

# 7 Mitigation Measures, Project Commitments, and Permits

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## 7.1 Mitigation Measures and Project Commitments

1           Impacts that would result from the Action Alternatives as described in **Chapter 3**,  
2           *Alternatives* would be mitigated through the implementation of mitigation measures such as  
3           those listed in **Table 7-1** below. At this stage of project planning, the measures in **Table 7-1**,  
4           **summarized from Chapter 5, *Environmental Consequences***, are proposed measures that are  
5           being considered by the Federal Railroad Administration (FRA).

**Table 7-1. Mitigation Measures and Project Commitments Being Considered**

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
<b>Water Resources and Water Quality</b>		
1	<ul style="list-style-type: none"> <li>▪ Project Proponents to ensure that Project design incorporates stormwater management features, including green infrastructure practices such as rainwater collection and reuse, green roofs, and bioretention facilities, as appropriate to manage stormwater flows in accordance with DOEE's <i>Stormwater Management Guidebook</i> and restore pre-development site hydrology to the maximum extent technically feasible in compliance with Section 438 of the EISA.</li> </ul>	Operational-phase stormwater runoff.
2	<ul style="list-style-type: none"> <li>▪ Construction contractor to be required to implement erosion and sedimentation controls compliant with National Pollutant Discharge Elimination System (NPDES) construction general permit and District's Department of Energy and Environment (DOEE)'s <i>Erosion and Sediment Control Manual</i>.</li> </ul>	Construction-phase erosion and sedimentation.
3	<ul style="list-style-type: none"> <li>▪ Construction contractor to be required to provide on-site treatment of pumped groundwater and discharge through the District's MS4 instead of through the combined sewer system to Blue Plains.</li> <li>▪ Prior to the beginning of construction, Project Proponents to conduct additional groundwater studies, including:               <ul style="list-style-type: none"> <li>• Performing additional borings to depths of 120 to 150 feet inside and along the perimeter of the Project Area to better characterize the lower aquifer's composition and extents and any discontinuities of the Potomac Clay layer separating the aquifers;</li> <li>• Performing research of adjacent properties to understand the local impacts of ongoing or periodic dewatering systems acting around the Project Area;</li> <li>• Performing additional pump testing that target zones of clay discontinuity in the lower aquifer; and,</li> <li>• If warranted by the above, performing further modeling to map the areas that have high potential to experience ground subsidence from drawdown.</li> </ul> </li> </ul>	Construction-phase groundwater dewatering

