



U.S. Department
of Transportation

**Federal Railroad
Administration**

Supplemental Assessment of Effects to Historic Properties

Final Report

WASHINGTON UNION STATION EXPANSION
PROJECT

MARCH 2023

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Executive Summary

This report presents a supplemental assessment of effects to historic properties that may result from the revised Preferred Alternative, also known as Alternative F, for the proposed Washington Union Station (WUS) Expansion Project (the Project). The Project's Proponents are the Union Station Redevelopment Corporation (USRC) and the National Railroad Passenger Corporation (Amtrak). The Project would expand and modernize WUS to meet current and future needs while preserving the historic station.

The Federal government, acting through the Federal Railroad Administration (FRA), owns WUS. The Project requires FRA approval, and FRA or another mode of the U.S. Department of Transportation may provide construction funding. These activities would constitute an undertaking with the potential to cause effects on historic properties. Therefore, FRA is the lead Federal agency for complying with Section 106 of the National Historic Preservation Act of 1966 (Section 106).¹ Section 106 requires Federal agencies consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation an opportunity to comment.² FRA is coordinating the Section 106 process with the preparation of an Environmental Impact Statement (EIS). An EIS for the Project is a requirement of the National Environmental Policy Act of 1969 (NEPA),³ the Council for Environmental Quality's NEPA implementing regulations,⁴ and FRA's *Procedures for Considering Environmental Impacts*.⁵

In June 2020, FRA issued a draft EIS (DEIS) and draft Assessment of Effects Report (draft AOE), which evaluated impacts and assessed effects to historic properties from six Action Alternatives

¹ 54 USC § 306108

² 36 CFR Part 800 (*Protection of Historic Properties*)

³ 42 USC § 4321 *et seq.*

⁴ 40 CFR Part 1500-1508. The EIS was prepared in accordance with CEQ's regulations implementing NEPA (40 CFR Parts 1500-1508) from 1978, as amended in 1986 and 2005. CEQ comprehensively updated its NEPA implementing regulations effective September 14, 2020; the revised regulations apply to any NEPA process begun after that date. For NEPA reviews initiated prior to September 14, 2020, the lead Federal agency may continue to apply the prior regulations. FRA initiated the NEPA process for the Washington Union Station Expansion Project in 2015 with publication of a Notice of Intent (NOI) in the Federal Register and is applying the CEQ regulations that were in effect at the time of that NOI.

⁵ 64 Federal Register [FR] 28545 [May 26, 1999] as updated by 78 FR 2713 [January 14, 2013]. Effective November 28, 2018, FRA joined the Federal Transit Administration and Federal Highway Administration in issuing updates to the regulation Environmental Impact and Related Procedures, 23 CFR parts 771 and 774. FRA is continuing to follow its *Procedures for Considering Environmental Impacts* that were in effect at the time of the NOI for the EIS for this Project.

as well as a No Action Alternative. At the time, the DEIS and draft AOE identified Alternative A-C as the preferred alternative.

Public, stakeholder, and consulting party comments on the alternatives, including the previously identified preferred alternative (Alternative A-C), prompted FRA and the Project Proponents to refine the Project element design. **FRA and the Project Proponents developed a new alternative (Alternative F) and identified it as the Project's new Preferred Alternative in 2022. From here after, Alternative F is referred to as the Preferred Alternative in this report.**

Common to the previous Action Alternatives assessed in the draft AOE, the Preferred Alternative preserves the historic WUS building and includes the following new station elements: tracks and platforms; bus facility; train hall; parking facility; concourse and retail; for-hire vehicles pick-up/drop-off (PUDO); and bicycle and pedestrian access. The Preferred Alternative addresses Consulting Party comments and concerns in many ways by providing:

- belowground parking facility with a reduced parking program;
- dedicated belowground facility for PUDO activities;
- bus facility that is integrated with the train hall;
- opportunity for a large central civic space that is on a symmetrical axis to the historic station. The private air-rights developer would have primary responsibility for the design of the central civic space, with coordination needed with the Project Proponents for the Project elements and the shared elements in support of the Project; and
- removal of vehicular ramp from the deck level to F Street NE on the east side of WUS that directed vehicular traffic to the Capitol Hill Historic District.

Because there are no changes to the Action Alternatives and the No-Action Alternative since the draft AOE report, this Supplemental Assessment of Effects Report (SAOE) does not reproduce that information. The draft AOE report is referenced throughout this SAOE and is included in **Appendix A**.

In this SAOE, FRA assessed the effects of the Preferred Alternative on 49 historic properties in the Project's Area of Potential Effects (APE). Additionally, FRA assessed visual effects of the Preferred Alternative from six culturally significant viewsheds representing topographic high points, which, though discontinuous, were also considered as part of the APE. FRA prepared this SAOE to describe the assessment and explain determinations of effect to historic properties that could result from the Preferred Alternative.

Based on the assessment of effect, **FRA determined the Preferred Alternative would result in adverse effects to the Railway Express Agency (REA) Building, WUS, and the WUS Historic Site**

as well as potential adverse effects to the City Post Office. Therefore, FRA will continue to consult with the Project's Consulting Parties to avoid, minimize, or mitigate the adverse effects to these historic properties in compliance with Section 106.⁶

There is currently no Project construction funding. However, the Section 106 and NEPA processes are informing the conceptual level of design for the Project. Since the design of the Project is in its early stages, FRA will prepare a Programmatic Agreement (PA) to establish a process to resolve unavoidable adverse effects of the Project to historic properties in accordance with 36 C.F.R. § 800.14(b)(1)(ii). The PA will establish a process for ongoing consultation and review as the level of design progresses following the Final EIS (FEIS) and a Record of Decision (ROD) (and subject to funding) to ensure that form, materials, architectural features, and connections (visual and physical) to surrounding development are considered. This includes the exploration of avoidance and minimization measures to historic properties. FRA anticipates the PA will outline coordinated design review in the context of Federal and District of Columbia regulations and guidelines. The Supplemental Draft EIS (SDEIS) will include a draft PA for public comment. After continued consultation and revision, the FEIS/ROD will include the executed PA.

⁶ A list of all Section 106 Consulting Parties is included in Appendix 2 of the draft AOE.

1 Introduction

The Federal Railroad Administration (FRA) prepared this Supplemental Assessment of Effects Report (SAOE) for the Washington Union Station (WUS) Expansion Project (the Project) in compliance with Section 106 of the National Historic Preservation Act (NHPA), as amended and its implementing regulations 36 CFR Part 800 (Protection of Historic Properties).

The Project's purpose and need, the Project background, and the Project elements are the same as described in the 2020 draft Assessment of Effects (AOE) report, referred to throughout this SAOE report as the "draft AOE" and provided for reference in **Appendix A**. Preserving the historic station building and maintaining it as the primary monumental entrance to WUS continues to be a key Project element. The historic station will be preserved and will continue to serve as a monumental focal point, the "gateway to the Nation's capital," and the primary pedestrian entrance and for-hire vehicles pick-up/drop-off (PUDO) location. More information is available in the draft AOE Section 1 *Introduction*, provided in Appendix A.

FRA and the Project Proponents paused the National Environmental Policy Act (NEPA) and Section 106 process between October 2020 and July 2022 to coordinate with the private air-rights development team, District of Columbia (DC) Department of Transportation (DDOT), WUS bus operators, DC Office of Planning, DC State Historic Preservation Office (SHPO), National Capital Planning Commission (NCPC), U.S. Commission of Fine Arts (CFA), Consulting Parties, and Cooperating Agencies. The coordination resulted in the development of Alternative F, the new Preferred Alternative assessed in this SAOE report for its effects on historic properties. Throughout this SAOE report, Alternative F is referred to as the Preferred Alternative.

1.1 Section 106 Legal and Regulatory Context

FRA is the lead federal agency obligated to fulfill the requirements of Section 106 for the Project as set forth in 36 CFR Part 800 (the Protection of Historic Properties) because the agency may issue approvals; provide funding; and be involved with the transfer, lease, or disposal of Federally owned air rights. All such actions are considered an "undertaking" pursuant to Section 106. FRA is coordinating the Section 106 process with the preparation of an Environmental Impact Statement (EIS) in accordance with the NEPA (40 CFR Part 1500-1508), ⁷ FRA's *Procedures for Considering Environmental Impacts* (64 Federal Register [FR]

⁷ 40 CFR Part 1500-1508. The EIS was prepared in accordance with CEQ's regulations implementing NEPA (40 CFR Parts 1500-1508) from 1978, as amended in 1986 and 2005. CEQ comprehensively updated its NEPA implementing regulations effective September 14, 2020; the revised regulations apply to any NEPA process begun after that date. For NEPA reviews initiated prior to September 14, 2020, the lead Federal agency may continue to apply the prior regulations. FRA initiated the NEPA process for the Washington Union Station Expansion Project in 2015 with publication of a Notice of Intent (NOI) in the Federal Register and is applying the CEQ regulations that were in effect at the time of that NOI.

28545 [May 26, 1999]), and FRA's *Update to NEPA Implementing Procedures* (78 FR 2713 [January 14, 2013]).^{8,9}

This SAOE report applies the criteria of adverse effect (36 CFR Part 800.5) to each identified historic property and assesses the effects of the Preferred Alternative in comparison to existing conditions. Physical, visual, noise, vibration, and other effects that could alter any of a property's characteristics that qualify it for inclusion in the National Register of Historic Places (NRHP) in a manner that would diminish its integrity of location, design, setting, materials, workmanship, feeling, or association would result in an adverse effect. In particular, this SAOE report assesses effects that would result from the Preferred Alternative's relationship to the historic station; construction of a new train hall, tracks and platforms, station concourses, bus facility, and parking facility; incorporation of dedicated areas for PUDO and bicycle and pedestrian access on surrounding streets and throughout the new facilities; and the potential transfer or lease of remaining Federal air-rights.

This SAOE report **does not** assess effects to historic properties from separate projects that are not part of the Federal undertaking and are included in the No-Action Alternative, such as the development of the private air-rights above the rail terminal.

1.2 Area of Potential Effect and Identification of Historic Properties

The area of potential effect (APE) and the identified historic properties within the APE are the same as those described in the draft AOE Section 2.3.1 *Area of Potential Effects*, provided in Appendix A, because most of the Preferred Alternative will occur within the same footprint (Project Area) as the previous Action Alternatives. The APE is bounded by Independence Avenue to the south; First Street and New Jersey Avenue to the west; and New York Avenue, the Eckington Rail Yard, and Ivy City Rail Yard tracks to the north. The eastern boundary is less regular due to the varying degree to which the Project may result in visual, noise and vibration, and traffic-related effects along the east-west running streets. Six culturally significant viewsheds, including views from the Washington National Cathedral, Washington Monument, Old Post Office Building, Arlington National Cemetery, U.S. Capitol Dome, and St. Elizabeths West Campus, are also considered part of the APE.

⁸ 64 Federal Register [FR] 28545 [May 26, 1999] as updated by 78 FR 2713 [January 14, 2013]. Effective November 28, 2018, FRA joined the Federal Transit Administration and Federal Highway Administration in issuing updates to the regulation Environmental Impact and Related Procedures, 23 CFR parts 771 and 774. FRA is continuing to follow its *Procedures for Considering Environmental Impacts* that were in effect at the time of the Notice of Intent to prepare the EIS for this Project.

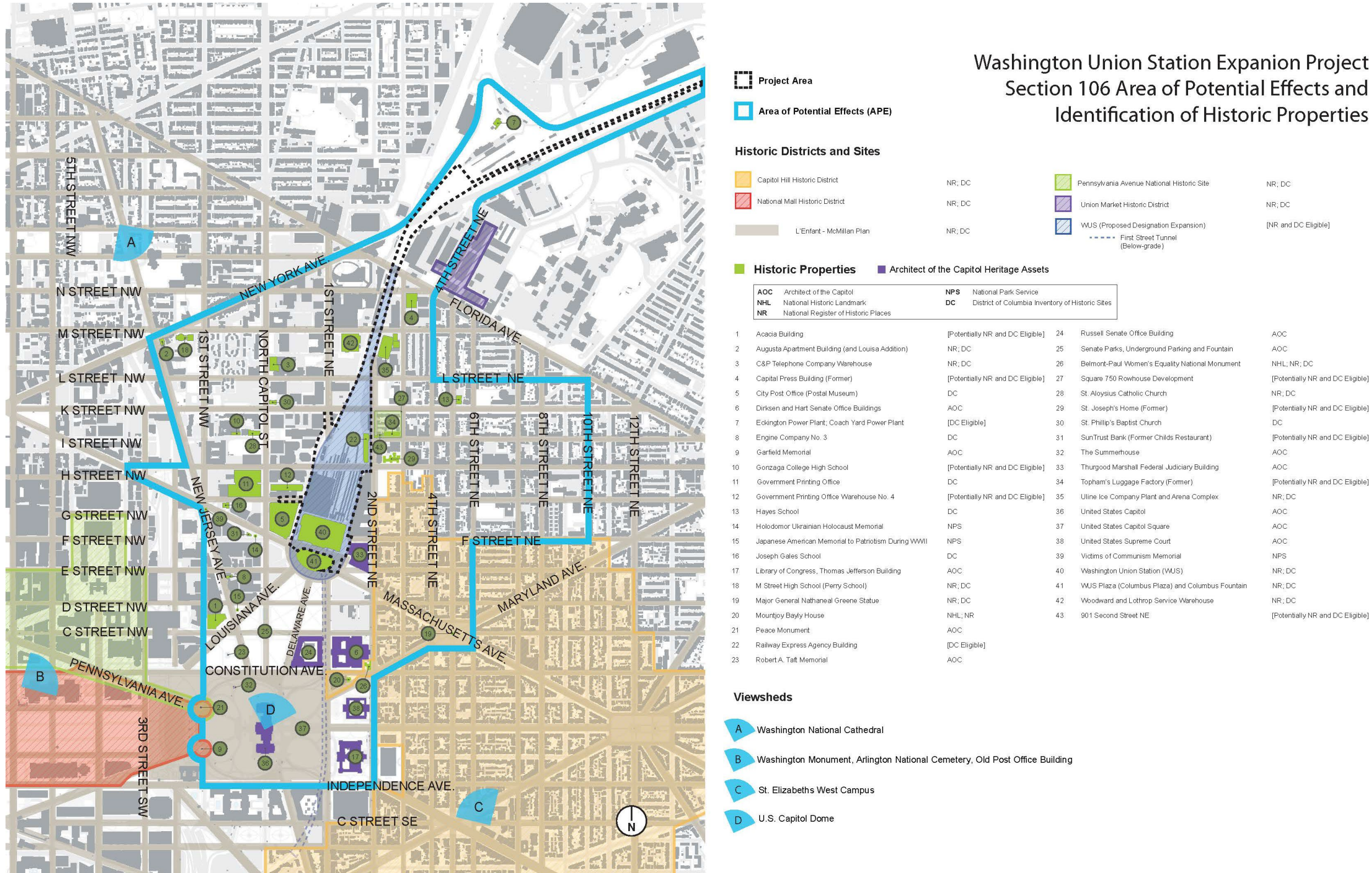
⁹ Please refer to the draft AOE Section 2.1 *Federal Undertaking Subject to Section 106*, provided in Appendix A, for a full discussion on FRA's actions relating to the Project and the Federal undertaking that is subject to Section 106.

The Preferred Alternative would introduce street ramps at G Street NE (west side of the station), First Street NE (at the Burnham Wall between H and K Streets NE), and at the east side of the station at Union Station Drive NE. The ramps will be described in Section 2: *Description of the Preferred Alternative* of this SAOE report. The ramps would be located at sections of street that are well within the boundary of the APE to account for any effects. The Project Area shown in the draft AOE was adjusted for the G Street ramp of the Preferred Alternative, to account for all proposed street ramps (**See Figure 1 for APE, identified historic properties, and new Project Area**).

In the time between the release of the draft AOE and this SAOE report, no new historic properties were identified. FRA confirmed with SHPO that no new properties within the APE were deemed eligible or been added to the DC Inventory of Historic Sites or the NRHP.

FRA determined that the Project has the potential to affect archaeological resources within the Project Area where ground disturbing activities would occur. It was noted that such activity would mostly occur within the rail terminal of the WUS Historic Site. In addition to ground disturbance at this location, the Preferred Alternative would also require ground disturbance within the first block of G Street NE, between North Capital Street and the WUS footprint to the east, where a ramp would be constructed at the center of the existing street to provide access to underground parking and other services at WUS. It is possible that prehistoric and historic archaeological materials, from isolated artifacts to cultural features of the nineteenth century city infrastructure, may be present. FRA anticipates that, through further consultation with the Consulting Parties, the development of a Programmatic Agreement (PA) would address the identification and evaluation of archaeological resources, including archaeological monitoring and treatment plans that would establish procedures for the discovery of archaeological resources and standards for their documentation and treatment.

Figure 1. Area of Potential Effect and Identification of Historic Properties.



1.3 Summary of the Section 106 consultation process to date

FRA initiated the Section 106 process for the Project on November 23, 2015, in a letter to the SHPO. Since 2015, FRA held 12 Consulting Party meetings to date.

Table 1 summarizes consultation from March 2016 to September 2020. A detailed description of the Section 106 consultation is provided in the draft AOE Section 2.3 *Summary of Section 106 Consultation*, provided in Appendix A.

