3 Transportation

Below is a summary comparing the impacts and mitigation in the 2016 Alignment with the Project Alignment.

Table 3-1. Comparison of Impacts and Mitigation – 2016 Alignment and Project Alignment

Resource	Did FEIS/ROD Identify an Impact and Mitigation?	Do the Proposed Modifications Change the Impacts to this Resource?	Do the Proposed Modifications Change the Mitigation?	Section Where Additional Information can be Found
Transit conditions	Yes. Intermittent impacts to bus operations during construction including temporary stop relocations or closures and route detours to be mitigated through communication strategies.	No	No	3.1
Freight Rail Conditions	Yes. Relocation of BNSF track and potential for temporary service impacts during construction to be mitigated through a coordination plan and use of flaggers to reduce impact to freight rail operations.	Project avoids impact to Freight Rail Right-of-Way	No mitigation required	3.6
Vehicular Traffic	Yes. Increase in number of intersections operating at unacceptable levels of service and traffic disruption during construction including lane, intersection, and roadway closure and detours. Long-term impacts mitigated through intersection improvements and short-term impacts mitigated through Construction Mitigation Plan, Construction Communication Plan, and construction staging.	Yes, increased number of intersections operating at unacceptable levels of service, vehicular access changes, roadway geometric changes, new LRT crossings	Yes, in addition to the mitigation measures listed in 2016 ROD, the Council will explore additional mitigation measures as design development progresses.	3.4

Resource	Did FEIS/ROD Identify an Impact and Mitigation?	Do the Proposed Modifications Change the Impacts to this Resource?	Do the Proposed Modifications Change the Mitigation?	Section Where Additional Information can be Found
Pedestrians and Bicyclists	Yes. Temporary closures or detours during construction mitigated through improvements to crossings, connections and facilities and Construction Communication Plan.	No	No	3.2/3.3
Parking	Yes. Loss of 92 on-street and 225 off-street parking spaces; potential "spill-over" parking in neighborhoods adjacent to LRT stations; and increased demand due to TOD. Loss of off-street parking compensated via the Uniform Act; loss of on-street parking to be mitigated by coordination with local jurisdictions to identify whether suitable replacement locations are necessary.	Increased number in on-street parking loss at an estimated 746 on-street parking spaces.	Yes, in addition to the mitigation measures listed in 2016 ROD, parking utilization studies would be completed to better understand parking needs and identify locations to preserve parking	3.5
Aviation	Yes. Construction of catenary in the Runway Protection Zone (RPZ) mitigated through an RPZ Alternatives Analysis.	Project avoids impact to the RPZ	No mitigation required	3.7

Chapter 3 presents the anticipated impacts of the Project to the transportation system. Results are presented for the No-Build Alternative for the purpose of establishing a basis to compare with the Build Alternative. Table 3-2 provides an overview of the transportation modes analyzed in this chapter, their defined study area, and rationale for the study area limits. Different modes have varying geographic extents of where there would be impacts or benefits from the Project. Only Project elements with impacts on resources are presented in the body of this chapter. Potential operating-phase (long-term) and construction-phase (short-term) impacts are evaluated, and potential avoidance, minimization, and mitigation measures are presented. The No-Build and Build Alternative evaluated in this chapter are illustrated and described in Chapter 2, and anticipated impacts from Project alignment and design options evaluated are in Appendix A-3 and include expanded discussion on regulatory context, methodology, study area, and affected environment.

Table 3-2. Defined Transportation Modes and Study Areas

Section/Topic	Resource Evaluated	Study Area Defined	Basis for Study Area
3.1 Transit	Describes existing and future transit conditions, including forecasted ridership for the Build Alternative	Project and all interactions with the existing regional transit system as defined in the Council Travel Demand Model	Estimated area where changes would occur to the regional transit system
3.2 Pedestrian	Describes existing and future pedestrian conditions, including changes to sidewalk facilities with the Build Alternative	10-minute walkable area around LRT stations; ¼ mile on either side of the Project Alignment	Captures generally walkable area around LRT stations and crossings
3.3 Bicycle	Describes existing and future bicycle conditions, including changes to bicycle facilities and networks with the Build Alternative	½ mile around LRT station areas; ¼ mile on either side of the Project Alignment	Captures generally bikeable area around LRT stations and crossings
3.4 Vehicle Traffic	Describes existing and future traffic conditions and changes to traffic signals and roadways with the Build Alternative	Signalized intersections and proposed signalized intersections along the Project Alignment	Intersections capture concentrated area of potential impacts and delay
3.5 Vehicle Parking	Describes existing and future parking locations for on-street and off-street parking with the Build Alternative	Within Project LOD	Estimated area of construction around the Project area
3.6 Freight Rail	Describes existing conditions where freight interacts with the Project area and changes to freight with the Build Alternative	Intersections of BNSF and Canadian Pacific Kansas City (CPKC) rights-of-way and Project Alignment	Freight rail infrastructure and operations lie within the BNSF and CPKC rights-of-way
3.7 Aviation	Describes existing conditions where aviation interacts with the Project area and changes to aviation facilities with the Build Alternative	Areas within LOD and Runway Protection Zone and Runway 6L Safety Zone of the Crystal Airport	Required study areas concerning Crystal Airport

3.1 Transit Conditions

This section documents the travel demand modeling and preparation ridership forecasts for the No-Build and Build Alternatives, as defined in this Supplemental Draft EIS.

3.1.1 Regulatory Context and Methodology

The Council used FTA's Simplified Trips-on-Project Software (STOPS) to develop transit ridership forecasts for the Project. Two STOPS models were developed: one calibrated to pre-COVID-19-pandemic (2019) transit demand and another calibrated to post-COVID-19-pandemic (2022) transit demand. The level of transit demand was determined from Twin Cities on-board survey data and automated passenger count data. The two-model approach is consistent with FTA's CIG reporting instructions for fiscal year 2025.[1] Ridership results were blended via FTA's CIG reporting

template. Post-COVID-19-pandemic forecasts were completed in January 2024, and pre-COVID-19-pandemic forecasts were completed in February 2024.

STOPS uses socioeconomic data to model increases from existing transit ridership derived from an on-board survey to forecast year levels. In the pre-COVID-19-pandemic model, socioeconomic data from 2018 were considered representative of a base year of 2019, and 2040 data were used to determine horizon year (2040) demand. Similarly, 2020 data were used in the post-COVID-19-pandemic model to represent the base year (2022), and 2050 data was considered representative of a 2045 horizon year. For comparison, the Travel Demand Model used in the 2016 Final EIS assumed a base year of 2014 and a horizon year of 2035. The updated STOPS inputs reflect increased population and employment growth but a decline in overall ridership, compared to the 2016 Travel Demand Model.

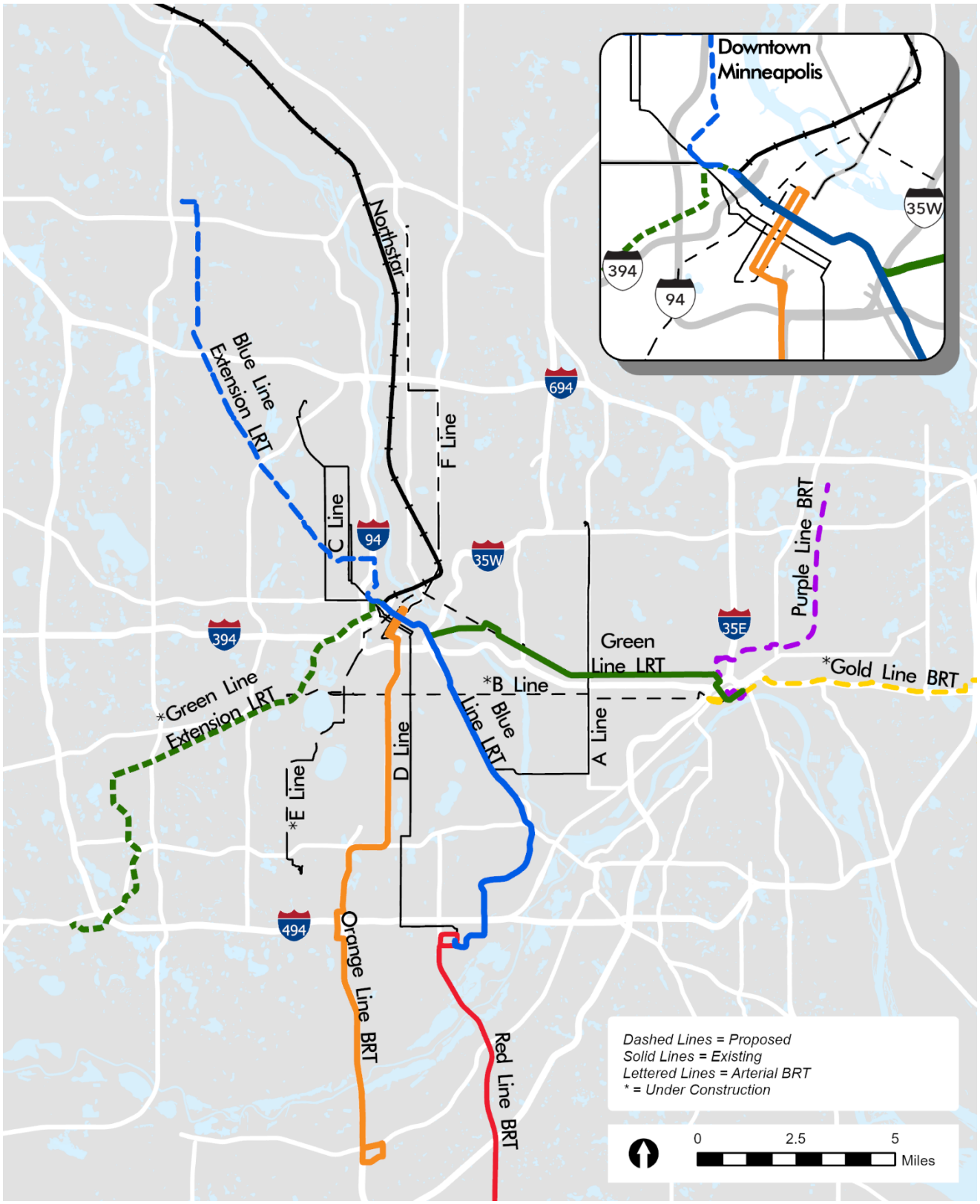
The Supplemental Draft EIS evaluation is based on planned service levels of trains operating at 10-minute frequencies for peak weekday operations. While Metro Transit has reduced service frequencies as of Spring 2024, the service frequencies are anticipated to return to the planned service levels by 2030, the Project's opening year.

