



Attachment D: Project Mitigation Measures and Responsible Parties

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To request special accommodations, contact Kaja Vang, Community Outreach Coordinator, by phone at 612-373-3918 or by email at Kaja.Vang@metrotransit.org.



Transportation

Category	Mitigation Measures	Responsible Party	Timing
Transit Conditions	Operating Phase (Long-Term): <ul style="list-style-type: none">No adverse effects identified; no mitigation needed. Route modifications to bus service will be made to integrate with the Light Rail Transit (LRT) via the public process specified in Title VI requirements. Construction Phase (Short-Term): <ul style="list-style-type: none">Develop and implement the Construction Mitigation Plan, Construction Communication Plan, and construction staging to minimize transit access changes and service disruptions.The Construction Communication Plan will address transit stop relocations, route modifications, anticipated duration of change, contractor notification requirements, and methods of communication, including: regular updates on Project and Metro Transit websites, bus stops, regional transit centers, and in Metro Transit on-board information brochures; 24-hour construction hotline; construction site Project liaisons; and public meetings.	Metropolitan Council	Construction
Pedestrian and Bicycle Conditions	Construction-Phase (Short-Term): <ul style="list-style-type: none">Develop and implement the Construction Communication Plan, which will address advance notice of pedestrian and bicycle facility closures and detour options.Maintain the continuity of, and access to, pedestrian and bicycle facilities where possible throughout construction.	Metropolitan Council	Engineering and Construction
Vehicle Traffic	Operating-Phase (Long-Term): <ul style="list-style-type: none">Implement traffic mitigation measures in coordination with the Project cities. Construction-Phase (Short-Term): <ul style="list-style-type: none">Develop and implement the Construction Communication Plan, which will address advance notice of lane and roadway closures and detour options.Prepare contractor specifications requiring compliance with County and City requirements for road and lane closures and the Minnesota Manual on Uniform Traffic Control Devices.Review and approve Contractor Maintenance and Protection of Traffic Plans and monitor compliance.	Metropolitan Council	Engineering and Construction
Vehicle Parking	Operating-Phase (Long-Term): <ul style="list-style-type: none">Compensate property owners for loss of off-street parking in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.Construct replacement parking near Penn Ave/W Broadway Ave to serve the surrounding parking-constrained commercial corridor.Conduct periodic Regional Park-and-Ride System Report to survey use of, and access to, park-and-ride facilities. Address spillover parking as needed. Construction-Phase (Short-Term): <ul style="list-style-type: none">Develop Construction Mitigation Plan, Construction Communication Plan, and contractor staging to reduce temporary parking loss during construction and monitor compliance.	Metropolitan Council	Engineering, Construction, and Operations
Freight Rail Conditions	Construction-Phase (Short-Term): <ul style="list-style-type: none">Develop freight rail operation coordination plans to manage coordination with affected railroads.Provide flaggers when needed to allow freight rail operations to continue.	Metropolitan Council	Engineering and Construction
Aviation	Construction-Phase (Short-Term): <ul style="list-style-type: none">Coordinate construction plan with Metropolitan Airports Commission (MAC) and Federal Aviation Administration (FAA) for work within the Runway 24 Departure Runway Protection Zone (RPZ) and maintain the function of the RPZ throughout construction.Restrict construction equipment height within the runway approach surface and prohibit open water within the RPZ during construction.	Metropolitan Council	Engineering and Construction



