APPENDIX A:
LIST OF PREPARERS

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APPENDIX A – LIST OF PREPARERS

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APPENDIX B:

LIST OF COOPERATING AND PARTICIPATING AGENCIES

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APPENDIX B – LIST OF COOPERATING AND PARTICIPATING AGENCIES

Jurisdiction	Agency	Agency Type/ Coordination Role	Regulatory Role or Technical Expertise
Federal	Federal Transit Administration (FTA)	Lead Federal Agency	NEPA Compliance
	National Park Service (NPS)	Cooperating Agency	Federal Parklands
	U.S. Environmental Protection Agency (USEPA)	Participating Agency	NEPA Compliance/ Hazardous Materials/ Federal Sustainable Communities Initiatives
	U.S. Army Corps of Engineers (USACE)	Participating Agency	Wetlands and Water Quality
	U.S. Department of Defense	Participating Agency	Economic, Security and Travel Demand Management
	Federal Aviation Administration (FAA)	Participating Agency	Airport Clear Zones
	Federal Highway Administration (FHWA)	Participating Agency	Roadway Traffic and Operations
	Federal Railroad Administration (FRA)	Participating Agency	Federal Regulator - adjacent Class I Freight Rail Corridor
	National Capital Planning Commission (NCPC)	Participating Agency	Specific Regulatory Authorities in the National Capital Region
	U.S. Fish and Wildlife Service (USFWS)	Participating Agency	Federally Listed Threatened and Endangered Species
Regional	Washington Metropolitan Area Transit Authority (WMATA)	Cooperating Agency	Metrorail System Operations, Capital Projects, and NEPA Compliance
	Metropolitan Washington Airports Authority (MWAA)	Participating Agency	Ronald Reagan Washington National Airport Operator
State	Virginia Department of Rail and Public Transportation (VDRPT)	Participating Agency	Operational & Capital Funding for Transit Agencies
	Virginia Department of Transportation (VDOT)	Participating Agency	Roadway Traffic and Operations
	Virginia Department of Historic Resources (VDHR)	Participating Agency	Cultural Resources
City of Alexandria	City of Alexandria	Joint Lead Agency and Project Sponsor	Local Project Jurisdiction
	Alexandria Police Department	Participating Agency	Local Project Jurisdiction
	Department of Planning and Zoning (P&Z)	Participating Agency	Local Project Jurisdiction
	Office of Historic Alexandria	Participating Agency	Local Project Jurisdiction
Other Jurisdictions	Arlington County Department of Environmental Services (DES)	Participating Agency	Local Project Jurisdiction

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APPENDIX C:
REFERENCES

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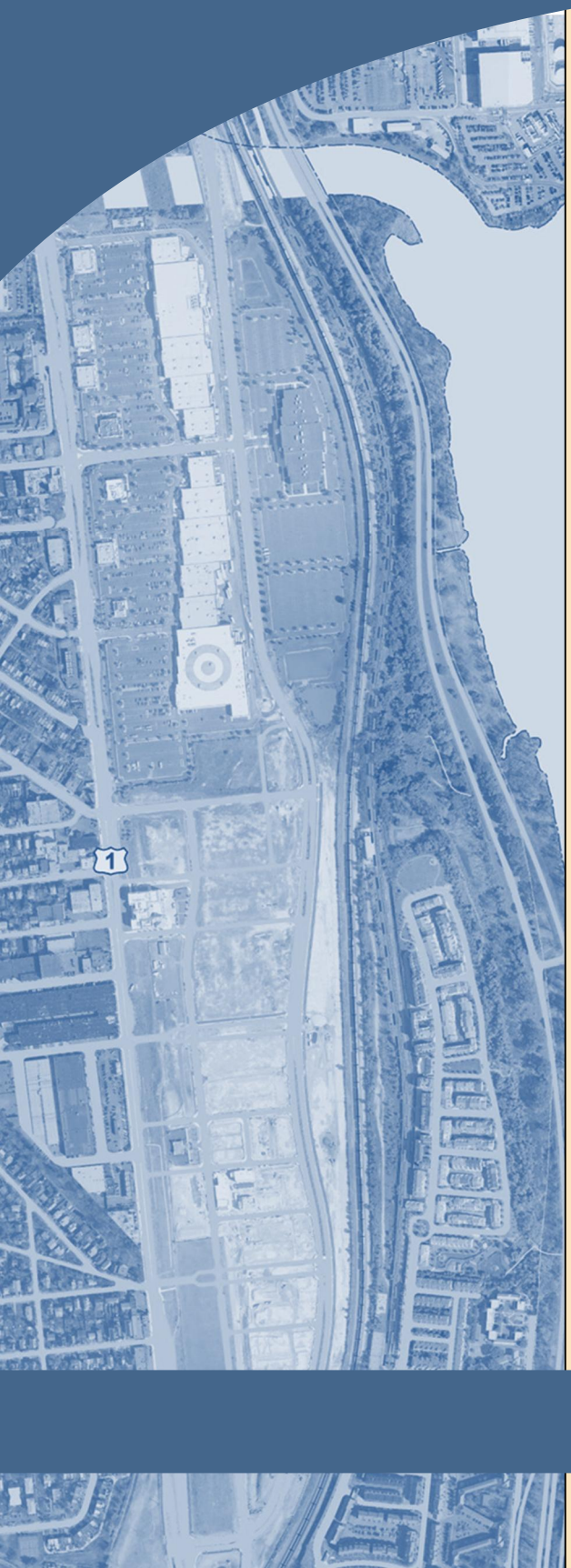

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1.0 INTRODUCTION

This evaluation discusses the effects of the Potomac Yard Metrorail Station project on parklands and historic properties eligible for protection under the provisions of Section 4(f) of the U.S. Department of Transportation Act of 1966 (commonly referred to as Section 4(f)). This Section 4(f) evaluation has been prepared in accordance with the joint Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) regulations for Section 4(f) compliance as codified in 23 CFR Part 774. In addition, this analysis also relied on FHWA's 2012 *Section 4(f) Policy Paper,* which supplements the Section 4(f) regulations. FTA has adopted the 2012 *Section 4(f) Policy Paper*.

2.0 LEGAL AND REGULATORY REQUIREMENTS

Section 4(f) of the U.S. Department of Transportation Act of 1966, (49 U.S.C. § 303), as amended, protects public parks and recreational lands, wildlife refuges, and historic sites of national, state, or local significance from acquisition or conversion to transportation use. Under Section 4(f), the use of such publicly-owned lands for transportation purposes can occur only if there is no feasible and prudent avoidance alternative to such use, and if the project includes all possible planning to minimize harm to those resources. The authority to administer Section 4(f) and make Section 4(f) approvals resides with the FTA Regional Administrator, as delegated by the Secretary of the U.S. Department of Transportation (DOT).

Section 4(f) does not apply to parks, recreational areas and wildlife or waterfowl refuges if these land uses are privately owned. However, Section 4(f) does apply to all historic sites that are listed or eligible for listing on the National Register of Historic Places (NRHP), regardless of whether they are publically or privately owned. Section 4(f) also applies to all archaeological sites on or eligible for inclusion on the National Register. Per the exception in the Section 4(f) regulations at 23 CFR 774.13(b), Section 4(f) approval is not needed when FTA determines with the official with jurisdiction, and the State Historic Preservation Office (SHPO) concurs, that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place.

Section 4(f) regulations require FTA to consult with the Department of Interior (DOI) when FTA makes a Section 4(f) finding or when a project would use property managed by DOI and, as appropriate, the involved offices of the Department of Agriculture (USDA) and the Department of Housing and Urban Development (HUD), as well as relevant State and local officials, in developing transportation projects and programs that use lands protected by Section 4(f). Consultation with the USDA would occur whenever a project uses Section 4(f) land from the National Forest System. Consultation with HUD would occur whenever a project uses Section 4(f) land for/on which certain HUD funding has been used. Since neither of these conditions apply to the project, consultation with HUD and USDA is not required.

Section 4(f) also provides specific consultation roles for the owners and/or managers of Section 4(f) properties as officials with jurisdiction. For historic sites listed on or eligible for the NRHP as part of this project, the SHPO is the official with jurisdiction and generally fulfills their role under Section 4(f) through their role in the Section 106 consultation process.

2.1 Use under Section 4(f)

Section 4(f) applies to protected resources when a "use" occurs. A "use" can be permanent, temporary, or constructive, as defined below.

2.1.1 Permanent Use

Permanent use includes acquisition and incorporation of all or a portion of the resource into the transportation facility; it includes fee simple and permanent easement use.

2.1.2 Temporary Use

Temporary use occurs when a transportation project temporarily occupies any portion of the resource and results in an adverse condition. A temporary occupancy of property does not constitute a use of a Section 4(f0 resource when all of the following conditions are satisfied:

- Duration is less than the time needed for the construction of the project and there is no change in ownership of the land;

- The nature and magnitude of the changes to the Section 4(f) property are minimal;
- There are no anticipated permanent adverse physical impacts, nor is there interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis;
- The land being used will be fully returned to a conditions at least as good as that which existed prior to the project; and
- There is a documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

2.1.3 Constructive Use

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 resource for project under Section 4(f) are substantially impaired. Substantial impairment only occurs when the protected activities, features, or attributes of the property are substantially impaired.

2.2 *De Minimis* Impact Finding

The requirements of Section 4(f) are satisfied with respect to a Section 4(f) resource if it is determined by the FTA that the use of the Section 4(f) property, including any measure(s) to minimize harm will have *de minimis* impact (23 CFR 774.3 (b) on the Section 4(f) resource. The *de minimis* impact determination subsumes the requirement for all possible planning to minimize harm by reducing the impacts on the Section 4(f) properties to a de minimis level. The official(s) with jurisdiction over the resource must be notified of the Agency's determination. 23 CFR 774.17 defines a *de minimis* impact as follows:

- For parks, recreation areas, and wildlife/waterfowl refuges, a *de minimis* impact is one that would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f), and the official with jurisdiction has concurred with this determination after there has been a chance for public review and comment.
- For historic sites, *de minimis* impact means that the FTA has determined, in accordance with 36 CFR part 800, that either no historic property is affected by the project, or the project would have "no adverse effect" on the property in question. The official with jurisdiction must be notified that the FTA intends to make a *de minimis* finding based on their concurrence with the "no adverse effect" determination under 36 CFR 800. This is usually done in the effect determination letter sent to the official with jurisdiction for their concurrence.

2.3 Feasible and Prudent Avoidance Alternatives under Section 4(f)

Under Section 4(f), the use of public lands for transportation purposes may only occur if no feasible and prudent avoidance alternative to such use exists and if the project includes all possible planning to minimize harm to resources from such use. A feasible and prudent avoidance alternative, as defined in 23 CFR 774.17, avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) property. An alternative is determined feasible if it can be built "as a matter of sound engineering judgment." Per 23 CFR 774.117, an alternative is not prudent if:

1. It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
2. It results in unacceptable safety or operational problems;
3. After reasonable mitigation, it still causes:
    a. Severe social, economic or environmental impacts;
    b. Severe disruption to established communities;
    c. Severe disproportionate impacts to minority or low-income populations; or
    d. Severe impacts to environmental resources protected under other federal statutes;
4. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
5. It causes other unique problems or unusual factors; or
6. It involves multiple factors in 1 through 5 above that while individually minor; cumulatively cause unique problems or impacts of extraordinary magnitude.

If no prudent and feasible alternative exists, the project must include all possible planning to minimize harm to the site, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303(c)(2)). If no feasible and prudent avoidance alternative exists, FTA must select the project alternative that causes the least overall harm in light of the statute's preservation purpose. The least overall harm is determined by balancing the following factors:

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

3.0 DESCRIPTION OF THE PROPOSED ACTION

The proposed action consists of construction of a new Metrorail Station located at Potomac Yard within the City of Alexandria along the existing Metrorail Blue and Yellow Lines between the Ronald Reagan Washington National Airport Station and the Braddock Road Station. The project would serve existing neighborhoods and retail centers, as well as high-density, transit-oriented development planned by the City of Alexandria. The project would provide access to the regional Metrorail system for the U.S. Route 1 corridor of north Alexandria, which is currently without direct access to the system.

The FTA is the lead federal agency for the project, and the City of Alexandria is the project's sponsor and joint lead agency. The Washington Metropolitan Area Transit Authority (WMATA) and the National Park Service (NPS) are listed as cooperating agencies for the project.

3.1 Project Purpose and Need

The purpose of the project is to improve local and regional transit accessibility to and from the Potomac Yard area adjacent to the U.S. Route 1 corridor for current and future residents, employees, and businesses. Currently, the project area is not served by direct access to regional rapid transit services, such as Metrorail. Direct access to the regional Metrorail system would provide more transportation choices for residents and workers and would enhance connections to regional employment and activity centers.

3.2 Project Alternatives

The Potomac Yard Metrorail Station Draft Environmental Impact Statement (Draft EIS) evaluates a No Build Alternative, three Build Alternatives, and a Design Option. Each alternative is described in the following subsections. For a description of alternatives that were previously considered, see the *Alternatives Considered Technical Report* (2011).

3.2.1 No Build Alternative

The No Build Alternative is defined as the existing highway and transit network along with the committed transportation improvements within the study area. The Draft EIS assumes that any improvements that are anticipated to be implemented by the project horizon year, whether physical or operational, are part of the No Build Alternative, with the exception of the new Metrorail Station at Potomac Yard. The No Build Alternative includes planned projects from the following adopted plans and improvement programs:

- *Financially Constrained Long-Range Plan for the National Capital Region* (CLRP), National Capital Region Transportation Planning Board, 2012 Update;
- *FY 2013-2018 Transportation Improvement Program for the Washington Metropolitan Region* (TIP), National Capital Region Transportation Planning Board, adopted 2010;
- *City of Alexandria FY 2012-2021 Capital Improvement Program* (CIP), adopted 2011;

- *Potomac Yard Coordinated Development District Concept Plan*, City of *Alexandria*, adopted 1999 with amendments through 2010; and
- *North Potomac Yard Small Area Plan*, City of Alexandria, adopted by ordinance in 2010.

The No Build Alternative includes the build-out of an internal street network within Potomac Yard, generally from Four Mile Run to Braddock Road, in addition to investments in transit and bicycle/pedestrian facilities. Anticipated transit investments include the Crystal City/Potomac Yard (CCPY) Transitway and an expansion of local transit service. The No Build Alternative also includes an off-street, multi-use trail through the planned linear park between Potomac Avenue and the CSXT right-of-way. The multi-use trail is already built from Four Mile Run to the intersection of Potomac Avenue and Main Line Boulevard, and the remainder of the trail from Potomac Avenue to Braddock Road is anticipated to be complete by 2016. Once completed, this multi-use trail will enhance access to the existing regional trail network, which serves both recreational users and commuters.

3.2.2 Build Alternatives

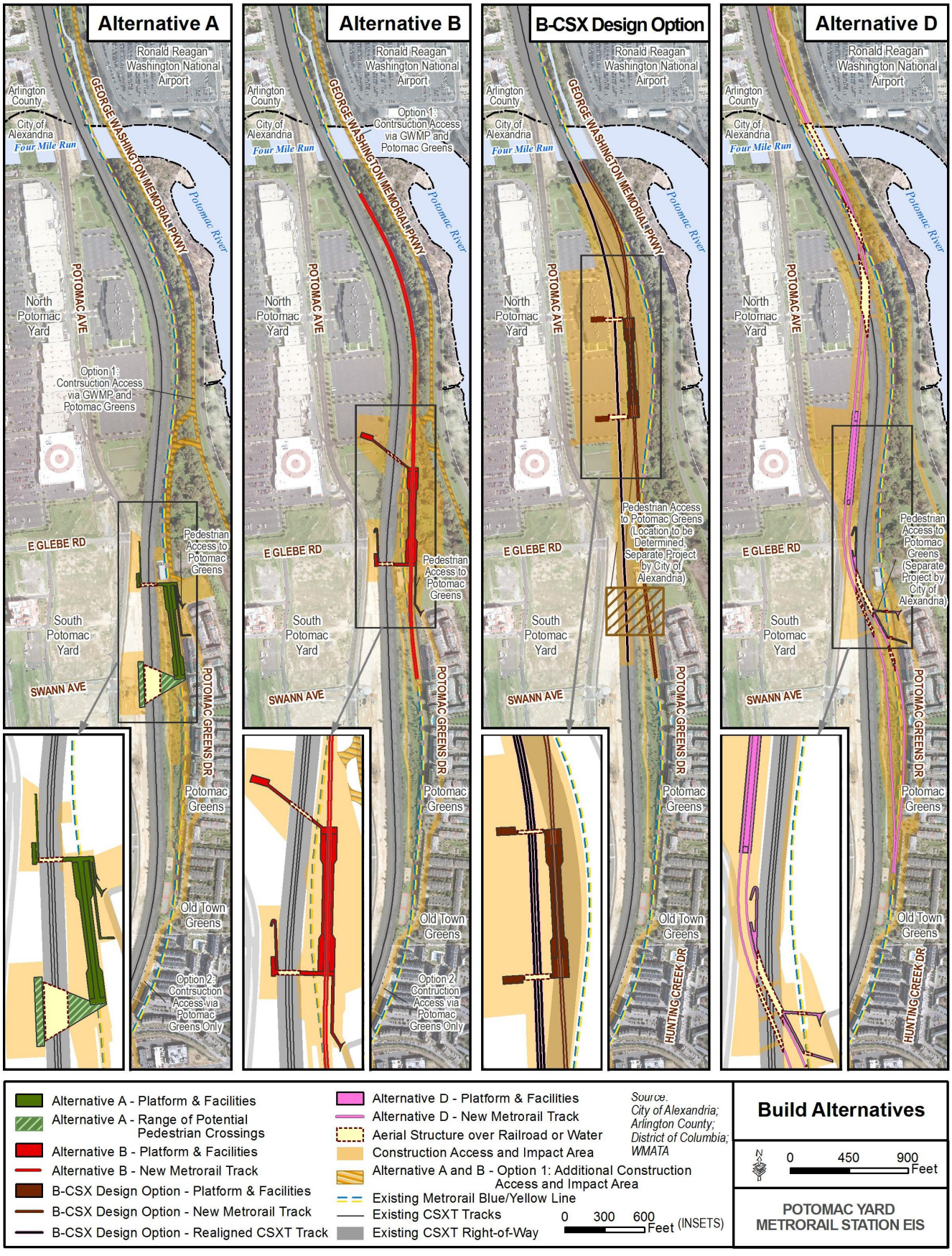
The three Build Alternatives and B-CSX Design Option are summarized in **Table 3-1** and shown in **Figure 3-1**.

Table 3-1: Build Alternatives

Alternative	Type and Layout	Track Work	Facilities for Station Access	Additional Structures Required
Build Alternative A	At-grade, side platform	Minimal track work	Two pedestrian bridges over CSXT right-of-way; access to Potomac Greens via walkway	None
Build Alternative B	At-grade, side platforms	Moderate track work	Two pedestrian bridges over CSXT right-of-way; access to Potomac Greens via walkway	Structures (retaining wall) to support new track and station
B-CSX Design Option	At-grade, side platforms	Major track work, including realignment of CSXT tracks	Two pedestrian bridges over CSXT right-of-way	None
Build Alternative D	Aerial, center platform	Major track work	One pedestrian bridge over CSXT right-of-way to provide access between Potomac Yard and Potomac Greens	Two aerial structures over CSXT right-of-way, one Metrorail bridge over Four Mile Run, aerial track and supports, and retaining wall replacement on the east and west sides of the tracks north of the existing Metrorail portal. New structures would pass over the existing Metrorail tracks, which would be removed following construction.

Note: Track work for Build Alternatives B and D and B-CSX Design Option assumes existing Blue and Yellow Line Metrorail track would be removed where the track is realigned.

Figure 3-1: Build Alternatives



3.2.2.1 Build Alternative A

Build Alternative A would be located on the existing Metrorail tracks between the CSXT Railroad tracks and the north end of the Potomac Greens neighborhood. Build Alternative A would be located within an area known as the Metrorail Reservation. The planning process for the *Potomac Yard/Potomac Greens Small Area Plan* (1992) identified the potential for a Metrorail station on the existing Metrorail line at a straight section of track roughly east of Raymond Avenue in the area adjacent to the Town Center and Potomac Greens. The plan also established Coordinated Development District (CDD) guidelines for Potomac Yard/Potomac Greens (*amended by Ordinance #4076 October 16, 1999*) that state that CDD development shall not preclude the possible future construction of a Metrorail station. Development Condition 30(A) for CDD#10 expressly contemplates the construction of a Metrorail station and related infrastructure at Potomac Yard. In accordance with this CDD Development Condition, Development Special Use Permit (DSUP) #2002-0026 as approved for Potomac Greens required the reservation of the Metrorail Station area. The reservation area for the Metrorail station was identified on the Potomac Greens site plan and ultimately dedicated to the City of Alexandria in 2004.

The station would be at-grade with a side platform layout. Additional station facilities would include two pedestrian bridges from the station over the CSXT right-of-way to the planned development in Potomac Yard. The bridge at the northern end of the station would provide 24-hour pedestrian/bicycle access between Potomac Yard and the Potomac Greens neighborhood. The exact location and configuration of the pedestrian access from the southern end of the Metrorail station to Potomac Yard is still under development. Build Alternative A would include construction of a double track crossover located approximately 900 feet south of the station, which would allow trains to switch from one track to the other when necessary for operations.

To construct Build Alternative A, access would be required to the area east of the existing Metrorail tracks. Construction access to the site would be provided by one of two options (see **Figure 3-2**):

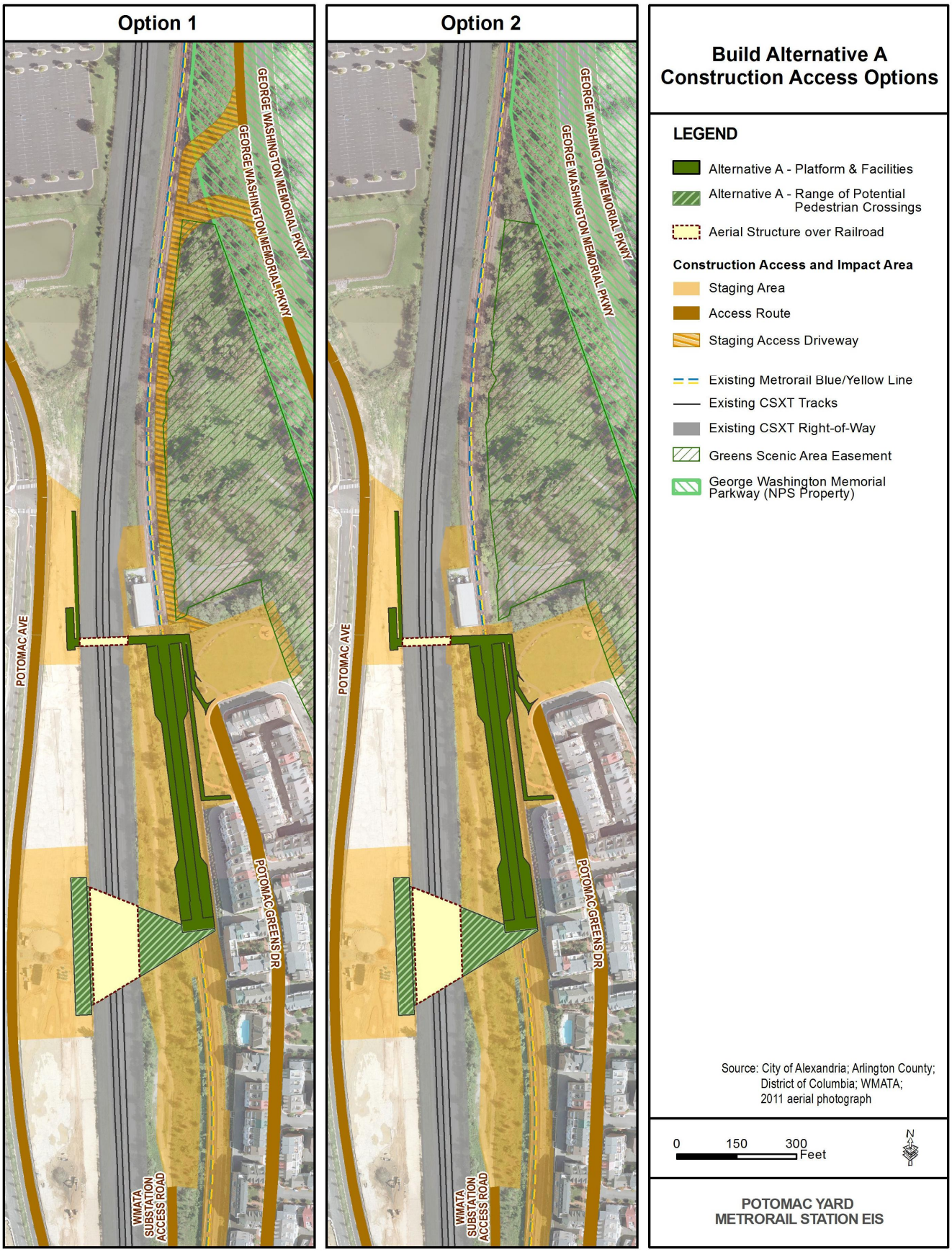
- **Option 1 Construction Access**: Option 1 would include access to the area east of the existing Metrorail tracks provided via a temporary construction access driveway from the George Washington Memorial Parkway (GWMP). Construction vehicles would use the southbound GWMP roadway from the Airport Access Road to Slaters Lane (1.7 miles). Additional access would be provided through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.
- **Option 2 Construction Access**: Option 2 would only include access to the area east of the existing Metrorail tracks through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.

Both options would require access on the west side of the existing Metrorail alignment, temporary construction access would be provided utilizing the access road through the planned Rail Park to the WMATA traction power substation (0.5 mile), crossing over the existing Metrorail alignment at the tennis court area of Old Town Greens (where Metrorail begins to travel below-grade). Access would also be required west of the CSXT right-of-way in Potomac Yard Park to construct landings and vertical circulation elements (escalators, elevators, and ramp) for the pedestrian bridges. Access would be provided via Potomac Avenue. Construction vehicles would use U.S. Route 1 to reach the local access routes described above.

Commercial vehicles are prohibited from the GWMP under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). The NPS policies state that “commercial traffic will be prohibited on roads within parks, except for the purpose of serving park visitors and park operations (9.2.1.2.1).” If access to private lands is otherwise not available, the park Superintendent has the discretion to issue permits for commercial vehicles. The proposed construction project area for Build Alternative A is accessible from locations other than the GWMP. However, since potential impacts would occur to residential communities at these other locations, construction access from the GWMP was also studied as an option in the Draft EIS.

The potential uses under Build Alternative A Option 1 Construction Access and Build Alternative A Option 2 Construction Access are assessed separately in this evaluation.

211 **Figure 3-2: Build Alternative A Construction Access Options**



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3.2.2.2 Build Alternative B

Build Alternative B would be located between the GWMP and the CSXT right-of-way, north of the Potomac Greens neighborhood, partially within Potomac Greens Park and the Greens Scenic Area easement, and east of the existing Potomac Yard Shopping Center and the CSXT right-of-way. The station would be at-grade with a side platform layout. Additional station facilities would include two pedestrian bridges from the station over the CSXT right-of-way to the planned development in Potomac Yard. The bridge at the southern end of the station would provide 24-hour pedestrian/bicycle access between Potomac Yard and the Potomac Greens neighborhood

Build Alternative B would require the realignment of approximately 650 feet of existing track, as well as the installation of approximately 1,450 feet of new track to provide a straight section of track for the proposed station location and meet other WMATA track design requirements. Special track work – a double crossover – would be required approximately 100 feet north of the station. The tracks and ties would be removed from the segment of the existing Metrorail line that would no longer be needed for Build Alternative B. No decision has been made regarding the re-use of this segment of track. The new track and station would be built on retained fill within a United States Army Corps of Engineers (USACE) designated wetland, and a new retaining wall would be constructed on the east side of the track and station to support the structures.

To construct Build Alternative B, access would be required to the area east of the existing Metrorail tracks. Construction access to the site would be provided by one of two options (see **Figure 3-3**):

- **Option 1 Construction Access**: Option 1 would include access to the area east of the existing Metrorail tracks provided via a temporary construction access driveway from the GWMP. Construction vehicles would use the southbound GWMP roadway from the Airport Access Road to Slaters Lane (1.7 miles). Additional access would be provided through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.
- **Option 2 Construction Access**: Option 2 would only include access to the area east of the existing Metrorail tracks through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.

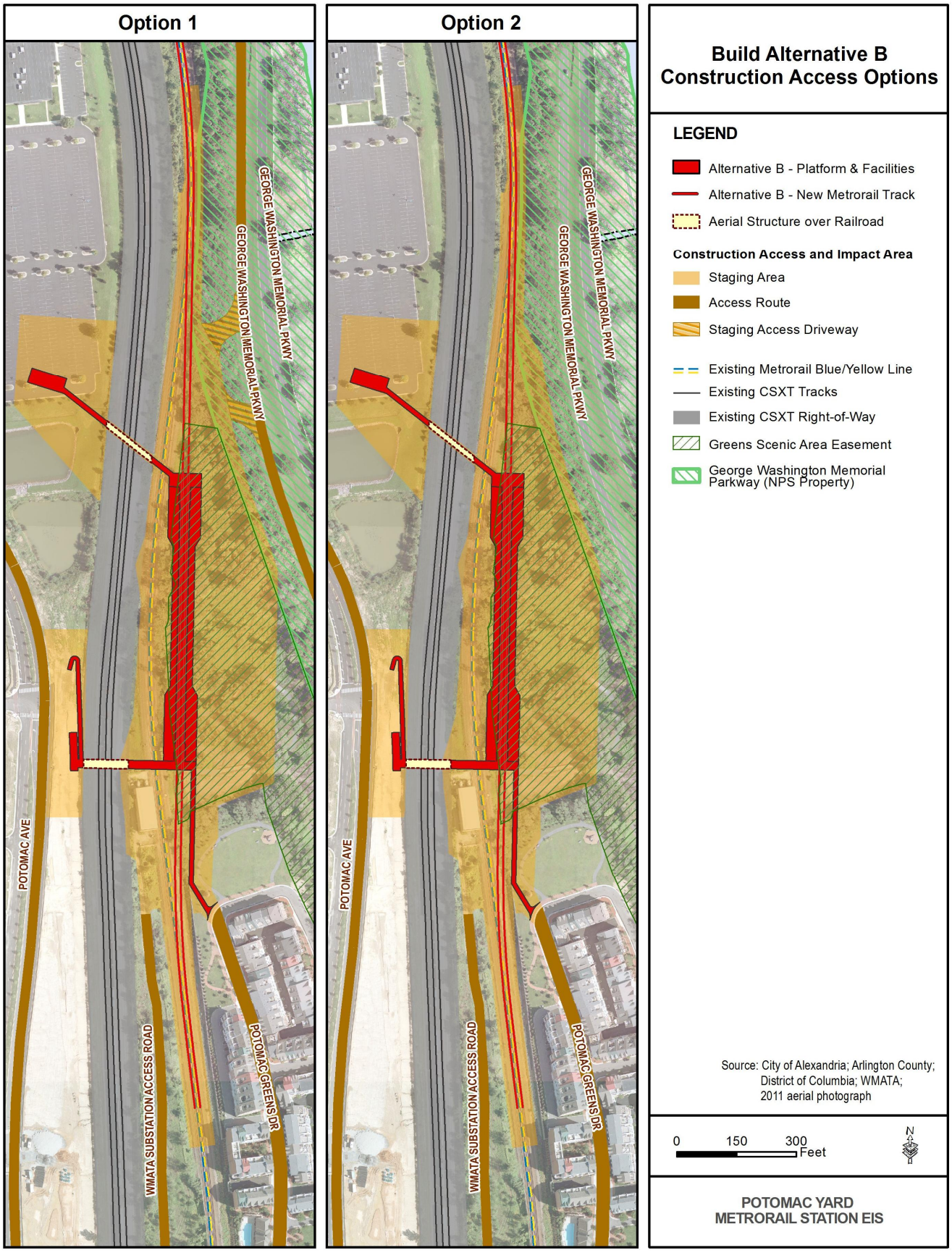
Both options would require access to the area west of the existing Metrorail tracks for some construction tasks, including the construction of the two pedestrian bridges; the access would utilize the access road through the planned Rail Park to the WMATA traction power substation (0.5 mile), crossing the existing Metrorail alignment at the tennis court area of Old Town Greens (where Metrorail begins to travel below-grade). A construction access easement would also be required across a portion of the CSXT right-of-way so that construction vehicles utilizing the Rail Park roadway can get around the west side of the existing traction power substation and be able to access the area north of the substation between the existing CSXT and Metrorail tracks. The easement would not cross CSXT tracks.

Although Build Alternative B is located east of the CSXT right-of-way, access would be required west of the CSXT right-of-way in Potomac Yard Park to construct landings and vertical circulation elements (escalators, elevators, and ramp) for the pedestrian bridges. Access would be provided via Potomac Avenue and U.S. Route 1.

Commercial vehicles are prohibited from the GWMP under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). The NPS policies state that “commercial traffic will be prohibited on roads within parks, except for the purpose of serving park visitors and park operations (9.2.1.2.1)." If access to private lands is otherwise not available, the park Superintendent has the discretion to issue permits for commercial vehicles. The proposed construction project area for Build Alternative B is accessible from locations other than the GWMP. However, since potential impacts would occur to residential communities at these other locations, construction access from the GWMP was also studied as an option in the Draft EIS.

The potential uses under Build Alternative B Option 1 Construction Access and Build Alternative B Option 2 Construction Access are assessed separately in this evaluation.

Figure 3-3: Build Alternative B Construction Access Options



3.2.2.3 B-CSX Design Option

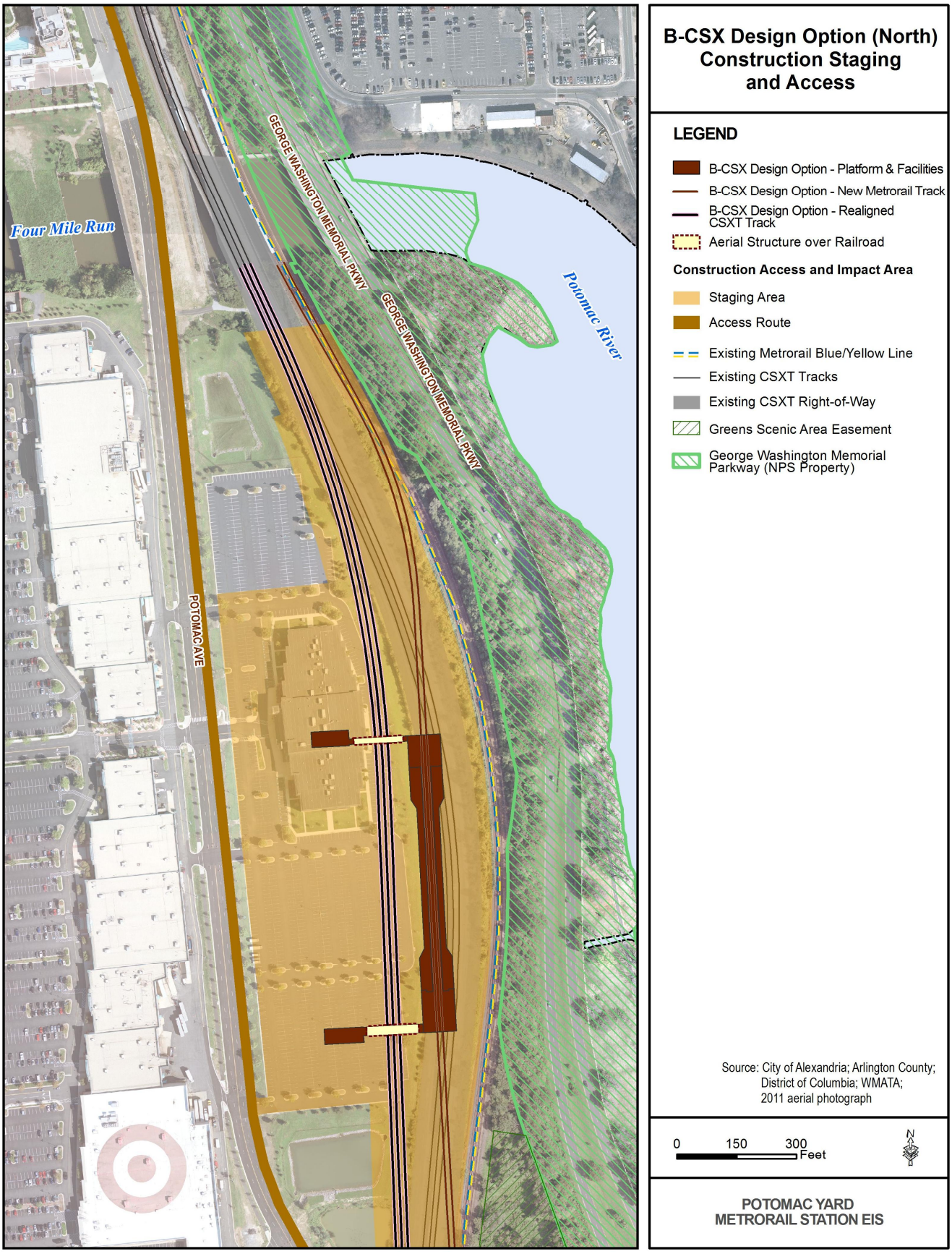
B-CSX Design Option relocates the CSXT tracks to the west of the existing line, straightening the alignment and eliminating the eastward curve of the existing CSXT line from a point near the intersection of Potomac Avenue and East Glebe Road to a point just north of the existing Potomac Yard Movie Theater. The relocation of the CSXT line provides the room necessary to relocate the Build Alternative B station and its connecting track to avoid GWMP property and the Greens Scenic Area easement. The track design maintains the WMATA and CSXT design standards for minimum clearance (50 feet) between the Metrorail facilities and the CSXT tracks and design standards for vehicle operating speeds along the relocated tracks.

The Metrorail station for B-CSX Design Option is located about 1,150 feet to the north and 150 feet to the west of the Build Alternative B station and just east of the existing Potomac Yard Movie Theater on land that currently is occupied by the CSXT line. The Metrorail Station for B-CSX Design Option would include the same design and features as the Build Alternative B station with the exception of how pedestrians would access the station from Potomac Greens. Direct pedestrian/bicycle access from Potomac Greens to the Metrorail station along the east side of the Metrorail tracks is not possible without a permanent encroachment into the Greens Scenic Area easement and wetlands. Thus, a separate pedestrian bridge over the CSXT right-of-way and existing Metrorail tracks would be constructed, providing 24-hour pedestrian/bicycle access between Potomac Yard and the Potomac Greens neighborhood. The design option also includes crossover tracks just north of the station to maintain operational flexibility.

