

## 5 DRAFT SECTION 4(F) EVALUATION

### 5.1 Introduction

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966 as amended (49 U.S.C. 303(c)) (Section 4(f)) is a Federal law that protects significant publicly-owned parks, recreation areas, wildlife and/or waterfowl refuges, or any significant public or private historic sites. Section 4(f) applies to all transportation projects that require funding or other approvals by the USDOT. As a USDOT agency, FHWA must comply with Section 4(f) and its implementing regulations at 23 CFR 774. The *Draft Section 4(f) Evaluation (Appendix F)* in this Draft Environmental Impact Statement (DEIS) follows established USDOT regulations at 23 CFR 774, FHWA's 2012 *Section 4(f) Policy Paper*, and 23 U.S.C. 138 and 39 U.S.C. 303.

Regulations at 23 CFR 774.17 define a Section 4(f) property as "publicly-owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance." 23 CFR 774.17 further defines "Historic site" to include any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

Section 4(f) stipulates that the USDOT, including the FHWA, cannot approve a transportation project that uses Section 4(f) property, unless FHWA determines that:

- There is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3(a)(1) and (2)); or
- The use of the Section 4(f) properties, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancements measures) committed to by the applicant, will have a *de minimis* impact on the property (23 CFR 774.3(b)).

The *Draft Section 4(f) Evaluation* found in **Appendix F** and summarized below describes Section 4(f) properties identified within the corridor study boundary; discusses potential impacts or use of the properties; evaluates potential feasible and prudent avoidance alternatives; analyzes least overall harm alternatives; and through a discussion of all possible planning, presents measures to minimize harm and mitigate for impacts to and the use of Section 4(f) properties.

### 5.2 Use of Section 4(f) Properties

Pursuant to 23 CFR 774.17, a "use" of Section 4(f) property occurs:

When land is **permanently incorporated** into a transportation facility;

(ii) When there is a **temporary occupancy** of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in 23 CFR 774.13(d); that is, when one of the following criteria for temporary occupancy are not met:

The duration of the occupancy must be less than the time needed for the construction of the project, and no change of ownership occurs;

Both the nature and magnitude of the changes to the Section 4(f) land are minimal;

No permanent adverse physical changes, nor interference with activities or purposes of the resources on a temporary or permanent basis, are anticipated;

The land must be returned to a condition that is at least as good as existed prior to the project; and

There is documented agreement with the appropriate Federal, State, or local officials having jurisdiction over the land that the above conditions have been met.

(iii) When there is a **constructive use** of a Section 4(f) property.

As defined in 23 CFR 774.15, a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. The degree of impact and impairment must be determined in consultation with the Officials with Jurisdiction in accordance with 23 CFR 774.15(d)(3).

Refer to **Appendix F, Section 1.2.2 A** for a preliminary analysis of constructive use.

### 5.2.1 Exceptions to Section 4(f) Use

FHWA has identified various exceptions to the requirement of Section 4(f) approval. Exceptions to Section 4(f) use are found in 23 CFR 774.11 and 774.13 and are discussed in the *Draft Section 4(f) Evaluation (Appendix F, Section 1.2.6)*. Ten Section 4(f) properties listed in **Table 5-3**, including six archaeological sites, would experience an impact from the Study and meet the exception to Section 4(f) use criteria. Additional information on the impacts to these properties and why they qualify as exceptions to Section 4(f) is located in **Appendix F, Section 2**.

### 5.2.2 De Minimis Impact

An impact to a significant public park, recreation area, or wildlife and waterfowl refuge may be determined to be *de minimis* if the use of the Section 4(f) property, including incorporation of any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f) (23 CFR 774.3(b), 23 CFR 774.5(b), and 23 CFR 774.17).

For historic sites, a *de minimis* impact means that FHWA has received written concurrence from the pertinent State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THP), and from the Advisory Council on Historic Preservation (ACHP) if participating, a finding of “no adverse effect” or “no historic properties affected” in accordance with 36 CFR Part 800. FHWA is required to inform these officials of its intent to make a *de minimis* impact determination based on their concurrence in the finding (36 CFR 774.5(b)(1)(ii)). On March 12, 2020, Maryland Historical Trust (MHT) concurred with MDOT SHA’s determination of effects on historic properties. MHT also provided written acknowledgement of FHWA’s intent to make *de minimis* impact determinations.

A *de minimis* impact determination does not require analysis to determine if avoidance alternatives are feasible and prudent, but consideration of avoidance, minimization, mitigation or enhancement measures should occur. Upon fulfilling the requirements set forth in 23 CFR 774.5(b), FHWA intends to make Section 4(f) *de minimis* impact findings for the 36 properties listed in **Table 5-2**. A full description and analysis of the 36 Section 4(f) properties that would experience a *de minimis* impact is found in **Appendix F, Sections 2.1, 2.2, and 2.4**.

### 5.3 Proposed Action

For purposes of the *Draft Section 4(f) Evaluation*, the **Proposed Action** includes the six Build Alternatives retained for detailed study in the DEIS: Alternatives 8, 9, 9M, 10, 13B, and 13C. These alternatives, as described in **Chapter 2, Section 2.6**, include managed lanes that differ in the manner in which the proposed travel lanes would be designated and configured. The limits of disturbance (LOD) are the same on I-495 for each of the Build Alternatives, except for Alternative 9M between I-270 West Spur and the I-95 Interchange. Therefore, the Section 4(f) use will be the same for each of these Build Alternatives on I-495, except along the top side of I-495 under Alternative 9M. The difference in Section 4(f) use for resources along I-495 is described in the evaluation, when applicable. The LODs for the Build Alternatives differ slightly on I-270 due to the existing High Occupancy Vehicle (HOV) system. The differences in Section 4(f) use for resources along I-270 is described in the evaluation, where applicable.

### 5.4 Officials with Jurisdiction

In the case of public parks, recreation areas, and wildlife and waterfowl refuges, the Officials with Jurisdiction are the officials of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property. There are eight Officials with Jurisdiction over parkland in the study corridor: National Park Service (NPS); Maryland-National Capital Park and Planning (M-NCPPC), Montgomery Parks; Maryland-National Capital Park and Planning, Prince George's County; Montgomery County Public Schools Board of Education; City of Gaithersburg; City of Greenbelt; City of New Carrollton; and City of Rockville. The Officials with Jurisdiction over historic sites are the MHT in Maryland and the Virginia Department of Historic Resources (VDHR) in Virginia. The ACHP is also an official with jurisdiction over historic sites when they are involved in Section 106 consultation. NPS is the official with jurisdiction over National Historic Landmarks (NHL).

Some public parks, recreation areas, and wildlife and waterfowl refuges are also historic properties that are either listed in or eligible for listing in the NRHP. In other cases, historic sites are located within the property boundaries of public parks, recreation areas, and wildlife and waterfowl refuges. When either of those situations exists, there will be more than one Official with Jurisdiction. **Appendix F, Section 1.2.1** provides more information on the Officials with Jurisdiction including roles and responsibilities.

### 5.5 Section 4(f) Properties

MDOT SHA established a corridor study boundary that extends 300 feet to either side of the existing right-of-way along I-495 and I-270. Within the corridor study boundary, 111 Section 4(f) properties were inventoried consisting of national parks, county and local parks, parkways, stream valley units of larger park facilities, local neighborhood parks, and historic sites that are listed in or eligible for listing in, the NRHP (refer to **Figures 5-1** through **5-3**).

