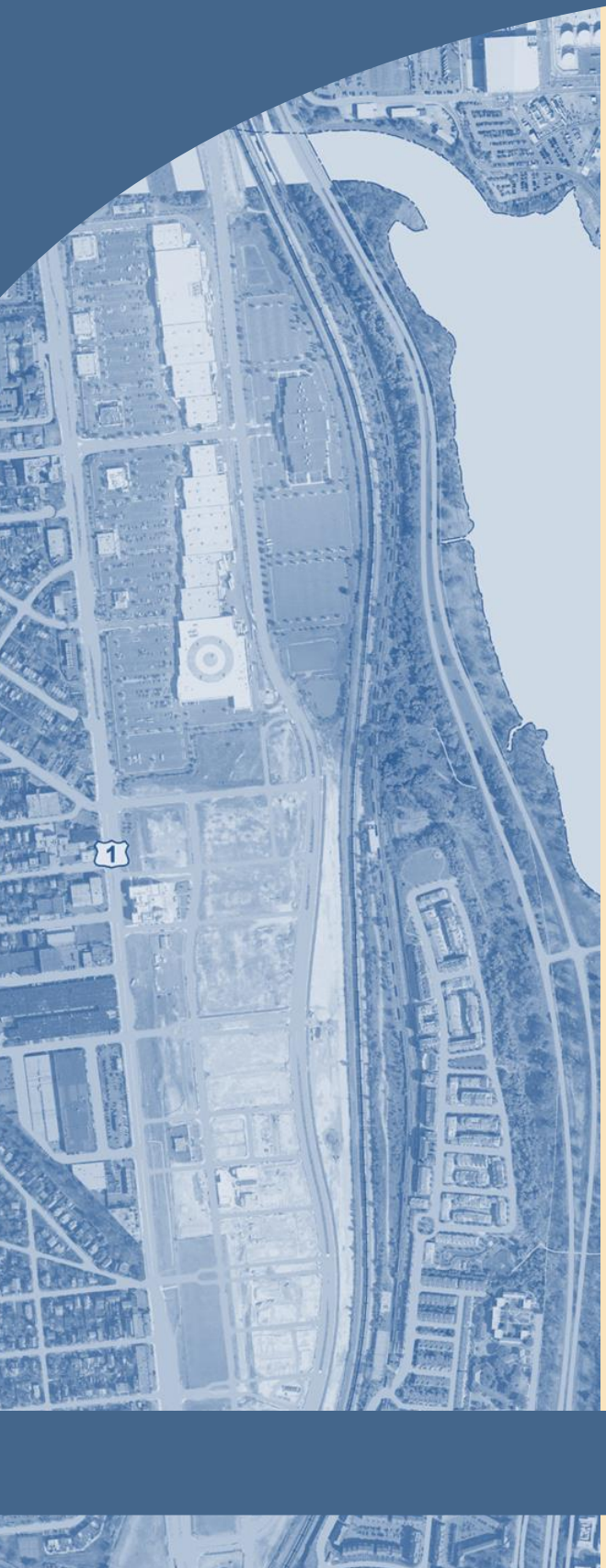
POTOMAC YARD METRORAIL STATION
ENVIRONMENTAL IMPACT STATEMENT



Volume I

Draft Environmental Impact Statement

and

Draft Section 4(f) Evaluation

April 2015

Federal Transit Administration

City of Alexandria Virginia

metro

National Park Service

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POTOMAC YARD METRORAIL STATION

Draft Environmental Impact Statement
and
Draft Section 4(f) Evaluation

Pursuant to:
National Environmental Policy Act of 1969 (42 U.S.C. Section 4321 et seq.)
Department of Transportation Act of 1966, Section 4(f) (49 U.S.C. Section 303)

Prepared by:

Federal Transit Administration (FTA)
City of Alexandria, Virginia

with the cooperation of the

Washington Metropolitan Area Transit Authority (WMATA)
National Park Service (NPS)

Terry Garcia Crews, *Regional Administrator*
Federal Transit Administration
U.S. Department of Transportation

Date: 3.25.15

Mark Jinks, *Acting City Manager*
City of Alexandria, Virginia

Date: 3-25-15

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Abstract: This document describes and summarizes the potential environmental impacts of a proposed new Metrorail Station and ancillary facilities located at Potomac Yard within the City of Alexandria along the existing Metrorail Blue and Yellow Line between the Ronald Reagan Washington National Airport Metrorail Station and the Braddock Road Metrorail Station. The purpose of the project is to improve accessibility of the Potomac Yard area and provide more transportation choices for current and future residents, employees, and businesses by establishing a new access point to the regional Metrorail system. The following alternatives are considered: a No Build Alternative, three Metrorail station build alternatives (Build Alternatives A, B and D), and a design option of Build Alternative B (B-CSX Design Option). The three Build Alternatives were developed based on an initial set of eight alternatives identified during the Potomac Yard Metrorail Station Concept Development Study, as well as alternatives suggested by the public during the Scoping process. The B-CSX Design Option was subsequently developed to avoid and minimize some of the adverse impacts of Alternative B. Potential impacts of the alternatives on key resources of the natural and human environment are evaluated in this document. Each section describes the applicable regulations and guidance, analysis methodology, description of the affected environment, key findings describing the potential effects, and mitigation strategies. Technical Memoranda supporting the findings are included in Volume II and referenced in appropriate sections. A draft Section 4(f) Evaluation is provided in Appendix D. FTA must issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141 Stat. 405, Section 1319(b) unless FTA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section 1319.

Comments on this Draft Environmental Impact Statement are due by May 18, 2015 and should be sent to one of the following addresses:

Potomac Yard Metrorail Station EIS
P.O. Box 16531
Alexandria, VA 22302

Office of the Secretary
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001

A Public Hearing will be held on April 30, 2015. More specific details regarding the public hearing location and time will be posted on the project website (www.potomacyardmetro.com), and notices will be mailed to interested parties and published in newspapers of general circulation.

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POTOMAC YARD METRORAIL STATION

DRAFT ENVIRONMENTAL IMPACT STATEMENT

EXECUTIVE SUMMARY

Introduction

Environmental Impact Statement for a New Metrorail Station at Potomac Yard

The Federal Transit Administration (FTA) and the City of Alexandria, in cooperation with the Washington Metropolitan Area Transit Authority (WMATA or Metro) and the National Park Service (NPS), have prepared this Draft Environmental Impact Statement (Draft EIS) under the National Environmental Policy Act (NEPA) for construction of a proposed Potomac Yard Metrorail Station. NPS is a cooperating agency because of the potential of the project to impact natural and cultural resources of the George Washington Memorial Parkway. Any action taken by NPS in conjunction with this project must be consistent with the National Park Service Organic Act, which directs NPS to "conserve the scenery and the natural and historic objects and the wild life therein" (16 U.S.C. 1). Construction would include a new Metrorail station, associated track improvements, and pedestrian bridges at Potomac Yard within the City of Alexandria. The station would be located along the existing Metrorail Blue and Yellow Lines between the Ronald Reagan Washington National Airport Metrorail Station and the Braddock Road Metrorail Station.

This document summarizes key information from the Draft EIS and gives information on opportunities to provide comments on the document. The entire Draft EIS document is available for review online at:

www.potomacyardmetro.com

Hard copies of the Draft EIS are available for review at the City of Alexandria public library and at:

Alexandria City Hall
301 King Street
Alexandria, VA 22314

The public comment period for the Draft EIS will be open until May 18, 2015. See **pages 14-15** for information on providing comments and participating in the public hearing.

Why Do We Need a Metrorail Station at Potomac Yard?

Project Purpose

The project is proposed 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.

Project Need

Currently, the project area is not served by direct access to regional transit services, such as Metrorail. This area is served by local bus services that operate in the U.S. Route 1 corridor, including the Crystal City/Potomac Yard Transitway (also known as "Metroway"). Direct access to the Metrorail system will facilitate regional transit trips.

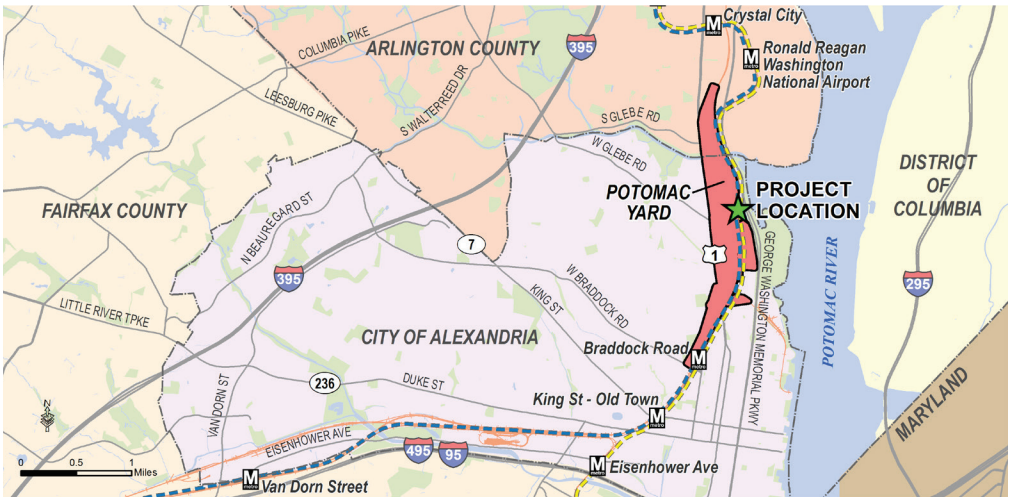
Traffic congestion will increase on U.S. Route 1 even without the proposed development in Potomac Yard. Increasing the share of transit trips would help to manage congestion, reduce auto trips and emissions along transit corridors, and make efficient use of existing infrastructure. Additional transportation options are needed to support the City of Alexandria's redevelopment plans.

Due to the constrained capacity of the roadway network, additional transportation options are needed to support the City of Alexandria's redevelopment plans by accommodating travel demand through transit and other non-auto modes. Direct regional transit access would provide more transportation choices for residents and workers and would enhance connections to regional employment and activity centers.

