7	65,454	24,670	1.50	0.57
WET 8	0	1,150	0.00	0.03
WET 10	0	1,298	0.00	0.03
WET 12	0	608	0.00	0.01
WET 13	0	0	0.00	0.00
WET 16	10,277	5,826	0.24	0.13
PEM TOTAL	**78,024**	**33,552**	**1.79**	**0.77**
OPTION A TOTAL	**83,382**	**46,156**	**1.91**	**1.06**
Interchange Option C: Diamond Over Existing Bridge				
PFO				
WET 3	61	1,053	0.00	0.02
WET 6	0	1,633	0.00	0.04
WET 15	180	4,357	0.00	0.10
WET 17	4,803	1,522	0.11	0.03
WET 21	0	138	0.00	0.00
PFO TOTAL	**5,044**	**8,703**	**0.12**	**0.20**
PSS				
PSS TOTAL	**0**	**0**	**0.00**	**0.00**
PEM				
WET 5a	0	18	0.00	0.00
WET 7	20,074	16,927	0.46	0.39
WET 10	2,023	785	0.05	0.02
WET 10A	273	0	0.01	0.00
WET 11	327	1,381	0.01	0.03
WET 12	0	761	0.00	0.02
WET 16	10,277	5,817	0.24	0.13
PEM TOTAL	**32,974**	**25,689**	**0.76**	**0.59**
OPTION C TOTAL	**38,018**	**34,392**	**0.87**	**0.79**
Interchange Option D: 2 Bridge				
PFO				
WET 3	684	1,674	0.02	0.04
WET 6	25,576	10,079	0.59	0.23
WET 15	462	5,644	0.01	0.13
WET 21	0	138	0.00	0.00
PFO TOTAL	**26,722**	**17,535**	**0.61**	**0.40**
PSS				
PSS TOTAL	**0**	**0**	**0.00**	**0.00**
PEM				
WET 7	68,682	29,950	1.58	0.69
WET 7a	0	47	0.00	0.00
WET 9	1,464	307	0.03	0.01
WET 12	0	120	0.00	0.00
WET 16	11,067	5,658	0.25	0.13
WET 17	4,812	1,523	0.11	0.03
WET 18	0	168	0.00	0.00
PEM TOTAL	**86,025**	**37,773**	**1.97**	**0.87**
OPTION D TOTAL	**112,747**	**55,308**	**2.59**	**1.27**

MD 198 WUS Impact Matrix						
WUS ID	Permanent Impacts (LF)	Temporary Impacts (LF)	Permanent Impacts (SF)	Temporary Impacts (SF)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Alternative 2 TSM						
Ephemeral						
EPH TOTAL	**0**	**0**	**0**	**0**	**0.00**	**0.00**
Perennial						
WUS 23	71	0	356	0	0.01	0.00
PER TOTAL	**71**	**0**	**356**	**0**	**0.01**	**0.00**
Intermittent						
INT TOTAL	**0**	**0**	**0**	**0**	**0.00**	**0.00**
ALTERNATIVE 2 TOTAL	**71**	**0**	**356**	**0**	**0.01**	**0.00**
Mainline Alternative 4 Modified						
Ephemeral						
WUS 19	108	17	637	117	0.01	0.00
WUS 20	15	1	7	1	0.00	0.00
WUS 21	96	15	192	30	0.00	0.00
EPH TOTAL	**219**	**33**	**836**	**148**	**0.02**	**0.00**
Perennial						
WUS 23	56	72	561	357	0.01	0.01
PER TOTAL	**56**	**72**	**561**	**357**	**0.01**	**0.01**
Intermittent						
WUS 22	184	0	597	0	0.01	0.00
INT TOTAL	**184**	**0**	**597**	**0**	**0.01**	**0.00**
ALTERNATIVE 4 MOD TOTAL	**459**	**105**	**1,994**	**505**	**0.05**	**0.01**
Interchage Option A: Flyover						
Ephemeral						
EPH TOTAL	**0**	**0**	**0**	**0**	**0.00**	**0.00**
Perennial						
WUS 1	18	17	79	39	0.00	0.00
WUS 8	63	16	772	152	0.02	0.00
WUS 9	0	14	0	14	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	**93**	**236**	**976**	**10,498**	**0.02**	**0.24**
Intermittent						
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	**0**	**30**	**0**	**71**	**0.00**	**0.00**
OPTION A TOTAL	**93**	**266**	**976**	**10,569**	**0.02**	**0.24**
Interchange Option C: Diamond Over Existing Bridge						
Ephemeral						
EPH TOTAL	**0**	**0**	**0**	**0**	**0.00**	**0.00**
Perennial						
WUS 1	55	211	468	850	0.01	0.02
WUS 8	63	16	772	147	0.02	0.00
WUS 9	0	14	0	14	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	**130**	**430**	**1,365**	**11,304**	**0.03**	**0.26**
Intermittent						
WUS 5	32	0	64	0	0.00	0.00
WUS 6	28	0	47	0	0.00	0.00
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	**60**	**30**	**111**	**71**	**0.00**	**0.00**
OPTION C TOTAL	**190**	**460**	**1,476**	**11,375**	**0.03**	**0.26**
Interchange Option D: 2 Bridge						
Ephemeral						
EPH TOTAL	**0**	**0**	**0**	**0**	**0.00**	**0.00**
Perennial						
WUS 1	117	34	949	168	0.02	0.00
WUS 7	23	1	273	8	0.01	0.00
WUS 8	65	16	781	145	0.02	0.00
WUS 9	35	34	41	38	0.00	0.00
WUS 13	12	18	125	121	0.00	0.00
WUS 15	0	87	0	6,601	0.00	0.15
WUS 16	0	84	0	3,571	0.00	0.08
PER TOTAL	**252**	**274**	**2,169**	**10,652**	**0.05**	**0.24**
Intermittent						
WUS 14	0	30	0	71	0.00	0.00
INT TOTAL	**0**	**30**	**0**	**71**	**0.00**	**0.00**
OPTION D TOTAL	**252**	**304**	**2,169**	**10,723**	**0.05**	**0.25**

Appendix B: Comments and Coordination Correspondence

Appendix B:
Comments and Coordination Correspondence

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2007			November 2007 Alternates Public Workshop	
June 2008	SHA	Public	Comments from June 2008 Alternates Public Workshop	B-168: B-177
11/17/09	SHA	Welch's Mobile Home Residence Meeting	Summary of the Welch's Mobile Home Park Residences Meeting	B-178: B-181
11/19/09	SHA	Local Business Community	Local Business Owners Meeting	B-182: B-186
Public Services & Elected Officials				
6/19/09 & 9/14/09	SHA	Emergency Services	Emergency Services Information Request Letters	B-187: B-196
4/9/09	SHA	Elected Officials	Elected Officials Initial Project Planning Letters	B-197: B-201
8/11 - 11/10//09	Emergency Services	SHA	Emergency Services Responses	B-202: B-204
11/3/09	SHA	NPS	EMS Response to Comments	B-205

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
✓ Corps of Engineers
___ Fish and Wildlife Service

___ **Concurs (without comments)** ✓ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment
___ MD Department of Planning
___ MD Historical Trust
___ Metropolitan Planning Org.

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

WOULD LIKE TO SEE TRAFFIC VOLUMES FOR BOTH 175 + 198 IN YRS 2006 AND 2030.

Additional Information Needed:

Signature: Steve Hamm Date: JULY 18 07

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32
Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):
___ Federal Highway Administration ___ Corps of Engineers ___ Environmental Protection Agency X Fish and Wildlife Service X **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur** Comments / Reasons for Non-Concurrence:
Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.
___ National Park Service ___ MD Dept. of the Environment ___ MD Historical Trust ___ National Marine Fisheries Service ___ MD Department of Planning ___ Metropolitan Planning Org. ___ MD Dept. of Natural Resources ___ **Provides Comments (below or attached)** ___ **Has No Comments** Comments:
Additional Information Needed:
Signature: William Schuh Date: 7/16/07

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

John D. Porcari, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

July 3, 2007

Re: Project No. AA510M11
MD 198 Transportation Improvement Study
Anne Arundel County, Maryland

Mr. Nelson J. Castellanos
Division Administrator
Federal Highway Administration
Del Mar Division
300 South New Street
Suite 2101
Dover DE 19904

Attn: Mr. Dan Montag

Dear Mr. Castellanos:

In accordance with Maryland's Streamlined Environmental/Regulatory Process, the State Highway Administration (SHA) requests your concurrence with the Purpose and Need for the MD 198 Transportation Improvement Study. Attached, is a copy of the Purpose and Need informational package presented at the June 20 Interagency Review meeting, along with a two-page summary statement.

Please provide us with your concurrence with the Purpose and Need by July 20, 2007, addressed to the attention of Mr. Joseph Kresslein in the Project Planning Division. Should you have any questions, please call the environmental manager, Ms. Anne Elrays at 410-545-8562.

Very truly yours,

APPROVED
7/20/07
DIV. ADM.-FHWA DATE

Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

by: for Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

Attachments

cc: Mr. Dennis Atkins, Assistant Division Chief, Project Planning Division, SHA
Ms. Anne Elrays, Environmental Manager, Project Planning Division, SHA
Mr. Bruce M. Grey, Deputy Director, Office of Planning and Preliminary Engineering, SHA
Ms. Kameel Holmes, Project Manager, Project Planning Division, SHA
Mr. Dan Johnson, Environmental Program Manager, Federal Highway Administration, w/attachments
Mr. Joseph R. Kresslein, Assistant Division Chief, Project Planning Division, SHA

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
X Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service

___ **Concurs (without comments)** ✓ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / ~~Reasons for Non-Concurrence~~: Please continue coordination to evaluate wetlands in the study area. Significant resources are present, as shown in Fig. 2-22 (though not apparent in Fig. 3A)

Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment
___ MD Department of Planning
___ MD Historical Trust
___ Metropolitan Planning Org.

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: [signature] Date: 9/11/2007

6/29/07

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32
Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):
___ Federal Highway Administration ___ Corps of Engineers ___ Environmental Protection Agency ___ Fish and Wildlife Service **___ Concurs (without comments) ___ Concurs (w/ minor comments) ___Does Not Concur** Comments / Reasons for Non-Concurrence:
Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.
___ National Park Service ___ MD Dept. of the Environment ___ MD Historical Trust ___ National Marine Fisheries Service ✓ MD Department of Planning ___ Metropolitan Planning Org. ___ MD Dept. of Natural Resources **___ Provides Comments (below or attached) ✓ Has No Comments** Comments:
Additional Information Needed:
Signature: _____ Date: 7/18/07

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32
Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):
___ Federal Highway Administration ___ Corps of Engineers ___ Environmental Protection Agency ___ Fish and Wildlife Service **___ Concurs (without comments) ___ Concurs (w/ minor comments) ___Does Not Concur** Comments / Reasons for Non-Concurrence:
Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.
___ National Park Service ___ MD Dept. of the Environment X MD Historical Trust ___ National Marine Fisheries Service ___ MD Department of Planning ___ Metropolitan Planning Org. ___ MD Dept. of Natural Resources **___ Provides Comments (below or attached) X Has No Comments** Comments:
Additional Information Needed:
Signature: Tom Tarburna Date: 8/9/07

5 JUL 06 '07 AM 8:11

Baltimore Metropolitan Council

2700 Lighthouse Point East, Suite 310
Baltimore, MD 21224-4774

Telephone: (410) 732-0500
Fax: (410) 732-8248
www.baltometro.org

Anne Arundel County
Baltimore City
Baltimore County
Carroll County
Harford County
Howard County

July 5, 2007

Mr. Samuel Minnitte, Director
Office of Systems Planning and Evaluation
ATTENTION: Jamie Lake
Maryland Department of Transportation
7201 Corporate Center Drive
P.O. Box 548
Hanover, Maryland 21076

Dear Mr. Minnitte:

The Baltimore Regional Transportation Board (BRTB) approved Resolution #07-24, endorsing the Purpose & Need Statement for MD 198 from west of MD 295 to MD 32, at their June 26, 2007 meeting. While this is part of the BRTB's congestion management process, the resolution also supports the State Highway Administration's Interagency Review Process.

Sincerely,

Harvey S. Bloom, Director
Transportation Planning

Enclosure

cc: Donald Sparklin, SHA

Attachment A

Purpose and Need Summary for MD 198 From West of MD 295 to MD 32

Project Description

The project study area is located approximately midway between Baltimore City and Washington D.C. in northwestern Anne Arundel County, Maryland. The limits of the MD 198 (Laurel Fort Meade Road) Project Planning Study extend from west of MD 295 (Baltimore Washington Parkway) at Russett Green East to MD 32 (Mapes Road/Savage Road), approximately 3.5 miles. MD 198 is on the State's Secondary System of highways and is functionally classified as an Urban Other Principal Arterial under the Federal Functional Classification System. It is an east-west route that extends from Montgomery County to the west, through the City of Laurel in Prince George's County, and terminates at Fort Meade at the eastern end of the project limits. It connects to major north-south arterials such as US 29, I-95, US 1 and MD 295. Within the study limits, MD 198 has grade-separated interchanges with MD 295 and MD 32, and several at-grade intersections with local roadways and access roads to Fort Meade. MD 198 serves as a primary gateway to Fort Meade from the south of the installation.

Purpose of the Project

The purpose of the project is to improve the existing capacity and traffic operations, enhance access to Fort Meade, and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. Improving MD 198 would accommodate future transportation needs in the project area.

Need for the Project

The area around Fort Meade is one of the fastest growing areas of Anne Arundel County. Combined, Fort Meade and the National Security Agency (NSA), a tenant of the fort, represent the largest employers in the State of Maryland. Fort Meade's workforce is comprised of more than 39,000 personnel. As a result of the 2005 Base Realignment and Closure (BRAC) process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2010, approximately 13,000 new jobs are expected to be relocated to the fort and NSA, as well as 20,000 private sector jobs. In addition to jobs, the study area is expected to see substantial increases in population, housing, commercial activity, and vehicular traffic as a result of BRAC.

Existing Average Daily Traffic (ADT) volumes along MD 198 between MD 295 and MD 32 are relatively even throughout, ranging from 21,600 to 24,000 ADT. Just west of the MD 295 interchange the existing ADT is higher, at 43,100. MD 198 within the project limits currently operates at Level of Service (LOS) E, as a two-lane facility. Three intersections within the study limits are operating at LOS E or F, under current traffic conditions. Rates for all crash types on MD 198 from west of MD 295 to the Little Patuxent River (2.5 miles) fall within acceptable parameters for similar type highways. Wet surface crashes occur at a rate higher than the statewide average for similar type highways; however, they are not significantly higher. Other crash types include rear

end, sideswipe, fixed object, left turn, angle, and parked vehicles. The majority of crashes occurred at the western end of the project area where the volumes are much higher. The projected 2030 ADT in the project area is expected to increase approximately 35% west of MD 295 and 75% between MD 295 and MD 32, with future volumes ranging between 57,900 ADT just west of MD 295 to 33,450 ADT just west of MD 32. Without improvements, congestion throughout the project area will reach severe conditions and the crash rate would be expected to increase. As a two-lane roadway, MD 198 between MD 295 and MD 32 is projected to experience failing conditions, with queues extending the entire length of the project limits. Nine of the twelve intersections in the project area are expected to operate at LOS F in either the AM or PM peak period, or both, under future 2030 No Build Conditions.

Source: Maryland State Highway Administration, May 2007

BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD
RESOLUTION #07-24

RESOLUTION TO ENDORSE PURPOSE AND NEED STATEMENT FOR MD 198 FROM WEST OF MD 295 TO MD 32

WHEREAS, the Baltimore Regional Transportation Board (BRTB) is the designated Metropolitan Planning Organization for the Baltimore region, consisting of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard, and the Maryland Department of Transportation, the Maryland Department of the Environment, and the Maryland Department of Planning; and

WHEREAS, Section 450.320 of the Final Metropolitan Transportation Planning Rules issued by the Federal Highway Administration and Federal Transit Administration on October 28, 1993 identifies the requirements of a major metropolitan transportation study in identifying all promising mobility solutions; and

WHEREAS, in October of 1997, the Baltimore Regional Transportation Board approved Resolution # 98-7, adopting a work program for the Congestion Management System (CMS) corridor implementation; and

WHEREAS, one of the primary purposes of the Congestion Management Process is to identify promising mobility (highway, transit, bicycle and pedestrian) improvements and congestion management strategies (transportation demand management or transportation system management), rather than select specific transportation improvement projects for implementation. These improvements will be considered for the next steps of the planning and project development process and, where appropriate, studied further in more detail; and

WHEREAS, the State Highway Administration has provided a draft Purpose and Need Statement dated May 15, 2007; and

WHEREAS, this study involves improving existing capacity and traffic operations, enhanced access to Fort Meade, and increased vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area; and

NOW, THEREFORE, BE IT RESOLVED, that the Baltimore Regional Transportation Board, as a commenting agency, endorses the MD 198 Purpose and Need Statement as described in Attachment A.

I HEREBY CERTIFY that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approved the aforementioned resolution at its June 26, 2007 meeting.

June 26, 2007
Date

Harvey Gold
Harvey Gold, Chairman
Baltimore Regional Transportation Board

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service

___ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ National Park Service
___ National Marine Fisheries Service
✓ MD Dept. of Natural Resources
___ MD Dept. of the Environment
___ MD Department of Planning
___ MD Historical Trust
___ Metropolitan Planning Org.

✓ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments: The Nontidal Wetlands of Special State Concern (NTWSSC) have been mapped inaccurately. The actual boundaries are much larger than shown on page A 22 (MD 198 Environmental Feature Map).

Additional Information Needed:

Signature: Ray C. Dittemore Date: 8-22-07

PURPOSE AND NEED

MD 198: West of MD 295 to MD 32

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration ___ Corps of Engineers
___ Environmental Protection Agency ___ Fish and Wildlife Service

___ Concurs (without comments) ___ Concurs (w/ minor comments) ___Does Not Concur

Comments / Reasons for Non-Concurrence:

Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ National Park Service ___ MD Dept. of the Environment ___ MD Historical Trust
✓ National Marine Fisheries Service ___ MD Department of Planning ___ Metropolitan Planning Org.
___ MD Dept. of Natural Resources

✓ Provides Comments (below or attached) ___ Has No Comments

Comments:

Additional Information Needed:

Signature: J. S. Zick Date: 8/10/07

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
Chesapeake Bay Program Office
410 Severn Ave., Suite 107A
Annapolis, Maryland 21403

August 10, 2007

MEMORANDUM TO: Anne Elrays
Project Planning Division

FROM: John Nichols

SUBJECT: MD 198 Study – Purpose & Need

National Marine Fisheries Service has reviewed the Purpose and Need Statement for the MD 198 Transportation Improvement Study near Laurel, in Anne Arundel County. We offer the following minor comments pertaining to resource issues.

We visited the project site on July 16, 2007; specifically the MD 198 Bridge crossing of the Little Patuxent River. A water supply dam associated with the Fort Meade military complex lies immediately upstream of the MD 198 Bridge over the river mainstem. A Denil fish ladder is situated on the west wing of the dam, which provides passage for migratory fish using the Little Patuxent River. Extensive riparian/floodplain forested and emergent wetlands lie upstream of the highway crossing.

Downstream of the highway crossing, a narrower band of active forested floodplain lies on either side of the river channel. The flow in the river channel is shallow, and restricted by extensive sand-gravel bar development. A sewage outflow from a wastewater treatment facility on the Fort Meade complex discharges to the east side of the river approximately 50 yards downstream of the bridge.

The constricted character of the MD 198 crossing of the Little Patuxent River will make avoidance/minimization of the impacts to aquatic resources and habitats difficult if roadway widening if proposed. Consequently, NMFS is most concerned with resources/habitats lying to the north or upstream of the crossing. This especially applies to the Denil fish ladder. Because the fish ladder has been designed to accommodate passage relative to site specific flow conditions above and below the dam, any changes to the MD 198 bridge should avoid physical disturbance to the ladder, as well as adverse changes in flow and sediment deposition patterns that may affect attraction and entry of fish into the ladder entrance. Project focus should also entail avoidance of impacts to the extensive wetland/floodplain system lying north of the crossing, which benefits the hydrology and water quality of the river.

If you have any questions, please contact me at (410) 267-5675; or, John.Nichols@NOAA.GOV.

PURPOSE AND NEED

Project Name & Limits: MD 198: West of MD 295 to MD 32
Anne Arundel County, MD

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
✓ MD Dept. of the Environment

✓ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: Elder A [illegible] Date: 11/13/07

Send to:

Mr. Joseph Kresslein
State Highway Administration
707 N. Calvert Street
Mail Stop C-301
Baltimore, MD 21202

Or fax to: 410-209-5004

PURPOSE AND NEED

Project Name & Limits: MD 198: west of MD 295 to MD 32

Having reviewed the attached Purpose and Need concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service

___ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

✓ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment
___ MD Department of Planning
___ MD Historical Trust
___ Metropolitan Planning Org.

✓ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: Susan M Hirsh Date: 2/4/08

The Environmental Inventory, contained in Appendix B, states that there are no public parks, schools, or public recreation uses in the study area. Please correct this to say that the Baltimore Washington Parkway, a unit of the National Park System under the jurisdiction of the National Park Service, is located in the study area, and will likely be affected by the project. The Baltimore Washington Parkway is maintained by NPS as a scenic travel route connecting Baltimore to Washington.

The Baltimore Washington Parkway is also listed in the National Register of Historic Places, a fact that is noted further ahead in the text, which we appreciate. Please also note that coordination and consultation will be needed with the National Park Service, pursuant to Section 106.

We appreciate the opportunity to comment on this project.

MD 198: MD 295 to MD 32
CONCURRENCE FORM FOR ALTERNATES RETAINED FOR DETAILED STUDY

Project Description:
The project involves a study to address capacity needs on MD 198 from just west of MD 295 (Baltimore Washington Parkway) at Russett Green East to MD 32 (Savage Road/Patuxent Freeway). Bicycle and pedestrian access will be provided where appropriate. (BRAC related)

Project Purpose Statement:
The purpose of the MD 198 Project Planning Study is to improve the existing capacity and traffic operations, enhance access to Fort Meade, and increase vehicular, bicycle, and pedestrian safety along MD 198, while supporting existing and planned development in the area. Improving MD 198 would accommodate future transportation needs in the project area.

Purpose of Package:
The purpose of this package is to request concurrence with the Alternates Retained for Detailed Study for the MD 198 project.

Alternatives Dropped Prior to the Alternates Public Workshop:
One Interchange Option was dropped prior to the June 24, 2008 Alternates Public Workshop.

- Interchange Option - Single-Point Urban Interchange (dropped due to disruption to traffic flow, number of construction stages required, and significantly higher costs for maintenance of traffic during construction than other proposed options)

Alternatives Dropped Subsequent to the Alternates Public Workshop:
The alternatives below were presented at the June 24, 2008 Alternates Public Workshop and dropped as a result of the preliminary planning phase and/or public comments generated at the Workshop.

- Mainline Alternative 3 - (dropped since this alternative is functionally redundant to Mainline Alternative 4 and does not promote pedestrian safety due to the lack of a sidewalk on the north side of the roadway)
- Interchange Option E – (dropped due to objectionable direct access to Fort Meade and relocation of Airfield Road)

Alternatives Retained for Detailed Study:
The following is a list of alternatives/options presented at the June 24, 2008 Alternates Public Workshop that are being carried forward into detailed analysis.

- Mainline Alternative 1 – No-Build
- Mainline Alternative 2 – Transportation Systems Management (TSM)
- Mainline Alternative 4 – Divided Roadway with Off-Road, Shared-Use Facility and Sidewalk
- Interchange Option A – Flyover Ramp
- Interchange Option B – Loop Ramp
- Interchange Option C – Diamond Interchange at Existing Bridge
- Interchange Option D – Two Bridge

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

✓ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

✓ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: _____ Date: 1.27.09

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
✓ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** ✓ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:
See attached email sent 2-06-09 to SHA (Elizabeth Habic)

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: _____ Date: 2-06-09

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
X Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** X **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence: Reduce median widths where possible. For Options B + C, place proposed roadway back on existing alignments and reduce lanes, ramps. Modify flyover ramp in Option A to minimize wetland impact, Reduce truck lane impacts.

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust
___ MD Department of Planning
___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: Joseph P. DaVia Date: 12/22/08

JOSEPH P. DAVIA

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
_X_ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** _X_ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

- Please see accompanying letter that expresses concerns related to the north entrance to the US Fish and Wildlife Patuxent Research Refuge.

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments: See attached

Additional Information Needed:

- Please provide identification of the State listed RTE specie(s) occurring in the Wetlands of Special State Concern located along the Little Patuxent River adjoining the project alignment.

Signature: _____ Date: 1/14/09

United States Department of the Interior

FISH AND WILDLIFE SERVICE

FILE COPY

January 14, 2009

Joseph R. Kresslein
Assistant Division Chief
Project Planning Division
Office of Planning and
Preliminary Engineering
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

Re: *MD 198 (Fort Meade Road) from MD 295 to MD 32, Anne Arundel County, Maryland*

Dear Mr. Kresslein:

On December 18, 2008, Mitch Keiler and Bill Schultz, representing the U.S. Fish and Wildlife Service (Service), attended a field trip to view and comment on potential natural resource impacts associated with the MD 198 proposed alignments and options. The following three project locations were field inspected by the interagency team:

- Bald Eagle Drive (intersection of Bald Eagle Drive and MD 198)
- Main Line Alternatives (between Chevron Station and Bald Eagle Drive) and
- Interchange Options A, B, C and D (Bald Eagle Dr. to Fort Meade Road)

The Service was asked to provide concurrence on the various Alternatives and Options for MD 198. We are also taking this opportunity to provide recommendations on the Alternatives and Options that would minimize impacts to wetlands, streams, and floodplains. This letter constitutes the U.S. Fish and Wildlife Service's comments and recommendations.

Bald Eagle Drive

The Patuxent Research Refuge has specific concerns related to the intersection of Bald Eagle Drive with MD 198. Bald Eagle Drive is the only public entrance to the North Tract of the Patuxent Research Refuge that is part of the USFWS National Wildlife Refuge System, which receives about 60,000 visitors annually. Increasing volumes of traffic along MD 198 currently make it difficult at times to make a left hand turn from Bald Eagle Drive onto MD 198. Likewise, visitors and recreational users attempting to make a left hand turn off of MD 198 onto Bald Eagle Drive sometimes experience long delays as well as the associated safety risk of being rear ended while waiting for oncoming traffic. The Service believes that the addition of a traffic signal and a designated left hand turn lane will increase the safety for all visitors to the Refuge. The Service recommends that SHA study the feasibility of including a traffic signal and a designated left hand turn lane at the intersection of Bald Eagle Drive and MD 198.

Bald Eagle Drive also provides access to parking for recreational users of the existing softball fields, which were received as part of the transfer of lands from the Department of Defense to the Department of the Interior in 1991. These fields are managed by the National Security Agency under a Special Use Permit issued by the Patuxent Research Refuge, to provide recreational opportunities for Fort Meade personnel and some limited county league play.

Management of the Patuxent Research Refuge have observed that during peak usage of the softball fields, parking is insufficient to handle all of the recreation user vehicles. Refuge management believes that the second parking area along MD 198 presents a safety hazard and should be used for MD 198 upgrades and recommends that an alternative parking area be investigated. Refuge management is also concerned that a large dip exists on Bald Eagle Drive at the intersection with MD 198. The Refuge managers, with our concurrence, request the elevation of the road surface of Bald Eagle Drive in order to provide a smooth at-grade connection between the two roads.

It must be noted that if any alignment results in refuge lands being paved over or otherwise impacted by the road development, these lands will need to be replaced through a land exchange/acquisition of equal or greater acreage/value, subject to Service approval, that keeps the refuge whole.

Main Line Alternatives 3 and 4

The Service is concerned with the alignment of the proposed Main Line Alternatives between the Chevron gas station and the Little Patuxent River. There are wetlands and floodplains on the north side of this road segment that we recommend for complete avoidance. This can be accomplished by constructing the new lanes to the south of the existing alignment. We also recommend reducing the width of the proposed road to the greatest extent possible. This includes establishing only one pedestrian walkway/bike path and reducing the median to the minimum acceptable width. We recommend holding the existing north side of the road (avoiding any wetland or waterway impacts on this side) and expanding the road width to the south.

It is anticipated that by avoiding wetland impacts on the north side of the road there will be some issues regarding properties on the south side of the road. One of these properties is a car parts yard (Glory Days Auto Service) that adjoins Bald Eagle Drive at the entrance way to the Patuxent Research Refuge. A portion or all of this property may provide an alternative area to develop parking for the softball fields. The Service recommends that SHA investigate the possibility of purchasing the Glory Days Auto Service as compensation for 4(f) impacts.

Interchange Options A, B, C and D

The Service recommends that SHA utilize as much as possible the existing alignment from the Little Patuxent River to Airfield Road. The Service recommends that expansion of the road width along the alignment from the Little Patuxent River to the location of the triple box culvert should occur on the south side. The north side of the road should be held in its current position and the curve that begins at the Little Patuxent River Bridge through the triple box culvert should be flattened with expansion to the south side. From the triple box culvert going toward Airfield Road, expansion of the proposed road width should be into the area between MD 198 and MD32. Our conclusion after traversing the palustrine forested wetlands (lands of the Tipton Airport Authority) located south of the present alignment is that they are of higher quality and function then the wetlands located between MD 198 and MD 32. We recommend avoiding and minimizing impacts to the lands owned by the Tipton Airport Authority between the triple box culvert and Airfield Road.

Option A (Flyover Ramp) - The Service does not recommend the Flyover Ramp because of the large acreage of impact to streams and wetlands.

Option B (Loop Ramp) - The Service recommends that the on ramp from MD 32 West to the Fort Mead access road be pulled further to the south in order to minimize impacts to wetlands.

Option C (Diamond Interchange) – Acceptable as designed.

Option D (Two Bridge) – Acceptable as designed.

We appreciate the opportunity to provide comments and recommendations for the MD 198 Alternatives and Options. If you have any questions or need further assistance, please contact Mitch Keiler at (410) 573-4554.

Sincerely,

Leopoldo Miranda
Field Supervisor

cc: Brad Knudsen, USFWS, Laurel, MD
Holliday Obrecht, USFWS, Laurel, MD
Joel Gorder, NPS, Washington D.C.
Barbra Rudnick, EPA, Philadelphia, PA
Mary Frazier, Baltimore corps of Engineers, Baltimore, MD
Nora Bucke, SHA, Baltimore, MD
Kameel Hall, SHA, Baltimore, MD
Elizabeth Habic, SHA, Baltimore, MD
Jennifer Hannum, MDE, Baltimore, MD
Jennifer Ray, JMT, Baltimore, MD
Greg Golden, DNR, Annapolis, MD

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
X National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** X **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence: see attached letter

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: _____ Date: 21 NOV 08

02/04/09 14:47 FAX 2024010017 LANDS RESOURCES PLAN 001

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

IN REPLY REFER TO:
L3027 (NCR-LRP)

NOV 26 2008

Maryland State Highway Administration
Office of Planning and Preliminary Engineering
707 North Calvert Street
Baltimore, Maryland 21202

Dear Ms. Kehinde:

First, I want to thank you for the extremely helpful and informative presentation you provided on November 19, 2008 addressing MD-198: west of MD-295 to MD-32 in Anne Arundel County. Since this is my first State Highway Administration project for which I will comment and provide concurrence/non-concurrence, I am not sure what level of comment you are seeking. I have reviewed the previous documents you provided to Tammy Stidham, Acting Transportation Liaison and the Draft Streamlining Package for the Alternatives Retained for Detailed Study (ARDS).

The National Park Service (NPS) **concurs with minor comment** on the Draft ARDS for MD-198. The NPS is concerned with the dismissal of Option E (Diamond Interchange with New Bridge). Based on the material provided, one reason for dismissal was "relocation of Airfield Road ...would result in the impact to new wetlands." According to the drawing provided in the Draft ARDS, the relocation of the Airfield Road is either along an existing unnamed road or through woods outside of the delineated wetlands. In fact, if Option E would be implemented along with the removal of the existing interchange the project would have the potential for substantial wetlands restoration and reduction in the overall impervious surface at the interchange. A second reason identified for dismissing Option E was that it provided a straight connection to Fort Meade. The straight connection is not unlike Option D which was retained, and as you mentioned there would be additional study for the possibility of making that option one-way. The NPS recommends Option E be retained with further study addressing road design features that reduce the security risk of a "straight connection", such as, retractable hydraulic bollards, speed tables, etc.

Finally, if traffic congestion is a concern, I would think in Option E, two lanes should exit north bound MD-32, as well as two lanes on the north bound on ramp for MD-32. By having two lanes on both of these ramps, traffic would have space to merge outside of Fort Meade before entering MD-32 and when entering Fort Meade to queue-up into two lanes instead of backing up

onto MD-32. There could also be two left turn lanes at the western stop light entering onto the south bound ramp for MD-32.

If you have any questions, or would like to schedule a site visit please give me a call at (202) 619-7277 or E-mail me at David_Hayes@nps.gov. I look forward to future presentations and opportunities to work together on Maryland State Highway projects.

Sincerely,

David Hayes
Regional Planner and Transportation Liaison
Lands, Resources and Planning

Enclosures

cc:
Ms. Elizabeth Habic

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Northeast Region
Habitat Conservation Division
410 Severn Avenue, Suite 107A
Annapolis, MD 21403
Commercial Phone: (410) 267-5675
FAX#: ~~(410) 267-5666~~ (410) 295-3154

FAX TRANSMITTAL

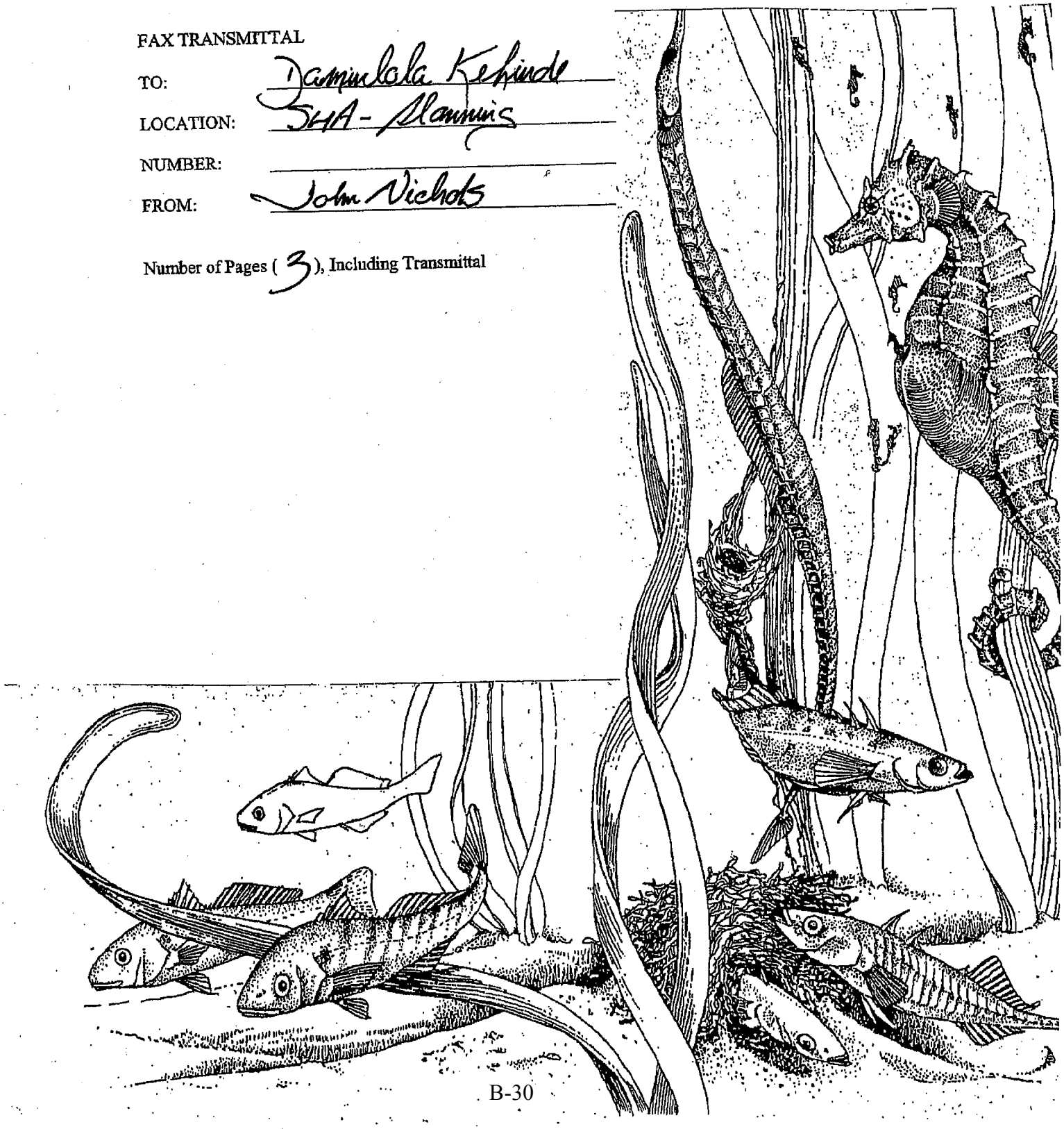
TO: Damilola Kehinde

LOCATION: SHA - Planning

NUMBER:

FROM: John Vichots

Number of Pages (3), Including Transmittal



MD 198: MD 295 to MD 32
CONCURRENCE FORM FOR ALTERNATES RETAINED FOR DETAILED STUDY

Project Description:
The project involves a study to address capacity needs on MD 198 from just west of MD 295 (Baltimore Washington Parkway) at Russett Green East to MD 32 (Savage Road/Patuxent Freeway). Bicycle and pedestrian access will be provided where appropriate. (BRAC related)

Project Purpose Statement:
The purpose of the MD 198 Project Planning Study is to improve the existing capacity and traffic operations, enhance access to Fort Meade, and increase vehicular, bicycle, and pedestrian safety along MD 198, while supporting existing and planned development in the area. Improving MD 198 would accommodate future transportation needs in the project area.

Purpose of Package:
The purpose of this package is to request concurrence with the Alternates Retained for Detailed Study for the MD 198 project.

Alternatives Dropped Prior to the Alternates Public Workshop:
One Interchange Option was dropped prior to the June 24, 2008 Alternates Public Workshop.

- Interchange Option - Single-Point Urban Interchange (dropped due to disruption to traffic flow, number of construction stages required, and significantly higher costs for maintenance of traffic during construction than other proposed options)

Alternatives Dropped Subsequent to the Alternates Public Workshop:
The alternatives below were presented at the June 24, 2008 Alternates Public Workshop and dropped as a result of the preliminary planning phase and/or public comments generated at the Workshop.

- Mainline Alternative 3 - (dropped since this alternative is functionally redundant to Mainline Alternative 4 and does not promote pedestrian safety due to the lack of a sidewalk on the north side of the roadway)
- Interchange Option E – (dropped due to objectionable direct access to Fort Meade and relocation of Airfield Road)

Alternatives Retained for Detailed Study:
The following is a list of alternatives/options presented at the June 24, 2008 Alternates Public Workshop that are being carried forward into detailed analysis.

- Mainline Alternative 1 – No-Build
- Mainline Alternative 2 – Transportation Systems Management (TSM)
- Mainline Alternative 4 – Divided Roadway with Off-Road, Shared-Use Facility and Sidewalk
- Interchange Option A – Flyover Ramp
- Interchange Option B – Loop Ramp
- Interchange Option C – Diamond Interchange at Existing Bridge
- Interchange Option D – Two Bridge

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
✓ National Park Service
✓ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

✓ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: _____ Date: 12/24/08

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
✓ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** ✓ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence: As planning has identified, one or more sensitive (RTE) species have been documented in the project vicinity (specifically in the vicinity of Little Patuxent River crossing). We look forward to further coordination on these resources.

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust
___ MD Department of Planning
___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments:

Additional Information Needed:

Signature: Gregory P. Golden Date: 2/18/09

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
✓ MD Dept. of the Environment

✓ Concurs (without comments) ___ Concurs (w/ minor comments) ___ Does Not Concur

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ Provides Comments (below or attached) ___ Has No Comments

Comments:

Additional Information Needed:

Signature: Elder A. Ghigiarelli Jr. Date: 1/22/09

200804019

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

X MD Historical Trust ___ MD Department of Planning ___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** X **Has No Comments**

Comments:

Additional Information Needed:

Signature: Jim Jarlum Date: 12/12/08

Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust
✓ MD Department of Planning
___ Metropolitan Planning Organization

✓ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments: The project is within the priority Funding Area and addresses the need for improving transportation access to Fort Meade to support BRAC related expansions.

Additional Information Needed:

Signature: [illegible] Date: 12/22/08

Baltimore Metropolitan Council

2700 Lighthouse Point East, Suite 310
Baltimore, MD 21224-4774

Telephone: (410) 732-0500
Fax: (410) 732-8248
www.baltometro.org

Anne Arundel County
Baltimore City
Baltimore County
Carroll County
Harford County
Howard County

January 28, 2009

9 '09JAN30 PM 2:03 OPP

Mr. Don Halligan
Office of Planning & Capital Programming
ATTN: THEO NGONGANG
Maryland Department of Transportation
7201 Corporate Center Drive
P.O. Box 548
Hanover, MD 21076

Dear Mr. Halligan:

Enclosed is Resolution #09-12, endorsing the Alternatives Retained for Detailed Study (ARDS) for MD 198: from west of MD 295 to MD 32. The Baltimore Regional Transportation Board (BRTB) voted for approval of the Resolution on January 28, 2009.

If you have any questions, please call me.

Sincerely,

Harvey S. Bloom, Director
Transportation Planning

Enclosure

cc: Kameel Hall, SHA
✓Elizabeth Habic, SHA

BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD
RESOLUTION #09-12

RESOLUTION TO ENDORSE ALTERNATIVES RETAINED FOR DETAILED STUDY
MD 198: FROM WEST OF MD 295 TO MD 32

WHEREAS, the Baltimore Regional Transportation Board (BRTB) is the designated Metropolitan Planning Organization for the Baltimore region, consisting of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard, and the Maryland Department of Transportation, the Maryland Department of the Environment, and the Maryland Department of Planning; and

WHEREAS, Section 450.318 of the Final Metropolitan Transportation Planning Rules issued by the Federal Highway Administration and Federal Transit Administration on October 28, 1993 identifies the requirements of a major metropolitan transportation study in identifying all promising mobility solutions; and

WHEREAS, in October of 1997, the Baltimore Regional Transportation Board approved Resolution # 98-7, adopting a work program for the Congestion Management System (CMS) corridor implementation; and

WHEREAS, one of the primary purposes of the Congestion Management Process is to identify promising mobility improvement and congestion management strategies, rather than select specific transportation improvement projects for implementation. These improvements will be considered for the next steps of the planning and project development process and, where appropriate, studied further in more detail; and

WHEREAS, this study involves improving existing capacity and traffic operations, enhanced access to Fort Meade, and increased vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area; and

WHEREAS, the State Highway Administration made a formal presentation at the Interagency Review meeting on June 20, 2007; and

WHEREAS, on June 26, 2007, the Baltimore Regional Transportation Board approved Resolution # 07-24 endorsing the MD 198 Purpose and Need Statement; and

WHEREAS, the State Highway Administration has provided Alternatives Retained for Detailed Study (ARDS) dated September, 2008 and made a formal presentation at the Interagency Review meeting on November 19, 2008; and

NOW, THEREFORE, BE IT RESOLVED, that the Baltimore Regional Transportation Board, as a commenting agency, endorses the MD 198 Alternatives Retained for Detailed Study as described in Attachment A.

I HEREBY CERTIFY that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approved the aforementioned resolution at its January 27, 2009 meeting.

JANUARY 28, 2009
Date

Carl Balser, Chairman
Baltimore Regional Transportation Board

ATTACHMENT A

MD 198: From West of MD 295 to MD 32
Alternatives Retained for Detailed Study

Summary

Description: The project involves a study to address capacity needs on MD 198 from just west of MD 295 at Russett Green East to MD 32. Bicycle and pedestrian access will be provided where appropriate. This project is related to the Base Realignment and Closure activities associated with Fort George G. Meade and the National Security Agency.

Purpose: The purpose of the MD 198 Project Planning Study is to improve the existing capacity and traffic operations, enhance access to Fort Meade, and increase vehicular, bicycle, and pedestrian safety along MD 198, while supporting existing and planned development in the area. Improving MD 198 would accommodate future transportation needs in the project area.

Alternatives Retained for Detailed Study

Mainline Alternative 1 – No Build: The No-build alternative consists of routine maintenance and spot improvements, with no substantial improvements to transportation facilities beyond those improvements currently planned for the area. Minor improvements would occur as part of normal maintenance and safety operations. These improvements would not measurably reduce the crash rate or improve operations. Possible improvements could include resurfacing, restriping, signing and lighting.

This alternative is recommended to be retained because it serves as a baseline condition to be used for comparison with the other build alternatives studied in detail.

Mainline Alternative 2 – Transportation System Management (TSM): The TSM alternative consists of spot improvement and access management along the corridor to address public concerns at specific locations.. TSM improvements generally could be constructed with relatively low costs and environmental impacts, but would provide no substantial improvements or operations to address future concerns. TSM strategies being considered for this corridor include improvements to the off-ramps from MD 295 to MD 198, access management and the addition of left turn lanes.

This alternative is recommended to be retained because it consists of several elements that could be short term solutions throughout the corridor that address the most serious concerns at specific locations or segments of the roadway. Also, the improvements generally could be constructed with relatively low costs and few environmental impacts.

Mainline Alternative 4 – Divided Roadway with Off-Road Shared-Use Facility and Sidewalk: This alternative provides for two lanes in both directions divided by a 20-foot grass median. On-road bicycle facilities are provided in both directions adjacent to the outside travel lane. A five-foot grass buffer along the south side curb separates the on-road bicycle lane from the shared-use pedestrian / bicycle path and a sidewalk will be provided along the northern edge of the roadway.