Of the 111 Section 4(f) properties identified in the corridor study boundary, 43 would be avoided (**Table 5-1**) 68 would experience an impact as a result of the Proposed Action. Those impacted Section 4(f) properties that do not qualify as exceptions to a Section 4(f) use are listed in **Table 5-2**. Of these 68 properties, 22 would experience a use that warrants an Individual Section 4(f) Evaluation. FHWA intends to apply *de minimis* impact findings at 36 properties because many of the anticipated uses of Section 4(f) properties consist of minor impacts along the edge of the properties in question adjacent to the existing transportation facility. Such impacts would not affect characteristics that contribute to the significance of historic sites or recreational amenities and features of those properties. The impacts to the ten Section

4(f) properties listed in **Table 5-3** meet the criteria of exceptions to a Section 4(f) use. Descriptions of the Section 4(f) properties that would experience an impact from the Proposed Action are provided in the *Draft Section 4(f) Evaluation (Appendix F, Section 2.1, page 28)*.

During final design, certain uses of Section 4(f) property may be determined to be temporary in nature, as related solely to the construction phase of the proposed action. Currently there is not enough information to make such a determination. For purposes of the *Draft Section 4(f) Evaluation*, all impacts to Section 4(f) property are assumed to be permanently incorporated into the transportation facility.



Figure 5-1: Inventory of Section 4(f) Property in the Corridor Study Boundary (Map 1 of 3)

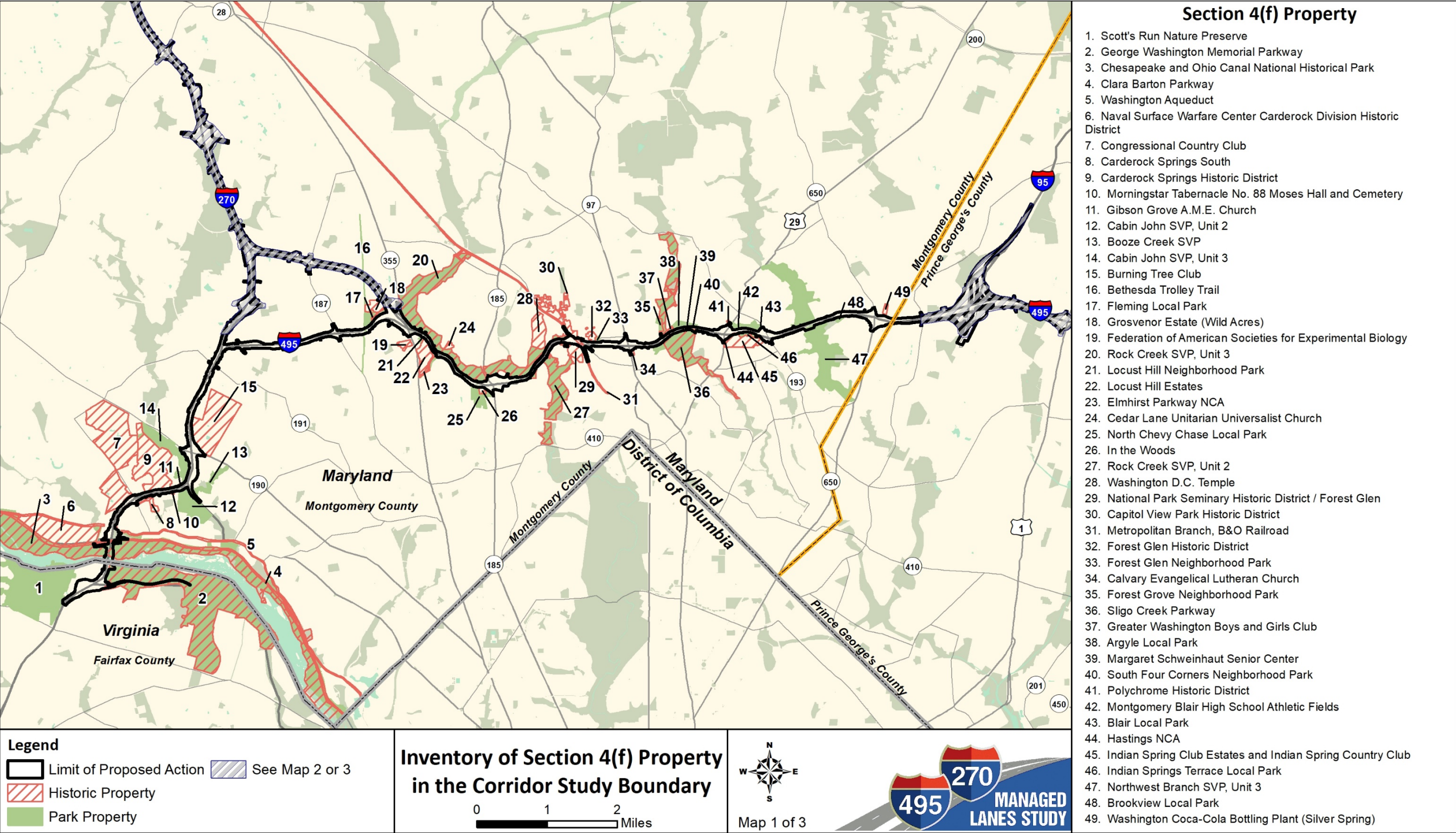




Figure 5-2: Inventory of Section 4(f) Property in the Corridor Study Boundary (Map 2 of 3)

