

8.0 Section 4(f) and Section 6(f) Documentation

8.1 Introduction

This technical memorandum is separated into two sections. The first section presents Section 4(f) resources and identifies if a potential “use”, as defined under the Department of Transportation Act of 1966 could occur. The second section presents resources that are protected under Section 6(f) of the Land and Water Conservation Fund Act (LWCF) of 1965.

Upon selection of a Locally Preferred Alternative (LPA) by Arlington and Fairfax County, additional analysis and coordination with the Virginia Department of Historic Resources (VDHR), Arlington County Department of Parks and Recreation, and the Northern Virginia Regional Park Authority (NVRPA) would occur to complete the evaluation of the project’s effects on identified Section 4(f) and Section 6(f) resources.

8.2 Section 4(f)

8.2.1 Legal and Regulatory Context

Section 4(f) of the Department of Transportation Act of 1966 (23 U.S.C. 138 and 49 U.S.C. 303), as amended, protects publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance from use.

Use of a Section 4(f) Property: According to 23 CFR 774, Section 4(f) applies when one of the following uses of a protected property occurs:

1. When land is *permanently* incorporated into a transportation facility;
2. When there is a *temporary* occupancy of land that is adverse in terms of the statute’s preservation purpose; or
3. When there is a *constructive use* (proximity effects) of a Section 4(f) property.

The following conditions must be met for a *temporary use* not to be considered adverse:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;

4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

A *constructive use* occurs when the transportation project does not incorporate land from a Section 4(f) property, but the proximity impacts of the transportation project (including mitigation) are so severe that the protected activities, features or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

Approval of the Use of a Section 4(f) Property: According to 23 CFR 774, a transportation use of a Section 4(f) property may not be approved unless:

1. There is no feasible and prudent avoidance alternative to the use of land from the property; and the action includes all possible planning to minimize harm to the property resulting from such use; or
2. The use of the property, including any measure(s) to minimize harm committed by the applicant, will have a *de minimis* impact on the property.

For historic sites, a *de minimis* impact means that the Administration has determined that no historic property is affected by the project or that the project will have “no adverse effect” on the historic property in question. For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

8.2.2 Methodology

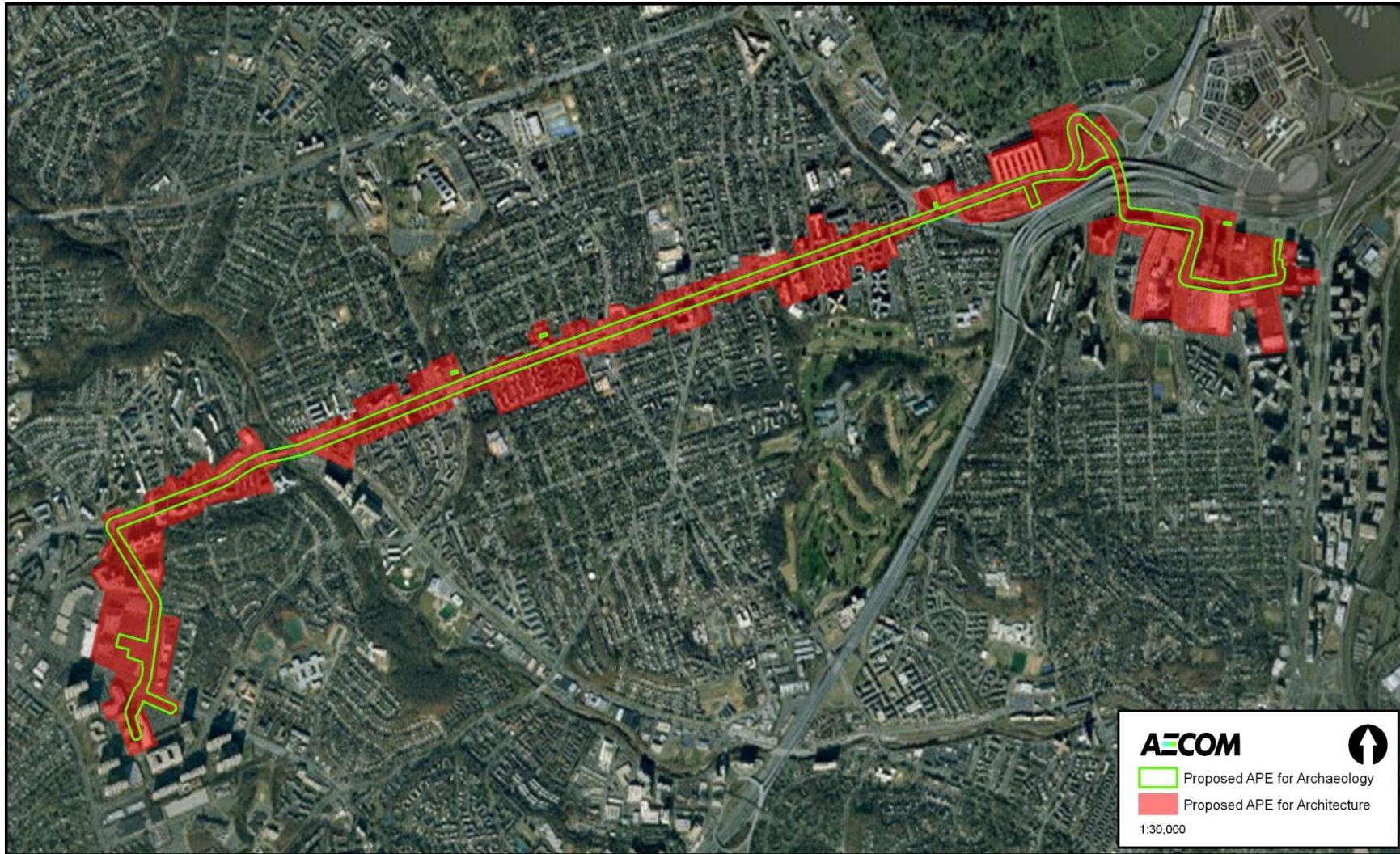
Properties protected under Section 4(f) were identified through the use of readily available information, field reviews, and coordination with state and local agencies. Potential uses of properties protected under Section 4(f) as a result of the project are described in terms of how activities and facilities at these areas could be impacted.

