



EAST FALLS CHURCH WMATA METRORAIL STATION BUS LOOP EXPANSION PROJECT

Environmental Evaluation

Arlington County Division of Transportation
Washington Metropolitan Area Transit Authority

April 22, 2022

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I. Introduction

This Environmental Evaluation has been developed in accordance with Section 14(c)(1) of the Washington Metropolitan Area Transit Authority (WMATA) Compact to document the proposed improvements and potential impacts resulting from the East Falls Church (EFC) WMATA Metrorail Station Bus Loop Expansion Project (“project”). The project is being implemented by the Arlington County Division of Transportation in coordination with WMATA for the purpose of expanding bus loop capacity and enhancing pedestrian access at the EFC Metrorail Station.

The project would be coordinated with Arlington County's Complete Streets program and in support of the signal improvements on North Sycamore Street and the Capital Bikeshare expansion project in the Arlington and City of Falls Church areas.

II. Existing Site Description

WMATA operates the EFC Metrorail Station located at 2001 North Sycamore Street in Arlington County, Virginia, as shown in **Figure 1**. As shown in **Figure 2**, the EFC Metrorail Station is composed of several parcels and is crossed above-grade by I-66 and the Metrorail Orange and Silver Metrorail Lines. The Park & Ride lot, bus loop, and bicycle lockers are located north of the elevated Metrorail lines and I-66 and are bounded by Washington Boulevard to the northwest and North Sycamore Street to the east. The Kiss & Ride lot, Bike & Ride storage facility plus bicycle racks, and Capital Bikeshare rental facilities are located south of the elevated Metrorail lines and I-66 and are bounded by 19th Road North/Washington and Old Dominion Trail to the west, 19th Street North to the south, and North Sycamore Street to the east. Passenger access to the elevated Metrorail platform is located below the overpass on North Sycamore Street, accessible via sidewalk from the Park & Ride lot, bus loop, and Kiss & Ride lot.

The existing bus loop features four saw-toothed bus bays and four bus shelters on the outer loop, plus a center island providing four layover locations around its perimeter. Two bicycle lockers are located on the south side of the bus loop. Bus circulation is counterclockwise within the loop. Buses enter and exit the bus loop via the signalized intersection of North Sycamore Street and the westbound I-66 off ramp. Metrobus riders access the bus loop via sidewalk from the Park & Ride lot, Kiss & Ride lot, or nearby neighborhoods.

Figure 1: East Falls Church WMATA Metrorail Station Location

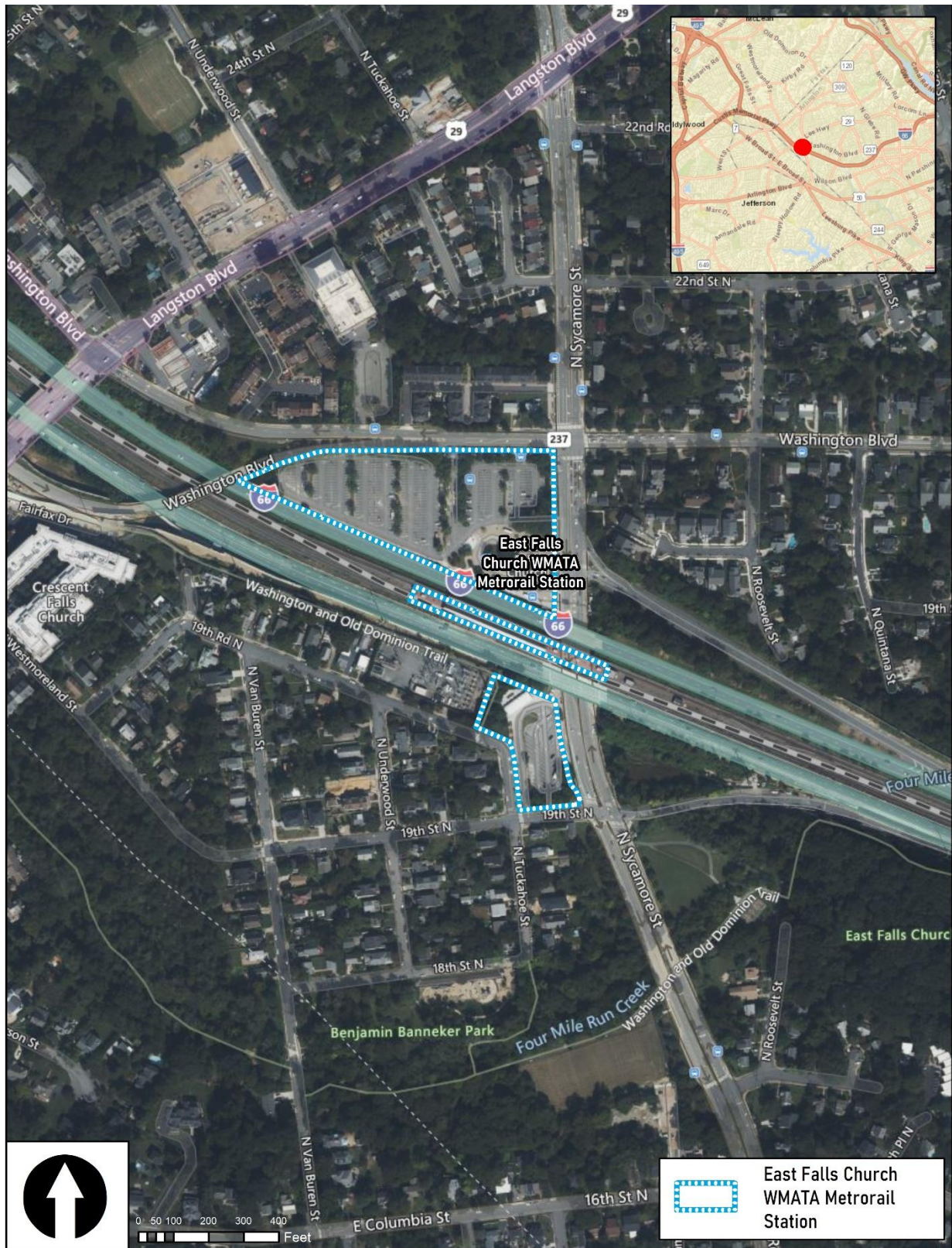
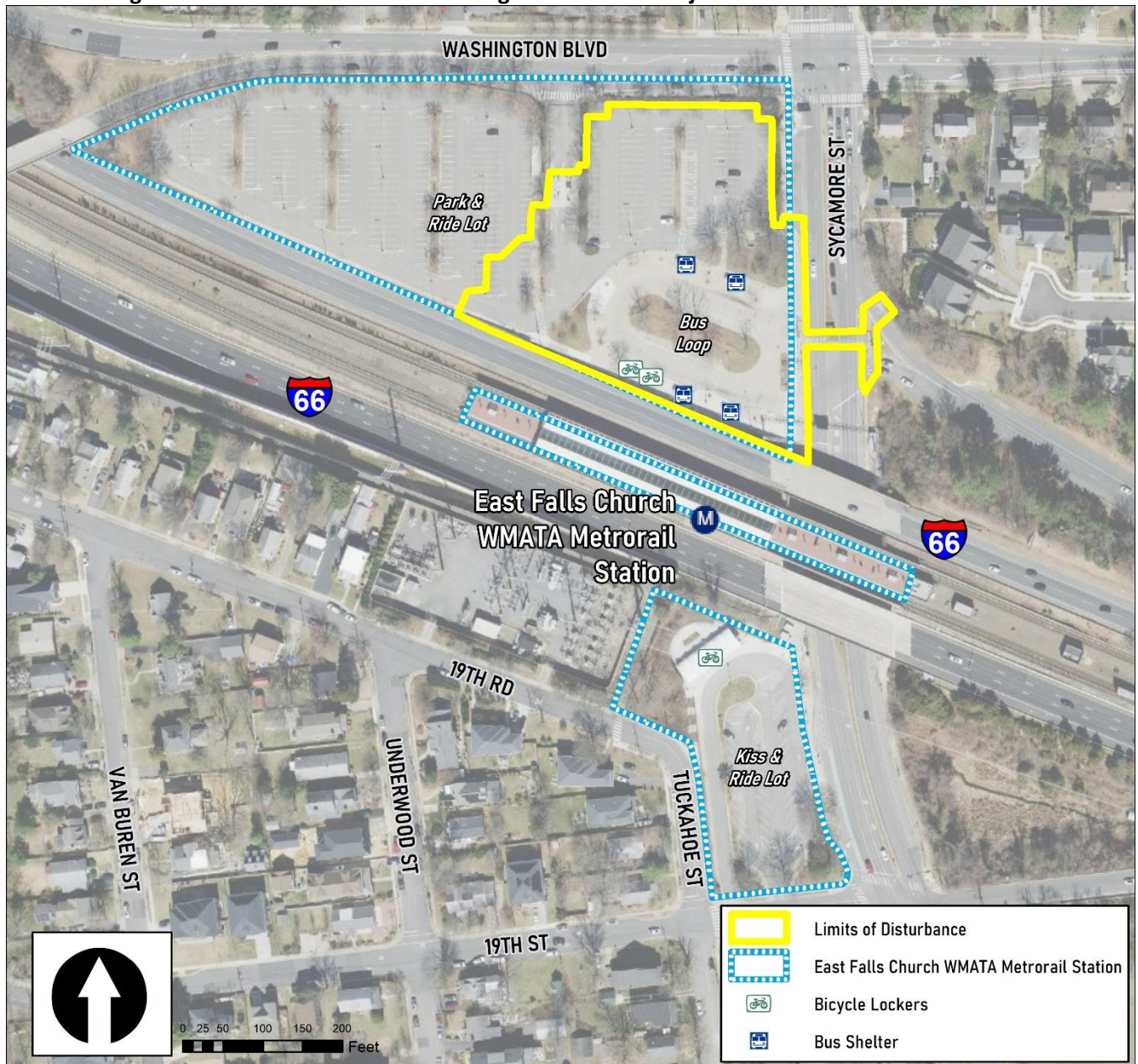