Since 2015, FRA continually developed and refined the Project with Consulting Parties to avoid and minimize impacts to the historic station building and adjacent historic properties. A full description of Consulting Party involvement in the Project alternative development process is provided in Section 4 *Consulting Party Involvement in the Project Alternative Development Process* of the draft AOE provided in Appendix A.

Table 1. Section 106 Consultation Summary for the Assessment and Resolution of Effects 2015-2020

Section 106 Process Stage	Date	Action
Initiation	November 23, 2015	FRA initiated the Section 106 process in a letter to the SHPO
	March 1, 2016	FRA sent invitations to Consulting Parties
	March 28, 2016	1 st Consulting Parties Meeting: Introduced the Project
Identification of Historic Properties	May 9, 2016	2 nd Consulting Parties Meeting: Discussed Proposed Section 106 Study Area
	October 6, 2016	3 rd Consulting Parties Meeting: Presented preliminary concepts, the proposed APE, and initial identification of historic properties
	August 2017	FRA provided draft <i>APE and Identification of Historic Properties Report</i> for Consulting Party review; FRA made Concept Screening Report available for public review
	September 7, 2017	4 th Consulting Parties Meeting: Presented Preliminary Alternatives; discussed draft <i>APE and Identification of Historic Properties Report</i>
	September 29, 2017	FRA received SHPO concurrence on APE and identification of historic properties
	November 6, 2017	FRA issued Final APE and Identification of Historic Properties Report to the Consulting Parties
Assess Effects	April 24, 2018	5 th Consulting Parties Meeting: Shared the Project's Action Alternatives; reviewed the methodology for assessing effects

Section 106 Process Stage	Date	Action
Assess Effects (Continued)	Summer 2018	FRA assessed effects of the Action Alternatives to the historic properties within the APE
	March 29, 2019	FRA shared draft AOE Report with Consulting Parties
	April 30, 2019	6 th Consulting Parties Meeting: FRA answered questions regarding findings of effect in a preliminary draft AOE report; solicited input on PA content and structure
	November 19, 2019	7 th Consulting Parties Meeting: Shared a new Project Alternative (Alternative A-C) with the Consulting Parties and discussed an additional Project element – the removal of columns within the First Street Tunnel
	Fall/Winter 2019	FRA continued to assess the effects of the Action Alternatives (including Alternative A-C) to historic properties within the APE
	June 4, 2020	FRA issued a revised draft AOE Report to the Consulting Parties, concurrent with the release of the Draft EIS (DEIS)
	June 30, 2020	8 th Consulting Parties Meeting: Discussed the traffic analysis methodology and how it informed the draft AOE
	September 2, 2020	9 th Consulting Parties Meeting: Facilitated the review of the draft AOE, provided overview of effect determination, and requested Consulting Party comments on effects to historic properties
	September 22, 2020	10 th Consulting Parties Meeting: Facilitated further review of the draft AOE, discussed measures to avoid and minimize adverse and potential adverse effects to historic properties
	September 28, 2020	Draft AOE and DEIS review period officially ends
Section 106 Process Paused	October 2020	FRA paused the Section 106 and NEPA processes to work collaboratively with the Project Proponents and other key stakeholders to address concerns raised during consultation and develop the Preferred Alternative

In October 2020, FRA paused the Section 106 and NEPA processes to consider the comments received during the public comment period for the draft AOE report and DEIS. In general, the Consulting Parties raised concerns regarding the size, alignment, and placement of the aboveground bus and parking facility in Alternative A-C and the size of the Visual Access Zone (VAZ). Consulting Parties expressed concern that such elements would adversely affect the station's historic setting. Consulting Parties stated that the aboveground parking and bus facility as proposed in Alternative A-C would result in an asymmetrical development to the north of the historic station and that the VAZ in Alternative A-C was inadequate to guarantee the civic space would be centered and of significant width or scale to establish a view to as much of the station's historic barrel vault as possible. Consulting Parties also expressed concerns over the noise at and around the station during construction and the increased levels of traffic that would affect Columbus Plaza and those that may affect the Capitol Hill Historic District. Consulting Parties urged FRA to coordinate with the private air-rights development team to achieve a harmonious and symmetrical design to the north of the station. This coordination resulted in the development of Alternative F, which is the Preferred Alternative presented and assessed in this report.

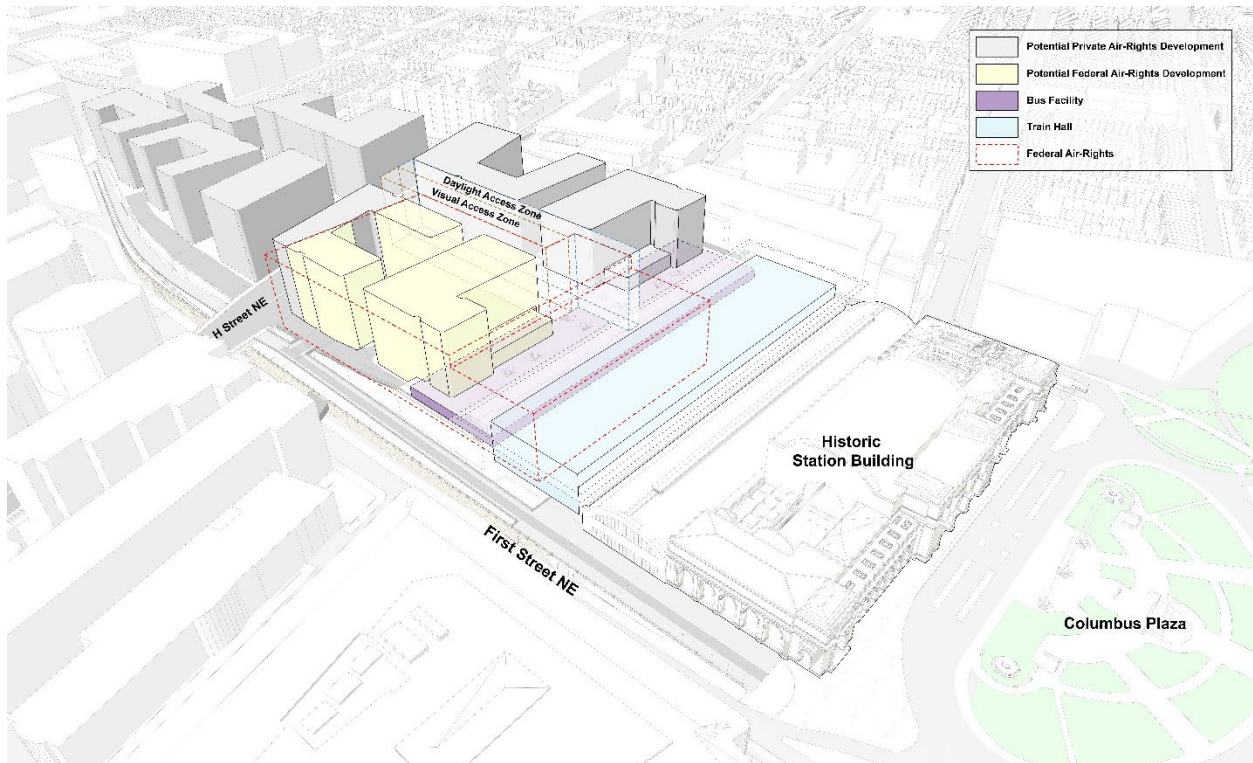
On March 2, 2022, FRA held a meeting with the Consulting Parties to share updates on the development of Alternative F. FRA and the Project Proponents then identified further refinements to the alternative to reduce construction costs and duration. In July 2022, FRA resumed the Section 106 and NEPA processes, holding another meeting with the Consulting Parties on July 14, 2022, to present Alternative F as the Preferred Alternative and explained the next steps in the Section 106 process. On December 22, 2022, FRA issued a draft SAOE report and provided the Consulting Parties 49 calendar days to review it and provide comments. During the review period, FRA held a Consulting Parties Meeting on January 31, 2023 to discuss the draft SAOE. FRA considered their comments and finalized the SAOE, resulting in this SAOE report.

2 Description of the Preferred Alternative

The Preferred Alternative (see **Figure 2**) is the only Action Alternative assessed in this SAOE report. FRA and the Proponents developed the Preferred Alternative to address the comments received following the release of the draft AOE and DEIS on June 4, 2020. Like the Action Alternatives assessed in the draft AOE, the Preferred Alternative continues to provide the necessary infrastructure to meet the needs of future station operations, rail capacity, and service demands. Input and feedback from key stakeholders informed new or updated approaches to several Project elements in the Preferred Alternative, including the size and location of the parking facility, the size and location of the bus facility, the location of PUDO

activities, and pedestrian and bicycle access. Opportunities for enhanced urban design and the provision of a successful civic space north of the station were explored in coordination with the private air-rights development.¹⁰

Figure 2. Preferred Alternative Axonometric View, looking northeast.



2.1 Rail Infrastructure Elements

New tracks, platforms, and rail infrastructure elements are the same as those described for the Action Alternatives in the draft AOE. Please refer to the draft AOE Section 5.2.1 *Elements Common to All Action Alternatives*, provided in Appendix A, for a full description of the tracks and platforms, concourses, rail support spaces, and the required column removal within the First Street Tunnel.

2.2 New Station Elements

The Preferred Alternative features an east-west oriented train hall, which would replace the existing Claytor Concourse, adjacent to the historic station. The train hall would provide additional space for passenger circulation and accommodation, commensurate to the growth projected for the station to address necessary improvements in the rail and bus passenger

¹⁰ The Project is separate and independent from the private air-rights development, which is not a Federal undertaking and is not assessed as part of the Section 106 process.

experience. The train hall would extend from the historic station up to the deck level above, accessed from H Street to the north (see **Figure 3**, **Figure 4**, and **Figure 5**).

Figure 3. Preferred Alternative train hall and bus facility.

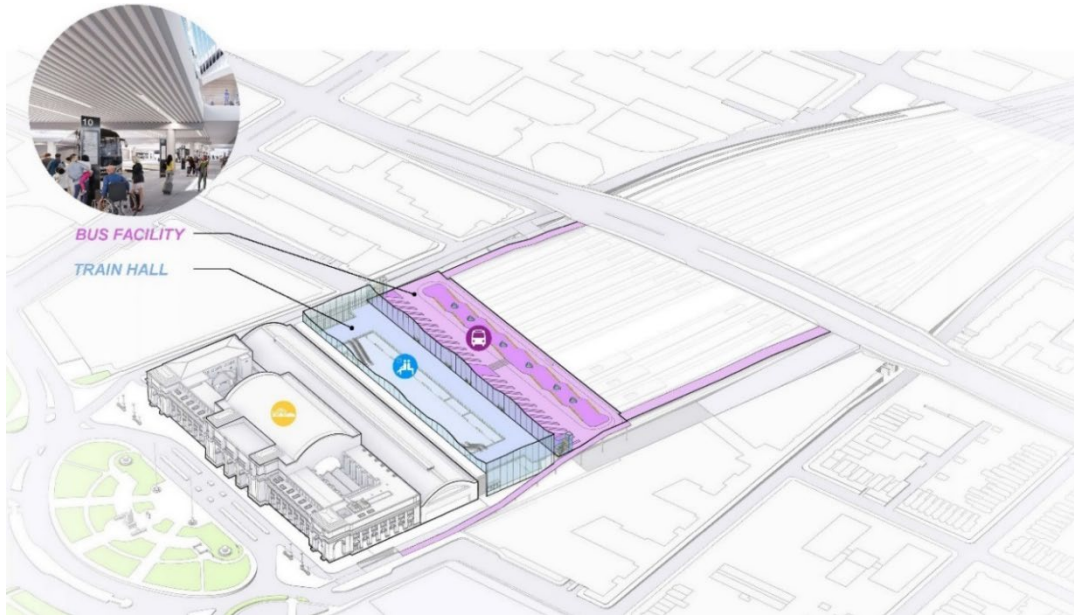


Figure 4. Preferred Alternative train hall and PUDO. The Project Alternative creates an opportunity for the central space, which is reflective of the symmetry of the station, to be designed with primary responsibility and implementation by the private air-rights development, with coordination needed with the Project Proponents for the Project elements and the shared elements in support of the Project.

PUDO and Deck Level Axon

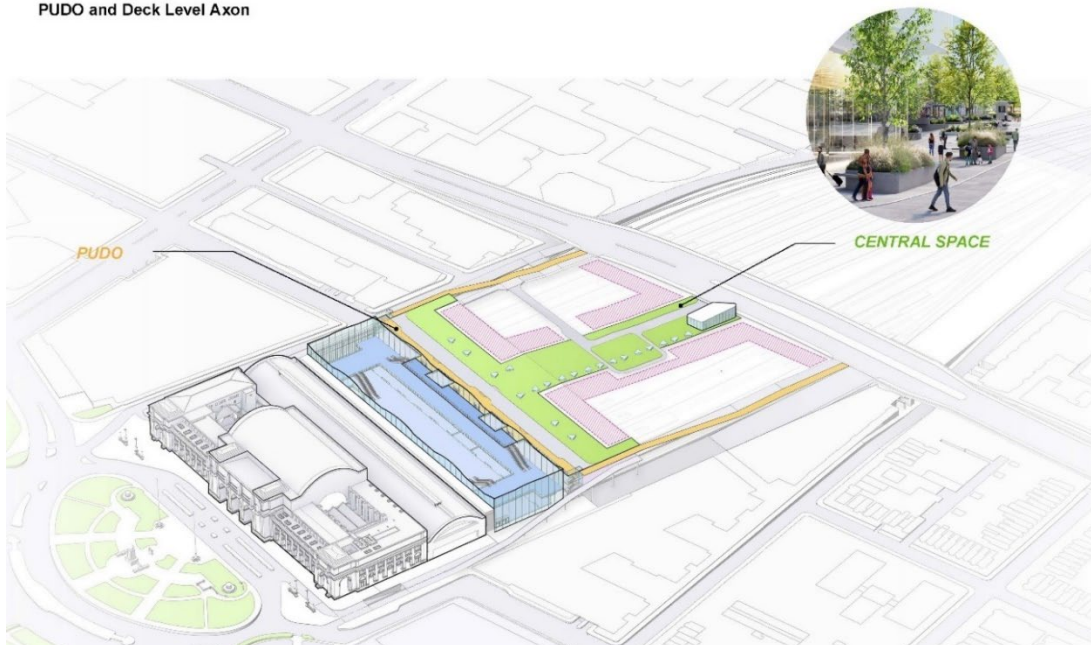
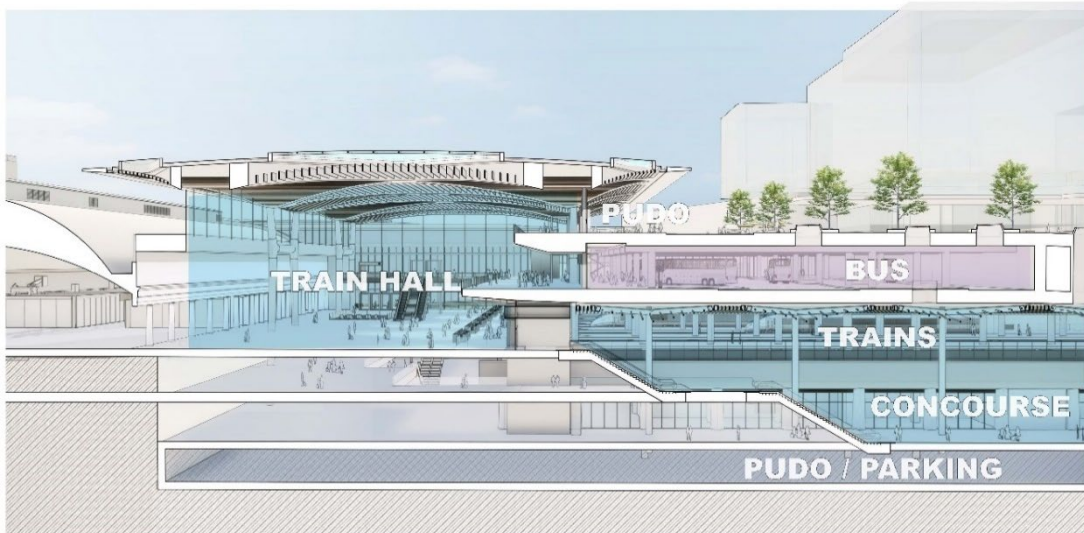


Figure 5. Preferred Alternative new station elements shown in cross section.



At the deck level, the north elevation of the train hall would open onto a PUDO area, fronting future air-rights development and a central civic space. Consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, the new train hall would not mimic the form, material, or architectural features of the historic station to avoid competing with the historic station and creating a false sense of history (see **Figure 6** and **Figure 7**).