3.1.2 Study Area and Affected Environment

The study area for public transit conditions is the Project Alignment, plus intersections or connections between the Project and the current Metro Transit service area, as defined in the STOPS model. The model analyzes the effects of transportation modifications to the entire Twin Cities metropolitan area. The model considers changes within the seven-county jurisdiction of the Council.

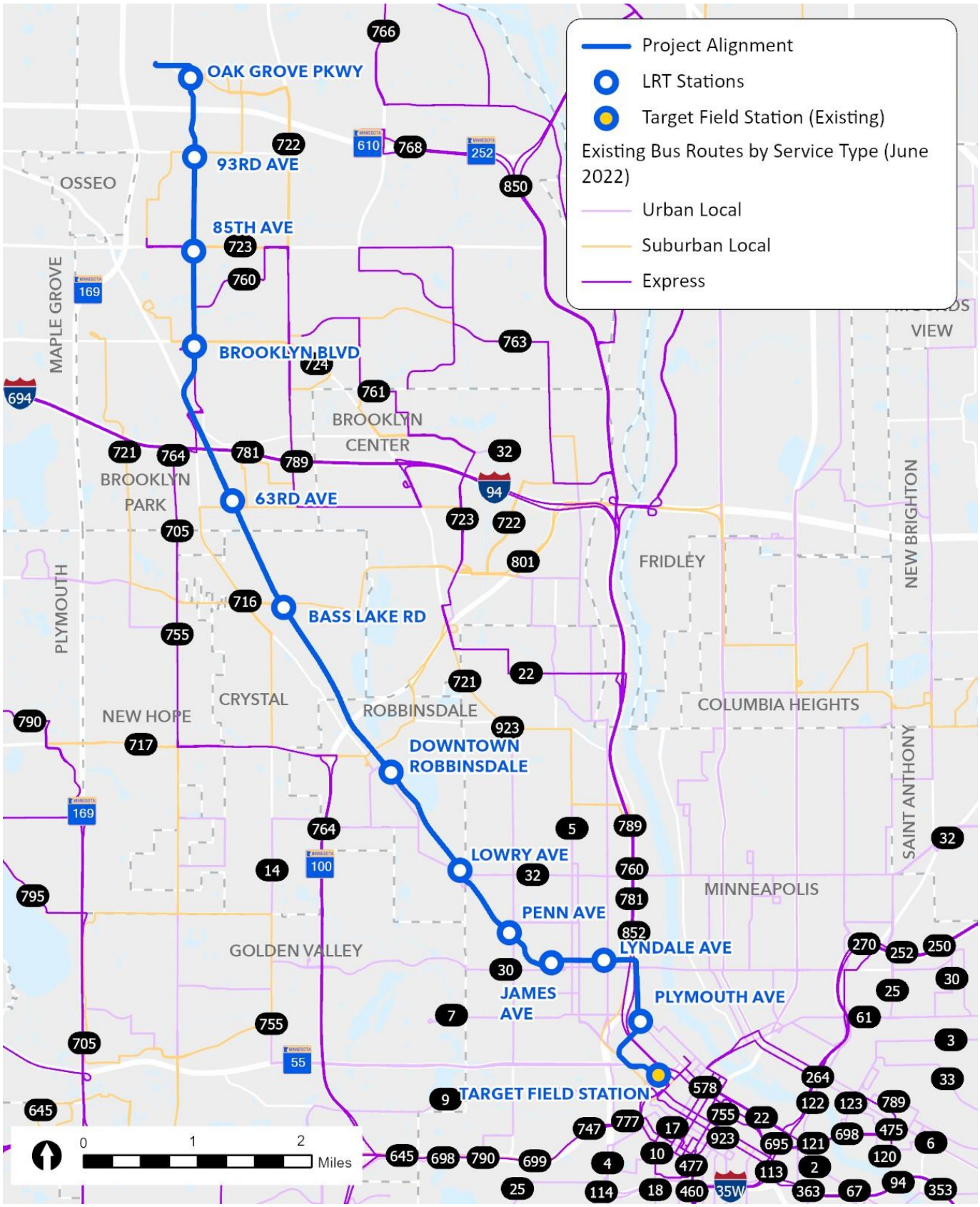
The Metro Transit service area for the Project is generally defined by the Mississippi River to the north and east, Interstate 394 (I-394) to the south, and US 169 to the west. The area is served by a network of urban and suburban local bus routes that make timed connections at three transit centers in the study area (Cities of Robbinsdale, Brooklyn Center, and Starlite) as well as in the City of Minneapolis (Target Field Station). The area is also served by express bus routes, most of which are oriented toward Downtown Minneapolis and serve the peak-period ("rush hour") commuter travel market. Existing and planned transit service in the area is shown in Figure 3-1 and Figure 3-2.

Figure 3-1 Planned METRO System by Target Year of 2026 Under Current Revenue Scenario



Source: Metropolitan Council *2040 Transportation Policy Plan*.

Figure 3-2 Existing Bus Transit Service as of June 2022



Source: Metro Transit System Map.

The Project would operate as part of the broader Twin Cities metropolitan area regional transit system. Connections to the Project route by METRO lines and bus lines would enable access and mobility beyond the study area and affected environment. The Project would connect to other METRO lines (Table 3-3) and existing local or express bus routes. Additionally, the Project would include four park-and-ride facilities at the Downtown Robbinsdale, Bass Lake Rd, 63rd Ave N, and Oak Grove Pkwy Stations.

Table 3-3 LRT Station Amenities and Connections to Local and Express Bus Service

Station	Park-and-ride?	Transfer Routes	Connecting METRO Line
Oak Grove Pkwy	Yes (924 spaces)	722, 724	-
93rd Ave N	No	724	-
85th Ave N	No	723, 724, 760	-
Brooklyn Blvd	No	705, 723, 724, 764	-
63rd Ave N	Yes (565 spaces)	716	-
Bass Lake Rd	Yes (170 spaces)	716, 721	-
Downtown Robbinsdale	Yes (up to 500 spaces)	14, 32, 716, 717,	-
Lowry Ave	No	14, 32	-
Penn Ave	No	14	C Line[b]
James Ave	No	14, 30	D Line[b]
Lyndale Ave	No	14, 22, 30	D Line[b]
Plymouth Ave	No	3, 14	H Line[a]
Target Field	No	14, 94, 355, 363	Green Line[b]; ; Northstar[b]

[a] Planned METRO route

[b] Existing METRO route

3.1.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be relevant after the Project has opened, and construction phase, meaning short-term impacts relevant during the construction of the Project.

Operating-Phase (Long-Term) Impacts

The Project is expected to increase the number of transit trips and passenger miles across the Twin Cities metropolitan area transit network, which is overall one of the most important benefits of the Project. Based on the methodology presented in Section 3.1.1, the blended forecast generates about 3,500 additional daily transit trips for a total of 12,700 daily transit trips in the horizon year (Table 3-4). The No-Build Alternative would not meet the future demand for reliable transit service.

Table 3-4 Projected Weekday Daily Boardings by LRT Station

Station	Current Year, Pre-COVID-19-Pandemic Model (2019)	Current Year, Post-COVID-19-Pandemic Model (2022)	Horizon Year, Pre-COVID-19-Pandemic Model (2040)	Horizon Year, Post-COVID-19-Pandemic Model (2045)
Target Field	375	150	450	700
Plymouth	300	300	350	350
Lyndale Ave	650	650	675	700
James Ave	900	350	975	425
Penn Ave	925	675	975	875
North Memorial Lowry	1,075	500	1,175	575
Downtown Robbinsdale	900	850	950	750
Bass Lake Rd	525	325	600	425
63rd Ave N	1,000	625	1,150	825
Brooklyn Blvd	1,250	325	1,375	400
85th Ave N	450	75	525	175
93rd Ave N	75	50	150	75
Oak Grove Pkwy	775	475	800	550
Total boardings (all modes)[a]	13,900	8,700	15,300	10,000
Post-COVID-19-pandemic model	8,600		10,000	
Blended results	9,200		12,700	

Source: Twin Cities Regional STOPS model and forecast February 2024.

