

Chapter 22: Mitigation Measures and Project Commitments

22.1 INTRODUCTION

In the preceding chapters of this EIS, FRA examined the potential for adverse environmental impacts to result from the construction and operation of the Preferred Alternative. The analysis indicated that specific commitments would need to be implemented by the Project Sponsor during construction and operation to address and avoid potential construction impacts that were identified. This chapter discusses the commitments related to construction and operation of the Preferred Alternative in detail below.

Chapter 20, “Indirect, Cumulative, and Other Impacts,” discusses the mitigation measures and other project commitments as a result of indirect effects from the Preferred Alternative, including information from the 2009 SEQRA/CEQR FEIS Western Rail Yard project and the subsequent RD.

22.2 PRIOR ENVIRONMENTAL REVIEWS

The CEPP for the Preferred Alternative incorporates the proposed project commitments identified as a result of this EIS process, as well as the established commitments being carried forward from prior environmental reviews for actions proposed at this Project Site (i.e., 2009 SEQRA/CEQR FEIS, 2013 EA, and 2014 SEA). Project commitments and mitigation measures prescribed in the previous environmental reviews that remain applicable to the Preferred Alternative are described briefly below.

22.2.1 2009 SEQRA/CEQR FEIS

In addition to the direct effects of the Preferred Alternative, FRA has considered the indirect effects of the Preferred Alternative, including those associated with the implementation of the Overbuild. The Platform and Overbuild was comprehensively analyzed in the 2009 SEQRA/CEQR FEIS. Following the completion of the 2009 SEQRA/CEQR FEIS, WRY Tenant LLC entered into a RD with New York City, which incorporates commitments associated with the design and construction of the Platform and Overbuild to protect sensitive resources (provided in **Appendix O1**). These commitments, which are still in force, include environmental controls during construction, noise attenuation, restrictions on fuel use and location of air intakes for ventilation systems, procedures for addressing hazardous materials on site, and commitments to sustainable development.

The Overbuild is an as-of-right development that will be built in accordance with the New York City Zoning Resolution's existing zoning controls. The Zoning Resolution will regulate type of use, building envelopes, publicly accessible open space areas, street wall controls, retail continuity, and maximum floor area ratio. All of the commitments made at the time the zoning change was approved by MTA and the New York City Planning Commission (as stated in the 2009 SEQRA/CEQR FEIS), including those relating to site lines, access to, and use of the High Line remain valid. All components of the 2009 CEPP, incorporated in the 2009 RD, remain valid. NYCDOB would oversee the implementation of the conditions and measures included in the RD for the Project Site. The mitigation and commitments related to the indirect effects of the operation and construction of the Preferred Alternative are summarized in Chapter 20.

The 2009 SEQRA/CEQR FEIS resulted in a LOR between the NYSHPO, MTA, CPC, and WRY Tenant LLC, pursuant to the Section 14.09 review under the New York State Historic Preservation Act of 1980, Part 428 (provided in **Appendix O2**). The LOR requires continued consultation under Section 14.09 regarding aspects of the development's design that could affect the High Line (specifically, review of preliminary and pre-final design plans). The LOR requires preparation of a CEPP to protect the High Line during adjacent project construction. As part of the Federal consultation process, SHPO would require the Project Sponsor to meet all requirements set forth in the SEQRA process including compliance with the LOR and its two stipulations (i.e., consultation with OPRHP concerning design elements that could affect the High Line, and preparation of a construction protection plan to protect the High Line during construction of the 2009 SEQRA/CEQR FEIS project).

22.2.2 2013 EA AND 2014 SEA NEPA FONSI

Mitigation measures and commitments in the 2013 and 2014 FONSI issued for the past environmental reviews (2013 EA and 2014 SEA) of the Tunnel Encasement (aka concrete casing) remain valid. These previously identified commitments for the construction of the concrete casing would also be included in the CEPP for the Preferred Alternative. Measures identified in the 2013 and 2014 FONSI to avoid and minimize impacts at the Project Site from construction of the concrete casing include the following:

- Soils Management Plan;
- Groundwater Management;
- Dewatering Plan;
- Dust control BMPs;
- Health and Safety Plan; and
- Noise and vibration monitoring per the New York City Building Code *TPPN #10/88*.

As a result of the 2013 and 2014 FONSI, FRA required Amtrak to implement protection measures, such as monitoring, to avoid accidental damage to the High Line during construction. Monitoring of the High Line would occur per the New York City Building Code *TPPN #10/88*. Exact monitoring measures utilized during construction of the Tunnel Encasement would be subject to detail design review and approval by Friends of the High Line and NYC Parks. Copies of the 2013 and 2014 FONSI, which include descriptions of the mitigation measures and commitments identified for the construction of the concrete casing, are posted on the Federal Docket system at Regulations.gov (Docket FRA-2020-0039), and are available for review on FRA's webpages for these environmental reviews.^{1,2}

22.3 CONSTRUCTION COMMITMENTS

If Federal financial assistance is granted, FRA would require the Project Sponsor to adhere to mitigation and best management practices (BMPs) to comply with Federal, State and local laws, permits and ordinances. To document the commitments during construction, the Project Sponsor would develop a CEPP for the Preferred Alternative that would utilize BMPs. Portions of the CEPP would be reviewed and approved by the relevant regulatory agencies (e.g., NYSHPO, NYSDEC, NYCDEP, NYCDOT, NYCDOT-OCMC, etc.), and the Project Sponsor would be responsible for the implementation of these commitments.