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<ul style="list-style-type: none"> <li>If warranted by the studies listed above, construction contractor to monitor and control the amount of active dewatering on the site so dewatering does not create subsidence in and around adjacent properties.</li> </ul>	
<b>Solid Waste Disposal and Hazardous Materials</b>		
4	<ul style="list-style-type: none"> <li>WUS to update existing Spill Prevention Control and Countermeasure (SPCC) Plan to reflect any major changes to on-site petroleum product or liquid hazardous waste storage.</li> </ul>	Operational-phase petroleum and hazardous waste storage.
5	<ul style="list-style-type: none"> <li>Construction contractor to be required to develop and implement a construction-specific SPCC.</li> </ul>	Construction-phase petroleum and hazardous waste storage.
6	<ul style="list-style-type: none"> <li>Construction contractor to be required to identify hazardous building materials (asbestos-containing materials [ACM], lead-based paint, polychlorinated biphenyls [PCBs], mercury, etc.) prior to any demolition work.</li> <li>If present, abatement of such material by a licensed contractor in accordance with state and local regulations. Debris to go to a receiving facility licensed to handle the relevant type of waste in compliance with applicable shipping regulations.</li> </ul>	Construction-phase demolition and disposal of hazardous building materials and debris.
7	<ul style="list-style-type: none"> <li>Construction contractor to be required to Develop a Soil Management Plan (SMP) based upon subsurface investigations, as needed. The purpose of these investigations would be to pre-characterize the soils to be removed during the construction of the Project. An SMP typically outlines standards and procedures for the identification and disposal of contaminated materials encountered during construction.</li> </ul>	Construction-phase removal and disposal of potentially contaminated soils.
8	<ul style="list-style-type: none"> <li>Construction contractor to be required to exclusively use certified clean-soil to replace excavated soil.</li> </ul>	Construction-phase excavation and replacement of potentially contaminated soils.
9	<ul style="list-style-type: none"> <li>Construction contractor to be required to control dust through wetting, sweeping, and other suppression techniques.</li> </ul>	Construction-phase fugitive dust emissions.
10	<ul style="list-style-type: none"> <li>Construction contractor to be required to develop a Health and Safety Plan to provide the minimum health and safety specifications that must be met during construction, including requirements for environmental monitoring, personnel protective equipment, site control and security, and training.</li> </ul>	Construction-phase human and environmental health and safety risks.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
11	<ul style="list-style-type: none"> <li>▪ USRC to maximize opportunities for recycling or other waste diversion methods in support of the District’s vision of an 80% solid waste diversion.</li> </ul>	Construction- and operational-phases solid waste disposal.
<b>Transportation</b>		
12	<ul style="list-style-type: none"> <li>▪ Proponents to require the construction contractor to prepare an integrated Construction Transportation Management Plan defining the measures to be implemented by the construction contractor to avoid, minimize, or mitigate impacts from construction on all transportation modes in each phase of construction, along with procedures to enforce, monitor, and evaluate these measures.</li> </ul>	All construction-related transportation impacts
13	<ul style="list-style-type: none"> <li>▪ Amtrak to coordinate with MARC and VRE on alternative service options for affected passengers, including the honoring of tickets on alternative services.</li> </ul>	During construction, up to four MARC trains and two VRE trains may be cancelled daily.
14	<ul style="list-style-type: none"> <li>▪ Project Proponents to contribute to improvements identified in WMATA’s Station Access and Capacity Study that have not been addressed by the Concourse Modernization Project or by WMATA by the time of implementation.</li> </ul>	Impact of increased passenger volumes on circulation at the WUS WMATA Station.
15	<ul style="list-style-type: none"> <li>▪ Proponents to coordinate WMATA about regional efforts to increase mainline capacity along the Red Line.</li> </ul>	Increase in passenger volumes and capacity issues on WMATA Red Line.
16	<ul style="list-style-type: none"> <li>▪ Proponents to coordinate with WMATA on construction approaches that would minimize delays or stoppages on the Red Line.</li> </ul>	Need for schedule adjustments or temporary stoppage on the Red Line during Phase 4 of construction.
17	<ul style="list-style-type: none"> <li>▪ Proponents to coordinate with the District Department of Transportation (DDOT) on options for temporary access to WUS Streetcar station during construction and take steps with the District State Safety Office to address issues that may affect Streetcar certification.</li> </ul>	Construction activities may block access to Streetcar station.
18	<ul style="list-style-type: none"> <li>▪ USRC to develop Bus Facility Operations Plan in concert with intercity and tour/charter operators.</li> <li>▪ USRC to work with DDOT and DCOP on strategies to address potential off-site bus layover activities.</li> <li>▪ USRC to coordinate with DDOT on strategy to address tour/charter bus parking capacity loss associated with the Project.</li> </ul>	Active management of buses, 30-minute timeframe limit and parking challenges.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
19	<ul style="list-style-type: none"> <li>In Alternative C-East Option, Proponents to refine bus facility designs to ensure that the pedestrian connection is entirely covered or within the concourse environments of WUS.</li> </ul>	<p>In Alternative C-East Option, distance between the bus facility and WMATA or front of WUS would substantially increase.</p>
20	<ul style="list-style-type: none"> <li>USRC to work with the District to identify a location for an adequately sized interim bus facility or bus loading zones as close to WUS as possible.</li> </ul>	<p>In all Action Alternatives except Alternative C East Option, bus service would not be accommodated at WUS during Phase 4 of construction.</p>
21	<ul style="list-style-type: none"> <li>USRC to identify adequately sized interim parking facilities outside the Project Area.</li> </ul>	<p>Loss of parking capacity during Phase 4 of construction.</p>
22	<ul style="list-style-type: none"> <li>USRC to ensure there is sufficient staffing to monitor traffic levels and ensure safe pedestrian crossing at all designated pick-up and drop-off areas. USRC to coordinate with Metropolitan Police Department (MPD) on enforcement strategies.</li> <li>USRC to coordinate with District Department of Public Works and MPD to provide coordinated enforcement of active curb areas along public streets.</li> <li>USRC to coordinate with the District Department of For-Hire Vehicles (DDFHV) to develop regulatory strategies to manage taxis and TNCs’ pick-up and drop-off activity at WUS, including a performance-based strategy for reducing impacts.</li> <li>USRC to coordinate with MPD to provide coordinated enforcement to minimize queues on public roadways.</li> <li>USRC to develop, in coordination with DDOT and DDFHV, an advanced vehicle dispatching strategy to distribute taxis and TNCs and maintain consistent queue lengths.</li> <li>USRC to manage, in coordination with DDOT and DDFHV, a regular monitoring program to reduce queues and spillback, particularly onto H Street NE from the deck roadways.</li> </ul>	<p>The large increases in pick-up and drop-off volumes are likely to cause major congestion at the designated pickup points, which may also have a moderate impact on pedestrian safety due to conflicts with these vehicles. Increased traffic volumes may negatively affect pick-up and drop-off operations.</p>
23	<ul style="list-style-type: none"> <li>USRC to develop a for-hire vehicle plan as part of the integrated Construction Transportation Management Plan. The Plan should prioritize maintaining safe traffic operations and distributing pick-ups and drop-offs.</li> </ul>	<p>During Phase 4 of the construction period, the unavailability of the west ramp and back ramp would force for-hire vehicles to queue on deck roads, which could interfere with traffic operations.</p>
24	<ul style="list-style-type: none"> <li>USRC to coordinate with DDOT and adjust signal timings to provide sufficient pedestrian crossing time when exiting at the front of WUS.</li> <li>USRC to pursue opportunities to provide enhanced pedestrian accommodations at the front of WUS.</li> </ul>	<p>The large increases in passenger volumes adjacent to WUS would adversely affect pedestrian crossing conditions.</p>

