Chapter 3: Environmental Scan

Georgetown Enhanced Transit Access to Metrorail

December 20, 2022

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3

Alternatives

3.1 Introduction

This document summarizes existing environmental, demographic, and socioeconomic conditions within the area that may be affected by the preliminary transit alternatives identified by the Georgetown to Metrorail Transit Enhancement Study (the Study).

Georgetown's multimodal transportation network facilitates travel by foot, bicycle, scooter, bus, and automobile. However, Georgetown is not served by Metrorail. The closest Metrorail stations are Rosslyn, Foggy Bottom-George Washington University (GWU), and Dupont Circle, all of which are at least a 10-minute walk to the neighborhood edge.

The Purpose and Need of the Study is to provide workers, students, residents, and visitors with a reliable, frequent, safe, and sustainable non-auto connection between Georgetown and the Metrorail system. In order to address the lack of Metrorail service in the Georgetown neighborhood. The Purpose and Need is documented in detailed in *Chapter 1, Purpose and Need*.

Through a multi-step concept development and screening process (documented in *Chapter 2, Alternatives*), the Study identified six preliminary alternatives meeting the Purpose and Need. Two of these preliminary alternatives consist of an aerial gondola line between the Rosslyn Metrorail Station in Arlington, Virginia, and Georgetown. The other four preliminary alternatives consist of partially dedicated bus corridors along existing rights-of-way between Georgetown and the Dupont Circle, Foggy-Bottom-GWU, or Farragut West and North Metrorail stations.

Further development and potential implementation of these alternatives may require federal funding or approvals, including approval by the National Capital Planning Commission (NCPC). As such, they would require compliance with the National Environmental Policy Act of 1969 (NEPA) (42 USC 4321-4355) and the Council on Environmental Quality (CEQ)'s regulations implementing NEPA (40 CFR 1500-1508). NEPA requires that federal agencies

evaluate the potential effects of their major actions on the human environment. Federally funded or permitted undertakings are also subject to Section 106 of the National Historic Preservation Act. Section 106 requires Federal agencies to consider the effects of their undertakings on historic properties listed, or eligible for listing, in the National Register of Historic Places. Finally, projects funded or authorized by the U.S. Department of Transportation (USDOT) are subject to Section 4(f) of the USDOT Act of 1966. Section 4(f) provides for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development.

The purpose of this document is to provide an overview of environmental features and conditions within the area that would potentially be affected by the preliminary alternatives and may require consideration under NEPA, Section 106, and Section 4(f) requirements, as applicable.

Table 3-1 below. These resources and features are those that would require consideration in any future environmental documentation. The table also indicates how relevant each resource or feature may be to the different preliminary alternatives. This high-level assessment is not intended as an evaluation of potential impacts; rather, for each alternative, it identifies which areas are likely to require more in depth-consideration in future environmental analysis, without prejudging whether impacts would occur or, if impacts would occur, what their extent and intensity would be.

Table 3-1.Environmental Resources Summary

Resources/Features	Sensitivity	
Surface Waters/Water Quality	Preliminary Alternatives 1-4: lowPreliminary Alternatives 5-6: high	
Floodplains	All Preliminary Alternatives: low	
Stormwater	All Preliminary Alternatives: low	
Federally Protected Species	All Preliminary Alternatives: low	
Cultural Resources	All Preliminary Alternatives: high	
Transportation (Transit, pedestrian/Bicycle, vehicular, air traffic)	 Preliminary Alternatives 1-4: high Preliminary Alternatives 5-6: low 	
Air Quality	All Preliminary Alternatives: low	
Noise	All Preliminary Alternatives: low	

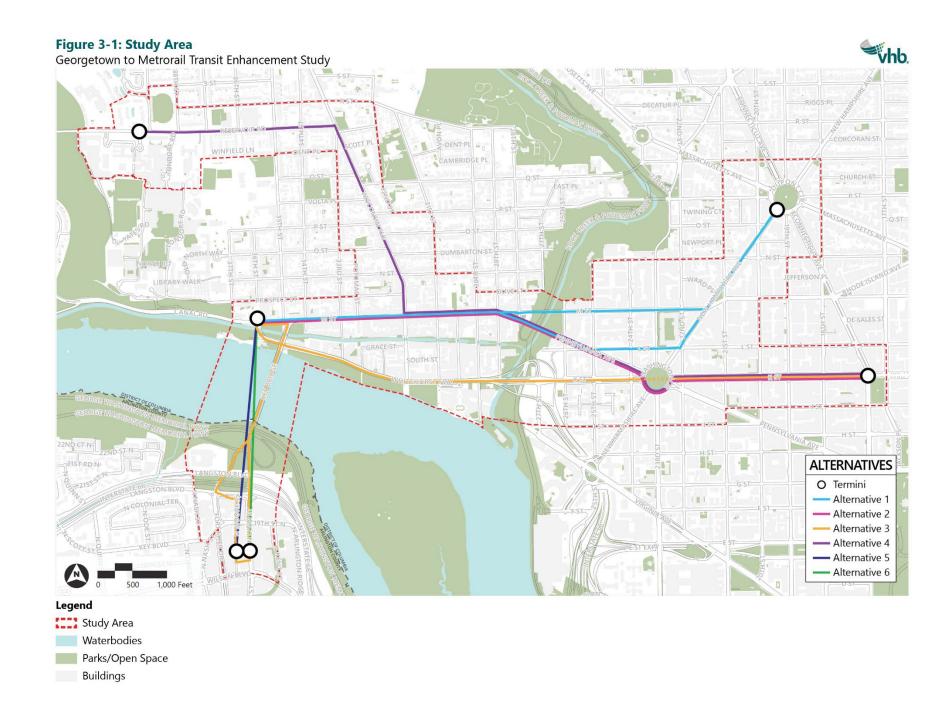
Resources/Features	Sensitivity
Parks and Open Space	Preliminary Alternatives 1-4: lowPreliminary Alternatives 5-6: high
Public Facilities and Services	Preliminary Alternatives 1-4: highPreliminary Alternatives 5-6: low
Environmental Justice	All Preliminary Alternatives: high
Section 4(f) Resources	Preliminary Alternatives 1-4: lowPreliminary Alternatives 5-6: high

3.2 Study Area

To capture potentially affected resources, a Study Area was developed using the following methodologies:

- 1) Defining a buffer area of one city block in each direction from the street centerline along the respective routes of the alternatives;
- 2) Where using a single city block boundary line was not feasible or appropriate due to geographic or built environment constraints, extending the buffer area from the street centerline to adjacent parcel boundary; and
- **3)** Where new infrastructure across the Potomac River is proposed (gondola alternatives) defining a buffer that is equivalent to the approximate width of a single city block.

Together, these buffer areas comprise the "Study Area." It is as shown in Figure 3-1.



The preliminary alternatives and their respective routes or alignments are as follows:

- Alternative 1: Partially dedicated bus between potential Transit Hub (site of former Exxon Station at 3601 M Street) and Dupont Circle Metrorail Station using M Street NW, L Street NW, and New Hampshire Avenue NW;
- Alternative 2: Partially dedicated bus between potential Transit Hub and Farragut Square (Farragut West and Farragut North Metrorail Stations) via M Street NW, Pennsylvania Avenue NW, and K Street NW;
- Alternative 3: Partially dedicated bus between Rosslyn Metrorail Station and Farragut Square (Farragut West and Farragut North Metrorail Stations) via Key Bridge, North Lynn Street/Fort Myer Drive, the Whitehurst Freeway, and K Street NW;
- Alternative 4: Partially dedicated bus between Medstar Georgetown University (GU)
 Hospital and Farragut Square (Farragut West and Farragut North Metrorail Stations)
 via Pennsylvania Avenue NW, K Street NW, M Street NW, Wisconsin Avenue NW, and
 Reservoir Road NW;
- **Alternative 5:** Aerial gondola between Rosslyn Metrorail Station at North Moore Street and the potential Transit Hub across the Potomac River; and
- **Alternative 6:** Aerial gondola between Rosslyn Metrorail Station at North Lynn Street and the potential Transit Hub across the Potomac River.

The alternatives consist of termini (i.e., Metrorail Stations), intermediary stops (i.e., Metrorail Stations and major intersections), and the streets connecting them (together, the "Elements"). The Alternatives' Elements are:

- Rosslyn Metrorail Station
- Key Bridge
- Dupont Circle Metrorail Station
- Farragut North/West Metrorail Stations
- Foggy Bottom Metrorail Station
- Pennsylvania Avenue NW
- New Hampshire Avenue NW
- L Street NW
- K Street NW
- M Street NW
- Whitehurst Freeway
- Potential Transit Hub
- Medstar GU Hospital
- Wisconsin Avenue/Reservoir Road

3.3 Natural Resources

In general, natural resources are only present in the part of the Study Area associated with preliminary Alternative 5 and preliminary Alternative 6, which both involve constructing an aerial gondola system across the Potomac River. The rest of the Study Area largely consists of urbanized areas, with no or limited natural resources.

3.3.1 Regulatory Context and Guidance

Major Federal regulations, policies, and guidance that pertain to ecological resources include:

- Clean Water Act (CWA) of 1972 (22 USC 1251) and implementing regulations (40 CFR 110-112);
- CWA Section 404 (33 USC 1344) and implementing regulations (33 CFR 320-330, 40 CFR 230);
- CWA/Water Quality Act of 1987 (33 USC 1251-1376) 401 and 402;
- Endangered Species Act (ESA) of 1973 (16 United States Code [USC] 1531) and implementing regulations (50 CFR 402);
- Migratory Bird Treaty Act of 1918 (16 USC 703-711) and implementing regulations (50 CFR 10);
- U.S. Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit;
- Executive Order (EO) 11990, Protection of Wetlands (42 Federal Register [FR] 26961);
- EO 11988, Floodplain Management (42 FR 26951);
- EO 13807, Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure; and
- Federal Water Pollution Control Act (CWA) of 1972 (33 USC 1251-1376) as amended by the CWA (1977) and the Water Quality Act (1987).

The descriptions in this section are based on available information from the following public sources:

- EPA NEPAssist;
- Open Data DC;
- Arlington County GIS Open Data;
- The District's Department of Energy and Environment (DOEE);
- Arlington County's Department of Environmental Services (DES);
- The National Park Service (NPS);
- The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database;

- The National Wetlands Inventory (NWI);
- The Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer (NFHL) Viewer and National Flood Insurance Rate Map (FIRM) Panels.