Archaeological and Historic Architectural Resources

Evaluation of historic resources included all sites on or eligible for the National Register of Historic Places (NHRP), as well as other historic sites of state and local significance. This part of the evaluation also included all archaeological sites that are on or eligible for inclusion on the National Register as well as other potentially archaeologically sensitive areas identified along the corridor.

Coordination with the VDHR identified an Area of Potential Effect (APE) for both architectural and archaeological resources. **Figure 8-1** shows the APE. Correspondence with VDHR is provided in Volume II, Chapter 16.

Figure 8-1: Area of Potential Effect for Historic Architectural and Archaeological Resources



For a detailed description of the assessment methodology used to identify historic resources, please refer to the Cultural Resources Technical Memorandum in Chapter 7 of Volume II.

Parklands

This portion of the Section 4(f) analysis utilized a 100-foot buffer on both sides of the track centerline of the proposed alignment to assess potential direct impacts to identified parkland resources. Public parks, recreational lands, and wildlife refuges subject to Section 4(f) evaluation were identified through site visits, recent aerial photographs, GIS data and other information provided by Arlington County and Fairfax County.

8.2.3 Potential Section 4(f) Resources

Cultural Resources

Archaeological resources could be impacted by the Columbia Pike Transit Initiative. Identified archaeological resources are listed in **Table 8-1** and shown in **Figure 8-2**. Additionally, the current right-of-way of Columbia Pike has the potential to contain buried deposits associated with the original construction of the turnpike (c.1810) and its subsequent operation.

Only one architectural resource was identified as being potentially affected - one of the Boundary Markers of the original District of Columbia MPD (DC) - Boundary Marker SW6. **Figure 8-3** shows the location of all architectural resources identified within the APE. Boundary Marker SW6 is located in Fairfax County along Jefferson Street.

Parklands

Figure 8-4 shows the three existing parklands within the study area that have the potential to be affected by the Columbia Pike Transit Initiative. These parks/trails include Four Mile Run Trail, Glencarlyn Park and the W&OD Trail. The Section 4(f) analysis focuses on Four Mile Run Trail and Glencarlyn Park. These parks/trails are described in **Table 8-2**. Please note that the W&OD Railroad Regional Park (W&OD Trail) is protected under the provisions of Section 6(f) of the Land and Water Conservation Fund Act and is described further in Section 8.3.

8.2.4 Potential Section 4(f) Uses

The development and construction of the Columbia Pike Transit Initiative is expected to have temporary construction impacts on identified potential Section 4(f). **Figure 8-5** shows the locations of these potential impacts.

No Build Alternative

The No Build Alternative is not expected to adversely impact historic architectural resources identified in the APE. The No Build Alternative may have potential impacts to archaeological deposits associated with the Alexandria Canal along 12th Street and to archaeologically sensitive areas along Columbia Pike. In addition, the No Build Alternative is not expected to result in a “use” of publicly-owned parklands identified in the study area. Evaluation and identification of Section 4(f) “uses” that might occur under the No Build Alternative would be covered under separate documentation and identified “use” would be the responsibility of the implementing agency.

TSM 1 Alternative

The TSM 1 Alternative is not expected to have direct adverse impacts on historic architectural resources identified in the APE. The TSM 1 Alternative may have potential impacts to archaeological deposits associated with the Alexandria Canal and to archaeologically sensitive areas along Columbia Pike. Coordination with VDHR is ongoing to determine the potential effects on archaeological resources. In addition, the TSM 1 Alternative would not adversely impact any publicly owned parklands.

Upon selection of the LPA, additional coordination with VDHR will determine if any adverse effects on historic resources would occur that would result in a Section 4(f) “use”.

TSM 2 Alternative

Proposed improvements associated with the TSM 2 Alternative include construction of seven transit stops and the Jefferson Street Transit Center. The TSM 2 Alternative is not expected to have direct adverse impacts on historic architectural resources identified in the APE. The alternative may have potential impacts on archaeological deposits associated with the Alexandria Canal and to archaeologically sensitive areas along Columbia Pike. Coordination with VDHR is ongoing to determine the potential effects on archaeological resources. In addition, the TSM 2 Alternative is not expected to result in any impacts to publicly owned parklands. Upon selection of the LPA, additional coordination with VDHR will determine if any adverse effects on historic resources would occur that would result in a Section 4(f) “use”.