Planning for the Potomac Yard Area

Several initiatives have studied and proposed a Metrorail station in the Potomac Yard area:

- **1968 and 1975:** Metrorail system plans identified Potomac Yard as a site for a future Metrorail station that could benefit new development.
- **Mid-to-Late 1980s:** The draft *Alexandria 2020* plan proposed a mixed-use, neighborhood development with a Metrorail station. Operations of the existing rail yard began to be phased out.
- **1992/1999:** The City of Alexandria's *Potomac Yard/ Potomac Greens Small Area Plan* identified the potential for a Metrorail station. A 2009 revision included approval for an urban, mixed-use Town Center along East Glebe Road.
- **2010:** The *Potomac Yard Concept Development Study*, conducted by the City of Alexandria and Metro, analyzed eight potential Metrorail station locations, recommending further examination of three locations.
- **2010:** The *North Potomac Yard Small Area Plan* was adopted, envisioning replacement of the existing shopping center with a high-density, transit-oriented neighborhood anchored by a Metrorail station.
- **2011:** The current EIS study began, gathering public and agency input on the scope of the environmental study, project alternatives to be evaluated, and defining agency roles in the process.



Location of Potomac Yard and the Project

Description of Alternatives

Alternatives Considered

The Draft EIS identifies and evaluates alternatives that meet the project's purpose and need. The Draft EIS includes a "No Build Alternative," which describes what would happen if no station was built. The No Build Alternative provides a baseline to compare impacts.

Screening of Initial Alternatives

In March 2011, the project team completed scoping for the Draft EIS. A total of 36 initial alternatives were evaluated and screened to select those that were:

1. Responsive to project purpose and need;
2. Consistent with land use and development plans; and
3. Technically feasible.

Build Alternatives A, B, and D – representing three different Metrorail station locations – emerged from the scoping process. A design option of Build Alternative B, identified as "B-CSX Design Option," was developed in an effort to avoid and minimize adverse impacts of Alternative B to the George Washington Memorial Parkway, Federally owned land administered by NPS.

Alternatives Studied in the EIS

The **No Build Alternative** includes planned transportation projects expected to be finished by 2040, except the Potomac Yard Metrorail Station. These No Build projects include:

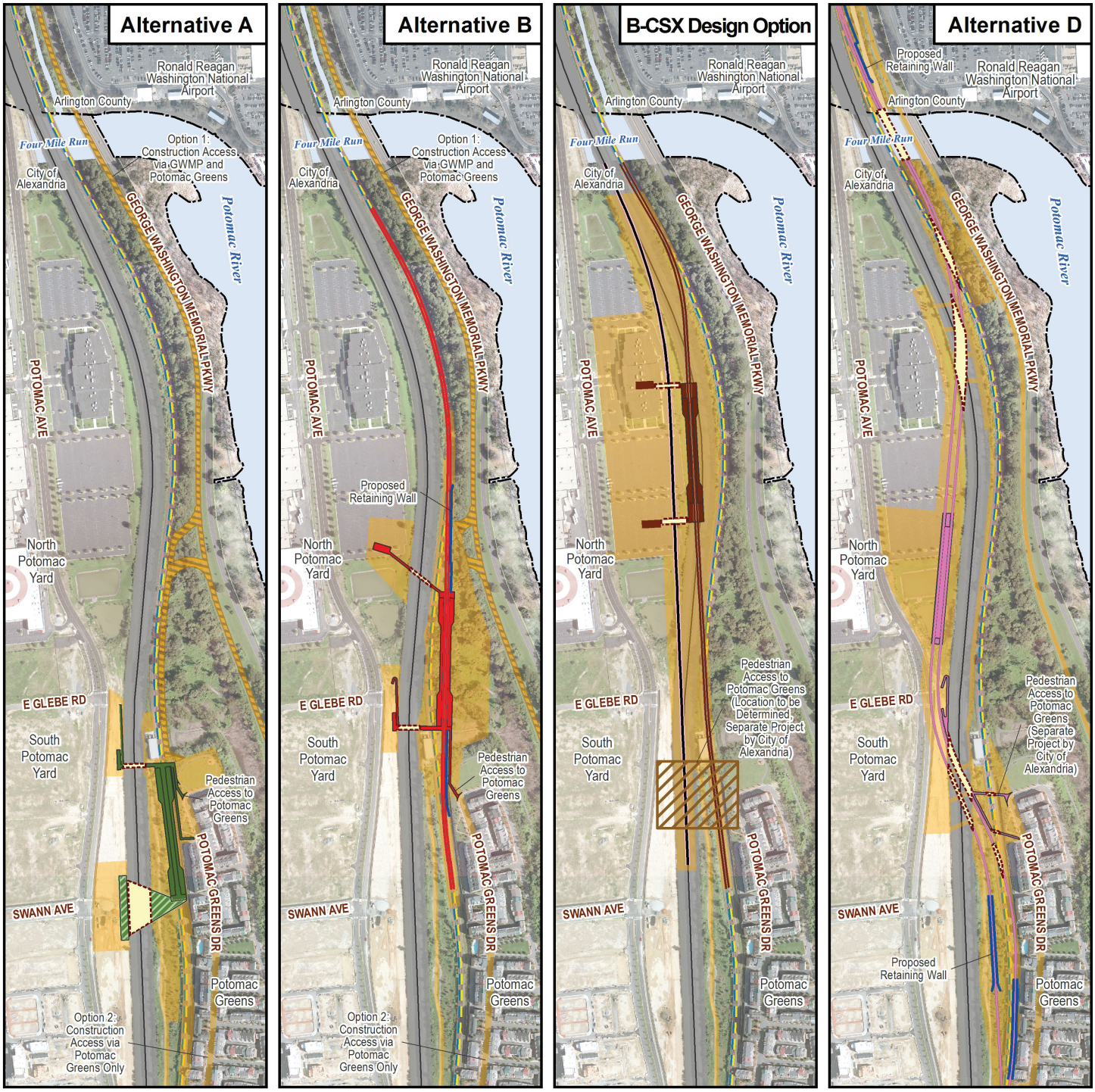
- Completion of the Potomac Yard street network and multi-use trails;
- Future pedestrian/bicycle bridge between Potomac Yard and Potomac Greens; and
- Expansion of local bus services.

The **Build Alternatives** are the three Metrorail station alternatives and design option shown on this page. Detailed depictions of each Build Alternative are provided on the following page.

Build Alternative station locations

- **Build Alternative A** is located along the existing Metrorail tracks between the CSX Transportation (CSXT) railroad tracks and the north end of the Potomac Greens neighborhood, generally within the "Metrorail Reservation" identified as part of the *Potomac Yard/Potomac Greens Small Area Plan* (1999).

Project Build Alternatives



- Alternative A - Platform & Facilities
- Alternative A - Range of Potential Pedestrian Crossings
- Alternative B - Platform & Facilities
- Alternative B - New Metrorail Track
- B-CSX Design Option - Platform & Facilities
- B-CSX Design Option - New Metrorail Track
- B-CSX Design Option - Realigned CSXT Track
- Alternative D - Platform & Facilities
- Alternative D - New Metrorail Track
- Aerial Structure over Railroad or Water
- Construction Access and Impact Area
- Alternative A and B - Option 1: Additional Construction Access and Impact Area
- Existing Metrorail Blue/Yellow Line
- Existing CSXT Tracks
- Existing CSXT Right-of-Way

0 350 700 Feet

N

Source:
City of Alexandria; Arlington County; District of Columbia; WMATA

- **Build Alternative B** is located between the George Washington Memorial Parkway and the CSXT railroad tracks north of the Potomac Greens neighborhood, and east of the existing Potomac Yard Shopping Center. Portions of Build Alternative B would be located within the Greens Scenic Area, a NPS-administered easement located within the City's Potomac Greens Park.
- **B-CSX Design Option** is located east of the existing Potomac Yard movie theater on land currently occupied by the CSXT railroad tracks. This design option of Alternative B would require relocation of the CSXT tracks to the west, providing the room necessary for the station and realigned Metrorail track to avoid George Washington Memorial Parkway property and the Greens Scenic Area easement.
- **Build Alternative D** is located west of the CSXT railroad tracks near the existing Potomac Yard Shopping Center. The alternative would require elevated tracks starting north of Four Mile Run, crossing over the CSXT tracks into Potomac Yard, and then crossing over the CSXT tracks again to reconnect to the existing Metrorail line behind Potomac Greens.

Station Design

- Build Alternatives A, B, and B-CSX Design Option would have station platforms at the same level as the existing Metrorail tracks, with elevated entrance mezzanines providing two pedestrian bridges from the station over the CSXT railroad tracks to Potomac Yard.
- Build Alternative D would have an elevated station platform with a ground floor mezzanine entrance.

Pedestrian Connections

- Build Alternatives A and B would provide 24-hour pedestrian/bicycle access between Potomac Yard and Potomac Greens via one of their two pedestrian bridges.
- B-CSX Design Option and Build Alternative D would have separate pedestrian/bicycle bridges providing 24-hour access between Potomac Yard and Potomac Greens.

Construction Access and Staging

Construction activities would occur within identified staging areas and access routes shown on page 4. Construction activities for the project would last approximately two years. Opening of the station was assessed in the Draft EIS for the year 2016 based on previous project schedule assumptions. The schedule and anticipated opening year will be updated in the Final EIS.

Two construction access options for **Build Alternatives A and B** were assessed in the Draft EIS:

- *Option 1* – access to construction staging areas from the George Washington Memorial Parkway, Potomac Greens Drive, and the Rail Park, with relatively limited construction access from Potomac Yard.
- *Option 2* – access to construction staging areas from Potomac Greens Drive and the Rail Park, with relatively limited construction access from Potomac Yard, and no access from the George Washington Memorial Parkway.

B-CSX Design Option construction access would be provided from the Rail Park and Potomac Yard. **Build Alternative D** construction access would be provided from the George Washington Memorial Parkway, Potomac Greens Drive, the Rail Park, and Potomac Yard.

Commercial vehicles are prohibited from the George Washington Memorial Parkway, with limited exceptions, 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 areas for Build Alternatives A and B are accessible from locations other than the George Washington Memorial Parkway. However, since

potential impacts would occur to residential communities at these other locations, construction access from the George Washington Memorial Parkway was also studied as an option in the Draft EIS.

Potential Benefits of the Project

Project Benefits

A new Metrorail station would serve residents, employees, and visitors, providing mobility benefits and supporting the City of Alexandria's redevelopment plans for Potomac Yard by helping accommodate higher-density, mixed-use development.

Transportation Benefits

- A Metrorail station in Potomac Yard would provide Metrorail access for thousands of Alexandria residents, employees, and visitors.
- Direct access to Metrorail would maximize the number of people taking transit to and from the Potomac Yard area.
- Additional high-density development, supported by Metrorail, would mean thousands of trips would stay in the community and allow more people to walk or bike to destinations in Potomac Yard to take care of their daily needs.

