

## 4.0 J. Edgar Hoover (JEH) Parcel

Chapter 4 describes the existing conditions of the affected environment and identifies the environmental consequences associated with the exchange and future redevelopment of the JEH parcel. A detailed description of the methodologies employed to evaluate impacts for each resource and the relevant regulatory framework is given in chapter 3, *Methodology*.

GSA intends to exchange the JEH parcel to partially fund the consolidation of the FBI HQ at a new site. Because the exchange is considered part of the Proposed Action, GSA must assess the indirect effects of its action to exchange the JEH parcel even though the exchange would occur later in time (40 Code of Federal Regulations [CFR] 1508.8). To do this GSA has developed two Reasonably Foreseeable Development Scenarios (RFDSs), which are essentially “what-if” development scenarios for future private redevelopment of the JEH parcel. They are GSA’s estimate of what could be reasonably developed by a private developer on the parcel in the foreseeable future. The RFDSs are not GSA’s suggestions or proposals for future use or design of the JEH parcel and have been developed in this Environmental Impact Statement (EIS) for environmental impact analysis purposes only. GSA has no decision on the future redevelopment of the site.

RFDS 1 assumes an adaptive reuse of the current JEH building, while RFDS 2 assumes the demolition of the JEH building and redevelopment of the parcel to maximize development capacity while adhering to applicable land use controls and applying recent urban development trends. See section 2.4.4 for a more detailed descriptions of each RFDS.