3.3.2 Surface Waters (Rivers, Streams, and Wetlands)

The United States Army Corps of Engineers (USACE), under Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 et seq.), regulates work in, or affecting, navigable Waters of the United States. Water resources are further federally regulated by the USACE and EPA under the Federal Water Pollution Control Act (i.e., the 1972 CWA amended in 1977). Under the CWA, USACE serves as the permitting agency while EPA provides oversight of the CWA permitting program. The regulations set forth in 40 CFR Section 230 (Guidelines for Specification of Disposal Sites for Dredged or Fill Material) are the substantive criteria used in evaluating discharges of dredged fill into waters of the US.

The Guidelines outline measures to avoid, minimize, and compensate for impacts. For any permit to be issued under Section 404 of the CWA, the proposed action must address all relevant portions of the Guidelines. This process allows USACE to arrive at the identification of the Least Environmentally Damaging Practicable Alternative (LEDPA). The LEDPA is the only project USACE can permit and is not identified until the permitting process is complete.

In April 2020, the EPA and USACE published the <u>Navigable Waters Protection Rule: Definition of "Waters of the United States"</u> (Rule) finalizing a revised definition of Waters of the United States under the CWA. The Rule defines four categories of jurisdictional waters including: territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. The Rule also identifies excluded features that traditionally have not been regulated and provides definitions for previously undefined terms occurring in prior regulatory text. This final rule became effective on June 22, 2020. On June 19, 2020, the District Court for the District of Colorado stayed the effective date of the Rule only in the State of Colorado. On June 9, 2021, EPA and USACE <u>announced their intention to initiate a new rulemaking process</u> that restores the protections in place prior to the 2015 Waters of the United States implementation and develops a new rule to establish a durable definition of the term.

The Fish and Wildlife Coordination Act (16 U.S.C. 661-666) applies to any Federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Construction of new-bridged crossings and reconstruction or modification of existing crossings over navigable Waters of the United States requires U.S. Coast Guard approval in accordance with Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946.

Three mapped waterbodies – a naturally occurring river, a stream, and a manmade canal – intersect the Study Area and are located within the boundary of the District, including:

 The Potomac River west of the Key Bridge, continuing southeast to the mouth of Rock Creek;

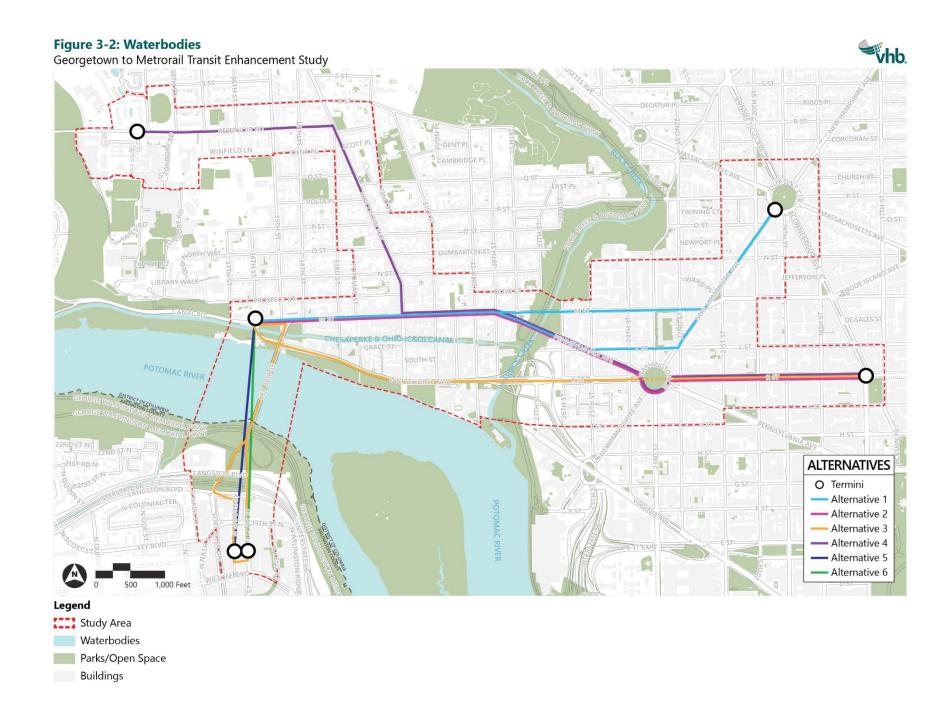
- Rock Creek north of M Street, continuing south to its mouth at the Potomac River;
 and
- **The Chesapeake and Ohio (C&O) Canal** west of the Key Bridge, continuing east to 27th Street.

According to the EPA's Waterbody Reports, all three waterbodies described above are listed as impaired. Waterbodies are listed as impaired when an applicable water quality standard is not being attained. While the standards vary by state, impaired waterbodies are typically identified as surface waters that have been documented to contain pollutant-, chemical-, or nutrient-related impairments. These three water bodies are classified as 303(d) listed impaired waters (Category 5), indicating that a waterbody is impaired or threatened and requires a total maximum daily load (TMDL) restoration plan for identified pollutants. Each of the waterbodies' uses, condition, identified pollutants and year of reporting are documented in detail below in **Table 3-2**.

Table 3-2. Impaired Waterbodies

Name	Use	Condition	Identified Pollutants	Year Reported
Potomac River (DC)	Aquatic Life; Fish and Shellfish Consumption; Swimming & Boating	Impaired	Acidity; Algae; Bacteria and Other Microbes; Low Oxygen; Murky Water; Nitrogen and/or Phosphorus; Polychlorinated Biphenyls (PCBs)	2020
Rock Creek (DC)	Aquatic Life; Fish and Shellfish Consumption; Swimming & Boating	Impaired	Bacteria and Other Microbes; Mercury; Metals; Murky Water	2020
C&O Canal (DC)	Aquatic Life; Fish and Shellfish Consumption; Swimming & Boating	Impaired	Acidity; Bacteria and Other Microbes; PCBs	2020

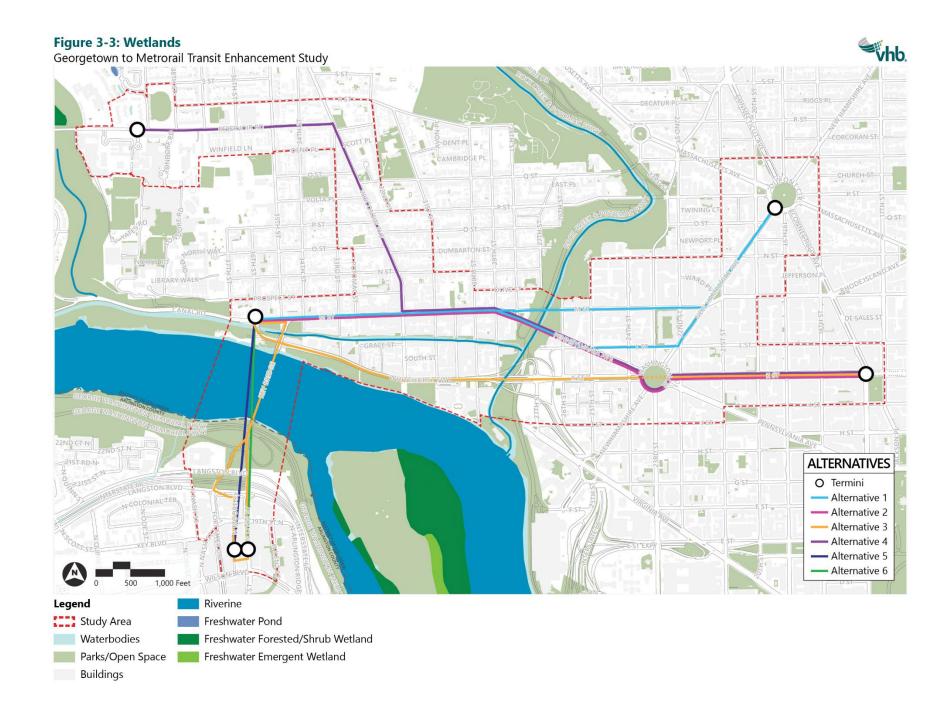
All mapped waterbodies within the Study Area fall within the Rock Creek-Potomac River Watershed, which is encompassed in the larger Chesapeake Bay Watershed. Waterbodies located within the Study Area are shown in **Figure 3-2**.



<u>Executive Order 11990</u>, Protection of Wetlands (May 24, 1977), established a national policy and mandates that each Federal agency acts to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance their natural value. The EPA, USACE, the Virginia Water Control Board, and the Virginia Department of Environmental Quality (DEQ) regulate wetlands in accordance with the CWA and the <u>Water Quality Act of 1987</u>.

Several instances of riverine areas as identified in the National Wetland Inventory (NWI) and regulated under Section 404 of the CWA are present within the Study Area. These include riverine areas in and around all three mapped waterbodies of the Potomac River, Rock Creek, and the C&O Canal. According to the NWI, riverine wetlands "include all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30 percent." NWI wetlands located within the Study Area are shown in **Figure 3-3**.

Any construction in Waters of the United States, including wetlands, would require permitting by USACE and the District Department of Energy and the Environment (DOEE) under Sections 404/401 of the CWA. Construction within the Potomac River would require coordination with the US Coast Guard, which regulates navigation in the river, and NPS, which has jurisdiction over the Potomac's bottom lands within the boundaries of the District.