Transportation Benefits of a Potomac Yard Metrorail Station	
10,000-11,300	Daily boardings at a Potomac Yard Metrorail Station
34%	Daily trips taken by transit, walking, or bike
5,000	Daily auto trips removed from the road

How Much Development is Permitted in Potomac Yard?

The amount of residential and commercial development in Potomac Yard will vary depending on the location of a new Metrorail station.

- Levels of development currently permitted are based on the City's North Potomac Yard Small Area Plan (2010) and adopted zoning, which assume the construction of a Metrorail station in the vicinity of Build Alternative B.
- Currently, a total of 13.075 million square feet of residential, commercial and office development are allowed in Potomac Yard.
- If the No Build Alternative or a different station location other than Build Alternative B is chosen, current zoning restricts the amount of development to 9.250 million square feet.
- B-CSX Design Option and Build Alternative D would occupy otherwise developable land in Potomac Yard, and Build Alternative A would be located too far from the northern end of Potomac Yard to adequately support the densest levels of redevelopment for the existing shopping center site.

U.S. Route 1 at Potomac Yard

Development Benefits

- A new Metrorail station would **support the City of Alexandria's redevelopment plans by providing regional transit access to Potomac Yard**, helping offset automobile trips and traffic congestion caused by the current and future development already approved.
- Depending on the location of a new Metrorail station, **additional high-density residential and commercial development is permitted** in Potomac Yard under current plans and zoning.
- If no Metrorail station is provided, then less development would be permitted in Potomac Yard.

Existing Potomac Yard Shopping Center

Artist's rendering of planned North Potomac Yard Redevelopment

Support for the Project Purpose and Need

The table below evaluates how the different alternatives would support the 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					
Additional transportation choices for residents and workers	No	Yes	Yes	Yes	Yes
Project Need: Increasing the share of transit and other non-auto trips					
Increased share of trips by transit, bike, and walking compared to Potomac Yard without regional transit access	No	Yes	Yes	Yes	Yes
Project Need: Supporting City of Alexandria redevelopment plans					
Total Potomac Yard development volume (million square feet) permitted under approved plans	9.250 M	9.250 M	13.075 M	9.250 M	9.250 M

Costs and Funding Sources

Estimated Capital Costs

Capital cost estimates are preliminary and based on conceptual engineering completed to date. Capital costs include all costs necessary to construct the station.

Capital Funding Sources

The City has created the Potomac Yard Metrorail Station Fund to manage the revenues collected for the project. Proceeds from the fund are to be used solely for the design, construction, and financing of the station and will be accounted for separately from other City revenues. Fund revenue comes from:

- Net new tax revenues generated by Potomac Yard development (beyond taxes to pay for City and School services);
- Two special tax districts in Potomac Yard; and
- Developer contributions.

Other opportunities for federal or state funds for construction include Surface Transportation Program funds, loans through the Transportation Infrastructure Financing Innovation Act (TIFIA), additional funding from the Northern Virginia Transportation Authority, and a $50 million loan through the Virginia Transportation Infrastructure Bank (VTIB).

Operating Costs and Funding Sources

The Potomac Yard Metrorail Station would add system-wide operating costs to Metrorail. The City of Alexandria's share of the WMATA operating subsidy for Metrorail is 5.1 percent, or approximately $10 million in FY2013. The addition of one station and an estimated 5,000 additional City residents would increase the City's share to 5.3 percent under the approved allocation formula, requiring an additional $1.39 million annual contribution. The City plans to fund the additional WMATA subsidy using the Potomac Yard Metrorail Station Fund.

Conceptual Capital Costs (millions of 2016 Dollars)*

Build Alternative	Low	High
Build Alternative A	$119	$228
Build Alternative B	$149	$293
B-CSX Design Option	$193	$358
Build Alternative D	$277	$539

** These estimates were based on a previous implementation schedule that assumed an opening date for the Potomac Yard Metrorail Station in 2016. Construction cost inflation likely would increase the estimated capital costs for a later opening date.*

Existing Metrorail Blue/Yellow Line between Potomac Greens and Potomac Yard

Summary of Permanent Project Effects

Resource	Build Alternatives				
	No Build Alternative	Alternative A	Alternative B	B-CSX Design Option	Alternative D
Transportation					
Additional off-peak Metrorail train required	0	1	1	1	1
Improved pedestrian/bicycle access between Potomac Greens and Potomac Yard	Yes	Yes	Yes	Yes	Yes
Human Environment					
Land acquisitions (acres)	0	1.3	4.0	14.4	10.0
Displacements of businesses or residences	0	0	0	Movie Theater	Movie Theater
Consistent with City of Alexandria Plans	No	No	Yes	No	No
Consistent with Regional Transportation Plans	No	Yes	Yes	Yes	Yes
Consistent with Plans for George Washington Memorial Parkway (GWMP)	Not inconsistent	Not inconsistent	Not inconsistent	Not inconsistent	Not inconsistent
Adverse impacts to viewsheds from GWMP (opening year viewsheds with a reduction in quality)	0	2	3	3	3
Adverse impacts to viewsheds from Potomac Greens (opening year viewsheds with a reduction in quality)	0	2	1	0	2
Adverse impacts to viewsheds from Potomac Yard (opening year viewsheds with a reduction in quality)	0	1	1	0	1
Effects to GWMP historic architectural resources and parkland (acres)	0	• Visual impacts • Removal of trees (for Option 1)	• Transfer of land (0.16 ac.) • Visual impacts • Removal of trees	• Visual impacts	• Transfer of land (1.43 ac.) • Visual impacts • Removal of trees
Effects to archaeological resources (sites)	0	Option 1: 2 Option 2: 0	Option 1: 2 Option 2: 0	0	1
City of Alexandria park impacts (acres)	0	1.16	3.01	3.86	5.38
Greens Scenic Area easement impact (acres)	0	0	1.71	0	0
FTA noise criteria impacts (residences)	0	0	0	0	7
WMATA noise criteria impacts (residences)	7	7	7	7	3
FTA vibration criteria impacts (residences)	0	6	0	0	7
WMATA vibration criteria impacts (residences)	0	1	0	0	0
Natural Environment					
Increase in impervious surface (acres)	0	1.82	2.24	(-0.02)	9.24
U.S. Army Corp of Engineers (USACE) regulated wetlands impacts (acres)	0	0.02	1.22	0	0.52
NPS regulated wetlands impacts (acres)	0	0	1.28	0	0.50
Floodplain impacts (acres)	0	0	1.48	0	0.90
Resource Protection Area impacts (acres)	0	0.41	3.36	1.12	2.07
Natural habitat loss (acres)	0	0.03	2.58	0.18	1.76
Secondary and Cumulative Effects					
Secondary traffic & visual impacts	Yes	Yes	Yes	Yes	Yes
Adverse effects to GWMP historic architectural resources	Yes	Yes	Yes	Yes	Yes
Cumulative traffic, visual & floodplain impacts	None	Yes	Yes	Yes	Yes

Summary of Temporary Construction Effects

Resource	Build Alternatives				
	No Build Alternative	Alternative A	Alternative B	B-CSX Design Option	Alternative D
General impacts to roadways and driveways	No	Yes	Yes	Yes	Yes
Use of GWMP roadway	No	Option 1: Yes Option 2: No	Option 1: Yes Option 2: No	No	Yes
Effects to GWMP historic architectural resources and parkland (acres)	0	Option 1: 0.30 Option 2: 0	Option 1: 0.78 Option 2: 0.55	0	2.40
Effects to archaeological resources (sites)	0	Option 1: 2 Option 2: 0	Option 1: 2 Option 2: 0	0	1
City of Alexandria park impacts (acres)	0	Option 1: 5.49 Option 2: 4.80	Option 1: 5.48 Option 2: 5.48	0.97	5.53
Greens Scenic Area easement impact (acres)	0	Option 1: 0.25 Option 2: 0.13	Option 1: 3.09 Option 2: 3.09	0	0.02
USACE regulated wetlands impacts (acres)	0	Option 1: 0.30 Option 2: 0.01	Option 1: 3.61 Option 2: 3.54	0	0.41
NPS regulated wetlands impacts (acres)	0	Option 1: 0.35 Option 2: 0.01	Option 1: 3.68 Option 2: 3.57	0	0.48
Resource Protection Area impacts (acres)	0	Option 1: 1.75 Option 2: 0.49	Option 1: 5.50 Option 2: 5.27	0.58	2.40

Project Effects for Key Environmental Resource Areas

Key Environmental Resource Areas

An overview of environmental impacts is shown on page 9; temporary construction impacts to environmental resources are listed in the table above. Specific effects to the George Washington Memorial Parkway are also described individually by resource area at the end of the section.

Land Acquisitions and Displacements

The Build Alternatives would require property for station facilities and right-of-way for realigned track, as well as additional temporary construction easements or access permits. No residential displacements would be required for any of the alternatives. B-CSX Design Option and Build Alternative D would result in a displacement of one existing business, the movie theater in the Potomac Yard Shopping Center. Build Alternatives A and B would not result in the displacement of any businesses.

Build Alternatives B and D would require permanent acquisition of 0.16 acre and 1.43 acres, respectively, of the George Washington Memorial Parkway property. Build Alternatives A and B-CSX Design Option would not require permanent acquisitions of the George Washington Memorial Parkway. In addition, Build Alternative B would be a violation of the Greens Scenic Area easement. Build Alternative B could not proceed unless the easement is released by NPS. Construction staging and access areas for Build Alternatives A and D would also be in violation of the Greens Scenic Area easement. B-CSX Design Option would not be in violation of the Greens Scenic Area easement.

Land acquisitions would be conducted in accordance with all applicable laws.

Local Plans and Zoning

The *North Potomac Yard Small Area Plan* and the zoning for Coordinated Development District (CDD) 19 link the level of development to the presence of a Metrorail station at the approximate location of Build Alternative B. Build Alternative A, B-CSX Design Option, and Build Alternative D are inconsistent with City of Alexandria plans. If a Metrorail station is constructed at a location other than Build Alternative B or is not built, the amount of permitted development in North Potomac Yard is reduced by approximately 3.825 million square feet. The selection of Build Alternative A, B-CSX Design Option, or Build Alternative D would require the City to undertake a revised planning and rezoning process for North Potomac Yard.

Visual Resources

The three Build Alternatives and B-CSX Design Option would impact views from the George Washington Memorial Parkway, the Potomac Greens neighborhood, Potomac Greens Park, and Potomac Yard, due to the introduction of new visual elements and removal of vegetation for construction access and staging areas. New visual elements include the stations and pedestrian bridges for all Build Alternatives, B-CSX Design Option, and the elevated track and structures required for Build Alternative D. The new higher-density development permitted in Potomac Yard under the No Build and Build Alternatives will also result in visual impacts, although this will happen whether or not a Metrorail station is constructed at Potomac Yard.

