

5 UPDATED DRAFT SECTION 4(F) EVALUATION

This Updated Draft Section 4(f) Evaluation provides information focused on the Preferred Alternative being studied in the Supplemental Draft Environmental Impact Statement (SDEIS). This supplemental information does not replace the DEIS or Draft Section 4(f) Evaluation published in July 2020. The DEIS documents can be viewed through the following links on the Program website:

DEIS, Chapter 5: https://oplanesmd.com/wp-content/uploads/2020/11/2020-06-02_DEIS_05_Section_4f.pdf

DEIS, Appendix F: https://oplanesmd.com/wp-content/uploads/2020/07/DEIS_AppF_Draft-Section-4f-Eval_web.pdf

This SDEIS Chapter includes the following updates:

- Identification of the Preferred Alternative, which is Alternative 9 – Phase 1 South
- Reduced list of Section 4(f) Properties based on the Preferred Alternative limits of disturbance
- Identification of temporary and permanent impacts to Section 4(f) properties
- Updates on all possible planning to avoid and minimize the use of Section 4(f) properties within the Preferred Alternatives limits
- Updated Least Overall Harm Analysis and Coordination

The Final Section 4(f) Evaluation, including final mitigation for unavoidable Section 4(f) uses, will be included with the Final Environmental Impact Statement (FEIS) along with the Least Overall Harm Analysis conclusion.

5.1 Introduction

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966 as amended (49 USC. 303(c)) 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.

5.1.1 Purpose and Background

Since the publication of the Draft Section 4(f) Evaluation and DEIS in July 2020, the Preferred Alternative has been identified as Alternative 9 – Phase 1 South. Alternative 9 – Phase 1 South includes the same improvements proposed as part of Alternative 9 in the DEIS and Draft Section 4(f) Evaluation but limited to the Phase 1 South limits only (I-495 from the George Washington Memorial Parkway to east of MD 187 and I-270 from I-495 to I-370 and on the I-270 east spur to MD 187). The Preferred Alternative is described in **Section 5.1.2** below. This decision to identify Alternative 9 – Phase 1 South as the Preferred Alternative was based in part on extensive coordination with and input from agencies and stakeholders, including the Officials with Jurisdiction (OWJs) for Section 4(f) properties (See **DEIS Chapter 5, Section 5.4** for information on OWJ). Comments received on the DEIS and Draft Section 4(f) Evaluation from agencies and

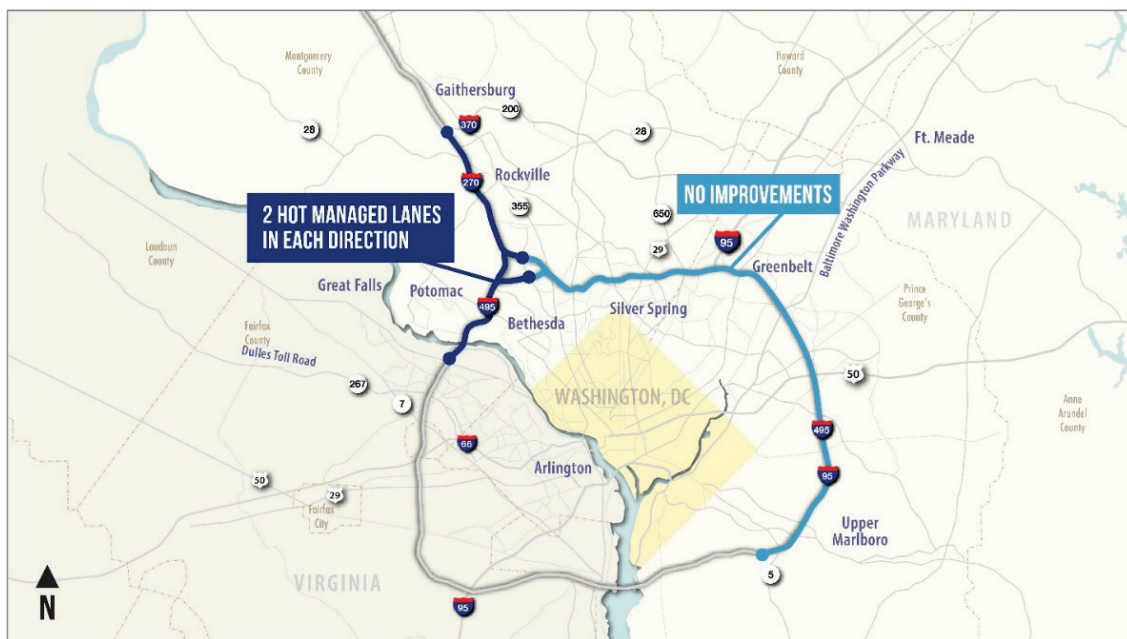
stakeholders specifically requested avoidance of significant parkland and historic resources within the study corridors. The Preferred Alternative is responsive to comments received and aligns the Study to be consistent with the previously determined phased delivery and permitting approach by limiting the build improvements to Phase 1 South and avoiding improvements on I-495 east of the I-270 east spur. The result is complete avoidance of significant Section 4(f) properties within the Study limits, which remain the same as the DEIS, on I-495 east of the I-270 east spur to MD 5 in Prince George's County.

This Updated Draft Section 4(f) Evaluation provides information focused on the potential impacts to Section 4(f) properties as related to the Preferred Alternative being discussed in the SDEIS. The information included in this Updated Draft Section 4(f) Evaluation will inform FHWA's consideration of the use of Section 4(f) property by the Preferred Alternative. This chapter of the SDEIS provides updated, supplemental information for the Draft Section 4(f) Evaluation included in **DEIS, Appendix F**. This supplemental chapter does not replace the Draft Section 4(f) Evaluation; it only provides additional analysis. The Section 4(f) Evaluation and this supplement follow established US DOT regulations including 23 CFR 774, FHWA's 2012 *Section 4(f) Policy Paper*, and 23 USC 138 and 39 USC 303.

5.1.2 Description of Preferred Alternative

Alternative 9 – Phase 1 South has been identified as the Preferred Alternative and includes two, new high-occupancy toll (HOT) managed lanes network on portions of I-495 and I-270 (shown in **dark blue** in **Figure 5-1**). On I-495, the Preferred Alternative consists of adding two, HOT managed lanes in each direction from the George Washington Memorial Parkway in Virginia to east of MD 187. On I-270, the Preferred Alternative consists of converting the one existing HOV lane in each direction to a HOT managed lane and adding one HOT managed lane in each direction from I-495 to I-370 and on the I-270 east spur to MD 187. There is no action, or no improvements included at this time on I-495 east of the I-270 east spur (shown in **light blue** in **Figure 5-1**). Along I-270, the existing collector-distributor (C-D) lane designation from Montrose Road to I-370 would be removed as part of the proposed improvements.

Figure 5-1: I-495 & I-270 Managed Lanes Study Corridors – Preferred Alternative



5.1.3 Changes Since the Draft Section 4(f) Evaluation and DEIS

The Preferred Alternative which includes build improvements only within the Phase 1 South limits avoids approximately 105 acres of Section 4(f) properties, including both parks and historic resources. In addition, impacts to several parks and historic resources were reduced following consideration of public and agency comments received during the DEIS public comment period. MDOT SHA and FHWA coordinated closely with the OWJs in a series of office and field meetings to identify opportunities to further avoid and minimize impacts to historic resources and park land including contributing features within parks such as forested areas, wetlands and waterways within the Preferred Alternative limits of disturbance (LOD). (Refer to **SDEIS, Chapter 7**, for a summary of agency coordination.)

Since the DEIS and Draft Section 4(f) Evaluation, substantial efforts to avoid and minimize impacts to park and historic resources around the American Legion Bridge (ALB) has occurred. MDOT SHA and FHWA met with the National Park Service (NPS) on December 8, 2020 to discuss the limit of disturbance (LOD) in the vicinity of the ALB that was presented in the DEIS. The NPS requested that MDOT SHA re-assess the LOD in the vicinity of the ALB to limit impacts to NPS land and its natural resources. MDOT SHA convened an 'ALB Strike Team' composed of national and local experts on bridge design and construction, natural resources, and cultural resources who were charged with the following mission:

To develop and evaluate alternatives for the replacement of the ALB to avoid impacts, to the greatest extent practicable, and reduce overall acreage impacts to the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP) and George Washington Memorial Parkway units of the NPS.

The ALB Strike Team considered bridge construction approaches to determine if any of the approaches could further reduce the LOD. The Strike Team conducted detailed investigation of a top-down segmental construction approach; a top-down cable stayed design approach; and a slide-in place bridge construction approach. In addition, after field analysis and review of readily available information, MDOT SHA and the ALB Strike Team determined that access to the existing bridge could be consolidated to the northwest quadrant along Clara Barton Parkway, eliminating the construction access from the other three quadrants around the bridge and significantly reducing impacts to NPS land. This would be achieved by constructing a temporary construction access road entrance off of the Clara Barton Parkway in the northwest quadrant and installing a temporary bridge over the C&O Canal and a temporary haul road paralleling the C&O Canal towpath. Refer to **Chapter 4, Section 4.4.3** for additional details on the ALB Strike Team's efforts.

Another focus area for avoidance and minimization was at the Morningstar Tabernacle No. 88 Moses Hall and Cemetery (Morningstar Cemetery) located adjacent to I-495 inner loop just south of Cabin John Parkway. In response to comments received on the DEIS and Draft Section 4(f) Evaluation, impacts to the Morningstar Cemetery boundary were reduced from 0.3 acres (13,068 square feet) reported in the DEIS for Alternative 9 to approximately 14 square feet of temporary area needed for construction access to build a noise barrier adjacent to the property. This design refinement also resulted in complete avoidance of ground disturbance within the cemetery boundary. In July 2021, additional investigation was conducted to detect and map both potential marked and unmarked graves within and adjacent to the cemetery boundary. Complete avoidance of the Morningstar Cemetery property has been achieved based on further design refinements in response to the results of this investigation.

With identification of a Preferred Alternative, design refinements have progressed and quantified impacts have been further broken down into permanent or long-term effects and temporary or short-term

construction-related effects. Additional opportunities to avoid, minimize, and mitigate effects will be considered and the commitments will be documented in the Final Section 4(f) Evaluation and the FEIS.

Since the DEIS, MDOT SHA has further evaluated the ownership of Millennium Garden Park, which was previously identified as a Section 4(f) property in the Draft Section 4(f) Evaluation. MDOT SHA has determined that, even though the property is maintained as a park by the City of Rockville, it is owned by MDOT SHA for transportation use. In accordance with 23 CFR 774.11(h), the Millennium Garden Park property is not subject to Section 4(f) as it is owned by MDOT SHA for transportation use and has not been included in this Updated Draft Section 4(f) Evaluation.

5.2 Inventory and Use of Section 4(f) Properties

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).

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

- (1) When land is **permanently incorporated** into a transportation facility;
- (2) 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 or more 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.
- (3) 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 the Section 4(f) Evaluation, Section 1.2.2 A for a preliminary analysis of constructive use.

An impact to a significant public park, recreation area, or wildlife and waterfowl refuge may be determined to be *de minimis* if the transportation 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), does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f) (23 CFR 774.17). For historic sites, a *de minimis* impact means that FHWA has determined (in accordance with 36 CFR 800) that either no historic property is affected by the project or that the project will have "no adverse effect" on the historic property. 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.

5.2.1 Overview

The Draft Section 4(f) Evaluation included descriptions of all Section 4(f) properties identified within the corridor study boundary, the use of Section 4(f) properties for all previously evaluated alternatives, and discussion of minimization measures for each property. The Preferred Alternative included in this SDEIS (Alternative 9 – Phase 1 South) avoids the use of Section 4(f) properties within the Study limits outside of Phase 1 South where no improvements are proposed, resulting in lower overall impacts to Section 4(f) properties. **Table 5-1** presents the Section 4(f) properties impacted by the Preferred Alternative. Each property with a potential Section 4(f) use is then described in **Sections 5.2.2 through 5.2.23** of this chapter. **Table 5-1** notes the Official with Jurisdiction (OWJ) for each Section 4(f) property; the OWJ is designated in the Section 4(f) regulations and are for the purposes of Section 4(f) only.

The last column in **Table 5-1** summarizes, at a high-level, changes to impacts from the DEIS related to design refinements of the Preferred Alternative LOD at each property. Additional details on changes to each property since the DEIS are provided in **Sections 5.2.2 through 5.2.23**. Refinements to the LOD for the Preferred Alternative included the following elements:

- Profile adjustments and roadway shifts due to mainline widening
- Inclusion of pedestrian and bicycle facilities for roads that cross over I-495 and I-270
- Direct access ramps and exchange ramps for access to the HOT managed lanes
- Interchange ramp relocation, reconfiguration, and tie-ins due to mainline widening
- On-site drainage and stormwater management, including swales, ponds, and large facilities along the roadside and within interchanges
- Relocation of existing streams, where determined to be feasible
- Culvert extensions, auxiliary pipes, and outfall stabilization areas
- Noise barrier replacement/construction
- Reconstruction of I-495 and I-270 mainline and interchange ramp bridges over water and roadways
- Full replacement of the ALB
- Utility relocations
- Avoidance and impact minimization of adjacent land uses such as: streams, wetlands, historic properties, parks, and private properties
- Construction access, staging, materials storage, grading, clearing, and erosion and sediment control

Table 5-1: Summary of Section 4(f) Property Use

Section 4(f) Property	Official(s) with Jurisdiction ¹	Property Type	Anticipated Section 4(f) Approval	Impact ² (acres)	Change from DEIS Alternative 9
George Washington Memorial Parkway	Advisory Council on Historic Preservation (ACHP), NPS, Virginia Department of Historic Resources (VDHR)	Public Park and Historic Property	Individual Evaluation	Permanent: 0.7 Temporary: 3.7 Total: 4.4	Total impact reduced by 7.8 acres from DEIS impact of 12.2 acres
Chesapeake & Ohio Canal National Historical Park ³	ACHP, Maryland Historical Trust (MHT), NPS	Public Park and Historic Property	Individual Evaluation	Permanent: 1.0 Temporary: 9.1 Total: 10.1	Total impact reduced by 5.3 acres from DEIS impact of 15.4 acres; altered areas within transportation use; revised property boundary to combine Public Park and Historic Property areas
Clara Barton Parkway ³	ACHP, MHT, NPS	Public Park and Historic Property	Individual Evaluation	Permanent: 1.6 Temporary: 0.9 Total: 2.5	Total impact increased by 0.7 acres from DEIS impact of 1.8 acres; altered areas within transportation use; revised property boundary to combine Public Park and Historic Property areas
Carderock Springs Historic District	MHT	Historic Property	<i>De minimis</i>	Permanent: < 0.1 Temporary: < 0.1 Total: < 0.1	Total impact increased by less than 0.1 acres from no impact in DEIS
Gibson Grove AME Church	MHT	Historic Property	Individual Evaluation	Permanent: 0.1 Temporary: 0.0 Total: 0.1	Total impact increased by 0.1 acres from no impact in DEIS

Section 4(f) Property	Official(s) with Jurisdiction ¹	Property Type	Anticipated Section 4(f) Approval	Impact ² (acres)	Change from DEIS Alternative 9
Cabin John Stream Valley Park Unit 2	Maryland-National Capital Park and Planning Commission (M-NCPPC) Montgomery County, NCPC	Public Park	<i>De minimis</i>	Permanent: 0.8 Temporary: 0.6 Total: 1.4	Total impact increased by 0.3 acres from DEIS impact of 1.1 acres
Burning Tree Club	MHT	Historic Property	<i>De minimis</i>	Permanent: 1.3 Temporary: 0.0 Total: 1.3	Total impact increased by 0.5 acres from DEIS impact of 0.8 acres
Academy Woods	MHT	Historic Property	<i>De minimis</i>	Permanent: 0.2 Temporary: 0.0 Total: 0.2	No change
Cabin John Regional Park	M-NCPPC Montgomery County	Public Park	Individual Evaluation	Permanent: 5.7 Temporary: 0.6 Total: 6.3	Total impact increased by 0.6 acres from DEIS impact of 5.7 acres
Tilden Woods Stream Valley Park	M-NCPPC Montgomery County	Public Park	<i>De minimis</i>	Permanent: 0.6 Temporary: 0.1 Total: 0.7	Total impact increased by 0.5 acres from DEIS impact of 0.2 acres
Old Farm Neighborhood Conservation Area	M-NCPPC Montgomery County	Public Park	<i>De minimis</i>	Permanent: 0.1 Temporary: 0.0 Total: 0.1	No change
Cabin John Stream Valley Park Unit 6	M-NCPPC Montgomery County	Public Park	<i>De minimis</i>	Permanent: 0.8 Temporary: 0.0 Total: 0.8	Total impact increased by 0.4 acres from DEIS impact of 0.4 acres
Cabin John Stream Valley Park (Rockville)	City of Rockville Department of Recreation and Parks	Public Park	Individual Evaluation	Permanent: 2.1 Temporary: 0.0 Total: 2.1	No change
Bullards Park and Rose Hill Stream Valley Park	City of Rockville Dept. of Recreation and Parks	Public Park	Individual Evaluation	Permanent: 3.3 Temporary: 0.0 Total: 3.3	Total impact increased by 3.0 acres from DEIS impact of 0.3 acres, impact likely greater than <i>de minimis</i>
Rockmead Park	City of Rockville Department of Recreation and Parks	Public Park	<i>De minimis</i>	Permanent: 0.2 Temporary: 0.1 Total: 0.3	Total impact increased by 0.1 acres from DEIS impact of 0.2 acres

Section 4(f) Property	Official(s) with Jurisdiction ¹	Property Type	Anticipated Section 4(f) Approval	Impact ² (acres)	Change from DEIS Alternative 9
Woottons Mill Park	City of Rockville Department of Recreation and Parks	Public Park	<i>De minimis</i>	Permanent: 0.7 Temporary: 0.0 Total: 0.7	Total impact increased by 0.5 acres from DEIS impact of 0.2 acres
Woodley Gardens	MHT	Historic Property	<i>De minimis</i>	Permanent: 1.2 Temporary: 0.1 Total: 1.3	Total impact increased by 0.6 acres from DEIS impact of 0.7 acres
Rockville Senior Center and Park	City of Rockville Department of Recreation and Parks, MHT	Public Park and Historic Property	<i>De minimis</i>	Permanent: 1.0 Temporary: 0.0 Total: 1.0	Total impact increased by 0.3 acres from DEIS impact of 0.7 acres
Ward Building	MHT	Historic Property	<i>De minimis</i>	Permanent: 0.2 Temporary: 0.0 Total: 0.2	Total impact increased by 0.1 acres from DEIS impact of 0.1 acres
Malcolm King Park	City of Gaithersburg Department of Parks, Recreation and Culture	Public Park	Individual Evaluation	Permanent: 1.3 Temporary: 0.0 Total: 1.3	Total impact increased by 1.2 acres from DEIS impact of 0.1 acres, impact likely greater than <i>de minimis</i>
Morris Park	City of Gaithersburg Department of Parks, Recreation and Culture	Public Park	Individual Evaluation	Permanent: 1.1 Temporary: 0.0 Total: 1.1	Total impact increased by 1.0 acres from DEIS impact of 0.1 acres, impact likely greater than <i>de minimis</i>

Note: 1. Virginia Department of Historic Resources (VDHR) serves as the Virginia State Historic Preservation Office; Maryland Historical Trust (MHT) serves as the Maryland State Historic Preservation Office.

2. All impacts rounded to the tenths. The DEIS impacts reflect Build Alternative 9. For purposes of determining Section 4(f) use, temporary impacts are considered short-term, construction related activities that do not require permanent incorporation of a Section 4(f) resource into a transportation facility. Short-term, construction related work includes but is not limited to construction staging, material and equipment storage, construction access easements, and other areas needed to support the construction, but not part of the long-term improvement.