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<ul style="list-style-type: none"> <li>▪ USRC to coordinate with DDOT on additional pedestrian safety infrastructure measures.</li> </ul>	
25	<ul style="list-style-type: none"> <li>▪ USRC to coordinate with DDOT on appropriate bicycle accommodations and wayfinding plan to direct bicyclists to the 2nd Street shared-use portion of Metropolitan Branch Trail.</li> </ul>	Work on First Street NE would disrupt use of the Cycle track during parts of the construction period.
26	<ul style="list-style-type: none"> <li>▪ USRC to coordinate with DDOT on appropriate bicycle facilities and strategies to reduce conflicts among bicyclists, pedestrians, and vehicles on First Street NE.</li> </ul>	Conflicts between bicycles, pedestrians, and vehicles on the First Street cycletrack.
27	<ul style="list-style-type: none"> <li>▪ USRC to provide enhanced facilities at the new G Street hop-on/hop-off bus location and to work with DDOT to provide an enhanced pedestrian connection to WUS entrances.</li> </ul>	Movement of sightseeing buses from front of WUS.
28	<ul style="list-style-type: none"> <li>▪ USRC to coordinate with U.S. Citizenship and Immigration Services (USCIS) and Gallaudet University to identify new stop locations convenient to WUS.</li> </ul>	Loss of spaces for employee shuttles.
29	<ul style="list-style-type: none"> <li>▪ Proponents to work with DDOT to identify solutions out of a toolbox of traffic mitigation approaches, including, but not limited to, regular monitoring activities, turn restrictions, alternative intersection phasing, lane reassignment, parking restrictions, and street pattern changes, at the most severely impacted intersections in the study area.</li> <li>▪ Proponents to coordinate with DDOT and WMATA on opportunities to achieve greater core transit capacity through additional lines or services, in order to accommodate a greater mode shift from vehicles to transit.</li> <li>▪ Proponents to coordinate with DDOT on transportation demand management, for-hire, and transit strategies to reduce the total number of 2040 trips by 20%.</li> </ul>	Increases in traffic volumes would result in increases in delay and queuing at multiple intersections.
30	<ul style="list-style-type: none"> <li>▪ Proponents to incorporate truck traffic plan into the integrated Construction Transportation Management Plan to minimize impacts of truck traffic on residential neighborhoods. Truck traffic plan to be coordinated with DDOT. Affected Advisory Neighborhood Commissions (ANCs) to be given an opportunity to comment on the plan.</li> <li>▪ If possible without major disruptions to train operations, Amtrak to allow for the use of work trains instead of dump trucks to haul away excavation spoil.</li> </ul>	During excavation, up to 120 daily construction trucks would enter and exit the site.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
31	USRC to coordinate with DDOT on required transportation demand management practices to reduce trips associated with the potential Federal air-rights development through the Comprehensive Transportation Review (CTR) process.	Potential Federal air-rights development would generate additional vehicular trips.
<b>Air Quality</b>		
32	<ul style="list-style-type: none"> <li>▪ Proponents to ensure that Project design places ventilation fans at least 30 feet from the nearest operable windows, louvers, or doors and emergency generators at least 30 feet from the nearest building or on a rooftop.</li> <li>▪ Rail operators to impose restriction on diesel locomotive idling to minimize MSAT emissions.</li> </ul>	Operational-phase air pollutant emissions.
33	<ul style="list-style-type: none"> <li>▪ Construction contractor to implement measures to reduce pollutant emissions, including but not limited to: dust suppression; idling restrictions; use of Ultra Low Sulfur Diesel (ULSD) fuel; proper maintenance of all motor vehicles, machinery, and equipment; and fitting of equipment with mufflers or other regulatory-required emissions control devices.</li> <li>▪ Construction contractor to be required to limit non-road engine idling to 3 minutes and place idling restriction signs on the premises. Drivers and equipment operators to be trained accordingly.</li> <li>▪ Construction contractor to be required to fit all diesel-fuel construction equipment with after-engine emission controls; use ULSD fuel for all off-road construction vehicles; use non-road diesel equipment rated 50 horsepower or greater to meet EPA’s Tier 4 emission limits or retrofitted with appropriate emission reduction equipment. Emission reduction equipment potentially to include EPA-verified or California Air Resource Board (CARB)-verified diesel oxidation catalysts or diesel particulate filters.</li> <li>▪ Construction contractor to be required to implement measures to protect local residents, visitors, passengers, and passers-by from off-site exposure to dust and debris. Appropriate methods of dust control to be determined according to the surfaces concerned (roadways or disturbed areas) and include, as applicable: application of water during ground-disturbing activities; stone surfacing</li> </ul>	Construction-related air pollutant emissions.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<p>of construction roads; seeding of areas of exposed or stock-piled soils; wheel washing; and regular sweeping of paved roadways. Recycling construction waste and demolition materials may also reduce dust emissions.</p> <ul style="list-style-type: none"> <li>▪ During construction in or immediately adjacent to the historic station building (demolition of the Claytor Concourse, column removal), construction contractor to set up airtight walls or partitions around the construction areas as needed to eliminate the risk of train engine exhaust fumes or dust drifting into the indoor areas accessible to the public or station employees.</li> </ul>	
<b>Greenhouse Gas Emissions and Resilience (see also <i>Energy Resources and Air Quality</i>)</b>		
34	<ul style="list-style-type: none"> <li>▪ Proponents to consider incorporating the following measures into Project design: <ul style="list-style-type: none"> <li>• Design and technology features to minimize buckled railroad tracks.</li> <li>• Power supply redundancy and backup generation.</li> <li>• Reduced dependency on centralized power by installing renewable energy systems.</li> <li>• Shelter facilities to provide shading and natural ventilation for passenger comfort and safety.</li> <li>• Water conservation features (See also <i>Water Resources and Water Quality</i> above).</li> <li>• Reflective roofs or green roofs to reduce urban heat island effect.</li> <li>• Appropriate glazing for the train hall so that it can control solar heat gain by season</li> <li>• Placement of electrical components above ground level to protect them from flash flood events during extreme storm events.</li> <li>• Use of building materials that can withstand inundation or installing flood barriers at openings of below-grade structures that may become vulnerable to flooding.</li> <li>• Dry and wet floodproofing measures for below-grade parking areas.</li> </ul> </li> </ul>	<p>Need for greater resilience in the context of climate change.</p>



