

16.0 Recreation and Parks

16.1. Introduction

This chapter defines the parks and recreation resources pertinent to the Long Bridge Project (the Project), and defines the regulatory context, methodology, and Affected Environment. For each Action Alternative and the No Action Alternative, this chapter assesses the potential short-term and long-term impacts on parks and recreation. This chapter also discusses proposed avoidance, minimization, and mitigation measures to reduce adverse impacts of the Project.

16.2. Regulatory Context and Methodology

This section describes the most pertinent regulatory context for evaluating impacts to recreation areas and parks and summarizes the methodology for evaluating current conditions and the probable consequences of the alternatives. This section also includes a description of the Study Area. **Appendix D1, Methodology Report**, provides the complete list of laws, regulations, and other guidance considered, and a full description of the analysis methodology.

16.2.1. Regulatory Context

The National Environmental Policy Act of 1969 and the Federal Railroad Administration *Procedures for Considering Environmental Impacts* require consideration of the potential effects of Federal actions on parks and recreation areas.¹ This evaluation of parks and recreation areas includes public parks, trails, paths, and areas open to the public and used for general recreation. **Chapter 24, Draft Section 4(f) Evaluation**, provides a separate evaluation of parklands and related resources protected under Section 4(f) of the United States Department of Transportation Act of 1966, as amended.² There are no properties in the Local Study Area acquired or developed under Section 6(f) of the Land and Water Conservation Fund Act of 1965; therefore, a Section 6(f) Evaluation is not required.^{3,4}

Within the Local Study Area, most of the parks and recreation areas are under the jurisdiction of the National Park Service (NPS). *NPS Management Policies 2006*,⁵ NPS regulations,⁶ and *NPS Director's Order 12, Conservation Planning, Environmental Impact Analysis, and Decision Making* govern activities on NPS property.⁷

¹ 64 FR 28545

² 49 USC 303

³ 16 USC 4601-4

⁴ The Land and Water Conservation Fund Act of 1965 (16 USC 460 I-4) was enacted to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) provides funds for authorizing federal assistance to states in planning, acquisition, and development of land and water areas and facilities; and provides funds for the federal acquisition and development of certain lands and other areas. Any project that proposes to convert property that was purchased or improved through 6(f) funding must receive approval from the National Park Service.

⁵ NPS. *NPS Management Policies 2006*. Accessed from https://www.nps.gov/policy/MP_2006.pdf. Accessed June 21, 2018.

⁶ 36 CFR 1-199

⁷ NPS Director's Order 12

16.2.2. Methodology

As shown in **Figure 16-1**, the Local Study Area for parks and recreation areas includes the footprint of the Project Area and the areas adjacent to the Project Area within approximately 0.25 miles of the existing bridge alignment. The Local Study Area includes all parks and recreation areas within a distance for which the Project may have potential direct or indirect effects. Because the Action Alternatives have the potential to create localized effects but not regional effects to parks, the analysis did not consider a Regional Study Area for this resource.

For parks and recreation areas located within the Local Study Area, the documentation of the Affected Environment included the name, location, ownership, and estimated total area (acres) within the Local Study Area. The analysis also noted the intended purposes of the park or recreation area (active or passive recreation). The desktop analysis was supplemented by field observation to confirm typical park usage.

The impact analysis evaluated direct and indirect impacts to each park and recreation area by reviewing plans, maps, aerials, and Geographic Information Systems resources against the alternatives. It also cross-referenced findings of other resources (such as water quality and noise), including:

- Whether all or a part of the resource would overlap the limits of disturbance;
- Whether impacts to related resources—for example, water quality—would cause harm to the resource;
- Whether construction staging or the permanent limits of the Project would require removal of trees or vegetation within the park or recreation area;⁸
- Whether the Project alternatives would cause changes in accessibility or connectivity;
- Whether the Project fragments any existing conservation lands or wildlife refuges;⁹ and
- Whether the Project would cause noise and vibration impacts, changes in the visual or aesthetic quality, or land cover conversion that would affect the use of the resource.

16.3. Affected Environment

This section summarizes the existing parks and recreation areas within the Local Study Area. For a complete description of the affected environment, see **Appendix D2, Affected Environment Report**. **Table 16-1** identifies the parks and recreation areas within the Local Study Area, the agency with jurisdiction over the property, the estimated property size, and highlighted amenities and features. **Figure 16-1** shows these parks and recreation areas in context of the Study Area.

⁸ The recreation and parks analysis did not consider street tree removal unless the street was specifically within a park or recreation area.

⁹ Fragmentation occurs when a project isolates one area of conservation lands or wildlife refuges from other areas or breaks up an area into several smaller areas.