Community and Social

Category	Mitigation Measures	Responsible Party	Timing
Land Use Plan Compatibility	No adverse effects identified; no mitigation needed.	Not applicable	Not applicable
Community Amenities, Character, and Cohesion	<p>Operations-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Implement the pedestrian and bicycle, vehicle parking, acquisition and displacement of residents and businesses, visual/aesthetics, noise, and vibration and ground-borne noise mitigation measures (see respective topic area sections of this table).■ Establish a Community Investment Fund and criteria for disbursement through community-based organizations. Topics under consideration for investment include affordable housing, rental assistance programs, and home repair and weatherization.■ Construct replacement parking near Penn Ave/W Broadway Ave to serve the surrounding parking-constrained commercial corridor.■ Establish cultural placekeeping design groups to incorporate existing cultural identities at stations, public infrastructure, and streetscapes.■ Concentrate public realm improvements such as lighting, seating, public art, and pedestrian and bicycle amenities in areas of community character impacts.■ Administration of a Workforce Development Program including stipulation of local hiring preference in construction contracts. Conduct workforce development opportunities, such as trainings, mentorships, apprenticeships, scholarships, career fairs, information sessions, and speaker series. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Implement the pedestrian and bicycle, parking, acquisitions and relocations, visual/aesthetics, noise, and vibration, and access mitigation measures (see respective topic area sections of this table).■ Develop Construction Mitigation Plan, Construction Communication Plan and contractor staging requirements to reduce community impacts and monitor compliance.■ Implement a Business Assistance Program, including the following:<ul style="list-style-type: none">● Canvassing to identify needed support services● Provision of signage and customer wayfinding● Business support fund, with a maximum of \$30,000 for each affected business up to a program maximum of \$5M, for funding for rent/mortgages to offset construction impacts to small businesses.■ Provisions in the Construction Mitigation Plan and Construction Communication Plan, including:<ul style="list-style-type: none">● Outreach coordinators to communicate between the project office, contractors, and businesses● Contractor employee parking plan● Retaining business access throughout construction● Utility shutoff minimum notification time guidelines● Phasing construction where possible to reduce business impacts■ Creation of a Met Council marketing program, including:<ul style="list-style-type: none">● Ads on buses and Light Rail Vehicles (LRVs)● Coordination with local businesses to create an “open for business” marketing campaign● Neighborhood-scale and location specific marketing to attract people within walking distance of businesses● Local coupon book	Metropolitan Council	Engineering and Construction



Category	Mitigation Measures	Responsible Party	Timing
Acquisitions and Relocations	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Provide assistance for displaced persons by offering individualized relocation services and advisors with an option to meet at two centrally located storefronts in the corridor and on an online portal.■ Compensate property owners for acquisitions in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended:<ul style="list-style-type: none">• Determine value of property via independent appraisals for parcels over \$5,000 and in accordance with federal requirements.• Provide relocation advisory services to displaced tenants and owner occupants, including translation/interpretation as needed.• Reimburse business owners for moving costs and re-establishment expenses.• Prioritize options within the neighborhood from which the affected individual was displaced based on individual relocatee preference.• Provide minimum 90 days’ written notice to vacate property prior to possession.• Provide tenants the opportunity to receive relocation assistance as a lump sum where policies allow• Delay evacuation or the physical destruction of acquired properties until necessary for construction• Provide relocated persons with decent, safe, and sanitary housing options that are comparable. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Properties affected by temporary easements would be restored to a reasonable pre-construction condition■ Establish an Online Portal to connect property owners and tenants to relocation resources outlined in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and connect to regional anti-displacement initiatives and resources, such as project updates, a construction hotline, advertisements for affected businesses, and Project outreach coordinators■ Establish two storefronts, one in Minneapolis and the other in Brooklyn Park to connect property owners and tenants to resources provided by the Project and its partners, including:<ul style="list-style-type: none">• Relocation assistance services• Hennepin County programs• Business program office hours• Community workshops and meetings• Community-led ‘sidewalk events’• Project information and updates• An active phone number• Project liaisons■ Hold sidewalk events on a regular basis at each Project storefront with Project updates and activities, and information to connect businesses to technical assistance through Elevate Hennepin.■ Implement the workforce development initiatives, including stipulation of local hiring preference in construction contracts and hosting workforce development opportunities, such as trainings, mentorships, apprenticeships, career fairs, information sessions, and speaker series.	Metropolitan Council	Engineering
Cultural Resources	<ul style="list-style-type: none">■ Continue to consult with Minnesota State Historic Preservation Office (SHPO) and Consulting Parties to develop mitigation measures and resolve adverse effects to the Forest Heights Addition Historic District and the Northwestern National Bank – North American Office per Stipulation XIV of the Memorandum of Agreement (MOA).■ Engage with the community within the geographic area of the affected properties to help determine appropriate mitigation measures.■ Provide mitigation after further consultation, likely to include interpretation and/or archival documentation of the historic properties based on the results of the intensive architecture/history evaluation completed for the historic properties. Interpretation may include but is not limited to interpretive panels, public art installations, and/or written history publications.■ Continued design review by SHPO throughout design phase in relation to the Grand Rounds Historic District to ensure the Project will continue to result in a no adverse effect determination.■ Continued design review by SHPO throughout design phase in relation to the Forest Heights Addition Historic District in order to minimize the Project’s effects to the historic property.■ Continued design review by SHPO throughout design phase in relation to the West Broadway Avenue Streetcar Historic District; Commercial Building/Upper Midwest American Indian Center; and Minneapolis Public Library, North Branch in order to minimize the Project’s effects to the historic property.■ Implementation of a Construction Protection Plan to protect historic properties from unanticipated damage during Project construction.	FTA, Metropolitan Council, and Minnesota State Historic Preservation Office	Engineering and Construction