A single-level east-west bus facility would be submerged into the deck north of the new train hall. The bus facility would be directly connected to the mezzanine level of the new train hall and would run parallel to the train hall along its entire east-west length (see **Figure 3**, **Figure 4**, and **Figure 5**). The bus facility would provide a capacity of between 38 and 39 bus slips. A glass wall would separate the mezzanine from the bus facility, which would be semi-open and ventilated. The facility would consist of two boarding/deboarding areas. Along the south side, directly adjacent to the mezzanine, a total of 23 angled bus slips would be provided. Across the bus circulation lane from this area, another 15 slips would be arrayed around an island, with room for a 16th slip for use if and as needed. The facility would be for use by intercity and charter buses. It would not accommodate transit buses and hop-on/hop-off sightseeing buses. The submerged design would result in available space on the deck for a future central civic space in front of the train hall. Buses would access the facility from H Street NE via new roadways along the western and eastern edges of the deck, respectively, and new intersections (west intersection and east intersection, both allowing full movements). Circulation would be

counterclockwise, with buses entering via the east intersection and east road and exiting via the west road and west intersection.

Figure 6. *Rendering of the Preferred Alternative train hall, looking northwest.*



Figure 7. *Rendering of the Preferred Alternative, looking northeast from the west side of Columbus Circle. The new train hall is visible beyond the historic station. The potential Federal air-rights development is beyond the train hall.*

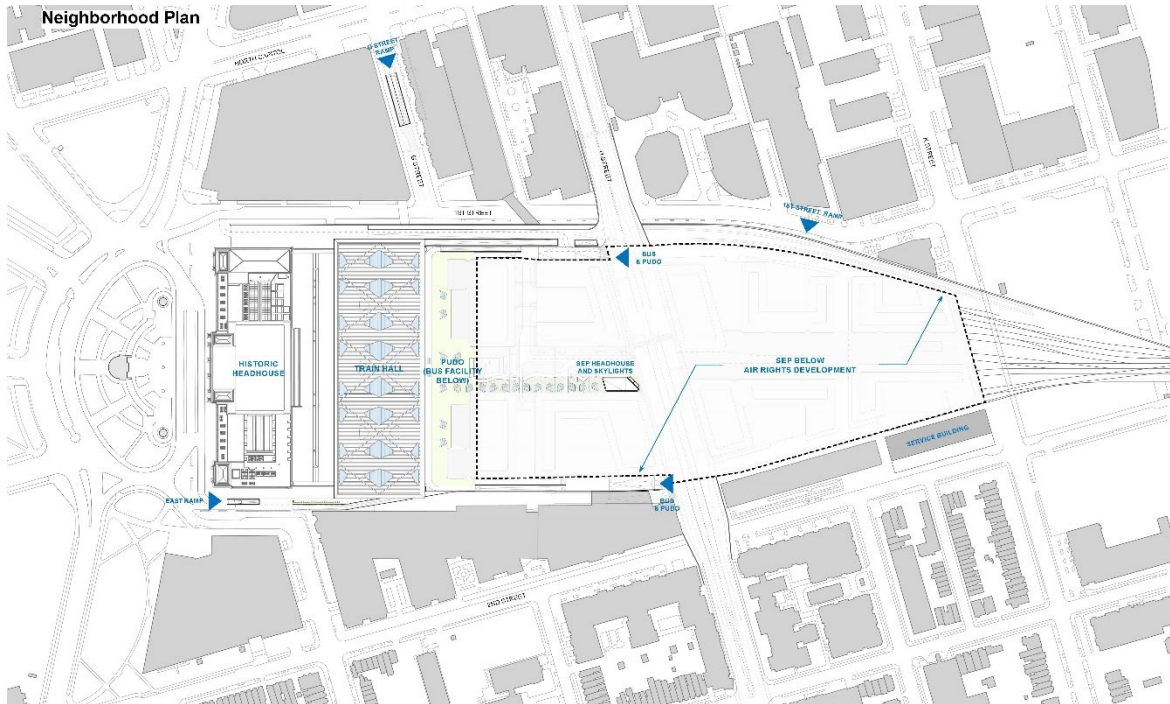


All parking for the station would be located in a single-level belowground facility capable of accommodating 400 to 550 vehicles. The facility would be located below the concourse level, along the western side of the rail terminal between K Street and the north side of the station. The belowground facility would also contain a PUDO facility with space for pick-ups and drop-offs as well as queueing space for for-hire vehicles waiting to pick up passengers either in the facility or in front of the station (see **Figure 5**). Further design refinements would determine the exact size and configuration of the PUDO facility as well as the exact number of parking spaces in the facility.

Access to and from the belowground facility would be via a series of three ramps (see **Figure 8**). A ramp to the west of the station on G Street NE would be a two-lane, two-way facility in the middle of the right-of-way. Inbound vehicles would reach the ramp via North Capitol Street. Outbound vehicles would turn right or left onto North Capitol Street. There would be a surface lane on each side of the ramp for traffic between First Street NE and North Capitol Street. An opening at the Burnham Wall and ramp from First Street NE would be located between H and K Streets NE and would also be bi-directional. Outbound vehicles could turn left onto First Street then right onto G Street toward North Capitol Street. Inbound vehicles would reach the portal via First Street NE northbound. A third outbound only ramp on the east side of the station—at

Union Station Drive NE—would provide access from the belowground facility to the front of the station. Some PUDO space would continue to be provided on First and Second Streets NE, in front of WUS, and on the deck level (next to the train hall, above the bus facility).

Figure 8. *Neighborhood Plan of WUS showing the three locations of the vehicular ramps that will be used to access the belowground levels. Ramps will be located at G Street NE, First Street NE, and at the east side of the station, north of Columbus Circle Drive. The plan also shows the location of the new service building to the north of the REA Building.*



A new service building with loading dock would be constructed north of the Railway Express Agency (REA) Building, located north of H Street between Second Street NE and the rail terminal (see **Figure 8**). The height of the structure would align with the cornice line of the REA Building and would occupy the area of the current substation, which is to be removed in a separate project.

The Preferred Alternative's elements, especially the belowground parking and bus facilities, would leave room on the deck that could be developed into a central civic space and integrated with the private air-rights development. A central civic space is not part of the Project. However, the Project does not preclude its development. This space could reflect the symmetry of the station and provide an opportunity for a visual connection between the historic station, the new train hall, and H Street (see **Figure 4** and **Figure 9**). Two new headhouses would be provided at the deck level north and south of H Street. Elevators at the H Street headhouses would connect passengers to the station via the Central and H Street concourses.

In the Preferred Alternative, pedestrian and bicycle circulation between the front of the station and H Street NE and the private air-rights development would be enhanced by building two ramps from the front of WUS to the deck level on the west and east side of the station, respectively. Both ramps would be primarily used for pedestrian and bicycle access, although they could provide redundant vehicular service when access from H Street NE is unavailable due to planned or unplanned closures. Such occasions are anticipated to be rare. The use of the east ramp for bicycle and pedestrian access led to the elimination of the vehicular southbound ramp to F Street NE that was included in all previous Action Alternatives.

Figure 9. *Rendering of the Preferred Alternative H Street headhouse, looking south along the central space towards the new train hall and the historic headhouse. The rendering of the central civic space is illustrative and will be designed with primary responsibility and implementation by the private air-rights developer, with coordination needed with the Project Proponents for the SEP elements and the shared elements in support of the SEP.*



Additionally, the Preferred Alternative would accommodate bicycle parking in the undercroft of the west ramp. It would provide enough room for hundreds of bicycles in a covered, safe bicycle facility.

The Preferred Alternative incorporates features that would reduce the amount of traffic east of WUS and in the vicinity of the Capitol Hill Historic District. For example, the Preferred Alternative would reduce the number of parking spaces from the existing garage by 77% and would accommodate approximately half of all PUDO activity in the belowground PUDO facility,

reducing PUDO-generated traffic at Columbus Circle and along Second Street NE. In addition, the elimination of the vehicular ramp from the deck level to F Street NE on the east side of WUS (which was a part of all Action Alternatives assessed in the draft AOE) would reduce vehicular traffic along the streets adjacent to or within the Capitol Hill Historic District.

Preferred Alternative - Traffic in and Surrounding the Capitol Hill Historic District

As shown in **Table 2** below, the Preferred Alternative would result in mostly acceptable Levels of Service (LOS) at the six intersections in and surrounding the Capitol Hill Historic District.¹¹ The Consulting Parties expressed concern that congestion at these intersections may lead drivers to look for alternative routes that would take them through residential streets in the Historic District such as Third Street NE, Fifth Street NE, or G Street NE. In the Preferred Alternative, with most intersections around the Historic District operating at an acceptable LOS, diversion of traffic through residential streets is less likely than it was in Alternative A-C and the other Action Alternatives assessed in the draft AOE. Compared to Alternative A-C, four of the intersections would experience better LOS in the AM or PM peak: H and Fourth Street NE (PM only), Second and F Streets NE, Second and D Street NE, and Fourth St and Massachusetts Ave NE. No intersections would experience a worse LOS, compared to Alternative A-C. When compared to the No Action Alternative, which reflects the baseline LOS expected in 2040, three intersections within or at the edge of the Capitol Hill Historic District would experience slightly worse LOS, and one intersection at the edge of the Capitol Hill Historic District would experience better LOS. Therefore, the Preferred Alternative would result in traffic conditions within the Capitol Hill Historic District that are very similar to those that would occur even if the Project was not constructed.

¹¹ LOS is a qualitative measure used to relate the quality of vehicle traffic service and is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measures. Refer to

Table 2. Existing Condition Level of Service at Six Intersections Adjacent to Capitol Hill Historic District Compared to the No Action, Alternative A-C, and the Preferred Alternative
(Red “F” indicates a failing LOS)

Intersection	Existing Condition Peak LOS (AM/PM)	Peak LOS For the No Action ¹² (2040 Baseline) (AM/PM)	Peak LOS For Alternative A-C (AM/PM)	Peak LOS for the Preferred Alternative (AM/PM)
H and Third Street NE	E/C	F/C	F/D	F/D
H and Fourth Street NE	B/B	C/C	C/C	C/B
Second and G Street NE	B/B	B/B	C/B	C/B
Second and F Street NE	B/B	C/C	E/D	C/C
Second and Massachusetts Ave NE	C/C	C/C	C/D	C/D
Second and D Street NE	D/F	D/D	E/E	D/D
Fourth and Massachusetts Ave NE.	C/D	D/D	E/E	D/D

3 Methodology

FRA’s methodology for assessing effects to historic properties did not change between the 2020 draft AOE and this SAOE (refer to the draft AOE Section 3 *Methodology*). As indicated by the years of consultation and previous study, FRA undertook a reasonable and good faith effort to identify 49 historic properties within the APE and assess effects of the Preferred Alternative to these historic properties in comparison to existing conditions by applying the criteria of adverse

¹² The LOS for the No Action Alternative reflects baseline traffic conditions in the year 2040.

effect.¹³ FRA shared and requested comment on the assessment of effect methodology at two Consulting Party meetings.

Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.¹⁴ For a determination of adverse effect to be made, the effect must be found to alter, directly or indirectly, any of the property's characteristics that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.¹⁵ These aspects of integrity are critical to defining a property's significance under the NRHP Criteria for Evaluation. The criteria of adverse effect and descriptions of the aspects of integrity are provided below.

3.1 Criteria of Adverse Effect

Examples of adverse effects are identified in 36 CFR 800.5(a)(2) and include, but are not limited to:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (36 CFR Part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

¹³ The baseline for existing conditions is predominantly 2017, which was the baseline of the draft AOE. In some instances, for discussions on visual effect, existing conditions from 2022 are used for comparison purposes. The assessment identifies if and when 2022 existing conditions are used.

¹⁴ 36 CFR § 800.5(a)(1)

¹⁵ Ibid.

- Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

3.2 Aspects of Integrity

The seven aspects of integrity, as defined by the National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, are as follows.¹⁶

1. **Location:** Place where the historic property was constructed or the place where the historic event occurred.
2. **Design:** Combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting:** The physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.
4. **Materials:** The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship:** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site.
6. **Feeling:** A property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.
7. **Association:** The direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.

3.3 Determination of Effect

To determine Project effects, architectural historians meeting the Secretary of Interior's *Professional Qualification Standards* conducted site visits and reviewed existing documentation

¹⁶ National Park Service. "National Register Bulletin: How to Apply the National Register Criteria for Evaluation." Accessed at https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf. Accessed September 4, 2022.

on the historic background and significance of each historic property.¹⁷ With an understanding of each property's significance, characteristics, and aspects of integrity, the criteria of effect are applied to assess effects. Understanding the NRHP criteria for which a historic property is significant is especially relevant when determining whether the integrity of a property would be affected by the undertaking. Each type of historic property depends on certain aspects of integrity, some more than others, to express historic significance. For example, for properties significant under NRHP criterion C, the retention of design, workmanship, and materials may be more important than location, setting, feeling, and association. However, properties significant under NRHP criteria A and B ideally would retain some features of all seven aspects of integrity.¹⁸ After understanding the significance and the aspects of integrity that express significance, the effects are evaluated and a finding of “no effect,” “no adverse effect,” or “adverse effect” is determined for each historic property in response to the Preferred Alternative:

- **No Historic Properties Affected/No Effect:** A finding of “no historic properties affected” per 36 CFR 800.4(d)(1), or “no effect” for purposes of this SAOE report, signifies that the Project would not affect the property, whether from direct, indirect, or cumulative effects.
- **No Adverse Effect:** A finding of “no adverse effect” per 36 CFR 800.5(b) signifies that any effect(s) would not alter a characteristic of a property that qualifies it for inclusion in the National Register in a manner that would diminish the integrity of the property.
- **Adverse Effect:** A finding of “adverse effect” per 36 CFR 800.5(a)(1) signifies that an effect(s) would alter any characteristic of a historic property that qualifies it for inclusion in the National Register in a manner that would diminish the integrity of the property.

In this SAOE report, direct and indirect effects to each historic property are assessed and described for the Preferred Alternative. When assessing direct effects, “direct” refers to the causality, not the physicality, of the effect. For example, if the effect comes from the undertaking at the same time and place with no intervening cause, it is considered to be a

¹⁷ Department of the Interior. *Secretary of the Interior's Standards and Guidelines, Professional Qualifications Standards*. Accessed at <https://www.nps.gov/articles/sec-standards-prof-quals.htm>. Accessed on September 10, 2022.

¹⁸ National Park Service. “National Register Bulletin: How to Apply the National Register Criteria for Evaluation.” Accessed at https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf. Accessed on September 10, 2022.

“direct” effect. “Indirect effects” are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.¹⁹

3.4 Methodologies

The methodologies used to determine physical and visual effects resulting from the Preferred Alternative are the same as those described in the draft AOE Section 3.1 *Physical Effects* and Section 3.2 *Visual Effects*, provided in Appendix A. However, new visual simulations using the Preferred Alternative were produced and used to assess visual effects. The visual simulations included in the draft AOE depicted the potential Federal air-rights development as the maximum buildable volume allowed by zoning. However, through continued Project coordination, new information is available regarding the building volumes of the potential Federal air-rights and proposed private air-rights developments. As such, the visual simulations included in this SAOE report show potential building volumes for the air-rights developments. The visual simulations for the Preferred Alternative are included in Section 4: *Assessment of Effects* of this SAOE report. The Project components of the Preferred Alternative are shown in blue while the potential Federal air-rights development is shown in green in each perspective view.

To assess effects to historic properties from noise, vibration, and traffic, FRA used the same methodologies as those presented in the draft AOE Section 3.3 *Noise and Vibration Effects* and Section 3.4 *Other Effects Generated by Traffic*, provided in Appendix A. FRA used the noise, vibration, and transportation analysis conducted for the Preferred Alternative, which used noise, vibration, and traffic impact modeling to predict operational (long-term) and temporary (construction) impacts.

Based on the noise, vibration, and transportation analysis for the Preferred Alternative, FRA qualitatively assessed whether the noise, vibration, and traffic effects of the Preferred Alternative would diminish the integrity of a property, especially the integrity of setting. If such a change was likely, a finding of adverse effect was made.

The noise, vibration, and transportation analysis for the Preferred Alternative will be documented in the Supplemental Draft EIS (SDEIS), which is scheduled to be available for public comment in 2023. Public review and comment of the SDEIS, including comments from Consulting Parties, will inform the Section 106 process and the development of the PA.

¹⁹ Clarification on the terms “direct” and “indirect” as relates to Section 106 and NEPA, was made in March 2019 by the DC circuit court when the court issued an opinion in *National Parks Conservation Association v. Semonite*: USCA Case #18-5179, DC Cir. Mar. 1, 2019.

Finally, FRA also considered the cumulative effects the Preferred Alternative to each historic property to determine if physical changes, visual changes, and increases in noise and/or vibration and other effects of traffic would diminish the historic property's character-defining features and/or aspects of integrity.

4 Assessment of Effects

FRA assessed effects of the Preferred Alternative to the 49 historic properties and six culturally significant viewsheds within the APE (**Figure 1**). See **Appendix B** for a summary chart of all historic properties and viewsheds in the APE and their respective effect assessment for the Preferred Alternative. Based on the assessment of effects presented in this chapter, **FRA determines the Preferred Alternative would result in adverse effects to the REA Building, WUS, and the WUS Historic Site. FRA also determines there would be a potential adverse effect to the City Post Office.**

4.1 Historic Properties with No Change in Effects Assessment

For 28 historic properties and viewsheds in the APE, FRA found the Preferred Alternative would have the same assessment of effect as what was presented in the draft AOE for the Action Alternatives (see **Table 3**). This is because the Preferred Alternative, except for the addition of the G Street Ramp, occurs within the same physical footprint as the other Action Alternatives. For these 28 historic properties and viewsheds, the visual effects of the Preferred Alternative are the same as the other Action Alternatives because there is no direct line of sight between the historic property and Project Area. Noise, vibration, and traffic effects would be unchanged because the properties are not located within the Noise and Vibration Study Areas and are not located at thoroughfares that would experience effects from traffic. For all these historic properties and viewsheds, FRA found there would be no adverse effect or no effect. To avoid duplication of text, FRA's detailed assessment of effect for each of these 28 historic properties and viewsheds is provided in the draft AOE in **Appendix A**.