3. Section 4(f) impacts to C&O Canal NHP and Clara Barton Parkway as currently noted in Chapter 5 exclude the area that currently has an existing transportation use. The area within NPS property defined as transportation use includes existing I-495 at-grade roadway sections to the toe of slope, Clara Barton Parkway Interchange ramp sections to the toe of slope, existing pier locations for the structure over the C&O Canal and eastbound Clara Barton Parkway, and existing pier locations for the American Legion Bridge.

While the Study limits remain the same as noted in the DEIS, the limits of build improvements under the Preferred Alternative are limited to Phase 1 South only. There is no action or no improvements included at this time on I-495 east of the I-270 east spur to MD 5. Therefore, the Preferred Alternative would avoid the use of 38 Section 4(f) properties that were previously reported as Section 4(f) uses in the DEIS and

Draft Section 4(f) Evaluation, totaling approximately 105 acres. The properties avoided and acreage of Section 4(f) use previously included in the DEIS are included in **Table 5-2**.

Table 5-2: Avoided Section 4(f) Use by the Preferred Alternative

Section 4(f) Properties No Longer Impacted by the Preferred Alternative	Acres of Avoided Section 4(f) Use
Andrews Manor Park	2.6
Baltimore Washington Parkway	69.3
Beckett Field	0.2
Beltsville Agricultural Research Center (BARC)	0.5
Blair Local Park	0.4
Buddy Attick Lake Park	0.1
Calvary Evangelical Lutheran Church	<0.1
Carsondale	0.1
Cherry Hill Road Park	1.8
Douglas E. Patterson Park	0.7
Fleming Local Park	0.1
Forest Glen Historic District	0.2
Forest Glen Neighborhood Park	0.3
Glenarden Historic District	0.8
Greenbelt Historic District	0.3
Greenbelt Park	0.6
Grosvenor Estate (Wild Acres)	0.1
Henry P. Johnson Park	<0.1
Henson Creek Stream Valley Park	0.1
Heritage Glen Park	0.5
Hollywood Park	<0.1
Indian Spring Club Estates and Indian Spring Country Club	1.2
Indian Springs Park (City of Greenbelt)	0.1
Indian Springs Terrace Local Park	1.4
Locust Hill Neighborhood Park	0.3
Manchester Estates Park	0.5
McDonald Field	<0.1
Metropolitan Branch, Baltimore & Ohio Railroad	8.8
Montgomery Blair High School Athletic Fields	1.4
Morningstar Tabernacle No. 88 Moses Hall and Cemetery	0.3
National Park Seminary Historic District / Forest Glen	1.2
Northwest Branch Stream Valley Park, Unit 3	3.2
Rock Creek Stream Valley Park, Unit 2	0.4
Rock Creek Stream Valley Park, Unit 3	3.3
Sligo Creek Parkway	4.1
South Four Corners Neighborhood Park	0.1

Section 4(f) Properties No Longer Impacted by the Preferred Alternative	Acres of Avoided Section 4(f) Use
Southwest Branch Stream Valley Park	0.3
Suitland Parkway	0.3
TOTAL ACRES AVOIDED	105.6

Note: all avoided impacts presented are relative to DEIS Alternative 9.

Properties that would experience a Section 4(f) use from the Preferred Alternative are detailed in **Sections 5.2.2 through 5.2.23** below. Within the Preferred Alternative LOD, there are four properties subject to the Capper Cramton Act and one property, the C&O Canal NHP, subject to Section 6(f). Refer to **Chapter 4, Section 4.4** and **Table 4-9** for discussion of park properties subject to the Capper Cramton Act. **Section 1.2.8** in the Draft Section 4(f) Evaluation includes additional information on other relevant authority including Capper Cramton Act of 1930 and Section 6(f) of the Land and Water Conservation Act (**DEIS, Appendix F**).

5.2.2 George Washington Memorial Parkway

Type of Section 4(f) Property: Historic Property and Public Park

Officials with Jurisdiction: NPS, VDHR

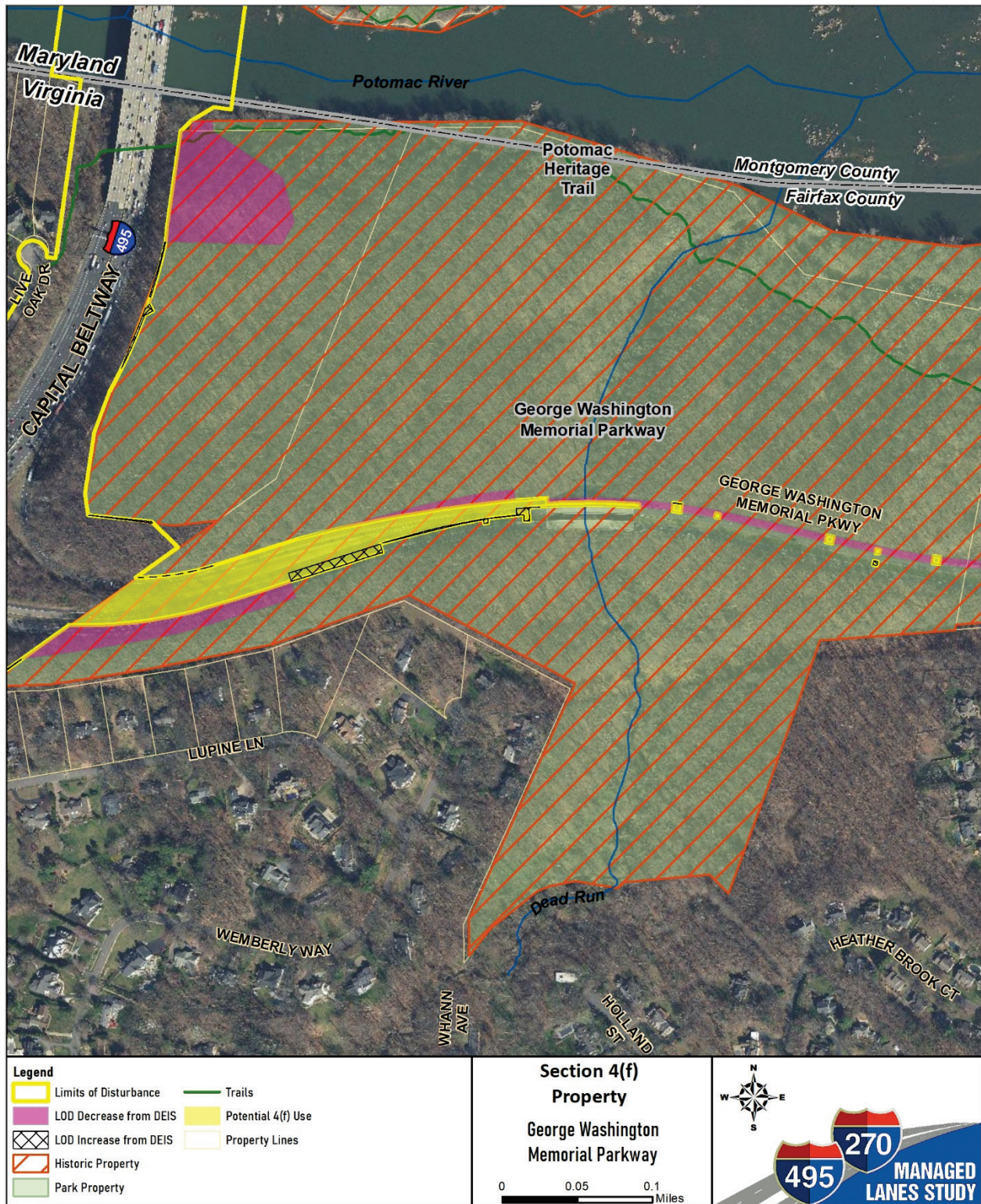
Type of Section 4(f) Approval: Individual Evaluation

George Washington Memorial Parkway is a publicly-owned park and NRHP-listed historic district that extends along the Potomac River from I-495 to Mount Vernon in Virginia. The George Washington Memorial Parkway is administered by the NPS. The George Washington Memorial Parkway is a scenic roadway honoring the nation's first president that protects and preserves cultural and natural resources along the Potomac River below Great Falls to Mount Vernon. It is also a historic district listed in the NRHP for its association with twentieth-century parkway design, engineering, landscape architecture, park planning and conservation, commemoration, and its association with George Washington. Features within George Washington Memorial Parkway include the Potomac Heritage National Scenic Trail and Turkey Run Park conservation area. The park boundary of George Washington Memorial Parkway extends 38.3 miles and comprises approximately 7,300 acres, including all administrative units and features. Clara Barton Parkway (**Section 5.2.4**) is part of the larger George Washington Memorial Parkway Historic District with a separate historic boundary in Maryland.

George Washington Memorial Parkway is also a historic district that was listed in the NRHP on June 2, 1995. It is historically significant under Criterion B for its association with the life of George Washington and Criterion C for its embodiment of the distinctive characteristics of a parkway.

The Preferred Alternative would result in a Section 4(f) use of 4.4 acres of George Washington Memorial Parkway (**Figure 5-2**), including 0.7 acres of permanent impact and 3.7 acres of temporary impact. This impact has been reduced by 7.8 acres compared to the total impact of 12.2 acres reported in the DEIS for Alternative 9.

Figure 5-2: George Washington Memorial Parkway



The impacts to George Washington Memorial Parkway would be required to accommodate access for construction activities to build the new American Legion Bridge and remove the existing structure; the construction, operation, and future maintenance of new direct access ramps to the managed lanes on I-495; the installation, operation, and future maintenance of electrical conduit and permanent signage to inform the traveling public of toll rates and operation of the facility, resurfacing of George Washington Memorial Parkway for maintenance of traffic during construction, construction of a shared use path along the I-495 inner loop and retaining wall. Detailed mapping of the Preferred Alternative design at George Washington Memorial Parkway can be found in **SDEIS, Appendix D – Maps 2-4**.

The Preferred Alternative may result in temporary impacts to the Potomac Heritage National Scenic Trail during construction. A detour would be provided for users of the Potomac Heritage National Scenic Trail if impacted during construction of the Preferred Alternative. The trail would be restored after construction is completed. No other recreational facilities within George Washington Memorial Parkway would be impacted by the Preferred Alternative.

The decrease in impact from the DEIS is due to minimization measures applied at the ALB. MDOT SHA conducted extensive minimization efforts to reduce impacts in the vicinity of the ALB, including impacts to George Washington Memorial Parkway, by evaluating alternative bridge designs and construction staging methods and coordinating with NPS as described in **Section 5.1.3 and Chapter 4, Section 4.4.3**. Minimization efforts resulted in the elimination of a construction access area within George Washington Memorial Parkway that was previously to be used for the location of a construction crane. A new interchange configuration pulled roadwork off the George Washington Memorial Parkway mainline within the park boundary, and a refined signing layout was developed limiting ground disturbance to only those areas where signs will be removed or placed and where electrical conduit must be placed. Through coordination with NPS, a retaining wall was included in the design adjacent to the proposed shared use path that runs parallel to I-495 to further reduce impacts.

Coordination is ongoing with NPS to identify parkland mitigation opportunities. Potential mitigation measures under consideration include acquisition of replacement parkland; wetland restoration; reforestation; trail improvements; and species-specific mitigations for RTE plant species. Mitigation for the use of George Washington Memorial Parkway would also be consistent with stipulations identified in the Section 106 Programmatic Agreement and would be coordinated with the MHT and Section 106 consulting parties. Final mitigation commitments including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.3 Chesapeake and Ohio Canal National Historical Park

Type of Section 4(f) Property: Historic Property and Public Park

Officials with Jurisdiction: MHT, NPS

Type of Section 4(f) Approval: Individual Evaluation

The Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP) is an NRHP-listed historic district and publicly-owned park and recreation area encompassing 19,575 acres. The C&O Canal NHP stretches along the Potomac River from Rock Creek at Georgetown in Washington, DC, to Cumberland, Maryland, for 184.5 miles. Construction on the C&O Canal began in 1828 and concluded in 1850. The C&O Canal

became a unit of the NPS as a national monument in 1961 and then established as a national historical park in 1971.

The C&O Canal NHP was designated to preserve and interpret the 19th century transportation canal and its associated scenic, natural, and cultural resources; and to provide opportunities for education and appropriate outdoor recreation. The C&O Canal NHP is listed on the NRHP and contains more than 1,300 historic structures, including one of the largest collections of 19th century canal features and buildings in the national park system.

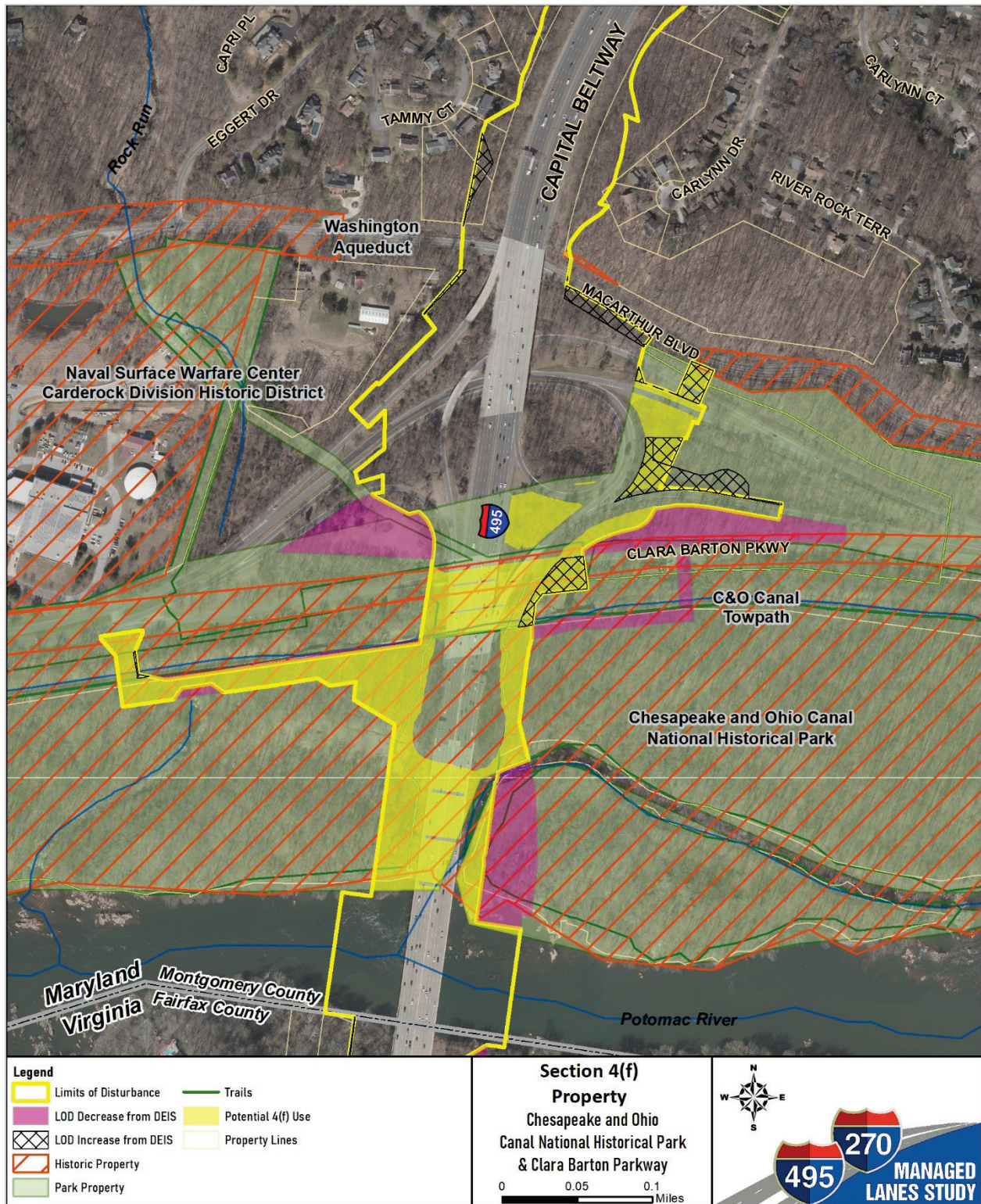
The C&O Canal NHP was listed in the NRHP on October 15, 1966, prior to becoming a national historical park. A supplementary listing under the name “Chesapeake and Ohio Canal National Historical Park” was added to the NRHP on February 3, 2015. The C&O Canal NHP is listed in the NRHP under Criteria A, C, and D. In addition to 455 contributing resources previously listed in the NRHP, the supplemental listing added 796 contributing resources comprising 106 buildings, 175 sites, 483 structures, and 32 objects.

Based on property information provided by NPS, MDOT SHA has now evaluated impacts to the C&O Canal NHP using a single boundary applicable to both the historic property and public park, rather than two separate boundaries as reported in the DEIS. This change to use a single boundary was made at the request of NPS. Impacts to the C&O Canal in the DEIS and Draft Section 4(f) Evaluation were based on readily available property information which included permits for operation and maintenance of the existing highway, including an area surrounding the highway, bridges, and ramps. While the intent to formally transfer property from NPS to MDOT SHA was noted in historical documents, neither NPS nor MDOT SHA recovered official documentation formalizing the transfer. Therefore, this SDEIS has altered the area delineated as within transportation use. MDOT SHA, FHWA, and NPS have agreed that Section 4(f) impacts to C&O Canal could exclude the area that currently has an existing transportation use. The area within NPS property defined as transportation use includes existing I-495 at-grade roadway sections to the toe of slope, Clara Barton Parkway Interchange ramp sections to the toe of slope, existing pier locations for the structure over the C&O Canal and eastbound Clara Barton Parkway, and existing pier locations for the ALB.

The Preferred Alternative would result in a Section 4(f) use of 10.1 acres of the C&O Canal NHP (**Figure 5-3**), including 1.0 acre of permanent impact and 9.1 acres of temporary impact. These impacts have decreased by 5.3 acres compared to the total impact of 15.4 acres reported in the DEIS for Alternative 9.

The impacts to C&O Canal NHP would be required to accommodate a temporary access road for construction vehicles and materials to build the new ALB and remove the existing structure, the construction and maintenance of the realigned ramp from I-495 northbound to Clara Barton Parkway, a temporary bridge crossing of the C&O Canal and towpath, and the construction of a shared-use path on the east side of the new ALB. Detailed mapping of the Preferred Alternative design at the C&O Canal NHP can be found in **SDEIS, Appendix D – Map 4**.

Figure 5-3: Chesapeake and Ohio C&O Canal NHP and Clara Barton Parkway



The C&O Canal towpath, which functions as a recreational facility, would be temporarily impacted during construction. The C&O Canal Towpath would be maintained for pedestrian and bike traffic during construction and would be returned to its original condition upon completion of construction. The proposed construction access road would be horizontally offset from the C&O Canal Towpath. Note that pedestrian traffic on the C&O Canal Towpath would be maintained across the proposed construction access road at all times and the towpath would remain open. Flaggers would be located at the C&O Canal towpath to ensure safe passage of towpath users during construction. Preliminary conceptual design for the proposed shared use path is still under review, and alternative configurations are being evaluated and coordinated with project stakeholders including NPS, Montgomery County Department of Transportation (MCDOT), and Maryland-National Capital Park and Planning Commission (M-NCPPC) (refer to **Section 2.3.8** for the shared-use path options under consideration). No other recreational facilities within the C&O Canal NHP would be impacted by the Preferred Alternative.

The decrease in impacts at the C&O Canal NHP resulted from minimization measures that have been applied around the ALB. MDOT SHA conducted extensive minimization efforts to reduce impacts in the vicinity of the ALB, including impacts to C&O Canal NHP, by evaluating alternative bridge designs, construction access paths, and construction staging methods in coordination with NPS as described in **Section 5.1.3**. Minimization measures include the elimination of one proposed access road east of I-495. An overall reduction in the LOD was achieved due to the ALB Strike Team analysis, resulting in a proposed construction method requiring less work area within C&O Canal relative to the DEIS.

On March 12, 2020, MHT concurred that the Study would have an adverse effect on C&O Canal NHP.