This alternative is recommended to be retained because it meets the Purpose and Need of the project, promotes pedestrian safety and connectivity throughout the project, and improves traffic operations at intersections.

Interchange Option A – Flyover Ramp: This option maintains the existing configuration of the MD 198/MD 32 interchange, however a flyover ramp is introduced that allows traffic from northbound MD 32 to access westbound MD 198, therefore completely separating this traffic from the roundabouts. All other traffic through the interchange would operate as it does today with the exception of trucks to Ft. Meade. Pedestrian and bicycle accommodations are provided through this interchange and into MD 32 eastbound and from MD 32 westbound.

This option is recommended to be retained because it results in less disruption to traffic flow through the interchange during construction, improves traffic operations at the two roundabouts by removing vehicles destined to Laurel, maintains a circuitous route that is preferred by Ft. Meade into the Post, and provides the best level of service for the interchange.

Interchange Option B – Loop Ramp: This option maintains the existing configuration of the MD 198/MD 32 interchange for the southern portion (the existing roundabout closest to Tipton Airport). However the northern portion (the ramps closest to Ft. Meade) is reconfigured. The existing roundabout is removed and replaced with a signalized intersection. All traffic from northbound MD 32 that is destined for westbound MD 198 would utilize the proposed loop ramp. Pedestrian and bicycle accommodations are provided through this interchange and into MD 32 eastbound and from MD 32 westbound.

This option is recommended to be retained because it improves traffic operations at the interchange by separating vehicles destined to Laurel from those destined to Ft. Meade and maintains a circuitous route that is preferred by Ft. Meade into the Post.

Interchange Option C – Diamond interchange at Existing Bridge: This option reconfigures the existing MD 198/MD 32 interchange from two roundabouts to two signalized intersections. All of the movements to and from the interchange will remain as they are today. All traffic from northbound MD 32 that is destined to Ft. Meade would utilize the ramp as they do today with the exception of trucks to Ft. Meade. At the ramp terminus, a signalized intersection will control traffic movement. Additionally, cars traveling on southbound MD 32 that are destined to Ft. Meade or Laurel would utilize the ramp as they do today but traffic movement at the intersection with MD 198 will be

controlled by a signal. Pedestrian and bicycle accommodations are provided through this interchange and into MD 32 eastbound and from MD 32 westbound.

This option is recommended to be retained because it removes roundabouts disliked by the public and replaces them with signalized intersections and maintains a circuitous route that is preferred by Ft. Meade into the Post.

Interchange Option D – Two Bridges: This option maintains the existing MD 198/MD 32 interchange configuration with the addition of a second crossing of MD 32 with access to Ft. Meade. Vehicles would exit northbound MD 32 as they do under existing conditions, utilizing the ramp to the roundabout and choosing their direction through the roundabout. Vehicles coming from eastbound MD 198 would access Ft. Meade with the second crossing of MD 32. Pedestrian and bicycle accommodations are provided through this interchange and into MD 32 eastbound and from MD 32 westbound.

This option is recommended to be retained because the existing configuration of the MD 198/MD 32 interchange remains intact which would result in less disruption to traffic flow through the interchange during construction and has the least amount of environmental impacts out of the interchange options retained for detailed study.

Alternatives Dropped Prior to the Alternates Public Workshop

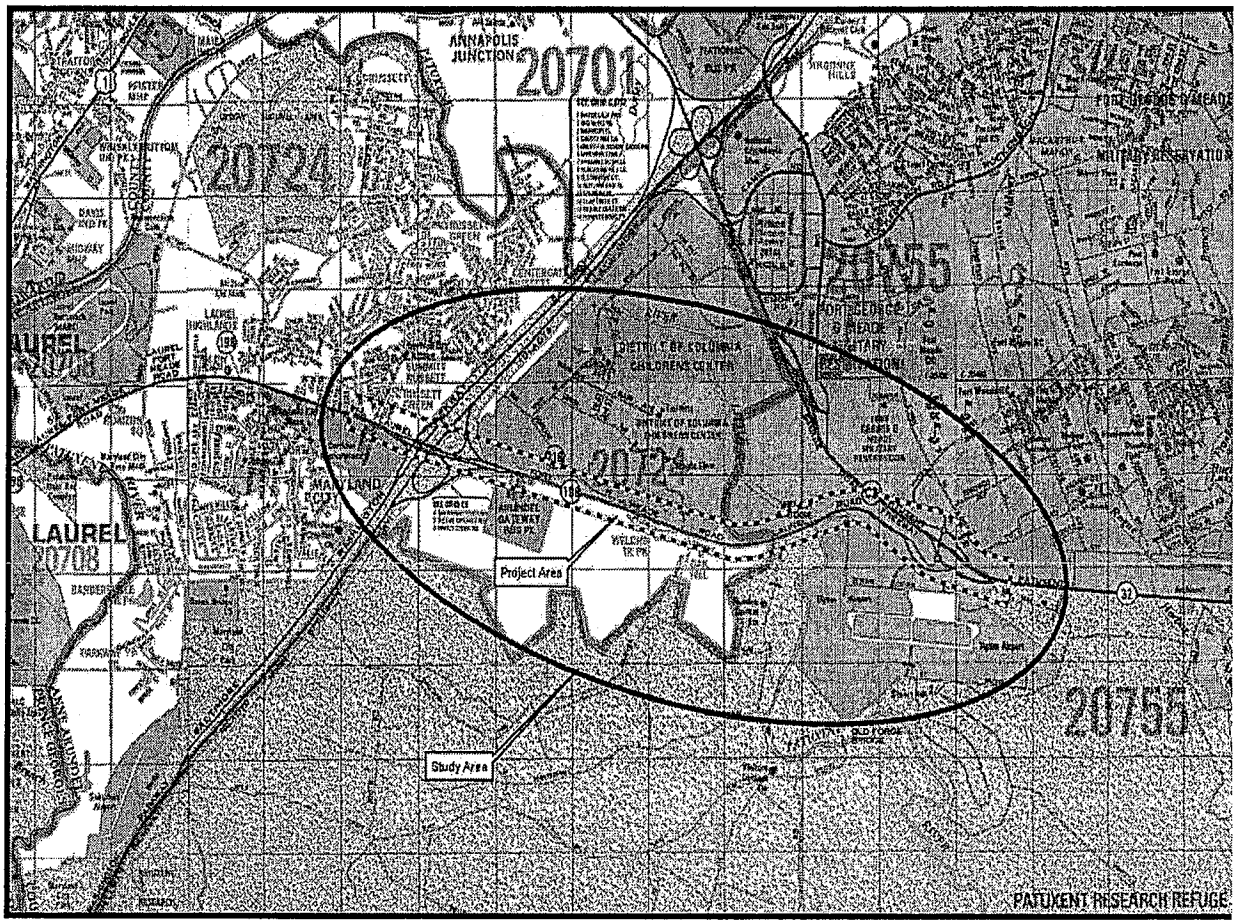
Interchange Option: Single Point Urban Interchange, this option was dropped due to disruption to traffic flow, number of construction stages required, and substantially higher costs for maintenance of traffic during construction than other proposed options.

Alternatives Dropped Subsequent to the Alternates Public Workshop

Mainline Alternative 3: Divided Roadway with Off-Road Shared-Use Facility, this alternative was dropped since it is functionally redundant to Mainline Alternative 4 and does not promote pedestrian safety due to the lack of a sidewalk on the northern side of the roadway.

Interchange Option E – Diamond Interchange with New Bridge, this option was dropped due to relocation of Airfield Road and Ft. Meade's security concerns associated with providing direct access to the Post.

MD 198: from West of MD 295 to MD 32



Project Name & Limits: MD 198: MD 295 to MD 32

Having reviewed the attached Alternatives Retained for Detailed Study concurrence/comment package and the summary presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Dept. of Natural Resources
___ MD Dept. of the Environment

___ Concurs (without comments) **___ Concurs (w/ minor comments)** **___Does Not Concur**

Comments / Reasons for Non-Concurrence:

Note: Do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.

___ MD Historical Trust ___ MD Department of Planning X Metropolitan Planning Organization

✓ Provides Comments (below or attached) **___ Has No Comments**

Comments:

Additional Information Needed:

Signature: Reginald L. Arin Date: 12/30/08

MD 198: MD 295 to MD 32
Comments –

1. The Central Maryland Transit Operations Center project is not discussed. The location has not been indentified, but has been proposed adjacent to MD 198. If the CMTOC includes a transit transfer facility that will provide transfer to the base; has the design included this?
2. Recommend that the TDM improvements be incorporated with the Selected Alternative.
3. Transit supportive improvements should be considered on MD 198 even though service does not currently exist east of MD 295. An Anne Arundel County document 'Fort Meade/BRAC Transit and Ridesharing Planning, October 2008' is seeking to increase transit service to Fort Meade to address the transportation needs due to the increase number of employees.

ANNE ARUNDEL COUNTY PUBLIC SCHOOLS

Kevin M. Maxwell, Ph.D., *Superintendent of Schools*

Facilities Division
9034 Fort Smallwood Road | Pasadena, MD 21122 | 410-255-2535

29 January 2007

Ms. Anne Elrays
State Highway Administration
Project Planning Division
707 N. Calvert Street
Baltimore, Maryland 21202

RE: SHA Project No. AA510M11
MD 198: West of MD 295 to MD 2
Anne Arundel County, Maryland

Dear Ms. Blum:

Per your department's January 23, 2007 request, we do not have any existing or proposed schools along MD 198: West of MD 295 to MD 2. The schools referenced in your letter, District of Columbia Children's Center, Maple Glen and Zigler Elementary School are not part of the Anne Arundel County Public Schools system.

If I can be of any further assistance, please feel free to call me at 410-439-5689.

Sincerely:

Lawrence A. Alberts, RA
Manager of Planning

C: A. Szachnowicz
K. Shanahan

Tricia Johnson *President* | Eugene Peterson *Vice-President* | Victor E. Bernson, Jr. | Edward P. "Ned" Carey | Michael G. Leahy | Enrique M. Melendez | Konrad M. Wayson | Brittany T. Walker *Student Member*

for every child

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Patuxent Research Refuge
12100 Beech Forest Road, Suite 138
Laurel, Maryland 20708

MAR 2 3 2007

Mr. Joseph Kresslein
Assistant Division Chief, Project Planning Division
MD State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

Dear Mr. Kresslein:

This is in response to your January 23, 2007, letter regarding SHA Highway Project No. AA510M11, MD 198, West of MD 295 to MD 32, in which you requested our assistance in determining the extent of "publicly owned parks or recreational facilities" within the study area. Patuxent Research Refuge, a refuge within the Department of the Interior's National Wildlife Refuge System, is within the proposed study area. I will address the bulleted questions in your letter in order.

1) The name of the officials with jurisdiction over the parks:

   Brad Knudsen, Refuge Manager

   Tony Leger, Regional Chief, NWRS – Region 5

2) Mapping and/or CADD files showing the park boundaries:

   I have provided an electronic file, via e-mail to Anne Elrays as of March 23, 2007.

3) Funding sources: Were Program Open Space and/or Land and Water Conservation - Section 6(f) funds used to acquire or develop these parks?

   The refuge lands in proximity to the proposed project were acquired from Fort Meade in the 1991-1992 Base Realignment and Closure Act actions.

4) Types of facilities within the park:

Patuxent Research Refuge is managed primarily for wildlife and wildlife habitat, with a specific purpose of providing opportunities for wildlife research. The refuge land in the immediate area of the proposed project is a softball field, an unusual facility for a NWR. However, it was stipulated in the land transfer from Department of Defense to DOI that this facility would remain active, as long as it was managed consistent with wildlife conservation purposes. The only public access to the refuge's North Tract is also located along this project. It is an asphalt road – Bald Eagle Drive – that becomes gravel about ½ mile from Highway 198.

5) Frequency with which the public uses these facilities:

The entrance road is used on a daily basis, except for federal holidays, when the refuge is closed. The softball fields are used several times a week from April through August. We have approximately 80,000 visitors a year use the Bald Eagle Drive entrance road.

6) Park Master Plans:

Currently, the refuge has no Master Plan, but we are due to start our Comprehensive Conservation Plan in FY09. This planning process will involve the public and other stakeholders, and will address long-term wildlife and habitat goals, as well as public uses such as hunting, fishing, nature observation, interpretation, and environmental education.

7) Determination as to whether the parks serve a "significant" function in providing for the overall recreational needs of communities in the park area, per Section 4(f) of he U.S. DOT Act:

Patuxent Research Refuge is visited by over 150,000 people annually, engaging in such activities as hunting, fishing, nature photography, wildlife observation, environmental education, interpretation, hiking, and bicycling. As a national wildlife refuge, Patuxent's mission is to administer its lands for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats for the benefit of present and future generations of Americans. Given its proximity to Baltimore and Washington, DC, Patuxent is one of the few large tracts of undeveloped land available for the public to seek quality experiences with the natural world, and therefore, serves a significant function regarding recreational needs of the local communities.

I must point out that it is NWRS policy that any refuge lands impacted by a project such as this will be subject to a land exchange of equal or greater monetary value, and subject to the approval of the Service. Mitigation of impacts to refuge habitat may also need to be addressed.

I am forwarding this correspondence to the Service's Ecological Services Chesapeake Bay Field Office, who has responsibility for reviewing highway projects such as this. They may want to offer an opinion related to the Section 4(f) question as well.

I hope this addresses your questions adequately. Should you require further information, feel free to call me at 301-497-5582.

Sincerely,

Brad Knudsen

Brad Knudsen
Refuge Manager

cc: John Wolflin, Project Leader, CBFO, Annapolis, MD

John Stasko, Refuge Supervisor – South, NWRS, Regional Office, Hadley, MA

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*

State Highway Administration
Driven to Excel

Robert L. Flanagan, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

December 20, 2006

RE: Project No. SPO72A43
MD 198: MD 295 to MD 32
Anne Arundel County, MD

Ms. Lori Byrne
Environmental Review Specialist
Wildlife and Heritage Division
Department of Natural Resources
Tawes State Office Building, E-1
Annapolis, MD 21401

Dear Ms Byrne:

The Maryland State Highway Administration is proposing roadway and intersection improvements along the MD 198 roadway from MD 295 to MD 32 in Anne Arundel County, Maryland (see attached location map). The purpose of the project is to improve traffic operations by providing adequate roadway capacity to safely and effectively serve existing traffic demand, as well as the increased demand expected to be generated by planned development. We request any information concerning state-listed threatened or endangered plant or animal species and/or unique habitat that may occur in the project area.

If you have any questions or need additional information regarding this request, please contact Ms. Anne Elrays, the Environmental Manager for the project. Ms. Elrays can be reached at 410-545-8562.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by: Anne Elrays for
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

Attachments 4
cc: Mr. Mark Duvall, SHA-OED
Ms. Anne Elrays, SHA-PPD
Ms. Kameel Holmes, SHA-PPD
Mr. Joseph R. Kresslein, SHA-PPD

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*

State Highway Administration
Driven to Excel
Maryland Department of Transportation

Robert L. Flanagan, *Secretary*
Neil J. Pedersen, *Administrator*

December 20, 2006

RE: Project No. SPO72A43
MD 198: MD 295 to MD 32
Anne Arundel County, MD

Mr. Devin Ray
U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Dear Mr. Ray:

The Maryland State Highway Administration is proposing roadway and intersection improvements along the MD 198 roadway from MD 295 to MD 32 in Anne Arundel County, Maryland (see attached location map). The purpose of the project is to improve traffic operations by providing adequate roadway capacity to safely and effectively serve existing traffic demand, as well as the increased demand expected to be generated by planned development. We request any information concerning federally-listed threatened or endangered plant or animal species and/or unique habitat that may occur in the project area.

If you have any questions or need additional information regarding this request, please contact Ms. Anne Elrays, the Environmental Manager for the project. Ms. Elrays can be reached at 410-545-8562.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by: Anne Elrays for
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

Attachments 2
cc: Mr. Mark Duvall, SHA-OED
Ms. Anne Elrays, SHA-PPD
Ms. Kameel Holmes, SHA-PPD
Mr. Joseph R. Kresslein, SHA-PPD

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

FEB09'07 PM 1:53 WHS

February 5, 2007

Mr. Bruce M. Grey
Maryland Department of Transportation
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

RE: Environmental Review for Project No. SP072A43, MD 198: MD 295 to MD 32, Roadway and Intersection Improvements, Anne Arundel County, Maryland.

Dear Mr. Grey:

The Wildlife and Heritage Service's database indicates that there are numerous records in the Little Patuxent River for the state-listed threatened Glassy Darter (*Etheostoma vitreum*) within close proximity to the project site, where Route 198 crosses this river. WHS recommends that a time-of-year restriction for work at the area of Route 198 over the Little Patuxent River, from March 1 to June 15 of any given year. This would reduce the likelihood of impacts to this species from sedimentation as a result of this project, during the time of year in whcih they are known to spawn in Maryland.

We would also like to bring to your attention that the portion of Little Patuxent River south of Route 198 is designated in state regulations as a Nontidal Wetland of Special State Concern (NTWSSC). This NTWSSC and its 100-foot upland buffer are regulated together as an NTWSSC by Maryland Department of the Environment. You project may need review by MDE for any necessary permits associated with this NTWSSC.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2006.3200.aa
cc: R. Dintaman, ERU
K. McCarthy, WHS

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

January 19, 2007

Mr. Bruce M. Grey
Deputy Director
Office of Planning and Preliminary Engineering
State Highway Administration
P.O. Box 717
Baltimore, MD 21203-0717

RE: Project No. SPO72A43 MD 198:MD 295 to MD 32 Anne Arundel County, MD

Dear Mr. Grey:

This responds to your letter, received December 26, 2006, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no biological assessment or further section 7 consultation is required with the U.S. Fish and Wildlife Service. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. It does not address the Service's concerns pursuant to the Fish and Wildlife Coordination Act or other legislation. For information on the presence of other rare species, you should contact Ms. Lori Byrne of the Maryland Heritage and Wildlife Division at (410) 260-8573.

JAN24'07 A10:53

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*
C. Ronald Franks, *Secretary*

December 28, 2006

Mr. Joseph R. Kresslein
State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203-0717

Dear Mr. Kresslein:

This letter is in response to your request on December 20, 2006 for information on the presence of finfish species in the vicinity of State Highway Administration's Project No. SPO72A43: MD 198 – MD 295 to MD 32 in Anne Arundel County.

From the information you sent for review, it appears that the proposed work could impact the Little Patuxent River and tributaries (Patuxent River Area). The Little Patuxent River and tributaries within your project area are classified as Use I streams (Water Contact Recreation and Protection of Nontidal Warmwater Aquatic Life). Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year.

Our Fisheries Service has documented the spawning activities of both white perch (*Morone americana*) and herring (*Alosa sp.*) in the Little Patuxent River. Additionally, Table B1-4 list fish species documented by our Maryland Biological Stream Survey Program within the Patuxent Basin. Many of these species (except trout) could be found near your project site. All of these fish species should be adequately protected by the Use I instream work prohibition period, sediment and erosion control methods, and other Best Management Practices typically used for protection of stream resources during highway projects.

It should be noted that the glassy darter (*Etheostoma vitreum*), a listed species by our Maryland Natural Heritage Program, has been documented as a resident species in the Little Patuxent River and is relatively common immediately below the Fort Meade Dam at MD Route 198. Because this species is known to occur in only two small, unconnected locations in Maryland, its populations are not well suited to withstanding impacts to their habitat or recolonizing disturbed areas in the manner of some of the more common fish species. Even very infrequent and accidental impacts to the stream could be responsible for significant damage to the glassy darter population in Maryland. Stream habitat protection measures for this project should therefore focus on minimization of sedimentation and water quality impacts to downstream areas. For more information on the current status of the glassy darter in Maryland and the habitat requirements of this species, you may contact the Wildlife and Heritage Division of our Department at 410-260-8567.

If you have any questions concerning these comments, you may contact me at 410-260-8331.

Sincerely,

Ray C. Dintaman, Jr.

Ray C. Dintaman, Jr., Director
Environmental Review Unit

Attachment

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

Mary Ratnaswamy

Mary J. Ratnaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

Table B1-4. Fish species found in 1994 MBSS project sampling vs supplemental sampling, Patuxent Basin

Fish Species	MBSS Study	Supplemental Sampling
AMERICAN BROOK LAMPREY	X	
AMERICAN EEL	X	X
BANDED KILLIFISH	X	X
BANDED SUNFISH	X	
BLACKNOSE DACE	X	X
BLUEGILL	X	X
BLUESPOTTED SUNFISH	X	X
BROWN BULLHEAD	X	X
BROWN TROUT		X
CENTRAL STONEROLLER		X
CHAIN PICKEREL	X	
CHANNEL CATFISH		X
COMMON SHINER		X
CREEK CHUB	X	X
CREEK CHUBSUCKER	X	X
CUTLIPS MINNOW	X	X
EASTERN MUDMINNOW	X	X
FALLFISH	X	X
FATHEAD MINNOW		X
GIZZARD SHAD		X
GLASSY DARTER	X	
GOLDEN SHINER	X	X
GREEN SUNFISH		X
LAMPREY	X	X
LARGEMOUTH BASS	X	X
LEAST BROOK LAMPREY		X
LEPOMIS	X	
LEPOMIS HYBRID		X
LONGNOSE DACE		X
MARGINED MADTOM	X	X
MOSQUITOFISH	X	X
MUMMICHOG		X
NORTHERN HOGSUCKER		X
PIRATE PERCH	X	X
POTOMAC SCULPIN		X
PUMPKINSEED	X	X
RAINBOW TROUT		X
REDBREAST SUNFISH	X	X

Martin O'Malley, *Governor*
Anthony Brown, *Lt. Governor*

State Highway Administration
Driven to Excel
Maryland Department of Transportation

John D. Porcari, *Secretary Designate*
Neil J. Pedersen, *Administrator*

October 16, 2007

Re: Project No. SPO72A43
MD 198 from MD 295 to MD 32
Anne Arundel County, MD
USGS *Laurel* 7.5' Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032-2023

Dear Mr. Little:

Introduction and Project Description

This letter serves to inform the Maryland Historical Trust (MHT) of the Maryland State Highway Administration's (SHA) proposed Project No. SPO72A43. SHA has initiated a project planning study for approximately 3.5 miles in the area encompassing MD 198 between MD 295 and MD 32. The purpose of the project is to improve the existing capacity and traffic operations, enhance access to Fort George G. Meade, and increase vehicular, bicycle and pedestrian safety along MD 198 while supporting existing and planned development in the area. SHA seeks to provide information about the identification and National Register of Historic Places (NRHP) eligibility of historic standing structures, and the assessment of potential for archeological resources within the APE.

A project location map is included as Attachment 1.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

The project area is heavily wooded with scattered mid-to-late twentieth century commercial and residential resources. In addition, some large institutions and federal lands are located adjacent to the roadway. The APE for historic standing structures includes tax parcels along MD 198, MD 295 and MD 32 within the SHA's proposed study area, encompassing a corridor 1000 feet on either side of the centerline of MD 198. The large study corridor accounts for impacts to wetlands and covers possible mitigation site locations. For some of these properties, the tax

parcel boundaries are adjacent to SHA's right-of-way for the highway, while other properties are within sight of MD 198. This APE also considers possible visual, audible, and physical impacts to historic properties. Once project plans are developed, the APE can be more closely defined. The APE is depicted on the attached SHA metro map (Attachment 1).

Identification Methods and Results

Architecture: SHA Architectural Historian Kathryn Barrett consulted the SHA-GIS Cultural Resources Database, aerial photographs, Maryland Inventory of Historic Properties and Determination of Eligibility forms, SHA project files, and Maryland Department of Assessments and Taxation information to identify previously recorded resources within the APE. Field visits were completed in April and August 2007 to identify resources that have not been previously recorded, but are more than 50 years of age. SHA retained Archaeological and Historical Consultants, Inc., R. Goodwin and Associates, Inc. and EHT Traceries, Inc., to complete the necessary architectural evaluations for this project.

Previously Recorded Historic Properties

Previously identified and evaluated historic resources within the project area include the Baltimore Washington Parkway (AA-5/PG: 69-26), the D.C. Children's Center- Forest Haven District (AA-2364), and Fort George G. Meade (AA-2095). The Baltimore Washington Parkway is listed on the National Register of Historic Places (NRHP). The Post Core of Fort George G. Meade and the D.C. Children's Center-Forest Haven District have been determined eligible for listing on the NRHP.

A comprehensive survey was completed in 1993 for Fort Meade. The survey identified several building types and MIHP forms were prepared for numerous buildings (see Attachment 4 for detailed eligibility information). In addition to the survey, a Cultural Resource Management Plan (CRMP) was conducted in several phases from 1994 to 2001 by R. Christopher Goodwin and Associates, Inc. One structure that was evaluated as part of the CRMP is within the APE and in close proximity to MD 198. The pump house (Fort Meade Building #9599), constructed in 1933, was determined not eligible for listing in the NRHP.

The D.C. Children's Center-Forest Haven District is part of a larger parcel that also contains the Woodland Job Corps campus and the Oak Hill Youth Center (all three resources compose tax parcel 96, Map 20 which was once known as the District Training School). The Oak Hill Youth Center is a maximum security juvenile detention center constructed in 1967 and was not evaluated as part of this study, as it is well outside the project area. The Woodland Job Corps, established in 1954, was evaluated as part of this investigation, and is discussed further below.

Previously Unidentified and Unrecorded Historic Resources

The western section of MD 198 between MD 295 and MD 32 is a two-lane highway sparsely lined with commercial buildings and a small number of residential buildings. Of these buildings, two are greater than fifty years old. Elite Automotive at 3348 Fort Meade Road was constructed circa 1940 and the ROH Body Shop at 3338 Fort Meade Road was built circa 1956.

These buildings are not eligible for the NRHP. Short forms were prepared for these buildings and are included in the enclosed documentation.

Parcel 42 along the south side of MD 198 contains two single dwellings greater than fifty years old. The dwellings are located west of a trailer park (Welch's Trailer Park) that is sited on the tax parcel. The dwellings are not eligible for the NRHP and short forms were prepared for these buildings and are also included in the enclosed documentation.

Simonds Bridge (AA-2387) carries MD 198 over the Little Patuxent River within the APE. The steel deck girder bridge was constructed by the State Roads Commission in 1944 to accommodate Fort Meade traffic. The bridge is recommended as not eligible for listing on the NRHP. A DOE form was prepared for the bridge and is included in the enclosed documentation.

The Woodland Job Corps Center is located primarily on the north side of MD 198 on Parcel 96, Map 20. Parcel 96 abuts MD 198 and extends to the south side of the road within the APE. The Woodland Job Corps Center was constructed circa 1954 as a home for incarcerated juveniles. One section, known as Maple Glen, was constructed for younger children while Cedar Knolls was built in 1955 for teenage children. Along with what is now the Oak Hill Youth Center, both Maple Glen and Cedar Knolls were known as the Children's Center. Maple Glen became a job corps center circa 1978. Currently, the Woodland Job Corps Center campus consists of approximately eight buildings including two circa 2000 dormitory buildings. The center is recommended as not eligible for the NRHP. A Maryland Inventory of Historic Places (MIHP) form and DOE were prepared for the property and are included in the enclosed documentation.

Tipton Airfield is located on the south side of MD 198 near the eastern project limit. The Tipton Airfield was opened in 1960. Historically part of Fort Meade, the airfield was transferred to Anne Arundel County around 1999. The structures on the site were not evaluated as part of the Fort George G. Meade CRMP which was conducted in several phases from 1994 to 2001 by R. Christopher Goodwin and Associates, Inc. The airfield was evaluated as part of this study and is recommended as not eligible for listing on the NRHP. An MIHP form and DOE were prepared for the property and are included in the enclosed documentation.

The Patuxent Research Refuge is located south of MD 198 with a small portion of the property located adjacent to the roadway. The Refuge was established in 1936 and encompasses 12,841 acres dedicated to wildlife study and restoration. The portion of the Refuge located within the project APE consists of four softball fields, a small brick equipment shed, gravel parking lot and the entrance to Bald Eagle Drive which leads to the north gate of the Refuge. The ball fields and associated shed were constructed by Fort Meade in early 1990. The parcel was subsequently transferred to the Patuxent Research Refuge in 1991-1992, though Fort Meade maintains the facility. It is recognized that the Patuxent Research Refuge could be considered a historic landscape district, with further research and evaluation. However, because only a small portion of the Patuxent Research Refuge is within the APE (approximately four acres), any project impact will be minor relative to the size of the property, and the portion that is within the APE is composed of land and a facility that is not historically associated with the Refuge

property or purpose, SHA is proposing that the evaluation of the Patuxent Research Refuge for NRHP eligibility is beyond the scope of this project.

An Eligibility Table is included as Attachment 3.

Archeology: SHA Archeologist Richard Ervin prepared a preliminary assessment of the archeological potential of the project area through consultation of previous archeological investigations, soils and historic mapping, and Visidata video. No field visit was made pending receipt of plans.

One archeological site has been recorded in the APE, 18AN1147, an Early Woodland and historic period artifact scatter. Archeological surveys of nearby areas have recorded sites on high terrain overlooking the Patuxent River and its tributary streams.

The project area was part of Richard Snowden's property called Birmingham, patented in 1685. The Snowden property included farms, mills, the Patuxent Forge, and the Patuxent Ironworks (Barse 2000). The forge and ironworks were south of the present Tipton Airfield, outside the APE. The Annapolis and Elkridge Railroad established a line crossing the project area in 1837. Historic maps (Martenet's 1860 Map of Anne Arundel County; Hopkins 1878 Atlas of Anne Arundel County; and the USGS 1892, 1907, and 1926 Laurel quadrangles) show that in the nineteenth century, a Post Office and Store were located within the eastern end of the APE, north of the town of Patuxent Forge. Ancestral MD 198 is depicted on the USGS (1892) 15' quadrangle, with several structures within the APE by the early twentieth century (USGS 1907). In 1907, a planned community known as the New Respass Industrial Colony was envisioned as an ethnic community on 5000 lots, but these plans were never carried out. Fort George G. Meade was established in 1917. Its historic boundary abuts MD 198 east of the Patuxent River, but is well south of MD 198 throughout the remainder of the project corridor.

Historic mapping indicates that the Patuxent River has been channelized in places, and that parts of the river once lay closer to the west bank, where well drained terrain is present within the APE overlooking Simond's Bridge. Most of this area was originally part of Fort Meade. Such settings along the Patuxent River have a high potential for archeological resources, including large base camps. Based on the preliminary project description, significant archeological resources may occur within the APE. The project's archeological potential will be re-assessed when preliminary design plans are available.

Review Request

Please examine the attached Compliance Report, MIHP and DOE forms, and Eligibility Table. We request your concurrence on SHA's eligibility determinations by November 10, 2007. By carbon copy, we invite the Anne Arundel County Office of Environmental & Cultural Resources to provide comments and participate in the Section 106 process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see CFR 800.2 (c) (4) and (6), and 800.3 (f) for information regarding the identification and

participation of consulting parties, and 800.4, and 800.5 regarding the identification of historic properties and assessment of effects).

For additional information regarding the Section 106 regulations, see the Advisory Council on Historic Preservation's website, www.achp.gov, or contact the Maryland State Highway Administration or the Maryland Historical Trust. If no response is received by November 16, 2007, we will assume that these offices decline to participate. Please call Ms. Kathryn Barrett at 410-545-0339 (or via email at kbarrett@sha.state.md.us) with questions regarding standing structures for this project. Mr. Richard Ervin may be reached at 410-545-2878 (or via email at rervin@sha.state.md.us) with concerns regarding archeology.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by: _____
Julie M. Schablitsky
Cultural Resources Team Leader
Project Planning Division

Attachments: 1) Project Location Map and APE Map
2) Resource Map
3) Eligibility Table
4) Compliance Report and Determination of Eligibility Forms

cc:

Ms. Kathryn Barrett, SHA-PPD
Ms. Anne Elrays, SHA-PPD (w/Attachments 1-3)
Mr. Bruce M. Grey SHA-OPPE (w/Attachments 1-3)
Ms. Kameel Holmes, SHA-PPD (w/Attachments 1-3)
Dr. Julie M. Schablitsky, SHA-PPD
Ms. Jenna Solomon, Office of Environmental & Cultural Resources, Anne Arundel County (w/Attachments 1-3)
Mr. Donald H. Sparklin, SHA-PPD

Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects

Project Number: SPO72A43 **MHT Log No._____**
Project Name: MD 198 from MD 295 to MD 32
County: Anne Arundel
Letter Date: October 16, 2007

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment 3]):

[ ] Concur
[ ] Do Not Concur

Effect (as noted in the Effects Table [Attachment N/A]):

[ ] No Properties Affected
[ ] No Adverse Effect
[ ] Conditioned upon the following action(s) (see comments below)
[ ] Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):

[ ] Agree

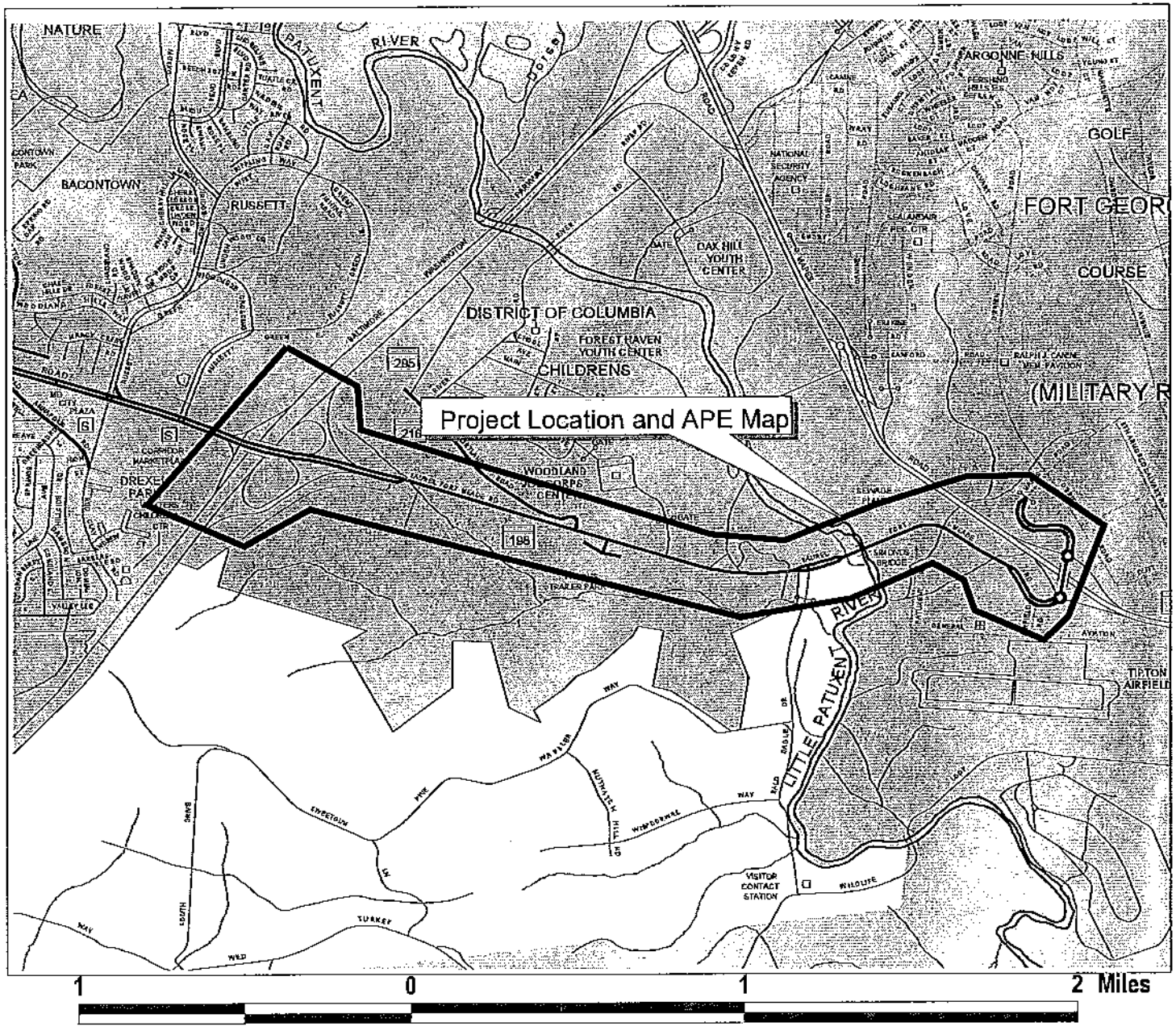
Comments:

_____
_____
_____
_____
_____
_____

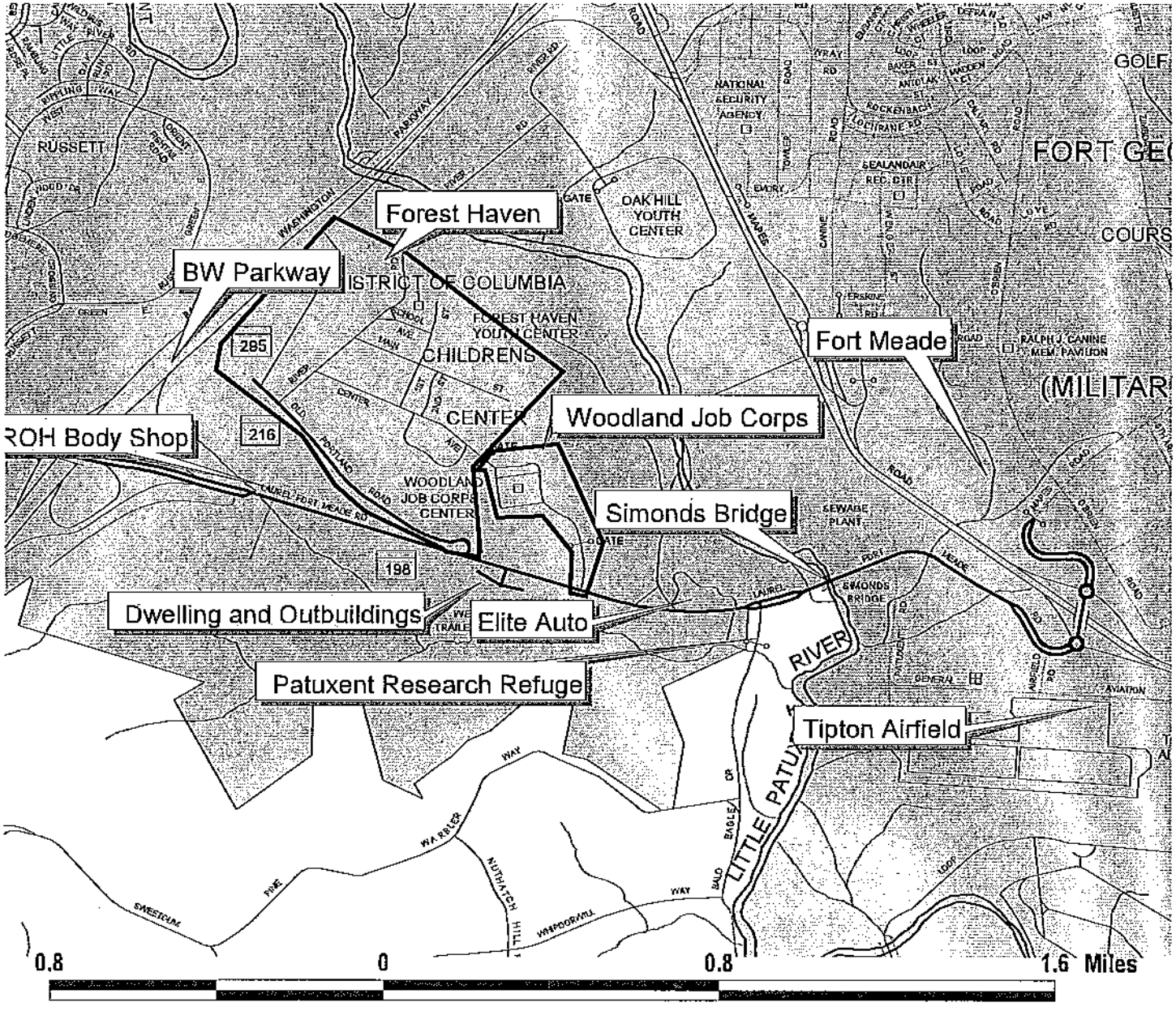
By: _____ _____
MD State Historic Preservation Office/ Date
Maryland Historical Trust

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Cultural Resources Team Leader, Project Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-8870 and Facsimile: 410-209-5004

Attachment 1
Project Location and APE Map



Attachment 2- Resource Map
MD 198 from MD 295 to MD 32
Anne Arundel County



Eligibility/Status Table

Attachment # 3

Project Name: MD 198 from MD 295 to MD 32 **October 16, 2007**

Resource	Type	SHA NR Determination	SHPO Opinion	Attachment	Remarks
Baltimore Washington Parkway (AA-5/PG: 69-26)	HD	NRL	NRL, 1991	N/A	
Fort George G. Meade- Post Core (AA-2095)	HD	NR	NR, 2001	N/A	Historic Core of the Fort Meade property is considered eligible for listing in the NRHP, two additional buildings within the Historic Core are also individually eligible. The entire property was evaluated as part of a CRMP.
D.C. Children's Center-Forest Haven District (AA-2364)	HD	NR	NR 2007	N/A	This resource is a portion of a large parcel that includes the Woodland Job Corps and the Oak Hill Youth Center.
Simonds Bridge (AA-2387)	S	**X**	**Requested 10/2007**	4	**See attached DOE form**
ROH Body Shop at 3338 Fort Meade Road	S	**X**	**Requested 10/2007**	4	**See attached short form**
Elite Auto Service Center, 3248 Fort Meade Road	S	**X**	**Requested 10/2007**	4	**See attached short form**
Single dwelling with	S	**X**	**Requested 10/2007**	4	**See attached short form**

Resource	Type	SHA NR Determination	SHPO Opinion	Attachment	Remarks
outbuildings at 3285 Fort Meade Road					
Tipton Airport (AA-2380)	HD	X	Requested 10/2007	4	See attached MIHP and DOE
Woodland Job Corps Center	HD	X	Requested 10/2007	4	See attached MIHP and DOE
Patuxent Research Refuge	HD	NOT EVALUATED	Requested 10/2007	4	Not evaluated- beyond scope of project. Seeking concurrence on this recommendation.

Codes:

Resource Types: S (Structure), A (Archeological Site), HD (Historic District), NHL (National Historic Landmark)
NR Determination: ND (Not Determined), X (Not Eligible), NR (Eligible), NRL (Listed), NHL (Landmark)
SHPO Opinion: (B) designates opinion regarding boundary, Code following date signifies SHPO opinion
Bold rows indicate review action requested

Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects

Project Number: SPO72A43 **MHT Log No.** 200703682
Project Name: MD 198 from MD 295 to MD 32
County: Anne Arundel
Letter Date: October 16, 2007

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment 3]):

[X] Concur
[ ] Do Not Concur

Effect (as noted in the Effects Table [Attachment N/A]):

[ ] No Properties Affected
[ ] No Adverse Effect
[ ] Conditioned upon the following action(s) (see comments below)
[ ] Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):

[ ] Agree

Comments:

By: _____ 12/4/07
MD State Historic Preservation Office/ Date
Maryland Historical Trust

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Cultural Resources Team Leader, Project Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-8870 and Facsimile: 410-209-5004

From: Rice, Bert CIV USA IMCOM [mailto:bert.rice@us.army.mil]
Sent: Thursday, June 04, 2009 5:54 PM
To: Ray, Jennifer
Cc: Kameel Hall; Danielle Edmonds; nwashington@sha.state.md.us; Hartman, Ted CIV USA; Baldeo, Bernadette Dr CIV USA IMCOM; jabonuc@nsa.gov; Singh, Tejbir Mr CIV USA IMCOM; Bagnall, Andrew Mr CIV USA IMCOM; Mellert, Frank W CIV USA; Butler, Mick CIV USA; McGee, Charles CIV USA IMCOM; Staab, Mary Ms CIV USA IMCOM; Dozier, Jeff CIV USA IMCOM; Miller, Patricia A CIV USA; Moeller, John Mr CIV USA IMCOM
Subject: MD 198 Access Options

Hi Jennifer:

As promised, we have reached consensus at Fort Meade regarding our preferred option to access Fort Meade from MD 198. I will only highlight our preferred option along with our reasons for selecting that option – Option A: Flyover. Options B and C could work but both have shortcomings that make them less acceptable than Option A. Also, Option D has a confusing design, most likely the costliest with the addition of a second bridge, has serious merging requirements, and is the least supportive of installation security measures. The advantages of Option A over other Options are as follows:

OPTION A:

- Provides additional space for MD 198 west bound traffic to access the flyover thus removing it sooner from MD 32.

- Precludes co-mingling MD 198 west bound traffic with traffic going into Fort Meade.

- Retains the two roundabouts and with minor modifications improves sight distance that is currently a problem, but traffic flow would remain adequate.

- Traffic queuing leading to the MD 32 – Mapes security gate is retained and should remain adequate.

- Retains the truck route to the current inspection point.

- Most significantly, construction of the Flyover and other improvements can be completed with least disruption to traffic flow during the actual construction.

- NSA prefers Option A as well.

If you have any questions regarding these comments please let me know.

A brief summary of each Option is provided below.

Thanks.

Bert

Bert L. Rice

EUL/Privatization Officer
4409 Llewellyn Avenue
Fort George G. Meade, MD 20755
301 677-2847
DSN: 622-2847
301 677-2381 FAX
"Please Comment On Our Service"
http://ice.disa.mil/index.cfm?fa=card&site_id=349&service_provider_id=106394

ACCESS OPTIONS

Option A: Retains roundabouts, truck access to inspection point remains same as now, and most notably a flyover ramp goes from MD 32 directly to MD 198 west bound.