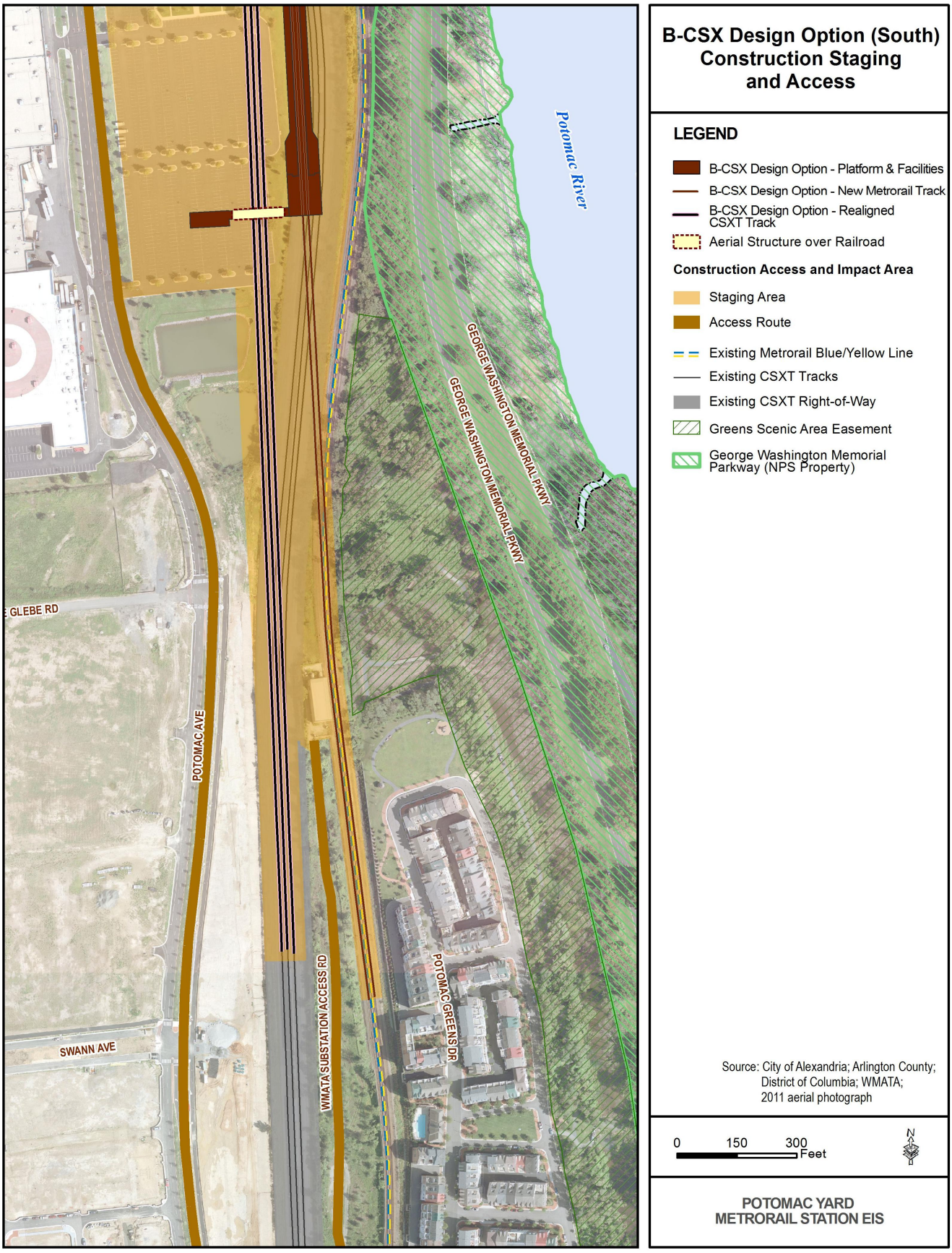
To construct B-CSX Design Option, access would be required from the west side of the Metrorail and CSXT tracks, utilizing Potomac Avenue. To access the area between the relocated CSXT tracks and the Metrorail Line, construction access would be required via the road through the planned Rail Park and across the CSXT tracks during temporary stoppages of CSXT operations. CSXT operations would be shifted to the three new tracks one at a time. Once the new CSXT tracks are complete and CSXT operations have ceased along the existing tracks, then the construction of the Metrorail station and new track would occur. See **Figures 3-4** and **3-5** for construction access to the site.

The tracks and ties would be removed from the segment of the existing Metrorail line that would no longer be needed for B-CSX Design Option. No decision has been made regarding the re-use of this segment of track.

Figure 3-4: B-CSX Design Option Construction Staging and Access (North)



293 **Figure 3-5: B-CSX Design Option Construction Staging and Access (South)**



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3.2.2.4 Build Alternative D

Build Alternative D would be located west of the CSXT right-of-way near the existing Potomac Yard Shopping Center and the planned Potomac Yard Park. The station would be aerial with a center platform layout. One pedestrian bridge over the CSXT right-of-way would be constructed, providing 24-hour pedestrian/bicycle access between Potomac Yard and the Potomac Greens. The pedestrian bridge would be parallel to the adjacent new Metrorail bridge over the CSXT railroad, which is required to accommodate the tracks connecting to the new station for Build Alternative D.

Build Alternative D would require the realignment of approximately 550 feet of existing track, as well as the installation of approximately 5,800 feet of new track. The majority of new track would be elevated. The tracks and ties would be removed from the segment of the existing Metrorail line that would no longer be needed for Build Alternative D. No decision has been made regarding the re-use of this segment of track.

Build Alternative D would also include construction of two Metrorail aerial bridges crossing the CSXT right-of-way to the north and south of the station, and a new, single span, aerial structure over Four Mile Run. Construction of a double crossover would be required in a location approximately 100 feet north of the station. During construction, two new Metrorail bridge structures would be constructed over the existing operating Metrorail tracks, north and south of the station. Following completion of construction, the old Metrorail tracks would be removed from service. Additional structural improvements would include the removal and replacement of the existing retaining wall near the Potomac Greens neighborhood and the removal of an additional retaining wall to the west of the existing Metrorail tracks, north of the portal at the southern end of the neighborhood. See **Figures 3-6** and **3-7** for construction access to the site.

Build Alternative D would require the majority of the proposed Metrorail track alignment to be constructed on retained fill or on aerial structures. Retained fill would be required on both sides of Four Mile Run. The station platform would be constructed on an aerial structure. At the north end of the alternative, construction of the new aerial track would be required in close proximity to the existing Metrorail alignment, an existing stream channel, and the GWMP roadway. To construct Build Alternative D, construction access would be required in several areas, as described below.

For construction activities located west of the CSXT right-of-way, access would be provided within Potomac Yard through existing and planned public rights-of-way, utilizing Potomac Avenue; construction vehicles would access this area from U.S. Route 1.

For construction activities in the vicinity of the Potomac Greens and Old Town Greens neighborhoods, access would be provided via the entire length of Potomac Greens Drive; construction vehicles would access this area from U.S. Route 1. Access to the area between the existing Metrorail tracks and CSXT right-of-way would be provided through Potomac Greens Drive (0.7 mile) and via the access road through the Rail Park to the WMATA traction power substation (0.5 mile). Additional construction access would be required at locations where proposed Metrorail aerial structures and pedestrian structures cross over the CSXT right-of-way, including locations north and south of the proposed station and locations west of the Potomac Greens and Old Town Greens neighborhoods.

For construction activities on the east side of the existing Metrorail alignment, in the vicinity of Four Mile Run, access would be provided via the GWMP; construction vehicles would use only the southbound GWMP roadway, entering from the Airport Access Road and exiting at Slaters Lane, 1.7 miles to the south. Construction access from the GWMP is needed for this part of Build Alternative D since access to the site is limited by site constraints and the inability to connect to other access roads. Access is precluded from the west due to the existing Metrorail Line and CSXT right-of-way, and north-south access is precluded by Four Mile Run.

Commercial vehicles are prohibited from the GWMP under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). The NPS policies state that “commercial traffic will be prohibited on roads within parks, except for the purpose of serving park visitors and park operations (9.2.1.2.1)." If access to private lands is otherwise not available, the park Superintendent has the discretion to issue permits for commercial vehicles.

343 **Figure 3-6: Build Alternative D Construction Staging and Access (North)**

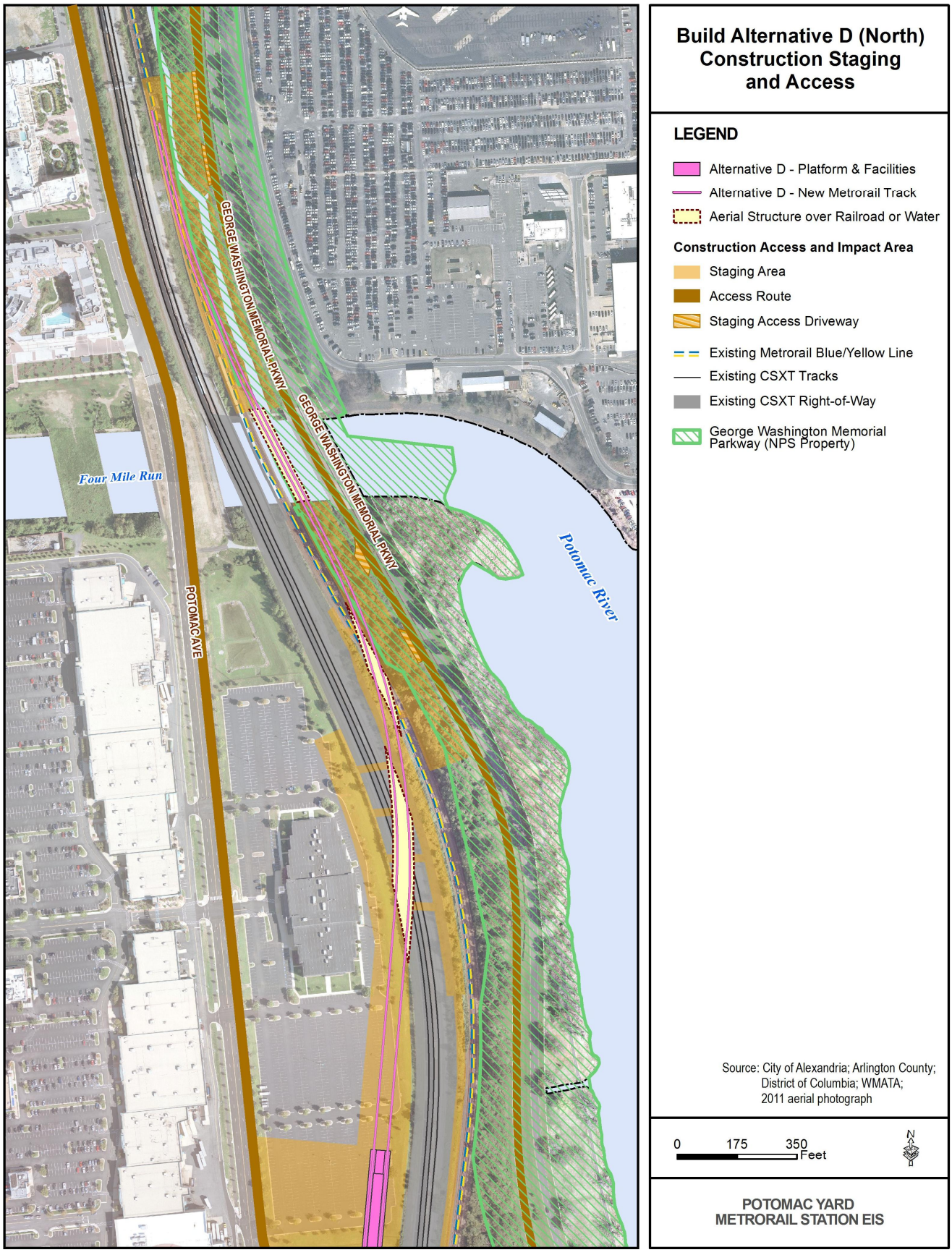

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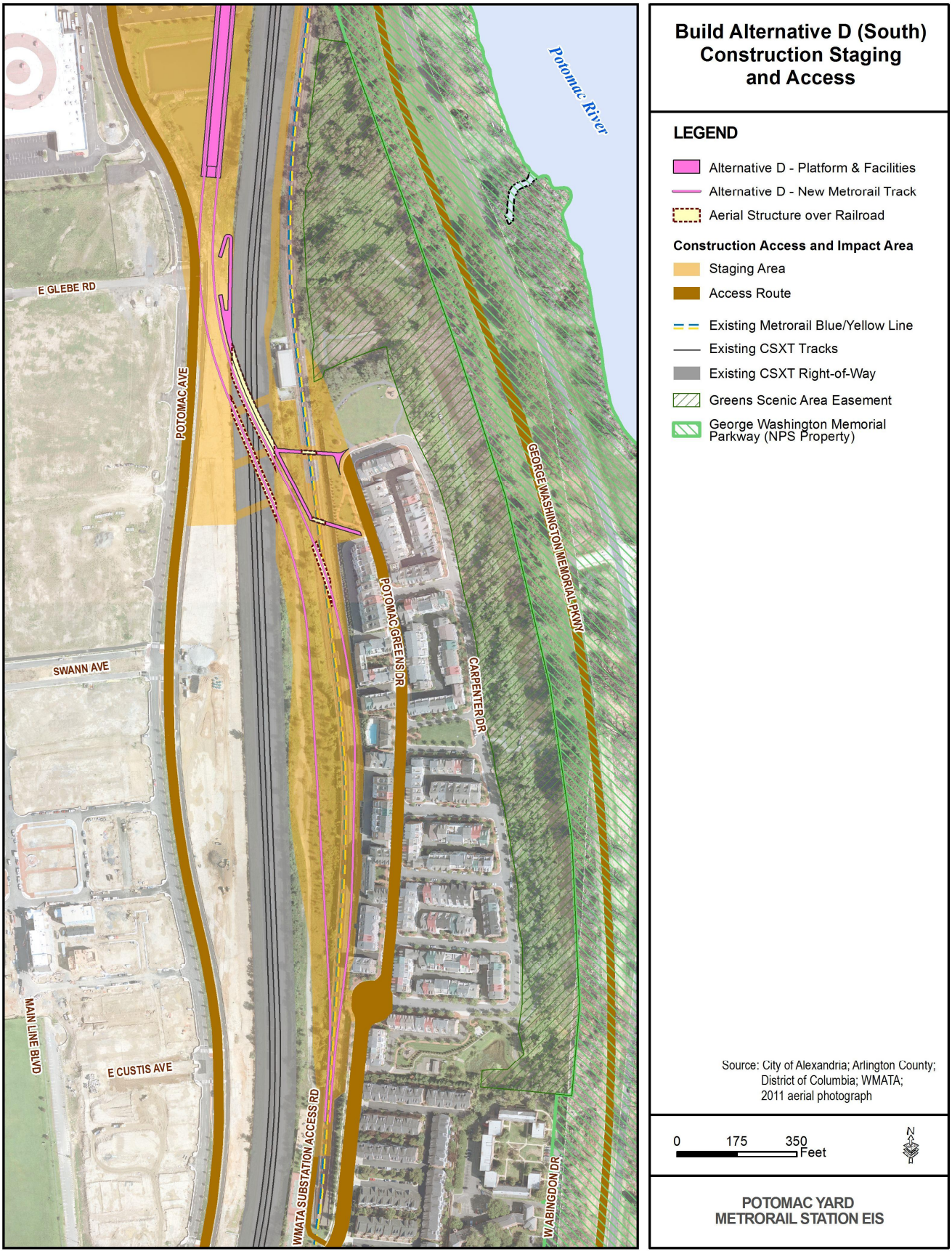
Figure 3-7: Build Alternative D Construction Staging and Access (South)



4.0 SECTION 4(F) RESOURCES

Section 4(f) resources in the study area include existing and planned publicly owned parks, as well as historic sites listed on or eligible for the NRHP. Historic sites are significant only if they are on or eligible for the NRHP, or when a local official formally provides information to indicate that the historic site is of local significance. The Mount Vernon Memorial Highway (MVMH) and GWMP are both categorized as a park and a nationally significant historic district listed on the NRHP.

Several existing and planned private open space areas were identified within the study area, as well as planned public open spaces that are currently on privately owned land. None of these is considered a Section 4(f) resource because none is currently publicly owned, as identified in FHWA's 2012 *Section 4(f) Policy Paper* (Questions 7A and 25). For planned parks that are currently on both private and public property, only the publicly owned portions are considered Section 4(f) resources. See **Table 4-1** for the determination of Section 4(f) resources within the study area, and **Figures 4-1**, **4-2,** and **4-3** for the locations of Section 4(f) resources. Study area parks that are not within the immediate vicinity of the three Build Alternatives and B-CSX Design Option or considered Section 4(f) resources due to private ownership were excluded from tables and figures.

4.1 Parkland Resources

4.1.1 Mount Vernon Memorial Highway

The MVMH is administered by the National Park Service (NPS) and categorized as a park and a historic site. The MVMH is on the NRHP and is significant as the property is associated with the lives of persons significant in our past and is a property that embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction (NRHP Criteria B and C). The listing for the MVMH is documented in NRHP #81000079 and Virginia Landmarks Register (VLR) #029-0218. The land designated under the MVMH NRHP listing is also designated under a separate NRHP listing for the GWMP. The GWMP is described below in **Section 4.1.2**.

The MVMH is nationally significant "as the first parkway constructed and maintained by the U.S. government and is the first road with a commemorative function explicit in its name and alignment."[1] The intended purpose of the MVMH was to provide an appropriately designed commemorative pilgrimage route to Mount Vernon as a memorial to George Washington. The purpose of the MVMH as a commemorative pilgrimage route is its most significant historic characteristic. Integral to its character and significance, numerous national monuments, historic sites, parks, and other landscaped green spaces are visible along the corridor. The MVMH links Mount Vernon, in Fairfax County, with the Arlington Memorial Bridge. The original 15.2-mile segment was designed and landscaped to maximize scenic, aesthetic and commemorative qualities along its route.

In 1922 Congress appropriated funds for the planning of Arlington Memorial Bridge, and in 1924 created the *United States Commission for the Celebration of the Two Hundredth Anniversary of the Birth of George Washington*. Construction of the Arlington Memorial Bridge began in 1926 which provided an impetus to plans for a road linking the bridge to Mount Vernon. On May 23, 1928, Congress approved and directed the survey and construction of a suitable memorial highway linking the two locations. The act ordered the Secretary of Agriculture, who had jurisdiction over the Bureau of Public Roads, to survey routes for selection by the commission and prepare plans for the highway.

Two routes were chosen as alternatives. The commission ultimately selected the route nearest the Potomac, which offered views of the river and an exceptional vista of the Washington Monument for traffic northbound from Alexandria. Construction of the MVMH was begun by the Bureau of Public Roads on September 17, 1929; the road was opened on January 16, 1932, the bicentennial year of Washington's birth.

The design of the MVMH was led by the landscape architects Wilbur Simonson and Gilmore Clarke. Simonson created a landscape in which motorists passed through places of distinct character. Over time more vegetation has been added, changing Simonson's original design. The *Cultural Landscape Report Mount Vernon Memorial Highway* (1987 CLR) provides a comprehensive description of the original design principles for the construction of the MVMH. The 1987 CLR identifies several landscape elements that formed the character of the Parkway as it proceeded from the Memorial Bridge to Mount Vernon:

[1] National Park Service. May 1981. *National Register of Historic Places Nomination Form, Mount Vernon Memorial Highway.*

396 **Table 4-1: Section 4(f) Resource Determination**

Resource Name	Current Ownership	Resource Status	Total Area (acres)	Section 4(f) Resource	Section 4(f) Reasoning
George Washington Memorial Parkway/	NPS	Existing	37.09 (1)	**Yes**	Existing public park/ NRHP Listing #95000605
Mount Vernon Memorial Highway	NPS	Existing	37.09 (1)	**Yes**	Existing public park/ NRHP Listing #81000079
Potomac Greens Park	City of Alexandria	Existing	20.54	**Yes**	Existing public park
Greens Scenic Area Easement	Administered by NPS (2)	Existing; Historic eligibility pending on Keeper of the Register determination	15.19	**Yes** (3)	Scenic easement within an existing public park
Rail Park	City of Alexandria	Existing	4.21	**Yes**	Existing public park
Four Mile Run Trail	Arlington County	Existing	0.35 (1)	**Yes**	Existing public trail
Custis Park	City of Alexandria	Existing	0.44	**Yes**	Existing public park
Howell Park	Private Property	Dedication anticipated October 2015	0.73	**Yes**	Planned park expected to be dedicated to the City before the Record of Decision (ROD)
Swann Park	Private Property	Dedication anticipated October 2015	0.41	**Yes**	Planned park expected to be dedicated to the City before the Record of Decision (ROD)
Potomac Yard Park (South)	City of Alexandria	Existing	13.58 (1)	No	Park dedication includes language in the deed which stipulates transportation uses
Potomac Yard Park (North)	City of Alexandria	Planned; Anticipated to be dedicated in July 2015	2.61	No	Park dedication to include language in the deed which stipulates transportation uses
Colonial Revival Apartment Complexes of Alexandria	Private Property	Potentially eligible for inclusion in the NRHP and the VLR	9.59(1)	**Yes** (4)	Potential Architectural Resource
Chesapeake and Ohio/ Alexandria Canal (44AX0028)	Multiple	Potentially eligible for inclusion in the NRHP and the VLR	NA	**Yes** (4)	Potential Archaeological Resource
Campsite No. 1 of the American Wagon Train Sept. 1781 (44AX0207)	Multiple	Potentially eligible for inclusion in the NRHP and the VLR	NA	**Yes** (4)	Potential Archaeological Resource
Archaeological Site 44AX0220	NPS	Potentially eligible for inclusion in the NRHP and the VLR	NA	**Yes** (4)	Potential Archaeological Resource
Archaeological Site 44AX0221	NPS	Potentially eligible for inclusion in the NRHP and the VLR	NA	**Yes** (4)	Potential Archaeological Resource
Archaeological Site 44AX0222	NPS	Potentially eligible for inclusion in the NRHP and the VLR	NA	**Yes** (4)	Potential Archaeological Resource

397 (1) Area within the Study Area.
398 (2) The Greens Scenic Area easement is administered by NPS and located on land owned by the City of Alexandria.
399 (3) Greens Scenic Area easement NHRP eligibility determination is pending from the Keeper of the National Register. Although the historic
400 eligibility of the Greens Scenic Area easement is being assessed, the easement is located within the boundaries of Potomac Greens Park,
401 and protects features of a Section 4(f) resource.
402 (4)Pending VDHR Review.
403 NA= Not Applicable

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- **Roadway alignment:** The road's horizontal and vertical alignment served two purposes – to follow the existing topography and to effectively control driving speeds.
- **Topography:** Careful grading was used to ensure natural transitions between the road and existing topography.
- **Plantings:** The planting plans were developed to fit with the existing tree plantings and wetlands in natural arrangements, while achieving different functional requirements, such as the as the screening of objectionable views (including the rail yard).
- **Viewsheds ("vistas"):** Through selective cutting, existing vegetation was cleared to expose long framed views across the Potomac towards the monumental core of Washington, DC. Other ways viewsheds were protected along the MVMH included the prohibition of signs and billboards and through the execution of an MOA between the City of Alexandria and United States, which restricted the use and appearance of buildings in Old Town Alexandria.
- **Bridges:** The most visible structures along the MVMH were the original eight stone bridges constructed. The original stone bridge over Four Mile Run was demolished and rebuilt in 1939. The second bridge over Four Mile Run was demolished and rebuilt in 1977.
- **Other:** Other facilities constructed along the MVMH included concession buildings, bus shelters and lighting.

The 1987 CLR summarizes the following general landscape architectural principles used by Clarke and Simonson in their design of the MVMH:

- Fitting the highway to the site with a mind toward utilizing both natural and historic features;
- Accommodating functional requirements in an attractive, aesthetic manner;
- Conserving the natural scenery as a means to quickly buffer adjacent properties, upgrade the existing woodland, and preserve existing topsoil; and
- Distributing new plantings in a natural configuration.

The "Daingerfield Island section" of the GWMP (where the project is located) is a low lying segment of the historic MVMH adjacent to the (former) rail yards at Potomac Yard on the west side (in operation during the twentieth century) and Daingerfield on the east. Potomac Yard was one of the largest rail yards in operation in the eastern United States during this time period and was owned and managed by the Richmond, Fredericksburg and Potomac Railroad (RF&P).

The topography on either side of the highway at Daingerfield Island is lower than the road itself, and the overall wet conditions drive the selection of plant species in this area. Plants chosen are adaptable to flooding and sustained wet conditions. On the west side, a group of amur cork trees (*Phellodendron amurense*) with Sargent's crabapples (*Malus sargentii*) were planted in the foreground to mark the change from mesic to wet soils and also makes a transition from the Alexandria approach.

Simonson proposed a different planting scheme for the east and west sides of the MVMH. On the west side plantings were also intended to create a thick vegetative screen of the swamp and rail yard, while on the east side the vegetation was used to frame the views of the significant monuments and buildings in Washington, DC across the Potomac River.

Simonson planned four large groupings of about fifteen oaks and elms on the west side of MVMH in the Daingerfield Island section. Simonson spaced the groupings widely apart, from two to four hundred feet, sometimes in combination with eleagnos willow (*Salix incana*). In one example, twelve American elms (*Ulmus americana*), four water oaks (*Quercus nigra*) and five red maples (*Acer rubrum*) anchor nearly three hundred feet of roadside. Medium size trees and a mass of large shrubs are planted between the large trees, leaving few glimpses into the swamp. Ornamental trees, such as white fringetree (*Chionanthus virginicus*), are kept in groups in the foreground where they are closer to motorists, but they are easily outnumbered by the shade and medium size trees.

The thick vegetative screen Simonson intended on the west side of the MVMH has been subject to considerable changes over the years. The loss of trees has compromised the integrity of the vegetative screen meant for the rail yard.

The original viewsheds identified by Simonson in 1932 (east towards Washington, DC) were significantly impacted by the construction of Reagan National Airport. Construction of the airport also shifted the original

alignment of the MVMH west from the Potomac River in the 1940s. Simonson identified one viewshed on the MVMH facing west towards the George Washington Masonic National Memorial in Alexandria in the 1932 plan.

4.1.2 George Washington Memorial Parkway

The GWMP is administered by the National Park Service (NPS) and categorized as a park and a historic site for this project and is listed on the NRHP. The GWMP is linear park and historic district along the Potomac River, whose primary feature is a memorial parkway that connects historic sites from the Mount Vernon Estate to Great Falls, Virginia.

The MVMH was incorporated as a component of the larger GWMP, as directed by the Capper-Cramton Act of 1930, and over the subsequent 30 years the parkway was extended north through Arlington County and Fairfax County to its present terminus at I-495 near McLean, Virginia. The Capper-Cramton Act, Public No. 284, 71st Congress, 46 Stat. 482, approved May 29, 1930, appropriated Federal funds to the National Capital Park and Planning Commission for the expeditious, economical and efficient development and completion, among other projects, the GWMP to include the shores of the Potomac, and adjacent lands, from Mount Vernon to a point above Great Falls, VA. The lands acquired as part of the MVMH were to be managed as part of the memorial parkway under the authority conferred by the Act approved February 26, 1925.

The GWMP comprises a total of 7,146 acres and extends 38.3 miles on both sides of the Potomac River in Virginia and Maryland. In continuation of the intent of the MVMH, the purpose of the GWMP is to commemorate the first president, preserve the natural setting of the shoreline of the Potomac River and provide a high-quality entryway to Washington, DC. Construction of the remainder of the GWMP (beyond the MVMH) continued after 1932 through 1965.

The GWMP was designed for recreational driving and links sites that commemorate important episodes in American history and preserve habitat for local wildlife. An important characteristic of the parkway experience is the scenic quality and contemplative experience for travelers. Although the GWMP was designed as a carefully planned scenic route to the nation's capital, the GWMP does allow for pedestrians and bicycles along the Mount Vernon Trail, canoeing or kayaking along the Potomac River, hiking, picnicking, and wildlife viewing. The Parkway is of a high recreational value because it provides trail connections and numerous recreational facilities, including the Mount Vernon Trail, Daingerfield Island, and Washington Sailing Marina. The GWMP and associated trails provide a scenic place to play and rest within the Washington DC metropolitan area.

The listing for the GWMP, which is documented in NRHP #95000605 and VLR #029-0228, includes all Capper-Cramton Act acquired property, MVMH and adjacent lands, the extent of the GWMP north of Memorial Bridge to its terminus at Great Falls, Virginia, and the Clara Barton Parkway in Montgomery County, Maryland. The GWMP is on the NRHP and is significant, as the property is associated with the lives of persons significant in our past and is a property that embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction (NRHP Criteria B and C).

The NRHP nomination describes several reasons for the national and historic significance of the GWMP. Like the older MVMH portion, the upper parkway commemorates the life of Washington as well as Clara Barton (in Maryland). A major reason for the GWMP's significance involves George Washington's association with the Potomac River corridor and the construction of canals along the river. A second reason for the GWMP significance is the selection of the site for the nation's new capital by George Washington, and his selection of L'Enfant to design the capital.

Another area of historical significance is the planning efforts related to parkways and roadways in the region that began with Pierre L'Enfant in the 18th century, to Frederick Law Olmstead, Jr. in the early 20th century. Specific efforts in the early 20th century, which incorporated the GWMP, included in the Park Improvement Commission of the District of Columbia, (commonly known as the "McMillan Plan" of 1902). Olmstead was the principal landscape architect for the McMillan Plan. Olmsted pushed for "intensively used" parks and connections between parks including a road network that would extend parks to the perimeters of the regional city, in particular to Mount Vernon, and along both sides of the Potomac to Great Falls. Charles W. Eliot II (an official of the National Capital Park and Planning Commission instrumental in the development of the GWMP) and Olmsted stated the importance of parks and linkages between them and gave a strong endorsement to the McMillan Commission's findings for a parkway along the Potomac River.

As described in the NRHP nomination, the landscape values for the GWMP have been to preserve the scenic and aesthetic qualities associated with the Potomac River valley, which extends from the Coastal Plain past the

fall line to the Piedmont. The McMillan Commission was concerned with the preservation of its landscape, including the palisades and the tree covered slopes, flowering understory, steep-sided creek valleys (runs), and hilltop vistas. The hilltop vistas provide views of the monumental core of Washington, D.C., a central purpose for the establishment and continuing protection of the GWMP. Eliot described the GWMP concisely as containing "grade separations, few entrances, border roads for service of abutting property, and a right-of-way never less and often much more than two hundred feet."

Planting plans exist for the MVMH portion, the interchanges from Route 123 to Turkey Run, and the area near the David Taylor Naval Ship Research and Development Center of the Clara Barton Parkway, and in the portion in proximity to the Central Intelligence Agency. Besides this description, few other details are provided in the NRHP nomination in regards to the cultural landscape, vegetation or viewsheds in the study area. NPS is currently undergoing a documentation effort to update the NRHP nomination for the GWMP.

Following the McMillan Plan, the National Capital Park and Planning Commission (NCP&PC) released a report titled *Preliminary Report, Park System for the District of Columbia* in December 1926. The NCP&PC vision for parks and linkages was enabled by the Capper-Cramton Act of 1930. This act established the funding and planning for the GWMP, creating the means for design and construction between 1930 and 1966.

The *2009 Cultural Landscape Report* (CLR) states that two additional plantings of trees were added to the Daingerfield Island section in 1936 soon after Simonson's plantings were installed. The first planting consisted of over one thousand pines planted adjacent to the western side of the GWMP, further screening it from the railroad activity at Potomac Yard. The plan used four species of pines, the first major planting of evergreens along the central section of the Parkway. Red pine (*Pinus resinosa*) dominates, along with Scots pine (*P. sylvestris*), white pine (*P. strobus*) and Virginia pine (*P. virginiana*). They are planted in large groupings along the entire western side of this stretch.

The second set of plantings added about 250 deciduous trees and 400 more pines to the previous plantings to further increase the buffer. The species mixture is similar to Simonson's—maples, elms, oaks, and sycamores—but it also includes more white pine (*P. strobus*). Most of these trees are planted in groups of a single species. The CLR states that these were the last plantings along the western edge of Daingerfield Island.

Per the CLR, the plantings that remain today are a mixture of 1932 and 1936 plants. Currently, the portion of the western side of the GWMP within the Area of Potential Effect (APE) has scarce remnants of the 1932 and 1936 plantings. The majority of the 1930's-era trees though have succumbed to mortality due to mature age or the high surface water due to a former beaver dam in the area which has since been removed. Very few of the pine trees remain along this stretch of the GWMP.

Other species from later planting plans are still found among the vegetation along the western side of the GWMP. The plantings that are currently present have returned to a more natural state through ecological succession. Species present include mulberry (*Morus alba*), sycamore (*Platanus* spp.), privet (*Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac (*Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*). A variety of volunteer herbaceous and woody plants have also naturally established.

All GWMP administered land within the APE, including lands that extend beyond the historic roadway right-of-way, is a NRHP-listed historic architectural resource.

4.1.3 Potomac Greens Park

Potomac Greens Park, which is owned by the City of Alexandria, is a 20.54-acre park located around the north end of the Potomac Greens neighborhood. Amenities in the park include a playground, seating area, and a wooded area with trails. The playground and park shelter are located on Carpenter Road.

Within the boundaries of Potomac Greens Park, NPS maintains a 15.19-acre scenic easement known as the "Greens Scenic Area." FTA and NPS are seeking a formal determination from the Keeper of the National Register on the eligibility on whether the easement is a historic resource eligible for or contributing to NRHP listing. The Greens Scenic Area easement is described further in **Section 4.1.4**.

4.1.4 Greens Scenic Area Easement

Within the boundaries of Potomac Greens Park, NPS maintains a 15.19-acre scenic easement known as the "Greens Scenic Area." In 2000, as part of an agreement to allow redevelopment of the Arlington County portion of Potomac Yard, the owner of the property (Commonwealth Atlantic Properties at the time) and the United

States of America signed the *Release Agreement and Scenic Easement.* The agreement granted the Greens Scenic Area easement to the United States Department of the Interior, including much of the land to the north and east of Potomac Greens neighborhood and east of the CSXT tracks within the City of Alexandria. The deed of the Greens Scenic Area easement states the easement is "*for the purposes of conserving and preserving the natural vegetation, topography, habitat and other natural features now existing."* The scenic easement is intended to provide a buffer between the GWMP and the development in Potomac Yard. The easement is located north of the Potomac Greens neighborhood, on land now owned by the City of Alexandria. The scenic easement stipulates that no improvements shall be constructed or installed within the Greens Scenic Area, and prohibits clearing, grading, or tree removal, except for uses such as light passive recreation and underground utilities, and that the Greens Scenic Area shall not otherwise be disturbed without prior written approval of the United States.

In 2004, during development of the Potomac Greens neighborhood, the underlying fee simple property interest was dedicated to the City of Alexandria for Potomac Greens Park. The transfer did not affect the terms of the Greens Scenic Area perpetual easement, which is currently located on portions of the City public park. A small portion at the southern end of the Greens Scenic Area easement (0.19 acre) is on property owned by the Potomac Greens Homeowners Association. The one amenity of Potomac Greens Park that is found within the Greens Scenic Area easement is a trail.

4.1.5 Rail Park (Landbay D)

Rail Park is a 4.21-acre planned park on property currently owned by the City of Alexandria, located between the CSXT tracks and Metrorail tracks. The park is accessed from Potomac Greens Drive near the north end of Old Town Greens. An existing Metrorail service drive for the existing traction power station will be maintained and used as vehicular service access to the park.

4.1.6 Four Mile Run Trail

The Four Mile Run Trail is a 7-mile paved trail located adjacent to Four Mile Run in Arlington County. The trail is owned by Arlington County and maintained by Arlington County's Department of Parks and Recreation. The trail extends from Falls Church to the Mount Vernon Trail. Within the study area, the ¼-mile segment of Four Mile Run Trail is located along the north bank of Four Mile Run under eight bridges, which comprise the following: U.S. Route 1, a pedestrian bridge, two abandoned rail bridges, Potomac Avenue, a CSXT bridge, an existing Metrorail bridge, and the GWMP.

4.1.7 Custis Park

Custis Park is a 0.44-acre park located in the South Potomac Yard development. The park was dedicated to the City of Alexandria in December 2013 and is one of several finger parks that serve as extensions of Potomac Yard Park into the adjacent existing and planned neighborhoods to the west. Custis Park is located within the right-of-way of Custis Avenue, between Main Street and Potomac Avenue. The park consists of mostly lawn space with pedestrian paths, occasional stopping points, and park features such as benches. None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy Custis Park.

4.1.8 Howell Park

Howell Park is a 0.73-acre planned park that will be developed as part of the South Potomac Yard development. The park is anticipated to be dedicated to the City of Alexandria in October 2015 and is one of several finger parks that serve as extensions of Potomac Yard Park into the adjacent existing and planned neighborhoods to the west. Since Howell Park is planned to be dedicated to the City of Alexandria before the Record of Decision (ROD), the park is considered a Section 4(f) resource. Howell Park is located within the right-of-way of Howell Avenue, between Main Street and Potomac Avenue. Howell Park is envisioned to be a large neighborhood park of either informal or formal design consisting of mostly lawn space with pedestrian paths and park features such as benches and shade trees. None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy Howell Park.

4.1.9 Swann Park

Swann Park is a 0.41-acre planned park that will be developed as part of the South Potomac Yard development. The park is anticipated to be dedicated to the City of Alexandria in October 2015, and is one of several finger parks that serve as extensions of Potomac Yard Park into the adjacent existing and planned neighborhoods to the west. Since Swann Park is planned to be dedicated to the City of Alexandria before the ROD, the park is

considered a Section 4(f) resource. Swann Park is located within the right-of-way of Swann Avenue, between Main Street and Potomac Avenue. The park will consist of mostly lawn space with pedestrian paths, occasional stopping points, and park features such as benches. None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy Howell Park.

4.2 Historic Sites

An analysis to identify cultural resources within the project's Area of Potential Effect (APE) is being undertaken in accordance with Section 106 of the National Historic Preservation Act. APEs were developed for both historic architectural resources and archaeological resources in consultation with Virginia Department of Historic Resources (VDHR). The APE for historic architecture is large enough to include all resources over 50 years of age with the potential to be directly or indirectly affected by the proposed project. The APE for historic architecture consists of most of the study area and extends out to the shores of the Potomac River. The APE for archaeology includes temporary Limits of Construction and Permanent Limits of Disturbance for each Build Alternative. The APE for archaeology consists of areas required for station facilities and construction. **Figure 4-2** shows the APEs for both historic architecture and archaeology.

Archival research has been completed to initiate the Section 106 process, and coordination with VDHR is on-going. **Figure 4-3** illustrates architectural resources found within the APE.

4.2.1 Historic Architectural Sites

Two significant historic properties listed on the NRHP are located within the APE for historic architectural resources: the MVMH (NRHP #81000079 and VLR #029-0218) and the GWMP (NRHP #95000605 and VLR #029-0228). All GWMP park property within the study area is NRHP-listed as an historic architectural resource. See **Sections 4.1.1** and **4.1.2** for information regarding the GWMP and MVMH. In addition, one other property could be considered potential architectural resources (over 50 years of age): the Colonial Revival Apartment Complexes of Alexandria (CRACA).

4.2.1.1 Colonial Revival Apartment Complexes of Alexandria

In addition to the NRHP-listed properties in the APE, one additional historic architectural resource, the Potowmack Crossing at Old Town Condominiums (over 50 years of age), was identified by the City of Alexandria as eligible for listing in the NRHP. The Potowmack Crossing complex is located in the City of Alexandria on West Abingdon Drive near the intersection of Slaters Lane and the GWMP. The complex was evaluated and not recommended as individually eligible for listing in the NRHP. However, this apartment complex is a contributing resource to a recommended NRHP eligible multiple property submission for post-World War II Colonial Revival apartment complexes along the GWMP in Alexandria called the Colonial Revival Apartment Complexes of Alexandria (CRACA). None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy the CRACA.