57 **Figure 16-1 | Parks and Recreation Areas Within the Local Study Area**



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59 **Table 16-1** | Parks and Recreation Areas that Intersect with the Local Study Area

Name	Owner	Total Park Size (acres)	Acres of Park in Study Area	Amenities and Features in Study Area
Benjamin Banneker Park	NPS	6.6	4.0	<ul style="list-style-type: none"> • Open space • Walkways • Landscaping • Overlook • Water fountain and plaza
Captain John Smith Chesapeake National Historic Trail	NPS-Chesapeake	--	--	<ul style="list-style-type: none"> • First National Water Trail • In the Study Area, sections of designated water trail along Potomac River are accessed from various sites supporting public access to the water
Earth Day Park	Department of Energy	0.4	0.4	<ul style="list-style-type: none"> • Open space • Bench seating • Technology demonstrations
East Potomac Park	NPS-National Mall and Memorial Parks (NAMA)	330	71.5	<ul style="list-style-type: none"> • Ohio Drive: bike and pedestrian use • Tennis center • NPS NAMA Headquarters and Maintenance Facilities • NPS National Capital Region Headquarters • U.S. Park Police District 1 Substation • Hains Point Loop Trail • Rock Creek Park Trails • Recreation fields • Thomas Jefferson Memorial • George Mason Memorial • Japanese cherry blossom plantings • Tidal Basin
George Washington Memorial Parkway (GWMP)	NPS	7,146	110	<ul style="list-style-type: none"> • Scenic parkway • Mount Vernon Trail (MVT)
Hancock Park (Reservation 113)	NPS-NAMA	1.3	1.3	<ul style="list-style-type: none"> • Open space • Walkways • Landscaping and screening • Café tables and chairs¹

Name	Owner	Total Park Size (acres)	Acres of Park in Study Area	Amenities and Features in Study Area
Long Bridge Park	Arlington County	30	29	<ul style="list-style-type: none"> • Sports fields • Walkways • Overlook • Picnic areas • Rain garden • Bird and train watching • <i>Planned aquatics, health, and fitness facility (Phase II)</i>
MVT	NPS (within GWMP)	--	--	<ul style="list-style-type: none"> • Paved multi-use trail for non-motorized use
National Mall and Smithsonian Grounds	NPS-NAMA	70.25	16.7	<ul style="list-style-type: none"> • National civic space used for events, protests, demonstrations, and recreation • Open space • Smithsonian museums • Landscaped gardens
Potomac Heritage National Scenic Trail	NPS	--	--	<ul style="list-style-type: none"> • Multiuse trails • In the Study Area, follows GWMP and Potomac River, supporting public access to the water
Reservation 197	NPS-NAMA	0.1	0.1	<ul style="list-style-type: none"> • Open space
Reservation 198	NPS-NAMA	0.2	0.2	<ul style="list-style-type: none"> • Open space
Roaches Run Waterfowl Sanctuary	NPS (within GWMP)	--	--	<ul style="list-style-type: none"> • Bird sanctuary and observation area
Star-Spangled Banner National Historic Trail	NPS	--	--	<ul style="list-style-type: none"> • Path traces 680 miles of land and water trails followed by the allied armies under General Washington and General Rochambeau • Within Study Area, follows GWMP
Washington Monument and Grounds	NPS-NAMA	104	11.3	<ul style="list-style-type: none"> • Tidal Basin • Japanese cherry blossom plantings • Trails
West Potomac Park	NPS-NAMA	400	0	<ul style="list-style-type: none"> • Lincoln Memorial • Franklin Delano Roosevelt Memorial • World War II Memorial • Tidal Basin • Japanese cherry blossom plantings • Trails and sidewalks
¹ Tables and chairs in Hancock Park provided by the Southwest Business Improvement District				

16.4. Permanent or Long-Term Effects

This section discusses the permanent or long-term effects following the construction of the No Action Alternative and Action Alternatives on recreation and parks within the Local Study Area. For a complete description of the permanent or long-term effects, see **Appendix D3, Environmental Consequences Report**.

16.4.1. No Action Alternative

In the No Action Alternative, the Long Bridge Corridor would continue to operate with two tracks crossing the Potomac River. The No Action Alternative presumes that Long Bridge remains in service, with continued maintenance as necessary. The No Action Alternative also presumes that the Virginia Department of Rail and Public Transportation (DRPT) and Virginia Railway Express (VRE) complete the other planned railroad projects that would expand capacity to four tracks on either side of the Long Bridge Corridor. These projects may have impacts to parks within the Local Study Area. Any park impacts related to these projects and any other large capital projects would be assessed within the context of each project.