Noise and Vibration

Residences in Potomac Greens were constructed alongside the pre-existing Metrorail alignment; current Metrorail operations exceed WMATA noise criteria at seven residences. Approval for construction of these residences included a reservation for a future Metrorail station (location of Build Alternative A), and the potential construction of a Metrorail station is disclosed in land and ownership documents.

The existing noise conditions would remain under the No Build Alternative, Build Alternative A, Build Alternative B, and B-CSX Design Option. Build Alternative D would reduce noise impacts at four residences, but would result in new noise impacts based on FTA criteria at eight residences due to its elevated track.

Build Alternative B and B-CSX Design Option would not exceed criteria for vibration impacts. However, both Build Alternatives A and D would result in increased vibration impacts based on FTA criteria to residences in Potomac Greens due to Metrorail trains passing over new switches.

Other noise sources are associated with the proposed station. Metrorail door chimes, train conductor announcements, station public address announcements, and brake noise would be audible in the community as a new noise source. These noises are not expected to contribute to any exceedance or noise impact, based on WMATA and FTA criteria. These noise sources would be evaluated more closely during final design when the station features are finalized, and would be mitigated, as appropriate.

Potomac Yard Park, CSXT railroad tracks, and Potomac Greens

Wetlands and Waterways

Wetlands exist in the area to the east and north of Potomac Greens, between the WMATA tracks and George Washington Memorial Parkway, and in the vicinity of Four Mile Run. Build Alternative B would permanently fill 1.22 acres of wetland regulated by the U.S. Army Corps of Engineers (USACE) under the Clean Water Act. Build Alternative D would permanently fill 0.52 acre of USACE regulated wetland and would require a new bridge over Four Mile Run with new bridge piers in the stream. Build Alternative A and B-CSX Design Option would have impacts of less than one-tenth of an acre. Wetlands are also regulated by NPS; specific impacts to wetlands within the parkland of the George Washington Memorial Parkway and the Greens Scenic Area easement are described on page 13.

Construction Access and Staging

Areas designated for construction staging (see areas shaded in orange on Page 4) would be cleared of all trees and other natural vegetation and filled or leveled as necessary to make construction activities possible. After construction, the areas would be replanted and landscaped according to prior uses and wetlands would be restored in coordination with NPS, USACE, and other relevant agencies. A screen of vegetation along George Washington Memorial Parkway would be maintained where possible to minimize the visual impact to users.

Option 1 construction access for Build Alternatives A and B (access from the George Washington Memorial Parkway) would impact two archaeological sites if avoidance measures are not possible. Construction of Build Alternative D would impact one archaeological site.

George Washington Memorial Parkway/ Mount Vernon Memorial Highway

The George Washington Memorial Parkway, including the historic Mount Vernon Memorial Highway, commemorates the first president, preserves the natural setting, and provides a quality entryway for visitors to the nation's capital. The construction of a Metrorail station at Potomac Yard would affect resources of the Parkway:

Cultural Resources

The segment of the George Washington Memorial Parkway within the project study area is listed on the National Register of Historic Places through two separate nominations: the Mount Vernon Memorial Highway and the George Washington Memorial Parkway.

Build Alternative D, and Option 1 construction access for Build Alternatives A and B (access from the Parkway) would impact the George Washington Memorial Parkway. Specifically, construction of temporary access roads to support station construction under the alternatives would require removal of trees and other vegetation that were intended to screen views of uses to the west. B-CSX Design Option, and Option 2 construction access for Build Alternatives A and B (no access from the Parkway) would not require the construction of temporary access roads from the George Washington Memorial Parkway. For Build Alternative B, both construction access options would require use of a portion of parkland for construction staging, regardless of the access route. Viewsheds and the visitor experience along the Parkway would be impacted by the introduction of a new Metrorail station under any of the three Build Alternatives or B-CSX Design Option.

The three Build Alternatives and B-CSX Design Option would impact historic resources by removing vegetation west of the George Washington Memorial Parkway and introducing new non-historic visual elements and views to the west. These new non-historic elements would impact the integrity of the designed historic landscape and degrade the scenic and historic quality and contemplative experience for travelers, important characteristics of the Parkway experience.

Option 1 construction access for Build Alternatives A and B (access from the George Washington Memorial Parkway) would impact two archaeological sites if avoidance measures are not possible. Construction of Build Alternative D would impact one archaeological site if avoidance measures are not possible. B-CSX Design Option, and Option 2 construction access for Build Alternatives A and B (no access from the Parkway) would not impact any archaeological sites.

Visual Resources

Views from the George Washington Memorial Parkway would be impacted by the introduction of the Metrorail station as well as the Potomac Yard redevelopment in all Build Alternatives, especially during winter, due to the loss of vegetative foliage.

- Build Alternatives requiring construction access from the Parkway (Option 1 construction access for Build Alternatives A and B, and Build Alternative D) would create long-term viewshed impacts. Removal of vegetation would create gaps in the vegetated viewsheds, and replacement vegetation would need to develop and mature to match the existing vegetation growth.
- Build Alternatives that do not require construction access from the Parkway (Option 2 construction access for Build Alternatives A and B, and B-CSX Design Option) would have viewshed impacts from station structures and bridges, and removal of vegetation off of the George Washington Memorial Parkway property. Build Alternative B would require clearing of vegetation within the Greens Scenic Area easement.
- Under the No Build Alternative, viewsheds would be degraded as the Potomac Yard area is developed.

Wetlands

Depending on the construction option, up to 1.28 acres of wetlands on NPS parkland or the Greens Scenic Area easement would be impacted. Up to 3.68 acres of additional wetlands would be temporarily impacted during construction.

Build Alternatives B and D would permanently impact 1.28 and 0.50 acre, respectively, of NPS regulated wetlands. Option 1 construction access for Build Alternatives A and B, and Option 2 construction access for Build Alternative B would all lead to additional temporary wetland impacts. Specific wetland mitigation would be determined through discussions with various agencies for unavoidable impacts. All wetlands located on NPS land would be replaced within the Parkway property or on other NPS sites. B-CSX Design Option and Option 2 construction access for Build Alternative A would not result in any permanent or temporary impacts to wetlands on the George Washington Memorial Parkway.

Construction Traffic

Build Alternatives that require construction access from the George Washington Memorial Parkway (Option 1 construction access for Build Alternatives A and B, and Build Alternative D) would have temporary traffic impacts due to construction vehicles. Construction vehicles would impact the driver experience along the Parkway and would require a permit from NPS. The number of construction vehicles accessing the site per day would vary and would be restricted to specific times based on NPS and City of Alexandria construction regulations and permits. Construction vehicles using the Parkway may damage the roadway pavement, which would require repair after construction. B-CSX Design Option and Option 2 construction access for Build Alternatives A and B would not require construction access from the George Washington Memorial Parkway.

Construction traffic would impact park user experience, an important element of the purpose of the park.

Commercial vehicles are prohibited from the George Washington Memorial Parkway, with limited exceptions, 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

Existing wetland area within Potomac Greens Park; George Washington Memorial Parkway in the background

proposed construction project areas for Build Alternatives A and B are accessible from locations other than the George Washington Memorial Parkway. However, since potential impacts would occur to residential communities at these other locations, construction access from the George Washington Memorial Parkway was also studied as an option in the Draft EIS.

Public Involvement and Next Steps

How Has the Public Been Engaged in the Project?

The public has been engaged through:

- Public meetings and community group meetings;
- Project newsletters and email distribution lists;
- Project website; and
- Interaction with community organizations.

Informational materials at all public meetings, including presentation materials, handouts, and comment sheets, have been available in Spanish as well as English, and a Spanish-speaking staff member has been present at all meetings.

In addition, the Alexandria City Council created the Potomac Yard Metrorail Implementation Work Group to assist in the EIS process by informing City officials and providing a venue for input on the project.

What Are the Roles of Other Agencies?

During project scoping, Federal, state, and local agencies that might have an interest in the project were invited to participate. Agencies have been involved through briefings and additional communication focused on specific areas of expertise within each agency's reviewing purview. Agencies, as well as the public, are invited to comment on the Draft EIS.

Agencies are also involved through concurrent Federal processes, including reviews for consistency with:

- Clean Water Act;
- National Historic Preservation Act;
- U.S. Department of Transportation Act ("Section 4(f)"); and
- Coastal Zone Management Act.

The National Park Service (NPS) is a cooperating agency because of the potential of the project to impact the George Washington Memorial Parkway. Any action taken by NPS must be consistent with the National Park Service Organic Act, which established NPS and governs its activities.

Public Comment Period

The public has the opportunity to comment on the environmental analysis. Comments received during this period can help to identify changes to alternatives that may mitigate adverse effects. Any changes will be incorporated into the Final EIS. See www.potomacyardmetro.com for the full copy of the Draft EIS and supporting background materials from the study.

Hard copies of the Draft EIS are available for review at the City of Alexandria public library and at:

Alexandria City Hall
301 King Street
Alexandria, VA 22314

The public comment period on the Draft EIS will be open until May 18, 2015.

See following page for information on opportunities to provide comments at the public hearing, by email, or by mail.

Project public meeting, April 2012

City of Alexandria Outreach

The City of Alexandria will be hosting two public workshops, in which individuals can learn more about the EIS process and get more information about specific subject areas. A separate public hearing will be held by the City of Alexandria as part of its legislative process.

For more information on the final dates of City meetings and hearings related to the project, please visit the City's website:

Alexandriava.gov/PotomacYard/

or you may call the City's general information line:

703-746-4357

Public Hearing

A public hearing on the Draft EIS will be held as part of the NEPA process at the following time and location:

Thursday, April 30, 2015 at 6:30pm

Cora Kelly Recreation Center
25 W. Reed Avenue
Alexandria, VA 22305

The location of the hearing is wheelchair accessible. Any individual who requires special assistance such as a sign language interpreter or additional accommodation to participate in the public hearing, or who requires these materials in an alternate format, should contact Danise Peña at 202-962-2511 or TTY: 202-962-2033 as soon as possible in order for WMATA to make necessary arrangements. For language assistance, such as an interpreter or information in another language, please call 202-962-2582 at least 48 hours prior to the hearing.

What Happens after the Public Hearing?

Following the public hearing, the City of Alexan dria will choose a preferred alternative. The City will continue coordination with FTA and NPS before selection of a preferred alternative to ensure compliance with NEPA and other applicable laws.