Table 3. Historic Properties and Cultural Viewsheds with the Same Assessment of Effect as Discussed in the Draft AOE

Property No. on APE Fig 1	Name of Historic Property	Determination of Effect
1	Acacia Building	No Effect
2	Augusta Building	No Effect
7	Eckington Power Plant	No Effect
8	Engine Company No. 3	No Effect

Property No. on APE Fig 1	Name of Historic Property	Determination of Effect
9	Garfield Memorial	No Effect
10	Gonzaga College High School	No Effect
13	Hayes School	No Effect
15	Japanese American Memorial to Patriotism During WWII	No Effect
18	M Street High School (Perry School)	No Effect
19	Major General Nathanael Greene Statue	No Effect
20	Mountjoy Bayly House	No Effect
21	Peace Monument	No Effect
23	Robert A. Taft Memorial	No Effect
24	Russell Senate Office Building	No Adverse Effect
26	Belmont-Paul Women's Equality National Monument (Formerly the Sewall-Belmont House)	No Effect
31	Suntrust Building (Former Childs Restaurant)	No Adverse Effect
32	The Summerhouse	No Effect
36	United States Capitol	No Effect
37	United States Capitol Square	No Effect
38	United States Supreme Court	No Effect
39	Victims of Communism Memorial	No Effect
42	Woodward and Lothrop Service Warehouse	No Adverse Effect
46	National Mall Historic District	No Effect
47	Pennsylvania Avenue National Historic Site	No Effect
50	Arlington National Cemetery Cultural Viewshed	No Effect
51	Old Post Office Building Cultural Viewshed	No Effect
52	St. Elizabeths West Campus Cultural Viewshed	No Effect
54	Washington National Cathedral Cultural Viewshed	No Effect

4.2 Historic Properties with New Effects Assessment

For 27 historic properties and viewsheds in the APE, the Preferred Alternative's location and refinement of certain Project elements necessitated a new assessment of effect from what was presented for the Action Alternatives in the draft AOE. This is because the Preferred Alternative has the potential to result in different physical, visual, noise, vibration, and traffic effects than the Action Alternatives in the draft AOE.

Based on the new assessment of effects, for all the historic properties listed in **Table 4** except three, FRA's determination of effect remains the same from what was presented in the draft AOE. FRA's determination that the Preferred Alternative has a potential adverse effect to the City Post Office is a change from what was presented in the draft AOE because temporary vibration effects during the construction of the G Street Ramp have the potential to cause structural damage.²⁰ The adverse effect is potential because the modeled construction vibration levels would exceed the criteria for potential structural damage, and vibration monitoring would be needed to ensure structural damage does not occur.

FRA's determination that the Preferred Alternative has no adverse effect to the Capitol Hill Historic District is a change from what was presented in the draft AOE because noise, vibration, and traffic effects of the Preferred Alternative would not diminish the integrity or significance of the property. The transportation analysis for the Preferred Alternative, which is based on traffic impact modeling, shows that the intersections in and surrounding the historic district would mostly operate at acceptable LOS. Drivers would be unlikely to seek diversions through the residential street network in significant numbers, and such activities would not diminish the integrity or significance of the district.

FRA's determination that the Preferred Alternative has no adverse effect to the Joseph Gales School is a change from what was presented in the draft AOE because the transportation analysis indicates that increased traffic would occur along Massachusetts Avenue, resulting in a change to the urban setting; however, this change is not an adverse effect.

The following narratives detail the assessment of effect for each of the 27 historic properties and viewsheds with new effects assessments. Note that the number of each historic property assessed in this section corresponds to the property's map number in the APE (**Figure 1**). Please refer to the draft AOE Section 6.1 *Effects to Each Historic Property*, provided in Appendix A, for narratives on the history and significance of each property.

²⁰ The G Street ramp was not a Project element for the Action Alternatives presented in the 2020 draft AOE.

Table 4. Historic Properties and Cultural Viewsheds with a New Assessment of Effect

Property No. on APE Fig 1	Name of Historic Property	Determination of Effect
3	C&P Telephone Company Warehouse	No Adverse Effect
4	Capital Press Building (Former)	No Effect
5	City Post Office (Postal Museum)	Potential Adverse Effect
6	Dirksen and Hart Senate Office Buildings	No Adverse Effect
11	Government Printing Office	No Adverse Effect
12	Government Printing Office Warehouse No. 4	No Adverse Effect
14	Holodomor Ukrainian Holocaust Memorial	No Adverse Effect
16	Joseph Gales School	No Adverse Effect
17	Library of Congress, Thomas Jefferson Building	No Adverse Effect
22	REA Building	Adverse Effect
25	Senate Parks, Underground Garage, and Fountains	No Adverse Effect
27	Square 750 Rowhouse Development	No Adverse Effect
28	St. Aloysius	No Adverse Effect
29	St. Joseph's Home (Former)	No Adverse Effect
30	St. Phillip's Baptist Church	No Adverse Effect
33	Thurgood Marshall Federal Judiciary Building	No Adverse Effect
34	Topham's Luggage Factory (Former)	No Adverse Effect
35	Uline Ice Company Plant and Arena Complex (Former)	No Adverse Effect
40	Washington Union Station (Station Building)	Adverse Effect
41	Washington Union Station Plaza (Columbus Plaza and Columbus Fountain)	No Adverse Effect
43	901 Second Street NE	No Adverse Effect
44	Capitol Hill Historic District	No Adverse Effect
45	L'Enfant-McMillan Plan	No Adverse Effect
48	Union Market Historic District	No Effect
49	Washington Union Station Historic Site	Adverse Effect

Property No. on APE Fig 1	Name of Historic Property	Determination of Effect
53	U.S. Capitol Dome Cultural Viewshed	No Adverse Effect
55	Washington Monument Cultural Viewshed	No Adverse Effect

No. 3 – C&P Telephone Company Warehouse



C&P Telephone Company Warehouse, view looking northeast from North Capitol and L Streets NW. The original building is on the left with an addition to the right.

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical and visual effects would occur. The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary vibration effects would occur during construction that would cause human annoyance due to the construction truck route on North Capitol Street. Such effects would not diminish the historic and architectural characteristics that qualify the building for inclusion in the NRHP and DC Inventory and the significance of the property is not derived from a quiet and vibration-free setting. No operational noise or vibration effects would occur once construction is complete.

The property is located along North Capitol Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that North Capitol Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting and there would be no adverse effect.

No. 4 – Capital Press Building (Former)



Capitol Press Building from N and Third Street NE, view looking southeast. This photograph was taken in March 2022.

Effects Assessment: FRA finds the Preferred Alternative would have **no effect**.

No physical and visual effects would occur. The property is located within the Operational and Construction Noise and Vibration Study Areas. However, noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur. The property is not located at or adjacent to thoroughfares that would be impacted by Project-related traffic. Furthermore, the property is under construction as part of a private development project, and as a result, has lost much of its integrity.

No. 5 – City Post Office (Postal Museum)



City Post Office (Postal Museum), view looking north from Massachusetts Ave NE.

Effects Assessment: FRA finds the Preferred Alternative would have a **potential adverse effect**.

No direct physical effects to the property would occur. The Preferred Alternative is visible from the east elevation of the City Post Office, as shown in the visual assessment below. Additionally, the G Street vehicular ramp to the Preferred Alternative's underground facilities would be visible from the north elevation. Details on the wayfinding for the new ramp and other WUS related wayfinding is not known at this time to be included in a visual simulation. However, such elements would likely have low visibility and low sensitivity. Overall, visual changes from the ramp and related wayfinding would have moderate visibility and sensitivity, resulting in a potential moderate visual effect because though the Preferred Alternative will be visible, it will be consistent with existing visual conditions of the existing parking garage. The visual effect of the Preferred Alternative would not diminish the integrity of the property. The architectural characteristics that distinguish the property will be retained as will its setting and connection to WUS, Columbus Plaza, Massachusetts Avenue, and the Senate Parks.

The City Post Office is currently used as a museum. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no operational noise or vibration effects would occur. However, during the construction of the G Street ramp, temporary, severe vibration levels of approximately 0.39 in/s would occur. Such levels exceed the Federal Transit Administration (FTA) criteria for potential structural damage. Therefore, there would be an increased risk of structural damage and a potential adverse effect during construction.

Vibration monitoring would be needed to ensure structural damage does not occur.

Additionally, there would be temporary, severe noise effects at the northeast corner of the building during start of excavation activities due to the construction of the G Street ramp. Such

temporary noise effects would not diminish the architectural significance of the property for which the property is listed and would not result in an adverse effect. The Project Proponents would prepare and implement a Construction Noise and Vibration Control Plan to ensure location specific measures are identified to minimize construction noise at the property.

The property is located along North Capitol Street and Massachusetts Ave NE, which are principal and minor arterial streets. While these streets would experience incremental increases in operational traffic volumes compared to existing conditions, as predicted in the traffic analysis, this would not alter the property's existing, busy, traffic-heavy urban setting. Furthermore, new traffic patterns due to the construction of the G Street ramp to the north of the property would not affect the property's association with WUS, the history of the U.S. Postal Service, or the building's association with architect Daniel Burnham for which the property is significant.

Visual Assessment from the east elevation of the City Post Office (Postal Museum) along First Street NE, looking northeast



*Visual Assessment for the Preferred Alternative;
view along First Street NE, looking north. City Post
Office on left, Project Area and WUS on right.*

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



*No-Action Alternative – Provided for Visual
Comparison*

*Note: The No-Action Alternative is not visible
because it would be obscured by the existing
parking garage.*

Visual Assessment from G Street NE, looking east with the north elevation of the City Post Office (Postal Museum) on the right



Visual Assessment for the Preferred Alternative; view along G Street NE, looking east with the new access ramp at the center of the street. Note that wayfinding for the new ramp and other WUS related wayfinding isn't known and cannot be part of the simulation at this time. However, such elements would likely have low visibility and low sensitivity and would not cause an adverse visual effect.



No-Action Alternative – Provided for Visual Comparison

Note: The private air-rights development of the No Action Alternative is not visible because it would be obscured by the existing parking garage.

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



No. 6 – Dirksen and Hart Senate Office Buildings



Dirksen Senate Office Building, view looking northeast



Hart Senate Office Building, view looking north

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects to the Dirksen and Hart Senate Office Buildings would occur as a result of the Preferred Alternative. The visual change resulting from the Preferred Alternative would have low visibility and low sensitivity, resulting in a negligible visual effect that would not diminish the significance or integrity of the property (see visual assessment below). The property is outside both the Operational and Construction Noise and Vibration Study Areas and is not located at or adjacent to thoroughfares that would be impacted by Project-related traffic.

Visual Assessment from the Dirksen and Hart Senate Office Building along C Street NE



Visual Assessment for the Preferred Alternative, view from the north elevation of the Dirksen Senate Office Building along C Street, looking north towards the Project Area



No-Action Alternative – Provided for Visual Comparison

Station Expansion



Private Air-Rights Development



Potential Federal Air-Rights Development



No. 11 – Government Printing Office



Government Printing Office, view looking west

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur. The visual effect of the Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible visual effect that would not diminish the significance or integrity of the property (see visual assessment below). The visual change would have a beneficial visual effect compared to existing conditions because the Project would be less visible than the existing parking garage, which would be removed.

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates no temporary or operational noise or vibration effects would occur.

The property is located along North Capitol Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that North Capitol Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

*Visual Assessment from the Government Printing Office at the corner of G Street NW and
North Capitol Street NW*



Visual Assessment for the Preferred Alternative

Station Expansion



Outline of Existing Parking Garage to be Removed



*No-Action Alternative – Provided for Visual
Comparison*

*Note: The private air-rights development of the No
Action Alternative is not visible because it would be
obscured by the existing parking garage.*

No. 12 – Government Printing Office Warehouse No. 4



View from GPO Building looking towards Government Printing Office Warehouse No. 4. Project Area in the background.

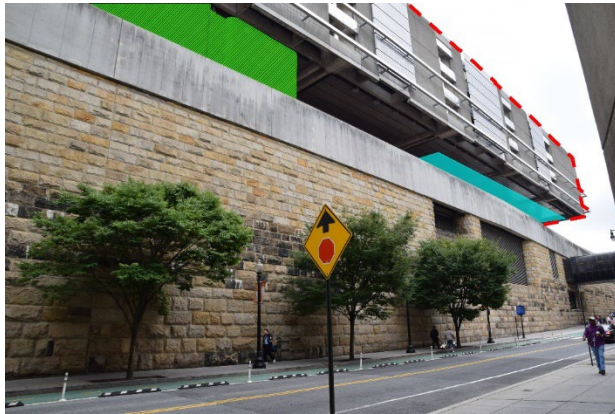
Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effect would occur. The Preferred Alternative would have low visibility and low sensitivity, resulting in a negligible visual effect (see visual assessment below). In fact, the visual change would have a beneficial visual effect because the Project would be less visible than the existing parking garage, which would be removed.

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of Preferred Alternative indicates that temporary, moderate to severe noise effects from construction would occur due to support of excavation activities and the construction of the G Street ramp. However, such effects would not diminish the significance and integrity of the property, which is directly related to its architectural design and association with the GPO, WUS, and City Post Office. No operational noise or vibration effects nor temporary construction vibration effects would occur.

The property is located along North Capitol Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that North Capitol Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting.

*Visual Assessment from the east elevation of the Government Printing Office Warehouse No. 4
along First Street NE looking southeast*



Visual Assessment for the Preferred Alternative

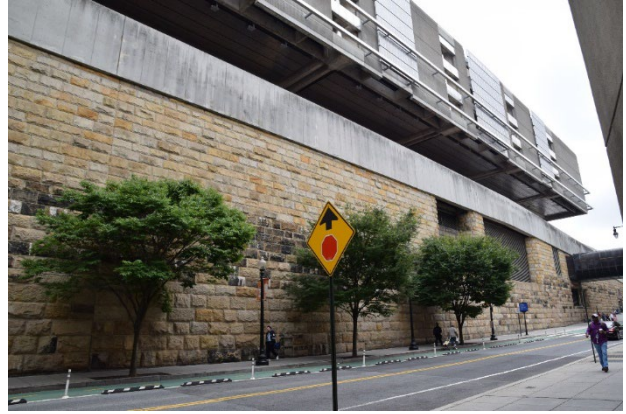
Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



*No-Action Alternative – Provided for Visual
Comparison*

*Note: The private air-rights development of the No
Action Alternative is not visible because it would be
obscured by the existing parking garage.*

No. 14 – Holodomor Ukrainian Holocaust Memorial



View of Holodomor Ukrainian Holocaust Memorial looking east towards the Project Area and WUS along Massachusetts Ave

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical or visual effects would occur. The property is located at the edge of the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur. The property is located along Massachusetts Ave NE, which is a principal arterial street at the location of the memorial and would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

No. 16 – Joseph Gales School



View from Massachusetts Ave NW of Joseph Gales School, looking east towards the Project Area. The property does not have a direct view of the Project Area.

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical or visual effects would occur. The property is located outside of the Operational and Construction Noise and Vibration Study Areas. However, the property is located along Massachusetts Ave NE, which is a principal arterial street and would experience incremental increases in operational traffic volumes compared to existing conditions. The increase in traffic would not alter the property's busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

No. 17 – Library of Congress, Thomas Jefferson Building



Library of Congress Thomas Jefferson Building, view looking east

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur. The visual effect of the Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible visual effect that would not diminish the significance or integrity of the property (see visual assessment below). The property is outside the Operational and Construction Noise and Vibration Study Areas and is not located at or adjacent to thoroughfares that would be impacted by Project-related traffic.

Visual Assessment from the west elevation of the Library of Congress Jefferson Building looking north



Visual Assessment for the Revised Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison Note: The No-Action Alternative is not visible from this perspective.

No. 22 – Railway Express Agency (REA) Building



Railway Express Agency Building, view looking southwest

Effects Assessment: FRA finds the Preferred Alternative would have an **adverse effect**.

The physical effects of the Preferred Alternative would be the same as the other Action Alternatives. Refer to the draft AOE Section 6.1.22 *Railway Express Agency Building*, provided in Appendix A, for a full explanation of physical effects. In summary, the extent of physical effects cannot be determined at this time because there is only a conceptual understanding that the REA Building may connect to the new H Street Concourse below the new tracks and platforms.