The CEPP for the Preferred Alternative—which includes the commitments from the prior environmental review processes, described above—would comply with the control measures as part of the construction commitments, described in the following sections.

22.3.1 CONSTRUCTION HEALTH AND SAFETY PLAN (CHASP)

The CHASP would describe precautionary measures and safety procedures for the Project Contractor to follow during construction of the Preferred Alternative, including a Materials Handling Plan, which would identify specific protocols and procedures to be employed to manage soil and groundwater at the Project Site. The CHASP would set forth health and safety procedures for the Project Sponsor/Project Contractor to follow to minimize pathways of exposure of hazardous materials to the construction workers, nearby community residents, as well as the surrounding public and environment. The hazards of the Project Site would be evaluated by determining the subsurface contaminants of concern and their chemical and physical characteristics, and the health hazards associated with the work to be performed.

22.3.2 EMISSION REDUCTION PROGRAM

The Project Sponsor would commit to developing and implementing an emission reduction program. These measures would include, at a minimum, the following provisions:

- Vehicles and equipment used to construct the Project Site would comply, at a minimum, with the USEPA Tier III Non-road Diesel Engine Emission Standard. Once Tier IV equipment is widely available, Tier IV would become the new minimum standard.
- All non-road, diesel-powered construction equipment with engines generating 50 hp or greater would be outfitted with the best available technology to reduce diesel particulate emissions beyond the USEPA Tier II and III particulate emission standards, including diesel particulate filters and diesel oxidation catalysts.

¹ <https://railroads.dot.gov/elibrary/hudson-yards-concrete-casing-construction-fonsi>, (2013 Concrete Casing EA FONSI), accessed April 14, 2021.

² <https://railroads.dot.gov/elibrary/hudson-yards-concrete-casing-construction-new-york-new-york-finding-no-significant-impact>, (2014 Concrete Casing SEA FONSI), accessed April 14, 2021.

- All non-road, diesel-powered construction equipment would be operated with ultra-low sulfur diesel fuel.
- Unless the vehicle engine is used to operate a loading, unloading or processing device, idling longer than three minutes would be prohibited on the Project Site, and within 10 feet of the perimeter of these sites.

22.3.3 FUGITIVE DUST CONTROL PLAN

The Project Sponsor would commit to implementing a fugitive dust control plan during construction. These measures would include, at a minimum, the following provisions:

- Fugitive dust would be controlled through water spraying or use of a biodegradable dust suppressant solution;
- Large piles of soil, rock or sediment would be kept wet, coated with a dust suppressant and/or covered to prevent wind erosion and fugitive dust. Longer term stockpiles would be covered with a tarp weighted down with sand bags.
- Concrete and rock grinding, drilling and saw cutting operations would be performed with a wet blade or misted if significant dust is being generated. Such operations in an enclosed space would utilize vacuum collection or extraction fans.
- During loading and unloading, loose material would be stabilized or wetted if the activity is generating dust plumes. During transportation to and from the Project Site, this type of material would be covered.

22.3.4 SOIL EROSION AND SEDIMENT CONTROL PLAN

The Project Sponsor/Project Contractor would develop, and implement during construction, a soil erosion and sediment control plan, including, at a minimum, the following elements:

- The wheels or treads of vehicles and equipment that could track soil from the Project Site would be washed before leaving the sites. To reduce the use of potable water for this purpose, the wheel wash could be supplied by collecting precipitation or using water collected during dewatering operations, where practicable.
- Rinse water from the wheel wash would be reabsorbed into the ground or pumped into tanks holding storm water or dewatering water. The wheel wash would not be used for concrete trucks which would contaminate wash water with high alkalinity.
- Concrete trucks would be rinsed into watertight dedicated bins. The captured washout water would be left to evaporate, treated, or returned to the concrete manufacturer. Any concrete that forms in the concrete washout bin would be recycled.
- Concrete from trucks, chutes, buckets, and other equipment would be removed and collected in dedicated waste bins prior to equipment rinsing. Concrete spillage on the sites would be collected in dedicated waste bins.

22.3.5 DEWATERING PLAN

The dewatering plan would require that the Project Sponsor/Project Contractor pump dewatering water collected during construction of the Preferred Alternative into sedimentation tanks for removal of sediments prior to reuse on the site or discharge into the City's sewer system or the Hudson River. The Project Sponsor would periodically test water in such tanks for pH and contaminants. If contaminants are identified, the Project Sponsor would treat the water for contaminants prior to disposal, as per NYSDEC, or NYCDEP regulations, and depending on point of discharge (i.e., City sewers or stormwater conveyance pipe to the Hudson River).