Category	Mitigation Measures	Responsible Party	Timing
Visual/Aesthetics	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Design lighting to reduce reflected glare and minimize light pollution.■ Design and install visual screens, landscaping, and walls where adequate space allows to protect privacy and reduce views of new Project elements in sensitive areas.■ Apply context sensitive aesthetic design enhancements, through coordination with the community, to mitigate adverse visual effects and enhance the existing built environment.■ Incorporate culturally relevant designs to project infrastructure through coordination with cultural placekeeping design groups.■ Incorporate context-sensitive design elements, visual screening, and landscaping on the OMF site to reduce visual impact. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Locate staging areas where less visible and provide temporary construction screens or barriers to limit views from nearby residential areas and community resources.■ Require contractor to minimize vegetation removal.■ Limit use of nighttime lighting and shield light sources in residential areas.■ Restore areas disturbed during construction to pre-construction conditions or better.	Metropolitan Council	Engineering and Construction
Economic Effects	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Implement acquisition and relocation mitigation measures.■ Construct replacement parking near Penn Ave/W Broadway Ave to serve the surrounding parking-constrained commercial corridor. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Include contractor requirements for maintaining business access during construction, providing “open for business” signage, and wayfinding signage for alternative parking and access.■ Provide community outreach coordinators to act as liaisons between the business community and contractors.■ Develop parking assistance measures to include temporary and/or permanent improvements to off-street parking adjacent to or near the Project area businesses.■ Implement the Business Assistance Program including marketing and consulting support for local businesses during construction.■ Implement workforce development initiatives, including a local hiring initiative; facilitating connections to apprenticeships, mentorships, and trainings; hosting information sessions for subcontractors, the public, vendors, and workforce development agencies; and job fairs, and other opportunities.■ Provide technical assistance to connect businesses to the Metropolitan Council Underutilized Business Program (MCUB) and Disadvantaged Business Enterprise (DBE) program under the Metropolitan Council Underutilized Business Program.■ Provide technical assistance to eligible businesses to apply for Small Business Administration 7(a) and 504 loans.	Metropolitan Council	Engineering and Construction
Safety and Security	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Follow the Project’s Safety and Security Action Plan (SSAP) and Metro LRT Design Criteria to consider safety and security when designing, constructing, and operating the Project.■ Conduct emergency-preparedness exercises through the Fire Life Safety and Security Committee.■ Design station areas according to the Project design criteria, incorporating Best Management Practices (BMPs) for safety and security.■ Include a police substation in the park and ride adjacent to Downtown Robbinsdale Station. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Coordinate with emergency service providers to provide schedule for construction activities and identify detour routes to minimize delay for emergency response vehicles.■ Require contractor to secure construction zones to avoid access by unauthorized persons.■ Develop and implement strategies for clear communication of Project activities with communities, partners, and other impacted parties.■ Maintain required access during established periods and keep one lane of traffic open on main arterials as much as possible, as would be described in the Construction Mitigation Plan.■ Maintain federal Occupational Safety and Health Administration (OSHA) and Minnesota OSHA standards for safety of construction site personnel to minimize and/or avoid injury to construction workers.■ Require contractors to prepare safety and health programs along with a site-specific safety plan to ensure that, while on the work site and construction activities, require contractor and subcontractor personnel comply with the specified safety practices, codes, and regulations.	Metropolitan Council	Engineering and Construction