[a] Total boardings include trips boarding at an existing LRT station on the current METRO Blue Line between Target Field and the Mall of America and alighting at a new project station.

Table 3-5 Blended Pre-COVID-19-Pandemic and Post-COVID-19-Pandemic Model Total Weekday Daily Boardings

Ridership Model	Current Year	Horizon Year
Blended Pre-COVID-19 Pandemic and Post-COVID-19 Pandemic [a]	9,200	12,700

[a] See Section 3.1.1 Methodology for a definition of Blended Pre-Pandemic and Post-Pandemic conditions.

Construction-Phase (Short-Term) Impacts

This section presents construction-phase (short-term) impacts to transit conditions. Under the No-Build Alternative, no construction-phase impacts would occur. Construction of the Project would have intermittent impacts to bus operations on routes within the construction area. These impacts could include temporary stop relocations or closures, route detours, or suspensions of service on segments of routes operating on streets where the Project is being constructed. See Table 3-3 above for potentially impacted routes.

3.1.4 Avoidance, Minimization, and Mitigation

No mitigation measures are anticipated for long-term impacts to transit because no long-term adverse impacts would occur. The addition of the Project is an overall benefit. However, the Project would affect fixed-route bus service as existing transit routes would be modified to directly serve the LRT stations, including the relocation of the Robbinsdale Transit Center. The Council would follow federal and local procedures for route modifications or suspension of transit service, which would include a Title VI analysis to determine how service changes would affect low-income population and BIPOC communities. Due to the nature of bus service planning, it is typical to conduct a Title VI analysis in advance of major service changes and Met Council has codified procedures consistent with federal rules for when such an analysis is triggered, and how the process is conducted, and how the results are shared with the public. This work would be done at such a point as a final service plan is developed, likely 12 to 18 months before the start of operations. Specific mitigation measures for short-term impacts to bus service would be identified in the Construction Mitigation Plan, which includes a Construction Communication Plan and Construction Staging Plan for implementation by the Council prior to and during construction. More details regarding mitigation will be included in the Supplemental Final EIS.

3.2 Pedestrian Conditions

This section discusses facilities and travel conditions for pedestrians, or people walking and using personal mobility devices, in the study area. It describes pedestrian conditions as they exist and the expected impacts of the Build Alternative. It also describes expected changes for the No-Build Alternative.

3.2.1 Regulatory Context and Methodology

Pedestrian facilities include sidewalks, trails, crosswalks, and pedestrian bridges. Existing and planned facilities were identified from the 2040 TPP[2] and by reviewing existing transportation plans, trail and street maps, and aerial photographs.

A Pedestrian Level of Traffic Stress (PLTS) analysis was conducted to compare differences in impacts and benefits between the No-Build and Build Alternatives. Level of Traffic Stress (LTS) is a metric developed by the Mineta Transportation Institute at San José State University to quantify the comfort level of a roadway for both pedestrians and bicycles (see Section 3.3) based on roadway design and vehicle traffic characteristics.[3] Several transportation agencies[4,5,6,7] use PLTS during the planning and design process as a cost-effective metric to determine the essential characteristics of a transportation facility. PLTS is based on the sidewalk width, sidewalk surface condition, type and width of buffer between sidewalk and roadway, prevailing speed of vehicle traffic and number of vehicle travel lanes on adjacent roadway, and general land use of the area. These characteristics serve as a proxy for pedestrian comfort, which cannot be directly measured. This analysis assumes that pedestrian comfort is a critical impact to the complete transportation environment. Given the level of design available for the Project Alignment, Council determined that the PLTS methodology would be the best measure of pedestrian comfort while the specifics of final facility designs were yet to be determined. The Oregon Department of Transportation[7] developed a PLTS methodology intended to "create a high-level walkability/connectivity rating of pedestrian facilities in a community." A similar and complementary methodology was employed in Section 3.3 to analyze bicycle facilities. The National Cooperative Highway Research Program recommends the Oregon Department of Transportation methodology to analyze quality of service on pedestrian facilities[8]. The Oregon Department of Transportation methodology was applied to this analysis to quantify pedestrian comfort across the typical cross-sections of facilities in the Study Area between a No-Build and a Build Alternative.

PLTS is measured on a 4-point scale, where 4 is a high level of traffic stress and uncomfortable for most users, 3 is a moderate traffic stress and uncomfortable for most adults, 2 is a low traffic stress and comfortable for most adults, and 1 is separation from all except low-speed, low-volume traffic and comfortable for children.[9]

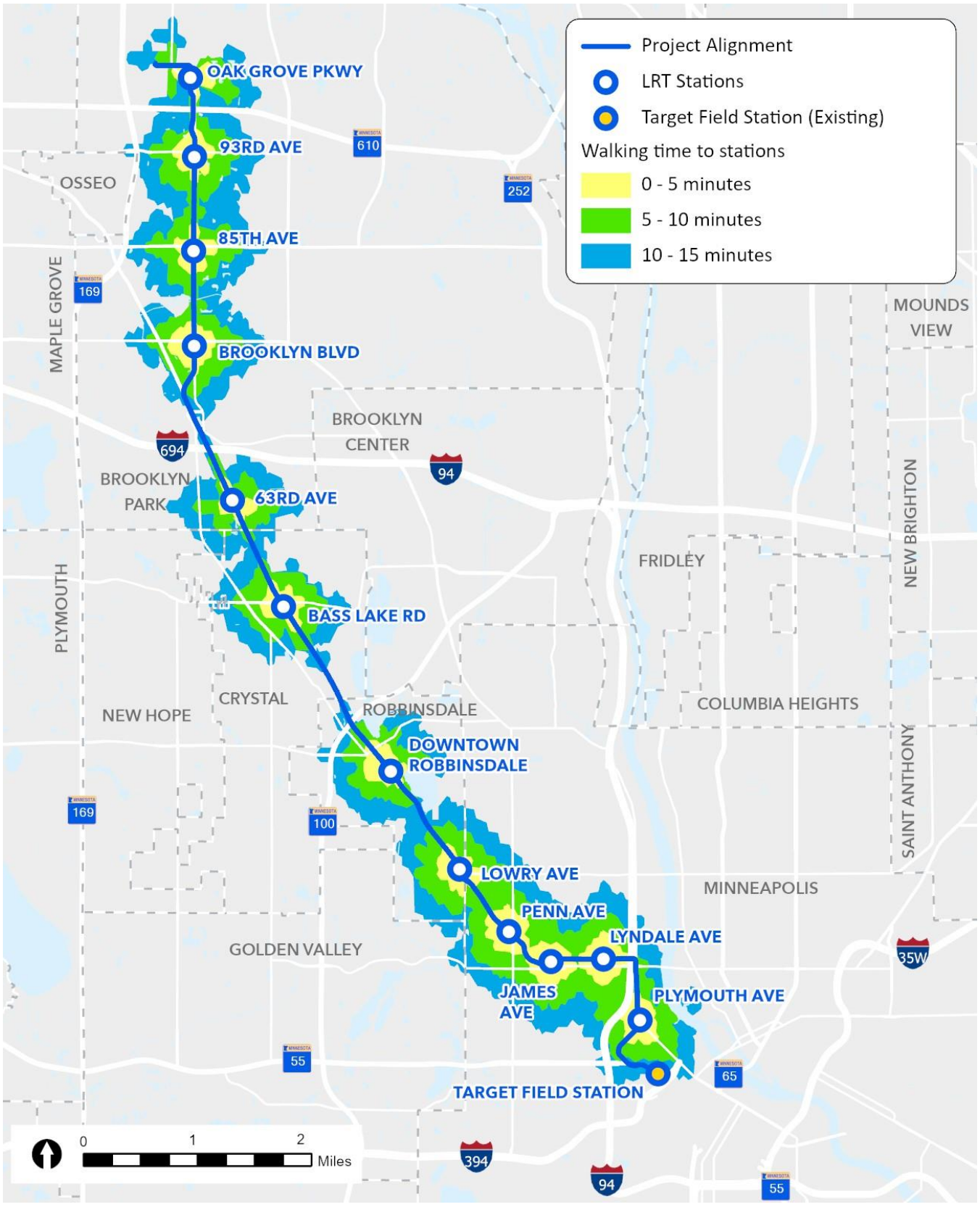
In addition to the PLTS analysis, proposed changes to pedestrian conditions in the Build Alternative were analyzed and are documented in this section based on the engineering information available in September 2023. This includes changes in pedestrian access, roadway crossings, and removed or added pedestrian facilities. An important factor in evaluating pedestrian facilities and service is adherence to ADA requirements. Greater preference is given to alternatives that exceed ADA requirements, extending pedestrian accessibility beyond the minimum.

3.2.2 Study Area and Affected Environment

The study area for impacts to pedestrian facilities is a quarter mile around the Project Alignment, plus the area that is accessible within a 10-minute walk (assuming a 3.1-mile per hour [mph] walking speed) of each LRT station area along the existing pedestrian network—also known as a 10-minute walkshed. Figure 3-3 illustrates the 10-minute walkshed along with an additional 15-minute walkshed for perspective. The Council uses the 10-minute walk distance as a typical trip length that an average able-bodied person is willing to walk to a transit station.[10] LRT stations closer to Downtown Minneapolis and other city centers along the Project Alignment generally have a larger affected environment, as a greater number of pedestrians and facilities exist in these denser urban LRT station areas. LRT stations toward the north terminus of the Project Alignment have smaller affected environments because fewer pedestrians and facilities exist close to the suburban station areas.