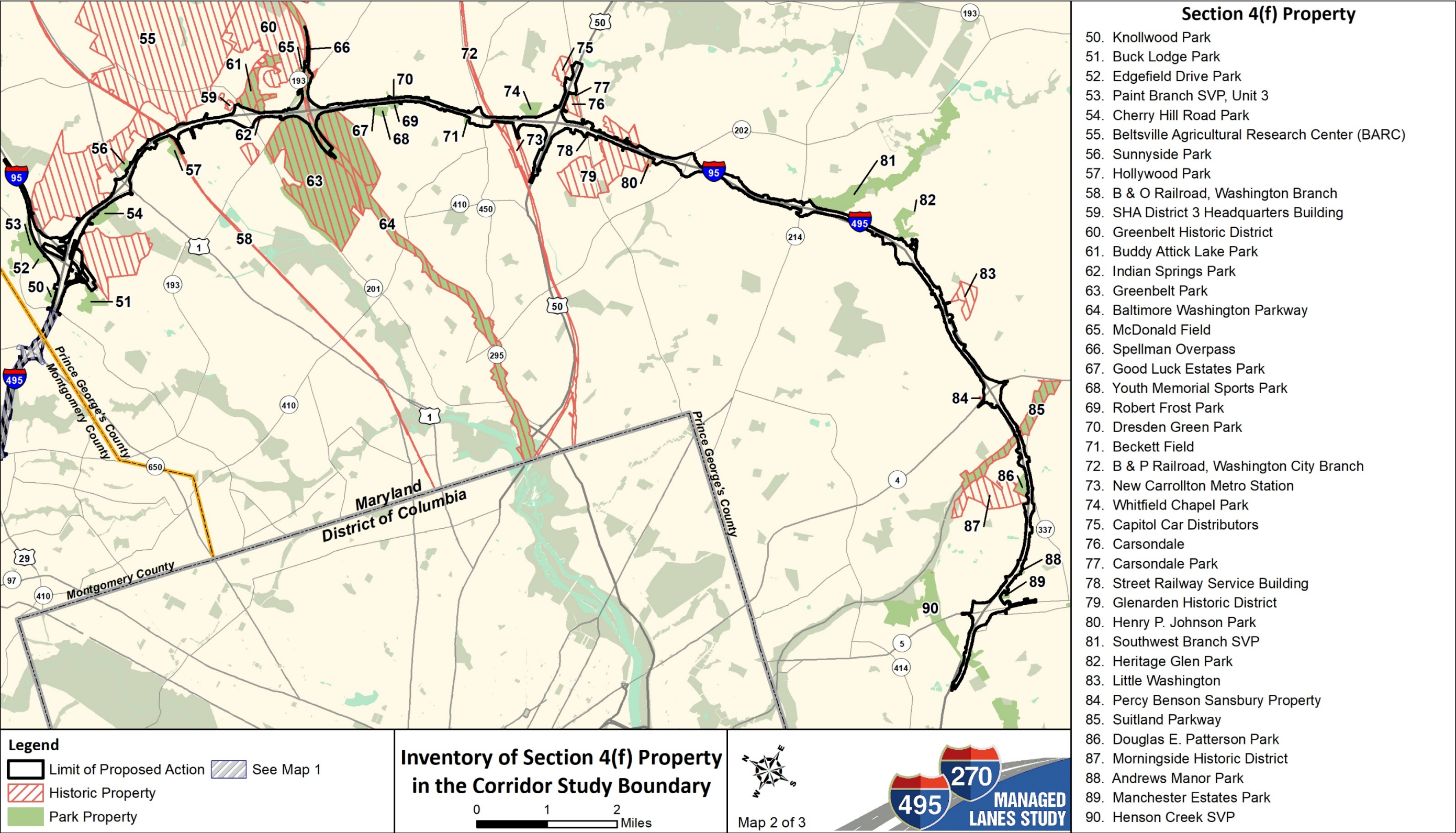
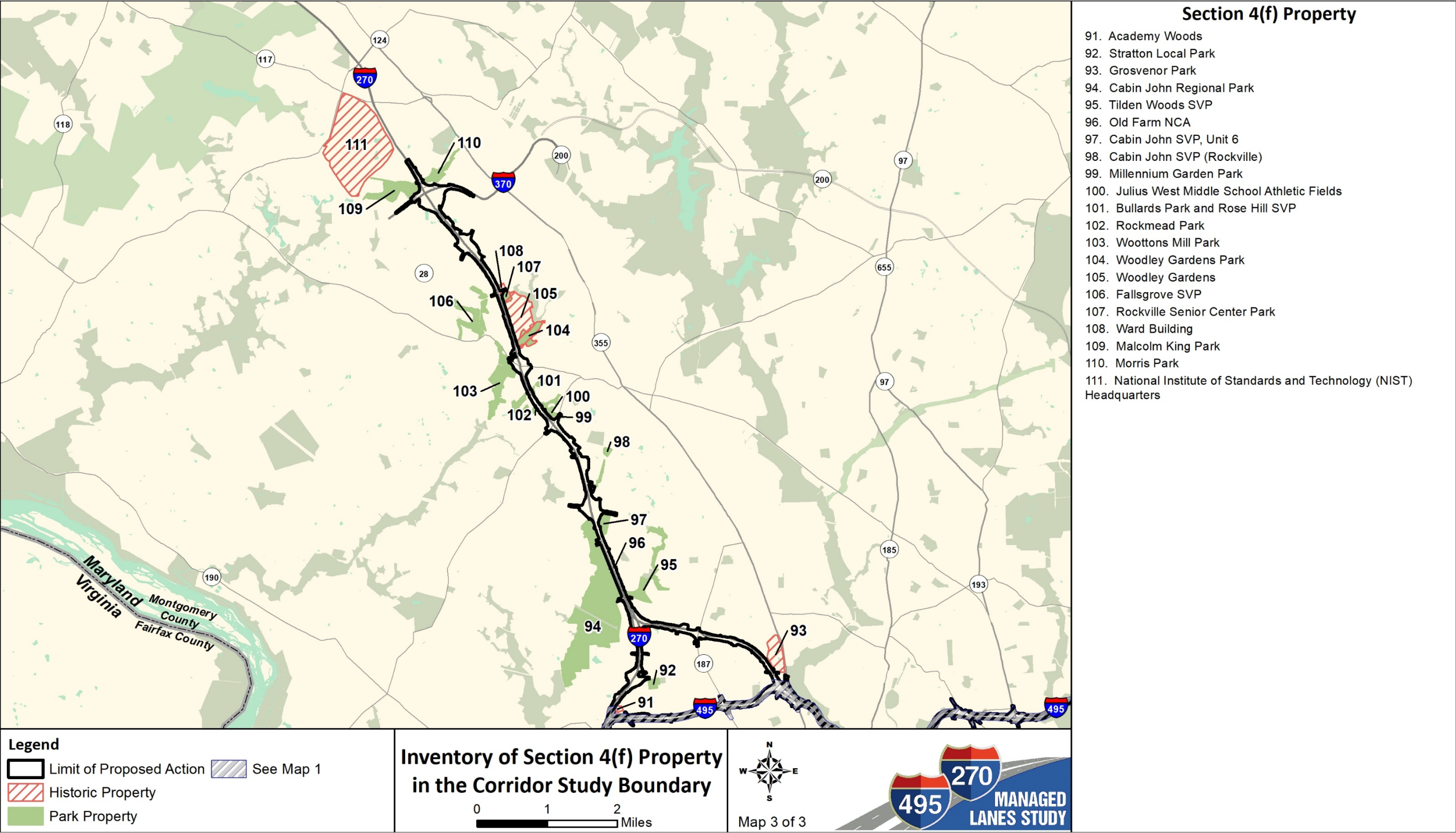




Figure 5-3: Inventory of Section 4(f) Property in the Corridor Study Boundary (Map 3 of 3)