Physical and Environmental

Category	Mitigation Measures	Responsible Party	Timing
Utilities	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">Coordinate with utility owners to evaluate utilities in areas adjacent to Project LRT electrification components for potential corrosion concerns and identify protective measures (such as cathodic protection).Coordinate with each city and private utility to evaluate the potential for service disruptions and long-term maintenance needs of water mains and other utilities.Identify utilities in conflict with the Project and coordinate relocations with utility owners. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">Conduct pre-construction surveys to identify utilities in general accordance with MnDOT requirements for the collection and depiction of subsurface utility information.Implement measures to minimize stray current and reduce potential for corrosion.Relocate all utilities in accordance with the Project Utility Relocation and Management Plan. Require the utility contractor to notify affected businesses and residents of any planned disruption in service because of construction.If utilities are discovered during construction that are not identified in the contract documents, the appropriate utility companies and agencies would be contacted to identify the line(s) and would be consulted on appropriate actions.Monitor contractor compliance with state and local regulations, including treatment of abandoned wells.Protect wells located outside, but near, the alignment.For those locations where impacts to wells will interfere with the necessary supply of potable water or with monitoring groundwater conditions at a site, well replacement or other water supply provisions will be considered.Any wells, either known or discovered during construction, which are in conflict and within the Project’s permanent right-of-way would be abandoned and sealed according to State and local regulations.Wells outside but near the Project right-of-way would be protected.For those locations where impacts to wells would interfere with a necessary supply of potable water or with monitoring groundwater conditions at a site, well replacement or other water supply provisions would be evaluated.Use Minnesota Department of Health (MDH) guidance to evaluate the feasibility of stormwater infiltration practices located in vulnerable Wellhead Protection Areas.	Metropolitan Council	Engineering and Construction
Floodplains	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">Mitigate the impact on regulatory floodplains through the creation of an equivalent volume of floodplain storage at each of the locations identified. Mitigation strategies include:<ul style="list-style-type: none">Grading along the edges of existing ponds to increase storage capacity where feasibleLimit excavation of areas within the existing floodplains to create additional storage capacity between the ordinary high-water elevation and the base flood elevation.Coordinate and obtain applicable permits from local, state, and federal jurisdictional authorities. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">Obtain applicable permits for floodplains, implement BMPs, and monitor contractor compliance with permit conditions.	Metropolitan Council with other appropriate jurisdictions and regulatory agencies	Engineering and Construction
Wetlands and Other Aquatic Resources	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">Amend 2018 Section 404 permit application to reflect updated Project design via coordination with United States Army Corps of Engineers (USACE) and provide compensatory wetland mitigation.Mitigate wetland impacts by purchasing wetland mitigation bank credits from established and approved wetland bank accounts to offset permanent impacts in accordance with applicable USACE, Watershed Conservation Authority (WCA), and Local Government Unit (LGU) requirements prior to construction. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">Require contractor to adhere to requirements of a SWPPP, including use of silt fencing, silt curtains, erosion mats, and rapid revegetation of disturbed areas to protect wetlands and aquatic resources, and monitor contractor compliance. Implement appropriate BMPs for erosion and sediment control to protect wetlands and other aquatic resources that are downslope of or downstream from areas disturbed because of earthmoving activities. Such BMPs include silt fence, silt curtains, erosion control blanket, and rapid stabilization of disturbed areas.	Metropolitan Council with USACE and other appropriate jurisdictions and regulatory agencies	Engineering and Construction



Category	Mitigation Measures	Responsible Party	Timing
Geology, Soils, and Topography	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Design and construct detention, retention, and infiltration BMPs to control and treat stormwater runoff caused by an increase in impervious surfaces.■ Design stable base (such as load transfer platforms and lightweight fill, if required) for Project components to avoid differential soil settlement.■ Determine if subsurface karst features are present by reviewing geotechnical borings and designing necessary mitigation measures, such as cutting, grading, using herbicides near a karst feature, or installing protective fencing, as needed. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Adhere to appropriate standards and applicable permitting requirements of Minnesota Pollution Control Agency (MPCA), MnDOT, and Hennepin County for grading and erosion control.■ Obtain dewatering permits, if required, from the Minnesota Department of Natural Resources (MnDNR).■ Address permanent stormwater management through a combination of filtration, infiltration, and wet sedimentation basins■ Where underlying geological conditions (i.e., poor soils, active karst, high groundwater, high contamination potential, etc.) preclude infiltration and filtration, implement wet sedimentation basins to address water quality and rate control. For areas of poor soils, incorporate typical geotechnical elements to provide a stable base for Project components (for example, track and LRT station platforms) and to avoid differential settlement of soils.	Metropolitan Council	Engineering and Construction
Hazardous Materials Contamination	<p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Address health and safety considerations in areas that exceed published levels of acceptable exposure for construction workers, adjacent residences, passerby, and businesses in a prepared health and safety plan.■ Conduct hazardous building material surveys and regulated waste assessments to identify the need for asbestos, lead paint, and regulated waste remediation.■ Develop a Response Action Plan for approval by MPCA to address the risks identified in the Phase I and II Environmental Site Assessments and the findings of the hazardous building material surveys.■ Develop a Construction Contingency Plan to address the potential to encounter undocumented soil and groundwater contamination.■ Review and approve Spill Prevention, Control, and Countermeasures Plan prepared by contractors and monitor contractor compliance with local, state, and federal regulations.	Council/Metro Transit	Engineering, Construction, and Operation
Noise	<p>Operation-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Design and install spring-rail frogs at crossover locations where mitigation is warranted■ Determine effectiveness of sound insulation to mitigate interior noise impacts in the residential buildings and churches where other measures would be ineffective. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Require contractors to prepare a detailed Noise Control Plan<ul style="list-style-type: none">● Contractor’s specific equipment types.● Schedule and methods of construction.● Maximum noise limits for each piece of equipment with certification testing.● Prohibitions on certain types of equipment and processes during the nighttime hours without local agency coordination.● Identification of specific sensitive sites near construction sites.● Methods for determining construction noise levels.● Implementation of noise-control measures where appropriate.■ Establish a 24-hour construction hotline	Metropolitan Council	Engineering, Construction, and Operation