The affected environment is illustrated in Figure 3-3, showing walksheds around each station area. Additionally, community amenities that generate walking trips were incorporated into the analysis and are shown in Appendix A-3. These community amenities include medical facilities, religious places of worship, food shelves, and civic buildings, as well as businesses that attendees identified as having important community and cultural value during public engagement events.

Figure 3-3 Pedestrian Study Area



3.2.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be relevant after the Project has opened, and construction phase, meaning short-term impacts relevant during the construction of the Project.

3.2.3.1 Operating-Phase (Long-Term) Impacts

Under the No-Build Alternative, no operating-phase impacts would occur to pedestrian facilities. The Project would provide several long-term improvements to pedestrian safety, comfort, and accessibility that would not occur with the No-Build Alternative. LRT station platforms would be pedestrian accessible from existing sidewalks, and several LRT station designs propose to modify or add new sidewalks, plazas, and crossings of roadways.

Most options show an improvement in PLTS or maintaining a level of comfort and safety for most users. A few exceptions to this include three locations that would remain improvement neutral.

City of Brooklyn Park

In the City of Brooklyn Park, the Project would include changes to the pedestrian environment around LRT stations and adjacent to the Project Alignment. Throughout the City of Brooklyn Park, the Project includes reconstruction of 33 existing intersections with ADA-compliant pedestrian facilities. Nine new ADA-compliant intersections would be added, mostly in the Oak Grove Pkwy Station area. Three new pedestrian roadway crossings would be installed where no crossing currently exists. The results of the PLTS analysis show an improved and acceptable level for pedestrians for the Build Alternative except for 85th Ave N at W Broadway Ave, where pedestrian conditions would be improved but still uncomfortable. Table 3-6 provides an overview of the changes at LRT stations.

Table 3-6 Summary of Pedestrian Service Changes at the City of Brooklyn Park LRT Stations

Station	Proposed Changes	Result
Oak Grove Pkwy	Sidewalks, multiuse paths, and plaza to be added to station area. Median space to be added between traffic on W Broadway Ave. Realigned Oak Grove Pkwy and new Rhode Island Dr to receive marked and signaled crossings.	Improvement
93rd Ave N	Marked and signaled crossings to be added on 93rd Ave N, 92nd Ave N, and W Broadway Ave. Curb radii to be adjusted, reducing crossing length.	Improvement
85th Ave N	Vehicle-free, right-turn lanes eliminated at intersection of 85th Ave N and W Broadway Ave and crossing lengths reduced. Mid-block crossing to be added between 85th Ave N and Rhode Island Dr. Sidewalks added along W Broadway Ave, widened along 85th Ave N. Sidewalk connection to North Hennepin Community College.	Improvement
Brooklyn Blvd	Dedicated right-turn lanes eliminated at intersection of Brooklyn Blvd and W Broadway Ave and crossing lengths reduced. Mid-block crossing to be added between Brooklyn Blvd and 76th Ave N. Sidewalks widened along W Broadway Ave and Brooklyn Blvd.	Improvement
63rd Ave N	Elevated pedestrian bridge between LRT station platform and 63rd Ave N park-and-ride. Traffic lanes narrowed and adding advance bike/pedestrian signage at free right turns, tightening curb radii so vehicles would need to slow down when making turns.	Improvement

City of Crystal

In the City of Crystal, the Project would include changes to the pedestrian environment around the LRT station and adjacent to the Project Alignment. At the Bass Lake Rd Station, the introduction of an interchange would enable at-grade access to the Bass Lake Rd Station platform from either the crossing of CR 81 at the north end or a walkway under the road interchange at the south end. Park-and-ride customers would use the sidewalk and crosswalk to access the LRT station platform. Citywide, the Project would include reconstruction of seven existing intersections with ADA-compliant pedestrian facilities. The results of the PLTS analysis at sample locations show no change in existing pedestrian conditions. CR 81 between Bass Lake Rd and 63rd Ave N would continue to be uncomfortable for most users, while CR 81 between 47th Ave N and Corvallis Ave would remain comfortable for most users (Appendix A-3). Further design refinement of pedestrian facilities in the City of Crystal will occur as the project progresses. Additional pedestrian enhancements will be identified in the Supplemental Final EIS.

City of Robbinsdale

In the City of Robbinsdale, the Project would include changes to the pedestrian environment around LRT stations and adjacent to the Project Alignment. Two LRT station locations are still under consideration for the Downtown Robbinsdale Station: north and south of 40th Ave N. See Chapter 2 for a map showing the stations' locations under consideration. Citywide, the Project would include reconstruction of several existing intersections with ADA-compliant pedestrian facilities. Table 3-7 provides an overview of the changes at LRT stations.

Table 3-7 Summary of Pedestrian Changes at Downtown Robbinsdale Station

Station	Proposed Changes	Result
Downtown Robbinsdale (north of 40th Ave N option)	Intersection plazas at 41st Ave N removed. Mid-block crosswalk across northbound lanes of CR 81 provides access to south end of LRT station platform.	Improvement
Downtown Robbinsdale (south of 40th Ave N option)	Mid-block crosswalk across southbound lanes of CR 81 provides access to south end of LRT station platform.	Improvement

City of Minneapolis

The results of the PLTS analysis at sample locations in the City of Minneapolis show improvements over existing conditions, with a few exceptions. The multiuse trails along Victory Memorial Pkwy and Theodore Wirth Pkwy would be realigned to connect to the Lowry Ave Station, providing direct access to a park facility from the Project. A traffic signal would be installed in the Lowry Ave Station area to regulate pedestrians and vehicle interaction. The addition of multiple mid-block crossings of W Broadway Ave at Thomas and Newton, a new bridge crossing of 21st Ave over I-94 that includes pedestrian accommodation, a transit mall on 10th Ave N, and widened sidewalks on 7th St N contribute to improving pedestrian comfort, safety, and access. Additional minor improvements on W Broadway Ave west of Logan Ave N and Washington Ave N between Broadway St NE and Plymouth Ave would remain uncomfortable for most users. Table 3-8 provides a summary of pedestrian service changes at each LRT station in the City of Minneapolis.

Table 3-8 Summary of Pedestrian Service Changes at the City of Minneapolis LRT Stations

Station	Proposed Changes	Result
Lowry Ave	Multiuse paths would provide access to the station platform from Oakdale Ave, Lowry Ave, and Victory Memorial/Theodore Wirth Pkwy. Multiuse trails and sidewalks will enhance access between the park and the surrounding residential neighborhoods.	Improvement
Penn Ave	Free right-turn lane eliminated at N 26th Ave. Crosswalk at Queen Ave provides access to north end of LRT station platform. McNair Ave eliminated from W Broadway Ave/Penn Ave intersection.	Neutral changes
James Ave	New sidewalk along south side of LRT station connecting to Irving Ave N and James Ave N, with new traffic signals.	Improvement
Lyndale Ave	New traffic signals at 21st Ave N /Aldrich Ave N and 21st Ave N/Lyndale Ave N. Crossing of N 21st Ave at DuPont eliminated.	Improvement
Plymouth Ave	Crossing of Washington Ave N to access the LRT station at Plymouth Ave N and 10th Ave N. and bike lanes continuing across Washington Ave N to 2nd St.	Improvement
Target Field Station	None. Connecting to existing LRT station.	Neutral changes

3.2.3.2 Construction-Phase (Short-Term) Impacts

The Project would involve some temporary sidewalk closures throughout the Project area during construction. The No-Build Alternative would have no short-term impacts.

3.2.4 Avoidance, Minimization, and Mitigation

No long-term mitigation is anticipated as the Project is expected to be neutral or improve pedestrian access and comfort compared to existing conditions and the No-Build Alternative. However, pedestrian conditions will continue to be studied and refined as design progresses. Any mitigation commitments will be documented in the Supplemental Final EIS. In general, there would be a slight reduction in the number of legal pedestrian crossings over the Project Alignment, but crossings would remain nearby the removed crossings, and any existing or new pedestrian crossings would be more comfortable for users compared to the No-Build Alternative.

In terms of short-term measures, where longer-term closures of sidewalks or trails are required, detour routes would generally be provided. During short-term closures of sidewalks or trails (typically up to about 3 to 5 days), detour routes or facilities might not be provided. Specific mitigation measures for short-term impacts to facilities would be identified in the Construction Mitigation Plan, which includes a Construction Communication Plan and Construction Staging Plan for implementation by the Council prior to and during construction. More details regarding mitigation will be included in the Supplemental Final EIS.

3.3 Bicycle Conditions

This section discusses facilities and travel conditions for bicyclists in the study area. It describes bicycle conditions as they exist and the expected impacts of the Project. It also describes expected changes for the No-Build Alternative.

3.3.1 Regulatory Context and Methodology

Bicycle facilities include trails, on-street and off-street bike lanes, and shared traffic streets. Facilities were identified from the 2040 TPP[11] and by reviewing existing transportation plans, trail and street maps, and aerial photographs.