**Table 5-1: Inventory of Section 4(f) Properties that Would Not Experience a Use**

Map ID	Section 4(f) Property	Size (Acres)	Official with Jurisdiction	Type of Section 4(f) Property
1	Scott's Run Nature Preserve	336.0	Fairfax County	Public Park
5	Washington Aqueduct	163.0	MHT, NPS	Historic Site (NHL)
6	Naval Surface Warfare Center Carderock Division Historic District	30.3	MHT	Historic Site
7	Congressional Country Club	31.8	MHT	Historic Site
8	Carderock Springs South	18.6	MHT	Historic Site
9	Carderock Springs Historic District	146.0	MHT	Historic Site
11	Gibson Grove A.M.E. Church	0.4	MHT	Historic Site
13	Booze Creek SVP	24.1	M-NCPPC	Public Park
14	Cabin John SVP, Unit 3	50.0	M-NCPPC	Public Park
19	Federation of American Societies for Experimental Biology	11.4	MHT	Historic Site
22	Locust Hill Estates	47.0	MHT	Historic Site
23	Elmhirst Parkway Neighborhood Conservation Area (NCA)	7.6	M-NCPPC	Public Park
24	Cedar Lane Unitarian Universalist Church	6.3	MHT	Historic Site
25	North Chevy Chase Local Park	30.9	M-NCPPC	Public Park
26	In the Woods	1.9	MHT	Historic Site
28	Washington DC Temple	31.7	MHT	Historic Site
30	Capitol View Park Historic District	124.0	MHT	Historic Site
35	Forest Grove Neighborhood Park	7.0	M-NCPPC	Public Park
38	Argyle Local Park	8.8	M-NCPPC	Public Park
39	Margaret Schweinhaut Senior Center	8.9	M-NCPPC	Public Park
41	Polychrome Historic District	1.1	MHT	Historic Site
44	Hastings Neighborhood Conservation Area (NCA)	0.4	M-NCPPC, MHT	Public Park
48	Brookview Local Park	12.4	M-NCPPC	Public Park
49	Washington Coca-Cola Bottling Plant (Silver Spring)	4.6	MHT	Historic Site
50	Knollwood Park	12.4	M-NCPPC	Public Park
51	Buck Lodge Park	40.0	M-NCPPC	Public Park
52	Edgefield Drive Park	7.2	M-NCPPC	Public Park
53	Paint Branch SVP, Unit 3	51.9	M-NCPPC	Public Park
56	Sunnyside Park	8.7	M-NCPPC	Public Park
59	SHA District 3 Headquarters Building	7.5	MHT	Historic Site
67	Good Luck Estates Park	6.6	M-NCPPC	Public Park
68	Youth Memorial Sports Park	3.9	City of New Carrollton	Public Park
69	Robert Frost Park	5.9	M-NCPPC	Public Park
70	Dresden Green Park	2.1	M-NCPPC	Public Park
73	New Carrollton Metro Station	71.7	MHT	Historic Site
74	Whitfield Chapel Park	26.2	M-NCPPC	Public Park
75	Capitol Car Distributors	38.7	MHT	Historic Site
77	Carsondale Park	2.9	M-NCPPC	Public Park
78	Street Railway Service Building	0.4	MHT	Historic Site
83	Little Washington	63.0	MHT	Historic Site
84	Percy Benson Sansbury Property	0.8	MHT	Historic Site
87	Morningside Historic District	191.0	MHT	Historic Site
92	Stratton Local Park	11.0	M-NCPPC	Public Park
93	Grosvenor Park	57.4	MHT	Public Park



Map ID	Section 4(f) Property	Size (Acres)	Official with Jurisdiction	Type of Section 4(f) Property
100	Julius West Middle School Athletic Fields	22.0	Montgomery Board of Ed.	Public Park
104	Woodley Gardens Park	37.5	City of Rockville, MHT	Public Park
106	Fallsgrove SVP	50.2	City of Rockville	Public Park
111	National Institute of Standards and Technology (NIST) Headquarters	578.0	MHT	Historic Site

Notes: <sup>1</sup>All units are in acres unless otherwise noted. <sup>2</sup>The size of Section 4(f) properties is sourced from data or documentation provided by the Officials with Jurisdiction. <sup>3</sup>The Section 4(f) properties in **Table 5-1** are sorted from west to east along I-495 and from south to north along I-270.

**Table 5-2: Inventory of Section 4(f) Properties with Use**

Map ID	Section 4(f) Property	Size (Acres)	Potential Impacts from Proposed Action (Acres)	Officials with Jurisdiction	Type of Section 4(f) Property	Type of Section 4(f) Approval
2	George Washington Memorial Parkway	7,146.0	12.2	ACHP, NPS, VDHR	Public Park, Historic Site	Individual Evaluation
3	Chesapeake and Ohio Canal National Historical Park	~19,575	15.4	ACHP, NPS, MHT	Public Park, Historic Site	Individual Evaluation
4	Clara Barton Parkway	96.2	1.8	ACHP, NPS, MHT	Public Park, Historic Site	Individual Evaluation
10	Morningstar Tabernacle No. 88 Moses Hall and Cemetery	1.5	0.3	ACHP, MHT	Historic Site	Individual Evaluation
12	Cabin John SVP, Unit 2	105.0	1.1	M-NCPPC	Public Park	<i>de minimis</i>
15	Burning Tree Club	221.0	0.8	MHT	Historic Site	<i>de minimis</i>
17	Fleming Local Park	24.0	0.1	M-NCPPC, MHT	Public Park, Historic Site	<i>de minimis</i>
18	Grosvenor Estate (Wild Acres)	34.7	0.1 0.2 (Alt 10)	MHT	Historic Site	<i>de minimis</i>
20	Rock Creek SVP, Unit 3	326.6	3.3 2.5 (Alt 9M)	M-NCPPC, MHT, ACHP	Public Park, Historic Site	Individual Evaluation
21	Locust Hill Neighborhood Park	5.0	0.3 0.2 (Alt 9M)	M-NCPPC	Public Park	<i>de minimis</i>
27	Rock Creek SVP, Unit 2	277.0	0.4 0.2 (Alt 9M)	M-NCPPC, ACHP, MHT	Public Park, Historic Site	Individual Evaluation
29	National Park Seminary Historic District/ Forest Glen	23.0	1.2	ACHP, MHT	Historic Site	Individual Evaluation
31	Metropolitan Branch, B&O Railroad	405.7	8.8	ACHP, MHT	Historic Site	Individual Evaluation
32	Forest Glen Historic District	10.3	0.2 0.1 (Alt 9M)	MHT	Historic Site	<i>de minimis</i>
33	Forest Glen Neighborhood Park	3.7	0.3 0.2 (Alt 9M)	M-NCPPC	Public Park	<i>de minimis</i>
34	Calvary Evangelical Lutheran Church	1.8	< 0.1	MHT	Historic Site	<i>de minimis</i>

Map ID	Section 4(f) Property	Size (Acres)	Potential Impacts from Proposed Action (Acres)	Officials with Jurisdiction	Type of Section 4(f) Property	Type of Section 4(f) Approval
36	Sligo Creek Parkway	543.0	4.1 3.3 (Alt 9M)	M-NCPPC, ACHP, MHT	Public Park, Historic Site	Individual Evaluation
40	South Four Corners Neighborhood Park	3.6	0.1 < 0.1 (Alt 9M)	M-NCPPC	Public Park	<i>de minimis</i>
42	Montgomery Blair High School Athletic Fields	30.0	1.4 1.1 (Alt 9M)	M-NCPPC; Montgomery County Public Schools Board of Education	Public Park	<i>de minimis</i>
43	Blair Local Park	10.2	0.4 0.3 (Alt 9M)	M-NCPPC	Public Park	<i>de minimis</i>
45	Indian Spring Club Estates and Indian Spring Country Club	51.0	1.2 1.1 (Alt 9M)	ACHP, MHT	Historic Site	Individual Evaluation
46	Indian Springs Terrace Local Park	30.0	1.4 1.2 (Alt 9M)	M-NCPPC	Public Park	Individual Evaluation
47	Northwest Branch SVP, Unit 3	144.0	3.2	M-NCPPC	Public Park	Individual Evaluation
54	Cherry Hill Road Park	43.1	1.8	M-NCPPC	Public Park	Individual Evaluation
55	Beltsville Agricultural Research Center (BARC)	6,852	0.5	MHT	Historic Site	<i>de minimis</i>
57	Hollywood Park	22.3	<0.1	M-NCPPC	Public Park	<i>de minimis</i>
60	Greenbelt Historic District	789.0	0.3	NPS, MHT	Historic Site (NHL)	<i>de minimis</i>
61	Buddy Attick Lake Park	85.3	0.1	City of Greenbelt, NPS, MHT	Public Park, Historic Site (NHL)	<i>de minimis</i>
62	Indian Springs Park	3.0	0.1	City of Greenbelt, NPS, MHT	Public Park, Historic Site (NHL)	<i>de minimis</i>
63	Greenbelt Park	1,100	0.6	ACHP, MHT, NPS	Public Park, Historic Site	Individual Evaluation
64	Baltimore Washington Parkway	~1,400	69.3	ACHP, MHT, NPS	Public Park, Historic Site	Individual Evaluation
65	McDonald Field	2.1	<0.1	City of Greenbelt	Public Park	<i>de minimis</i>
71	Beckett Field	7.0	0.2	City of New Carrollton	Public Park	<i>de minimis</i>
76	Carsondale	35.1	0.1	ACHP, MHT	Historic Site	Individual Evaluation
79	Glenarden Historic District	306.0	0.8	ACHP, MHT	Historic Site	Individual Evaluation
80	Henry P. Johnson Park	7.1	<0.1	M-NCPPC, ACHP, MHT,	Public Park	Individual Evaluation
81	Southwest Branch SVP	264.0	0.3	M-NCPPC	Public Park	<i>de minimis</i>
82	Heritage Glen Park	38.2	0.5	M-NCPPC	Public Park	<i>de minimis</i>