Option B: Retains roundabout on south side of MD 32, a signal intersection is proposed where roundabout is located now on north side of MD 32, truck access to inspection point remains same, and a loop off MD 32 west bound will bring traffic back across the current bridge through the roundabout to MD 198.

Option C: Removes both existing roundabouts, signals will be installed where roundabouts now exist, truck access to inspection point remains about the same, all traffic west bound to MD 198 must pass through these aforementioned signals, and requires the current bridge be widened considerably.

Option D: Removes both existing roundabouts, retains the current bridge, adds a second bridge for traffic departing Fort Meade and for all traffic heading to MD 198 west bound, truck access to inspection point is about the same, and most notably the proposed traffic pattern is rather confusing.

From: Bonucci, Judith [mailto:jabonuc@nsa.gov]
Sent: Thursday, June 11, 2009 4:45 PM
To: khall1@sha.state.md.us; klucas@sha.state.md.us; etombs@sha.state.md.us; Ray, Jennifer; Chamberlain, Steven D; Stuart, Lois E; Hill, Catherine ; Wolfe, John
Subject: FW: MD 198 Project Planning Study

NSA is in concurrence w/Mr. Chamberlain's comments in the attachment. If you have any comments, please feel free to call me.

Thanks,
Judy Bonucci
Chief, Commuter and Motor Fleet Services, NSA
301-688-2351

Memo

To: **Judy Bonucci, Chief LL31, Commuter Transportation and Motor Fleet Services**

From: **Steve Chamberlain, LL31 Traffic**
Contractor - WR&A/Traffic Engineer

CC: Lois Stuart, LL31 Traffic

Date: May 27, 2009

Re: **MD 198 Project Planning Study –**
LL31 Traffic Comments from 4/16/2009 Meeting w/SHA & Ft. Meade

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As previously discussed, I attended the Thursday 4/16/2009 meeting at Ft Meade's Building 4409 w/you as a representative of NSA Traffic, at which the current alternatives for the MD 198 Project Planning Study were presented by SHA and their consultants.

Below is my summary of traffic-related issues discussed at this meeting, along with my comments (preceded with "***Comment***" in bold text) on the current SHA MD 198 project plans that were presented at the meeting.

MD 198 Mainline Alternative - B/W Pkwy. to Water-Sewer Treatment Facility Driveway (West of MD 32)

- MD 198 will be widened to provide a 4-lane divided roadway section, with separate turn lanes at intersections.
- The current numerous access points along MD 198 route between B/W Pkwy and Water-Sewer Treatment Facility driveway will be minimized through the use of adjacent frontage roads.
- Proposed Traffic Signals:
    - SB B/W Pkwy Ramps
    - Gateway Blvd (new road to access proposed Arundel Gateway development and adjacent properties (east of B/W Pkwy, such as Ourisman Honda/VW Dealer) -- ***Comment***: SHA concurred that proximity of Gateway Blvd's Ourisman Honda/VW access and MD 198 intersections will need to be further studied, to minimize potential for queuing/congestion and collision potential, especially during peak hours once Arundel Gateway becomes "active"/occupied.
    - Welches Court - currently accesses Welches Trailer Park; in future to access Arundel Gateway development (south side of MD 198) and adjacent properties (such as DC Children's Center, Woodlands Job Corp Center)
- Proposed Unsignalized Intersections:
    - Access Road (with median break) to properties abutting north side of MD 198, east of Gateway Blvd (Extra Space Storage, Remington's of Laurel, ROH Body Shop).
    - CDL Practice Center (right-in/right-out only), south side of MD 198, west of Bald Eagle Drive
    - WB exit (only) from WB MD 198 to Frontage Road, to access the numerous north-side properties between Welches Court and Bald Eagle Drive - this WB frontage road will connect to new Welches Court signal

- Bald Eagle Drive (with median break) – signal will not be warranted
- Water-Sewer Treatment Facility Driveway (with Maryland-Modified "T" Intersection channelization)

- Bicycles/Pedestrians - due to local bicyclists' high interest in providing bicycle accessibility, plan includes an off-road shared-use "hiker/biker" path along south side, with standard sidewalk along north side.
- ***Comment***: How will Waters Road (south side of MD 198, east of Welches Court) be accessed?

MD 32/MD 198 Interchange Options

Option A - Flyover – ***Comment***: I consider this the BEST OPTION; many at meeting concurred.

- Provides WB flyover ramp from WB MD 32 (Odenton) to WB MD 198 (Laurel) - separates the highest AM traffic volume movement from the existing roundabouts, which are to remain.
- WB MD 32 exit ramp to be widened back onto mainline MD 32 to provide 2-lane exit. ***Comment***: OVERHEAD signs should be required to ensure exiting WB MD 32 drivers access proper lanes to reach downstream destinations (i.e., WB MD 198, Mapes Rd, NSA Delivery Rd)
- Requires 15' widening of existing MD 198 (formerly Airfield Rd) bridge over MD 32 to provide bicycle-compatible shoulders.
- Improves traffic operations at current roundabouts; construction to include geometric improvements to south roundabout.
- ***Comment***: Maintaining traffic will be much easier than all other options, as majority of construction will occur "off" existing MD 32 and MD 198 roadway alignments; basically, current traffic lanes will be able to be maintained without significant impact.
- ***Comment***: Question was raised about the vertical height of the proposed Option A flyover ramp, relative to potential NSA "security concern" with drivers' visibility of buildings/facilities inside the fence. I contacted and met w/Security at VCIF/Perimeter Rd on Friday 4/17/2009 -- from a point in front of VCIF, looking in direction of MD 32/MD 198 interchange, all that is visible is the dense "forest" of trees located between the interchange and the VCIF. After I met w/ Security, I was informed that although a portion of these trees are proposed to be removed as part of another project in order to construct a stormwater management pond in this area, a significant portion of trees will remain close to the MD 32/MD198/Mapes Rd side. While Security did not think that the height of the flyover would be a problem due to the distance (approximately 3000 feet) between the VCIF and the MD 32/MD 198 interchange's proposed flyover ramp location, Security indicated someone else from their office would attend future meeting(s) to address this matter.
- ***Comment***: Fort Meade needs to consider providing a future SEPARATE truck inspection facility, as NSA's current VCIF may not be able to process future projected truck volumes of BOTH (NSA and Ft Meade) compounds. Current inbound queues along the "NSA Delivery Rd", which at times extend back to MD 32, are anticipated to increase with BRAC-related traffic growth. FYI – there is a project that will be addressing this matter.

Option B – Loop Ramp – ***Comment***: I do not prefer this interchange option.

- This option would separate the critical WB MD 32 to WB MD 198 traffic movement with a new loop ramp. ***Comment/Question:*** Will this option include a traffic signal at the new WB MD 32 ramp intersection with MD 198/Mapes Road? Design needs to ensure that NB MD 198 queues (in the one available NB lane) from this intersection would not extend back into South Roundabout; that is, NB queues extending this far would result in roundabout gridlock (failure).

- ***Comment***: While Option A would separate the critical WB MD 32 to WB MD 198 movement completely from the existing north & south roundabouts and MD 198 bridge over MD 32, this Option B would eliminate the north roundabout, but unfortunately maintain the heavy AM WB traffic flow across the existing bridge and through the south roundabout.
- ***Comment***: While Option A would not significantly impact traffic during construction, maintaining traffic adequately during Option B construction would be difficult.

Option C – Signalized Diamond Interchange – ***Comment***: I do not prefer this interchange option.

- This option would replace the existing two MD 198 roundabouts with a signalized diamond interchange. It requires significant widening of MD 198 bridge over MD 32, from 3 lanes to 8 lanes.
- ***Comment***: With the amount of necessary reconstruction to tie-in existing roads into proposed roadway/bridge alignment, maintaining traffic during construction will be extremely challenging, with significant impact to current traffic operations and safety, especially with roundabouts.
- ***Comment***: The success of this option is critically dependent on proper signal operations; hence, a signal malfunction during peak hours would result in very poor traffic operations and significant congestion.

Option D – Two Bridge – ***Comment***: I do not prefer this interchange option, and would rate this option as the lowest/worst of the 4 interchange options.

- This option would involve construction of a new WB MD 198 bridge from Mapes Rd to existing MD 198, which along with the existing MD 198 bridge (for EB traffic), would provide a "one-way" pair of roadways for traffic circulation at the interchange.
- ***Comment***: Primary concern would be the new WB MD 198 intersection with Mapes Road – this intersection's proximity to the Mapes Rd Access Control Point (ACP) would exacerbate intersection congestion and safety, considering the very heavy AM/PM volumes at this location. Based on previous studies of other ACPs, this proximity would result in significant inbound AM & outbound PM traffic queues along Mapes Rd, resulting in traffic congestion/safety and potential security concerns at this ACP.
- ***Comment***: Weaving traffic – This option includes two ramps that would require traffic diverging & merging traffic on the left, which is not preferred by SHA. The significant PM volume of traffic headed from outbound Mapes Rd to EB MD 32 would be required to:
    - WB MD 198: Weave across the new 3-lane section of WB MD 198 to the single-lane left ramp to access EB MD 198 and downstream EB MD 32 entrance ramp. This weave would be most critical during the outbound Mapes Rd approach's red signal interval, when right-turns-on-red would be merging into and weaving across WB traffic to access the left WB ramp to EB MD 198.
    - EB MD 198: Weave from the left lane across the 4-lane EB MD 198 section approaching the Airfield Rd signal, to access the downstream EB MD 32 entrance ramp (on right).
- ***Comment***: Depending on anticipated operation of the WB MD 32 Ramp/ WB MD 198 intersection, the WB MD 32 Ramp approach to this intersection may require longer storage for delivery trucks headed to the downstream NSA Delivery Rd.

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

MARYLAND DEPARTMENT OF TRANSPORTATION

June 30, 2009

Re: Contract No. SPO72A43
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Mr. David Hayes
Regional Transportation Liaison
National Capital Region of the National Park Service
1100 Ohio Drive, SW
Washington, DC 20242

Dear: Mr. Hayes:

Introduction and Project Description

This letter serves to provide the National Park Service (NPS) with additional information regarding the Maryland State Highway Administration's (SHA) proposed Contract No. SPO72A43, on MD 198 between MD 295 and MD 32 in Anne Arundel County, regarding the project's impacts to the Baltimore-Washington Parkway. Mr. David Hayes attended a preliminary site meeting held on site December 18, 2008 and we are providing preliminary project plans for the project in lieu of an additional site meeting.

The purpose of the project is to improve the existing capacity and traffic operations, and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to the Fort George G. Meade Military Reservation (Fort Meade) from MD 32, MD 295 and generally points south and west of the study area. Improving MD 198 would enhance access to Fort Meade and accommodate future transportation needs in the project area.

The area around Fort Meade is one of the fastest growing areas of Anne Arundel County. Fort Meade and the National Security Agency (NSA), a tenant of the Fort, combined represent the largest employers in the State of Maryland. Fort Meade's workforce is comprised of more than 39,000 military, civilian and contractor personnel. As a result of the 2005 BRAC process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2010, approximately 5,300 additional new on-base jobs are expected to be relocated to Fort Meade, along with 7,500 new jobs at NSA. As many as 20,000 or more private sector jobs are also anticipated, primarily in the defense and support industries. These jobs would be located both on and in the vicinity of the Fort.

MD 198 provides a continuous connection between the City of Laurel and its suburbs with Fort Meade. The Laurel area has been a traditional community of Fort Meade and this relationship will continue as the Fort and its various tenant organizations increase in population and employment. MD 198 is also the route to convey Odenton area-generated travel demand to the Baltimore Washington Parkway (especially southbound) toward the Capital Beltway and the Washington Metropolitan area.

In addition to an increase in jobs, the study area is expected to see substantial increases in population, housing, commercial activity and vehicular traffic as a result of BRAC. This project will address projected operational and safety deficiencies resulting from the expected growth.

Improvements to the Baltimore-Washington Parkway will be limited to the slight widening of the egress ramp from southbound Baltimore-Washington Parkway to MD 198 and the construction of sidewalks/ bikeways across the MD 198 Bridge. The expansion of the typical section at the egress ramp will accommodate a free-flowing right turn onto MD 198 and an additional left turn lane onto MD 198. Adding sidewalks/ bikeways to the existing bridge will provide a travel route for pedestrians and bikers across the bridge and along MD 198, which is completely absent.

The construction of the interchange will require approximately .38 acres of right-of-way and approximately 4.68 acres of temporary easement for construction from the NPS property.

Preliminary project plans and photographs, including color-coded plans of the interchange and bridge sections, are included as Attachment 1. Landscape plans have not yet been developed.

Funding

Federal funds are anticipated for this project.

Historic Resources Impacts

The Baltimore-Washington Parkway is listed on the National Register of Historic Places (NRHP) under Criteria A and C in the areas of transportation and landscape architecture. The NRHP boundary for the parkway encompasses the 19-mile federally owned and maintained section of the parkway, which extends north from the District of Columbia terminating just south of MD 175.

According to its NRHP Registration Form, some of the significant features of the Baltimore-Washington Parkway that are important to preserve include "right-of-way with heavy slope vegetation, curvilinear road alignments, stone-faced bridge abutments, and contour grading fit to the topography."

Preliminary project plans at the Baltimore-Washington Parkway consist of minor widening of one egress ramp as well as restriping the bridge and adding sidewalks across the bridge and on the roadway adjacent to the bridge (see photos and detailed plans in Attachment 1). Work at this intersection will impact three components of the Parkway: 1) the MD 198 Bridge over 295; 2) MD 198 within the historic boundary; and 3) one egress ramp from MD 295 to MD 198 within the historic boundary.

1) The bridge is ca. 1950s streamlined expression of the typical stone and concrete Parkway bridges. This type is characterized as an "intermediate design treatment" found on several bridges on the Parkway, described in the National Register of Historic Places Nomination Form as "a combination of concrete span and recessed support walls that curve out to meet the wingwalls. These...are clad with dressed rough-cut stone, but they are smaller and more angular than the previous type of bridges." Alterations to the bridge will occur only on the travel surface over the bridge. Specifically, automobile travel lanes will be restriped and sidewalks will be constructed across the bridge for bike and pedestrian use. Character defining features of the concrete and stone bridge that is a contributing element of the Baltimore-Washington Parkway will not be altered.

2) Sidewalks will be constructed alongside the existing travel lanes on the bridge approaches. The landscape in this area consists of a grass median bordered by slopes covered in heavy vegetation. The character of the landscape at this location will not be altered by the addition of sidewalks along the roadway. The character defining features of the Baltimore-Washington Parkway will not be altered by the addition of sidewalks at this location.

3) The existing egress ramp from south bound MD 295 to MD 198 will be slightly widened at the intersection of MD 198. Egress ramps were designed "as a landscaped graduation to the roadway" and to meet the needs of traffic capacity. The profile of the existing egress ramp will be replicated in the reconstruction. Roadside features such as signage and guardrail will be retained and reinstalled or replaced in-kind. The landscape in this area consists of a grass median bordered by slopes covered heavy vegetation. The landscape character along the egress ramp will not be altered. The character defining features of the Baltimore-Washington Parkway will not be adversely impacted by a small increase in the typical road section in this location.

SHA finds that the proposed plans for MD 198 at MD 295 do not adversely impact the Baltimore-Washington Parkway. Landscape plans have not been developed at this stage of the project planning. NPS participation in review of proposed landscape will be sought when they are prepared.

Review Request

SHA initiated Section 106 Consultation for this project with a letter to the Maryland Historical Trust (MHT) on October 16, 2007. The letter established the project's Area of Potential Effects (APE) and provided information about the NRHP eligibility of historic standing structures within the APE. By carbon copy, SHA invited NPS to be a consulting party in the Section 106 process. SHA intends to formally consult with MHT and other consulting parties regarding the project's effects on historic resources in the near future; however, we are seeking NPS's comments on impacts to the Baltimore-Washington Parkway in advance of this coordination so that our agencies can work together to resolve issues specific to the parkway prior to SHA's effect finding for the overall project.

Please examine the attached project plans and provide your comments by July 30, 2009. Please contact the project manager, Ms. Kameel Hall at 410-545-8542 (or via email at khall1@sha.state.md.us) or Heather Lowe at 410-545- 8526 (or via email at hlowe@sha.state.md.us) with questions regarding this project.

Very truly yours,

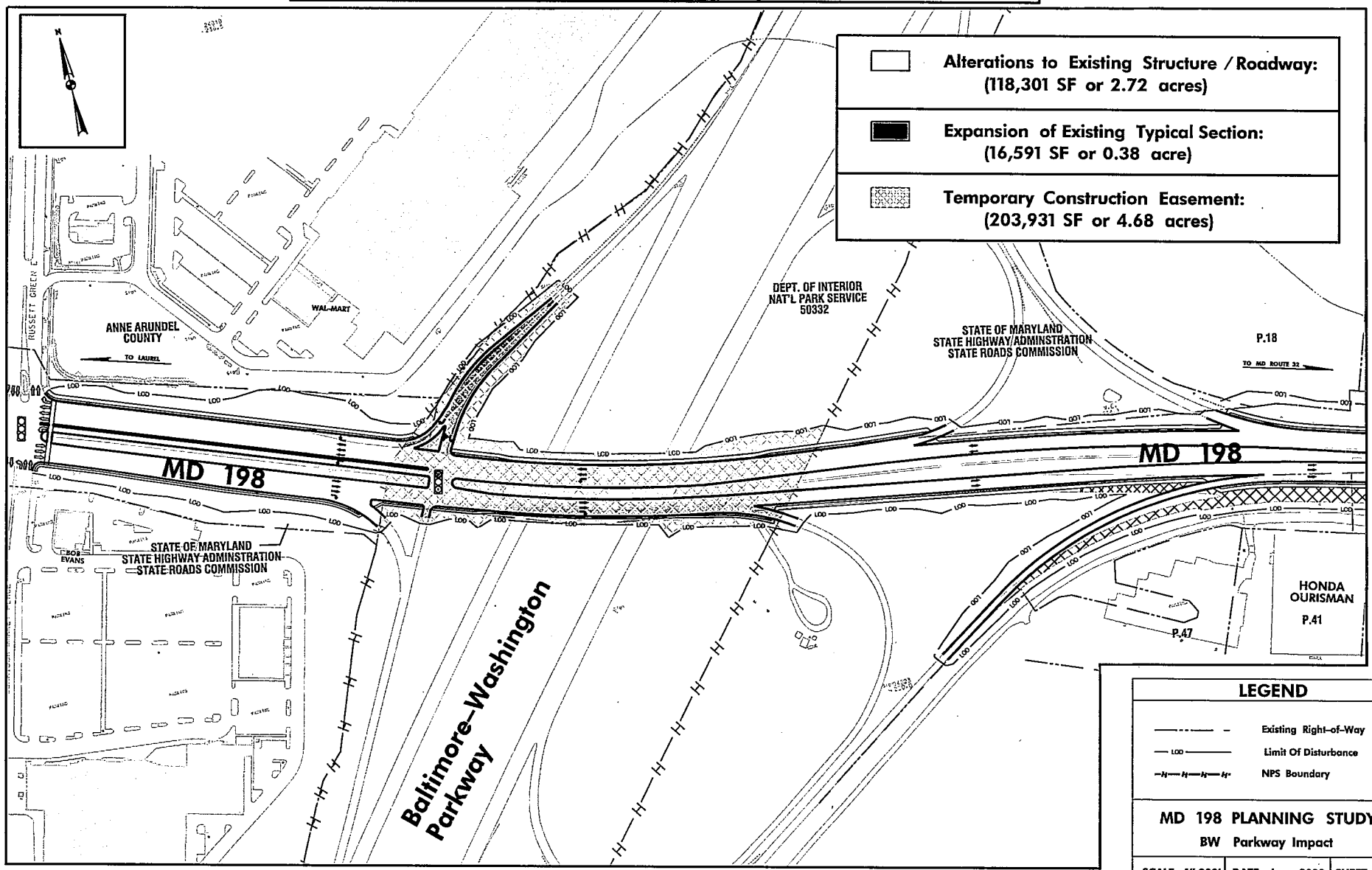
April Foster

for Julie M. Schablitsky
Assistant Division Chief
Environmental Planning Division

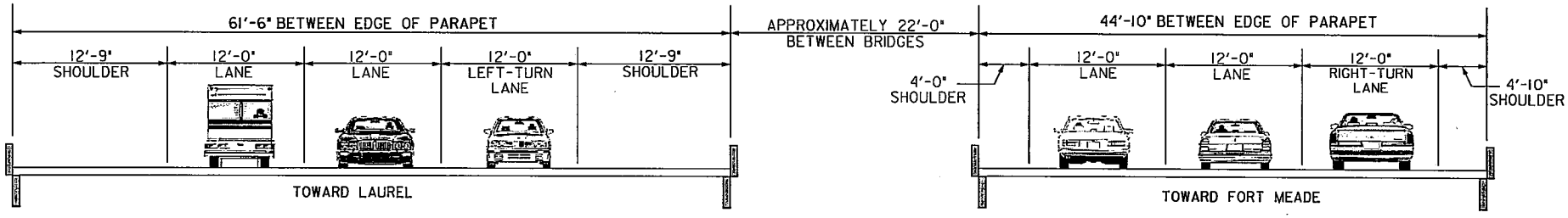
Attachments: 1) Project Plans and Photos

cc: Mr. Fred Cunningham, Site Manager, National Capital Park-East, NPS (w/Attachments)
Ms. Jennifer Goold, Architectural Historian, SHA-EPLD
Ms. Kameel Hall, Project Manager, SHA-EPLD
Ms. Gayle Hazelwood, Superintendent, National Capital Park-East, NPS (w/Attachments)
Ms. Denise King, Environmental Protection Specialist, DelMar Division, FHWA
Mr. Joseph Kresslein, Assistant Division Chief, SHA-EPLD
Mr. J. Rodney Little, Director, Division of Historical and Cultural Programs, MHT (w/Attachments)
Ms. Heather Lowe, Environmental Manager, SHA-EPLD (w/Attachments)

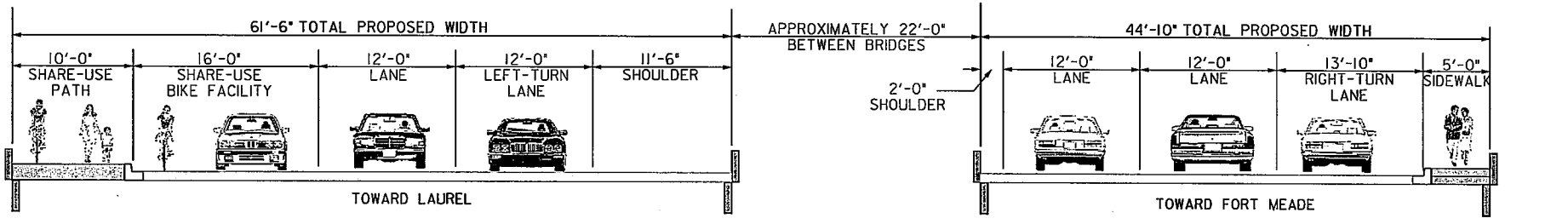
Alternative 4 Mainline: Divided Roadway with Off-Road Shared-Use Facility and a Sidewalk



EXISTING MD 198: BRIDGE OVER BW PARKWAY



PROPOSED MD 198: BRIDGE OVER BW PARKWAY



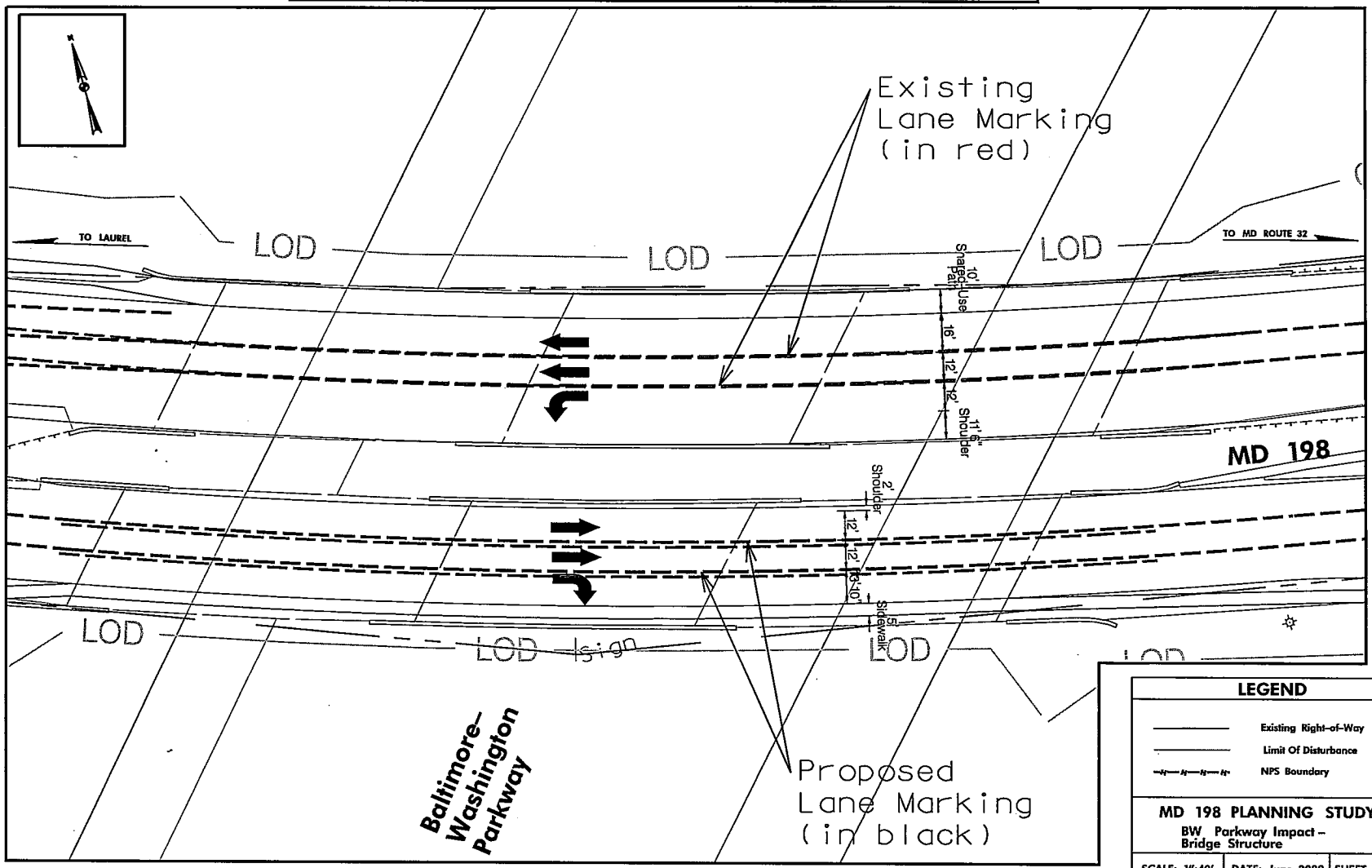
MD 198 PLANNING STUDY
TYPICAL SECTIONS
OVER BALTIMORE-WASHINGTON PARKWAY

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION
SCALE = NOT TO SCALE

BACKGROUND MAPPING SOURCE
MD SHA

June 2009

Alternative 4 Mainline: Divided Roadway with Off-Road Shared-Use Facility and a Sidewalk



LEGEND

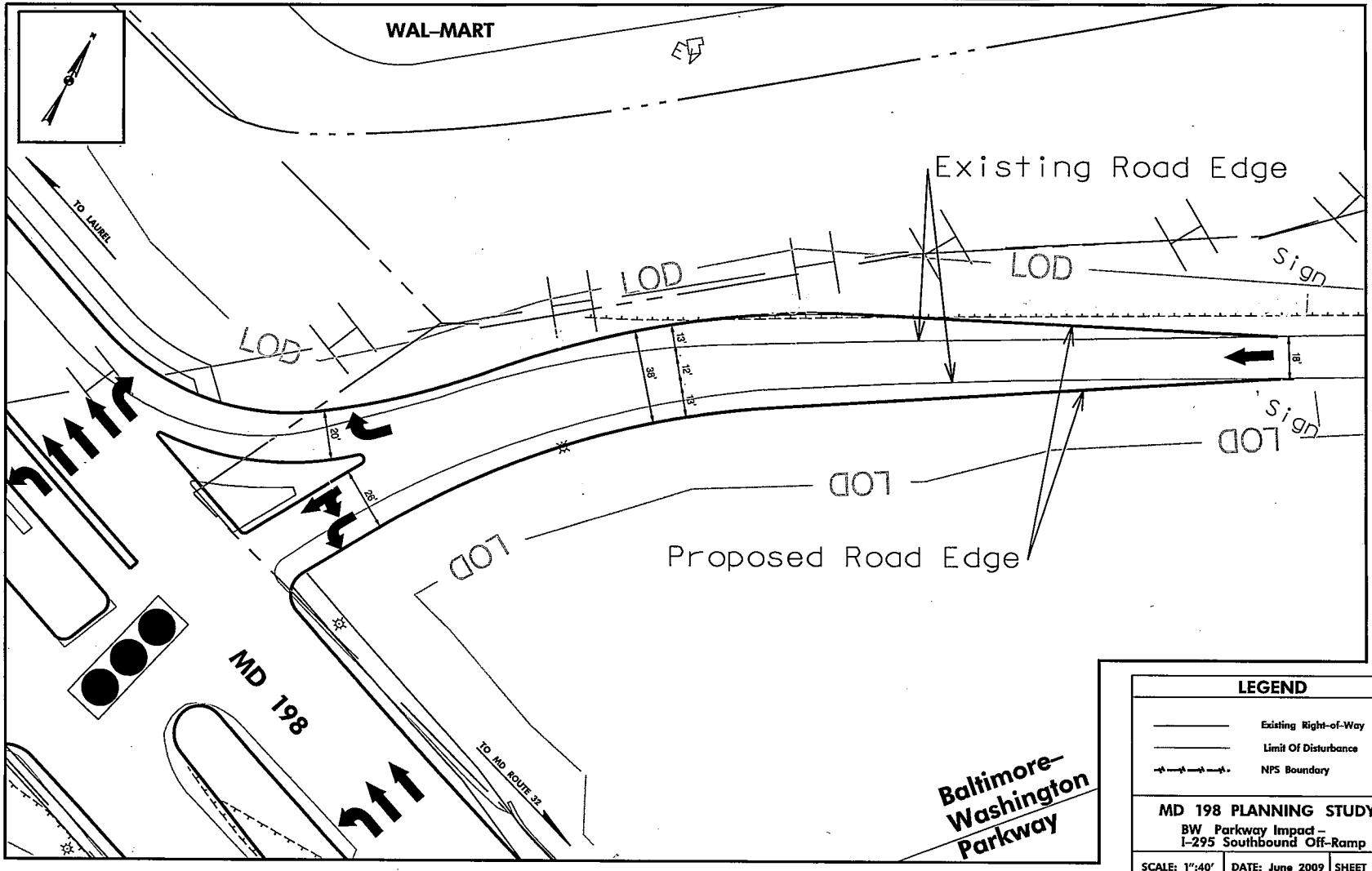
- Existing Right-of-Way
- Limit Of Disturbance
- NPS Boundary

MD 198 PLANNING STUDY

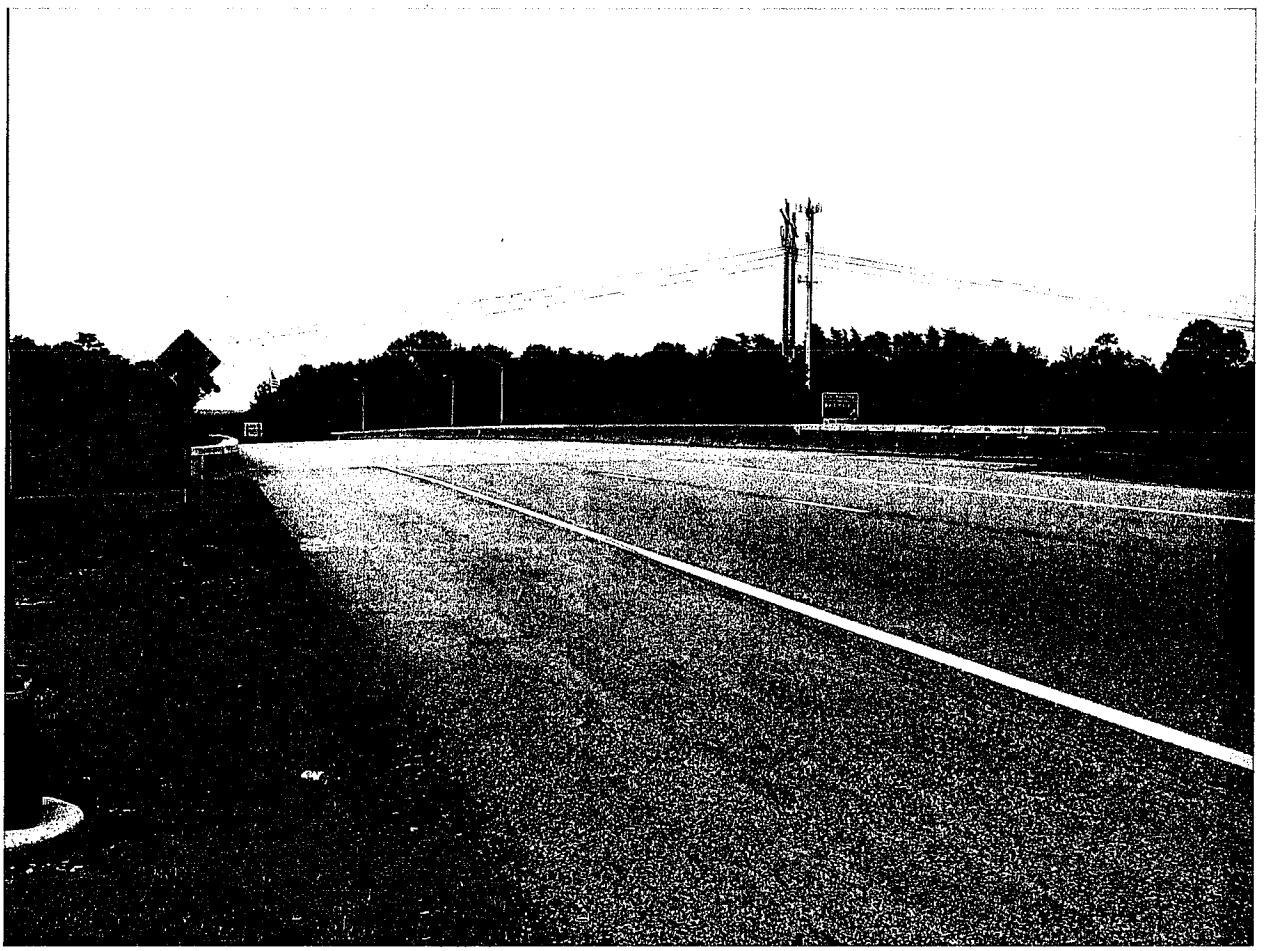
BW Parkway Impact – Bridge Structure

SCALE: 1":40'	DATE: June 2009	SHEET : 1/1

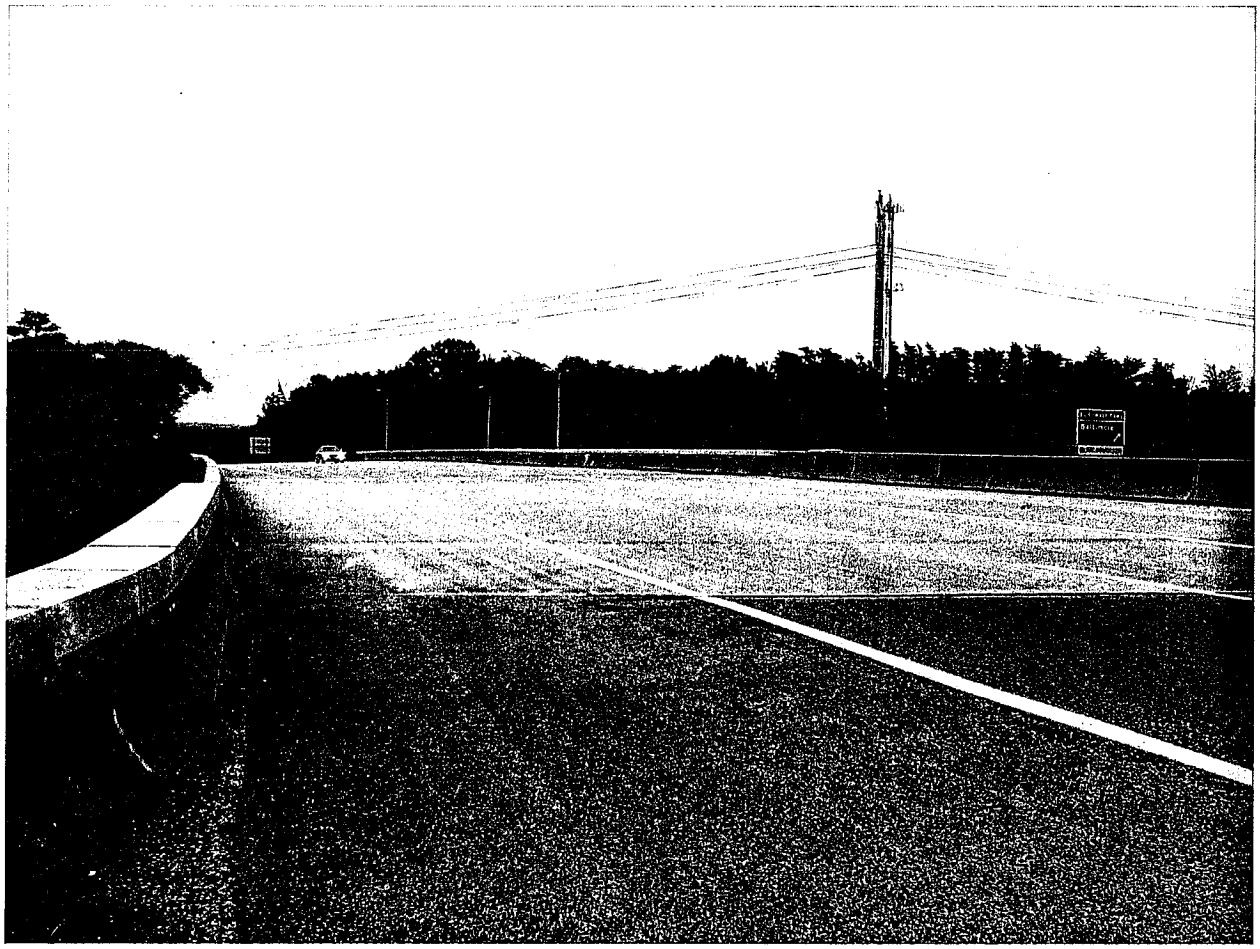
Alternative 4 Mainline: Divided Roadway with Off-Road Shared-Use Facility and a Sidewalk



1) View south. Shows egress ramp towards MD 198.



2) View east. Shows bridge approach MD 198.



3) View east. Shows MD 198 bridge.

4) View east. Shows MD 198 bridge.

5) View east. Shows MD 198 bridge.

6) View west. Shows MD 198 bridge.

7) View west. Shows MD 198 bridge.

8) View west. Shows MD 198 bridge.

9) View west. Shows MD 198 bridge.

MEMORANDUM

TO: Mr. Raja Veeramachaneni
Director
Office of Planning and
Preliminary Engineering

FROM: Bruce M. Grey BMG
Deputy Director
Office of Planning and
Preliminary Engineering

DATE: April 16, 2007

SUBJECT: Project No. AA510M11
MD 198 Project Planning Study
From W. of MD 295 to MD 32
Anne Arundel County

RE: Scoping Meeting

I. Introduction

The Scoping Meeting for the MD 198 Project was held on Wednesday, March 28, 2007 at the State Highway Administration's (SHA) 211 E. Madison Street building. The following people were in attendance:

Frank Anuszewski	SHA-OOTS-TEDD	410-287-4047	fanuszewski@sha.state.md.us
Dennis Atkins	SHA-PPD	410-545-8520	datkins@sha.state.md.us
Judy Freedman Breckon	SHA-ORE-D5	410-841-1069	jfreedmanbreckon@sha.state.md.us
Nora Bucke	SHA-EPD	410-545-8643	nbucke@sha.state.md.us
George Cardwell	AACo. OPZ	410-222-7432	pzcard44@aacounty.org
Prakash Dave	SHA-Bridge	410-545-8355	pdave@sha.state.md.us
Anne Elrays	SHA-PPD	410-545-8562	aelrays@sha.state.md.us
Richard Ervin	PPD Cultural Resources	410-545-2878	rervin@sha.state.md.us
Dennis German	SHA-OHD	410-545-8900	dgerman@sha.state.md.us
Bruce M. Grey	SHA-PPD	410-545-8500	bgrey@sha.state.md.us
Derek Gunn	SHA-PPO-7FS	410-545-5642	dgunn@sha.state.md.us
Joe Harrison	SHA-PPD	410-545-8506	jharrison@sha.state.md.us
Kameel Holmes	SHA-PPD-OPPE	410-545-8542	kholmes@sha.state.md.us
Denise W. King	FHWA	410-779-7145	denise.king@fhwa.dot.gov
Joe Kresslein	SHA-PPD	410-545-8550	jkresslein@sha.state.md.us
Victoria Lane	SHA-PPD	410-545-2950	vlane@sha.state.md.us
Vaughn Lewis	SHA	410-545-5674	vlewis@sha.state.md.us

L'Kiesha Markley	SHA-PPD-TFS	410-545-5641	lmarkley@sha.state.md.us
Kirk McClelland	SHA-OHD	410-545-8800	kmcclelland@sha.state.md.us
Dan Montag	FHWA	302-734-1719	daniel.Montag@fhwa.dot.gov
Brian Muldoon	H. Co. Trans. Planning	410-313-4363	bmuldoon@howardcountymd.gov
Harvey Muller	SHA-RIRD	410-545-5656	hmuller@sha.state.md.us
Kareem Myrie	SHA-OMT	410-321-3117	kmyrie@sha.state.md.us
Nasser Rahimi	AA County	410-222-7028	pwrahi@aacounty.org
Sarah Sebald	SHA-PPD	410-545-8519	ssebald@sha.state.md.us
Steve Sites	OOC	410-545-0372	ssites@sha.state.md.us
Steve Swarr	JMT	410-316-2392	sswarr@jmt.com
Jennifer Ray	JMT	410-316-2231	jray@jmt.com
Michael Rothenheber	JMT	410-316-2260	mrothenheber@jmt.com
Eric G. Tombs	SHA-PPD	410-545-8571	etombs@sha.state.md.us
Kim Tran	SHA-D-5 Traffic	410-841-1003	ktran@sha.state.md.us
Raja Veeramachaneni	SHA-OPPE	410-545-0412	rveeramachaneni@sha.state.md.us
Greg Welker	SHA-D-5	410-841-1001	gwelker@sha.state.md.us
Julie Wright	JMT	410-316-2365	jwright@jmt.com

II. Purpose of Meeting

The purpose of the meeting was to introduce all of the team members to the project and gather information from the various attendees.

III. Project Overview

Ms. Kameel Holmes presented the project overview. The proposed project limits extend along 3.5 miles of MD 198, beginning west of the interchange with the Baltimore Washington Parkway (MD 295) and ending at the MD 32 interchange. The project study area is located midway between Baltimore City and Washington D.C. in northwestern Anne Arundel County.

The background for the study area consists of the establishment of Fort Meade in 1917 and the expansion of National Security Agency (NSA) in the 1950's. Fort Meade is in transition from a training and deployment center to an information and administrative center. Employment growth is expected to continue through this transition period. The Anne Arundel County Executive requested that SHA initiate a Project Planning Study for MD 198. The funding for the study has been allocated in the County's Capital Improvement Plan.

The existing conditions along MD 198 are as follows:

- MD 198 – Two lane open section with ten-foot shoulders and no access control
- MD 198 @ MD 295 (western limit)* – Interchange
- MD 198@ MD 32 (eastern limit) – Diamond interchange with roundabouts at each ramp termini

  * **Upon further discussion, the western limit was shifted west to include the Russett Green East intersection.**

A table entitled "MD 198 – Existing Roadway Characteristics" was presented to show the physical elements that exist today. Corresponding pictures with further descriptions were also presented and can be found in the meeting handouts.

The bridge over the Little Patuxent River (Welch Bridge) is a three lane bridge that floods and is in poor condition. SHA is planning to redeck and rebuild this bridge as it does fall within SHA's jurisdiction.

IV. Preliminary Purpose & Need

Mr. Vaughn Lewis presented the preliminary purpose and need. The purpose of the project is to improve the existing capacity and traffic operations; increase vehicular and pedestrian safety; and support the Base Realignment and Closure (BRAC) related growth.

The need for the project is based upon the BRAC growth. Over 19,000 jobs are expected to be coming to Fort Meade by way of Direct BRAC jobs, Non-embedded contractors, indirect and induced growth. It was noted that the NSA is expanding as well; they are expected to add an additional 7,500 jobs in the coming years. It was stated that each NSA job typically results in a contractor job meaning 7,500 NSA jobs would be equivalent to 15,000 jobs total. This growth at NSA has already started. The exact time table for inclusion of all new NSA jobs is not known. There are several other tenants who will be coming to the area regardless of BRAC associated expansions.

This project is consistent with regional plans including SHA's Highway Needs Inventory, 1997 Anne Arundel County General Development Plan, 2004 Jessup/Maryland City Small Area Plan, 2003 Odenton Small Area Plan and the Long Range Plan for the Baltimore Region – Transportation 2030.