Figure 2: EFC Metrorail Station Existing Facilities and Project Limits of Disturbance



The EFC Metrorail Station currently serves the Orange and Silver Metrorail Lines, three WMATA Metrobus routes, three ART-Arlington Transit bus routes, and two Fairfax Connector bus routes.

The Orange Line operates between the Vienna Metrorail Station in Fairfax County, Virginia, and New Carrollton Metrorail Station in Prince George's County, Maryland. The Silver Line currently operates between Wiehle-Reston East Metrorail Station in Fairfax County and Largo Town Center in Prince George's County. The Silver Line Phase 2 project will extend the Silver Line west to Loudon County via six new Metrorail stations: Reston Town Center, Herndon, Innovation Center, Washington Dulles International

Airport, Loudoun Gateway, and Ashburn. Construction of the Silver Line Phase 2 project is nearing completion (WMATA, 2022).

Between 2011 and 2021, the average weekday rail boardings at EFC Metrorail Station is 3,400 riders. Rail ridership at the station increased by 147% between December 2020 and December 2021, indicating a rebound increase in ridership after the record low ridership levels of 2020 due to the Covid-19 pandemic. Currently, the Orange and Silver Lines have a 20-to-24-minute headway range at the EFC Metrorail Station.

Bus activity data was collected in Fall 2014 and is documented in the *East Falls Church Station Bus Facility Study* (WMATA, 2015). Bus services that operated out of the four bus bays at EFC Metrorail Station served approximately 2,200 passenger trips on an average weekday. The four bus bays were occupied between 40 and 78 percent of the time during their respective peak hour.

Table 1 provides the headway range for each bus line for weekdays, weekends, peak, and non-peak hours.

Table 1: Overview of Bus Lines Operating from EFC Metrorail Station

Operator	Line (Route)	Headway Range (minutes)
WMATA Metrobus	Washington Boulevard-Dunn Loring Line (2A)	30-45
	Annandale-East Falls Church Line (26A)	30-60
	Leesburg Pike Line (28A)*	12-30
ART- Arlington Transit	Ballston-MU via George Mason Drive (52)	25-60
	Ballston-MU via Military Road (53)	25
	Rosslyn via Lee Highway (55)	12-30
Fairfax Connector	McLean/Langley (715)	30
	Annandale and Seven Corners Transit Center (803)	30-45

*Provides Frequent Service: runs every 12 minutes or less between 7:00 am to 9:00 pm every day.

Source: WMATA Bus Ridership Data Viewer. Accessed at <https://www.wmata.com/initiatives/ridership-portal/Bus-Data-Portal.cfm>

III. Project Background and Description

A. Planning

The *East Falls Church Area Plan*, adopted by the Arlington County Board in 2011, describes a vision for East Falls Church that features development activity nodes, improved pedestrian, bicycle, and transit access for residents, and the preservation of the existing single-family residential areas. Specifically, the *Area Plan* calls for development of a transit-oriented, mixed-use neighborhood center where higher-density residential, office, retail, and hotel development would be targeted. In various build-out options described in the *Area Plan*, the EFC Metrorail Station is designated as the central hub of activity for the neighborhood center, connected to the surrounding areas by enhanced bus, bicycle, pedestrian, and streetscape facilities. Accordingly, two stated goals of the *Area Plan* are to enhance transit access and facilities to meet the future needs of the East Falls Church area and to improve pedestrian and bicycle connections through the area.

As the first eastbound Metrorail station that connects the Silver Line with the Orange Line, the EFC Metrorail Station is an important transfer point for both rail and bus riders. Additional local and commuter bus services are expected to operate from this station in the future to accommodate the anticipated growth in transit ridership. The *East Falls Church Area Plan* and other planning studies have identified needs specific to bus transit operations and capacity at the EFC Metrorail Station. The *Area Plan* states that additional bus bays are desirable for future service expansion and also calls for intersection enhancements to increase pedestrian safety. The *East Falls Church Station Vision Plan*, also released in 2011, describes the existing bus shelters as providing inadequate shelter for the number of passengers waiting for buses during peak hours (WMATA, 2011). The 2015 *East Falls Church Station Bus Facility Study* lists deficiencies due to inadequate bus loop area for bus parking and maneuvering; a lack of pavement markings directing vehicle flow at the Park & Ride lot; insufficient signal cycles for buses to exit the bus loop at the intersection of North Sycamore Street and the westbound I-66 off ramp; and damaged bus loop pavement (WMATA, 2015). Overall, the previous studies describe the existing bus loop facilities as insufficient to meet current and future capacity needs and planning goals.

The East Falls Church WMATA Metrorail Station Bus Loop Expansion Project is programmed in both the Northern Virginia Transportation Authority FY2017 Program and Arlington County Capital Improvement Program, Fiscal Years 2022-2024.