Coordination is ongoing with NPS to identify parkland mitigation opportunities. Potential mitigation measures under consideration include: acquisition of replacement parkland; wetland restoration; rehabilitation to canal, towpath, and masonry structures; reforestation; and species-specific mitigations for RTE plant species. Mitigation for the use of C&O Canal NHP would also be consistent with stipulations identified in the Section 106 Programmatic Agreement and would be coordinated with the MHT and Section 106 consulting parties. Final mitigation commitments including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.4 Clara Barton Parkway

Type of Section 4(f) Property: Historic Property and Public Park

Officials with Jurisdiction: MHT, NPS

Type of Section 4(f) Approval: Individual Evaluation

The Clara Barton Parkway is an administrative unit of George Washington Memorial Parkway within Maryland. Clara Barton Parkway extends 6.6 miles along the northern shore of the Potomac River between the Naval Surface Warfare Center at Carderock and the Washington, DC border with Maryland. The historic boundary in Maryland comprises 96.2 acres. Though Clara Barton Parkway has a separate historic boundary in Maryland, it is part of the larger George Washington Memorial Parkway Historic District.

Clara Barton Parkway is under the jurisdiction of NPS and was designed for recreational driving, to link sites that commemorate important episodes in American history, and to preserve habitat for local wildlife.

The Clara Barton Parkway is also a historic property and was listed in the NRHP on June 2, 1995. It is historically significant under Criterion B for its association with the life of George Washington and Clara Barton, persons significant in our past, and Criterion C for its embodiment of the distinctive characteristics of a parkway.

The Preferred Alternative would result in a Section 4(f) use of 2.5 acres of the Clara Barton Parkway (**Figure 5-3**), of which 1.6 acres are permanent and 0.9 acres are temporary impacts. This impact has increased by 0.7 acres from the total impact of 1.8 acres reported in the DEIS for Alternative 9.

The impacts to Clara Barton Parkway would be required to accommodate a temporary access road for construction vehicles and materials to build the new American Legion Bridge (ALB) and remove the existing structure for reconstruction and maintenance of I-495 northbound ramp to Clara Barton Parkway and the eastbound Clara Barton Parkway ramp to northbound I-495; and for construction of a trail connection between a shared-use path on the east side of the new ALB and the existing sidepath along MacArthur Boulevard. Detailed mapping of the Preferred Alternative design at Clara Barton Parkway can be found in **SDEIS, Appendix D – Maps 4-5**.

Impacts to Clara Barton Parkway in the DEIS and Draft Section 4(f) Evaluation were based on readily available property information which included permits for operation and maintenance of the existing highway, including an area surrounding the highway, bridges, and ramps. While the intent to formally transfer property from NPS to MDOT SHA was noted in historical documents, neither NPS nor MDOT SHA recovered official documentation formalizing the transfer. Therefore, this SDEIS has altered the area delineated as within transportation use. MDOT SHA, FHWA, and NPS have agreed that Section 4(f) impacts to C&O Canal NHP and Clara Barton Parkway could exclude the area that currently has an existing transportation use. The area within NPS property defined as transportation use includes existing I-495 at-grade roadway sections to the toe of slope, Clara Barton Parkway Interchange ramp sections to the toe of slope, existing pier locations for the structure over the C&O Canal and eastbound Clara Barton Parkway, and existing pier locations for the ALB.

Despite the increase in impacts from the DEIS, MDOT SHA conducted extensive efforts to reduce impacts in the vicinity of the ALB, including impacts to Clara Barton Parkway, by evaluating alternative bridge designs and construction staging methods and coordinating these efforts with NPS. Detailed construction evaluation resulted in the elimination of one proposed access road in the southwest quadrant of the bridge and Potomac River, just south of the Clara Barton Parkway.

Coordination is ongoing with NPS to identify parkland mitigation opportunities. Potential mitigation measures under consideration include funds to support recommended safety improvements to Clara Barton Parkway. Mitigation for the use of Clara Barton Parkway would also be consistent with stipulations identified in the Section 106 Programmatic Agreement and would be coordinated with the MHT and Section 106 consulting parties. Final mitigation commitments including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.5 Carderock Springs Historic District

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: *De Minimis* Impact

Carderock Springs is a planned residential development of 275 modernist houses located northwest of Bethesda in Montgomery County, Maryland. The Carderock Springs Historic District is significant under Criterion A as an example of a type of residential development which resulted from the collaborative efforts of builder Edmund J. Bennett and architects Keyes, Lethbridge, and Condon (KLC) in the suburbs of Washington, DC. The Carderock Springs Historic District is also significant under Criterion C for its distinctive examples of modernist houses in a carefully planned and landscaped development designed to have a “natural” appearance by retaining most of the original vegetation and topography.

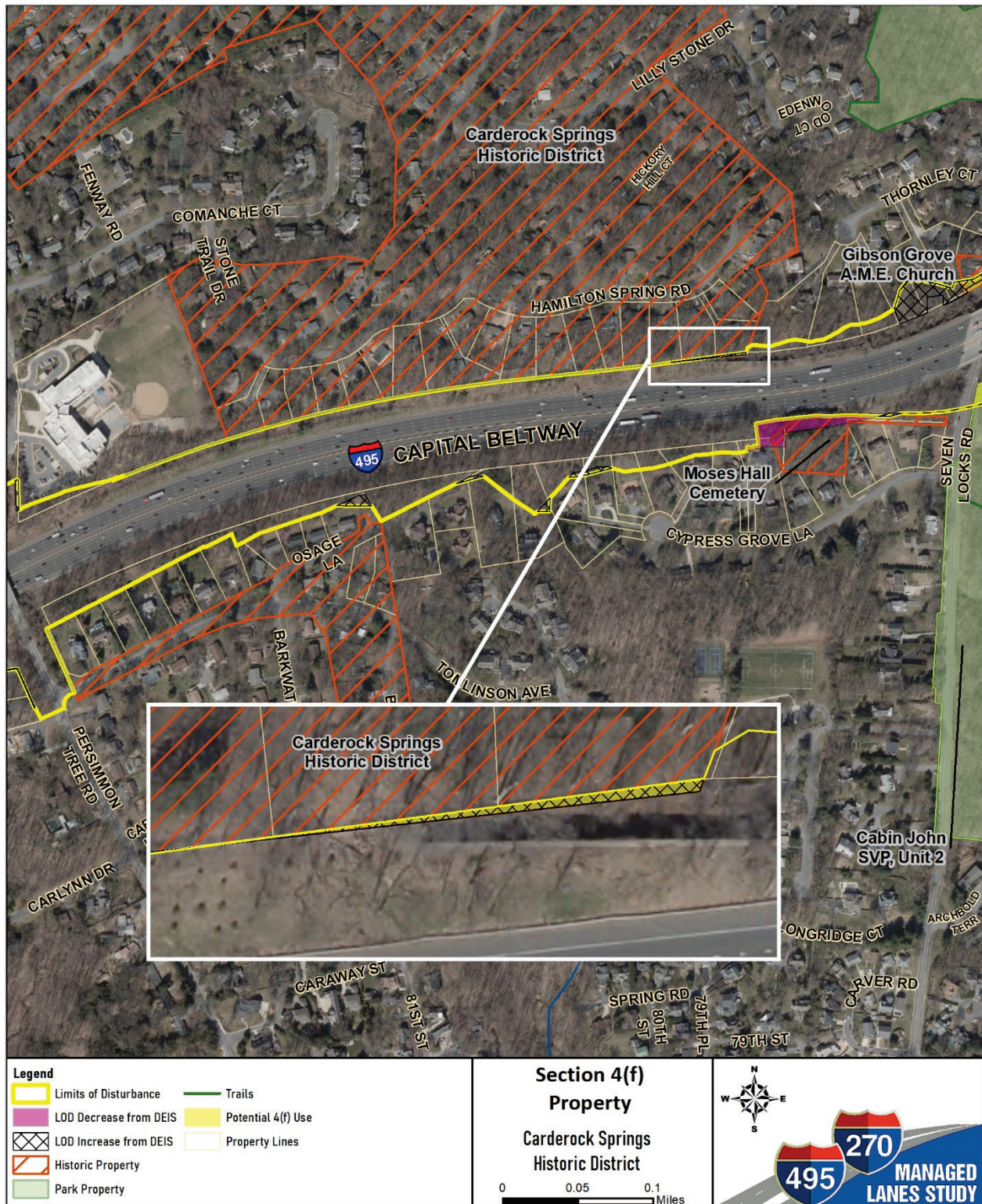
The Preferred Alternative would result in a Section 4(f) use of less than 0.1 acres of the Carderock Springs Historic District (**Figure 5-4**), including less than 0.1 acres of permanent impact and less than 0.1 acres of temporary impact. This impact has increased from no impact reported in the DEIS.

The increase in impact from the DEIS is due to design refinements to avoid and minimize impacts to Morningstar Cemetery located on the opposite side of I-495 from the Carderock Springs Historic District. The proposed centerline of I-495 is shifted north compared to existing conditions through this section to avoid and minimize impacts to Morningstar Cemetery. Impact to the Carderock Springs Historic District is due shifting of the mainline, adding managed lanes exchange ramps, constructing retaining and noise walls along the outer loop, and clearing and erosion and sediment control measures. Detailed mapping of the Preferred Alternative design at the Carderock Springs Historic District can be found in **SDEIS, Appendix D – Map 7**.

The Preferred Alternative would impact portions of two contributing properties in the Carderock Springs historic district. No contributing structures would be impacted within the district.

MDOT SHA had included provisions for making an effect determination at a later time (upon design advancement) to Carderock Springs Historic District under an initial draft Section 106 Programmatic Agreement. However, based on refined design MDOT SHA anticipates that there would be no adverse effect, and will coordinate the finding with MHT for concurrence. If MHT concurs, FHWA would make a *de minimis* impact determination for the Carderock Springs Historic District. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

Figure 5-4: Carderock Springs Historic District



5.2.6 Gibson Grove AME Zion Church

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: Individual Evaluation

Gibson Grove AME Zion Church is a small, wood-frame structure set on a hill overlooking Seven Locks Road, immediately north of I-495. Gibson Grove AME Zion Church is eligible for the National Register of Historic Places under Criterion A. The church derives its significance from its association with the African American settlement of Gibson Grove that was founded in the 1880s by former slaves. The original church was a log structure that was replaced with the current edifice in 1923. It is the only remaining building associated with the African American Gibson Grove community.

The Preferred Alternative would result in a Section 4(f) use of 0.1 acres of the Gibson Grove AME Zion Church property (**Figure 5-5**), all of which would be permanent impact. This impact has increased by 0.1 acres compared to no impact reported in the DEIS for Alternative 9. The Gibson Grove Church building will not be directly impacted by the Preferred Alternative.

The increase in impact from the DEIS is due to design refinements including outfall stabilization, culvert augmentation, bridge reconstruction, and construction access. A shift of the roadway centerline towards the Gibson Grove AME Zion Church was included in the Preferred Alternative to avoid impacts to Morningstar Cemetery, located on the opposite side of I-495 from the Gibson Grove Church. Detailed mapping of the Preferred Alternative design at Gibson Grove AME Zion Church can be found in **SDEIS, Appendix D – Map 8**.

MDOT SHA and FHWA are currently assessing the potential for an adverse effect to Gibson Grove AME Zion Church and has requested concurrence from MHT on the determination pursuant to Section 106. Mitigation for the use of Gibson Grove AME Zion Church would be consistent with stipulations identified in the Section 106 Programmatic Agreement and be coordinated with the MHT and Section 106 consulting parties. Final mitigation commitments including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.7 Cabin John Stream Valley Park Unit 2

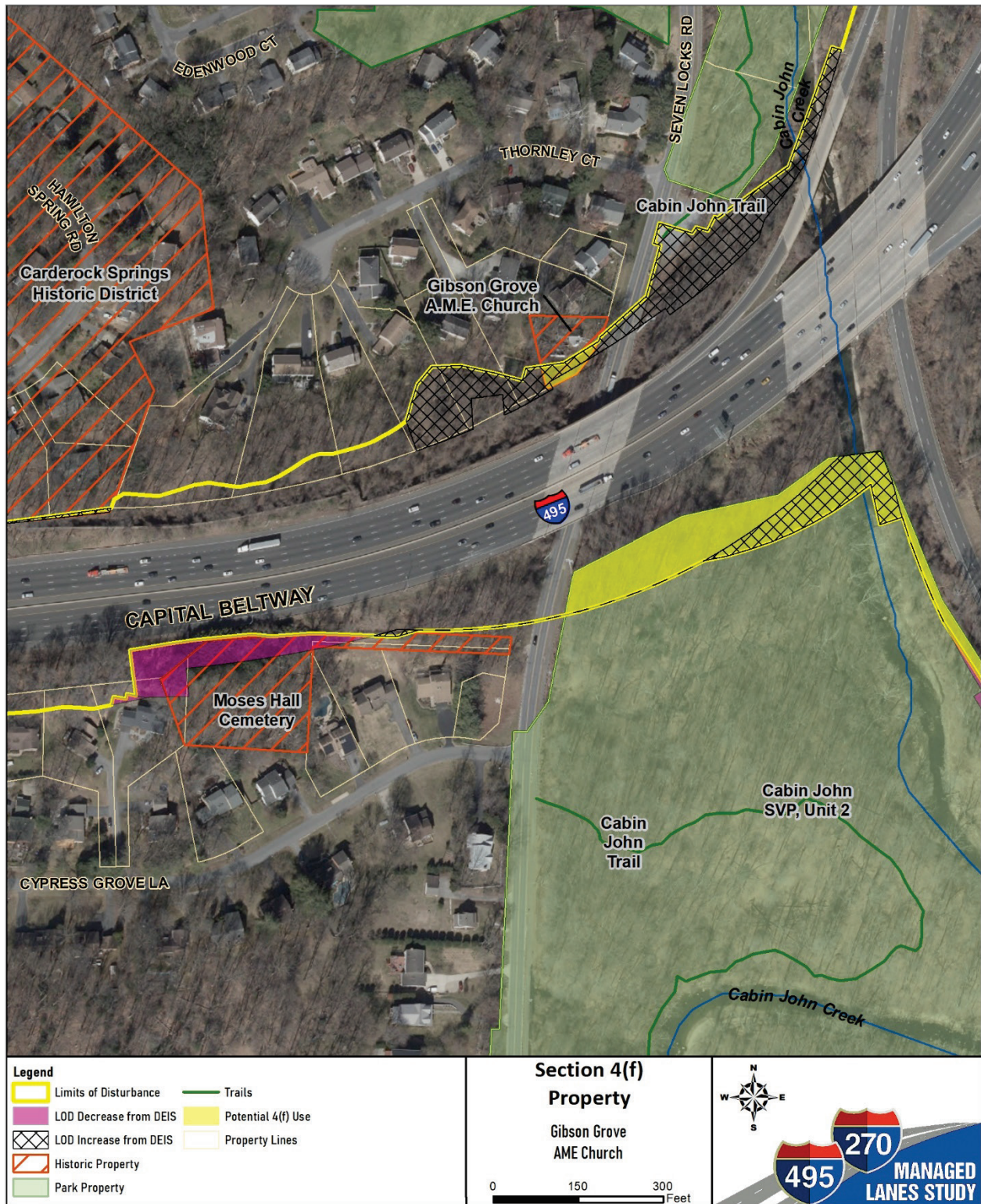
Type of Section 4(f) Property: Public Park

Official with Jurisdiction: M-NCPPC Montgomery County

Type of Section 4(f) Approval: *De Minimis* Impact

Cabin John Stream Valley Park Unit 2 is one of six units that comprise M-NCPPC Montgomery County's Cabin John Stream Valley Park, a publicly-owned park and recreation area. Cabin John Stream Valley Park Unit 2 extends north-south across I-495 from south of River Road to along Cabin John Parkway, where it abuts Unit 1 of the park. The entirety of Cabin John Stream Valley Park encompasses 520 acres across six units; of which Unit 2 comprises approximately 105.0 acres.

Figure 5-5: Gibson Grove AME Zion Church



Cabin John Stream Valley Park features portions of the natural-surface Cabin John Trail that runs north-south and connects the stream valley park's Potomac Area to Cabin John Parkway. The park also features undeveloped wooded area that provides a protective buffer along Cabin John Creek.

The Preferred Alternative would result in a Section 4(f) use of 1.4 acres of Cabin John Stream Valley Park, Unit 2 (**Figure 5-6**), including 0.8 acres of permanent impact and 0.6 acres of temporary impact. This impact has increased by 0.3 acres compared to the total impact of 1.1 acres reported in the DEIS for Alternative 9.

The impacts to Cabin John Stream Valley Park would be required to accommodate widening of I-495, replacement of the bridges across Seven Locks Road and Cabin John Parkway and associated construction access, realigning the interchange with Cabin John Parkway, a proposed noise barrier along the inner loop of I-495, and providing northbound managed lane access to River Road (**Figure 5-6**). Along southbound Cabin John Parkway, there would be impacts due to culvert augmentation and construction of a retaining wall along the Parkway and resurfacing of Cabin John Parkway for maintenance of traffic. Additionally, two culverts would be augmented in the southwest quadrant of the I-495 and River Road interchange. Detailed mapping of the Preferred Alternative design at Cabin John Stream Valley Park Unit 2 can be found in **Appendix D – Maps 8 - 10**.

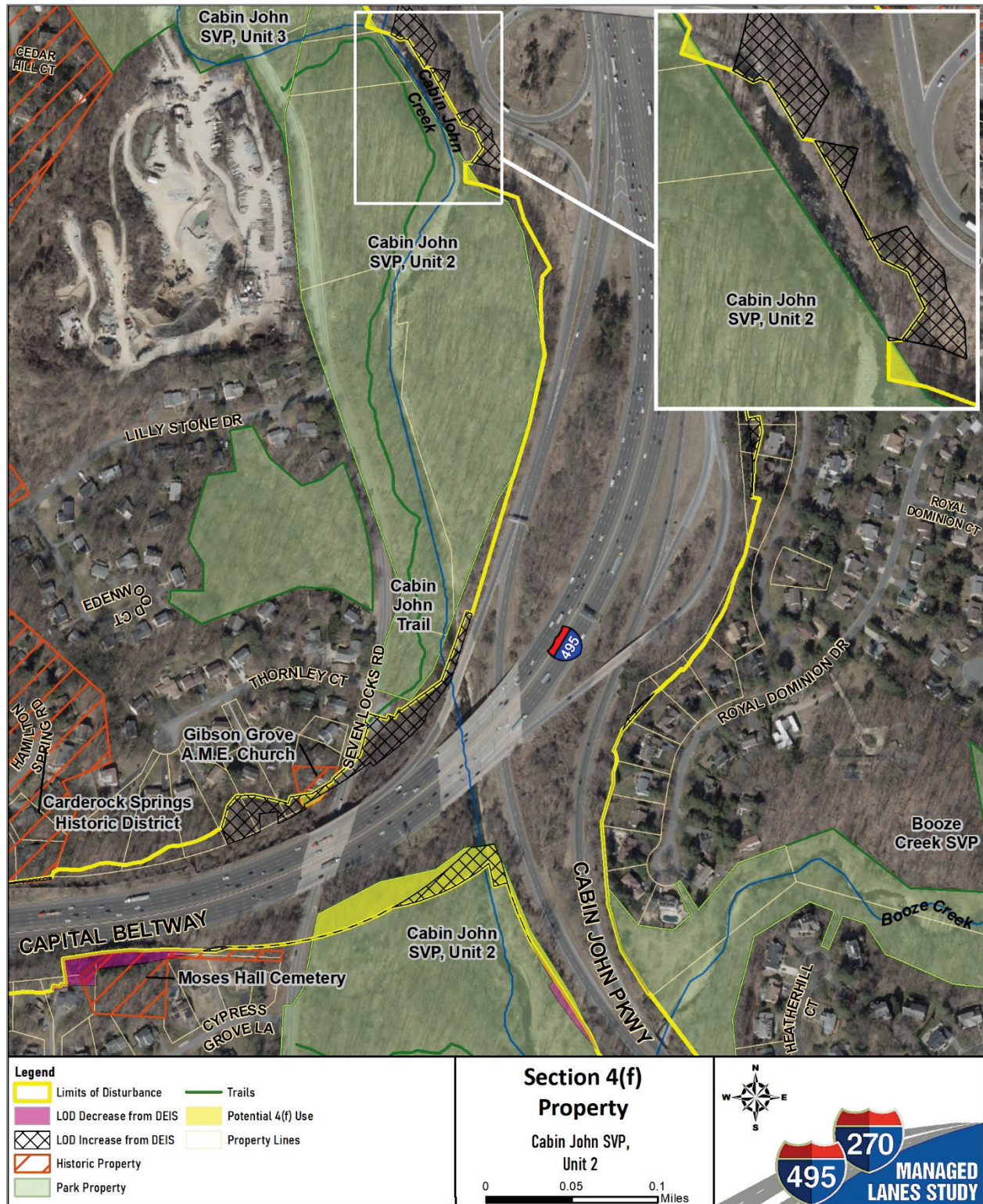
The increase in impact from the DEIS is due to design refinements along I-495 for construction of bridges and new interchange modifications. The alignment shift of I-495 included to reduce impacts at Morningstar Cemetery also led to redesigned of the direct access ramp connection to the River Road interchange which resulted in an increase in LOD at Cabin John Stream Valley Park Unit 2.