It was stated that there is no existing bus service within the study limits; however, the Corridor Transportation Corporation (CTC) operates along MD 198 west of MD 295 in Maryland City. CTC provides service to Laurel Mall, Laurel Racetrack, NSA, Arundel Mills and the Cromwell Light Rail Station in Glen Burnie. Laurel Mall is also serviced by Howard Transit, Maryland Transit Administration (MTA) and Metrobus. Arundel Mills also has MTA service and Annapolis Transit.

WMATA operates the B-30 bus route connecting the Greenbelt Metrorail Station with the Baltimore Washington International Thurgood Marshall (BWI) Airport. There is a potential for this service to provide access to Fort Meade in the future.

The Tipton Airport is a former U.S. Army airfield designated for privatization by the 1988 BRAC. It is operated by the Tipton Airport Authority, which is a County-chartered public corporation. No scheduled airline, commuter or cargo service is planned or expected at any time in the future. The airport does have an environmental assessment permitting the extension of the runway from 3,000 to 4,000 feet, plus the extension of landing lights.

Commuter train service is provided on the MARC Commuter train on either side of the study area. West of the project is the Laurel station which runs on the Camden line. East of the project is the Odenton station which runs on the Penn Line and is the third most utilized station on the line. Transit Oriented Development (TOD) is being implemented at the Odenton station and is expected to be completed in the three-five years. The MTA has recently increased the parking capacity at the Odenton station.

Pedestrian access along the study area is sparse; a few sidewalks are located in front of the commercial buildings without connectivity. Bicycle access is prevalent with ten foot shoulders along most of the roadway, excluding the area between Bald Eagle Drive and the Little Patuxent River. Presently, MD 198 is a designated bike route east of the Little Patuxent River to MD 32. The bicycle designation continues along MD 32 to MD 175. The Anne Arundel County Bicycle and Pedestrian Master Plan identifies the need for both pedestrian and bicycle improvements along MD 198. SHA has long-term plans to designate MD 198 as a bike route from MD 32 to Laurel.

Related projects include the MD 175 Project Planning Study from MD 170 to MD 295 and the Central Maryland Transit Maintenance Facility. The MD 175 Project Planning Study is very similar to this study as it is due to BRAC growth; both projects have political pressure for expedition. The proposed Transit Maintenance facility has access on Airfield Road. Approximately 100 -125 buses will be accommodated. The Maintenance Facility is funded by Howard and Anne Arundel counties with earmarked funds through SAFETEA-LU.

V. Environmental Overview

Land use in the study consists primarily of industrial, institutional, with commercial at the western end, and natural features concentrated at the eastern/western ends of the project area. A mixed use development, Arundel Gateway Business Park, is proposed along the southern portions of the study area. It is anticipated that there will be a lot of development pressures in this corridor as a result of BRAC. Mr. Raja Veeramachaneni recommended that Mr. Vaughn Lewis and Mr. George Cardwell maintain close attention to the zoning changes proposed along this corridor as they will have a great impact on the project.

There are three master plans that govern land use in the study area: the Anne Arundel County General Development Plan (GDP) (1997), the Jessup/Maryland City Small Area Plan (2004), and the Odenton Small Area Plan (2003). The project falls mostly within the Jessup/Maryland City Small Area Plan. Both the GDP and the Jessup/Maryland City Small Area Plan recommend capacity improvements along MD 198 through the project area.

The MD 198 project is located almost entirely within a Priority Funding Area. There are no public parks, schools, or associated respective public recreational uses. However the Patuxent Research Refuge, a national wildlife refuge, is located in the southern portion of the project area. The Patuxent Research Refuge and associated ballfields, are Section 4(f) resources, as is MD 295 in the study area. Fort Meade is located within the project area along with Tipton Airport. Tipton Airport is operated by the Tipton Airport Authority, a state-chartered public corporation.

Based on an initial review of census data, Environmental Justice populations were not identified within the project area. The block group that includes the Welch's Trailer Park does not qualify as an area of Environmental Justice (EJ). Further research of the socioeconomic resources and characteristics will be conducted to ensure that SHA is not disproportionately or adversely affecting any EJ communities. Both air and noise studies will be conducted once detailed alternatives become available.

There is a gas station, two car service centers, as well as various auto salvage yards throughout the project area. These facilities typically generate, handle, or store hazardous materials. Although no hazardous waste sites have been previously identified throughout the majority of the study area, the potential for unexploded ordnance exists on and in the vicinity of Fort Meade. Prior to any testing or technical studies that require ground disturbance, coordination must be initiated with the Fort.

An assessment of archeological potential identified the presence of one recorded archeological site within the project area: an Early Woodland and historic period artifact scatter, 18AN1147. The assessment revealed sections of the project area within the vicinity of the Little Patuxent River and its tributaries have a high potential to contain prehistoric archeological resources, therefore a Phase I archeological survey will be warranted.

Previously identified historic resources within the project area include the Baltimore Washington Parkway. The parkway, owned and operated by the National Park Service, is listed as a historic district on the National Register of Historic Places (NRHP) and is designated as a state scenic byway. At the meeting the team was asked if the ramps were included as part of the NPS boundary. Currently, there are no formal maintenance agreements with the NPS regarding the MD 198/MD 295 interchange. Woodland Job Corps Center (eight buildings), Oak Hill Youth Center (circa twenty buildings), and a cemetery, all located north of MD 198 within the D. C. Children's Center will require survey and evaluation for listing on the NRHP. Tipton Airfield, mentioned previously, was historically part of Fort Meade, and will also require evaluation for listing on the NRHP. Coordination with the Maryland Scenic Byways Program will also be initiated to determine potential effects of the proposed improvements on the scenic byway (MD 295).

Coordination with the Maryland Department of Natural Resources (DNR) identified the section of the Little Patuxent River which flows through the study area as a spawning location for both white perch (*Morone americana*) and herring (*Alosa sp.*). DNR also identified the state-listed threatened Glassy Darter (*Etheostoma vitreum*) as being present south of the MD 198 Fort Meade Dam. Due to the small population of the Glassy Darter, DNR recommended that stream habitat protection focus on the minimization of sedimentation and water quality impacts to downstream locations. The Little Patuxent River and its tributaries are classified as Use I streams. The fish populations identified by DNR should be adequately protected by the Use 1 work prohibition period (March 1 through June 15 inclusive).

According to the US Fish and Wildlife Service, there are no federally-listed threatened or endangered species in the project area. A review of the Federal Emergency Management Agency 100-year floodplain mapping reveals that the Little Patuxent River 100-year floodplain crosses the project area. Review of National Wetland Inventory and DNR non-tidal wetland mapping indicates that palustrine/emergent wetlands are located throughout the project area. In addition, DNR identified the portion of the Little Patuxent River south of MD 198 as a Nontidal Wetland of Special State Concern.

There was an Environmental Assessment (EA) completed for the Tipton Airport in 2002/03 that may aid in gathering further information regarding resources in the project area.

At the meeting it was recommended that the US Army be asked to be a cooperating agency for this project.

VI. Traffic & Safety

Mr. Derek Gunn presented the traffic and safety issues in the study area. Existing Average Daily Traffic (ADT) data (2006) and proposed No-Build (2030) ADT data was presented for the impacted and surrounding roadways. Many of the access points/uncontrolled intersections along MD 198 in this area will be failing in 2030. Mr. Gunn noted that his analysis used an unconstrained model. Recommendations provided at the meeting are as follows:

- The PM LOS "A" for 2030 No-Build MD 32 Eastbound Ramps Roundabout looked suspicious and should be revisited.
- Pay close attention to the MD 32 roundabouts; verifying that traffic does not back up onto the highway.
- Determine if the 2006 Crash Data is available from OOTS and evaluate.
- Incorporate data associated with new signal @ MD 198/MD City Plaza in traffic studies.

The Crash Data History from January 31, 2003 – December 31, 2005 shows that all crash types in the study area fall into the acceptable limits for similar roadways. 157 crashes were reported within crash analysis limits and the majority of the reported crashes occurred at the western end of the study area. Mr. Raja Veeramachaneni requested data pertaining to bicycle and pedestrian crashes within study limits.

VII. Conceptual Alternatives

Ms. Jennifer Ray presented the conceptual alternatives. Potential alternatives include a four-lane divided highway typical section along the existing alignment, as well as alignment shifts both north and south of the present alignment for all or part of MD 198. There are possible impacts to the MD 198/MD 32 interchange, the MD 198/MD295 interchange and also the MD 295 roadway.

Recommendations/comments from the team included:

- Raising the roadway profile over Little Patuxent River
- Incorporate access controls and access management techniques along the corridor
- Need to consider potential impacts to the MD 198/MD 295 Interchange ramps. Traffic on the ramps needs to be studied for operational purposes
- Include the Russett Green East signal into the project limits. There are operational issues at this signal associated with the MD 198/MD 295 interchange that will need to be addressed
- Water main lines and sewer lines may hinder new alignments

- The corridor has subsurface soil concerns. (hydrology has not been completed)
- All alignments will consider a four-lane divided highway
- It was also noted that the current MD 198/MD 32 interchange was a compromise design. The location of this interchange may need to be revisited.
- The MD 32 Interchange leads to the Fort Meade entrance. The Fort's traffic management/queuing may be an issue that will need to be considered in developing future alignments.

VIII. Public Involvement

Ms. Holmes then discussed public involvement strategies and activities in the corridor. A meeting was held with the West County Federation Community on January 16, 2007. A Project Initiation Ad will run on March 28 and March 29 and will include SAFETEA-LU language. A coordination plan and public outreach plan will be developed in consultation with Mr. Joe Harrison. No Focus Group is planned rather the team is planning to hold regular meetings with the West County Federation and use this as an opportunity for community feedback. Mr. Harrison also asked the team to consider holding a public initiation meeting this fall where the team would show conceptual alternatives.

The residential stakeholders in the immediate study area are located in Welch's Trailer Park. The group then took a few minutes to identify additional stakeholders and made the following recommendations regarding who should be contacted:

- Maryland City
- Welch's Trailer Park
- Representatives of the six businesses along the corridor
- The Greater Odenton Improvement Association (it was noted that they may already be a part of the West County Federation)

IX. Schedule

The project schedule is as follows:

• Purpose & Need Concurrence	Spring 2007
• Alternatives Public Workshop	Spring 2008
• Alternatives Retained for Detailed Study	Summer 2008
• Location/Design Public Hearing	Fall 2009
• Location/Design Approval	Winter 2011

A determination will be made on whether the project's environmental documentation will follow the EA or Environmental Impact Statement (EIS) track, with the schedule dates/milestones, etc., being revised accordingly. Mr. Joe Kresslein will be working with Ms. Holmes, and Ms. Anne Elrays to determine the course of action as soon as possible. It was noted that the initial agency Field Review is going to be held this Spring.

X. Partnering Rating Form

A Partnering Rating Form was distributed to the group, and Ms. Holmes outlined the partnering process for the project and asked that the team fill out the form. This will help the team establish the process for maintaining effective communications within the group throughout the project.

XI. Action Items

During the course of the meeting several Action Items were developed. The following list represents those items as well as the individuals who are responsible for their completion:

- Determine whether the MD 295/MD198 interchange ramps are included as part of the historic property owned by NPS. **(STEVE SWARR)**
- Verification of the Wetlands of Special State Concern boundaries. **(STEVE SWARR)**
- Maintain close attention to the zoning changes proposed along the MD 198 corridor. **(VAUGHN LEWIS & GEORGE CARDWELL)**
- Verification of EJ properties along the MD 198 corridor, particularly Welch's Trailer Park **(STEVE SWARR)**
- Ask the Army to be a cooperating agency **(STEVE SWARR/ANNE ELRAYS – through FHWA)**
- Obtain bicycle & pedestrian crash data along corridor **(DEREK GUNN)**
- Revisit the PM LOS "A" for 2030 No-Build MD 32 Eastbound Ramps Roundabout **(DEREK GUNN)**
- Verify that the MD 32 roundabout traffic does not back up onto the highway **(DEREK GUNN)**
- Determine if the 2006 Crash Data is available from OOTS and evaluate **(DEREK GUNN)**
- Incorporate data associated with the new signal @ MD 198/Maryland City Plaza into the traffic studies **(DEREK GUNN)**
- Consider the team recommendations when developing the alternative alignments **(JMT)**
- Contact Maryland City, Welch's Trailer Park, businesses along the corridor, and the Greater Odenton Improvement Association **(KAMEEL HOLMES)**
- Create a Coordination Plan and Public Outreach Plan **(KAMEEL HOLMES/ANNE ELRAYS/JOE HARRISON)**
- Create EIS document schedule and an EA/FONSI document schedule **(KAMEEL HOLMES/ANNE ELRAYS)**
- Hold an agency Field Review between the third week of May and the third week in June 2007 **(TEAM)**
- Consider holding an informational meeting in the Fall of 2007 **(TEAM)**

XII. Adjournment

Ms. Holmes thanked everyone for attending and closed the meeting.

I concur that the above statements accurately represent the direction and decisions made for the project during the March 28, 2007 Scoping Meeting.

Concurrence:

4/16/07

Raja Veeramachaneni
Director
Office of Planning and
Preliminary Engineering

Date

Attachments (Meeting Handouts for CC's)

cc: Attendees (copy of Draft Purpose and Need)
Ms. Susan Bauer, District Right-of-Way Chief, District 5
Mr. Marty Cohn, Assistant District Engineer, District 5
Mr. Geoffrey Hall, Pavement and Geotechnical Division, Office of Materials Technology, SHA
Mr. Woody Hood, Division Chief, Traffic Engineering and Design Division, Office of Traffic and Safety, SHA
Mr. Moreshwar Kulkarni, Project Engineer, Office of Highway Development, SHA
Mr. Donald Sparklin, Deputy Division Chief, Project Planning Division, SHA
Mr. Eric Tabacek, Division Chief, Traffic Development and Safety Division, Office of Traffic and Safety, SHA
Mr. Richard Zeller, Area Engineer, Engineering Access Permits Division, SHA

*** CC's also get a copy of the Draft Purpose and Need**

Maryland Department of Transportation
State Highway Administration
Interagency Review Meeting
Meeting Summary
May 21, 2008

GENERAL

John Wiser (Greenhorne & O'Mara) opened the meeting and introductions were made.

There were no agency requests for project presentations.

STATUS OF AGENCY CONCURRENCE/COMMENTS AND CALENDAR

There were no outstanding agency concurrences.

Field meetings scheduled:

- I-70 Purpose and Need – May 30
- MD 223 Purpose and Need – June dates being proposed

HANDOUTS

Ms. Sue Rajan distributed the MD 223: Steed Road to MD 5 Draft Purpose and Need.

Ms. Sheila Mahoney (G&O) distributed the I-81 Selected Alternate/Conceptual Mitigation (SA/CM) concurrence package. Mr. Wiser explained this was the final SA/CM package, which incorporated changes in response to NPS comments, and that SHA was seeking agency concurrences.

PROJECT PRESENTATIONS

MD 295: MD 100 to I-95 and Hanover Road
Anne Arundel County, Maryland
Project Number: AA372A11
Presentation Focus: Recommended Alternative
SHA Project Manager: Carmeletta Harris (410-545-8522 or charris@sha.state.md.us)
SHA Environmental Manager: Theresa Christian (410-545-8697 or tchristian@sha.state.md.us)

Presentation Summary

Carmeletta Harris (SHA) introduced the project and team. She stated that a Recommended Alternative has been selected, and was concurred upon by Raja Veeramachaneni, Director of the Office of Planning and Preliminary Engineering (OPPE), in December 2007. The Recommended Alternative will be presented to the Administrator on June 10 for approval. Following, the public will be notified and the SA/CM will be prepared.

Brett Ripkin (Jacobs) then presented the alternatives that were presented at the Public Hearing in September. The alternatives included:

- MD 295 widening will be common to all alternatives – inside widening from 2 lanes to 3 lanes throughout the corridor.
- Hanover Road Interchange Options
    - Alternative 3 – Diamond interchange, Hanover Road remains on current alignment
    - Alternative 3a – Diamond interchange, Hanover Road shifted to the south to minimize environmental impacts
    - Alternative 4 – Single point urban interchange (SPUI) on current Hanover Road Alignment
    - Alternative – 4a – SPUI interchange, Hanover Road shifted to the south to minimize environmental impacts
    - Alternative 7 – Half diamond and loop interchange, Hanover Road shifted to the south to minimize environmental impacts
    - Alternative 8 – Divergent diamond interchange, Hanover Road shifted to the south to minimize environmental impacts

Mr. Ripkin explained that when determining the Recommended Alternative, several factors were taken into consideration. Alternatives 3 and 4 did not shift the Hanover Road alignment to the south, and would result in a higher number of residential displacements and environmental impacts. As a result, these alternatives were eliminated. Alternatives 4a and 8 were also eliminated due to driver expectation concerns. Because the interchange is in close proximity to the Baltimore Washington International airport and several rental car facilities, a high number of drivers would be unfamiliar with the area and also unfamiliar with the SPUI and divergent diamond interchanges.

After eliminating all but Alternatives 3 and 7, it was determined that the half diamond and loop interchange would provide better traffic movement, and Alternative 7 was selected as the Recommended Alternative.

To date, Alternative 7 has been approved by Anne Arundel and Howard Counties, as well as Mr. Veeramachaneni.

Theresa Christian (SHA) provided an environmental overview of the Recommended Alternative, which was summarized on a handout table. Impacts associated with Alternative 7 would include:

- 3 residential displacements
- 4.12 acres of wetland impacts
- 14,436 linear feet of waterway impacts
- 34.47 acres of woodlands
- 2.90 acres of impacts to Patapsco Valley Park
- 0.15 acres of impacts to BWI trail

Ms. Christian stated that the mitigation site field review took place on March 12, and the PA/CM package will be handed out in July and presented in August.
A meeting between SHA and DNR is scheduled in June. Because the area impacted in Patapsco Valley Park is not used for recreation, SHA plans to request a finding of *de minimus* from FHWA following the DNR meeting. Ms. Christian also noted that the impacts to the park have already been presented to public. Lastly, Anne Arundel County has approved the temporary construction impacts to BWI trail. The trail may be relocated 40 feet to the north during construction.

Ms. Harris noted that public involvement conducted throughout the planning process included regular meetings with stakeholder groups. She also confirmed that a public newsletter will be developed after a Preferred Alternative is selected.

Discussion
Steve Elinsky (USACE) asked what type of structure would cross Deep Run. Mr. Ripkin responded that it would remain a bridge structure, which would likely be widened.

Prakash Dave (SHA) asked who currently maintains the bridge over Deep Run. Mr. Ripkin replied that Anne Arundel County currently maintains it, and Ms. Harris added that a decision on who will maintain the bridge after improvements will be made by upper management and coordination with the County.

Mr. Elinsky also asked if utilities would be relocated, and have impacts due to utility relocation been considered. Mr. Ripkin replied that there likely would be some utility relocation, and that he would follow up with Mr. Elinsky.

Steve Hurt (MDE) stated that a Jurisdictional Determination (JD) agency field review will be required upon selection of the Preferred Alternative. Joe Kresslein (SHA) confirmed that a meeting will take place.

Action Item
SHA will follow up with Mr. Elinsky regarding potential impacts due to utilities relocation.

MD 4: Thomas Johnson Bridge
Calvert and St. Mary's Counties, Maryland
Project Number: SM351A11
Presentation Focus: Alternatives Workshop
SHA Project Manager: Mike Perrotta (410-545-8511 or mperrotta@sha.state.md.us)
SHA Environmental Manager: Alexis Zimmerer (410-545-8471 or azimmerer@sha.state.md.us)

Presentation Summary

Ms. Felicia Alexander (SHA) introduced the project and the purpose of the presentation, which was to review the alternatives which will be presented at the June Alternatives Public Workshops. Ms. Alexander restated the Purpose and Need, which is to improve existing capacity and operations, improve vehicular and pedestrian safety, and to support existing and planned development in the area.

MD 4 is currently a four lane roadway through Calvert County, and narrows to two lanes at the junction with MD 2. It continues as a two-lane facility over the Thomas Johnson Memorial Bridge into St. Mary's County and to the MD 235 intersection. It is classified by SHA as a Rural Arterial road.

Ms. Alexander then reviewed the mainline alternatives and the MD 4/MD 235 alternatives that will be presented to the public in June. The Mainline Alternatives include the following:

- No-Build
- Alternative 2 Transportation System Management/Travel Demand Management – would include low-cost improvements such as traffic signal and intersection improvements and minor roadway widening. This alternative also includes improvements such as enhanced transit service, telecommuting and car-pooling
- Alternative 3 Parallel Structure – would include converting the existing structure to a one-way 2-lane bridge. The parallel structure would include a one-way, 2-lane bridge with 10 and 2-foot shoulders and a 10 foot shared use path.
- Alternative 4 Replacement Structure – would be a new 4-lane bridge (2 lanes in each direction) with 10-foot shoulders and a 10-foot shared use path. The height of the bridge has not yet been determined. Alternative 4 includes two alignment options:
    - Town Point Option – the replacement structure would be shifted slightly to the north of the existing structure.
    - Myrtle Point Option – MD 4 would follow an alignment through the Naval Recreation Center, and would cross the Patuxent River just south of Myrtle Point Park. (It was noted that this option was designed at the request of residents, particularly those who live in Town Point and would be the most effected by an additional or replacement span in their community.)

Eric Harp (JMT) presented the four alternatives proposed for the MD 4/MD 235 intersection, which include:

- Continuous flow intersection
- 1-Directional flyover (It was noted that this is the preferred option of many residents, but that it would not address afternoon peak traffic conditions.
- Partial cloverleaf (Mr. Harp noted that there is proposed development in the southwest quadrant of the intersection, but it is not clear what will be built there.)
- SPUI – this option will decrease the footprint of the interchange.

Alexis Zimmerer (SHA) reviewed the environmental conditions taken into consideration while developing alternatives, and summarized the range of impacts for each alternative (an impact table was included in the presentation handout). Environmental features in the study area include a free Calvert County operated boat ramp within the SHA right of way, residences, potential terrestrial and underwater archeology, a potential historic district at Solomon's Island, tidal and forested wetlands, Chesapeake Critical Area, and the potential for breeding peregrine falcons (listed as In Need of Conservation in MD) under the bridge. Ms. Zimmerer also stated that the boat ramp on SHA right of way was leased to DNR and subleased to Calvert County. Impacts to the boat ramp are unknown at this time, but would potentially be mitigated.

The Alternatives Public Workshops will be held on June 16 in Calvert County, and June 17 in St. Mary's County. The Location/Design Public Hearing is scheduled for Fall 2009, and Location/Design Approval in Winter 2010/2011.

Discussion

John Nichols (NMFS) asked if SHA had received the guidance package regarding essential fish habitat surveys. Ms. Zimmerer acknowledged receipt of the package and stated that she would follow up with Mr. Nichols following the meeting.

Mr. Nichols also noted that due to the known oyster bars in the Patuxent River, the NMFS would be on alert with any of the new structure alternatives.

Dan Johnson (FHWA) asked the team to check on the Naval Recreational Center as a Section 4(f) resource. Ms. Zimmerer stated that the facility is not open to the public; therefore SHA does not believe it is a 4(f) resource. Mr. Johnson asked that SHA send FHWA a statement to that effect.

Mr. Johnson also recommended that a simulation of the interchanges be available at the public meetings, as some of the less familiar configurations may be confusing to people. Mr. Harp stated that JMT is developing a simulation for use at the workshops.

Mr. Nichols asked what would happen to the existing bridge if the Myrtle Point option is selected, and Mr. Harp replied that the existing structure would likely be demolished. Mr. Nichols stated that this would be a concern of the NMFS with regards to habitat, as would any pile driving associated with a new or parallel structure.

Action Items

Ms. Zimmerer will follow up with NMFS regarding the essential fish habitat survey.

SHA will look into the Naval Recreational Center as a Section 4(f) resource, and will provide FHWA a statement of the findings.

MD 198: West of MD 295 to MD 32
Anne Arundel County, Maryland
Project Number: AA510M11
Presentation Focus: Alternatives Workshop
SHA Project Manager: Alvaro Sifuentes (410-837-5840 or alvaro.sifuentes@jacobs.com)
SHA Environmental Manager: Elizabeth Habic (410-545-8697 or ehabic@sha.state.md.us)

Presentation Summary
Ms. Jennifer Ray (JMT) introduced the project and the purpose of the presentation, which was to provide a project update and to introduce the alternatives to the agencies prior to the June 24th Alternatives Public Workshop.

The purpose and need of the project is to improve existing capacity and traffic operations, enhance access to Fort Meade, increase vehicular, bicycle and pedestrian safety, and to support existing and planned development in the area.

The project area is approximately 3.5 miles long, located midway between Baltimore City and Washington, DC in northwestern Anne Arundel County.

Current MD 198 in the study area is a two lane open section with ten-foot shoulders and no access control. There is a partial interchange at MD 295 at the western limit, and a diamond interchange with roundabouts at MD 32 at the eastern limit. The bridge over the Baltimore Washington Parkway is owned and maintained by the National Park Service (NPS).

Ms. Ray then played a video of the drive from the western to eastern study area limits.

The project is consistent with the Anne Arundel County General Development Plans and the local Small Area Plans, and is located entirely within a Priority Funding Area (PFA). Parks include the Baltimore Washington Parkway (NPS) and baseball field parking near the Patuxent Wildlife Research Center. Although it did not show up as such on the 2000 census data, the Welch's Trailer Park will be treated as an environmental justice community. There are wetlands, waters of the US and forested areas within the project limits. There are known occurrences of the state threatened glassy darter in the Little Patuxent River, as well as anadromous fish species (white perch and herring).

There is also a fish ladder at the Patuxent River crossing, and the bridge is also tied into a dam. The bridge will need to be rebuilt under any action alternatives, and so a hydrology and hydraulics study will take place and be presented following the upcoming public workshop.

Ms. Ray presented the following main line alternatives, which will be presented to the public at the workshop:

- Alternative 1: No Build
- Alternative 2: Transportation Systems Management (TSM)
- Alternative 3: Divided Roadway with Off-Road Shared-Use Facility
- Alternative 4: Divided Roadway with Off-Road Shared-Use Facility and a Sidewalk

In addition to the mainline alternatives, there are several Options proposed for the interchange with MD 32 at Fort Meade:

- Option A: Flyover Ramp – this improves access to Patuxent Wildlife Research Center and improves parking at the ball fields. It would also raise the bridge out of the floodplain, and take into consideration Fort Meade security requirements, i.e., keeping truck traffic separate from other vehicles at the entrance.
- Option B: Loop Ramp
- Option C: Diamond Interchange at Existing Bridge – this option would remove the roundabouts. Would require a triple left turn lane, and the bridge would
- Option D: Two Bridges – one bridge would travel to MD 32 and one to Fort Meade
- Option E: Diamond Interchange with New Bridge – would travel straight into Fort Meade, but would also provide a circuitous queue (which is consistent with current security measures) after the Fort Meade entrance.

Discussion

Mr. Elinsky expressed concerns that SHA recently built the bridge and roundabouts at MD 198/MD 32 interchange, and the USACE authorized impacts to wetlands as part of that project. He cited examples where roundabouts are failing at other locations, and discouraged their use. He stated that SHA would have to provide good justification to support changing the new improvements for the USACE to authorize additional wetland impacts as part of this project. He recommended that SHA hold off on going to the public with alternatives. He also asked what has changed since the planning of the MD 32 interchange.

Mr. Kresslein said that as a result of recent Base Realignment and Closure (BRAC) activities, Fort Meade is now gaining employees. The traffic projections made during the initial MD 198/MD 32 planning study did not include increases due to BRAC because at the time SHA was not aware that BRAC would occur at Fort Meade.

Ms. Alexander said that while she understands Mr. Elinsky's concern, all reasonable alternatives must be presented to the public.

Mr. Kresslein also stated that at this point, SHA would present all reasonable alternatives and gauge the public reaction. Perhaps the public would be opposed to the alternatives and options. He also stated that SHA was in a reactive mode due to the recent BRAC activities that have occurred since the last planning study.

Mr. Hurt asked how Option A would improve access to Fort Meade. Ms. Ray said that it would improve movement for vehicles traveling to Laurel, which currently are blocked by vehicles entering Fort Meade. She stated that Option B provide the same improvement of movement.

Action Items
There were no action items associated with this presentation.

Mr. John Wiser thanked everyone for their attendance and closed the meeting.

ATTENDANCE

Attendees	Organization	Phone	Email
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Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

October 7, 2009

RE: Project No. AA510M11
MD 198: From Russett Green East to
MD 198/MD 32 Interchange
Anne Arundel County, Maryland

Mr. Tejbir Singh
Director, Department of Public Works
Fort George G. Meade
2212 Chisholm Avenue
Fort George G. Meade, MD 20755

Dear Mr. Singh:

The Maryland State Highway Administration (SHA) is continuing the Project Planning Study for MD 198 from Russett Green East to the MD 198/MD 32 Interchange in Anne Arundel County, Maryland. The purpose of this letter is to request your concurrence that the proposed project would not adversely affect the activities, features or attributes of the Patuxent Research Refuge ball fields due to proposed changes to the Fort George G. Meade-owned gravel parking lot located adjacent to MD 198 and east of Bald Eagle Drive. In addition, we are requesting your concurrence on the associated temporary construction use of the parking lot.

The purpose of the project is to improve existing capacity and traffic operations and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to Fort George G. Meade from MD 32, MD 295 and points south and west of the study area. Improving MD 198 would enhance access to Fort George G. Meade and accommodate future transportation needs in the project area.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration. Alternative 1 (the "no build" alternative) would result in no changes to the existing roadway configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramp from MD 295 southbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road, and include left turn lanes for the combined access points to decrease left-turn conflicts with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. Alternative 4 could be combined with one of four options for the MD 198/MD 32 interchange, Options A, B, C and D.

Each of the Alternative 4 interchange options would require approximately 0.41 acre from the gravel parking lot owned by Fort George G. Meade and utilized for the adjacent ball fields owned by the Patuxent Research Refuge for the expanded eastbound section of MD 198 (Attachment 1). The remaining portion of the parking lot, approximately 0.33 acre, would be paved and striped to create a formal parking area. We estimate that the existing gravel parking lot currently provides a maximum of 47 parking spaces. After the proposed improvements to MD 198 and the parking area, the paved parking lot would provide 28 parking spaces.

The MD 198 project would also require approximately 0.47 acre of temporary impact to the gravel parking area (Fort George G. Meade property) for construction (Attachment 1). The following five elements would apply to the proposed temporary impact, which would exempt it from evaluation under Section 4(f) of the U.S. Department of Transportation Act of 1966:

1) The duration of the use will be temporary and less than the time needed for construction of the project.

2) The activity will not result in a change in ownership of the land or result in the retention of long-term or indefinite interests in this property for transportation purposes.

3) The improvements will not result in any temporary or permanent adverse impacts nor will there be interference with the activities or features which are important to the purpose or function that qualifies the trail for protection under Section 4(f) of the US DOT Act on either a temporary or a permanent basis.

4) This minor work to reconstruct the parking lot will affect a minimal amount of publicly owned recreational land.

5) The land being used will be fully restored, in that the resource will be returned to a condition that is at least as good as that which existed prior to the project.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amendment to the Section 4(f) requirements allows the Federal Highway Administration to determine that certain uses of Section 4(f) land will have a *de minimis* effect on the protected resource after mitigation is considered. When this is the case, and the responsible official(s) with jurisdiction over the resource agrees in writing, compliance with Section 4(f) is greatly simplified. *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the activities, features and attributes" of the Section 4(f) resource. Proposed mitigation for this impact would consist of improvements to the Patuxent Research Refuge-owned parking lot along Bald Eagle Drive (Attachment 2) in order to provide the same number of parking spaces as currently available. The existing parking lot along Bald Eagle Drive currently provides 43 spaces. After the proposed improvements to the lot, 62 spaces would be available. No net change in parking spaces is proposed.

We request your concurrence that the proposed minor impact would not impair the remaining activities, features and attributes of the Patuxent Research Refuge ball fields. We also request your concurrence that the proposed temporary construction use is consistent with the designated use of the parking lot and with the five elements cited above. Based on your agreement, the SHA intends to request a *de minimis* impact finding from the Federal Highway Administration for the use of the Fort George G. Meade property. If you agree with this determination, please indicate your concurrence on the signature line below.

Should you have any questions or need additional information, please feel free to contact the Environmental Manager, Ms. Elizabeth Habic, at 410-545-8563, or via email at ehabic@sha.state.md.us.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

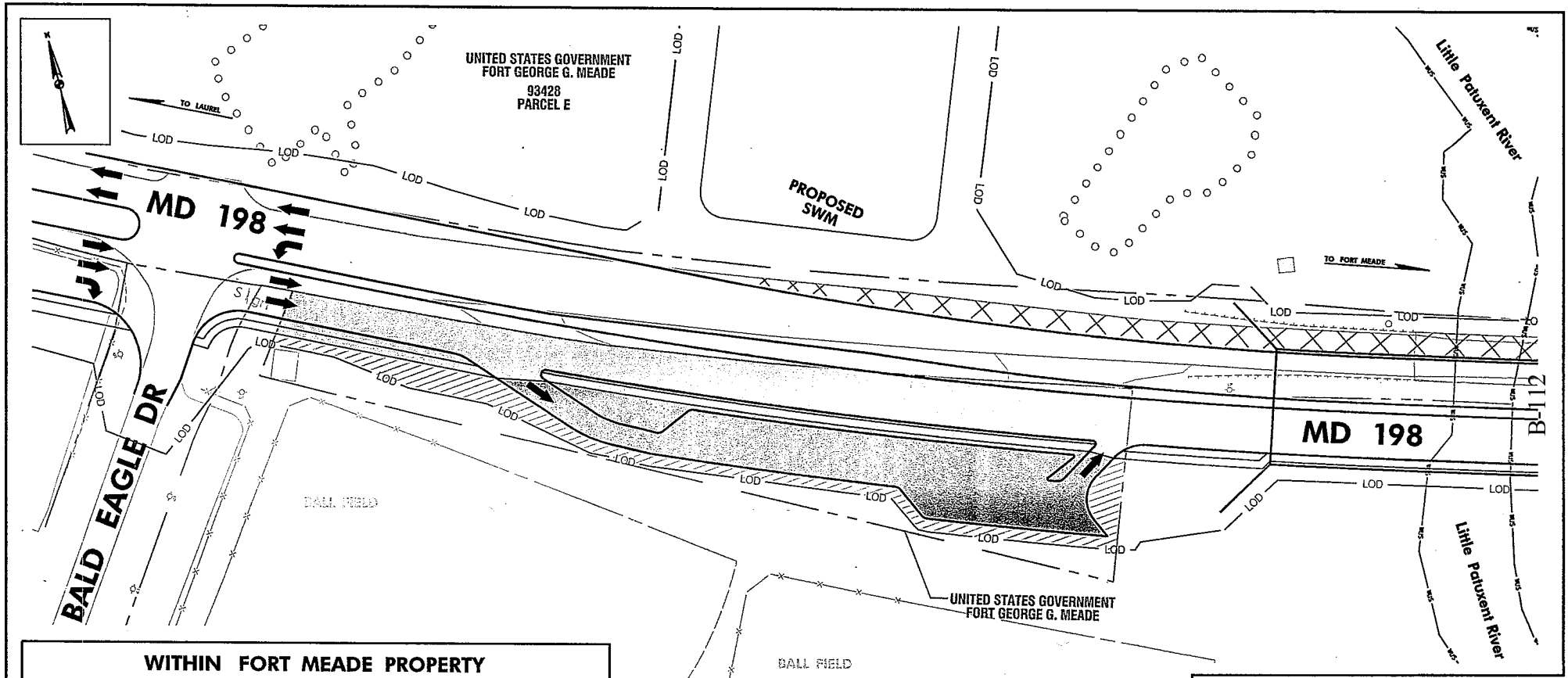
by _____
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

CONCURRENCE:

_____ _____
Fort George G. Meade Date

Enclosure
cc: Ms. Felicia Alexander, SHA-PMD
Ms. Elizabeth Habic, SHA-EPLD (w/attachments)
Ms. Kameel Hall, SHA-PMD (w/attachments)
Mr. Brad Knudsen, USFWS
Mr. Joseph Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Interchange Options A – D



WITHIN FORT MEADE PROPERTY	
	Expansion of Existing Typical Section: (17,968 SF or 0.41 acre)
	Redesigned Parking Lot: (14,164 SF or 0.33 acre)
	Temporary Construction Easement: (6,094 SF or 0.14 acre)

LEGEND

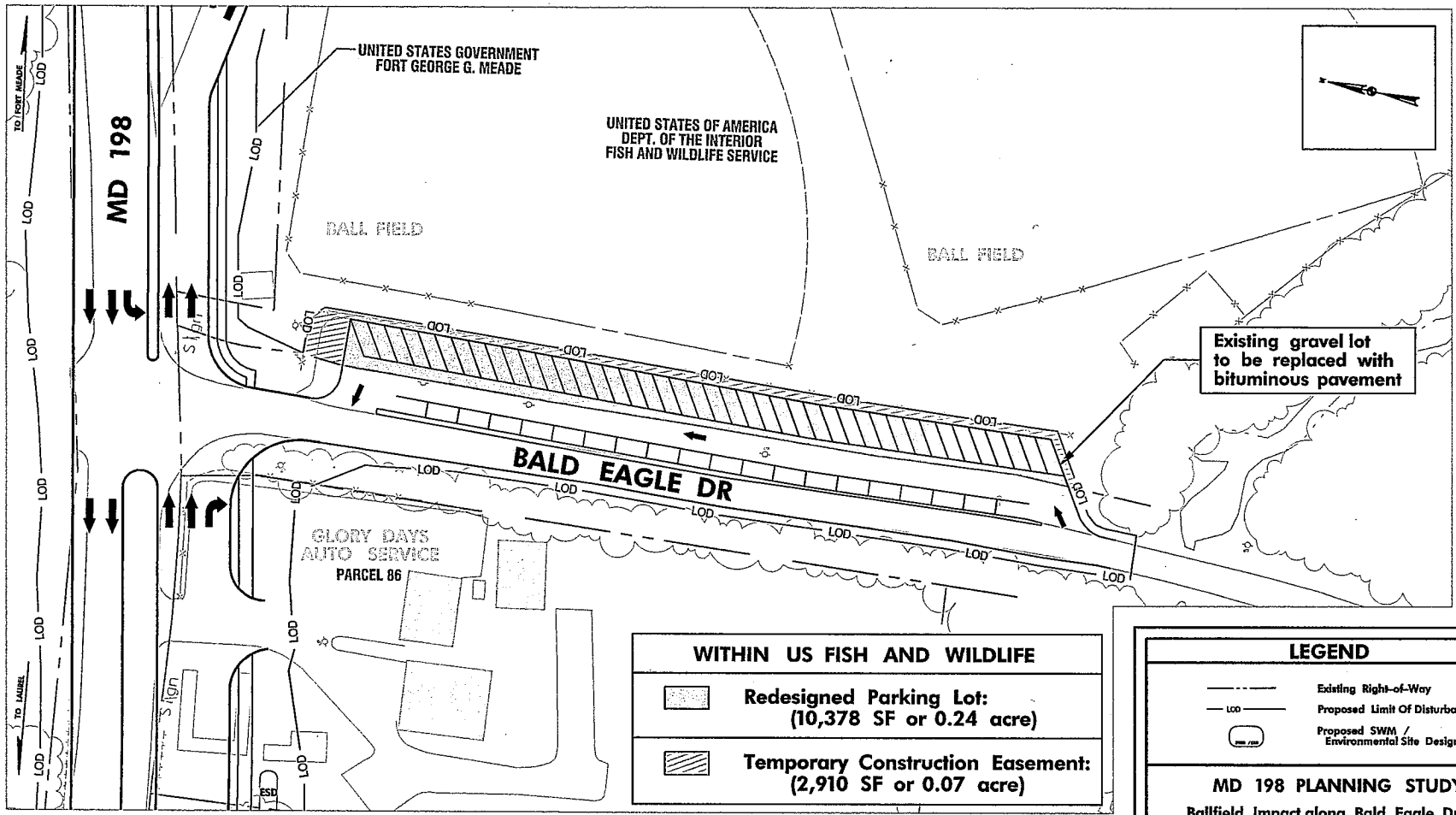
- Existing Right-of-Way
- LOD — Proposed Limit Of Disturbance
- Proposed SWM / Environmental Site Design

MD 198 PLANNING STUDY

Ballfield Impact

SCALE: 1" : 60'	DATE: August 2009	SHEET : 1/1

Interchange Options A - D



LEGEND

- Existing Right-of-Way
- LOD — Proposed Limit Of Disturbance
- Proposed SWM / Environmental Site Design

MD 198 PLANNING STUDY

Ballfield Impact along Bald Eagle Drive

SCALE: 1" : 60'	DATE: September 2009	SHEET : 1/1

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
MARYLAND DEPARTMENT OF TRANSPORTATION

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

August 17, 2009

RE: Project No. AA510M11
MD 198: From Russett Green East
to MD 198/MD 32 Interchange
Anne Arundel County, Maryland

Mr. David Hayes
Regional Transportation Liaison
National Capital Region of the National Park Service
1100 Ohio Drive, SW
Washington D.C. 20242

Dear Mr. Hayes:

The Maryland State Highway Administration (SHA) is continuing the Project Planning Study for MD 198 from Russett Green East to the MD 198/MD 32 Interchange in Anne Arundel County, Maryland. The purpose of this letter is to request your concurrence that the proposed project would not adversely affect the activities, features or attributes of the parkway and to clarify right-of-way requirements for the project as stated in the letter from SHA dated June 30, 2009.

The purpose of the project is to improve existing capacity and traffic operations and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to Fort Meade from the Baltimore-Washington Parkway (MD 295), MD 32, and points south and west of the study area. Improving MD 198 would enhance access to Fort Meade and accommodate future transportation needs in the project area.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration. Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramp from MD 295 southbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease left-turn conflicts with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • *Phone* 410.545.0300 • www.marylandroads.com

be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side.

Alternatives 2 and 4 include improvements within the boundary of the MD 295 historic roadway. Under Alternative 2 (Attachment 1), the MD 295 southbound to MD 198 westbound ramp would be expanded to two lanes with an exclusive right-turn lane. Under Alternative 4 (Attachment 2), the MD 295 southbound to MD 198 westbound ramp would be expanded as with Alternative 2. In addition, the left-turn channelization along westbound MD 198 would be expanded and the MD 198 bridge over MD 295 would be re-striped to include two lanes in each direction with a westbound left-turn lane, an eastbound right-turn lane, a 10-foot westbound shared-use path and a 5-foot eastbound sidewalk. Pavement would be added east and west of the bridge to tie in the sidewalk and shared-use path.

Under Alternative 2, approximately 0.14 acre of additional pavement would be added to the MD 295 southbound to MD 198 westbound ramp. The proposed changes to National Park Service (NPS) property under Alternative 2 would require temporary construction use access by a NPS permit on approximately 1.0 acre for construction. Under Alternative 4, approximately 0.38 acre of additional pavement would be added to the existing parkway exit ramp and bridge. The proposed changes to NPS property under Alternative 4 would require temporary construction use access by a NPS permit on a maximum of 4.68 acres. No right-of-way would be acquired from the NPS under either Alternative 2 or 4. Once a preferred alternative is identified after the public hearing, SHA will initiate coordination with the NPS to determine appropriate mitigation for impacts to the Baltimore-Washington Parkway.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amendment to the Section 4(f) requirements allows the Federal Highway Administration (FHWA) to determine that certain uses of Section 4(f) land will have a *de minimis* effect on the protected resource after mitigation is considered. When this is the case, and the responsible official(s) with jurisdiction over the resource agrees in writing, compliance with Section 4(f) is greatly simplified. *De minimis* impacts on historic or publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the historic property, activities, features and attributes" of the Section 4(f) resource.

We request your concurrence that the proposed minor impacts will not impair the remaining activities, features and attributes of the Baltimore-Washington Parkway. Based on your agreement, the SHA intends to recommend a no adverse effect determination to the Maryland Historical Trust and request a *de minimis* impact finding from the FHWA for the use of the park property.