3.3.3 Floodplains

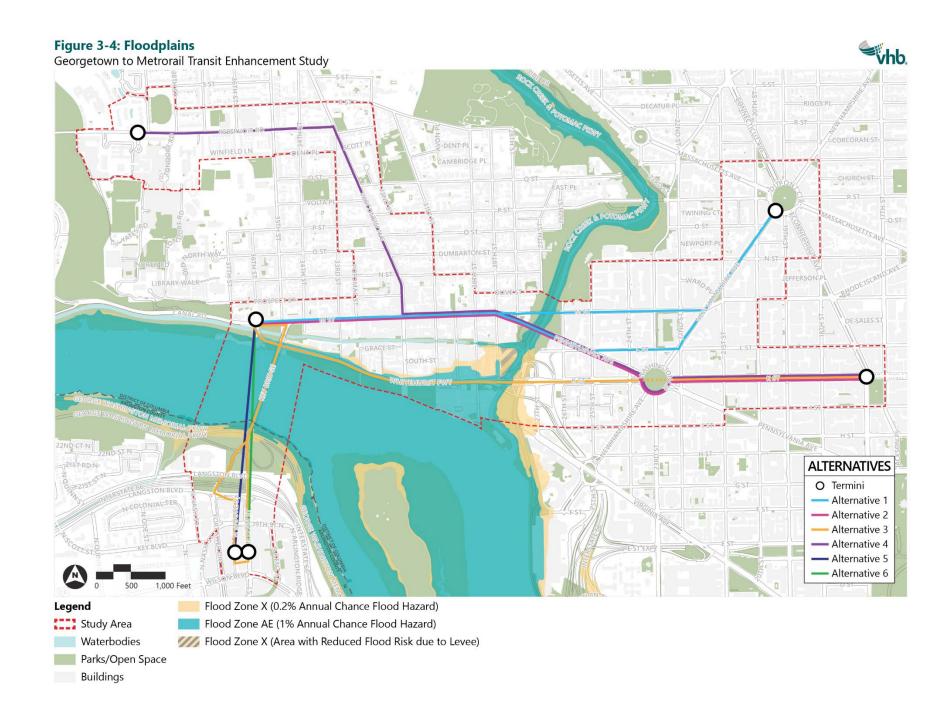
Several Federal directives regulate construction in floodplains to ensure that consideration is given to avoidance and mitigation of adverse effects to floodplains. These Federal directives include the National Flood Insurance Act of 1968, Executive Order 11988 (May 24, 1977), and U.S. Department of Transportation Order 5650.2, entitled "Floodplain Management and Protection". These orders establish a policy for Federal agencies to avoid actions with the 100-year floodplain if there are alternatives that are practical. When no practicable alternative is available, the agency must minimize potential harm to the floodplain.

The National Flood Insurance Act of 1968 established the National Flood Insurance Program (NFIP), which is administered by FEMA.

Several portions of the three mapped waterbodies and their immediate surroundings are mapped floodplains based on the FEMA NFHLs, including floodplains mapped within National Flood Insurance Rate Map (FIRM) Panels 1100010012C, 1100010014C, 1100010016C, and 1100010018C. This includes mapped areas of:

- Zone AE: a Special Flood Hazard Area (SFHA) that will be inundated by a flood event having a 1-percent chance of being equaled or exceeded in any given year, also known as the base flood or 100-year flood, and
- Zone X:
 - A moderate flood hazard area with a 0.2-percent annual chance flood hazard, or
 - An area with reduced flood risk due to the presence of a levee.

A single levee structure exists within the Study Area surrounding the West Heating Plant located between the C&O Canal to the north, Rock Creek to the east, the Whitehurst Freeway to the south, and 29th Street NW to the west. Mapped floodplains located within the Study Area are shown below in **Figure 3-4**.



3.3.4 Stormwater

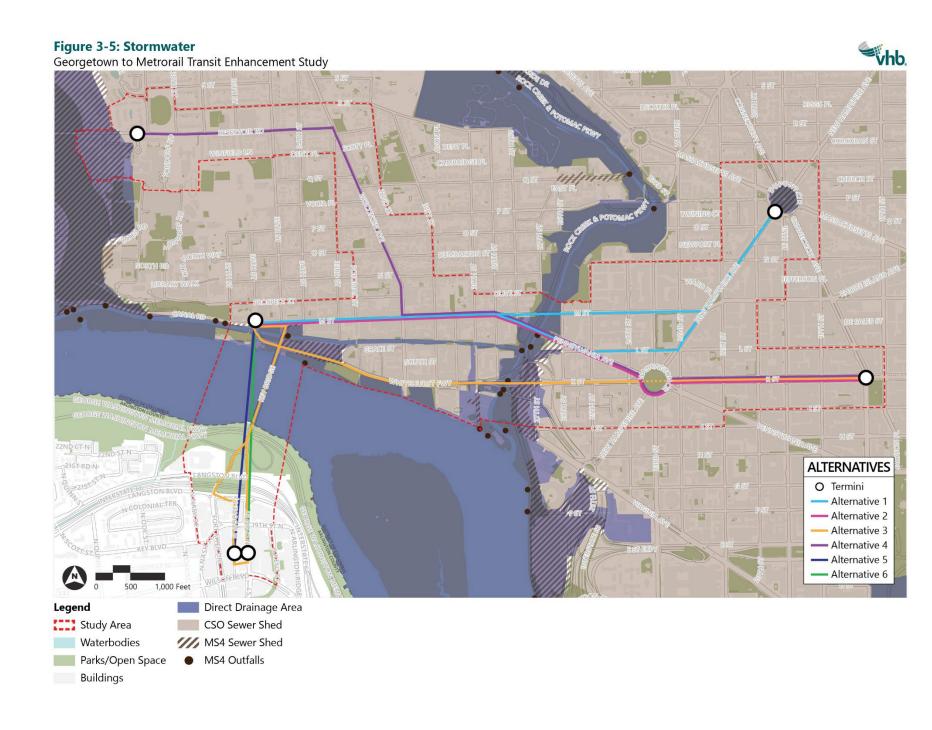
In the Washington DC portion of the Study Area, there are two types of sewer systems: the Municipal Separate Storm Sewer System (MS4) and the Combined Sewer System (CSS). Stormwater management and runoff is overseen by the District's Department of Energy and Environment (DOEE). The discharge of stormwater is regulated through the District's Municipal Separate Storm Sewer System (MS4) Permit. According to the DOEE, a "major component of the MS4 permit is the development of a Consolidated Total Maximum Daily Load (TMDL) Implementation Plan." Supportive of the Clean Water Act, the District's TMDL Implementation Plan – the 2015 DC Stormwater Plan:

"...established requirements to manage both stormwater quality and quantity. The regulations were updated in 2013 to set more stringent standards for how much stormwater must be held on a site or absorbed into the ground, making them one of the most advanced and progressive stormwater management regulations nationwide. These regulations are the centerpiece of the District's approach for reducing stormwater pollution." 1

The 2015 DC Stormwater Plan's primary strategies include using Best Management Practices (BMPs) to reduce and control stormwater runoff and reducing pollutants such as pet waste, trash, fertilizers, or oil via regulations and education.

Along with DOEE, DC Water operates the two existing systems that manage wastewater in the District. According to DC Water, "approximately two-thirds of the District is served by a separate sewer system (i.e., sanitary sewer system), while the remaining one-third is served by combined sewers." A majority of the Study Area within the District is covered by the combined sewer system (CSS). Waste collected via the sanitary sewer system and CSS is treated at the District's Water's Blue Plains Advanced Wastewater Treatment Plant. However, during periods of heavy rainfall, waste within the Study Area is directed to combined sewer overflow (CSO) outfalls that discharge excess wastewater into the C&O Canal, Rock Creek, and the Potomac River. CSO outfalls are monitored and permitted via the EPA's National Pollutant Discharge Elimination System (NPDES). Sewer systems and outfalls within the Study Area are shown below in **Figure 3-5**.

¹ DOEE. 2015. "Consolidated TMDL Implementation Plan." *DC Stormwater Plan*. Accessed August 2022. https://dcstormwaterplan.org/wp-content/uploads/ExecutiveSummary_InteractivePDF.pdf.



In the Virginia portion of the Study Area, stormwater runoff is managed via Arlington County's MS4 Permit. As part of the County's Comprehensive Plan, a Stormwater Master Plan was adopted in 2014 that "evaluates the current state of stormwater management and the condition of storm sewers, streams and watersheds in Arlington County and charts a path to a more sustainable community by providing a comprehensive framework for managing stormwater, streams, and watersheds for the next 20 years." The overarching strategies defined in the 2014 Stormwater Master Plan include reducing flooding risks, maintaining and improving stormwater infrastructure and management facilities, restoring streams and watersheds, implementing best practices, conducting outreach and education programs, ensuring compliance with the MS4 permit and Chesapeake Bay TMDL, and preparing for climate adaptation and resiliency planning. Wastewater in the Virginia portion of the Study Area is managed via a system of separate sanitary sewers that are treated by the county's water pollution control plant.

The EPA's Integrated Compliance Information System (ICIS) database listed thirteen (13) NPDES water dischargers located within the Study Area. According to the EPA, the "Clean Water Act prohibits anybody from discharging pollutants through a point source into a water of the United States unless they have an NPDES permit. Individual NPDES permits contain limits on what facilities can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health." All listed NPDES water dischargers located within the Study Area are listed In the **Appendix**, **Table A-1**.

3.3.5 Federally Protected Species

The Federal Endangered Species Act of 1973 (16 U.S.C. 1531-1544), and subsequent amendments and regulations, define basic protections for federally listed wildlife and plants that are considered threatened, endangered, or species of greatest conservation need. Section 7 of the Act requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species.

The Migratory Bird Treaty Act (16 U.S.C. 703-712) makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season.

According to IPaC (accessed August 2, 2022), there are no critical habitats mapped within the Study Area. IPaC review, supplemented by review of the Virginia Department of Game and Inland Fisheries' VaFWIS system, and the National Oceanic and Atmospheric Administration's

² DES. 2014. "Arlington County, Virginia Stormwater Master Plan." *Stormwater Master Plan*. September. Accessed August 2022. https://arlingtonva.s3.dualstack.us-east-1.amazonaws.com/wp-content/uploads/sites/31/2014/05/SWMP_FINAL_Sept2014.pdf#page=6.

Species Directory identified the protected species listed in **Table 3-3** as being potentially present in or near the Study Area. In addition, the IPaC search identified several specifies of migratory birds that may have habitats present within the Study Area. These bird species are listed in the **Appendix**, **Table A-2**.

Table 3-3. Federally Listed Endangered/Candidate Species

Species	Scientific Name	Class	Location	Status
Northern Long-eared Bat	Myotis septentrionalis	Mammals	Wherever Found	Threatened
Tri-colored Bat	Perimyotis subflavus	Mammals	Wherever Found	Proposed
Monarch Butterfly	Danaus plexippus	Insects	Wherever Found	Candidate
Hay's Spring Amphipod	Stygobromus hayi	Crustaceans	Wherever Found	Endangered
Atlantic Sturgeon	Acipenser oxyrinchus	Fish	Wherever Found	Endangered
Short-Nose Sturgeon	Acipenser brevirostrum	Fish	Wherever Found	Endangered

3.4 Cultural Resources

Cultural resources are present throughout the Study Area, as it encompasses long occupied portions of the District of Columbia and Arlington County. There are cultural resources near each one of the preliminary alternatives.