Table 8-1: Archaeologically Sensitive Areas within the APE

Area #	Location	Description
1	Grassy areas on the south side of Leesburg Pike between South Jefferson Street and South George Mason Drive	Undeveloped at-grade grassy area previously occupied by several middle 20 th century buildings (USGS 1945; NETR Online 2010). The presence of a retaining wall at the western end of this area indicates some potential for significant disturbance at that location; however some at-grade surfaces exist between the retaining wall and Leesburg Pike.
2	Northeast corner of the intersection of South Jefferson Street and Leesburg Pike.	Undeveloped grassy area at the approximate location of a middle 20 th century building/residence (USGS 1945; NETR Online 2010).
3	On Columbia Pike at the Four Mile Run Bridge between South Arlington Mill Drive and South Four Mile Run Drive.	Map research indicates there may be historic 19 th century archaeological deposits at this location associated with Arlington Station, the Washington and Ohio Railroad and the “Sarah Dvdhon” residence (Hopkins 1879). Intermittent paving and excessive slopes (>15%) may reduce the testable area at this location considerably.
4	The Four Mile Run floodplain below the Four Mile Run Bridge.	Deeply buried deposits may exist within the Four Mile Run floodplain.
5	South side of Columbia Pike between its intersections with South Thomas and South Taylor Streets.	Grassy yard areas at the approximate location of the 19 th century “Wm Mack” residence (Hopkins 1879).
6	North side of Columbia Pike between South Monroe Street on the west and South Lincoln Street on the east.	Grassy yard area adjacent to the Arlington Presbyterian Church. Research indicates that the church was chartered in 1908, the original building was destroyed by fire in 1924 and rebuilding began in 1930 (APC). Intact early 20 th century deposits associated with the original church building may be present at this location.
7	South side of Columbia Pike between South Barton Street and South Adams Street.	Historic mapping (USGS 1945) indicates several structures at this location suggesting that intact early-middle 20 th century archaeological deposits may be present.
8	North side of Columbia Pike between South Wayne Street on the west and South Veitch Street on the east.	Grassy yard area around Trinity Episcopal Church; research indicates that the church was built at this location in 1903 (TEC); intact early 20 th century deposits associated with the church may be present at this location.
9	North side of Columbia Pike west of South Scott Street.	Yard area surrounding St. John’s Baptist Church, former site of the Arlington Episcopal Church (c. 1878).
10	South side of Columbia Pike west of South Orme Street.	Approximate former location of the late 19 th century “Rich. ^d Johnson” residence (Hopkins 1879).
11	North side of Columbia Pike west of South Orme Street.	Yard area south of the Sheraton National Hotel; former site of Arlington Chapel.
12	South side of Columbia Pike east of South Oak Street.	Approximate former site of the late 19 th century “J.R. Johnson” residence and “N.S. Wright” residence and store (Hopkins 1879).
13	West side of Columbia Pike east of the Air Force Memorial.	Approximate former location of the Columbia Pike “Toll Gate” and late 19 th century “H.S. Johnson” residence (Hopkins 1879).
14	East side of Columbia Pike east of the Air Force Memorial.	Approximate former location of the Columbia Pike “Toll Gate”, the late 19 th century “H.S. Johnson” store and “B.S. Sh.” (Blacksmith shop?) (Hopkins 1879).
15	West side of South Eads Street west of 12 th Street South.	Approximate former location of the Chesapeake and Ohio Canal/Alexandria Canal (44AX0028) (c.1833 - c. 1886) (Hopkins 1979; USGS 1885; CoA).
16	East side of South Eads Street north of 12 th Street South.	Approximate former location of the Potomac Brick Works (Hopkins 1879).

Table 8-2: Existing Parklands within the Study Area - Potential Section 4(f) Resources

Resource	Address	Jurisdiction	Size	Recreational Activities Provided
Four Mile Run Trail	Adjacent to Four Mile Run stream	Arlington County	6.2 mile trail	Paved multi-use trail through public parks and easements
Glencarlyn Park	301 South Harrison Street	Arlington County	97 acres	Passive recreation facilities and natural areas

Source: Arlington County, Fairfax County and National Park Service

Figure 8-2: Areas of Archaeological Sensitivity within the APE - Potential Section 4(f) Resources