B. Ongoing Area Projects

Other proposed transportation projects in the area were identified using the online Arlington County *Projects Map* and in resources provided by Arlington County; these projects include the following:

- Bicycle station project on EFC Metrorail Station Kiss & Ride lot;
- Envision Route 7 Bus Rapid Transit;
- Improvements to the sidewalk along North Quintana Street;
- Lee Highway and Washington Boulevard Bus Stop Consolidation project;
- Sidewalk improvements along North Sycamore Street;
- Signal replacement at Washington Boulevard and North Sycamore Street;
- Signal study at EFC Metrorail Station Park & Ride lot entrance on Washington Boulevard; and
- Transform I-66.

Implementation of the East Falls Church WMATA Metrorail Station Bus Loop Expansion Project would complement the transportation improvements proposed in other ongoing projects in the area. Arlington County would coordinate potential implementation with other projects' lead agencies.

C. Project Description

As shown on the Preferred Concept Plan in **Attachment A**, the East Falls Church WMATA Metrorail Station Bus Loop Expansion Project proposes the following improvements:

- Expansion of the existing bus loop footprint to better accommodate current and future bus operations, including additional service routes and bus circulation movements, layovers, and idling for passenger boarding and alighting;
- Addition of three new bus bays and shelters and replacement of the four existing bus shelters (shown on **Figure 2**);
- Pedestrian access (sidewalk) improvements from the Park & Ride lot to the bus bays and shelters;¹
- Lighting upgrades at the intersection of North Sycamore Street and the westbound I-66 off ramp (bus loop entrance/exit);
- New lighting and communication system upgrades at the bus loop and Park & Ride lot;
- Replacement of existing traffic signal at the bus loop entrance/exit at the intersection of North Sycamore Street and the westbound I-66 off ramp;
- Relocation of accessible parking spaces closer to the expanded bus loop;
- Enhancement of existing and addition of new crosswalks and Americans with Disabilities Act (ADA)-accessible curb ramps at the Park & Ride lot entrance from North Sycamore Street and the west Park & Ride lot entrance, at the bus loop entrance/exit, and at the intersection of North Sycamore Street and the westbound I-66 off ramp;
- Minor relocation of existing gate at Park & Ride entrance from North Sycamore Street;
- Improvements to directional marking and vehicle circulation at the Park & Ride lot; and
- Enhanced landscaping and stormwater management features.

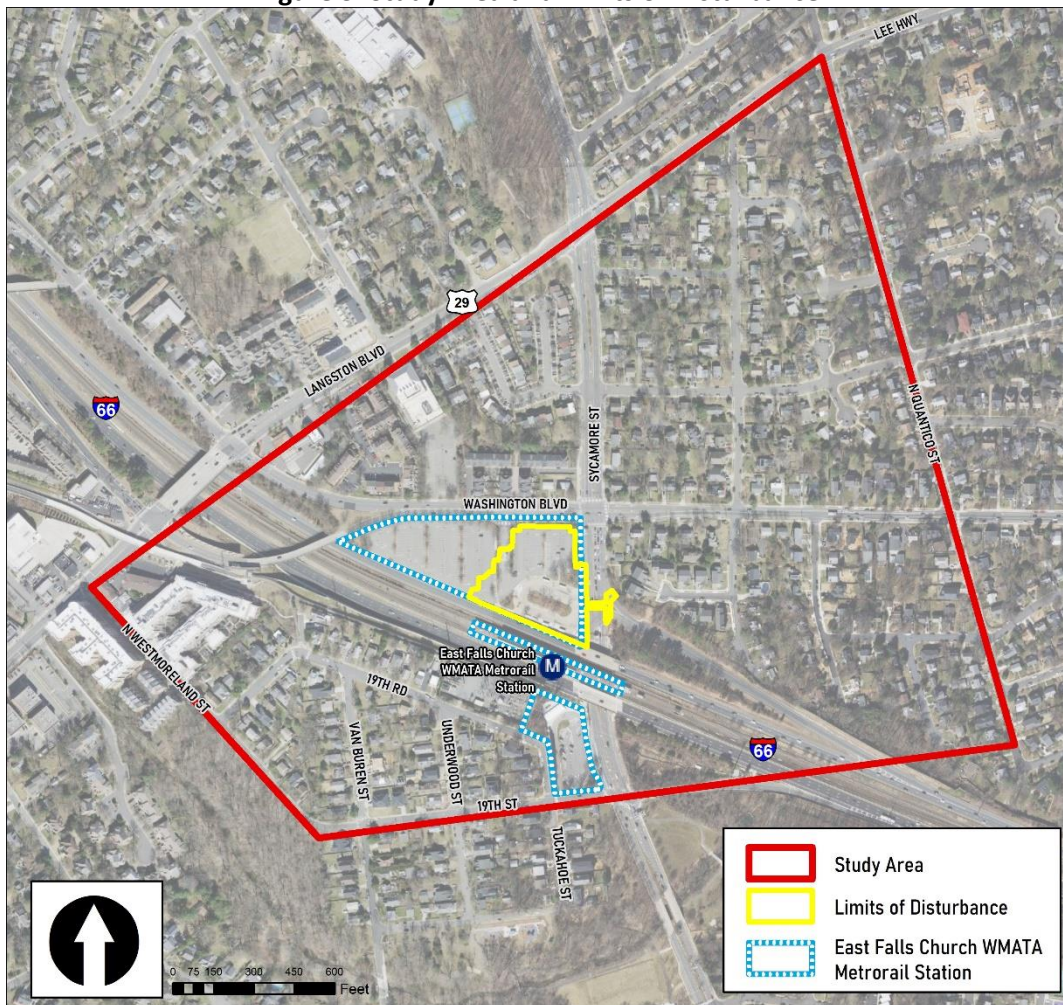
¹ Separate from this project, Arlington County is studying the potential for a new traffic signal and crosswalk at the Washington Boulevard entrance to the Park & Ride lot.

IV. Environmental Resources and Potential Impacts

This section provides information on the environmental resources present within the study area and the potential for impacts to occur to these resources from the proposed improvements. The information is based on publicly available data, including previous reports and planning documents, Geographic Information Systems (GIS) data layers and online mapping produced by local and state resource agencies, online technical databases, and Google Earth. **Figure 5** at the end of this evaluation on page 20 shows all relevant environmental resources within the study area .

The study area used in this Environmental Evaluation is shown on **Figure 3** and extends approximately 600 to 1,000 feet from the study limits of disturbance (LOD). The LOD are the proposed boundary within which all construction, staging, materials storage, erosion and sediment control, landscaping, drainage, stormwater management, and related activities would occur under “worst-case scenario” conditions. The study area extends beyond the LOD and is bounded approximately by Langston Boulevard (US 29) to the north, 19th Street North to the south, North Quantico Street to the east, and North Westmoreland Street to the west. Resources in this Environmental Evaluation have been reviewed within this study area.