Category	Mitigation Measures	Responsible Party	Timing
Vibration and Ground-Borne Noise	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Design and install spring-rail frogs for crossover locations where mitigation is warranted and special track work (e.g. ballast mats and resilient fasteners) to mitigate vibration impacts. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Require contractor to conduct vibration monitoring as appropriate based on distance away from high vibration activities.■ Perform pre-construction surveys to document existing conditions of structures near high-vibration construction activities.■ Specify vibration thresholds in contract documents that limit the potential for cosmetic damage as well as structural damage, accounting for the condition of adjacent structures.■ Prepare a Noise and Vibration Control Plan at locations where there is potential to exceed vibration thresholds; work will be stopped and construction methods modified if exceedance occurs.■ Minimize use of impact and vibratory equipment wherever feasible.■ Specify truck haul routes to minimize exposure at sensitive receptors and damage to roadway surfaces.■ Limit high-vibration activities at night.	Metropolitan Council	Engineering and Construction



Category	Mitigation Measures	Responsible Party	Timing
Biological Environment	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Incorporate enhanced culverts or other design elements to facilitate wildlife crossings of the LRT corridor. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Continue coordination with the U.S. Fish and Wildlife Service (USFWS) if an Incidental Take Permit (ITP) is deemed necessary due to proposed and unavoidable Project-related impacts (i.e., take) to the federally endangered northern long-eared bat (NLEB) (<i>Myotis septentrionalis</i>) or rusty patched bumble bee (<i>Bombus affinis</i>) (RPBB). If there are proposed impacts to the proposed endangered tricolored bat (TCB), proposed threatened monarch butterfly, or proposed rusty patched bumble bee critical habitat and the status of said species or critical habitat changes from proposed to listed prior to construction, the need to include them in an ITP will be evaluated at that time. Note that currently the need for an ITP is not expected.■ Adhere to required DNR guidelines to minimize impacts to Blanding’s turtles (<i>Emydoidea blandingii</i>) and implement BMPs (i.e., contractor awareness training, proper use and removal of silt fencing, checking trenches prior to backfilling, etc.).■ Require contractor to develop a Vegetation Management Plan that describes measures to control noxious weeds, including requirements for spot-spraying with appropriate herbicides and cleaning equipment as it enters and exits construction sites to minimize spreading noxious weed seeds or materials.■ Comply with USFWS guidance to minimize impacts to nesting migratory birds and bald eagles (<i>Haliaeetus leucocephalus</i>), and implement BMPs (e.g., contractor awareness training and, avoid tree clearing during nesting season). If a bald eagle nest is observed within 660 feet of the Project, the USFWS eagle nest disturbance guidelines will be followed to determine if avoidance or minimization measures or a disturbance permit are necessary.■ Bridge numbers 27203 and 27B60 contain cliff swallow (<i>Petrochelidon pyrrhonota</i>) nests. Per the Migratory Bird Treaty Act (MBTA), the destruction of active swallow nests will be avoided by conducting work outside of the nesting season, or by preventing the swallows (or other protected bird species) from nesting until work on said bridge is complete. Note that the nests of the rock pigeon (<i>Columba livia</i>) are not protected under the MBTA and are not subject to the avoidance measures proposed here.■ No disturbance of native vegetation in RPBB habitat within the 0.13 acres of low/medium quality foraging habitat within the HPZ during the nesting period (April 15 to October 10).■ Updates to the USFWS’s RPBB HPZ map will be monitored yearly through Project construction to determine if the high potential zone expands into areas where Project-related impacts would occur in suitable foraging, nesting, or overwintering habitat. If there are areas where Project-related impacts to suitable RPBB habitat overlaps with current or future HPZs, the USFWS’s guidelines will be followed.■ Conduct an updated bat habitat assessment within 24 months (2 years) of initiating construction activity on structures. Bat habitat assessments for bridges and culverts will be staged during the construction phase of the Project such that the habitat assessment for each structure is current (i.e., 2 years or less) per the <i>USFWS’s Range-Wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines</i>.■ No removal of trees during the bat pup season (June 1 to August 15) and no tree removal at Shingle Creek during the active season (April 15 to October 31).