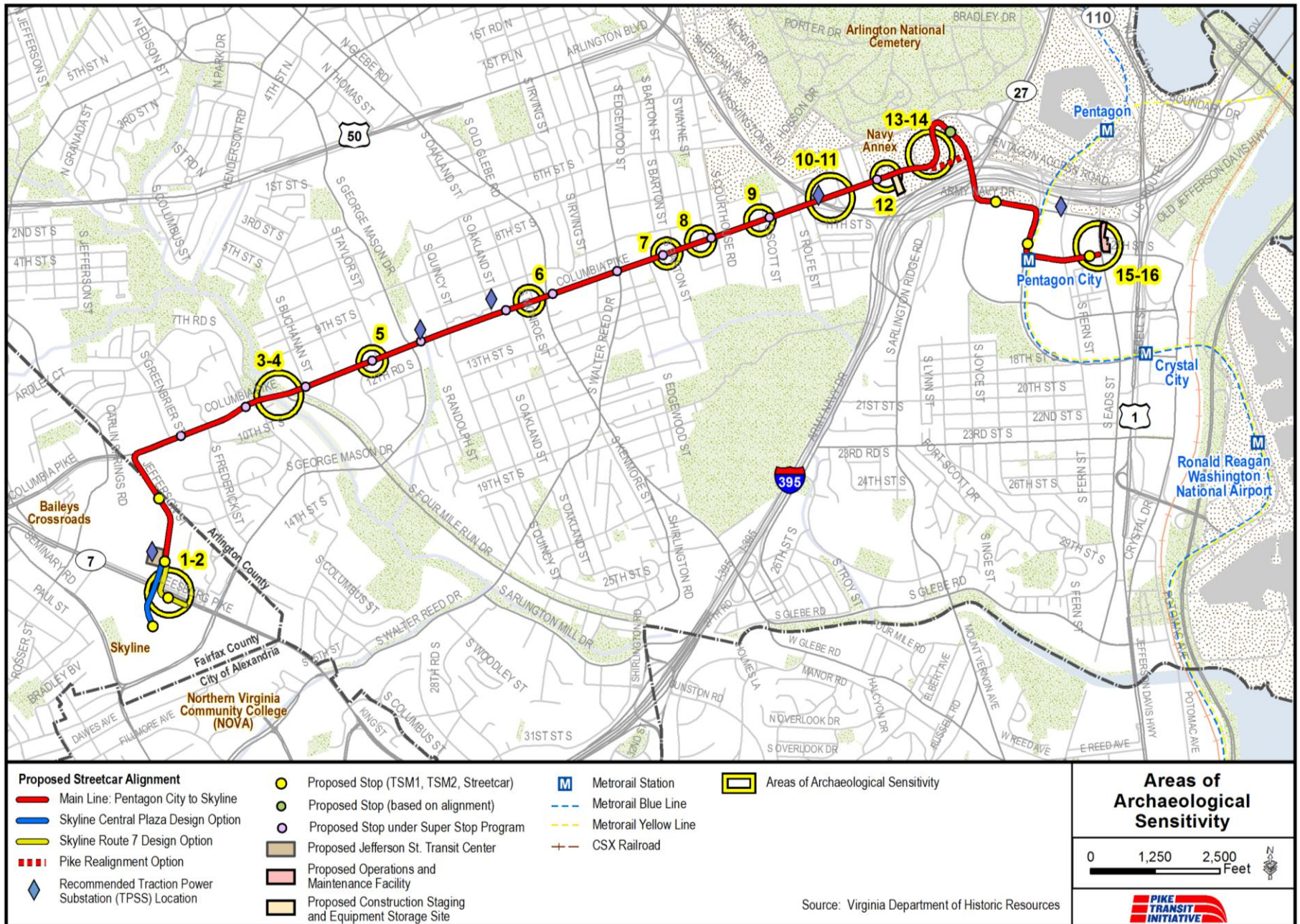
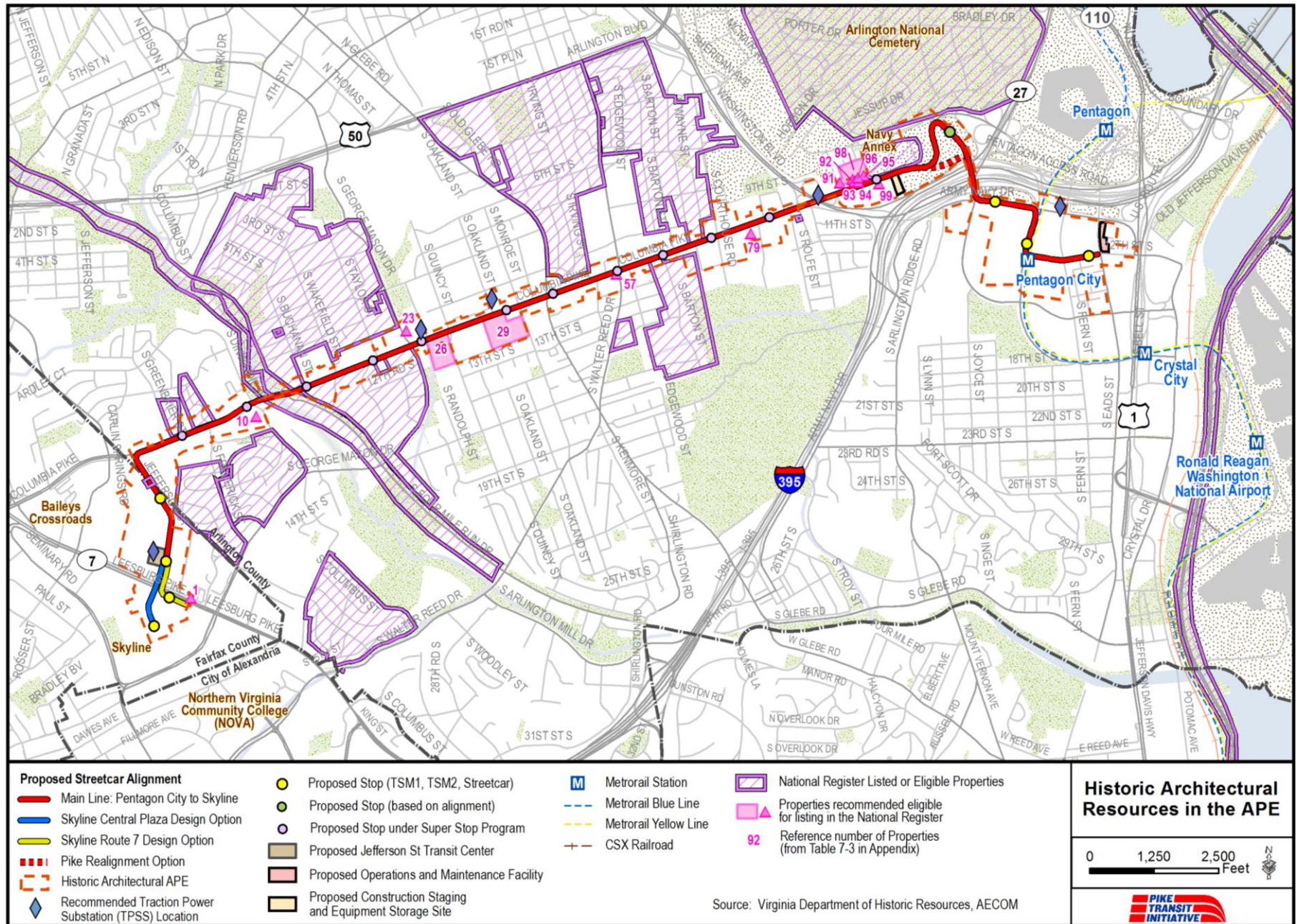