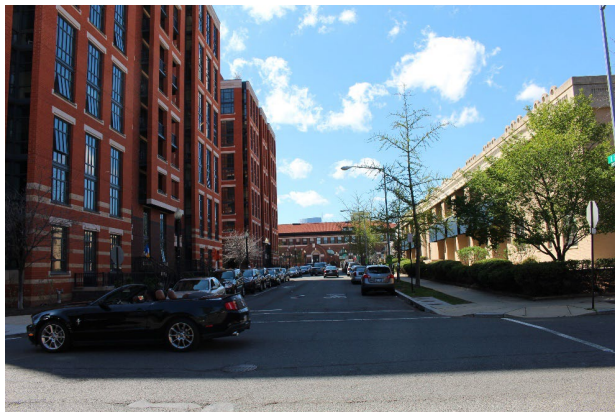
The reconstruction of the rail terminal, construction of a deck above the rail terminal, and construction of a new service building to the north of the REA Building would result in physical and visual effects that would alter the connection between WUS, the rail terminal, and the REA Building. This would adversely affect the property's integrity of setting, feeling, and association. However, the Preferred Alternative would not be visible looking west towards the REA Building from Eye Street and Third Street NE, and there would be a moderate visual effect due to the construction of the service building from Second Street and K Street NE, as illustrated in the visual assessments below. There would be no perceived visual effect from the east of the property, and a moderate change to the north of the property. Overall, the property would maintain its existing visual relationship with residential neighborhoods to the east.

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that the property would experience noise and vibration effects during Project construction that may result in an adverse effect. Vibratory pile driving may occur within approximately 16 feet of the REA Building, resulting in vibration levels of approximately 0.17 to

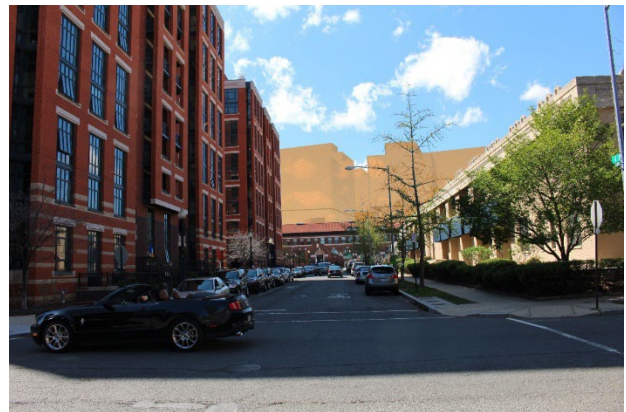
0.33 in/s, which exceeds the FTA criteria for potential structural damage. Therefore, there would be an increased risk of structural damage and a potential adverse effect during construction. Such effects would likely occur when construction is on the eastern side of the construction site, and there would be little to no potential construction vibration effects as construction activities shift farther west. Given the long duration of construction activities and the relative proximity of the REA Building, the effect of vibration on the building would need to be monitored to ensure structural damage does not occur. Additionally, temporary, severe noise effects from construction would occur, especially when excavation occurs on the eastern side of the construction site. However, such temporary noise effects, would not diminish the significance or integrity of the building, which is defined by its architectural design and association with WUS and the WUS Historic Site.

The property is located along Second Street NE, which is classified as a collector road intended to connect local roads with arterial roads and carry higher volumes of traffic. The traffic analysis for the Preferred Alternative shows that Second Street NE would likely not experience incremental increases in operational traffic volumes compared to existing conditions. Traffic related to the Preferred Alternative would not diminish the property's integrity of setting, feeling, or association.

Visual Assessment from the intersection of Eye Street and Third Street NE, REA Building in background



The Preferred Alternative would not be visible from this perspective.



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from Second Street NE and K Street NE



Visual Assessment for the Preferred Alternative showing construction of a new service building in place of the existing Substation 25A.

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Substation 25A to be Removed



No-Action Alternative – Provided for Visual Comparison

As part of the No-Action Alternative, Substation 25A, located above the Burnham Wall in the center of the photograph and a contributing element to the WUS Historic Site, would be demolished and relocated.

Private Air-Rights Development



No. 25 – Senate Parks, Underground Garage, and Fountains



Senate Parks, view looking south



View from Lower Senate Park looking northeast towards the WUS headhouse

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur. According to the visual assessment (see below), the Preferred Alternative would have low visibility and moderate sensitivity, resulting in a potential minor visual effect, which would not affect the integrity of setting or association because the significance of the site is not derived from its visual connection beyond WUS but is instead attributed to its design and relationship to the Senate Office Buildings and Capitol Grounds.

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur. Additionally, the property is not located along or near thoroughfares that would be impacted by traffic.

Visual Assessment from the fountain within the Senate Parks between New Jersey Ave and Delaware Ave NE.



Visual Assessment for the Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



No. 27 – Square 750 Rowhouse Development



*Square 750 Rowhouse
Development, view looking west
along Parker Street NE*



*Square 750 Rowhouse
Development, view looking
southwest from K Street NE and
Third Street NE*



*Development, view looking east
to the southwest corner of the
block. Multi-story development
has surrounded the one and
two-story commercial and
rowhouse architecture.*

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

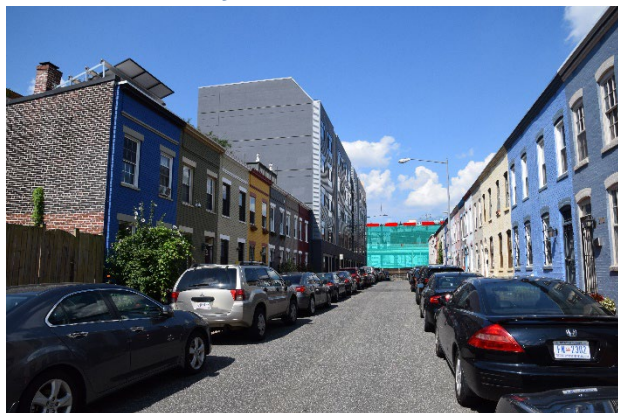
While the Square has lost much of its integrity of setting, feeling, and association due to recent and planned developments within and surrounding the square, FRA is presuming it is still eligible for the purposes of analysis for this undertaking. Most recently, 203 and 205 K Street NE, the properties at the northwest corner, and 917 through 923 Second Street NE, the properties at the southwest corner, north of Parker Street, were torn down for new residential development.

No physical effects from the Project would occur. The Preferred Alternative would have moderate visibility and low sensitivity, resulting in a potential minor visual effect that would not affect the integrity or significance of the property (see visual assessment below).

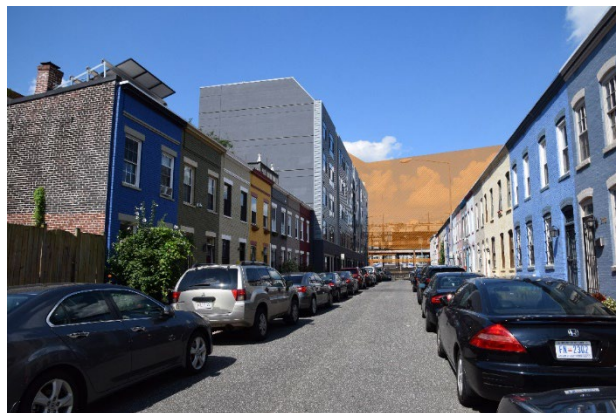
The property is within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that the square would experience temporary, moderate noise effects during construction at the buildings facing K Street, and temporary, severe noise effects due to excavation activities during construction at buildings facing Second Street and Parker Street NE. Additionally, temporary vibration effects at the northwest corner would result in human annoyance but would not cause physical effects and would not diminish the integrity or significance of the square. There would also be moderate operational noise effects due to increased train operations and incremental increases in operational traffic volumes, compared to existing conditions.

The property is bound by K Street to the north and Second Street to the west, which are minor arterial and collector streets, respectively. The traffic analysis for the Preferred Alternative shows that both streets would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting.

Visual Assessment from Parker Street, the central street dividing Square 750, looking west towards the Project Area



Visual Assessment for the Preferred Alternative



No-Action Alternative – Provided for Visual Comparison

Station Expansion



Outline of Existing Substation 25A to be Removed



As part of the No-Action Alternative, Substation 25A, located above the Burnham and a contributing element to the WUS Historic Site, would be demolished and relocated.

Private Air-Rights Development



Visual Assessment from the west side of Parker Street, the central street dividing Square 750, looking west towards the REA Building and the Project Area



Visual Assessment for the Preferred Alternative

Station Expansion



Outline of Existing Substation 25A to be Removed



No-Action Alternative – Provided for Visual Comparison

As part of the No-Action Alternative, Substation 25A, located above the Burnham Wall and a contributing element to the WUS Historic Site, would be demolished and relocated.

Private Air-Rights Development



No. 28 – St. Aloysius Catholic Church



St. Aloysius Catholic Church, view looking west

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical or visual effects would occur. The property is located at the edge of the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur.

The property is located along North Capitol Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that North Capitol Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

No. 29 – St. Joseph’s Home (Former)



St. Joseph’s Home (Former), view looking northwest

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

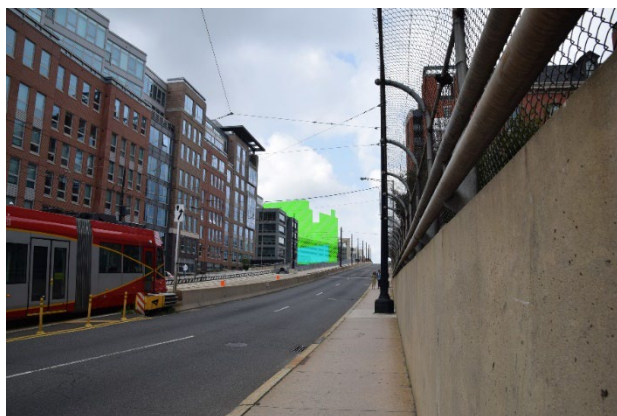
No physical effects would occur. The Preferred Alternative would have moderate visibility and low sensitivity, resulting in a potential minor visual effect that would not alter the visual character of the view towards the station or affect the integrity or significance of the property, which is tied to its association with the development of the Swampoodle neighborhood (see visual assessment below).

The property is within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that moderate operational noise effects would occur due to incremental increases in operational traffic volumes along H Street. Additionally, temporary, moderate to severe construction noise effects would occur during excavation (severe if excavation spoils are removed by trucks and moderate if removed by train). Temporary construction vibration effects would also occur, resulting in an annoyance impact. However, such effects would not diminish the property’s integrity or historical significance, which is tied to its association with the development of the Swampoodle neighborhood.

The property is located along H Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that H Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the

property's existing, busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

Visual Assessment from the south elevation of St. Joseph's Home (former) along H Street NE looking west

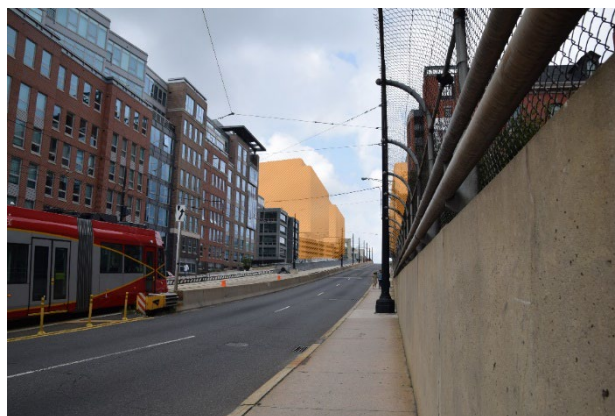


Visual Assessment for the Revised Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development (maximum buildable volume including penthouse)



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



No. 30 – St. Phillip's Baptist Church



St. Phillip's Baptist Church, view looking northeast

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical or visual effects would occur. The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur.

The property is located along North Capitol Street NE, which is a principal arterial street. The traffic analysis for the Preferred Alternative shows that North Capitol Street NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

No. 33 – Thurgood Marshall Federal Judiciary Building



Thurgood Marshall Federal Judiciary Building, view looking east

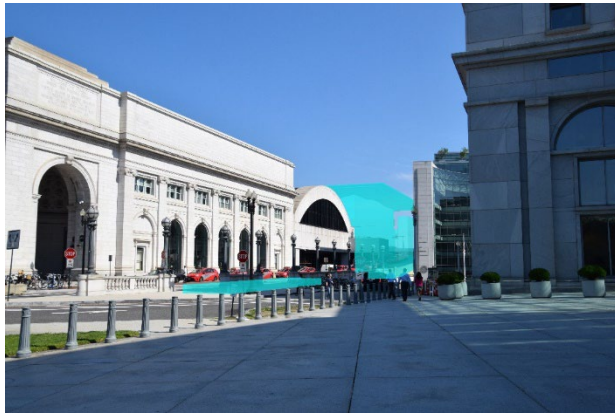
Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur. The visual effect of the Preferred Alternative would have moderate visibility and moderate sensitivity, resulting in a potential moderate visual effect that would not diminish the integrity of setting, which is characterized by the existing institutional buildings to the north, open space to the west, and the visual connection to the WUS headhouse, Columbus Plaza, and the AOC campus to the south (see visual assessment below).

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, severe construction noise effects would occur during the start of excavation due to the construction of the ramp at the east side of WUS. However, such effects would not diminish the property's integrity or historical significance, which is related to its architectural characteristics and association with the Architect of the Capitol. No operational noise or vibration effects would occur.

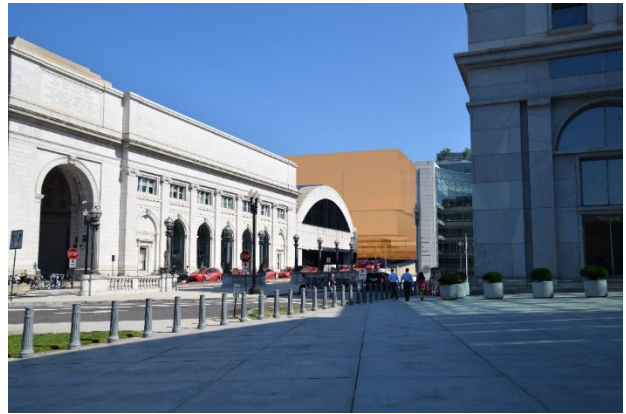
The property is located at the east side of Columbus Circle Drive, which is a minor arterial street. The traffic analysis for the Preferred Alternative shows that Columbus Circle Drive NE would experience incremental increases in operational traffic volumes compared to existing conditions. However, this would not alter the property's existing, busy, traffic-heavy urban setting and would not diminish the integrity or significance of the property.

Visual Assessment from the front plaza of the Thurgood Marshall Building.



Visual Assessment for the Preferred Alternative

Station Expansion



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



No. 34 – Topham’s Luggage Factory (Former)



Topham’s Luggage Factory (former), view looking northwest

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical or visual effects would occur. The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, moderate noise effects would occur due to support of excavation activities. However, such effects would not diminish the property’s integrity or historical significance, which is related to its historical association with commercial development and industry in Washington, DC. No operational noise or vibration effects would occur. The property is not located at or adjacent to thoroughfares that would be impacted by Project-related traffic.

No. 35 – Uline Ice Company Plant and Arena Complex



Uline Ice Company Plant and Arena Complex, view looking southwest

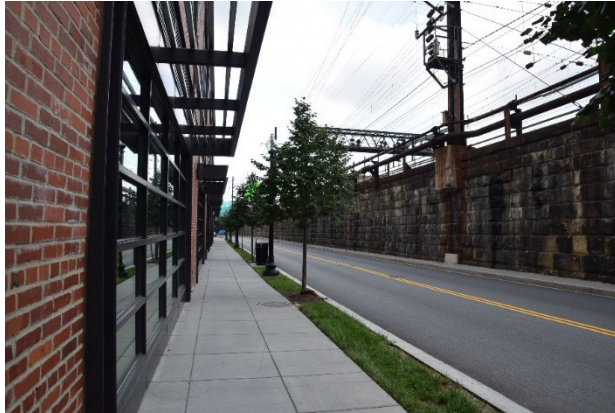
Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur. The visual effect of the Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible visual effect that would not diminish the integrity of setting (see visual assessment below).

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that moderate operational noise effects would occur due to increased train operations. However, such effects would not diminish the property's integrity or historical significance, which is related to the property's association with the development of the neighborhood, and association with the Beatles. No temporary noise effects or temporary or operational vibration effects would occur.

The property is not located at or adjacent to thoroughfares that would be impacted by traffic.

Visual Assessment from the west elevation of the Uline Arena looking south along Second Street NE



Visual Assessment for the Preferred Alternative



No-Action Alternative – Provided for Visual Comparison

Station Expansion



Private Air-Rights Development



Potential Federal Air-Rights Development



No. 40 – Washington Union Station (Station Building)



Aerial view of WUS with Columbus Plaza in foreground, view looking northeast

Effects Assessment: FRA finds the Preferred Alternative would have an **adverse effect**.

The physical effects assessment of the Preferred Alternative would be the same as the other Action Alternatives (refer to the draft AOE, Section 6.1 *Effects to Each Historic Property*, provided in Appendix A). In summary, work to remove the existing Claytor Concourse (constructed in 1988) and construct a new train hall would impact the north façade of the original passenger concourse. The extent of original fabric remaining at the north elevation of the original passenger concourse is unknown at this time. Currently, a section of the entablature is the only original fabric visible from within the Claytor Concourse. Should the removal of the Claytor Concourse and construction of the new train hall cause physical effects or fail to preserve the distinctive features, materials, and finishes of the original passenger concourse, then an adverse effect would occur. Regardless, the construction of the new train hall would adversely affect WUS, substantially increasing the mass of the station and diminishing the integrity of the building's design and setting, altering its connection to the rail terminal.