After identification of the preferred alternative, a Final EIS will be prepared. The Final EIS will state how public comments are addressed, include further design and refinement of the project to minimize community and environmental impacts, identify impacts of the preferred alternative, and describe measures for avoiding, minimizing, or mitigating adverse impacts.

Comment on the Draft EIS

Submit written comments by May 18, 2015:

- By email: comments@potomacyardmetro.com
  or
  writtentestimony@wmata.com
- By mail: **Potomac Yard Metrorail Station EIS**
  P.O. Box 16531
  Alexandria, VA 22302
  or
  Office of the Secretary
  WMATA
  600 Fifth Street Northwest
  Washington, DC 20001

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LIST OF ACRONYMS

AA	Alexandria Archaeology
AAI	All Appropriate Inquiries
AACE	Association of Advancement of Cost Estimating
ARPA	Archaeological Resources Protection Act
ACHP	Advisory Council on Historic Preservation
AMI	area median income
APE	Areas of Potential Effect
ARS	Adopted Regional System
ASTM	American Society of Testing and Materials
BAR	Board of Architectural Review
bgs	below ground surface
BMP	Best Management Practice
CAA	Clean Air Act
CBLAD	Chesapeake Bay Local Assistance Department
CCPY	Crystal City/Potomac Yard
CCTV	closed circuit television
CDD	Coordinated Development Districts
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CH_4	methane
CIP	Capital Improvement Program
CLR	Cultural Landscape Report
CLRP	Constrained Long Range Plan
CO	carbon monoxide
CO_2	carbon dioxide
CRACA	Colonial Revival Apartment Complexes of Alexandria
CSXT	CSX Transportation
CWA	Clean Water Act
CZMA	Costal Zone Management Act
DASH	Alexandria Transit Company
dB	decibels
dBA	A-weighted decibel
DBH	diameter at breast height
DOI	United States Department of the Interior

DRPT	Virginia Department of Rail and Public Transportation
DSP	Development Site Plan
DSUP	Development Special Use Permit
EAP	Environmental Action Plan
ECS	Extent of Contamination Study
EDR	Environmental Data Resources Company
EIS	Environmental Impact Statement
EO	Executive Order
EOC	Emergency Operations Center
ESA	Environmental Site Assessment
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FOIA	Freedom of Information Act
FR	Federal Register
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system
GWMP	George Washington Memorial Parkway
HUD	United States Department of Housing and Urban Development
JD	Jurisdictional Determination
JPA	Joint Permit Application
LEDPA	Least Environmentally Damaging Practicable Alternative
LEED	Leadership in Energy and Environmental Design
LID	low impact design
LOC	Limits of Construction
LOD	Limits of Disturbance
LOS	level of service
LWCF	Land and Water Conservation Fund Act
MAP-21	Moving Ahead for Progress in the 21st Century Act
MOA	memorandum of agreement
MTPD	Metro Transit Police Department
MVMH	Mount Vernon Memorial Highway (National Park Service)
MWAA	Metropolitan Washington Airports Authority
MWCOG	Metropolitan Washington Council of Governments

N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEDIS	National Environmental Data Information System
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NO	nitrogen oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO_x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NPYSAP	North Potomac Yard Small Area Plan
NRHP	National Register of Historic Places
NVRC	Northern Virginia Regional Commission
NVTA	Northern Virginia Transportation Authority
NWI	National Wetland Inventory
O_3	ozone
OEM	Office of Emergency Management
PA	Programmatic Agreeement
Pb	lead
PCB	polychlorinated biphenyl
PEM	Palustrine Emergent Wetlands
PFO	Palustrine Forested/Shrub Wetlands
PM	particulate matter
PM10	particulate matter less than 10 microns
PM2.5	particulate matter less than 2.5 microns
PYGSAP	Potomac Yard/Potomac Greens Small Area Plan
PYMIG	Potomac Yard Metrorail Implementation Work Group
PYPAG	Potomac Yard Planning Advisory Group
RBSL	Risk Based Screening Level
RECs	Recognized Environmental Conditions
RF&P	Richmond, Fredricksburg and Potomac Railroad
ROCC	Rail Operations Control Center
ROD	Record of Decision

RPA	Resource Protection Areas
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SAP	Small Area Plan
SCC	Standard Cost Categories
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Office
SIP	State Implementation Plan for Air Quality
SO_2	sulfur dioxide
SSC	Safety and Security Certification
SSPP	System Safety Program Plan
SVOC	Semi-Volatile Organic Compound
TCRP	Transit Cooperative Research Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program
TMDL	Total Maximum Daily Load
TPH-DRO	total petroleum hydrocarbons diesel-range organics
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
V/C	volume-to-capacity ratio
VdB	vibration decibel
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDGIF	Virginia Department of Game and Inland Fisheries
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register
VMRC	Virginia Marine Resources Commission
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VPDES	Virginia Pollution Discharge Elimination System
VRE	Virginia Railway Express
VRP	Voluntary Remediation Program
WMATA	Washington Metropolitan Area Transit Authority
WMMP	Water Management Master Plan

W&OD	Washington and Old Dominion Railroad
WOUS	Waters of the United States
µg	microgram

GLOSSARY OF TERMS

100-year floodplain – The areas along or adjacent to a stream or body of water that are capable of storing or conveying floodwaters during a 100-year frequency storm event.

Accessibility – A measure of the degree of difficulty in reaching other locations, goods, services or activities from a given site. It is influenced by changes in travel time, safety, vehicle operating costs, transportation mode, and local and regional land use conditions.

Adopted Regional System (ARS) – WMATA's approved transit system.

Adverse effect – In the context of cultural resources reviewed in this report, the term is defined in Section 106 of the National Historic Preservation Act (36 CFR 800.5(a)(1)). An adverse effect to a historic property occurs when the project under consideration would potentially alter any characteristic that qualifies the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property.

Advisory Council on Historic Preservation (ACHP) – An independent federal agency that promotes the preservation, enhancement, and productive use of the nation's historic resources, as well as advises the President and Congress on national historic preservation policy.

Affected environment – Ambient conditions of the relevant study area at the time an Environmental Effects Report is prepared.

Alight – To depart a transit vehicle.

Alignment – The ground plan of a railway, trail, roadway or other fixed route.

All Appropriate Inquiries (AAI) – A process of evaluating a property's environmental conditions and assessing the likelihood of any contamination.

Ambient air – A physical and chemical measure of the concentration of various chemicals in the outside air, usually determined over a specific time period (e.g., one hour, eight hours).

Ambient background noise – The existing cumulative noise that is characteristic of an area based on current activity levels.

Archaeological Resources Protection Act of 1979 (ARPA) – Federal legislation that governs the excavation of archaeological sites on federal and Indian lands in the United States, and the removal and disposition of archaeological collections from those sites.

Area of Potential Effects (APE) – For purposes of complying with Section 106 of the National Historic Preservation Act, a geographic area or areas where an undertaking (e.g., the Potomac Yard Metrorail Station) may directly or indirectly cause alterations in the character or use of historic properties, if any such properties are located in the area of the project.

Arterial – A roadway designed to connect two distant areas at higher speeds and higher capacity travel than a local road.

Association of Advancement of Cost Estimating (AACE) – An international non-profit professional organization associated with cost management principles and professionals in civil engineering and planning.

At-grade – Occurring at the same ground-level elevation, especially in reference to a crossing point or intersection of two separate transportation facilities (e.g. road, sidewalk, bicycle path, railroad, etc.).

Attainment area – An area where the quality of air is as good as or better than the National Ambient Air Quality Standards that are defined in the Federal Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

A-weighted decibel (dbA) – See A-Weighted Sound Level.

A-Weighted Sound Level (A-Weighted Scale) – Decibel measurements in the "A" scale; a method of representing the human ear's interpretations of the loudness of an equal sound level throughout the audible frequency range.

Backwater – A section of a stream where water accumulates behind a blockage.

Best management practices (BMPs) – Specific standards utilized during construction to minimize the impact on surrounding resources.

Boardings, passenger – The count of passengers embarking onto a transit vehicle or route for the purposes of measuring ridership or fare revenue.

Brownfield – Real property, of which the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Build Alternative(s) – The alternative(s) being evaluated as the proposed action during the EIS process.

Carbon monoxide (CO) – A colorless and odorless gas that is a product of incomplete combustion. In most areas, motor vehicles are responsible for the major portion of ambient CO levels. CO is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the symptoms of cardiovascular disease. It can cause headaches and nausea, and at sustained high concentration levels, can lead to coma and death.

Centerline – The line corresponding to the central geometric axis of a railroad track, road, trail or other transportation corridor. It is typically used as the reference point for measurements of track dimensions and location.

Chesapeake Bay Local Assistance Department (CBLAD) – A branch of the Virginia Department of Conservation and Recreation that addresses the impact land use has on waters that feed the Chesapeake Bay.

Civil Rights Act of 1964 – Title VI of this federal act provides that that no person shall, on the grounds of race, color, national origin and sex, be discriminated against in federally funded programs or activities. Environmental impact statements are required to demonstrate consideration of project compliance with Title VI.

Clean Air Act (CAA) – A federal law designed to control air pollution on a national level. It requires the Environmental Protection Agency to develop and enforce regulations to protect the public from airborne contaminants that are known to be hazardous to human health.

Clean Air Act Amendments of 1990 (CAAA) – A strategy by the Federal government to address the problem of urban smog. It requires states and the Federal government to reduce emissions from automobiles, trucks, buses, ships, barges, and consumer products, and to meet air quality standards. It particularly addresses the urban problems of ozone, carbon monoxide (CO), and particulate matter (PM-10). It established a process for the designation of “attainment” and “nonattainment” areas by the U.S. Environmental Protection Agency. The CAAA also required that official regional transportation plans “conform” to the State Implementation Plan (see definition below) for federal air quality standards. The USDOT reviews regional transportation plans and makes a conformity determination.

Clean Water Act (CWA) – The primary federal law in the United States governing water pollution. The act established the goals of eliminating releases of high amounts of toxic substances into water, eliminating additional water pollution and ensuring that surface waters would meet standards necessary for human sports and recreation.

Coastal Zone Management Act (CZMA) – An Act of Congress passed in 1972 to encourage coastal states to develop and implement coastal zone management plans. This act was established as a United States National policy to preserve, protect, develop, and where possible, restore or enahce the resources of the Nation’s coastal zone for this and future generations.

Community facility – Public or publicly-funded facilities, such as police and fire protection facilities, emergency medical response facilities, hospitals, schools, and libraries, as well as private facilities such as hospitals and schools.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Commonly known as Superfund, this law was passed in 1980 to create a tax on the chemical and petroleum industries and provide broad federal authority to respond directly to releases or hazardous substances that may endanger public health or the environment.