3.4.1 Regulatory Context and Guidance

The National Historic Preservation Act (NHPA) of 1966, as amended, is the principal legislation for regulating Federal actions that have the potential to affect cultural resources. Section 106 of the NHPA requires that all Federal agencies consider the effects (impacts) of their undertakings on historic properties. Further, Federal agencies must consult with the State Historic Preservation Officer (SHPO); Tribal Historic Preservation Officer (THPO), if applicable; Advisory Council on Historic Preservation (ACHP), as required; and other relevant consulting parties invited to participate in the Section 106 consultation process to help identify and determine effects to historic properties. If adverse effects are determined, agencies are required to continue consultation to avoid, minimize, or mitigate the effects to historic properties that would alter the characteristics that qualify the property for inclusion in the National Register of Historic Places (NRHP).

Federal policies, regulations, and guidance that are relevant to this section include:

- Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470);
- Protection of Historic Properties (36 CFR 800);
- The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR 68);
- Assumption of Responsibility for Preservation of Historic Property, (54 USC 306101);
 and
- National Register of Historic Places (NRHP) (36 CFR 60).

In addition to NHPA and NEPA, other important laws and regulations designed to protect cultural resources include:

- Section 110 of the NHPA, charging Federal agencies with the responsibility for establishing preservation programs for the identification, evaluation, and nomination of historic properties to the NRHP;
- Section 4(f) of the Department of Transportation Act which prohibits the U.S. Department of Transportation (USDOT) agencies from using land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use (23 CFR 774);
- Section 106 Regulations: 36 CFR 800 Protection of Historic Properties (as amended in August 2004);
- Native American Graves Protection and Repatriation Act (NAGPRA), 1990;
- American Indian Religious Freedom Act (AIRFA), 1978; and
- Archaeological Resources Protection Act (ARPA), 1979.

3.4.2 Cultural Resources in the Study Area

Information on cultural resources in the Study Area was collected from the following entities:

- NEPAssist;
- Open Data DC;
- Arlington County GIS Open Data;
- NPS' NRHP;
- NPS' National Historic Landmarks (NHL);
- The District's Historic Preservation Office (DC SHPO); and

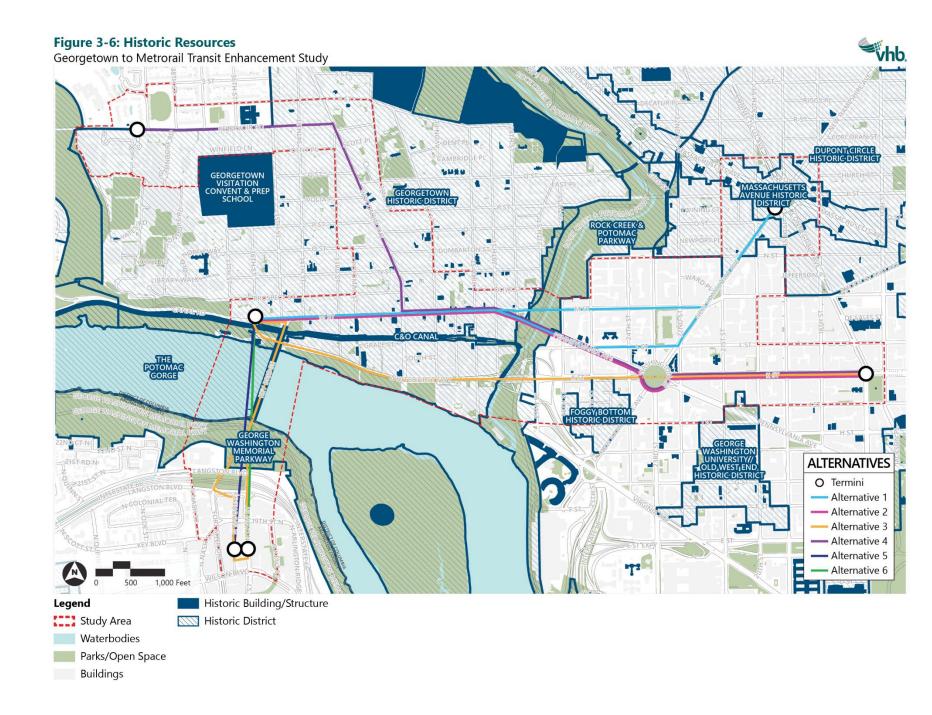
 The Virginia Department of Historic Resource's (DHR) Virginia Landmarks Register (VLR) and Virginia Cultural Resources Information System (VCRIS).

A large number of historic properties, buildings, and districts are located wholly or partially within the Study Area as shown in **Figure 3-6**. These properties are listed in the **Appendix**, **Table A-3**. **Table 3-4** below summarizes this information by type of listing. Properties with multiple listings are counted under the highest-level listing (NHL, NRHP, or DC Inventory).

Table 3-4. Summary of Historic Properties in the Study Area

Listing	Туре	Number of Properties
NHL	District	1
NHL	Structure	1
NRHP	District	6
NRHP	Structure	32
DC Inventory	District	2
DC Inventory	Structure	57

In addition to physical fabric, the auditory and visual surroundings of historic properties need to be considered. Of special interest are viewsheds to and from certain historic properties such as the George Washington Memorial Parkway and the Key Bridge toward Georgetown.



3.4.3 Archaeological Sites

Known and unknown post-contact era archaeological resources may be present in the Study Area, which has long been occupied and urbanized. Pre-contact resources may still be present in undeveloped or lightly developed areas adjacent to the Potomac River. Any alternative involving ground disturbance would require evaluating the potential for the disturbance area to contain historic or pre-historic archaeological resources through literature and archival review (Phase 1A survey) and, if warranted, field testing (Phase 1B survey).

3.5 Transportation

Transportation infrastructure is a defining element of the Study Area. All the preliminary alternatives would make use of, add to, and interact with several aspects of the existing transportation infrastructure in the Study Area.

3.5.1 Public Transportation

Given the urban nature and density of the Study Area, a number of public transportation facilities are located within its bounds, connecting it to surrounding neighborhoods in the District, Virginia, and Maryland. A list of the public transportation operators and facilities are listed below:

- The Washington Metropolitan Area Transit Authority's (WMATA) Metrorail and Metrobus systems throughout the District, Virginia, and Maryland;
- Arlington Transit's (ART) local bus service within Arlington County, Virginia; and
- The District Department of Transportation's (DDOT) DC Circulator local bus service within the District and Rosslyn.
- Georgetown University Transportation Shuttle (GUTS)

An overview of the bus routes in the Study Area are listed in detail below in **Table 3-5**.

Table 3-5. Bus Operators and Routes

Operator	Route Type	Route(s)
Metrobus	Frequent Route	31, 33, 36
Metrobus	Local Route	D2, D51, D6, G2, N2, N4, N6, 38B, 42, 43, L2
Metrobus	Commuter Route	3F, 3Y
Metrobus	Airport Express Route	5A
ART	-	43, 45, 55, 61
DC Circulator	-	Dupont Circle-Georgetown-Rosslyn, Georgetown-Union Station
Georgetown University Transportation Shuttle (GUTS)		

The Study Area considered in this document contains several Metrorail stations on the Red, Orange, Blue, and Silver Lines. Metrorail stations served by the Red Line include the Dupont Circle Metrorail Station and the Farragut North Metrorail Station. Those served by the Blue, Orange, and Silver Lines include the Farragut West Metrorail Station, the Foggy Bottom-GWU Metrorail Station, and the Rosslyn Metrorail Station.

All public transit systems including rail and bus services located within the Study Area are shown below in **Figure 3-7**.

3.5.2 Pedestrian and Bicycle Facilities

The Study Area is highly walkable and bikeable via an interconnected system of sidewalks, multi-use paths, on-street bike routes, off-street trails, bike lanes and shared lanes (sharrows). Several trails and bike routes (both on- and off-street) are locally wholly or partially within the Study Area, as listed below in **Table 3-6**.



Table 3-6. Designated Trails and Bike Routes

Route	Route Type	Extent within the Study Area
C&O Canal Towpath	Off-street Trail	Adjacent to the C&O Canal
Rock Creek Park Trail	Off-street Trail	Adjacent to Rock Creek Parkway
Capital Crescent Trail	Off-street Trail	Adjacent to the Potomac River Waterfront in Georgetown
Wisconsin Ave NW	Bike Lane	Between K St. NW and the C&O Canal Towpath
Thomas Jefferson Street NW	Bike Lane	Between K St. NW and M St. NW
K Street NW	Protected Bike Lane	Between 20 th St. NW and 34 th St. NW
M Street NW	Mixed (On-street Signed Route and Protected Bike Lane)	Between 19 th St. NW and 28 th St. NW
New Hampshire Avenue NW	Mixed (Shared Lane [Sharrow] and Bike Lane)	Between Washington Circle and Dupont Circle (Q St. & 18 th St. NW)
Q Street NW	Bike Lane	Between 18 th St. NW and 21 st St. NW
N Street NW	Bike Lane	Between 19 th St. NW and 21 st St. NW
29 th Street NW	On-Street Signed Route	Between M St. NW and K St. NW
33 rd Street NW	Bike Lane	Between Wisconsin Ave. NW and the C&O Canal Towpath
34 th Street NW	Bike Lane	Between R St. NW and the C&O Canal Towpath
37 th Street NW	Shared Lane (Sharrow)	Between Reservoir Rd. NW and R St. NW
Francis Scott Key Bridge	Off-street Trail	Atop of the Key Bridge

Route	Route Type	Extent within the Study Area
Mount Vernon Trail	Off-street Trail	Adjacent to the George Washington Memorial Parkway in Rosslyn
Martha Custis Trail	Off-street Trail	Adjacent to Langston Blvd.
Fort Meyer Drive	On-Street Signed Route	From the Key Bridge to Wilson Blvd.
N. Lynn Street	Mixed (On-Street Signed Route and Bike Lane)	From the Key Bridge to Wilson Blvd.
Wilson Boulevard	On-Street Signed Route	Between Fort Meyer Dr. and N. Lynn St.
N. Nash Street	On-Street Signed Route	Between Fort Meyer Dr. and Wilson Blvd.

The Study Area is also served by Capital Bikeshare, with the Study Area alone containing 23 Capital Bikeshare stations – 21 in Georgetown and two in Rosslyn.

3.5.3 Roadways

The routes of the alternatives follow several major streets and roadways, including the following:

- Reservoir Road NW between Wisconsin Avenue and the entrance to the Medstar Georgetown University Hospital;
- Wisconsin Avenue NW between M Street and Reservoir Road;
- M Street NW between New Hampshire Avenue and Key Bridge;
- K Street NW between Farragut Square and 27th Street;
- L Street NW between New Hampshire Avenue and Pennsylvania Avenue;
- Pennsylvania Avenue NW between Washington Circle and M Street;
- New Hampshire Avenue NW between Dupont Circle and L Street;
- The Whitehurst Freeway; and
- The Francis Scott Key Bridge.