Work to remove the columns in the First Street Tunnel would involve accessing the tunnel from above and rebuilding approximately 15,000 square feet of the Retail and Ticketing Concourse (original passenger concourse) floor. While the current marble finish of the floor was installed in the 1980s, the floor structure is original. Constructed of a steelwork frame and terracotta tile arches, adverse physical effects due to the demolition of the original floor structure and removal of the original steel columns would be minimized or avoided as the design would adhere to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Additional physical effects to WUS may occur as design of the Project continues. If aspects of future design do not adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties, it would diminish the integrity to the WUS Historic Site. In the Project's PA, FRA will include further design review and consultation to ensure effects do not become adverse or are appropriately minimized and mitigated.

Visual effects of the Preferred Alternative would adversely affect the integrity of setting, feeling, and association by altering the visual connection of the station with the rail terminal and the various contributing features within the WUS Historic Site. Similarly, views of the station from various vantage points of the L'Enfant-McMillan Plan, specifically those from the radial streets to the south of the station, including Delaware Ave and First Street NE, would be changed, affecting the setting and visual character of the station, which is characterized by the uninterrupted silhouette of the barrel-vaulted station roof and the visual symmetry of the station's monumental Beaux Arts design. Due to the height of the Project elements and/or the potential Federal air-rights development, such character-defining features of the setting would be altered.

As shown in the following visual simulations, the Preferred Alternative would not change the character of the view towards the station from the west side of Columbus Circle. The Preferred Alternative would have moderate visibility and low sensitivity from the west side of Columbus Plaza. However, the Preferred Alternative would have a beneficial visual effect because the existing parking garage would be removed and the view looking north along First street NE would be reestablished. The existing view is currently truncated by the projecting mass of the existing parking garage. From the east side of Columbus Circle, the Preferred Alternative would have low visibility and moderate sensitivity, resulting in potential minor visual effects.

New ramps, which replace existing parking garage ramps, would be constructed to the east and west of WUS. Visual effects from the ramps to the immediate views of the station at the east and west ends would continue to occur, diminishing the integrity of design of the station. However, the effects of the ramps may be minimized as the design of the Project continues. Design review and ongoing consultation to ensure adverse effects are appropriately minimized and mitigated would be outlined in the Project's PA. Further details on the ramps are provided in Section 4, No. 49 *Washington Union Station Historic Site* of this SAOE.

Visual Assessment from the west side of Columbus Circle Drive



Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



No-Action Alternative – Provided for Visual Comparison

Note in this view the private air-rights development is not visible as it would be obscured by the existing parking garage, which would remain in the No-Action Alternative.

Visual Assessment from the east side of Columbus Circle Drive



Visual Assessment for the Preferred Alternative

Station Expansion



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



The Preferred Alternative would have moderate to high visibility and sensitivity, resulting in potential moderate to major visual effects to the station building from views from Delaware Ave NE, Louisiana Ave NE, First Street NE, E Street NE, and the H Street Bridge. From Delaware Ave, looking north from both C and D Streets NE, the Preferred Alternative would have high visibility and high sensitivity due to the potential Federal air-rights development rising above the west wing of the station and interrupting the roofline of the barrel vault roof, resulting in potential major visual effects to WUS. The same is true of the potential Federal air-rights development at the view from the intersection of First Street and C Street NE.

From the intersections of Louisiana Ave and D Street NW and E Street and the west side of Columbus Circle NE, the Preferred Alternative would have moderate visibility and moderate sensitivity, resulting in potential moderate visual effects.

Visual Assessment from Delaware Avenue and D Street NE



Visual Assessment for the Preferred Alternative



No-Action Alternative – Provided for Visual Comparison

Potential Federal Air-Rights Development



Private Air-Rights Development



Visual Assessment from Delaware Avenue and C Street NE



Visual Assessment for the Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from First Street and C Street NE



Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from Louisiana Avenue and D Street NW



Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from E Street and Columbus Circle Drive



Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



No-Action Alternative – Provided for Visual Comparison

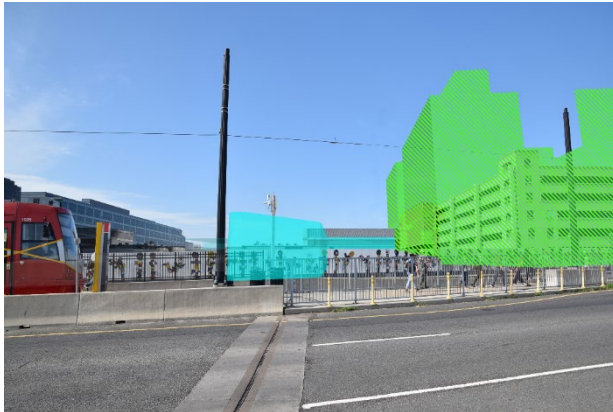
In this view the private air-rights development is partially obscured by the existing parking garage, which would remain in the No-Action Alternative.

Private Air-Rights Development



The view from the center of the H Street Bridge looking south towards the station conveys architect Daniel Burnham's design for the WUS rail yard and contributes to the character of Union Station and its public visibility. The Preferred Alternative would have high visibility and high sensitivity, resulting in a potential major visual effect. The Preferred Alternative would change the scale and character of development along the bridge with the potential Federal air-rights development replacing the existing parking garage and the new H Street headhouse providing access from the bridge to the station via the new concourses constructed below. A visual connection between the H Street Bridge and the north elevation of the station and new train hall would be provided by a central civic space. This central civic space would be designed with primary responsibility and implementation by the private air-rights development, with coordination needed with the Project Proponents for the Project elements and the shared elements in support of the Project.

Visual Assessment from the Center of the H Street Bridge Looking South

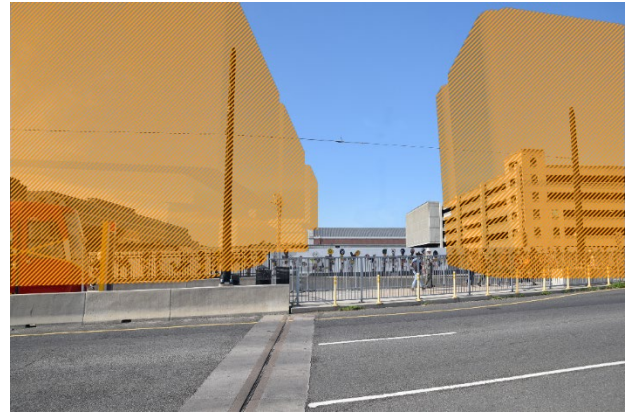


Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



WUS was designed and constructed to have a monumental visual presence from the southern radial streets of the L'Enfant-McMillan Plan, including Delaware Ave NE, Louisiana Ave NE, and First Street NE. These streets provide a direct connection to the U.S. Capitol and the monumental core of Washington, DC. The potential major visual effects of the Preferred Alternative to the views of the station from Delaware Ave NE, First Street NE, and the H Street Bridge would affect the visual character and integrity of design, setting, and feeling of WUS and would cause an adverse effect.

The Preferred Alternative may result in adverse visual effects to the interior of the historic station building depending on the design of the Project elements. Changes that may significantly alter the visual character of the interior of the station may diminish the integrity of design, setting, and feeling and result in an adverse effect.

Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary vibration and noise effects would occur. During construction, vibratory pile driving and drill rigging may occur within approximately 10 feet of the north elevation with vibration levels of 0.3 to -0.67 in/s, which may exceed the FTA criterion for increased risk of structural damage and result in an adverse effect. Although the historic station building was designed to facilitate train operations and may be capable of withstanding vibration levels that

exceed the thresholds, its sensitivity to vibration has not been specifically determined at this stage of Project planning. Vibrations at the building would need to be monitored to ensure structural damage does not occur.

Additionally, temporary moderate to severe noise effects would occur due to support of excavation and excavation activities during construction. While the setting of WUS has always been characterized by the busy and noisy atmosphere of an active rail station, the extent of temporary severe noise effects occurring on all sides of WUS may diminish the integrity of setting of the station, resulting in a potential adverse effect, and should be monitored during construction. No operational noise or vibration effects would occur.

Operational traffic volumes along Columbus Circle Drive would generally remain the same relative to existing conditions. Additionally, the Preferred Alternative would create a dedicated PUDO facility belowground that would direct some PUDO traffic away from the front of the station. The Preferred Alternative includes measures to monitor traffic congestion and coordinate with DDOT to minimize increased traffic volumes at various intersections. It is unlikely that traffic effects of the Preferred Alternative would diminish the integrity and significance of the property which currently experiences busy, traffic-heavy activity, as a major intermodal station.

The Preferred Alternative also includes Federal air rights, which may be transferred or leased if the Station Expansion Project occurs. Consistent with Section 106 regulations 36 CFR 800.5(2)(vii), should the transfer, lease, or sale of the Federal air-rights occur without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance, there would be an adverse effect. Therefore, necessary stipulations to ensure that WUS is preserved and that any new development would adhere to the Secretary of the Interior's *Standards for the Treatment of Historic Properties* would be outlined in the Project's PA.

No. 41 – Washington Union Station Plaza (Columbus Plaza and Columbus Fountain)



Columbus Fountain is the focal point of Columbus Plaza, view looking north

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur, and the Preferred Alternative would not be visible from the plaza (see visual assessment below).

The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, severe noise effects would occur due to the construction of the east ramp during support of excavation and start of excavation activities. However, such temporary effects would not diminish the property's integrity or historical significance, which is related to the property's monumental design and association with WUS. No vibration effects would occur.

Operational traffic volumes along Columbus Circle Drive would generally remain the same relative to existing conditions. Additionally, the Preferred Alternative would create a dedicated PUDO facility belowground that would direct some PUDO traffic away from Columbus Plaza. The Preferred Alternative includes measures to monitor traffic congestion and coordinate with DDOT to minimize increased traffic volumes at various intersections. The traffic effects of the Preferred Alternative would not diminish the integrity and significance of the property, which is derived from its monumental design and spatial relationship as the forecourt to WUS, and currently experiences heavy traffic.

Visual Assessment from Columbus Plaza



The Preferred Alternative would not be visible from this vantage point.



No-Action Alternative – Provided for Visual Comparison

In this view the private air-rights development is not visible.

No. 43 – 901 Second Street NE



901 Second Street, view looking northeast

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects would occur, and the Preferred Alternative would not be visible (see visual assessment below). The property is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, moderate to severe noise effects would occur due to support of excavation and excavation activities. However, such temporary effects would not diminish the property's integrity or historical significance, which is related to the property's association with the 19th century development in the northeast quadrant of Washington, DC. No temporary vibration effects nor operational noise and vibration effects would occur.

Incremental increases to traffic along Second Street in front of the property are unlikely as predicted in the traffic analysis and would not diminish integrity.

Visual Assessment from the 901 Second Street looking southwest.



Visual Assessment for the Preferred Alternative. The Project would not be visible.



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



No. 44 – Capitol Hill Historic District



Capitol Hill Historic District, view looking northeast from the intersection of F Street and Third Street NE. The character of the district is defined by its mostly late 19th and early 20th century residential rowhouses and tree-lined streets

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

No physical effects to the Capitol Hill Historic District would occur. The Preferred Alternative would only be visible from certain locations within the historic district that have a visual connection to the Project Area. From First Street NE and Constitution Avenue NE, the Preferred Alternative would have moderate visibility and moderate sensitivity, resulting in potential moderate visual effects. From Massachusetts Ave and Second Street NE the Preferred Alternative would not be visible. From G and Third Streets NE, the Preferred Alternative would have low visibility and low sensitivity, resulting in potential negligible visual effects. The Preferred Alternative would not be visible from F and Third Streets NE. Please refer to the visual assessments below.

Cumulatively, such visual effects are minor and would not adversely affect the integrity of the historic district. The character of the existing views, which are exemplified by the small scale residential and commercial buildings in the foreground surrounded by large institutional and commercial buildings along Second Street NE in the background, would not change because of the Preferred Alternative. Furthermore, the integrity of the historic district's setting, feeling, and association, which is characterized by the architectural design of the predominately 19th and early 20th century buildings and their relationship to the streets of the L'Enfant Plan, would remain intact despite the minor visual effects of the Preferred Alternative.

Visual Assessment from First Street NE and Constitution Avenue NE



Visual Assessment for the Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from Massachusetts Avenue and Second Street NE



Visual Assessment for the Preferred Alternative, which would not be visible from this view.



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from G Street and Third Street NE



Visual Assessment for the Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from F Street and Third Street NE



Visual Assessment for all Action Alternatives. The Project would not be visible from this view.



No-Action Alternative – Provided for Visual Comparison. The private air-rights development would not be visible from this view.

The northeast corner of the Capitol Hill Historic District, between Second and Third Streets NE and Massachusetts Ave and H Street NE, is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, moderate noise effects would occur along Second and F Streets NE during construction due to excavation activities. Such effects would occur if excavation spoils are removed by truck or mixed (truck and work train) scenarios. Noise

impacts are reduced significantly if spoils are removed by work train instead of trucks. Additionally, temporary vibration effects during excavation would result in annoyance impacts to properties at Second Street NE and 205 F Street NE due to construction truck routes. Such temporary effects would not diminish the property's integrity or historical significance, which is related to the property's association with architectural design of 19th and early 20th century and the history of development of Washington, DC. No operational noise or vibration effects would occur. The Preferred Alternative includes measures for temporary noise and vibration effect minimization, including the preparation and implementation of a Construction Noise and Vibration Control Plan, which would ensure location specific measures are identified to minimize and mitigate construction noise.

Most of the Preferred Alternative's traffic would occur west of the station and would not be concentrated in the Capitol Hill Historic District. The Preferred Alternative parking garage would have 77% fewer parking spaces than existing conditions. The Preferred Alternative would also accommodate approximately half of all PUDO activity in the belowground PUDO facility, reducing PUDO-generated traffic at Columbus Circle and along Second Street NE compared to the Action Alternatives assessed in the draft AOE. In addition, the Preferred Alternative's elimination of the vehicular ramp from the deck level to F Street NE on the east side of WUS (which was included in all Action Alternatives assessed in the draft AOE) would reduce vehicular traffic along the streets adjacent to or within the historic district.

The Preferred Alternative transportation analysis modeled traffic at seven intersections in or on the edge of the historic district:

- H and Third Street NE,
- H and Fourth Street NE,
- Second and G Street NE,
- Second and F Street NE,
- Second and Massachusetts Ave NE,
- Second and D Street NE, and
- Fourth and Massachusetts Ave NE.

These intersections are nodes in the roadway network adjacent to the Project Area along which vehicles are known to travel to and from WUS.

The analysis shows that compared to existing conditions, there would be an increase in operational vehicular traffic to the east of the station. In terms of the Preferred Alternative's operational effects from traffic, the analysis shows while there would be in an increase in traffic

at some intersections within the historic district, all the studied intersections within the historic district would have acceptable Levels of Service (LOS) of D or better.²¹ Table 5 also explains:

- The Preferred Alternative improves one intersection (Second and D Streets NE) within the CHHD currently operating an unacceptable LOS F in the PM Peak Period to an acceptable LOS of D.
- The intersection at Third and H Streets NE, which is adjacent to *but not within* the CHHD, currently operates at a LOS E within the AM Peak Period. While LOS E is better than the LOS F in the Preferred Alternative's AM Peak Period, the existing condition of LOS E is not "free flow" traffic operations and is considered to be an unacceptable LOS.

²¹ "Acceptable LOS" based on traffic engineering standards and consistent with District Department of Transportation (DDOT) Comprehensive Transportation Review (CTR) guidance, which identifies significant impacts at LOS E or F. Some of the intersections at LOS D may see increases in queue and delay relative to existing conditions, but the overall intersection operations would remain acceptable.

Table 5. Existing Condition Level of Service at Six Intersections Adjacent to Capitol Hill Historic District Compared to the No Action, Alternative A-C, and the Preferred Alternative (Red “E” and “F” indicates an unacceptable LOS)

Intersection	Existing Condition Peak LOS (AM/PM)	Peak LOS for the Preferred Alternative (AM/PM)
H and Third Street NE	E/C	F/D
H and Fourth Street NE	B/B	C/B
Second and G Street NE	B/B	C/B
Second and F Street NE	B/B	C/C
Second and Massachusetts Ave NE	C/C	C/D
Second and D Street NE	D/F	D/D
Fourth and Massachusetts Ave NE.	C/D	D/D

Whether the AM LOS condition at the Third and H Street NE intersection could affect traffic volumes along streets in the Capitol Hill Historic District cannot be reliably determined at this time. Modeling cannot account for the reactive and discretionary behavior of drivers diverting their course from the known travel routes because of increased congestion.²² Projecting such

²² Traffic modeling projects vehicular circulation and routing based on established data sources and parameters. Both the DEIS and Supplemental Draft EIS (SDEIS) analyses used data from the regional travel model developed by the Transportation Planning Board, the regional metropolitan planning organization to identify the regional flow of traffic to and from WUS. This data indicates where traffic is likely to enter and exit the study area. Peak-hour routings were then identified using ArcGIS Network Analysis tools that provide real-time information about the shortest route for drivers during the AM and PM peaks. This identified the routings that drivers are likely to take based on travel patterns and congestion. The traffic modeling reflects a 2040 traffic scenario where the baseline data collected in 2017 has been grown, based on an accepted growth rate verified with DDOT. Though baseline traffic data was collected in 2017, the growth rate accounts for background growth/development and corresponding traffic increases since then and resulting impacts in the study area. The growth in traffic that is accounted for in the traffic model is a conservative assessment relative to the overall growth in traffic in the District of Columbia because it does not take into account the long-term effects of the Covid-19 pandemic on commuting patterns.

activity with any degree of accuracy is not possible because it deviates substantially from the observed and modeled data that are the basis for understanding traffic impacts. Additionally, a number of access restrictions already exist governing access to the Capitol Hill Historic District. Standard practice precludes modeling behavior that would violate posted signs.