22.3.6 NOISE MITIGATION PLAN

The Noise Mitigation Plan would require compliance with the City's Local Law 113, and with Chapter 28 of the NYCNCC, and would consider the condition of surrounding buildings, structures, infrastructure, and utilities while performing construction activities likely to cause significant noise and vibration.

22.3.7 CONSTRUCTION PROTECTION PLAN (CPP)

Consistent with the RD from the 2009 SEQRA/CEQR FEIS and the 2009 LOR described below, prior to commencing construction, the Project Sponsor would be required to develop a CPP in coordination with OPRHP and NYCLPC. The purpose of the CPP would be to avoid any adverse physical, construction-related impacts to historic properties (e.g., the High Line and NRT), such as those from ground-borne vibrations, falling objects, dewatering, flooding, subsidence, collapse, or damage from construction machinery, and shall submit same to NYCDCP for review and approval. The following conditions would also apply to construction of the Preferred Alternative in the vicinity of historic properties:

- NYCDOB shall not issue, and Project Sponsor or Project Contractor shall not accept, a Building Permit allowing work within 90 feet of the High Line and/or NRT until NYCDCP shall have certified to the NYCDOB Commissioner that both OPRHP and NYCLPC have determined that the CPP is acceptable.
- All construction activities (including demolition and excavation) within 90 feet of the High Line and/or NRT shall be undertaken in accordance with the CPP.
- The CPP shall follow the guidelines set forth in NYCLPC's *Guidelines for Construction Adjacent to a Historic Landmark and Protection Programs for Landmark Buildings* as appropriate, except as may be otherwise approved by NYCLPC and OPRHP. The CPP shall also follow the requirements established in NYCDOB's *TPPN #10/88*, in addition to the guidelines set forth in Section 523 of the *CEQR Technical Manual*.
- The Project Sponsor/Project Contractor would engage licensed professional structural and foundation engineers to develop construction procedures included in the CPP to monitor and protect the foundations and structures of the High Line and/or NRT.

22.3.8 PEST MANAGEMENT PLAN

The Project Sponsor/Project Contractor would develop and implement an integrated pest management plan to control pests (unwanted vermin, insects and weeds) during construction of the Preferred Alternative. This plan would include the following provisions:

- Keep the Project Site as clean as possible. Food waste would be segregated from construction waste and deposited in covered bins;
- Pump out standing water before the water becomes septic;
- Trim vegetation fostering vermin; and
- Elevate construction trailers, dumpsters, and sheds off the ground to discourage vermin from burrowing or hiding under them.

22.3.9 MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN

Construction activity would require temporary closure of curb lanes, and temporary closure, reduction in width, or relocation of sidewalks along segments of the streets and avenues bordering the Project Site. No streets would be completely closed to vehicular traffic nor transit buses due to construction activity on the Project Site. In areas where temporary sidewalk closure is required, the sidewalk would be relocated to the curb lane and a barrier would be erected to separate motor vehicle traffic from pedestrian traffic. In areas where access to bordering lots is not needed—along segments of the streets and avenues bordering the Project Site—the sidewalk and/or curb lane may be closed. In such instances, pedestrians would be routed to the opposite side of the street at the nearest crosswalk. Sidewalk modification may include the construction of a protective shed over segments of sidewalk bordering construction sites. The width of any relocated or modified sidewalks would be at least five feet.

MPT plans would be developed and submitted to NYCDOT. Such plans would provide diagrams of proposed temporary lane and sidewalk alterations, including the duration, and the width and length of affected segments. Provisions of the plans may include requirements for the stationing of flagmen, and may limit the hours of the day and/or days of the week when changes can be implemented. After NYCDOT has approved the MPT plans, the Project Contractor(s) would be responsible for maintaining the provisions of the plans.

22.4 SUMMARY OF PROJECT COMMITMENTS AND MITIGATION MEASURES

Table 22-1 summarizes the mitigation and/or commitments related to the direct effects of both construction and operation of the Preferred Alternative. Where the EIS refers to actions or specified activities for construction and implementation of the Preferred Alternative that would be taken by the Project Sponsor and/or Project Contractor, FRA would include conditions as part of its environmental decision regarding the Preferred Alternative (i.e., in the ROD for the EIS in accordance with NEPA).