No recreational facilities within Cabin John Stream Valley Park Unit 2 would be impacted by the Preferred Alternative.

FHWA intends to make a *de minimis* impact determination for Cabin John Stream Valley Park Unit 2 if M-NCPPC concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with M-NCPPC as potential mitigation for parkland impacts. Other mitigation measures under consideration include a visual barrier at the edge of the ramps along southbound I-495, stream bank and bed stabilization, and removal of a concrete lined channel along a tributary to Cabin John Creek. MDOT SHA is coordinating with M-NCPPC to develop final mitigation commitments at Cabin John Stream Valley Park Unit 2 including all possible planning to minimize harm to be included in the Final Section 4(f) Evaluation and FEIS.

Figure 5-6: Cabin John SVP Unit 2



5.2.8 Burning Tree Club

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: *De Minimis* Impact

Burning Tree Club is a privately-owned, historic golf course in the northeast quadrant of the interchange of I-495 and River Road. The 221-acre club includes a Tudor Revival clubhouse and 18-hole golf course built in 1922 and 1923. Burning Tree Club is eligible for the NRHP under Criteria A and C. Burning Tree Club is significant under Criterion A as an exclusive, male-only social institution devoted to the pastime of golf, and an example of the type of recreational organization that flourished during the 1920s.

The Preferred Alternative would result in a Section 4(f) use of 1.3 acres of Burning Tree Club (**Figure 5-7**), all of which would be permanent impact. This impact has increased by 0.5 acres compared to the total impact of 0.8 acres reported in the DEIS for Alternative 9.

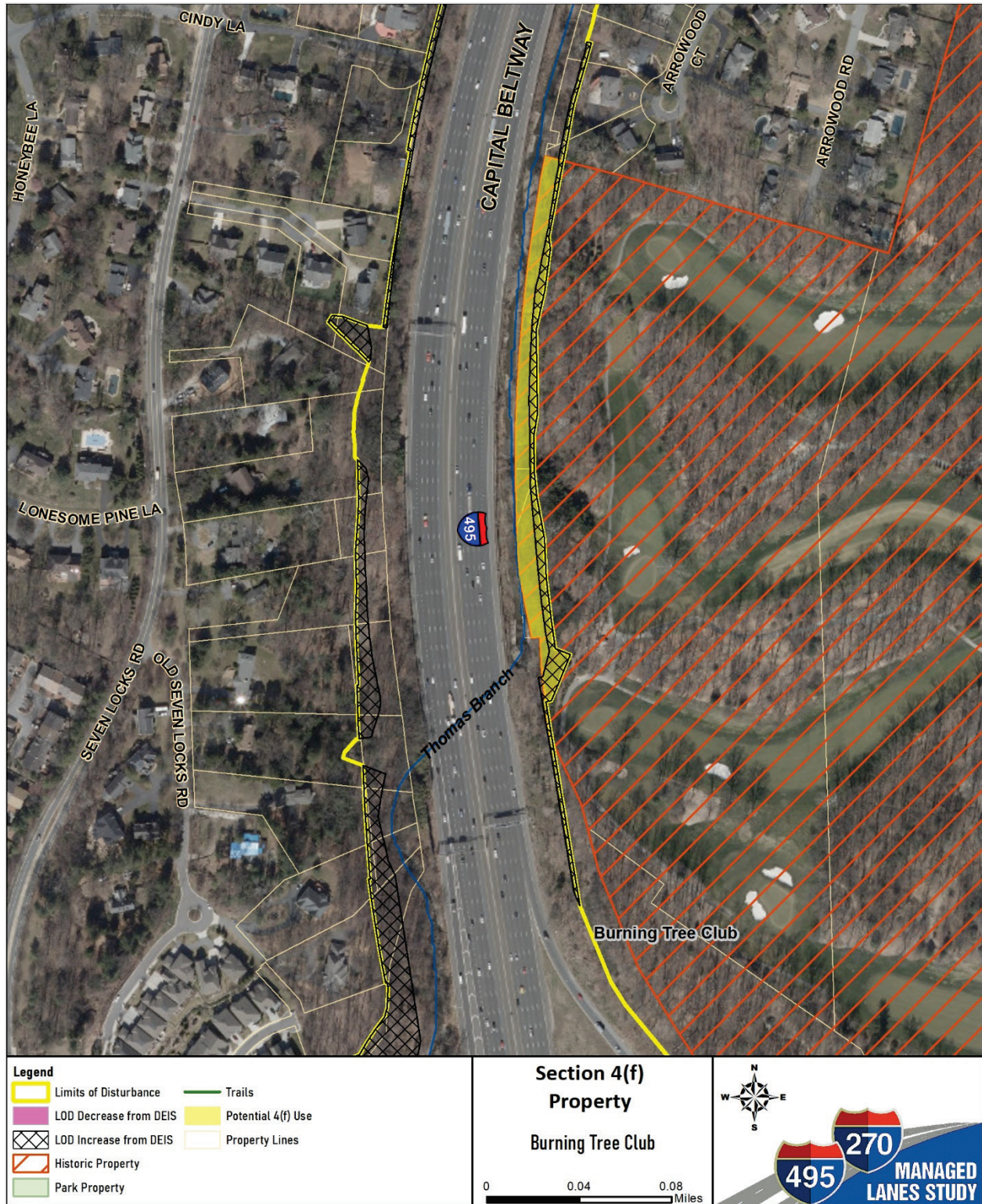
The impacts to Burning Tree Club would be required to accommodate widening I-495, the augmentation of an existing culvert carrying Thomas Branch beneath I-495, construction of a retaining wall, and the realignment of Thomas Branch along the east side of I-495. Detailed mapping of the Preferred Alternative design at the Burning Tree Club can be found in **SDEIS, Appendix D – Maps 10 and 11**.

The increase in impact from the DEIS is due to design refinements, including proposed relocation of Thomas Branch and utilities, and construction of a headwall structure.

The LOD expansion is located at the edge of the property, along the Capital Beltway. The revised LOD would not impact the golf course itself or its associated paths and would not alter the characteristics that qualify the property for the NRHP.

On March 12, 2020, MHT concurred that the Managed Lanes Study would have no adverse effect on Burning Tree Club and provided written acknowledgement of FHWA's intent to make a *de minimis* impact finding based on the impacts presented in the DEIS. This initial MHT review was conducted prior to recent design changes and avoidance and minimization efforts. MDOT SHA anticipates that there would still be no adverse effect to the Burning Tree Club and submitted documentation for concurrence to MHT on September 8, 2021. Therefore, FHWA still intends to make a *de minimis* impact determination for Burning Tree Club provided MHT concurs with the effect determination and acknowledges the intent to make the *de minimis* finding. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

Figure 5-7: Burning Tree Club



5.2.9 Academy Woods

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: *De Minimis* Impact

Academy Woods is a Section 4(f) historic property comprised of a small neighborhood on 6.5 acres northeast of the western I-495 and I-270 spur interchange in Bethesda. The historic district is eligible for the NRHP under Criterion C as representative of a type, period, and method of construction.

The Preferred Alternative would result in a Section 4(f) use of 0.2 acres of Academy Woods (**Figure 5-8**), all of which would be permanent impact. There has been no change compared to the impact reported in the DEIS for Alternative 9.

The impacts to Academy Woods would be required to accommodate the construction, operation and future maintenance of a stormwater management facility, and construction of a noise barrier. Detailed mapping of the Preferred Alternative design at Academy Woods can be found in **SDEIS, Appendix D – Map 13**.

The impacts to Academy Woods have not changed from those reported for Alternative 9 in the DEIS. Refer to the **DEIS Appendix F, Section 2.2.1** for more detail.

On March 12, 2020, MHT concurred that the Study would have no adverse effect on Academy Woods and provided written acknowledgement of FHWA's intent to make a *de minimis* impact finding. As such, the impact to Academy Woods Historic District under the Preferred Alternative would constitute a minor use. FHWA intends to issue a finding of *de minimis* impact to Academy Woods. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

5.2.10 Cabin John Regional Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: M-NCPPC Montgomery County

Type of Section 4(f) Approval: Individual Evaluation

Cabin John Regional Park is a publicly-owned park and recreation area situated between Democracy Boulevard and southbound I-270. The 513.8-acre park contains a playground, dog park, picnic shelters, a miniature train, grills, horseshoe pits, and restrooms. The park has more than four miles of natural surface trails and two miles of hard surface trails. Athletic facilities include an indoor ice rink, baseball field, five softball fields, a volleyball court, and indoor tennis center. The Locust Grove Nature Center and Robert C. McDonnell Campground are also within the park.

The Preferred Alternative would result in a Section 4(f) use of 6.3 acres of Cabin John Regional Park (**Figure 5-9**), including 5.7 acres of permanent impact and 0.6 acres of temporary impact. This impact has increased by 0.6 acres compared to the total impact of 5.7 acres reported in the DEIS for Alternative 9.

Figure 5-8: Academy Woods

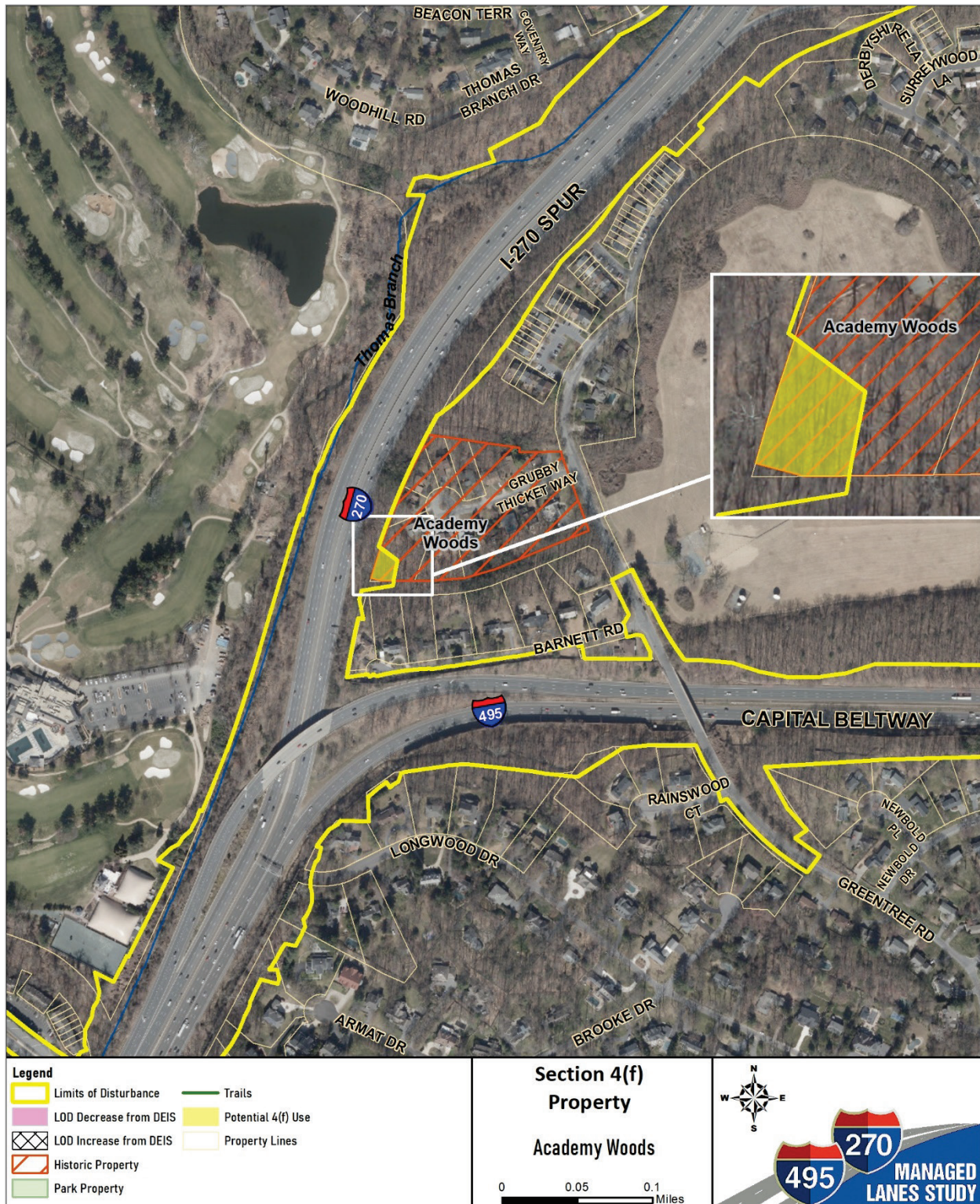
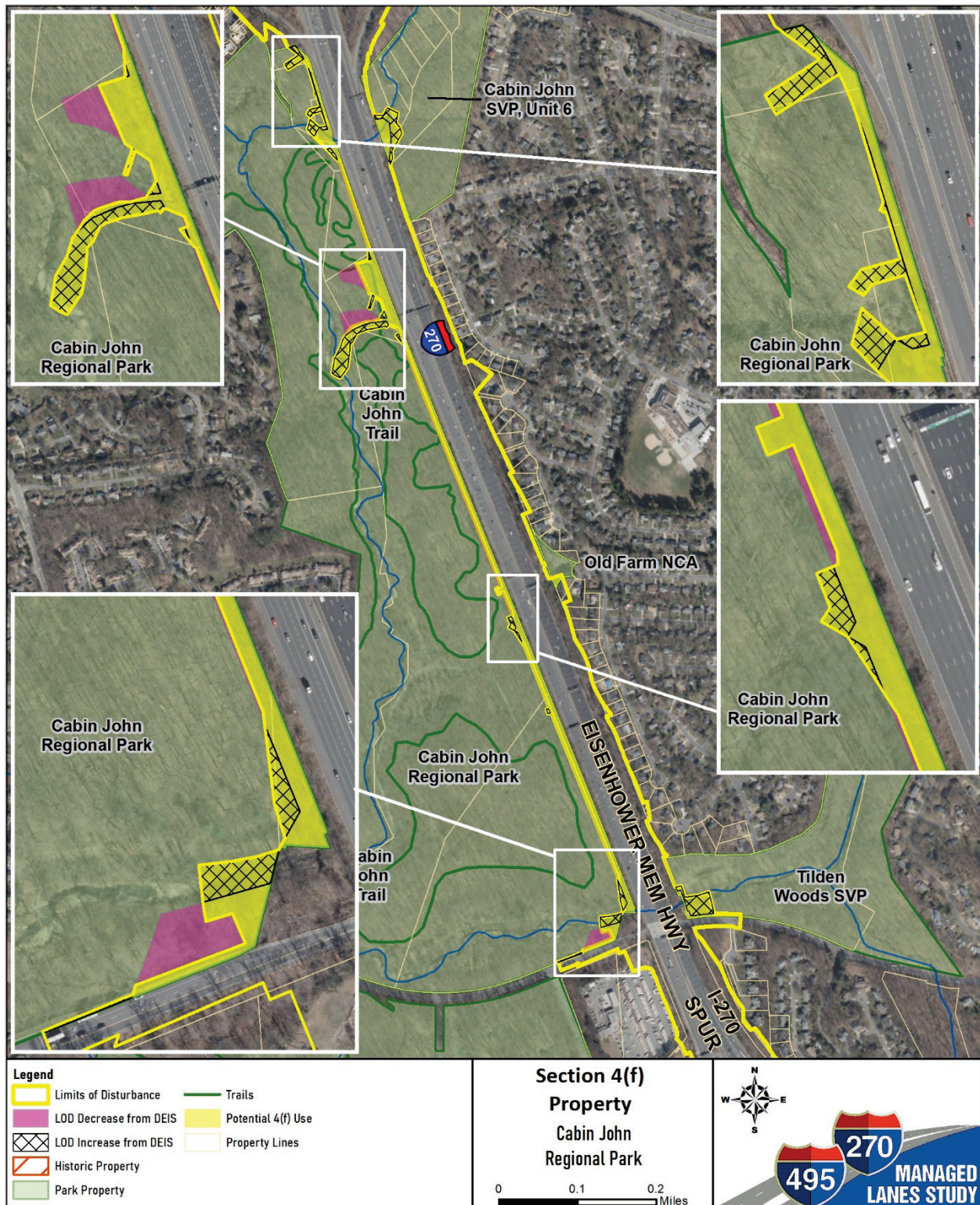


Figure 5-9: Cabin John Regional Park



The impacts to Cabin John Regional Park would be required due to widening of southbound I-270 and construction of a retaining wall along the outside shoulder, utility relocations, a SWM facility, augmentation of two storm drains and one culvert, and outfall stabilization. Impacts would occur to the connecting trail between the Highway Loop Trail and Kidney Bean Loop Trail. Detailed mapping of the Preferred Alternative design at Cabin John Regional Park can be found in **SDEIS, Appendix D – Maps 23 - 25**.

A portion of the connecting trail between the Highway Loop Trail and Kidney Bean Loop Trail would need to be realigned in coordination with M-NCPPC. Access to the trail would be maintained throughout construction. No other recreational facilities would be impacted by the Preferred Alternative.

The increase in impact from the DEIS is due to expanded LOD needed to accommodate culvert augmentation, outfall stabilization, utility relocation, updated roadway configuration and retaining wall, and temporary drainage needs along the retaining wall. Expansion of the LOD in certain areas was in response to M-NCPPC's comments to ensure stable outfall channels.

MDOT SHA has identified potential mitigation opportunities for the site including tree planting and improvements to the connecting trail between the Highway Loop Trail and Kidney Bean Loop Trail. MDOT SHA would also identify and pursue the acquisition of replacement parkland in coordination with M-NCPPC as potential mitigation for parkland impacts. Also under consideration are a visual barrier along southbound I-270 and improvements to the Robert C. McDonnell Campground. MDOT SHA is coordinating with M-NCPPC to develop final mitigation commitments at Cabin John Regional Park including all possible planning to minimize harm to be included in the Final Section 4(f) Evaluation and FEIS.