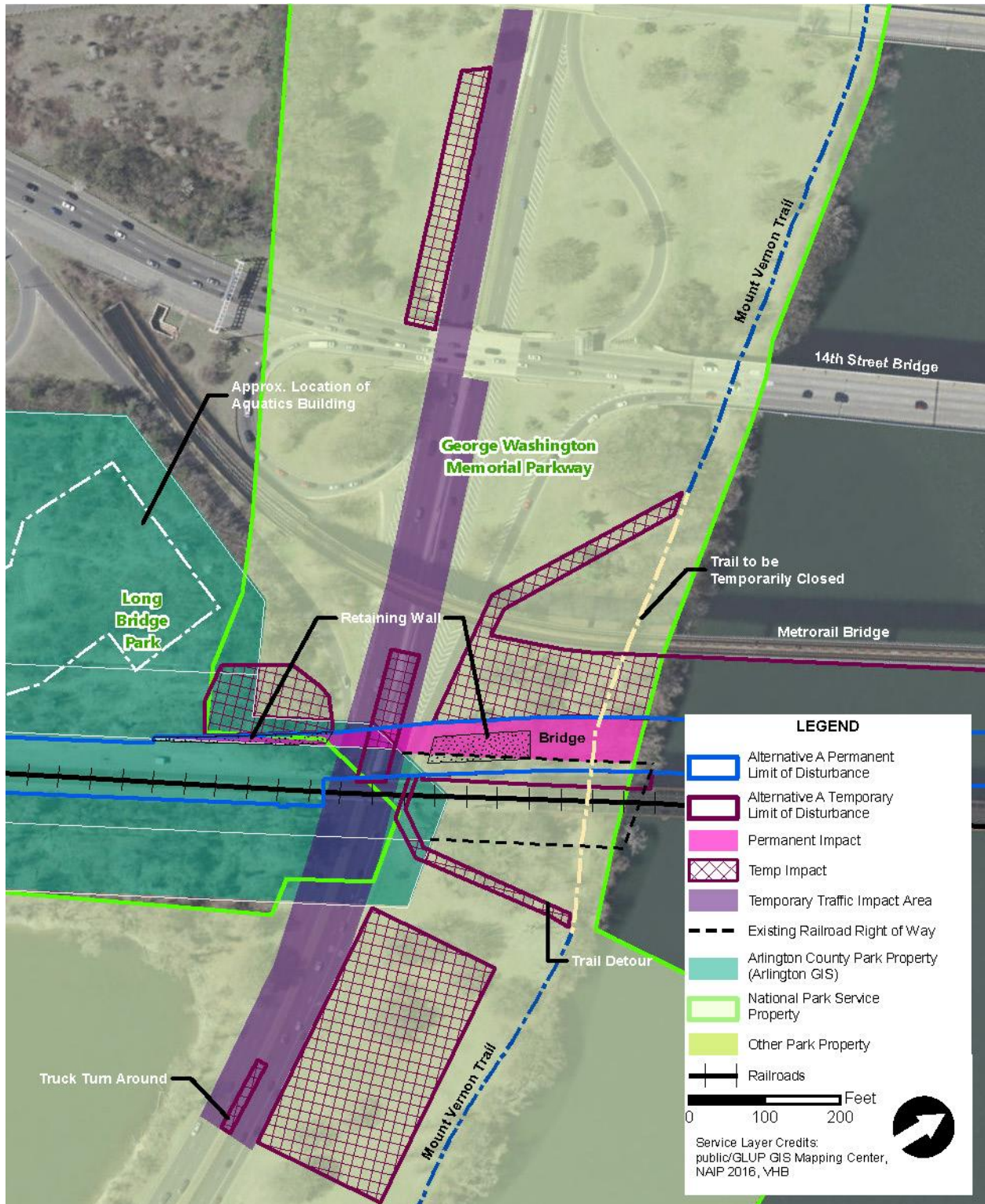
16.4.2. Action Alternative A (Preferred Alternative)

Action Alternative A would have moderate permanent direct adverse impacts on parks and recreation areas, including vegetation resources (**Figures 16-2 through 16-4**). In Action Alternative A, the permanent right-of-way would overlap with park and recreation area boundaries in the Local Study Area, directly impacting park and recreation resources as well as visitor use and experience. **Table 16-2** lists the parks that Action Alternative A would permanently affect, the total acres of park land in the Local Study Area, the total acres of park land permanently affected, and the percentage of park land in the Local Study Area that Action Alternative A would affect.

Table 16-2 | Action Alternative A Acres of Permanent Impact on Recreation Areas and Parks