A Bicycle Level of Traffic Stress (BLTS) analysis was conducted to compare differences in impacts and benefits of the Project. BLTS is a metric developed by the Mineta Transportation Institute at San José State University to quantify the comfort level of a roadway for bicyclists based on roadway design and vehicle traffic characteristics.[3] A methodology guide published by the Oregon Department of Transportation[7] was applied to this analysis for a high-level way to quantify the comfort level of a roadway for bicyclists. A similar and complementary methodology was employed in Section 3.2 to analyze pedestrian facilities. BLTS is based on the bike facility width, width of buffer between bicycle and vehicle traffic, vehicle traffic volumes, prevailing speed of automobiles, and whether bicycles must mix with vehicle traffic.

BLTS is measured on a 4-point scale, where 4 is a high level of traffic stress and uncomfortable for most users, 3 is a moderate traffic stress and uncomfortable for most adults, 2 is a low traffic stress and comfortable for most adults, and 1 is separation from all except low-speed, low-volume traffic and comfortable for children.[9]

Segments described in this document as “comfortable” are graded 1 or 2 and generally suitable for most adult cyclists and some children, while segments described as “uncomfortable” are graded 3 or 4 and would be avoided by most adult cyclists. Proposed changes to bicycling access, roadway crossings, and removed or added bicycle facilities were also evaluated.

3.3.2 Study Area and Affected Environment

The study area for bicycling impacts is one-half mile surrounding the station areas and one-quarter mile on either side of the Project Alignment. Figure 3-4 depicts the bicycle network in the study area. LRT stations closer to Downtown Minneapolis and other city centers along the Project Alignment generally have a greater number of cycling facilities in these denser urban LRT station areas. LRT stations toward the northern terminus of the Project generally have fewer cycling facilities near the suburban LRT station areas.

3.3.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be relevant after the Project has opened, and construction phase, meaning short-term impacts relevant during the construction of the Project.

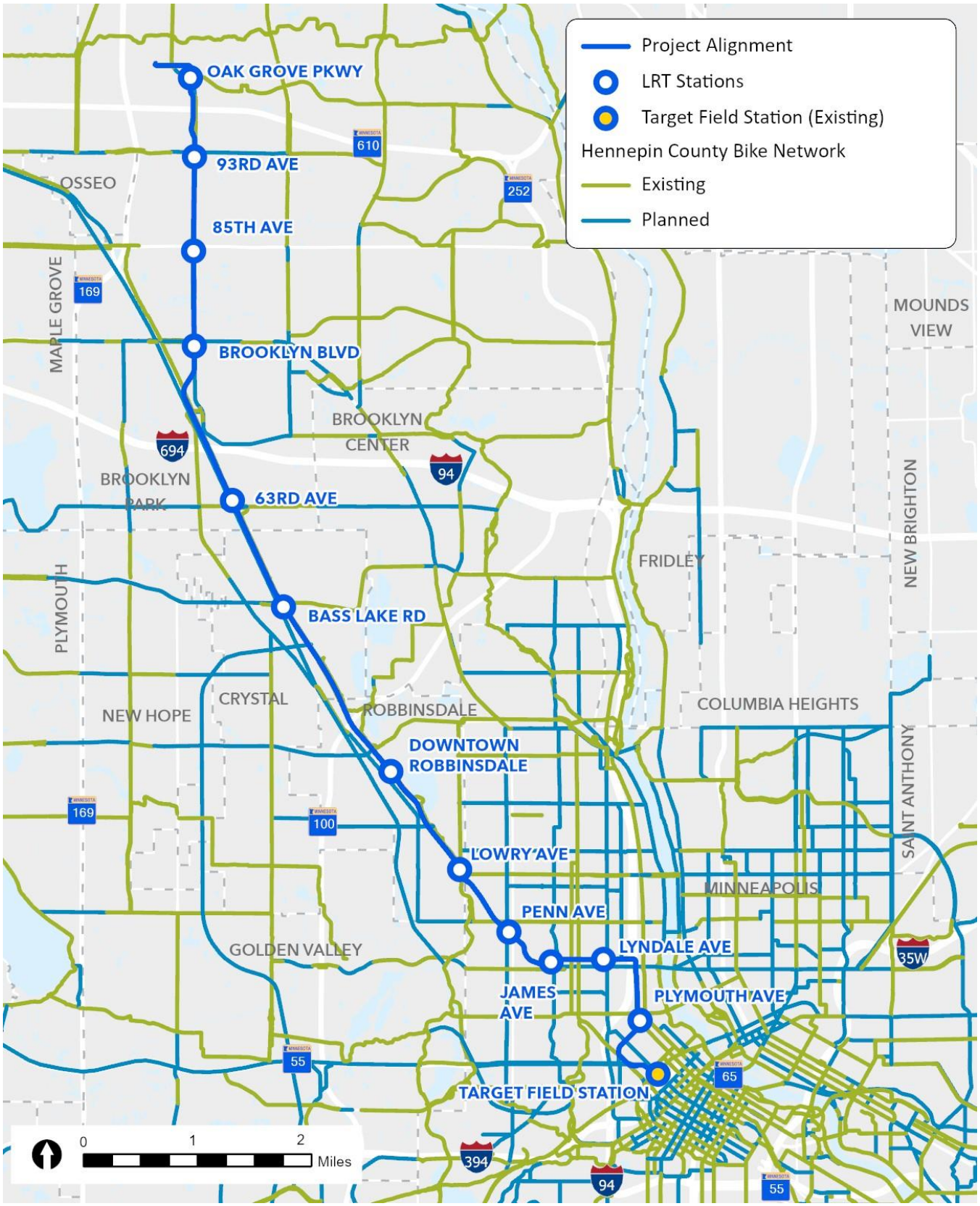
3.3.3.1 Operating-Phase (Long-Term) Impacts

Under a No-Build Alternative, no operating-phase impacts would occur to bicycle facilities. The Build Alternative would provide several long-term improvements to cyclist safety, comfort, and accessibility. Several LRT station areas and street corridors along the Project Alignment would be reconstructed to include new bicycle facilities for all ages and abilities. Bicycle parking would be added at many station areas. LRT vehicles would accommodate customers bringing bicycles into the train car, allowing bicyclists to link trips between bicycling and transit modes.

The Project would intersect existing and planned future designated low-stress bikeways in the study area, and bicycle access would be maintained at all existing locations, though some surface and routing modifications would be required. The Project would also be compatible with the planned bicycle facilities. However, design for W Broadway

Ave reconstruction with the Build Alternative on N 21st Ave is still under development, and it is not yet determined whether a bicycle facility would be included. Additional information about the roadway design of W Broadway Ave will be available in the Supplemental Final EIS.

Figure 3-4. Bicycle Network in the Project Area



Roadway and bikeway segments representative of the various cross-sections found along the Project Alignment were selected for analysis of their BLTS. All segments would either retain the same level of BLTS or would be improved with the Project. Segments along 21st Ave N, 10th Ave N, and N 7th St in the City of Minneapolis show the greatest improvements in BLTS results. Segments with high BLTS under build conditions will undergo further design coordination with the intent to improve bicycling conditions, and results will be presented in the Supplemental Final EIS including any mitigation warranted.

City of Brooklyn Park

Table 3-9 presents a summary of bicycle service changes by LRT station in the City of Brooklyn Park. The BLTS results all showed improvement from existing conditions; however, W Broadway Ave at Brooklyn Blvd remains uncomfortable for most users with the Project.

Table 3-9 Summary of Bicycle Service Changes in the City of Brooklyn Park Station Areas

Station	Proposed Changes	Result
Oak Grove Pkwy	Multiuse paths and plaza to be added to the station area. W Broadway Ave to be realigned. Realigned Oak Grove Pkwy (with existing bike facility) and new Rhode Island Dr to receive marked and signaled crossings but would remain uncomfortable for most users with only a slight improvement over the existing conditions.	Improvement
93rd Ave N	Crossing lengths reduced. Project does not preclude planned facility on 93rd Ave N.	Improvement
85th Ave N	Vehicle-free, right-turn lanes eliminated at intersection of 85th Ave N (existing bike facility) and W Broadway Ave; crossing lengths reduced.	Improvement
Brooklyn Blvd	Conflict with vehicle-free, right-turn lanes eliminated at intersection of Brooklyn Blvd and W Broadway Ave. Project does not preclude planned facility on Brooklyn Blvd.	Improvement
63rd Ave N	Elevated pedestrian bridge between LRT station platform and 63rd Ave N park-and-ride. Traffic lanes narrowed and adding advance bike/pedestrian signage at free right turns, tightening curb radii so vehicles would need to slow down when making turns.	Improvement

City of Crystal

At the Bass Lake Rd Station, a bicycle facility would be added between Bass Lake Rd and Yates Ave N, resulting in an improvement to bicycle comfort and safety with the Project. Grade separation with an interchange at Bass Lake Rd and CR 81 would reduce conflicts for bicyclists crossing CR 81 and accessing the LRT station. BLTS results in the City of Crystal with the existing trail along CR 81 are comfortable for all users with both the existing and addition of the Project.

City of Robbinsdale

No operating-phase bicycle impacts would occur at Downtown Robbinsdale Station or Lowry Ave Station. BLTS results in the City of Robbinsdale with the existing trail along CR 81 are comfortable for all users with both the existing and addition of the Project.