5.2.11 Tilden Woods Stream Valley Park

Type of Section 4(f) Property: Public Park

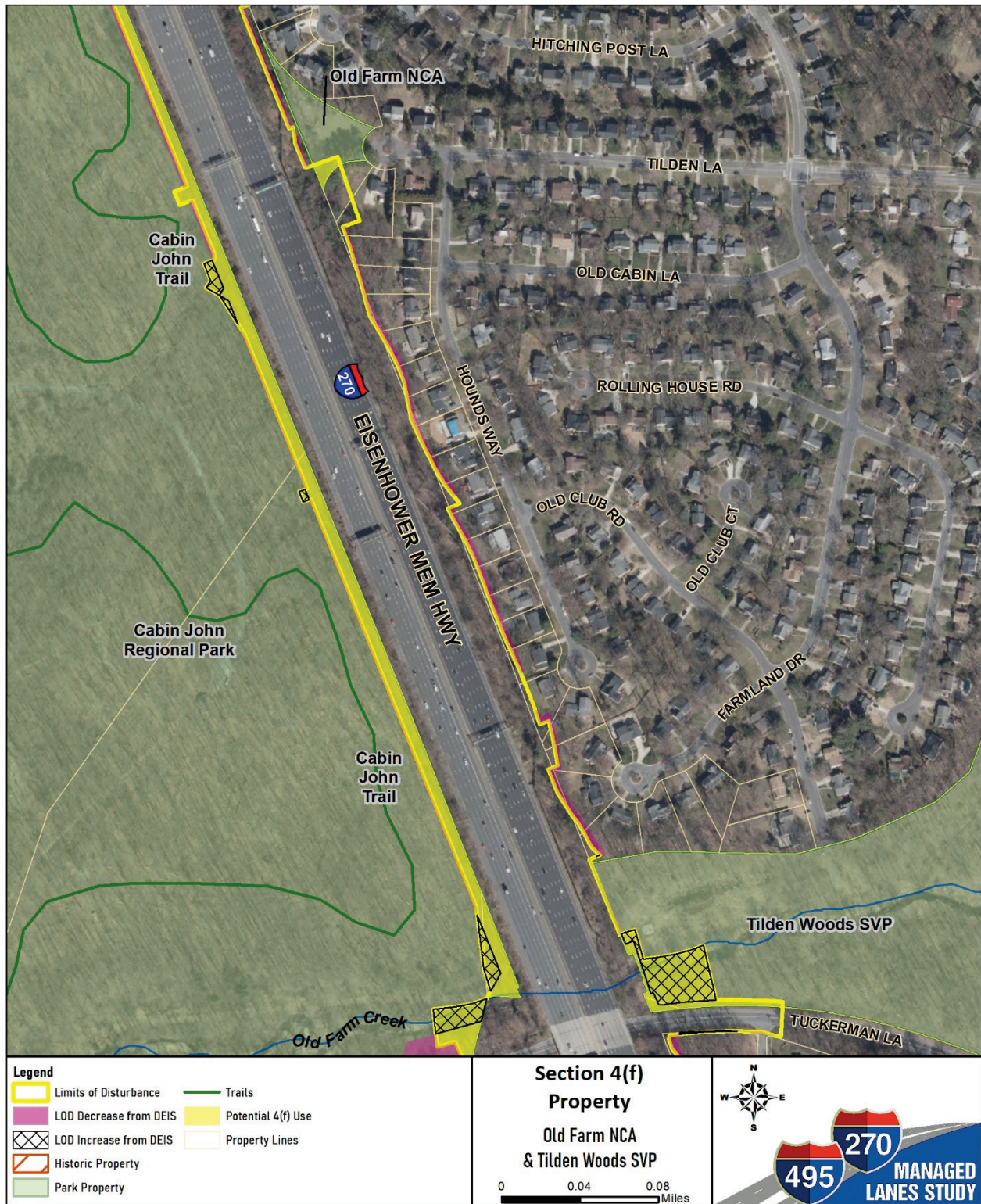
Official with Jurisdiction: M-NCPPC Montgomery County

Type of Section 4(f) Approval: *De Minimis* Impact

Tilden Woods Stream Valley Park is a publicly-owned park, and recreation area, accessed via Sully Lane in Bethesda. Tilden Woods Stream Valley Park extends along the banks of Old Farm Creek from Montrose Road to I-270. This 67.4-acre park consists of an undeveloped wooded area that provides a protective buffer along Old Farm Creek. This park is under the jurisdiction of M-NCPPC and was acquired in pieces beginning in 1961 using Program Open Space funds.

The Preferred Alternative would result in a Section 4(f) use of 0.7 acres of Tilden Woods Stream Valley Park (**Figure 5-10**), including 0.6 acres of permanent impact and 0.1 acres of temporary impact. This impact has increased by 0.5 acres compared to the total impact of 0.2 acres reported in the DEIS for Alternative 9.

Figure 5-10: Tilden Woods SVP and Old Farm NCA



The impacts to Tilden Woods Stream Valley Park would be required to accommodate an area for construction to widen I-270, replacing the bridge that carries I-270 over Tuckerman Lane, augmenting the existing culvert conveying Old Farm Creek beneath I-270, providing access for construction vehicles and materials, and utility relocation. Detailed mapping of the Preferred Alternative design at Tilden Woods Stream Valley Park can be found in **SDEIS, Appendix D – Maps 22 and 23**.

No recreational facilities would be impacted by the Preferred Alternative at Tilden Woods Stream Valley Park.

The increase in impact from the DEIS is due to design refinements including culvert augmentation and utility relocation.

FHWA intends to make a *de minimis* impact determination for Tilden Woods Stream Valley Park if M-NCPPC Montgomery County concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection and in consideration of public comments.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with the M-NCPPC as potential mitigation for impacts to parkland. Replacement parkland of equal or greater monetary and recreational value is required for Tilden Woods Stream Valley Park because the impacted park was acquired with Program Open Space Funds. MDOT SHA has also identified potential offsite tree planting mitigation opportunities. MDOT SHA is coordinating with M-NCPPC to develop mitigation commitments at Tilden Woods Stream Valley Park and final mitigation will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.12 Old Farm Neighborhood Conservation Area

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: M-NCPPC Montgomery County

Type of Section 4(f) Approval: *De Minimis* Impact

Old Farm Neighborhood Conservation Area is a publicly-owned park and recreation area at 7030 Tilden Lane in Rockville. The park is bounded to the west by I-270. The 0.8-acre park is composed of an undeveloped wooded area.

The Preferred Alternative would result in a Section 4(f) use of 0.1 acres of Old Farm Neighborhood Conservation Area (**Figure 5-10**), all of which would be permanent impact. The impact has not changed compared to the total impact reported in the DEIS for Alternative 9.

The impacts to Old Farm Neighborhood Conservation Area would be required to construct, operate, and maintain a stormwater management facility on land adjacent to the park. Detailed mapping of the Preferred Alternative design at Old Farm Neighborhood Conservation Area can be found in **SDEIS, Appendix D – Map 23**.

No recreational facilities would be impacted by the Preferred Alternative at Old Farm Neighborhood Conservation Area.

FHWA intends to make a *de minimis* impact determination for Old Farm Neighborhood Conservation Area if M-NCPPC, Montgomery County concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with M-NCPPC as potential mitigation for impacts to parkland. Potential tree planting mitigation is also under consideration. MDOT SHA is coordinating with M-NCPPC to develop mitigation commitments at the Old Farm Neighborhood Conservation Area and final mitigation will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.13 Cabin John Stream Valley Park Unit 6

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: M-NCPPC Montgomery County

Type of Section 4(f) Approval: *De Minimis* Impact

Cabin John Stream Valley Park Unit 6 is one of six units that comprise M-NCPPC Montgomery County's Cabin John Stream Valley Park, a publicly-owned park and recreation area. Cabin John Stream Valley Park Unit 6 is the northernmost portion of the stream valley park and is situated east of I-270 bounded by Old Stage Road to the south and the I-270 offramp to Montrose Road to the north. The entirety of Cabin John Stream Valley Park encompasses 520 acres; of which Unit 6 comprises 19.8 acres. Cabin John Stream Valley Park features portions of the natural surface Cabin John Trail that runs north-south and connects the stream valley park's Potomac area to Cabin John Parkway as well as an undeveloped wooded area that provides a protective buffer along Cabin John Creek.

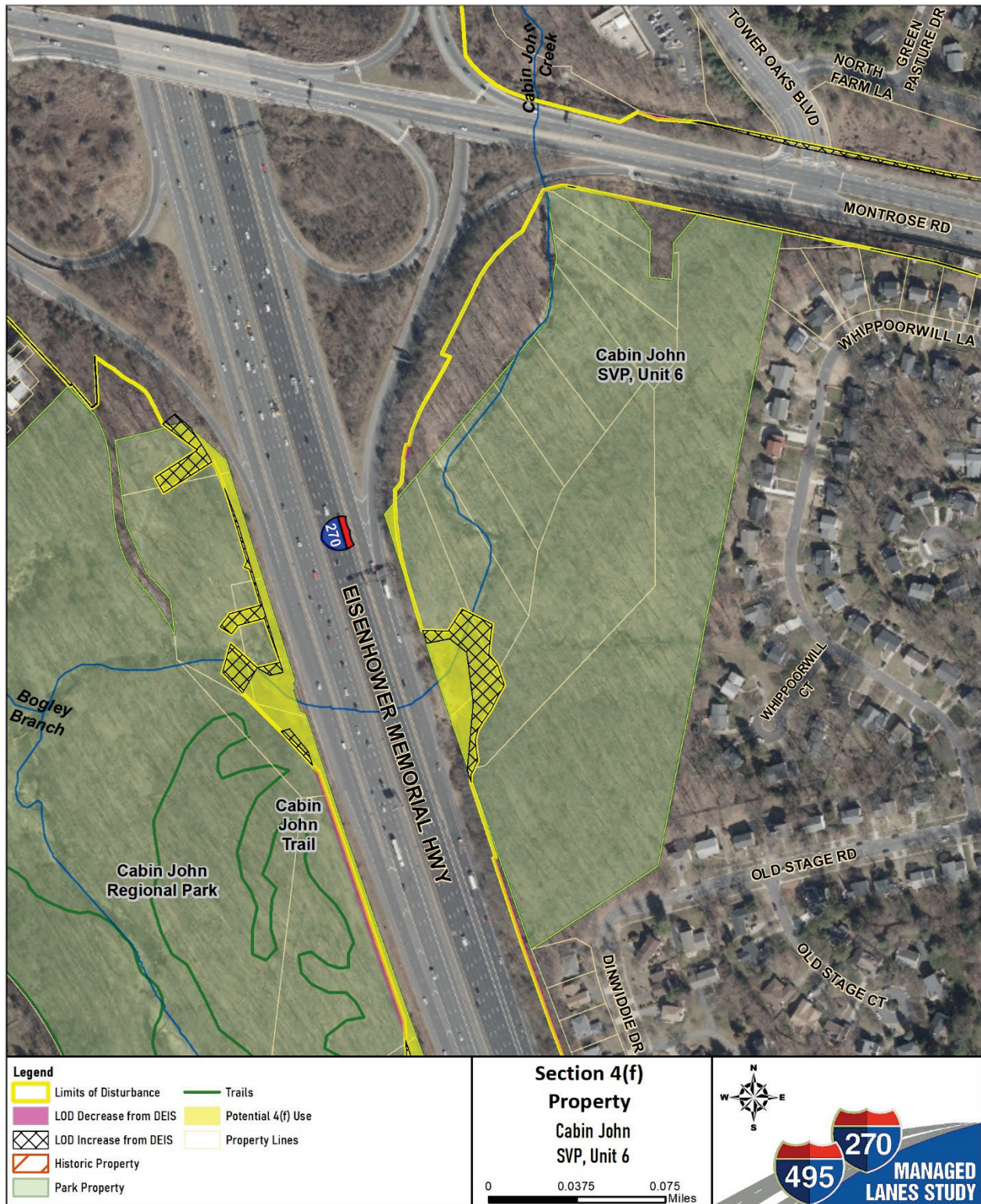
The Preferred Alternative would result in a Section 4(f) use of 0.8 acres of Cabin John Stream Valley Park Unit 6 (**Figure 5-11**), all of which would be permanent impact. This impact has increased by 0.4 acres compared to the total impact of 0.4 acres reported in the DEIS for Alternative 9.

The impacts to Cabin John Stream Valley Park Unit 6 would be required to accommodate: tree removal, grading, improvements to the existing culvert, access for construction vehicles and materials, construction of a retaining wall along the realigned ramp from northbound I-270 to eastbound Montrose Road, and construction of a SWM facility. Detailed mapping of the Preferred Alternative design at Cabin John Stream Valley Park Unit 6 can be found in **SDEIS, Appendix D – Map 24**.

The Preferred Alternative would not impact any recreational facilities in Cabin John Stream Valley Park Unit 6.

The increase in impact from the DEIS is due to design refinements including culvert augmentation, stormwater pond location, and updated roadway configuration and retaining wall. Expansion of the LOD in certain areas was in response to M-NCPPC's comments to improve stormwater management and existing drainage issues.

Figure 5-11: Cabin John Stream Valley Park, Unit 6



FHWA intends to make a *de minimis* impact determination for Cabin John Stream Valley Park Unit 6 if M-NCPPC concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with M-NCPPC as potential mitigation for parkland impacts MDOT SHA is coordinating with M-NCPPC to develop final mitigation commitments at Cabin John Stream Valley Park Unit 6 including all possible planning to minimize harm to be included in the Final Section 4(f) Evaluation and FEIS.

5.2.14 Cabin John Stream Valley Park (Rockville)

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Rockville Department of Recreation and Parks

Type of Section 4(f) Approval: Individual Evaluation

Cabin John Stream Valley Park (Rockville) is a publicly-owned park and recreation area east of Tower Oaks Boulevard and south of Preserve Parkway in Rockville. The 4.5-acre park provides a wooded buffer along a portion of the environmentally sensitive Cabin John Creek.

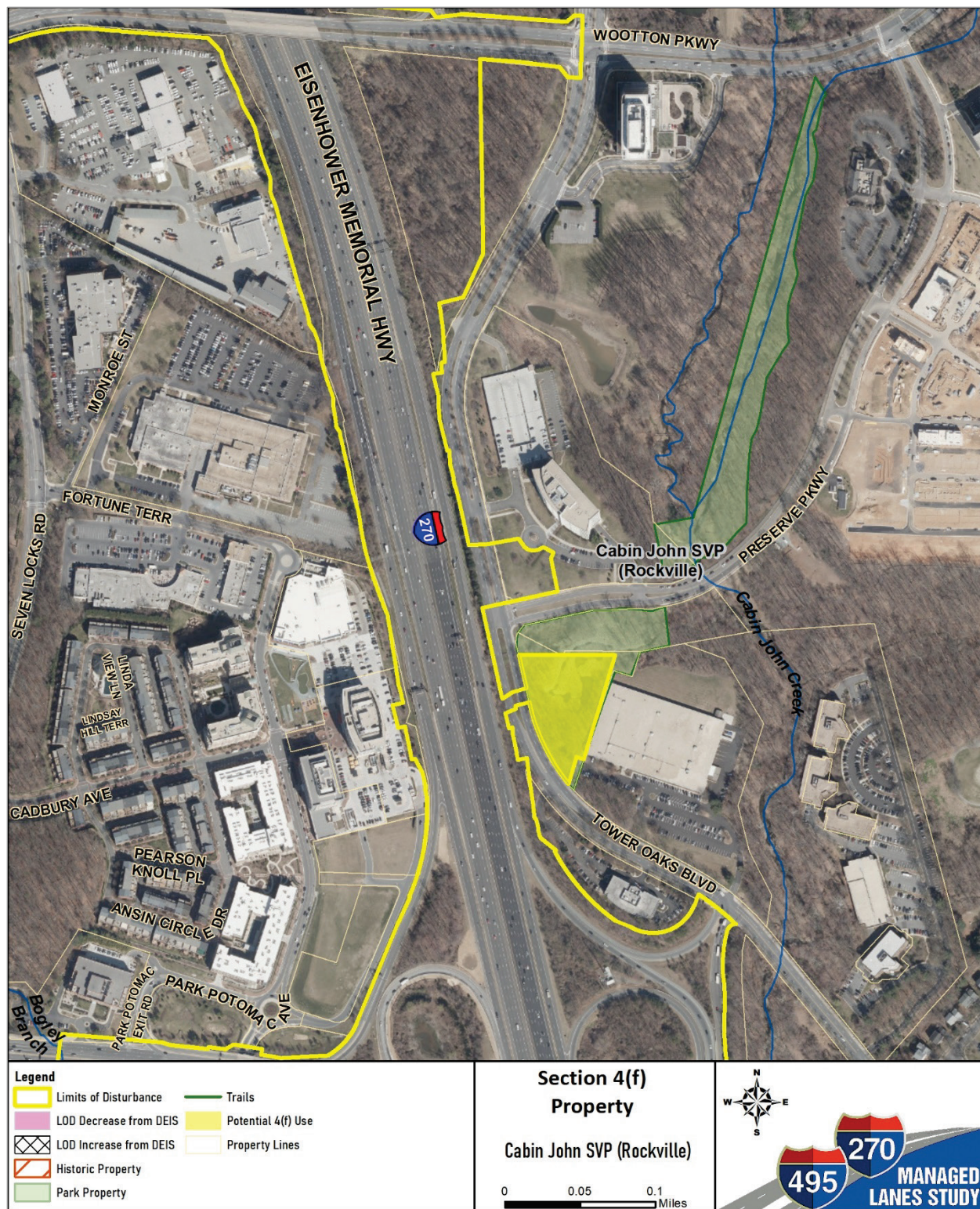
The Preferred Alternative would result in a Section 4(f) use of 2.1 acres of Cabin John Stream Valley Park (Rockville) (**Figure 5-12**), all of which would be permanent impact. This impact has not changed compared to the total impact reported in the DEIS for Alternative 9.

The impacts to Cabin John Stream Valley Park (Rockville) would be required to construct, operate, and maintain a stormwater management facility. Detailed mapping of the Preferred Alternative design at Cabin John Stream Valley Park (Rockville) can be found in **SDEIS, Appendix D – Map 26**. Refer to the **DEIS Appendix F, Section 2.2.1** for more detail.

No recreational facilities in Cabin John Stream Valley Park (Rockville) would be impacted by the Preferred Alternative.

MDOT SHA would identify and pursue the acquisition of replacement parkland and/or other mitigation opportunities in coordination with the City of Rockville. Final mitigation commitments at Cabin John Stream Valley Park including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

Figure 5-12: Cabin John Stream Valley Park (Rockville)



5.2.15 Bullards Park and Rose Hill Stream Valley Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Rockville Department of Recreation and Parks

Type of Section 4(f) Approval: Individual Evaluation

Bullards Park and Rose Hill Stream Valley Park is a publicly-owned park and recreation area abutting the northbound lanes of I-270 in Rockville. The 4.7-acre park is divided into two sections. The stream valley park comprises the central and southern portions of the park while the northern portion, Bullards Park, contains basketball courts, hard and natural surface trails, a playground, and picnic area. The Preferred Alternative would result in a Section 4(f) use of 3.3 acres of Bullards Park and Rose Hill Stream Valley Park (**Figure 5-13**), all of which would be permanent impact. This impact has increased by 3.0 acres compared to the total impact of 0.3 acres reported in the DEIS for Alternative 9.

The impacts to Bullards Park and Rose Hill Stream Valley Park would be required for grading or modification of existing stormwater management (SWM) facilities, including an existing joint-use SWM facility near the Julius West Middle School pond, and the modification of an existing SWM facility at the north end of the park property. Based on continued coordination with the City of Rockville, MDOT SHA, and FHWA, the assumption regarding the applicability of Section 4(f) to the existing joint-use SWM facility and potential impacts may be modified and updated in the Final Section 4(f) Evaluation. Detailed mapping of the Preferred Alternative design at Bullards Park and Rose Hill Stream Valley Park can be found in **SDEIS, Appendix D – Map 30**.