The existing JEH building

Figure 4-1: J. Edgar Hoover (JEH) Parcel Overview

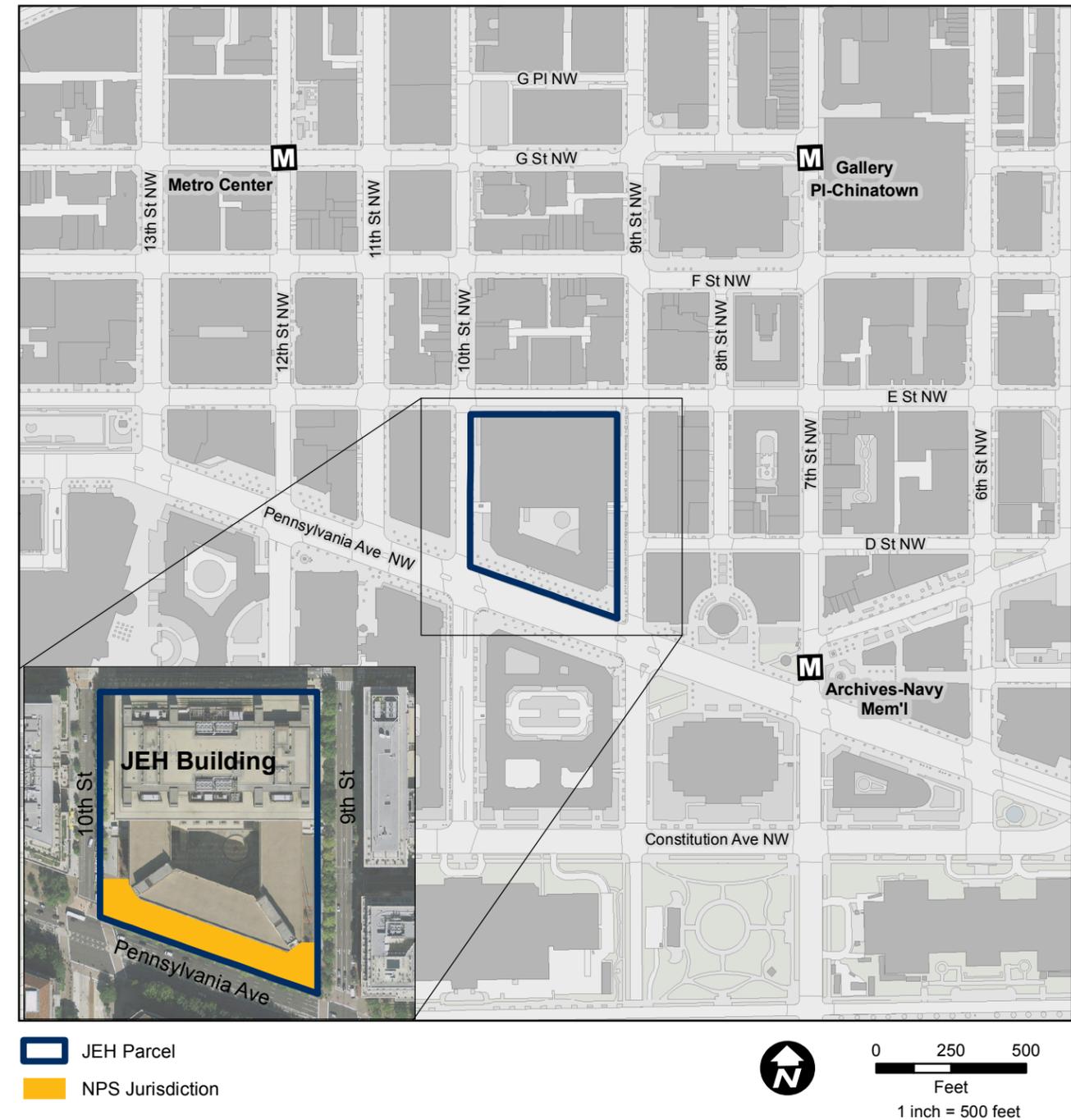
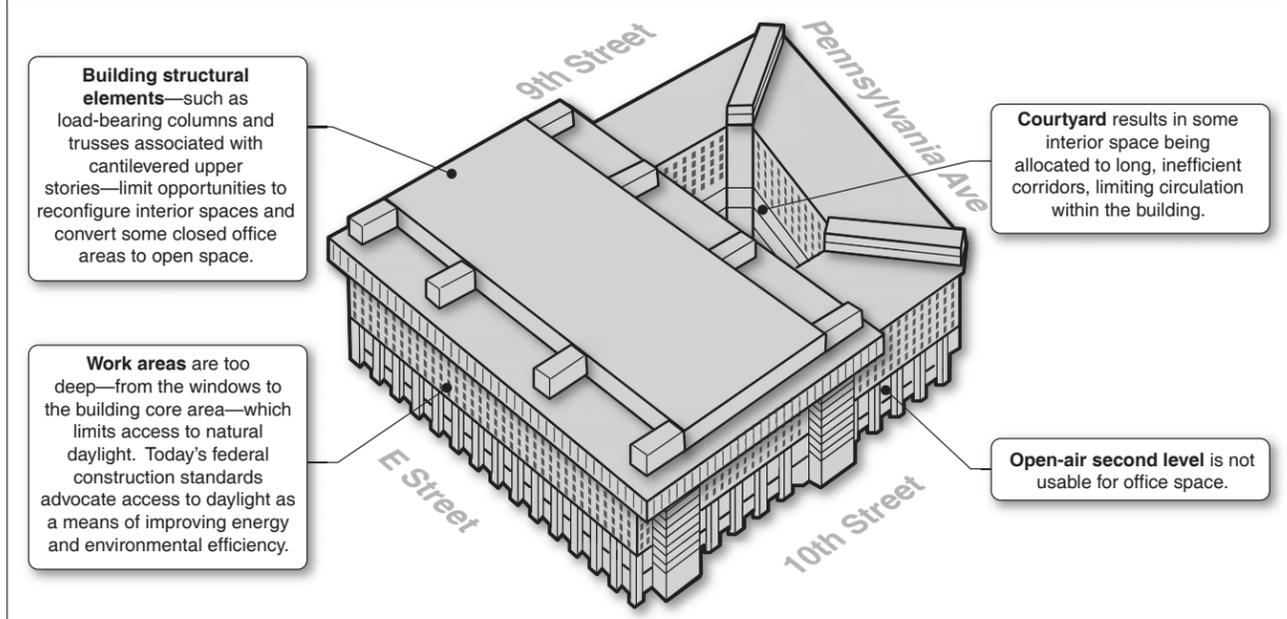


Figure 4-2: Design Features that Limit the JEH Building's Efficiency



Source: U.S. Government Accountability Office, November 2011. "Federal Bureau of Investigation, Actions Needed to Document Security Decisions and Address Issues with Condition of Headquarters Buildings"

**EFFICIENCY RATIO**  
 The ratio of usable area (area inhabited/used) to rentable area (area available for use) on a property.

**BRUTALIST ARCHITECTURE**  
 A modern architectural style popularized between the 1950s and 1970s. It is characterized by its simple aesthetic theme and use of reinforced concrete to create bulky, modular structures.



View of JEH from National Archives Building along Pennsylvania Avenue NW

The approximately 6-acre JEH parcel contains a 2.8 million square foot (SF) building, which occupies an entire city block in Washington, D.C's Ward 2, bounded by 9th Street NW to the east, 10th Street NW to the west, E Street NW to the north, and Pennsylvania Avenue NW to the south (figure 4-1). The National Park Service (NPS) has jurisdiction of the sidewalk, extending from the face of the JEH building to the curb, approximately 0.75 acres. If GSA seeks a transfer of jurisdiction from NPS to GSA for all or a portion of the property under NPS jurisdiction, NPS will need to agree to pursue the transfer of jurisdiction prior to the completion of the NEPA. Any NPS land transfer to GSA would be carried out in accordance with 40 USC, Sec. 8124, whereby the GSA would present the proposed transfer and all accompanying compliance documents to the NCPC for its recommendation, consistent with jurisdictional transfers among federal agencies. NPS has been consulted about the potential transfer of its jurisdiction during the preparation of the Draft EIS.