Figure 3: Study Area and Limits of Disturbance



A. Property, Land Use, and Zoning

1. Existing Conditions

The EFC Metrorail Station is located within the City of Falls Church along Arlington County's western boundary. Both WMATA and the Virginia Department of Transportation (VDOT)/Commonwealth of Virginia own the street-level portion of the EFC Metrorail Station. As indicated in the *East Falls Church Station Bus Facilities Study: Final Report* and as shown on **Figure 4**, WMATA owns the Kiss & Ride lot and the northeast portion of the Park & Ride lot. VDOT/Commonwealth of Virginia owns the southwest portion of the Park & Ride lot as well as the bus loop, westbound I-66 off ramp, and I-66, per the Arlington County topographic survey provided in **Attachment B**.² Arlington County owns and operates the traffic signals adjacent to the EFC Metrorail Station.

Development of the East Falls Church neighborhood area has been guided by the *East Falls Church Area Plan*, adopted by the Arlington County Board in 2011. The study area is located within the Arlington-East Falls Church Neighborhood Conservation Area, one of Arlington's delineated neighborhood areas with its own planning initiatives and where development activity is concentrated. A review of Google Earth and Arlington County *AC Maps* online mapping indicates that land use within the study area is typical of suburban development and East Falls Church as a whole. The study area features primarily single-family detached zoning districts along sprawling tree-lined local road networks bound by arterial streets that provide access to the EFC Metrorail Station and to I-66. Pockets of higher-density development, including single-family attached and multifamily housing plus commercial/mixed use zoning districts, are located adjacent to the Park & Ride lot and existing bus bay (including the project LOD) and along the western edge of the study area.

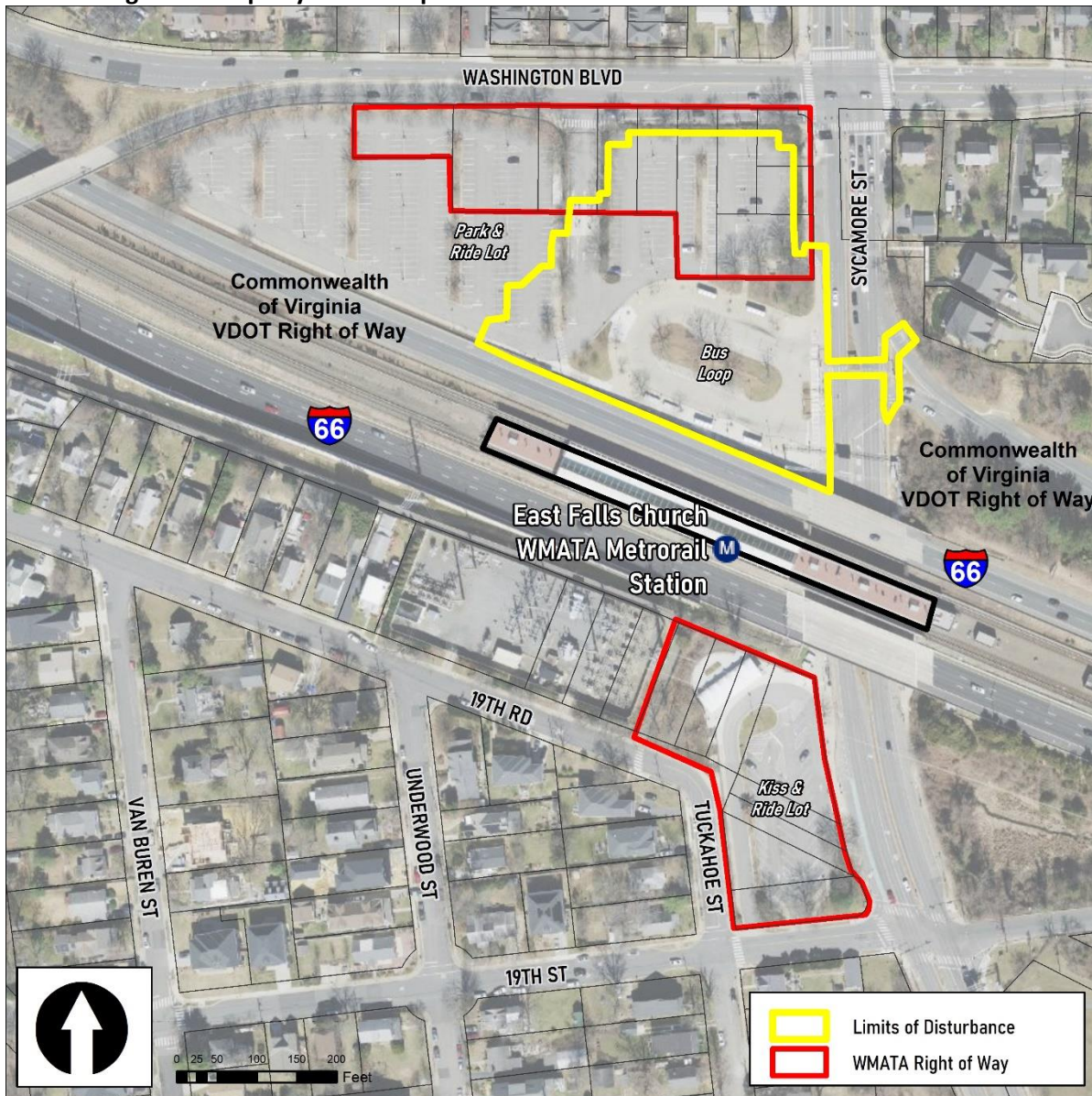
2. Potential Impacts

As shown in the Preferred Concept Plan in **Attachment A**, the LOD boundary in **Figure 4**, and survey in **Attachment B**, the majority of the proposed bus loop improvements would occur on VDOT-owned property. As such, this project would require a Land Use Permit from VDOT. Coordination among Arlington County, WMATA, and VDOT would be undertaken regarding improvements on VDOT property and potential impacts to vehicular and pedestrian flow between the westbound I-66 ramp off ramp and North Sycamore Street. Potential impacts to any VDOT structures, such as roadway signs and information systems, would also be identified and coordinated. No additional right-of-way (ROW) outside the VDOT and WMATA properties would be required for this project.

No permanent or temporary impacts to land use and zoning would occur within the study area, as all study improvements are located within existing ROW at the EFC Metrorail Station in accordance with the existing special zoning district. Additionally, the study improvements are consistent with the *East Falls Church Area Plan* described in **Section III.A**. By supporting the *Area Plan* goals for enhanced transit facilities and improved bicycle and pedestrian connections, the study aligns with the long-term vision of a transit-oriented neighborhood center at the EFC Metrorail Station.

² The Arlington County topographic survey in **Attachment B** identifies existing VDOT/Commonwealth of Virginia ROW "per VDOT Plan #0066-000-102, RW-201."

Figure 4: Property Ownership at the East Falls Church WMATA Metrorail Station



Property ownership data source: *East Falls Church Station Bus Facilities Study: Final Report*, pg. 4. WMATA, 2015 and email correspondence with Arlington County (04/22/22; see Footnote #2)

B. Transportation Impacts

1. Existing Conditions

East Falls Church is served by a network of multimodal transportation facilities, including roadways, Metrorail, bus, pedestrian, and bicycle facilities. The neighborhood's transportation facilities include the following:

Roadway Network: The roadway network consists primarily of interconnected, curved local roads serving residential areas that reflect the original “topsy-turvy” development of East Falls Church as a larger neighborhood of many smaller, unincorporated communities (Arlington County, 2022). The local roads

empty onto collector roads, such as Lincoln Avenue, Little Falls Street, and 19th Street North. Minor arterial roads such as North Sycamore Street, Westmoreland Street, and Washington Boulevard, plus principal arterial roads such as Langston Boulevard (US 29), accommodate the highest volume of traffic and provide access from collector roads to freeways and interstates like I-66 and the region at large. The EFC Metrorail Station accommodates vehicle access via approximately 420 parking spaces within the Park & Ride lot.