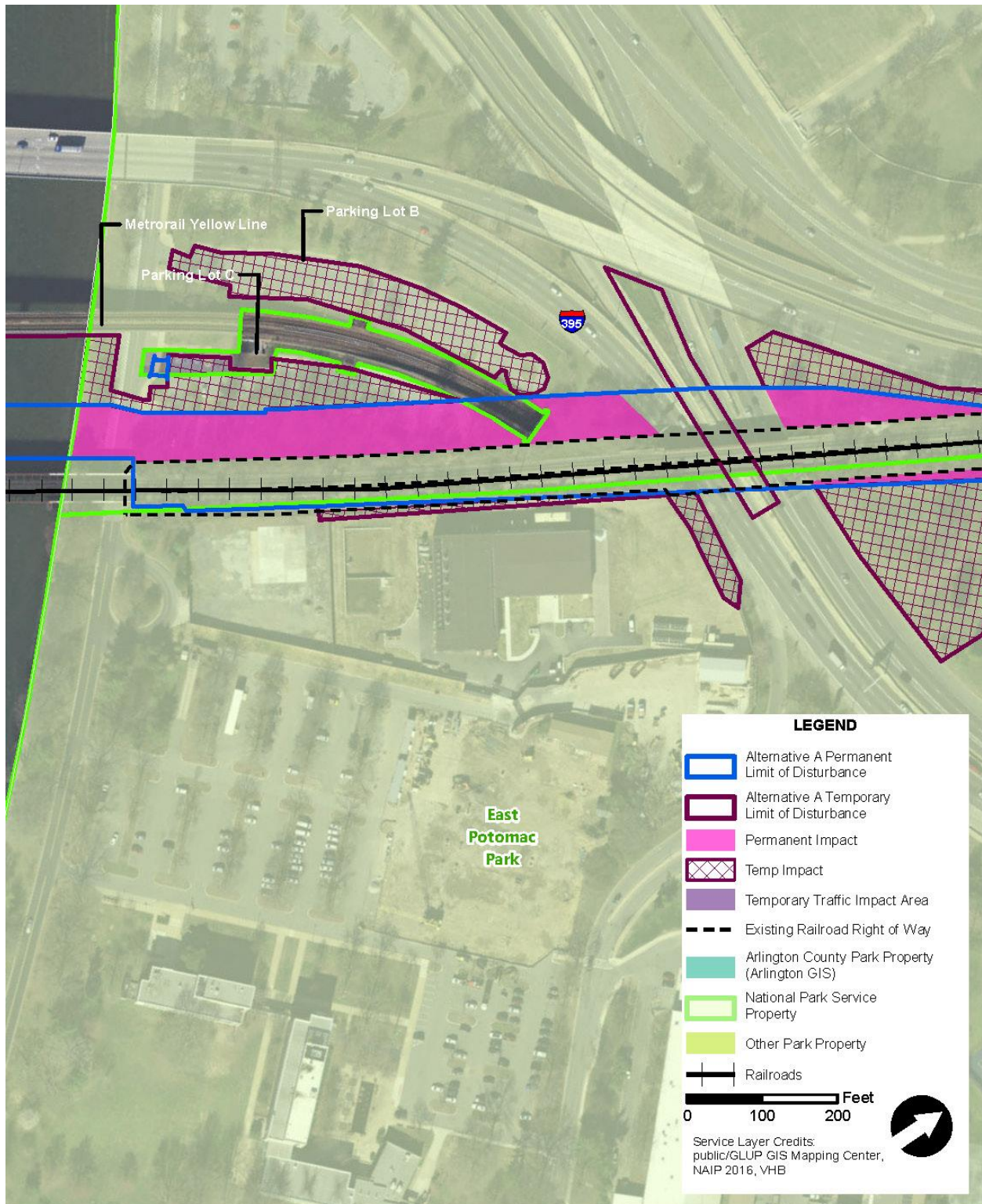
Name	Acres of Park in Local Study Area	Acres of Direct Permanent Impact	Percent Direct Permanent Impact
Long Bridge Park	30	0.04 or 0.14 ¹	<1%
George Washington Memorial Parkway	7,146	0.4 or 0.5 ¹	<.01%
East Potomac Park	330	2.4	<1%
¹ The range in impact areas for Long Bridge Park and the GWMP is due to the discrepancy in property records.			

84 **Figure 16-2** | Impacts of Action Alternative A on Long Bridge Park and GWMP