Map ID	Section 4(f) Property	Size (Acres)	Potential Impacts from Proposed Action (Acres)	Officials with Jurisdiction	Type of Section 4(f) Property	Type of Section 4(f) Approval
85	Suitland Parkway	419.0	0.3	ACHP, MHT, NPS	Public Park, Historic Site	Individual Evaluation
86	Douglas E. Patterson Park	26.2	0.7	M-NCPPC	Public Park	<i>de minimis</i>
88	Andrews Manor Park	4.1	2.6	M-NCPPC	Public Park	Individual Evaluation
89	Manchester Estates Park	4.6	0.5	M-NCPPC	Public Park	<i>de minimis</i>
90	Henson Creek SVP	1103.0	0.1	M-NCPPC	Public Park	<i>de minimis</i>
91	Academy Woods	6.4	0.2	MHT	Historic Site	<i>de minimis</i>
94	Cabin John Regional Park	514.0	5.7 7.2 (Alt 10) 4.5 (Alt 13B) 5.2 (Alt 13C)	M-NCPPC	Public Park	Individual Evaluation
95	Tilden Woods SVP	67.4	0.2	M-NCPPC	Public Park	<i>de minimis</i>
96	Old Farm Neighborhood Conservation Area	0.8	0.1	M-NCPPC	Public Park	<i>de minimis</i>
97	Cabin John SVP, Unit 6	19.8	0.4 0.3 (Alt 10)	M-NCPPC	Public Park	<i>de minimis</i>
98	Cabin John SVP (Rockville)	33.1	2.1	City of Rockville	Public Park	Individual Evaluation
99	Millennium Garden Park	1.3	0.2	City of Rockville	Public Park	<i>de minimis</i>
101	Bullards Park and Rose Hill SVP	16.8	0.3	City of Rockville	Public Park	<i>de minimis</i>
102	Rockmead Park	27.4	0.2 0.3 (Alt 10)	City of Rockville	Public Park	<i>de minimis</i>
103	Woottons Mill Park	95.3	0.2	City of Rockville	Public Park	<i>de minimis</i>
105	Woodley Gardens	200.0	0.7 1.1 (Alt 10) 1.0 (Alt 13C)	MHT	Historic Site	<i>de minimis</i>
107	Rockville Senior Center Park	12.2	0.7 0.9 (Alt 10) 0.8 (Alt 13C)	City of Rockville, MHT	Public Park, Historic Site	<i>de minimis</i>
108	Ward Building	4.8	0.1 <0.1 (Alt 13B)	MHT	Historic Site	<i>de minimis</i>
109	Malcolm King Park	78.5	0.1	City of Gaithersburg	Public Park	<i>de minimis</i>
110	Morris Park	30.7	0.1	City of Gaithersburg	Public Park	<i>de minimis</i>
<b>Total Potential Impacts of Section 4(f) Properties by Build Alternative</b>			<b>144.7 (Alt 9M)</b> <b>145.5 (Alt 13B)</b> <b>146.7 (Alt 13C)</b> <b>146.8 (Alts 8 &amp; 9)</b> <b>149.0 (Alt 10)</b>			

Notes: <sup>1</sup>The size of Section 4(f) properties is sourced from data or documentation provided by the Officials with Jurisdiction.

<sup>2</sup>Section 4(f) properties in **Table 5-2** are sorted from west to east along I-495 and from south to north along I-270. <sup>3</sup>The size of the Baltimore-Washington Parkway in **Table 5-2** is only the area within the historic boundary, which ends at the Anne Arundel County border. The full size of the Baltimore-Washington Parkway is larger.

**Table 5-3: Inventory of Properties that Qualify as Section 4(f) Exemptions**

Map ID	Section 4(f) Property	Size (Acres)	Potential Impacts from Proposed Action (Acres)	Officials with Jurisdiction	Type of Section 4(f) Property	Exception Criteria
16	Bethesda Trolley Trail	4 miles	0.2	Montgomery County Department of Transportation	Public Park/Trail	23 CFR 774.13(f)(3)
58	Baltimore & Ohio Railroad, Washington Branch	146.4	0.6	MHT	Historic Site	23 CFR 774.13(a)(3)
66	Spellman Overpass	1.0	<0.1	City of Greenbelt	Public Park	23 CFR 774.13(f)(3)
72	Baltimore & Potomac Railroad, Washington City Branch	284.4	1.0	MHT	Historic Site	23 CFR 774.13(a)(3)
N/A	Site 18MO749	N/A	N/A	MHT, NPS	Historic Site	23 CFR 774.13(b)
N/A	Site 18MO751	N/A	N/A	MHT, NPS	Historic Site	23 CFR 774.13(b)
N/A	Site 44FX0374	N/A	N/A	VDHR, NPS	Historic Site	23 CFR 774.13(b)
N/A	Site 44FX0379	N/A	N/A	VDHR, NPS	Historic Site	23 CFR 774.13(b)
N/A	Site 44FX0381	N/A	N/A	VDHR, NPS	Historic Site	23 CFR 774.13(b)
N/A	Site 44FX0389	N/A	N/A	VDHR, NPS	Historic Site	23 CFR 774.13(b)

Note: To protect location information, archaeological sites are not inventoried on Section 4(f) mapping.

## 5.6 Avoidance Alternatives and Analysis

A *feasible and prudent avoidance alternative* is one that avoids using any Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) property (23 CFR 774.17). In assessing the importance of protecting Section 4(f) properties, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute. The preservation purpose of Section 4(f) is described in 49 U.S.C. § 303(a), which states: “It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

The presence of linear, mostly north-south oriented, Section 4(f) properties such as Cabin John Stream Valley Park, Rock Creek Stream Valley Park, Sligo Creek Stream Valley Park, Northwest Branch Stream Valley Park, Southwest Stream Valley Park, Henson Creek Stream Valley Park, George Washington Memorial Parkway, Clara Barton Parkway, Baltimore Washington Parkway, Sligo Creek Parkway, and Suitland Parkway, in contrast to the largely east-west oriented interstate corridors, limits the potential for feasible and prudent avoidance alternatives to exist in this corridor. Each of these park properties extends perpendicular to the alignment of I-495 or I-270. Additionally, the area in the vicinity of the study limits is a densely populated, urban area with large residential communities, business complexes, large



governmental institutions, numerous community facilities, and hundreds of sensitive cultural and natural resources. Since I-495 and I-270 are existing interstate systems that serve local and regional traffic and connect to major arterials in each county, addressing the need on a system level is critical to achieving the overall purpose of the Study.