Metrorail: The EFC Metrorail Station currently serves the Orange and Silver Metrorail Lines. The Orange Line operates between the Vienna Metrorail Station in Fairfax County, Virginia, and New Carrollton Metrorail Station in Prince George’s County, Maryland. The Silver Line currently operates between Wiehle-Reston East Metrorail Station in Fairfax County and Largo Town Center in Prince George’s County. The Silver Line Phase 2 project will extend the Silver Line west to Loudon County via six new Metrorail stations: Reston Town Center, Herndon, Innovation Center, Washington Dulles International Airport, Loudoun Gateway, and Ashburn. Per a January 2022 update released by WMATA, construction of the Silver Line Phase 2 project is nearing completion (WMATA, 2022).

Bus Transit Network: Three bus transit services operate within East Falls Church— WMATA Metrobus, ART Arlington Transit, and the Fairfax Connector. All three services have routes that operate out of the existing EFC Metrorail Station bus loop, which is accessed via the intersection of North Sycamore Street and the westbound I-66 off ramp. Detail on existing bus services at the EFC Metrorail Station is provided in **Section II**. As described in **Section III.A**, various studies, including the *East Falls Church Area Plan* (Arlington County Board, 2011), the *East Falls Church Station Vision Plan* (WMATA, 2011), and the *East Falls Church Station Bus Facility Study* (WMATA, 2015), describe the existing EFC Metrorail Station bus loop facilities as insufficient to meet current and future capacity needs and planning goals.

Pedestrian and Bicycle Network: Sidewalks are generally provided along the local and collector roads, including along North Sycamore Street and Washington Boulevard at the entrances to the EFC Metrorail Station. The Washington and Old Dominion (W&OD) Railroad Trail is a paved, multi-use trail that connects the W&OD Railroad Regional Park at the western edge of the study area to other parks in East Falls Church, including Benjamin Banneker Park, East Falls Church Park, and Madison Manor Park. Within the study area, W&OD Railroad Trail runs parallel to I-66, joining North Tuckahoe Street just west of the EFC Metrorail Station Kiss & Ride. Delineated bicycle lanes are provided along various arterial roadways in the study area and East Falls Church as a whole. Capital Bikeshare also operates a number of bicycle rental stations throughout the neighborhood. Within the study area, bicycle lanes are located on North Sycamore Street and Washington Boulevard— except the portion of Washington Boulevard directly north of the project LOD, between North Sycamore Street and Langston Boulevard (US 29). Two Capital Bikeshare rental stations are located in the study area: one at the intersection of Sycamore Street and 19th Street North, at the northern edge of the EFC Metrorail Station Kiss & Ride loop; and one at the intersection of Langston Boulevard and the W&OD Railroad Trail. A Bike & Ride storage facility is located at the northeast side of the Kiss & Ride.

2. Potential Impacts

The improvements proposed under East Falls Church WMATA Metrorail Station Bus Loop Expansion Project would address the bus transit needs identified in previous planning studies (as described in **Section III.A**) by optimizing existing bus operations; increasing bus loop capacity to allow for future additional routes and passengers; upgrading the physical conditions of bus loop pavement and sidewalks; and enhancing landscaping and stormwater management areas. Pedestrian access and safety would be

enhanced via the addition of crosswalks and ADA-accessible curb ramps at EFC Metrorail Station access points and the intersection of North Sycamore Street and the westbound I-66 off ramp. Traffic circulation at the Park & Ride lot would also be improved by the enhancement of directional markings.

Temporary impacts to regular roadway, bus transit, bicycle, and pedestrian network operations may occur during construction. A study to evaluate impacts from the study to existing traffic operations will be developed. Any impacts to regular transportation network operations would be minimized and mitigated in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*. The EFC Metrorail Station will remain open to users during construction of the proposed improvements. During construction, all modes of operation would be maintained. However, on-site parking and existing pedestrian access points around the bus loop may be temporarily modified to ensure the safety of pedestrians from traffic and construction hazards.

C. Socioeconomic Characteristics and Community Facilities

1. Existing Conditions

Socioeconomic and environmental characteristics of the study area were gathered using the Environmental Protection Agency (EPA) online mapping tool, EJSCREEN. EJSCREEN uses GIS data and American Community Survey Estimates (ACS)³ data to generate a summary report of socioeconomic and environmental characteristics for a geographic area. The EJSCREEN report for the study area is provided in **Attachment C**.

With a population of 1,100, the study area contains approximately 360 housing units. The summary report indicates the study area is relatively homogenous in terms of race and ethnicity, with people of color comprising about 20 percent of the population and people identifying as non-Hispanic or Latino, white alone accounting for the remaining population. Eighty-eight percent of the population speak only English at home. Children up to 17 years of age comprise 30 percent of the population, indicating a predominance of families living in the area. Nearly 90 percent of the study area residents have a Bachelor's Degree or above; the same percentage of residents have a household income above \$75,000.

A review of community facilities in the study area using Arlington County *AC Maps* online mapping indicates that no community facilities,⁴ aside from the EFC Metrorail Station, are located in the study area. Fire Station 6 (6950 Little Falls Road) is located outside of but proximal to the study area.

2. Potential Impacts

No impacts would occur to the study area socioeconomic resources or the community facilities located within the study area, aside from improvements to the EFC Metrorail Station itself. Additionally, the Study would not disrupt community cohesion or quality of life. Because the improvements would occur on existing transportation right-of-way within or on sidewalks directly adjacent to the EFC Metrorail Station, divisions or isolation of private properties, persons, or groups would not occur. Quality of life for bus passengers and the surrounding East Falls Church neighborhood residents could be enhanced by improved bus operations and shelters, sidewalk conditions, and landscaping at the EFC Metrorail Station. By upgrading the sidewalk network for pedestrian travel, improving bus circulation movements within the

³ The ACS EJSCREEN report in **Attachment C** uses the American Community Survey Five-Year Estimates, 2015-2019.

⁴ Community facilities include fire and rescue stations, police stations, hospitals, libraries, schools, nature centers, and recycling centers. Parks and recreational areas are reviewed in **Section IV.E**.

bus loop, addressing traffic signal issues at the bus loop entrance/exit, and creating capacity for future additional bus routes, the Study would allow bus passengers to reach even more destinations in less time, thereby increasing both mobility and accessibility for passengers and nearby residents.

The proposed improvements would not result in temporary or permanent impacts to the W&OD Railroad Trail. Arlington County would communicate potential construction impacts to traffic flow and access with nearby Fire Station 6. Measures to minimize any temporary construction impacts such as disruptions to the normal flow of traffic and pedestrian and bicycle movements would be implemented in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*.

D. Environmental Justice

1. Overview

A review of potential Environmental Justice (EJ) concerns has been conducted for the study area to confirm that no disproportionately high and adverse impacts would occur to low-income populations or minority race and ethnicity populations under the proposed project. This Study refers to the Federal Transit Administration (FTA) Circular 4703.1 for guidance and definitions,⁵ and to the EPA online mapping tool, EJSCREEN, for a report on study area population characteristics related to EJ.