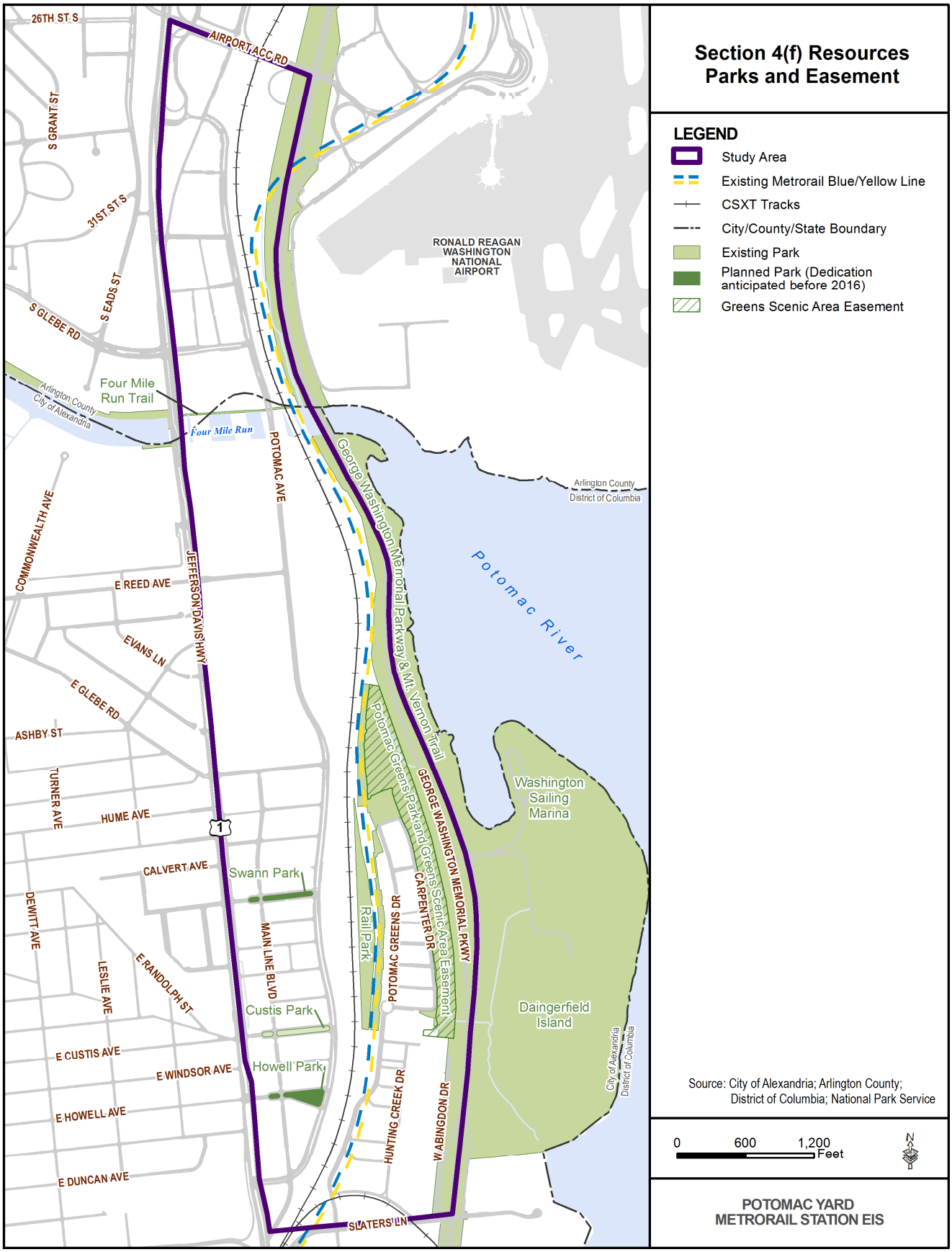
4.2.2 Archaeological Sites

Five archaeological resources have been identified within the APE which are potentially eligible for inclusion in the NRHP:

1. Chesapeake and Ohio/Alexandria Canal (44AX0028);
2. Campsite No. 1 of the American Wagon Train Sept. 1781 (44AX0207);
3. Archaeological Site 44AX0220;
4. Archaeological Site 44AX0221; and
5. Archaeological Site 44AX0222.

None of the five resources has been evaluated for NRHP eligibility. Background research conducted at the VDHR archives in Richmond, Virginia identified the Alexandria Canal (44AX0028) and Campsite No. 1 of the American Wagon Train Sept. 1781 (44AX0207). Subsequent Phase I archaeological testing identified three new sites (44AX0220, 44AX0221 and 44AX0222) within the APE for archaeology. Eligibility of the five resources will be assessed by the consulting parties, after the selection of a preferred alternative.

658 **Figure 4-1: Section 4(f) Resources - Parks and Easement**



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660 **Figure 4-2: Areas of Potential Effects (APEs)**

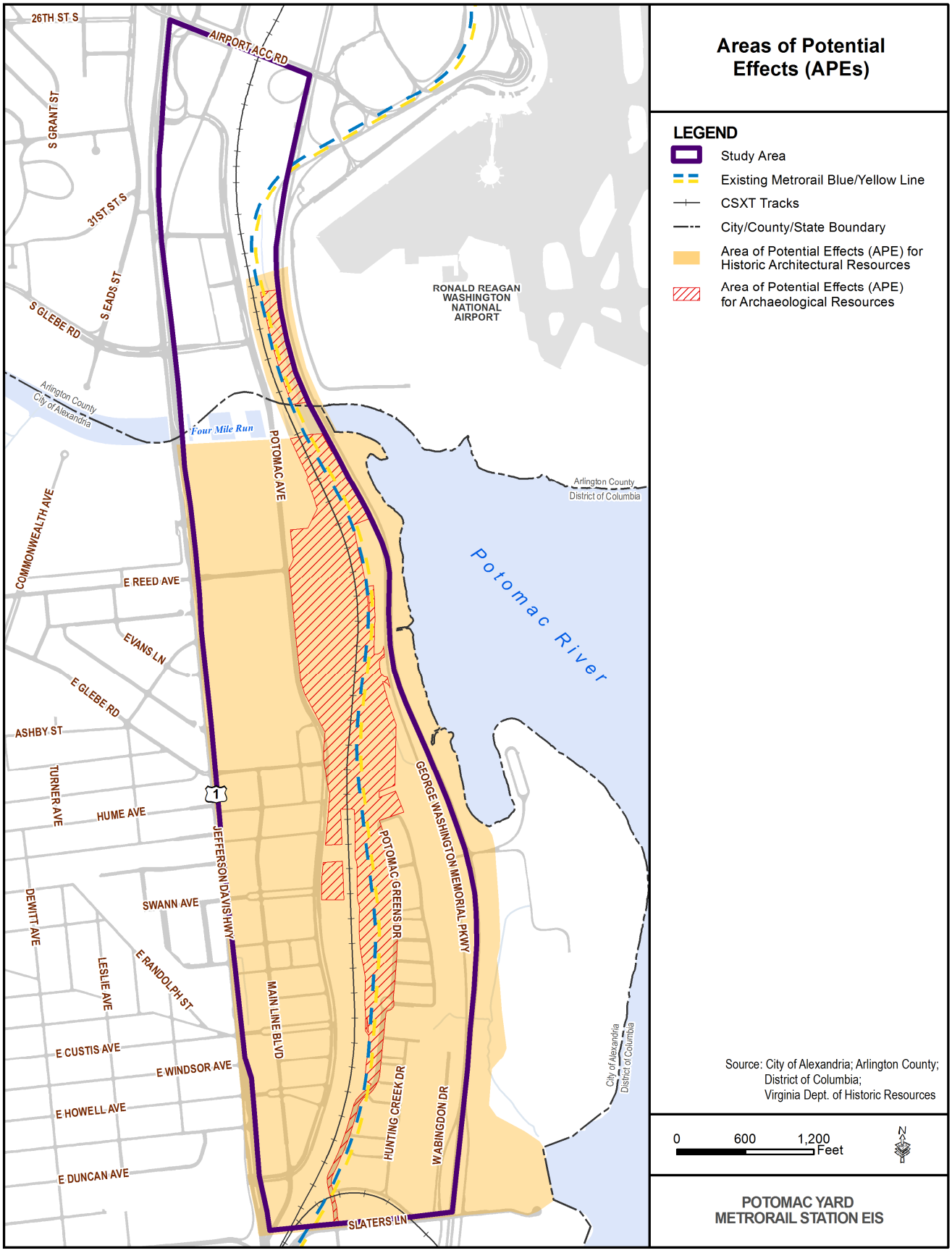

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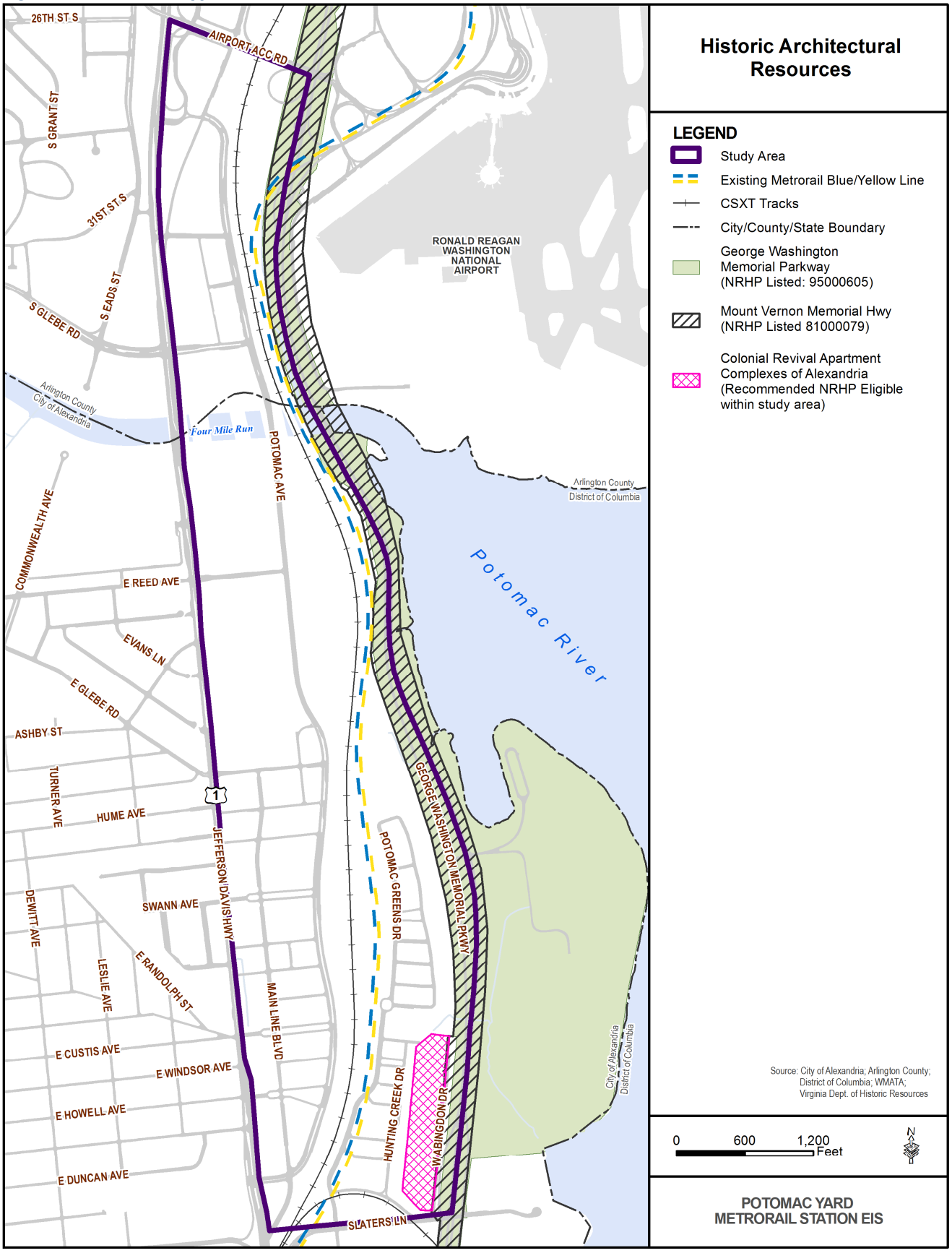
Figure 4-3: Section 4(f) Resources - Historic Architectural Sites



4.2.2.1 Chesapeake and Ohio/Alexandria Canal (44AX0028)

The Chesapeake and Ohio/Alexandria Canal was established by Congressional charter and operated between 1843 and 1886, carrying freight between Georgetown and Alexandria. The canal carried coal from western Maryland to Alexandria, as well as grain, flour, and whiskey, and returned materials needed on the western frontier through Georgetown, including fish, salt, and plaster. None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy the Chesapeake and Ohio/Alexandria Canal.

4.2.2.2 Campsite No. 1 of the American Wagon Train Sept. 1781 (44AX0207)

Campsite No.1 of the American Wagon Train was an eighteenth-century military site occupied by American and French wagon trains in September, 1781. The site was recorded with the VDHR in 2008 based on descriptions in historic documents; however the site's location has not been archaeologically verified. None of the three Build Alternatives or B-CSX Design Option is anticipated to permanently use or temporarily occupy Campsite No.1 of the American Wagon Train.

4.2.2.3 Archaeological Site 44AX0220

44AX0220 was a seventeenth- through nineteenth-century domestic site, possibly associated with the historic Preston Plantation. A precontact component, which consists of features that predate European colonists and is associated with Native American peoples, of unknown age is also present at this location. The site is located on NPS administered property.

4.2.2.4 Archaeological Site 44AX0221

44AX0221 was an eighteenth- through nineteenth-century domestic site, possibly associated with the historic Preston Plantation. A precontact component, which consists of features that predate European colonists and is associated with Native American peoples, of unknown age is also present at this location. The site is located on NPS administered property.

4.2.2.5 Archaeological Site 44AX0222

44AX0222 includes the presence of a buried intact historic Belgian block masonry feature predating 1957, which indicates the presence of intact historic archaeological resources at this location. The site is located on NPS administered property.

5.0 POTENTIAL USES

Table 5-1 summarizes the potential permanent and temporary uses of existing and planned publicly-owned parks that are in the project study area. Permanent use of Section 4(f) parks was determined based on property acquisition needs assuming a minimum 20-foot setback from proposed permanent facilities and structures. **Table 5-2** summarizes the potential permanent and temporary uses of historic architectural resources. **Table 5-3** summarizes the potential permanent uses of archaeological resources. Preliminary *de minimis* impact determinations for each potential use are assessed in **Section 8.0**.

For Build Alternative A, use of parkland within the Metrorail Reservation land was not considered a potential Section 4(f) use, because this land was set aside for possible use as a Metrorail station. The Metrorail Reservation was identified as the possible location of a Metrorail station (in the general location of Build Alternative A) in early planning documents for the redevelopment of Potomac Yard. Title provisions relating to the Metrorail Reservation apply to the deeds of a number of parcels located between the residential neighborhoods of Old Town Greens and Potomac Greens and the CSXT right-of-way, as well as one parcel located west of the CSXT right-of-way. The parcels are covered by easements and covenants, which anticipate construction of a Metrorail station. Build Alternatives B and D and B-CSX Design Option have a portion of realigned track within the Metrorail Reservation but not station facilities, so the Metrorail Reservation area was not excluded from the Section 4(f) uses for these alternatives.

5.1 Build Alternative A Option 1 Construction Access

Figure 5-1 shows the permanent uses and temporary occupancies of Section 4(f) parks and the Greens Scenic Area easement for Build Alternative A Option 1 Construction Access. **Figure 5-2** shows the potential permanent uses and temporary occupancies to historic sites for Build Alternative A Option 1 Construction.

5.1.1 George Washington Memorial Parkway

Build Alternative A Option 1 Construction Access would not require the permanent use of national parkland for the realigned track, but would require the temporary occupancy of 0.30 acre of the GWMP (same as the MVMH). Temporary occupancy of 0.30 acre of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to the station location. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative A. As described in **Section 3.2.2.1**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

- Vegetation clearance and construction equipment in staging areas near the station and access areas; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

The proposed activities associated with construction of the temporary access driveways would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

740 **Table 5-1: Build Alternatives Uses of Section 4(f) Parklands**

Resource	Owner/ Designator	Total Area of Park (acres)	Permanent Use (acres)	Percentage of Permanent Use to Total Area Affected [3]	Temporary Occupancy (acres)	Percentage of Temporary Occupancy to Total Area Affected
BUILD ALTERNATIVE A: Option 1 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.00	0.0%	0.30	0.8%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.00	0.0%	0.30	0.8%
Potomac Greens Park	City of Alexandria	20.54	0.71	3.5%	2.30	11.2%
Greens Scenic Area Easement	NPS	15.19	0.00	0.0%	0.25	1.6%
Rail Park	City of Alexandria	4.21	Less than 0.01	Less than 0.1%	1.79	42.5%
BUILD ALTERNATIVE A: Option 2 Construction Access						
Potomac Greens Park	City of Alexandria	20.54	0.71	3.5%	1.61	7.8%
Greens Scenic Area Easement	NPS	15.19	0.00	0.0%	0.13	0.9%
Rail Park	City of Alexandria	4.21	Less than 0.01	Less than 0.1%	1.79	42.5%
BUILD ALTERNATIVE B: Option 1 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.16	0.4%	0.78	2.1%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.16	0.4%	0.78	2.1%
Potomac Greens Park	City of Alexandria	20.54	2.54	12.4%	3.43	16.7%
Greens Scenic Area Easement	NPS	15.19	1.71	11.3%	3.09	20.3%
Rail Park	City of Alexandria	4.21	0.00	0.0%	0.96	22.8%
BUILD ALTERNATIVE B: Option 2 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.16	0.4%	0.55	1.5%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.16	0.4%	0.55	1.5%
Potomac Greens Park	City of Alexandria	20.54	2.54	12.4%	3.43	16.7%
Greens Scenic Area Easement	NPS	15.19	1.71	11.3%	3.09	20.3%
Rail Park	City of Alexandria	4.21	0.00	0.0%	0.96	22.8%
B-CSX DESIGN OPTION						
Potomac Greens Park	City of Alexandria	20.54	0.10	0.5%	0.01	Less than 0.1%
Rail Park	City of Alexandria	4.21	0.00	0.0%	0.96	222.8%
BUILD ALTERNATIVE D						
George Washington Memorial Parkway	NPS	37.09 [1]	1.43	3.9%	2.40	6.5%
Mount Vernon Memorial Highway	NPS	37.09 [1]	1.43	3.9%	2.40	6.5%
Four Mile Run Trail [2]	Arlington County	0.35 [1]	0.00	0.0%	0.00	0.0%
Potomac Greens Park	City of Alexandria	20.54	1.21	5.9%	0.40	1.9%
Greens Scenic Area Easement	NPS	15.19	0.00	0.0%	0.02	0.1%
Rail Park	City of Alexandria	4.21	1.55	36.8%	1.71	40.6%

741 [1] Area within the Study Area.
742 [2] Four Mile Run Trail would only have aerial impacts.
743

744 **Table 5-2: Build Alternatives Uses of Section 4(f) Historic Architectural Resources**

Resource	Owner/ Designator	Total Area of Park (acres)	Permanent Use (acres)	Percent of Total Area Affected [2]	Temporary Occupancy (acres)	Percent of Total Area Affected
BUILD ALTERNATIVE A: Option 1 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.00	0.0%	0.30	0.8%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.00	0.0%	0.30	0.8%
BUILD ALTERNATIVE B: Option 1 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.16	0.4%	0.78	2.0%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.16	0.4%	0.78	2.0%
BUILD ALTERNATIVE B: Option 2 Construction Access						
George Washington Memorial Parkway	NPS	37.09 [1]	0.16	0.4%	0.55	1.5%
Mount Vernon Memorial Highway	NPS	37.09 [1]	0.16	0.4%	0.55	1.5%
BUILD ALTERNATIVE D						
George Washington Memorial Parkway	NPS	37.09 [1]	1.43	3.9%	2.40	6.5%
Mount Vernon Memorial Highway	NPS	37.09 [1]	1.43	3.9%	2.40	6.5%

745 [1] Area within the Study Area.

746 **Table 5-3: Potential Uses of Section 4(f) Historic Archaeological Resources**

Site Name	VDHR ID	Potential Permanent Use of Section 4(f) Historic Archaeological Resources					
		Build Alternative A		Build Alternative B		B-CSX Design Option	Build Alternative D
		Option 1 Construction Access	Option 2 Construction Access	Option 1 Construction Access	Option 2 Construction Access		
Chesapeake and Ohio/ Alexandria Canal	44AX0028	No	No	No	No	No	No
Campsite No. 1 of the American Wagon Train Sept. 1781	44AX0207	No	No	No	No	No	No
Un-named	44AX0220	No	No	No	No	No	Yes
Un-named	44AX0221	Yes	No	Yes	No	No	No
Un-named	44AX0222	Yes	No	Yes	No	No	No

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748

749 **Figure 5-1: Build Alternative A Option 1 Construction Access- Permanent Use and Temporary Occupancy**
750 **of Section 4(f) Resources - Parks and Easement**

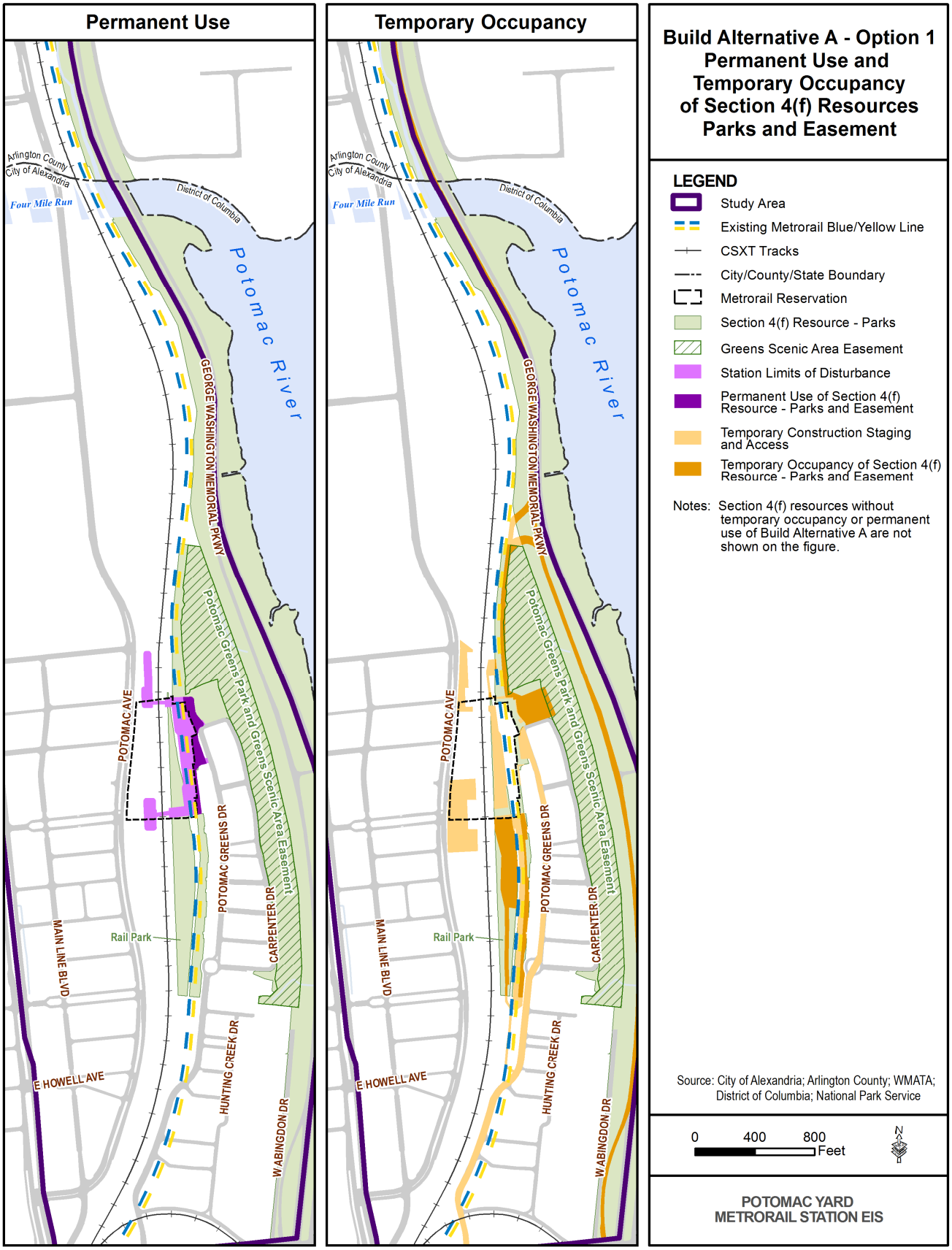

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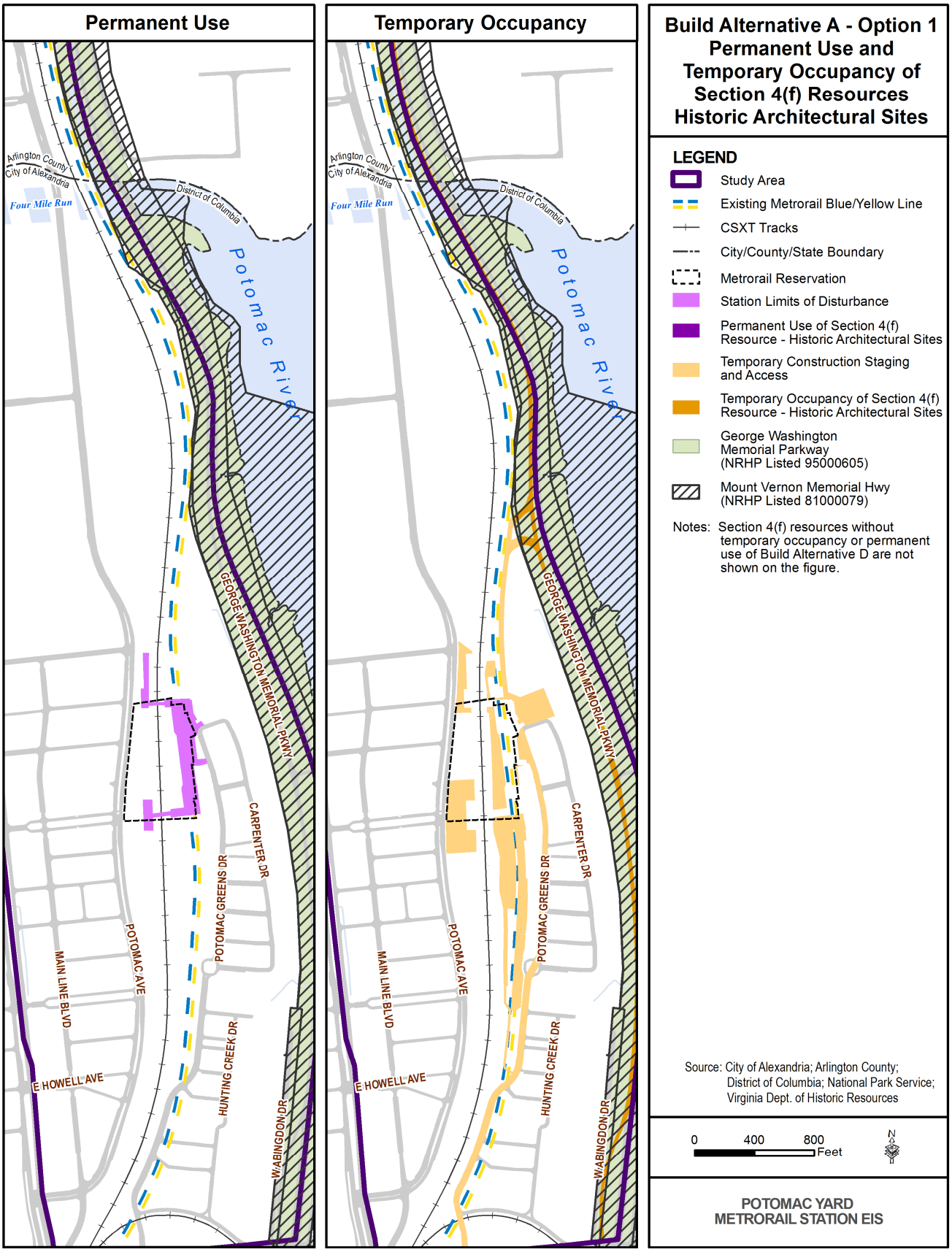
Figure 5-2: Build Alternative A Option 1 Construction Access- Permanent Use and Temporary Occupancy of Section 4(f) Resources - Historic Architectural Sites



Build Alternative A Option 1 Construction Access would also involve temporary construction activities within MVMH and GWMP property requiring a permit from NPS and a long-term loss of vegetation in areas that were part of the original landscape design for GWMP. These would result in some diminishment of the landscape architecture area of significance of the GWMP, including landscaping to preserve the scenic and aesthetic qualities associated with the Potomac River valley.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways on GWMP property would require the clearance of 0.30 acre of vegetation and forested wetlands, which would remove roughly five to ten trees over two inches diameter at breast height (DBH), in areas planted as part of the original landscape design of the GWMP. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The areas of GWMP property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the GWMP, trees and shrubs would be removed for the construction of temporary access driveways and a portion of the staging area within 0.18 acre of the Greens Scenic Area easement and would have visual effects to the GWMP as a result.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.1.2 Mount Vernon Memorial Highway

Build Alternative A Option 1 Construction Access would not require the permanent use of national parkland for the realigned track, but would temporarily occupy 0.30 acre of the MVMH (same as the GWMP). Temporary occupancy of 0.30 acre of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to the station location. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative A. As described in **Section 3.2.2.1**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

- Vegetation clearance and construction equipment in staging areas near the station and access areas; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

Build Alternative A Option 1 Construction Access would also involve temporary construction activities within MVMH and GWMP property requiring a permit from NPS and a long-term loss of vegetation in areas that were part of the original landscape design for MVMH. These would result in some diminishment of the landscape

architecture area of significance of the MVMH including landscaping to maximize scenic, aesthetic, and commemorative qualities along its route between Washington, D.C. and Mount Vernon.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the MVMH and GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways on MVMH property would require the clearance of 0.30 acre of vegetation and forested wetlands, which would remove roughly five to ten trees over two inches diameter at breast height (DBH), in areas planted as part of the original landscape design of the GWMP. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The areas of MVMH property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The proposed activities associated with construction of the temporary access driveways would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the MVMH, trees and shrubs would be removed for the construction of temporary access driveways and a portion of the staging area within 0.18 acre of the Greens Scenic Area easement and would have visual effects to the MVMH as a result.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.1.3 Potomac Greens Park

Build Alternative A Option 1 Construction Access would require the permanent use of 0.71 acre and temporary occupancy of 2.30 acres of Potomac Greens Park. The area required for permanent use is along the western boundary of the park, which would be used for the station platform. The permanent use would impact an existing pedestrian path, open space, and a seating area.

Temporary occupancy of Potomac Greens Park would be necessary to provide an access road for construction vehicles and a staging area for construction equipment. The access road through Potomac Greens Park would be located on the western border of the park, and would connect to entry and exit driveways along the GWMP to the station location. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of Potomac Greens Park.

Of the 2.30 acres of temporary occupancy of Potomac Greens Park, 0.25 acre is within the Greens Scenic Area easement. Since the Greens Scenic Area easement overlays the Potomac Greens Park, NPS is considered an official with jurisdiction over portions of Potomac Greens Park as a Section 4(f) resource. Since the temporary occupancy to the Greens Scenic Area easement portion of Potomac Greens Park would require the release of the easement and a land exchange, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.1.4 Greens Scenic Area Easement

Build Alternative A Option 1 Construction Access would not require the permanent use of the Greens Scenic Area easement, but would temporarily occupy 0.25 acre of the Greens Scenic Area easement. Although a permanent use of Potomac Greens Park is necessary under Build Alternative A, the area required is not located within the overlapping Greens Scenic Area easement. Temporary occupancy of the Greens Scenic Area easement would be necessary to provide an access road for construction vehicles and a staging area for

construction equipment. The access road through the Greens Scenic Area easement would be located on the western border of the easement, and would connect to entry and exit driveways along the GWMP to the station location. Construction staging would require a permit from NPS for the removal of existing vegetation on the western side of the easement. Approximately 0.18 acre of trees and shrubs would be removed from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas, which would cause visual effects to the MVMH and GWMP as a result. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state.

Since the temporary occupancy to the Greens Scenic Area easement would require the release of the easement subject to an equal value exchange in property or interest in property per 54 U.S.C. 102901, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.1.5 Rail Park

Build Alternative A Option 1 Construction Access would require the permanent use of less than 0.01 acre and temporary occupancy 1.79 acres of the Rail Park. The area required for permanent use is along the northern boundary of the park and would be used for the station platform and track alignment. Construction staging would require the removal of the existing vegetation throughout the property and vegetation bordering the Metrorail tracks. The temporary occupancy of Rail Park under Build Alternative A Option 1 Construction Access could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.1.6 Archaeological Site 44AX0221

Build Alternative A Option 1 Construction Access would require the permanent use of Archaeological Site 44AX0221. Permanent uses would result from superficial soil disturbance and soil compression caused by the construction of temporary access roads for Build Alternative A Option 1 Construction Access. Permanent use would be caused by soil compaction and rutting, disturbances associated with silt fence and construction fence installation, subsequent soil erosion, and restoration efforts. The NRHP eligibility of Archaeological Site 44AX0221 has not been determined. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative.

5.1.7 Archaeological Site 44AX0222

Build Alternative A Option 1 Construction Access would require the permanent use of Archaeological Site 44AX0222. Permanent uses would result from superficial soil disturbance and soil compression caused by the construction of temporary access roads for Build Alternative B. Permanent use would be caused soil compaction and rutting, disturbances associated with silt fence and construction fence installation, subsequent soil erosion, and restoration efforts. The NRHP eligibility of Archaeological Site 44AX0222 has not been determined. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative.

5.2 Build Alternative A Option 2 Construction Access

Figure 5-3 shows the permanent uses and temporary occupancies of Section 4(f) parks and the Greens Scenic Area easement for Build Alternative A Option 2 Construction Access. **Figure 5-4** shows the potential permanent uses and temporary occupancies to historic sites for Build Alternative A Option 2 Construction Access.

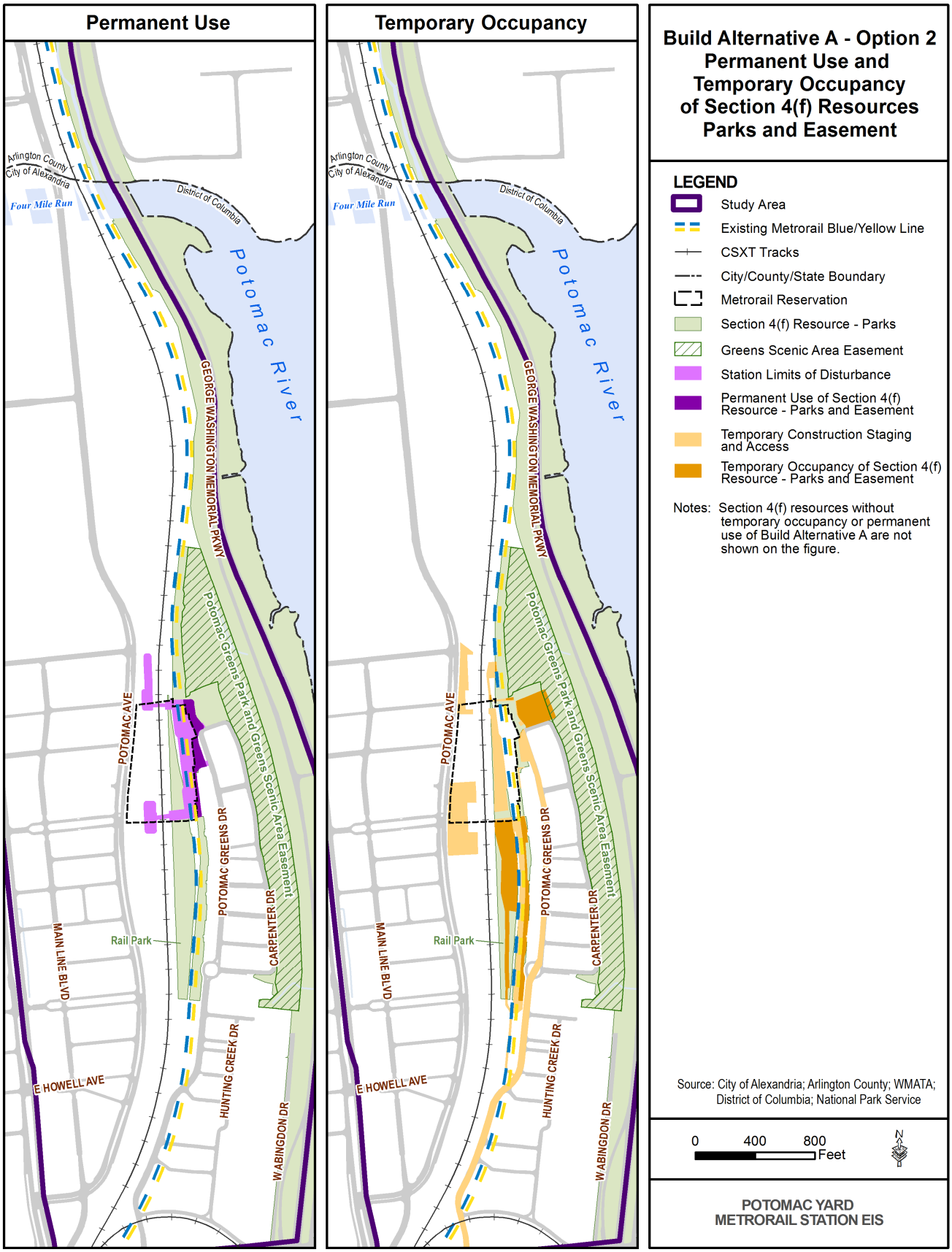
5.2.1 Potomac Greens Park

Build Alternative A Option 2 Construction Access would require the permanent use of 0.71 acre and temporary occupancy of 1.61 acres of Potomac Greens Park. The area required for permanent use is along the western boundary of the park, which would be used for the station platform. The permanent use would impact an existing pedestrian path, open space, and a seating area.

Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of Potomac Greens Park.