City of Minneapolis

Bicycle facilities, connections to LRT stations, and connections to the bikeway network would be improved with the Project. The multiuse trails that carry the Grand Rounds cycling route through the Victory Memorial Pkwy and Theodore Wirth Pkwy would be realigned to connect to the Lowry Ave Station, providing direct access to a park facility from the Project. A traffic signal would also be installed in the Lowry Ave Station area to regulate bicycle traffic and vehicular traffic interaction. A new bicycle facility would be added on 21st Ave N between James Ave N and Washington Ave N that crosses over I-94 on a new 21st Ave bridge, which includes bicycle accommodation. The facility would be a two-way bikeway located on the north side of the street from James Ave N to Washington Ave N. Additionally, a transit mall along 10th Ave N would include a new bike facility, and closure of access points would reduce conflicts between drivers and bicyclists. An off-street bikeway on 7th St N would also provide bicycle enhancements with the Project. Table 3-10 presents a summary of bicycle service changes by LRT station.

Table 3-10 Summary of Bicycle Service Changes by LRT Station

Station	Proposed Changes	Result
Lowry Ave	Paved multiuse trails serving Theodore Wirth/Victory Memorial Pkwy and Grand Rounds bike facilities will be modified to provide access to the LRT station.	Improvement
Penn Ave	Conflict with vehicle-free, right-turn lane eliminated at N 26th Ave. McNair Ave eliminated from W Broadway Ave/Penn Ave intersection. Mid-block crosswalk added near Newton Ave.	Improvement
James Ave	New sidewalk along south side of LRT station along W Broadway Ave connecting to Irving Ave N and James Ave N, with new traffic signals.	Improvement
Lyndale Ave	New traffic signals at 21st Ave N/Aldrich Ave N and 21st Ave N/Lyndale Ave N. New bike facility along 21st Ave N. Crossing of 21st Ave at Dupont eliminated.	Improvement
Plymouth Ave	Crossing of Washington Ave N to access LRT station at Plymouth Ave N and 10th Ave N.	Improvement
Target Field Station	Bike lanes on N 7th St raised to sidewalk-grade.	Improvement

3.3.3.2 Construction-Phase (Short-Term) Impacts

The Project would involve some temporary bicycle facility closures throughout the Project area during construction. The No-Build Alternative would have no short-term impacts.

3.3.4 Avoidance, Minimization, and Mitigation

No long-term mitigation measures are anticipated because no long-term impacts notably degrade the bicycling network within the study area. Where longer-term closures of trails, on-street bike facilities, or shared streets are required during construction, detour routes would generally be provided. During short-term closures of sidewalks or trails (typically up to about 3 to 5 days), detour routes or facilities might not be provided. Specific mitigation measures for short-term impacts to facilities would be identified in the Construction Mitigation Plan, which includes a Construction Communication Plan and Construction Staging Plan for implementation by the Council prior to and during construction. More details regarding mitigation will be included in the Supplemental Final EIS.

3.4 Vehicle Traffic

The addition of the Project into the existing transportation network would affect the flow of vehicular traffic in the study area. The Project would modify roadway alignments on many street segments and intersections to accommodate LRT infrastructure. The Council analyzed projected traffic conditions in a series of *METRO BLRT Traffic Operations Technical Memoranda* (Appendix A-3).

The Project will need to complete the Interstate Access Modification Request process and receive authorization from the FHWA to modify vehicle access to and from the interstate system. Crash and traffic movement analyses will be included in Chapter 3 of the Supplemental Final EIS.

3.4.1 Regulatory Context and Methodology

Turning movement counts and signal timing data were collected at intersections within the study area. Included were signalized intersections for which an LRT crossing is proposed in the intersection, unsignalized intersections that may have a change in intersection control, and intersections that provide access to an LRT station park-and-ride facility.

The year 2040 was selected as the forecast year, consistent with the 2016 Final EIS[12] and county and municipal comprehensive planning cycles, including the Council's 2040 TPP.[13]

3.4.2 Study Area and Affected Environment

The study area was divided into six segments for traffic analysis, which includes the existing and proposed signalized intersections along the Project Alignment:

- CR 103 from Oak Grove Pkwy to CR 81
- CR 81 from CR 103 to TH 100
- CR 81 from TH 100 to Lowry Ave N
- CR 81 from Lowry Ave N to Washington Ave
- Lyndale Ave from CR 81 to Target Field Station
- Washington Ave, N 10th Ave, N 7th St, and N 6th Ave from CR 81 to Target Field Station

3.4.3 Affected Environment

The regional highway system consists of principal and minor arterials (roads that have a primary purpose of moving traffic efficiently, with less emphasis on access to adjacent land). Several adjacent and connecting roadways to the Build Alternative also include collector and local roadways, which provide access to property. Several roadways, including arterials, connectors, and local roadways, would undergo modifications as a part of the Project, and those are described in detail in Chapter 2.

3.4.4 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be relevant after the Project has opened, and construction phase, meaning short-term impacts relevant during the construction of the Project.

3.4.4.1 Operating-Phase (Long-Term) Impacts

This section presents operating-phase (long-term) impacts to vehicle traffic.

No-Build Alternative

Analysis of the No-Build Alternative is based on 2040 traffic volumes with current roadway configurations, existing rail crossing locations and treatments, and signal operations.

The results of the 2040 No-Build conditions were based on existing roadway geometrics. The 2040 forecast peak hour traffic volumes were developed based on the methodology described in the *METRO BLRT Traffic Operations Technical Memorandum* dated Sept. 15, 2022, and included in Appendix A-3. Based on the 2040 results of the morning and afternoon peak hour analyses, all intersections are expected to operate under capacity for the No-Build peak hour scenarios except for the intersections listed in Table 3-11.

Table 3-11 Intersections Exceeding Capacities Under 2040 No-Build Condition

City	Intersection	Morning Peak Hour Capacity	Afternoon Peak Hour Capacity
Brooklyn Park	W Broadway Ave/101st Ave N	Under capacity	Over capacity
Brooklyn Park	W Broadway Ave/Winnetka Ave N	Under capacity	Over capacity
Brooklyn Park	W Broadway Ave/93rd Ave N	Under capacity	Over capacity
Brooklyn Park	W Broadway Ave/85th Ave N	Under capacity	Over capacity

Build Alternative

The Project assumes a forecasted operation year of 2040. Assumptions related to the build condition analysis are provided in Appendix A-3.

City of Brooklyn Park

In the City of Brooklyn Park, the Project would include several roadway access changes, mostly conversions of full-access intersections to right-in/right-out intersections along W Broadway Ave to reduce conflicts between vehicles and LRT. Additionally, there would be a reduction of lanes on CR 81 between 63rd Ave N and 73rd Ave N to accommodate the Project. Ten new traffic signals would be installed, and 14 signals would be modified. Specific changes proposed are detailed in Appendix A-3.

Figure 3-5 depicts anticipated afternoon peak hour impacts to intersections under the Build Alternative. The results of the morning and afternoon peak hour analysis showed that all of the City of Brooklyn Park intersections are expected to operate under capacity with Project operations, except for the intersections listed in Table 3-12. Two of the four intersections predicted to operate over capacity, at 93rd Ave N and 85th Ave N, are also expected to be over capacity under a No-Build scenario. Oak Grove Pkwy and Xylon Ave is a recently constructed intersection. Adjustments to improve traffic operations will be made as design and engineering advances. CR 81 and 63rd Ave N will also require design adjustments as engineering concepts advance.

Table 3-12 City of Brooklyn Park Intersections Exceeding Capacity Under Build Alternative

Intersection	Morning Peak Hour Capacity	Afternoon Peak Hour Capacity
Oak Grove Pkwy/Xylon Ave[a]	Over capacity	Over capacity
W Broadway Ave/93rd Ave N[b]	Over capacity	Over capacity
W Broadway Ave/85th Ave N[b]	Over capacity	Over capacity

Intersection	Morning Peak Hour Capacity	Afternoon Peak Hour Capacity
CR 81/63rd Ave N	Under capacity	Over capacity

[a] Side street stop-controlled intersection.
[b] Also over capacity in a No-Build scenario.

Figure 3-5 2040 Afternoon Peak Hour Impacts to Intersections

City of Crystal

In the City of Crystal, a new interchange would be added to grade-separate the intersection of CR 81 and Bass Lake Rd. Multiple traffic signals would be modified, and new LRT crossings would be constructed. The interchange design would have four through lanes and center-running LRT on CR 81 from north of the CR 81 and 73rd Ave N intersection to the TH 100 interchange. A southbound auxiliary lane on CR 81 may be provided from Bass Lake Rd to the southbound TH 100 on-ramp. Specific changes are detailed in Table 3-13. The results of the morning and afternoon peak hour analysis showed that all intersections are expected to operate under capacity during the 2040 build conditions peak hour scenarios.

Table 3-13 Traffic-Related Changes Included in the City of Crystal

Purpose	Description
Grade-separate LRT and vehicle traffic	Through lanes on CR 81 at Bass Lake Rd bypass intersection
Create space for elevated highway structure	One left-turn lane in each direction on CR 81 at Bass Lake Rd eliminated
Create space for LRT tracks	One eastbound lane on CR 81 between 63rd Ave N and 51st Ave N eliminated
Create space for LRT tracks	One westbound lane on CR 81 eliminated

City of Robbinsdale

In the City of Robbinsdale, the Project would include roadway access changes, traffic signal modifications, and new LRT crossings. Specific changes are detailed in Table 3-14. The results of the morning and afternoon peak hour analysis showed that all City of Robbinsdale intersections are expected to operate under capacity.