The building is a concrete structure constructed in the brutalist architectural style with an internal courtyard occupying a portion of the southern one-third of the parcel. The JEH building reaches 7 stories high (approximately 110 feet in height) on the Pennsylvania Avenue side and 11 stories high (approximately 168 feet in height) on the E Street side. While no substantial changes to the building's structure have occurred since its completion in 1974, the FBI has implemented a variety of internal and external renovations to address security concerns, deteriorating building conditions, and space limitations (GAO 2011). Notwithstanding these improvements, the inefficiency of the original design limits the JEH building's efficiency ratio to 53 percent; 22 percent lower than GSA's efficiency target for new Federal office buildings, as shown in figure 4-2.

Currently, there is no through access for pedestrians, bicyclists, or vehicles across the parcel, and the building is not open to the public. Employee vehicles enter and exit the underground parking garage along both 9th and 10th Streets NW. Along Pennsylvania Avenue, the parcel contains a broad brick sidewalk, lined with street trees, planters, benches, and lighting fixtures which was implemented by the Pennsylvania Avenue Development Corporation (PADC) as part of a unified streetscape plan for Pennsylvania Avenue.

## 4.1 Affected Environment

The following sections describe the Affected Environment relevant to the JEH parcel and associated study areas for each resource topic evaluated in this EIS.

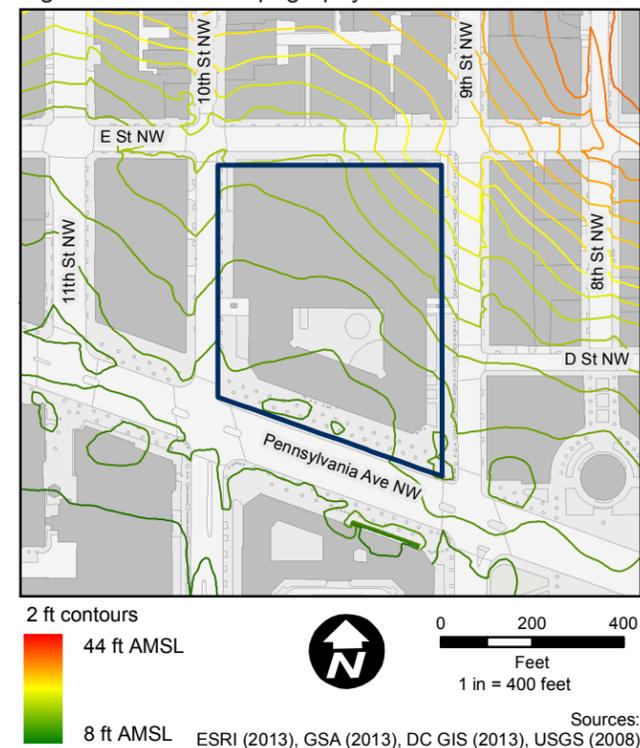
### 4.1.1 Earth Resources

Earth resources encompass geology, topography, and soils.

#### 4.1.1.1 Geology and Topography

The parcel consists of approximately 6 acres of fully developed urban land in Northwest Washington, D.C. The topography of the parcel is characterized by a gentle slope of about 2.3 percent toward the southwest. As shown in figure 4-3, the highest elevation is located on the northeast side of the parcel at approximately 28 feet above mean sea level (AMSL), and the lowest point is on the southwest side of the parcel at 16 feet AMSL.

Figure 4-3: JEH Topography



**AMSL**  
 Above mean sea level (AMSL) is the average level for the surface of one or more of Earth's oceans from which heights such as elevations may be measured.



The existing JEH building at night



Entrance to the JEH building

**JEH EARTH RESOURCES  
AFFECTED ENVIRONMENT  
OVERVIEW**

- Parcel topography gently slopes about 2.3% towards the southwest
- Surface physiography consists of artificial fill underlain by weathered deposits of gravel, sand, silt, and clay from the late Pleistocene era
- Soil is classified as Urban land; site survey investigation is required to determine the erosion, drainage, and building potential characteristics of the soil