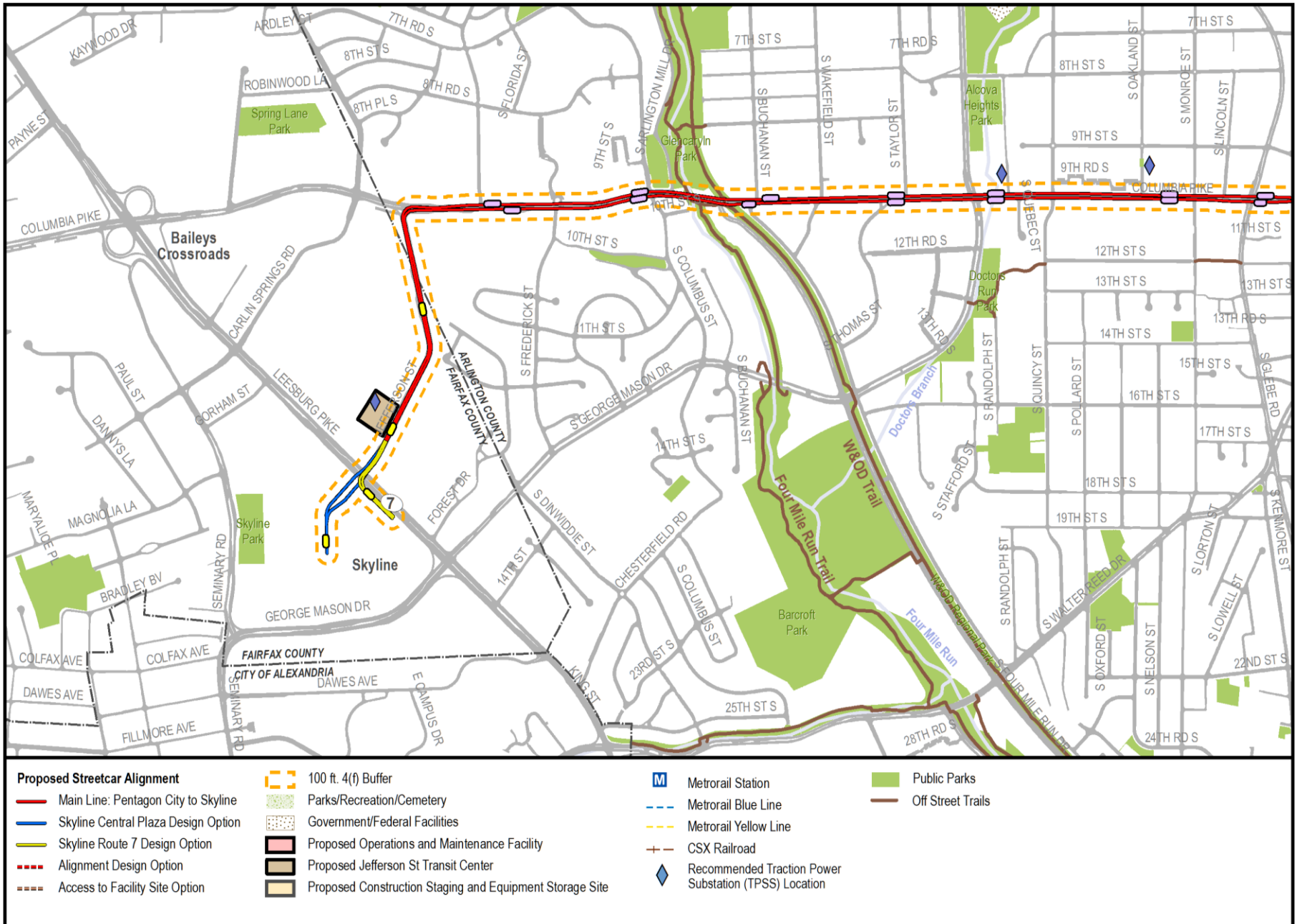