No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
<b>Energy Resources</b>		
35	<ul style="list-style-type: none"> <li>▪ Project Proponents to incorporate cost-effective energy efficiency technologies in Project design. Examples include but are not limited to programmable and learning thermostats; energy management systems that react to utility price signals and energy demand in the region; and light motion sensors and dimmers.</li> <li>▪ USRC to prepare a Tenant Manual to help current and future tenants make their operations more sustainable and energy efficient and reduce overall energy demand.</li> </ul>	Energy consumption increases.
<b>Land Use, Land Planning, and Property</b>		
36	<ul style="list-style-type: none"> <li>▪ Federal Government to provide just compensation of the owner of the private air-rights consistent with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended.</li> <li>▪ Project Proponents to minimize delays to the construction schedule of the private air-rights development (as much as practicable) through coordination with the developer during construction planning.</li> </ul>	Acquisition of approximately 1.1 to 4.8 acres of private air-rights.
<b>Noise and Vibration</b>		
37	<ul style="list-style-type: none"> <li>▪ Project Proponents to require the construction contractor to prepare and implement a Construction Noise and Vibration Control Plan.</li> <li>▪ This plan to include detailed predictions of construction noise and vibration levels; requirements for conducting construction noise and vibration monitoring; and, if necessary, detailed approaches to mitigate potential construction-period noise and vibration impacts.</li> <li>▪ The plan to define a process to alert the contractor of any limit exceedances and implement corrective actions.</li> <li>▪ The plan to contain a public engagement plan specifying measures that would be implemented to inform neighbors of anticipated noisy activities,</li> </ul>	General construction noise and vibration.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<p>noise or vibration level exceedances, and measures to be taken to remedy these exceedances.</p> <ul style="list-style-type: none"> <li>▪ At a minimum, following measures to be included in the plan unless equivalent but more Project-or location-specific measures are identified during the preparation of the plan:               <ul style="list-style-type: none"> <li>• Ensuring equipment is properly functioning and equipped with mufflers and other noise-reducing features.</li> <li>• locating especially noisy equipment as far from sensitive receptors as possible.</li> <li>• Using quieter construction equipment and methods, as feasible.</li> <li>• Using path noise control measures such as temporary noise barriers, portable enclosures for small equipment (such as, jackhammers and concrete saws).</li> <li>• Replacing back up alarms with strobes if and as allowed by Occupational Safety and Health Administration (OSHA) regulations.</li> <li>• Maintaining smooth truck route surfaces within and next to the Project Area.</li> <li>• Establishing and implementing procedures to maintain strong communications with neighbors.</li> </ul> </li> <li>▪ If warranted by the projections in the Construction Noise and Vibration Control Plan, construction contractor to construct a temporary noise wall approximately 12 feet tall along the perimeter of the Project Area where there are no adjacent buildings.</li> </ul>	
38	<ul style="list-style-type: none"> <li>▪ The Construction Noise and Vibration Control Plan to assess buildings at risk to determine the appropriate threshold applicable to each based on its type of construction and condition.</li> <li>▪ The plan would define measures to be taken to minimize the risk of damage based on these thresholds. As warranted by the assessment and projections in the Construction Noise and Vibration Control Plan, and as technically feasible, alternative construction methods to be implemented would including but not limited to the following:               <ul style="list-style-type: none"> <li>• Using a hydromill instead of a clam shovel for slurry wall construction when working close to a building.</li> </ul> </li> </ul>	Risk of structural damage to buildings from construction vibration.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<ul style="list-style-type: none"> <li>• Using push-in type sheeting equipment rather than vibratory equipment to install sheet-pile walls.</li> <li>• Using sonic drill rigs instead of traditional drill rigs.</li> </ul>	
39	<ul style="list-style-type: none"> <li>▪ Among potential truck routes to and from the Project Area, Construction Noise and Vibration Control Plan to require trucks to use those with fewer residential receptors if practicable.</li> <li>▪ Construction Noise and Vibration Control Plan to limit truck speeds or directing trucks to use travel lanes farther from receptors on multi-lane roads such as New York Avenue.</li> <li>▪ If possible without major disruptions to train operations, Amtrak to allow for the use of work trains instead of dump trucks to haul away excavation spoil.</li> </ul>	Annoyance from construction trucks
<b>Aesthetics and Visual Quality</b>		
40	<ul style="list-style-type: none"> <li>▪ Project Proponents to design the Project as much as possible with context-compatible architecture and materials, and in a manner sensitive to surrounding structures.</li> </ul>	Potential impacts to views around WUS.
<b>Cultural Resources</b>		
41	<ul style="list-style-type: none"> <li>▪ FRA to prepare a Programmatic Agreement (PA) to establish a process to resolve the known adverse effects of the Project on historic properties in accordance with 36 C.F.R. § 800.14(b)(1)(ii) including the exploration of avoidance and minimization measures. The PA would establish a process for on-going consultation and review as the level of design progresses.</li> </ul>	Adverse impacts on WUS, WUS Historic Site, and Railway Express Agency (REA) Building.