However, because of the anticipated acceptable LOS in the vicinity of the Historic District for all but one intersection during the AM peak—there is low likelihood of significant diversion through the residential streets of the district. Even if drivers reacted by diverting course through the neighborhood, the volume of diverted traffic would not diminish the integrity of setting and feeling in the district.

Additionally, noise from operational traffic would not result in a noise effect, as stated in the noise and vibration analysis above. Other effects from operational traffic, including visual changes, would be concentrated along major thoroughfares, including H Street NE, Massachusetts Avenue NE, and Second Street NE. These streets function as principal arterial, minor arterial, and collector streets, respectively. Increases in operational traffic volumes compared to existing conditions along these streets would not alter their existing, busy, traffic-heavy urban setting.

During construction, the only street within or adjacent to the historic district that would be affected by temporary closures would be Second Street NE. The District of Columbia permits trucks to use this route today, as it is classified as a major collector street, and the street's setting has been substantially altered over the years by modern high-density development. During excavation on the east side of the rail terminal, which would last for approximately five months, up to 120 trucks per day could travel along portions of Second Street NE. This estimate is a projected worst-case scenario. All efforts are being made to reduce the need for trucks during excavation across the entire project area. Trucks would travel north and south on Second Street NE to access the construction site between H and K Streets NE, north of the historic district. No trucks would circulate along streets where the District of Columbia does not permit truck traffic. For example, the District of Columbia forbids heavy trucks on Third and Fourth Streets NE between Massachusetts Avenue NE and H Street NE, and on F Street NE between Second Street NE and Sixth Street NE.

Throughout the entire construction period for the Preferred Alternative, street and sidewalk segments around WUS could be subject to temporary closures. The only street in or adjacent to the historic district potentially affected by these closures would be Second Street NE. Road closures would generally last from 5 to 6 minutes on average and no more than 20 minutes. During those times, traffic may temporarily move to another street in the historic district, such as Fourth Street NE.

The upcoming Supplemental DEIS (SDEIS) identifies a commitment for Amtrak to evaluate and maximize the use of work trains instead of dump trucks to haul away excavation spoil. This approach would substantially reduce or eliminate the dump truck traffic associated with excavation. The upcoming SDEIS also identifies commitments of the Project Proponents to incorporate a truck traffic plan into the Project's integrated Construction Transportation Management Plan to limit impacts of truck traffic on residential neighborhoods as much as possible; adopt noise management best practices; and develop and implement a construction noise and vibration control plan.²³

The Capitol Hill Historic District is significant under NRHP Criteria A and C for its historical and architectural contributions to the development of the nation's capital. The historic district is also listed under Criterion D as a property that is likely to yield information important in prehistory and history. Capitol Hill Historic District history includes early residential development clustered near the U.S. Capitol and the Navy Yard, and late 19th- and early-20th-century housing for mostly middle-class workers.

National Park Service guidelines state that historic districts or components of historic districts lose significance if they contain so many alternations or new intrusions that they no longer convey a sense of historic environment.²⁴ The historic district currently experiences a high volume of traffic. Based on information provided by DDOT, there are currently ten intersections spread throughout the historic district that have unacceptable LOS (E or F). Despite this existing traffic that results in unacceptable LOS, the historic district still maintains the characteristics that qualify it for inclusion in the NRHP and it still conveys a sense of historic environment. As explained above, the Preferred Alternative is not anticipated to result in a net growth of unacceptable LOS intersections in the historic district.²⁵ Further, the temporary construction traffic impacts described above are confined to a few blocks along the western edge of the historic district, on a street (Second Street NE) where truck traffic is allowed, and therefore would not result in an adverse effect in the urban environment of the historic district. Traffic effects would not diminish the integrity of the late 19th and early 20th century architectural characteristics of the historic district or its association with the development of Washington, DC in that period.

²³ More information is provided in Chapter 5, Section 5 *Transportation* and Chapter 5, Section 10 *Noise and Vibration* of the DEIS.

²⁴ National Park Service. "National Register Bulletin: How to Apply the National Register Criteria for Evaluation." Accessed at <https://www.nps.gov/nr/publications/bulletins/nrb15/>. Accessed on June 1, 2018.

²⁵ As noted above, one intersection goes from existing LOS E to F in the Preferred Alternative; while one intersection goes from existing LOS F to LOS D in the Preferred Alternative.

Cumulatively, the minor visual effects; temporary, moderate noise and vibration effects affecting portions of only two streets in the district; and incremental traffic increases along H Street NE, Massachusetts Avenue NE, and Second Street NE would not diminish the historic district's integrity or significance.

The Preferred Alternative would not alter, directly or indirectly, any of the characteristics of the Capitol Hill Historic District that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of its location, design, setting, materials, workmanship, feeling, or association.

No. 45 – L’Enfant-McMillan Plan



View looking north along Delaware Ave NE towards the Project Area is a significant viewshed established by the L’Enfant-McMillan Plan



View looking northeast along Louisiana Ave NE towards the Project Area is a significant viewshed established by the L’Enfant-McMillan Plan

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

The Preferred Alternative would result in a physical effect to the L’Enfant McMillan Plan at G Street NE. A two-way vehicular ramp would be inserted into the street between North Capitol Street and First Street NE in order for vehicles to access the Preferred Alternative’s underground parking and PUDO. Such a change represents a minor effect to the property’s

overall integrity of design, considering that the entire plan is composed of approximately 3,565 acres within Washington, DC and the section of G Street NE would still be active and would continue to connect North Capitol and First Streets NE. The site's integrity of feeling and association are connected to its design, which is characterized by the relationships between the diagonal and orthogonal streets, the open space geometries, and the views and vistas created by the streets and open space. Such relationships would not be affected by the Preferred Alternative.

While many of the street views within the L'Enfant-McMillan Plan would experience visual changes, the visibility and sensitivity of the Preferred Alternative would vary according to the street and distance from the Project Area. Overall, the following views associated with the L'Enfant-McMillan Plan would experience visual effects to the south, west, and east of WUS:

South of WUS, the Preferred Alternative would have moderate to high visibility and sensitivity, resulting in potential moderate to major visual effects, to views from First Street NE looking north, Delaware Ave NE looking north/northeast, and Louisiana Avenue NE looking northeast. As illustrated in the following example visual simulations, the Preferred Alternative would not be visible from Delaware Ave NE. However, the potential Federal air-rights development would have high visibility and high sensitivity, resulting in potential major visual effects. As shown and described in the analysis for WUS, the Preferred Alternative would also have a potential major visual effect to the view from First Street NE and C Street NE.

Visual Assessment from Delaware Avenue and C Street NE



Visual Assessment for the Preferred Alternative

Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



Visual Assessment from Delaware Avenue NE and Constitution Avenue NE



Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



From Louisiana Ave NE, the Preferred Alternative would have moderate visibility and moderate sensitivity, resulting in a potential moderate visual effect. From the west side of Columbus Circle Drive looking north, the Preferred Alternative would have moderate visibility and low sensitivity. However, the Preferred Alternative would have a beneficial effect to this view because the existing parking garage would be removed and the view along First street NE would be reestablished. The existing view is currently truncated by the projecting mass of the exiting parking garage. From the east side of Columbus Circle, the Preferred Alternative would have low visibility and moderate sensitivity, resulting in a potential minor effect.

Visual Assessment from Louisiana Avenue and D Street NW



Visual Assessment for the Preferred Alternative



No-Action Alternative – Provided for Visual Comparison

Station Expansion



Private Air-Rights Development



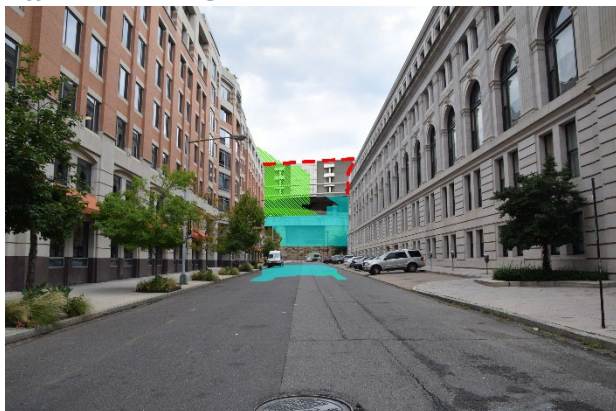
Potential Federal Air-Rights Development



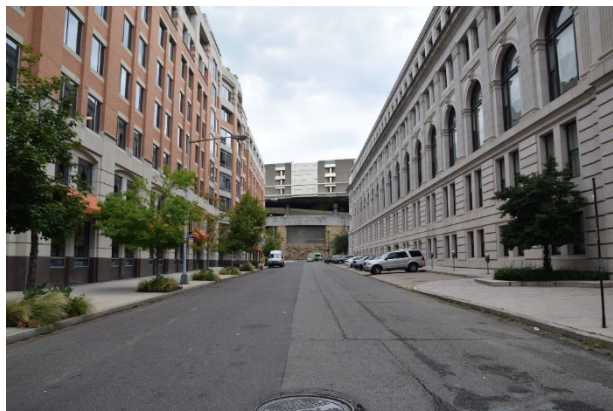
West of WUS, the Preferred Alternative would have low visibility and sensitivity, resulting in a potential negligible effect to the views from H Street and K Street NW, looking east. From G Street NE looking east towards the station, a new two-way ramp would provide vehicular access to the belowground level of the station. The extent, design, and placement of wayfinding elements associated with the ramp are unknown at this time but would likely have low visibility and sensitivity and would not cause an adverse visual effect. Overall, the Preferred Alternative would have a potential beneficial visual effect to this view because it would be less visible than

the existing parking garage, which would be removed, opening the view to the east and allowing the entire cornice line of the City Post Office to be more prominent. Finally, from First Street NE (approximately from the address 888 First Street NE) looking south, the Preferred Alternative would have high visibility and moderate sensitivity, resulting in a potential moderate effect.

Visual Assessment from G Street NE, looking east with the north elevation of the City Post Office on the right



Visual Assessment for the Preferred Alternative; view along G Street NE, looking east with the new access ramp at the center of the street. Note that wayfinding for the new ramp and other WUS related wayfinding isn't known and cannot be part of the simulation at this time. However, such elements would likely have low visibility and low sensitivity and would not cause an adverse visual effect.



No-Action Alternative – Provided for Visual Comparison

Note: The private air-rights development of the No Action Alternative is not visible because it would be obscured by the existing parking garage.

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



East of WUS, the Preferred Alternative would cause visual changes to the views from Second Street and K Street NE looking south and K, H, and G, Streets NE looking west. The Preferred Alternative would not be visible from I and F Streets NE looking west or from Massachusetts Ave NE looking northwest. From Second Street NE, The Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible effect. From K Street NE, there would be low visibility and low sensitivity, resulting in potential negligible visual effects. From H Street NE, the Preferred Alternative would have moderate visibility and low sensitivity, resulting in a potential minor effect, and from G Street NE, the Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible effect. **Table 6** presents a summary of visual effects to the L’Enfant-McMillan Plan.

Table 6. Summary of visual effects from the Preferred Alternative to views within the L’Enfant-McMillan Plan

Location of View (Street Intersections)	Visual Effect of Preferred Alternative
South of WUS	
Delaware Avenue and C Street NE	Major Effect
Delaware and Constitution Avenues NE	Major Effect
First and C Street NE	Major Effect
Louisiana Avenue and D Streets NW	Moderate Effect
West Side of Columbus Circle Drive	Beneficial Effect
East Side of Columbus Circle Drive	Minor Effect
West of WUS	
G Street NE and North Capital Street, looking east	Beneficial Effect
H Street NE and North Capital Street, looking east	Negligible Effect
K Street NE and North Capital Street, looking east	Negligible Effect
First Street NE (approximately 888 First Street) looking south	Moderate Effect
East of WUS	
Second and K Streets NE, looking south	Negligible Effect
K and 3 rd Streets NE, looking west	Negligible Effect
I and 3 rd Streets NE, looking west	No Effect
H and 3 rd Streets NE, looking west	Minor Effect
G and 3 rd Streets NE, looking west	Negligible Effect
F and 3 rd Streets NE, looking west	No Effect
Massachusetts Ave NE, looking northwest	No Effect

Cumulatively, visual effects would not diminish the L’Enfant-McMillan Plan’s significance or integrity. While the Preferred Alternative would have potential major visual effects from several contributing streets, including Delaware Ave and First Street NE, the setting of the L’Enfant-

McMillan Plan, which is connected to the site's architectural design and the resulting vistas, would not change from the existing conditions. No spatial corridors or vistas along the contributing streets and avenues would be obstructed, including at G Street NE where a visual connection between North Capitol and First Street NE would be maintained, as would a visual connection to the Burnham Wall.

Several portions of the L'Enfant-McMillan Plan are located within the Operational and Construction Noise and Vibration Study Areas, especially First Street NE, Second Street NE, Columbus Circle, and Florida Ave. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that limited noise and vibration effects would occur. Operational noise effects would occur at small sections to the east of the Project Area along H and K Streets NE. Temporary, severe construction noise effects would occur along First Street NE, between G and K Streets NE. Temporary, moderate noise effects would occur at portions of Second Street, between E and H Streets NE and along K Street NE between Second and Fourth Streets NE. Temporary vibration effects causing human annoyance due to the removal of excavation spoils by truck would occur at several locations along Second Street NE, between F and K Streets NE and on North Capitol Street NE. Such temporary effects would not diminish the property's integrity or historical significance, which is related to its 18th and early 20th century urban design and association with the history of the development of Washington, DC.

The traffic analysis indicates that incremental increases in operational traffic volumes would occur, especially along North Capitol Street, H Street, K Street, and Massachusetts Ave. Additional traffic may be present at G Street NE where a new two-way ramp would provide vehicular access to the belowground level of the station. Overall, the property's setting has evolved as the city continues to grow and develop and is largely defined by the traffic-heavy urban characteristics. The potential for increased noise, vibration, and traffic throughout the property from the Preferred Alternative would not diminish the L'Enfant-McMillan Plan's characteristic design of diagonal and orthogonal thoroughfares, vistas, parks, and open spaces.

No. 48 – Union Market Historic District



View of the Union Market Historic District looking northeast from the intersection of Morse Street NE and Fourth Street NE. The buildings are those within the APE.



View from the intersection of Morse Street NE and Fourth Street NE looking west towards the Project Area, which is not visible

Effects Assessment: FRA finds the Preferred Alternative would have **no effect**.

No physical or visual effects would occur. Portions of the district (at the corner of Morse and Fourth Streets NE) are located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that no temporary or operational noise or vibration effects would occur. The property is not located at or adjacent to thoroughfares that would be impacted by traffic.

No. 49 Washington Union Station Historic Site





Photograph of Columbus Plaza, WUS, and the rail terminal behind, looking north. Source: "Aerial view of Union Station" 1980. Photograph. From the Library of Congress, <https://www.loc.gov/item/2011634160/>



Photograph of the rail terminal showing existing conditions of "K" Tower and several original single catenaries, looking north

Effects Evaluation: FRA finds the Preferred Alternative would have an **adverse effect**.

The physical effects assessment of the Preferred Alternative would be the same as the other Action Alternatives (refer to the draft AOE, Section 6.1 *Effects to Each Historic Property*, provided in Appendix A). In summary, the Preferred Alternative would cause extensive physical effects within the rail terminal, including the reconstruction of all tracks, platforms, and associated railroad infrastructure to meet future intercity and commuter ridership requirements, operational criteria, and modern design standards (Americans with Disabilities

Act and Life Safety requirements). The reconstruction of the rail terminal would require the removal of K Tower; all existing platforms and umbrella sheds, including cast iron column supports; the original retaining wall dividing the run-through tracks from the rest of the rail terminal; and the systems and signals used to power and control train traffic, including catenary poles, the catenary with cross beam, signal bridges, and pneumatic switch valves throughout the historic site. In addition, the excavation and reconstruction of the rail terminal may cause effects to potential significant archaeological resources if present.

The bridge underpass at H Street NE (which was closed and used to support WUS after the construction of the H Street Bridge in 1976) would be removed and converted to a concourse. Unlike Alternatives B, C, D, and E, the Preferred Alternative would not result in a physical effect to the K Street bridge underpass.

The ventilation intake required for the operation of the Preferred Alternative may require the potential reconstruction and the insertion of vents at the southwest portion of the Burnham Wall. Due to the removal of the majority of character-defining features within the rail terminal, the Preferred Alternative would adversely affect the WUS Historic Site's integrity of location, design, materials, setting, workmanship, feeling, and association.