Table 3-7 provide a summary characterization of these route segments, including annual Average Daily Traffic (AADT) volumes from 2019, to provide a measure of the activity along these segments. Data were obtained from the District's open access GIS.

Table 3-7. Characteristics of Street Segments included in the Alternatives

Roadway	Segment	DC Classification	2019 AADT Traffic Volumes	Directionality	Total right-of- way (ROW) (Feet)	Roadway ROW (Feet)
Reservoir Rd. NW	Wisconsin Ave. NW to MedStar Georgetown University Hospital	Minor Arterial	11,169	Two-way	90	36
Wisconsin Avenue NW	Reservoir Rd. NW to M St. NW	Principal Arterial	28,395	Two-way	60 (North of N St.) 82.5 (South of N St.)	40 (North of N St.) 56 (South of N St.)
M Street NW	Francis Scott Key Bridge to Wisconsin Ave. NW	Principal Arterial	21,455	Two-way	82.5	60
M Street NW	Wisconsin Ave. NW to Pennsylvania Ave. NW	Principal Arterial	30,288	Two-way	82.5	60
M Street NW	Pennsylvania Ave. NW to New Hampshire Ave.	Minor Arterial	16,158	Westbound	90 (East of 26th St.)	56
K Street NW	27 th St. NW to 21 st St. NW	Principal Arterial	26,985	Two-way	147.6	48
K Street NW	21 st St. NW to Farragut Square	Principal Arterial	21,809	Two-way	147.6	50
L Street NW	New Hampshire Ave. NW to Pennsylvania Ave. NW	Minor Arterial	8,341	Eastbound	90	32
Pennsylvania Avenue NW	M St. NW to Washington Cir.	Principal Arterial	14,058	Two-way	130	80

Roadway	Segment	DC Classification	2019 AADT Traffic Volumes	Directionality	Total right-of- way (ROW) (Feet)	Roadway ROW (Feet)
New Hampshire Avenue NW	L St. NW to Dupont Cir.	Minor Arterial	9,180	Two-way	120	50
Whitehurst Freeway		Freeway/Expressway	41,841	Two-way	60	50
Francis Scott Key Bridge		Principal Arterial	50,096	Two-way	76	60

3.5.4 Air Traffic

The Study Area, where it follows the Key Bridge, includes a section of major air traffic corridor above the Potomac River primarily associated with Reagan Washington National Airport (DCA), but also serving a significant amount of helicopter traffic. The Federal Aviation Administration (FAA) is the agency that oversees and controls the air space over the District, covering both aircrafts (fixed wing) and helicopter (rotary wing) traffic.

Above the Key Bridge, fixed wing traffic has a floor of 900 feet. Rotary wing traffic is required to maintain a 500-foot separation from fixed wing traffic above. Rotary wing traffic does not have a floor. It is required to avoid all obstructions marked on FAA maps. The elevation of Key Bridge at its highest point sits at 85 feet.

Construction of any vertical structures in this area would require coordination with the FAA. Plans would need to be filed with the FAA office in Seattle, Washington, which is responsible for reviewing "potential airspace obstructions" in air space over the District. The FAA review will take into consideration the presence of significant helicopter traffic in the area which may require additional provisions such as specific lighting and markers (for structures above 200 feet). Establishing structures under the air corridor would also require coordination with the Metropolitan Washington Airports Authority (MWAA) which operates both Reagan National Airport (DCA) and Dulles International Airport (IAD).

3.6 Air Quality

Air quality is a regional concern relevant to all transportation projects in the District of Columbia. Within the entire Study Area, motorized transportation is a major source of emissions.

3.6.1 Regulatory Context and Guidance

The Clean Air Act (CAA) is the primary legislation regulating air quality, with both playing a role in setting the Nation's air quality standards for pollutants and adopting emission control programs. The CAA authorizes the EPA to "protect public health by regulating emissions of harmful pollutants."

Federal policies, regulations and guidance that pertain to air guality include the following:

- CAA (42 USC 7401);
- Conformity Rule (40 CFR 51 & 93);
- National Ambient Air Quality Stands (NAAQS) (40 CFR 50);
- Control of Hazardous Air Pollutants from Mobile Sources 2007 (72 FR 8427);
- Federal Highway Administration (FHWA) Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents; and

• CEQ, Regulations for Implementing the Procedural Provision of the Nation Environmental Policy Act (40 CFR 1500-1508).

Under authority of the CAA, EPA has established NAAQS for criteria pollutants to protect the public health and welfare. Ambient air is generally defined as the portion of the atmosphere, external to buildings, to which the general public has access. The criteria pollutants which are of significance to the project include CO, NO₂, O₃ (in the form of oxides of nitrogen (NOx) and volatile organic compounds (VOC)), PM₁₀, and PM_{2.5}. SO₂ and Pb are generally not emitted in substantial quantities by on-road vehicles since regulations have limited the amount of sulfur and lead allowed in the composition of fuels for these vehicles. SO₂ pollution is still of concern for some non-road engines that burn high-sulfur fuel.

3.6.2 Attainment Status

The EPA assesses an area's attainment of the NAAQS by classifying the area under four designations: Attainment, Nonattainment, Maintenance, and Unclassifiable. An Attainment designation occurs when an area's ambient air concentrations are below the respective NAAQS. Nonattainment areas have ambient air concentrations of criteria pollutants that are greater than the NAAQS. A Maintenance designation indicates that an area has recently achieved Attainment after being previously designated as a Nonattainment area. An Unclassifiable designation specifically refers to an area where insufficient data exists to decide as to Attainment or Nonattainment. Unclassifiable areas are generally treated as Attainment areas.

The EPA tracks emissions and compliance data on air pollution point sources through the ICIS-AIR database. The Study Area is within the District of Columbia, which is a Marginal Non-attainment for the Ozone 8-hour standard (2015 standard). In August 2018, the area was reclassified a Maintenance Area for the Ozone 8-hour standard (2008 standard).

All projects proposed in a Nonattainment or Maintenance area must show conformity with the State Implementation Plan (SIP). Conformity is showing agreement to a SIP's purpose of reducing the severity of or eliminating the NAAQS violation(s) in the area. Conformity requires that a project will not:

- Cause or contribute to any new violation of the NAAQS;
- Increase of the frequency or severity of any existing violation of the NAAQS; or
- Delay the attainment of the NAAQS.

Transportation projects can demonstrate conformity by being included in a conforming long-range transportation plan. The current long-range transportation plan for the District region is Visualize 2045, prepared by the Metropolitan Washington Council of Governments.

3.7 Noise

Transportation (i.e., automobile and bus traffic and air traffic) is the primary source of noise throughout the Study Area. Sensitive noise receptors in the Study Area include multifamily

residences such as apartments, condominiums, and rowhouses, as well as hospitals and medical facilities, grade schools, colleges and universities, houses of worship, parks and recreational areas, and certain historical sites.

3.7.1 Regulatory Context and Guidance

Federal policies, regulations and guidance that pertain to noise include the following:

- Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment;
 and
- FHWA, Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR 772).

Sound levels are typically measured and reported using a descriptor called the A-weighted decibel (dBA). The dBA descriptor weights different frequencies of sound to correspond to human hearing. Sound is also dynamic and fluctuates over time. Depending on the source and type of sound, different metrics (ways of measuring) are used to characterized sound levels:

- Maximum A-weighted Level (Lmax) represents the highest sound level generated by a source. For mobile sources, the maximum level typically occurs when the source is closest to the measurement location.
- Energy-average Level (Leq) is the level of continuous sound over a given time period
 that would deliver the same amount of energy as the actual, varying sound exposure.
 The Leq metric accounts for how loud the noise event is during the period, how long
 it lasts, and how many times it occurs.
- Day-night Average Level (Ldn) is a single value that represents the sound energy over a 24-hour period with a 10-decibel (dB) penalty applied to sound that occurs between 10:00 PM and 7:00 AM when people are more sensitive to noise. Ldn accounts for how loud events are, how long they last, how many times they occur, and whether they occur at night.
- Sound Exposure Level (SEL) describes the cumulative noise exposure from a single noise event over its entire duration. In calculating SEL, the noise exposure is normalized to a time duration of one second so events with different durations can be compared in terms of their sound energy.

3.7.2 Noise Receptors

Noise receptors are categorized based on their use as defined by FTA as shown below in **Table 3-8**. Vibration-sensitive land uses are similar to noise-sensitive land uses except that only interior locations are considered. Historic properties are categorized based on their use.

Table 3-8. FTA Land Use Categories and Noise Metrics

FTA Land-Use Category	Noise Metric (dBA)	Description of Land-Use Category
1	Outdoor Leq*	Tracts of land where quiet is essential. Includes lands set aside for serenity and quiet (such as outdoor amphitheaters, concert pavilions, national historic landmarks with significant outdoor use, recording studios and concert halls).
2	Outdoor Ldn	Residences and buildings where people normally sleep (such as homes, hospitals, and hotels where a nighttime sensitivity to noise is important).
3	Outdoor Leq*	Institutional land uses with primarily daytime and evening use (such as schools, libraries, theaters, and churches, cemeteries, monuments, museums, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material, certain historical sites, parks, campgrounds, and recreational facilities are also included).

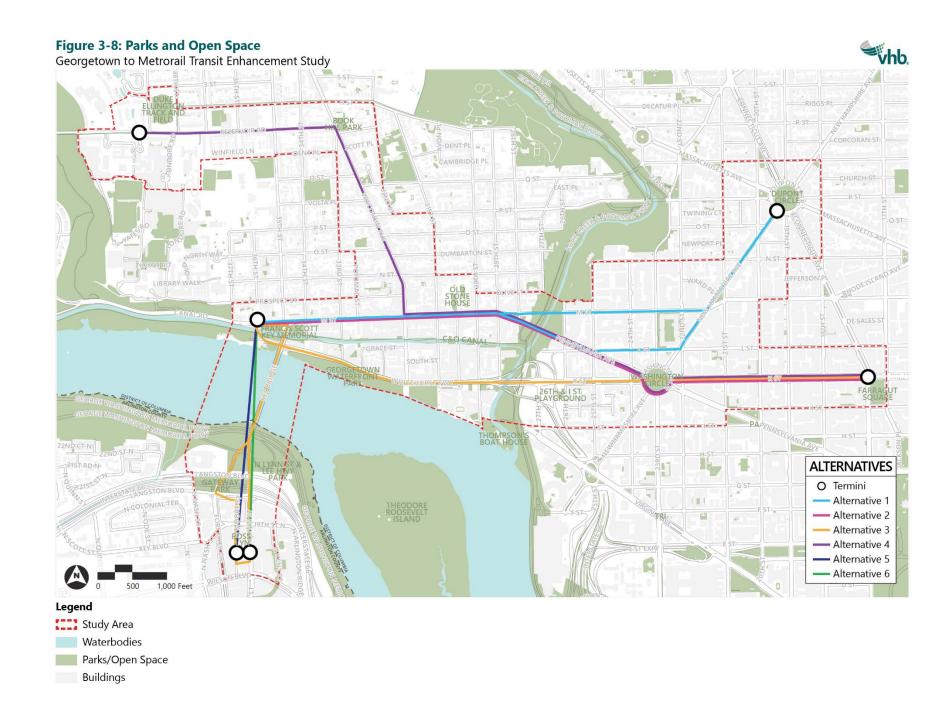
^{*}Leq for the noisiest hour of related activity during hours of noise sensitivity.