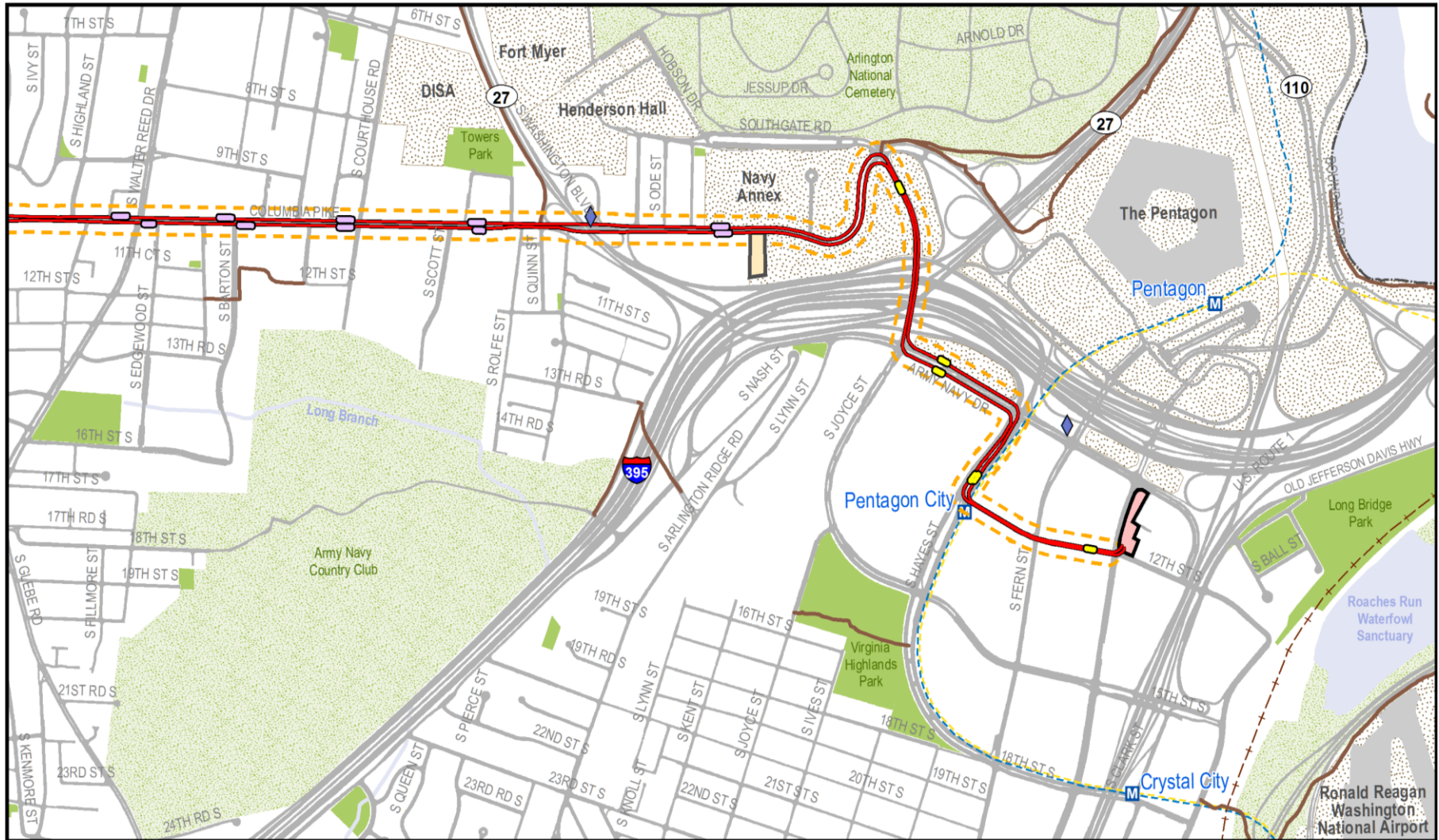
Figure 8-3: Historic Architectural Resources within the APE