As defined in FTA Circular 4703.1, a person who identifies as American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and other Pacific Islander—either alone or in combination— is considered to be a person of minority race and ethnicity; a minority race and ethnicity population is a group or groups of minority persons living in geographic proximity. In EJSCREEN and in this Environmental Evaluation, the term “people of color” refers to people of minority races and ethnicities.

A low-income person is a person whose median household income is at or below the Department of Health and Human Services poverty guidelines (or at or below a locally developed threshold); a low-income population is a group or groups of low-income persons living in geographic proximity.

Also described in FTA Circular 4703.1 are the three guiding principles of EJ: to avoid, minimize, and mitigate disproportionately high and adverse effects to EJ populations; to ensure the full and fair participation by all potentially affected EJ communities; and to prevent the denial of, reduction in, or significant delay in receipt of benefits by minority and low-income populations.

2. Existing Conditions

Using the EPA online mapping tool, EJSCREEN, a report on socioeconomic and environmental characteristics as well as EJ indexes (scores) was generated for the study area. The EJSCREEN report for the study area is provided in **Attachment C**.

People of color comprise 19 percent of the study area population, and low-income people comprise six percent of the population. The percentages of both these characteristics are substantially lower in the study area than they are in Virginia, whose population is 38 percent people of color and 25 percent low-

⁵ While the East Falls Church WMATA Metrorail Station Bus Loop Expansion Project is neither federally funded nor located on federally owned land and therefore not subject to a formal Environmental Justice Analysis, a high-level review of potential EJ concerns is provided in this Study using guidance from the FTA.

income. Given this, the study area is considered to have small to no EJ populations. Additional study area socioeconomic characteristics are described in **Section IV.C**.

In addition to identifying the presence of EJ populations, the review of existing environmental conditions that pose risk to human populations, such as pollution exposure level and effects, is essential in determining potential impacts to EJ populations. To this end, EJSCREEN generates various EJ indexes for the study area by combining environmental and socioeconomic characteristics. The EJ indexes are then compared to the same combined characteristics of a larger reference geography (in this instance, Virginia) and presented as a percentile. The higher the EJ index percentile for the study area, the greater the relative potential for EJ concern.⁶

The EJ indexes for the 12 environmental indicators produced by EPA EJSCREEN are shown as percentiles compared to Virginia in **Table 2**. EJSCREEN methodology and definitions of the environmental indicators are available at <https://www.epa.gov/ejscreen/overview-environmental-indicators-ejscreen>. As shown in **Table 2**, the project area represents relatively lower levels of EJ concern for various adverse environmental characteristics as compared to Virginia.

Table 2: State Percentiles of Study Area EJ Indexes for Various Environmental Indicators

Environmental Indicator	Percentile as Compared to Virginia
EJ Index for Particulate Matter 2.5	32
EJ Index for Ozone	34
EJ Index for Diesel Particulate Matter	13
EJ Index for Air Toxics Cancer Risk	35
EJ Index for Air Toxics Respiratory Hazard Index	32
EJ Index for Traffic Proximity	0
EJ Index for Lead Paint	12
EJ Index for Superfund Proximity	30
EJ Index for Risk Management Plan Facility Proximity	35
EJ Index for Hazardous Waste Proximity	13
EJ Index for Underground Storage Tanks	10
EJ Index for Wastewater Discharge	35

3. Potential Impacts

As described throughout this Environmental Evaluation, no permanent adverse impacts are anticipated to occur from the study to existing private property, transportation facilities, community cohesion, public parks and recreation areas, community facilities, natural resources, historic resources, air quality, visual quality, or utilities as the LOD is contained entirely within existing transportation right-of-way at the EFC Metrorail Station. Therefore, no permanent adverse impacts would occur to EJ populations.

⁶ For example, if the project area shows a state percentile of 86 for the hazardous waste proximity indicator, it means that 14 percent of Census block groups—the base geographic area used in EJSCREEN— in Virginia have higher EJ index values, and therefore higher levels of EJ concern, for hazardous waste proximity.

Temporary impacts to regular roadway, bus transit, bicycle, and pedestrian network operations may occur during construction; any impacts to regular transportation network operations would be minimized and mitigated in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*.

Finally, the increase in bus capacity, accessibility, and mobility at the EFC Metrorail Station would benefit transit-dependent populations in the area, including low-income populations. As such, no disproportionately high and adverse effects to EJ populations are anticipated.

The EJSscreen report for the project area is provided in **Attachment C**.

E. Public Parkland and Recreation Areas

1. Existing Conditions

The Virginia Department of Conservation and Recreation Outdoors Plan Mapper and Arlington County AC *Maps* have been reviewed to identify public parkland and recreation areas within the study area. As shown on **Figure 5** on page 20, the Washington and Old Dominion (W&OD) Railroad Regional Park/Trail is the only park resource located within the study area, and it is owned by the Northern Virginia Regional Park Authority (NVRPA). The W&OD Railroad Trail is a paved, multi-use trail that runs parallel to I-66, joining North Tuckahoe Street just west of the EFC Metrorail Station Kiss & Ride within the study area. The trail connects to Arlington County parks located close to, but outside of, the study area, including Benjamin Banneker Park, East Falls Church Park, and Madison Manor Park, and beyond.

Other Arlington County parkland and recreation resources located close to, but outside of, the study area include Charles A. Stewart Park and Tuckahoe Park, which are located north of Langston Boulevard (US 29). No park or recreation resources protected by Section 6(f)(3) of the Land and Water Conservation Fund Act are located within or close to the study area.

2. Potential Impacts

Because all study improvements would occur on existing transportation right-of-way, no permanent impacts would occur to the W&OD Railroad Regional Park/Trail. Temporary impacts to pedestrian and bicyclist access to W&OD Railroad Trail may occur due to construction activities. Any impacts to regular pedestrian and bicycle network operations would be minimized and mitigated in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*.

F. Historic and Archeological Resources

1. Existing Conditions

A search of previously identified historic architectural resources within the study area was conducted using the Virginia Department of Historic Resources (DHR) online Virginia Cultural Resources Information System. No historic architectural resources or archeological resources are located within or adjacent to the study LOD.

As shown on **Figure 5** on page 20, the search identified two⁷ previously identified historic architectural resources in the study area. These resources are eligible for listing in the National Register of Historic

⁷ Another previously identified historic resource, the Falls Church Park Historic District (DHR #000-9730) overlaps the study area but was recommended not eligible in 2016. A formal eligibility determination by DHR has not been

Places (NRHP): the Madison Manor Historic District (DHR #000-4211) and the Washington & Old Dominion Railroad Historic District (DHR #053-0276). The Washington & Old Dominion Railroad Historic District follows the W&OD Railroad Trail through the study area.

2. Potential Impacts

No permanent or temporary impacts to historic and archeological resources would occur as all study improvements are located within existing transportation ROW at the EFC Metrorail Station.

G. Air Quality⁸

1. Existing Conditions

Arlington County is considered a national leader in transit-oriented development and is recognized for its innovative land use planning, sustainability, and climate action (Arlington County, 2019). Since 2013, Arlington County has released and updated a *Community Energy Plan* as an element of its Comprehensive Plan. The foundational goal of the *Arlington County Community Energy Plan* is to minimize man-made contributions to climate change by reducing greenhouse gas emissions. The *Energy Plan* identifies actions to achieve this goal, including the reduction of Vehicle Miles Traveled (VMT) and increase in use of alternative and public transportation.