■ Ensure all operators, employees, and contractors working in areas of NLEB or TCB suitable habitat are aware of all Transportation Agency environmental commitments, including all applicable Avoidance and Minimization Measures (AMMs).■ Direct temporary lighting away from suitable habitat during the bat active season (December 15 to February 15).■ When installing new/additional permanent lighting or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those Transportation Agencies using the Backlight Uplight and Glare (BUG) system developed by the Illuminating Engineering Society, the project should be as close to “0” for all three ratings with a priority of "uplight" of “0” and "backlight" as low as practicable. http://www.escolighting.com/PDFfiles/BUG_rating.pdf.■ Modify all phases/aspects of the Project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal/trimming in excess of what is required to implement the Project safely.■ Ensure tree removal/trimming is limited to that specified in Project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree removal/trimming to ensure contractors stay within clearing limits.■ Avoid conducting tree removal/trimming outside documented habitat for the NLEB or TCB beyond 100 ft of the road/rail surface during the pup season.■ If removing/trimming trees outside documented habitat for the NLEB or TCB within 100 feet of the road/rail surface during the pup season, all trees removed/trimmed must be <9 inches (22.9 cm) diameter at breast height (DBH).■ Minimize tree removal and coordinate replacement trees needs with local jurisdictions, as appropriate.■ Specify BMPs in contract documents or permits, including the use of silt fencing, silt curtains, erosion mats, and rapid revegetation of disturbed areas to protect wetlands and aquatic resources from erosion or sedimentation impacts, and monitor contractor compliance to said documents or permits.	Metropolitan Council, USFWS, DNR	Engineering and Construction



Category	Mitigation Measures	Responsible Party	Timing
Water Quality and Stormwater	<p>Operating-Phase (Long-Term):</p> <ul style="list-style-type: none">■ Design and construct detention and infiltration BMPs located appropriately to control and treat stormwater runoff caused by an increase in impervious surfaces. <p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Prepare Stormwater Pollution Prevention Plans and applications for National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permits.■ Monitor contractor compliance with NPDES permit conditions and best practices to control runoff and reduce erosion and sedimentation.	Metropolitan Council, USACE, and local regulatory agencies	Engineering and Construction
Air Quality/GHG Emissions	<p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Comply with United States Environmental Protection Agency (EPA) recommended measures to reduce short-term construction impacts to air quality wherever possible:<ul style="list-style-type: none">• Minimize land disturbance during site preparation.• Ensure vehicles and equipment meet EPA emission standards (e.g., Tier 4 for non-road vehicles and model year 2010 or newer standards for on-highway vehicles). When feasible, electric or zero-emission technologies should be prioritized.• Utilize the most advanced emission control systems available if such equipment and retrofit are available, including retrofitting older vehicles or using electric systems, and ensure regular maintenance of diesel engines.• Enforce anti-idling policies at construction sites to minimize emissions when practicable.• Position the exhaust pipe to direct fumes away from personnel.• Stabilize open storage piles as soon as practicable and, if feasible, use water or chemical dust suppressants in unpaved areas. In areas where water is used, ensure it does not create puddles or ice, particularly in cold weather, to prevent tripping or slipping hazards. Additionally, install wind fences and manage speed limits (10 mph) for vehicles to control fugitive dust.• Use respirators as an interim measure to control exposure to diesel emissions.• Cover trucks while hauling soil or debris off site or transferring materials.• Protect worker health by using enclosed, air conditioned-controlled cabs with high-efficiency filters, providing respirators, and training workers on proper safety protocols.• Implement construction emission reduction measures near locations frequented by children, such as homes, schools, and playgrounds, in line with EO 13045 on children's health.• Revegetate any disturbed land post-construction.• Encourage recycling of construction and demolition debris, use of recycled materials for infrastructure components, and construction of energy-efficient buildings.• Use energy-efficient construction equipment and vehicles.• Regularly maintain diesel engines to keep exhaust emissions low.• Reduce exposure through work practices and training.	Metropolitan Council	Construction
Energy	No adverse effects identified; no mitigation needed.	Not applicable	Not applicable