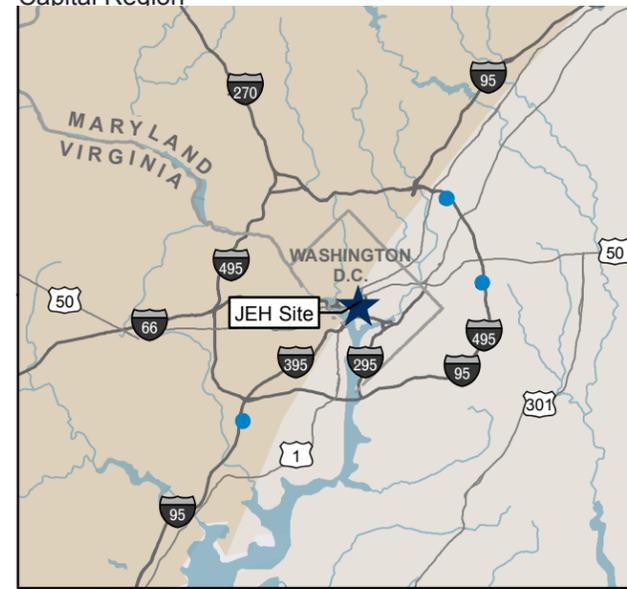
**FALL LINE**

The geomorphologic break between an upland region of relatively hard crystalline basement rock and a coastal plain of softer sedimentary rock.

**PHYSIOGRAPHIC PROVIDENCE**

A geographic region with a characteristic geomorphology and often specific subsurface rock type or structural elements.

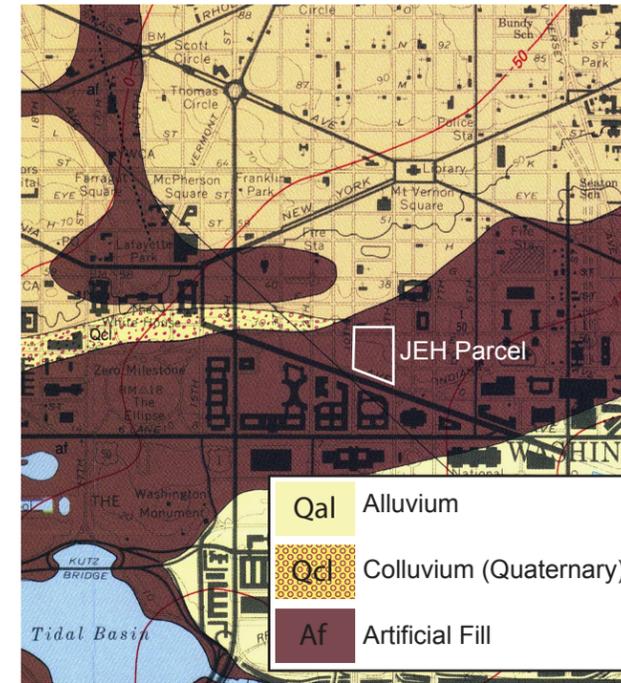
Figure 4-4: Physiographic Provinces of the National Capital Region



Sources:

ESRI (2013), GSA (2013), DC GIS (2013)

Figure 4-5: JEH Geology Overview Map



Adapted from the Geologic Map of Washington, D.C.

The JEH parcel is located on the western edge of the embayed section of the Coastal Plain physiographic province and approximately 0.5 mile to the east of the Fall Line, which separates the Coastal Plain province from the Piedmont province (Froelich and Hack 1975), as shown in figure 4-4. The coastal plain is characterized by gently rolling hills and valleys and underlain by a southeastwardly thickening sequence of sediments that consists of sand and gravel aquifers interlayered with silt and clay and confining units. The sediments of the Coastal Plain dip eastward at a low angle, generally less than one degree, and range in age from Triassic (250 to 200 million years ago [Mya]) to Quaternary (2.6 Mya to present). Mineral resources of the Coastal Plain are chiefly sand and gravel and are used as aggregate materials by the construction industry (MGS 2014). According to the geologic map of the Washington West quadrangle, as shown in figure 4-5, the surficial geology of the JEH parcel consists of artificial fill characterized by a heterogeneous composition of materials (Fleming et al. 1994). The fill was brought in for building purposes and consists of locally derived unconsolidated material (Froelich 1975). Fill deposits vary in thickness from less than 1 foot to 25 feet or greater (Matheson et al. 1994). Surficial fill is underlain by weathered deposits of gravel, sand, silt, and clay from the late Pleistocene era at a thickness of approximately 40 to 80 feet (Fleming et al. 1994; Southworth and Denenny 2006).

#### **4.1.1.2 Soils**

The parcel consists entirely of impervious surfaces with the exception of planters and tree wells around the perimeter of the building, and planters, permeable pavers, and artificial turf within the courtyard.

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS) web soil survey, the JEH parcel and its vicinity is identified as Urban Land, which is characterized as land mostly covered by pavement, buildings, and other structures common to urban areas such that the original characteristics are no longer present (USDA 2015a). This soil type requires on-site survey investigation of erosion, drainage, and building potential characteristics of the soil.

### **4.1.2 Water Resources**

The following sections describe the affected environment for water resources relevant to the JEH parcel. Water resources encompass surface water, groundwater, hydrology, wetlands, and floodplains.