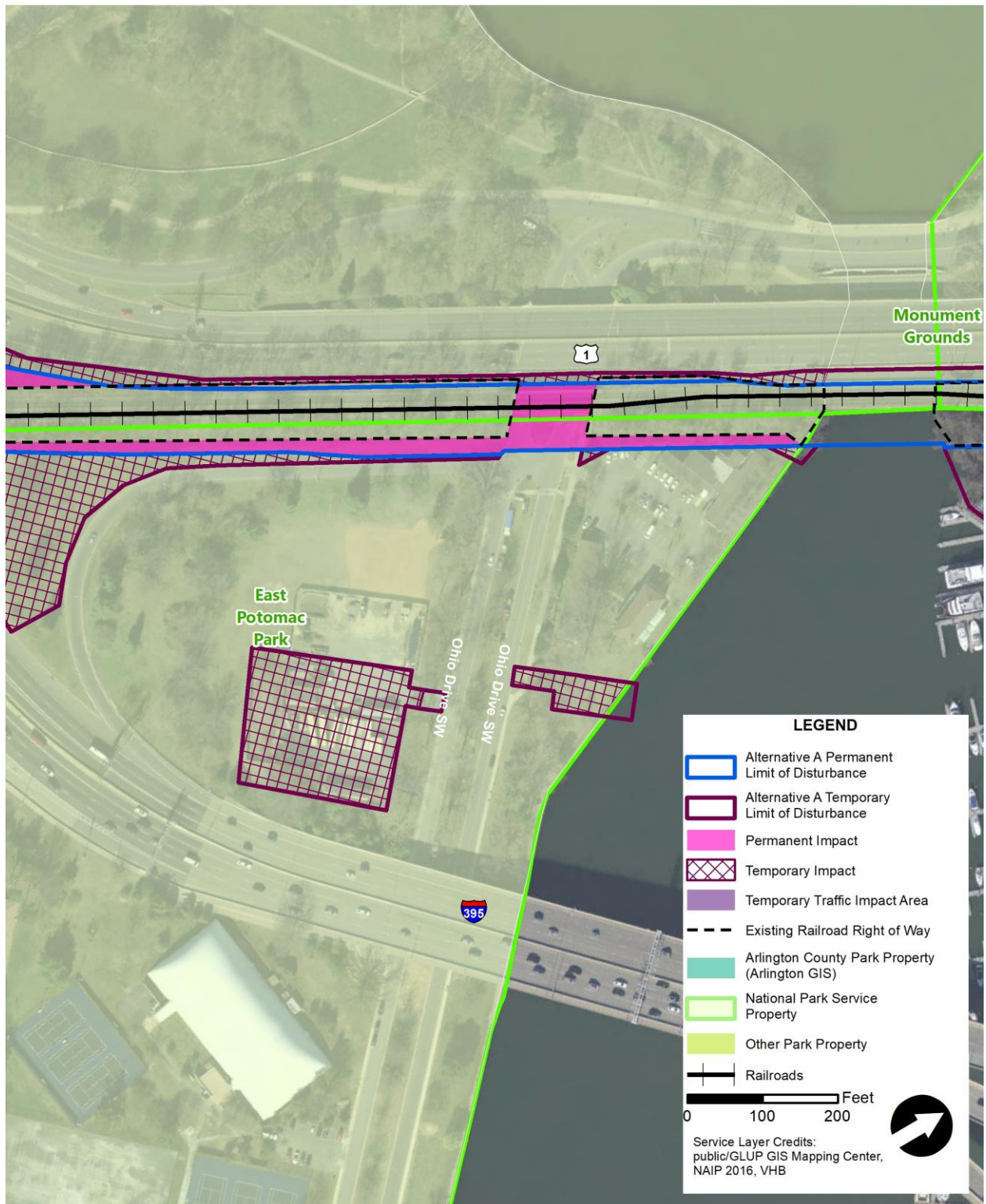
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86 **Figure 16-3 | Impacts of Action Alternative A on East Potomac Park**



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88 **Figure 16-4** | Impacts of Action Alternative A on East Potomac Park



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16.4.2.1. Physical Impacts to Park and Recreation Resources

Action Alternative A would have negligible permanent direct adverse impacts to Long Bridge Park. The railroad right-of-way would impact either approximately 0.04 or 0.14 acres of a wooded area that is currently unused by the public. The area of impact amounts to less than one percent of the total area of the park. Arlington County plans for the park include a multi-use trail that would be adjacent to this vegetated area. Action Alternative A may require some minor reconfiguration of the trail where it runs alongside the railroad right-of-way.

Action Alternative A would have moderate permanent direct adverse impacts to the GWMP, impacting less than one percent of the total area of the park in an area currently dominated by transportation infrastructure. The new railroad bridge would pass over the MVT and GWMP roadway and would permanently occupy a portion of the vegetated area between the trail and the roadway, occupying either approximately 0.4 or 0.5 acres of parkland on retained fill with 15-20 foot high retaining walls. Construction of the new bridge would result in removal of approximately 70 trees, including three larger trees with greater than 34-inch trunk diameters. Approximately 50 trees, including the three larger trees with greater than 34-inch trunk diameters, would be within the permanent limits of disturbance of the new railroad bridge and could not be replanted. Outside of the permanent limits of disturbance, replanted larger trees would take a long time to reach maturity and are therefore considered a permanent impact. Some of these trees date to the 1932 planting plan of the GWMP and were intended to visually screen the railroad bridge from the motorway (see **Chapter 15, Cultural Resources**).

Action Alternative A would have moderate permanent direct adverse impacts to East Potomac Park, impacting less than one percent of the total area of the park in an area currently dominated by transportation infrastructure. The new railroad bridge would pass over East Ohio Drive and the two new tracks would require widening of the existing railroad embankment, affecting approximately 2.4 acres of the park. The widened railroad right-of-way would also permanently occupy a portion of NPS Parking Lot C, causing the permanent loss of up to 50 parking spaces. Construction staging areas and widening of the embankment would require removal of approximately 170 trees, including eight larger trees with greater than 34-inch trunk diameters and up to four Japanese cherry blossom plantings. The majority of the trees removed (150) would be small saplings under 12-inch trunk diameters that screen the railroad tracks. Approximately 160 trees, including two larger trees with greater than 34-inch trunk diameters, would be within the permanent limits of disturbance of the new railroad infrastructure and could not be replanted. Outside of the permanent limits of disturbance, replanted larger trees would take a long time to reach maturity and are therefore considered a permanent impact.

16.4.2.2. Visitor Use and Experience

Action Alternative A would have moderate to major direct adverse impacts on visitors to Long Bridge Park due to noise, as the increased number of trains would increase the amount of noise experienced by park users. Action Alternative A would also have a minor direct adverse impact on visitor use of the GWMP resulting from the conversion to railroad use, as this area is typically experienced by visitors passing through via motor vehicles, bicycles, and walking. Action Alternative A would also have minor to moderate permanent direct adverse visual impacts on GWMP visitor experience due to the increased number of bridges crossing the roadway and the removal of mature vegetation and trees as described above. The loss of 50 parking spaces at East Potomac Park would also have a minor permanent direct adverse impact on visitor use by reducing the amount of available parking for users who drive to the

park. The removal of mature trees screening East Potomac Park space from the railroad tracks could have a minor permanent direct adverse impact on park visitor experience by making the railroad corridor more visible.