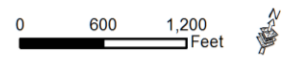
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Figure 8-4: Public Parklands within the Study Area - Potential Section 4(f) Resources





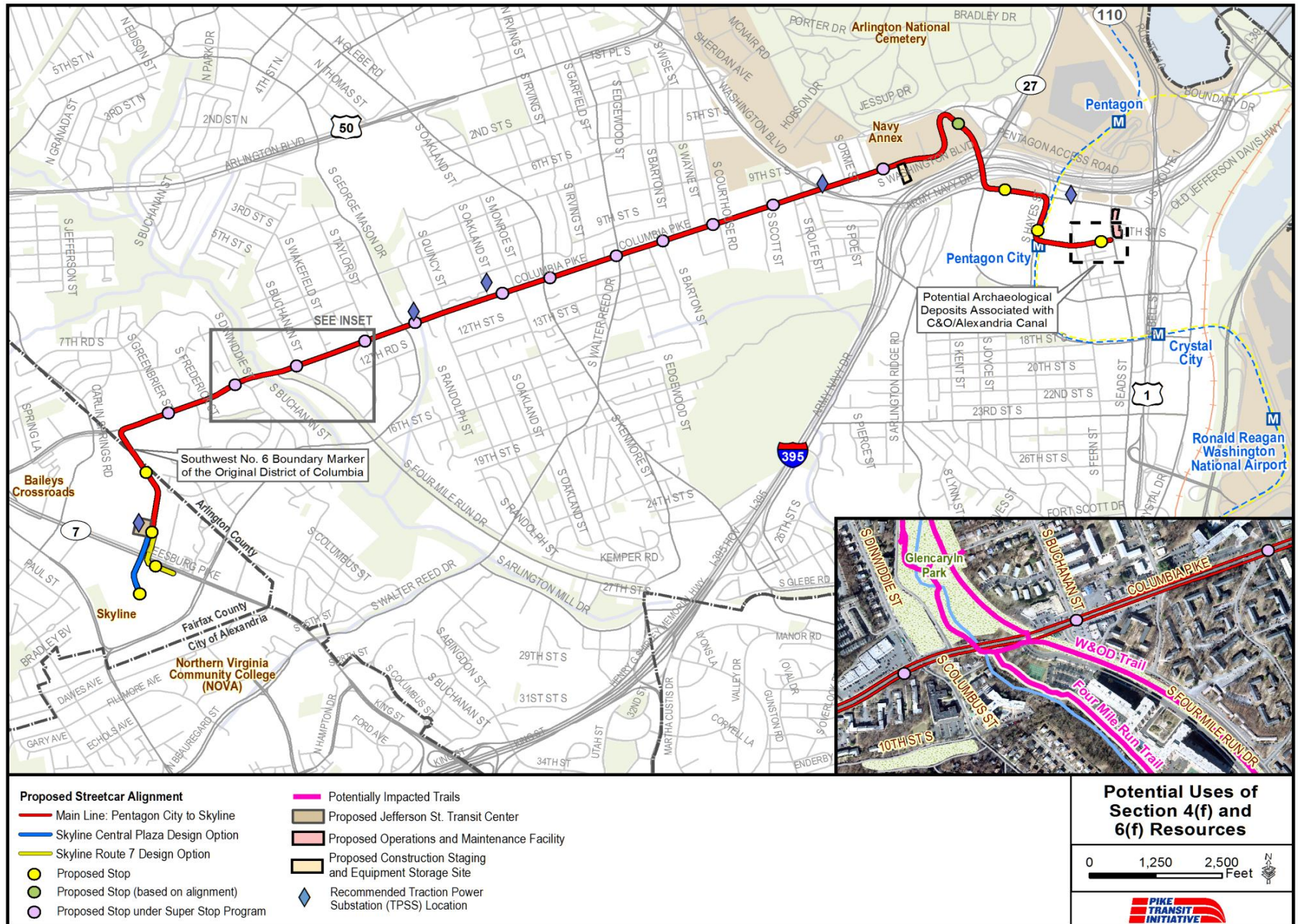
Public Parklands



Source: Arlington County, Fairfax County, City of Alexandria, and National Park Service data; AECOM field observations



Figure 8-5: Potential Uses of Section 4(f) and Section 6(f) Resources



Streetcar Build Alternative

Historic Resources: The Streetcar Build Alternative is expected to affect the following resources:

- All 16 identified areas of archaeological sensitivity in the APE;
- Archaeological deposits associated with the Alexandria Canal.
- Potential archaeological deposits associated with the historic Columbia Pike turnpike within the ROW of the current roadway; and
- Boundary Marker Southwest #6 of the Boundary Markers of the original District of Columbia MPDF, a NRHP-listed resource, which is located within a median on Jefferson Street, approximately 615 feet south of its intersection with Columbia Pike. Re-grading proposed for this section of Jefferson Street would require temporary removal of the median and the boundary marker, potentially resulting in a direct adverse effect.

Improvements proposed for the Streetcar Build Alternative include approximately seven transit stops, the O&M facility, four traction power substations (TPSS), the Jefferson Street Transit Center, one construction staging and equipment storage area, as well as tracks and catenary lines servicing the streetcars. In addition, structural improvements are proposed to the Four Mile Run Bridge (Bridge #1008).

Two transit stops are proposed on S. Joyce Street, located approximately 335 feet south of Arlington National Cemetery; however, the improvements would not alter the characteristics that make the cemetery eligible for listing in the NRHP, and, as a result, the improvements would not have an adverse effect on the cemetery.

The proposed construction staging and equipment storage area would be located in the parking lot approximately 100 feet south of the NRHP-eligible Navy Annex building. The staging area would not include construction of buildings or structures and the parking lot would largely remain unchanged. As physical improvements here would be limited, the characteristics that make the Navy Annex eligible would not be altered. As a result, the improvements would have no adverse effect on the Navy Annex.

Roadway improvements associated with the construction of the streetcar tracks would occur throughout the project corridor. One NRHP-listed resource, the Boundary Marker Southwest #6 of the Boundary Markers of the original District of Columbia MPDF, is located within a median on Jefferson Street, approximately 615 feet south of its intersection with Columbia Pike. Re-grading proposed for this section of Jefferson Street would require temporary removal of the median and the boundary marker, resulting in a potential direct adverse effect on the boundary marker.

Structural No other improvements associated with the Streetcar Build Alternative are expected to cause effects to historic architectural resources. The project is in review with VDHR on determining potential effects on archaeological and architectural resources. Depending on the results of the

ongoing Section 106 coordination, the impacts on the historic boundary marker may be determined to as a *de minimus* impact.