Of the 1.61 acres of temporary occupancy of Potomac Greens Park, 0.13 acre is within the Greens Scenic Area easement. Since the Greens Scenic Area easement overlays the Potomac Greens Park, NPS is considered an official with jurisdiction over portions of Potomac Greens Park as a Section 4(f) resource. Since the temporary occupancy to the Greens Scenic Area easement portion of Potomac Greens Park would require the release of the easement and a land exchange, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

908 **Figure 5-3: Build Alternative A Option 2 Construction Access- Permanent Use and Temporary**
909 **Occupancy of Section 4(f) Resources - Parks and Easement**



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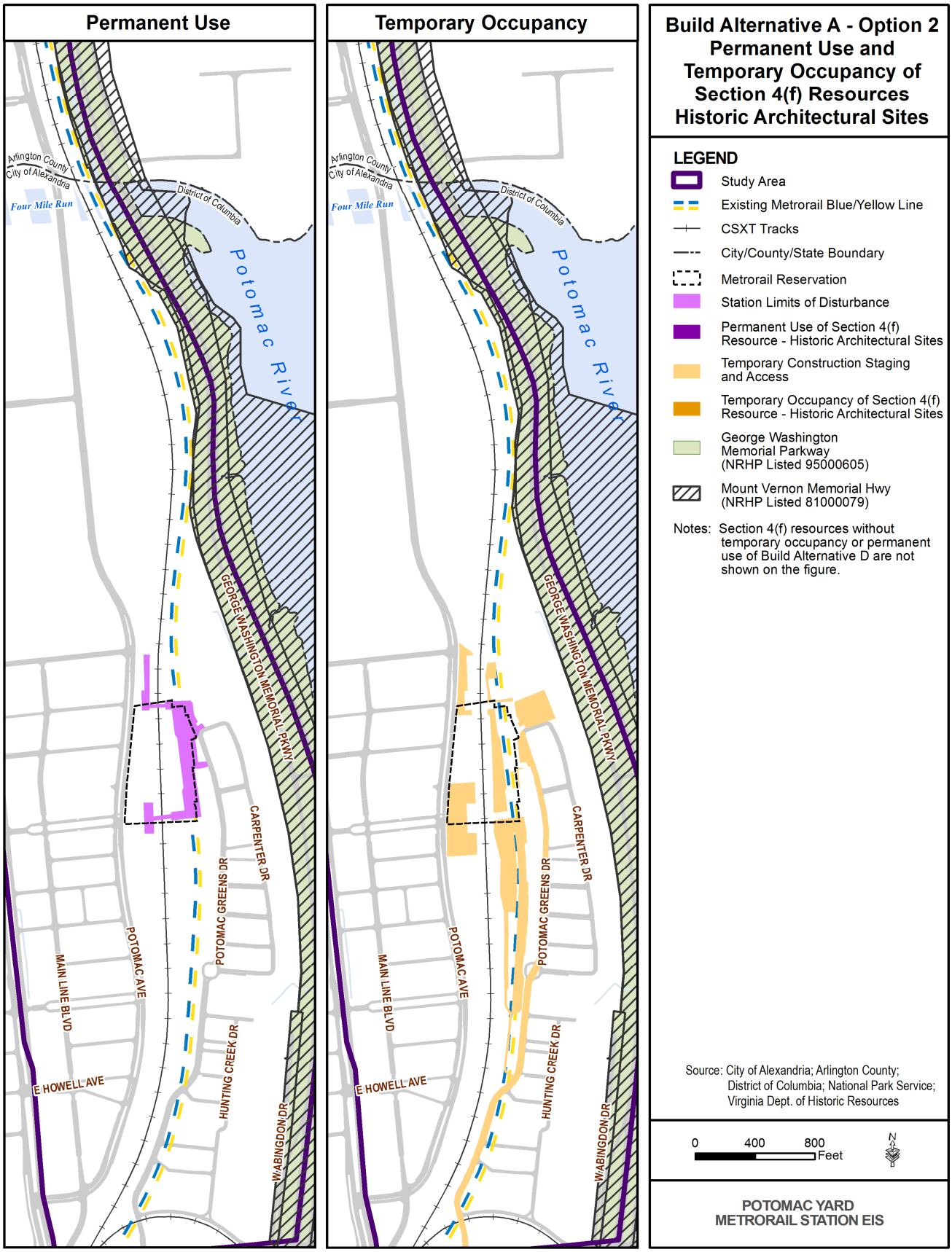
911 **Figure 5-4: Build Alternative A Option 2 Construction Access - Permanent Use and Temporary**
912 **Occupancy of Section 4(f) Resources - Historic Architectural Sites**



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5.2.2 Greens Scenic Area Easement

Build Alternative A Option 2 Construction Access would not require the permanent use of the Greens Scenic Area easement, but would temporarily occupy 0.13 acre of the Greens Scenic Area easement. Although a permanent use of Potomac Greens Park is necessary under Build Alternative A, the area required is not located within the overlapping Greens Scenic Area easement. Temporary occupancy of the Greens Scenic Area easement would be necessary to provide a staging area for construction equipment. Construction staging would require a permit from NPS for the removal of existing vegetation on the western side of the easement. 0.09 acre of trees would be cleared, including about ten to thirty woody stemmed trees and shrubs from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state.

Since the temporary occupancy to the Greens Scenic Area easement would require the release of the easement subject to an equal value exchange in property or interest in property per 54 U.S.C. 102901, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.2.3 Rail Park

Build Alternative A Option 2 Construction Access would require the permanent use of less than 0.01 acre and temporary occupancy 1.79 acres of the Rail Park. The area required for permanent use is along the northern boundary of the park and would be used for the station platform and track alignment. Construction staging would require the removal of the existing vegetation throughout the property and vegetation bordering the Metrorail tracks. The temporary occupancy of Rail Park under Build Alternative A Option 1 Construction Access could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.3 Build Alternative B Option 1 Construction Access

Figure 5-5 shows the permanent uses and temporary occupancies of Section 4(f) parks and Greens Scenic Area easement for Build Alternative B Option 1 Construction Access. **Figure 5-6** shows the potential permanent uses and temporary occupancies to historic sites for Build Alternative B Option 1 Construction Access.

5.3.1 George Washington Memorial Parkway

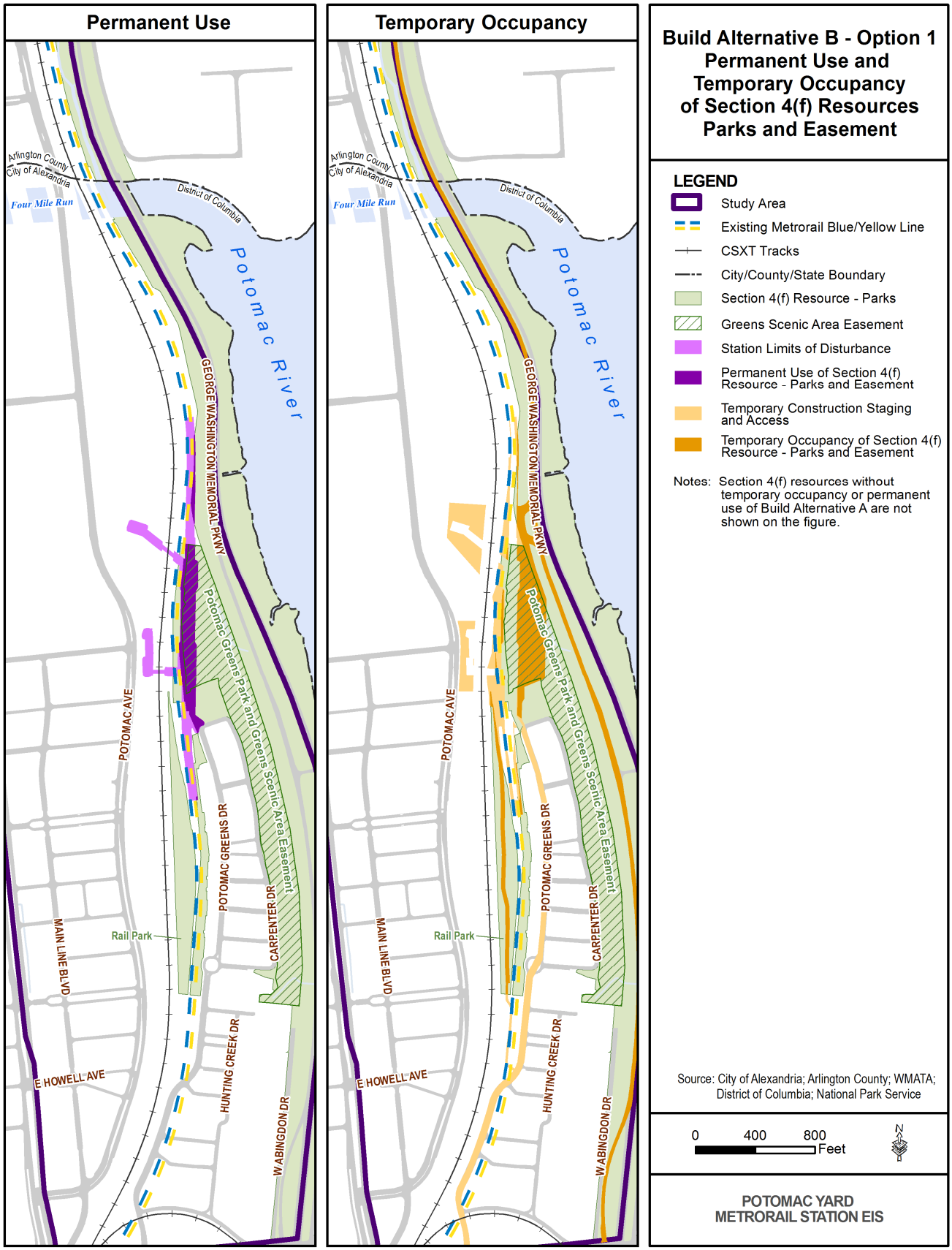
Build Alternative B Option 1 Construction Access would require the permanent use of 0.16 acre of national parkland and would temporarily occupy 0.78 acre of the GWMP (same as the MVMH). The area required for permanent use is along the western boundary of the park and would be used for realigned track. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard. Temporary occupancy of 0.78 acre of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to the station location and construction staging areas. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B. As described in **Section 3.2.2.2**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

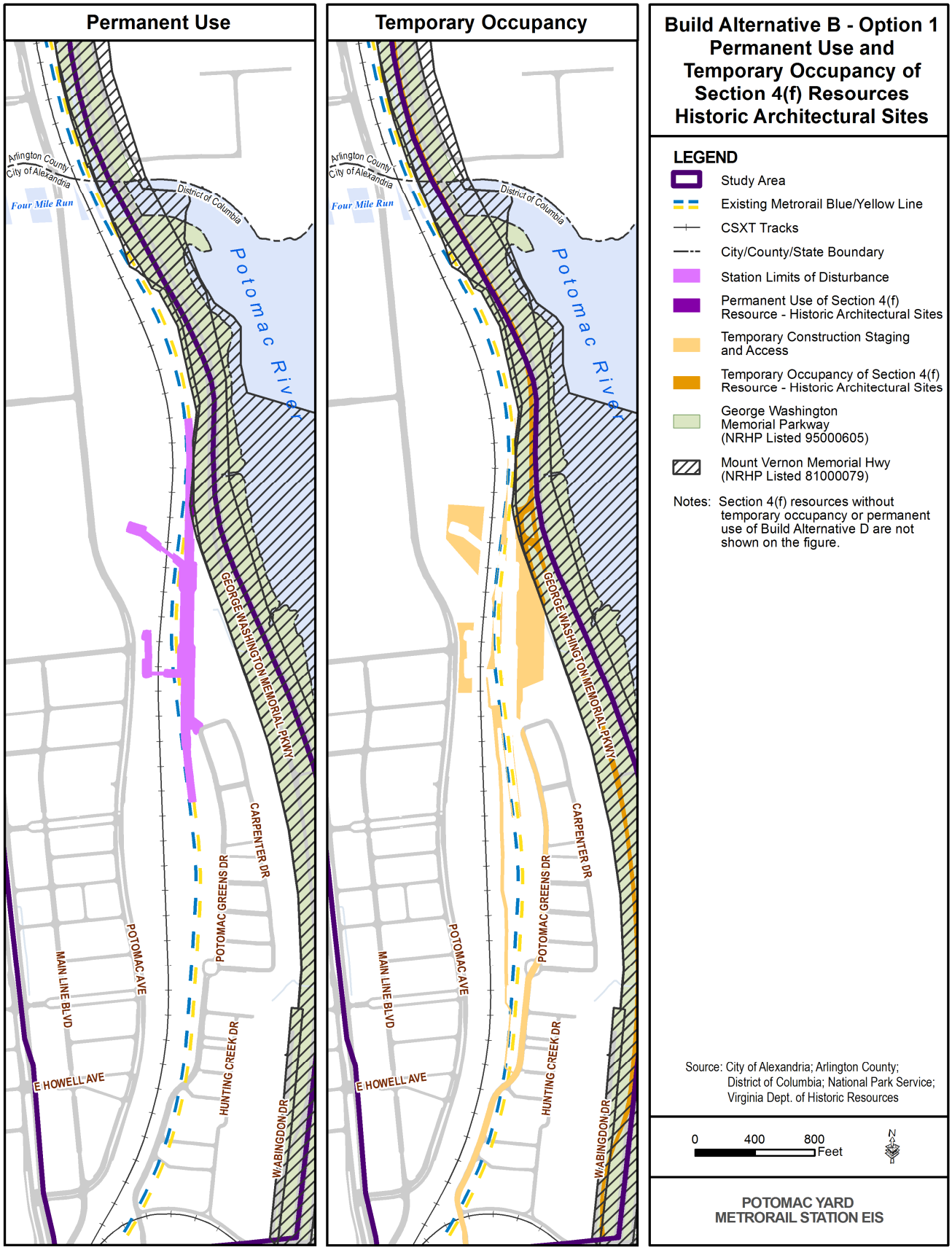
- Vegetation clearance and construction equipment in staging areas near the station and access areas; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

Figure 5-5: Build Alternative B Option 1 Construction Access- Permanent Use and Temporary Occupancy of Section 4(f) Resources - Parks and Easement



966 **Figure 5-6: Build Alternative B Option 1 Construction Access- Permanent Use and Temporary Occupancy**
967 **of Section 4(f) Resources - Historic Architectural Sites**



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Build Alternative B Option 1 Construction Access would result in permanent land transfers, temporary construction activities within GWMP property requiring a permit from NPS, and temporary and permanent visual effects. Construction Access would also have effects on the GWMP resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the GWMP including landscaping to preserve the scenic and aesthetic qualities associated with the Potomac River valley.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways on GWMP property would require the clearance of 0.77 acre of vegetation and forested wetlands, which would remove roughly 15 to 20 trees over two inches DBH. Permanent station facilities and realigned track would require clearance of 0.16 acre of vegetation and forested wetlands, which would remove roughly up to five trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The areas of GWMP property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The proposed activities associated with construction of the temporary access driveways and staging areas and permanent station and track facilities would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening in areas temporarily cleared for construction would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the GWMP, 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement consisting of 0.83 acre for the temporary construction staging area and 0.68 acre for the permanent station and track facilities. This removal of trees and shrubs would cause visual effects to the GWMP as a result. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site..

5.3.2 Mount Vernon Memorial Highway

Build Alternative B Option 1 Construction Access would require the permanent use of 0.16 acre of national parkland and would temporarily occupy 0.78 acre of the MVMH (same as the GWMP). The area required for permanent use is along the western boundary of the park and would be used for realigned track. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard. Temporary occupancy of 0.78 acre of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to the station location and construction staging areas. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B. As described in **Section 3.2.2.2**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

- Vegetation clearance and construction equipment in staging areas near the station and access areas; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

Build Alternative B Option 1 Construction Access would result in permanent land transfers, temporary construction activities within MVMH and GWMP property requiring a permit from NPS, and temporary and permanent visual effects. Construction Access would also have effects on the MVMH resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the MVMH, including landscaping to maximize scenic, aesthetic, and commemorative qualities along its route between Washington, D.C. and Mount Vernon.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the MVMH and GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways on MVMH property would require the clearance of 0.77 acre of vegetation and forested wetlands, which would remove roughly 15 to 20 trees over two inches DBH. Permanent station facilities and realigned track would require clearance of 0.16 acre of vegetation and forested wetlands, which would remove roughly up to five trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The areas of MVMH property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The proposed activities associated with construction of the temporary access driveways and staging areas and permanent station and track facilities would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening in areas temporarily cleared for construction would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the MVMH, 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement consisting of 0.83 acre for the temporary construction staging area and 0.68 acre for the permanent station and track facilities. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. This removal of trees and shrubs would cause visual effects to the MVMH as a result. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.3.3 Potomac Greens Park

Build Alternative B Option 1 Construction Access would require the permanent use of 2.54 acres and would temporarily occupy 3.43 acres of Potomac Greens Park. The area required for permanent use is along the western boundary of the park, which would be used for station facilities and realigned track. The permanent use would impact an existing pedestrian path, open space, and a seating area.

Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction of the proposed station would remove existing vegetation along the western boundary of the park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Approximately 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas, which would cause visual effects to the MVMH and GWMP as a result.

Of the 3.43 acres of temporary occupancy of Potomac Greens Park, 3.09 acres are within the Greens Scenic Area easement. Since the Greens Scenic Area easement overlays the Potomac Greens Park, NPS is considered an official with jurisdiction over portions of Potomac Greens Park as a Section 4(f) resource. Since the temporary occupancy to the Greens Scenic Area easement portion of Potomac Greens Park would require the release of the easement and a land exchange, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.3.4 Greens Scenic Area Easement

Build Alternative B Option 1 Construction Access would require the permanent use of 1.71 acres and would temporarily occupy 3.09 acres of the Green Scenic Area easement. The area required for permanent use is along the western boundary of the park, which would be used for station facilities and realigned track. The permanent use would impact existing vegetation intended to provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B.

Construction effects would also include the introduction of construction vehicles and materials. Construction of the proposed station would remove existing vegetation along the western boundary of the easement, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Construction would also require the removal of trees from the Greens Scenic Area easement that are intended to protect views from the GWMP. Approximately 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas, which would cause visual effects to the MVMH and GWMP as a result. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state.

Since the temporary occupancy to the Greens Scenic Area easement would require the release of the easement subject to an equal value exchange in property or interest in property per 54 U.S.C. 102901, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.3.5 Rail Park

Build Alternative B Option 1 Construction Access would not require the permanent use of the Rail Park, but would temporarily occupy 0.96 acre of the Rail Park. Construction staging would require the development of a construction access lane through the park and the removal of the existing vegetation throughout the property. The temporary occupancy of Rail Park under Build Alternative B Option 1 Construction Access could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.3.6 Archaeological Site 44AX0221

Build Alternative B Option 1 Construction Access would require the permanent use of Archaeological Site 44AX0221. Permanent uses would result from superficial soil disturbance and soil compression caused by the construction of temporary access roads for Build Alternative B Option 1 Construction Access. Permanent use would be caused by soil compaction and rutting, disturbances associated with silt fence and construction fence installation, subsequent soil erosion, and restoration efforts. The NRHP eligibility of Archaeological Site 44AX0221 has not been determined. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative.

5.3.7 Archaeological Site 44AX0222

Build Alternative B Option 1 Construction Access would require the permanent use of Archaeological Site 44AX0222. Permanent uses would result from superficial soil disturbance and soil compression caused by the construction of temporary access roads for Build Alternative B Option 1 Construction Access. Permanent use would be caused soil compaction and rutting, disturbances associated with silt fence and construction fence installation, subsequent soil erosion, and restoration efforts. The NRHP eligibility of Archaeological Site 44AX0222 has not been determined. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative.

5.4 Build Alternative B Option 2 Construction Access

Figure 5-7 shows the permanent uses and temporary occupancies of Section 4(f) parks and Greens Scenic Area easement for Build Alternative B Option 2 Construction Access. **Figure 5-8** shows the potential permanent uses and temporary occupancies to historic sites for Build Alternative B Option 2 Construction Access.

5.4.1 George Washington Memorial Parkway

Build Alternative B Option 2 Construction Access would require the permanent use of 0.16 acre of national parkland and would temporarily occupy 0.55 acre of the GWMP (same as the MVMH). The area required for permanent use is along the western boundary of the park and would be used for realigned track. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard. Temporary occupancy of 0.55 acre of NPS land would be necessary for construction staging areas. Construction staging and material laydown areas would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B. Build Alternative B Option 2 Construction Access would not provide access for construction vehicles from the Parkway to the station location and construction staging areas. Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to vegetation clearance and construction equipment in staging areas on GWMP property and adjacent areas near the station and realigned track. GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction.

Build Alternative B Option 2 Construction Access would result in permanent land transfers, temporary construction activities within MVMH and GWMP property requiring a permit from NPS, and temporary and permanent visual effects. Construction Access would also have effects on the GWMP resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the GWMP, including landscaping to preserve the scenic and aesthetic qualities associated with the Potomac River valley.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction staging areas on GWMP property would require clearance of 0.55 acre of vegetation and forested wetlands, which would remove roughly 10 to 15 trees over two inches DBH. Permanent station facilities and realigned track would require clearance of 0.16 acre of vegetation and forested wetlands, which would remove roughly five to ten trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present. The total area cleared of vegetation in areas planted as part of the original landscape design of the GWMP for construction staging and permanent facilities for Build Alternative B Option 2 is 0.71 acre including the removal of a total of 10 to 15 trees over two inches DBH.

The areas of GWMP property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

Figure 5-7: Build Alternative B Option 2 Construction Access- Permanent Use and Temporary Occupancy of Section 4(f) Resources - Parks and Easement

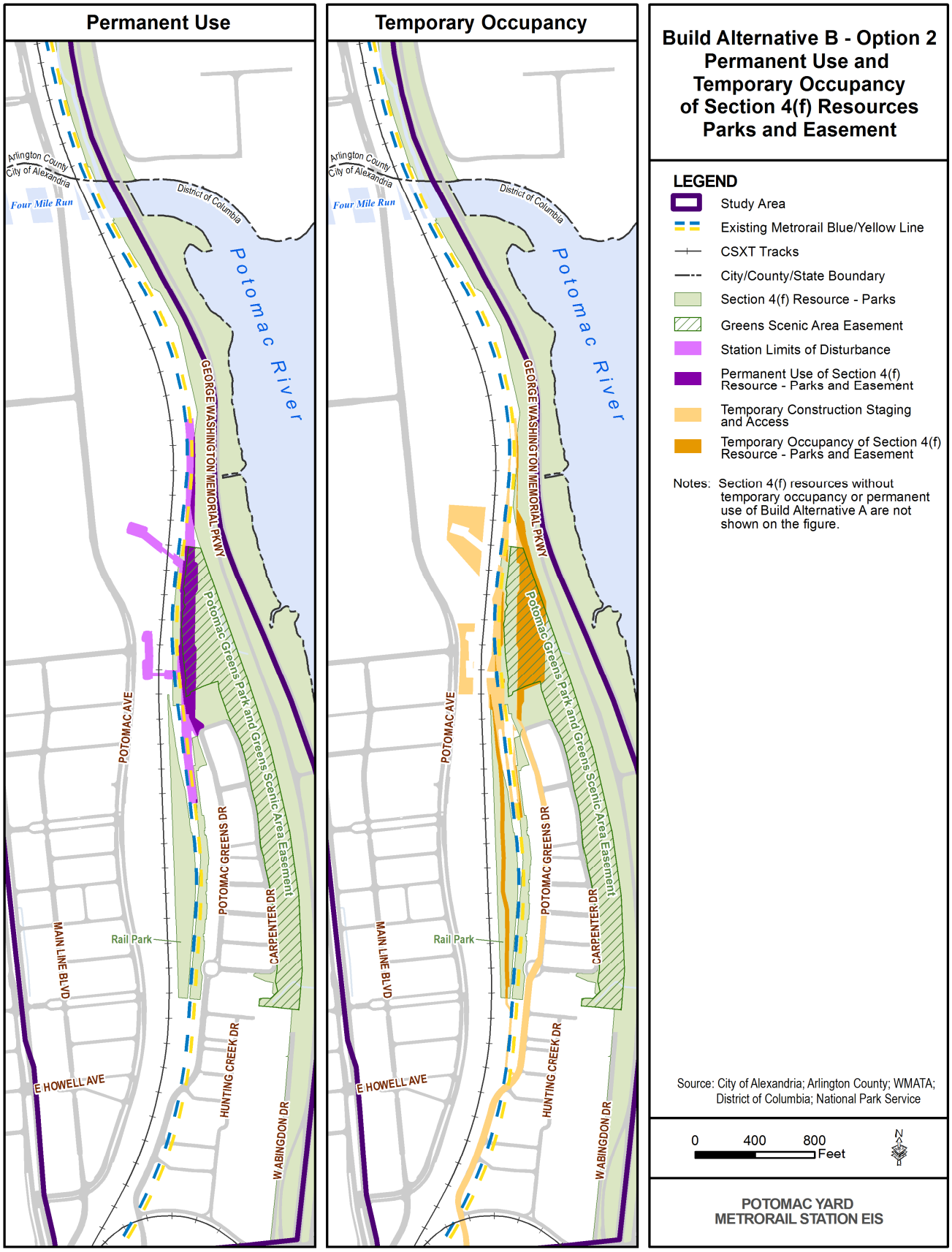
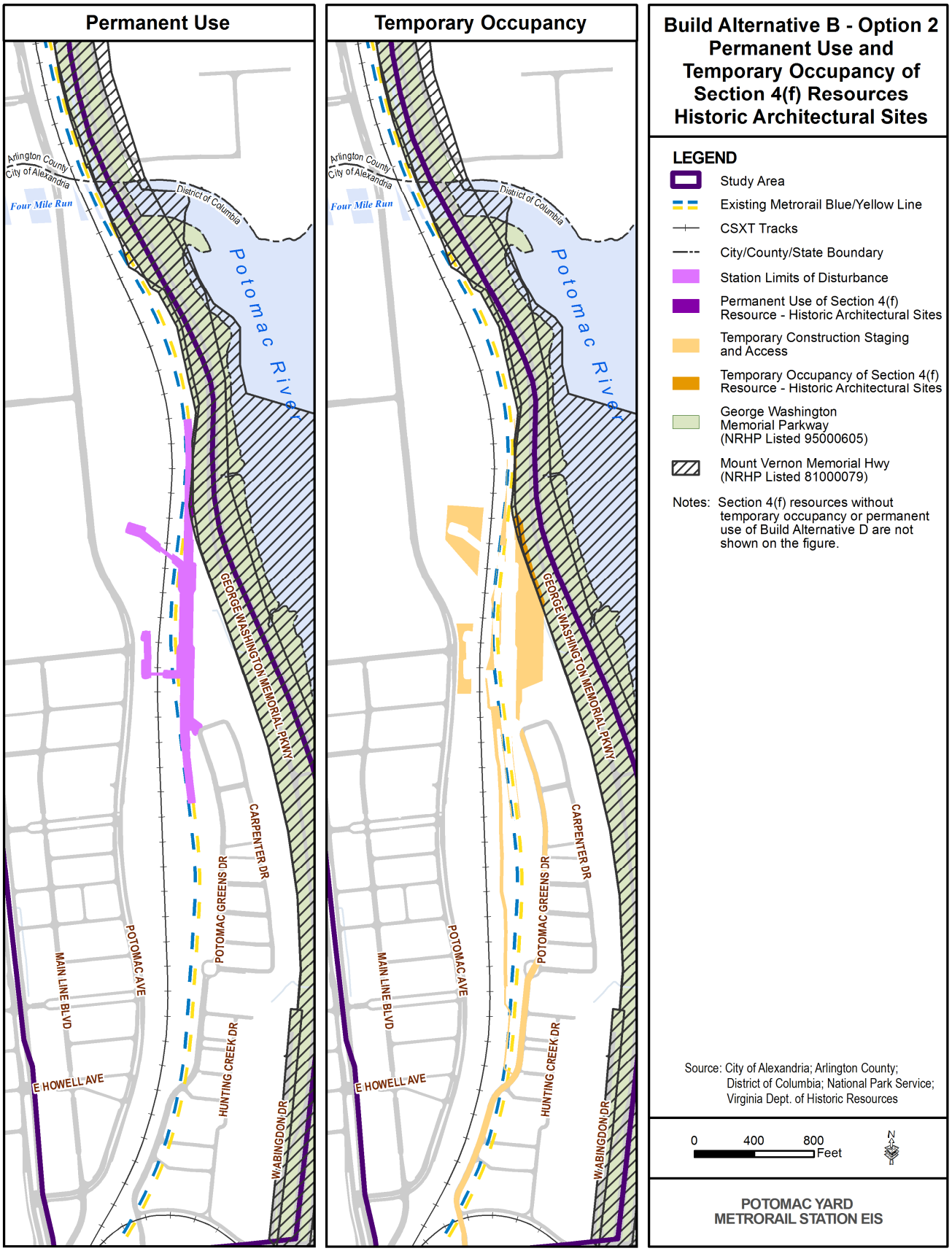


Figure 5-8: Build Alternative B Option 2 Construction Access- Permanent Use and Temporary Occupancy of Section 4(f) Resources - Historic Architectural Sites



The proposed activities associated with construction of the temporary access driveways and staging areas and permanent station and track facilities would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening in areas temporarily cleared for construction would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the GWMP, 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement consisting of 0.83 acre for the temporary construction staging area and 0.68 acre for the permanent station and track facilities. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. This removal of trees and shrubs would cause visual effects to the GWMP as a result. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.4.2 Mount Vernon Memorial Highway

Build Alternative B Option 2 Construction Access would require the permanent use of 0.16 acre of national parkland and would temporarily occupy 0.55 acre of the MVMH (same as the GWMP). The area required for permanent use is along the western boundary of the park and would be used for realigned track. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard. Temporary occupancy of 0.55 acre of NPS land would be necessary for construction staging areas. Construction staging and material laydown areas would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B. Build Alternative B Option 2 Construction Access would not provide access for construction vehicles from the Parkway to the station location and construction staging areas.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to vegetation clearance and construction equipment in staging areas on GWMP property and adjacent areas near the station and realigned track. GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction.

Build Alternative B Option 2 Construction Access would result in permanent land transfers, temporary construction activities within MVMH and GWMP property requiring a permit from NPS, and temporary and permanent visual effects. Construction Access would also have effects on the MVMH resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the GWMP, including landscaping to maximize scenic, aesthetic and commemorative qualities along its route between Washington, D.C and Mount Vernon.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the MVMH and GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction staging areas on MVMH property would require clearance of 0.55 acre of vegetation and forested wetlands, which would remove roughly 10 to 15 trees over two inches DBH. Permanent station facilities and realigned track would require clearance of 0.16 acre of vegetation and forested wetlands, which would remove roughly five to ten trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present. The total area cleared of vegetation in areas planted as part of the original landscape design of the MVMH for construction staging and permanent facilities for Build Alternative B Option 2 is 0.71 acre including the removal of a total of 10 to 15 trees over two inches DBH.

The areas of MVMH property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus*

americana), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The proposed activities associated with construction of the temporary access driveways and staging areas and permanent station and track facilities would include removing contributing features (trees) of NRHP-listed resources. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening in areas temporarily cleared for construction would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

In addition to the vegetation and resulting visual impacts described above related to the cultural landscape within the MVMH, 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement consisting of 0.83 acre for the temporary construction staging area and 0.68 acre for the permanent station and track facilities. This removal of trees and shrubs would cause visual effects to the MVMH as a result. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.4.3 Potomac Greens Park

Build Alternative B Option 2 Construction Access would require the permanent use of 2.54 acres and would temporarily occupy 3.43 acres of Potomac Greens Park. The area required for permanent use is along the western boundary of the park, which would be used for station facilities and realigned track. The permanent use would impact an existing pedestrian path, open space, and a seating area.

Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction of the proposed station would remove existing vegetation along the western boundary of the park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Approximately 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas, which would cause visual effects to the MVMH and GWMP as a result.

Of the 3.43 acres of temporary occupancy of Potomac Greens Park, 3.09 acres are within the Greens Scenic Area easement. Since the Greens Scenic Area easement overlays the Potomac Greens Park, NPS is considered an official with jurisdiction over portions of Potomac Greens Park as a Section 4(f) resource. Since the temporary occupancy to the Greens Scenic Area easement portion of Potomac Greens Park would require the release of the easement and a land exchange, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.4.4 Greens Scenic Area Easement

Build Alternative B Option 2 Construction Access would require the permanent use of 1.71 acres and would temporarily occupy 3.09 acres of the Green Scenic Area easement. The area required for permanent use is along the western boundary of the park, which would be used for station facilities and realigned track. The permanent use would impact existing vegetation intended to provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Temporary occupancy of Greens Scenic Area easement would be necessary to provide a staging area for construction equipment. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative B.

Construction effects would also include the introduction of construction vehicles and materials. Construction of the proposed station would remove existing vegetation along the western boundary of the easement, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Construction would also require the removal of trees from the Greens Scenic Area easement that are intended

to protect views from the GWMP. Approximately 1.51 acres of trees and shrubs would be removed from the Greens Scenic Area easement to accommodate the construction access, staging, and laydown areas, which would cause visual effects to the MVMH and GWMP as a result. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state.

Since the temporary occupancy to the Greens Scenic Area easement would require the release of the easement subject to an equal value exchange in property or interest in property per 54 U.S.C. 102901, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.4.5 Rail Park

Build Alternative B Option 2 Construction Access would not require the permanent use of the Rail Park, but would temporarily occupy 0.96 acre of the Rail Park. Construction staging would require the development of a construction access lane through the park and the removal of the existing vegetation throughout the property. The temporary occupancy of Rail Park under Build Alternative B Option 1 Construction Access could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.5 B-CSX Design Option

Figure 5-9 shows the permanent uses and temporary occupancies of Section 4(f) parks and Greens Scenic Area easement for B-CSX Design Option. **Figure 5-10** shows the potential permanent uses and temporary occupancies to historic sites for B-CSX Design Option.

5.5.1 Potomac Greens Park

B-CSX Design Option would require the permanent use of 0.10 acre and temporary occupancy of 0.01 acre of Potomac Greens Park. The area required for permanent use is along the western boundary of the park, which would be required for the realigned WMATA track. The permanent use would impact existing vegetation intended to provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park.

Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, trees, and fencing of Potomac Greens Park. The temporary occupancy of Potomac Greens Park under B-CSX Design Option could potentially qualify as an exemption pending an agreement with the City of Alexandria.

B-CSX Design Option would not require the permanent use of or temporarily occupy the Greens Scenic Area easement.

5.5.2 Rail Park

B-CSX Design Option would not require the permanent use of the Rail Park, but would temporarily occupy 0.96 acre of the Rail Park. Construction staging would require the development of a construction access lane through the park and the removal of the existing vegetation throughout the property. The temporary occupancy of the Rail Park under B-CSX Design Option could potentially qualify as an exemption pending an agreement with the City of Alexandria.

Figure 5-9: B-CSX Design Option - Permanent Use and Temporary Occupancy of Section 4(f) Resources - Parks and Easement

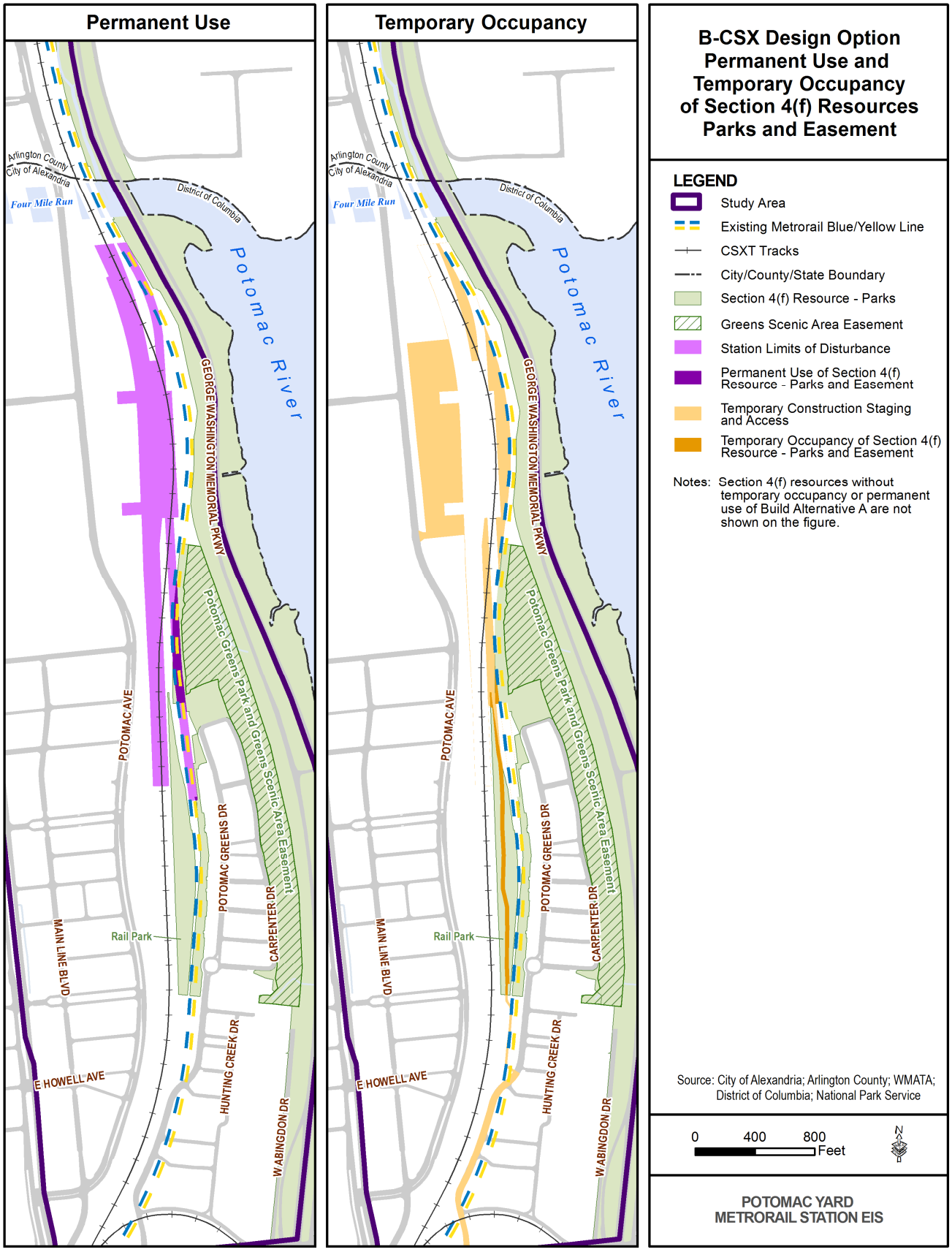
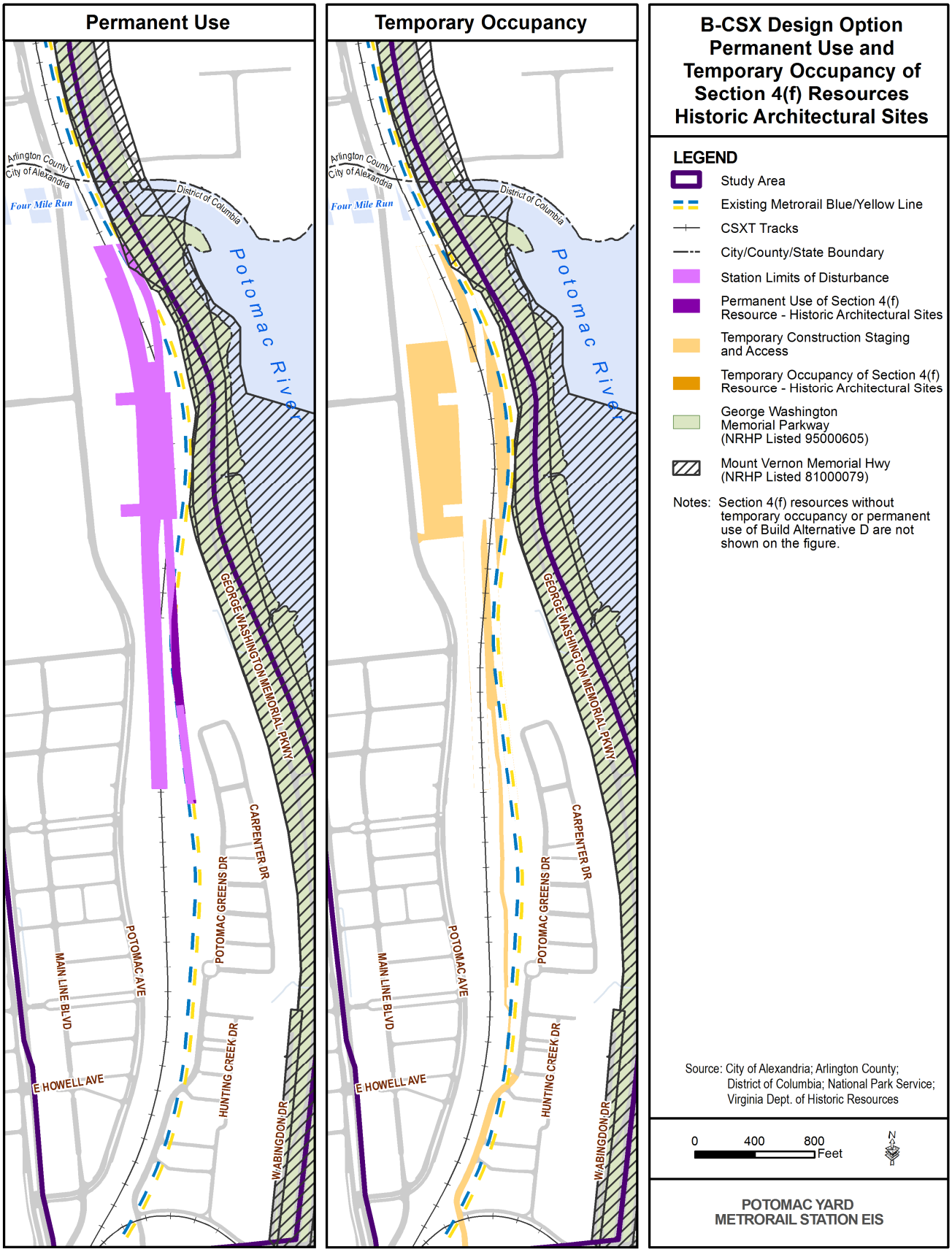


Figure 5-10: B-CSX Design Option - Permanent Use and Temporary Occupancy of Section 4(f) Resources - Historic Architectural Sites



5.6 Build Alternative D

Figure 5-11 shows the permanent uses and temporary occupancies of Section 4(f) parks and Greens Scenic Area easement for Build Alternative D. **Figure 5-12** shows the potential permanent uses and temporary occupancies to historic sites for Build Alternative D.