Adverse impacts due to changes to visual resources and noise conditions are further described in **Chapter 13, Noise and Vibration**, and **Chapter 14, Aesthetics and Visual Resources**.

16.4.3. Action Alternative B

16.4.3.1. Physical Impacts to Park and Recreation Resources

Action Alternative B would have similar impacts to Action Alternative A. However, because Action Alternative B would replace two existing bridges, it would have more impacts near those bridges. The additional impacts include one additional tree with a greater than 34-inch trunk diameter and 15 additional smaller trees removed in the GWMP green space, the removal of two to three additional Japanese cherry blossom plantings along Ohio Drive SW, one additional tree with a greater than 34-inch trunk diameter and nine additional smaller trees removed from East Potomac Park, and an additional 0.1 acres impacted in East Potomac Park. There would also be some minimal differences in the visual impacts on parks because the replacement bridge profile would be raised compared to the existing bridge.

16.4.3.2. Visitor Use and Experience

Action Alternative B would have similar impacts on visitor use and experience as Action Alternative A.

16.5. Temporary Effects

This section discusses the direct or indirect temporary effects of the No Action Alternative and Action Alternatives during construction, based on conceptual engineering design. For the complete technical analysis of the potential impacts to recreation areas and parks, see **Appendix D3, Environmental Consequences Report**.

16.5.1. No Action Alternative

The No Action Alternative could result in temporary impacts to parks related to the construction of other projects such as the addition of a fourth track from AF to RO Interlockings in Virginia, the addition of a fourth track from L'Enfant (LE) to Virginia (VA) Interlockings in the District, the VRE L'Enfant Station Improvements, and the Virginia Avenue Tunnel project. In Long Bridge Park, Arlington County is currently undertaking Phase II of the Long Bridge Park Development Plan. This project will include construction of the 120,420-square-foot Long Bridge Aquatics and Fitness Center as well as the development of another 10.5 acres of park land, including the extension of the Esplanade, rain gardens, public gathering areas, parking, and support spaces. However, the impacts related to the construction of these projects and any other large capital projects would be assessed within the context of each project.

16.5.2. Action Alternative A (Preferred Alternative)

Action Alternative A would cause minor to moderate temporary direct adverse impacts to recreation areas and parks due to impacts on the GWMP roadway, loss of NPS parking resources, relocation of part

of the MVT, and displacement of park users during construction. **Table 16-3** lists the parks that Action Alternative A would temporarily affect, the total acres of park land in the Local Study Area, the total acres of park land temporarily affected, and the percentage of park land in the Local Study Area that Action Alternative A would affect.

Table 16-3 | Action Alternative A Acres of Temporary Impact on Recreation Areas and Parks

Name	Total Park Acres	Acres of Temporary Impact from Action Alternative A	Percent Temporary Impact
Long Bridge Park	30	0.1 or 0.4 ¹	1%
George Washington Memorial Parkway	7,146	2.8 or 3.2 ¹	<1%
East Potomac Park	330	4.7	1.4%
Hancock Park	1.3	0.09	7%

¹The range in impact area for Long Bridge Park and the GWMP is due to the discrepancy in property records.

16.5.2.1. Physical Impacts to Park and Recreation Resources

Action Alternative A would have minor temporary direct adverse impacts to Long Bridge Park due to construction over a period of approximately 4 years and 2 months. These impacts would primarily affect the northeastern area of Long Bridge Park. Long Bridge Park next to the GWMP roadway would be the site of a construction staging area. During this time, the public would have limited or no use of this part of the park. This area of the park is planned to be primarily green space (a meadow and wooded area) but does include a loop trail that may need to be temporarily relocated during construction.

Action Alternative A would have moderate temporary direct adverse impacts to the GWMP during construction over a period of approximately 3 years and 4 months. Constructing the new railroad bridge would temporarily impact roadway operations as well as park property. These impacts on the parkway itself would include traffic control measures, temporary lane closures, temporary lane shifts, and limited use of the parkway for construction vehicles. Impacts would also include laydown and staging areas next to both the northbound and southbound sides of the GWMP, as well as temporary removal of the median to enable trucks to cross the roadway for delivery of materials. Construction at the GWMP would take place primarily at night.

Action Alternative A would have moderate direct impacts on East Potomac Park for approximately 4 years and 9 months during construction of the railroad bridge over the Potomac River. As shown in **Figures 16-3** and **16-4**, construction areas would use approximately 4.6 acres, or six percent of park land. Construction areas would use NPS Parking Lots B and C, as well as the green space between I-395 and the railroad corridor, one ballfield along Ohio Drive SW, and an area between Ohio Drive SW and the Washington Channel.