**Table 22-1
Summary of Mitigation Measures and Project Commitments**

Environmental Category	Operational and Construction Effects
Land Use, Land Planning, and Property	<p>Contain construction staging and construction activities within the Project Site and adjacent roadways.</p> <p>Coordinate with LIRR on the relocation of LIRR maintenance and operations facilities on the Project Site as they would be relocated during construction. The facilities would be housed in temporary facilities under the Construction Agreement between the Project Sponsor and LIRR.</p> <p>Coordinate with MTA and LIRR to provide interim facilities to enable the Yard to be functional during construction.</p>
Transportation	<p>The Project Sponsor would develop MPT plans for submission to NYCDOT for review and approval. Review of the plans and implementation of the best practices highlighted in the MPT would be coordinated with NYCDOT's OCMC. After NYCDOT has approved the MPT plans, the Project Sponsor and its contractors would be responsible for maintaining the provisions of the plans. Common MPT measures for a large-scale construction project in New York City would likely require:</p> <p>Temporary closure of curb lanes, and temporary closure, reduction in width, or relocation of sidewalks along segments of the streets and avenues bordering the Project Site.</p> <p>Based on the preliminary construction logistics plan developed by the Project Sponsor, construction trucks such as dump trucks or concrete trucks are anticipated to enter the "construction area" via West 33rd Street and Eleventh Avenue throughout the duration of Platform construction, and via West 30th Street for the construction of the substation.</p> <p>Pedestrian circulation adjacent to the Project Site would be temporarily closed throughout Platform construction on Eleventh Avenue and West 33rd Street. However, at no time would access to occupied buildings be closed, nor would access to the Western Rail Yard and other Caemmerer Rail Yard facilities be closed to LIRR personnel and equipment.</p> <p>No streets would be completely closed to vehicular traffic nor transit buses due to construction of the Preferred Alternative. However, the segment of West 33rd Street between Eleventh and Twelfth Avenues would be completely closed to non-emergency vehicles during the Preferred Alternative's construction period because of the NYCEDC West 33rd Street Viaduct project's construction.</p> <p>The timing of the West 33rd Street reconstruction work would be coordinated with the schedule and construction of the Platform.</p> <p>Nearby vehicle detour routes would include West 34th Street, West 30th Street, and West 29th Street and none of the streets are likely to be disrupted by the detour, nor would other nearby projects during the construction period.</p> <p>In areas where temporary sidewalk closure is required, the sidewalk would be relocated to the curb lane and a barrier could be erected to separate motor vehicle traffic from pedestrian traffic. Furthermore, 34th and 29th Streets would be available as alternative pedestrian routes to 33rd and 29th Streets, respectively.</p> <p>In areas where access to bordering lots is not needed—along segments of the streets and avenues bordering the Project Site—the sidewalk and/or curb lane may be closed. In such instances, pedestrians would be routed to the opposite side of the street at the nearest crosswalk.</p> <p>Sidewalk modification may include the construction of a protective shed over segments of sidewalk bordering construction sites. The width of any relocated or modified sidewalks would be at least five feet, as specified in the 2009 Restrictive Declaration.</p>

Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments

Environmental Category	Operational and Construction Effects
Air Quality, Greenhouse Gas Emissions, and Resilience	<p>The Project Sponsor would implement measures to reduce both criteria pollutant and GHG emissions during construction in accordance with all applicable laws, regulations, and building codes. In addition, the Project Sponsor would implement an emissions reduction program to minimize the air quality effects from construction under the Preferred Alternative, consisting of the following components:</p> <ul style="list-style-type: none"> • Clean Fuel. Only ULSD fuel would be used for all diesel engines throughout the construction site. • Diesel Equipment Reduction. Electrically powered equipment such as welders and saws would be used instead of diesel-powered versions of that equipment, to the extent feasible and practicable. • Dust Control Measures. Contract specifications would require a dust control plan, including a watering program, to minimize dust emissions from construction activities. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the Project Site and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air. • Idling Restriction. As required by local law, all stationary vehicles on roadways adjacent to the Project Site would be prohibited from idling for more than three minutes. The idling restriction excludes vehicles that are using their engines to operate a loading, unloading, or processing device (e.g., concrete-mixing trucks) or otherwise required for the proper operation of the engine. • Engine Retrofits. Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the Preferred Alternative), including but not limited to, concrete mixing and pumping trucks would utilize the best available technology (BAT) (e.g., diesel particulate filters) for reducing diesel particulate matter emissions. • Utilization of Newer Equipment. USEPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). All diesel-powered non-road construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 emissions standard. <p>The Project Sponsor would also develop a stormwater management plan and identify measures to address risk from potential flooding due to precipitation.</p> <p>The Preferred Alternative would include a new ventilation system with several fan plants which would ventilate daily emissions and emergency smoke events from the Western Rail Yard to maintain air quality under operational conditions. The new ventilation system would be designed in compliance with all applicable laws, regulations, and building codes to ensure no adverse air quality effects from operation of these systems.</p>

**Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments**

Environmental Category	Operational and Construction Effects
Noise and Vibration	<p>Noise from construction equipment would comply with New York City noise emission standards. These standards mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards, and construction material be handled and transported in such a manner to not create unnecessary noise.</p> <p>Construction of the Preferred Alternative would include sufficient mitigation to meet the New York City Noise Control Code construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties.</p> <p>The Project Sponsor would be required to obtain NYCDOB approval for construction outside of weekdays 7 AM to 6 PM, which is prohibited by the NYC Noise Control Code.</p> <p>To the extent practicable given space constraints at the work sites, construction would use acoustical noise tent and/or enclosures surrounding hoe rams, jackhammers, or pavement breakers that can provide up to 15 dB(A) of noise reduction during any demolition activities. For additional noise reduction, jackhammer noise mufflers that can provide up to an additional 10 dB(A) of noise reduction can also be used.</p> <p>To minimize the noise from the backup warning alarms on trucks, vehicles would be routed through the construction sites to minimize the use of alarms. In addition, vehicles would also be equipped with Occupational Safety and Health Administration (OSHA)-approved quieter backup alarms.</p> <p>Any blasting activities associated with excavation of rock during construction of the Tunnel Encasement would be coordinated and conducted with permission from the FDNY. The Project Sponsor would provide a blasting schedule to neighboring building owners and occupants. Construction vibration monitoring would be required during blasting activities to ensure that vibration does not exceed a level that could result in damage to any nearby buildings or structures.</p> <p>Consistent with the protection and monitoring procedures developed for the High Line, construction vibration monitoring would be required whenever construction would occur within 90 feet of the High Line structure to ensure that construction activities do not result in vibration levels that would be capable of causing damage.</p> <p>The Project Sponsor would develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the NRT and High Line. The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88, the Protection for Landmarked Buildings</i> guidance document of the LPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i>.</p> <p>The Project Sponsor would incorporate sufficient noise control measures in the final design of the ventilation system plans to ensure operation of the Preferred Alternative would be in compliance with the NYCNCC noise limits at all surrounding residential receptors.</p>
Cultural Resources	<p>The Project Sponsor would be required by SHPO to develop a CPP for protection of the NRT and High Line during the construction of the Preferred Alternative. The CPP for the protection of the High Line and NRT would be incorporated into the overarching CEPP that would be developed for the Preferred Alternative (see Section 22.3). The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88, the Protection for Landmarked Buildings</i> guidance document of the LPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i>. The CPP(s) would set forth the specific protection and monitoring measures that would be implemented during construction to avoid inadvertent damage to these historic properties and would be implemented in coordination with NYSHPO and NYCLPC.</p> <p>The LOR requires continued consultation under Section 14.09 regarding aspects of the development's design that could affect the High Line (specifically, review of preliminary and pre-final design plans). As part of the Federal consultation process, SHPO would require the Project Sponsor to meet all requirements set forth in the SEQRA process including compliance with the LOR.</p>

Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments

Environmental Category	Operational and Construction Effects
Parks and Recreation Areas	To ensure that potential construction-related effects to the High Line are not adverse, FRA would include conditions as part of its environmental decision regarding the Preferred Alternative, i.e., in the ROD for the EIS in accordance with NEPA. These conditions include requiring the Project Sponsor to develop a CEPP for the construction of the Platform and Tunnel Encasement in order to protect the High Line. FRA is coordinating with NYC Parks to determine appropriate minimization measures to address impacts to the High Line. Design plans for the Platform would be submitted at the preliminary and pre-final design stages. If NYC Parks identifies substantive concerns with maintenance and operation access, the Project Sponsor would continue coordination with NYC Parks to mitigate those concerns. The practices that would be used to reduce noise and vibration levels associated with construction of the Preferred Alternative, to the extent feasible and practicable, are detailed above.
Parks and Recreation Areas (cont'd)	FRA would include conditions as part of its environmental decision regarding the Preferred Alternative, i.e., in the ROD for the EIS in accordance with NEPA, to ensure that the potential effects to the High Line from construction vibration are not adverse. These conditions include requiring the Project Sponsor to develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the High Line. The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88, the Protection for Landmarked Buildings</i> guidance document of the LPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i> . The Project Sponsor would consult with NYC Parks regarding those aspects of the Platform design that relate to the High Line. Design plans for the Platform would be submitted at the preliminary and pre-final design stages. If NYC Parks identifies substantive concerns with maintenance and operation access, the Project Sponsor would continue coordination with NYC Parks to mitigate those concerns.
Aesthetics and Visual Quality	No avoidance, minimization, or mitigation measures are proposed.

**Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments**

Environmental Category	Operational and Construction Effects
Contaminated Materials	<p>A Subsurface (Phase II) Investigation would be conducted in areas of proposed disturbance to characterize subsurface conditions. Since an RD was assigned to the Project Site based on the 2009 SEQRA/CEQR FEIS, the Phase II must be conducted with NYCOER approval. The investigation may also include coordination with NYSDEC, as a portion of the Project Site is listed in the SHWS due to coal tar contamination noted in prior investigations and/or coordination with USEPA.</p> <p>Prior to any excavation or construction activity, a site-specific RAP and CHASP would be prepared and incorporated into the Preferred Alternative's construction documents. The RAP and CHASP would describe precautionary measures and safety procedures to be followed to minimize pathways of exposure to contaminants, including a Materials Handling Plan identifying specific protocols and procedures to be employed to manage soil and groundwater at the Project Site in accordance with applicable regulations during construction. The requirement for a CHASP was also included in the RD that pertains to the Project Site.</p> <p>Information in the NY Spills database indicated that additional remedial activities would be required to address known or potential residual contamination on the southwestern portion of the Project Site related to Spill #1802063 and on the northwestern portion of the Project Site under the NYSDEC SHWS program (ID #231083). Remedial activities in these areas would continue to be conducted in coordination with NYSDEC and NYCOER, as required.</p> <p>Any USTs encountered during redevelopment would be properly closed and removed, along with any contaminated soil, in accordance with federal, state, and local regulations, including NYSDEC for registration and, if applicable, spill reporting.</p> <p>During any future subsurface disturbance, excavated soil would be handled and disposed of properly in accordance with all applicable regulatory requirements, with spill reporting as required. Transportation of material leaving the Project Site for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.</p> <p>The appropriate vapor mitigation systems would be installed to protect buildings on the terra firma portion of the Project Site. If required, the design of new buildings would consider soil vapor mitigation measures to prevent any volatile contaminants that may remain present in the soil and groundwater from migrating into the new buildings. The RD includes these vapor mitigation requirements. This document specifies that, based upon further testing and review of any additional analytical data, the Project Sponsor would have the opportunity to demonstrate to the satisfaction of the NYCDEP and the NYCOER which of these measures are required.</p> <p>Any building materials, equipment, or utilities containing suspect PCBs, LBP, and/or ACM would be properly handled and disposed of, in accordance with the applicable regulations, prior to demolition or construction which may disturb them. LBP and ACM Management Plans would be implemented for existing structures and utilities prior to disturbance.</p> <p>Dewatering activities would be conducted in accordance with NYCDEP requirements, including pre-treatment as required during construction. Appropriate permanent ventilation systems would be installed during construction of the Preferred Alternative, as necessary, (to be operated post-construction) for areas under the Platform at the Project Site in accordance with LIRR's engineering design criteria for yard ventilation.</p>

Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments

Environmental Category	Operational and Construction Effects
Utilities and Energy	<p>During construction of the Platform, the Project Sponsor would be required to reroute and/or reconstruct portions of the Western Rail Yard's existing utility infrastructure on the Project Site and would make temporary infrastructure improvements to maintain utility services at the railyard. This would include temporary and permanent on-site sewer improvements. The existing storm sewers on the Project Site would be diverted to the sanitary sewer system to accommodate the Platform support piles, and temporary drainage provision (such as pits and pumps) would be installed as temporary bypasses if needed during construction to maintain stormwater drainage in the rail yard. The existing sanitary sewer system and potable water mains would be relocated in order to avoid conflicts with the Platform support piles; however, sanitary service and water supply to the rail yard would continue to function during and after construction. In addition, the AC duct banks that service the rail yard's lighting would be removed or abandoned during construction of Platform foundations, and the Project Sponsor would provide temporary power and lighting system provided to maintain lighting on the rail yard during construction. The Project Sponsor would reroute the DC feeders that supply energy to the rail yard's traction power system around foundations in compliance with LIRR practices and standards as needed to avoid conflicts with the Platform support piles.</p> <p>The storm sewer currently serving the rail yard would continue to operate following construction of the Platform in order to convey stormwater collected on the terra firma portion of the Project Site; this sewer operates in accordance with an MS4 permit and would continue to meet the permit requirements (no additional detention and/or onsite treatment measures are required). The drainage system in the railyard and on the Platform would discharge to the NYCDEP sewers adjacent to the Project Site and would be designed to meet all NYCDEP permit requirements.</p>
Soils and Geology	<p>FUGITIVE DUST CONTROL PLAN</p> <ul style="list-style-type: none"> • The Project Sponsor would develop a fugitive dust control plan. These measures would include, at a minimum, the following provisions: • Controlling fugitive dust through water spraying or use of a biodegradable dust suppressant solution; • Maintaining large piles of soil, rock or sediment in a wet condition, coated with a dust suppressant and/or covered to prevent wind erosion and fugitive dust and covering longer-term stockpiles with weighted tarps. • Performing concrete- and rock-grinding, drilling, and saw-cutting operations with a wet blade or using mist if the activity is generating significant dust. Such operations in an enclosed space would utilize vacuum collection or extraction fans. • Stabilizing or wetting loose material during loading and unloading if the activity is generating dust plumes, and covering this material during transportation to and from the Project Site. <p>DEWATERING PLAN</p> <p>The dewatering plan would require pumping of dewatering water into sedimentation tanks for removal of sediments prior to reuse on the sites or discharge into the City's sewer system or the Hudson River via the existing LIRR outfall that serves the rail yard. The Project Sponsor would periodically test water and particles in such tanks for pH and contaminants. Depending on test results, the Project Sponsor would treat the water for contaminants prior to disposal, as per NYSDEC, or NYCDEP regulations, and depending on point of discharge (i.e., City sewers or stormwater conveyance pipe to the Hudson River).</p>

**Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments**

Environmental Category	Operational and Construction Effects
Soils and Geology (cont'd)	<p>NOISE MITIGATION PLAN Construction practices that would be used to the extent feasible and practicable to reduce noise and vibration levels associated with construction of the Preferred Alternative are listed above under the Noise and Vibration environmental category.</p> <p>LIRR/MTA COORDINATION The Project Sponsor would conduct construction work in accordance with LIRR guidelines and design/construction criteria, which require persons engaged in pre-construction or construction activities located on or near the tracks, or with the potential of fouling a track in the Western Rail Yard to attend the LIRR Contractor Roadway Worker and Safety Training in accordance with provisions of 48 CFR Part 214 and LIRR Rules and Regulations. LIRR regulations also require that MTA and LIRR receive and approve plans—to result in a construction agreement entered into between MTA and LIRR and the Project Sponsor—for construction activities related to work at the Western Rail Yard.</p> <p>UTILITY PROTECTION The Project Sponsor has undertaken an inventory of underground utilities on the Project Site through a review of existing utility drawings and information, as well as performing geotechnical surveys. The Project Sponsor performed this work as part of the engineering and design of the Preferred Alternative. The Project Sponsor's contractor would confirm location of underground utility lines to ensure avoidance by digging test pits at each caisson location. The Project Sponsor's contractor would likely conduct additional geotechnical surveys if necessary. The Project Sponsor or Contractor may conduct additional soil and groundwater testing to characterize more fully soil constituents for disposal purposes.</p>
Water and Natural Resources	<p>GROUNDWATER To avoid exposing construction workers and the general public to existing groundwater contaminants and to minimize potential adverse impacts to groundwater resources, the Project Sponsor would perform demolition, disposal, excavation, dewatering, and other construction activities in accordance with all applicable federal, state, and local regulations and guidelines. As such, the Project Sponsor would implement a site-specific CHASP during ground disturbance to protect workers, the public, and the environment from exposure to groundwater contaminants.</p> <p>WETLANDS To minimize potential adverse impacts to NYSDEC littoral zone tidal wetlands of the Hudson River due to discharge of sediment during construction, the Project Sponsor would implement the erosion and sediment control measures contained in the SWPPP prepared for the Project.</p> <p>AQUATIC RESOURCES To minimize potential adverse impacts to water quality and aquatic biota of the Hudson River during construction, the Project Sponsor would treat all groundwater recovered during dewatering in accordance with NYCDEP requirements prior to discharge to the municipal sewer. Additionally, to minimize the potential for discharge of sediment to the Hudson River during construction, the Project Sponsor would implement erosion and sediment control measures contained in the SWPPP prepared for the Project in accordance with SPDES requirements.</p>

Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments

Environmental Category	Operational and Construction Effects
Coastal Zone Consistency	<p>The Project Sponsor would implement erosion and sediment control measures identified in the SWPPP prepared in accordance with a SPDES permit for the Preferred Alternative.</p> <p>The Project Sponsor would pump, test, and treat any groundwater recovered during dewatering of excavation sites before disposal to the New York City stormwater or combined sewer system under an NYCDEP Discharge Permit from the Bureau of Wastewater Treatment and in conformance with applicable discharge limits.</p> <p>The Project Sponsor would treat any groundwater recovered during dewatering activities prior to discharge to the Hudson River through existing stormwater outfalls within the Western Rail Yard in accordance with NYSDEC requirements.</p> <p>The Project Sponsor would implement the following remedial and protective measures to avoid, minimize, or mitigate exposure pathways to these potential contaminants during construction and operation:</p> <ul style="list-style-type: none"> • A Phase II Investigation would be conducted in areas of proposed disturbance (above the bedrock interface) to characterize subsurface conditions. • Prior to any excavation or construction activity, the Project Sponsor would prepare a site-specific RAP and CHASP. • Remedial activities in areas of known spills would continue to be conducted in coordination with NYSDEC and OER, as required. • Any USTs encountered during redevelopment would be properly closed and removed, along with any contaminated soil, in accordance with federal, state, and local regulations, including NYSDEC for registration and, if applicable, spill reporting. • During subsurface disturbance, excavated soil would be handled and disposed of properly in accordance with all applicable regulatory requirements, with spill reporting as required. Transportation of material for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. • The appropriate vapor mitigation systems would be installed to protect buildings on the terra firma portion of the Project Site. If required, the design of new buildings would consider soil vapor mitigation measures to prevent any volatile contaminants that may remain present in the soil and groundwater from migrating into the new buildings. • Any building materials, equipment, or utilities containing suspect PCBs, LBP, and/or ACM would be properly handled and disposed of, in accordance with the applicable regulations, prior to demolition or construction which may disturb them. • Appropriate permanent ventilation systems would be installed during redevelopment (to be operated post-construction) for areas under the platform at the Project Site in accordance with LIRR's engineering design criteria for yard ventilation. <p>FRA would include conditions as part of its environmental decision regarding the Preferred Alternative, i.e., in the ROD for the EIS in accordance with NEPA, and in any funding agreement between the USDOT and the Project Sponsor, requiring the Project Sponsor to develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the NRT and High Line. The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88</i>, the <i>Protection for Landmarked Buildings</i> guidance document of the LPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i>.</p>
Socioeconomics	<p>The Project Sponsor has committed to provide interim MTA LIRR facilities to enable the railyard to be fully functional during construction.</p> <p>The Project Sponsor would develop MPT plans to ensure the safety of pedestrian, bicyclist, and vehicle circulation near the Project Site during construction of the Preferred Alternative as required by NYCDOT.</p>

**Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments**

Environmental Category	Operational and Construction Effects
Public Health	<p>The Project Sponsor would install appropriate permanent ventilation systems during construction of the Preferred Alternative (to be operated post-construction) for areas under the Platform at the Project Site, in accordance with LIRR's engineering design criteria for yard ventilation.</p> <p>Prior to any excavation or construction activity, a site-specific RAP and CHASP would be prepared.</p> <p>During any subsurface disturbance, the Project Sponsor would handle and dispose of excavated soil properly in accordance with all applicable regulatory requirements, with spill reporting as required.</p> <p>The Project Sponsor would treat any groundwater recovered during dewatering in accordance with NYCDEP requirements prior to discharge to the municipal sewer.</p> <p>The Project Sponsor would transport all material leaving the Site for off-site disposal in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.</p> <p>The Project Sponsor would incorporate sufficient noise control measures in the final design of the ventilation system plans to ensure compliance with the NYCNCC at all surrounding residential receptors</p> <p>Construction of the Preferred Alternative would include sufficient mitigation to meet the New York City Noise Control Code construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties.</p>
Environmental Justice	<p>With respect to potential vibration and other construction-related impacts to the High Line, the Project Sponsor would develop a CPP to protect this resource during construction of the Platform and Tunnel Encasement. The CPP would include vibration monitoring whenever construction would occur within 90 feet of the High Line structure to ensure that construction activities do not result in vibration levels that would be capable of causing damage.</p>

Table 22-1 (cont'd)
Summary of Mitigation Measures and Project Commitments

Environmental Category	Operational and Construction Effects
Section 4(f)	<p>FRA would require the Project Sponsor to develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the High Line and the NRT. As described in Section 22.3, the CPP for the protection of the High Line and NRT is a component of the overarching CEPP that would be developed for the Preferred Alternative.</p> <p>FRA is consulting with NYC Parks to determine the appropriate steps to protect High Line park users and the agency's ability to maintain the High Line. FRA proposes the Project Sponsor would consult with NYC Parks regarding those aspects of the Platform design that relate to the High Line. Design plans for the Platform would be submitted at the preliminary and pre-final design stages. If NYC Parks identifies substantive concerns with maintenance and operations access, the Project Sponsor would continue coordination with NYC Parks to mitigate those concerns.</p> <p>The following practices would be used to the extent feasible and practicable to reduce noise and vibration levels associated with construction of the Preferred Alternative:</p> <ul style="list-style-type: none"> • Noise from construction equipment would comply with New York City noise emission standards. These standards mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards, and construction material be handled and transported in such a manner to not create unnecessary noise. • Construction of the Preferred Alternative would include sufficient mitigation to meet the NYCNCC construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties. • The Project Sponsor would be required to obtain NYCDOB approval for construction outside of weekdays 7 AM to 6 PM, which is prohibited by the NYCNCC. The Project Sponsor expects discretionary approval would be granted to reduce interference with LIRR operations. • To the extent practicable given space constraints at the work sites, construction would use acoustical noise tent and/or enclosures surrounding hoe rams, jackhammers, or pavement breakers that can provide up to 15 dB(A) of noise reduction during any demolition activities. For additional noise reduction, jackhammer noise mufflers that can provide up to an additional 10 dB(A) of noise reduction can also be used. • To minimize the noise from the backup warning alarms on trucks, vehicles would be routed through the construction sites to minimize the use of alarms. In addition, vehicles would also be equipped with OSHA-approved quieter backup alarms. • Any blasting activities associated with excavation of rock during Tunnel Encasement would be coordinated and conducted with permission from the FDNY. The Project Sponsor would provide a blasting schedule to neighboring building owners and occupants. Construction vibration monitoring would be required during blasting activities to ensure that vibration does not exceed a level that could result in damage to any nearby buildings or structures. • Consistent with the protection and monitoring procedures developed for the High Line, construction vibration monitoring would be required whenever construction would occur within 90 feet of the High Line structure to ensure that construction activities do not result in vibration levels that would be capable of causing damage. • The Project Sponsor has committed to include a specification in construction documents indicating the following: the only allowable construction work hours on the High Line structure and columns for underpinning work (column load transfer) are between 11 PM and 7 AM—when the High Line is not open—unless otherwise approved by NYC Parks and Friends of the High Line.

*