2. Potential Impacts

The East Falls Church WMATA Metrorail Station Bus Loop Expansion Project supports the recommendations in the *Energy Plan* to reduce VMT and increase the use of public transportation. Implementation of the Study would encourage the use of bus transit by enhancing accessibility and mobility as described in **Section IV.B**, helping to reduce VMT in the long-term. See **Section Q** for a discussion of potential temporary air quality impacts due to construction.

H. Wetlands and Waters of the U.S.

1. Existing Conditions

A review of the National Wetlands Inventory (NWI) indicates that one freshwater pond is located within the study area, as shown on **Figure 5** on page 20. NWI identifies no other wetlands or waters present within the study area. The nearest stream to the study area is Four Mile Run and is located approximately 50 feet south and southwest of the study area. Wetlands associated with Four Mile Run are located approximately 100 feet southwest of the study area.

2. Potential Impacts

In general, there are no anticipated impacts to wetlands or waters, from this study. Any impacts that do arise would be minimized to the greatest extent practicable and mitigated in accordance with local, state, and federal regulations, including WMATA and Arlington County stormwater requirements and applicable VDOT and Virginia Stormwater Management Program regulations. Erosion and Sediment Control design

made. The review also identified 104 individually surveyed resources that are part of the Falls Church Park Historic District (also listed under DHR #000-428) that have either been determined not eligible by DHR or have not been evaluated for NRHP eligibility. As such the Falls Church Park Historic District, it is not considered a historic resource in this Environmental Evaluation.

⁸ Because the East Falls Church WMATA Metrorail Station Bus Loop Expansion Project is neither federally funded nor located on federally owned land, it is not subject to the Transportation Conformity requirements of the Clean Air Act and is not included in the Metropolitan Washington Council of Governments (MWCOC) Transportation Improvement Plan.

would be developed in future phases of study design. See **Section III.K** for additional detail on stormwater management.

I. Floodplains

1. Existing Conditions

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM),⁹ the 500-year floodplain overlaps the southern portion of the study area, as shown on **Figure 5** on page 20. The 100-year floodplain and a regulatory floodway are located outside of, but adjacent to, the southern portion of the study area.

2. Potential Impacts

No direct impact would occur to the floodplains and floodway located within and adjacent to the study area as all improvements would occur on existing transportation right-of-way within the study LOD.

In general, there are no anticipated indirect impacts to natural resources, including floodplains and floodways, from this study. Any impacts that do arise would be minimized to the greatest extent practicable and mitigated in accordance with local, state, and federal regulations, including WMATA and Arlington County stormwater requirements and applicable VDOT and Virginia Stormwater Management Program regulations. Erosion and Sediment Control design would be developed in future phases of study design. See **Section III.K** for additional detail on stormwater management.

J. Ecologically Sensitive Areas and Endangered Species

1. Existing Conditions

A preliminary Resource List provided by the USFWS Information, Planning, and Conservation (IPaC) system identified no protected, federal species or critical habitat within the study area; this coordination is provided in **Attachment D**. The study is located in a densely developed area.

2. Potential Impacts

No impacts would occur to protected, federal species, or critical habitat as none of these resources have been identified within the study area.

K. Water Quality

1. Existing Conditions

The LOD is located within the Four Mile Run - Potomac River watershed. While the EFC Metrorail Station's current water drainage infrastructure (catch basins and stormwater [SWM] pipe network) provides sufficient capacity for the proposed improvements, modifications to the existing drainage infrastructure would be required to accommodate the new site layout.

2. Potential Impacts

As shown in the Preferred Concept Plan in **Attachment A**, two new bioretention facilities are proposed to meet applicable state and local SWM requirements for water quality and water quantity. All stormwater and drainage design has been developed and will be implemented in accordance with WMATA and Arlington County stormwater requirements and applicable VDOT and Virginia Stormwater Management Program and federal regulations.

⁹ Shown on FEMA FIRM panels 51013C0018C and 51013C0019C, effective August 19, 2013.

Erosion and Sediment Control design would be developed in future phases of Study design and will likely include tree protection and inlet protection during construction.

Additional detail is provided in the Stormwater Management and Drainage memorandum in **Attachment E**.

L. Visual Quality

1. Existing Conditions

The visual quality of the study area is typical of that of suburban development and the East Falls Church neighborhood as a whole. The primary visual features within the study area are tree-lined local, collector, and minor arterial roads serving residential neighborhoods with single-family detached housing. Adjacent to the EFC Metrorail Station are higher density housing and commercial buildings. The EFC Metrorail Station itself features typical transit station elements, including an elevated concrete platform, a paved parking lot and passenger drop-off area, a bus loop with bus shelters, and bicycle lockers, racks, and rental facilities. The Metrorail Orange Line tracks and trains run in the median of I-66 at-grade through the study area and via overpass above North Sycamore Street. I-66 and the Metrorail tracks and trains are separated from non-transportation uses via concrete walls.

2. Potential Impacts

The visible elements of the study include an expanded bus loop with three additional bus shelters, sidewalk improvements, lighting upgrades, a replaced traffic signal, enhanced and new crosswalks, directional markings, and enhanced landscaping and stormwater management features. All visible proposed study elements would be consistent with the existing visual quality of the EFC Metrorail Station and its context within the study area; therefore, no permanent impacts would occur to the existing visual quality. Temporary impacts to visual quality may occur due to construction due to the presence of equipment, trucking, staging areas, and other construction elements. These temporary visual impacts would be minimized and mitigated to the greatest extent possible in accordance with Arlington County Department of Environmental Services Construction Standards and Specifications Manual and the WMATA Adjacent Construction Program Manual.

M. Noise

1. Existing Conditions

Existing transportation noise sources at the EFC Metrorail Station include Metrorail operations, Metrobus operations, and vehicle traffic entering from and exiting to I-66 and local and minor arterial roadways. Noise produced from these sources comprise a substantial portion of the ambient noise environment for the residential and commercial land uses surrounding the EFC Metrorail Station.

2. Potential Impacts

The need for a project to provide noise mitigation is determined based on the magnitude of noise impact and the consideration of factors related to the affected land uses and proposed improvements.¹⁰ Existing

¹⁰ While the East Falls Church WMATA Metrorail Station Bus Expansion Project is neither federally funded nor located on federally owned land, the Federal Transit Administration (FTA) *Noise and Vibration Impact Assessment Manual* provides general information on how to identify and mitigate potential noise impacts from transit projects; as such, the *Manual* is referenced here. All potential noise impacts from the project would be mitigated in accordance with

transportation noise and the potential increase over existing noise levels are two such considerations. As described above, the ambient noise levels of the residential and commercial land uses adjacent to the EFC Metrorail Station are already heavily influenced by transportation noise. Additionally, while the expansion of the existing bus loop and increase in number of bus shelters would allow for additional bus circulation, no new sources of transportation noise would be introduced; further, the increase in bus noise is expected to be marginal, particularly as WMATA transitions to an all-electric fleet. As such, no permanent noise impacts are expected as a result of the Study. See **Section Q** for a discussion of potential temporary noise impacts due to construction.

N. Vibration

1. Existing Conditions

Existing transportation vibration sources at the EFC Metrorail Station include Metrorail operations, Metrobus operations, and vehicle traffic entering from and exiting to I-66 and local and minor arterial roadways.

2. Potential Impacts

It is unusual for vibration from bus operations on roadways to be perceptible to nearby residential and commercial land uses, especially if the roadways are in good physical condition.¹¹ Additionally, the bus loop improvements proposed under the Study would not introduce new sources of vibration compared to the existing conditions. As such, no permanent vibration impacts are expected as a result of the Study.