3.8 Community Resources

Given its urbanized character, the Study Area contains a wide range of community resources. Park and open space resources are largely concentrated near the Potomac River, in the portion of the Study Area associated with preliminary Alternatives 5 and 6. Urban parks are present throughout, along with the community facilities and services typically found in urban areas.

3.8.1 Parks and Open Space

A number of national, regional and local parks and trails are either wholly or partially located within the Study Area shown below in **Figure 3-8**. A list of named parks and recreational area in the Study Area is provided in the **Appendix**, **Table A-4**.



The local and regional parks and open space resources are maintained by either Arlington County Parks for those in Virginia or the District Department of Parks and Recreation (DPR) for those in the District. In addition to Arlington County Parks and DPR, the National Park Service's (NPS') Region 1 – National Capital Area (NCA) maintains multiple parks, trails, and open space assets throughout the Study Area in both the District and Virginia, including the following units:

- C&O Canal,
- George Washington Memorial Parkway,
- National Mall and Memorial Parks,
- Potomac Heritage National Scenic Trail, and
- Rock Creek Park.

Within each NPS Unit are individual parks, memorials, circles, fountains, statues, and other open spaces.

3.8.2 Public Facilities and Services

A number of public facilities are present within the Study Area, including both local- and regional-serving facilities, all of which are located within the District's portion of the Study Area. The Study Area is home to two major hospitals – MedStar Georgetown University Hospital and The George Washington University Hospital, as well as several major university facilities – Georgetown University School of Medicine, School of Nursing, and School of Health, as well as The George Washington University Milken Institute of Public Health. A number of grade and specialty schools and houses of worship are located within the Study Area, along with two libraries, Georgetown Library and West End Library.

While only a single fire station, DC Fire and EMS Department Engine Station 1, is located within the Study Area, it is served by several engine companies in the District including Local Alarm Districts (LADs), including Engine Companies 1, 5, 9, 16 and 23, as well as three Fire Battalions, Battalion 4, 5, and 6. The Virginia portion of the Study Area is served by the Arlington County Fire Department's Fire Station 10. Similarly, while there is no physical presence of a police station within the Study Area, the District's portion is covered entirely by the Second District of the Metropolitan Police Department (MPD), including Police Service Areas (PSAs) 205, 206, 207, and 208. The Virginia portion of the Study Area is covered by Arlington County Police District 1.

Public facilities and serviced located within the Study Area are detailed in the **Appendix**, **Table A-5**.

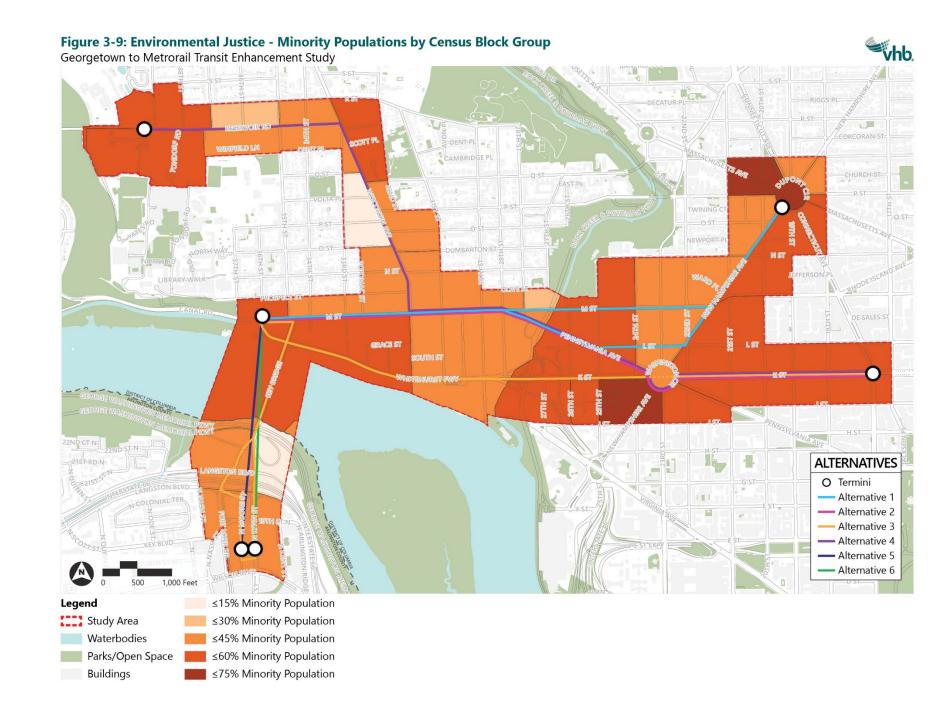
3.9 Environmental Justice: Minority and Low-Income Populations

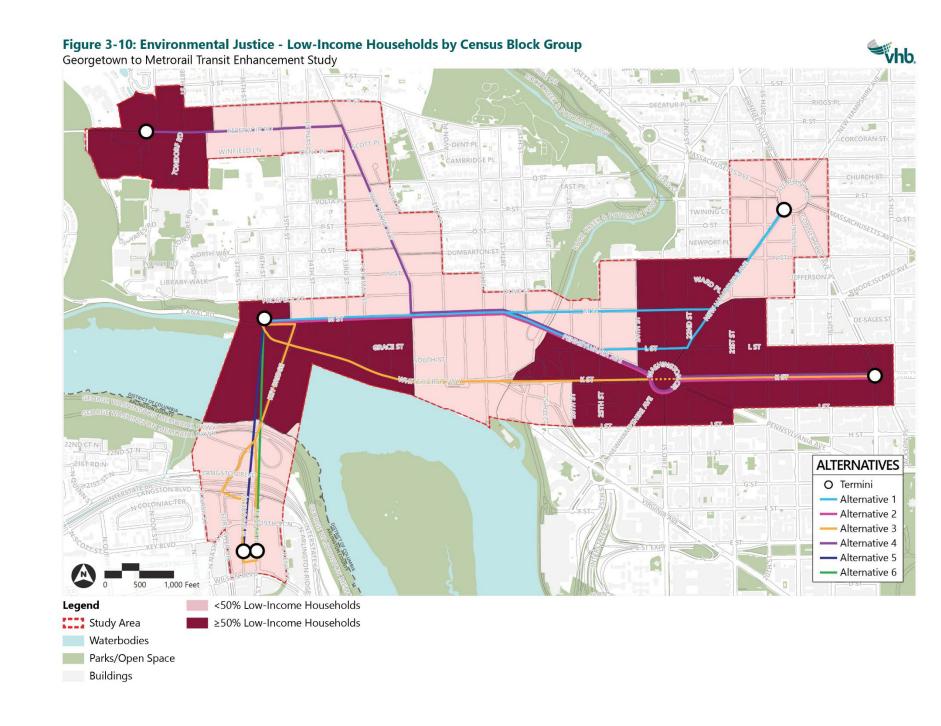
Executive Order 12898 was issued in 1994 and reinforces the importance of fundamental rights and legal requirements contained in Title VI of the Civil Rights Act of 1964 (Public Law 88–352, 78 Statute 241) and NEPA. The Executive Order directs that "each Federal agency and State Highway Administration/ Department of Transportation make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations".

Executive Order 12898 require agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal transportation projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law, while ensuring EJ communities are proactively provided meaningful opportunities for public participation in project development and decision-making.

The EPA's EJScreen tool was utilized to gather the demographic and socioeconomic data presented within this section. According to the EJScreen tool, of the population of the Study Area (approximately 11,960 people), 27 percent are classified as minority populations and 27 percent are classified as low-income. Corresponding numbers for the District of Columbia as a whole are 63 percent and 28 percent, respectively. Based on those numbers, the Study Area is not home to a disproportionately high proportion of minority or low-income persons relative to the District.

However, numbers for large areas can hide small concentrations of minority or low-income populations warranting consideration under EJ requirements. **Figure 3-9** and **Figure 3-10** provide a more nuanced view, based on Census block groups. Both figures highlight areas within the overall Study Area that have substantial or high concentrations of minority or low-income populations. These areas are broadly concentrated at the western end and eastern end of the Study Area. This may in part reflect the presence of student populations associated with Georgetown University and George Washington University. However, until a more refined analysis is conducted, it should be assumed that the preliminary alternatives may raise EJ issues.





3.10 Section 4(f) Resources

Section 4(f) requirements would apply if the USDOT funds or otherwise authorizes the project. Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits any operating administration of the USDOT from approving a project that uses public parks and recreational lands, wildlife refuges; and public or private historic properties eligible for listing in the NRHP, unless it determines there is no feasible and prudent alternative to avoid the use and the project includes all possible planning to minimize harm to the resources, or the use meets the requirements for a de minimis impact. If 4(f) applies and if a feasible and prudent alternative exists that avoids Section 4(f) properties and meets the project purpose and need, federal agencies may not select an alternative that uses a Section 4(f) property. As defined in the Section 4(f) implementing regulation, "a feasible and prudent avoidance alternative is one that avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

The ways in which projects may affect Section 4(f) properties are:

- **Use**: Generally, a "use" of Section 4(f) property occurs when land is permanently incorporated into a transportation facility.
- **Temporary occupancy**: A temporary occupancy occurs when land from a Section 4(f) property is used for short-term construction purposes, such as to provide staging or access areas. Temporary occupancies may be considered a Section 4(f) use if the land is subject to temporary or permanent adverse changes. Temporary occupancy is not a Section 4(f) use if the work is minor; occupancy is less than the time needed for project construction; there is no change in ownership; there are no adverse changes to the property's activities, features, or attributes; the land is restored to its original condition; and there is documented agreement of the official(s) with jurisdiction over the Section 4(f) resources regarding these conditions.
- **Constructive use**: Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

If there is no feasible and prudent alternative that would avoid using a Section 4(f) property, then USDOT may approve, from the alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the preservation purpose of the statute. Least overall harm is determined by considering the following seven factors:

 Ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

- Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- Relative significance of each Section 4(f) property;
- Views of the officials with jurisdiction over each Section 4(f) property;
- Degree to which each alternative meets the purpose and need for the project;
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- Substantial differences in cost among the alternatives.