Table 3-14 Traffic-Related Changes Included in the City of Robbinsdale

Purpose	Description
Create space for LRT tracks	One westbound lane on CR 81 between TH 100 and 47th Ave N eliminated
Reduce traffic conflicts	Unsignalized eastbound left turn from CR 81 onto Lakeland Ave at 43rd Ave N eliminated
Create space for LRT tracks	One westbound left-turn lane from CR 81 to 42nd Ave N eliminated
Reduce traffic conflicts	Left turns into alleys and private driveways along CR 81 between 40th Ave N and 47th Ave N eliminated
Reduce traffic conflicts	Unsignalized eastbound left turn from CR 81 into Lakeview Terrace Park eliminated

In response to feedback from the City of Minneapolis, the City of Robbinsdale, and the Minneapolis Park and Recreation Board, an at-grade track and LRT station design was developed for the Lowry Station south of Lowry Ave and Oakdale Ave at CR 81. The LRT guideway would be at-grade between the northbound and southbound CR 81 bridges, with an at-grade LRT crossing of Lowry Ave and Oakdale Ave. An at-grade Lowry Ave Station includes geometric modifications to the road system, including realignment of a portion of Theodore Wirth Pkwy and the approaches to the CR 81 bridges. The interchange functionality will remain similar to existing conditions. Roadway modifications associated with the at-grade Lowry Station will be confirmed as design develops and will be reflected in the Supplemental Final EIS. Traffic operational analysis will be conducted, and traffic mitigation will be identified and incorporated as necessary.

City of Minneapolis

In the City of Minneapolis, the Project would include roadway lane changes, access changes, traffic signal changes, and new LRT crossings. Notable changes would include removal of vehicle access along 21st Ave N and 10th Ave N as well as lane reductions throughout to accommodate the Project. Specific changes are described in Table 3-15. W Broadway Ave would also be reconstructed generally between Irving Ave N and N Lyndale Ave and include accommodations for people walking and bicycling. Details regarding the roadway changes to W Broadway Ave will be available in the Supplemental Final EIS. This area will require the FHWA to approve an Interstate Access Modification Request due to traffic modifications to and from I-94. Traffic and crash data for intersections accessing I-94 will be included in the Supplemental Final EIS. Specific changes to traffic patterns are described in Table 3-15.

Table 3-15 Traffic-Related Changes in the City of Minneapolis

Purpose	Description
Create space for LRT tracks	W Broadway Ave reduced to one lane in each direction between N 29th Ave and N James Ave
Create space for LRT tracks	Upton Ave at W Broadway Ave changed to right-in, right-out only
Create space for LRT tracks	N 27th Ave at W Broadway Ave changed to right-in, right-out only
Reduce traffic conflicts	Thomas Ave access to W Broadway Ave on north side of W Broadway Ave eliminated; Thomas Ave would connect only to N 27th Ave
Create space for LRT tracks	Thomas Ave at W Broadway Ave changed to right-in, right-out only
Reduce traffic conflicts	Through lanes of Sheridan Ave at W Broadway Ave eliminated
Create space for LRT tracks	Queen Ave at W Broadway Ave changed to right-in, right-out only
Create space for LRT tracks	N 24th Ave at W Broadway Ave changed to right-in, right-out only
Reduce traffic conflicts	McNair Ave access to intersection of W Broadway Ave and Penn Ave eliminated; McNair dead ended between Ferrant Pl and W Broadway Ave
Create space for LRT tracks	Left-turn lane at W Broadway Ave and Logan Ave eliminated
Accommodate James Ave Station platform	N James Ave at W Broadway Ave converted to one way north of W Broadway Ave
Create space for LRT tracks	Vehicle access removed along N 21st Ave between N James Ave and N 4th St including access to alleys and private driveways from N 21st Ave
Create space for LRT tracks	New bridge on N 21st Ave crossing I-94 carries two-way vehicle traffic, LRT, bicycle facility and sidewalks (analysis underway; results will be presented in the Supplemental Final EIS)
Accommodate new LRT bridge at N 21st Ave	Eastbound I-94 exit ramp shifted west, terminating at-grade at the intersection with N 21st Ave. Road continues past N 21st Ave to connect with W Broadway Ave with three lanes (analysis underway; results will be presented in the Supplemental Final EIS)
Create space for LRT tracks	N Washington Ave between W Broadway Ave and N Plymouth Ave reduced to one through lane in each direction, with additional turn lanes at intersections
Create space for LRT tracks	Vehicle access removed along N 10th Ave between N Washington Ave and N 5th St, including access to alleys and private driveways from N 10th Ave. Emergency bus access is retained.
Create space for LRT tracks	N 7th St reduced to one lane in each direction, with a center turn lane

Peak hour traffic analysis results show that all intersections are expected to operate under capacity during the 2040 build conditions peak hour scenarios except for the four intersections listed in Table 3-16. The intersections with afternoon capacity issues are a result of the high volume of northbound users of N Washington Ave and changes in

left-turn signal timing to protected left turns only. Traffic and safety analysis is underway and in development specific to the Interstate Access Modification Request process and will be presented in the Supplemental Final EIS.

Table 3-16 City of Minneapolis Intersections Exceeding Capacity

Intersection	Morning Peak Capacity	Afternoon Peak Capacity
CR 81 (W Broadway)/CR 152 (N Washington Ave)	Under capacity	Over capacity
CR 152 (N Washington Ave)/N 17th Ave	Under capacity	Over capacity
CR 152 (N Washington Ave)/N 15th Ave	Under capacity	At capacity
CR 152 (N Washington Ave)/N Plymouth Ave	At capacity	Over capacity
CR 152 (N Washington Ave)/N 10th Ave	Under capacity	At capacity

3.4.4.2 Construction-Phase (Short-Term) Impacts

The Council expects construction of the Project to cause temporary disruption to traffic operations, including lane closures, short-term intersection and roadway closures, detours, and increased truck trips related to construction that would cause localized increases in congestion. Maintenance-of-traffic (MOT) plans would be developed during final design or construction and submitted for approval to the roadway authorities. The No-Build Alternative would have no short-term impacts.

3.4.5 Avoidance, Minimization, and Mitigation Measures

The Project would result in permanent vehicle access changes, roadway geometric changes, traffic signal changes, and new LRT crossings, which would result in additional traffic capacity issues at four intersections in the City of Brooklyn Park and five intersections in the City of Minneapolis. MOT plans would be developed during final design or construction and submitted for approval to the roadway authorities. The MOT plans would address construction phasing, MOT, traffic signal operations, access through the construction work zone, road closures, and any traffic detours. As design development progresses, traffic-related improvements (which could include additional geometric improvements and/or traffic signal operation changes) will be considered and evaluated further in the Supplemental Final EIS to improve traffic capacity issues.

3.5 Vehicle Parking

This section describes changes in vehicle parking because of the Project. The construction of the Project and associated modifications to roadway geometry would alter the supply of on-street and off-street parking. These changes could, in turn, reduce convenient access to businesses and residences.

3.5.1 Regulatory Context and Methodology

The analysis in this section focuses on the impacts of the Project on existing on-street and off-street parking. Local jurisdictions have the authority to regulate parking, including introducing parking permits or other parking restrictions. Almost all on-street parking is available to the public as either metered or unmetered spaces. Methods to inventory existing parking supply in the Project area included reviewing aerial photographs and Project engineering drawings, as well as conducting field visits, to assess the potential effects of changes in the parking supply. All new park-and-ride facilities as a part of the Project are described in Chapter 2 and are not addressed as part of this impact assessment of existing parking conditions.

3.5.2 Study Area and Affected Environment

The study area for parking is defined as the Project LOD. Vehicle parking in the study area is a combination of on-street and off-street parking (surface parking lots). Off-street parking consists of a mix of public and private lots. Private off-street parking is restricted to authorized users. Off-street public parking spaces are available for commercial and retail businesses, as well as parking areas and facilities such as public parks. Other off-street parking facilities include parking lots for restaurants, churches, schools, and medical-related businesses.

3.5.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be experienced after the Project has opened, and construction phase, meaning short-term impacts experienced during the construction of the Project.

3.5.3.1 Operating-Phase (Long-Term) Impacts

This section presents operating-phase (long-term) impacts to vehicle parking based on the Project options as compared to the No-Build Alternative. No operating-phase parking impacts would occur under the No Build Alternative. The results of the analysis for the Build Alternative are shown in Figure 3-6 and Figure 3-7.

Cities of Brooklyn Park and Crystal

Parking impacts in the Cities of Brooklyn Park and Crystal are described in Table 3-17. All impacts would be to off-street private parking lots.