Parklands: Temporary impacts to Four Mile Run Trail and Glencarlyn Park would occur as a result of Four Mile Run Bridge improvements required as part of the Streetcar Build Alternative. The temporary impacts associated with construction activities are not expected to result in a *temporary adverse use* based on the following:

1. The duration of the construction impacts would not exceed the total duration of the Streetcar Build Alternative construction. This alternative would require superstructure and substructure improvements to the Columbia Pike roadway bridge, which crosses the Four Mile Run Trail and Glencarlyn Park above grade. It is expected that superstructure improvements would require temporary lane closures of the roadway and that the time to complete these improvements would be approximately six to eight months. Construction time to complete substructure improvements would be approximately four to six months. Total construction of the Streetcar Build Alternative is expected to be approximately two years.
2. The scope of the construction activities in the vicinity of these parklands would be for construction materials and construction vehicles to access the substructure of the bridge and the use of barriers to protect park users from construction activities.
3. There is no anticipated permanent effect or interference of protected activities of the parks. Access to the parkland/trail would be maintained; however during certain construction activities the trail may be rerouted for the safety of trail users. It is not expected that it would be necessary to reroute the trail for the duration of the construction activities specified for the bridge improvements.
4. Upon completion of the construction activities at this location, the park/trail would be fully restored to preconstruction conditions.
5. Should the Streetcar Build Alternative be selected as the LPA, coordination with the park/trail owner would occur to document an agreement that the proposed construction activities would not result in a temporary adverse use of the Section 4(f) resources.

8.2.5 Avoidance and Measures to Minimize Harm

Should the Streetcar Build Alternative be selected as the LPA, the regrading of Jefferson Street is unavoidable which would affect historic boundary marker SW6. As such, VDHR would be consulted on a mitigation program that may include:

- Conditions assessment;
- Protection, stabilization, and temporary relocation and storage plan;
- Preservation plan consisting of conservation, maintenance, and repair of historic fabric; and
- Returning the boundary marker and historic signage to the median post-construction.

If engineering associated with the alternatives change, a re-evaluation of effects to historic architectural resources in the project area would be required.

Should final engineering indicate potential direct impacts to the previously identified areas of archaeological sensitivity, a program that may include additional background research, sensitivity analysis, limited subsurface testing, geomorphologic testing and construction monitoring developed in consultation with VDHR is recommended to identify intact archaeological resources that may exist within the study corridor and evaluate their potential eligibility for inclusion in the National Register of Historic Places or the Virginia Landmarks Register. In addition, the one registered archaeological site, the Alexandria Canal (44AX0028), is not visible on the surface and would likely require further survey to determine the canal's location and degree of integrity.

To minimize the temporary construction effects on parklands/trails, signage temporarily redirecting trail/park users away from construction activities and alternate routes would be provided when necessary. Construction activities would be coordinated with the park/trail owner to assess how best to minimize impacts to trail/park users. Correspondence regarding the project's potential impacts on these parks/trails is included in Volume II, Chapter 16.

8.3 Section 6(f) of the Land and Water Conservation Fund Act

8.3.1 Legal and Regulatory Context

The Land and Water Conservation Fund Act (LWCF) of 1965 was enacted to assist in preserving, developing, and assuring accessibility to outdoor recreation resources. The Act provides funding for the federal acquisition and development of public outdoor recreation areas and facilities and, also provides for matching grants for state and local governments. Once a property is acquired or developed using these funds, these lands are protected by Section 6(f) of the LWCF from conversion to uses other than public outdoor recreation uses.

A conversion of a Section 6(f) protected property occurs when the property is converted to anything other than public outdoor recreation use. A conversion of use must be approved by the U.S. Secretary of the Interior; must be in accordance with the existing comprehensive statewide outdoor recreation plan; and must assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

Temporary uses for construction are not considered a conversion if the property is restored to its original condition after construction. Proposals for "temporary non-conforming uses," that is temporary non-recreation activities of less than a six-month duration within a Section 6(f)(3) protected area, must

be reviewed and approved by the Virginia Department of Conservation and Recreation (VDCR) and the National Park Service (NPS).

8.3.2 Methodology

Parks protected by Section 6(f) of the LWCF were identified based on the Detailed Listing of Grants by County obtained from the National Park Service.

8.3.3 Section 6(f) Resources

The W&OD Trail is publicly owned parkland that is protected under the provisions of Section 6(f) of the Land and Water Conservation Fund Act. In the vicinity of the project, the park is within Arlington County and runs parallel to Four Mile Run stream. The park is a 45-mile multi-use linear park. **Figure 8-4** shows the location of the W&OD Trail.

8.3.4 Potential Conversion of Use

The W&OD Trail would not be affected by the No Build, TSM 1, or TSM 2 Alternatives. However, the W&OD Park would be temporarily affected by the Streetcar Build Alternative during proposed improvements to the Four Mile Run Bridge. The scope of the construction activities in the vicinity of this Section 6(f) resource would be for construction materials and construction vehicles to access the substructure of the bridge and the use of barriers to protect park users from construction activities. Access to the park would be maintained; however during certain construction activities the trail may be rerouted for the safety of trail users. It is not expected that it would be necessary to reroute the trail for the duration of the construction activities specified for the bridge improvements. The temporary construction impacts on the park would not result in a permanent conversion of the Section 6(f) resource.