<b>Parks and Recreation Areas</b>		
42	<ul style="list-style-type: none"> <li>▪ Project Proponents to coordinate with NPS during construction planning to develop measures to maintain as much as possible access to Columbus Plaza during the construction of the Columbus Circle improvements.</li> <li>▪ Project Proponents to prohibit construction contractor from using Columbus Plaza as a staging area during construction.</li> </ul>	Columbus Plaza and the Metropolitan Branch Trail.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<ul style="list-style-type: none"> <li>Project Proponents to work with DDOT to appropriately advertise construction-related closures of the Metropolitan Branch Trail and establish alternative routes, as needed.</li> </ul>	
<b>Social and Economic Conditions</b>		
43	<ul style="list-style-type: none"> <li>In Alternatives B through E, FRA to extend WUS's lease area to encompass part or all of the new parking and retail area to generate new revenue that would offset the anticipated loss.</li> </ul>	Loss of WUS revenue from parking.
<b>Safety and Security</b>		
44	<ul style="list-style-type: none"> <li>FRA and the Proponents to develop a Safety and Security Operations Plan that would identify procedures appropriate to the level of passenger activity; evaluate appropriate passenger screening practices; and identify funding for these purposes.</li> </ul>	Safety and security issue associated with increased passenger volumes.
45	<ul style="list-style-type: none"> <li>FRA and the Proponents, in coordination with Federal law enforcement and security agencies, to identify security features that the Project design would incorporate, including measures recommended in the Threat and Vulnerability Risk Assessment (TVRA), as appropriate.</li> </ul>	Increased threats from increased vehicular volumes.
46	<ul style="list-style-type: none"> <li>FRA and the Project Proponents to develop a construction safety and security plan for the Project to include procedures for screening people, equipment, and goods, and for reducing risk of injury. This plan to include procedures to screen people, equipment, and goods, and to reduce the risk of injury to workers, passengers, and passers-by from construction activities. May also include background checks for contractors and their employees.</li> </ul>	Public safety and security threats during construction.
47	<ul style="list-style-type: none"> <li>Construction contractor to be required to ensure that the movement of heavy motorized equipment and trucks in and out of the construction site is through designated access points and designated truck routes only; use flaggers as needed to prevent conflicts between trucks and street traffic; ensure that construction-related traffic proceed in compliance with applicable speed limitations and other District traffic laws.</li> </ul>	Public safety risks from construction traffic.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
48	<ul style="list-style-type: none"> <li>During column removal work within WUS, construction contractor to be required to close off the portions of the historic station building where the column removal work would be conducted from the areas remaining accessible to the public or to station or Amtrak employees. Walls and partitions to be sufficient to provide fire protection at least equal to that provided by the existing floor and walls. Only authorized personnel to have access to the area.</li> </ul>	Public safety risks from column removal work.
49	<ul style="list-style-type: none"> <li>FRA and the Project Proponents to work with the private air-rights developer to address risks consistent with the recommendations of the TVRA, including consideration of solutions that would not place parking in the deck.</li> </ul>	Potential risks to WUS from private air-rights development parking within the deck structure.
50	<ul style="list-style-type: none"> <li>In Alternatives C and D, Project Proponents to refine the bus and parking facilities’ design to reduce risks to the private development above the above-ground parking facility.</li> </ul>	Potential security risks to private air-rights development.
51	<ul style="list-style-type: none"> <li>FRA to require that the new owner, transferee, or lessee develop a safety and security plan that Amtrak and FRA would review and approve in any sale, transfer, or lease of the Federal air rights.</li> </ul>	Indirect impacts of potential Federal air-rights development on safety and security.
<b>Public Health, Elderly and Persons with Disabilities</b>		
52	<ul style="list-style-type: none"> <li>For Alternatives B, C, D, and E, USRC to ensure that parking reserved for persons with disabilities is placed near the southern end of the below-ground parking facility to minimize the distance between parking spaces and Concourse A.</li> <li>For Alternatives B and E, such parking would additionally be located on the first level of the parking facility.</li> <li>Project Proponents to ensure that the most direct path from the parking facility or bus facility to the nearest WUS entrance is clearly identified; adequate signage, lighting, and safety features are provided; access to elevators, escalators, and emergency exits is clearly marked; signs and maps are clear and concise, with large, high-contrast, raised lettering for those who rely on tactile capabilities for information; audible direction is incorporated where appropriate; close joints in walkways and transitions from ramps to walks are provided and are flush to prevent tripping and</li> </ul>	Operational impacts to transportation and mobility of elderly or persons with disabilities.