Should you have any questions or need additional information, please feel free to contact the Environmental Manager, Ms. Elizabeth Habic, at 410-545-8563, or via email at ehabic@sha.state.md.us.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by: _____
for Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

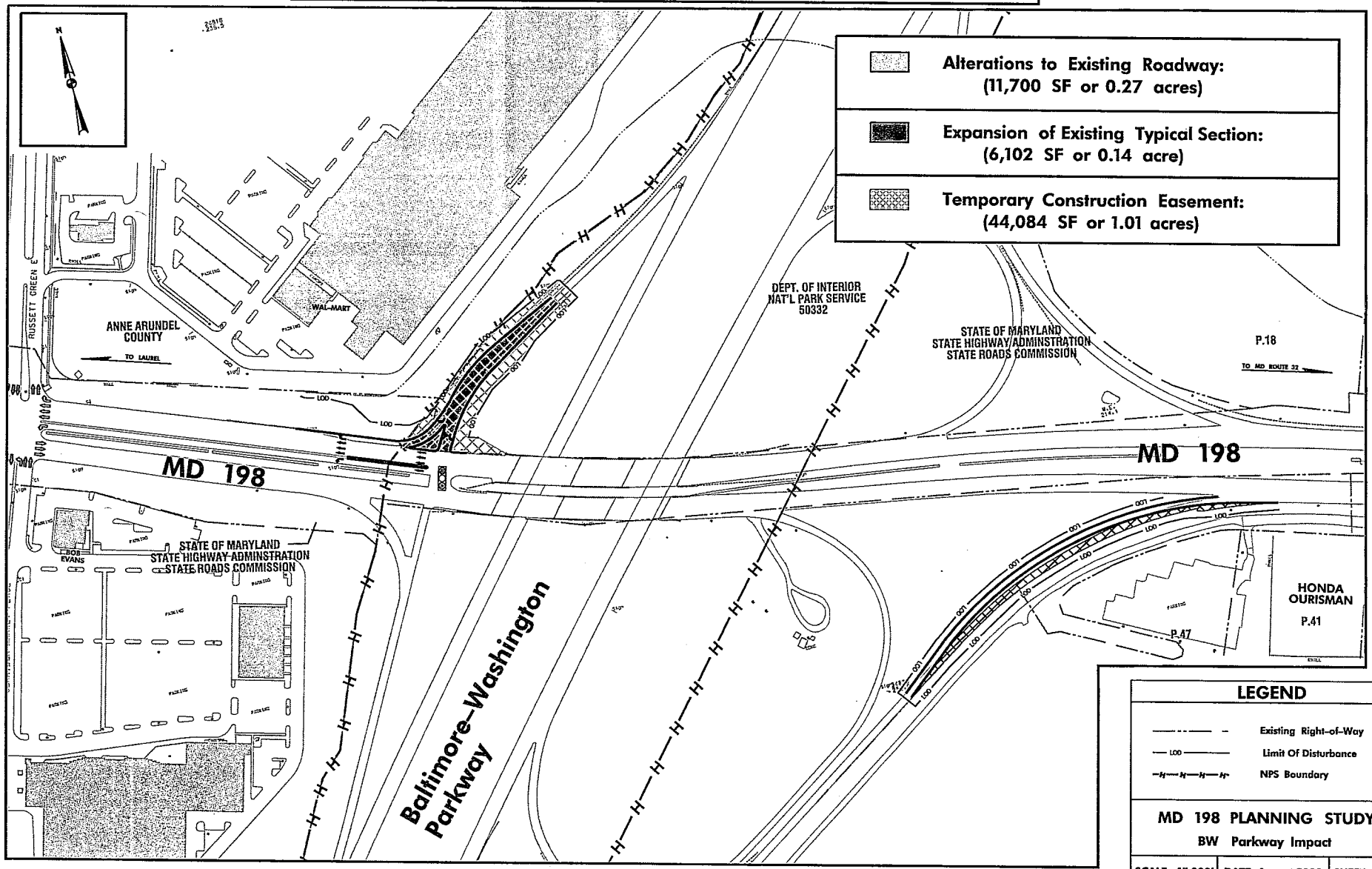
CONCURRENCE:

_____ _____
National Park Service Date

Attachments
cc: Ms. Felicia Alexander, SHA-PMD
Ms. Jennifer Goold, SHA-EPLD (w/Attachments)
Ms. Elizabeth Habic, SHA-EPLD (w/Attachments)
Ms. Kameel Hall, SHA-PMD (w/Attachments)
Mr. Joseph Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Attachment 1

Alternative 2 Mainline: Transportation System Management (TSM)



LEGEND

- Existing Right-of-Way
- LOD — Limit Of Disturbance
- NPS Boundary

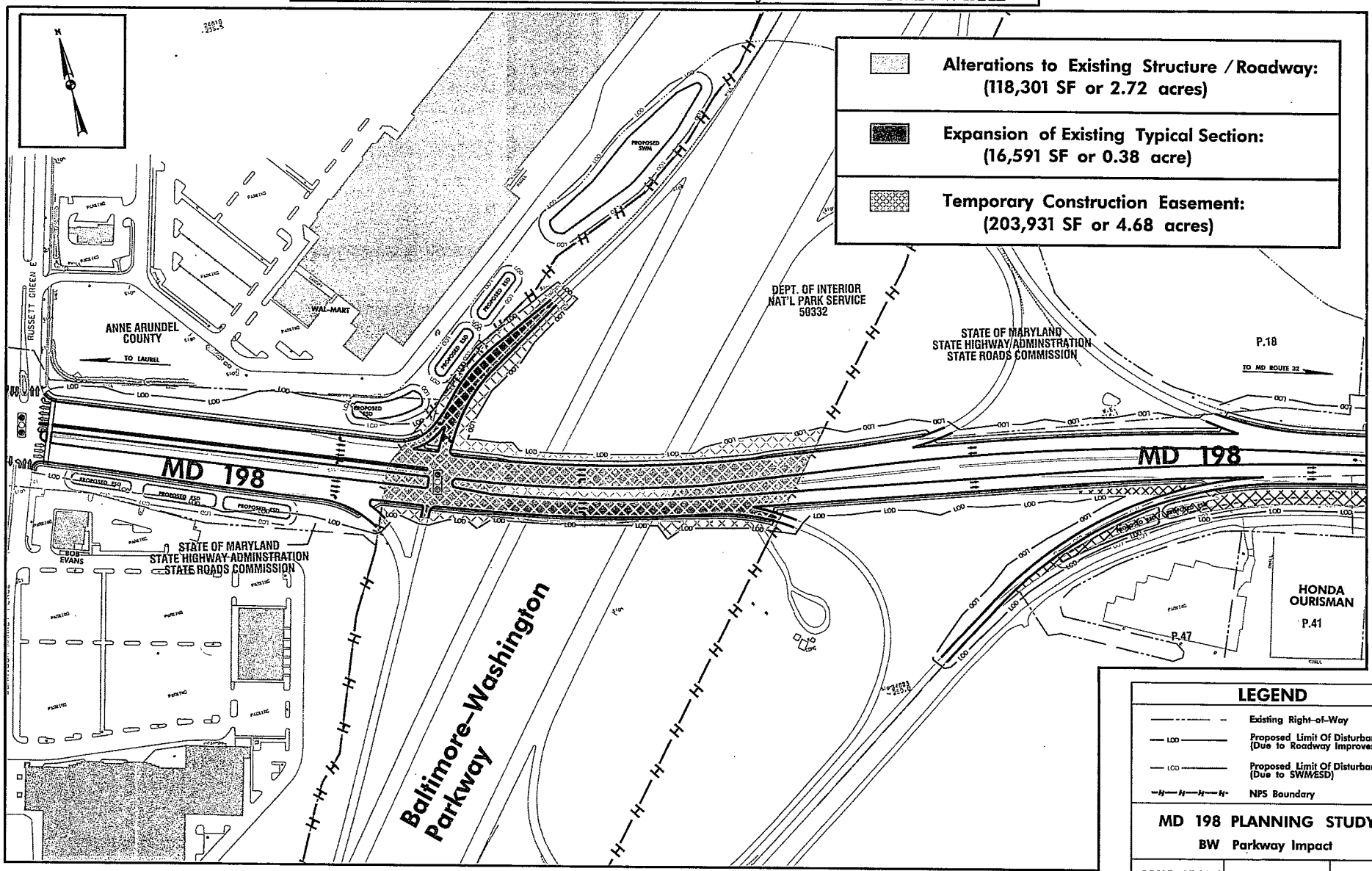
MD 198 PLANNING STUDY

BW Parkway Impact

SCALE: 1":200'	DATE: August 2009	SHEET : 1/1

Attachment 2

Alternative 4 Mainline: Divided Roadway with Off-Road Shared-Use Facility and a Sidewalk



LEGEND

- Existing Right-of-Way
- LOD — Proposed Limit Of Disturbance (Due to Roadway Improvement)
- LOD — Proposed Limit Of Disturbance (Due to SWM/ESD)
- NPS Boundary

MD 198 PLANNING STUDY

BW Parkway Impact

SCALE: 1":200'	DATE: June 2009	SHEET : 1/1

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

September 17, 2009

RE: Project No. AA510M11
MD 198: From Russett Green East to
MD 198/MD 32 Interchange
Anne Arundel County, Maryland

Mr. Brad Knudsen
US Fish & Wildlife Service
Patuxent Research Refuge
12100 Beech Forest Road, Suite 138
Laurel, MD 20708

Dear Mr. Knudsen:

The Maryland State Highway Administration (SHA) is continuing the Project Planning Study for MD 198 from Russett Green East to the MD 198/MD 32 Interchange in Anne Arundel County, Maryland. The purpose of this letter is to explain the impact to parking at the Patuxent Research Refuge ball fields and seek concurrence that the proposed temporary impact to US Fish and Wildlife property is consistent with the designated use of the parking lot.

The purpose of the project is to improve existing capacity and traffic operations and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration. Alternative 1 (the "no build" alternative) would result in no changes to the existing roadway configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramp from MD 295 southbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease left-turn conflicts with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. Alternative 4 could be combined with one of four options for the MD 198/MD 32 interchange, Options A, B, C and D.

My telephone number/toll-free number is_____
Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone: 410-545-0300 • www.marylandroads.com

Each of the Alternative 4 interchange options would require approximately 0.41 acre from the Fort George G. Meade-owned gravel parking lot adjacent to MD 198 for the expanded eastbound section of MD 198 (Attachment 1). The remaining portion of the parking lot, approximately 0.33 acre, would be paved and striped to create a formal parking area. We estimate that the existing gravel parking lot currently provides a maximum of 47 parking spaces. After the proposed improvements to MD 198 and the parking area, the paved parking lot would provide 28 parking spaces.

Proposed mitigation for this impact to the gravel parking lot would consist of improvements to the Patuxent Research Refuge-owned parking lot along Bald Eagle Drive (Attachment 2) in order to provide the same number of parking spaces as currently available. This parking lot along Bald Eagle Drive currently provides 43 spaces. After the proposed improvements to the lot, 62 spaces would be available.

The work would require approximately 0.31 acre of temporary impact to the Patuxent Research Refuge property for construction. The following five elements would apply to the proposed temporary impact, which would exempt it from evaluation under Section 4(f) of the U.S. Department of Transportation Act of 1966:

1) The duration of the use will be temporary and less than the time needed for construction of the project.
2) The activity will not result in a change in ownership of the land or result in the retention of long-term or indefinite interests in this property for transportation purposes.
3) The improvements will not result in any temporary or permanent adverse impacts nor will there be interference with the activities or features which are important to the purpose or function that qualifies the trail for protection under Section 4(f) of the US DOT Act on either a temporary or a permanent basis.
4) This minor work to reconstruct the parking lot will affect a minimal amount of publicly owned recreational land.
5) The land being used will be fully restored, in that the resource will be returned to a condition that is at least as good as that which existed prior to the project.

We request your concurrence that the proposed temporary impact is consistent with the designated use of the parking lot and with the five elements cited above. If you agree with this determination, please indicate your concurrence on the signature line below.

Should you have any questions or need additional information, please feel free to contact the Environmental Manager, Ms. Elizabeth Habic, at 410-545-8563, or via email at ehabic@sha.state.md.us.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

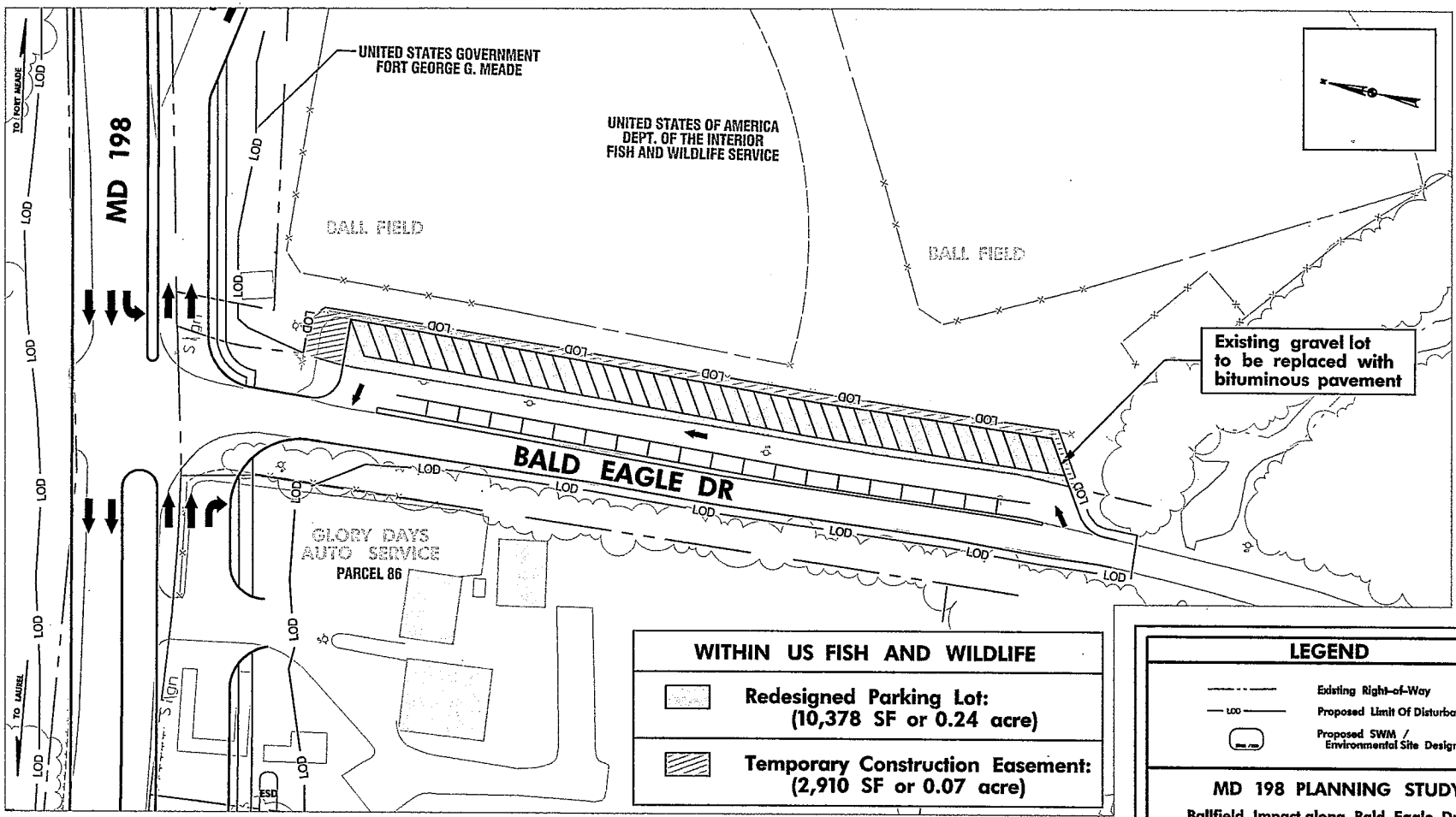
by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

CONCURRENCE:

_____ _____
Patuxent Research Refuge Date

Enclosure
cc: Ms. Felicia Alexander, SHA-PMD
Ms. Elizabeth Habic, SHA-EPLD (w/attachments)
Ms. Kameel Hall, SHA-PMD (w/attachments)
Mr. Joseph Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Interchange Options A - D



WITHIN US FISH AND WILDLIFE	
	Redesigned Parking Lot: (10,378 SF or 0.24 acre)
	Temporary Construction Easement: (2,910 SF or 0.07 acre)

LEGEND

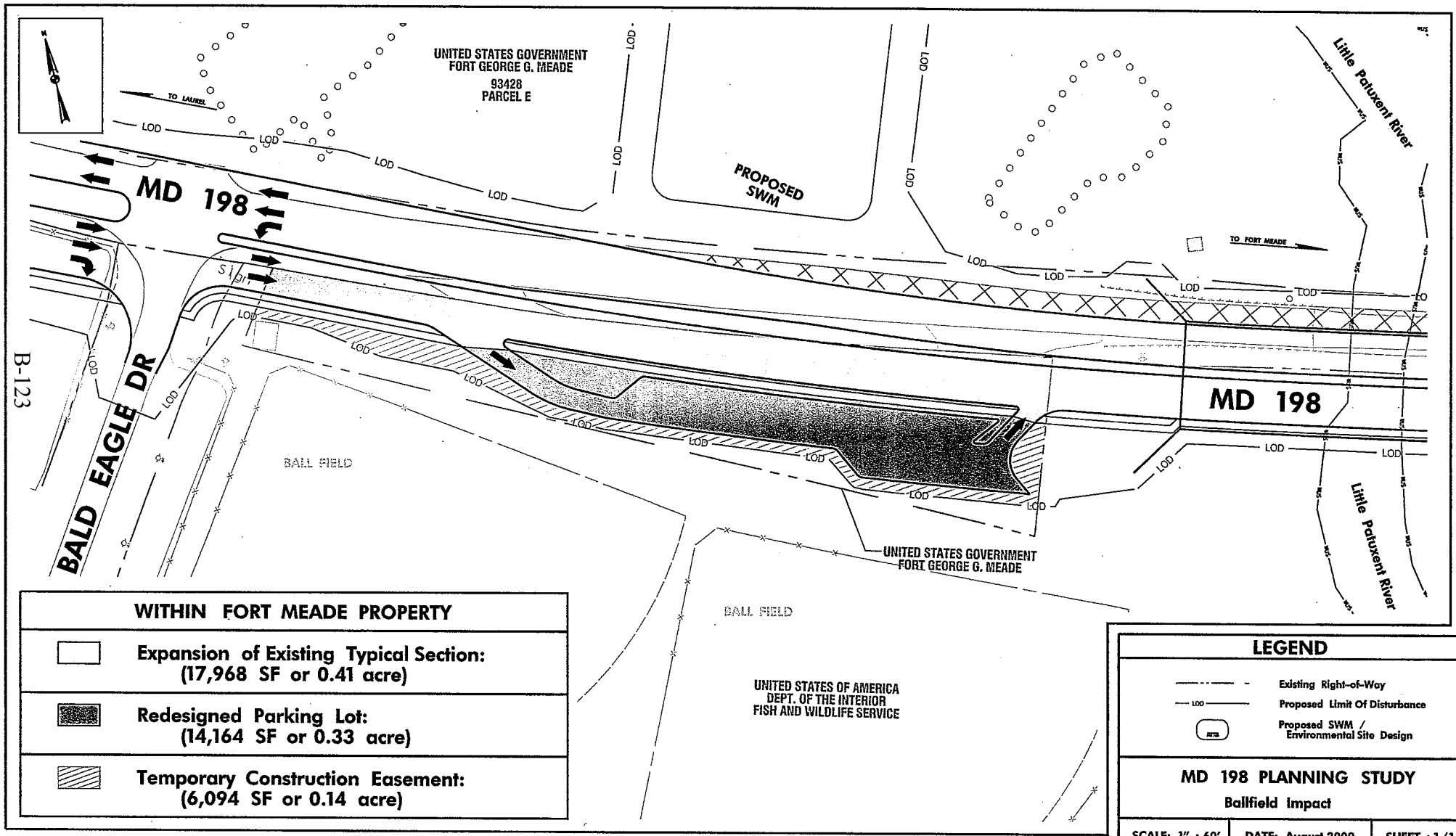
- Existing Right-of-Way
- LOD — Proposed Limit Of Disturbance
- Proposed SWM / Environmental Site Design

MD 198 PLANNING STUDY

Ballfield Impact along Bald Eagle Drive

SCALE: 1" : 60'	DATE: September 2009	SHEET : 1/1

Interchange Options A - D



WITHIN FORT MEADE PROPERTY	
	Expansion of Existing Typical Section: (17,968 SF or 0.41 acre)
	Redesigned Parking Lot: (14,164 SF or 0.33 acre)
	Temporary Construction Easement: (6,094 SF or 0.14 acre)

LEGEND

- Existing Right-of-Way
- LOD — Proposed Limit Of Disturbance
- Proposed SWM / Environmental Site Design

MD 198 PLANNING STUDY

Ballfield Impact

SCALE: 1" : 60'	DATE: August 2009	SHEET : 1/1

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

October 23, 2009

Re: Project No. AA510M11
MD 198 from MD295 to MD 32
Anne Arundel County, MD
USGS *Laurel* 7.5' Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

Introduction and Project Description

This letter serves to inform the Maryland Historical Trust (MHT) of the Maryland State Highway Administration's (SHA) finding that proposed Project No. AA510M11 will have no adverse effect on historic properties. The purpose of the project is to improve the existing capacity and traffic operations, and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to the Fort George G. Meade Military Reservation (Fort Meade) from MD 32, MD 295 and generally points south and west of the study area. Improving MD 198 would enhance access to Fort Meade and accommodate future transportation needs in the project area.

The area around Fort Meade is one of the fastest growing areas of Anne Arundel County. Fort Meade and the National Security Agency (NSA), a tenant of the Fort, combined represent the largest employers in the State of Maryland. Fort Meade's workforce is comprised of more than 39,000 military, civilian and contractor personnel. As a result of the 2005 Base Realignment and Closure (BRAC) process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2010, approximately 5,300 additional new on-base jobs are expected to be relocated to Fort Meade, along with 7,500 new jobs at NSA. As many as 20,000 or more private sector jobs are also anticipated, primarily in the defense and support industries. These jobs would be located both on and in the vicinity of the Fort.

MD 198 provides a continuous connection between the City of Laurel and its suburbs with Fort Meade. The Laurel area has been a traditional community of Fort Meade and this relationship will continue as the Fort and its various tenant organizations increase in population and employment. MD 198 is also the route to convey Odenton area-generated travel demand to the Baltimore Washington Parkway (especially southbound) toward the Capital Beltway and the Washington Metropolitan area.

In addition to an increase in jobs, the area is expected to see substantial increases in population, housing, commercial activity and vehicular traffic as a result of BRAC. This project will address projected operational and safety deficiencies resulting from the expected growth.

The project involves intersection improvements at MD 198 and MD 295 and at MD 198 and MD 32. The project also involves widening MD 198 to a dualized four-lane road through construction of two additional lanes to the south of the existing two-lane roadway. Entrances to properties north and south of the existing roadway will be combined and new access roads will be constructed as part of project scope. There are four Alternatives being considered for this project.

1. **Alternative 1: No-Build**

No major improvements are proposed under the No Build Alternative. Minor short term improvements would occur as part of routine maintenance and safety improvements. This alternative does not address the purpose and need for the project. However, it serves as a baseline for judging the impacts and benefits associated with the other alternatives.

2. **Alternative 2: Transportation Systems Management (TSM)**

This alternative involves the implementation of TSM strategies to optimize the existing transportation system by providing improvements with minimal capital cost. The TSM strategies being considered for this corridor include:

- Improvements to the off-ramps from MD 295 to MD 198 to alleviate confusion and increase merge distance
- Access management – combining several of the driveways and access points along MD 198 to provide for fewer turns off of the main road
- Left turn lanes – including left turn lanes for the combined access points to decrease the left-turn conflict with the through movement

3. Alternative 4: Divided Roadway with Off-Road, Shared-Use Facility and a Sidewalk

This alternative provides for two lanes in both directions (eastbound and westbound) divided by a grassy median that varies throughout the corridor from 20-feet to six-feet. On-road bicycle facilities are provided in both directions adjacent to the outside travel lane. A five-foot grass buffer along the south side curb separates the on-road bicycle lane from the shared-use pedestrian/bicycle path. This path extends from just east of the bridge over MD 295 to the ball-fields located adjacent to Bald Eagle Drive. East of Bald Eagle Drive, this becomes a five-foot sidewalk to the eastern limits of the project. There is also a five-foot grass buffer along the north side of the curb that separates the on-road bicycle lane from the five-foot sidewalk. This sidewalk extends from the western limits of the project area to the businesses located just east of the relocated Old Portland Road.

4. MD 198/MD 32 Interchange Options

i. Option A: Flyover Ramp

This option maintains the existing configuration of the MD 198 / MD 32 interchange. However, a flyover ramp is introduced that allows traffic from northbound MD 32 to access westbound MD 198 directly, therefore completely separating this traffic from the roundabout. All other traffic through the interchange would operate as it does today.

ii. Option B: Loop Ramp Option

This option maintains the existing configuration for the MD 198 / MD 32 interchange for the southern portion (the existing roundabout closest to the Tipton Airport). However, the northern portion (the ramps closest to Fort Meade) is reconfigured. The existing roundabout is removed and replaced with a signalized intersection. All traffic from northbound MD 32 that is destined for Fort Meade would utilize the ramp as they do today. All traffic from northbound MD 32 that is destined for westbound MD 198 would utilize the proposed loop ramp. This configuration separates the traffic from Fort Meade with that traffic destined towards Laurel.

iii. Option C: Diamond Interchange at Existing Bridge

This option reconfigures the existing MD 198 / MD 32 interchange from two roundabouts to two signalized intersections.

iv. Option D: Two Bridge

This option maintains the existing MD 198 / MD 32 interchange configuration with the addition of a second crossing of MD 32 with access into Fort Meade. Vehicles would exit northbound MD 32 as they do in existing conditions, utilizing the ramp to the roundabout and choosing their direction through the roundabout. Vehicles coming from eastbound MD 198 would access Fort Meade with the second crossing of MD 32.

Project plans are included as Attachment 1.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

In determining the Area of Potential Effects (APE) for this project, SHA considered direct and indirect impacts to historic properties. In order to consider the area or areas within which the project may directly or indirectly cause alterations in the character of use of historic properties, the APE has been defined by the worst case Limits of Disturbance (LOD) and extends 250 feet from the outermost edge of the LOD as indicated on the attached SHA quadrangle map for Laurel (Attachment 2). The APE was previously defined as extending approximately 1,000 feet from the roadway and intersections in the Eligibility coordination letter with MHT dated October 16, 2007, because project plans had not been developed. All historic standing structures located in the previous APE are also within in the redefined APE. The archeology survey area is defined as the area of direct construction impact. The archeology survey area will only include sections of the road widening portion of the project, as the APE for the proposed alternates was previously assessed by the SHA in 1999 for the addition of two roundabouts at the intersection of MD 198 and MD 32 (Barse and Scheerer 2000). Owing to the large amount of unexploded ordinance (UXO) and other unknown hazardous waste within the project area, MHT concurred with SHA's request that Phase I archeology not be undertaken due to safety concerns, although thorough historical background research was undertaken. Due to UXO within the APE east of Bald Eagle Drive on MD 198, no property east of Bald Eagle Drive will be included in the archeology survey area for the current project.

Identification Methods and Results

Potentially significant architectural and archeological resources were both researched as part of the historic investigation instigated by the proposed roadway and intersection improvements.

Architecture: SHA Architectural Historian Jennifer Goold consulted the SHA-GIS Cultural Resources Database, MD 198 from MD 295 to MD 32 Compliance Report, Historic Context, and Property Evaluations prepared for SHA by EHT Traceries, Inc. in August 2007, the National Register of Historic Places (NRHP), the Maryland Inventory of Historic Properties (MIHP), and made multiple field visits in April, May, and June 2009.

The APE for this project is comprised of the LOD plus 250 feet to encompass direct and indirect impacts on historic standing structures. The October 16, 2007 historic structures eligibility letter summarized the historical context for the area and provided descriptions of historic resources in the APE. MHT concurred on December 4, 2007 that the only NRHP listed and eligible properties within the APE consist of the Baltimore Washington Parkway (AA-5/PG: 69-26) and the D.C. – Forest Haven District (AA-2364).

MHT also concurred on December 4, 2009 that no NRHP eligible portions of Fort George G. Meade (AA-2095) are located within the APE and that evaluation of the Patuxent Research Refuge is beyond the project scope. As part of that coordination seven properties were recommended not eligible for listing in the NRHP and the MHT concurred with this finding. Three additional Short Forms for Ineligible Properties are attached herein. These forms address buildings in the APE constructed ca. 1960 in order to identify all standing structures within the APE that are at least 45 years of age (Attachment 3).

Improvements to the Baltimore-Washington Parkway will be limited to the slight widening of the egress ramp from southbound Baltimore-Washington Parkway to MD 198 and the construction of sidewalks/ bikeways across the MD 198 Bridge. The expansion of the typical section at the egress ramp will accommodate a free-flowing right turn onto MD 198 and an additional left turn lane onto MD 198. Adding sidewalks/ bikeways to the existing bridge will provide a travel route for pedestrians and bikers across the bridge and along MD 198, which is completely absent.

The construction of the interchange will require approximately .38 acres of right-of-way and approximately 4.68 acres of temporary easement for construction from the NPS property.

This project has been coordinated with the National Park Service (NPS) via letter dated June 25, 2009. Work at this intersection will impact three components of the Parkway: 1) the MD 198 Bridge over 295; 2) MD 198 within the historic boundary; and 3) one off-ramp from MD 295 to MD 198.

1) The bridge is ca. 1950s streamlined expression of the typical stone and concrete Parkway bridges. This type is characterized as an "intermediate design treatment" found on several bridges on the Parkway, described in the NRHP Nomination Form as "a combination of concrete span and recessed support walls that curve out to meet the wingwalls. These . . . are clad with dressed rough-cut stone, but they are smaller and more angular than the previous type of bridges." Alterations to the bridge will occur only on the travel surface over the bridge. Specifically, automobile travel lanes will be restriped and sidewalks will be constructed across the bridge for bike and pedestrian use. The concrete and stone bridge structure that characterizes the contributing feature of the Baltimore-Washington Parkway will not be altered.

2) Sidewalks will be constructed alongside the existing travel lanes on the bridge approaches. The landscape in this area simply consists of a grass margin bordered by slopes covered in vines and trees. The character defining features of the Baltimore-Washington Parkway will not be altered by the addition of sidewalks at this location.

3) The existing off ramp from south bound MD 295 to MD 198 will be slightly widened at the intersection of MD 198. Egress ramps were designed "as a landscaped graduation to the roadway" and to meet the needs of traffic capacity. The profile of the existing off ramp will be replicated in the reconstruction. Roadside features such as signage and guardrail will be retained and reinstalled or replaced in-kind. The landscape in this area simply consists of a grass margin bordered by slopes covered in vines and trees. The landscape character along the off ramp will not be altered. The character defining features of the Baltimore-Washington Parkway will not be adversely impacted by a small increase in the typical road section in this location.

The proposed project will not adversely impact the Baltimore-Washington Parkway.

Project plans at the D.C. Children's Center - Forest Haven District consist of closing the existing entrance and constructing a new shared entrance for the property that will be located east of the existing entrance. The existing and proposed entrances are not located within the historic boundary for the District (see Attachment 4 – Boundary Map). The boundary and the entry's exclusion from that boundary were coordinated with Tim Tamburrino at the MHT via e-mail on June 4, 2009. The proposed project will not impact the D.C Children's Center – Forest Haven District.

Project plans at the intersection of MD 198 and MD 32, which abuts Fort George G. Meade, consist of four alternates for intersection configurations. As coordinated with MHT via the October 16, 2007 letter, no NRHP eligible resources at Fort George G. Meade are located within the APE.

In conclusion, the proposed roadway and intersection improvement project at MD 198 between MD 295 and MD 32 will have no adverse impacts on historic standing structures. No additional architectural investigations are recommended (see attachments including DOE forms and Eligibility and Effects Table [Attachment 5]).

Upon your agreement that the acquisition of .38 acres of right-of-way will not adversely impact the historic property, SHA intends to propose *de minimis* impact finding to the Federal Highway Administration (FHWA) for Section 4(f) use of the Baltimore Washington Parkway. The necessary construction will temporarily impact approximately 203,931 square feet (4.68 acres) of the property. Given that these improvements would occur by temporary occupancy only, the requirements of Section 4(f) would not apply in this instance based on your agreement with the following criteria as the officials with jurisdiction.

- The duration of the impact will be temporary, i.e., less than the time needed for construction of the project;
- There will be no change in the ownership of the land;
- The scope of the work will be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) resource are minimal;
- There are no anticipated permanent adverse physical impacts; and
- The land being used will be fully restored, i.e., the resource will be returned to a condition which is at least as good as that which existed prior to the project.

Archeology: SHA Archeologist Jennifer Babiarz assessed the potential of the survey area through consultation of archeology survey area through consultation of the SHA-GIS Cultural Resources Database, aerial photographs, site file data, prior studies, county soil survey, and historic maps. A site visit was made on April 17, 2009.

Portions of the project area have been disturbed by commercial and military development. The area is drained by tributaries to the Little Patuxent River which itself drains into the Patuxent River. The terrain is comprised of wetlands surrounding the Little Patuxent River overlooked by higher terraces made up of a conglomerate of well drained soils. These terrain and soil characteristics would have made the area attractive for prehistoric occupation.

The APE was part of Richard Snowden's property called Birmingham, patented in 1685 and containing farms, mills, the Patuxent Forge and the Patuxent Ironworks (Barse and Scheerer 2000). All of these buildings were located far south of the APE. The Annapolis and Elkridge Steam Railroad (later the Annapolis, Washington, and Baltimore Railroad) established a line in the project area running to the west of and adjacent to MD 32 by the mid nineteenth century. The rail line was abandoned by the late 1920's and the railroad company dissolved by the mid-1930s. Historic maps (Martinet's 1860 Map of Anne Arundel County; Hopkins 1878 Atlas of Anne Arundel County) show a P.O. Box and Store north of the nearby town of Patuxent Forge on the east end of the APE, where MD 198 and MD 32 converge in a roundabout. The 1892 USGS 15' quadrangle shows ancestral MD 198, and several structures are depicted within the APE on the 1907 and 1926 USGS maps. Fort Meade was established in 1917 and continued to grow through World War II. The historic portion of Fort Meade that now makes up the North Tract of the Patuxent Wildlife Refuge, Tipton Airport, and the ball fields between the two (USGS 1949) were used as munitions and tank training grounds from World War I through the Vietnam War. There are also safety concerns from unexploded ordinance between the ball fields and the west side of the Glory Days Auto Service property; Phase I survey began west of that property.

In 1999, the APE east of the ball fields was included in an assessment by Barse and Scheerer (2000) for the addition of two roundabouts at the intersection of MD 32 and MD 198 at Fort Meade. The APE east of the Little Patuxent River were also part of a survey of MD 32 done by Curry in 1985, as well as Hornum, Saul and Majarov's Phase I survey of Fort Meade in 1995. The ball fields were surveyed by Decicco in 1987 and portions of MD 198 between Bald Eagle Drive and MD 295 were surveyed by Wesler et al. in 1981. A small portion of MD 198 in the vicinity of Welch's Trailor Park was surveyed by Collier et al. in 1990. The portion of the Baltimore-Washington Parkway (MD 295) and the property directly adjacent to it within the APE has been surveyed by Curry in 1978 and Hopkins et al. in 1992. There have been surveys by Conrad (1975) and Epperson (1980) of the APE between Russett Green East and MD 295, and a portion of that area was also surveyed by Rutherford in 1990. The only archeology site recorded within the APE is a historic and prehistoric artifact scatter found during walkover done preliminarily to the Barse and Scheerer study in 2000 (18AN1147).

Although the majority of the widening project will have the greatest effect on the south side of MD 198, the two main roads leading to the Woodlands Job Corps Center and Oak Hill Youth Center (Old Portland Road and Center Avenue) will be connected to form one main entrance to the Centers from MD 198 on its north side. This is a wooded area that overlooks the Little Patuxent River and has a high prehistoric and historic

archeological potential. The south side of MD 198 is highly commercially developed west of MD 295. The greatest potential for prehistoric and historic archeological remains on the south side of MD 198 is between MD 295 and west side of the Glory Days Auto Service property on the corner of MD 198 and Bald Eagle Drive.

Phase I survey was recommended for the above identified high potential areas. Goals of the Phase I survey included the identification of archeological sites within the APE, definition of site size and approximate site boundaries, and potential eligibility for listing in the NRHP. SHA engaged the firm of R. Christopher Goodwin & Associates, Inc. to undertake Phase I archeological investigation for the project. Enclosed please find one copy of the report entitled *Phase I Archeological Survey of Portions of MD 198 Between MD 295 and MD 32, Anne Arundel County, Maryland* for your review and comment (Attachment 6).

Goodwin and Associates archeological survey consisted of a combination of pedestrian survey and a grid of 153 shovel test pits. There were no non-modern artifacts recovered during the project and no significant archeological resources were identified. A mid-twentieth century outbuilding foundation and concrete slab foundation were identified within the LOD. They were not identified as archeological resources, as topsoil within the project area was stripped during clearing for development and no features or artifacts remained that would have contributed to an understanding of their periods of construction or use.

SHA agrees with the consultant that the proposed work will have no impact on archeological resources within the LOD for this project, and there is no need for additional work.

Review Request

Please examine the attached map, plans, DOE forms, report, and Eligibility and Effects Table. We request your concurrence by November 23, 2009 that there would be no that there would be no adverse effects on historic properties for Project AA510M11 at MD 198 from MD 295 to MD 32. By carbon copy, we invite the Anne Arundel County Office of Environmental and Cultural resources to provide comments and participate in the Section 106 process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR §800.2(c)(3) and (5), and §800.3(f) for information regarding the identification and participation of consulting parties, and §800.4, and §800.5 regarding the identification of historic properties and assessment of effects). For additional information regarding the Section 106 regulations,

see the Advisory Council on Historic Preservation's website, www.achp.gov, or contact the Maryland State Highway Administration or the Maryland Historical Trust. If no response is received by November 23, 2009, we will assume that these offices decline to participate. Please call Jennifer Goold at 410-545-2899 (or via email at jgoold@sha.state.md.us) with questions regarding standing structures for this project. Jennifer Babiarz may be reached at 410-545-0339 (or via email at jbabiarz@sha.state.md.us) with concerns regarding archeology.

Very truly yours,

Julie M. Schablitsky
Assistant Division Chief
Environmental Planning Division

Attachments:
1) Project Plans
2) Area of Potential Effects Map
3) DOE Short Forms
4) D.C. Children's Center - Forest Haven District Boundary Map
5) Eligibility and Effects Table
6) Report - *Phase I Archeological Survey of Portions of MD 198 Between MD 295 and MD 32, Anne Arundel County, Maryland*

cc: Ms. Jennifer Babiarz, SHA-EPLD (w/Attachments)
Mr. Mick Butler, Fort George G. Meade, (w/ Attachments 1, 2, 5, and 6)
Mr. Ian Cavanaugh, Federal Highway Administration
Ms. Jennifer Goold, SHA-EPLD
Ms. Elizabeth Habic, SHA- EPLD
Ms. Kameel Hall, SHA-EPLD
Ms. Denise King, Federal Highway Administration
Ms. Margaret O'Dell, National Capital Region of the National Park Service, (w/ Attachments 1, 2, and 5)
Dr. Julie M. Schablitsky, SHA-EPLD
Ms. Darian Schwab, Anne Arundel County, Office of Environmental & Cultural Resources, (w/Attachments 1, 2, 4, 5, and 6)
Mr. Jim South, District of Columbia, Office of Property Management (w/ Attachments1, 2, 4, 5, and 6)

Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects

Project Number: AA510M11 **MHT Log No._____**
Project Name: MD 198 from MD 295 to MD 32
County: Anne Arundel County
Letter Date: October 23, 2009

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment 5]):

[ ] Concur
[ ] Do Not Concur

Effect (as noted in the Effects Table [Attachment 5]):

[ ] No Properties Affected
[ ] No Adverse Effect
[ ] Conditioned upon the following action(s) (see comments below)
[ ] Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):

[ ] Agree

Comments:

_____
_____
_____
_____
_____
_____

By: _____ _____
MD State Historic Preservation Office/ Date
Maryland Historical Trust

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Assistant Division Chief, Environmental Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-8870 and Facsimile: 410-209-5046

Hybrid Eligibility/Effects Table

Attachment 5

Project Name

October 21, 2009

				Alternative 2:TSM		Alternative 4:Divided Roadway			
Resource	**Type**	**SHA NR Det.**	**SHPO Opinion**	**Impact**	**SHPO Concur**	**Impact**	**SHPO Concur**	**Attachment**	**Remarks**
Baltimore Washington Parkway(AA -5/PG: 69-26)	**HD**		**NRL 5/9/1991**	**No Adverse**	**Requested 10/2009**	**No Adverse**	**Requested 10/2009**		
D.C-Forest Haven District (AA-2364)	**HD**		**NRL 4/17/2007**	**None**	**Requested 10/2009**	**None**	**Requested 10/2009**		
3244 Fort Meade Road	**S**	**X**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**3**	
3340 Fort Meade Road	**S**	**X**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**3**	
3351 Fort Meade Road	**S**	**X**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**N/A**	**Requested 10/2009**	**3**	
Effect				**NAE**	**Requested 10/2009**	**NAE**	**Requested 10/2009**		

Codes:

Resource Types: S (Structure), A (Archeological Site), HD (Historic District), NHL (National Historic Landmark)
NR Determination: ND (Not Determined), X (Not Eligible), NR (Eligible), NRL (Listed), NHL (Landmark)
SHPO Opinion: (B) designates opinion regarding boundary, Code following date signifies SHPO opinion
Impact: None, No Adverse, Adverse
Effect: NPA (No Properties Affected), NAE (No Adverse Effect), AE (Adverse Effect)
Bold rows indicate review action requested

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

October 27, 2009

Re: Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, MD
USGS *Laurel* 7.5' Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

Introduction and Project Description

This letter serves to provide the Maryland Historical Trust (MHT) with additional information regarding the Maryland State Highway Administration's (SHA) Project No. AA510M11 on MD 198 from MD 295 to MD 32. Our most recent letter for this project, dated October 23, 2009, had incorrect information regarding impacts to the Baltimore-Washington Parkway. We incorrectly stated that the construction of the interchange will require approximately 0.38 acres of right-of-way from the National Park Service (NPS) property. However, there will be no right-of-way acquisition from NPS property under any of the project alternatives.

The correct information regarding impacts to NPS property was detailed in a letter to NPS dated August 17, 2009 (Attachment 1) and is as follows: Alternatives 2 and 4 include improvements within the National Register of Historic Places boundary of the Baltimore-Washington Parkway. Under Alternative 2, the MD 295 southbound to MD 198 westbound ramp would be expanded to two lanes with an exclusive right-turn lane. Under Alternative 4, the MD 295 southbound to MD 198 westbound ramp would be expanded as with Alternative 2. In addition, the left-turn channelization along westbound MD 198 would be expanded and the MD 198 bridge over MD 295 would be re-striped to include two lanes in each direction with a westbound left-turn lane, an eastbound right-turn lane, a 10-foot westbound shared-used path and a 5-foot eastbound sidewalk. Pavement would be added east and west of the bridge to tie in the sidewalk and shared-use path.

Under Alternative 2, approximately 0.14 acre of additional pavement would be added to the MD 295 southbound to MD 198 westbound ramp. The proposed changes to NPS property under Alternative 2 would require temporary construction use access by a NPS permit on approximately 1.0 acre for construction. Under Alternative 4, approximately 0.38 acre of additional pavement would be added to the existing parkway exit ramp and bridge. The proposed changes to NPS property under Alternative 4 would require temporary construction use access by a NPS permit on a maximum of 4.68 acres. No right-of-way would be acquired from the NPS under either Alternative 2 or 4.

This corrected information does not change SHA's conclusion that proposed project will not adversely impact the Baltimore-Washington Parkway and that the proposed roadway and intersection improvement project at MD 198 between MD 295 and MD 32 will have no adverse impacts on historic standing structures.

Upon your agreement that 0.14 acre or 0.38 acre of additional pavement will not adversely impact the historic property, SHA intends to propose *de minimis* impact finding to the Federal Highway Administration (FHWA) for Section 4(f) use of the Baltimore Washington Parkway.

The necessary construction will temporarily impact approximately 203,931 square feet (4.68 acres) of the property, which includes up to 0.38 acre of additional pavement. Given that these improvements would occur by temporary occupancy only, the requirements of Section 4(f) would not apply in this instance based on your agreement with the following criteria as the officials with jurisdiction.

- The duration of the impact will be temporary, i.e., less than the time needed for construction of the project;
- There will be no change in the ownership of the land;
- The scope of the work will be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) resource are minimal;
- There are no anticipated permanent adverse physical impacts; and
- The land being used will be fully restored, i.e., the resource will be returned to a condition which is at least as good as that which existed prior to the project.

Please include this corrected information in your review of our October 23, 2009 letter and attachments. Thank you for allowing us to correct our error. Please contact Melissa Blair at 410-545-8560 or via email at mblair@sha.state.md.us with any questions regarding this corrected information.

Very truly yours,

Julie M. Schablitsky
Assistant Division Chief
Environmental Planning Division

Attachment: August 18, 2009 letter to NPS

cc: Ms. Jennifer Babiarz, SHA-EPLD (w/Attachment)
Mr. Mick Butler, Fort George G. Meade (w/Attachment)
Mr. Ian Cavanaugh, Federal Highway Administration (w/Attachment)
Ms. Jennifer Goold, SHA-EPLD (w/Attachment)
Ms. Elizabeth Habic, SHA- EPLD (w/Attachment)
Ms. Kameel Hall, SHA-EPLD (w/Attachment)
Ms. Denise King, Federal Highway Administration (w/Attachment)
Ms. Margaret O'Dell, National Capital Region of the National Park Service (w/Attachment)
Dr. Julie M. Schablitsky, SHA-EPLD (w/Attachment)
Ms. Darian Schwab, Anne Arundel County, Office of Environmental & Cultural Resources (w/Attachment)
Mr. Jim South, District of Columbia, Office of Property Management (w/Attachment)

Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects

Project Number: AA510M11 **MHT Log No. 200904167**
Project Name: MD 198 from MD 295 to MD 32
County: Anne Arundel County
Letter Date: October 23, 2009

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment 5]):
[X] Concur
[ ] Do Not Concur

Effect (as noted in the Effects Table [Attachment 5]):
[ ] No Properties Affected
[X] No Adverse Effect
[ ] Conditioned upon the following action(s) (see comments below)
[ ] Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):
[X] Agree

Agreement with FHWA's de minimis impact finding (as detailed in the referenced letter, if applicable):
[X] Agree

Comments:

MHT accepts the current Phase I Report as a final document for our library. Please coordinate with MHT on any future ancillary actions or modifications proposed outside of the APE reviewed to date.

By: Beth Cole 11/4/2009
MD State Historic Preservation Office/ Date
Maryland Historical Trust

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Assistant Division Chief, Environmental Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-8870 and Facsimile: 410-209-5046

Cc: Ms. Darian Schwab (Anne Arundel County Office of Planning and Zoning)

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON
DIRECTOR OF PUBLIC WORKS
2212 CHISHOLM AVENUE
FORT GEORGE G. MEADE, MARYLAND 20755-5000

Office of the Director of Public Works

Maryland Department of Transportation
State Highway Administration
Environmental Planning Division
ATTN: Mr. Donald H. Sparklin
707 North Calvert Street
Baltimore, Maryland 21202

Dear Mr. Sparklin,

Fort Meade concurs with the SHA's determination that the proposed Rt. 198 project will have a de minimis impact on Fort Meade land adjacent to the ball fields. Please note that Fort Meade's response to your request does not imply concurrence on the specifics of the proposed alignment of the Rt. 198 project or imply approval for the use of Fort Meade land. Therefore, your letter of 7 October 2009 is returned unsigned.