#### **4.1.2.1 Surface Water**

The JEH parcel is located within the Pimmit Run-Potomac River subwatershed in the larger Chesapeake Bay watershed, and it does not contain any surface water features. Stormwater drains into a combined sewer system that is conveyed to the Blue Plains Advanced Wastewater Treatment Plant on the Potomac River. The Tidal Basin, Washington Channel, and Potomac River are about 1 mile to the south, and the Anacostia River is about 2.25 miles to the southeast. The reach of the Potomac River closest to the JEH parcel is tidally influenced.

According to Washington, D.C., Water Quality Standards for Surface Water (Title 21 of the District of Columbia Municipal Regulations [DCR], Chapter 11), the current designated uses of the Potomac River and Anacostia River are secondary contact recreation and aesthetic enjoyment; protection and propagation of fish, shellfish, and wildlife; protection of human health related to consumption of fish and shellfish; and navigation. Both rivers have water quality impairments. The Potomac River impairments include nitrogen, phosphorus, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and turbidity (USEPA 2012a). The Anacostia River was designated as impaired due to metals (i.e., arsenic, copper, lead, and zinc), biological oxygen demand, fecal coliform, pesticides, trash, nitrogen and phosphorus, oil and grease, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and turbidity (USEPA 2012b).

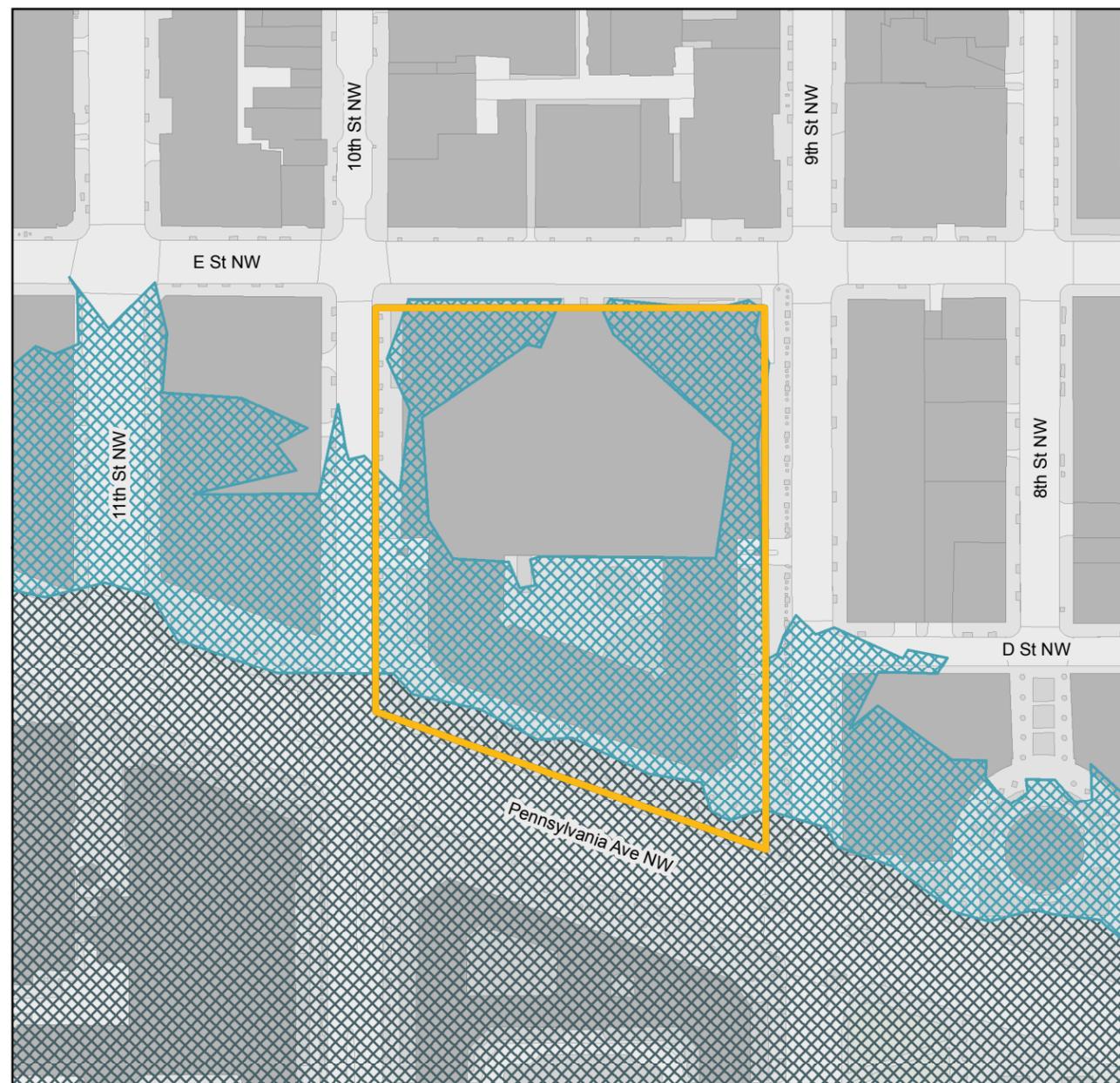
#### **4.1.2.2 Hydrology**

Because the JEH parcel is entirely covered by impervious surfaces, with the exception of planters and tree wells around the perimeter of the building, the hydrology of the parcel is composed of stormwater runoff rather than natural surface waters. The conveyance and treatment of stormwater for the JEH parcel are discussed in detail in section 4.1.12.6.