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<p>reduce the risks of canes or small wheels from getting trapped in gaps or spaces; and walkways have a continuous detectable edge to help users navigate paths safely.</p> <ul style="list-style-type: none"> <li>▪ Amtrak to ensure that its Red Cap service remains available to assist elderly passengers and passengers with physical, visual, and auditory disabilities in navigating and traversing the station, including moving between the platforms and the bus or parking facilities.</li> </ul>	
53	<ul style="list-style-type: none"> <li>▪ Project Proponents to require the construction contractor to install temporary walls and partitions to close off the portions of the Retail and Ticketing Concourse where the column removal work would be conducted from the areas remaining accessible to the public or to station or Amtrak employees. These walls and partitions would be sufficient to prevent the fumes from train operations in the tunnel, as well as dust from the demolition or construction work and emissions from construction equipment, from entering these areas. They would also provide adequate shielding from noise.</li> <li>▪ Project Proponents to ensure that the construction contractor maintains accessibility during construction in compliance with Americans with Disabilities Act (ADA) requirements and DDOT Pedestrian Safety and Work Zone Standards, including avoiding or minimizing narrow passages, bottlenecks, or areas otherwise difficult for persons with disabilities or elderly persons with reduced mobility to navigate.</li> <li>▪ Outside WUS, the construction contractor to be required to provide protected pedestrian passages along with appropriate signage. Signs would be clear and concise and designed to communicate information to visually impaired as well as non-visually impaired persons. Where possible, audible direction would be provided. Pedestrian pathways would be kept clear of debris and obstructions, adequately drained, and with adequate passing spaces. Pedestrian pathways would have detectable edges or channelizing equipment. Pedestrians would be protected from vehicular traffic with crash-worthy barriers. Barriers would be equipped with reflective material for delineation on the side exposed to traffic.</li> </ul>	<p>Construction impacts to transportation and mobility of elderly or persons with disabilities.</p>