The process for obtaining approval for use of government owned land requires the submittal of a written request to Director of Public Works, ATTN: Master Planning Division, ATTN: Real Property, 2212 Chisholm Avenue, Fort George G. Meade, MD 20755-5115. The request should include complete project details along with a property survey with metes and bounds description (at no cost to the government).

My Point of Contact for further environmental information is Mr. Mick Butler, 301-677-9188 and Ms. Joyce Patenaude, 301-677-9180 for real estate.

Enclosure
SHA Letter, 7 Oct 09

Michael P. Butler for
Tejbir Singh
Director, Public Works

Copy Furnished:
Directorate of Public Works, Environmental Management Division
Directorate of Public Works, Master Planning Division
Staff Judge Advocate
Department of Interior, US Fish and Wildlife Service
US Army Corps of Engineers, Baltimore District

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Patuxent Research Refuge
12100 Beech Forest Road, Suite 138
Laurel, Maryland 20708

APR 0 6 2010

Mr. Donald Sparklin, Division Chief
Environmental Planning Division
Maryland State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

Re: *MD 198 (Fort Meade Road) from MD 295 to MD 32, Anne Arundel County, Maryland*

Dear Mr. Donald Sparklin:

The US Fish & Wildlife Service (Service), Patuxent Research Refuge in cooperation with the Chesapeake Bay Field Office, has completed a review of the State Highway Administration request for concurrence that the proposed temporary impact to Patuxent Research Refuge property is consistent with the designated use of the parking lot.

The Service understands that of the three alternatives retained for detailed study only Alternative 4 impacts the baseball field parking lots. Alternative 4 also enhances the access to Bald Eagle drive by providing a designated left turn lane. The Service has also advocated for a traffic light at the intersection of Bald Eagle Drive and MD 198. The proposed widening of MD 198 would require approximately 0.41 acres from the Fort Meade owned gravel parking lot adjacent to MD 198. The remaining parking area on Fort Meade land would be paved and striped to create a formal parking area. The Bald Eagle Drive parking area would then be improved to provide additional parking to compensate for spaces lost from the widening.

The Service has reviewed the State Highway Administration (SHA) letter dated September 17, 2009 and has coordinated our review with Fort Meade, the adjoining property owner. Based on Fort Meade's concurrence with the SHA determination that the proposed MD 198 project will have a de minimis impact on their land adjacent to the ball fields the Service concurs with the de minimis finding and offers the following recommendations.

1) The Service understands that the proposed mitigation for the impact to the Fort Meade gravel parking lot would consist of improvements to the Fort Meade parking lot and the Patuxent Research Refuge owned parking lot along Bald Eagle Drive. The Service is against increasing the footprint of the parking area along Bald Eagle.

2) The Service recommends that SHA not create additional impervious surface area in the new parking lots. Please investigate the use of permeable surfacing techniques that will require minimal maintenance. This will support President Obama's Executive Order of On May 12, 2009, that recognizes the Chesapeake Bay as a national treasure and calls on the federal government to lead a renewed effort to restore and protect the nation's largest estuary and its watershed. On March 22, 2010, draft guidance was released for public comment, as required by the Chesapeake Bay Executive Order, and provides federal land managers with a guide to implementing the best proven tools and practices to restore and protect the region's waterways and the Bay.

3) Construction plans for this project must be provided to the Patuxent Research Refuge for approval. The Service can provide for temporary access but recommends that the following language be added to the construction plan notes for this project:

a. Work is not to interfere with the normal operation of the ball fields as a recreational facility.
b. Equipment, supplies, and temporary storage areas are to be maintained as not to interfere with the day to day operation of the North Tract entrance way to the Patuxent Research Refuge.
c. Equipment, supplies, and temporary storage areas are to be centralized, as agreed to in advance with Refuge management, such that at the end of each construction day they are located out of the way of the recreational public.
d. The Service will grant this temporary access only for construction activities related to the mitigation of the ball field parking lots and for duration only as long as normal construction practices for this scale of project require.
e. The contractor must notify the Refuge of intent to mobilize 48 hours in advance of moving any equipment and supplies onto the site.
f. The contractor must notify the Refuge of intent to demobilize 48 hours in advance. The Service reserves the right to retain the contractor until all construction debris, and site stabilization practices have been completed.
g. If possible, the Service would like certification that all equipment and materials used in construction are weed seed free.

4) If for unseen circumstances the designated land use for the ball fields should change before the construction of the proposed roadway enhancements, the Service recommends that SHA reevaluate the proposed mitigation at the ball field site with the Refuge.

5) Due to the prior land use of this area as an active military base, any area within the construction zone must be swept for the presence of unexploded ordinance.

6) SHA also will be responsible for any cultural resource sweeps to ensure there is no detrimental impact to archaeological resources.

Thank you for this opportunity to provide our recommendations on this project. Please contact me at 301-497-5582 if you have any questions or concerns.

Sincerely,

Brad Knudsen

Brad Knudsen
Refuge Manager
Patuxent Research Refuge

cc:

Susan McMahon, Refuge Supervisor-South, Region 5, Hadley, MA
Mitch Keiler, Wildlife Biologist, Chesapeake Bay Field Office
Leo Miranda, Field Supervisor, Chesapeake Bay Field Office
Mick Butler, Environmental Manager, Fort George G. Meade

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Parks-East
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

IN REPLY REFER TO:

May 17, 2010

Ms. Kameel Hall
Project Manager
Maryland State Highways
707 North Calvert Street, MS C-301
Baltimore, Maryland 21202

Dear Ms. Hall:

This is follow-up to our meeting of March 12, 2010 regarding the proposed *de minimis* determination for impacts upon the historic Baltimore-Washington Parkway from the Maryland Route 198 Highway Improvements proposal. While the National Park Service (NPS) lands proposed for use in the new ramp alignment may be minimal, we continue to have concerns regarding other associated project impacts.

The following describes the concerns we shared with you during our meeting and constitute elements we ask to have resolved prior to agreeing to a *de minimis* determination for the project.

- Stormwater management: Although currently not planned for NPS property, we understand that existing, non-park tree cover that serves as critical screening in this part of the historic Parkway viewshed, could be removed for a stormwater management system. We ask to be consulted in the stormwater management planning to ensure the resulting construction and access does not exacerbate existing viewsheds from the Parkway. We encourage the project to include a "pro-active" design for an aesthetic, "green" stormwater facility, not simply a "generic" stormwater pond approach.

- The NPS must be consulted in all design discussions involving MD Route 198 bridge modifications. This bridge is an historic resource to the Parkway and thus there are certain design and aesthetic criteria that must be enforced so the project does not adversely impact the visual and aesthetic integrity of the resource.

- Your agency shall apply to our National Capital Region Right-of–Way Permit Office for the installation and operation of the traffic signals proposed for NPS property. Placement and design of such facilities may also be critical to protecting the Parkway's scenic viewshed.

- The NPS should be consulted in all landscaping plans and design involving MD Route 198 bridge modifications. This would include both NPS and non-NPS properties that may require landscaping to mitigate viewshed, aesthetic and/or environmental impacts of the Maryland

Route 198 Highway Improvements project on the Parkway. We encourage the use of locally native species in landscaping.

We appreciate your attention in this matter and look forward to hearing from you so that we can resolve these concerns. You may contact me or Stephen Syphax at 202-690-5160 with any questions or follow-up.

Sincerely,

George Liffert
Acting Superintendent

Cc: Ms. Elizabeth Habic
Environmental Planning Division
Maryland State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore MD 21202

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

March 16, 2011

Re: Project No. AA510M11
MD 198 from MD295 to MD 32
Anne Arundel County, MD
USGS *Laurel* 7.5' Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

Introduction and Project Description

This letter serves to inform the Maryland Historical Trust (MHT) of changes to Project No. AA510M11. The Maryland State Highway Administration (SHA) continues to find that there will be no adverse effect to historic properties by the proposed project MD 198 from MD 295 to MD 32.

In letter dated October 23, 2009, SHA recommended that the project would have no adverse effect on historic properties. MHT concurred with this finding on November 4, 2009. Subsequently, several land use changes have been requested through the Anne Arundel County planning process. A traffic sensitivity analysis was completed to determine the effect of these land use changes and concluded that additional capacity will be required through the project area. As a result, SHA proposes to drop from consideration one mainline alternative and one interchange option. With the increased traffic volumes, Alternative 4 will no longer provide improved traffic operations along the corridor and Interchange Option B will not operate at an acceptable level of service, thus no longer meeting the purpose and need for the project.

SHA has developed Alternative 4 Modified to meet the project purpose and need to improve safety and traffic operations under the increased traffic forecast. Alternative 4A is much the same as Alternate 4 with the addition of an approximately 0.5 mile eastbound auxiliary lane between the Baltimore-Washington Parkway egress ramp (outside the historic boundary) to the second access point for the Arundel Gateway

development. In addition, three signals have been added (MD 198 at Arundel Gateway 2nd Access, MD 198 at Waters Road, MD 198 at Bald Eagle Drive) to consolidate access points along the corridor. Environmental Site Design (ESD) plans have been further developed resulting in revisions to the limits of disturbance. A preliminary landscape plan for the intersection of MD 198 and I-295 is provided.

Project plans are included as Attachment 1.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

In determining the Area of Potential Effects (APE) for this project, SHA considered direct and indirect impacts to historic properties. In order to consider the area or areas within which the project may directly or indirectly cause alterations in the character of use of historic properties, the APE was defined in the October 23, 2009 correspondence to encompass the worst case Limits of Disturbance (LOD) for the project and extend 250 feet from the outermost edge of the LOD as indicated on the attached SHA quadrangle maps for Laurel. The new LOD remains well within the established APE. The archeological survey area is defined as the worst case limits of disturbance of the combined alternatives.

Identification Methods and Results

Potentially significant architectural and archeological resources were both researched as part of the historic investigation instigated by the proposed roadway and intersection improvements.

Architecture: SHA Architectural Historian Jennifer Goold consulted the SHA-GIS Cultural Resources Database, project plans, the National Register of Historic Places (NRHP), and made a field visit on February 17, 2011.

Because the revised LOD remains within the APE established in 2009, the APE for this project remains unchanged. Historic Structures Eligibility was previously coordinated with the Maryland Historical Trust (MHT) by letters dated October 16, 2007 and October 23, 2009. MHT concurred on December 4, 2007 and November 4, 2009 that NRHP listed and eligible properties within the APE consist of the Baltimore-Washington Parkway (AA-5/PG: 69-26) and the D.C. – Forest Haven District (AA-2364).

The Baltimore-Washington Parkway is a 1,353 acre linear resource. The federal portion of the property is coterminous with its historic right-of-way boundary that extends from the eastern border of the District of Columbia through Prince Georges and Anne Arundel counties. The irregular right-of-way is 400 to 800 feet wide and contains a dual lane roadway, a variable-width median, a flanking buffer of natural forest and cultivated native landscaping, scores of culverts, and twenty-two bridges. The parkway has state and local significance in the areas of transportation and landscape architecture under criteria A and C. Its character-defining features consist of the "'high-speed' elements of modern freeway design" coupled with "natural topography and vegetation for scenic purposes."

Previously Coordinated Improvements: Improvements to the Baltimore-Washington Parkway coordinated with MHT in 2009 consisted of:

- Slight widening of the egress ramp from southbound Baltimore-Washington Parkway to MD 198 to accommodate a free-flowing right turn onto MD 198 and an additional left turn lane onto MD 198.
- Construction of sidewalks/ bikeways across the existing bridge to provide a travel route for pedestrians and bikers across the bridge and along MD 198.

Although no right-of-way would be acquired from the Baltimore-Washington Parkway, these plans included 0.38 acre of additional pavement and required approximately 4.7 acres of temporary easement for construction from the NPS property.

Revised Improvements: Revised improvements at this intersection will additionally impact three components of the Parkway: 1) one additional on-ramp from MD 295 to MD 198 within the historic boundary; 2) Environmental Site Design (ESD), Stormwater Management (SWM); and 3) landscaping within and adjacent to the historic boundary. These revised plans that address components no. 1 and 2 constitute an additional 0.5 acre of permanent alterations and require an additional 1.3 acres in temporary construction easements within the NPS boundary (Attachment 1). The proposed landscaping as shown in the concept plans (Attachment 2) would constitute approximately 2.25 acres of additional permanent alterations within the NPS boundary and would require a temporary construction easement of the same size.

1) The existing on ramp from MD 198 westbound to southbound MD 295 will be widened to two lanes, merging back to the existing single lane over the length of approximately 400 feet to provide needed capacity for two left turn lanes at this location. Egress ramps were designed "as a landscaped graduation to the roadway" and to meet the needs of traffic capacity. The profile of the existing off ramp will be replicated in the reconstruction. Roadside features such as signage and guardrail will be retained and reinstalled, or replaced in-kind.

The landscape in this area currently consists of grass. The character defining features of the Baltimore-Washington Parkway will not be adversely impacted by a small increase in the typical road section in this location.

2) Environmental Site Design (ESD) and Stormwater Management (SWM) features will be located within and adjacent to the parkway's historic boundary. Location of these features within the historic boundary has been minimized as greatly as possible. Completion of this work will necessitate removal of some existing vegetation, which consists primarily of scrub trees, vines, and invasive plant materials in this location.

3) In order to preserve the character defining features of the Baltimore-Washington Parkway as a modern highway running through a native and landscaped woodland setting, additional landscaping will be provided at the intersection of MD 198 and MD 295. Landscaping goals will be to maintain the overall quantity of vegetation at this intersection including screening of adjacent commercial development from the parkway mainline. Furthermore, the landscape plan will seek to create a healthy plant ecosystem with a focus on native plants. Final landscape plans will be coordinated with MHT and NPS when complete.

Conditioned on implementation of the landscaping plan, the proposed project will not adversely impact the Baltimore-Washington Parkway because the character defining features of the parkway as a modern highway within a landscaped setting will remain intact.

Project plans at the D. C Children's Center – Forest Haven District continue to consist of reconfiguring the property's entrance from MD 198. As coordinated in 2009, the entrance is not located with the property's historic boundary. The proposed project will not impact NRHP eligible portions of D.C Children's Center – Forest Haven District.

In conclusion, SHA continues to find that, conditioned upon implementation of the landscaping plan, the proposed roadway and intersection improvement project at MD 198 between MD 295 and MD 32 will have no adverse impacts on historic standing structures. No additional architectural investigations are recommended.

This project has been coordinated with the National Park Service (NPS) via letters dated June 25, 2009 and August 17, 2009. On May 17, 2010, NPS requested additional information that is not available at this stage of the planning process. SHA is providing current project information to the NPS in a separate letter concurrent with this letter.

Upon your agreement that there will be no adverse impacts to the Baltimore-Washington Parkway conditioned upon implementation of the landscape plan, SHA intends to request that the Federal Highway Administration make a *de minimis* impact finding for the minor Section 4(f) use of the Baltimore-Washington Parkway, including 0.5 acre of additional pavement, 0.4 acre of environmental site design and stormwater management facilities, and 2.25 acres of landscaping.

In addition, the necessary construction will require approximately 6 acres of temporary construction easement. Given that this impact would occur by temporary occupancy only, the requirements of Section 4(f) would not apply in this instance based on your agreement, as the officials with jurisdiction, with the following criteria.

- The duration of the impact will be temporary, i.e., less than the time needed for construction of the project;
- There will be no change in the ownership of the land;
- The scope of the work will be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) resource are minimal;
- There are no anticipated permanent adverse physical impacts; and
- The land being used will be fully restored, i.e., the resource will be returned to a condition which is at least as good as that which existed prior to the project.

Archeology: SHA Archeologist Carol A. Ebright assessed the archeological potential of the worst case LOD of the new MD 198 Alternative 4 Modified and ESD facilities, through consultation of the SHA-GIS Cultural Resources Database, aerial photographs, historic and environmental maps, Preliminary Investigation plans, prior survey reports and file data, and a field visit conducted on February 23, 2011.

Numerous prior surveys have been conducted in or immediately adjacent to portions of the MD 198 project corridor including Phase I surveys by Conrad (1975), Curry (1978, 1985), Cunningham and Gardner (1979), Epperson (1980), Wesler et al. (1981), Decicco (1987), Collier et al. (1990), Rutherford and Petraglia (1990), Hopkins et al. (1992), Barse and Scheerer (2000), and Child et al. (2009). The 2009 Child et al. survey conducted for SHA was designed to examine high potential portions of earlier alignments of the MD 198 project that had not been previously surveyed. The survey found no non-modern artifacts and recorded no archeological sites. MHT concurred with SHA's recommendation that no further archeological work was required for the MD 198 alignments on November 4, 2009.

The current Alternative 4 Modified and ESD facilities are largely contained within the LOD used for the Child et al. (2009) Phase I survey, or have been heavily disturbed by prior construction or development at the Baltimore-Washington Parkway Interchange and at Gateway Boulevard. Two previously unsurveyed areas with potentially intact terrain were examined further. One undisturbed area with new

SWM/ESD facilities, located between Professional Auto Dealing and CPC Computer Cabling Corp., is characterized by poorly drained Fallsington sandy loam. The other area involves the realignment of a short section of Waters Road and includes new SWM/ESD facilities. This area includes poorly drained Zekiah and Issue soils, and an area mapped as moderately well-drained Downer-Hammonton soils; however, the field visit showed the entire area to be poorly drained, and to have a hummocky surface suggestive of prior earth moving.

The proposed new work will occur in previously disturbed or poorly drained terrain and is unlikely to impact any intact, significant archeological resources. No further archeological work is recommended for Alternative 4 Modified.

Review Request

Please examine the attached map, plans, and Effects Table (Attachment 5). We request your concurrence by April 18, 2011 that there would be no that there would be no adverse effects on historic properties for Project AA510M11 at MD 198 from MD 295 to MD 32. By carbon copy, we invite the Anne Arundel County Office of Environmental and Cultural resources and the National Park Service to provide comments and participate in the Section 106 process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR §800.2(c)(3) and (5), and §800.3(f) for information regarding the identification and participation of consulting parties, and §800.4, and §800.5 regarding the identification of historic properties and assessment of effects). For additional information regarding the Section 106 regulations, see the Advisory Council on Historic Preservation's website, www.achp.gov, or contact the Maryland State Highway Administration or the Maryland Historical Trust. If no response is received by April 18, 2011, we will assume that these offices decline to participate. Please call Jennifer Goold at 410-545-2899 (or via email at jgoold@sha.state.md.us) with questions regarding standing structures for this project. Carol Ebright may be reached at 410-545-2889 (or via email at cebright@sha.state.md.us) with concerns regarding archeology.

Very truly yours,

April Feh

for Julie M. Schablitsky
Assistant Division Chief
Environmental Planning Division

Attachments:
1) Project Plans
2) Preliminary landscape plans
3) Previously coordinated APE map
4) Photographs
5) Effects Table

cc: Ms. Karen Arnold, SHA- EPLD (w/Attachments)
Ms. Carol Ebright, SHA-EPLD (w/Attachments)
Ms. Jennifer Goold, SHA-EPLD (w/Attachments)
Ms. Kameel Hall, SHA-EPLD
Mr. David Hayes, National Capital Region of the National Park Service (w/Attachments)
Dr. Julie M. Schablitsky, SHA-EPLD
Ms. Darian Schwab, Anne Arundel County, Office of Environmental & Cultural Resources, (w/Attachments)

Effects Table

Attachment 5

Project Name: MD 198 from MD 295 to MD 32 **March 15, 2011**

				Alternative 4 Modified			
Resource	**Type**	**SHA NR Det.**	**SHPO Opinion**	**Impact**	**SHPO Concur**	**Attachment**	**Remarks**
Baltimore-Washington Parkway(AA -5/PG: 69-26)	**HD**	**NR**	**NR**	**No Adverse**	**Requested 3/2011**		
D.C-Forest Haven District (AA-2364)	**HD**	**NR**	**NR**	**None**	**Requested 3/2011**		
Effect				**NAE**			

Codes:

Resource Types: S (Structure), A (Archeological Site), HD (Historic District), NHL (National Historic Landmark)
NR Determination: ND (Not Determined), X (Not Eligible), NR (Eligible), NRL (Listed), NHL (Landmark)
SHPO Opinion: (B) designates opinion regarding boundary, Code following date signifies SHPO opinion
Impact: None, No Adverse, Adverse
Effect: NPA (No Properties Affected), NAE (No Adverse Effect), AE (Adverse Effect)
Bold rows indicate review action requested

Concurrence with the MD State Highway Administration's Determination(s) of Eligibility and/or Effects

Project Number: AA510M11 **MHT Log No. 201101164**
Project Name: MD 198 from MD 295 to MD 32
County: Anne Arundel County
Letter Date: March 16, 2011, Rec'd March 24, 2011

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment N/A]):
[ ] Concur
[ ] Do Not Concur

Effect (as noted in the Effects Table [Attachment 5]):
[ ] No Properties Affected
[ ] No Adverse Effect
[X] Conditioned upon the following action(s) (see comments below)
[ ] Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):
[X] Agree

Agreement with FHWA's de minimus impact finding (as detailed in the referenced letter, if applicable):
[X] Agree

Comments:
AS NOTED ON PAGE 4, THE NO ADVERSE EFFECT FINDING IS CONDITIONED ON IMPLEMENTATION OF THE LANDSCAPING PLAN.

By: Beth Cole
MD State Historic Preservation Office/
Maryland Historical Trust

4/14/2011
Date

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Assistant Division Chief, Environmental Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-8870 and Facsimile: 410-209-5004

CC: David Hayes NPS-NCR

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

March 16, 2011

Re: Contract No. SPO72A43
MD 198 from MD295 to MD 32
Anne Arundel County, MD

Mr. David Hayes
Regional Transportation Liaison
National Capital Region of the National Park Service
1100 Ohio Drive, SW
Washington, DC 20242

Dear: Mr. Hayes:

Introduction and Project Description

This letter serves to provide the National Park Service (NPS) with additional information regarding the Maryland State Highway Administration's (SHA) proposed Contract No. SPO72A43 (MD 198 between MD 295 and MD 32) in Anne Arundel County, because this project includes impacts to the Baltimore-Washington Parkway. Mr. David Hayes from NPS attended a preliminary site meeting held on site December 18, 2008. SHA provided preliminary project plans to NPS on June 25, 2009. In a letter to the Maryland Historical Trust (MHT) dated October 23, 2009, SHA recommended that the project would have no adverse effect on historic properties. MHT concurred with this finding on November 4, 2009. Mr. George Liffert from NPS attended an additional site meeting held on March 12, 2010 and provided preliminary written comments on May 17, 2011. SHA is now providing modified plans that address revised traffic studies, environmental site design (ESD) and stormwater management (SWM) features, and preliminary landscape plans for the intersection of MD 198 and MD 295 (the Baltimore-Washington Parkway).

As detailed in previous correspondence, the purpose of the project is to improve the existing capacity and traffic operations, and increase vehicular and pedestrian safety along MD 198, while supporting existing and planned development in the area. As a result of the 2005 BRAC process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2010, approximately 5,300 additional new on-base jobs are expected to be relocated to Fort Meade, along with 7,500 new jobs at NSA. As many as 20,000 or more private sector jobs are also anticipated, primarily in the defense and support industries. In addition to an increase in jobs, the study area is expected to see substantial increases in population, housing, commercial activity, and vehicular traffic as a result of BRAC. This project will address projected operational and safety deficiencies resulting from the expected growth.

Previously coordinated improvements to the Baltimore-Washington Parkway consisted of the slight widening of the egress ramp from southbound Baltimore-Washington Parkway to MD 198 and the construction of sidewalks/ bikeways across the MD 198 Bridge. The construction of the interchange resulted in 0.34 acres of permanent alterations and required 4.68 acres of temporary construction easement from the NPS property.

Subsequently, several land use changes have been requested through the Anne Arundel County planning process. A traffic sensitivity analysis was completed to determine the affect of these land use changes and concluded that additional capacity will be required through the project area. As a result, SHA has developed Alternative 4 Modified to meet the project purpose and need to improve safety and traffic operations under the increased traffic forecast. Alternative 4A is much the same as Alternate 4 with the addition of an approximately 0.5 mile eastbound auxiliary lane between the Baltimore-Washington Parkway egress ramp (outside the historic boundary) to the second access point for the Arundel Gateway development. In addition, three signals have been added (MD 198 at Arundel Gateway 2nd Access, MD 198 at Waters Road, MD 198 at Bald Eagle Drive) to consolidate access points along the corridor (also outside the historic boundary). Environmental Site Design (ESD) plans have been further developed resulting in revisions to the limits of disturbance within the NPS boundary (Attachment 1). A preliminary landscape plan for the intersection of MD 198 and I-295 is also provided (Attachment 2). Site photographs are included in Attachment 3.

Funding

Federal funds are anticipated for this project.

Historic Resources Impacts

The Baltimore-Washington Parkway is a 1,353 acre linear resource. The federal portion of the property is coterminous with its historic right-of-way boundary that extends from the eastern border of the District of Columbia through Prince Georges and Anne Arundel counties. The irregular right-of-way is 400 to 800 feet wide and contains a dual lane roadway, a variable-width median, a flanking buffer of natural forest and cultivated native landscaping, scores of culverts, and twenty-two bridges. The parkway has state and local significance in the areas of transportation and landscape architecture under criteria A and C. Its character-defining features consist of the "'high-speed' elements of modern freeway design" coupled with "natural topography and vegetation for scenic purposes."

Revised improvements at this intersection will additionally impact three components of the Parkway: 1) one additional on-ramp from MD 295 to MD 198 within the historic boundary; 2) Environmental Site Design (ESD) and Stormwater Management (SWM); and 3) landscaping within and adjacent to the historic boundary. The revised plans that address components 1 and 2 constitute an additional 0.5 acre of permanent alterations and require an additional 1.3 acres in temporary construction easements within the NPS boundary. The proposed landscaping as shown in the concept plans would constitute approximately 2.25 acres of additional permanent

alterations within the NPS boundary and would require a temporary construction easement of the same size.

1) The existing on ramp from MD 198 westbound to southbound MD 295 will be widened to two lanes, merging back to the existing single lane over the length of approximately 400 feet to provide needed capacity for two left turn lanes at this location. Egress ramps were designed "as a landscaped graduation to the roadway" and to meet the needs of traffic capacity. The profile of the existing off ramp will be replicated in the reconstruction. Roadside features such as signage and guardrail will be retained and reinstalled, or replaced in-kind. The landscape in this area currently consists of grass. The character defining features of the Baltimore-Washington Parkway will not be adversely impacted by a small increase in the typical road section in this location.

2) Environmental Site Design (ESD) and Stormwater Management (SWM) features will be located within and adjacent to the parkway's historic boundary. Location of these features within the historic boundary has been minimized as greatly as possible. Completion of this work will necessitate removal of some existing vegetation, which consists primarily of scrub trees, vines, and invasive plant materials in this location.

3) In order to preserve the character defining features of the Baltimore-Washington Parkway as a modern highway running through a native and landscaped woodland setting, additional landscaping will be provided at the intersection of MD 198 and MD 295. Landscaping goals will be to maintain the overall quantity of vegetation at this intersection including screening of adjacent commercial development from the parkway mainline. Furthermore, the landscape plan will seek to create a healthy plant ecosystem with a focus on native plants. Final landscape plans will be coordinated with MHT and NPS when complete.

SHA finds that the proposed plans for MD 198 at MD 295 do not adversely impact the Baltimore-Washington Parkway. Continuing NPS participation in review of the plans and proposed landscaping will be sought as they are prepared.

Review Request

SHA initiated Section 106 Consultation for this project with a letter to the Maryland Historical Trust (MHT) on October 16, 2007. By carbon copy, SHA invited NPS to be a consulting party in the Section 106 process. We continue to seek NPS comments on impacts to the Baltimore-Washington Parkway as a part of this consultation.

Please examine the attached project plans and provide your comments by April 10, 2011.

Please contact the project manager, Ms. Kameel Hall at 410-545-8542 (or via email at khall1@sha.state.md.us) or Karen Arnold at 410-545- 8510 (or via email at karnold@sha.state.md.us) with questions regarding this project.

Very truly yours,

April Fehr

for Julie M. Schablitsky
Assistant Division Chief
Environmental Planning Division

Attachments:
1) Project Plans
2) Preliminary Landscape Plans
3) Photographs

cc: Ms. Jennifer Goold, Architectural Historian, SHA-EPLD
Ms. Kameel Hall, Project Manager, SHA-EPLD
Mr. Alex Romero, Superintendent, National Capital Park-East, NPS (w/Attachments)
Ms. Denise King, Environmental Protection Specialist, DelMar Division, FHWA (w/Attachments)
Mr. Joseph Kresslein, Assistant Division Chief, SHA-EPLD
Mr. J. Rodney Little, Director, Division of Historical and Cultural Programs, MHT
Ms. Karen Arnold, Environmental Manager, SHA-EPLD

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

IN REPLY REFER TO:

Maryland State Highway Administration
Attn: Ms. Julie M. Schablitsky,
Assistant Division Chief, Environmental Planning Division
707 North Calvert Street
Baltimore, MD 21202

7 April, 2011

Dear Ms Schablitsky,

First I want to thank you for the continued consultation with the National Park Service in regards to the "MD 198 from MD 295 to MD 32 Highway Project".

The National Park Service concurs with your assessments of the additional impacts to NPS lands within the historic boundary and adjacent to the historic boundary. The impacts identified include: 1) one additional on-ramp from MD 295 to MD 198 within the historic boundary; 2) Environmental Site Design (ESD) and Stormwater Management (SWM), and; 3) landscaping within and adjacent to the historic boundary. Components 1 and 2 constitute an additional 0.5 acres of permanent alterations and require an additional 1.3 acres in temporary construction easements within the NPS boundary. Component 3 would constitute approximately 2.25 acres of additional permanent alterations within the NPS boundary and would require a temporary construction easement of the same size. The three components would constitute a total of 2.75 acres of permanent impacts to NPS lands and 3.55 acres of temporary construction easements during the life of the proposed project. Under NPS definitions this would constitute an adverse impact, but since NPS is a cooperating agency and not the lead compliance agency, we accept the definitions used by Maryland State Highway Administration and concur with your determination.

NPS concurs with your determination for component 1 that the "character defining features of the Baltimore-Washington Parkway would not be adversely impacted by a small increase in the typical road section in this location". We would add that we are concerned about cumulative impacts – especially if any additional road or non-pervious surfaces are added to the overall design. We also stress that cumulative impacts be addressed in any future NEPA and Section 106/4f environmental documentation.

NPS concurs with your determination for component 2 that "ESD and SWM have been minimized as greatly as possible," but NPS asks that any vegetation removed would be replaced

on a 1:1 ratio using native species and submitted to NPS and MHT for approval in a landscape plan. Component 3 should be addressed in a similar approach through NPS and MHT approval.

If you have any questions, or would like to schedule a site visit please give me a call at 202.619.7277 or email me at david_hayes@nps.gov, I look forward to future presentations and opportunities to work together on Maryland State Highway projects.

Sincerely,

David Hayes
Regional Planner and Transportation Liaison
National Capital Region, National Park Service
1100 Ohio Drive Southwest
Washington, DC 20242

cc:
NACE/Superintendent
NCR/LRP/files
NCR/LRP/Hayes

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MD 198 Project Planning Study

MARYLAND 198

PROJECT NEWSLETTER • FALL 2007

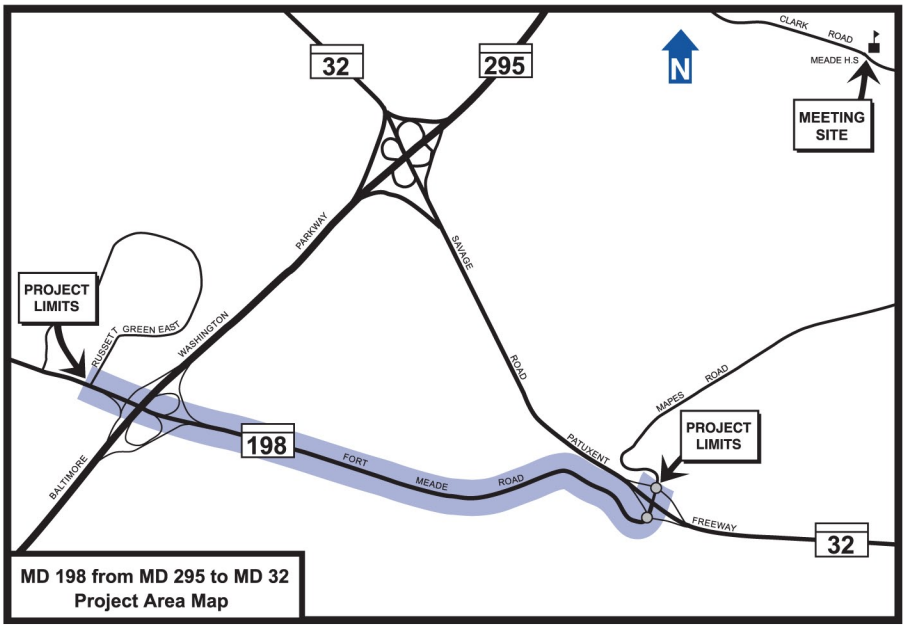
SHA Launches MD 198 Project Planning Study

The State Highway Administration (SHA) has initiated a project planning study to investigate transportation improvements to MD 198 from west of MD 295 at Russett Green East to MD 32 in Anne Arundel County, Maryland.

The study will focus on how best to ease growing congestion on the existing roadway network, while considering the needs of local communities and minimizing the project's impacts as much as possible.

WHAT: Informational Open House to enable the public to learn more about the study.

WHEN:	WHERE:
Wednesday, November 7, 2007 6:00 PM to 8:00 PM	Meade High School 1100 Clark Rd Fort Meade, MD 20755



MD 198 from MD 295 to MD 32
Project Area Map

Maryland Department of Transportation
State Highway Administration
Office of Planning and Preliminary Engineering
P.O. Box 717, Mail Stop C-301
Baltimore, Maryland 21203-0717

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Purpose & Need Preparation

At the start of any planning study, SHA develops a draft Purpose and Need Statement that is used as the foundation for all of the engineering and environmental studies that follow. The Purpose and Need Statement is a summary of the study area's needs in terms of traffic mobility, land use, and pedestrian and bicycle use. It is crucial to the success of this planning study that SHA has a strong foundation based on input from residents, business owners, and other stakeholders of the MD 198 project area. Please review this summary below and provide your input by completing the survey included in this newsletter, calling the study team, or sending written comments to SHA.

Project Description

The MD 198 Project Planning Study will evaluate improvements along a 3.5-mile portion of MD 198 extending from just west of MD 295, at Russett Green East, to MD 32 in Anne Arundel County. The existing MD 198 corridor consists of a six-lane roadway west of MD 295, a four-lane roadway through the MD 295 interchange area, a two-lane roadway with 10-foot shoulders and no access controls through most of the study area, a roundabout at Airfield Road, and a four-lane roadway from Airfield Road to the MD 32 interchange. The MD 32 interchange is a diamond interchange, with roundabouts at either end of a three-lane bridge that carries traffic over MD 32. The limits of SHA maintenance end just east of the interchange, approaching the gate into Fort George G. Meade Military Reservation (Fort Meade)

Potential alternatives include dualizing MD 198 within the study limits, including bicycle and pedestrian access, combining access points, and providing intersection improvements along the corridor.

Purpose & Need Overview

The purpose of the project is to improve existing capacity and traffic operations, enhance access to Fort Meade, and increase vehicular, bicycle, and pedestrian safety along MD 198, while supporting existing and planned development in the area. MD 198 provides direct access to Fort Meade from MD 32, MD 295, and points south and west of the study area.

Growth and Development

The area around Fort Meade is one of the fastest growing areas of Anne Arundel County. Fort Meade's workforce comprises more than 39,000 military, civilian, and contractor personnel. As a result of the 2005 Base Realignment and Closure (BRAC) process, Fort Meade and the surrounding area are expected to experience considerable growth. By 2010, approximately 5,300 additional new on-post jobs are expected to be relocated to Fort Meade, along with 7,500 new jobs at the National Security Agency. As many as 20,000 private sector jobs—primarily in the defense and support industries—are anticipated both on and in the vicinity Fort Meade. Over 30,000 additional direct and indirect jobs forecasted to locate in the region to support the influx of growth will create a demand for office space, housing, and commercial services throughout western Anne Arundel County and in nearby areas of Prince George's and Howard counties.

In addition to jobs, the study area is expected to experience significant increases in population, housing, commercial activity, and vehicular traffic as a result of BRAC. The MD 198 Project Planning Study will address projected operational and safety deficiencies resulting from the expected growth.

Traffic

Annual Average Daily Traffic (AADT) AM and PM peak-hour volumes were developed for the MD 198 Project Planning Study. Table 1 shows 2006 Existing and Projected 2030 No-Build AADT.

MD 198	2006 Existing Volume	2030 No-Build Volume
	Average Daily Traffic	
MD 198 West of MD 295	43,100	57,750
MD 198 : MD 295 to Airfield Road	23,950 - 21,750	41,300 - 38,875
Mapes Road North of MD 32	7,900	28,200
MD 295 South of MD 198	93,600	122,500
MD 32 East of MD 198	58,500	76,600
MD 32 West of MD 198	46,150	63,425

Table 1

Levels of Service (LOS)

Planners often use a grading system, much like the one used in school, to characterize the operations at intersections. A grade or level of service (LOS) of "A" means there is no delay or congestion, while LOS F means the intersection is failing, with long delays and high levels of congestion. Table 2 shows the current LOS at intersections within the study area. Several intersections are experiencing failing conditions and will continue to fail through traffic forecast year 2030, as shown in Table 3.

Safety

A total of 155 crashes were reported between 2003 and 2005 within the limits of the crash analysis, resulting in one fatality and 87 injuries. The majority of reported crashes, including the one fatality, occurred at the western end of the study area, from the Clay Road/Russett Green West intersection through the MD 295 interchange area, where traffic volumes are much higher.

To Learn More — For more information on this project, please visit the Maryland State Highway Administration's website at: *www.marylandroads.com*

Written comments/requests may be submitted to:
Ms. Kameel Holmes, Project Manager
Maryland State Highway Administration
P.O. Box 717, Mailstop C-301
Baltimore, Maryland 21203-0717

To speak with members of the Project Team, please call toll-free 1-800-548-5026 or email kholmes@sha.state.md.us

Existing 2006 Level of Service (LOS)		
Intersection of MD 198 and (from west to east)	AM LOS	PM LOS
Market Place Corridor/ Russett Green East	B	C
Tischer Entrance	F	F
Ourisman Entrance	F	F
Arundel Gateway	A	B
MD 216B (Old Portland Road)	E	D
Welch's Court	E	F
Gate Access (Children's Center)	B	D
Bald Eagle Drive	A	F
Airfield Road	A	A
MD 32 Eastbound Ramps	A	A
MD 32 Westbound Ramps	B	A
MD 198, MD 295 to MD 32	E	E

Table 2

2030 No-Build Level of Service (LOS)		
Intersection of MD 198 and (from west to east)	AM LOS	PM LOS
Market Place Corridor/ Russett Green East	D	F
Tischer Entrance	F	F
Ourisman Entrance	F	F
Arundel Gateway	C	C
MD 216B (Old Portland Road)	F	F
Welch's Court	F	F
Gate Access (Children's Center)	C	F
Bald Eagle Drive	C	F
Airfield Road	B	C
MD 32 Eastbound Ramps	F	A
MD 32 Westbound Ramps	F	F
MD 198, MD 295 to MD 32	F	F

Table 3

MD 198 Project Planning Study

MARYLAND 198

Please assist the Project Team by answering the following questions. To return the survey, simply detach and fold before dropping it in the mail. All postage will be paid by the State Highway Administration.

1. What are the top three transportation issues in the project area? (Circle three)

A. Too much traffic on MD 198
B. Traffic safety
C. Delays at MD 295
D. Delays at MD 32
E. Delays at unsignalized intersections
F. Speeding
G. Bicycle and pedestrian safety
H. Other:_____

2. When is the most difficult time to travel in the project area? (Circle one)

A. Morning rush hour
B. Evening rush hour
C. Weekends
D. All of the above

3. What improvements do you think would help most? (Circle one)

A. Intersection/traffic signal improvements
B. Widening of MD 198
C. Reconstruction of certain segments of MD 198
D. Do Nothing
E. Other : _____

4. What types of "impacts" concern you most? (Circle one)

A. Impacts to homes and businesses
B. Impacts to the natural environment
C. Impacts during construction
D. Noise
E. Other : _____

5. Please provide your comments on the Purpose and Need Overview:

_____
_____
_____
_____

6. What else should the Project Team know about the study area? (attach additional sheets(s) if needed)

_____
_____
_____
_____

Project Mailing List - Please provide your name and address if you would like to be placed on the project mailing list for future updates and announcements. *If you prefer to receive these items via email, please provide your e-mail address.*

NAME: _____

ADDRESS: _____

EMAIL: _____

Project Status

The MD 198 Project Planning Study is funded for Project Planning only. It is not yet funded for Design, Right-of-Way Acquisition, or Construction. The Project Planning phase includes the review of all reasonable alternatives, including the No-Build Alternative, the collection and evaluation of social, economic, and natural environmental factors, and agency and public involvement. Citizen involvement in the planning process is encouraged.

Project Schedule

- Open House Workshop - *Wednesday, November 7, 2007*
- Alternates Public Workshop - *June 2008*
- Location/Design Public Hearing - *Fall 2009*
- Location/Design Approval - *Winter 2009/2010*

Martin O'Malley, Governor
Anthony Brown, Lieutenant Governor
John D. Porcari, Secretary
Neil J. Pedersen, Administrator

Public Input is Important

We want to hear from you! Here's how you can get involved in the study and stay updated as we move forward:

- Fill out and mail the attached postage-paid survey.
- Get on the project mailing list. Add your name and address to the bottom of the attached survey to receive future project updates and announcements.
- Come to our public meetings.
  We will send you announcements and advertise in newspapers. Refer to the project schedule in this newsletter for general timeframes for upcoming meetings.
- Log on to our Project Web Page at:
  www.marylandroads.com
- **Submit written comments/requests to:**
  Ms. Kameel Holmes, Project Manager
  Maryland State Highway Administration
  P.O. Box 717, Mail Stop C-301
  Baltimore, Maryland 21203-0717

To speak with members of the Project Team, please call toll-free 1-800-548-5026 or email kholmes@sha.state.md.us

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BALTIMORE, MD 21203-0717

ATTN: Ms. Kameel Holmes,
SHA Project Manager

MARYLAND
198

MD 198 (Ft. Meade Road) from MD 295 to MD 32

PROJECT PLANNING STUDY

The Maryland State Highway Administration (SHA) has initiated a project planning study to evaluate ways to improve travel and safety along MD 198 (Ft. Meade Road) from MD 295 to MD 32.

The purpose of the workshop is to familiarize interested citizens with the project planning process, the project purpose and need, potential environmental impacts, and preliminary alternatives. Your input on current problems in the study area, the project's purpose and need, and the potential range of alternatives and improvements will help contribute to the project's success.

SHA team members will be available to answer your project-related questions and concerns during the workshop, which will be conducted in an Open House format. *There will be no formal presentation.*

YOUR INVOLVEMENT IS IMPORTANT- PLEASE PLAN TO ATTEND!

WHAT: Alternates Public Workshop

WHERE: Maryland City Elementary School
3359 Crumpton South
Laurel, MD 20724

WHEN: Tuesday, June 24, 2008
5:00 p.m. – 8:00 p.m.

For additional information, contact Ms. Danielle Edmonds, SHA Assistant Project Manager, toll-free at 1-800-548-5026, by email at *dedmonds@sha.state.md.us* or go to the project website at *www.marylandroads.com*. Please contact Ms. Edmonds by June 17 if you will need special assistance to participate in the meeting. The Maryland Relay Service for impaired hearing and speech can be reached at 1-800-735-2258.

MARYLAND
198

MD 198 (Ft. Meade Road) from MD 295 to MD 32 Project Planning Study

ALTERNATES PUBLIC WORKSHOP
June 24, 2008

Workshop Topics

Project Purpose and Need

Community Considerations

Environmental Features

Typical Sections

Preliminary Alternatives

***If you didn't complete the survey in the Fall 2007 Project Newsletter, be sure to do so at the workshop. Your input is needed!**

SHA State Highway Administration
Maryland Department of Transportation

707 N. Calvert Street
MS C-301
Baltimore, MD 21203-0717

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TO:

MD 198 Project Planning Study
November 2007 Public Workshop Summary of Comments

Issues of Concern	Number of Response(s)	Issues of Concern	Number of Response(s)
Bike/Ped. Consideration	28	School Safety	4
Congestion on I-295	26	Signage concerns	3
MD 32 Interchange	20	Truck Traffic	3
Access to Russett/Wal-Mart	19	Maintenance of Traffic (MOT)	3
Law Enforcement	19	New road	3
MD 198/ I-295 Interchange	19	Eliminate traffic lights	3
development/overdevelopment concerns	16	Lower speed limit	2
Public transportation	15	Property values	2
Expand study area west toward Rt.1	13	Lighting	2
traffic light timing	12	flooding	2
Environmental Concerns	12	Gate expansion	1
Slots Impact	7	Add traffic lights	1
Road Debris	5	Public safety response times	1
Driveway on MD 198 in project area	5	Parking lot at Ballfield	1
Expand MD 32	4		

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME James Elston **DATE** 6/15/08
ADDRESS 8406 Woodland Manor Dr.
CITY Laurel **STATE** Md **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

Prefer adoption of Option A. Keeps traffic signals to a minimum, with what appears to be a minimum of new construction - with hopefully lower costs. Re Alternative 4. Why do we need a 5' foot buffer between bike & pedestrian paths?