Category	Mitigation Measures	Responsible Party	Timing
Section 4(f) Evaluation	<p>Operating-Phase (Long-Term) and Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Implement the following standard mitigation measures at all affected Section 4(f) properties:<ul style="list-style-type: none">• Financial compensation for the loss of property in accordance with the Uniform Act and based on fair market appraisal;• Avoidance, conservation, and replacement of protected trees wherever practical;• Implementation and monitoring of BMPs during construction to minimize noise, vibration, and dust levels;• Maintenance of bicycle and pedestrian traffic via detour routes around construction sites; and• Restoration of construction sites to a condition at least as good as that which existed prior to construction as coordinated with OWJs■ Section 4(f) use of two historic resources including:<ul style="list-style-type: none">• The Northwestern National Bank – North American Office (1.0 acre permanent). Mitigation measures such as interpretation and/or historic documentation and/or historic documentation will be agreed upon by SHPO and consulting parties and documented in the Amended MOA.• The Forest Heights Addition Historic District (2.29 acres permanent and 2.11 acres of temporary easements). Mitigation measures such as interpretation and/or historic documentation and/or historic documentation will be agreed upon by SHPO and consulting parties and documented in the Amended MOA.• Continued design review by SHPO throughout design phase in relation to the Forest Heights Addition Historic District in order to minimize the Project’s effects to the historic property.■ Continued design review by SHPO throughout design phase in relation to the Grand Rounds Historic District ensuring the Project will result in No Adverse Effect to this historic property.■ Continued design review by SHPO throughout design phase in relation to the West Broadway Avenue Streetcar Historic District to minimize potential effects as the Project design develops and implementation of a Construction Protection Plan to protect historic properties from unanticipated damage during Project construction.■ Adhere to temporary occupancy requirements at the following locations:<ul style="list-style-type: none">• Park property adjacent to Rush Creek Regional Trail (connection to Rush Creek Regional Trail at Winnetka Ave N)• Crystal Lake Regional Trail (trail detours required which will be posted at trail segments and on TRPD website, permanent route modification between Lakeland Ave N and Bass Lake Rd)• Becker Park (180-day restriction, trail detours required)• Trail SW Quadrant of CR 81 and Bass Lake Rd (trail detour required)• Connecting trail to CLRT under CR 81 near TH 100 (extension of MnDOT-owned bicycle/pedestrian culvert under CR 81, trail detours required)• Twin Lakes Boat Launch (maintain access to boat launch during construction, trail detours required, southbound CR 81 left-turn lane to improve future access)• Lakeview Terrace Park/Crystal Lake Boat Launch (maintain access to boat launch during construction, trail detours required)• 2105 Girard Ave N and associated parcels (replace existing fence along N 21st Ave affected by construction activities, if needed)• Graeser Park (historic property)• Hennepin County Library, City of Robbinsdale Branch• All Pets Animal Clinic• West Broadway Avenue Streetcar Historic District• Commercial Building/Upper Midwest American Indian Center• Minneapolis Public Library, North Branch• Durnam Hall• Franklin Co-Operative Creamery Association North Side Complex• Minneapolis Warehouse Historic District• Saint Anthony Falls Historic District	Metropolitan Council, FTA, NPS, and DNR	Engineering, Construction, and Operation
Section 6(f) Evaluation	<p>Construction-Phase (Short-Term):</p> <ul style="list-style-type: none">■ Adhere to requirements for temporary non-conforming use of 0.04 acre of Becker Park, which is subject to Section 6(f) regulations, by limiting temporary impacts within the park to a period of less than 6 months.	Metropolitan Council, FTA, NPS, and DNR	Engineering, Construction, and Operation