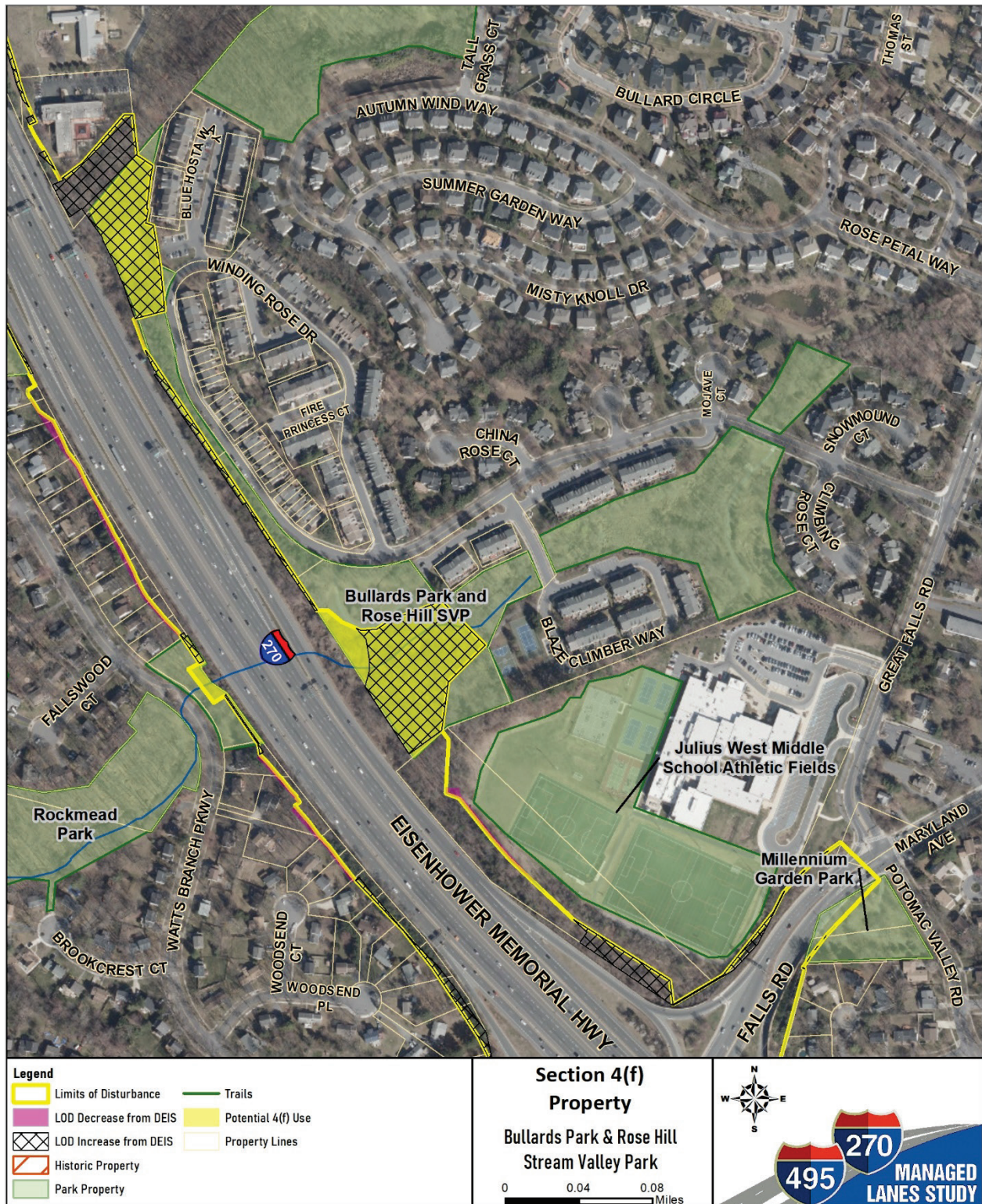
The increase in impact from the DEIS is due to further adjustment and evaluation of the LOD to account for culvert augmentation in the vicinity of this park.

No recreational facilities would be impacted by the Preferred Alternative in Bullards Park and Rose Hill Stream Valley Park.

MDOT SHA and FHWA previously anticipated that the Section 4(f) use of Bullards Park and Rose Hill Stream Valley Park would be *de minimis* based on the impacts presented in the DEIS. However, impacts to Bullards Park and Rose Hill Stream Valley Park are now anticipated to be greater than *de minimis*, and thus requiring an Individual Section 4(f) Evaluation.

MDOT SHA has identified potential park mitigation and enhancement opportunities for Bullards Park and Rose Hill Stream Valley Park, including trail and path improvements, addition of park amenities such as benches, and the addition of decorative landscaping. MDOT SHA would also identify and pursue the acquisition of replacement parkland in coordination with the City of Rockville as potential mitigation for parkland impacts. MDOT SHA will continue coordinating with the City of Rockville to identify final mitigation commitments including all possible planning to minimize harm for inclusion in the Final Section 4(f) Evaluation and FEIS.

Figure 5-13: Bullards Park and Rose Hill Stream Valley Park



5.2.16 Rockmead Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Rockville Department of Recreation and Parks

Type of Section 4(f) Approval: *De Minimis* Impact

Rockmead Park is a publicly-owned park and recreational facility at 1800 Greenplace Terrace in Rockville. This 25.3-acre park abuts the southbound lanes of I-270. Park amenities include open space, benches, natural and hard surface paths, and playground equipment.

The Preferred Alternative would result in a use of 0.3 acres of Rockmead Park (**Figure 5-14**), including 0.2 acres of permanent impact and 0.1 acres of temporary impact. This impact has increased by 0.1 acres compared to the total impact of 0.2 acres reported in the DEIS for Alternative 9.

The impacts to Rockmead Park would be required to accommodate improvements to two existing culverts that convey waterways beneath I-270 and providing access for construction vehicles and materials, construction of a retaining wall and a noise barrier. Detailed mapping of the Preferred Alternative design at Rockmead Park can be found in **SDEIS, Appendix D – Map 30**.

No recreational facilities would be impacted by the Preferred Alternative at Rockmead Park.

FHWA intends to make a *de minimis* impact determination for Rockmead Park if the City of Rockville Department of Recreation and Parks concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with the City of Rockville as potential mitigation for impacts to parkland. MDOT SHA has identified additional potential mitigation opportunities including stream restoration, trail and path improvements, additional park amenities, improvements to playground equipment, and decorative landscaping. MDOT SHA is coordinating with the City of Rockville to develop mitigation commitments at Rockmead Park and final mitigation will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.17 Woottons Mill Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Rockville Department of Recreation and Parks

Type of Section 4(f) Approval: *De Minimis* Impact

Woottons Mill Park is a publicly-owned park and recreation area on Hurley Road in Rockville. Woottons Mill Park extends along a portion of Watts Branch from the southwest quadrant of the I-270 and MD 28 interchange to the intersection of Scott Drive and Wootton Parkway.

Figure 5-14: Rockmead Park



The increase in impact from the DEIS is due to design refinements requiring additional LOD for a noise wall, an updated roadway configuration and retaining wall, and further adjustment and evaluation of the LOD to account for culvert augmentation within the park.

Amenities within this 106.5-acre park include basketball and tennis courts, benches and picnic tables, natural surface and hard surface paths, playground equipment, and garden plots.

The Preferred Alternative would result in a Section 4(f) use of 0.7 acres of Woottons Mill Park (**Figure 5-15**), all of which would be permanent impact. The impact has increased by 0.5 acres compared to the total impact of 0.2 acres reported in the DEIS for Alternative 9.

The impacts to Woottons Mill Park would be required to improve a storm drain outfall, and augmentation of one culvert with potential stream restoration improvements. Detailed mapping of the Preferred Alternative design at Woottons Mill Park can be found in **SDEIS, Appendix D – Map 31**.

No recreational facilities would be impacted by the Preferred Alternative in Woottons Mill Park.

The increase in impact from the DEIS is due to design refinements for culvert augmentation.

FHWA intends to make a *de minimis* impact determination for Woottons Mill Park if the City of Rockville Department of Recreation and Parks concurs that the Preferred Alternative, after measures to minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments.

MDOT SHA has also identified potential mitigation opportunities including trail and path improvements, improvements to basketball and/or tennis courts, improvement to the bridge over Watts Branch, improvements to the Veirs Drive parking area, and shade tree planting. MDOT SHA is coordinating with City of Rockville to develop mitigation commitments at Woottons Mill Park to be included in the Final Section 4(f) Evaluation and FEIS.

5.2.18 Woodley Gardens

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: *De Minimis* Impact

Woodley Gardens is a planned residential development containing Colonial Revival-style, single- and multi-family dwellings constructed between 1960 and 1970 in Rockville, Maryland. The approximately 200-acre development is east of I-270 and south of the Gude Drive overpass. Woodley Gardens is an important, early example of mixed housing types in a planned residential development and is, therefore, eligible for the NRHP under Criterion A as a historic district. Woodley Gardens is also significant as a historic district under Criterion C as an excellent, intact example of a planned residential development with a period of significance ranging from 1960 to 1970.

Figure 5-15: Woottons Mill Park



The Preferred Alternative would result in a Section 4(f) use of 1.3 acres of Woodley Gardens (**Figure 5-16**), including 1.2 acres of permanent impact and 0.1 acres of temporary impact. This impact has increased by 0.6 acres compared to the total impact of 0.7 acres reported in the DEIS for Alternative 9.

The impacts to Woodley Gardens would be required to accommodate the construction, operation, and future maintenance of a stormwater management facility, construction of a retaining wall and noise barrier, utility relocations, and storm drain impacts. Detailed mapping of the Preferred Alternative design at Woodley Gardens can be found in **SDEIS, Appendix D – Maps 31 and 32**.

The increase in impact from the DEIS is due to design refinements including an updated roadway configuration resulting in changes to the location of the noise barrier and retaining wall, utility relocations, and storm drain impacts.

The LOD expansion encompasses a portion of the parking lot adjoining the Woodley Gardens Shopping Center. The parking lot is a character-defining feature of the contributing shopping center, but impacts will be limited to several spaces along the edge of the lot and will not alter the characteristics that qualify the district for the NRHP.

On March 12, 2020, MHT concurred that the Managed Lanes Study would have no adverse effect on Woodley Gardens and provided written acknowledgement of FHWA's intent to make a *de minimis* impact finding based on the impacts identified in the DEIS. This initial MHT review was conducted prior to recent design changes and avoidance and minimization efforts. MDOT SHA anticipates that there would still be no adverse effect to Woodley Gardens, and have submitted documentation for concurrence to MHT as of September 8, 2021. Therefore, FHWA intends to make a finding of *de minimis* impact to Woodley Gardens provided MHT concurs with the effect determination and acknowledges the intent to make the *de minimis* finding. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

5.2.19 Rockville Senior Center and Park

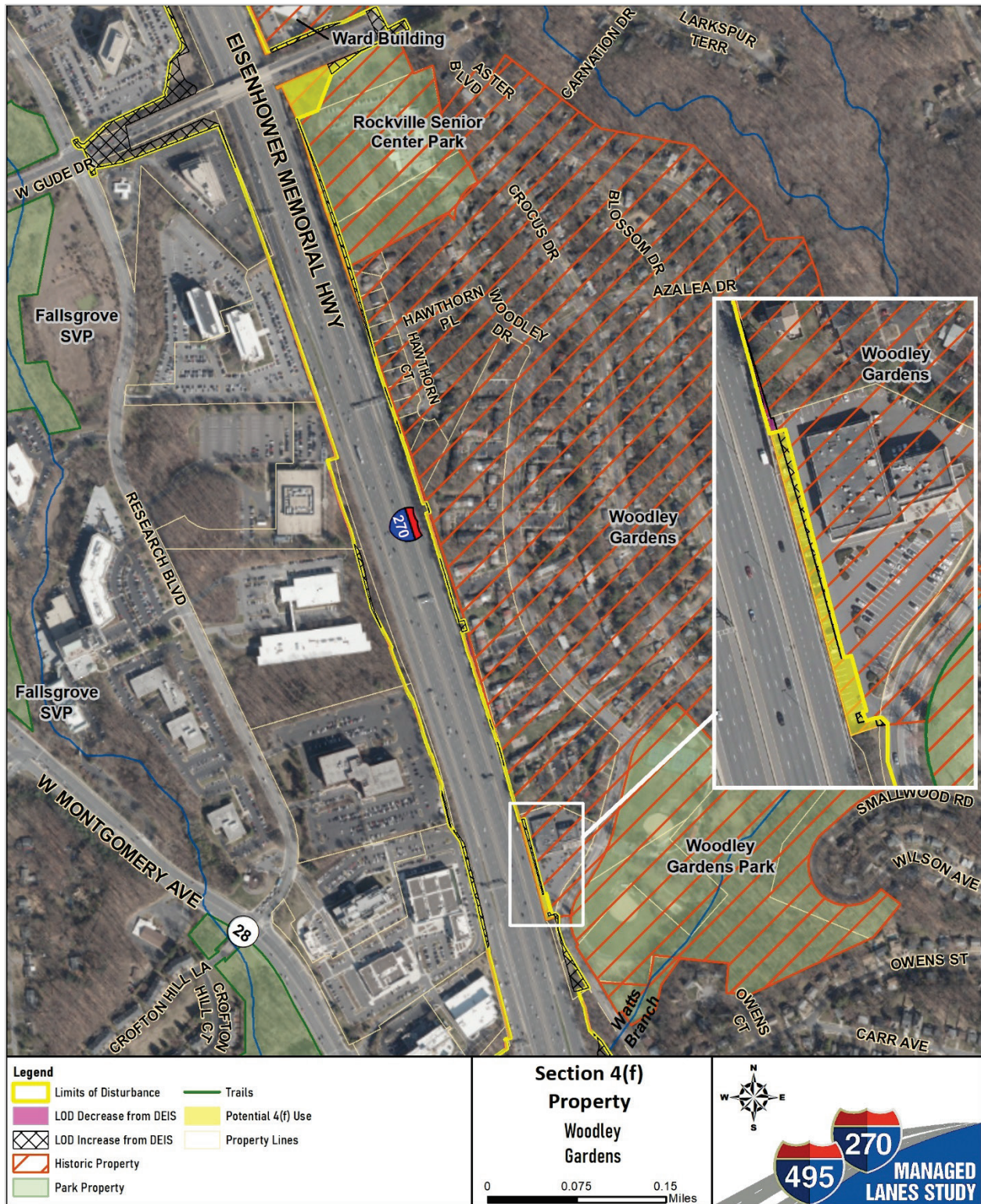
Type of Section 4(f) Property: Historic Property and Public Park

Officials with Jurisdiction: MHT, City of Rockville

Type of Section 4(f) Approval: *De Minimis* Impact

Rockville Senior Center and Park is a publicly-owned park and recreational facility at 1150 Carnation Drive in Rockville. This 12.1-acre park is immediately south of West Gude Drive and abuts the northbound lanes of I-270. Park amenities consist of benches, picnic tables, walking paths, a nature trail, community garden, outdoor fitness equipment, art, bocce ball court, and playground equipment. The senior center building features additional recreational facilities including fitness rooms, a woodworking studio and meeting space.

Figure 5-16: Woodley Gardens



The senior center building of the Rockville Senior Center and Park is the former Woodley Gardens Elementary School and contributes to the significance of Woodley Gardens, eligible for the NRHP under Criteria A and C as an early example of a developed residential-focused, mixed use community in Rockville. The landscaping and park elements of the senior center were added after 1982, outside the Woodley Gardens period of significance (1960-1970). Significant elements of Woodley Gardens include the dwellings, shopping center, swim club, Woodley Gardens Park, and the Rockville Senior Center building.

The Preferred Alternative would result in a use of 1.0 acres of Rockville Senior Center and Park (**Figure 5-17**) all of which would be permanent impact. This impact has increased by 0.3 acres compared to the total impact of 0.7 acres reported in the DEIS for Alternative 9.

The impacts to Rockville Senior Center and Park would be required to accommodate the construction, operation, and future maintenance of a stormwater management facility, construction of a retaining wall and noise barrier, and widening of Gude Drive. Detailed mapping of the Preferred Alternative design at Rockville Senior Center and Park can be found in **SDEIS, Appendix D – Map 33**.

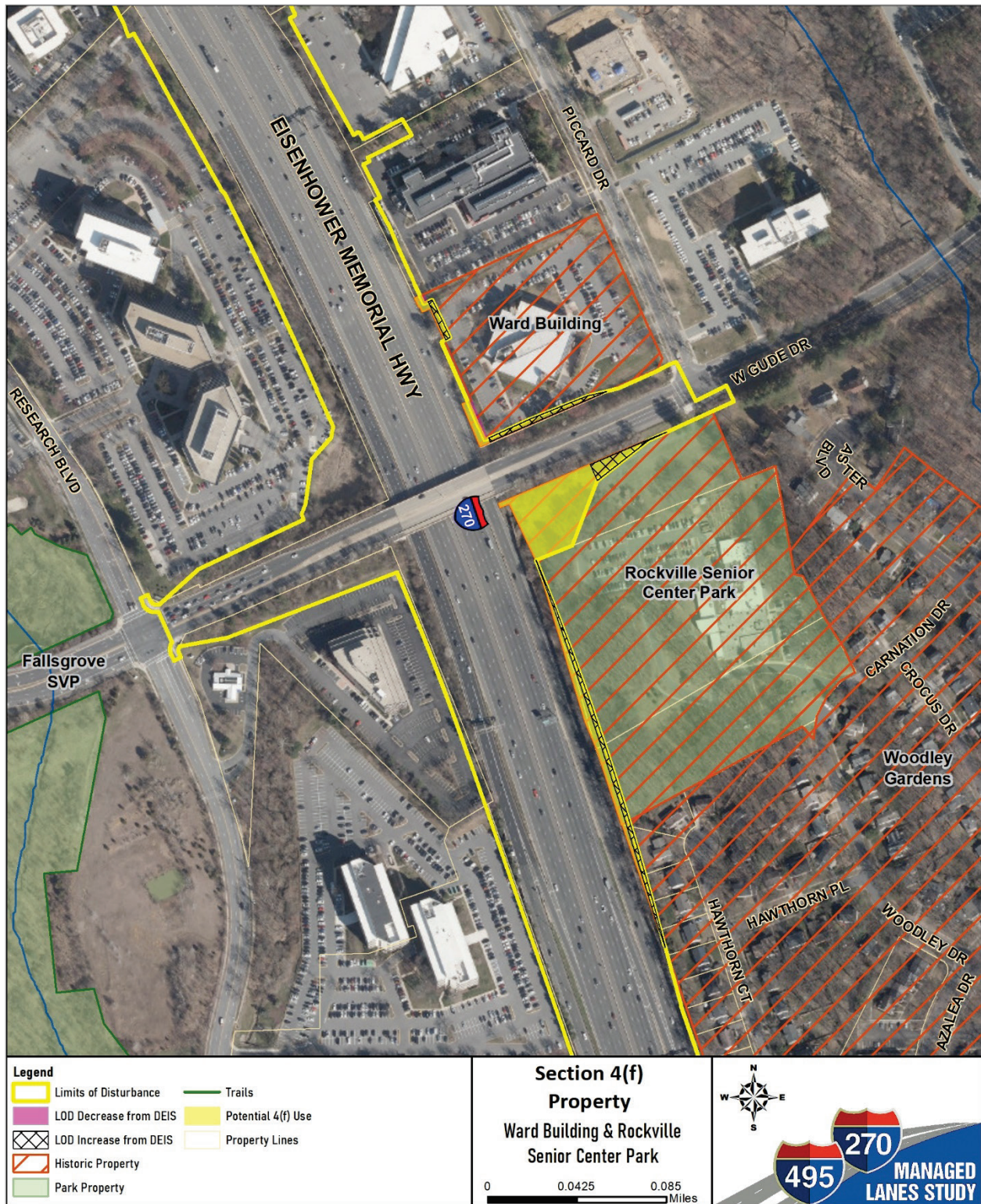
No recreational facilities would be impacted by the Preferred Alternative at Rockville Senior Center and Park.

The increase in impact from the DEIS is due to design refinements including an updated roadway configuration that resulted in changes to the location of the retaining wall and noise barrier, and grading and side slope construction associated with widening Gude Drive.