5.6.1 George Washington Memorial Parkway

Build Alternative D would require the permanent use of 1.43 acres and would temporarily occupy 2.40 acres of the GWMP (and MVMH). The alternative would require a portion of the GWMP property, just south and north of Four Mile Run for the realigned track. The 1.43 acres of permanent use would accommodate a new aerial track structure that would cross over Four Mile Run to connect to the existing Metrorail tracks. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard and Crystal City. Temporary occupancy of 2.40 acres of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to support the construction of the aerial structure over Four Mile Run and construction staging areas. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative D. As described in **Section 3.2.2.4**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

- Vegetation clearance and construction equipment in staging areas on GWMP property and adjacent areas near the station and realigned track and access areas on GWMP property; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

Build Alternative D would also involve permanent land transfers, temporary construction activities within GWMP property requiring a permit from NPS, visual effects, and temporary and permanent loss of vegetation. Construction access would also cause effects to the GWMP resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the GWMP including landscaping to preserve the scenic and aesthetic qualities associated with the Potomac River valley.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement area for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways and staging areas would require clearance of 2.40 acres of vegetation and forested wetlands, which would remove roughly 45-50 trees over two inches DBH. Permanent realigned track and associated structures would require clearance of 1.14 acres of vegetation and forested wetlands, which would remove roughly 20-25 trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The total area cleared of vegetation in areas planted as part of the original landscape design of the GWMP for construction staging and permanent facilities for Build Alternative D is 3.54 acres including the removal of a total of 70 to 75 trees over two inches DBH.

Figure 5-11: Build Alternative D - Permanent Use and Temporary Occupancy of Section 4(f) Resources - Parks and Easement

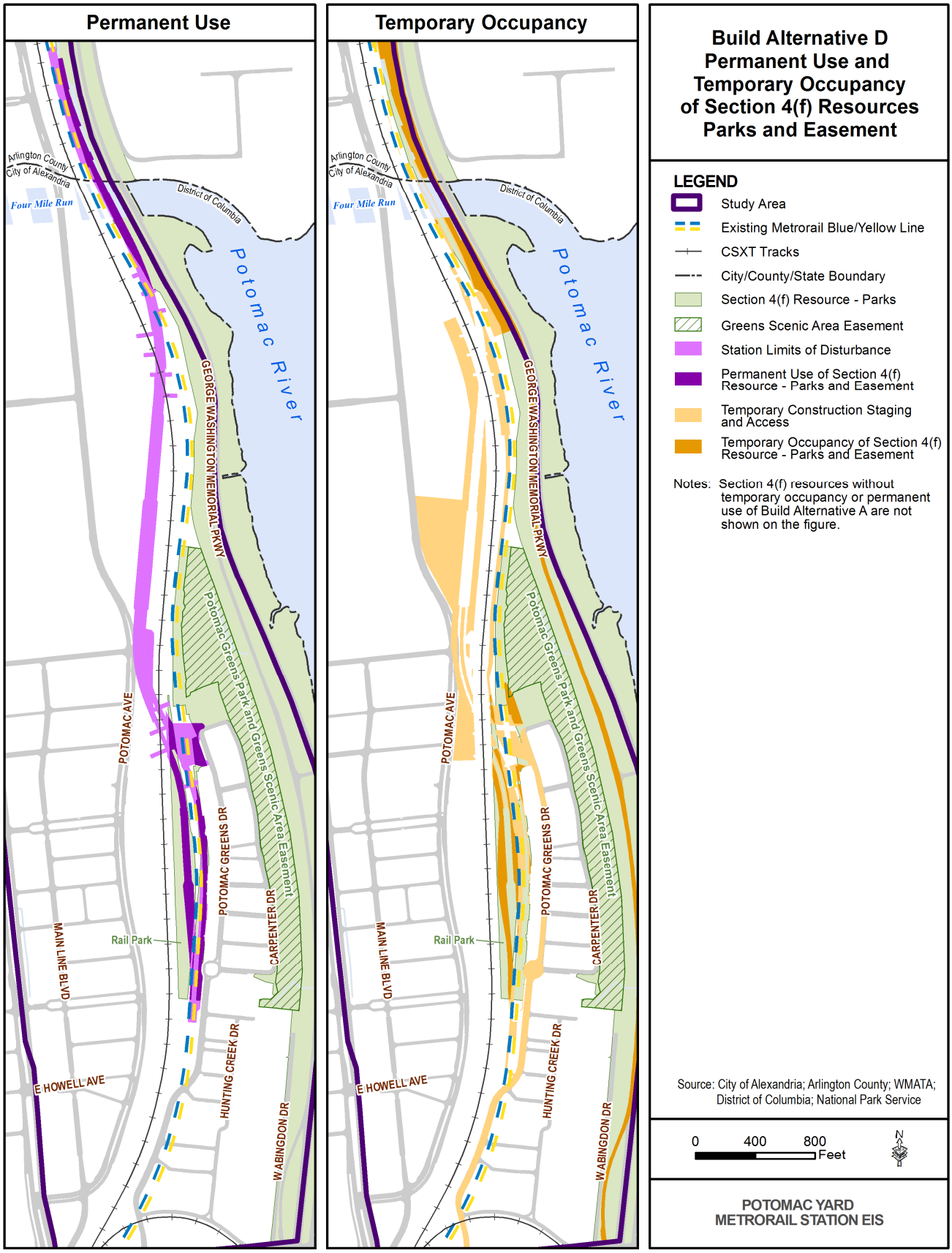
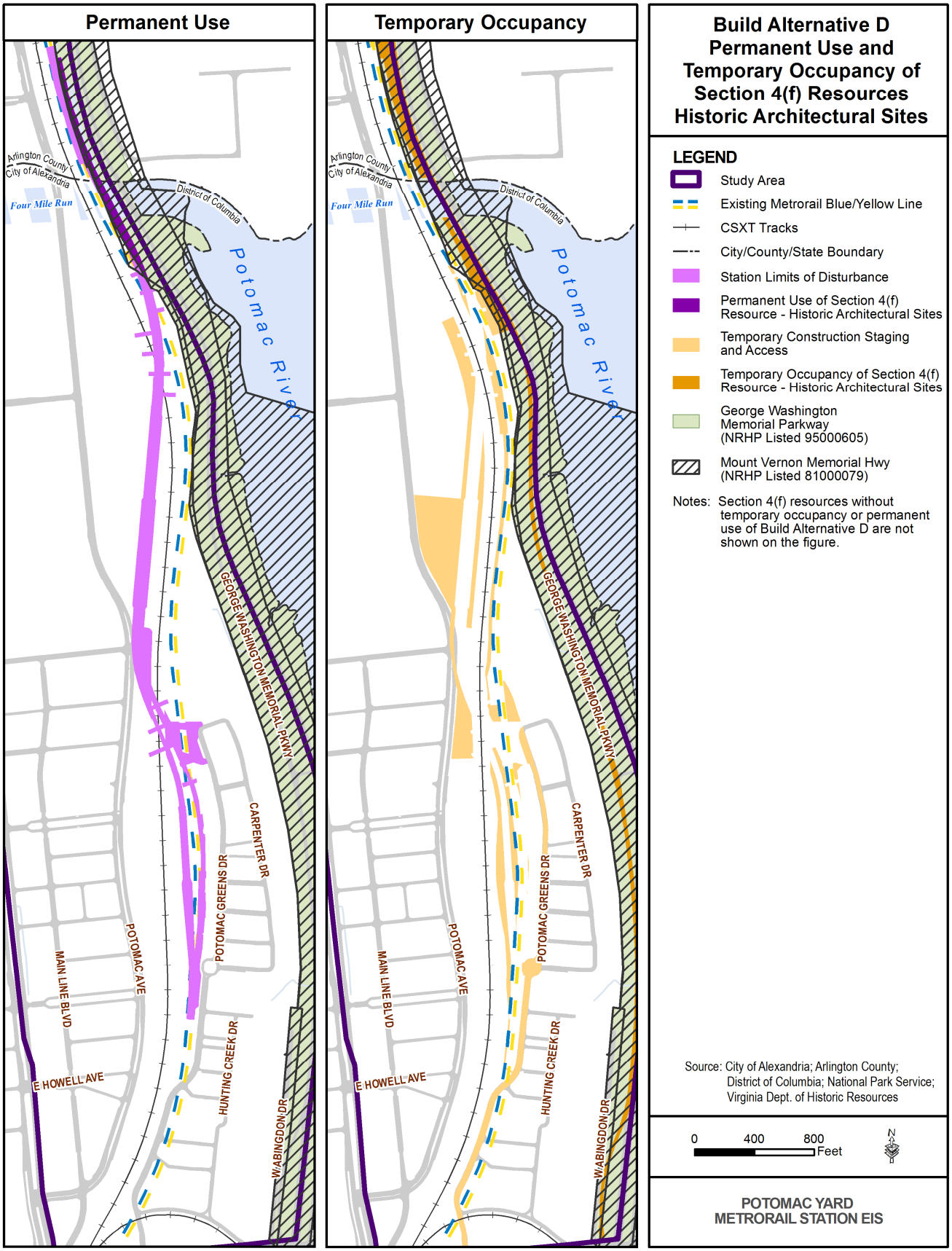


Figure 5-12: Build Alternative D - Permanent Use and Temporary Occupancy of Section 4(f) Resources - Historic Architectural Sites



The areas of GWMP property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The area north of Four Mile Run is an area referred to as the Airport segment of the GWMP and stretches to the northern end of Ronald Reagan Washington National Airport. This section was realigned in 1940 when the airport was constructed on the site of the original alignment. Trees located on the west side of the GWMP in this area were largely planted during the 1963 planting plan, but the area has since returned to its natural woodland state, filling out the vegetation among the earlier plantings. The plantings in this area were intended to shield views of the Potomac Yard rail yard and the railroad, and, while the plantings have lost some integrity, they still function as intended. The proposed activities associated with realignment of track would include removing contributing features (trees) of a NRHP-listed resource. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

Construction staging and temporary access roads south of Four Mile Run would also cause damage to part of the NRHP-listed GWMP, requiring removal of trees and other vegetation that were planted in 1936 and contribute to the significance of the GWMP. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

Removal of the vegetation in the location of the temporary construction staging areas and access driveways would introduce visual elements into the properties' setting that would compromise their historic significance. The gap in vegetation created by the temporary construction staging areas and access driveways would open up views to the Metrorail tracks and Potomac Yard Shopping Center. While the rail yard is no longer extant, removing the trees at this location temporarily would introduce views to the west that were never intended as part of the design. These temporary views would not perpetuate a scenic quality and contemplative experience for travelers, an important characteristic of the parkway experience. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of the GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.6.2 Mount Vernon Memorial Highway

Build Alternative D would require the permanent use of 1.43 acres and would temporarily occupy 2.40 acres of the MVMH (and GWMP). The alternative would require a portion of the GWMP property, just south and north of Four Mile Run for the realigned track. The 1.43 acres of permanent use would accommodate a new aerial track structure that would cross over Four Mile Run to connect to the existing Metrorail tracks. The permanent use would impact existing vegetation that currently provides a visual barrier between the GWMP and Potomac Yard and Crystal City. Temporary occupancy of 2.40 acres of NPS land would be necessary to provide access roads for construction vehicles from the Parkway to support the construction of the aerial structure over Four Mile Run and construction staging areas. Construction staging, material laydown areas, and access driveways would require a permit from NPS for the clearing of vegetation and disturbance of soils in the areas designated for these activities for Build Alternative D. As described in **Section 3.2.2.4**, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Users of the GWMP roadway and the Mount Vernon Trail would experience temporary visual and noise effects throughout the two-year project construction duration related to:

- Vegetation clearance and construction equipment in staging areas on GWMP property and adjacent areas near the station and realigned track and access areas on GWMP property; and
- Additional vehicular traffic on the southbound roadway due to the inclusion of construction vehicles, which may impede traffic at certain times and would diminish the scenic quality associated of the GWMP.

GWMP facilities in the vicinity, including the Mount Vernon Trail and Daingerfield Island marina and recreational fields, would remain open for public use, and the roadway would remain open to general vehicular traffic in both directions of travel during the duration of construction, although temporary lane closure of a portion of one southbound lane in the vicinity of the construction access areas would be required.

Build Alternative D would also involve permanent land transfers, temporary construction activities within MVMH and GWMP property requiring a permit from NPS, temporary and permanent, visual effects, and temporary and permanent loss of vegetation. Construction access would also cause effects to the MVMH resulting from long-term loss of vegetation in areas that were part of the original landscape design. These would result in some diminishment of the landscape architecture area of significance of the GWMP including landscaping to maximize scenic, aesthetic and commemorative qualities along its route between Washington, D.C. and Mount Vernon.

During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Construction of temporary access driveways and staging areas would require clearance of 2.40 acres of vegetation and forested wetlands, which would remove roughly 45-50 trees over two inches DBH. Permanent realigned track and associated structures would require clearance of 1.14 acres of vegetation and forested wetlands, which would remove roughly 20-25 trees over two inches DBH. These locations have since returned to a more naturally vegetated state, although some of the species from the planting plans are still present.

The total area cleared of vegetation in areas planted as part of the original landscape design of the MVMH for construction staging and permanent facilities for Build Alternative D is 3.54 acres including the removal of a total of 70 to 75 trees over two inches DBH.

The areas of MVMH property to be cleared of vegetation include trees that are approximately 20 to 70 years old of various species, such as mulberry (*Morus alba*), sycamore (*Platanus spp.*), American Elm (*Ulmus americana*), and pin oak (*Quercus palustrus*). Additionally, other landscape plan vegetation proposed for removal includes privet *(Ligustrum spp.*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), bush honeysuckle (*Lonicera spp.*), sumac *(Rhus spp.*), porcelainberry (*Ampelopsis brevipedunculata*), and trumpet creeper (*Campsis radicans*).

The area north of Four Mile Run is an area referred to as the Airport segment of the MVMH and stretches to the northern end of Ronald Reagan Washington National Airport. This section was realigned in 1940 when the airport was constructed on the site of the original alignment. Trees located on the west side of the MVMH in this area were largely planted during the 1963 planting plan, but the area has since returned to its natural woodland state, filling out the vegetation among the earlier plantings. The plantings in this area were intended to shield views of the Potomac Yard rail yard and the railroad, and, while the plantings have lost some integrity, they still function as intended. The proposed activities associated with realignment of track would include removing contributing features (trees) of a NRHP-listed resource. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

Construction staging and temporary access roads south of Four Mile Run would also cause damage to part of the NRHP-listed MVMH, requiring removal of trees and other vegetation that were planted in 1936 and contribute to the significance of the MVMH and GWMP. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

Removal of the vegetation in the location of the temporary construction staging areas and access driveways would introduce visual elements into the properties' setting that would compromise their historic significance. The gap in vegetation created by the temporary construction staging areas and access driveways would open up views to the Metrorail tracks and Potomac Yard Shopping Center. While the rail yard is no longer extant,

removing the trees at this location temporarily would introduce views to the west that were never intended as part of the design. These temporary views would not perpetuate a scenic quality and contemplative experience for travelers, an important characteristic of the parkway experience. NPS parklands used for construction activities would be restored based on an NPS-approved planting plan. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Restoration of MVMH and GWMP temporarily impacted areas would be a condition of any permit issued by NPS.

The temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d), since NPS has stated they would not issue a permit for construction access for the project from the GWMP, and the use for construction will be of a nature that will affect the attributes of the property to which makes the park significant both as a park and as a historic site.

5.6.3 Potomac Greens Park

Build Alternative D would require the permanent use of 1.21 acres and would temporarily occupy 0.40 acre of Potomac Greens Park. The area required for permanent use is needed for the realigned track along the western boundary of the Potomac Greens Park between the existing track alignment and the townhomes along Potomac Greens Drive. A portion of the pedestrian bridges and landings would also be located within the park boundaries. The permanent use would impact an existing pedestrian path, open space, and a seating area.

Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction of the proposed station would remove existing vegetation along the western boundary of the park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park.

Of the 0.40 acre of temporary occupancy of Potomac Greens Park, 0.02 acre is within the Greens Scenic Area easement. Since the Greens Scenic Area easement overlays the Potomac Greens Park, NPS is considered an official with jurisdiction over portions of Potomac Greens Park as a Section 4(f) resource. Since the temporary occupancy to the Greens Scenic Area easement portion of Potomac Greens Park would require the release of the easement and a land exchange, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.6.4 Greens Scenic Area Easement

Build Alternative D would not require the permanent use of the Greens Scenic Area easement, but would temporarily occupy 0.02 acre of the Green Scenic Area easement. Although a permanent use of Potomac Greens Park is necessary under Build Alternative D, the area required is not located within the overlapping Greens Scenic Area easement. Temporary occupancy of the Greens Scenic Area easement would be necessary to provide a staging area for construction equipment. Construction of the proposed station would a permit from NPS for the removal of existing vegetation along the western boundary of the park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from the Potomac Greens Park. Build Alternative D would not require the permanent use of the Greens Scenic Area easement.

Since the temporary occupancy to the Greens Scenic Area easement would require the release of the easement subject to an equal value exchange in property or interest in property per 54 U.S.C. 102901, the temporary occupancy does not qualify as an exemption under 23 CFR 774.13(d).

5.6.5 Rail Park

Build Alternative D would require the permanent use of 1.55 acres and would temporarily occupy 1.71 acres of the Rail Park. The area required for permanent use is located along the eastern boundary of the park and would be used for aerial structures to support the new track alignment. Construction staging would require the removal of the existing vegetation throughout the property and vegetation bordering the Metrorail tracks. The temporary occupancy of Rail Park under Build Alternative D could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.6.6 Four Mile Run Trail

Build Alternative D would not require permanent use of Four Mile Run Trail, but would potentially require a temporary occupancy of Four Mile Run Trail. During construction of the Metrorail bridge over Four Mile Run, the trail segment underneath the new bridge may be closed to the public for a period of no more than six months. During construction periods, proper signage would direct trail users to alternate routes. The temporary

occupancy of Rail Park under Build Alternative D could potentially qualify as an exemption pending an agreement with the City of Alexandria.

5.6.7 Archaeological Site 44AX0220

Build Alternative D is anticipated to require the permanent use of Archaeological Site 44AX0220. Permanent use of Archaeological Site 44AX0220 would include superficial soil disturbance and soil compression caused by the construction of temporary access roads for Build Alternative D. Permanent use would be caused by subsequent soil compaction and rutting, disturbances associated with silt fence and construction fence installation, subsequent soil erosion, and restoration efforts. The NRHP eligibility of Archaeological Site 44AX0220 has not been determined. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative.

6.0 DETERMINATION OF FEASIBLE AND PRUDENT AVOIDANCE ALTERNATIVE

If a proposed Section 4(f) use is determined not *de minimis*, FTA is required to determine whether a feasible and prudent avoidance alternative exists as described in **Section 2.3**. If no prudent and feasible avoidance alternative exists, the project must include all possible planning to minimize harm to the site, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303(c)(2)). If no feasible and prudent avoidance alternative exists, FTA must select the project alternative that causes the least overall harm in light of the statute's preservation purpose.

6.1 Development of Alternatives Considered for Section 4(f) Evaluation

The planning process for the Potomac Yard Metrorail Station began with the *Potomac Yard Metrorail Station Concept Development Study* (2010), in which eight station alternatives in addition to a No Build Alternative were evaluated. The station alternatives were developed in consultation with the Metrorail Station Feasibility Work Group, an advisory group of elected and appointed officials. At a conceptual level, the study examined the characteristics of a station at potential locations. Station characteristics considered when evaluating the alternatives included property ownership, station design, relationship to NPS lands, ridership, financing, and implementation considerations.

The No Build Alternative and the eight Metrorail station alternatives identified during the *Concept Development Study (2010)* were advanced into the scoping phase of the Environmental Impact Statement (EIS) and were presented to governmental agencies and the general public for review and comment during the scoping process and at the agency and public scoping meetings. Each of the Build Alternatives from the *Concept Development Study* included three potential station options (underground, at-grade, and aerial). The Build Alternatives, referred to during the scoping process as Metrorail Station Alternatives A, B1, B2, B3, C1, C2, D1, and D2, are shown in **Figure 6-1** and described in the *Initial Screening of Alternatives Report* (2011). A Virginia Railway Express (VRE) Station Alternative, Bus Alternative, and Parking Garage Alternative were also included in the initial screening of alternatives. The No Build Alternative was not evaluated as part of the initial screening.

To develop a reasonable range of alternatives to be fully evaluated, the alternatives from the *Concept Development Study*, plus additional alternatives suggested during the scoping process (also shown in **Figure 6-1**) were further refined as part of a two-step process. The *Initial Screening of Alternatives Report* documented the first step of the refinement process, which screened alternatives based on the following criteria:

1. **Responsiveness to Project Purpose and Need:** All alternatives were found to meet the project Purpose and Need with the exception of Alternatives E1, E2, the VRE Station Alternative, Bus Alternative, and the Parking Garage Alternative.
2. **Consistency with Land Use and Development Plans:** All alternatives were found to be consistent with land use and development plans with the exception of the at-grade options of Alternatives C1, C2, D1, D2, and D3, the VRE Station Alternative, Bus Alternative, and the Parking Garage Alternative.
3. **Technical Feasibility:** Metrorail Station Alternatives A, B1, B2 and B3 (aerial and underground options only); C1, C2, D1, and D2 (at-grade, aerial, and underground options); D3 (at-grade and underground options only) did not pass the initial screening because they were not technically feasible.

As a result of the initial screening of alternatives, five Metrorail station Build Alternatives (Build Alternatives A, B1, B2, B3, and D3) were identified as potentially feasible location options for a Potomac Yard Metrorail station. However, the initial screening of alternatives also determined there could be numerous variations in the precise layout and location of the five alternatives. Therefore, “feasible station zones” that could accommodate Build Alternatives A, B1, B2, B3, and D3 and minimize the potential for social, environmental, and economic impacts, while maximizing the potential benefits of a Metrorail station, were identified for further analysis. The size and configuration of the station and associated facilities were determined for each of the alternatives based on technical considerations to minimize track length and complexity; minimize impacts to existing Metrorail facilities; maintain track alignment geometry in accordance with WMATA standards; and comply with CSXT standards for vertical and horizontal clearance. The potential station locations within each zone were chosen to maximize access to the planned development in Potomac Yard, minimize impacts to Potomac Greens Park and the Greens Scenic Area easement, and minimize impact to wetlands. The station locations chosen for each of the three zones became Build Alternatives A, B and D, which are being evaluated in the Draft EIS for the Potomac Yard Metrorail Station project.

To determine if a feasible and prudent avoidance alternative exists, a reanalysis of the initial alternatives screened out during the EIS scoping process and several new alternatives suggested by contributing agencies during the EIS development process are examined in **Section 6.2.**

6.1.1 Development of Alternative Construction Access

In addition to the station alternatives development process described under **Section 6.1**, additional consideration was given to different construction access methods. During project development, As described in previous sections, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources. To reduce impacts to Section 4(f) resources, a modified construction access option was assessed for Build Alternatives A and B. As described in **Section 3.2.2**, construction access for Build Alternatives A and B was assessed under two construction options:

- **Option 1 Construction Access**: Option 1 would include access to the area east of the existing Metrorail tracks provided via a temporary construction access driveway from the George Washington Memorial Parkway (GWMP). Construction vehicles would use the southbound GWMP roadway from the Airport Access Road to Slaters Lane (1.7 miles). Additional access would be provided through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.
- **Option 2 Construction Access**: Option 2 would only include access to the area east of the existing Metrorail tracks through the residential areas of Potomac Greens and Old Town Greens via the entire length of Potomac Greens Drive (0.7 mile); construction vehicles would access this area from U.S. Route 1.

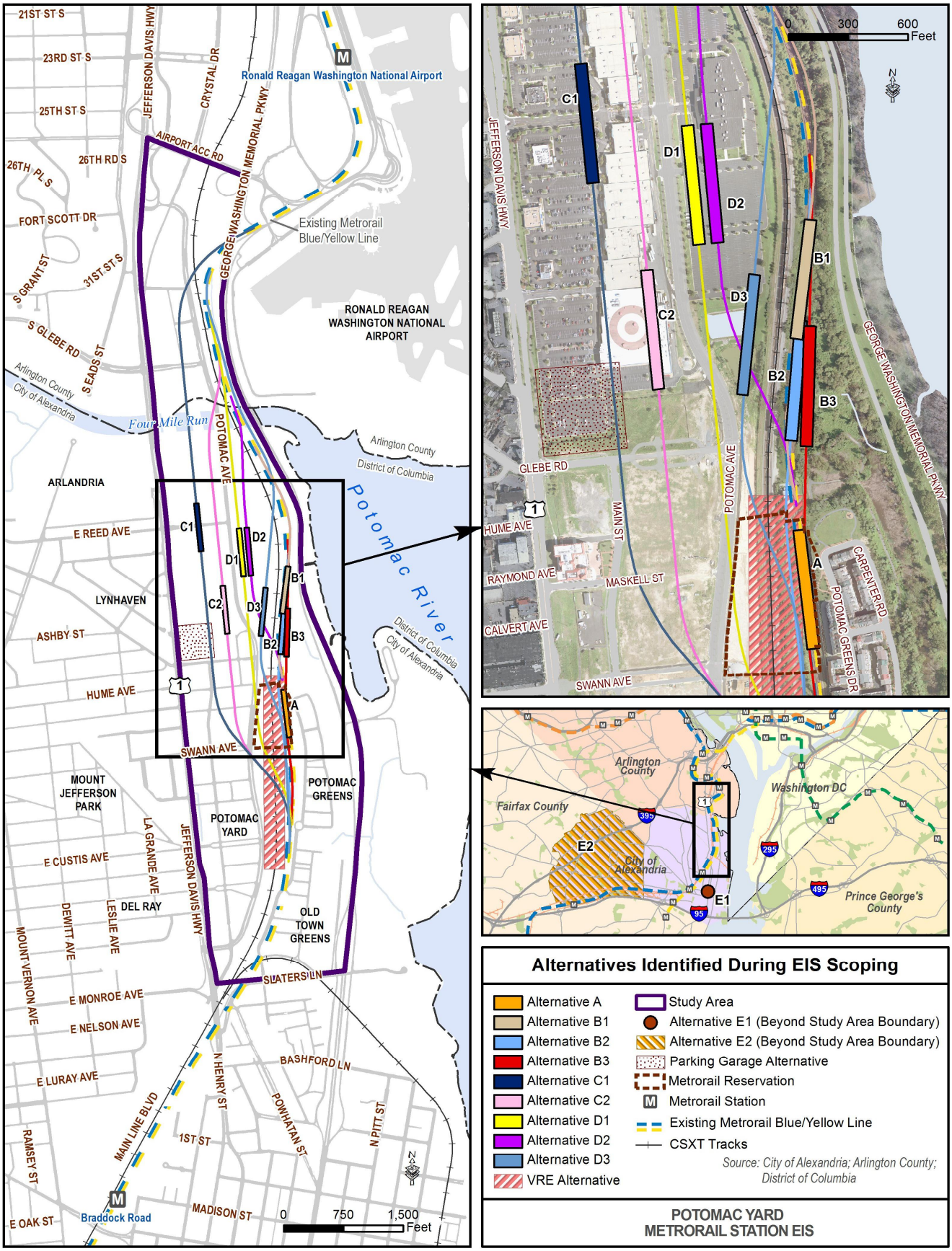
For both Build Alternatives A and B, Option 2 Construction Access would reduce and minimize potential impacts to the GWMP and MVMH over the Option 1 Construction Access. Build Alternative A would still require the permanent use of Potomac Greens Park and temporary occupancy of Potomac Greens Park and Greens Scenic Area easement. Build Alternative B would still require the permanent use of GWMP, MVMH, Potomac Greens Park, and Greens Scenic Area easement and temporary occupancy of Potomac Greens Park and Greens Scenic Area easement. For both Build Alternatives, the permanent impacts to Rail Park could be considered *de minimis* and the temporary occupancy could potentially qualify as an exemption pending an agreement with the City of Alexandria.

Although the impacts to Section 4(f) resources would be minimized under Option 2 Construction Access for Build Alternatives A and B over Option 1 Construction Access, impacts to Section 4(f) resources would still exist under both Build Alternatives. Build Alternatives A and B could not be considered a feasible and prudent avoidance alternative due to the remaining impacts.

In regards to Build Alternative D, access from the GWMP could not be avoided due to the construction of the aerial structures over Four Mile Run. The development of B-CSX is described further in **Section 6.1.2**.

Based on the analysis described in **Section 5.0**, Build Alternatives A, B, and D would require use of Section 4(f) resources. Therefore, none of the three Build Alternatives could be considered a feasible and prudent avoidance alternative.

Figure 6-1: Initial Alternatives Considered



6.1.2 Development of B-CSX Design Option

In an attempt to avoid NPS property and the Greens Scenic Area easement, a modified design option of Build Alternative B (known as B-CSX Design Option) was developed and evaluated in the Draft EIS. B-CSX Design Option moves the station and track elements of the alternative further to the north and west to fully avoid NPS owned property for the GWMP and the Greens Scenic Area easement located along the western edge of the parkway property and administered by NPS. The design option requires the relocation of the existing CSXT freight rail line further to the west and the placement of the proposed Metrorail station in the location formerly occupied by the CSXT line. **Figure 6-2** shows B-CSX Design Option in relation to Build Alternative B.

On November 13, 2013 the City of Alexandria, WMATA, and CSXT met to review the conceptual plans for B-CSX Design Option with CSXT staff. On May 28, 2014 CSXT staff responded to the City of Alexandria via letter regarding the proposed B-CSX Design Option indicating that while there may be a few minor improvements to the CSXT property and assets as part of this project, CSXT prefers that this option is not chosen. CSXT expressed that the disruption to both passenger and freight operations during construction outweighs any benefits that would be gained by CSXT.

However, the letter also states that CSXT understands the importance of the project to the neighborhood development, the city, WMATA, and the region and, thus, CSXT is willing to have the Design Option be considered as a possible alternative for the Potomac Yard Metrorail Station as long as certain conditions are met. These conditions include the following:

- CSXT shall be reimbursed for all costs associated with the project including:
  - Preliminary engineering plan reviews
  - All necessary track and signal work
  - Construction, engineering, and inspection
  - Full time flagman for duration of construction
- Project assumes responsibilities for any Amtrak/VRE passenger delays and penalties
- CSXT acquires the new right-of-way via fee simple ownership
- Maintain existing right-of-way width for the main section, at a minimum
- All pedestrian crossings must be grade separated and span the entire CSXT right-of-way
- CSXT must keep the ability to maintain access to its right-of-way and access roads

The letter also indicated that the above conditions are not all inclusive, but a list of initial concerns. As the project progresses, additional concerns raised by CSXT will need to be addressed as part of the normal project review progression.

Based on the analysis described in **Section 5.0**, B-CSX Design Option would require use of Section 4(f) resources. Therefore, B-CSX Design Option could not be considered a feasible and prudent avoidance alternative.

1673 **Figure 6-2: Build Alternative B and B-CSX Design Option**

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6.2 Feasible and Prudent Avoidance Analysis of Other Alternatives

Based on the findings of the *Initial Screening of Alternatives Report,* initial alternatives were screened out during the EIS scoping process that failed to meet the evaluation criteria. The No Build Alternative and each of the initial alternatives not advanced beyond the scoping phase were reexamined to determine whether they met the requirements of a feasible and prudent avoidance alternative as described in **Section 2.3**. Alternatives were determined to meet the requirements of a feasible and prudent avoidance alternative through a three-step test, based on the following criteria:

1. **Does the alternative avoid Section 4(f) resources?** Any alternative that uses a Section 4(f) resource cannot be considered an avoidance alternative.
2. **Feasible Factor: Can the alternative be built as a matter of sound engineering?** Alternatives were evaluated by a review of compliance with the current WMATA Manual of Design, Release 9 (2008) and relevant CSXT criteria.
3. **Prudent Factors: Does the alternative not result in unacceptable operational problems and does the alternative address the project's purpose and need?** Unacceptable operational problems are based on the constructability and construction phasing of each alternative. WMATA policy requires that construction activities not interrupt existing Metrorail operations on the Blue and Yellow Line for a period longer than a three-day holiday weekend (76 hours). The project's purpose and need is described in **Section 3.1**.

Table 6-1 shows the results of the feasible and prudent avoidance test for the initial alternatives that were eliminated during the scoping process. All of the initial Metrorail Station Alternatives and the VRE Station Alternative were found to use a Section 4(f) resource and were thus eliminated as an avoidance alternative. The No Build, Bus, and Parking Garage Alternatives were all deemed technically feasible and did not result in any unacceptable operational problems, but they did not address the project's purpose and need in establishing a new access point to the Metrorail system. Since all of the initial alternatives eliminated during scoping failed the feasible and prudent avoidance test, none of them can be considered a feasible and prudent avoidance alternative.

In addition to the re-examining initial alternatives, **Table 6-2** and **Figure 6-3** show several new alternatives examined in regards to the feasible and prudent avoidance test. The new alternatives were suggested for consideration by cooperating and participating agencies during the EIS development process. Additional alternatives examined include the realignment of CSXT tracks to accommodate new WMATA tracks; the introduction of nearby ferry service; and providing a streetcar connection to existing Metrorail stations. The options for realignment of CSXT tracks include underground, at-grade, and aerial options. The realignment of CSXT tracks underground or aerial was deemed not feasible due to the inability of realigned track to tie-in to existing track given the vertical and horizontal track geometry requirements. The realignment of CSXT tracks at-grade (known as B-CSX Design Option) was deemed feasible and prudent, but is not an avoidance alternative as the option would require the use of Section 4(f) resources (see **Section 5.5** for B-CSX Design Option Section 4(f) Uses and **Section 6.1.2** for the development of B-CSX Design Option). The introduction of ferry or streetcar service is technically feasible, but the two alternatives do not address the project's purpose and need as they fail to establish a new access point to the Metrorail system. All of these new alternatives failed to meet the feasible and prudent avoidance test and cannot be considered avoidance alternatives.

1715 **Table 6-1: Feasible and Prudent Avoidance Test Applied to Initial Alternatives**

Alternatives		Avoids Section 4(f) Resource?	Feasible Factor	Prudent Factors	
			Can be built as a matter of sound engineering?	Does not result in unacceptable operational problems?	Addresses project's purpose and need?
No Build Alternative	existing condition	Yes	Yes	Yes	No
Metrorail Station Alternative A	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative B1	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative B2	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative B3	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative C1	at-grade	No	-	-	-
	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative C2	at-grade	No	-	-	-
	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative D1	at-grade	No	-	-	-
	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative D2	at-grade	No	-	-	-
	underground	No	-	-	-
	aerial	No	-	-	-
Metrorail Station Alternative D3	at-grade	No	-	-	-
	underground	No	-	-	-
VRE Station Alternative	at-grade	No	-	-	-
Bus Alternative	at-grade	Yes	Yes	Yes	No
Parking Garage Alternative	at-grade	Yes	Yes	Yes	No

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Table 6-2: Feasible and Prudent Avoidance Test Applied to Additional Alternatives

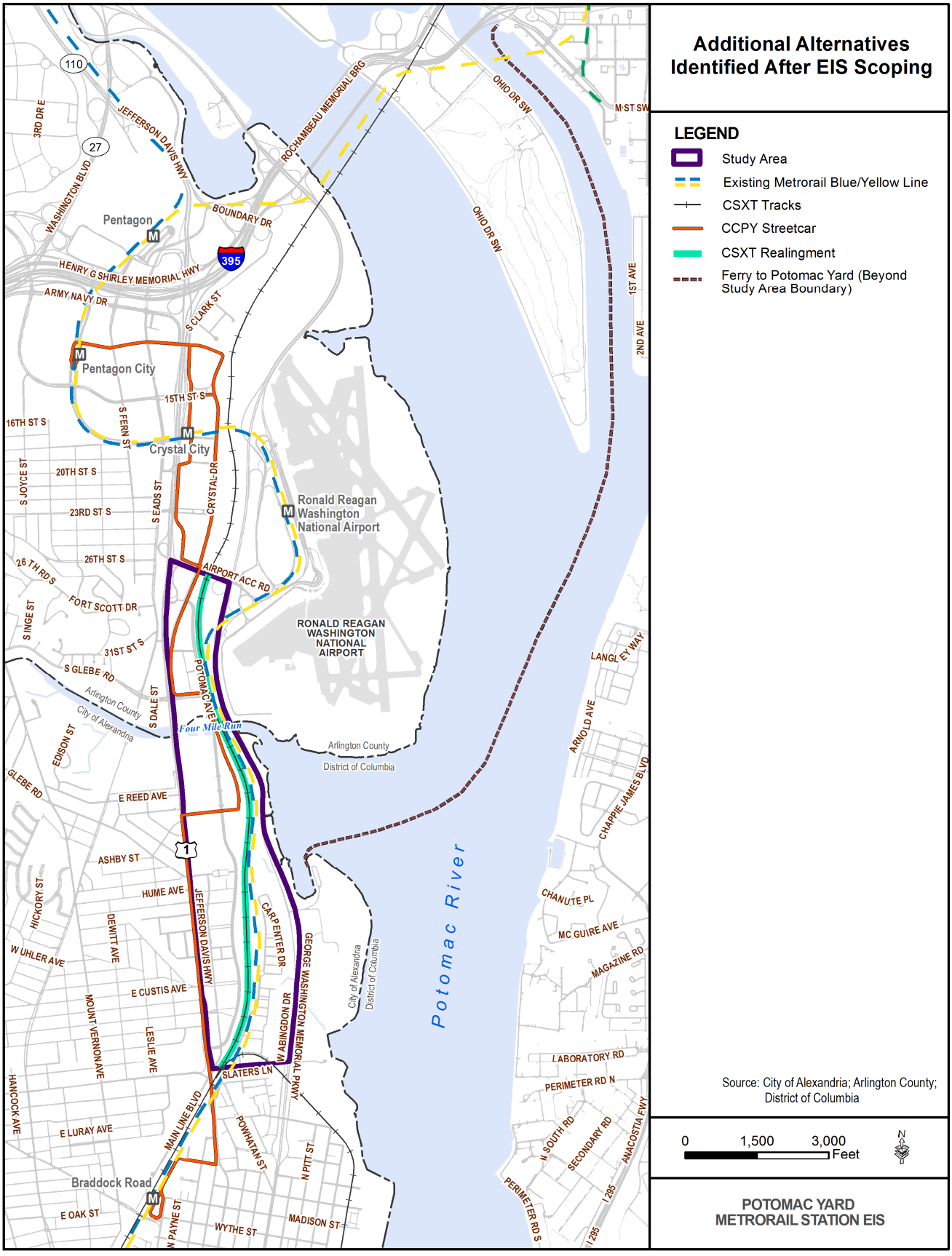
Alternatives		Feasible Factor	Prudent Factors	
		Can be built as a matter of sound engineering?	Does not result in unacceptable operational problems?	Addresses project's purpose and need?
CSXT Realignment Alternative	underground	No	-	-
	at-grade[1] (B-CSX Design Option)	Yes	Yes	Yes
	aerial	No	-	-
Ferry Service Alternative	at-grade	Yes	Yes	No
Streetcar Service Alternative	at-grade	Yes	Yes	No

(1) Although B-CSX Design Option is considered feasible and prudent, the alternative is not an avoidance alternative based on the Section 4(f) uses described in Section 5.3.