3.10.1 Section 4(f) Properties in the Study Area

Properties in the Study Area that would require consideration under Section 4(f) are identified in **Sections 3.4.2** and **3.8.1**.

Appendix

Table A-1. NPDES Water Dischargers

Name	Address	NPDES	Expiration
JBG at 1920 N Street NW	1920 N St. NW, Washington, DC 20036	DCR10002W	15-FEB-2022
Amerada Hess Corp.	Washington DC Terminal, Washington, DC 20003	DC0000051	14-NOV-2005
PR-C CSO 025 and CSO 026 Sewer Separation	Wisconsin Ave. & Water St. NW, Washington, DC 20007	DCR10007T	15-FEB-2022
Steven's School	1050 21 st St. NW & 2100 L St. NW, Washington, DC 20036	DCR10003Q	15-FEB-2022
Medstar Georgetown University Hospital Medical Surgical Pavilion	3800 Reservoir Rd. NW, Washington, DC 20007	DCR10004A	15-FEB-2022
2100 Penn	2100 Pennsylvania Ave., Washington, DC 20037	DCR10006P	15-FEB-2022
Former GSA West Heating Plant	1051 29 th St. NW, Washington, DC 20007	DCNOEJ001	05-SEP-2023
Georgetown 29K Acquisition	29 th & K St. NW, Washington, DC 20007	DC0000035	10-SEP-2006
Division PR-C CSO 025 & 026 Sewer Separation Project	Water St. NW Washington, DC 20007	DCR10008M	15-FEB-2022
Medstar Georgetown University Hospital Medical Surgical Pavilion	3800 Reservoir Rd. NW, Washington, DC 20007	DCR10009Y	16-FEB-2027
C&O Canal Locks 3 & 4	1057 Thomas Jefferson St., Washington, DC 20007	DCR10000N	15-FEB-2022
1812 N. Moore Street	1812 N. Moore St., Arlington, VA 22209	VAG830340	25-FEB-2018
Eastern Chemical Waste	Unlisted	DCU000077	Unpermitted Facility

Table A-2. Federally Protected Migratory Bird Species

Species	Scientific Name	Breeding Season	
Bald Eagle	Haliaeetus leucocephalus	Sep 1 to Aug 31	
Black-billed Cuckoo	Coccyzus erythropthalmus	May 15 to Oct 10	
Blue-winged Warbler	Vermivora pinus	May 1 to June 30	
Bobolink	Dolichonyx oryzivorus	May 20 to Jul 31	
Canada Warbler	Cardellina canadensis	May 20 to Aug 10	
Cerulean Warbler	Dendroica cerulea	Apr 28 to Jul 20	
Chimney Swift	Chaetura pelagica	Mar 15 to Aug 25	
Eastern Whip-poor-will	Antrostomus vociferus	May 1 to Aug 20	
Golden Eagle	Aquila chrysaetos	Breeds elsewhere	
Kentucky Warbler	Oporornis formosus	Apr 20 to Aug 20	
King Rail	Rallus elegans	May 1 to Sep 5	
Lesser Yellowlegs	Tringa flavipes	Breeds elsewhere	
Long-eared Owl	Asio Otus	Mar 1 to Jul 15	
Prairie Warbler	Dendroica discolor	May 1 to July 31	
Prothonotary Warbler	Protonotaria citrea	Apr 1 to Jul 31	
Red-headed Woodpecker	Melanerpes erythrocephalus	May 10 to Sep 10	
Ruddy Turnstone	Arenaria interpres morinella	Breeds elsewhere	
Rusty Blackbird	Euphagus carolinus	Breeds elsewhere	
Short-billed Dowitcher	Limnodromus griseus	Breeds elsewhere	
Willet	Tringa semipalmata	Apr 20 to Aug 5	
Wood Thrush	Hylocichla mustelina	May 10 to Aug 31	

Table A-3. Historic Resources

Name	Address	Туре	Year(s) Built	Source
Adams-Mason Houses	1071 & 1076 Thomas Jefferson St. NW, Washington, DC	Structure	1810	DC Inventory
Arts Club of Washington (Caldwell- Monroe House)	20171 I St. NW, Washington, DC	Structure	1806	NRHP; NHL; DC Inventory
Arts Club of Washington (General Robert MacFeely House)	2015 I St. NW, Washington, DC	Structure	1857	NRHP; DC Inventory
Barber-Caperton House	3233 N St. NW, Washington, DC	Structure	1813	DC Inventory
Barr Building	910 17th St. NW, Washington, DC	Structure	1926	NRHP; DC Inventory
Joseph Beale House	2012 Massachusetts Ave. NW, Washington, DC	Structure	1898	DC Inventory
James G. Blaine Mansion	2000 Massachusetts Ave. NW, Washington, DC	Structure	1881	DC Inventory
William J. Boardman House (Chancery of Iraq)	1801 P St. NW, Washington, DC	Structure	1893	DC Inventory
Brickyard Hill House	3134-3136 South St. NW, Washington, DC	Structure	1800	DC Inventory
Samuel M. Bryan House	2025 Massachusetts Ave. NW, Washington, DC	Structure	1885	DC Inventory

Name	Address	Туре	Year(s) Built	Source
Joseph Carleton House	1052-1054 Potomac St. NW, Washington, DC	Structure	1794	DC Inventory
Chesapeake & Ohio (C&O) Canal	Washington, DC	Structure; District	1850	NRHP; DC Inventory
Christ Church	3116 O St. NW, Washington, DC	Structure	1819	NRHP; DC Inventory
Former Christ Church	3100 O St. NW, Washington, DC	Structure	1885	DC Inventory
City Tavern	3206 M St. NW, Washington, DC	Structure	1796	NRHP; DC Inventory
Columbia Hospital for Women	2401 L St. NW, Washington, DC	Structure	1915	DC Inventory
William Wilson Corcoran Store	1300 Wisconsin Ave. NW, Washington, DC	Structure	1817	DC Inventory
District of Columbia Paper Manufacturing Company (Paper Mill)	3299 K St. NW, Washington, DC	Structure	1903	DC Inventory
Dodge Warehouses	1000-1006, 1008, 1010 Wisconsin Ave. NW & 3205 K St. NW, Washington, DC	Structure	1807; 1813	DC Inventory
Dougal House	3259 R St. NW, Washington, DC	Structure	1854	DC Inventory
Dupont Circle Historic District	Washington, DC	District	-	NRHP; DC Inventory
Admiral Francis Dupont Fountain	Dupont Cir. NW, Washington, DC	Statue	1921	NRHP; DC Inventory

Name	Address	Туре	Year(s) Built	Source
The Flour Mill; Pioneer Mills; Bomford Mill	1000 Potomac St. NW, Washington, DC	Structure	1847	DC Inventory
Duvall Foundry	1050 30th St. NW, Washington, DC	Structure	1856	DC Inventory
Admiral David Farragut Statue	Farragut Square NW, Washington, DC	Statue	1881	NRHP; DC Inventory
Foggy Bottom Historic District	Washington, DC	District	-	NRHP; DC Inventory
Forrest-Marbury House	3350 M St. NW, Washington, DC	Structure	1790	NRHP; DC Inventory
Foxall-McKenney House	3123 Dumbarton St. NW, Washington, DC	Structure	1819	DC Inventory
George Washington Memorial Parkway	Arlington, VA	Structure; District	1932	VLR; NRHP
George Washington University / Old West End Historic District	Washington, DC	District	-	NRHP; DC Inventory
Georgetown Car Barn	3600 M St. NW, Washington, DC	Structure	1897	NRHP; DC Inventory
Georgetown Commercial Buildings- Thomas Robertson Building	3116 M St. NW, Washington, DC	Structure	1813	DC Inventory
Georgetown Commercial Buildings- M Street NW	2919 M St. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Commercial Buildings- M Street NW	1077 31 st St. NW, Washington, DC	Structure	1820	DC Inventory

Name	Address	Туре	Year(s) Built	Source
Georgetown Commercial Buildings- M Street NW	3112 M St. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Commercial Buildings- M Street NW	3056 & 3072 M St. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Commercial Buildings- M Street NW	3058 M St. NW, Washington, DC	Structure	1868	DC Inventory
Georgetown Commercial Buildings- Farmers and Mechanics' National Bank	3068 M St. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Commercial Buildings- Reckert House	3232 M St. NW, Washington, DC	Structure	1790	DC Inventory
Georgetown Commercial Buildings- Sims House	2801 M St. NW, Washington, Dc	Structure	1820	DC Inventory
Georgetown Commercial Buildings- Thomas Cramphin Building	3209 & 3211 M St. NW, Washington, DC	Structure	1813	DC Inventory
Georgetown Commercial Buildings- Wisconsin Avenue NW	1527 & 1529 Wisconsin Ave. NW, Washington, DC	Structure	1837	DC Inventory
Georgetown Commercial Buildings- Schultze Buildings	1515 & 1517 Wisconsin Ave. NW, Washington, DC	Structure	1819	DC Inventory
Georgetown Commercial Buildings- Beall's Express Building	1522 & 1524 Wisconsin Ave. NW, Washington, DC	Structure	1816; 1820	DC Inventory

Name	Address	Туре	Year(s) Built	Source
Georgetown Commercial Buildings- Wisconsin Avenue NW	1218, 1219, 1221, 1249 Wisconsin Ave. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Commercial Buildings- Wisconsin Avenue NW	1300 Wisconsin Ave. NW, Washington, DC	Structure	1817	DC Inventory
Georgetown Commercial Buildings- Wisconsin Avenue NW	1304 Wisconsin Ave. NW, Washington, DC	Structure	1820	DC Inventory
Georgetown Custom House and Post Office	1215 31st St. NW, Washington, DC	Structure	1858	NRHP
Georgetown Historic District	Washington, DC	District	-	NRHP; NHL
Georgetown Market	3276 M St. NW, Washington, DC	Structure	1865	NRHP; DC Inventory
Godey Lime Kilns (Washington Lime Kilns)	Rock Creek Parkway and the Whitehurst Freeway, Washington, DC	Ruins	1864	NRHP; DC Inventory
Grace Church (Grace Protestant Episcopal Church)	1041 Wisconsin Ave. NW, Washington, DC	Structure	1867	NRHP; DC Inventory
Halycon House (Benjamin Stoddert House)	3400 Prospect St. NW, Washington, DC	Structure	1787	NRHP; DC Inventory
Nicholas Hedges House & Federal Houses	1063, 1069, 1071 Thomas Jefferson St. NW,	Structure	1815; 1818; 1819	DC Inventory
	Washington, DC			