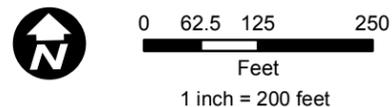
#### **4.1.2.3 Groundwater**

Groundwater conditions differ depending on local topography, geologic characteristics, location, season, precipitation, and groundwater-affecting activities (USGS 2010). In the vicinity of the JEH parcel, groundwater is generally contained within semi-consolidated sand or gravel aquifers of the North Atlantic Coastal Plain aquifer system (USGS 2003). The surficial aquifer, with a depth to water of 8 to 50 feet, consists of either alluvium and artificial fill or river terrace deposits (Schneider et al. 1993). In the larger aquifer system, groundwater generally flows down gradient towards the east. On a local scale, groundwater in the study area is disrupted by underground infrastructure such as subway tunnels and utility pipelines. Recharge of the surficial aquifer is typically through infiltration of precipitation and anthropogenic activities including installation of impervious surfaces. Construction-related dewatering can alter the natural recharge and discharge locations of the aquifer. Groundwater in Washington, D.C., is not used for potable water supply; however, the beneficial uses of groundwater (including, but not limited to, surface water recharge, drinking water in other jurisdictions, and potential drinking water source in the future) are protected by water quality standards for groundwater, as defined in 21 DCR §§1150–1158.

Figure 4-6: JEH Parcel Water Resources



-  Parcel Boundary
-  100 Year Flood Zone
-  500 Year Flood Zone



Sources:  
 ESRI (2013), GSA (2013), FEMA (2013), NHD (2013)  
 DC GIS (2013)

#### JEH WATER RESOURCES AFFECTED ENVIRONMENT OVERVIEW

- Hydrology characterized by stormwater flow rather than natural surface waters.
- 0.5 acre of 1 percent annual chance floodplain located within the parcel boundary along Pennsylvania Avenue,
- 4 additional acres within the parcel are designated as areas of 0.2 percent annual chance flood.



17th Street Levee. Image obtained from [https://img.washingtonpost.com/rf/image\\_480w/2010-2019/WashingtonPost/2013/05/17/Local/Graphics/w-levee17\\_promo.jpg?uui=IRT\\_0r6GEeKbCRY4rMOULg](https://img.washingtonpost.com/rf/image_480w/2010-2019/WashingtonPost/2013/05/17/Local/Graphics/w-levee17_promo.jpg?uui=IRT_0r6GEeKbCRY4rMOULg)

#### FLOODPLAIN DEFINITIONS

- 100-year flood:** A flood event that has a 1 percent probability of occurring in any given year.
- 500-year flood:** A flood event that has a 0.2 percent probability of occurring in any given year.

#### 4.1.2.4 Wetlands

Review of the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) showed that the urbanized environment of the JEH parcel does not contain any wetlands (USFWS 2010).

#### 4.1.2.5 Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) data for Washington, D.C., the JEH parcel contains 0.5 acre of floodplains along Pennsylvania Avenue, as shown in figure 4-6 (FEMA 2010a). This portion of the parcel is currently sidewalk, classified as flood zone A. This zone is described as “areas subject to inundation by the 1-percent-annual-chance flood event,” and is also commonly referred to as the 100-year floodplain. There are no published base flood elevations for this floodplain (FEMA 2014a). Approximately 4 additional acres within the parcel are designated as flood zone X or “areas of 0.2 percent annual chance flood,” which indicates a minimal risk of flooding (FEMA 2014a), and is commonly referred to as the 500-year floodplain. The existing floodplain could be revised based on the completion in 2014 of the 17th Street Levee in addition to other flood protection projects in Washington, D.C., which could result in the removal of the JEH parcel from the floodplain (NCPC 2010).

According to the National Oceanic and Atmospheric Administration (NOAA) Sea, Lake, and Overland Surges from Hurricanes model, the JEH parcel is at risk of storm surge impacts, such as tidal flooding, from Category 3 and 4 hurricanes (USACE 2009; USEPA 2015d). The potential storm surge at the JEH parcel ranges from more than 6 feet to more than 9 feet above ground level during Category 3 and 4 hurricanes.