6.3 Feasible and Prudent Avoidance Test Conclusion

Based on the analysis of potential avoidance alternatives, none of the alternatives considered constitutes a feasible and prudent avoidance alternative in accordance with 23 CFR 774. Thus, a least overall harm analysis of the three Build Alternatives and B-CSX Design Option is required.

Figure 6-3: Additional Alternatives Identified After EIS Scoping



7.0 MEASURES TO MINIMIZE HARM

This Section 4(f) Evaluation documents "measures to minimize harm" in accordance with 23 CFR 774.17. From the initial screening of alternatives until the design of each Build Alternative, numerous modifications were made to further minimize impacts onto parklands and historic sites. Measures to minimize harm to Section 4(f) resources were considered throughout the planning process.

For Build Alternative A, the station location was shifted further south during the conceptual design process to minimize potential impacts to Potomac Greens Park. Proposed mitigation measures, such as restoring vegetation to areas cleared for station construction staging and adding new landscaping, were included to minimize visual impacts. Build Alternative A was designed to minimize harm by placing needed ancillary spaces at the mezzanine level to minimize the footprint of the station and the potential use of adjacent park land. Construction impacts from Build Alternative A were minimized based on the development of an alternative construction access option (Option 2) that does not require access from the GWMP (see **Section 6.1.1**). By avoiding construction access from the GWMP, Option 2 Construction Access avoids impacting two archeological sites (44AX0221 and 44AX0222) and the impacts described under **Section 5.1.1** and **5.1.2.**

For Build Alternative B, the design of the track segments was modified during conceptual design to be constructed on retained fill rather than bermed earth to minimize the use to Potomac Greens Park. The central portions of the station platform structures were also designed to be constructed on retained fill and the Greens Scenic Area easement. Proposed mitigation measures, such as restoring vegetation to areas cleared for construction staging, adding new landscaping, and reducing the height of the station, were included to minimize visual impacts. Build Alternative B was also designed to minimize harm by placing needed ancillary spaces at the mezzanine level to minimize the footprint of the station and reduce the potential use of adjacent park land. Construction impacts from Build Alternative B were minimized based on the development of an alternative construction access option (Option 2) that does not require access from the GWMP (see **Section 6.1.1**). By avoiding construction access from the GWMP, Option 2 Construction Access avoids impacting two archeological sites (44AX0221 and 44AX0222) and the impacts described under **Section 5.3.1** and **5.3.2.** During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

For B-CSX Design Option, the design option was developed to fully avoid NPS-owned property for the GWMP and Greens Scenic Area easement as well as cultural resources and wetlands on NPS property. To avoid the NPS property and easement, the design option requires the relocation of the existing CSXT freight rail line further to the west and the placement of the proposed Metrorail station in the location formerly occupied by the CSXT line. In comparison to Build Alternative B, B-CSX Design Option also includes additional land acquisitions, displacement of a business, and reductions in developable land for the North Potomac Yard redevelopment area.

For Build Alternative D, aerial structures were designed to be supported by piers and bents rather than fill, which minimizes the footprint of the improvements. A girder bridge rather than a truss bridge over Four Mile Run is proposed to reduce visual impacts. Proposed mitigation measures, such as restoring vegetation to areas cleared for construction staging and adding new landscaping, were included to minimize visual impacts.

The City of Alexandria has developed potential mitigation measures to impacts to Section 4(f) resources as documented in the least overall harm analysis (see **Section 9.0**). These potential mitigation measures will be updated based on consultation with affected parties during the preliminary and final design process.

The efforts to minimize harm are on-going and expected to become more detailed upon the selection of a preferred alternative, consideration of public comment, additional design, and the development of a Section 106 memorandum of agreement. This section will be updated to describe any future planning and design decisions that are made to minimize harm to Section 4(f) resources.

8.0 *DE MINIMIS* IMPACT PRELIMINARY DETERMINATION

As defined in **Section 2.2**, a *de minimis* impact determination can only be made on a historic property after taking into account any measures to minimize harm that result in a National Historic Preservation Act of 1966 (NHPA) Section 106 finding of no adverse effect or would not adversely affect the activities, features, or attributes qualifying a property for protection under Section 4(f). In other words, a *de minimis* impact determination is made for the net impact on the Section 4(f) property. A use of Section 4(f) property having a *de minimis* impact can be approved by FTA without the need to develop and evaluate alternatives that would avoid using the Section 4(f) property. A *de minimis* impact determination may be made for a permanent incorporation or temporary occupancy of Section 4(f) property. **Table 5-1** summarizes the potential permanent and temporary uses of existing and planned publicly owned parks that are in the project study area. **Table 5-2** summarizes the potential permanent and temporary uses of historic architectural resources. **Table 5-3** summarizes the potential permanent uses of archaeological resources.

A *de minimis* impact determination requires agency coordination and public involvement as specified in 23 CFR 774.5(b). The regulation has different requirements depending upon the type of Section 4(f) property that would be used. For historic sites (Section 106), the consulting parties identified in accordance with 36 CFR Part 8007 must be consulted. The official(s) with jurisdiction must be informed of the intent to make a *de minimis* impact determination and must concur in a finding of no adverse effect or no historic properties affected in accordance with 36 CFR Part 800. Compliance with 36 CFR Part 800 satisfies the public involvement and agency coordination requirement for *de minimis* impact findings for historic sites. For non-historic 4(f) properties (parks recreation areas and wildlife/waterfowl refuges), the official with jurisdiction must concur with the *de minimis* determination after there has been a chance for public review and comment.

Table 8-1 provides a preliminary assessment of permanent uses to Section 4(f) resources qualify as a de minimis impact, while **Table 8-2** provides the same assessment but to temporary occupancies.

Of the Section 4(f) permanent uses identified, most uses do not qualify as *de minimis* due to the potential adverse effects to Section 106 resources or the impacts to park activities, features, or attributes. As of February 2015, only permanent uses of Rail Park under Build Alternative A, permanent uses of Potomac Greens Park under B-CSX Design Option, and the permanent use of Four Mile Run Trail (via an aerial structure) under Build Alternative D could potentially be considered *de minimis* pending consultation with official(s) with jurisdiction.

Of the Section 4(f) temporary occupancies identified, most uses do not qualify as *de minimis* due to the potential adverse effects to Section 106 resources. As of February 2015, only temporary occupancies of Rail Park under Build Alternatives A and B and B-CSX Design option, and temporary occupancies of Potomac Greens Park under B-CSX Design Option could potentially be considered *de minimis* pending consultation with official(s) with jurisdiction.

1809 **Table 8-1: Permanent Uses *De Minimis* Impact Preliminary Determination**

Resource	Official with Jurisdiction	Permanent Use (acres)	Is Impact *De minimis?*	Reasoning
BUILD ALTERNATIVE A				
Potomac Greens Park	City of Alexandria	0.71	No	Impacts park activities, features, or attributes
Rail Park	City of Alexandria	Less than 0.01	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or attributes
44AX0221	VDHR	N/A	No	Potential adverse effect to Section 106 resource
44AX0222	VDHR	N/A	No	Potential adverse effect to Section 106 resource
BUILD ALTERNATIVE B				
George Washington Memorial Parkway	NPS	0.16	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	0.16	No	Potential adverse effect to Section 106 resource
Potomac Greens Park	City of Alexandria	2.54	No	Impacts park activities, features, or features
Greens Scenic Area Easement	NPS	1.71	No	Potential adverse effect to Section 106 resource
44AX0221	VDHR	N/A	No	Potential adverse effect to Section 106 resource
44AX0222	VDHR	N/A	No	Potential adverse effect to Section 106 resource
B-CSX DESIGN OPTION				
Potomac Greens Park	City of Alexandria	0.10	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or attributes
BUILD ALTERNATIVE D				
George Washington Memorial Parkway	NPS	1.43	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	1.43	No	Potential adverse effect to Section 106 resource
Four Mile Run Trail	Arlington County	0.00 [(1)]	Potentially (pending consultation with official(s) with jurisdiction)	No physical use
Potomac Greens Park	City of Alexandria	1.21	No	Impacts park facilities
Rail Park [(2)]	City of Alexandria	1.55	No	Impacts park facilities
44AX0220	VDHR	N/A	No	Potential adverse effect to Section 106 resource

1810 [(1)] Four Mile Run Trail would only have aerial impacts.
1811 N/A = Not Applicable; acreages for archaeological resources is undetermined until the eligibility of each is assessed after the selection of the
1812 preferred alternative
1813

1814 **Table 8-2: Temporary Occupancy *De Minimis* Impact Preliminary Determination**

Resource	Official with Jurisdiction	Temporary Occupancy (acres)	Is Impact *De minimis?*	Reasoning
BUILD ALTERNATIVE A: Option 1 Construction Access				
George Washington Memorial Parkway	NPS	0.30	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	0.30	No	Potential adverse effect to Section 106 resource
Potomac Greens Park	City of Alexandria	2.30	No	Potential adverse effect to Section 106 resource (overlaps GSAE)
Greens Scenic Area Easement	NPS	0.25	No	Potential adverse effect to Section 106 resource
Rail Park	City of Alexandria	1.79	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
BUILD ALTERNATIVE A: Option 2 Construction Access				
Potomac Greens Park	City of Alexandria	1.61	No	Potential adverse effect to Section 106 resource (overlaps GSAE)
Greens Scenic Area Easement	NPS	0.13	No	Potential adverse effect to Section 106 resource
Rail Park	City of Alexandria	1.79	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
BUILD ALTERNATIVE B: Option 1 Construction Access				
George Washington Memorial Parkway	NPS	0.78	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	0.78	No	Potential adverse effect to Section 106 resource
Potomac Greens Park	City of Alexandria	3.43	No	Potential adverse effect to Section 106 resource (overlaps GSAE)
Greens Scenic Area Easement	NPS	3.09	No	Potential adverse effect to Section 106 resource
Rail Park	City of Alexandria	0.96	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
BUILD ALTERNATIVE B: Option 2 Construction Access				
George Washington Memorial Parkway	NPS	0.55	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	0.55	No	Potential adverse effect to Section 106 resource
Potomac Greens Park	City of Alexandria	3.43	No	Potential adverse effect to Section 106 resource (overlaps GSAE)
Greens Scenic Area Easement	NPS	3.09	No	Potential adverse effect to Section 106 resource
Rail Park	City of Alexandria	0.96	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
B-CSX DESIGN OPTION				
Potomac Greens Park	City of Alexandria	0.01	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
Rail Park	City of Alexandria	0.96	Potentially (pending consultation with official(s) with jurisdiction)	Does not affect park activities, features, or features
BUILD ALTERNATIVE D				
George Washington Memorial Parkway	NPS	2.40	No	Potential adverse effect to Section 106 resource
Mount Vernon Memorial Highway	NPS	2.40	No	Potential adverse effect to Section 106 resource
Potomac Greens Park	City of Alexandria	0.40	No	Potential adverse effect to Section 106 resource (overlaps GSAE)
Greens Scenic Area Easement [(1)]	NPS	0.02	No	Potential adverse effect to Section 106 resource
Rail Park [(2)]	City of Alexandria	1.71	No	Does affect park activities, features, or features

9.0 LEAST OVERALL HARM ANALYSIS

As described in **Section 6.0**, no feasible and prudent avoidance alternative was identified. Therefore, pursuant to 23 CFR 774.3(c), FTA may approve only the alternative that causes the "least overall harm" in light of the purposes of Section 4(f). The regulations require that determining which alternative causes the least overall harm is based upon assessing and balancing the following seven factors:

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

The following sections of this chapter summarize the results of an assessment of each of the project three Build Alternatives and B-CSX Design Option relative to these seven factors. The assessment considers the use of eight Section 4(f) resources by the three Build Alternatives and B-CSX Design Option as described in **Section 5.0** of this report. These Section 4(f) resources include:

- George Washington Memorial Parkway,
- Mount Vernon Memorial Highway;
- Potomac Greens Park,
- Greens Scenic Area easement;
- Rail Park;
- Archaeological Site 44AX0220 (eligibility to be assessed by consulting parties);
- Archaeological Site 44AX0221 (eligibility to be assessed by consulting parties); and,
- Archaeological Site 44AX0222 (eligibility to be assessed by consulting parties).

9.1 Factor 1: Ability to Mitigate Adverse Impacts to Each Section 4(f) Property

This factor requires an analysis of how the effects of each alternative can be mitigated for each of the six Section 4(f) resources. **Table 9-1** and **9-2** summarize the uses that would occur and preliminary mitigation measures that have been proposed as a result of consultation with the appropriate resource managers, including the City of Alexandria and NPS. The proposed mitigation is further discussed below by Section 4(f) resource. The ability to mitigate all impacts on Section 4(f) resources are pending based on further consultation with the officials with jurisdiction. The following subsections describe the preliminary mitigation measures that are proposed under each alternative. Additional mitigation measures will be developed after further consultation with officials with jurisdiction.

9.1.1 George Washington Memorial Parkway and Mount Vernon Memorial Highway

Build Alternative A Option 1 Construction Access, Build Alternative B (both construction options), and Build Alternative D would use parkland of the GWMP and MVMH. Permanent acquisition of park land varies, with Build Alternative B permanently using less than one percent of park land and Build Alternative D using about four percent of park land in the study area before mitigation. Build Alternative A Option 1 Construction Access, Build Alternative B (both construction options), and Build Alternative D would also temporarily occupy parkland of the GWMP and MVMH in the study area before mitigation.

Build Alternative A Option 1 Construction Access would require the temporary occupancy of 0.30 acre of parkland to provide access for construction vehicles from the Parkway to the station location. Construction access roads for Build Alternative A Option 1 Construction Access would require the removal of a portion of the vegetation along the GWMP. Although the property would be vegetated after construction, approximately 20-40 years of vegetative growth would be required before the vegetation returned to the current appearance.

Table 9-1: Uses and Potential Mitigation by Alternative

Resource	Associated Build Alternative	Permanent Use (acres)	Temporary Occupancy (acres)	Potential Mitigation
George Washington Memorial Parkway/ Mount Vernon Memorial Highway	Build Alternative A Option 1 Construction Access	0.00	0.30	Permanent: • Develop landscape and visual screening plans consistent with the Vegetation Cultural Landscape Report. • Replace landscaping and park amenities impacted by the alternative. Temporary: • Restore temporarily disturbed areas to better than existing conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS.
	Build Alternative B Option 1 Construction Access	0.16	0.78	
	Build Alternative B Option 2 Construction Access	0.16	0.55	
	Build Alternative D	1.43	2.40	
Potomac Greens Park	Build Alternative A Option 1 Construction Access	0.71	2.30	Permanent: • Replace landscaping and park amenities impacted by the alternative. Temporary: • Restore temporarily disturbed areas to better than existing conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS.
	Build Alternative A Option 2 Construction Access	0.71	1.61	
	Build Alternative B (both options)	2.54	3.43	
	B-CSX Design Option	0.10	0.01	
	Build Alternative D	1.21	0.40	
Greens Scenic Area Easement	Build Alternative A Option 1 Construction Access	0.00	0.25	Permanent: • Develop new easement agreement with NPS. • Develop landscape and visual screening plans consistent with the Vegetation Cultural Landscape Report. • Replace landscaping and park amenities impacted by the alternative. Temporary: • Restore temporarily disturbed areas to better than existing conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS.
	Build Alternative A Option 2 Construction Access	0.00	0.13	
	Build Alternative B	1.71	3.09	
	Build Alternative D	1.21 (0.00)	0.40 (0.02)	
Rail Park	Build Alternative A (both options)	Less than 0.01	1.79	Permanent: • Replace park amenities impacted by the alternative. Temporary: • Restore temporarily disturbed areas to existing conditions through construction restoration, landscaping, and vegetation plans.
	Build Alternative B (both options)	0.00	0.96	
	B-CSX Design Option	0.00	0.96	
	Build Alternative D	1.55	1.71	
44AX0220	Build Alternative D	Yes	N/A [1]	Permanent: • Design-based avoidance of NRHP eligible archaeological resources
44AX0221	Build Alternative A Option 1 Construction Access	Yes	N/A [1]	Permanent: • Design-based avoidance of NRHP eligible archaeological resources.
	Build Alternative B Option 1 Construction Access	Yes	N/A [1]	
44AX0222	Build Alternative A Option 1 Construction Access	Yes	N/A [1]	Permanent: • Design-based avoidance of NRHP eligible archaeological resources.
	Build Alternative B Option 1 Construction Access	Yes	N/A [1]	

[1] Any disturbance to an archaeological resource is considered a permanent impact.
N/A= Not Applicable

Table 9-2: Section 4(f) Resources Requiring Mitigation by Alternative

Section 4(f) Resources with Potential Impacts	Alternative Requires Mitigation to Section 4(f) Resources					
	Build Alternative A Option 1 Construction Access	Build Alternative A Option 2 Construction Access	Build Alternative B Option 1 Construction Access	Build Alternative B Option 2 Construction Access	B-CSX Design Option	Build Alternative D
GWMP	Yes	No	Yes	Yes	No	Yes
MVMH	Yes	No	Yes	Yes	No	Yes
Potomac Greens Park	Yes	Yes	Yes	Yes	Yes	Yes
Greens Scenic Area Easement	Yes	Yes	Yes	Yes	No	Yes
Rail Park	Yes	Yes	Yes	Yes	Yes	Yes
44AX0220	No	No	No	No	No	Yes
44AX0221	Yes	No	Yes	No	No	No
44AX0222	Yes	No	Yes	No	No	No
Number of Section 4(f) Resources Requiring Mitigation	**7**	**3**	**7**	**5**	**2**	**6**

Build Alternative B would require the permanent use of a portion of parkland (0.16 acre) of the GWMP for the realigned track alignment. Under Option 1 Construction Access, the temporary occupancy of 0.78 acre of parkland is necessary to provide access for construction vehicles from the Parkway to the station location. Although the property would be re-vegetated after construction, approximately 20-40 years of vegetative growth would be required before the vegetation returned to the current appearance. Under Option 2 Construction Access, the temporary occupancy of 0.55 acre of parkland is necessary to provide access for construction staging. Construction staging would remove much of the vegetation that currently provides a visual barrier between the GWMP and the proposed location of the Metrorail station for Build Alternative B. During preliminary design, and prior to the Final EIS, alternative methods will be developed to avoid use of the GWMP and reduce the area required of the Green Scenic Area easement for construction staging. This avoidance approach will be undertaken to reduce impacts to natural and cultural resources.

Build Alternative D would require the permanent use of 1.43 acres of parkland of the GWMP for the realigned track alignment. Permanent use includes both aerial and physical impacts required for reconnection to the existing track alignment. The temporary occupancy of 2.40 acres of parkland for Build Alternative D is necessary to provide access for construction vehicles from the Parkway to the station location. Although the property would be vegetated after construction, approximately 20-40 years of vegetative growth would be required before the vegetation returned to the current appearance. Construction staging for Build Alternative D would require the removal of a portion of the vegetation along the GWMP, most notably in the vicinity of Four Mile Run.

For Build Alternatives A and B Option 1 Construction Access and Build Alternative D, construction of temporary access roads would require removal of trees and other vegetation that were planted as part of the original design of the GWMP. The vegetation was planted in an effort to perpetuate a scenic quality and contemplative experience and to screen objectionable views to Potomac Yard. Removal of the vegetation would also expose visual elements to the property's setting that contribute to its historic significance. As the first parkway built and maintained by the U.S. government, the MVMH is nationally significant. Linking George Washington's former home, Mount Vernon in Fairfax County with the Arlington Memorial Bridge, the 15.2-mile segment was designed and landscaped to maximize scenic, aesthetic and commemorative qualities. The larger GWMP, which includes MVMH also serves as a memorial to George Washington, as the Parkway was conceived as a route between his home at Mount Vernon and the Potowmack Canal in Great Falls, Virginia.

For the three Build Alternatives, removal of vegetation would expose visual elements into the property's setting. B-CSX Design Option does not require the removal of vegetation along the GWMP. The gap in vegetation created by the access roads and construction clearing would open up views to the proposed Potomac Yard Metrorail Station, Metrorail tracks, and the Potomac Yard Shopping Center that may last 20-40 years until the area is re-vegetated with trees of similar maturity. While the rail yard is no longer existent, removing the trees at this location

would expose views to the west that were never intended as part of the design. These views would not perpetuate a scenic quality and contemplative experience for travelers, an important characteristic of the parkway experience. Additionally, the western viewshed of the GWMP (towards Potomac Yard) has been altered over time and will continue to be changed independently of the Metrorail station by increased urban development as identified in Section 3.8 Visual Resources of the Potomac Yard Metrorail Station Draft EIS Volume I.

Minimization measures such as vegetation planting and building design may help minimize visual effects to the GWMP, but are not anticipated to fully mitigate effects. Vegetation, especially trees, would be added and restored to the GWMP, in accordance with the Secretary of the Interior's *Standards for Treatment of Historic Properties*. Mitigation would reflect the core design principles of the GWMP as documented in the *Mount Vernon Memorial Highway Cultural Landscape Report,* Vol. I, p. 72-74 (NPS, 1987). Adding new landscaping to Potomac Greens Park and the Greens Scenic Area easement would provide a visual buffer to the proposed station. Landscape mitigation measures would be consistent with the terms of the scenic easement, as well as provide potential mitigation for impacts to the easement. The minor viewshed effects to the GWMP are not so severe that they substantially impact the protected activities (recreational driving), features, or attributes of the contributing resources to the GWMP.

Several preliminary measures are proposed to mitigate permanent uses and temporary occupancies of the GWMP and Mount Vernon Memorial Trail for Build Alternatives B and D. The project could develop landscape and visual screening plans consistent with the *Vegetation Cultural Landscape Report* and the U.S. Department of Agriculture, Bureau of Public Roads, *Plan for Development, Mount Vernon Memorial Highway, Washington, DC to Mount Vernon, VA.* (1930). The project could also replace any park amenities and landscaping that are removed or displaced due to any permanent use by following a new landscaping planting strategy that is consistent with the historic character and design principles of the GWMP, as documented in the *Mount Vernon Memorial Highway Cultural Landscape Report*, Vol. I, p. 72-74 (NPS, 1987). The planting strategy ideally will utilize native plant and tree species described and used for the MVMH construction in the 1930s, while removing non-native invasive species along the Parkway. Vegetation, especially trees, would be added and restored to the GWMP, in accordance with the Secretary of the Interior's *Standards for Treatment of Historic Properties*. Vegetative screening would require approximately 20-40 years of regrowth to be re-established similar to its current state. Conversely, some vegetation along the GWMP within the study area could be thinned or removed to improve and restore important views east toward the Potomac River identified in the *Vegetation of the George Washington Memorial Parkway Cultural Landscape Report* (2009). Additional vegetation could be planted to provide a visual buffer between the GWMP and the project.

Temporary occupancy mitigation efforts include the restoration of disturbed areas to prior conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS. Mitigation would include restoration of parkland temporarily used for construction activities to a condition equal to or better than current and planned conditions. The potential mitigation measures if implemented would mitigate the effects to the park under all alternatives. For Build Alternatives that require construction access from the GWMP, a construction access permit is required. As described in previous sections, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

Discussions are ongoing regarding the location of construction staging areas and have yet to be resolved. Preliminary staging areas have been identified. More detail on construction staging would become available as discussions with property owners continue. The ability to mitigate all impacts to the GWMP and MVMH are pending based on further consultation with the officials with jurisdiction.

9.1.2 Potomac Greens Park

The three Build Alternatives and B-CSX Design Option would use Potomac Greens Park. Permanent use of Potomac Greens Park varies by Build Alternative, with Build Alternative A using about four percent, B-CSX using less than one percent, Build Alternative B using about 12 percent, and Build Alternative D using about six percent before mitigation.

The three Build Alternatives and B-CSX Design Option would temporarily occupy portions of Potomac Greens Park. Temporary occupancy of Potomac Greens Park varies by Build Alternative, with Build Alternative A Option 1 Construction Access temporarily occupying about 11 percent, Build Alternative A Option 2 Construction Access temporarily occupying about eight percent, Build Alternative B (both options) occupying about 17 percent, B-CSX

Design Option occupying less than one tenth of a percent, and Build Alternative D occupying about two percent before mitigation.

Build Alternative A would require the permanent use of 0.71 acre along the western boundary of the park and would be used for the station platform and facilities. Build Alternative A Option 1 Construction Access would require the temporary occupancy of 2.30 acres of Potomac Greens Park. Temporary occupancy of Potomac Greens Park would be necessary to provide an access road for construction vehicles and a staging area for construction equipment. The access road through Potomac Greens Park would be located on the western border of the park, and would connect to entry and exit driveways along the GWMP to the station location. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of Potomac Greens Park. Build Alternative A Option 2 Construction Access would require the temporary occupancy of 1.61 acres of Potomac Greens Park. Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of Potomac Greens Park.

Build Alternative B requires the permanent use of 2.54 acres of Potomac Greens Park to accommodate a part of the station platform and facilities, along the western boundary of the park. Temporary occupancy of Potomac Greens Park would be necessary to provide a staging area for construction equipment. Under both construction access options, construction of the proposed station would remove 3.43 acres of existing vegetation along the western boundary of Potomac Greens Park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from Potomac Greens Park.

B-CSX Design Option would require the permanent use of 0.10 acre along the western boundary of Potomac Greens Park and would be used for the realigned WMATA track. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, trees, and fencing of Potomac Greens Park totaling 0.10 acre.

Build Alternative D requires the permanent use of 1.21 acres of Potomac Greens Park to accommodate the new aerial track configuration, mainly on the western boundary of the park, including parkland between the existing track alignment and Potomac Greens Drive. A portion of the pedestrian bridges would be located within the park boundaries. Construction of the proposed station would remove 0.40 acre of existing vegetation along the western boundary of Potomac Greens Park, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from Potomac Greens Park.

Several potential measures are proposed to mitigate permanent uses and temporary occupancies to Potomac Greens Park. Since the Greens Scenic Area easement is located within Potomac Greens Park, the City of Alexandria and NPS could develop landscape and visual screening plans consistent with the *Vegetation Cultural Landscape Report*. The project could also replace any park amenities and landscaping that are removed or displaced due to any permanent use by following a new landscaping planting strategy that is consistent with the historic character and design principles of the GWMP, as documented in the *Mount Vernon Memorial Highway Cultural Landscape Report*, Vol. I, p. 72-74 (NPS, 1987). Adding new landscaping to Potomac Greens Park would provide a visual buffer to the proposed station. Landscape mitigation measures would be consistent with the terms of the scenic easement, as well as provide potential mitigation for impacts to the easement.

Additional efforts include the restoration of disturbed areas to prior conditions through construction restoration, landscaping, and vegetation plans. Discussions are ongoing regarding the location of construction staging areas and have yet to be resolved. Preliminary staging areas have been identified. More detail on construction staging would become available as discussions with property owners continue. The ability to mitigate all impacts to the Potomac Greens Park are pending based on further consultation with the officials with jurisdiction.

9.1.3 Greens Scenic Area Easement

Build Alternatives B and D would require the permanent use of the Greens Scenic Area easement. Build Alternative B would use about 11 percent and Build Alternative D would use six percent of the resource. Build Alternative A and B-CSX Design Option would not require any permanent use of the easement.

The three Build Alternatives would temporarily occupy portions of the Greens Scenic Area easement. Temporary occupancy of the Greens Scenic Area easement varies by Build Alternative, with Build Alternatives A (both options) and D temporarily occupying about one percent and Build Alternative B (both options) occupying about 20 percent before mitigation. B-CSX Design Option would not temporarily occupy the easement.

Build Alternative A would not require the permanent use of the Greens Scenic Area easement. Build Alternative A Option 1 Construction Access would require the temporary occupancy of 0.25 acre of the Green Scenic Area

easement. Temporary occupancy of Greens Scenic Area easement would be necessary to provide an access road for construction vehicles and a staging area for construction equipment. The access road through Greens Scenic Area easement would be located on the western border of the easement, and would connect to entry and exit driveways along the GWMP to the station location. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of the Greens Scenic Area easement. Build Alternative A Option 2 Construction Access would require the temporary occupancy of 0.13 acre of the Green Scenic Area easement. Temporary occupancy of Greens Scenic Area easement would be necessary to provide a staging area for construction equipment. Construction staging would require the removal of existing vegetation bordering the Metrorail tracks, an existing open area, trees, a pedestrian path, and fencing of the Greens Scenic Area easement.

Build Alternative B requires the permanent use of 1.71 acres of the Greens Scenic Area easement to accommodate a part of the station platform and facilities, along the western boundary of the easement. Temporary occupancy of Greens Scenic Area easement would be necessary to provide a staging area for construction equipment. Under both construction access options, construction would require the removal of trees from 3.09 acres of the Greens Scenic Area easement that are intended to protect views from the GWMP.

B-CSX Design Option would not require the permanent use or temporary occupancy of the Greens Scenic Area easement.

Build Alternative D would not require the permanent use of the Greens Scenic Area easement. Construction of the proposed station would remove 0.02 acre of the Greens Scenic Area easement, including trees that provide a visual buffer to the CSXT tracks and Potomac Yard from Potomac Greens Park.

Several potential measures are proposed to mitigate permanent uses and temporary occupancies to Greens Scenic Area easement. Since Build Alternative B requires the permanent use of the Greens Scenic Area easement administrated by NPS, the use of the easement requires a release of the easement by NPS, which would require equal value exchange in property or interest in property as required by federal law mitigation (54 U.S.C. 102901). In addition, the City of Alexandria (who is the official with jurisdiction over the Potomac Greens Park, the land on which the easement is located) and NPS could develop a new easement agreement to modify the Green Scenic Area easement, and develop landscape and visual screening plans consistent with the *Vegetation Cultural Landscape Report*. The project could also replace any park amenities and landscaping that are removed or displaced due to any permanent use by following a new landscaping planting strategy that is consistent with the historic character and design principles of the GWMP, as documented in the *Mount Vernon Memorial Highway Cultural Landscape Report*, Vol. I, p. 72-74 (NPS, 1987). Adding new landscaping to the Greens Scenic Area easement would provide a visual buffer to the proposed station. Landscape mitigation measures would be consistent with the terms of the scenic easement, as well as provide potential mitigation for impacts to the easement.

Temporary occupancy mitigation efforts for Build Alternatives A, B, and D require a construction permit as agreed to with NPS. Additional efforts include the restoration of disturbed areas to prior conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS. Discussions are ongoing regarding the location of construction staging areas and have yet to be resolved. Preliminary staging areas have been identified. More detail on construction staging would become available as discussions with property owners continue. The ability to mitigate all impacts to the Greens Scenic Area easement are pending based on further consultation with the officials with jurisdiction.

9.1.4 Rail Park

The three Build Alternatives and B-CSX Design Option would impact the planned Rail Park. Permanent use of the Rail Park varies by Build Alternative, with Build Alternative A permanently using less than one-hundredth of a percent and Build Alternative D using about 37 percent of the park before mitigation. Build Alternative B and B-CSX Design Option would not have any permanent use of the planned Rail Park. The three Build Alternatives and B-CSX Design Option would also temporarily occupy the planned Rail Park, with Build Alternatives A and D each temporarily occupying about forty percent of the park, and Build Alternative B and B-CSX Design Option each temporarily occupying about 23 percent of the park before mitigation.

Build Alternative A requires the permanent use of less than 0.01 acre of the Rail Park along the northern boundary of the park just outside the Metrorail Reservation easement, which is necessary to maintain a 20-foot setback from the station facilities. Build Alternative D requires the permanent use of 1.55 acres of parkland along the eastern boundary, which is necessary to accommodate aerial structures for the new track alignment. Build Alternative A would also require the removal of 1.79 acres and Build Alternative D would require the removal of 1.71 acres of vegetation to accommodate construction staging. Build Alternative B would require the removal of

0.96 acre of vegetation for construction staging to accommodate a temporary construction access lane through the park. B-CSX Design Option would require the removal of 0.96 acre of vegetation for construction staging to accommodate a temporary construction access lane through the park.

Several measures are proposed to mitigate permanent and temporary uses of the Rail Park. Permanent use mitigation measures could include replacing any park amenities that were removed or displaced due to any permanent use. Temporary use mitigation efforts could include restoring disturbed areas to existing conditions through construction restoration, landscaping, and vegetation plans as agreed to with NPS. Discussions are ongoing regarding the location of construction staging areas and have yet to be resolved. Preliminary staging areas have been identified. More detail on construction staging would become available as discussions with property owners continue. The ability to mitigate all impacts to the Rail Park easement is pending based on further consultation with the officials with jurisdiction.

9.1.5 Archaeological Site 44AX0220

If Archeological Site 44AX0220 is determined eligible for the NRHP and is determined to be important for preservation in place, then Build Alternative D is anticipated to result in the permanent use of Site 44AX0220. Permanent use impacts to Site 44AX0220 include construction of temporary access roads. Potential mitigation of permanent uses to Archaeological Site 44AX0220 from Build Alternative D includes design-based avoidance of NRHP eligible archaeological resources. Mitigation could also include the execution of an Archeological Overview and Assessment for the GWMP (MVMH) South of Alexandria. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative. Permanent use mitigation efforts of Site 44AX0220 are to be determined during the Section 106 process.

9.1.6 Archaeological Site 44AX0221

If Archeological Site 44AX0221 is determined eligible for the NRHP and is determined to be important for preservation in place, then Build Alternatives A and B Option 1 Construction Access are anticipated to result in the permanent use of Site 44AX0221. Permanent use impacts to Site 44AX0221 include construction of temporary access roads. Potential mitigation of permanent uses to Archaeological Site 44AX0221 from Build Alternatives A and B Option 1 Construction Access includes design-based avoidance of NRHP eligible archaeological resources. Mitigation could also include the execution of an Archeological Overview and Assessment for the GWMP (MVMH) South of Alexandria. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative. Permanent use mitigation efforts of Site 44AX0221 are to be determined during the Section 106 process.

9.1.7 Archaeological Site 44AX0222

If Archeological Site 44AX0222 is determined eligible for the NRHP and is determined to be important for preservation in place, then Build Alternatives A and B Option 1 Construction Access are anticipated to result in the permanent use of Site 44AX0222. Permanent use impacts to Site 44AX0222 include construction of temporary access roads. Potential mitigation of permanent uses to Archaeological Site 44AX0222 from Build Alternatives A and B Option 1 Construction Access includes design-based avoidance of NRHP eligible archaeological resources in accordance. Mitigation could also include the execution of an Archeological Overview and Assessment for the GWMP (MVMH) South of Alexandria. Eligibility of the resource will be assessed by the consulting parties, after the selection of a preferred alternative. Permanent use mitigation efforts of Site 44AX0221 are to be determined during the Section 106 process.

9.1.8 Factor 1 Conclusion

The ability to minimize and mitigate impacts on Section 4(f) resources are pending based on further consultation with the officials with jurisdiction.

9.2 Factor 2: Relative Severity of the Remaining Harm after Mitigation

Factor 2 analyzes the severity of the remaining harm to each Section 4(f) resource after measures to avoid, minimize, and mitigate would be implemented. Where all uses to a particular Section 4(f) resource can effectively be mitigated, the absence of remaining harm is a key consideration. Where uses that cannot be mitigated are proposed, a determination is required of whether the impacts are significant within the context of the purpose, goals, plans, and other resource management objectives for the particular Section 4(f) resource. All uses are not treated alike and are evaluated in this analysis within the context of each resource for each alternative.

As the ability to mitigate impacts on Section 4(f) resources are pending based on further consultation with the officials with jurisdiction, the decision on the relative severity of remaining harm after mitigation is pending. The

following subsections describe the preliminary mitigation measures that are proposed under each alternative. Additional mitigation measures will be developed after further consultation with officials with jurisdiction.

9.2.1 George Washington Memorial Parkway and Mount Vernon Memorial Highway

Preliminary mitigation measures are proposed to mitigate the impact to the permanent uses and temporary occupancies of the GWMP and MVMH as described in **Section 9.1.1**. Additional mitigation measures are dependent upon negotiations with NPS. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the GWMP and MVMH is undetermined at this time. As described in previous sections, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.

9.2.2 Potomac Greens Park

Preliminary mitigation measures are proposed to mitigate permanent uses and temporary occupancies of Potomac Greens Park as described in **Section 9.1.2**. Additional mitigation measures are dependent upon negotiations with the City of Alexandria and NPS (since they have jurisdiction over the Greens Scenic Area easement). As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to Potomac Greens Park is undetermined at this time.

9.2.3 Greens Scenic Area Easement

Preliminary mitigation measures are proposed to mitigate permanent uses and temporary occupancies of Greens Scenic Area easement as described in **Section 9.1.3**. Additional mitigation measures are dependent upon negotiations with NPS and the City of Alexandria. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to Potomac Greens Park and Greens Scenic Area easement is undetermined at this time.

9.2.4 Rail Park

Preliminary mitigation measures are proposed to mitigate permanent uses and temporary occupancies of the Rail Park as described in **Section 9.1.3**. Additional mitigation measures are dependent upon negotiations with the City of Alexandria. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the Rail Park easement is undetermined at this time.

9.2.5 Archaeological Site 44AX0220

Preliminary mitigation measures are proposed to mitigate impacts from permanent uses of Archaeological Site 44AX0220 as described in **Section 9.1.4**. Additional mitigation measures are dependent upon negotiations with VDHR and other consulting parties through the Section 106 process. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the Archaeological Site 44AX0220 is undetermined at this time.

9.2.6 Archaeological Site 44AX0221

Preliminary mitigation measures are proposed to mitigate to impacts from permanent uses of Archaeological Site 44AX0221 described in **Section 9.1.5**. Additional mitigation measures are dependent upon negotiations with VDHR and other consulting parties through the Section 106 process. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the Archaeological Site 44AX0221 is undetermined at this time.

9.2.7 Archaeological Site 44AX0222

Preliminary mitigation measures are proposed to mitigate to impacts from permanent uses of Archaeological Site 44AX0222 described in **Section 9.1.6**. Additional mitigation measures are dependent upon negotiations with VDHR and other consulting parties through the Section 106 process. As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the Archaeological Site 44AX0222 is undetermined at this time.

9.2.8 Factor 2 Conclusion

As negotiations on mitigation measures are pending, the relative severity of the remaining harm after mitigation to the Section 4(f) resources is undetermined at this time.

9.3 Factor 3: Relative Significance of Each Section 4(f) Property

This factor does not address the use of each Section 4(f) resource but rather is intended to help assess whether certain Section 4(f) resources are of greater significance than others. This analysis is necessarily qualitative and requires an element of judgment, since it requires comparing unlike resources and their relative and comparative value to the community.

Understanding how the City of Alexandria and NPS value their respective resources is useful for this analysis. Each resource that would potentially be affected by the project has a unique function and value. While the City of Alexandria, Arlington County, and NPS have formally indicated each affected park is significant (and therefore eligible for protection under Section 4(f)), the relative significance of each resource is not the same.