No.	Mitigation Measure/Project commitment	Relevant Impacts Mitigated
	<ul style="list-style-type: none"> <li>▪ Construction contractor to be required to properly and clearly advertise lane closures, detours, alternative parking access, or use of metal plates to cover temporary trenches across roadways.</li> <li>▪ Construction contractor to be required to notify the owners and occupants of the Kaiser Permanente Medical Building of any planned road or sidewalk closures sufficiently in advance to allow them to publicize these disruptions to their patients and customers as appropriate. Temporary entrances or pathways would be clearly marked and advertised. ADA-compliant access to the building would be maintained at all times.</li> </ul>	
<b>Environmental Justice</b>		
54	<ul style="list-style-type: none"> <li>▪ For all Action Alternatives except Alternative C, East Option, USRC, in coordination with the District, to identify a location for an adequately-sized interim bus facility or bus loading zones as close to WUS as possible.</li> </ul>	Disproportionately high and adverse impact from unavailability of the bus facility in Phase 4 of construction.
55	<ul style="list-style-type: none"> <li>▪ If and when construction contractors encounter homeless persons during staging and construction, they would be required to contact and coordinate with the appropriate authorities and organizations to ensure the displaced persons are given access to assistance services, including opportunities for shelter, and health and mental health care; that they are not deprived of their belongings or otherwise mistreated; and that neither they nor the workers interacting with them are put at risk of harm.</li> </ul>	Impacts on the homeless.