Comprehensive Plan – Each jurisdiction in the Commonwealth of Virginia is required by state law to institute a comprehensive plan to be used as a guide to decision-making about the natural and built environment. The City of Alexandria's Master Plan was adopted by the City Council on June 13, 1992, and chapters are updated and added on an ongoing basis as needed through Master Plan Amendments. The Master Plan is made up of 18 Small Area Plans (SAPs) covering neighborhoods throughout the City, plus substantive chapters on topics of citywide relevancy, such as Historic Preservation, Urban Design, Transportation, and Open Space.

Conformity determination – See Clean Air Act Amendments of 1990.

Constrained Long-Range Plan (CLRP) – The National Capital Region's Financially Constrained Long-Range Transportation Plan identifies all regionally significant transportation projects and programs that are planned in the Washington metropolitan area between 2012 and 2040. It is constrained to include only those projects that can be funded by revenues that are "reasonably expected to be available" as required by federal law and regulations. It includes both transit and highway projects, and meets federal planning and air-quality conformity requirements. The CLRP is prepared and adopted by the National Capital Region Transportation Planning Board.

Contributing property/structure – A property or structure which contributes to the historical integrity of a designated historic district or property.

Code of Federal Regulations (CFR) - The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. The CFR is published annually.

Coordinated Development District (CDD) – A Special zoning district that is created for the purpose of permitting property development. Typically CDDs are 5 or more acres, with construction requiring complex and coordinated rezoning, transportation, and planning efforts.

Council on Environmental Quality (CEQ) – The federal office that oversees implementation of the Federal National Environmental Policy Act of 1969 (see below) and coordinates other federal environmental efforts.

Critical habitat – Defined under the Federal Endangered Species Act of 1973 as areas within a listed species' current range (at the time of listing) that contain the physical or biological features that are essential to that species' conservation or that for some reason require special management and areas outside the species' current range that the Secretary of the Interior determines to be essential to its conservation.

Cross section – The cross-sectional configuration of a transportation corridor (railway, trail, roadway, etc.) that specifies typical widths for tracks/travel lanes, related facilities, buffer areas and total right-of-way.

CSX Transportation (CSXT) – A Class I railroad in the United States, and the main subsidiary of the CSX Corporation.

Cultural Landscape Report – A document published by the National Park Service that records and outlines the cultural features within a national park or historic site.

Cultural resource – Defined as both architectural and archaeological resources and typically including resources such as buildings, structures, religious properties, cemeteries, and Native American tribal areas. The historic significance of these types of resources is determined by applying the criteria set forth in the National Register of Historic Places Evaluation Criteria.

Cumulative impacts – Changes to the environment that are caused by an action in combination with other past, present and future human actions. In simplest terms, analyzing cumulative effects means considering and accounting for the impacts of a proposed action in the context of the existing transportation system and improvements to it that are reasonably foreseeable in the vicinity. Also referred to as incremental effects.

Cut-through traffic impacts – Impacts caused by traffic using residential streets rather than the local street system intended for through traffic.

decibels (dB) – a unit of measurement that records the loudness, or magnitude, of noise, which determines its intensity. The greater the amount of decibels, the more loud or intense the noise, ranging from below 40dB (the rustling of leaves) to over 100dB (a rock concert).

determination of eligibility – Decision made by the State Historic Preservation Office (SHPO) regarding whether a historic building or district is eligible for listing in the National Register of Historic Places.

Development Site Plan (DSP) – A architectural plan, landscape architecture document, or detailed engineering drawing of proposed improvements to a given lot.

Development Special Use Permit (DSUP) – A document that allows for the consideration of an alternative method of improving a site that is not specified within the zoning code. A DSUP will neither change the underlying zoning of the lot, nor will it be a permanent solution that affects all future development efforts for that lot or the zone in consideration.

Driving Alexandrians Safely Home (DASH) - The public bus system for the city of Alexandria, Virginia. It is operated by the Alexandria Transit Company.

Easement – A right afforded by a property owner for another to make limited use of his or her property.

Effects – Synonymous with impacts of a proposed action; includes both beneficial and detrimental outcomes.

Emergency Operations Center (EOC) – A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level in an emergency situation, and ensuring the continuity of operation of a company, political subdivision, or other organization.

Endangered – A species whose prospects for survival within the state are in immediate danger based on a loss of habitat, over-exploitation, predation, competition, or disease. An endangered species requires immediate attention or extinction will likely follow. The Federal government maintains a list of designated endangered species in accordance with the Endangered Species Act of 1973.

Environmental Action Plan (EAP) – A document that outlines steps and measures to be taken in addressing environmental issues for a given geographic area.

Environmental Impact Statement – A document required by the National Environmental Policy Act of 1969 (see below) for any proposed major federal action that may significantly affect the environment (defined as a Class III action). The purpose of the EIS is to provide full and open evaluation of environmental issues and alternatives, and to inform decision-makers and the public of reasonable alternatives that could avoid or minimize adverse impacts and enhance the quality of the environment.

Environmental Site Assessment (ESA) – A report prepared for a real estate holding that identifies potential or existing contamination liabilities.

Environmental Justice – Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," provides for equal protection from environmental hazards and fair treatment for all people regardless of race, ethnicity, or economic status, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no population of people bear an unequal share of negative environmental impacts of pollution or environmental hazard resulting from industrial, municipal, and commercial operations or the execution of federal, state, or local policies.

Fixed guideway transit – An exclusive travel way used by a particular mode of public transportation.

Flood Insurance Rate Maps (FIRM) – The official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special hazard areas and the risk premium zones applicable to the community.

Floodplain – A nearly flat plain along the course of a stream or river that is naturally subject to flooding. In this document, the term floodplain generally refers to one of the Flood Hazard Areas defined by the National Flood Insurance Program and mapped in a Flood Insurance Rate Map.

Freedom of Information Act (FOIA) – A federal law that allows for the full or partial disclosure of previously unreleased information and documents controlled by the United States government.

Fugitive dust – Dust that leaves a property during construction, demolition, or other induced activity and that can alter the air quality at a given location.

Geographic Information System (GIS) – A computerized mapping system that includes database and analytical capabilities.

George Washington Memorial Parkway (GWMP) – the legislated unit of the National Park Service which contains the roadway known as the George Washington Memorial Parkway and incorporates the Mount Vernon Memorial Highway.

Grade-separated – Used to describe an alignment that is elevated or below ground, or crossings that use an overpass or an underpass. Grade separation allows traffic or transit vehicles to pass through intersections without stopping for opposing traffic. Heavy rail transit such as the Metrorail system must be grade-separated because it uses a high-voltage third rail.

Greens Scenic Area easement – In 2000, as part of an agreement to allow redevelopment of the Arlington County portion of Potomac Yard, the owner of the property granted a perpetual scenic easement (known as the Greens Scenic Area) to the United States Department of the Interior for much of the land to the north of the Potomac Greens neighborhood and east of the Metrorail tracks within the City of Alexandria. The scenic easement was created "…for the purpose of conserving and preserving the natural vegetation, topography, habitat and other natural features now existing within the Greens Scenic area" (Release Agreement and Scenic Easement, Title Document #000005341, p.0029).

Ground-borne vibration and noise – The vibration-induced levels that propagate over ground between the source and a receptor such as a building; typically assessed indoors.

Habitat – The area or environment where an organism or ecological community normally lives or occurs.

Hazardous material – Any toxic substance or explosive, corrosive, combustible, poisonous, or radioactive material that poses a risk to the public's health, safety or property.

Headway – The time interval between vehicles moving in the same direction on a particular route; also called service frequency.

Heavy rail – An electric railway with capacity for a heavy volume of traffic and characterized by exclusive rights-of-way, high speed and rapid acceleration. The existing WMATA rail system comprises heavy rail lines. Heavy rail is different from commuter rail and light rail systems.

Hertz (Hz) – Frequency measured in cycles per second

Historic District – A concentration of sites, buildings, structures, or objects that are listed or eligible for listing on the National and Virginia Register of Historic Places.

Hydric – Having high water content.

Hydrocarbon (HC) – A type of chemicals that belongs to a larger group of chemicals known as volatile organic compounds (VOC), which include a wide variety of organic compounds emitted principally from the storage, handling and use of fossil fuels. HC are compounds of hydrogen and carbon only, while VOC may contain other elements. Hydrocarbons contribute to the formation of ground-level ozone. See also *Volatile Organic Compounds*.

Hydrophytic vegetation – Plant life growing in water or in earth that is at least periodically deficient in oxygen as a result of excessive water content.

Impaired stream – A stream with water quality that does not support its designated use as defined by the State of Virginia in accordance with Section 303(d) of the Federal Clean Water Act.

Indirect effects – See *secondary effects*.

Intermodal – Referring to connections between or integration of two or more transportation modes (e.g., bus, train, automobile, etc.).

Invasive species – A species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic harm, environmental harm, or harm to human health.

Joint Permit Application (JPA) – A form used by the United States Army Corps of Engineers, the Virginia Marine Resources Commission, the Virginia Department of Environmental Quality, and the Local Wetlands Boards for permitting purposes involving water, wetlands, and dune/beach resources, including, but not limited to, major water supply and water withdrawls projects.

Jurisdictional stream – A stream that is regulated by Section 404 of the federal Clean Water Act.

Jurisdictional wetland – A wetland that is regulated by Section 404 of the federal Clean Water Act.

Land use – Classification providing information on land cover and the types of human activity occurring on a parcel of land, such as "commercial," "industrial," "residential," or "open space."

L_{dn} – The day-night noise level, represents the average noise level evaluated over a 24-hour period. A 10-decibel penalty is added to events that occur during the nighttime hours (10:00 P.M. to 7:00 A.M.) to account for people's increased sensitivity to noise while they are sleeping.

L_{eq} noise level – The level of constant noise which contains the same amount of acoustic energy as time varying noise levels (e.g. traffic noise) during a given time interval.

Leadership in Energy and Environmental Design (LEED) – A suite of rating systems for the design, construction, and operation of high performance green buildings, homes, and neighborhoods. It is intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations, and maintenance solutions.

Level of service (LOS) – A letter grade designation used to describe given roadway conditions with "A" being at or close to free-flow conditions and "F" being at or close to over-saturation of the roadway; usually based on the progression of vehicles through the green phase of a signal, driver discomfort/frustration, lost travel time, and fuel consumption.

Limits of Construction (LOC) – The likely "footprint" or physical extent of the construction area of the proposed project.