☑ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Fabregas **DATE** 5/'08
ADDRESS 8005 Big Pool Rd
CITY Laurel **STATE** Md **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

Based on the information provided, and the fact that R-198 is no longer able to handle the amount of traffic that it sustains now-a-days, we think Alternative #3 (R-198)

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME William Lawrence **DATE** 6-16-08
ADDRESS 1 Oak Run Rd
CITY Laurel **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

(1) — get rid of "circles" on ramps/bridges OR
— put in clear lane markers & rumble
strips to keep drivers in their lanes!!
The circles are accidents waiting to happen
(or happening!) with bad MD drivers.

(2) bike lanes everywhere please! BUT
They should NOT be on road way shoulder
but up on a sidewalk protected by
curbs - drivers use bike lanes for
passing on right - make biking safe!

☐ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Sandra Jaffe **DATE** 6/15/08
ADDRESS 3003 Old Channel Road
CITY Laurel **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

In the evenings there are significant backups
going east on 198 to south bound 32. I am
not sure these improvements will change this
condition. Will it?
Also, I am concerned about the significant
environmental impacts associated w/ alt 3 &
& with any of the interchange options.
Why does the median need to be so wide?
I support efforts to reduce the footprint of
improvements.

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA436B11
PUBLIC HEARING

MD 175
PROJECT PLANNING STUDY

THURSDAY, JUNE 26, 2008
6:00 P.M. - MAPS/DISPLAYS AVAILABLE
7:00 P.M. - PRESENTATION/TESTIMONY

MEADE MIDDLE SCHOOL
1103 26TH STREET
FORT MEADE, MARYLAND 20755

PLEASE PRINT

NAME Pam & Wm Perrey **DATE** 6/18/08
ADDRESS 2883 Jessup Rd
CITY Jessup **STATE** Md **ZIP** 20794

I/We wish to comment or inquire about the following aspects of this project:

What is going to happen to the bottle neck through Jessup from 295 to Rt. 1 ?? when 4 four lanes are put in from 295 to Odenton?
It is almost impossible to get out of our driveway now.
I might not be able to make the meeting on the 26th but would appreciate an answer to this. Thank You

☐ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Chitra Outarsingh **DATE** 6/17/08
ADDRESS 8608 Jacks Roof Rd.
CITY Laurel **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

I personally like Option E. I think the Circles are good speed control but sometimes confusing & intimidating for those not accustomed to the area. I like the more "direct" route to 32, which is shorter distance for expansion of lanes bike & mix use lanes & sidewalk.
I vote option E! &
I also belive some improvement could be made at ramp from 295 N to 198 W esp to Corridor Market Place.

☒ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME RAYMOND H. SZYPERSKI **DATE** 18 JUNE '08
ADDRESS 332 MARGANZA SOUTH
CITY LAUREL **STATE** MD. **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

I like Alternative 4 - Divided Roadway with Off-Road, Shared Used Facility and Sidewalk

I also want Option E: Diamond Interchange with new bridge -

I want the roundabouts out!!!

☑ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME JULIUS R. BROWN **DATE** June 9, 08
ADDRESS 1728 Maco Dr.
CITY HANOVER **STATE** MD **ZIP** 21076

I/We wish to comment or inquire about the following aspects of this project:

I cont begin to know what the regul path is.

Will there be a nice bike/walking trail like there is at BWI?

☑ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME _____ DATE _____

ADDRESS Barbara Azan, 3010 Spice Bush Rd, Laurel, MD 20724

CITY _____ STATE _____ ZIP _____

I/We wish to comment or inquire about the following aspects of this project:

Breakdown of the environmental impacts to each alternative and option.

☐ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Anne Pearson DATE 6/21/08

ADDRESS 2041 Shore Dr.

CITY Edgewater STATE MD ZIP 21037

I/We wish to comment or inquire about the following aspects of this project:

A great deal of damage has been done to the adequate function of ecosystems as a result of road building. It's past time to stop building roads in a futile attempt to solve traffic congestion. It has been proven repeatedly that wider + more roads only bring MORE cars. It has also been proven that decreasing roads solves problems. We need alternatives to the car and to encourage those solutions we need to stop road building, wetland + river destruction air pollution + global warming.

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STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 P.M. - 8:00 P.M.

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MD 20724

PLEASE PRINT

NAME DON GROTE **DATE** JUNE 24, 2008
ADDRESS 808 KAY CT. APT. 121
CITY LAUREL **STATE** MD **ZIP** 20707

I/We wish to comment or inquire about the following aspects of this project:

I APPRECIATE MAINTAINING THE BIKE LANES, PLEASE KEEP IT UP.
MY CONCERNS LIE IN ONCOMING RAMPS SQUEEZING BICYCLISTS BETWEEN CARS. ALSO, HOW WILL BIKES BE ABLE TO MAKE LEFT HAND TURNS AT TRAFFIC LIGHTS?
I VERY MUCH LIKE THE IDEA OF REPLACING THE ROUNDABOUTS WITH TRAFFIC LIGHTS; IT'S NICE WHEN TRAFFIC STOPS.
ANOTHER MAJOR CONCERN IS THE CONDITION OF THE ROAD DURING CONSTRUCTION; ~~WHICH WAS ESTIMATED TO LAST~~ SHOULDERS TEND TO DISAPPEAR DURING CONSTRUCTION.

☐ **Please add my/our name(s) to the Mailing List.**

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STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Joe Gorman **DATE** 7-17-08
ADDRESS 1200 Winer Rd
CITY Odenton **STATE** MD **ZIP** 21113

I/We wish to comment or inquire about the following aspects of this project:

Add extra traffic span across 32 would benefit vehicles and bike/pedestrian safety.

Thanks

Joe Gorman

☑ **Please add my/our name(s) to the mailing list.** On List

☐ **Please delete my/our name(s) from the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME John Majsztrik **DATE** 7/1/08

ADDRESS 3521 Laurel view ct

CITY Laurel **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

I ~~[illegible]~~ would like more information to be included about the environmental impact of the proposed changes, and how those impacts might be reduced.

☑ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 P.M. - 8:00 P.M.

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MD 20724

PLEASE PRINT

NAME KENDRA SMITH **DATE** 24 JUNE 2008

ADDRESS 8606 WOODLAND MANOR DR

CITY LAUREL **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

THANK YOU! LOTS OF INFORMATION TO ABSORB. I COMMUTE DOWN THIS ROAD EVERY DAY BY BICYCLE (EASTBOUND TO THE FORT IN THE MORNING, WESTBOUND HOME AT NIGHT). WE REALLY LIKE SEEING THE BIKE LANES PROPOSED - THIS IS CURRENTLY A HORRIBLE ROAD TO RIDE ON, AND THOSE COULD MAKE IT MUCH MUCH SAFER! I'M NOT A FAN OF OFF-ROAD BIKEWAYS, THEY'RE TOO DARK FOR COMMUTERS, OFTEN NOT KEPT CLEAN IN THE OFF SEASON, AND PROBLEMATIC AT INTERSECTIONS. I DO WALK OR RUN DOWN THIS ROAD, HOWEVER, AND AT PEAK TRAFFIC TIME IT IS NEARLY IMPOSSIBLE TO CROSS. WITH TWO LANES AND TRAFFIC MOVING AT FULL SPEED IT'D BE EVEN WORSE. OF THE INTERSECTION CHOICES WE LIKE E BEST, OF COURSE, BECAUSE IT HAS NO TRAFFIC CIRCLES! BUT ALL HAVE PROS AND CONS. AS YOU EVALUATE THE BIKEWAYS, PLEASE LOOK AT TRAFFIC FROM 32 TO 198 AND BACK (THE BIKE ROUTE), 32 TO THE FORT AND BACK, AND 198 TO THE FORT AND BACK (THAT'S ME!) AND TAKE A LOOK AT THE

2

☐ **Please add my/our name(s) to the Mailing List.**

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PROJECT PLANNING DIVISION
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINSTRATION
PO BOX 717
BALTIMORE MD 21298-8317

HAZARDS ON ALL 6 OF THESE PATHS. FOR EXAMPLE, ARE BIKES OK ON THE FLYOVER IN OPTION A? A BIKE COMING FROM THE FORT HAS TO CROSS HIGH-SPEED, HIGH-VOLUME TRAFFIC COMING IN FROM THE RAMP AND ENTERING THE RAMP FROM 32! THE TRAFFIC CIRCLE ON THE WESTERN SIDE IS DIFFICULT FOR BICYCLES TO NAVIGATE, ESPECIALLY THOSE GOING FROM THE FORT TO 32. MANY OF THE PICTURES DON'T SHOW BIKE LANES ON THE 32 RAMPS, WE HOPE THOSE WILL BE INCLUDED. RIGHT NOW THE RAMP OFF OF 32 CAN BE A BIT SCARY. WITH OPTION C, STOPLIGHTS ARE GREAT. BUT HOW DOES A CYCLIST GO LEFT FROM 198 EASTBOUND TO GET TO THE FORT? THESE ARE THE TYPES OF DETAILS WE WORRY ABOUT, BECAUSE WE KNOW WE'LL BE NAVIGATING THE AREAS DAILY.

WE ALSO WORRY ABOUT ACCESS DURING CONSTRUCTION. WE'VE SEEN THE DECIMATION OF 175 DUE TO UTILITY CONSTRUCTION - IT MAKES THE ROAD VERY DANGEROUS WHEN BIKE ACCESS ISN'T PLANNED FOR. PLEASE INCLUDE THESE CONCERNS IN YOUR PLAN - WE WILL STILL HAVE TO RIDE EVERY DAY, AND WE'D LIKE TO SURVIVE TO SEE ALL YOUR GREAT IMPROVEMENTS!

THANKS FOR YOUR HARD WORK, WE REALLY APPRECIATE IT!

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME LCDR VINCENT J. SKWAREK **DATE**

ADDRESS 3150 GALAXY WAY

CITY LAUREL **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

WE LIVE IN RUSSETT AND TRAVEL THIS AREA TO FT. MEADE HEAVILY. WE LIKE ALTERNATIVE 4 BEST, THEN ALTERNATIVE 3. OPTION A IS OUR PREFERRED INTERCHANGE. WE WOULD LIKE TO WALK/BIKE ALONG 198.

☐ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198 FROM MD 295 TO MD 32
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 PM to 8:00 PM

MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MARYLAND 20724

PLEASE PRINT

NAME Maryland City Fire Department Ray Smallwood **DATE** 6-24-2008

ADDRESS 3498 Ft. Meade Road

CITY Laurel **STATE** Md. **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

The proposed road improvements is located in the Maryland City Fire Department's first due area. With the amount of vehicle traffic and collisions that occur in the proposed project area, we would like to suggest Alternative 4 with Option E. This gives us a wide road area with sidewalks and a short access to Fort Meade.

☐ **Please add my/our name(s) to the mailing list.**

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STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

AA510M11
ALTERNATES PUBLIC WORKSHOP

MD 198
PROJECT PLANNING STUDY

TUESDAY, JUNE 24, 2008
5:00 P.M. - 8:00 P.M.

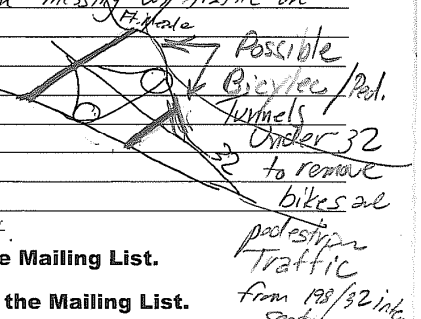
MARYLAND CITY ELEMENTARY SCHOOL
3359 CRUMPTON SOUTH
LAUREL, MD 20724

PLEASE PRINT

NAME Tim Mical **DATE** 6/24/08
ADDRESS 110 Cherry Hill Lane
CITY Laurel **STATE** MD **ZIP** 20724

I/We wish to comment or inquire about the following aspects of this project:

You need to include a bicycle tunnel (see Cook County horse trail model in Illinois under St. Rt. 45) - just bike or hikers that goes under 32 instead on messing w/ traffic on the on/off ramps over 32.



Already on list.

☐ **Please add my/our name(s) to the Mailing List.**

☐ **Please delete my/our name(s) to the Mailing List.**

* **Persons who have received a copy of the project brochure through the mail are already on the project Mailing List.**

(OVER)

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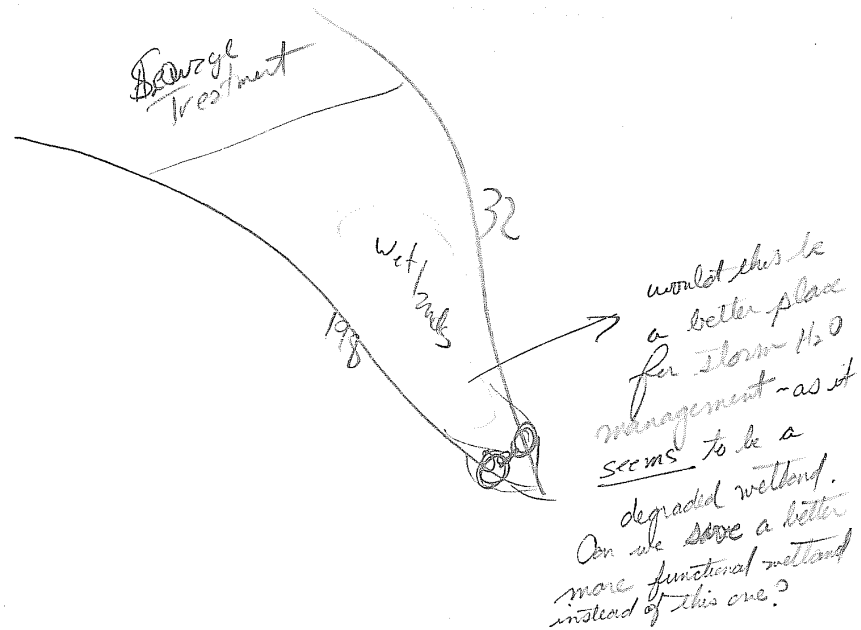
ATTN: Danielle Edmonds - Assistant Project Manager
MAIL STOP C-301
PROJECT PLANNING DIVISION
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINSTRATION
PO BOX 717
BALTIMORE MD 21298-8317



MEMORANDUM:

FROM: Kameel Hall
Project Manager
Project Management Division
Office of Planning and Preliminary Engineering

DATE: December 9, 2009

SUBJECT: MD 198 Project Planning Study
Anne Arundel County
Project Number AA510M11

RE: Welch's Mobile Home Residents Meeting –Maryland City Volunteer Fire Department

I. Introduction

A residents meeting was held on Tuesday, November 17, 2009 at the Maryland City Volunteer Fire Department. to discuss the MD 198 Project Planning Study. The following people were in attendance:

Maryland State Highway Administration Staff

Kameel Hall	SHA/PMD/OPPE	khall1@sha.state.md.us
Elizabeth Habic	SHA-EPLD/OPPE	ehabic@sha.state.md.us
Kenya Lucas	SHA/PMD/OPPE	klucas@sha.state.md.us
Victoria Lane	SHA/PI/OPPE	vlane@sha.state.md.us
Michael Rothenheber	JMT	mrothenheber@jmt.com

Welchs Mobile Home Park Residents

Woody and Linda Merson
Kenneth Helmer
Melissa Donald
Allison Berry-Rhodes
Ryan Sayer
Alicia Herrera
Carolin A. Poole

Ms. Victoria Lane (SHA) thanked those in attendance. Ms. Lane introduced the team to those present and gave an introduction to why SHA was there and the process of public involvement for this project.

II. Purpose of Meeting

The purpose of the meeting was to present the MD 198 alternatives to the residents of Welch's Mobile Home Park. In addition, the purpose was to cover issues of access and property impacts based on the proposed alternatives. Lastly the team would explain the project development process, environmental document process, and the upcoming public hearing.

III. Project Background/Update

Ms. Kameel Hall (SHA-PMD) thanked those in attendance. Ms. Hall presented the project overview and began discussing the project background. Ms. Hall explained the purpose and need, traffic analysis, and safety data associated with the project.

Ms. Elizabeth Habic (SHA-EPLD) briefly discussed the environmentally sensitive areas along the project corridor to include wetlands, forested areas and endangered species (both plant and animal).

IV. Alternatives Discussion

Mr. Rothenheber (JMT) began discussion of the selected alternatives in detail.

Mainline Alternative 1: No Build

- No construction will be done along the 2 – lane facility for widening. Maintenance and spot improvements would be done.

Mainline Alternative 2: Transportation Systems Management (TSM)

- Combining access (traffic signals) at Welch's Trailer Park and Gateway Boulevard.
- Minor ramp interchange improvements at MD 295 and MD 198

Mainline Alternative 4

- Alternative 4 provides for two lanes in both directions (eastbound and westbound) divided by a grass median that varies throughout the corridor from 20-feet to six-feet. On-road bicycle facilities are provided in both directions adjacent to the outside travel lane. A five-foot grass buffer along the south side of the curb separates the on-road bicycle from the shared-use pedestrian/bicycle path. This path extends from just east of the bridge over MD 295 to the ball-fields located adjacent to Bald Eagle Drive. East of Bald Eagle Drive, this becomes a five-foot sidewalk to the eastern limits of the project. There is also a five-foot grass buffer along the north side of the curb that separates the on-road bicycle lane from the five-foot sidewalk. This sidewalk extends from the western limits of the project area to the businesses located just east of the relocated Old Portland Road.

Interchange Option A: Flyover

- This option maintains the existing configuration of the MD 198 / MD 32 interchange however, a flyover ramp is introduced that provides for traffic from northbound MD 32 to westbound MD 198, therefore completely separating this traffic from the roundabouts. All other traffic through the interchange would operate as it does today.

Interchange Option B: Loop Ramp

- This option maintains the existing configuration for the MD 198 / MD 32 interchange for the southern portion (the existing roundabout closest to Tipton Airport). However, the northern portion (the ramps closest to Fort Meade) is reconfigured. The existing roundabout is removed and replaced with a four-way intersection. All traffic from northbound MD 32 that is destined for Fort Meade would utilize the ramp as they do today. All traffic from northbound MD 32 that is destined for westbound MD 198 would utilize the proposed loop ramp. This configuration separates the traffic from Fort Meade with the traffic destined towards Laurel.

Interchange Option C: Diamond Interchange at Existing Bridge

- Existing bridge over MD 32 would be replaced with a wider span to accommodate two left turn lanes in each direction across the bridge.
- This option reconfigures the existing MD 198 / MD 32 interchange from two roundabouts to two signalized intersections

Interchange Option D: Two Bridges

- This option reconfigures all traffic movements through the area by creating a second one-way crossing of MD 198. The existing MD 198 bridge over MD 32 would become a one-way crossing towards Fort Meade. The ramp from MD 32 towards Laurel would become a second crossing one-way crossing and two turn lanes would be provided for right-turns to access Fort Meade. All other vehicles would have a continuous flow towards Laurel.

V. Community General Comments and Questions

- **Kenneth Helmer**
  - Provided a detailed schematic to Ms. Hall of traffic operational suggestions for the area. Schematic is attached. *Ms. Hall explained that these suggestions were outside of the scope of the planning study, but she would forward the suggestions to the district office for review.*
  - Was helpful in background history of the Mobile Home Park and the area in general.
  - Mentioned that the MD 295 interchange is a traffic nightmare.
  - Questioned if Tipton Airport Property (near MD 32) had been turned over to MNCPPC. *Ms Hall stated that she was not aware of any land transfers in the area.*

- **Alicia Herrera**
  - Issues with safety and the proximity of the limit of disturbance line to the mobile home park once the project is constructed. Ms. Herrera wanted to ensure that there would be significant spacing from the road to the actual mobile home park and the proximity of the new road to the current playground on the mobile home park property. *Ms. Hall suggested that the project team may be able to add a privacy fence or some type of additional buffer for the playground. This could be investigated further in detailed design.*
  - Questions regarding what will happen to the school bus stop during and after construction; would it be relocated, and if so, where? *The project team would coordinate with the school board and the location of the school bus stop would be safe and accessible during and after construction.*
  - Will a signal be proposed at the entrance of the mobile home park due to increased difficulty getting in and out? *The project team explained that under the build alternatives a traffic signal has been proposed at Welch's Court. In addition to a traffic signal, the build alternatives propose to relocate Old Portland Road across from Welch's Court to create a four leg intersection.*
  - Potential increased noise from the road being closer. Will a noise wall be warranted? *The project team is in the process of evaluating noise levels for the project corridor. This information will be available at the public hearing.*

Other comments:

- Concerns that widening MD 198 will bring more traffic, noise, etc., through the area
- Questions about displacement of barber shop which is heavily used by mobile home residents
- Participants agree that roadway improvements are needed

IV. Schedule

Ms. Hall discussed the current schedule and that SHA will be conducting a Public Hearing in spring 2010. Ms Hall explained that the public hearing will be the formal opportunity for the public to comment on the alternatives. In addition there are three ways to make formal comment: public testimony, private testimony or in writing.

Location/Design Public Hearing	Spring 2010
Location/Design Approval	Spring 2011

Ms. Hall thanked everyone for coming and was available to answer any questions after the meeting. The meeting was adjourned at 7pm.

cc: Attendees
File

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

MEMORANDUM:

FROM: Kameel Hall
Project Manager
Project Management Division
Office of Planning and Preliminary Engineering

DATE: December 9, 2009

SUBJECT: MD 198 Project Planning Study
Anne Arundel County
Project Number AA510M11

RE: Local Business Owners Meeting –Maryland City Volunteer Fire Department

I. Introduction

A local business owners meeting was held on Thursday, November 19, 2009 at the Maryland City Volunteer Fire Department to discuss the MD 198 Project Planning Study. The following people were in attendance:

Maryland State Highway Administration Staff

Kameel Hall	SHA/PMD/OPPE	khall1@sha.state.md.us
Elizabeth Habic	SHA-EPLD/OPPE	ehabic@sha.state.md.us
Kenya Lucas	SHA/PMD/OPPE	klucas@sha.state.md.us
Victoria Lane	SHA/PI/OPPE	vlane@sha.state.md.us
Matt Snare	SHA/TF/OPPE	msnare@sha.state.md.us
Susan Bauer	District 5 ROW	sbauer@sha.state.md.us
Felicia Alexander	SHA/PMD/OPPE	falexander@sha.state.md.us
Jennifer Ray	JMT	jray@jmt.com

Local Business and Property Owners

Kun Woo Roh - ROH Body Shop
Wendell Cavin - Remington's of Laurel Bar
Mike Stahlnecker – MBC Technologies
Sharon Bramble - 198 Barber Shop
Dave Kilpe – Casey's Crab Company
Charles 'Sandy" Wilkes – Property Owner

Allan Kwon – Laurel Auto Body
Danny Sauro – Tischer Auto
Robert Dipietro – Arundel Gateway Development
Jarrett Walker – Ourisman Honda
George Bryant – Bank Shot Bar and Grill

Ms. Victoria Lane (SHA) thanked those in attendance. Ms. Lane introduced the team to those present and gave an introduction to why SHA was here and the process of public involvement for this project.

II. Purpose of Meeting

The purpose of the meeting was to present the MD 198 alternatives to the local business owners along the MD 198 corridor. In addition, the purpose was to cover issues of access and property impacts based on the proposed alternatives. Lastly the team would explain the project development process, environmental document process, and the upcoming public hearing.

III. Project Background/Update

Ms. Kameel Hall (SHA) thanked those in attendance. Ms. Hall presented the project overview and began discussing the project background. Ms. Hall explained the purpose and need, traffic analysis, and safety data associated with the project.

Mr. Matt Snare (SHA-Travel Forecasting) explained that the increased traffic projections through design year 2030 contribute to a need to widen MD 198 to a 4-lane facility. Increase in the traffic projections is based on approved landuse from developments in the area as well as the Base Realignment and Closure (BRAC).

Ms. Elizabeth Habic (SHA-EPLD) briefly discussed the environmentally sensitive areas along the project corridor to include wetlands, forested areas and endangered species (both plant and animal).

IV. Alternatives Discussion

Ms. Jennifer Ray (JMT) began discussion of the selected alternatives in detail.

Mainline Alternative 1: No Build

- No construction will be done along the 2 – lane facility for widening. Maintenance and spot improvements would be done.

Mainline Alternative 2: Transportation Systems Management (TSM)

- Combining access (traffic signals) at Welch's Trailer Park and Gateway Road.
- Minor ramp interchange work on MD 295 and MD 198

Mainline Alternative 4

- Alternative 4 provides for two lanes in both directions (eastbound and westbound) divided by a grass median that varies throughout the corridor from 20-feet to six-feet. On-road bicycle facilities are provided in both directions adjacent to the outside travel lane. A five-foot grass buffer along the south side of the curb separates the on-road bicycle land from the shared-use pedestrian/bicycle path. This path extends from just east of the bridge over MD 295 to the ball-fields located adjacent to Bald Eagle Drive. East of Bald Eagle Drive, this becomes a five-foot sidewalk to the eastern limits of the project. There is also a five-foot grass buffer along the north side of the curb that separates the on-road bicycle lane from the five-foot sidewalk. This sidewalk extends from the western limits of the project area to the businesses located just east of the relocated Old Portland Road.

Interchange Option A: Flyover

- This option maintains the existing configuration or the MD 198 / MD 32 interchange however, a flyover ramp is introduced that allows traffic from northbound MD 32 to westbound MD 198 to utilize, therefore completely separating this traffic from the roundabouts. All other traffic through the interchange would operate as it does today.

Interchange Option B: Loop Ramp

- This option maintains the existing configuration for the MD 198 / MD 32 interchange for the southern portion (the existing roundabout closest to the Tipton Airport). However, the northern portion (the ramps closest to Fort Meade) is reconfigured. The existing roundabout is removed and replaced with a four-way intersection. All traffic from northbound MD 32 that is destined for Fort Meade would utilize the ramp as they do today. All traffic from northbound MD 32 that is destined for westbound MD 198 would utilize the proposed loop ramp. This configuration separates the traffic from Fort Meade with that traffic destined towards Laurel.

Interchange Option C: Diamond Interchange at Existing Bridge

- Existing bridge would be replaced with a wider span to accommodate two left turn lanes in each direction over the bridge.
- This option reconfigures the existing MD 198 / MD 32 interchange from two roundabouts to two signalized intersections

Interchange Option D: Two Bridges

- This option reconfigures all traffic movements through the area by creating a second one-way crossing of MD 198. The existing MD 198 bridge over MD 32 would become a one-way crossing towards Fort Meade. The ramp from MD 32 towards Laurel would become a second crossing one-way crossing and two turn lanes would be provided for right-turns to access Fort Meade. All other vehicles would have a continuous flow towards Laurel.

Ms. Susan Bauer (SHA – Dist. 5) explained the right-of-way (ROW) acquisition process. However, the project is currently only funded for project planning. Final design, ROW acquisition, and construction phases are not funded at this time.

V. Business Owner Comments and Questions

- **Sharon Bramble (198 Barber Shop)**
  - How much time do I have? Is it a full take or partial? *The project team explained that the timing can vary however, Ms Bramble will have significant time to negotiate. Once the project is funded for detailed design and ROW acquisition the project team and District ROW office will begin discussions with property owners. Construction can not begin until ROW acquisition has been resolved. Currently the project is only funded for project planning. The current build alternatives show a full take of the structure on the property.*

- **George Bryant (Bank Shot Bar and Grill)**
  - How many parking spots will be eliminated from Bank Shot bar and Grill by the widening and will replacement parking be provided? *The final design stage of the engineering process will give a more accurate assessment of the number of parking spaces needed to accomplish the widening.*

  - When will construction happen? *Funding has to be provided for the remaining phases in the highway development process. Currently no funding has been allocated for final design, ROW acquisition and construction.*

- **Dave Kilpe – Casey's Crab Company**
  - Can we get signing along MD 198 to inform commuters of businesses on the north side the road because the median would eliminates direct access to the businesses)? *The district office will be able to further analyze the request as the project moves further in the highway development process.*

- **Charles 'Sandy" Wilkes – Property Owner**
  - Can there be an extension of the Service Road to the east in front of the CPC Computing Office Building to accommodate future development in the lots behind the office building? *Access for the other parcels in this area will have to be coordinated with Anne Arundel County and the SHA Access Permits Division. As additional development comes along the corridor the design of the alternatives maybe refined to accommodate this development.*

Other comments and questions:

- Is public water and sewer going to be provided because of the MD 198 project? *Anne Arundel County is responsible for providing water and sewer to the area and not SHA.*

- Can a stub out from the CPC Computing Office Building begin immediately for current service vehicle access issues? *At this time, SHA will not be doing any construction. For access issues the developer can work with Anne Arundel County and the SHA Access Permits Division.*

- Ownership and maintenance of the service roads? *The project team will discuss roadway ownership with the County once the project moves further in the highway development process.*

VI. Schedule

Ms. Hall discussed the current schedule and that SHA will be conducting a Public Hearing in spring 2010. Ms Hall explained that the public hearing will be the formal opportunity for the public to comment on the alternatives. In addition there are three ways to make formal comment: public testimony, private testimony or in writing.

Location/Design Public Hearing	Spring 2010
Location/Design Approval	Spring 2011

Ms. Hall thanked everyone for coming and was available to answer any questions after the meeting. The meeting was adjourned at 8pm.

cc: Attendees
File

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

MARYLAND DEPARTMENT OF TRANSPORTATION

June 19, 2009

Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Lieutenant Kevin Hickey
Commander
Maryland State Police
Barrack P Glen Burnie
6800 Aviation Blvd.
Glen Burnie, Maryland 21061

Dear Lieutenant Hickey:

The Maryland State Highway Administration (SHA) has initiated a project planning study to enhance access to Fort George G. Meade Military Installation (Fort Meade). The project will improve the existing capacity and traffic operations, and increase vehicular, bicycle, and pedestrian safety along MD 198 between MD295 and the entrance to Fort Meade along MD 32 (see Attachment 1).

The purpose of this letter is to request your input regarding the effects of the proposed alternatives and options on response times for emergency services. All possible impacts that may result from these projects, including any effects to emergency services and response time caused by changes in traffic circulation patterns, access and/or road construction in these areas must be investigated. These impacts may be positive, such as improved response time following the road improvements, or negative, such as delayed or longer response times.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration (Attachment 2). Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramps from MD 295 northbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease the left-turn conflict with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side. There are also four options under consideration for the reconstruction of the MD 198 / MD 32 interchange.

Option A maintains the existing configuration of the MD 198/MD 32 with the addition of a flyover ramp. This option would remove vehicles destined to Laurel from the roundabouts, reducing the amount of traffic that Fort Meade has to redirect from their gate and would maintain the circuitous route that is preferred by Fort Meade into the Post. Option B separates the traffic destined to Fort Meade from the traffic destined towards Laurel. This option would maintain the circuitous route that is preferred by Fort Meade into the Post. Option C removes the two roundabouts and replaces them with two signalized intersections. This option would also maintain the circuitous route that is preferred by Fort Meade into the Post. Option D leaves the existing roundabout and bridge intact and would result in less disruption to traffic flow through the interchange area during proposed construction in comparison to the other options under consideration. A typical section (Attachment 3) is included for each Alternative under consideration for your review.

We are asking for your written response to be faxed to SHA at 410-209-5004, or e-mailed to khall@sha.state.md.us by July 3, 2009. Should you have any questions or concerns, please feel free to call Ms. Kameel Hall at 410-545-8542. Thank you for your cooperation.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

Attachments (3)
cc: Mrs. Kameel Hall, SHA-PPD
Ms. Elizabeth Habic, SHA-EPLD (w/Attachments)
Mr. Joseph R. Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

MARYLAND DEPARTMENT OF TRANSPORTATION

June 19, 2009

Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Captain Thomas Wilson
Anne Arundel County Office of Emergency Management
7480 Baltimore Annapolis Blvd., Ste. 102
Glen Burnie, Maryland 21061

Dear Captain Wilson:

The Maryland State Highway Administration (SHA) has initiated a project planning study to enhance access to Fort George G. Meade Military Installation (Fort Meade). The project will improve the existing capacity and traffic operations, and increase vehicular, bicycle, and pedestrian safety along MD 198 between MD295 and the entrance to Fort Meade along MD 32 (see Attachment 1).

The purpose of this letter is to request your input regarding the effects of the proposed alternatives and options on response times for emergency services. All possible impacts that may result from these projects, including any effects to emergency services and response time caused by changes in traffic circulation patterns, access and/or road construction in these areas must be investigated. These impacts may be positive, such as improved response time following the road improvements, or negative, such as delayed or longer response times.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration (Attachment 2). Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramps from MD 295 northbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease the left-turn conflict with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side. There are also four options under consideration for the reconstruction of the MD 198 / MD 32 interchange. Option A maintains the existing configuration of the MD 198/MD 32 with the addition of a flyover ramp. This option would remove vehicles destined to Laurel from the roundabouts, reducing the

amount of traffic that Fort Meade has to redirect from their gate and would maintain the circuitous route that is preferred by Fort Meade into the Post. Option B separates the traffic destined to Fort Meade from the traffic destined towards Laurel. This option would maintain the circuitous route that is preferred by Fort Meade into the Post. Option C removes the two roundabouts and replaces them with two signalized intersections. This option would also maintain the circuitous route that is preferred by Fort Meade into the Post. Option D leaves the existing roundabout and bridge intact and would result in less disruption to traffic flow through the interchange area during proposed construction in comparison to the other options under consideration. A typical section (Attachment 3) is included for each Alternative under consideration for your review.

We are asking for your written response to be faxed to SHA at 410-209-5004, or e-mailed to khall@sha.state.md.us by July 3, 2009. Should you have any questions or concerns, please feel free to call Ms. Kameel Hall at 410-545-8542. Thank you for your cooperation.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

Attachments (3)
cc: Mrs. Kameel Hall, SHA-PPD
Ms. Elizabeth Habic, SHA-EPLD (w/Attachments)
Mr. Joseph R. Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

MARYLAND DEPARTMENT OF TRANSPORTATION

June 19, 2009

Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Sheriff Ron Bateman
Anne Arundel County Sheriff's Office
P.O. Box 507
Annapolis, Maryland 21401

Dear Sheriff Bateman:

The Maryland State Highway Administration (SHA) has initiated a project planning study to enhance access to Fort George G. Meade Military Installation (Fort Meade). The project will improve the existing capacity and traffic operations, and increase vehicular, bicycle, and pedestrian safety along MD 198 between MD295 and the entrance to Fort Meade along MD 32 (see Attachment 1).

The purpose of this letter is to request your input regarding the effects of the proposed alternatives and options on response times for emergency services. All possible impacts that may result from these projects, including any effects to emergency services and response time caused by changes in traffic circulation patterns, access and/or road construction in these areas must be investigated. These impacts may be positive, such as improved response time following the road improvements, or negative, such as delayed or longer response times.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration (Attachment 2). Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramps from MD 295 northbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease the left-turn conflict with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side. There are also four options under consideration for the reconstruction of the MD 198 / MD 32 interchange. Option A maintains the existing configuration of the MD 198/MD 32 with the addition of a flyover ramp. This option would remove vehicles destined to Laurel from the roundabouts, reducing the

amount of traffic that Fort Meade has to redirect from their gate and would maintain the circuitous route that is preferred by Fort Meade into the Post. Option B separates the traffic destined to Fort Meade from the traffic destined towards Laurel. This option would maintain the circuitous route that is preferred by Fort Meade into the Post. Option C removes the two roundabouts and replaces them with two signalized intersections. This option would also maintain the circuitous route that is preferred by Fort Meade into the Post. Option D leaves the existing roundabout and bridge intact and would result in less disruption to traffic flow through the interchange area during proposed construction in comparison to the other options under consideration. A typical section (Attachment 3) is included for each Alternative under consideration for your review.

We are asking for your written response to be faxed to SHA at 410-209-5004, or e-mailed to khall@sha.state.md.us by July 3, 2009. Should you have any questions or concerns, please feel free to call Ms. Kameel Hall at 410-545-8542. Thank you for your cooperation.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

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cc: Mrs. Kameel Hall, SHA-PPD
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Mr. Joseph R. Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

Beverley K. Swaim-Staley, *Acting Secretary*
Neil J. Pedersen, *Administrator*

MARYLAND DEPARTMENT OF TRANSPORTATION

June 19, 2009

Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Mr. Ross E. Dinkel
Division Chief, Fire Marshal's Office
2660 Riva Road, Ste 290
Annapolis, Maryland 21401

Dear Mr. Dinkel:

The Maryland State Highway Administration (SHA) has initiated a project planning study to enhance access to Fort George G. Meade Military Installation (Fort Meade). The project will improve the existing capacity and traffic operations, and increase vehicular, bicycle, and pedestrian safety along MD 198 between MD295 and the entrance to Fort Meade along MD 32 (see Attachment 1).

The purpose of this letter is to request your input regarding the effects of the proposed alternatives and options on response times for emergency services. All possible impacts that may result from these projects, including any effects to emergency services and response time caused by changes in traffic circulation patterns, access and/or road construction in these areas must be investigated. These impacts may be positive, such as improved response time following the road improvements, or negative, such as delayed or longer response times.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration (Attachment 2). Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramps from MD 295 northbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease the left-turn conflict with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • *Phone* 410.545.0300 • www.marylandroads.com

There are also four options under consideration for the reconstruction of the MD 198 / MD 32 interchange. Option A maintains the existing configuration of the MD 198/MD 32 with the addition of a flyover ramp. This option would remove vehicles destined to Laurel from the roundabouts, reducing the amount of traffic that Fort Meade has to redirect from their gate and would maintain the circuitous route that is preferred by Fort Meade into the Post. Option B separates the traffic destined to Fort Meade from the traffic destined towards Laurel. This option would maintain the circuitous route that is preferred by Fort Meade into the Post. Option C removes the two roundabouts and replaces them with two signalized intersections. This option would also maintain the circuitous route that is preferred by Fort Meade into the Post. Option D leaves the existing roundabout and bridge intact and would result in less disruption to traffic flow through the interchange area during proposed construction in comparison to the other options under consideration. A typical section (Attachment 3) is included for each Alternative under consideration for your review.

We are asking for your written response to be faxed to SHA at 410-209-5004, or e-mailed to khall@sha.state.md.us by July 3, 2009. Should you have any questions or concerns, please feel free to call Ms. Kameel Hall at 410-545-8542. Thank you for your cooperation.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

Attachments (3)
cc: Mrs. Kameel Hall, SHA-PPD
Ms. Elizabeth Habic, SHA-EPLD (w/Attachments)
Mr. Joseph R. Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Neil J. Pedersen, *Administrator*

September 14, 2009

Project No. AA510M11
MD 198 from MD 295 to MD 32
Anne Arundel County, Maryland

Lt. Warren Boyer
Greenbelt Station Commander
6501 Greenbelt Road
Greenbelt, MD 20770

Dear Lt. Boyer:

The Maryland State Highway Administration (SHA) has initiated a project planning study to enhance access to Fort George G. Meade Military Installation (Fort Meade). The project will improve the existing capacity and traffic operations, and increase vehicular, bicycle, and pedestrian safety along MD 198 between MD295 and the entrance to Fort Meade along MD 32 (see Attachment 1).

The purpose of this letter is to request your input regarding the effects of the proposed alternatives and options on response times for emergency services. All possible impacts that may result from these projects, including any effects to emergency services and response time caused by changes in traffic circulation patterns, access and/or road construction in these areas must be investigated. These impacts may be positive, such as improved response time following the road improvements, or negative, such as delayed or longer response times.

Within the project limits, MD 198 is generally a two-lane roadway with 10-foot shoulders and no control of access. Currently two "build" alternatives and the "no build" alternative are under consideration (Attachment 2). Alternative 1 (the "no build" alternative) would result in no changes to the roadway existing configuration. Alternative 2 would not change the roadway except to provide spot improvements at the off-ramps from MD 295 northbound to MD 198 westbound, combine several of the driveways and access points along MD 198 to provide for fewer turn lanes off of the main road and include left turn lanes for the combined access points to decrease the left-turn conflict with the through movement. Alternative 4 would provide two lanes in both directions (eastbound and westbound) divided by a 20-foot grass median. On-road bicycle facilities would be provided in both directions adjacent to the outside travel lane. The existing northern edge of roadway would be maintained and all roadway widening would occur along the south side. There are also four options under consideration for the reconstruction of the MD 198/MD 32 interchange.

Option A maintains the existing configuration of the MD 198/MD 32 with the addition of a flyover ramp. This option would remove vehicles destined to Laurel from the roundabouts, reducing the amount of traffic that Fort Meade has to redirect from their gate and would maintain the circuitous route that is preferred by Fort Meade into the Post. Option B separates the traffic destined to Fort Meade from the traffic destined towards Laurel. This option would maintain the circuitous route that is preferred by Fort Meade into the Post. Option C removes the two roundabouts and replaces them with two signalized intersections. This option would also maintain the circuitous route that is preferred by Fort Meade into the Post. Option D leaves the existing roundabout and bridge intact and would result in less disruption to traffic flow through the interchange area during proposed construction in comparison to the other options under consideration. A typical section (Attachment 3) is included for each Alternative under consideration for your review.

We are asking for your written response to be faxed to SHA at 410-209-5004, or e-mailed to ehabic@sha.state.md.us by October 1, 2009. Should you have any questions or concerns, please feel free to call Ms. Elizabeth Habic at 410-545-8563. Thank you for your cooperation.

Very truly yours,

Donald H. Sparklin
Division Chief
Environmental Planning Division

by: Joseph R. Kresslein
Assistant Division Chief
Environmental Planning Division

Attachments (3)
cc: Mrs. Kameel Hall, SHA-PPD
Ms. Elizabeth Habic, SHA-EPLD (w/Attachments)
Mr. Joseph R. Kresslein, SHA-EPLD
Ms. Heather Lowe, SHA-EPLD

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

John D. Porcari, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

April 8, 2009

The Honorable John R. Leopold
County Executive
Anne Arundel County
44 Calvert Street
P.O. Box 2700, Fourth Floor
Annapolis MD 21401

John

Dear ~~County Executive~~ Leopold:

The State Highway Administration (SHA) has completed the initial project planning phase for the MD 198 Project Planning Study, from west of MD 295 (Baltimore Washington Parkway) to MD 32 (Patuxent Freeway), in Anne Arundel County. During the initial planning stage, alternatives were developed, and an environmental inventory of the area was completed to identify socio-economic, natural, and cultural resources. These resources were considered during the development of the alternatives.

A series of community, business, and developer meetings was held to solicit opinions and ideas on proposed improvement alternatives from a representative group of citizens. On June 24, 2008, an Alternates Public Workshop was held at the Maryland City Elementary School. Approximately 87 people were in attendance to review the proposed alternatives and offer comments. Four Alternatives (1 through 4) and five options (A through E) were presented to the public. Alternatives 1, 2, and 4, as well as Options A through D, were retained for detailed study. Enclosed please find a copy of the brochure distributed at the workshop.

In accordance with Section 8-612 of Annotated Code of the General Public Laws of Maryland, we are informing the appropriate elected officials in Anne Arundel County of our decision to proceed with final project planning for the MD 198 Project Planning Study. If you have any questions, please do not hesitate to contact me or the Project Manager, Ms. Kameel R. Hall, at 410-545-8542, toll-free 800-548-5026, or via email at khall1@sha.state.md.us. She will be happy to assist you.

Sincerely,

Neil J. Pedersen

Neil J. Pedersen
Administrator

Enclosure
cc: Ms. Kameel R. Hall, Project Manager, SHA
Mr. John D. Porcari, Secretary, Maryland Department of Transportation
Mr. Douglas H. Simmons, Deputy Administrator/Chief Engineer for Planning, Engineering, Real Estate, and Environment, SHA

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

John D. Porcari, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

April 8, 2009

The Honorable John C. Astle
Chair, Anne Arundel County Delegation
Senate of Maryland
123 James Senate Office Building
11 Bladen Street
Annapolis MD 21401

Dear ~~Senator Astle~~ John:

The State Highway Administration (SHA) has completed the initial project planning phase for the MD 198 Project Planning Study, from west of MD 295 (Baltimore Washington Parkway) to MD 32 (Patuxent Freeway), in Anne Arundel County. During the initial planning stage, alternatives were developed, and an environmental inventory of the area was completed to identify socio-economic, natural, and cultural resources. These resources were considered during the development of the alternatives.

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Sincerely,

Neil J. Pedersen

Neil J. Pedersen
Administrator

Enclosure
cc: Ms. Kameel R. Hall, Project Manager, SHA
Mr. John D. Porcari, Secretary, Maryland Department of Transportation
Mr. Douglas H. Simmons, Deputy Administrator/Chief Engineer for Planning, Engineering, Real Estate, and Environment, SHA

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

John D. Porcari, *Secretary*
Neil J. Pedersen, *Administrator*

April 8, 2009

The Honorable Edward R. Reilly
Chairman of County Commissioners
Anne Arundel County
44 Calvert Street, 1st Floor
Annapolis MD 21401

Dear ~~Chairman Reilly~~: Ed

The State Highway Administration (SHA) has completed the initial project planning phase for the MD 198 Project Planning Study, from west of MD 295 (Baltimore Washington Parkway) to MD 32 (Patuxent Freeway), in Anne Arundel County. During the initial planning stage, alternatives were developed, and an environmental inventory of the area was completed to identify socio-economic, natural, and cultural resources. These resources were considered during the development of the alternatives.