9.3.1 George Washington Memorial Parkway

As described in detail in **Section 4.1.2**, the GWMP is a Section 4(f) resource of national significance. The GWMP was authorized by an Act of Congress and incorporated the MVMH. The Capper-Cramton Act appropriated Federal funds to the National Capital Park and Planning Commission for the expeditious, economical and efficient development and completion, among other projects, the GWMP to include the shores of the Potomac, and adjacent lands, from Mount Vernon to a point above Great Falls, VA. The Parkway is listed on both the NRHP (NRHP #95000605) and the VLR (VLR# 029-0228). The GWMP also serves as a memorial to George Washington, as the Parkway was conceived as a route between his home at Mount Vernon and the Potowmack Canal in Great Falls, Virginia. The Parkway provides scenic vistas, contains numerous historic and archeological resources, and "serves as a quality entryway into Washington, D.C" and is "an instrument of conservation and protection of scenic and recreational values."[2] The Parkway is also of a high recreational value, because it provides trail connections and numerous recreational facilities, including the Mount Vernon Trail, Daingerfield Island, and Washington Sailing Marina.

9.3.2 Mount Vernon Memorial Highway

As described in detail in **Section 4.1.1**, the MVMH is a Section 4(f) resource of national significance. The MVMH was authorized by an Act of Congress to connect Mount Vernon, the home and burial place of George Washington, with Washington, DC. As the first parkway built and maintained by the U.S. government and the first segment completed as part of the GWMP, the MVMH is nationally significant and is listed on the NRHP (NRHP #81000079) and the VLR (VLR# 029-0218). The purpose of the MVMH as a commemorative pilgrimage route is its most significant historic characteristic. Integral to its character and significance, numerous national monuments, historic sites, parks, and other landscaped green spaces are visible along the corridor. Linking George Washington's former home, Mount Vernon in Fairfax County with the Arlington Memorial Bridge, the 15.2-mile MVMH segment was designed and landscaped to maximize scenic, aesthetic and commemorative qualities.

9.3.3 Potomac Greens Park

As described in **Section 4.1.3**, Potomac Greens Park is a locally significant park. Potomac Greens Park is of moderate recreational value, because it provides amenities including a playground, seating area, an open grassy area, and a wooded area with trails. Within the Potomac Greens Park boundary, the Greens Scenic Area easement is maintained by NPS. The significance of the Greens Scenic Area easement is assessed in **Section 9.3.4**.

Additional information on the significance of Potomac Greens Park is pending based on further discussions with the City of Alexandria.

9.3.4 Greens Scenic Area Easement

As described in **Section 4.1.4**, Greens Scenic Area easement is maintained by NPS. The easement prohibits most improvements, clearing, and grading, except for uses such as light passive recreation and underground utilities. The easement is in place to restrict development, and preserve the natural habitat and vegetation, and thereby support the visual quality of the GWMP and the MVMH. The Greens Scenic Area easement is to conserve and preserve the natural vegetation, topography, habitat, and other natural features existing on the parcel. The Green Scenic Area easement is a recorded Federal land interest and runs with the land in perpetuity for the sole benefit of the United States and successors. Due to the function of the easement, the Greens Scenic Area easement is nationally significant in the supportive role of enhancing the Parkway.

[2] National Park Service. April 1995. *National Register of Historic Places Nomination Form, George Washington Memorial Parkway.*

9.3.5 Rail Park

As described **Section 4.1.5**, Rail Park is a locally significant park. The park is located between the CSXT tracks and Metrorail tracks and has minimal access points. The recreational value for the park is low, because the park is for passive open space as determined by the City. An existing Metrorail service drive will be maintained and possibly used as vehicular service access for the park. In comparison to the other impacted Section 4(f) resources, Rail Park has no national significance or historic value associated with the resource.

Additional information on the significance of Rail Park is pending based on further discussions with the City of Alexandria.

9.3.6 Archaeological Site 44AX0220

The significance of Archaeological Site 44AX0220 is to be determined during the Section 106 process.

9.3.7 Archaeological Site 44AX0221

The significance of Archaeological Site 44AX0221 is to be determined during the Section 106 process.

9.3.8 Archaeological Site 44AX0222

The significance of Archaeological Site 44AX0222 is to be determined during the Section 106 process.

9.3.9 Factor 3 Conclusion

Preliminary assessment on the significance of each Section 4(f) resource found the GWMP and the MVMH are the only resources within the study area of national significance authorized by acts of Congress. The Greens Scenic Area easement (within Potomac Greens Park) supports the preservation of the GWMP and the MVMH. The Rail Park has no national significance or historic value associated with the resource, and the significance of Archaeological Sites 44AX0220, 44AX0221, and 44AX0222 is to be determined during the Section 106 process.

Since the significance of each resource has not been discussed with the officials with jurisdiction, and the significance of archaeological sites are dependent upon the Section 106, the relative significance of each Section 4(f) resource is incomplete at this time.

9.4 Factor 4: Views of the Official(s) with Jurisdiction over Each Section 4(f) Property

9.4.1 Views of the Officials with Jurisdiction

Three entities have jurisdiction over the Section 4(f) resources that would be potentially affected by the three Build Alternatives and B-CSX Design Option:

- City of Alexandria has jurisdiction over local public parks, including Potomac Greens Park, Rail Park, Custis Park, Howell Park, and Swann Park.
- NPS has jurisdiction over the GWMP, MVMH, and the Greens Scenic Area easement.
    1) As described in previous sections, commercial vehicles are prohibited from the GWMP, with limited exceptions, under *NPS Management Policies 2006* (9.2.1.2.1) and Federal regulations (36 CFR 5.6). NPS has stated that they would not issue a permit for construction access for the project from the GWMP because construction access would impact park natural and cultural resources and visitor use and enjoyment of those resources.
- VDHR has jurisdiction over NRHP-listed or eligible cultural resources in the study area.

9.4.2 Factor 4 Conclusion

Official conclusions from the City of Alexandria, NPS, and VDHR will be sought after the Draft EIS review stage.

9.5 Factor 5: Degree to Which Each Build Alternative Meets Project's Purpose and Need

The purpose of the project is to improve local and regional transit accessibility to and from the Potomac Yard area adjacent to the U.S. Route 1 corridor for current and future residents, employees, and businesses.

This additional access point is needed to address existing and future travel demand in the area resulting from the City of Alexandria's planned development of Potomac Yard, which includes a major transit-oriented, mixed-use activity center in the vicinity of the proposed station.

To evaluate the extent to which each alternative supports the stated purpose and need, the following questions were considered for each alternative:

- Does the alternative improve regional transit accessibility of Potomac Yard?
- Does the alternative expand transportation choices by locating regional transit within walking distance of residents and employees of the Potomac Yard area? Walking distance was defined as ½ mile for residents (a 10-minute walk) and ¼ mile for employees (a 5-minute walk), based on industry experience.
- Does the alternative accommodate travel demand by shifting automobile trips to transit and other non-auto modes? Non-auto mode share is defined as the percentage of trips which are taken on foot, by bicycle, or using transit.
- Does the alternative support the City of Alexandria's redevelopment plans for a major mixed-use activity center in Potomac Yard?

Table 9-3 shows the results to these questions for each alternative. Because the three Build Alternatives and B-CSX Design Option are located in relatively close proximity to each other, they often perform similarly using these measures. In addition, each alternative's support of the overall project's purpose and need are further described and summarized in the following subsections.

Table 9-3: Support for Project Purpose and Need

Evaluation Measure	No Build Alternative	Build Alternatives			
		Alternative A	Alternative B	B-CSX Design Option	Alternative D
Project Purpose: Improving regional transit accessibility					
Regional transit access to Potomac Yard	No	Yes	Yes	Yes	Yes
Project Need: Providing additional transportation choices for residents and workers					
Number of residents within ½ mile of regional transit station, assuming development in approved plans (2040)	0	15,200	19,800	16,700	16,500
Number of employees within ¼ mile of regional transit station, assuming development in approved plans (2040)	0	17,100	24,400	12,000	13,200
Project Need: Increasing the share of transit and other non-auto trips					
Daily automobile trips shifted to transit, assuming development in approved plans (2040)	Base	5,100	6,700	5,200	5,200
Non-auto mode share for trips in the Potomac Yard area (2040)	29%	34%	34%	34%	34%
Project Need: Supporting City of Alexandria redevelopment plans					
Total Potomac Yard development volume (square feet) permitted under approved plans	9.250 million	9.250 million	13.075 million	9.250 million	9.250 million

Source: MWCOG Round 8.0 Cooperative Land Use Forecasts; City of Alexandria approved development volumes for Potomac Yard; and MWCOG regional travel demand model with WMATA transit post-processor application (Version 2.3, 2012).

9.5.1 Improving Regional Transit Accessibility of the Potomac Yard Area

Each of the three Build Alternatives and B-CSX Design Option supports the purpose and need by constructing a new Metrorail station at Potomac Yard that would provide direct access to the regional transit system. Locating a station in Potomac Yard minimizes travel times by transit to regional destinations served by the system. Although the No Build Alternative improves connecting service to the existing Braddock Road and Crystal City Metrorail Stations via the CCPY Transitway, the Transitway does not provide direct regional transit service to and from Potomac Yard.

9.5.2 Providing Additional Transportation Choices for Residents and Workers

All three Build Alternatives and B-CSX Design Option would serve planned population and employment growth in the Potomac Yard area by providing an additional transportation option, regional transit, for residents, employees, and visitors to the area. The majority of the new development within Potomac Yard would be within walking distance of the Metrorail station under each of the Build Alternatives and B-CSX Design Option. However, Build

Alternatives B and D would be located farther north than Build Alternative A and, therefore, would be closer to North Potomac Yard, which is where the densest development is planned within the Potomac Yard area. Based on the maximum allowable development, Build Alternative B would be within walking distance of the highest number of residences, as well as offices, shopping, and entertainment destinations. Build Alternative B would enable significantly more office use with a greater percentage of the planned office area located within a ¼ mile walk of Alternative B. Although Build Alternative D would be located the farthest north and west, it would occupy land that is currently planned for development, thereby reducing the development potential of North Potomac Yard and resulting in lower levels of development within walking distance of the station. B-CSX Design Option would have a similar location and effect on development within walking distance of the station as Build Alternative D.

9.5.3 Increasing the Share of Transit and Other Non-Auto Trips

Build Alternative B would reduce automobile trips with an origin or destination in Potomac Yard by approximately 6,700 trips. Build Alternatives A and D and B-CSX Design Option would reduce these automobile trips by approximately 5,000 daily trips. B-CSX Design Option is assumed to have a similar diversion of auto trips to transit as Build Alternative D based on its similar location within Potomac Yard and the associated development volume. The non-automobile mode share in Potomac Yard is projected to be 34 percent for each of the three Build Alternatives and B-CSX Design Option, and under the No Build Alternative, the non-automobile mode share is projected to be 29 percent.

9.5.4 Supporting City of Alexandria Redevelopment Plans

In regards to estimating ridership, a constant level of development was assumed in North Potomac Yard for each alternative (9.250 million square feet). However, as shown in **Table 9-3**, current City plans and zoning allow up to 13.075 million square feet of development if a station is constructed in the vicinity of Build Alternative B. Under approved plans and zoning, 9.250 million square feet of development would be allowed under Build Alternative A, Build Alternative D, or B-CSX Design Option.

9.5.5 Factor 5 Conclusion

The three Build Alternatives and B-CSX Design Option each address the project's overall purpose and need. Each Build Alternative would improve the accessibility of the Potomac Yard area and would establish a new access point to the regional Metrorail system. The three Build Alternatives and B-CSX Design Option differ in regards to the overall number of employees and residents they would each serve and the development levels allowed under each alternative. Build Alternative B would maximize the amount of development permitted in North Potomac Yard and would accommodate the highest daily ridership among the three alternatives. Build Alternative A, Build Alternative D, and B-CSX Design Option provide less ridership than Build Alternative B and less development space than Build Alternative B.

9.6 Factor 6: Magnitude of Any Adverse Impacts to Resources Not Protected by Section 4(f) After Reasonable Mitigation

This factor addresses unavoidable environmental impacts to resources not protected by Section 4(f) after implementing mitigation measures. When mitigation is considered, differences exist among the quantifiable impacts of Build Alternatives A, B, D, and B-CSX Design Option. The primary unavoidable impacts that cannot be completely mitigated are related to visual resources.

The ability to mitigate impacts on resources not protected by Section 4(f) after reasonable mitigation are pending based on further consultation with the officials with jurisdiction. Additional mitigation measures will be developed after further consultation with officials with jurisdiction.

9.6.1 Visual Resources

After mitigation efforts, all three Build Alternatives and B-CSX Design Option would have impacts to visual resources. For all three Build Alternatives, station facilities would still be visible after landscaping and vegetation plans are implemented.

9.6.1.1 Build Alternative A

Visual effects to the GWMP would result from the addition of new horizontal and vertical built elements for Build Alternative A that would be intermittently visible from the parkway. These visual effects are mostly due the height of the station necessary to accommodate the pedestrian access bridges over the CSXT railroad. The visual effects of Build Alternative A on the GWMP would be less than those for Build Alternatives B, D, and B-CSX

Design Option since the station is slightly further away from the GWMP roadway than the other alternatives and a portion of the station would be hidden from the GWMP by the existing townhomes at Potomac Greens.

Build Alternative A would also have adverse visual effects for the existing South Potomac Yard and Potomac Greens neighborhoods. Build Alternative A would have greater visual impacts than the other Build Alternatives and Design Option to views from South Potomac Yard and Potomac Greens due its height and close proximity to these neighborhoods.

9.6.1.2 Build Alternative B

Visual effects to the GWMP would result from the removal of vegetation and the introduction of horizontal and vertical built elements for Build Alternative B that would be intermittently visible from the parkway. The visual effects of Build Alternative B would be lessened over time as replanted vegetation matures and provides additional screening from the GWMP. The visual effects are due in part to the height of the station necessary to accommodate the pedestrian bridges over the CSXT Railroad and the station's proximity to the GWMP. Planned development for North and South Potomac Yard would also be visible in the views of the station from the GWMP. The visual effects of Build Alternative B to the GWMP would be greater than Build Alternative A due to its proximity to the parkway and the clearing of vegetation necessary to accommodate the station. The visual effects of Build Alternative B to the GWMP would be greater than B-CSX Design Option since the visual effects of Build Alternative B occur throughout the year whereas the visual impacts of B-CSX Design Option primarily occur during the winter months due to the loss of vegetative foliage. The visual effects of Build Alternative B to GWMP would be less than Build Alternative D given the lower profile of the Build Alternative B station and the lack of elevated railroad structures located in close proximity to the GWMP that would be required for Build Alternative D.

The station would also result in adverse effects to views from South Potomac Yard and Potomac Greens neighborhoods due to the height of the station and pedestrian access bridges. Build Alternative B would have less of a visual impact than Build Alternatives A and D and a greater impact than B-CSX Design Option for South Potomac Yard and Potomac Greens due the proximity of the station to these neighborhoods.

9.6.1.3 B-CSX Design Option

Visual effects to the GWMP would result from the introduction of horizontal and vertical built elements of B-CSX Design Option that would be intermittently visible from the parkway due to the height of the station. Visual effects would be minimal during summer months but greater for the winter months due to the lack of foliage. Planned development for North Potomac Yard would also be visible in the views of the station from the GWMP. The visual effects of B-CSX Design Option would be similar to Build Alternative A but less than Build Alternatives B and D, since it would not require the clearing and replanting of vegetation in the area of the Greens Scenic Area easement or GWMP.

The visual effects of B-CSX Design Option to the existing South Potomac Yards and Potomac Greens would be minimal and less than the other Build Alternatives since it is located farther away from these neighborhoods.

9.6.1.4 Build Alternative D

Visual effects to the GWMP would result from the height of the elevated station and the elevated connecting tracks north and south of the station for Build Alternative D. The connecting track structures would be visible from the GWMP through large breaks in vegetation especially in the area near Four Mile Run. Replacement vegetation would lessen the effects over time as the vegetation matures. Planned development for North and South Potomac Yard would also be visible in the views of the station and elevated connecting tracks from the GWMP. Alternative D would have greater visual effects to the GWMP than the other Build Alternatives and B-CSX Design Option due to the height of the station and visibility of the elevated connecting track structures from the parkway.

Build Alternative D would have adverse visual effects to the existing South Potomac Yard and Potomac Greens neighborhood due to the height of the elevated station and the elevated connecting track structures located south of the proposed station. Build Alternative D would have less of a visual effect than Build Alternative A and a greater visual effect than Build Alternation B and B-CSX Design Option on the South Potomac Yard and Potomac Greens neighborhoods.

9.6.2 Wetlands

Table 9-5 summarizes permanent wetland impacts for United States Army Corps of Engineers (USACE), NPS, and USACE/NPS regulated wetlands. Temporary construction impacts to USACE and NPS wetlands are summarized in **Table 9-6**. The listed acreages of temporary construction impacts exclude wetland acreage that would also be permanently displaced by the three Build Alternatives. Temporarily impacted wetlands would be restored after construction is completed.

All three Build Alternatives would have some impacts to wetlands and Build Alternative D would impact the two Waters of the U.S. (WOUS) identified in the northern part of the study area. B-CSX Design Option would not impact any wetlands. Mitigation includes developing a Joint Permit Application (JPA) for both permanent and temporary project-related wetland impacts in compliance with Section 404 of the Clean Water Act. The permitting process would be initiated with USACE, the Virginia Department of Environmental Quality (VDEQ), and NPS. If wetlands are deemed tidal wetlands, the permitting process would also be initiated with the Virginia Marine Resources Commission (VMRC). All NPS actions with the potential to have adverse impacts on wetlands must also comply with Director's Order 77-1. In the case where both NPS and USACE procedures apply, coordination with the appropriate USACE office will be initiated early in the process to reduce potential duplication of effort, and the JPA and NPS processes would be initiated at the design phase of the project. USACE will review the permit application for the preferred alternative. Thereafter, USACE may conduct an Alternatives Analysis to determine the Least Environmentally Damaging Practicable Alternative (LEDPA) prior to completion of the Final EIS. Furthermore, NPS will require a Statement of Findings with the Final EIS before the Record of Decision is signed. The Statement of Findings will require its own public review period.

Specific wetland mitigation quantities and types would be determined through the JPA and NPS processes for unavoidable impacts to WOUS and wetlands resulting from the preferred alternative. USACE, VDEQ, VMRC, and NPS would determine mitigation measures, as part of the JPA process and NPS Director's Order 77-1, where appropriate. If wetland compensation is necessary, the wetland restoration proposal will meet the compensation requirements of both the USACE and the NPS processes as well as EO 11990 for no net loss. Typical wetland mitigation measures include on-site or off-site wetland compensation according to specified ratios of acres of created or restored wetland to be provided for each acre of impacted wetland; ratios are based on the size and function of existing wetland impacted and the type of wetland compensation (on-site, off-site, fee-in-lieu) as determined during the JPA process.

Table 9-4: Permanent Impacts to USACE and NPS Regulated Wetlands

Alternative	USACE-only Wetlands (acres) and WOUS	NPS-only Wetlands (acres)	USACE and NPS Wetlands (acres)	TOTAL (acres)
No Build	0.00	0.00	0.00	0.00
Build Alternative A	0.00	0.00	0.02	0.02
Build Alternative B	0.00	0.06	1.22	1.28
B-CSX Design Option	0.00	0.00	0.00	0.00
Build Alternative D*	0.06	0.04	0.46	0.56

*WOUS impacts only.

Table 9-5: Temporary Impacts to USACE and NPS Regulated Wetlands

Alternative	USACE-only Wetlands (acres)	NPS-only Wetlands (acres)	USACE and NPS Wetlands (acres)	TOTAL
No Build	0.00	0.00	0.00	0.00
Build Alternative A (Option 1 Construction Access)	0.00	0.05	0.30	0.35
Build Alternative A (Option 2 Construction Access)	0.00	<0.01	0.01	0.01
Build Alternative B (Option 1 Construction Access)	0.00	0.07	3.61	3.68
Build Alternative B (Option 2 Construction Access)	0.00	0.03	3.54	3.57
B-CSX Design Option	0.00	0.00	0.00	0.00
Build Alternative D	0.00	0.41	0.07	0.48

9.6.3 Factor 6 Conclusion

Regarding the factor of the magnitude of adverse impacts to non-Section 4(f) resources after reasonable mitigation, the three Build Alternatives would have impacts to visual resources and wetlands, while B-CSX Design Option would only have impacts to visual resources. Thus, B-CSX Design Option is slightly favorable in regards to avoiding adverse impact to non-Section 4(f) resources.

The ability to mitigate all impacts on resources not protected by Section 4(f) after reasonable mitigation are pending based on further consultation with the officials with jurisdiction. Additional mitigation measures will be developed after further consultation with officials with jurisdiction.

9.7 Factor 7: Substantial Differences in Costs among Alternatives

This factor compares the relative cost differences among the alternatives and determines if a substantial cost difference exists between them. The cost of each alternative is summarized below.

9.7.1 Build Alternative A Costs

The estimated capital costs of Build Alternative A are between $119-228 million (in 2016$). The forecasted station fund revenues to be used to pay for the new station would be adequate to fund the construction and operation of a Metrorail station for Build Alternative A.

9.7.2 Build Alternative B Costs

The estimated capital costs of Build Alternative B are between $149-293 million (in 2016$). The forecasted station fund revenues to be used to pay for the new station would be adequate to fund the construction and operation of a Metrorail station for Build Alternative B.

9.7.3 B-CSX Design Option Costs

The estimated capital costs of B-CSX Design Option are between $193-358 million (in 2016$). The forecasted station fund revenues to be used to pay for the new station would be adequate to fund the construction and operation of a Metrorail station for B-CSX Design Option. For B-CSX Design Option, the cost estimate includes the relocation of CSXT tracks; potential costs for compensation of any CSXT penalties for delay of Amtrak and Virginia Railway Express (VRE) operations during construction are not included.

9.7.4 Build Alternative D Costs

The estimated capital costs of Build Alternative D are between $277-539 million (in 2016$). The forecasted station fund revenues to be used to pay for the new station would not be adequate to fund the construction and operation of a Metrorail station for Build Alternative D.

9.7.5 Factor 7 Conclusion

Based on the cost differences listed above, Build Alternatives A and B and B-CSX Design Option are within the same cost range. Build Alternative D has a higher cost range than Build Alternatives A and B and B-CSX Design Option. Costs for any CSXT penalties for delay of Amtrak and Virginia Railway Express (VRE) operations as a result of B-CSX Design Option are currently unknown. In regards to this factor, a substantial cost difference between the Build Alternatives does exist, with Build Alternatives A and B and B-CSX Design Option being less costly than Build Alternative D.

9.8 Least Overall Harm Analysis Conclusion

Table 9-5 summarizes the relative comparison of the three Build Alternatives and B-CSX Design Option under each of the seven factors considered in the Least Overall Harm assessment. Based on the preliminary information provided, several factors cannot be concluded at this time since information is still pending. The Least Overall Harm Analysis Conclusion will be finalized upon publication of the Final EIS.

2461 **Table 9-6: Summary of Least Overall Harm Factors**

Factor	Build Alternative A		Build Alternative B		B-CSX Design Option	Build Alternative D
	Option 1 Construction Access	Option 2 Construction Access	Option 1 Construction Access	Option 2 Construction Access		
Number of Section 4(f) Resources Affected	7	3	7	5	2	6
Section 4(f) Resources Affected	GWMP, MVMH, Potomac Greens Park, Greens Scenic Area easement, Rail Park, 44AX0221, 44AX0222	Potomac Greens Park, Greens Scenic Area easement, Rail Park	GWMP, MVMH, Potomac Greens Park, Greens Scenic Area easement, Rail Park, 44AX0221, 44AX0222	GWMP, MVMH, Potomac Greens Park, Greens Scenic Area easement, Rail Park	Potomac Greens Park , Rail Park	GWMP, MVMH, Potomac Greens Park, Greens Scenic Area easement, Rail Park, 44AX0220
Factor 1: Ability to Mitigate	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined
Factor 2: Severity of Remaining Harm on Section 4(f) Resources	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined
Factor 3: Relative Significance of Section 4(f) Lands	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined
Factor 4: Views of the Officials	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined
Factor 5: Ability to Meet Purpose and Need	Addresses both aspects of the project's purpose and need; less ridership and development than Alternative B	Addresses both aspects of the project's purpose and need; less ridership and development than Alternative B	Addresses both aspects of the project's purpose and need; maximizes ridership and development	Addresses both aspects of the project's purpose and need; maximizes ridership and development	Addresses both aspects of the project's purpose and need; less ridership and development than Alternative B	Addresses both aspects of the project's purpose and need; less ridership and development than Alternative B
Factor 6:Magnitude of Impacts on non-Section 4(f) Resources	Adverse impacts on visual resources and wetlands	Adverse impacts on visual resources and wetlands	Adverse impacts on visual resources and wetlands	Adverse impacts on visual resources and wetlands	Adverse impacts on visual resources	Adverse impacts on visual resources, wetlands, and WOUS
Factor 7: Substantial Difference in Cost	Within lower cost range ($119-228 million)	Within lower cost range ($119-228 million)	Within lower cost range ($149-293 million)	Within lower cost range ($149-293 million)	Within lower cost range ($193-358 million); unknown CSXT penalty costs	Higher cost range ($277-539); results in shortfall

10.0 COORDINATION AND CONSULTATION

The lead federal agency, project sponsor, and cooperating and participating agencies all have defined opportunities for meaningful participation in the decision-making process for the project, including review and comment on the Section 4(f) evaluation. Coordination among these agencies will continue throughout the development of the project and further refinement of the Section 4(f) evaluation. These activities are outlined in **Table 10-1**.

The Federal Transit Administration (FTA) is the lead federal agency and the City of Alexandria is the project sponsor and joint lead agency for the proposed Potomac Yard Metrorail Station. NPS, maintains the GWMP, is a cooperating agency for this project. Pursuant to 40 CFR 1501.6, cooperating agencies are those governmental agencies specifically requested by FTA to participate during the environmental evaluation process for the project. Cooperating agencies are responsible for:

- Reviewing the EIS for sufficiency;
- Providing comments on the purpose and need;
- Providing comments on the impact assessment methodologies, and
- Providing comments on the range of alternatives.

VDHR and the Arlington County Department of Environmental Services (DES) are participating agencies for this project. Participating agencies are federal and non-federal governmental agencies that may have an interest in the project, and are formally invited to participate in the environmental review of the project. These agencies are responsible for the following:

- Participating in the scoping process;
- Providing comments on purpose and need, methodologies, and the range of alternatives;
- Identifying any issues of concern regarding the project's environmental or socioeconomic impacts; and
- Providing meaningful and timely input on unresolved issues.

NPS and the City of Alexandria are considered officials with jurisdictions in terms of Section 4(f) regulations. FTA has coordinated with NPS and the City of Alexandria during the entirety of the Section 4(f) evaluation. 23 CFR 774.5 states that prior to making Section 4(f) approvals, the Section 4(f) evaluation shall be provided for coordination and comment to the official(s) with jurisdiction. FTA is responsible for soliciting and considering the comments of official(s) with jurisdiction over the Section 4(f) property, as part of the administration of Section 4(f). The regulations require that the official(s) with jurisdiction:

- Have been consulted over the findings;
- "Have not objected" to applying exceptions for the restoration, rehabilitation, or maintenance of historic transportation facilities or for archeological sites of minimal value for preservation in place.
- Have provided written concurrence in finding there are no adverse effects prior to making *de minimis* impact findings or in applying the exception for temporary occupancies, transportation enhancement activities, and mitigation activities.

The Section 4(f) evaluation must be submitted to the officials with jurisdiction over the Section 4(f) resources and to the Department of the Interior. Invitation letters were sent to potential cooperating and participating agencies on January 25, 2011.

FTA sent a letter regarding Section 106 of the National Historic Preservation Act as it relates to the project to VDHR on May 10, 2012. The letter included information about the project, preliminary results of background research, and a map of the preliminary area of potential effect. In September 2012, FTA sent invitations to potential consulting parties. Parties that accepted the invitation as a consulting party include:

- Alexandria Federation of Civic Associations
- Alexandria Historical Restoration and Preservation Commission
- Alexandria Historical Society
- Arlington County
- City of Alexandria
- Lynhaven Civic Association
- National Park Service

- North East Citizens Association
- Old Town Business and Professional Association
- United State Army Corps of Engineers

Meetings with consulting parties to discuss Section 106 coordination took place on February 20, 2013 and March 27, 2013. Section 106 correspondence and a copy of an agency invitation letter are provided in **Appendix F** of the Potomac Yard Metrorail Station Draft EIS Volume I. FTA contacted the Advisory Council on Historic Preservation (ACHP) to inform them of the project and provided them with copies of the materials from the consulting parties meeting. FTA will notify ACHP if a preliminary determination of adverse effects is likely, providing further opportunities for ACHP review and comment.

Cooperating and participating agencies have defined opportunities for meaningful participation in the decision-making process for the project. Coordination with these agencies will continue throughout the development of the project. These opportunities are outlined in **Table 10-1**.

Table 10-1: Coordination Points and Responsibilities

Date Completed	Coordination Point	Format	Timeframe	Lead Agency Responsibility	Input from Agencies	Agencies Responsible for Input
Fall 2013	Project Management Team (PMT) Meetings Lead and Cooperating Agencies	Meeting	Bi-Weekly November 2010 through Fall 2013	Draft project materials and analysis; identification of issues and coordination needs	Collaboration and input on project materials and analysis, as well as project issues and coordination needs	Cooperating agencies
January 2011	Issue Notice of Intent (NOI)	*Federal Register* notice	January 2011	Publish NOI in the *Federal Register* and notices in local newspaper; invite agencies and public to scoping meetings	Comments on NOI	Participating and cooperating agencies
January 2011	Issue Cooperating and Participating Agency Invitation Letters	Letter	January 2011	Send letters inviting agencies to act as cooperating or participating agencies	Letter accepting or declining the invitation	Participating and cooperating agencies (all invited)
January 2011	Project Scoping ▪ Agency Coordination, Document Review Timeframes, and Scheduling ▪ Data Sources and Previous Studies	Agency Scoping Meeting (2/10/11), Resource Agency Meetings, Conference Calls, Phone or Email (as required), Written Correspondence	February 2011 – March 2011	Provide materials and hold scoping meeting; include draft purpose and need statement, initial range of alternatives, and potential environmental effects	Comments on draft purpose and need, initial range of alternatives, and issues of concern	Participating and cooperating agencies; general public
Spring 2012	Impact Assessment Methodologies	Resource Agency Meetings, Conference Calls, Phone or Email (as required), Written Correspondence	Spring 2012	Provide opportunity to collaborate on the development and review of methodologies required for the analysis of alternatives	Collaboration and input through the development of methodologies, and comments on proposed methodologies	Participating and cooperating agencies
Fall 2012	Impact Assessment, Evaluation of Alternatives, Section 4(f) Evaluation	Resource Agency Meetings, Conference Calls, Phone or Email (as required), Written Correspondence	Spring 2012 – Fall 2012	Identification of potential impacts to resources as a result of the alternatives	Identification of any issues of concern regarding potential environmental or socioeconomic impacts of the alternatives, including issues that could substantially delay permit approval	Participating and cooperating agencies

Date Completed	Coordination Point	Format	Timeframe	Lead Agency Responsibility	Input from Agencies	Agencies Responsible for Input
Not completed	Public Meetings	Public Meeting	Continuous	Provide materials and hold public meeting	Collaboration and input through the development of meeting materials	Participating and cooperating agencies; general public
July 2012	Virginia Department of Historic Resources (VDHR) Section 106 Review Initiation Meeting	Agency Meeting	July 2012	Provide Section 106 methodology to VDHR for review, comment and concurrence	Collaboration and input through the development of methodologies and technical reports	Participating and cooperating agencies
September 2012	Issue Invitation Letters to Potential Section 106 Consulting Parties	Letter	September 2012	Send letters inviting agencies to act as consulting parties	Letter accepting or declining the invitation	Consulting parties (all invited)
February 2013	Section 106 Cultural Resources Consulting Parties Meeting	Consulting Parties Meeting	February 2013	Provide Section 106 compliance to VDHR for review, comment and concurrence	Collaboration and input on project analysis, as well as designated cultural resources	Participating and cooperating agencies
March 2013	Section 106 Cultural Resources Consulting Parties Meeting	Consulting Parties Meeting	March 2013	Provide Section 106 compliance to VDHR for review, comment and concurrence	Collaboration and input on project analysis, as well as designated cultural resources	Participating and cooperating agencies
November 2013	B-CSX Design Option Conceptual Plan Review Meeting	Meeting	November 2013	Provide conceptual plans of B-CSX Design Option	Further review and comment from CSXT on B-CSX Design Option	CSXT
Not completed	Circulation of Draft EIS and Section 4(f) Evaluation	Public hearing; notice of public availability of document; document for review and comment	Spring 2015	Make available the Draft EIS and Section 4(f) Evaluation to cooperating and participating agencies and the public	Comments on the Draft EIS and Section 4(f) Evaluation	Participating and cooperating agencies; general public
Not completed	Section 106 Coordination	Section 106 Cultural Resources Consulting Parties Meeting	Spring 2016	Identification of Adverse Effects; Resolution of Adverse Effects (Mitigation); Development of Section 106 Memorandum of Agreement (MOA); Circulation of MOA for signature among the Consulting Parties	Agreement on adverse effects and their resolution; Development of the Section 106 MOA; Execution of the Section 106 MOA	VDHR, Cooperating Agencies and Section 106 Consulting Parties
Not completed	Circulation of Final EIS and Section 4(f) Evaluation	Notice of availability of document; document for review	Spring 2016	Make available the Final EIS and Section 4(f) Evaluation to cooperating and participating agencies and the public	Comments on the Final EIS and Section 4(f) Evaluation	Participating and cooperating agencies; general public
Not completed	Issue Record of Decision (ROD)	*Federal Register* and newspaper notice	Spring 2016	Publish ROD in local newspaper and the *Federal Register*	FTA, NPS	None

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ATTACHMENT A:
REFERENCES

Map Data

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Reports

AASHTO Practitioner's Handbook: Complying with Section 4(f) of the U.S. DOT Act. Center for Environmental Excellence. 2009.

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City of Alexandria website. 2012. Recreational Parks and Cultural Activities. http://alexandriava.gov/recreation/info/default.aspx?id=12286#Four_Mile.

Federal Highway Administration (FHWA). 2012. FHWA Section 4(f) Policy Paper. http://www.environment.fhwa.dot.gov/4f/4fpolicy.asp#intro.

FHWA. 2005. Guidance for Determining De Minimis Impacts to Section 4(f) Resources. http://www.fhwa.dot.gov/hep/guidedeminimis.htm.

NPS. 2012. George Washington Parkway. http://www.nps.gov/gwmp/index.htm.

ATTACHMENT B:
LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
CCPY	Crystal City/Potomac Yard
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
CLRP	Constrained Long Range Plan
CRACA	Colonial Revival Apartment Complexes of Alexandria
CSXT	CSX Transportation
DES	Arlington County Department of Environmental Services
DOI	United States Department of Interior
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FR	Federal Register
FTA	Federal Transit Administration
GIS	geographic information system
GWMP	George Washington Memorial Parkway
JPA	Joint Permit Application
LEDPA	Least Environmentally Damaging Practicable Alternative
LWCF	Land and Water Conservation Fund Act
MVMH	Mount Vernon Memorial Highway
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPS	National Park Service
NRHP	National Register of Historic Places
ROD	Record of Decision
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Officer
TIP	Transportation Improvement Program for the Washington Metropolitan Region
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register

VMRC	Virginia Marine Resources Commission
VRE	Virginia Railway Express
WMATA	Washington Metropolitan Area Transit Authority
WOUS	Waters of the U.S.

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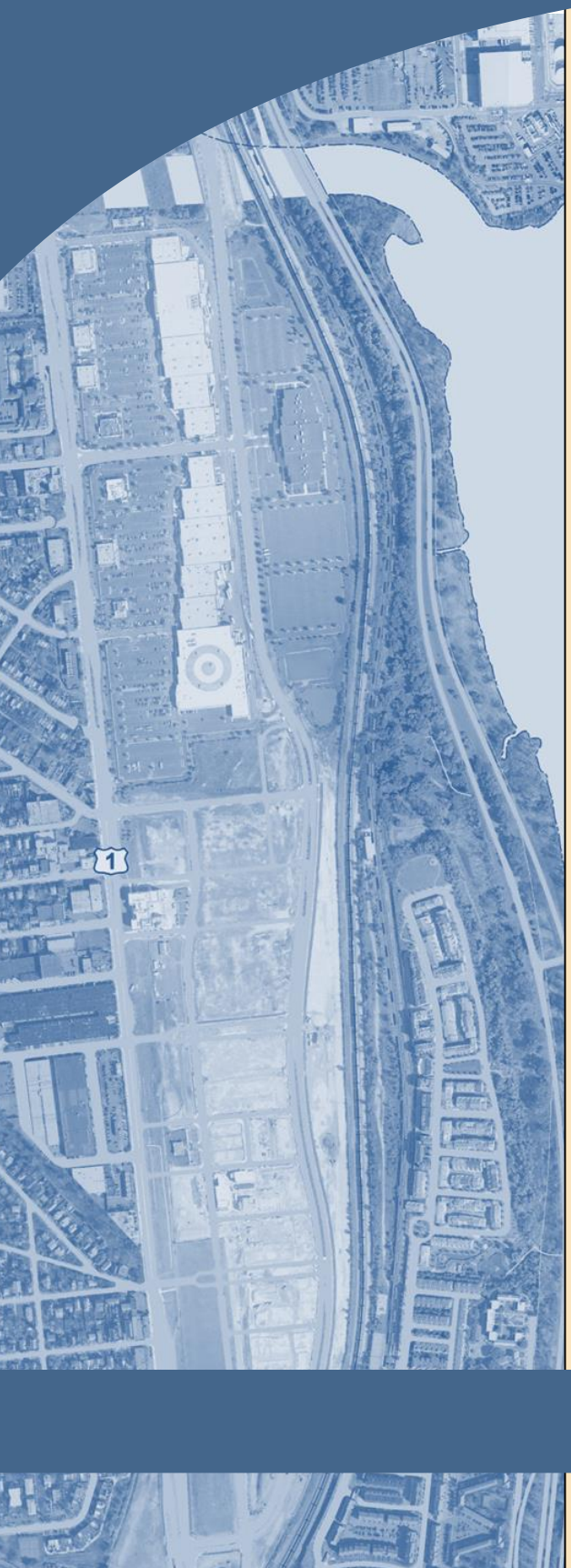
POTOMAC YARD METRORAIL STATION
ENVIRONMENTAL IMPACT STATEMENT



Appendix E: Draft Section 6(f) Evaluation

April 2015

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Table of Contents

1.0 INTRODUCTION

This evaluation discusses the effects of the Potomac Yard Metrorail Station project on properties needed to comply with the provisions of Section 6(f) of the U.S. Land and Water Conservation Fund Act of 1965 (LWCF).

2.0 LEGAL AND REGULATORY REQUIREMENTS

Section 6(f) of the LWCF preserves, develops, and assures the quality and quantity of outdoor recreation resources through the purchase and improvement of recreational lands, wildlife and waterfowl refuges, and other similar resources. Section 6(f) contains provisions to protect and maintain the quality of Federal, state, and local investments in parkland and/or recreational resources. The LWCF established a funding source for Federal acquisition of park and recreation lands and matching grants to state and local governments for recreation planning, acquisition, and development. Once purchased using these funds, these lands are protected from conversion to uses other than public outdoor recreational uses. Any such conversion must be in accordance with an existing comprehensive statewide outdoor recreation plan and must be approved by the Secretary of the Interior. If a conversion occurs, the land must be replaced with other recreational properties of at least equal fair market value and with reasonably equivalent usefulness and location. The conversion requirements for Section 6(f) land are outlined in 36 CFR 59.3.