O. Hazardous Materials

1. Existing Conditions

Sites with previously documented hazardous materials-related environmental impact concerns the study area were identified using the following online databases: Virginia Department of Environmental Quality Environmental Data Mapper, United States Environmental Protection Agency (EPA) NEPAassist, EPA National Priorities List, and EPA Underground Storage Tank Finder. No sites of hazardous materials-related impact concerns were identified within or adjacent to the study LOD. Results and mapping from the database searches are provided in **Attachment F**.

2. Potential Impacts

While sites with potential hazardous materials-related impact concern are located within the study area, no impacts from hazardous materials are expected to occur due to the distance of these sites from the LOD and the sites' regulatory statuses (lack of releases or closed cases).

P. Utilities

1. Existing Conditions

Per the *East Falls Church Station Bus Facilities Study: Final Report*, the majority of utilities within the existing Bus Loop are light poles— both pedestrian-scale and larger streetlamps—connected by underground lighting conduits. Utility structures are also located within the sidewalks and buffer strip adjacent to roadways, including the sidewalk between the Park & Ride lot and Washington Boulevard. Water and sewer lines run below Washington Boulevard and North Sycamore Street. Within the broader

[cont.] Arlington County Department of Environmental Services Construction Standards and Specifications Manual and the WMATA *Adjacent Construction Program Manual*.

¹¹ Information taken from FTA *Noise and Vibration Impact Assessment Manual*; see Footnote #9.

study area, utilities include overhead utility lines and infrastructure associated with signalized intersections: electric hand holes, traffic cabinets, traffic signal poles, fire hydrants, and streetlights.

2. Potential Impacts

Arlington County will coordinate with Miss Utility and the applicable utility companies. All existing utilities will be protected from damage during construction in accordance with the Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*.

Q. Construction Impacts

Project construction is anticipated to last from January 2023 to June 2024. The EFC Metrorail Station will remain open to users during construction of the proposed improvements. As described in Section IV, all construction, staging, materials storage, erosion and sediment control, landscaping, drainage, stormwater management, and related activities would occur within the LOD.

During construction all modes of operation would be maintained. However, on-site parking and existing pedestrian access points surrounding the bus loop may be temporarily modified to ensure the safety of pedestrians from traffic and construction hazards.

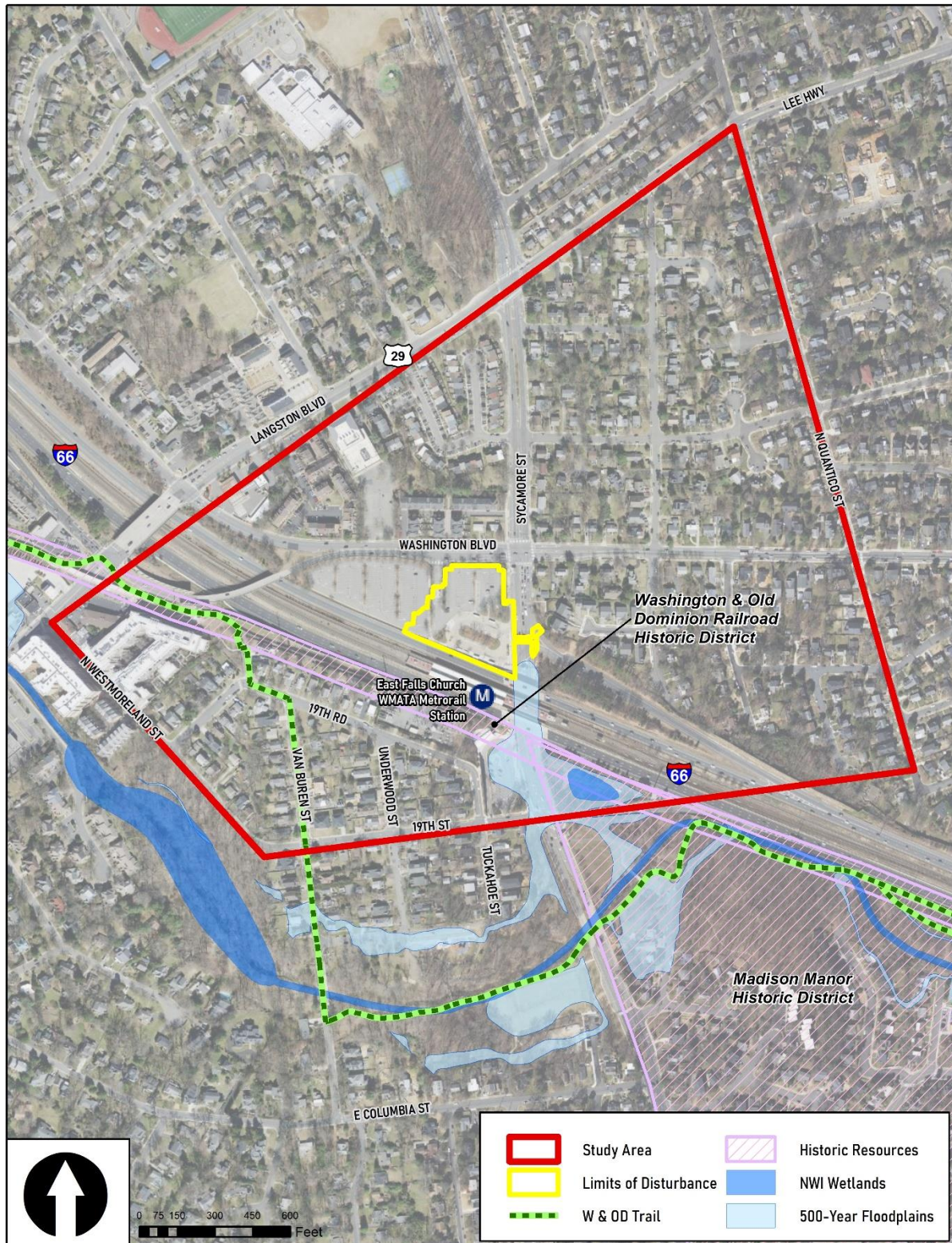
Temporary noise impacts would result from construction. Noise mitigation measures may include using smaller and quieter equipment or a temporary perimeter noise walls or enclosures around smaller equipment. The contractor would also control construction noise by completing particularly noisy construction activities during the day to help minimize impact. Temporary vibration effects from construction activities are not anticipated.

Construction activities would be conducted in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual*. Any temporary impacts to existing resources, including the transportation network, air quality, noise levels, and visual landscape, would be mitigated in accordance with all applicable local, state, and federal regulations.

R. Safety and Security Considerations

The project would improve pedestrian safety by enhancing the physical quality of sidewalks and adding crosswalks for pedestrian access to the EFC Metrorail Station. The project would be constructed in accordance with Arlington County Department of Environmental Services *Construction Standards and Specifications Manual* and the WMATA *Adjacent Construction Program Manual* and would, therefore, not adversely affect safety or security. All Metrorail facilities are designed and construction in accordance with applicable laws and accessibility guidelines in place at the time of construction. Access to parking, bus transit, and Metrorail services through the EFC Metrorail Station would be provided at all times at the direction of the project Engineer to ensure the safety of pedestrians from traffic and construction hazards.

Figure 5: Environmental Resources within the Study Area



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