Physical effects to the First Street Tunnel would also occur, as described above in the determination of effect for WUS (historic property No. 40). Adverse effects due to the demolition and reconstruction of the original floor structure would be minimized or avoided as the design would adhere to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

New ramps, which replace existing parking garage ramps, would be constructed to the east and west of WUS. The new ramps would allow bike, pedestrian, and certain vehicular circulation to occur between the new deck to the north of the station and the front of the station at Columbus Plaza. On the east side, an additional inbound only ramp on the east side of the station—at Union Station Drive NE—would provide access to the belowground facility from the queuing area at the front of the station. The aboveground ramps would be comparatively smaller in size to those that are existing, and the new east ramp would create a physical and visual change at the east side of the station. Originally, these areas were bordered by the wings of the original passenger concourse, establishing outdoor rooms to the east and west of WUS. The wings of the passenger concourse were removed in the 1970s to enable the construction of the Metro station and the existing parking garage ramps. The physical and visual effects from the new ramps at the east and west sides of WUS would continue to diminish the integrity of design of the historic site. The effect of such ramps may be minimized as the design of the Project continues. Design review and ongoing consultation to ensure adverse effects are appropriately minimized and mitigated would be outlined in the Project's PA.

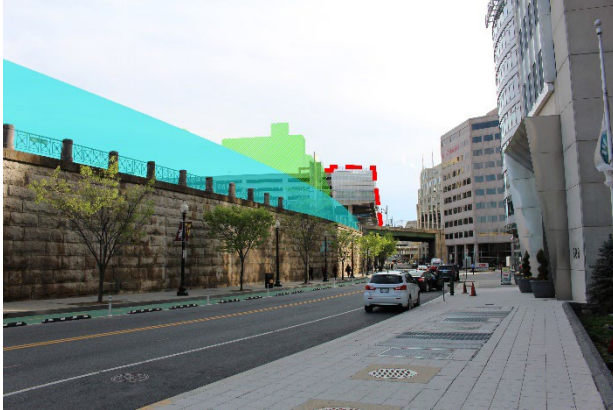
Additional physical effects to WUS Historic Site may occur as design of the Project continues. If aspects of future design do not adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties and would diminish the integrity of the station would result in an adverse effect. Further design review and consultation to ensure adverse effects do not occur (or are appropriately minimized and mitigated) as a result of ongoing Project design will be outlined in the Project's PA.

Visual effects of the Preferred Alternative would adversely affect the integrity of setting, feeling, and association by altering and obstructing the visual connection of the various contributing features within the WUS Historic Site. Existing views from within the rail terminal would be non-existent, and views from the REA Building to WUS would be obstructed.

Visual effects to views from Louisiana Ave, Delaware Ave, and First Street NE, Columbus Circle Drive, and H Street Bridge – as discussed in the determination of effect for WUS (historic property No. 40) – would have the same visual effects to the WUS Historic Site.

As shown in the visual simulations below, additional visual effects, especially to the rail terminal, would change views from Second Street NE, First Street NE (between H and K Streets NE), and the New York Avenue Bridge. However, the visual effects of the Preferred Alternative to these views would not diminish the integrity or significance of the historic site. From 888 First Street NE (between H and K Streets NE), the Preferred Alternative would have high visibility and moderate sensitivity, resulting in potential moderate visual effects. The sensitivity of the visual change would be moderate because the development would be in keeping with the scale of the existing development of the surrounding buildings and the existing WUS parking garage.

Visual Assessment from 888 First Street NE Between H and K Streets NE



Visual Assessment for the Preferred Alternative



No-Action Alternative – Provided for Visual Comparison

Station Expansion



Private Air-Rights Development



Potential Federal Air-Rights Development



Outline of Existing Parking Garage to be Removed



From New York Avenue Bridge, the Preferred Alternative would have high visibility and moderate to high sensitivity. The Preferred Alternative would obstruct the view of the rail terminal and would also obstruct the view of the U.S. Capitol Dome. However, such visual effects would not adversely affect the WUS Historic Site because these views are not historic and there was never a direct view from the rail terminal to the U.S. Capitol.

Visual Assessment from the New York Avenue Bridge

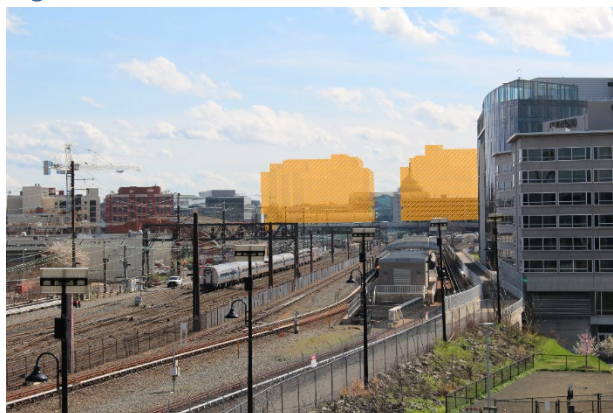


Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



From the intersection of Second and K Streets NE, the Preferred Alternative would have moderate visibility and sensitivity, resulting in potential moderate visual effects.

Visual Assessment from Second Street NE and K Street NE



Visual Assessment for the Preferred Alternative showing construction of a new service building in place of the existing Substation 25A.

Station Expansion



Potential Federal Air-Rights Development



Outline of Existing Substation 25A to be Removed



No-Action Alternative – Provided for Visual Comparison

As part of the No-Action Alternative, Substation 25A, located above the Burnham Wall in the center of the photograph and a contributing element to the WUS Historic Site, would be demolished and relocated.

Private Air-Rights Development



Cumulatively, the visual effects obstructing the visual connections to the contributing features within the historic site would affect the significance and integrity of setting of the WUS Historic Site. Furthermore, the potential major visual effect of the Preferred Alternative to the view of the station from Delaware Ave NE, and the potential major visual effect to the view of the site from First and C Streets NE would affect the visual symmetry of the station's monumental Beaux Arts design, a character-defining feature of WUS and the WUS historic site and would cause an adverse effect.²⁶

²⁶ It should be noted that the proposed private air-rights development would likely provide visual balance and symmetry behind the station, thus minimizing the potential major visual effects of the Action Alternatives.

The WUS Historic Site is located within the Operational and Construction Noise and Vibration Study Areas. Noise and vibration analysis conducted to study impacts of the Preferred Alternative indicates that temporary, severe noise effects would occur due to support of excavation and excavation activities during construction. While the setting of WUS has always been characterized by the busy and noisy atmosphere of an active rail station, the extent of temporary severe noise effects occurring on all sides of WUS and the rail terminal may diminish the integrity of setting of the historic site, resulting in a potential adverse effect, and should be monitored during construction.

During construction, vibratory pile driving and drill rigging may occur within approximately 10 feet of the north elevation with vibration levels of 0.35 to 0.67 in/s, which may exceed the FTA criterion for increased risk of structural damage and result in an adverse effect. Although the historic station building was designed to facilitate train operations and may be capable of withstanding vibration levels that exceed the thresholds, its sensitivity to vibration has not been specifically determined at this stage of Project planning. Vibrations at the building would need to be monitored to ensure structural damage does not occur. No operational noise or vibration effects would occur.

Operational traffic volumes along Columbus Circle Drive would generally remain the same relative to existing conditions, although there would be incremental increases to other streets in the immediate street network surrounding the station, especially along Massachusetts Ave, and H Street NE, which are principal or minor arterial streets intended to carry significant amounts of traffic. Additionally, the Preferred Alternative would create a dedicated PUDO facility belowground that would direct some PUDO traffic away from the front of the station. The Preferred Alternative includes measures to monitor traffic congestion and coordinate with DDOT to minimize increased traffic volumes at various intersections. It is unlikely that traffic effects of the Preferred Alternative would diminish the integrity and significance of the property which currently experiences busy, traffic-heavy activity, as a major intermodal station.

No. 53 – U.S. Capitol Dome Cultural Viewshed



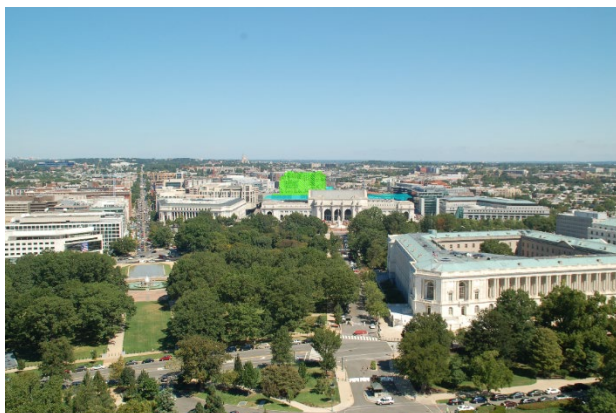
View from the U.S. Capitol Dome looking north towards WUS and the Project Area.

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

The Preferred Alternative would have moderate visibility and moderate sensitivity, resulting in a potential moderate visual effect.

While the Project elements and potential Federal air-rights development would be taller than adjacent buildings within the existing skyline, they would not rise above the horizon line. The qualities characterizing the existing view from the U.S. Capitol Dome would not be altered. The Alternatives would not interrupt the views along North Capitol Street NW and Delaware Ave NE to Columbus Plaza and the WUS headhouse, as established by the L'Enfant-McMillan Plan. Additionally, there would be no visual effects to the U.S. Capitol Grounds and associated buildings and sites, including the Russell Senate Office Building and the Senate Parks, Underground Garage, and Fountains.

Visual Assessment from the U.S. Capitol Dome

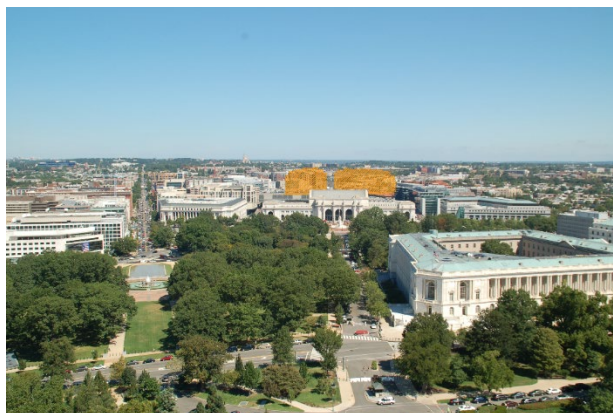


Visual Assessment for the Preferred Alternative

Station Expansion



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



No. 55 – Washington Monument Cultural Viewshed



View from Washington Monument looking east towards WUS and the Project Area, which is not easily visible to the naked eye

Effects Assessment: FRA finds the Preferred Alternative would have **no adverse effect**.

The Preferred Alternative would have low visibility and low sensitivity, resulting in a potential negligible visual effect. The qualities characterizing the existing view would not be altered. There would be no adverse effect on the Washington Monument Viewshed.

Visual Assessment from the Washington Monument



Visual Assessment for the Preferred Alternative

Proposed Alternative



Potential Federal Air-Rights Development



No-Action Alternative – Provided for Visual Comparison

Private Air-Rights Development



5 Cumulative Effects

Cumulative effects, resulting from cumulative physical, visual, noise, vibration, and other effects, would diminish the integrity of and result in a finding of adverse effect to WUS, WUS Historic Site, and the REA Building.

At WUS, extensive adverse physical effects would occur. Adverse visual effects would also diminish the integrity of the station, especially from within the station to the new train hall and from views along Delaware Avenue NE, First Street NE, and the H Street Bridge. Noise and vibration effects would occur, resulting in potential physical effects from construction-related vibration as well as construction-related noise effects. Traffic volumes in front of and surrounding WUS would generally remain the same. Additional effects may be found if the transfer, lease, or sale of the Federal air-rights occur without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property. When considered cumulatively, all such effects result in a finding of adverse effect for WUS.

Similarly, cumulative effects would diminish the integrity of the WUS Historic Site. The site would experience extensive adverse physical effects, including the demolition and reconstruction of the rail yard and all contributing historic elements within it. Additional physical effects to the First Street Tunnel and the construction of new ramps to the east and west of WUS would also diminish the integrity, especially of design. Visual effects are the same as those for WUS, with added visual impacts related to the loss of the visual connection between WUS and the rail yard, WUS and the REA Building, and the rail yard and the REA Building. Noise and vibration effects would occur, resulting in potential adverse physical effects from construction-related vibration and potential adverse construction-related noise effects. Incremental increases in operational traffic volume surrounding the station would occur. Individually, traffic effects would be unlikely to diminish integrity. However, considered cumulatively, all effects result in a finding of adverse effect for WUS Historic Site.

The REA Building would experience physical and visual effects that would diminish the integrity of the property and result in an adverse effect. Noise and vibration effects would also occur, resulting in potential adverse physical effects from construction-related vibration. Individually, construction related noise effects would not diminish the integrity of the property. Similarly, incremental increases in operational traffic along Second Street would not diminish integrity. However, considered cumulatively, all effects result in a finding of adverse effect for the REA Building.

6 Summary Finding of Effect

The Preferred Alternative would result in adverse effects to three historic properties: the REA Building, WUS, and the WUS Historic Site. The Preferred Alternative would also result in a potential adverse effect to the City Post Office. FRA will continue consulting with the Consulting Parties to develop a PA that identifies measures to minimize and mitigate those adverse and potential adverse effects. Additionally, FRA acknowledges incremental increases in traffic, as predicted by the traffic analysis, would occur at many thoroughfares and intersections adjacent to or within the APE. However, when FRA applied the criteria of adverse effect, the agency found the Preferred Alternative's traffic increases would not have an adverse effect to historic properties. The Preferred Alternative includes measures to monitor traffic congestion and coordinate with DDOT to minimize increased traffic volumes at various intersections. FRA anticipates that the PA, developed in consultation with Consulting Parties, would reference these measures to monitor and manage traffic.

7 Next Steps

7.1 Next Steps for the Section 106 Process in Coordination with NEPA

FRA will notify the Advisory Council on Historic Preservation of the adverse effect determination for the undertaking and invite them to formally participate in Section 106 consultation. As this report finds there are adverse effects to historic properties from the Preferred Alternative, FRA intends to prepare a PA. The PA would explain the process for continued Section 106 consultation as the Project advances to resolve adverse effects to historic properties in accordance with 36 C.F.R. § 800.14(b)(1)(ii). The PA will also likely identify other mitigation measures (see Section 6.2). The draft PA will be available for Consulting Party review when the Supplemental Draft EIS (SDEIS) is released for public review, and FRA plans to hold Consulting Parties meetings to discuss a draft PA. FRA will consider Consulting Party comments and revise the draft PA as necessary. An executed PA will be included in the Final EIS (FEIS)/Record of Decision (ROD).²⁷

7.2 Avoidance, Minimization, and Mitigation Strategies

As mentioned above, FRA intends for a PA to establish a process for on-going consultation and review as the level of design progresses following the FEIS and a ROD to ensure that form, materials, architectural features, and connections (visual and physical) to surrounding development are considered. Ensuring that the Preferred Alternative design progresses in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic*

²⁷ FRA will also respond to comments from the 2020 draft AOE report in coordination with the FEIS/ROD.

Properties will be an important component of ongoing consultation. FRA anticipates the PA will outline coordinated design review in accordance with Federal and District of Columbia regulations and guidelines.

Through review of the draft SAOE, and at a January 2023 Consulting Party meeting, FRA requested Consulting Party comment on the following initial proposed minimization and mitigation measures that could be included in the PA.

- Develop and implement plans to monitor vibration during construction of WUS, the REA Building, and the City Post Office and to monitor for potential archaeological discoveries during the excavation of the rail terminal and sections of street impacted by the construction of the vehicular ramps.
- Continue coordination with the District of Columbia Department of Transportation and other parties to study, identify, and monitor traffic (especially at the intersections within and at the edge of the Capitol Hill Historic District) and work to avoid, minimize or resolve traffic congestion. The PA will acknowledge that the Preferred Alternative would include commitment measures to develop policies and infrastructure to control traffic access; ensure best management practices; and develop and implement a construction noise and vibration control plan.
- Continue coordination to develop design guidelines and a review process for the future transfer and redevelopment of the Federal air-rights property.
- Continue coordination as design of the Preferred Alternative progresses, to ensure that the Secretary of the Interior's Standards are adhered to and that potential adverse physical and visual effects within WUS are avoided or minimized.
- Complete Historic American Buildings Survey / Historic American Engineering Record documentation of elements that would be removed or demolished within the WUS Historic Site.
- Salvage certain elements and materials that would require removal, specifically those within the WUS Historic Site.
- Develop public interpretation of the adversely affected historic properties.

In correspondence dated February 9, 2023, the DC SHPO also requested the following measures be incorporated into the PA:

- Nominate the WUS Historic Site to the National Register of Historic Places and the DC Inventory of Historic Sites.
- Ensure a historic preservation covenant is applied to the Federal air-rights property.

FRA will continue to consult with the Consulting Parties to identify and document the full extent of Section 106 minimization and mitigation measures as it develops the PA.

8 Appendices

8.1 Appendix A: 2020 Draft Assessment of Effects Report

8.2 Appendix B: Assessment of Effect Summary Chart

8.3 Appendix C: Appendices to the 2020 Draft Assessment of Effects Report

- *List of Consulting Parties*
- *Formal Communication and Comments from Consulting Parties*
- *Area of Potential Effects and Identification of Historic Properties for the Washington Union Station Expansion Project - Final Report*