At a Federal level, the National Park Service (NPS) administers and regulates the grant program and stewardship of lands acquired through the LWCF. The Virginia Department of Conservation and Recreation (VDCR) administers the program at the state level. NPS is responsible for approval of both the conversion of Section 6(f) lands to non-recreational uses and the identification of a suitable replacement property serving similar recreational purpose. Temporary non-recreation activities of less than a six-month duration, such as construction activities, may be acceptable as a "temporary non-conforming use"[1] of 6(f) parkland.

3.0 IDENTIFYING LWCF RESOURCES

Although the City of Alexandria and Arlington County have constructed parks with LWCF funds within their jurisdictions, no permanent conversion of use of Section 6(f) park resources is anticipated for this project.

3.1 NPS Properties

Federal parkland can also be acquired with LWCF funds; however, no information source was found to identify Federal 6(f) parklands. Most of the land for the Mount Vernon Memorial Highway (MVMH) was acquired in the 1930s prior to the establishment of the LWCF in 1965.

3.2 Local Government Properties

Both the City of Alexandria and Arlington County have used LWCF grant funds for the acquisition of parkland within their jurisdictions. The relevant grant applications by the two jurisdictions date back to the 1960s and 1970s and are not available in digital form. The following documents were used to identify potential 6(f) lands in the study area:

- United States Department of the Interior, National Park Service, *Land & Water Conservation Fund Detailed Listing of Grants Grouped by County for the Commonwealth of Virginia*, May 2012, Accessed at http://waso-lwcf.ncrc.nps.gov/public/index.cfm;
- City of Alexandria *2002 Self-Certification Post Compliance LWCF Documentation to VDCR*; and
- United States Department of the Interior, Federal Interdepartmental Task Force on the Potomac, *Land, People and Recreation in the Potomac River Basin*, 1968 (Planning Study).

Neither jurisdiction had records of the use of LWCF for parks within the study area, nor did VDCR[2].

[1] United States Department of the Interior, National Park Service, *Land and Water Conservation Fund State Assistance Program, Federal Financial Assistance Manual, Volume 69*, October 1, 2008, pg. 8-13.

[2] Wamack, S., Virginia Department of Conservation and Recreation. Phone conversation with consultant on July 9, 2012.

City of Alexandria: NPS LWCF records for the City of Alexandria indicate that two LWCF were approved for the City in 1977 and 1983 (see Attachment A). Neither grant was used, or is planned for use, to construct parks in the study area. A review of post-compliance reporting by the City to VDCR in 2002 confirmed this finding.

Arlington County: NPS LWCF grant records for Arlington County indicate that four grants were approved by NPS for the County in 1966, 1974, 1984 and 2006 (see Attachment A). The 1984 and 2006 grants were used for parks outside the study area. Arlington County was contacted to verify that Four Mile Run trail used LWCF funds, but the County has no record of the grant application or use of the funds within the study area.

ATTACHMENT A:

NPS LWCF DETAILED LISTINGS FOR VIRGINIA

United States Department of the Interior
National Park Service
Land & Water Conservation Fund

Detailed Listing of Grants Grouped by County

Today's Date: 6/18/2012

VIRGINIA - 51

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
ACCOMACK								
328 - XXX	D	WACHAPREAGUE HARBOR	TOWN OF WACHAPREAGUE	$57,094.99	C	2/18/1994	12/31/1995	1
415 - XXX	C	Wachapregue Seaside Community Park	Town of Wachapreague	$92,297.00	C	12/3/2008	12/31/2010	1
			ACCOMACK County Total:	**$149,391.99**		**County Count:**		**2**
ALBEMARLE								
374 - XXX	D	Pen Park Playground and Tennis Courts	City of Charlottesville	$140,288.00	C	8/29/2003	12/31/2006	5
409 - XXX	D	Mint Springs Fishing Accessiblity	County of Albemarle	$102,030.00	C	11/6/2006	12/31/2009	5
421 - XXX	D	Azalea Park Improvements	City of Charlottesville	$54,930.00	A	9/9/2011	12/31/2014	5
			ALBEMARLE County Total:	**$297,248.00**		**County Count:**		**3**
ALEXANDRIA CITY								
165 - XXX	C	ALEXANDRIA PARKS AND TRAILS	CITY OF ALEXANDRIA	$935,301.72	C	9/20/1977	12/31/1983	8
263 - XXX	D	FOUNDERS AND ORONOCO BAY PARKS	CITY OF ALEXANDRIA	$210,773.55	C	6/23/1983	6/30/1988	8
			ALEXANDRIA CITY County Total:	**$1,146,075.27**		**County Count:**		**2**
AMELIA								
253 - XXX	D	AMELIA COUNTY PARK	AMELIA COUNTY	$63,163.95	C	5/12/1982	6/30/1987	4
			AMELIA County Total:	**$63,163.95**		**County Count:**		**1**
AMHERST								
161 - XXX	C	BUFFALO WATERSHED PARKS (A&D)	AMHERST COUNTY	$115,754.83	C	4/1/1977	12/31/1981	6
326 - XXX	D	COOLWELL RECREATIONAL PARK	AMHERST COUNTY	$119,133.29	C	8/9/1993	12/31/1997	6
			AMHERST County Total:	**$234,888.12**		**County Count:**		**2**

Grant ID & Element	Type	Grant Element Title	Grant Sponsor	Amount	Status	Date Approved	Exp. Date	Cong. District
APPOMATTOX								
179 - C	D	STATE PARKS CONSOLIDATED GRANT	DEPT. OF CONSERVATION & ECONOMIC DEV	$73,217.92	C	8/11/1978	12/31/1983	5
379 - XXX	D	Appomattox County Community Park	Appomattox County	$224,460.00	C	8/28/2003	12/31/2006	5
			APPOMATTOX County Total:	**$297,677.92**		**County Count:**	**2**	
ARLINGTON								
13 - XXX	C	ARLINGTON COUNTY URBAN TRAILS	ARLINGTON COUNTY	$42,670.48	C	7/15/1966	7/1/1968	8
112 - XXX	D	ARLINGTON TRAILS PHASE II	ARLINGTON COUNTY	$100,000.00	C	2/26/1974	3/1/1976	8
271 - XXX	D	ROSSLYN BICYCLE BRIDGE	ARLINGTON COUNTY	$243,854.69	C	1/3/1984	6/30/1988	8
406 - XXX	D	Upton Hill Pool - Sprayground/Northern VA Park	Northern Virginia Regional Park Authority	$82,282.00	C	9/6/2006	12/31/2009	8
			ARLINGTON County Total:	**$468,807.17**		**County Count:**	**4**	
AUGUSTA								
46 - XXX	C	NATURAL CHIMNEYS REGIONAL PARK	UPPER VALLEY REGIONAL PARK AUTHORITY	$160,567.50	C	5/20/1970	8/30/1971	6
67 - XXX	C	NATURAL CHIMNEYS REG. PK A&D PH II	UPPER VALLEY REGIONAL PARK AUTHORITY	$155,071.00	C	9/16/1971	6/30/1973	6
356 - XXX	D	Stuarts Draft Park	County of Augusta	$75,735.32	C	9/15/2001	6/30/2004	6
			AUGUSTA County Total:	**$391,373.82**		**County Count:**	**3**	
BATH								
178 - XXX	D	BATH COUNTY RECREATION PARK	BATH COUNTY	$227,716.80	C	6/27/1978	6/30/1980	6
397 - XXX	D	Douthat State Park Cabin	Virginia Department of Conservation and Rec.	$163,026.00	C	9/12/2005	9/12/2010	6
418 - XXX	D	Douthat State Park Campgrounds	Virginia Dept. of Conservation & Recreation	$1,474,962.00	A	9/2/2009	12/31/2012	6
			BATH County Total:	**$1,865,704.80**		**County Count:**	**3**	

APPENDIX F:
SECTION 106 COORDINATION

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APPENDIX F – SECTION 106 COORDINATION

Appendix F summarizes the consultation efforts to date with regard to project review under Section 106 of the National Historic Preservation Act of 1966. As the Section 106 review process continues through the effects assessment and resolution phases, new information will be incorporated into this section. Refer to the *Cultural Resources Technical Memorandum* in Volume II for more detailed information on the project's assessment of cultural resources and documents related to the Section 106 process referenced below.

- On May 10, 2012, the Federal Transit Administration (FTA) initiated the Section 106 consultation process with the Virginia Department of Historic Resources (VDHR) (VDHR File No. 2012-0717), which is the State Historic Preservation Office (SHPO) for the Commonwealth of Virginia. In the submission, FTA included proposed Area of Potential Effects (APE) for historic architectural resources and archaeology (see Volume II, *Cultural Resources Technical Memorandum, Appendix C: VDHR Project Initiation Package*).
- On June 12, 2012, VDHR concurred that the project was a "Federal undertaking," subject to Section 106 review. VDHR provided general comments on the proposed undertaking, including indicating concurrence with the proposed APE for archaeology. Pursuant to 36 CFR Part 800.2 (c), VDHR requested that FTA submit a list of appropriate consulting parties and its comments on the proposed project and provide additional justification for the boundaries of the proposed APE for historic architectural resources (see Volume II, *Cultural Resources Technical Memorandum, Appendix D: VDHR Response Letter*)**.**
- On July 9, 2012, a Section 106 Initiation Meeting was held at VDHR offices in Richmond, Virginia. Representatives of VDHR, FTA, Washington Metropolitan Area Transit Authority (WMATA), and the project consultant AECOM were present. In response to VDHR's request for justification of the boundaries of the proposed APE for historic architectural resources, AECOM presented a revised APE. VDHR staff concurred with the revised APE for historic architectural resources. At the Section 106 Initiation Meeting, VDHR requested the completion of a Reconnaissance-Level Survey Form for the Potowmack Crossing at Old Town Condominiums, to assess its eligibility for listing in the NRHP and satisfy the identification phase of the Section 106 process for historic architectural resources.
- On July 24, 2012, at VDHR's request, FTA submitted a proposed Phase I archaeological testing methodology to VDHR, Alexandria Archeology (AA), and National Park Service (NPS) for review and comment.
- On August 28, 2012, to comply with a previous request from VDHR to evaluate the individual eligibility of the Potowmack Crossing at Old Town Condominiums, a Reconnaissance Level Survey Form was submitted to VDHR through the Data Sharing System (DSS).
- On August 29, 2012, FTA, after receiving comment from VDHR, AA and NPS, submitted a revised archaeological testing methodology for review and comment. FTA received concurrence on the revised methodology via email correspondence from AA on September 7, 2012, from VDHR on September 10, 2012, and from NPS on September 18, 2012.
- In September 2012, FTA sent invitations to potential consulting parties. As described in 36 CFR 800.2(c), consulting parties are those parties with consultative roles in the Section 106 process, including the SHPO, Tribal Historic Preservation Office (THPO), Indian tribes, representatives of local governments, applicants for Federal assistance, permits, licenses, and other approvals, as well as other individuals and organizations with a "demonstrated interest" in the undertaking. The list of invited consulting parties and a copy of FTA's invitation letter are provided in Volume II, *Cultural Resources Technical Memorandum, Appendix G: Consulting Parties Correspondence and Mailing List*.
- On October 22, 2012, VDHR requested preparation of a report addressing the effects of the proposed project on significant historic architectural properties.
- On December 7, 2012, the Draft DSS archaeological site forms were electronically submitted to VDHR for review and comment.
- On January 25, 2013, a Reconnaissance Level Survey Form was submitted to VDHR (through the DSS) for the Colonial Revival Apartment Complexes of Alexandria (CRACA) recommending the properties' eligibility for listing in the NRHP (see Volume II, *Cultural Resources Technical Memorandum, Appendix E: Colonial Revival Apartment Complexes of Alexandria Reconnaissance Level Survey Form)*. A revised Reconnaissance Level Survey Form was also submitted to VDHR (through the DSS) specifically for Potowmack Crossing at Old Town Condominiums, recommending the property as a contributing resource to the CRACA (see Volume II,

Cultural Resources Technical Memorandum, Appendix F: Potowmack Crossing at Old Town Condominiums Reconnaissance Level Survey Form).

- On February 20, 2013, the first Section 106 Cultural Resources Consulting Parties Meeting was held at Alexandria City Hall in Alexandria, Virginia. Representatives of VDHR, FTA, NPS, WMATA, City of Alexandria, Alexandria Historical Restoration and Preservation Commission (HRPC), Alexandria Historical Society, North East Citizens Association, Old Town Business and Professional Association (OTBPA), and the project consultant AECOM were present. The consulting parties reviewed the Section 106 process, project overview, agency roles, the APE, and identified potential cultural resources.
- On February 22, 2013, the Advisory Council on Historic Preservation (ACHP) was informed about the project and the second consulting parties meeting and chose not to attend. Instead ACHP requested to be notified when an adverse effect determination is made.
- On March 27, 2013, the second Section 106 Cultural Resources Consulting Parties Meeting was held at Alexandria City Hall in Alexandria, Virginia. Representatives of VDHR, FTA, NPS, WMATA, United State Army Corps of Engineers (USACE), City of Alexandria, HRPC, the North East Citizens Association, and the project consultant AECOM were present. The consulting parties reviewed issues regarding the eligibility of potential historic resources, extending the APE east to the Potomac shoreline, and the preliminary effects of each Build Alternative.

APPENDIX G:
GREENS SCENIC AREA EASEMENT

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APPENDIX G – GREENS SCENIC AREA EASEMENT

INTRODUCTION

This appendix provides background information and title documents for the Greens Scenic Area easement located in the project study area for the Potomac Yard Metrorail Station. The scenic easement comprises 15.27 acres that are administered by the National Park Service (NPS) and located on land owned by the City of Alexandria to the north and east of the Potomac Greens neighborhood along the George Washington Memorial Parkway (GWMP) (see **Figure G-1**).

The Greens Scenic Easement is also a Resource Protection Area designated by the City of Alexandria under Virginia's Chesapeake Bay Preservation Act (see **Chapter 3 Environmental Consequences, Section 3.16 Navigable Waterways and Coastal Zones** for more details).

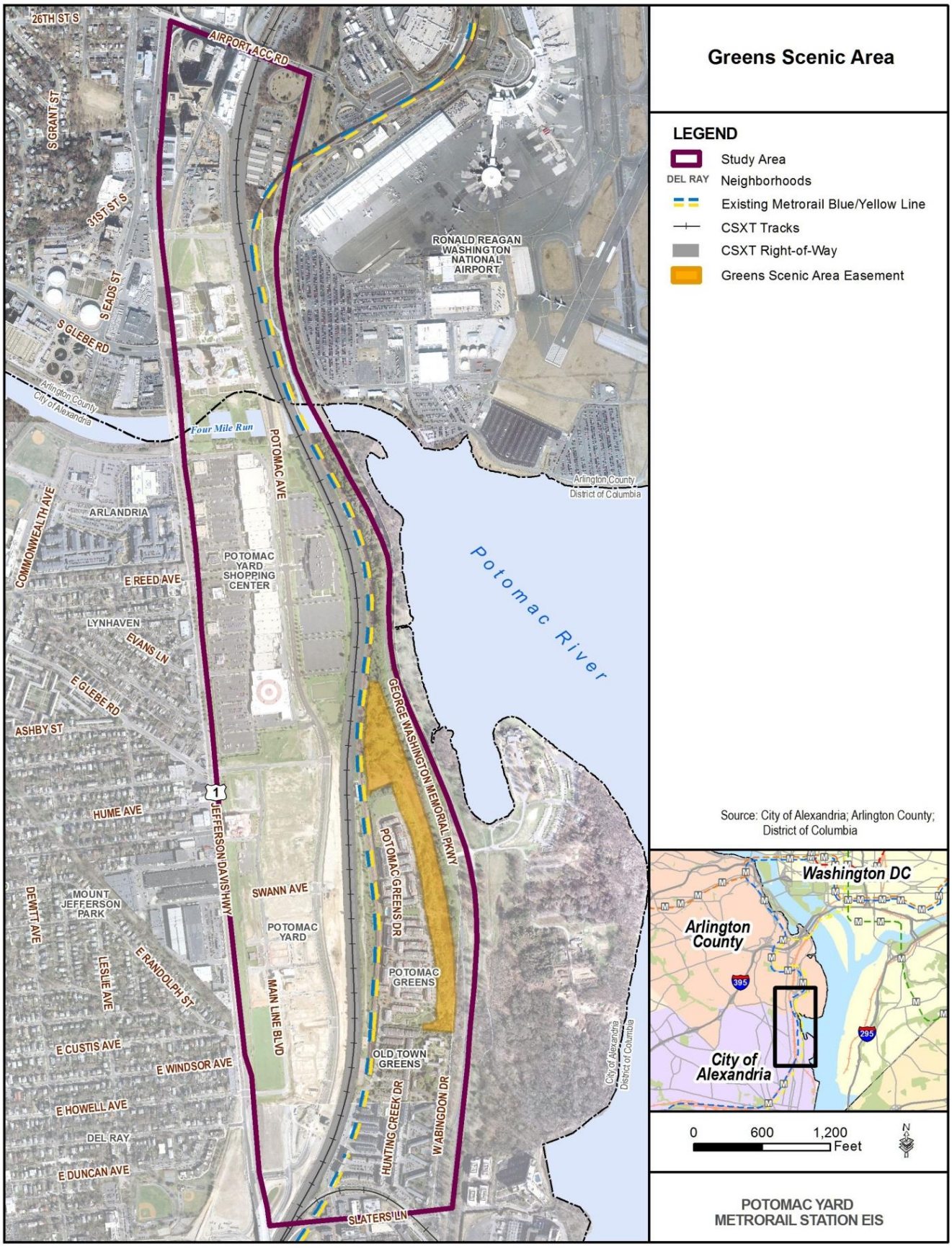
The appendix is organized as follows:

- Section 2: Background
- Section 3: Chronology of Events

Copies of the following documents related to the easement are provided as attachments to the memorandum in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*:

- Attachment A: 1938 Indenture, Title Document 0443-0083
- Attachment B: 1970 Exchange Agreement, Title Document 727-723
- Attachment C: 2000 Release and Scenic Easement Agreement, Title Document 000005341
- Attachment D: 2004 Dedication of Underlying Property to City of Alexandria, Title Document 050027503
- Attachment E: Parcel Ownership in Vicinity of Greens Scenic Area

Figure G-1: Greens Scenic Area Easement



BACKGROUND

This section describes the various events, including previous property agreements and development proposals that led to the *Release Agreement and Scenic Easement* in 2000, establishing the Greens Scenic Area easement.

The timeline begins with the 1938 indenture, which resolved a property dispute between the United States and the Richmond, Fredericksburg and Potomac Railroad Company (RF&P), and restricted the use of the disputed property to railroad purpose. As RF&P began to wind down operations of the Potomac Yard rail yard, it began to contemplate development of the property. In 1970, the Exchange Agreement between RF&P, the United States, and Charles Fairchild allowed for the proposed construction of an interchange from the planned Potomac Greens neighborhood to the GWMP roadway to facilitate development of the neighborhood.

No development on the Potomac Greens property occurred during the 1970s, and in the 1980s several development proposals were submitted to the City of Alexandria. The U.S. Commission of Fine Arts and the National Capital Planning Commission issued approvals for the interchange onto GWMP in 1983. Citizens groups filed a lawsuit in 1986 to prevent construction of the interchange, and in 1987 the U.S. Congress barred NPS from issuing any construction permit for an interchange with the Parkway until an EIS had been prepared. The *George Washington Memorial Parkway-Potomac Greens Final EIS* (1991) proposed several methods of preserving views from GWMP, including the purchase of a visual buffer along the area between the Potomac Greens and Potomac Yard developments and GWMP. This document was prepared under direction from the U.S. Congress, rather than under NEPA; consequently, no record of decision was prepared.

The United States of America and Commonwealth Atlantic Properties (the owner of Potomac Yard at the time) signed the *Release Agreement and Scenic Easement* in 2000. The agreement enabled redevelopment of the land in Arlington County which had been restricted to railroad uses under the 1938 indenture, negated the right to build a highway interchange onto GWMP, and established a perpetual scenic easement over a portion of Potomac Greens (known as the Greens Scenic Area). The purpose of the easement, as stated in the title documents, is to conserve and preserve the natural vegetation, topography, habitat, and other natural features within its area. The scenic easement stipulates that no improvements shall be constructed or installed within the Greens Scenic Area, that no clearing, grading, or tree removal shall be permitted, and that the Greens Scenic Area shall not otherwise be disturbed without prior written approval of the United States.

In 2004, during development of the Potomac Greens neighborhood, the underlying fee simple property interest was dedicated to the City of Alexandria for Potomac Greens Park. The transfer did not affect the terms of the Greens Scenic Area perpetual easement, which is currently located on portions of the City public park. A small portion at the southern end of the Greens Scenic Area easement (0.19 acres) is on property owned by the Potomac Greens Homeowners Association.

CHRONOLOGY OF AGREEMENTS

1938 – The United States Department of the Interior and RF&P executed an indenture resulting in public law that provided direction to the settlement of conflicting titles to land associated with the shoreline of the Potomac River in the vicinity of the Mount Vernon Memorial Highway. In the indenture, the United States quitclaimed to RF&P a tract, labeled "Area 3," which encompassed roughly 40 acres near Four Mile Run. The indenture specified that the transferred land is subject to a use restriction, which provides that the property is to be used by RF&P solely for the construction, maintenance and operation of the railroad and freight yard (refer to Title Document 0443-0083, provided in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*, Attachment A).

1970 – RF&P leased the land encompassing Potomac Greens (then called Potomac Center) to Charles Fairchild, who intended to develop the parcel. An Exchange Agreement between the United States, RF&P, and Charles Fairchild (refer to Title Document 727-723, provided in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*, Attachment B) was executed whereby the United States (National Park Service) exchanged access rights to the George Washington Memorial Parkway from Potomac Greens in exchange for 28 acres in Fairfax County known as Dyke Marsh.

1982 – RF&P terminated Fairchild's lease and pursued Federal approvals for construction of the interchange with the Parkway.

1983 – Approvals for the highway interchange were issued by the U.S. Commission of Fine Arts and the National Capital Planning Commission.

1986-1988 – Various plans for a mixed-use development at the Potomac Greens site were submitted to the City of Alexandria.

1986 – Daingerfield Island Protective Society, a citizen group, filed a lawsuit against NPS challenging the 1970 Federal decision that gave developers the rights and obligation to construct an interchange between the Potomac Greens site and the Parkway. The lawsuit also alleged that the interchange design approval violated various Federal laws.

1987-1991 – The U.S. Congress barred NPS from issuing any construction permit for an interchange with the Parkway until an EIS had been prepared. The *George Washington Memorial Parkway-Potomac Greens Final EIS* (1991) evaluated four alternative development scenarios. The first alternative included the development proposals. Alternatives 2, 3 and 4 assumed, respectively, purchase of the interchange rights, purchase of a visual buffer to protect the Parkway, and purchase of the entire site.

Late 1980s/Early 1990s – The RF&P pursued redevelopment in "Area 3", above the height of the existing freight yard rails. The RF&P took legal action against the National Parks Service to allow redevelopment in two courts, with the U.S. prevailing in each court and each appeal. RF&P could not proceed without acquiring additional interests. It was under this situation that the appraised, valued exchange of land interests occurred between the Railroad and the U.S. The Release Agreement was a component of the Land Exchange. NPS proposed to drop the railroad use restriction for Area 3 (Arlington Potomac Yard), in exchange for RF&P giving up the right to build an interchange with the Parkway. Instead, RF&P filed an action to "quiet title" in the parcel, seeking a declaration that the use restriction in the indenture had ceased to be effective or, in the alternative, that the restriction was satisfied by RF&P's use of a portion, rather than the entirety, of the property for railroad purposes. In 1991, the United States Court of Appeals, Fourth Circuit, upheld lower court rulings that dismissed RF&P's request. (RF&P v. United States, 1991, http://openjurist.org/945/f2d/765/richmond-fredericksburg-potomac-railroad-company-v-united-states).

1994 – The United States Court of Appeals, District of Columbia Circuit, affirmed lower court rulings which dismissed challenges to the 1970 exchange agreement, and affirmed that the design approval of the Parkway interchange did not contravene any of the cited laws. (Daingerfield Island Protective Society v. Babbitt, 1994, http://openjurist.org/40/f3d/442/daingerfield-island-protective-society-v-babbitt-us.)

2000 – Commonwealth Atlantic Properties, the owner of the property in Potomac Yard at the time, entered into the Release Agreement and Scenic Easement with the United States of America, Department of the Interior (refer to Title Document 000005341[1], provided in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*, Attachment C). Key agreements included:

- Commonwealth Atlantic Properties relinquished the right of ingress and egress from the Parkway.
- The United States agreed to release the restrictions from the 1938 indenture agreement related to Area 3 in Arlington County.
- Commonwealth Atlantic Properties agreed to grant the United States a perpetual scenic easement (Greens Scenic Area) over and across certain portions of Potomac Greens.

2001-2003 – Commonwealth Atlantic Properties deeds the property underlying the Greens Scenic Area, along with other adjacent land that will be part of the Potomac Greens neighborhood, to Crescent Potomac Greens, LLC. In 2001, the underlying property is deeded to Potomac Greens Associates, LLC. The transfers do not affect the Greens Scenic Area perpetual scenic easement over portions of the property.

2004 – The underlying property (City tax parcel # 025.02-01-36) is dedicated to the City of Alexandria for "public park and/or open space uses" as Potomac Greens Park (refer to Title Document 050027503[2], provided in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*, Attachment D). The dedication to the City of the Potomac Greens Park property does not affect the Greens Scenic Area scenic easement over portions of the property. A detailed map of current parcel ownership (fee simple interest) in the vicinity of the Greens Scenic Area is provided in Volume II, *Greens Scenic Area Easement: Background and Reference Documents Technical Memorandum*, Attachment E.

[1] Title Document 000005341 amended the original Release Agreement and Scenic Easement title document 000005037, as noted: "Agreement is being re-recorded to follow the deed re-recorded immediately prior hereto in the chain of title." Aside from the note, the title documents are identical.

[2] Title document 050027503 is the current title document included minor corrections to the original title document 040050111. The corrections did not affect the terms of the dedication of the Potomac Greens Park property to the City or the Greens Scenic Area perpetual scenic easement.

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APPENDIX H:
AGENCY COORDINATION

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APPENDIX H – AGENCY CORRESPONDENCE

INTRODUCTION

This appendix includes a letter from NPS to FTA regarding construction access from the George Washington Memorial Parkway (GWMP).

United States Department of the Interior

NATIONAL PARK SERVICE
George Washington Memorial Parkway
c/o Turkey Run Park
McLean, Virginia 22101

IN REPLY REFER TO:
L2400 (GWMP)

May 1, 2012

Mr. Daniel Koenig
Environmental Protection Specialist
Federal Transit Administration
1990 K Street NW, Suite 510
Washington, DC 20006-1178

Dear Mr. Koenig:

This letter is in regard to proposed use of lands of the United States of America under the jurisdiction of the George Washington Memorial Parkway (GWMP), a unit of the National Park Service (NPS). GWMP is listed on the National Register of Historic Places in part for its historic and scenic landscape values. The specific property in question is part of United States Reservation 404, Virginia Section 5 and known as GWMP Tract 108-014 located within the City of Alexandria, Virginia.

As a part of the Potomac Rail Metrorail Station Environmental Impact Statement (EIS), GWMP Tract 108-014 is proposed as a construction entrance and staging area for Alternative B. The proposed construction area includes portions of the western shoulder of the George Washington Memorial Parkway roadway and up to the property line in an area bounded by Four Mile Run to the north and the Potomac Greens development to the south. The proposed construction area, including portions of NPS land, was determined in April 2012, to be a wetland using criteria published by the U.S. Army Corps of Engineers and NPS.

We are a cooperating agency on this EIS team. This letter is to inform the co-lead agencies of this EIS, the Federal Transportation Administration and the City of Alexandria, we do not believe access through property under our jurisdiction is feasible for the purposes of constructing Alternative B.

This early determination is based on three factors. First, the mission of the National Park Service is "…to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (16 USC 1) As stated in *NPS Management Policies 2006*, when making management decisions, we are guided to conserve park resources and values, defined as "…the park's scenery…and the processes that contain them [and] appropriate opportunities to experience enjoyment of the above resources…" (1.4.3 and 1.4.6)

We have serious concerns the amount of disturbance to park resources proposed by this construction access through a known wetland could constitute significant damage to these resources.

Also, we have concerns about the duration of closures necessary for construction and heavy construction vehicle use of the Parkway roadway. It is true road projects along GWMP often inconvenience the public in order to improve and keep the parkway operational. In these situations we are guided by the same philosophy outlined above: public use and conservation of resources. Projects to improve the Parkway are also to the benefit of our park visitors. Thus, we do our best to keep impacts to the parkway roadway short, with minimal resource damage, and only when absolutely necessary. We would anticipate the public having legitimate questions if we were to allow an extensive construction project that will not directly benefit the park, yet will put a burden on our park visitors and commuters.

We further believe issuing a permit for construction access in this area would be a violation of an easement held by the United States over the lands west of our property held in fee. Our estimation is the proposed construction access roads would cross our fee property into our easement property, known as the Greens Scenic Area. The easement was granted to the United States by Commonwealth Atlantic Properties on March 24, 2000 and is recorded in the land records of the City of Alexandria at Deed Book 5341, Page 24. We administer this easement on behalf of the United States.

The easement states:

> ...no improvements (including monuments, memorials or other commemorative works) shall be constructed or installed within the Greens Scenic Area, no clearing, grading or tree removal shall be permitted within the Greens Scenic Area and the Greens Scenic Area shall not otherwise be disturbed...

We assume the temporary construction roads proposed by this construction would constitute grading and disturbance within the Greens Scenic Area. We cannot permit work in violation of an easement we have a duty to enforce without sound reasoning as to how the violation would further protect park resources. We do not feel the proposed construction access rises to this level.

Generally, the denial of a permit or construction easement request would occur after we have received plans from the applicant. As permission pertains to actions within the Greens Scenic area, the easement stipulates a request must come in writing to my office, whereby we have 30 days to respond. We have neither officially received a permit request nor a request to construct within the easement.

We are taking the extraordinary step of informing you in advance of our inclination on the matter, so the EIS team may focus on other means of construction. Should the individuals or groups building a Metrorail station or any other development in the future approach us about construction permits and easement access through normal channels, we will consider the request and reply as appropriate.

Please note these thoughts apply to the construction access south of Four Mile Run and tied to Alternative B. North of Four Mile Run, Alternative D would also require the use of parkland. While we would review requests for construction permits in this area, the proposed actions would be on a much smaller scale and in an area known to be less ecologically sensitive. Finally, we would be remiss without reminding the EIS team the aforementioned easement held by the United States prohibits any improvements within the Greens Scenic Area. It is our preliminary assessment Alternative B, as designed, would be in violation of this easement. Former GWMP Superintendent Dottie Marshall explained this to the City of Alexandria in her letters of December 28, 2009, and May 3, 2010.

Thank you very much for the opportunity to give our thoughts on the matter. Please feel free to call me with additional questions at 703-289-2500.

Sincerely,

Jon G. James
Acting Superintendent

APPENDIX I:
LIST OF RECIPIENTS

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APPENDIX I – LIST OF RECIPIENTS

First Name	Last Name	Title	Organization	Hard Copy (Volume I & CD)	Executive Summary & CD	Executive Summary with Weblink
Federal Elected Officials						
Mark	Warner	Senator	U.S. Senate		1	
Tim	Kaine	Senator	U.S. Senate		1	
Don	Beyer	8th District	U.S. House of Representatives		1	
State Elected Officials						
Adam	Ebbin	30th District	Virginia State Senate		1	
Robert	Krupicka, Jr.	45th District	Virginia House of Delegates		1	
Local Elected Officials						
William	Euille	Mayor	City of Alexandria		1	
Allison	Silberberg	Councilman	City of Alexandria		1	
John	Chapman	Councilman	City of Alexandria		1	
Timothy	Lovain	Councilman	City of Alexandria		1	
Redella	Pepper	Councilman	City of Alexandria		1	
Paul	Smedberg	Councilman	City of Alexandria		1	
Justin	Wilson	Councilman	City of Alexandria		1	
Mary	Hughes Hynes	Chair, Arlington County Board	Arlington County		1	
J. Walter	Tejada	Vice Chair, Arlington County Board	Arlington County		1	
Jay	Fisette	Member, Arlington County Board	Arlington County		1	
Libby	Garvey	Member, Arlington County Board	Arlington County		1	
John	Vihstadt	Member, Arlington County Board	Arlington County		1	
Muriel	Bowser	Mayor	District of Columbia		1	
Phil	Mendelson	Council Chairman	District of Columbia		1	
Sharon	Bulova	Chairman, At-Large, Board of Supervisors	Fairfax County		1	
Jeff	McKay	Member, Board of Supervisors	Fairfax County		1	
Gerald	Hyland	Member, Board of Supervisors	Fairfax County		1	
Federal Agencies						
Terry	Garcia Crews	Regional Administrator	Federal Transit Administration		1	
Vida	Morkunas	Director of Planning & Program Development	Federal Transit Administration		1	
Elizabeth	Patel	Environmental Protection Specialist	Federal Transit Administration	1		
Melissa	Barlow	Community Planner	Federal Transit Administration	1		
Tammy	Stidham	Chief, Planning, Compliance & GIS	National Park Service, National Capitol Region	5		
Claire	Rozdilski	Acting Environmental Protection Specialist	National Park Service, George Washington Memorial Parkway	5		
Shawn	Garvin	Region 3 Administrator	Environmental Protection Agency		1	
Lourdes	Maurice	Chief Scientist and Technical Advisor for Environment	Federal Aviation Administration		1	
Marisel	Lopez-Cruz	Environmental Protection Specialist	Federal Highway Administration		1	

First Name	Last Name	Title	Organization	Hard Copy (Volume I & CD)	Executive Summary & CD	Executive Summary with Weblink
John	Winkle	Grant Manager	Federal Railroad Administration		1	
Elizabeth	Miller	Director, Physical Planning Division	National Capital Planning Commission		1	
Theresita	Crockett-Augustine	Northern Virginia Field Office	U.S. Army Corps of Engineers		1	
Elizabeth	Lenyk	Architect, PM Navy Annex Land Transfer	U.S. Department of Defense		1	
David	Reese	Environmental Planning Program Manager	U.S. Department of Homeland Security		1	
Barbara	Rudnick	NEPA Team Leader	U.S. Environmental Protection Agency		1	
Cindy	Schulz	Supervisor	U.S. Fish and Wildlife Service		1	
Regional, State, and Local Agencies						
Jennifer	Green-Ellison	Acting Secretary, Board of Directors	Washington Metropolitan Area Transit Authority	1		
Jack	Requa	Interim General Manager and Chief Executive Officer	Washington Metropolitan Area Transit Authority	1		
James	Ashe	Manager, Environmental Planning and Compliance	Washington Metropolitan Area Transit Authority	20		
William	Lebegern	Manager, Planning Department	Metropolitan Washington Airports Authority		1	
Richard	Taube	Executive Director	Northern Virginia Transportation Commission		1	
Erik	Marx	Director of Planning & Operations	Potomac Rappahannock Transportation Commission		1	
William	Morrow, Jr.	Executive Director, General Counsel	Washington Metropolitan Area Transit Commission		1	
Keith	Tignor	State Apiarist, Endangered Species Coordinator	Virginia Department of Agriculture and Consumer Services		1	
René	Hypes	Project Review Coordinator	Virginia Department of Conservation and Recreation		1	
Trisha	Beasley	Manager	Virginia Department of Environmental Quality		1	
Shirl	Dressler	Secretary Senior	Virginia Department of Game and Inland Fisheries		1	
Marc E.	Holma	Architectural Historian	Virginia Department of Historic Resources		1	
Jennifer	Mitchell	Director	Virginia Department of Rail and Public Transportation		1	
Valerie	Pardo	Transportation Planning Manager	Virginia Department of Transportation		1	
Elizabeth	Murphy	Environmental Engineer	Virginia Marine Resources Commission		1	
James	Dyke, Jr.	Board Member, At-Large Urban	Commonwealth Transportation Board		1	
Gary	Garczynski	Board Member, Northern Virginia District	Commonwealth Transportation Board		1	
Martin	Nohe	Chairman	Northern Virginia Transportation Authority		1	
Penelope	Gross	Chairman	Northern Virginia Regional Commission		1	
Robert	Dubé	Fire Chief	City of Alexandria			1

First Name	Last Name	Title	Organization	Hard Copy (Volume I & CD)	Executive Summary & CD	Executive Summary with Weblink
Stephen	Haering	Director, Health Department	City of Alexandria			1
Dianne	Gittins	Deputy Police Chief	City of Alexandria			1
Mark	Jinks	Acting City Manager	City of Alexandria			1
Jeffrey	Farner	Deputy Director, Department of Planning & Zoning	City of Alexandria			1
James	Spengler	Director, Department of Recreation, Parks, and Cultural Activities	City of Alexandria			1
Yon	Lambert	Director, Transportation & Environmental Services	City of Alexandria			1
J. Lance	Mallamo	Director, Office of Historic Alexandria	City of Alexandria			1
Charles	Trozzo	Chairman, Alexandria Restoration and Preservation Commission	City of Alexandria			1
Al	Cox	Historic Preservation Manager	City of Alexandria			1
Catherine	Miliaras	Urban Planner	City of Alexandria			1
Pamela	Cressey	City Archeologist	City of Alexandria			1
Francine	Bromberg	City Archeologist	City of Alexandria			1
Steven	Cover	Director of Community Planning, Housing, & Development	Arlington County			1
Dennis	Leach	Director of Transportation	Arlington County			1
Rebeccah	Ballo	Preservation Planner	Arlington County			1
Chuck	Bean	Executive Director	Metropolitan Washington Council of Governments		1	
Leif	Dormsjo	Director	District of Columbia Department of Transportation		1	
Donald	Halligan	Director, Office of Planning and Capital Programming	Maryland Department of Transportation		1	
Robert	Smith	Administrator	Maryland Transit Administration		1	
Libraries and Community Centers						
		City Clerk's Office	City of Alexandria	1		
Anton	Murray	James M. Duncan Branch Library	City of Alexandria	1		
Anton	Murray	Charles E. Beatley, Jr. Central Library	City of Alexandria	1		
Angela	Redfearn	Cora Kelly Recreation Center	City of Alexandria	1		
Gail	Koritansky	Aurora Hills Branch Library	Arlington County	1		
Other Interested Parties and Property Owners						
Ben	Beisterveld	Project Manager	CSX Transportation			1
Christine	Hoeffner	Manager	Virginia Railway Express			1
Stephen	Gardner	Vice President	Amtrak			1
Andrew	Vanhorn	Senior Vice President	JGB			1
Daniel	Dubrowski	Partner	Lionstone Investments			1
Jonathan	Rak	Partner	McGuireWoods			1
Steve	Collins	Director of Entitlements	Potomac Yard Development, LLC			1

First Name	Last Name	Title	Organization	Hard Copy (Volume I & CD)	Executive Summary & CD	Executive Summary with Weblink
Mark	Anderson	President	Potomac Greens Homeowners Association			1
			Potomac Yard Homeowners Association			1
Mary	Kendall	President	Old Town Greens Townhome Owners Association			1
Barbara	Draughon	President	Lynhaven Civic Association			1
Mary Jane	Kramer	President	NorthEast Citizens' Association			1
Christa	Watters	President	North Old Town Independent Citizens Association			1
Townsend	Van Fleet	President	Old Town Civic Association			1
Leslie	Zupan	President	West Old Town Citizens Association			1
Ali	Ahmad	Co-Chair	Alexandria Federation of Civic Associations			1
Carol	Supplee	President	Old Town Business and Professional Association			1
Katy	Cannady	Director	Alexandria Historical Society			1
Jim	Oliver	President	Aurora Highlands Civic Association			1
Jay	Nestlerode	President	Del Ray Citizens Association			1
Colleen	Stover	President	Hume Springs Citizens Association			1