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Sincerely,

Neil J. Pedersen

Neil J. Pedersen
Administrator

Enclosure
cc: Ms. Kameel R. Hall, Project Manager, SHA
Mr. John D. Porcari, Secretary, Maryland Department of Transportation
Mr. Douglas H. Simmons, Deputy Administrator/Chief Engineer for Planning, Engineering, Real Estate, and Environment, SHA

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration

John D. Porcari, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

April 8, 2009

The Honorable Mary Ann Love
Chair, Anne Arundel County Delegation
Maryland House of Delegates
165 House Office Building
6 Bladen Street
Annapolis MD 21401

Dear ~~Delegate Love~~: Mary Ann

The State Highway Administration (SHA) has completed the initial project planning phase for the MD 198 Project Planning Study, from west of MD 295 (Baltimore Washington Parkway) to MD 32 (Patuxent Freeway), in Anne Arundel County. During the initial planning stage, alternatives were developed, and an environmental inventory of the area was completed to identify socio-economic, natural, and cultural resources. These resources were considered during the development of the alternatives.

A series of community, business, and developer meetings was held to solicit opinions and ideas on proposed improvement alternatives from a representative group of citizens. On June 24, 2008, an Alternates Public Workshop was held at the Maryland City Elementary School. Approximately 87 people were in attendance to review the proposed alternatives and offer comments. Four Alternatives (1 through 4) and five options (A through E) were presented to the public. Alternatives 1, 2, and 4, as well as Options A through D, were retained for detailed study. Enclosed please find a copy of the brochure distributed at the workshop.

In accordance with Section 8-612 of Annotated Code of the General Public Laws of Maryland, we are informing the appropriate elected officials in Anne Arundel County of our decision to proceed with final project planning for the MD 198 Project Planning Study. If you have any questions, please do not hesitate to contact me or the Project Manager, Ms. Kameel R. Hall, at 410-545-8542, toll-free 800-548-5026, or via email at khall1@sha.state.md.us. She will be happy to assist you.

Sincerely,

Neil J. Pedersen

Neil J. Pedersen
Administrator

Enclosure
cc: Ms. Kameel R. Hall, Project Manager, SHA
Mr. John D. Porcari, Secretary, Maryland Department of Transportation
Mr. Douglas H. Simmons, Deputy Administrator/Chief Engineer for Planning, Engineering, Real Estate, and Environment, SHA

Elizabeth Habic

From: John Scholz [FdScho22@aacounty.org]
Sent: Tuesday, August 25, 2009 11:54 AM
To: Elizabeth Habic
Subject: Fwd: Rt 198 Study

This email, and any attachments hereto, is intended only for use by the addressee(s) and may contain sensitive or confidential information. If you are not the intended recipient of this email, you are hereby notified that any dissemination, distribution or copying of this email, and any attachments, is strictly prohibited. If you have received this email in error, please immediately and permanently delete the original and any copy or printout thereof and notify the sender of such receipt.

John M. Scholz, Deputy Chief
Operations Bureau
Anne Arundel County Fire Department
8501 Veterans Highway
Millersville, MD 21108
Office - 410-222-8326
e-mail: fdscho22@aacounty.org

>>> Julian Jones 7/6/2009 6:51 AM >>>
Ms. Hall,

Thank you for giving the Anne Arundel County Fire Department an opportunity to comment on the proposed changes to MD 198 between Rt.32 and Rt.295. After careful study of the various traffic plan options provided in your correspondence dated June 19, we believe that option A “the flyover ramp” will provide the best response time for some emergency vehicles into the Maryland City area, however, all of the options provided are acceptable and appear to decreases the response time of some of our units into the area.

Thanks again for giving us an opportunity to provide input. If you have any questions or require any further assistance, please fell free to call me

Julian E. Jones, Jr., Division Chief
Operations Division
Anne Arundel County Fire Department
8501 Veterans Highway
Millersville, Md. 21108
443-336-1407

MARTIN O'MALLEY
GOVERNOR

ANTHONY G. BROWN
LT GOVERNOR

STATE OF MARYLAND
MARYLAND STATE POLICE

Barrack "P" Glen Burnie
6800 Aviation Boulevard
Glen Burnie, Maryland 21061-2597
410-761-5130

COLONEL
TERRENCE B. SHERIDAN
SUPERINTENDENT

August 11, 2009

Ms. Kameel Hall
State Highway Administration
Environmental Planning Division
Ref: Project No. AA510M11
MD 198 from MD 295 to MD 32

Dear Ms. Hall:

I have reviewed the proposed plans and alternatives for the roadwork/changes to be completed on MD 198 between MD 295 and MD 32. I do not anticipate that the proposed changes would cause any issues with emergency services provided by the MSP. MD 295 and the interchanges with MD 198 in that area are under the jurisdiction of the U.S. Park Police. MD 198, under an agreement between the MSP and the Anne Arundel County Police, is under the jurisdiction of the Anne Arundel County Police. While the MSP may use MD 198 as a possible route while responding to emergency calls, I do not believe the proposed changes would have any adverse affects on those responses.

Thank you for bringing this matter to my attention and requesting input from the MSP. Should you have further concerns, I can be reached at 410-761-5130.

Sincerely,

Kevin D. Hickey, Lieutenant
Commander
Glen Burnie Barrack

"Maryland's Finest"

ANNE ARUNDEL COUNTY
OFFICE OF EMERGENCY MANAGEMENT
Henry L. Hein Public Service Building
7480 Baltimore-Annapolis Blvd.
Glen Burnie, Maryland 21061
Telephone: 410-222-0600
FAX: 410-222-0690
http://www.aacounty.org

September 8, 2009

Ms. Elizabeth Habic
State Highway Administration
Maryland Department of Transportation

Re: Project # AA510M11

Dear Ms. Habic:

The Anne Arundel County Office of Emergency Management has reviewed the proposed alternatives regarding Project #AA510M11 (MD Rt. 198 from MD Rt. 295 to MD Rt. 32). We do not forsee any issues regarding emergency response under any of the proposed alternatives. The area in question has very limited service population and the proposed alternatives still allow for access by emergency vehicles.

Thank you for allowing us to provide our input and please contact this office if you have further questions or needs.

Sincerely,

Captain Eric Hodge
Director, Office of Emergency Management

"An All Hazards Response Organization, Committed to Your Safety"

Colonel James Teare, Sr.
Chief of Police

ANNE ARUNDEL COUNTY
MARYLAND

Police Department
8495 Veterans Hwy.
Millersville, MD 21108
(410) 222-8500
Fax #: 410-987-9167

John R. Leopold
County Executive

November 10, 2009

Elizabeth Habic
Environmental Planning Division
MD State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore MD 21202

Reference: Project No. AA510M11
(MD 198/ MD 295 Improvements)

Dear Ms. Habic,

Thank you for the opportunity to review the MD 198 Project Planning Study. The MD 198/MD 32 Interchange is critical to the Anne Arundel County Police Department's emergency responses to the Laurel area of the county. Obviously, any improvements or construction activities will have a direct impact to response times since it is the main route taken by officers to this area. After reviewing the proposed options, Alternative Four Option A would appear to have a positive impact on police responses to Laurel/MD 198 Corridor and accommodate concerns Fort Meade has regarding incoming traffic to the post. The existing configuration is considered a "choker" point when responding to emergencies to the Laurel area.

If I can assist you in any other way in this matter or if you have any further questions, please do not hesitate to contact me.

Corporal Brian Smith
Anne Arundel County Police Department
Western District Traffic Coordinator
(410) 222-6155

Nationally Accredited Law Enforcement Agency

From: Elizabeth Habic [mailto:EHabic@sha.state.md.us]
Sent: Tuesday, November 03, 2009 2:32 PM
To: warren_boyer@nps.gov
Cc: Kameel Hall; Kenya Lucas; Guerieri-Phillips, Deanna
Subject: MD 198: MD 295 to MD 32 Emergency Services

Lt. Boyer,

Thank you for your comments regarding the MD 198 project planning study and emergency service provisions along the corridor.

The SHA Travel Forecasting and Analysis Division has evaluated traffic back-ups related to the widening of MD 198 where the road exits at either end onto MD 295 and MD 32 and has provided the information below:

- The MD 198 project will clearly improve traffic operations on MD 198 itself, between MD 295 and MD 32. Without the improvements, the segment is projected to operate at Level of Service "F" in the design year of 2030 during both the AM and PM peak hours, with stop-and-go conditions anticipated. With the proposed widening, the segment is projected to operate at Level of Service "C," with traffic operating at free-flow conditions.
- There are two primary sources of new traffic projected along the MD 198 corridor: 1) BRAC traffic at Fort Meade, and 2) the proposed Arundel Gateway development. Both of these are expected to occur with or without the MD 198 widening.
- At the project endpoints, the proposed widening along MD 198 naturally ties in to existing conditions, without requiring lane drops.
    - At the east end of the project, MD 198 EB currently widens to two lanes approaching the MD 32 interchange. Under the proposed improvements, the new two-lane segment of MD 198 EB would simply continue to the MD 32 interchange. The MD 198 project also includes several alternatives to upgrade the MD 198/MD 32 interchange to improve traffic flow between MD 198 and MD 32.
    - At the west end of the project, MD 198 WB currently widens to two lanes approaching the MD 295 interchange. Under the proposed improvements, the new two-lane segment of MD 198 WB would simply continue through the MD 295 interchange. The MD 198 project also includes several minor upgrades to the MD 198/MD 295 interchange to improve traffic flow between MD 198 and MD 295.

If I have misinterpreted your comments or there are any questions please feel free to contact me.

Thank you,
Elizabeth

Elizabeth Habic
Environmental Planning Division
MD State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore MD 21202

Phone: 410-545-8563
Fax: 410-209-5004
Toll Free: 1-866-527-0502
E-mail: ehabic@sha.state.md.us

Appendix C: Environmental Justice Guidelines

DRAFT

ENVIRONMENTAL JUSTICE GUIDELINES

for

MD State Highway Administration's Projects

Rev. 7/18/01

I. INTRODUCTION

President Clinton issued Executive Order 12898 on February 11, 1994, which **reinforces the importance of fundamental rights and legal requirements contained in Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act. The Executive Order directs** that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations". Other documents which have been issued to further clarify the Executive Order are the US Department of Transportation's (DOT) Order on Environmental Justice, dated April, 1997; the Council on Environmental Quality's (CEQ) "Environmental Justice Guidance Under the National Environmental Policy Act", dated December, 1997; and the Federal Highway Administration's (FHWA) Order on Environmental Justice, dated December, 1998.

Maryland is committed to the principles of environmental justice (EJ) and will be assessing and documenting the impacts of transportation projects on minority and low-income populations as a normal part of our environmental analysis efforts. A key aspect of an EJ analysis is to ensure the involvement of affected communities in the project development process. These guidelines are meant to provide the project team with a consistent framework for both preparing an EJ analysis and developing an effective public involvement strategy. They contain only **principles and** general procedures, which means that the specific approach must be **tailored to the unique circumstances of each project and those communities affected by it.** If the procedures do not seem appropriate for a particular project, then the team should develop a more suitable approach.

The guidelines apply to projects requiring all types of NEPA documentation (Environmental Impact Statements, Environmental Assessments, Categorical Exclusions or environmental reevaluations). The identification of minority or low-income populations **actually** begins during **systems planning by the Metropolitan Planning Organization (MPO) or SHA's Regional and Intermodal Planning Division. This information will be used and supplemented during the environmental inventory and alternatives development phases of the project development process as additional data, analysis and public input are refined. Decision-makers will be better informed about the important issues and concerns of low income and minority populations to be considered along with other factors in determining project location, design and mitigation**. The EJ analysis **during project development** will be conducted concurrently with other technical environmental analyses during the Alternatives Retained for Detailed Study stage.

An EJ analysis must be completed for each build alternative. Additionally, the No-Build alternative must be carefully considered as well. For example, it's possible that not building transportation improvements could impact minority or low-income populations (i.e., increased noise or air pollution, limited access to employment, etc.). A clearly written description of all EJ findings must be included in the environmental document.

II. ENVIRONMENTAL JUSTICE AND TITLE VI

The EJ Executive Order supplements the existing requirements of Title VI of the Civil Rights Act. Title VI says that each Federal agency is required to ensure that no person on grounds of race, color, or national origin is excluded from participation in, denied the benefits of, or in any other way subjected to discrimination under any program or activity receiving Federal assistance. Supplemental legislation provides these same protections from discrimination based on sex, age, disability or religion.

The concept of environmental justice is intended to ensure that procedures are in place to further protect groups which have been traditionally underserved. **The fundamental principles of environmental justice are:**

- **To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.**
- **To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.**
- **To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.**

The major similarities and differences between the EJ Executive Order and Title VI are described below:

SIMILARITIES	DIFFERENCES
▪ Both address non-discrimination. ▪ Both capture minority populations. ▪ Both are rooted in the constitutional guarantee (14th Amendment) that all citizens are created equal and are entitled to equal protection. ▪ Both address involvement of impacted citizens in the decision-making process through meaningful involvement and participation.	▪ EJ covers minority and low-income, while Title VI and supplemental legislation cover race, color, national origin, sex, age, disability and religion. ▪ EJ is an executive order (an order of the President of the United States), while Title VI is a law (an act of Congress). ▪ EJ mandates a process, while Title VI prohibits discrimination.

A listing of existing laws and regulations addressing environmental justice and Title VI is included at the end of these guidelines.

III. DEFINITIONS

For your information, the following definitions are provided. They have been taken directly from the US DOT Order on Environmental Justice:

Low-Income
A person whose median household income is at or below the Department of Health and Human Services poverty guidelines.

Minority
A person who is:
(a) Black (a person having origins in any of the black racial groups of Africa);
(b) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
(c) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
(d) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition)

Low-Income Population
Any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

Minority Population
Any readily identifiable groups of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

Adverse Effects
The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:
- bodily impairment, infirmity, illness or death
- air, noise, and water pollution and soil contamination
- destruction or disruption of man-made or natural resources
- destruction or diminution of aesthetic values
- destruction or disruption of community cohesion or a community's economic vitality
- destruction or disruption of the availability of public and private facilities and services

- vibration
- adverse employment effects
- displacement of persons, businesses, farms, or nonprofit organizations
- increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community
- denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities

Disproportionately High and Adverse Effects on Minority and Low-Income Populations

An adverse effect that:

(a) is predominately borne by a minority population and/or a low-income population, or

(b) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population

IV. PUBLIC OUTREACH

Public involvement is the foundation to effectively integrating environmental justice concerns into transportation decision-making. It is not a separate task, but must be fully integrated within the full range of SHA processes. Outreach to the public is already a critical component of SHA's project development process (as outlined in the Maryland Action Plan); environmental justice simply requires us to ensure that minority and low-income populations are included in this public outreach.

The public can provide valuable input and assist in validating information obtained from secondary sources such as census data. They can play an integral role in identifying issues and concerns of their communities, cataloging community resources and past actions affecting their quality of life, suggesting project alternatives, and negotiating avoidance, minimization, mitigation, and enhancements.

A primary goal of environmental justice is to **engage** those groups traditionally underrepresented in the project development process. For each project, the team should proactively reach out to the minority or low-income communities identified during **systems planning and** the environmental inventory and alternatives development stages. It doesn't matter whether the study area is predominantly minority or low-income, or if there is only a small EJ community. Outreach is still required to get them involved in the project development process. This outreach effort begins early in the project (i.e., in the same time frame as focus group formation) and continues throughout the process. In order to be effective, your public involvement strategy **should be tailored** to use adaptive or innovative approaches that overcome linguistic, institutional,

cultural, economic, historical, or other potential barriers to effective participation in the decision-making process.

Each project team will need to develop its own outreach strategy thoughtfully, based on the characteristics of the particular study area. There is no 'cookie-cutter' approach, so each project may need to be treated somewhat differently.

Your goal should be to identify minority and low-income populations, bring them into the project development process, and ensure that **reasonable efforts are made to address their concerns and provide them meaningful opportunities to influence transportation decisions.** This doesn't mean that your project outreach is directed only toward EJ communities to the exclusion of other communities. The outreach strategies listed below can be applied to all communities, not strictly to EJ communities.

Listed below is a menu of possible tools and strategies which may be useful in identifying, contacting, and engaging the public in the project development process. Remember, you don't have to use all of these strategies; you should use only those which are appropriate for your project and study area:

- For the following agencies, organizations and/or stores, consider posting fliers and notices on bulletin boards; including information in church bulletins, homeowner association newsletters, etc.; offering to make project presentations; etc.:
    - homeowner/community associations
    - community action agencies
    - religious organizations (churches, etc.)
    - civil rights organizations
    - minority business associations
    - Chambers of Commerce
    - business and trade organizations (e.g., Washington Board of Trade)
    - environmental and environmental justice organizations
    - rural/agricultural organizations
    - ethnic stores/shops
    - universities, colleges, vocational and local schools
    - fraternities/sororities
    - senior citizen groups (e.g., senior centers, county Office of Aging)
    - community/recreational centers
- Publish ads and notices in newspapers, radio and other media, particularly media targeted to minority and low-income populations
- In addition to ads and notices, actively pursue having articles about the project published in local newspapers
- Publish ads not just in the legal section of the newspapers, but also in more 'popular' sections
- Include minority or low-income people on project focus groups
- Depending on the make-up of the particular project area, consider translating documents, notices and hearings for limited English-speaking populations

- For public meetings and brochures:
    - include a slide asking for input from minority and low-income communities
    - include wording in brochures soliciting input and information
- If at all possible, hold public meetings in locations that are accessible to transit
- Hold meetings at times and locations that are convenient for the attendees
- If appropriate, consider using an independent facilitator at community meetings, task force meetings, etc.
- Consider providing a minute-taker at key community meetings and providing copies of the minutes to attendees and other interested people
- Hold neighborhood open-houses or charrettes
- In any notices for EJ community meetings, ask if there are unique needs/concerns (i.e., interpreter, etc.)
- Consider adding wording in project Initiation Ads and/or project mail-back cards to solicit input on, and active involvement from, minority/low-income/other populations – wording would have to be sensitive to any perception of discrimination
- Use the internet and other electronic media (e.g., SHA/MDOT web-site, some colleges and local schools have web-sites with bulletin boards, local governments)
- Place public meeting/workshop brochures, fliers and newsletters in the management offices of apartment buildings occupied by minority or low-income people
- Provide public meeting/workshop brochures, fliers and newsletters at local festivals and fairs
- Post signs in buses
- Distribute public meeting notices at bus/Metro stops
- Post notices in local libraries
- Contact school PTAs – they may be willing to have a presentation at one of their regular meetings
- Conduct in-street interviews to identify local issues/concerns
- Set up informational kiosks in malls, libraries, etc.

- Possible innovative/unique ideas for atypical projects:
    - Open a project field office in a minority or low-income area
    - In addition to the normal workshops or informational meetings which provide information about the project as a whole, hold workshops with affected populations <u>by alternative</u> in order to focus more on the alternative having the most impact on them
    - Use questionnaires to identify concerns of affected populations (issues, impacts, benefits, etc.) Any questionnaire would have to be developed and distributed early, so that ample time would be available to compile, analyze and use the data.
    - Put out fliers and do a “road show” in communities, parks, festivals, malls, etc.

To keep impacted communities involved and informed during final design and construction, consider having a community representative attend certain team meetings, developing flyers/brochures, etc.

V. IDENTIFICATION OF MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

The identification of minority or low-income populations will begin during **systems planning by the Metropolitan Planning Organization (MPO) or SHA's Regional and Intermodal Planning Division. This information developed during planning will be used and supplemented during the project development process as additional data, analysis and public input are refined to be included in the NEPA document**. As more information becomes available and the alternatives are developed, the locations of populations will continue to be refined.

You need to be sensitive to the fact that you are identifying both minority and low-income populations, so don't just concentrate on minority communities. Also, remember that there are many wealthy minority communities and many poor non-minority communities.

A. Environmental Inventory

For environmental inventory purposes, the main sources of information regarding locations of minority or low-income populations are:

1. Census Data

Because census data is so readily available and easy to use, it is typically the first information gathered when trying to determine if there are minority or low-income populations in the project study area. However, census data is just the starting point used to "flag" census areas that potentially contain minority or low-income populations. You have to keep in mind that even census areas with a very small minority or low-income percentage may contain a protected population in your study area – in some cases, a group of a few homes could be considered a population. **"Disproportionately high and adverse effects", not size, are the basis for environmental justice. A very small minority or low-income population in the project area does not eliminate the possibility of a disproportionately high and adverse effect on these populations**. That's why it is critical to continue gathering additional information from various sources in order to successfully locate and refine the geographic locations of the populations.

a. Determine whether you will use census "tracts" or "blocks". Generally, data based on census tracts should be used for larger project areas. For smaller project areas (like intersection improvements), data based on the smaller census blocks would probably be more appropriate.

b. Once the project study area is determined, identify all census tracts/blocks which overlap with it.

c. Determine the minority or low-income percentage for each census tract/block.

1) Minority Percentage

If there is more than one minority group in your study area, the minority percentage should be based on the aggregate of all minority people. For example, if the percentage of Black persons in the identified census tract/block is 20% and the percentage of Hispanic persons is 20%, then the total of 40% should be used for the minority percentage.

2) Low-Income Percentage

Census data provides the percentage of people below the poverty level (but does not actually provide the dollar amount of that poverty level). The dollar amount is defined by the Department of Health and Human Services. **The data is revised annually and can be accessed at www.aspe.hhs.gov or www.census.gov**. In order to be sensitive to low-income communities, do not include the poverty level dollar amount in the environmental document; you should simply keep the information in your project files. Be sure to identify the poverty level associated with the year of the census data being used (e.g., if you are using 1990 census data, use the corresponding 1990 poverty level).

Keep in mind that local jurisdictions may define their own 'poverty level'; however, you are to use the poverty level defined by the Department of Health and Human Services in order to maintain consistency between various jurisdictions.

d. Calculate the average minority percentage and average low-income percentage for your entire study area by averaging the individual tract/block percentages.

e. Determine which census tracts/blocks should be "flagged" because they could contain minority or low-income populations by comparing the minority or low-income percentage of each individual census tract/block to the average percentage for the study area. If this individual percentage is "meaningfully greater" than the average percentage, then a minority or low-income population is potentially located within that census tract/block.

On a project-by-project basis, the project team should define "meaningfully greater" and document the rationale. For example, if the minority percentage for a census tract is 10% and the study area average is 5%, this 5% difference could be "meaningfully greater" because it represents a doubling of the average. However, if the minority percentage for a census tract is 75% and the study area average is 70%, this 5% difference is probably not "meaningfully greater" since it represents only a small increase over the average.

2. SHA and Other Agencies

The project team should use a common sense approach when determining what further level of effort is appropriate for identifying EJ populations. For example, if the census data tells you that your project is in a mostly minority area, you probably don't need to use the other sources discussed below to identify minority populations – in essence, your entire project area would be a minority population. (However, you would still need to go beyond just the census data to identify low-income populations.)

Even if a census tract/block has a very small percentage of minority or low-income persons - and is therefore not identified during Step 1 above - it is possible that a population(s) may still be located in that census tract/block. For example, a 5% Asian American population may be entirely located in one particular community, thus qualifying as a minority population. Therefore, <u>you cannot rely on census data alone to identify populations</u>.

At a minimum, you should also contact the following sources, via phone conversations, meetings (including project team meetings) or correspondence:

a. Local planning and transportation staff, including MPOs

b. State Highway Administration
   1) Regional and Intermodal Planning Division
   2) Office of Equal Opportunity
   3) District Right-of-Way Office

In any conversations with or letters to the above sources, you must be careful to include the following information so they understand why you are collecting EJ information. Information regarding the locations of EJ communities may raise sensitive issues, so you shouldn't just request locations of EJ communities without explaining why you need the information and what you will be doing with it.

- Provide the purpose/background of environmental justice (reference the Executive Order)
- Emphasize that you are looking for information on both minority and low-income populations – and that they are not the same thing
- Explain what the 4 minority groups are and what the poverty level is
- Request information on the location of minority or low-income populations, based on their knowledge of the project study area

B. Alternatives Development

After the environmental inventory stage, as preliminary/conceptual alternatives are developed, **other sources of information must be used to confirm and further refine the locations of minority and low-income populations. As described earlier, public involvement is a critical component to this effort**. The project team will need to determine, based on each particular project, which sources are appropriate to contact.

This contact can be made via formal written correspondence (letters, flyers, etc.), meetings/presentations, phone calls and/or e-mails – the team needs to determine which method is most appropriate for a particular source. Some sources, such as religious groups and schools, in addition to providing race and national origin information about the people attending their services or classes, may also be able to provide information about any low-income communities they may assist. Keep in mind that it's very important to maintain a record of all sources you contact, as well as the input each source provides to you.

Possible additional information sources include, but are not limited to:

- homeowner/community associations
- community action agencies
- religious organizations (churches, etc.)
- civil rights organizations
- Maryland Department of Planning (GIS and other data)
- state and local tax and financing agencies
- minority business associations
- Chambers of Commerce
- business and trade organizations (e.g., Washington Board of Trade)
- environmental and environmental justice organizations
- rural/agricultural organizations
- economic and job development agencies (e.g., Welfare to Work)

- ethnic stores/shops
- universities, colleges, vocational and local schools
- fraternities/sororities
- senior citizen groups (e.g., senior centers, county Office of Aging)
- community/recreational centers

NOTE: For purposes of a secondary and cumulative effects analysis (SCEA), census data only will be used to identify minority or low-income populations. Each census tract which overlaps with the SCEA geographic boundary should be identified. Then the individual minority and low-income percentages for each tract are to be compared to the average study area percentages as determined in Section V.A.1.d (you do not need to calculate the average percentages for the entire SCEA boundary). Those individual tracts with percentages meaningfully greater than the study area average percentage will be considered to have minority or low-income populations.

C. Documentation

In the "Affected Environment" section of the environmental document, you will need to carefully discuss your findings regarding minority and low-income populations. While the project files should include all details of your efforts to identify minority or low-income populations in the study area (letters written to agencies/organizations, phone memos, responses or non-responses, etc.), the environmental document should only provide a summary.

1. Clearly state whether minority or low-income populations have been identified in the project study area.

2. Describe how you concluded whether or not there are minority or low-income populations.

   a. describe the results of the census data assessment

   b. list all of the agencies, organizations and/or other groups which were contacted and describe how they were contacted (letter, phone call, meeting, etc.),

   c. summarize the responses received and/or issues identified

   The most effective way to display this information is in a matrix format.

3. If minority or low-income populations are identified, characterize them by describing their make-up, size, general location, age, etc. It's recommended that study area mapping showing all locations of EJ populations not be included in the environmental document.

VI. ASSESSMENT OF DISPROPORTIONATELY HIGH AND ADVERSE IMPACTS

The definition of adverse effects (see Section II) encompasses a wide variety of potential impacts, including those to human health, the natural and social environment, the economy, community function, etc. It also includes the denial, reduction or delay in receiving benefits, which should be addressed like any other impact. For an EJ analysis, you'll need to consider all of these.

There is no magic formula for determining if a minority or low-income community will experience disproportionately high and adverse impacts due to your project. Since each project – and each minority or low-income community – is different, the team will have to carefully consider many factors in making its determination. You will need to use an approach that combines both qualitative and quantitative information to support your conclusion.

Keep in mind that the EJ analysis must be done for each alternative, including the No-Build. The No-Build alternative is defined as no other improvements being done except maintenance to the existing road. Even under the No-Build, minority or low-income populations may be affected. Impacts such as increased noise, air pollution, congestion, travel times, etc. must be considered and documented appropriately.

One of the most important factors to consider is whether and how the community itself believes it will be impacted. What one community perceives as an impact, another may perceive as a benefit. It's also possible that, within the same community, the same action may be perceived by various segments as both an impact and a benefit. Therefore, it's imperative that you work with the EJ community to see how they feel about the project.

A. Analysis of Disproportionately High and Adverse Effects

Since a one-size-fits-all approach won't work, the team will need to address a variety of questions and considerations in order to conclude if the project will have disproportionately high and adverse impacts (including denial, reduction or delay in receiving benefits) on an EJ population. You will, in essence, be assessing the context and intensity of effects on EJ populations as compared to non-EJ populations.

You will need to carefully consider all of the items below, since no single item will lead to a supportable conclusion:

1. Is the adverse effect <u>predominantly borne by</u> the EJ population? For example, are more minority or low-income people impacted than non-minority or non-low-income people? Is the percentage of minority or low-income people impacted greater than the percentage of minority or low-

income people in the study area? Be very cautious when using numbers like this, since numbers alone can be misleading.

2. Will the adverse effect on the EJ population be appreciably more severe or greater in magnitude than the adverse effect on the non-minority or low-income population? In other words, will the EJ population carry an unfair share of the impact? For example, if ten EJ residences and ten non-EJ residences will each experience noise levels above the federal standard, but noise at the EJ residences will increase by 20 decibels and noise at the non-EJ residences will increase by 10 decibels, there may be a disproportionate impact.

3. Does the project impact a resource that is especially important to an EJ populations? Does it serve an especially important social, religious or cultural function for the EJ community? For example, is a park which is used regularly for cultural festivals being impacted by the project?

4. Are there mitigation, enhancement measures or offsetting project benefits (see Section VI) to the affected EJ population? These should be taken into account when assessing if there are disproportionately high and adverse effects.

5. Have you assessed the type and severity of adverse effects on non-EJ populations? In order to determine if there are disproportionately high and adverse effects on EJ populations, you will have to take into consideration the comparative impacts in non-EJ areas.

Keep in mind that, while the identification of a disproportionately high and adverse effect on a low-income or minority population does not preclude the project from going forward, it should heighten our attention to alternatives (including alternative sites), mitigation strategies, monitoring needs and preferences expressed by the affected community or population.

Note: In the SCEA, you will need to consider the same questions and considerations listed above in order to determine if there are disproportionately high and adverse effects on EJ populations within the SCEA boundary.

B. Documentation

Your conclusions regarding impacts on minority or low-income populations must be thoroughly explained in the “Environmental Consequences” section of the environmental document.

1. The final environmental document should clearly conclude whether or not a disproportionately high and adverse impact on any minority or low-income population is likely to result. This conclusion must be reached for

each alternative, including the No-Build. Remember to take into account mitigation, enhancement measures or offsetting project benefits (see Section VI) to the affected EJ population.

2. Whether or not an alternative results in disproportionately high and adverse impact on minority or low-income populations, you need to supply supporting information to document how you reached that conclusion for each alternative – you have to "make your case".

   a. Present the analysis you completed and the issues you considered in order to reach your conclusions as concisely as possible. Include a description of impacts (type and severity), any offsetting benefits and mitigation/enhancements, comparison of impacts on EJ and non-EJ populations, etc.

   b. Document the efforts made to interact with the affected communities, the issues/concerns they identified, results of the interaction, etc. Examples of interaction could include meetings to determine whether a community considers a project's effects to be impacts or benefits, correspondence discussing potential mitigation or enhancement measures, etc. A helpful way to present this information would be in a matrix format, which should be included in the appendix of the environmental document. The information in the matrix could include meeting dates, correspondence dates, responses received, issues/concerns identified by the community, etc. You may also want to include copies of important minutes in the appendix.

   c. When mapping is necessary in order to clearly illustrate the effect of a project on an EJ population, mapping may be included in the environmental document; otherwise, document the impacts textually. If possible, you should refer to existing alternatives mapping rather than develop special mapping. Remember to be sensitive to the concerns of the affected communities when determining what type of mapping, if any, will be provided.

VII. AVOIDANCE, MINIMIZATION, MITIGATION AND ENHANCEMENT

If you determine that your project appears to have a disproportionately high and adverse impact on a minority or low-income population, you will then need to consider how the magnitude and severity of the impact can be prevented or reduced. The approach is first to avoid impacts if possible, then minimize impacts, then mitigate unavoidable impacts. Enhancements should also be considered. The definitions of

these terms and examples (from the Federal Highway Administration's "Community Impact Assessment" booklet) are provided below:

A. Definitions

1. avoid – to alter a project so an impact does not occur (i.e., shift an alignment to avoid displacements, redesign a road segment as an underpass to avoid cutting off access to a community facility, etc.)

2. minimize – to modify the project to reduce the severity of an impact (i.e., shift an alignment to reduce displacements, alter an alignment to increase the distance between the facility and residences to decrease noise impacts, phase the project to minimize impedance to business access during peak shopping periods, limit interchanges to minimize incompatible land use development, etc.)

3. mitigate – to take an action to alleviate or offset an impact or to replace an appropriated resource (i.e., set aside land for a park or add to public recreation areas to replace lost facilities, erect sound barriers to mitigate noise impacts, provide a bicycle/pedestrian overpass or underpass to provide access to public facilities, etc.)

4. enhance – to add a desirable or attractive feature to the project to make it fit more harmoniously into the community; this will <u>not</u> replace lost resources or alleviate project impacts (i.e., provide signing to recognize specific cultural or historic resources, develop bicycle trails or pathways adjacent to roadways, plant trees and add park benches, add public artwork or a façade to a transportation facility to match the aesthetic design goals of the community, etc.)

B. Considerations in Determining Appropriate Avoidance, Minimization, Mitigation and Enhancement Measures

1. Remember to take mitigation, enhancements and project benefits into account when you are assessing if there will ultimately be a disproportionately high and adverse impact on an EJ population.

2. Another important consideration is the fairness in distribution of avoidance, minimization, mitigation and enhancement measures between EJ and non-EJ communities. When considering these measures for an EJ community vs. the entire project area, keep in mind that the measures should be proportional to the level of impact on each.

3. A disproportionately high and adverse effect on an EJ population can only be carried out if further avoidance, minimization and mitigation measures are not practicable. In determining whether a measure is 'practicable', the

social, economic (including costs) and environmental effects of avoiding, minimizing or mitigating the adverse effects can be taken into account.

You can use experience on other projects to determine what measures may be considered practicable. You should also take into account the nature and severity of the disproportionate impacts when determining what is practicable. For example, it may be appropriate to go beyond 'the norm' depending on how disproportionate the impact is.

Throughout this effort, keep in mind that you may be able to eliminate, reduce or mitigate the initial disproportionate impacts to such a degree that the impacts to the EJ population are now proportional.

C. Coordination with the Impacted EJ Community

The most important consideration in developing avoidance, minimization, mitigation and enhancement measures is how the impacted EJ community feels about them. Throughout the process, you must consult with and elicit the views of the affected populations. Otherwise, you might unknowingly propose a mitigation measure which impacts the community in a different way. Also, if the same community is composed of various minority groups or income levels, each component may have separate (and possibly conflicting) issues or concerns to be considered by the project team.

You should be encouraging the members of the EJ communities that may suffer a disproportionately high and adverse impact to help develop and comment on possible avoidance/minimization alternatives as early as possible in the process.

In addition to community meetings and correspondence, you may want to consider using community questionnaires to solicit input on proposed mitigation and enhancement strategies and to suggest their own strategies, based on the EJ community's perception of impacts. Any questionnaire would have to be developed and distributed early, so that ample time would be available to compile, analyze and use the data.

Once you have worked with the affected EJ communities to determine the appropriate avoidance, minimization, mitigation and enhancement measures, you should continue to keep them informed about the project status and progress throughout the design and construction phases.

D. Possible Mitigation Strategies (to be coordinated with the affected community):

- Keep the impacted minority or low-income population informed (status, progress, design changes, etc.) during final design and construction of the project; this could be accomplished by posting/mailing notices, meeting with

the community, having a community representative serve a liaison role and attend construction partnering meetings, etc.
- Provide noise walls (appropriateness to be discussed with Noise Committee)
- Provide landscaping/visual screening
- Provide lighting
- Provide sidewalk improvements
- Provide multi-modal improvements (i.e., bus shelters, bicycle/pedestrian facilities)
- Build or rehabilitate community parks or recreation centers
- If relocations are required, attempt to relocate to the same area if possible to preserve community cohesiveness

Even when SHA has no responsibility to mitigate impacts not caused by the project, we may encourage other public/private groups to partner together to improve the quality of life in EJ communities.

E. Documentation

For each alternative, you will need to clearly explain in the "Environmental Consequences" section of the environmental document any avoidance, minimization, mitigation and enhancement measures which have been adopted.

1. Document the strategies taken to reduce, avoid or mitigate impacts to EJ communities. The discussion of these strategies should be clearly 'linked' to the associated community impacts. If appropriate, include a discussion of how these strategies helped turn a disproportionate adverse impact into a proportionate adverse impact.

2. Include a summary of the public interaction used to develop and/or review the various strategies.

3. If necessary in order to clearly illustrate the strategies and results, mapping may be included in the environmental document; otherwise, document the information textually.

Once mitigation commitments have been made in the final environmental document, they are to be recorded in the Environmental Compliance and Considerations Checklists and discussed at the project transition meeting between the planning and design divisions. Planning staff will continue to be involved in the project during final design to ensure that the commitments are incorporated into the construction documents.

EXISTING LAWS AND REGULATIONS

- Environmental Justice Executive Order 12898
- US DOT EJ Order, April 1997
- FHWA EJ Order, December 1998
- Title VI Act of 1964
- **23 USC 109(h)**
- US DOT Title VI Regulations [49 CFR 21.5 (b)(2)(3)] - addresses contracts and site selections
- Civil Rights Restoration Act of 1987
- National Environmental Policy Act of 1969
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- 23 USC 324 – addresses discrimination on the basis of sex
- Section 504 of the Rehabilitation Act of 1973 (29 USC 790) – addresses discrimination of the basis of disability
- Age Discrimination Act of 1975 (42 USC 6101) – addresses discrimination on the basis of age
- Fair Housing Act of 1988 - addresses discrimination on the basis of religion
- Religious Freedom Restoration Act of 1993 - addresses discrimination on the basis of religion
- **23 CFR 450 - FHWA Planning Regulations**
- **23 CFR 771 - FHWA Environmental Regulations**

ADDITIONAL SOURCES OF INFORMATION

"Community Impact Assessment: A Quick Reference for Transportation" (FHWA, 9/96)

"Community Impact Mitigation Case Studies" (FHWA, 5/98)

"Transportation & Environmental Justice Case Studies" (FHWA, 12/00)

"Assistance for Reviewing the Application of Title VI and Environmental Justice in the Transportation Planning Process" (FHWA, 2001)

"Environmental Justice Guidance Under the National Environmental Policy Act" (CEQ, 12/97)

"Environmental Policy Statement" (FHWA, 1994)

"EPA Guidance for Consideration of Environmental Justice in Clean Air Act Section 309 Review" (EPA, 4/98)

OMB Bulletin 00-02, "Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement" (OMB, 3/00)

Technical Advisory 6640.8A "Guidance for Preparing and Processing Environmental and 4(f) Documents" (FHWA, 10/87)

FHWA Environmental Justice web site: www.fhwa.dot.gov/environment/ej2.htm

Appendix D: Uniform Relocation Assistance Program

SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE MARYLAND STATE HIGHWAY ADMINISTRATION

All State Highway Administration projects utilizing Federal funds must comply with the provisions of the Uniform Relocation and Real Property Acquisition Policies Act of 1970 (42 USC 4601) as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), Public Law 105-117 in 1997, and Title 49 CFR Part 24 in 2005. State-funded projects must comply with Sections 12-112 and Subtitle 2, Sections 12-201 to 12-212, of the Real Property Article of the Annotated Code of Maryland.

The State Highway Administration's Office of Real Estate administers the Relocation Assistance Program for the Maryland Department of Transportation.

The aforementioned Federal and State laws require that the State Highway Administration provide relocation assistance payments and advisory services to eligible persons who are displaced by a public project. There are two categories of residential occupants: 180-day owner-occupants and 90-day tenants and short-term owner-occupants. Non-residential occupants may be businesses, farms or non-profit organizations.

A displaced person that has owned and occupied a subject dwelling for at least 180 days prior to the initiation of negotiations for the property may receive a replacement housing payment of up to $22,500. The replacement housing payment is composed of three parts: a purchase price differential; an increased mortgage interest differential; and reimbursement for incidental settlement expenses.

The purchase price differential is the difference between the value paid by the State Highway Administration for the existing dwelling and the cost to the displaced owner of a comparable replacement dwelling, as determined by the State's replacement housing study.

The increased mortgage interest differential is a payment made to the owner at the time of settlement on the replacement dwelling to negate the effects of less favorable financing in the new situation. The payment is calculated by use of the "buy-down" mortgage method.

Reimbursable incidental expenses are necessary and reasonable incidental costs that are incurred by the displaced person in purchasing a replacement dwelling, excluding pre-paid expenses such as real estate taxes and insurance. The maximum reimbursable amount for these incidental expenses is based upon the cost of the comparable selected in the replacement housing study.

A displaced person who has leased and occupied a subject dwelling for at least 90 days prior to the initiation of negotiations for the property may receive a replacement rental housing payment of up to $5,250. The replacement rental housing payment is the difference between the

monthly cost of housing for the subject dwelling, plus utilities, and the monthly cost of housing for a comparable replacement rental unit, plus utilities, over a period of 42 months. Owner-occupants of 90-179 days prior to the initiation of negotiations for the subject dwelling are eligible for the same replacement rental housing payments as tenants.

As an alternative to renting, a displaced tenant-occupant may elect to apply the rental replacement housing eligibility amount toward the down payment needed to purchase a replacement dwelling.

The comparable properties used in calculating any replacement housing payment eligibility must comply with all local standards for decent, safe and sanitary (DS&S) housing and be within the financial means of the displaced person.

If affordable, comparable DS&S replacement housing cannot be provided within the statutory maximums of $22,500 for 180-day owner-occupants or $5,250 for 90-day tenants or short-term owners, the maximums may be exceeded on a case-by-case basis. This may only be done after the completion and approval of a detailed study that documents the housing problem, explores the available replacement options and selects the most feasible and cost-effective alternative for implementation.

In addition, eligible displaced residential occupants may be reimbursed for the expense of moving personal property up to a maximum distance of fifty (50) miles, using either an actual cost or fixed schedule method.

Actual cost moves are based upon the lower of at least two commercial moving estimates and must be documented with receipted bills or invoices. Other incidental moving expenses, such as utility reconnection charges, may also be paid in the same manner.

As an alternative method, the fixed schedule move offers a lump sum, all-inclusive payment based upon the number of rooms to be moved. Other incidental costs are not separately reimbursable with this method.

Non-residential displaced persons such as businesses, farms or non-profit organizations may also receive reimbursement for the expense of relocating and re-establishing operations at a replacement site on either an actual cost or fixed payment basis.

Under the actual cost method, a non-residential displaced person may receive reimbursement for necessary and reasonable expenses for moving its personal property, the loss of tangible personal property that is not moved, the cost of searching for a replacement site and a re-establishment allowance of up to $10,000.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Payments for the actual reasonable expenses are limited to a 50-mile radius unless the State determines a longer distance is necessary. The expenses claimed for actual cost moves must be supported by firm bids and receipted bills. An inventory of the items to be moved must be prepared in all cases. In self-moves, the State will negotiate an amount for

payment, usually lower than the lowest acceptable bid. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business vehicles or equipment, wages paid to persons who participate in the move, the cost of actual supervision of the move, replacement insurance for the personal property moved, costs of licenses or permits required and other related expenses.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses.

If the business elects not to move or to discontinue the use of an item, the payment shall consist of the lesser of: the fair market value of the item for continued use at the displacement site, less the proceeds from its sale; or the estimated cost of moving the item.

If an item of personal property which is used as part of a business or farm operation is not moved and is promptly replaced with a substitute item that performs a comparable function at the replacement site, payment shall be the lesser of: the cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item; or the estimated cost of moving and reinstalling the replaced item.

In addition to the moving payments described above, a business may be eligible for a payment up to $10,000 for the actual reasonable and necessary expenses of re-establishing at the replacement site. Generally, re-establishment expenses include certain repairs and improvements to the replacement site, increased operating costs, exterior signing, advertising the replacement location, and other fees paid to re-establish. Receipted bills and other evidence of these expenses are required for payment. The total maximum re-establishment payment eligibility is $10,000.

In lieu of all moving payments described above, a business may elect to receive a fixed payment equal to the average annual net earnings of the business. This payment shall not be less than $1,000 nor more than $20,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage; the business is not part of a commercial enterprise having more than three other establishments in the same or similar business that are not being acquired; and the business contributes materially to the income of a displaced owner during the two taxable years prior to the year of the displacement. A business operated at the displacement site solely for the purpose of renting to others is not eligible. Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expense payment, the average annual net earnings of the business is to be one-half of the net earnings before taxes during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State may use another two-year

period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, owner's spouse, or dependents during the period. Should a business be in operation less than two years, the owner of the business may still be eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earnings, such as income tax returns, or certified financial statements, for the tax years in question.

Displaced farms and non-profit organizations are also eligible for actual reasonable moving costs up to 50 miles, actual direct losses of tangible personal property, search costs up to $2,500 and re-establishment expenses up to $10,000 or a fixed payment "in lieu of" actual moving expenses of $1,000 to $20,000. The State may determine that a displaced farm may be paid a minimum of $1,000 to a maximum of $20,000 based upon the net income of the farm, provided that the farm has been relocated or the partial acquisition caused a substantial change in the nature of the farm. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization is eligible to receive a fixed payment or an "in lieu of" actual moving cost payment, in the amount of $1,000 to $20,000 based on gross annual revenues less administrative expenses.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms and non-profit organizations is available in the brochure entitled, "Relocation Assistance – Your Rights and Benefits," that will be distributed at the public hearing for this project and be given to all displaced persons.

Federal and State laws require that the State Highway Administration shall not proceed with any phase of a project which will cause the relocation of any persons, or proceed with any construction project, until it has furnished satisfactory assurances that the above payments will be provided, and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means, or that such housing is in place and has been made available to the displaced persons.

In addition, the requirements of Public Law 105-117 provides that a person who is an alien and is not lawfully present in the United States shall not be eligible for relocation payments or other assistance under the Uniform Act. It also directed all State displacing agencies that utilize Federal funds in their projects to implement procedures for compliance with this law in order to safeguard that funding. To this end, displaced persons will be asked to certify to their citizenship or alien status prior to receiving payments or other benefits under the Relocation Assistance Program.

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