Limits of Disturbance (LOD) – The likely "footprint" or physical extent of the proposed project.

L_{max} – The maximum noise level that occurs during an event or train passby and is the noise level actually heard during the event or passby.

Low impact design (LID) – An approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimzing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product.

Low-income – Any household with income at or below the U.S. Bureau of the Census poverty thresholds.

Memorandum of Agreement (MOA) – A document that describes the terms and conditions agreed upon to resolve the potential adverse effects of a federal agency program, under Section 106 of the National Historic Preservation Act.

Metropolitan Washington Airports Authority (MWAA) – The Authority responsible for operating and maintaining Washington Dulles International Airport and Ronald Reagan Washington National Airport.

Metropolitan Washington Council of Governments (MWCOG) – An independent nonprofit association that brings area leaders together to address major regional issues in the District of Columbia, suburban Maryland, and Northern Virginia. It is the local Metropolitan Planning Organization for the Washington DC Metropolitan area.

Migratory birds – Bird species that embark on regular seasonal journeys on an annual basis for purposes such as breeding or feeding or in response to weather conditions. Migratory birds are protected under the federal Migratory Bird Treaty Act.

Minority – As recognized by Federal law, a member of one of the following races: (1) Black or African American, (2) American Indian or Alaska Native, (3) Asian, (4) Native Hawaiian or other Pacific Islander, (5) Hispanic or Latino Origin.

Mitigation – Action necessary to reduce, minimize or eliminate an impact to the affected environment by the proposed project.

Mitigation banking - The restoration, creation, enhancement, and preservation of wetlands and/or other aquatic resources, for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

Mixed-use – Combination of land uses, such as residential uses combined with office, retail, public, entertainment, or even manufacturing uses.

Mobility – The degree to which a person is able to move about; it is determined by a person's economic situation in addition to any physical disabilities she or he may possess.

Mount Vernon Memorial Highway (MVMH) – A memorial highway and surrounding lands dedicated to George Washington connecting Arlington Memorial Bridge to the Mount Vernon Estate later incorporated into the GWMP.

Moving Ahead for Progress in the 21st Century Act (MAP-21) – A funding and authorization bill to govern United States federal surface transportation spending. A key portion of the bill is the reformation of the environmental review process, which introduces a four-year review deadline for projects.

Multi-use trail – A trail designed for a variety of non-motorized transportation modes and recreational uses, including walking, jogging, bicycling, and in-line skating as permitted by the facility's design and regulations.

National Ambient Air Quality Standards (NAAQS) – Nationwide air quality standards established by the U.S. Environmental Protection Agency (EPA) in accordance with the federal Clean Air Act Amendments of 1990 that apply to six principal types of pollutants.

National Environmental Data Information System (NEDIS) – A comprehensive, proprietary master database that integrates environmental records and land use information from thousands of federal, state, tribal, local, and private sources.

National Environmental Policy Act of 1969 (NEPA) – Federal legislation that establishes an umbrella process for coordinating compliance with each law through the preparation of an Environmental Impact Statement (EIS) for all major federal actions significantly affecting the environment. Other special purpose statutes and procedures may apply as well, depending on specific circumstances, e.g., protective measures for historic properties, wetlands, floodplains, etc. If related environmental review requirements apply, they are to be undertaken as part of the NEPA compliance process. NEPA is the primary law governing the environmental protection process undertaken by the sub-agencies of the US Department of Transportation in reviewing federally funded transportation projects.

National Fire Protection Association (NFPA) – A nonprofit organization that works to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.

National Flood Insurance Program – A program of the Federal Emergency Management Agency (FEMA) that provides flood insurance to participating communities, issues floodplain management regulations, and identifies and maps floodplains

National Historic Landmark – A place that is designated by the US Department of the Interior as possessing exceptional value or quality in illustrating and interpreting the heritage of the United States. The National Park Service administers the National Historic Landmarks program for the Secretary of the Interior. Only 3% of properties listed in the National Register of Historic Places are designated as National Historic Landmarks.

National Historic Preservation Act (NHPA) – Federal legistation intended to preserve historical and archaeological sites in the United States.

National Pollution Discharge Elimination System (NPDES) – A program, as authorized by the Clean Water Act, that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

National Register of Historic Places (NRHP or National Register) – A federal list of buildings, sites, districts or other properties that have a historic significance. The National Register of Historic Places is maintained by the Keeper of the National Register.

National Wetlands Inventory (NWI) – A geospatial database of wetlands maintained by the Division of Habitat and Resource Conservation of the U.S. Fish and Wildlife Service.

Neighborhood – A contiguous residential area with distinct characteristics or boundaries.

Nitrogen oxides (NOx) – When combustion temperatures are extremely high, as in motor vehicle engines, atmospheric nitrogen may combine with oxygen to form various oxides of nitrogen. These pollutants, generally referred to as NOx, are inorganic gases formed by combination of oxygen with nitrogen from the air. Of these, nitric oxide (NO) and nitrogen dioxide (NO2) are the most significant compounds. Nitric oxide is a colorless and odorless gas. It is relatively harmless to humans and quickly converts to NO2. NO2, like VOCs, is of concern primarily because of its role in the formation of ozone. NO is produced in much greater quantities than NO2, but oxidizes to NO2 in the atmosphere. NO2 causes detrimental effects to the bronchial system.

No Build Alternative – The future condition of the study area in the absence of the proposed project. The No Build Alternative serves as a benchmark against which the potential impacts of other alternatives can be compared. It assumes that no improvements will be made with the exception of other committed projects and periodic maintenance and minor enhancements needed to maintain safe operation.

Non-contributing – See “contributing resource.”

Northern Virginia Regional Commission (NVRC) – A regional council of fourteen member local governments in the Northern Virginia suburbs of Washington, DC. The NVRC is a political subdivision within the Commonwealth of Virginia.

Notice of Intent (NOI) – A document issued by a state’s Department of Environmental Conservation (or equivalent of) that informs the appropriate governing body of stormwater discharge associated with construction activity for a given site within the state.

Off-peak travel hour – An hour of a 24-hour day when traffic is less than the maximum observed for the same 24-hour period.

Operations and maintenance (O&M) costs – Costs associated with operating and maintaining transit service, including vehicle operators, fuel, vehicle maintenance, and infrastructure (stations, tracks, right-of-way) maintenance.

Order of magnitude cost – A general cost figure used for comparative purposes.

Ozone (O_3) – A gas found in two different layers of earth's atmosphere: in the stratosphere (beginning seven to ten miles above earth's surface) and the troposphere (beginning at earth's surface and extending up to the stratosphere). In the stratosphere, ozone occurs naturally and provides a protective layer shielding earth from harmful ultraviolet radiation. In the troposphere, ozone is a major component of photochemical smog and can harm the respiratory systems of humans and other animals. It is a prevalent and widespread criteria pollutant that is regulated by the U.S. Environmental Protection Agency in accordance with the Clean Air Act. Ozone in the troposphere is produced by complex chemical reactions involving nitrogen oxides, which are among the primary pollutants emitted by combustion sources; hydrocarbons, released into the air through the combustion, handling and processing of petroleum products; and sunlight. This report is concerned with potential effects of the proposed state action on tropospheric ozone emissions and ambient levels.

Palustrine – Relating to a system of inland, nontidal wetlands characterized by the presence of trees, shrubs, and emergent vegetation (vegetation that is rooted below water but grows above the surface). Palustrine wetlands range from permanently saturated or flooded land (as in marshes, swamps, and lake shores) to land that is wet only seasonally (as in vernal pools).

Particulate matter (PM_{10} and $PM_{2.5}$) – Particle pollution is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The US Environmental Protection Agency regulates two categories of particle pollution: fine particles ($PM_{2.5}$), which are 2.5 micrometers in diameter and smaller; and inhalable coarse particles (PM_{10}) which are smaller than 10 micrometers. (A micrometer is 1/1000th of a millimeter; there are 25,400 micrometers in an inch.)

Passive park – A park where the primary focus is low-impact, quiet recreation, including hiking, meditation, and nature study.

Peak period – The primary morning and afternoon/evening commute periods, the hours of which are defined differently according to the agency or study purpose.

Phase I Archaeological Survey – The first step in a cultural resource archaeology investigation. The Phase I Survey assesses the potential presence and locations of potential archaeological sites within a study area using background research and field reconnaissance.

Pocket track – Track that is located between the main tracks and are used to store out-of-service trains and equipment.

Polychlorinated biphenyl (PCB) – An odorless, tasteless, clear to pale-yellow, viscous liquid formed by the electrophilic chlorination of biphenyl with chlorine gas. PCBs were widely used as dielectric and coolant fluids in the United States until their production was banned in 1979 due to their environmental toxicity.

Potomac Yard Planning Advisory Group (PYPAG) – An advisory group created by the City of Alexandria Department of Planning and Zoning that oversees Potomac Yard Development projects within the city.

Preferred Alternative – A transit alternative that is technically feasible and supported by local residents, stakeholders, and elected officials. It is determined through a detailed technical study and comments received through the associated public involvement process.

Profile – The vertical alignment of a transit alignment, which typically shows the elevation of the alignment as it relates to ground level.

Programmatic Agreement (PA) – A document that spells out the terms of a formal, legally binding agreement between federal agency and other state and/or federal agencies.

Project sponsors – The City of Alexandria is the project sponsor for the Potomac Yard Metrorail Station environmental study being conducted in compliance with the National Environmental Policy Act.

Protected species – An organism that is legally protected because it is considered endangered or threatened to become endangered, or one of special concern. Protection may be granted at the federal, state or local levels.

Recognized Environmental Conditions (RECs) – A term defined by ASTM International, originally known as the American Society for Testing and Materials (ASTM). It is defined under ASTM E1527 - 05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. "The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions."

Record of Decision (ROD) – The final step in the EIS process under NEPA. Documentation of the lead federal agency's formal decision on the proposed action. This document constitutes the basis for the federal agency's environmental finding on the project.

Resource Protection Area (RPA) – Land at or near the shoreline that has an intrinsic water quality value due to the ecological and biological processes it performs or that is sensitive to impacts that may result in significant degradation to the quality of state waters.

Richmond, Fredericksburg, and Potomac Railroad (RF&P) – A railroad that connected Richmond to Washington, DC that is now a portion of the CSX Transportation system.

Ridership – The number of people using a public transportation system during a given time period.

Right-of-way (ROW) – A public or private area that allows for passage of people or goods, including, but not limited to, railways, freeways, streets, bicycle paths, alleys, trails and walkways. A public right-of-way is dedicated or deeded to the public entity for use under the control of a public agency.