Six alternatives that would completely avoid the use of any Section 4(f) properties have been developed and are discussed below. They are evaluated in accordance with the definition of a *feasible and prudent* avoidance alternative found in 23 CFR 774.17.

- **Alternative 1: No Build Alternative** would include routine maintenance and safety improvements, but there would be no changes to the existing lane configuration on I-495 and I-270. There would be no operational improvements or increased capacity along I-495 and I-270; existing and future traffic volumes would not be accommodated at this location. The No Build Alternative would not meet Purpose and Need and would cause other severe problems that substantially outweigh the importance of protecting Section 4(f) properties. I-495 and I-270 are the two most heavily traveled freeways in the National Capital Region, each with an Average Annual Daily Traffic volume of up to 260,000 vehicles per day in 2018. On both of these interstate systems, congestion within the study area lasts between 7 and 10 hours per day resulting in the second highest congestion in the United States. In 2040, under the no build condition, the average daily traffic is estimated to increase by 7-17%, depending on the roadway segment along the 48-mile study corridor. Alternative 1 would not accommodate existing and long-term traffic growth, enhance trip reliability, or improve the movement of goods and services. Alternative 1 would not provide the much-needed capacity improvements to serve both existing and future traffic growth on these interstate systems.
- **Increased Bus Transit** would include expansion of the existing bus transit services within the limits of the study on both I-270 and I-495 and the additional surrounding roadway network. This could be in the form of an increase in bus service on existing I-495 and I-270 within the study limits, or consideration of dedicated facilities such as bus rapid transit systems on existing infrastructure. To avoid impacting Section 4(f) property, the Increased Bus Transit Alternative would not include any capacity improvements to I-495 and I-270 within the limits of the study and therefore the bus transit would be subject to the same existing delays on both interstate corridors that are expected to worsen in the future.

A 2017 study by the National Capital Region TPB, Long-Range Plan Task Force, titled, *An Assessment of Regional Initiatives for the National Capital Region - Draft Technical Report on Phase II of the TPB Long-Range Plan Task Force*<sup>1</sup>, studied a series of regional transportation initiatives compared to the baseline of the Financially Constrained Long Range Plan (CLRP). This study showed that an extensive, regionwide network of BRT and transitway facilities would result in a one percent reduction in average travel times for transit, HOV and single-occupancy vehicle commute trips relative to the 2040 CLRP scenario. Daily vehicle hours of delay would be reduced by two percent, and transit commute mode share would increase four percent. Daily VMT and daily VMT per capita would be reduced by less than one percent. Share of passenger miles on reliable modes would increase by six percent.

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<sup>1</sup><https://www.mwcog.org/documents/2017/12/20/long-range-plan-task-force-reports-projects-regional-transportation-priorities-plan-scenario-planning-tpb/>

The Increased Bus Transit Alternative would not meet the Purpose and Need and would cause other severe problems that outweigh the importance of protecting Section 4(f) properties. Given the modest improvements to travel times and vehicle hours of delay expected from an extensive regionwide network of BRT and transitways, dedicated BRT facilities along only I-495 and I-270 would not achieve the Study's Purpose and Need as it would not address existing and long-term traffic growth, would not enhance trip reliability along I-495 or I-270, and would not accommodate Homeland Security. Under this alternative, fares would be collected, but additional analysis would be needed to determine financial feasibility based on ridership and operations and maintenance costs. In addition, improvement in the movement of goods and services would be limited to commuter benefits and not the movement of freight or services that require vehicular movement (i.e., mechanical, electrical, etc. services). Additional discussion of the Increased Transit Alternative can be found in **Appendix F, Section 3.1.2**.

- **Transportation Systems Management (TSM)/Transportation Demand Management (TDM) Alternative** would improve the operation and coordination of transportation services and facilities through strategies such as ramp metering, modifications to turn lanes, reconfiguring interchanges, changing driver behavior to provide the most efficient and effective use of existing transportation services and facilities. TSM/TDM strategies would only be implemented where no impacts to Section 4(f) properties would occur. Some TSM/TDM strategies have been incorporated into the Proposed Action, such as ramp metering and signal timing optimization. Other TSM/TDM measures have been determined infeasible because they would result in additional impacts to Section 4(f) properties or would not meet the Purpose and Need.

TSM/TDM Alternatives, by their nature, do not include the addition of roadway capacity, and could not address the large-scale challenges with existing capacity along the existing interstate systems. Therefore, because of the limited scope of these types of improvements, TSM/TDM improvements alone would not address the existing or future capacity needs. The TSM/TDM Alternative is therefore not prudent because it would be unreasonable to proceed with the alternative in light of the stated Purpose and Need and it would result in unacceptable operational problems.

Because the actions that would be included as part of TSM/TDM solutions would only address a small fraction of congestion challenges and only do so in the short-term, the TSM/TDM Alternative would not accommodate existing and future long-term traffic, nor would these measures enhance trip reliability. In addition, TSM/TDM Alternative does not directly provide an additional travel choice, accommodate Homeland Security, improve the movement of goods and services, nor enhance multimodal connectivity; and it does not provide a revenue source. Additional discussion of the TSM/TDM Alternative can be found in **Chapter 2, Section 2.5.2 and Appendix F, Section 3.1.3**.

- **Section 4(f) Avoidance Alternative 1** would construct four, new managed lanes off-alignment between George Washington Memorial Parkway and MD 4. The managed lanes would be constructed in Montgomery and Prince George's Counties, outside the alignment of existing I-495 between the American Legion Bridge and the MD 202 interchange. The alignment of Section 4(f) Avoidance Alternative 1 would cross from outside to inside the existing I-495 at the MD 202 interchange and continue south until rejoining existing I-495 at the limit of the study area between



the interchanges with MD 4 and MD 5. To avoid the use of any Section 4(f) property on I-270, four managed lanes would be constructed off alignment to the west of existing I-270. The alignment of Section 4(f) Avoidance Alternative 1 would rejoin existing I-270 at the MD 200 interchange, the limit of the study area.

The proposed improvements would avoid impacts to all Section 4(f) properties inventoried in the corridor study boundary, including by bridging over long linear Section 4(f) properties such as stream valley parks. This alternative would construct a new roadway on new alignment that would require a LOD 200 feet wide by 50 miles long at an estimated construction cost of \$25 billion. By comparison, the estimated range of costs for the Proposed Action is between \$8.7 billion and \$10 billion. This area has not been subject to a detailed, technical inventory of Section 4(f) properties or other environmental resources. However, desktop review of the alignment indicates it would likely result in significant impacts to neighborhoods causing many relocations and impacts to natural resources. After reasonable mitigation, it would still cause severe social, economic and environmental impacts. Avoidance Alternative 1 would cause severe problems that outweigh the importance of protecting Section 4(f) properties. A map and additional discussion of Section 4(f) Avoidance Alternative 1 can be found in **Appendix F, Section 3.1.4.**

- **Section 4(f) Avoidance Alternative 2** would construct four, new managed lanes off-alignment between George Washington Memorial Parkway and MD 4. The managed lanes would be constructed in Montgomery and Prince George's Counties, inside the alignment of existing I-495 through nearly full the limits of the study: from the Potomac River crossing and between interchanges with MD 4 and MD 5. To avoid the use of any Section 4(f) property on I-270, four managed lanes would also be constructed off-alignment to the east of existing I-270. The alignment of Section 4(f) Avoidance Alternative 2 would rejoin existing I-270 at the MD 200 interchange, the limit of the study area.