## 7.2 Permits

6

Permits applicable to the Project are listed below in **Table 7-2**.

**Table 7-2. Permits**

No.	Applicable Permits
<b>Natural Ecological Systems</b>	
1	<ul style="list-style-type: none"> <li>▪ DDOT Urban Forestry Division Public Street Tree Permit</li> </ul>
<b>Water Resources and Water Quality</b>	
2	<ul style="list-style-type: none"> <li>▪ DOEE permit for erosion and sediment control, dewatering, and post-construction storm water management</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit</li> <li>▪ Stormwater Pollution Prevention Plan (SWPP) submission to both DOEE and EPA Region 3 that is in compliance with the requirement of the NPDES permit</li> </ul>
<b>Solid Waste Disposal and Hazardous Materials</b>	
4	<ul style="list-style-type: none"> <li>▪ Register underground storage tanks covered under 20 District of Columbia Municipal Regulations, Chapter 55</li> </ul>
<b>Transportation</b>	
5	<ul style="list-style-type: none"> <li>▪ District Department of Transportation permits governing the use of the public right-of-way and creation of roadway access permits, including:               <ul style="list-style-type: none"> <li>• Public Space Permit – Construction</li> <li>• Public Space Permit – Occupancy</li> <li>• Traffic Control Plan for both Construction and Occupancy permits.</li> </ul> </li> </ul>
6	<ul style="list-style-type: none"> <li>▪ Washington Metropolitan Area Transit Authority permits governing construction and service closure</li> </ul>
<b>Energy</b>	
7	<ul style="list-style-type: none"> <li>▪ Green determination request to the District Department of Consumer and Regulatory Affairs (DCRA) to determine the applicability of green and energy laws in the green building design process</li> </ul>
<b>Land Use, Land Planning, and Property</b>	
8	<ul style="list-style-type: none"> <li>▪ DCRA building permit</li> </ul>
9	<ul style="list-style-type: none"> <li>▪ DCRA public space permit</li> </ul>
10	<ul style="list-style-type: none"> <li>▪ DDOT public space permit (see also #5)</li> </ul>
11	<ul style="list-style-type: none"> <li>▪ DDOT fences and retaining walls permit</li> </ul>



No.	Applicable Permits
12	<ul style="list-style-type: none"> <li>▪ DDOT sidewalk, curb, and gutter permit</li> </ul>
<b>Aesthetics and Visual Quality</b>	
13	<ul style="list-style-type: none"> <li>▪ Pre-design and programing, schematic design review and approval by the National Capital Planning Commission (NCPC)</li> </ul>
14	<ul style="list-style-type: none"> <li>▪ Concept design review and approval by the Commission of Fine Arts</li> </ul>
15	<ul style="list-style-type: none"> <li>▪ Final design and site plan review and approval by NCPC, CFA, and the District of Columbia Historic Preservation Office</li> </ul>
<b>Cultural Resources</b>	
16	<ul style="list-style-type: none"> <li>▪ PA resolving the Project’s adverse effects on historic properties in compliance with Section 106</li> </ul>
<b>Public Health, Safety, and Persons with Disabilities</b>	
17	<ul style="list-style-type: none"> <li>▪ Compliance with Americans with Disabilities Act (ADA) requirements and U.S. Access Board’s ADA Accessibility Guidelines (ADAAG) adopted by the U.S. Department of Transportation in 2006.</li> </ul>