Name	Address	Туре	Year(s) Built	Source
Christian Heurich Mansion	1307 New Hampshire Ave. NW, Washington, DC	Structure	1892	NRHP; DC Inventory
Hillandale (Gatehouse)	3905 Reservoir Rd. NW, Washington, DC	Structure	1925	NRHP; DC Inventory
Francis Scott Key Bridge	Crossing over the Potomac River from Georgetown, DC to Rosslyn, VA	Structure	1923	NRHP; DC Inventory
The Keystone	2150 Pennsylvania Ave. NW, Washington, DC	Structure	1931	NRHP; DC Inventory
William Knowles House	1228 30th St. NW, Washington, DC	Structure	1858	DC Inventory
Laird-Dunlop House	3014 N St. NW, Washington, DC	Structure	1799	DC Inventory
Thomas Sim Lee Corner	3001-3011 M St. NW, Washington, DC	Structure	1787	DC Inventory
Loughborough- Patterson House; Junior League of Washington	3037 M St. NW, Washington, DC	Structure	1806	DC Inventory
John Lutz House	1255 Wisconsin Ave. NW, Washington, DC	Structure	1756	DC Inventory
Westover Apartment House Company	1100 25 th St. NW, Washington, DC	Structure	1896	NRHP; DC Inventory
Mackall-Worthington House	1686 34th St. NW, Washington, DC	Structure	1820	DC Inventory

Name	Address	Туре	Year(s) Built	Source
Massachusetts Avenue Historic District	Washington, DC	District	-	NRHP; DC Inventory
Henry McCleery House	1068 30th St. NW, Washington, DC	Structure	1800	DC Inventory
Mullett Rowhouses	2517-2525 Pennsylvania Ave. NW, Washington, DC	Structure	1889	NRHP; DC Inventory
Old Engine Company No. 5 (bank of Columbia; Georgetown Town Hall & Mayor's Office)	3210 M St. NW, Washington, DC	Structure	1883	DC Inventory
Old Stone House	3051 M St. NW, Washington, DC	Structure	1765	NRHP; DC Inventory
Patterson House (Washington Club)	15 Dupont Cir. NW, Washington, DC	Structure	1901	NRHP; DC Inventory
Potomac Aqueduct Bridge Abutment and Pier	Along the Potomac River west of Key Bridge, Washington, DC	Ruins	1843	DC Inventory
Potomac Boat Club	3530 K St. NW, Washington, DC	Structure	1908	NRHP; DC Inventory
The Potomac Gorge (Potomac Palisades)	Washington, DC	District	-	DC Inventory
Potomac Masonic Lodge No. 5	1058 Thomas Jefferson St. NW, Washington, DC	Structure	1810	DC Inventory
Prospect House (Lingan-Templeman House)	3508 Prospect St. NW, Washington, DC	Structure	1793	NRHP; DC Inventory

Name	Address	Туре	Year(s) Built	Source
Riggs-Riley House	3038 N St. NW, Washington, DC	Structure	1816	DC Inventory
Rock Creek & Potomac Parkway	Washington, DC	Structure; District	1936	DC Inventory
Ross & Getty Building I	3007 M St. NW, Washington, DC	Structure	1812	DC Inventory
St. John's Church	3240 O St. NW, Washington, DC	Structure	1809	DC Inventory
Schneider Triangle	Square 53, Washington, DC	Structure	1889	NRHP; DC Inventory
Scott-Grant House	3238 R St. NW, Washington, DC	Structure	1854	DC Inventory
Brigadier General George P. Scriven House	1300 New Hampshire Ave. NW, Washington, DC	Structure	1884	NRHP; DC Inventory
Square 38 – 23rd Street NW	1002, 1004, 1006, 1008, 1010 23rd St. NW, Washington, DC	Structure	1884; 1875; 1978	DC Inventory
Square 38 – 24th Street NW	1011, 1013, 1015 24 th St. NW, Washington, DC	Structure	1887; 1903	DC Inventory
Square 38 – L Street NW	2324 & 2326 L St. NW, Washington, DC	Structure	1903	DC Inventory
Square 38 – Pennsylvania Avenue NW	2307, 2315, 2317, 2319, 2375 Pennsylvania Ave. NW, Washington, DC	Structure	1889	DC Inventory

Name	Address	Туре	Year(s) Built	Source
Square 38 – Washington Circle NW	108 Washington Cir. NW, Washington, DC	Structure	1893	DC Inventory
Thaddeus Stevens School	1050 21st St. NW, Washington, DC	Structure	1897	DC Inventory
Sweeney-Plowman Houses (Cooper Houses)	2521-2523 K St. NW, Washington, DC	Structure	1843; 1868	DC Inventory
Vigilant Fire House	1066 Wisconsin Ave. NW, Washington, DC	Structure	1844	NRHP; DC Inventory
Herbert Wadsworth House (Sulgrave Club)	1801 Massachusetts Ave. NW, Washington, DC	Structure	1901	NRHP; DC Inventory
Walsh-McLean House (Indonesian Embassy)	2020 Massachusetts Ave. NW, Washington, DC	Structure	1901	NRHP; DC Inventory
Washington Canoe Club	3700 Water St. NW, Washington, DC	Structure	1904	NRHP; DC Inventory
George Washington Statue	Washington Cir., Washington, DC	Structure	1860	NRHP; DC Inventory
West Heating Plant	1051 29 th St. NW, Washington, DC	Structure	1948	DC Inventory
Western High School (Duke Ellington School of the Arts)	1680 35th St. NW, Washington, DC	Structure	1898	NRHP; DC Inventory
Sarah Adams Whittemore House	1526 New Hampshire Ave. NW, Washington, DC	Structure	1892	NRHP; DC Inventory

Name	Address	Туре	Year(s) Built	Source
Wisconsin Avenue Bridge (High Street Bridge)	Wisconsin Ave. NW over the C&O Canal, Washington, DC	Structure	1828	NRHP; DC Inventory

Table A-4. Named Parks and Open Space Resources

Name	Facility Type	Jurisdiction	Located Wholly or Partially within Study Area
C&O Canal National Historic Park	Park	NPS	Partially
C&O Canal Towpath	Trail	NPS	Partially
Rock Creek & Potomac Parkway	Parkway	NPS	Partially
Rock Creek Park	Park	NPS	Partially
Bike Trail #6 – Rock Creek Pkwy to Virginia Ave	Trail	NPS	Partially
Glover Archbold to Montrose Park	Trail	NPS	Partially
Book Hill Park	Park	DC DPR	Wholly
26 th & I Street Playground	Park	DC DPR	Wholly
Farragut Square	Park	NPS	Wholly
James Monroe Park	Park	DC DPR	Partially
Washington Circle	Park	NPS	Wholly
Dupont Circle	Park	NPS	Wholly
Georgetown Waterfront Park	Park	NPS	Wholly
West Potomac Park	Park	Park	Partially
Potomac River	Trail	NPS	Partially
George Washington Memorial Parkway	Parkway	NPS	Partially
Glover Archbold Park	Park	NPS	Partially
Thompson's Boat House	Park	NPS	Partially
Old Stone House	Park	NPS	Wholly
Potomac Palisades Parkway	Park	NPS	Partially

Table A-5. Public Facilities and Services

Name	Address	Facility Classification
MedStar Georgetown University Hospital (Medstar-Georgetown Medical Center; Georgetown Lombardi Cancer Center)	3800 Reservoir Rd. NW, Washington, DC 20007	Hospital
The George Washington University Hospital	900 23rd St. NW, Washington, DC 20037	Hospital
Kaiser Permanente West End Medical Center	2301 M St. NW, Washington, DC 20037	Hospital
Hyde-Addison Elementary School	3219 O St. NW, Washington, DC 20007	School
Stevens Elementary School	1050 21 st St. NW, Washington, DC 20036	School
Duke Ellington School of the Arts	3500 R St. NW, Washington, DC 20007	School
The Children's House of Washington	3133 Dumbarton St. NW, Washington, DC 20007	School
Georgetown Montessori School	1041 Wisconsin Ave. NW, Washington, DC 20007	School
Saint John's Episcopal Preschool	3240 O St. NW, Washington, DC	School
Washington International School – Primary School Campus	1690 36 th St. NW, Washington, DC 20007	School
Georgetown University School of Medicine	3900 Reservoir Rd. NW, Washington, DC 20057	University/College
Georgetown University School of Nursing; Georgetown University School of Health	3700 Reservoir Rd. NW, Washington, DC 20057	University/College

Name	Address	Facility Classification
Milken Institute of Public Health (The George Washington University)	950 New Hampshire Ave. NW, Washington, DC 20052	University/College
Fifth Church of Christ Scientist	1238 31 st St. NW, Washington, DC 20007	House of Worship
Georgetown Lutheran Church	1556 Wisconsin Ave. NW, Washington, DC 20007	House of Worship
Grace Episcopal Church	1041 Wisconsin Ave. NW, Washington, DC 20007	House of Worship
St. Stephen Martyr Catholic Church	2436 Pennsylvania Ave. NW, Washington, DC 20037	House of Worship
Christ Church Georgetown	3116 O St. NW, Washington, DC 20007	House of Worship
Dumbarton United Methodist Church	3133 Dumbarton St. NW, Washington, DC 20007	House of Worship
Georgetown Baptist Church	3101 N St. NW, Washington, DC 20007	House of Worship
St. Paul's Episcopal Church	2430 K St. NW, Washington, DC 20037	House of Worship
St. John's Episcopal Church Georgetown	3240 O St. NW, Washington, DC 20007	House of Worship
CityLight Church DC	1015 31 st St. NW, Washington, DC 20007	House of Worship
Georgetown Library	3260 R St. NW, Washington, DC 20007	Library

Name	Address	Facility Classification
West End Library	2301 L St. NW, Washington, DC 20037	Library
Engine Station 1	2225 M St. NW, Washington, DC 20007	Fire Station