This alternative is similar to Avoidance Alternative 1 in that all Section 4(f) properties in the corridor study boundary would be avoided, but it would build a new highway on new alignment, having similar severe impacts to socioeconomic and natural resources. Constructing a new roadway on new alignment would require a LOD 200 feet wide along a distance of approximately 40 miles at an estimated construction cost of \$20 billion. By comparison, the estimated range of costs for the Proposed Action is between \$8.7 billion and \$10 billion. This area has not been subject to a detailed, technical inventory of Section 4(f) properties or other environmental resources. However, desktop review of the alignment plainly indicates it would likely result in significant impacts to neighborhoods causing many relocations and impacts to natural resources. After reasonable mitigation, it would still cause severe social, economic and environmental impacts. Avoidance Alternative 2 would cause severe problems that outweigh the importance of protecting Section 4(f) properties. A map and additional discussion of Section 4(f) Avoidance Alternative 2 can be found in **Appendix F, Section 3.1.5.**

- **Section 4(f) Avoidance Alternative 3** would construct four, new managed lanes as proposed in the Proposed Action but incorporate alignment shifts or bridges to avoid impacts to Section 4(f) properties at 15 different locations to avoid impacts to all Section 4(f) properties inventoried within the corridor study boundary. The estimated cumulative cost of the location specific alignment shifts would be \$18 billion. By comparison, the estimated range of costs for the Proposed Action is between \$8.7 billion and \$10 billion. The avoidance alignment shifts would

involve construction on new location adjacent to I-495 and I-270 disrupting communities from relocations and resulting in significant additional impacts to natural resources. After reasonable mitigation, it would still cause severe social, economic and environmental impacts. Avoidance Alternative 3 would cause operational challenges to access and egress between the managed and general purpose lanes. Avoidance Alternative 3 would cause other severe problems that outweigh the importance of protecting Section 4(f) properties. Additional discussion of Section 4(f) Avoidance Alternative 1 can be found in **Appendix F, Section 3.1.6, Page 157**.

The orientation of multiple linear parks perpendicular to the study alignments presents significant challenges to complete avoidance of all Section 4(f) properties. The analysis summarized above and presented in greater detail in **Appendix F** was not able to identify an alternative that totally avoids the use of any Section 4(f) property while addressing the Purpose and Need and without causing other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties. The final determination of whether there is no feasible and prudent avoidance alternative to the use of land from Section 4(f) properties will be presented in the Final Section 4(f) Evaluation. Refer to **Appendix F, Section 3** for a detailed discussion of these avoidance alternatives.

## 5.7 All Possible Planning to Minimize Harm

FHWA may not approve the use of Section 4(f) property unless there is no feasible and prudent avoidance alternative and the action includes all possible planning to minimize harm to the property resulting from such use. "All possible planning," as defined in 23 CFR 774.17, includes all reasonable measures to minimize harm or mitigate for adverse impacts and effects. Measures to avoid and minimize harm have been incorporated into the Proposed Action, as discussed in **Chapter 2, Section 2.7.4** of this DEIS. These measures include but are not limited to:

- Minimization of visual impacts (i.e. removing flyover ramps, consolidating and reducing fixed and dynamic signing along historic parkways)
- Reducing the typical section width by varying type of stormwater control (i.e. undergrounding stormwater management facilities, removing or limiting stormwater management facilities in parks)
- Widening toward the existing median wherever possible
- Alignment shifts
- Use of retaining walls to avoid or minimize property impacts due to additional grading or filling.
- Landscaping
- Minimizing vegetation disturbance
- Mitigation

MDOT SHA has engaged in extensive coordination with the majority of the Officials with Jurisdiction over Section 4(f) properties through existing regulatory processes (such as Section 106 consultation), regularly scheduled coordination meetings, and meetings requested by stakeholders. Additional coordination took place via written letter, over the phone, and via electronic communication. This coordination resulted in minimizing harm to Section 4(f) properties through a variety of means, such as: eliminating or relocating stormwater management facilities; shifting the centerline of the transportation facility; developing alternative interchange configurations; relocating slip ramps; refining construction access locations; and limiting the number, type, and configuration of signage. The results of coordination and descriptions of



the minimization efforts resulting from such coordination are discussed in detail throughout **Appendix F, Section 2.**

Minimization of harm may entail both alternative design modifications that reduce the amount of Section 4(f) property used, such as those described in the preceding paragraphs, and mitigation measures that compensate for residual impacts. For Section 4(f) uses that cannot be avoided or further minimized, mitigation would be considered. The level of mitigation considered would be commensurate with the severity of the impact on the Section 4(f) property. Final mitigation and minimization measures would be determined through continued consultation with the officials having jurisdiction over each Section 4(f) property and presented in the Final Section 4(f) Evaluation. MDOT SHA and FHWA have committed to providing meaningful benefit to impacted Section 4(f) properties by improving the values, services, attributes and functions that may be compromised. The goal of mitigation is net benefit to the property impacted. To date, preliminary mitigation discussions with many of the Officials with Jurisdiction have included replacement land, completing additional cultural and natural resource surveys, reconfiguring recreational facilities, relocating recreational facilities out of environmentally compromised areas (i.e. floodplains), restoring streams, and funding of cultural and park related buildings and amenities.

Potential mitigation measures for the Section 4(f) use of historic sites would be identified within a Section 106 Programmatic Agreement that would be developed with FHWA, MDOT SHA, ACHP, NPS, MHT, VDHR, and the Section 106 consulting parties (refer to **Appendix H** for the Draft Section 106 Programmatic Agreement). Mitigation measures will be developed on a case by case basis. By signature, agencies will assure that the mitigation measures would be completed.

All minimization and mitigation measures will be documented in the Final Section 4(f) Evaluation.

Pursuant to 23 CFR 774.17, a determination of Section 4(f) *de minimis* impacts inherently includes the requirement for all possible planning to minimize harm because impacts have already been reduced to a *de minimis* level.

## 5.8 Least Overall Harm

If the avoidance analysis concludes there is no feasible and prudent avoidance alternative, then FHWA may approve, from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the statute's preservation purpose. This analysis is required when multiple alternatives that use Section 4(f) property remain under consideration.

The least overall harm to Section 4(f) property is determined by balancing the following factors set forth in 23 CFR 774.3(c)(1)):

- (i) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- (ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- (iii) The relative significance of each Section 4(f) property;
- (iv) The views of the official(s) with jurisdiction over each Section 4(f) property;
- (v) The degree to which each alternative meets the purpose and need for the project;

- (vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- (vii) Substantial differences in costs among the alternatives.