16.5.2.2. Visitor Use and Experience

Action Alternative A would have minor temporary direct adverse impacts to visitor use and experience of Long Bridge Park due to construction. The construction area at the northeastern end of the park may affect use of the planned loop trail. In addition, construction noise levels would exceed the Arlington

County nighttime noise limit at Long Bridge Park (see **Chapter 13, Noise and Vibration**), causing a moderate direct adverse noise impact to user experience. Long Bridge Park is open until 11:00 PM.

Action Alternative A would temporarily impact visitors to the GWMP greenspace, including the MVT. This alternative would involve a temporary relocation of less than 0.25 miles of the MVT for public safety and to allow construction access and staging along the water. The relocation would last approximately 2 years. Users of the MVT would experience a different trail route, away from the Potomac River and towards the GWMP roadway. In addition, construction noise levels would exceed the Arlington County nighttime noise limit at the MVT, which is in a special-purpose zone (see **Chapter 13, Noise and Vibration**), causing a moderate indirect adverse impact.

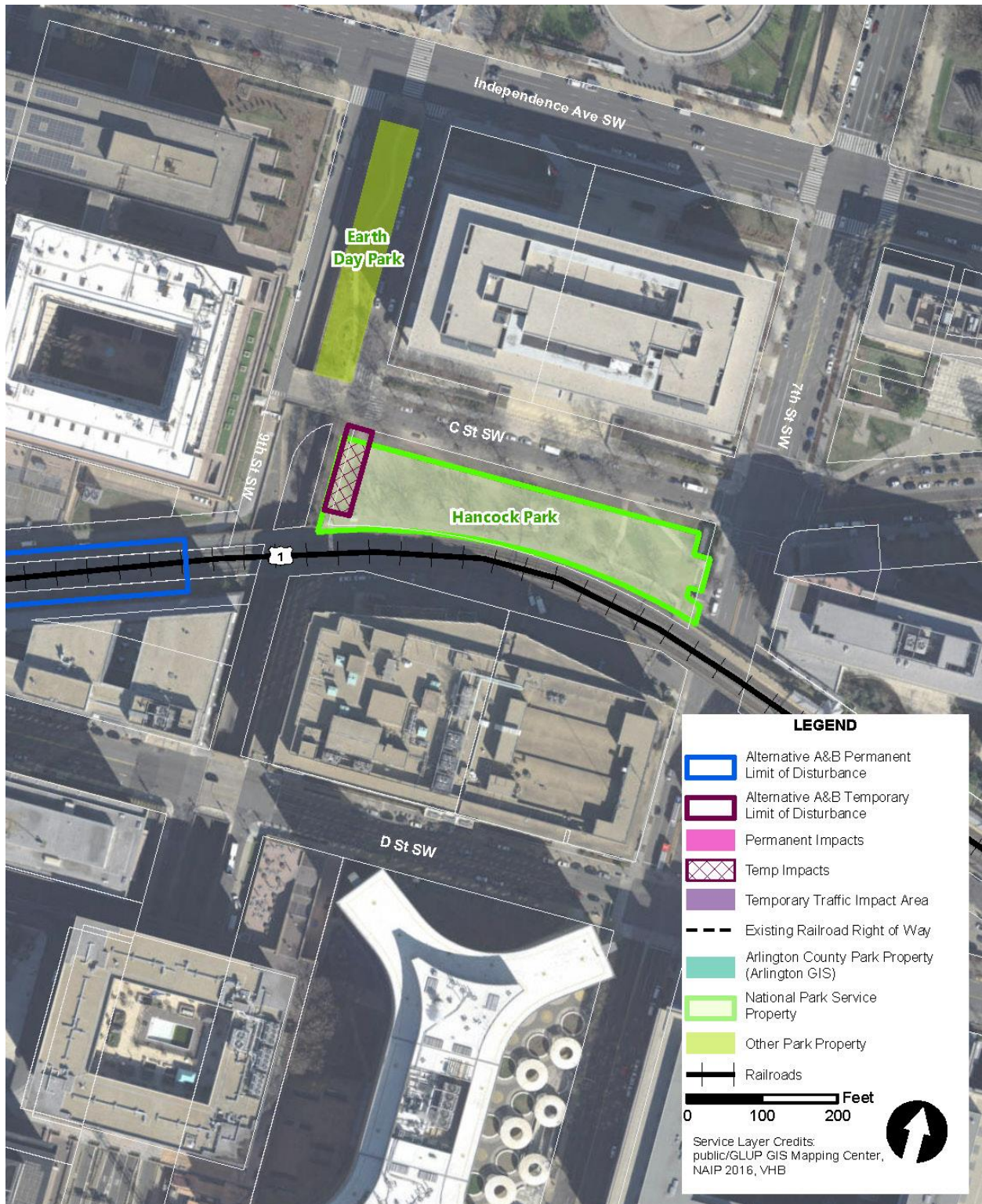
Action Alternative A would have moderate direct impacts on visitor use and experience of East Potomac Park during construction. The majority of activities within East Potomac Park (golf course, biking, running, and walking, as well as picnics) take place south of Buckeye Drive SW, away from the construction areas. The tennis center is north of Buckeye Drive SW, but not proximate to the construction activities. Visitor access to the park would be maintained. During construction, the public would not be able to use NPS Parking Lots B and C, which would affect access to the park for visitors who drive and park. These surface parking areas are heavily used by park visitors during peak times such as the annual National Cherry Blossom Festival but are under capacity during most of the year. The staging area along Ohio Drive SW near the NPS-NAMA Headquarters would make use of an existing ballfield, which would not be available to park users during this time. However, there are multiple additional ballfields available nearby in West Potomac Park. Construction noise levels would exceed the District daytime limit at the NPS-NAMA Headquarters (see **Chapter 13, Noise and Vibration**), causing a moderate direct adverse impact for nearby park users and construction staging and equipment would be visible to park users traveling to and from the park, adversely affecting user experience. Visitor access to NPS-NAMA Headquarters would be maintained.