### 4.1.3 Biological Resources

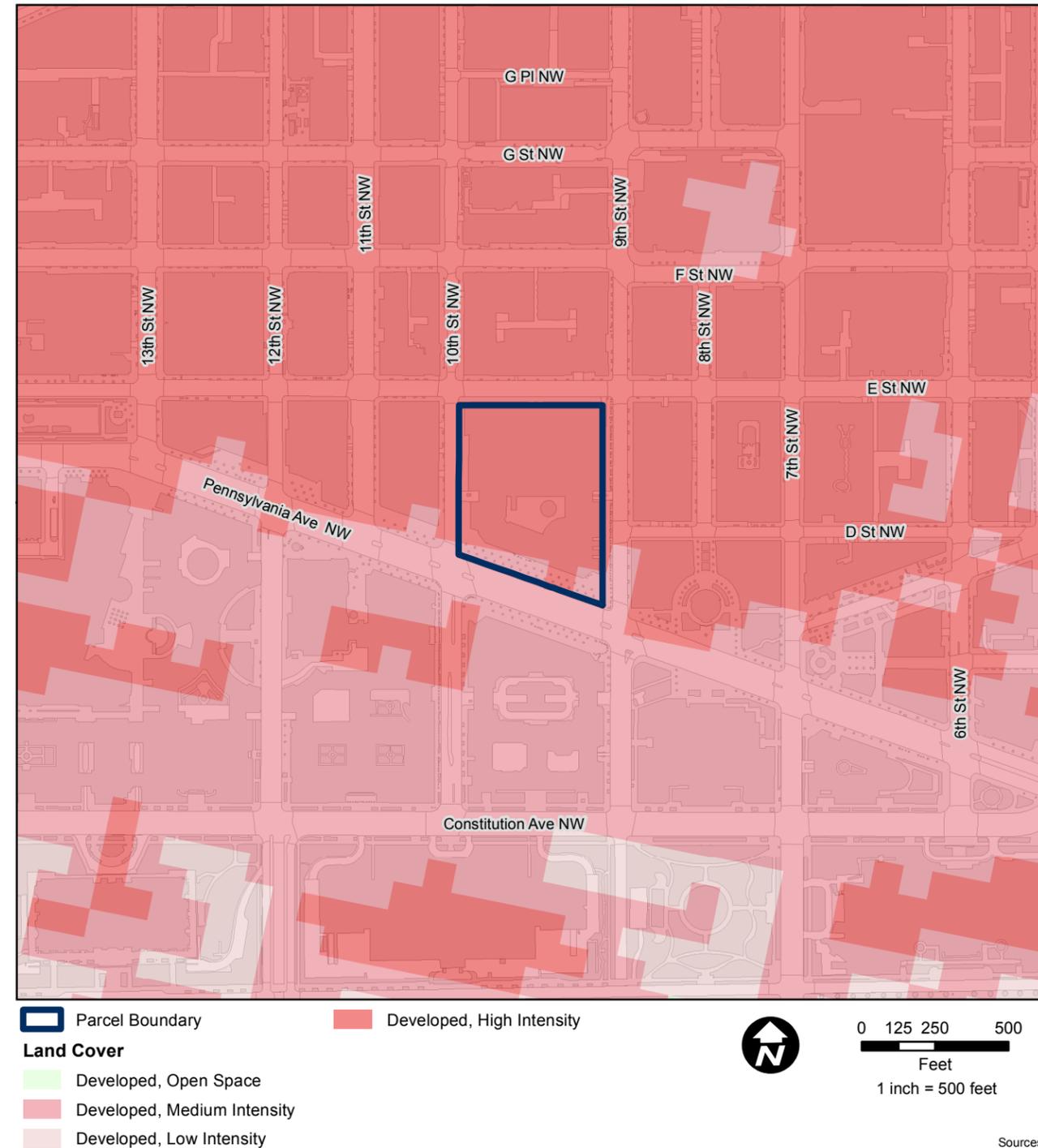
Biological resources include vegetation, aquatic plant and animal species, terrestrial plant and animal species, and special status species.

#### 4.1.3.1 Vegetation

The JEH parcel is currently fully developed with minimal vegetation, although there are street trees and other ornamental vegetation in planter boxes along the sidewalks around the building and in the courtyard. As figure 4-7 shows, the mapped National Land Cover Database (NLCD) land cover class for the JEH parcel and its general vicinity is High Intensity Developed (USGS 2011). The U.S. Environmental Protection Agency (USEPA) (2001) characterizes this land cover class as highly developed area where people reside or work in high numbers, with impervious surfaces accounting for 80 to 100 percent of the total cover. The existing vegetation on this parcel is composed of deciduous streetscape trees and large planters (Google 2015).