Riparian buffer – A strip of naturally vegetated land along a stream. The vegetation along the banks and in the adjacent floodplain area is characterized by plants that associate with waterways and nearby moist soils. Riparian buffers protect water quality and other natural functions of the stream by filtering storm water runoff, stabilizing stream banks, moderating water temperatures, and providing habitat for wildlife.

Risk Based Screening Level (RBSL) – A measure, defined by the EPA, that measures the risk for chemical contaminants at superfund sites.

Runoff – The part of precipitation, snow melt, or irrigation water that runs off the land into streams and lakes. It can carry pollutants from the air and land into receiving waters.

Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) – A federal law that guarantees funding for highways, highway safety, and public transportation. At $244.1 billion, it is the largest surface transportation investment in the history of the United States.

Safety and Security Certification (SSC) – The series of processes that collectively verify the safety and security readiness of a project for public use.

Safety and Security Management Plan (SSMP) – A plan required by the Federal Transit Administration (FTA) for major capital transit projects as a condition for Federal financial assistance. The SSMP explains how the funding recipient will perform safety and management activities defined in FTA guidelines.

Scoping Process – Scoping is the first step in the environmental review process and involves using public and agency participation to develop possible solutions and identify issues regarding a proposed project. Scoping also helps determine needs, objectives, resources and constraints within the study area. The formal Public Scoping Process for the Potomac Yard Metrorail Station Environmental Study began with the publication in the Federal Register of a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) on January 27, 2011 (Volume 76, No. 18). The *Scoping Summary Report summarized the initial public and agency input that was gathered during the project scoping period from February 10, 2011 through March 15, 2011.*

Secondary effects –Effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Secondary effects may include growth-inducing effects and other effects related to changes in the pattern of land use, population density or growth rate, and related effects on air and water and on other natural systems, including ecosystems. Also referred to as “indirect effects.”

Section 106 – A provision of the National Historic Preservation Act of 1966 that requires consideration of historic and archaeological properties and resources in Federal actions. Section 106 requires Federal agencies to assess potential effects of proposed actions on historic resources and provide opportunity for comment by the Advisory Council on Historic Preservation.

Section 303(d) – A provision of the federal Clean Water Act of 1977 that requires states to assess the conditions of their waters to determine where water quality is impaired (does not fully meet standards) or threatened (is likely to violate standards in the near future). The result of this review is the 303(d) list of impaired waters within the state, which must be submitted to the EPA every other year. Section 303(d) also requires states to prioritize and target water bodies on their list for development of water quality improvement strategies.

Section 4(f) – A provision of the Department of Transportation Act (DOT Act) of 1966 which stipulates that DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply: there is no feasible and prudent alternative to the use of land, and the action includes all possible planning to minimize harm to the property resulting from use. In 2005, the provision was modified so that the U.S. Department of Transportation (DOT) may determine that certain uses of Section 4(f) land would have *de minimis* impacts and would have no adverse effect on the protected resource. When this is the case, and the responsible official(s) with jurisdiction over the resource agrees in writing, compliance with Section 4(f) is greatly simplified.

Section 6(f) – A provision of the U.S. Land and Water Conservation Funds Act of 1965 which protects and maintains 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.

Section 404 – A provision of the federal Clean Water Act of 1977 which establishes a program to regulate the discharge of dredged or fill material into waters of the United States. Proposed impacts to waters of the U.S., including wetlands, streams and other open water bodies, are regulated by this provision.

Section 404 Permit – A permit issued in accordance with Section 404 of the Clean Water Act of 1977. The permitting program is administered by the U.S. Army Corps of Engineers.

semi-volatile organic compounds (SVOCs) – A group of chemicals composed primarily of carbon and hydrogen that have a tendency to evaporate (volatilize) into the air from water or soil. Examples include compounds that make up asphalt.

Sensitive receiver / receptor – A land use that would receive noise or vibration caused by a project. The type of the land use in question (e.g., residences, schools, libraries, laboratories, etc.) is generally sensitive to noise and vibration effects.

Sensitive view – An outdoor area that is visible by *sensitive viewers* (see below).

Sensitive viewer – A person who may be affected by a change in the local outdoor visual and aesthetic environment at a given location.

Shovel test pit – A hole, typically round and one foot in diameter, excavated with a shovel through soil layers. Archaeologists use shovel test pits spaced at regular intervals to identify the presence of archaeological deposits or sites.

Small Area Plan (SAP) – See Comprehensive Plan.

Sole source aquifer – An underground water supply designated by the Environmental Protection Agency (EPA) as the "sole or principal" source of drinking water for an area.

Standard Cost Categories (SCC) – In 2005 FTA implemented the Standard Cost Categories, to establish a consistent format for the reporting, estimating, and managing of capital costs for New Starts projects.

State Historic Preservation Office (SHPO) – A state administrative agency responsible for carrying out consultation in accordance with the National Historic Preservation Act of 1966, as amended, and other state historic preservation regulations.

State Historic Preservation Officer (SHPO) – A person designated and appointed by the state governor to administer the State Historic Preservation Program, and the office of professional staff supporting the program.

State Implementation Plan (SIP) – A state plan for the establishment, regulation, and enforcement of Federal air pollution standards. It is reviewed and approved by the US Environmental Protection Agency in accordance with the Clean Air Act Amendments of 1990.

Station platform – The area where passengers board and disembark from a train or subway vehicle.

Stormwater – Runoff water that is generated by a rain event. Stormwater discharges include runoff from land, pavements, building rooftops and other surfaces. Stormwater runoff can accumulate a variety of pollutants such as oil and grease, chemicals, nutrients, metals, and bacteria as it travels across land before discharging into surface and other receiving waters. Heavy surges in stormwater runoff can cause other negative effects, including flooding and erosion, to streams and adjacent low-lying areas, especially in urbanized watersheds.

Stormwater management pond(s) (SWMP) – A best BMP designed to enhance stormwater quality by slowing the velocity of runoff, thereby settling sediment and potential contaminants.

Streetcar – A streetcar is a form of rail transit that generally refers to a type of light rail transit which uses smaller vehicles than typical light rail transit systems and generally operates as single-car trains. Modern Streetcars are capable of operating in mixed traffic and along exclusive fixed-rail guideways.

Sulfur oxides (SOx) – A class of compounds of which sulfur dioxide (SO2) and sulfur trioxide (SO3) are of great importance. The health effects of SOX include respiratory illness, damage to the respiratory tract, and

aggravation of respiratory diseases such as asthma, bronchitis and emphysema. Additionally, atmospheric reactions of SO2 generate sulfuric acid, which is the main constituent of acid rain. Motor fuels, particularly diesel fuel, contain small amounts of sulfur that are oxidized and emitted in vehicle exhaust.

Superfund – See Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

System Safety Program Plan (SSPP) – A document authored by the Washington Metropolitan Area Transportation Authority (WMATA) that consists of a series of required activities which must be undertaken to ensure the safety of its' customers, employees, emergency responders, and the general public. It is WMATA's safety planning and management document.

Tie-breaker station – A facility that breaks the rail power line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system and allowing for the efficient distribution of power.

Title VI – See Civil Rights Act of 1964.

Topography – The surface features of a place or region.

Total Maximum Daily Load (TMDL) – A regulatory term in the Clean Water Act describing a value of the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. Alternatively, it is an allocation of that water pollutant deemed acceptable to the subject receiving waters.

total petroleum hydrocarbons (TPH) – A term used to describe a broad family of several hundred chemical compounds that originally come from crude oil (can be found in crude oil).

Traction Power Substations – Facilities that convert alternating current power supplied by the power company into direct current power for the rail system.

Transit-dependent population – Defined by the Federal Transit Administration as persons in one or more of the following categories: 1) without private transportation, 2) elderly (over age 65), 3) youths (under age 18), or 4) persons below poverty or median income levels defined by the U.S. Census Bureau.

Transit-Oriented Development (TOD) – A land use designation intended to encourage the use of transit. Measures employed in areas with TOD designations include increased densities, clustered development, pedestrian amenities, parking restrictions, and urban design enhancements.

Transportation Infrastructure Finance and Innovation Act (TIFIA) – The TIFIA program provides Federal credit assistance to nationally or regionally significant surface transportation projects, including highway, transit and rail. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt.

Transportation Improvement Program (TIP) – A prioritized list of regional transportation projects and proposed funding to be implemented in stages over several (usually 3 to 6) years. The projects are selected from those proposed in the systems management element and the long-range element of the regional transportation planning process. This program is required as a condition for the region to receive federal transit and highway grants.

Turbidity – A cloudy water quality condition due to suspended silt or organic matter.

Underground storage tank (UST) – A tank located at least partially underground and designed to hold gasoline, other petroleum products or chemicals.

Uplands – Land that is well-drained and rarely, if ever, inundated.

Vegetated buffer/vegetative buffer – A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters which separates the open water from developed areas and agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or by restoring a cleared or degraded area. See also *riparian buffer*.

Vehicle miles traveled (VMT) – on highways, the measurement of the total miles traveled by all vehicles in an area for a specified time period.

vibration decibel (VdB) – A unit of measurement that records and observes the repetitive motion of a structure (its vibration). The scale is logarithmic.

Visual resource – A local resource, such as a structure or outdoor setting, valued for its visual or aesthetic qualities.

VISSIM – A visual block diagram language for the simulation of dynamical systems and model based design of embedded systems. It is widely used in control system design and digital signal processing for multidomain simulation and design.

Volatile organic compound (VOC) – A wide variety of organic compounds emitted principally from the storage, handling and use of fossil fuels. They are produced by incomplete combustion of hydrocarbon fuels and also by their evaporation. Because there are many hundreds of different compounds, VOC display a wide range of properties. Some, such as benzene, are carcinogenic while others are harmless to health. VOC contribute to the formation of ground-level ozone.

Washington Metropolitan Area Transit Authority (WMATA) – The agency that plans, builds, operates, and maintains the Washington D.C. metropolitan region's Metrorail and Metrobus transit systems.

Wastewater – The water and wastes from homes, businesses, institutions and infrastructure facilities that enter pipes and are transported to treatment plants for treatment and disposal.

Water Management Master Plan (WMMP) – A document outlining the way in which a city or governening body treats water, including sourcing, storage, treatment, and delivery systems. Both potable and non-potable water sources are included in the document.

Waters of the United States – All waters defined under the Clean Water Act 40 CFR 230.3(s) and subject to US Army Corps of Engineers jurisdiction. Waters of the United States include those which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. The definition includes all impoundments, tributaries of and wetlands adjacent to such waters.

Wetland – As defined by the Clean Water Act wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."