Action Alternative A would have minor direct impacts on visitor use of Hancock Park. Approximately 0.09 acres of Hancock Park would be required for approximately 3 years (**Figure 16-5**). Construction crews would use the western part of the park near 9th Street SW for access to allow for railroad materials, equipment, and crews to enter the depressed railroad corridor. This area would be fenced and would affect visitors by temporarily displacing users that are attempting to use this section of the park while construction vehicles are accessing the Project area. People using the eastern end of the park may also experience temporary visual or noise impacts.

16.5.3. Action Alternative B

Action Alternative B would have similar impacts to Action Alternative A, but in some cases the greater duration of those impacts would result in greater intensity of effect. Specifically, the increased duration of construction impacts along the GWMP and MVT, and within East Potomac Park would result in major adverse impacts. Construction impacts would last approximately 2 years 6 months longer at Long Bridge Park, 3 years 2 months longer along the GWMP, and 3 years 4 months longer at East Potomac Park.

236 **Figure 16-5 | Temporary Impacts on Hancock Park**



16.6. Avoidance, Minimization, and Mitigation

This section describes proposed mitigation for the impacts to recreation areas and parks. During the development of plans for construction, FRA and the District Department of Transportation (DDOT) met with NPS to discuss potential impacts to recreation areas and parks. DDOT also met with Arlington County to discuss impacts. Where practicable, identification of staging areas and access routes that do not use park property has avoided construction-related impacts to Long Bridge Park, the GWMP, and East Potomac Park. DRPT, the project sponsor for final design and construction, would employ measures to avoid, minimize, or mitigate the adverse impacts of the Project on recreation areas and parks. These measures would potentially include:

- Minimizing impacts to trees and vegetated areas prior to construction through tree protection measures and preventing or limiting equipment access to adjacent forested areas through protective fencing.
- Mitigating loss of vegetation following construction to the extent practicable by restoring land and planting native woody shrubs and trees on NPS property within the GWMP and Long Bridge Park in coordination with Arlington County. Tree species may include various oaks (*Quercus spp.*), American sycamore (*Platanus occidentalis*), and tulip poplar (*Liriodendron tulipifera*). Maintain trees and vegetation for 3-5 years following planting.
- Restoring impacted ballfields following construction, and compensating NPS for revenue lost during construction.
- Coordinating with park owners, including Arlington County and NPS, on traffic control strategies to minimize traffic disruptions and maintain vehicular, pedestrian, and bicycle mobility on roadways in and around the Study Area.
- Maintaining visitor access to recreation areas and parks and trails within the Local Study Area to the extent practicable during construction.
- Mitigating direct property impacts to Long Bridge Park, GWMP, and East Potomac Park through construction of a bike-pedestrian bridge that will connect the parks and the regional trail system.
- Coordinating with park and reservation owners, including Arlington County and NPS, regarding traffic control strategies to minimize traffic disruptions and maintain vehicular, pedestrian, and bicycle mobility on roadways in and around the Local Study Area.
- Developing a construction access and staging plan pertinent to park property. Eliminating the approximately 1.6-acre staging area in the center of Long Bridge Park; reducing the size of the GWMP staging area next to I-395 from 2.6 acres to approximately 1.2 acres; eliminating the use of the MVT for truck access; using a large floating barge near the shoreline of the East Potomac Park rather than the construction of a temporary pier; eliminating the staging area next to Ohio Drive SW near the Potomac River shoreline in East Potomac Park; relocating another staging area at East Potomac Park to an existing equipment storage yard rather than occupying an adjacent grassy open space; and reducing the size of the construction access area at Hancock Park.

277 Other chapters in the EIS also discuss avoidance, minimization, and mitigation measures to reduce the
278 adverse impacts of the Action Alternatives on recreation areas and parks. These chapters include
279 **Chapter 5, Natural Ecological Systems and Endangered Species; Chapter 12, Land Use and Property;**
280 **Chapter 13, Noise and Vibration; Chapter 14, Aesthetics and Visual Resources; Chapter 15, Cultural**
281 **Resources; and Chapter 24, Draft Section 4(f) Evaluation.**