The National Mall is located approximately three blocks south of the parcel, and is characterized by vegetation in the form of lawn grasses where impervious surfaces account for less than 20 percent of total cover.

Figure 4-7: Land Cover Classes for the JEH Parcel



Sources:  
ESRI (2013), GSA (2013), FEMA (2013), NLCD (2011)  
DC GIS (2013)

#### JEH BIOLOGICAL RESOURCES AFFECTED ENVIRONMENT OVERVIEW

- High Intensity Developed LULC within the Chesapeake Rolling Coastal Plain Ecoregion
- Terrestrial animals in the study area would be those adapted to urban environments, including squirrels, raccoons, bats, mice, and rats
- Avian species in the study area could include rock doves (pigeons), sparrow species, starlings, and grackles
- Because trees are within and adjacent to this parcel, species of conservation concern that may occasionally be seen include the broad-winged hawk, red-shouldered hawk, and the eastern red bat



Street trees and large planters exemplify vegetation at the JEH parcel



Raccoon (*Procyon lotor*). Photo courtesy of Trappro

#### 4.1.3.2 Aquatic Species

There are no surface water bodies located on the JEH parcel. As a result, there are no on-site aquatic habitats.

#### 4.1.3.3 Terrestrial Species

Wildlife species that are present in any particular location depend on the amount of available habitat and resources. As discussed in section 4.1.3.1, vegetation at the JEH parcel is limited to streetscape trees and large planters. Animals that would be commonly seen in the study area would be those adapted to this type of urban habitat. Common mammals suited to urban settings that may be found in and around the JEH parcel include raccoon (*Procyon lotor*), squirrel (*Sciuridae spp.*), rats (*Rattus spp.*), mice (*Mus spp.*), and various bat species. Given the parcel location within the densely developed downtown area of Washington, D.C., even mammals common to urban areas may be an uncommon occurrence.

Urban environments are known to provide habitat to several avian species. Most of these species show little fear of humans and feed on crumbs left by pedestrians; however, most of their diet consists of local insects (USFWS 2006). Avian species, such as rock doves, commonly known as pigeons (*Columba livia*)—sparrow species, starlings (*Sturnus vulgaris*), and grackles (*Quiscalus quiscula*) are a common sight around Washington, D.C., and are likely to occur within and around the JEH parcel. Migratory bird species and raptors (hawks and falcons) may fly overhead and occasionally perch in or near the JEH parcel (Smithsonian 2012). Wading and swimming birds, such as herons and ducks are not expected to occur at this location.

Reptiles do not commonly occur in a city landscape; however, there have been occasional sightings in downtown Washington, D.C. The black rat snake (*Elaphe obsoleta*) and the northern brown snake (*Storeria dekayi*) would be the most likely reptiles to occur on or adjacent to the parcel (The Daily Caller 2013).

#### 4.1.3.4 Special Status Species

Special status species are plant or animal species that require special consideration and/or protection. These species would be listed as rare, threatened, or endangered by Federal and/or state governments. State species of greatest conservation concern are also covered under this section and include rare, threatened, and endangered species, as well as species that have a declining population and are considered at risk.

There are seven Federally listed animal species documented for Washington, D.C., based on historic range and population: Hay's spring amphipod (*Stygobromus hayi*), American burying beetle (*Nicrophorus americanus*), eskimo curlew (*Numenius borealis*), eastern puma (*Puma concolor cougar*), dwarf wedgemussel (*Alasmodonta heterodon*), northern long-eared bat (*Myotis septentrionalis*), and gray wolf (*Canis lupus*). The small whorled pogonia (*Isotria medeoloides*) is the only state-listed plant species for Washington, D.C. Based on current ranges, the Hay's spring amphipod and northern long-eared bat are the only animal species that occur within Washington, D.C. (USFWS 2014a). Neither of these species are likely to be present at the JEH parcel due to a lack of adequate habitat (USFWS 2014b).

The northern long-eared bat (*Myotis septentrionalis*) was Federally listed as threatened in May 2015. Consultation with USFWS in December 2014 confirmed that the northern long-eared bat does not occur within or adjacent to the JEH parcel (USFWS 2014a).

Washington, D.C., has 162 animal species of conservation concern, including 11 mammals, 49 birds, 23 reptiles, 16 amphibians, 12 fish, and 51 invertebrates (USFWS 2014a). Of these 162 species, it is unlikely that many of these species are present at the JEH parcel due to the lack of habitat. However, due to the presence of trees within and adjacent to this parcel, species of conservation concern that may occasionally be seen at this site include the broad-winged hawk (*Buteo platypterus*), red-shouldered hawk (*Buteo lineatus*), and the eastern red bat (*Lasiurus borealis*) (DDOE 2006).



Pigeons atop Statue. Photo courtesy of APF\_Getty



Northern long-eared bat. Photo courtesy of Georgia Forestry Association