On March 12, 2020, MHT concurred that the Managed Lanes Study would have no adverse effect on Woodley Gardens, including Rockville Senior Center; and provided written acknowledgement of FHWA's intent to make a *de minimis* impact finding based on the DEIS impacts. This initial MHT review was conducted prior to recent design changes and avoidance and minimization efforts. MDOT SHA anticipates that there would still be no adverse effect to the Rockville Senior Center and Park and submitted documentation for concurrence to MHT on September 8, 2021. FHWA intends to make a finding of *de minimis* impact to Rockville Senior Center and Park if the City of Rockville Department of Recreation and Parks and MHT concur that the Preferred Alternative, after measures to mitigate and minimize harm are employed, would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, and in consideration of public comments. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

Parkland mitigation measures will be identified in coordination with the City of Rockville. Potential mitigation measures include replacement parkland, trail/path improvements, addition of park amenities such as benches along or near the path, and addition of decorative landscaping along or near the path. Final mitigation commitments including all possible planning to minimize harm will be included in the Final Section 4(f) Evaluation and FEIS.

Figure 5-17: Rockville Senior Center and Park and Ward Building



5.2.20 Ward Building

Type of Section 4(f) Property: Historic Property

Official with Jurisdiction: MHT

Type of Section 4(f) Approval: *De Minimis* Impact

The Ward Building is a Brutalist-style suburban corporate office constructed in 1978 at 1300 Piccard Drive, Rockville, Maryland. The property is 4.76 acres laying just east of I-270 and north of the Gude Drive overpass. The Ward Building is eligible under Criterion C for its high artistic value as an example of Brutalist-style architecture.

The Preferred Alternative would result in a use of 0.2 acres of the Ward Building (**Figure 5-17**), all of which would be permanent impact. This impact has increased by 0.1 acres compared to the total impact of 0.1 acres reported in the DEIS for Alternative 9.

The impacts to the Ward Building would be required to accommodate widening of I-270, widening of Gude Drive, and construction area for a retaining wall. Detailed mapping of the Preferred Alternative design at the Ward Building can be found in **Appendix D – Map 33**.

The increase in impact from the DEIS is due to updated roadway configuration, grading and side slope construction associated with widening Gude Drive, and retaining wall construction.

The LOD expansion encompasses areas along the parking lot surrounding the Ward Building and would not affect the characteristics that qualify the building for the NRHP.

On March 12, 2020, MHT concurred that the Managed Lanes Study would have no adverse effect on the Ward Building and provided written acknowledgement of FHWA's intent to make a *de minimis* impact finding based on the impacts described in the DEIS. This initial MHT review was conducted prior to recent design changes and avoidance and minimization efforts. MDOT SHA anticipates that there would still be no adverse effect to the Ward Building and submitted documentation for concurrence to MHT on September 8, 2021. Therefore, FHWA intends to make a finding of *de minimis* impact to the Ward Building provided MHT concurs with the effect determination and acknowledges the intent to make the *de minimis* finding. A final *de minimis* determination would be documented in the Final Section 4(f) Evaluation and FEIS.

5.2.21 Malcolm King Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Gaithersburg Department of Parks, Recreation and Culture

Type of Section 4(f) Approval: Individual Evaluation

Malcolm King Park is a publicly-owned park and recreation area at 1200 West Side Drive in Gaithersburg. The 72.9-acre park abuts the interchange of southbound I-270 and westbound I-370. Park amenities include a basketball court, picnic area, playground, tot lot, two miles of hiking trails, and two tennis courts. The majority of the park's acreage is wooded and serves as an environmental buffer for Muddy Branch.

The Preferred Alternative would result in a Section 4(f) use of 1.3 acres of Malcolm King Park (**Figure 5-18**), all of which would be permanent impact. This impact has increased by 1.2 acres compared to the total impact of 0.1 acres reported in the DEIS for Alternative 9.

The impacts to Malcolm King Park would be required to accommodate a constructability area related to widening I-270; augmenting the existing culvert conveying Muddy Branch beneath I-270, stabilizing the Muddy Branch outfall, and improvements to the existing outfall for a culvert that passes under I-370. Detailed mapping of the Preferred Alternative design at Malcolm King Park can be found in **SDEIS, Appendix D – Map 36**.

No recreational facilities would be impacted by the Preferred Alternative at Malcolm King Park.

The increase in impact from the DEIS is due to design refinements including additional LOD for culvert augmentation, outfall stabilization, and an updated roadway configuration.

MDOT SHA and FHWA previously anticipated that the Section 4(f) use of Malcolm King Park would be *de minimis* based on the impacts presented in the DEIS. However, based on the increased impacts identified in this SDEIS, impacts to Malcolm King Park are now anticipated to be greater than *de minimis*, and thus requiring an individual Section 4(f) evaluation.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with the City of Gaithersburg as potential mitigation for impacts to parkland. Other potential mitigation opportunities include trail/path improvements and improvements to or addition of playground equipment. MDOT SHA is coordinating with the City of Gaithersburg to develop mitigation commitments at Malcolm King Park and final mitigation will be included in the Final Section 4(f) Evaluation and FEIS.

5.2.22 Morris Park

Type of Section 4(f) Property: Public Park

Official with Jurisdiction: City of Gaithersburg Department of Parks, Recreation and Culture

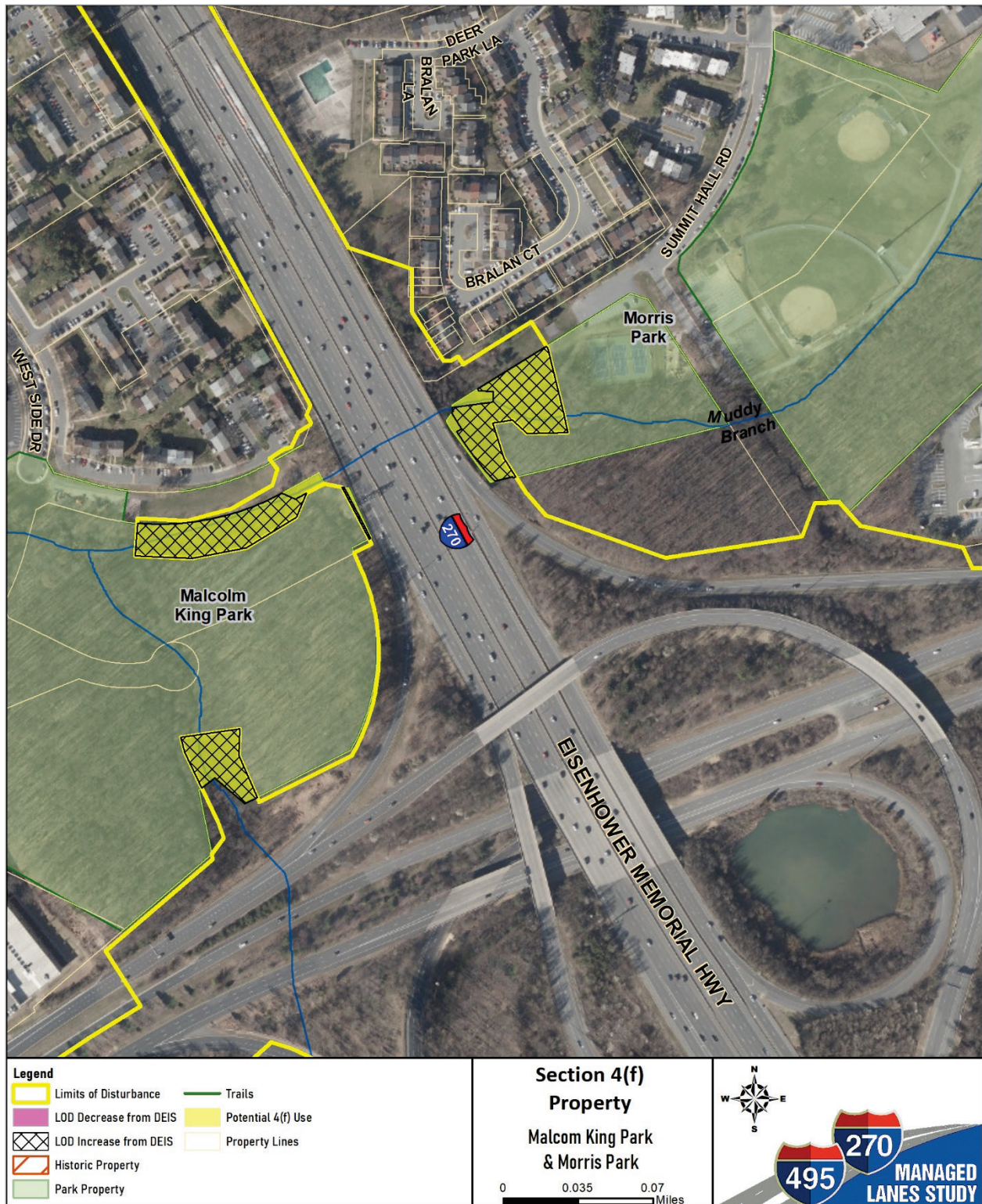
Type of Section 4(f) Approval: Individual Evaluation

Morris Park is a publicly-owned park and recreation area on Summit Hall Road in Gaithersburg. The 37.2-acre park abuts the interchange of northbound I-270 and westbound I-370. Park amenities include two baseball fields, three tennis courts, a basketball court, soccer field, picnic pavilion, picnic area with grill, playground, and tot lot. Wooded areas of the park provide an environmental buffer along Muddy Branch creek.

The Preferred Alternative would result in a Section 4(f) use of 1.1 acres of Morris Park (**Figure 5-18**), all of which would be permanent impact. The impact to Morris Park has increased by 1.0 acres compared to the total impact of 0.1 acres reported in the DEIS for Alternative 9.

The impacts to Morris Park would be required to accommodate an area for construction related to widening I-270, augmenting the existing culvert conveying Muddy Branch beneath I-270, stabilizing the Muddy Branch outfall, and storm drain improvements.

Figure 5-18: Malcolm King Park and Morris Park



No recreational facilities would be impacted by the Preferred Alternative at Morris Park.

The increase in impact from the DEIS is due to design refinements requiring additional LOD for culvert augmentation and a storm drain improvements. Detailed mapping of the Preferred Alternative design at Morris Park can be found in **SDEIS, Appendix D – Map 36**.

MDOT SHA and FHWA previously anticipated that the Section 4(f) use of Malcolm King Park would be *de minimis* based on the impacts presented in the DEIS. However, based on the increased impacts identified in this SDEIS, impacts to Morris Park are now anticipated to be greater than *de minimis*, and thus requiring an individual Section 4(f) evaluation.

MDOT SHA would identify and pursue the acquisition of replacement parkland in coordination with the City of Gaithersburg as potential mitigation for impacts to parkland. Other potential mitigation opportunities include trail/path improvements, improvements to tennis courts, and improvements to or addition of playground equipment. MDOT SHA is coordinating with the City of Gaithersburg to develop mitigation commitments at Morris Park and final mitigation will be included in the Final Section 4(f) Evaluation and FEIS.

5.3 Avoidance Alternatives and Analysis

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)).

Section 3 of the Draft Section 4(f) Evaluation (DEIS, Appendix F) included discussion of six avoidance alternatives, summarized briefly in the following table. No feasible and prudent alternatives were identified that completely avoid the use of Section 4(f) property. **Table 5-3** summarizes the avoidance alternatives evaluated in the Draft Section 4(f) Evaluation.

The alternatives previously included in the DEIS least overall harm analysis are carried forward here, as they are still applicable to the current evaluation of least overall harm in this SDEIS with revised project limits. The Preferred Alternative, a minimization alternative, is also included for evaluation in the revised discussion of least overall harm.

Table 5-3: Avoidance Alternatives

Avoidance Alternative	Description	Avoidance Analysis Findings ¹
Alternative 1: No Build Alternative	Alternative 1 would avoid all Section 4(f) property impacts. Under this alternative routine maintenance and safety improvements would occur 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.	Alternative 1 would avoid impacts to Section 4(f) properties but would be unreasonable to proceed with in light of the Study's stated Purpose and Need. Alternative 1 causes other severe problems of a magnitude that substantially outweigh the importance of protecting Section 4(f) properties.
Increased Bus Transit	This alternative would include expansion of 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 limits of the Study, or consideration of dedicated facilities such as bus rapid transit systems on existing infrastructure.	An extensive regionwide network of dedicated BRT facilities along I-495 and I-270 would not achieve the Study's Purpose and Need. It would be unreasonable to proceed with the Bus Transit Alternative in light of the stated Purpose and Need. This avoidance alternative causes other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) properties.
Transportation System Management/Transportation Demand Management (TSM/TDM)	Transportation System Management (TSM)/Transportation Demand Management (TDM) strategies are improvements to existing facilities that improve the operation and coordination of transportation services and facilities.	A TSM/TDM Alternative would not accommodate existing and future long-term traffic, nor would these measures enhance trip reliability. In addition, the TSM/TDM Alternative would not directly provide an additional travel choice, accommodate Homeland Security, improve the movement of goods and services, nor enhance multimodal connectivity; and it would not provide a revenue source. Based on these factors, the TSM/TDM Alternative is not a feasible and prudent alternative. This avoidance alternative causes other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) properties.

¹ Refer to the definition of *feasible and prudent avoidance alternative* in 23 CFR § 774.17.

Avoidance Alternative	Description	Avoidance Analysis Findings ¹
Section 4(f) Avoidance Alternative 1	Section 4(f) Avoidance Alternative 1 would construct four new managed lanes off-alignment between George Washington Memorial Parkway and MD 4, outside of I-495. 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.	Section 4(f) Avoidance Alternative 1 would result in additional construction, maintenance, and operational costs of an extraordinary magnitude. After reasonable mitigation, it would still cause severe social, economic, and environmental impacts; severe disruption to established communities; and severe impacts to environmental resources protected under other Federal statutes. Section 4(f) Avoidance Alternative 1 causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties.
Section 4(f) Avoidance Alternative 2	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 inside the alignment of existing I-495 through nearly full the limits of the Study. 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.	Avoidance Alternative 2 would result in additional construction, maintenance, and operational costs of an extraordinary magnitude. After reasonable mitigation, it would still cause severe social, economic, and environmental impacts; severe disruption to established communities; and severe impacts to environmental resources protected under other Federal statutes. Section 4(f) Avoidance Alternative 2 causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties.
Section 4(f) Avoidance Alternative 3	Section 4(f) Avoidance Alternative 3 would construct four managed lanes as proposed in the Preferred Alternative. However, where impacts to Section 4(f) properties would occur, the location specific options would be incorporated into the alignment of Section 4(f) Avoidance Alternative 3.	Although Section 4(f) Avoidance Alternative 3 would result in additional construction, maintenance, and operational costs of an extraordinary magnitude. After reasonable mitigation, it would still cause severe social, economic, and environmental impacts; severe disruption to established communities; and severe impacts to environmental resources protected under other Federal statutes. Section 4(f) Avoidance Alternative 3 causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties.

The Preferred Alternative presented in this SDEIS would not avoid the use of all Section 4(f) properties. It would, however, avoid the use of 38 Section 4(f) properties totaling roughly 105 acres compared to DEIS Build Alternative 9 (**Table 5-2**). Those 105 acres of impact to 38 properties would be fully avoided by the Preferred Alternative.

5.4 All Possible Planning

Section 4(f) states 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. The cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on Section 4(f) property, in accordance with 23 CFR 771.105(e).

The DEIS presented measures that had been identified to ensure all possible planning to minimize harm and mitigate for adverse impacts and effects. These measures are summarized here and detailed in **Section 4 of the Draft Section 4(f) Evaluation (DEIS, Appendix F)**. Additional minimization and mitigation efforts have been implemented in conjunction with the Preferred Alternative presented in this SDEIS and Updated Draft Section 4(f) Evaluation.

5.4.1 Summary of All Possible Planning Presented in DEIS

Pursuant to Section 106, MDOT SHA is in the process of drafting a Programmatic Agreement to resolve adverse effects to historic properties. In general, mitigation measures agreed upon as part of the Section 106 process satisfy the requirement to include all possible planning to minimize harm for historic properties under Section 4(f).

With regard to public parks, all possible planning will involve the minimization activities described herein as well as mitigation coordinated with the OWJs over public parks and recreation areas. All possible planning to minimize harm will additionally involve an agreement document that outlines the process to continue coordination with the OWJs over Section 4(f) properties through the design phase of the project.

Members of the public are also afforded an opportunity to provide comments. Mitigation measures involving the public parks and recreation areas may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation to enhance the remaining land.

Section 4 of the Draft Section 4(f) Evaluation (DEIS, Appendix F) includes detailed discussion of the methodology and assumptions for establishing LODs (**DEIS, Appendix F, Section 4.1**), the considerations for adjacent land use and minimization of the LOD (**DEIS, Appendix F, Section 4.2**) and a summary of potential mitigation measures (**DEIS, Appendix F, Section 4.3**).

New measures intended to address all possible planning to minimize harm to Section 4(f) properties are documented in this SDEIS and included in the Preferred Alternative’s avoidance of 38 Section 4(f) properties as compared to the DEIS Alternative 9. Additional avoidance and minimization measures at Section 4(f) properties include extensive design refinements in the vicinity of the ALB and at Morningstar Cemetery, and new conceptual mitigation measures developed in coordination with the OWJs for each Section 4(f) property impacted.

5.4.2 Preferred Alternative

The Preferred Alternative presented in this SDEIS was developed as a Section 4(f) minimization alternative based in part on extensive coordination with and input from agencies and stakeholders, including the Officials with Jurisdiction (OWJs) for Section 4(f) properties. Comments received on the DEIS and Draft Section 4(f) Evaluation from agencies and stakeholders specifically requested avoidance of significant

parkland and historic resources within the Study area. The Preferred Alternative is responsive to comments received and aligns the Study to be consistent with the previously determined phased delivery and permitting approach by limiting the build improvements to the area of Phase 1 South only while avoiding improvements on I-495 east of the I-270 East Spur. The result is complete avoidance of significant Section 4(f) properties within the Study limits, *which remain the same as the DEIS*, on I-495 east of the I-270 east spur to MD 5 in Prince George's County. These include complete avoidance of significant stream valley parks including: Rock Creek, Northwest Branch, Sligo Creek, Southwest Branch, and Henson Creek Stream Valley Parks, as well as historic parks of national significance including the Baltimore-Washington Parkway, Greenbelt Park and Suitland Parkway.

5.4.3 American Legion Bridge (ALB)

MDOT SHA conducted an extensive engineering evaluation at the ALB to identify strategies for minimizing impacts at NPS owned Section 4(f) properties adjacent to the bridge including the C&O Canal NHP, Clara Barton Parkway, and George Washington Memorial Parkway. MDOT SHA convened a multidisciplinary team of experts referred to as the 'ALB Strike Team' to develop and evaluate alternatives for the replacement of the ALB that avoid impacts, to the greatest extent practicable, or reduce overall acreage impacts to the three NPS properties in the vicinity of the ALB.

The ALB Strike Team explored strategies for reducing the LOD including top-down construction, alternate construction phasing, alternate bridge types, and construction access requirements. Bridge type options were evaluated including conventional structures, cable stayed, and cast-in-place segmental bridges. Alternate construction phases such as Accelerated Bridge Construction techniques were also evaluated to investigate options to reduce the construction duration. Options for the ultimate roadway and bridge alignment as well as construction access and phasing to reduce impacts to Plummer's Island were also considered.

The ALB Strike Team evaluation determined that one construction access road located in the northwest quadrant of the ALB and Potomac River would be sufficient to provide construction access for removal of the existing bridge and construction of a new bridge thus eliminating the need for construction access in the three other quadrants.

Overall, MDOT SHA's efforts to minimize impacts to NPS properties in the vicinity of the ALB has led to reductions of 5.3 acres at the C & O Canal NHP and 7.8 acres at the George Washington Memorial Parkway relative to the DEIS impacts. Refer to **Section 5.1.3** for additional details.