By balancing the seven factors, four of which concern the degree of harm to Section 4(f) properties, FHWA will be able to consider all relevant concerns to determine which alternative would cause the least overall harm in light of the statute's preservation purpose. For the *Draft Section 4(f) Evaluation*, location specific alignment shifts were developed that would avoid one or more of the 22 Section 4(f) properties that would experience a non-*de minimis*. The location specific alignment shifts primarily follow the alignment of the Proposed Action, but incorporate alignment shifts or design changes that locally avoid specific Section 4(f) properties. In general when compared to the Proposed Action, these location specific alignment shifts would result in additional use of other Section 4(f) properties, cause a severe magnitude of adverse impacts to resources not protected by Section 4(f), and/or result in additional construction, maintenance, or operational costs of extraordinary magnitude. The alignment shift alternatives are described and evaluated in **Appendix F, Section 5.1, Page 166**.

The Least Overall Harm section also evaluates two additional alternatives that would potentially reduce impacts to Section 4(f) properties: Alternative 5 and the MD 200 Diversion Alternative. Analysis shows that these two alternatives would result in less impact to Section 4(f) property; however, they would not meet the Purpose and Need of the Study.

The final section of the Least Overall Harm analysis evaluates the Proposed Action. This analysis balances the seven factors to determine which alternative would cause the least overall harm in light of the preservation purpose of Section 4(f). Refer to **Appendix F, Section 5** for the detailed discussion of the least overall harm analysis.

## 5.9 Coordination

Many of the Officials with Jurisdiction have been active Cooperating or Participating Agencies in the development of the DEIS and through consultation in the Section 106 process. Coordination with the Officials with Jurisdiction have included letters, calls, emails, in-person meetings, and other written correspondence throughout the Study. Consultation and coordination with these agencies is ongoing and will continue with the review of the *Draft Section 4(f) Evaluation*. For detailed information on the coordination to-date (refer to **Appendix F, Section 6**).

The public has an opportunity to review and comment on the *Draft Section 4(f) Evaluation* concurrently with the DEIS. For parks, recreation areas, or wildlife and waterfowl refuges, the Officials with Jurisdiction over Section 4(f) property must be informed of the intent to make a *de minimis* impact determination, after which an opportunity for public review and comment must be provided. For historic sites, FHWA and MDOT SHA will consult with the parties participating in the Section 106 process, but is not required to provide additional public notice or provide additional opportunity for review and comment of *de minimis* impact findings. Comments from the public related to the Draft Section 4(f) analysis will be addressed in the Final Section 4(f) Evaluation.

**Table 5-4** summarizes the coordination with Officials with Jurisdiction and other regulatory agencies to date. FHWA will complete coordination prior to making Section 4(f) approvals under 23 CFR 774.3. **Appendix F, Section 6** details coordination completed with Officials with Jurisdiction to date.

**Table 5-4: Section 4(f) Officials with Jurisdiction Coordination Summary**

Officials With Jurisdiction	Subject	Discussion Topic	Upcoming Coordination
Advisory Council on Historic Preservation	Participating Agency	FHWA notified ACHP about the study. ACHP replied to FHWA they are participating in Section 106 consultation	Determination of eligibility and finding of effect review, PA execution, Draft Section 4(f) Evaluation review of historic properties
City of Gaithersburg	Briefing Mayor and City Council, Scoping, Property Access, Consulting Party	Project status, Scoping comments, property access, cultural resources study overview and schedule	Draft Section 4(f) Evaluation review of City properties
City of Greenbelt	Purpose and Need, Alternatives, Impacts; Impacts to Historic Properties	Section 106 Consulting Party acceptance, Project status briefing, comments on preliminary list of adversely and potentially adversely affected historic properties, PA Development	Draft Section 4(f) Evaluation review of City properties
City of New Carrollton	Purpose and Need, Alternatives, Impacts	Project status briefing	Draft Section 4(f) Evaluation review of City properties
City of Rockville	Section 106 Consulting Party; Impacts to Parks and Historic Properties	Section 106 Consulting Party acceptance, Project status briefing	Section 106 review; Draft Section 4(f) Evaluation review of City properties
DOI/HUD			Draft Section 4(f) Evaluation review
Maryland Historical Trust	Participating Agency, Section 106 approach, APE Concurrence, Gap Analysis, Inventory, NRHP Eligibility, Historic Property Effect Determination	Participating agency, concurrence with Section 106 initiation letter, cultural resources information gap concurrence, revised APE concurrence, NRHP eligibility review and comment; Concurrence on Section 106 effects on historic properties	Coordination on Draft Programmatic Agreement; Review of Draft Section 4(f) Evaluation
MNCPPC-Montgomery County	Cooperating Agency, Property Access, Impacts, Avoidance, Minimization Mitigation	Cooperating Agency and Section 106 Consulting Party invitation and acceptance, impacts to park properties, avoidance, minimization, mitigation	Draft Section 4(f) Evaluation review Montgomery County M-NCPPC parks
MNCPPC- Prince George's County	Cooperating Agency, Property Access,	Cooperating Agency and Section 106 Consulting Party	Draft Section 4(f) Evaluation review



Officials With Jurisdiction	Subject	Discussion Topic	Upcoming Coordination
	Impacts, Avoidance, Minimization, Mitigation	invitation and acceptance, impacts to park properties, avoidance, minimization, mitigation	Prince George's County M-NCPPC parks
NPS	Cooperating Agency, Property Access, Cultural Resources, Parks, Impacts, Avoidance, Minimization, Mitigation	Cooperating Agency and Section 106 Consulting Party invitation and acceptance, property access, cultural resources inventory permitting, determinations of NRHP eligibility for NPS properties, impact avoidance, minimization and mitigation	Section 106 consultation for NPS properties, Draft Section 4(f) Evaluation of NPS properties
USDA	Participating Agency, Section 106 Consultation, Property Impacts, Minimization, Mitigation	Participating Agency and Section 106 Consulting Party invitation and acceptance, BARC property impacts, minimization, mitigation	Preliminary finding of effect, Section 106 consultation, Draft Section 4(f) Evaluation review
Virginia Department of Historic Resources	Participating Agency, Section 106 Approach, APE Definition Concurrence, Archaeological Scope; Concurrence and comments on MDOT SHA eligibility determinations	Participating Agency invitation and acceptance, Section 106 initiation, APE definition and revised APE concurrence, archaeological scope of investigations in Virginia; Concurrence and comments on MDOT SHA eligibility determinations	Preliminary finding of effect and Draft Section 4(f) historic properties review

## 5.10 Mitigation

To determine meaningful mitigation for impacts to parkland resources, MDOT SHA has engaged in ongoing discussions with Officials with Jurisdiction and received substantive input from them concerning potential mitigation measures. Pursuant to those discussions and a review of best practices to address parkland impacts, possible mitigation measures may include:

- Replacement with lands of at least comparable value, and of reasonably equivalent usefulness and location
- Replacement of facilities impacted by the project, including sidewalks, paths, benches, lights, trees, fields, courts, stormwater facilities, parking lots, trails, swales, buildings, and other facilities
- Relocation of recreational facilities outside of environmentally compromised areas (i.e. floodplains)
- Restoration and landscaping of disturbed areas
- Incorporation of design features and habitat features where necessary
- Payment of fair market value for the land
- Rehabilitation of deteriorating facilities and assets on nearby parkland

- Relocation of impacted facilities and assets to allow for use similar to that which existed pre-impact
- Design and construction of new facilities
- Non-native invasive species management
- Environmental enhancements with the goals of habitat and/or water quality improvements
- Any additional measures recommended during consultation with the official with jurisdiction that are relevant to and commensurate with the impacts.