5.4.4 Morningstar Tabernacle No. 88 Moses Hall and Cemetery

MDOT SHA has coordinated directly with the Friends of Moses Hall and other consulting parties since early 2020 on avoidance and minimization efforts at the Morningstar Tabernacle No. 88 Moses Hall and Cemetery (Morningstar Cemetery). In January 2021, MDOT SHA implemented bamboo removal within the Morningstar Cemetery to continue documentation of the cemetery features and boundaries. Through design efforts that led to refinements of the LOD, MDOT SHA developed design options that would avoid all ground disturbance within the cemetery parcel and reduce impacts to the overall Section 4(f) property from 0.3 acre reported in the DEIS to the current estimated impact of less than 0.1 acre (approximately 14 square feet of temporary area) associated with the construction of a noise barrier adjacent to the property.

In July 2021, MDOT SHA evaluated an alternative to avoid the Morningstar Cemetery and associated potential graves identified in an area of adjacent right-of-way through ground-penetrating radar (GPR) survey.

The proposed typical section of the SDEIS layout along the northbound I-495 inner loop managed lane ramp in the vicinity of the cemetery consists of the following:

- 12-foot left shoulder (adjacent to concrete traffic barrier)
- 15-foot travel lane
- 4-foot right shoulder (adjacent to concrete traffic barrier)
- Noise barrier located five feet from the centerline of concrete traffic barrier

The proposed modification reduces the northbound I-495 inner loop managed lane ramp left shoulder width to 6 feet (from 12 feet). The ramp's right shoulder remains four (4) feet in width; however, the noise barrier would be relocated to the back of the concrete traffic barrier. The LOD is established five feet from the centerline of the noise barrier for approximately 300 feet along the frontage of the Morningstar Cemetery property. An area similarly reducing impacts to existing right-of-way extends approximately 65 feet west of the identified potential graves to provide a buffer margin.

This alternative minimizes the overall width of the section avoiding earthwork (cuts or fills) at the nearest GPR-indicated feature that may be a grave.

Although this minimization effort has eliminated project impacts within the property and avoids associated potentially indicated burial features within right-of-way adjacent to the cemetery, MDOT SHA continues to find that the property will be adversely affected pending further consultation regarding options for future investigations and other issues raised regarding indirect and cumulative effects. Any potential proximity effects of the Preferred Alternative, such as visual changes, would not substantially impair the aesthetic features or attributes of Morningstar Cemetery that contribute to the value of the property. Nor would the Preferred Alternative restrict access to the property. The overall proximity impacts from the Preferred Alternative would not substantially impair the activities, features, or attributes that qualify Morningstar Cemetery for protection under Section 4(f); therefore no constructive use would occur per 23 CFR 774.15.

Additional information about investigation and mitigation activities at Morningstar Cemetery are detailed in **SDEIS, Chapter 4, Section 4.7.3.D and Section 4.7.4.D.**

5.4.5 Mitigation

MDOT SHA has coordinated extensively with the OWJs on Section 4(f) properties impacted by the Preferred Alternative to identify potential mitigation measures. Potential mitigation measures identified in this SDEIS are preliminary in nature, as this coordination is ongoing. Final mitigation commitments including all possible planning to minimize harm will be developed in more detail in coordination with the OWJs and included in the Final Section 4(f) Evaluation and FEIS.

Potential mitigation measures for parkland identified to date include:

- Identification and acquisition of replacement parkland;
- Trail and path improvements;

- Addition of park amenities, recreational equipment and facilities;
- Landscaping, tree planting and reforestation;
- Visual and noise barriers;
- Wetland creation or restoration;
- Stream restoration;
- Species-specific mitigations for RTE species;
- Funds to support safety improvements; and,
- Parking, roadway and bridge improvements within park areas.

Potential mitigation measures for historic properties identified in the current draft PA include:

- Property-specific design-review consultation to ensure context-sensitive design for new facilities;
- Cultural Landscape documentation;
- Rehabilitation of historic structures and features;
- Data recovery, research and archaeological treatment plans;
- Cemeteries and human remains treatment plan;
- Preservation of vegetation and planting for vegetative screening;
- Development of historical interpretive materials, plaques and signage located for public accessibility; and,
- Completion of NRHP nominations.

5.5 Least Overall Harm

Pursuant to 23 CFR 774.3(c)(1), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, then only the alternative that causes the least overall harm may be approved. Because no feasible and prudent avoidance alternative has been identified, all remaining alternatives are evaluated to determine which would cause the least overall harm.

23 CFR 774.3(c)(1) identifies seven factors for identifying the alternative with the least overall harm.

- Factor 1: The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- Factor 2: 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;
- Factor 3: The relative significance of each Section 4(f) property; and
- Factor 4: The views of the OWJs over each Section 4(f) property.
- Factor 5: The degree to which each alternative meets the Purpose and Need for the project;
- Factor 6: After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- Factor 7: Substantial differences in costs among the alternatives.

5.5.1 Draft Section 4(f) Least Overall Harm Evaluation

The Draft Section 4(f) Evaluation included a preliminary assessment of least overall harm which compared location-specific avoidance options, other minimization alternatives, and Alternatives Retained for Detailed Study (ARDS) based on the least overall harm criteria. (Refer to **DEIS, Appendix F, Section 5.**)

The DEIS included discussion of 18 location-specific alternatives identified to avoid the use of individual Section 4(f) properties, developed to be incorporated into the DEIS Build Alternatives. Each alternative was evaluated using the seven factors of least overall harm. The alternatives consisted of alignment shifts, tunnels, or bridges that were developed to avoid specific Section 4(f) properties for which the impacts were not anticipated to be *de minimis*.

In general, the evaluation determined that these location specific options would result in additional use of other Section 4(f) properties, adverse impacts of a severe magnitude to resources not subject to Section 4(f) protection, or a substantial increase in cost. Because the location-specific options modify relatively short portions of the end-to-end Build Alternatives, each would meet the Purpose and Need of the Study to some degree. However, the analysis determined that the location specific options that more substantially deviate from the existing alignments of I-495 and I-270 and result in a lengthier travel routes would be less effective in addressing the project needs.

The DEIS considered other minimization alternatives including Alternative 5: 1-Lane High-Occupancy Toll Managed Lane Network and the MD 200 Diversion Alternative. These were evaluated along with the six Build Alternatives that were retained for detailed study in the DEIS. These alternatives included managed lanes that differ in the manner in which the proposed travel lanes would be designated and configured. The six ARDS included Alternatives 8, 9, 9M, 10, 13B, and 13C. These are described in detail in the **DEIS, Chapter 2, Section 2.6.**

5.5.2 Updated Least Overall Harm Analysis

The preliminary results of the Least Overall Harm Analysis were presented in the **DEIS, Appendix F, Section 5.4**, and are summarized below for each of the alternatives (**Table 5-4**). The table has been updated to include the Preferred Alternative included in this SDEIS.



Table 5-4: Least Overall Harm Analysis

Alternative	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 properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives	Preliminary Summary
DEIS Build Alternatives								
Alternative 8	Substantially equal ability to mitigate adverse impacts to each Section 4(f) property	Substantially equal relative harm given the physical footprint among the Build Alternatives. Harm would occur to properties as described in Section 2	All DEIS build alternatives would impact the same number of Section 4(f) properties	OWJs provided views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Meets Purpose and Need to a Lesser Degree	Substantially equal magnitude of adverse impacts to properties not protected by Section 4(f)	Total Cost of Alternative would be between \$8.7 and \$9.6 Billion	Would meet the Purpose and Need to a lesser degree than other DEIS Build Alternatives. Would create traffic problems that would reduce trip reliability in the managed lanes.
Alternative 9					Meets Purpose and Need to Greater Degree		Total Cost of Alternative would be between \$8.7 and \$9.6 Billion	Would meet the Purpose and Need; impacts to properties protected by Section 4(f) are minimized; appropriate mitigation measures for use of Section 4(f) property to minimize harm.
Alternative 9 Modified					Meets Purpose and Need to a Lesser Degree	Lesser Magnitude of Adverse Impacts than Build Alternatives	Cost of Alternative would be between \$8.5 and \$9.3 Billion. Not financially viable owing to lower revenue.	Would meet the Purpose and Need to a lesser degree than other DEIS Build Alternatives because it does not successfully address existing traffic and long-term traffic growth or enhance trip reliability, and it is not financially viable.
Alternative 10					Meets Purpose and Need	Greater Magnitude of Adverse Impacts than other Build Alternatives	Total Cost of Alternative would be between \$9.0 and \$9.9 Billion	Would have greater impacts to Section 4(f) Properties, natural resources, and property relocations as well as greater cost, but would provide no additional benefit in meeting Purpose and Need.
Alternative 13B					Meets Purpose and Need to a Lesser Degree	Substantially equal magnitude of adverse impacts to properties not protected by Section 4(f)	Total Cost of Alternative would be between \$8.7 and \$9.6 Billion. Not financially viable owing to lower revenue	Would meet the Purpose and Need to a lesser degree than the other DEIS Build Alternatives. Would only accommodate traffic growth in the peak direction during peak period. Would not be financially self-sufficient.
Alternative 13C					Meets Purpose and Need to a Lesser Degree		Total Cost of Alternative would be between \$8.8 and \$9.7 Billion. Not financially viable owing to lower revenue	Would meet the Purpose and Need to a lesser degree. Would have negative impacts to travel along I-495 during the AM peak period as reversible lanes can only be operated in one direction at a time. Would not be financially self-sufficient.
SDEIS Preferred Alternative								
Preferred Alternative Alternative 9 – Phase 1 South	Substantially equal ability to mitigate adverse impacts to each Section 4(f) property relative to the DEIS Build Alternatives, with fewer property impacts to mitigate.	Substantially lower overall harm due to shorter project limits and fewer Section 4(f) properties impacted.	Less harm than DEIS Build Alternatives	Modified project limits to avoid Section 4(f) properties, in response to feedback from OWJ; coordination ongoing until Final Section 4(f)	Meets Purpose and Need to a Lesser Degree	Substantially lower magnitude of overall impacts to properties not protected by Section 4(f) due to shorter project limits	Cost of Alternative would be between \$3.0 and \$3.5 Billion.	Would meet the Purpose and Need. Would have substantially lower impacts to Section 4(f) properties and resources not protected by Section 4(f) due to shorter project limits.



Alternative	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 properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives	Preliminary Summary
Other Alternatives Considered								
MD 200 Diversion Alternative	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	OWJs to provide views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Does not meet Purpose and Need	Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Cost of Alternative would be between \$7.0 and \$8.1 Billion. Not financially viable owing to lower revenue.	The MD 200 Diversion Alternative would not address the Study's Purpose and Need of accommodating long-term traffic growth, enhancing trip reliability or improving the movement of goods and services. Would not be financially self-sufficient.
Alternative 5	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	OWJs to provide views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Does not meet Purpose and Need	Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Cost of Alternative would be between \$7.8 and \$8.5 Billion. Not financially viable owing to lower revenue.	Alternative 5 does not meet the Study's Purpose and Need because it does not address existing traffic and long-term traffic growth or enhance trip reliability, and it is not financially viable.
Location Specific Options								
LS-1	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	OWJs to provide views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Meets Purpose and Need	Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-1 would meet the Purpose and Need of the project, it would cost \$600 million more to construct than the DEIS Build Alternatives along this portion of the project.
LS-2	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative Not financially viable owing to lower revenue	Option LS-2 would adequately meet the Purpose and Need of the project, it would cost in excess of \$1 billion more than the DEIS Build Alternatives along this portion of the project.
LS-3	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-3 would result in 10.4 acres of additional impacts to Section 4(f) properties, which would create additional mitigation along this portion of the project when compared to the DEIS Build Alternatives. Would cost in excess of \$1.7 billion more than the DEIS Build Alternatives along this portion of the project.
LS-4	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives	When compared to the DEIS Build Alternatives, Option LS-4 would result in 11 acres of additional impacts to Section 4(f) properties and cost nearly \$700 million more.

Alternative	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 properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives	Preliminary Summary
LS-5	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	OWJs to provide views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Meets Purpose and Need	Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-5 would result in 3.8 acres of additional impacts to Section 4(f) properties and cost \$27 million more than the DEIS Build Alternatives along this portion of the Study.
LS-6	Great Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-6 would cost \$25 million more than the DEIS Build Alternatives along this portion of the Study.
LS-7	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-7 would result in an increase of 12 acres of impact to Section 4(f) properties, result in 547 additional relocations, and cost approximately \$1.2 billion more than the DEIS Build Alternatives along this portion of the Study.
LS-8	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-8 would result in 0.9 acres of additional impacts to Section 4(f) properties and cost \$250 million more than the DEIS Build Alternatives along this portion of the Study.
LS-9	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than Build Alternative	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-9 would cost approximately \$200 million more than the DEIS Build Alternatives along this portion of the Study.
LS-10	Less Ability to Mitigate than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives	Greater Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	When compared to the DEIS Build Alternatives, Option LS-10 would result in 6.1 acres of additional impacts to one Section 4(f) property: BARC. Option LS-10 would cost approximately \$88 million more than the DEIS Build Alternatives along this portion of the project.
LS-11	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-11 would cost approximately \$500 million more than the DEIS Build Alternatives along this portion of the project.

Alternative	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 properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives	Preliminary Summary
LS-12	Greater Ability to Mitigate than DEIS Build Alternatives	Substantially Equal	Less Harm than DEIS Build Alternatives	OWJs to provide views during the review period of the DEIS and Draft Section 4(f) Evaluation; coordination ongoing until Final Section 4(f)	Meets Purpose and Need	Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Less cost than DEIS Build Alternatives; greater cost than the Preferred Alternative	Option LS-12 would cost approximately \$1 million less than the DEIS Build Alternatives. However, Option LS-12 would result in two displacements versus none by the DEIS Build Alternatives or the Preferred Alternative.
LS-13	Substantially Equal	Substantially Equal	Substantially Equal			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-13 would cause severe impacts to community resources, potentially resulting in the relocation of 166 properties and cost approximately \$400 million more than the DEIS Build Alternatives.
LS-14	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-14 would cause additional impacts to wetlands and forest resources and cost approximately \$125 million more than the DEIS Build Alternatives.
LS-15	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Lesser Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-15 would cost approximately \$25 million more than the DEIS Build Alternatives along this portion of the Study.
LS-16	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-16 would cost approximately \$1.6 billion more than the DEIS Build Alternatives along this portion of the project.
LS-17	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Greater Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-17 would cost approximately \$270 million more than the DEIS Build Alternatives along this portion of the project.
LS-18	Greater Ability to Mitigate than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives	Less Harm than DEIS Build Alternatives			Greater Magnitude of Adverse Impacts than DEIS Build Alternatives	Less Cost than DEIS Build Alternatives or Preferred Alternative	Option LS-18 would be more difficult to permit than the DEIS Build Alternatives.

Based on the information presented in the Draft Section 4(f) Evaluation and this Updated Draft Section 4(f) Evaluation, FHWA and MDOT SHA have reached a preliminary conclusion that the Preferred Alternative is the alternative with least overall harm. The Preferred Alternative meets the Purpose and Need for the study and impacts far fewer Section 4(f) properties and total acreage relative to the other Build Alternatives that would meet the Purpose and Need. The Preferred Alternative would avoid the use of 38 Section 4(f) properties totaling approximately 105 acres relative to the DEIS Build Alternatives. The Preferred Alternative would require use a total of 39.1 acres of Section 4(f) property (including temporary and permanent), compared to 146.8 acres for the DEIS Build Alternative 9. Because the OWJs have not had a chance to review the updated information related to the Preferred Alternative, and mitigation is not yet finalized, this least overall harm conclusion is preliminary. Coordination with the OWJs has continued since the DEIS and will continue to the Final Section 4(f) Evaluation and the FEIS. The Final Section 4(f) Evaluation, FEIS, and Record of Decision (ROD) will include final mitigation commitments including all possible planning to minimize harm developed in coordination with the OWJs, final *de minimis* determinations with documented concurrence from the OWJs, and the final determination of the alternative with least overall harm.

5.6 Coordination

Section 4(f) of the US Department of Transportation Act of 1966 mandates that use of a publicly-owned park, recreation area, wildlife/waterfowl refuge, or historic site for a transportation project cannot be approved unless certain conditions are applied. Section 4(f) regulations require the Draft Section 4(f) Evaluation be made available for coordination and comment to OWJs over the Section 4(f) resource (23 CFR §774.5). Since the publication of the DEIS in July 2020, MDOT SHA has conducted conference calls, meetings, and field reviews with, or sent letters to the following agencies with jurisdiction over parkland along the Phase 1 South limits: NPS, M-NCPPC Montgomery County, National Capital Planning Commission (NCP), City of Rockville, and the City of Gaithersburg. FHWA and MDOT SHA have also held meetings and coordinated with the agencies with jurisdiction over historic sites, including NPS, ACHP, NCPC, MHT, and the VDHR. MDOT SHA has worked closely with the OWJs over all Section 4(f) properties to identify minimization and mitigation measures necessary for Section 4(f) approval. **Tables 7-4, 7-5 and 7-6** in **Chapter 7** of this document in detail the meetings held and topics covered. Coordination with the OWJs will continue, as needed, through the development of the Final Section 4(f) Evaluation and will focus on efforts to further reduce impacts and harm to Section 4(f) properties and the development of appropriate Section 4(f) mitigation and enhancement opportunities. Prior to the Final Section 4(f) Evaluation, a draft of the Final Section 4(f) Evaluation will be provided for coordination and comment to the OWJs over their Section 4(f) resource, such as MHT for historic properties.

In addition to OWJs, the Section 4(f) Evaluation must be made available to the US Department of the Interior (USDOI) and as needed, to the US Department of Agriculture (USDA) and the Department of Housing and Urban Development (HUD) (23 CFR §774.5). The Draft Section 4(f) Evaluation was provided to USDOI for review in conjunction with the DEIS in July 2020. USDOI provided preliminary comments to MDOT SHA but those comments did not represent the formal consultation of FHWA with USDOI, as required under 23 CFR §774.5(a). USDOI will again be afforded the opportunity to review and provide comments on the Updated Draft Section 4(f) Evaluation in conjunction with this chapter. However, formal coordination with USDOI is not expected to occur until the Final Section 4(f) Evaluation as this will enable USDOI to provide comments on FHWA's conclusions regarding the existence of feasible and prudent

avoidance alternatives, the inclusion of all possible planning to minimize harm to Section 4(f) properties (including mitigation), and the least overall harm alternative. The Preferred Alternative would not affect resources requiring coordination with USDA and HUD and, therefore, consultation with these agencies is not necessary.

The public was afforded notice and opportunity for comment on the Draft Section 4(f) Evaluation per 23 CFR 774(b)(2). This public involvement has been conducted in conjunction with the overall NEPA document public involvement process, as outlined in **SDEIS, Chapter 7**. Additional public notice and opportunity for comment will be provided concurrent with the SDEIS.

Prior to making a Section 4(f) *de minimis* impact determination, public notice and opportunity for public review is required. For historic resources, MDOT SHA has notified MHT and consulting parties of the intent to make a *de minimis* impact determination via letters as part of the Section 106 process. For park resources, the opportunity for public notice and review is occurring as part of the public review of the DEIS and SDEIS as the intent to make a *de minimis* impact determination has been documented in the Draft Section 4(f) Evaluation and the Updated Section 4(f) Evaluation. Prior to the Final Section 4(f) Evaluation, a draft of the Final Section 4(f) Evaluation will be provided to the OWJs over each Section 4(f) resource, such as MHT for historic properties, for review and comment.

5.7 Conclusion

Based on the information presented in the Draft Section 4(f) Evaluation and this Updated Draft Section 4(f) Evaluation, FHWA and MDOT SHA have reached a preliminary conclusion that the Preferred Alternative is the alternative with least overall harm.

The Final Section 4(f) Evaluation will reflect ongoing coordination with OWJs to coordinate impacts and mitigation, and *de minimis* coordination with the OWJs. The Final Section 4(f) Evaluation will also include finalization of the analysis to demonstrate all possible planning to minimize harm, and finalization of the Least Overall Harm Analysis, and final mitigation commitments.