Table 3-17. Parking Impacts in the Cities of Brooklyn Park and Crystal

City	Affected Location or Business(es)	Loss of Off-Street Spaces	Reason for Impact
Brooklyn Park	Target North Campus Lot	Reconfiguration of off-street lot. No net loss in parking.	Realignment of Oak Grove Pkwy
Brooklyn Park	North Hennepin Community College	Loss of 166 off-street spaces in west parking lots (7% loss of campus parking)	Expansion of W Broadway Ave to accommodate LRT guideway
Brooklyn Park	Target Parking Lot	Loss of 162 off-street spaces in parking lot (12% loss)	Reconstructed southbound lanes of W Broadway Ave and multiuse trail
Brooklyn Park	Retail center	Loss of 83 off-street spaces in parking lot (32% loss)	To accommodate LRT as it transitions from CR 81 to W Broadway Ave
Crystal	Business Commons	Loss of 7 off-street spaces in parking lot (less than 1% loss)	Introduction of interchange at CR 81 and Bass Lake Rd
Crystal	Schrader, U-Haul	Loss of 76 off-street spaces in parking lot (100% loss)[a]	To accommodate the Bass Lake Rd park-and-ride facility

[a] The properties affected by the loss of this parking are full property acquisitions. Currently, parking in these lots is restricted to employees and customers only. Under Project implementation, the businesses would no longer be located here.

Figure 3-6 Parking Impacts in the Cities of Brooklyn Park, Crystal, and Robbinsdale

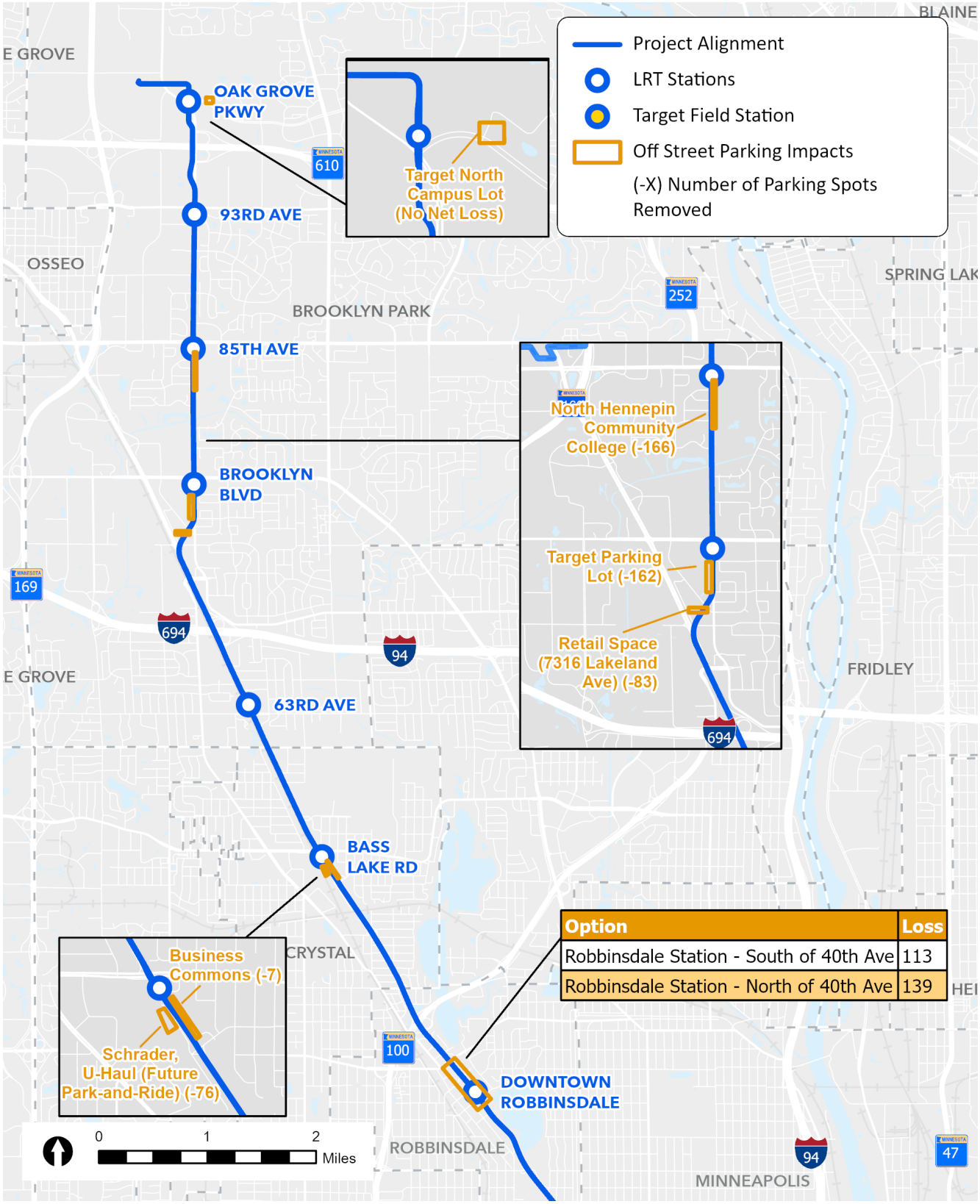
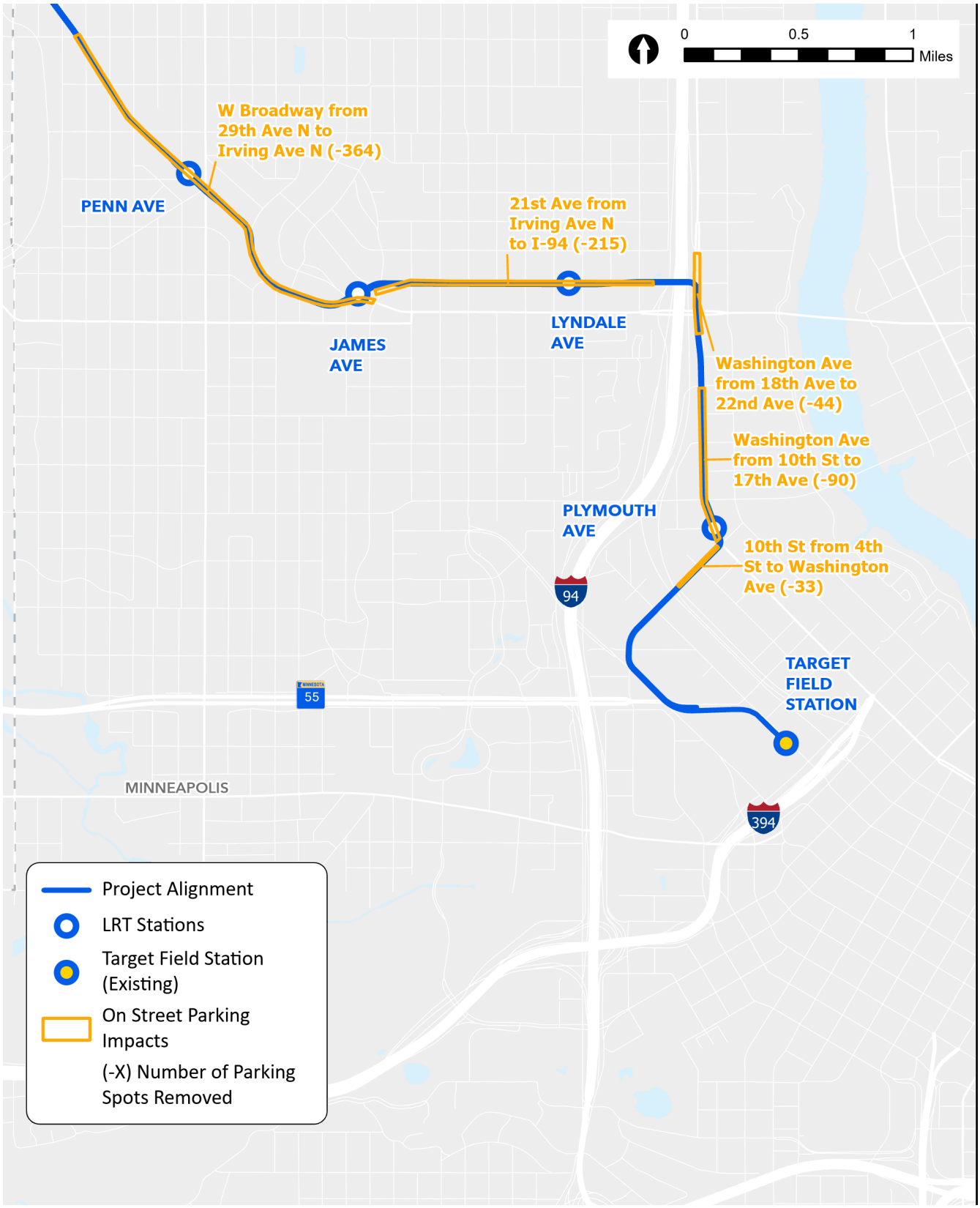


Figure 3-7 On-Street Parking Impacts in the City of Minneapolis



City of Robbinsdale

There are two proposed location options for the Downtown Robbinsdale Station and associated park-and-ride facility. The LRT station is proposed to be on CR 81 south of 40th Ave N or north of 40th Ave N. Table 3-18 summarizes the parking impacts by LRT station option, with the U.S. Bank park-and-ride facility location. All impacts would be to off-street private parking lots.

Table 3-18. Parking Impacts at City of Robbinsdale Stations

Station Option	Affected Location or Business(es)	Loss of Off-Street Parking Spaces
South of 40th Ave N	Robin Center, CVS, T-Mobile, Loads of Laundry, Nonna Rosa's Ristorante, Marna's Eatery	113 (21% loss)
North of 40th Ave N	Town Center, Robin Center, CVS, T-Mobile, Loads of Laundry, Nonna Rosa's Ristorante, Marna's Eatery	139 (19% loss)

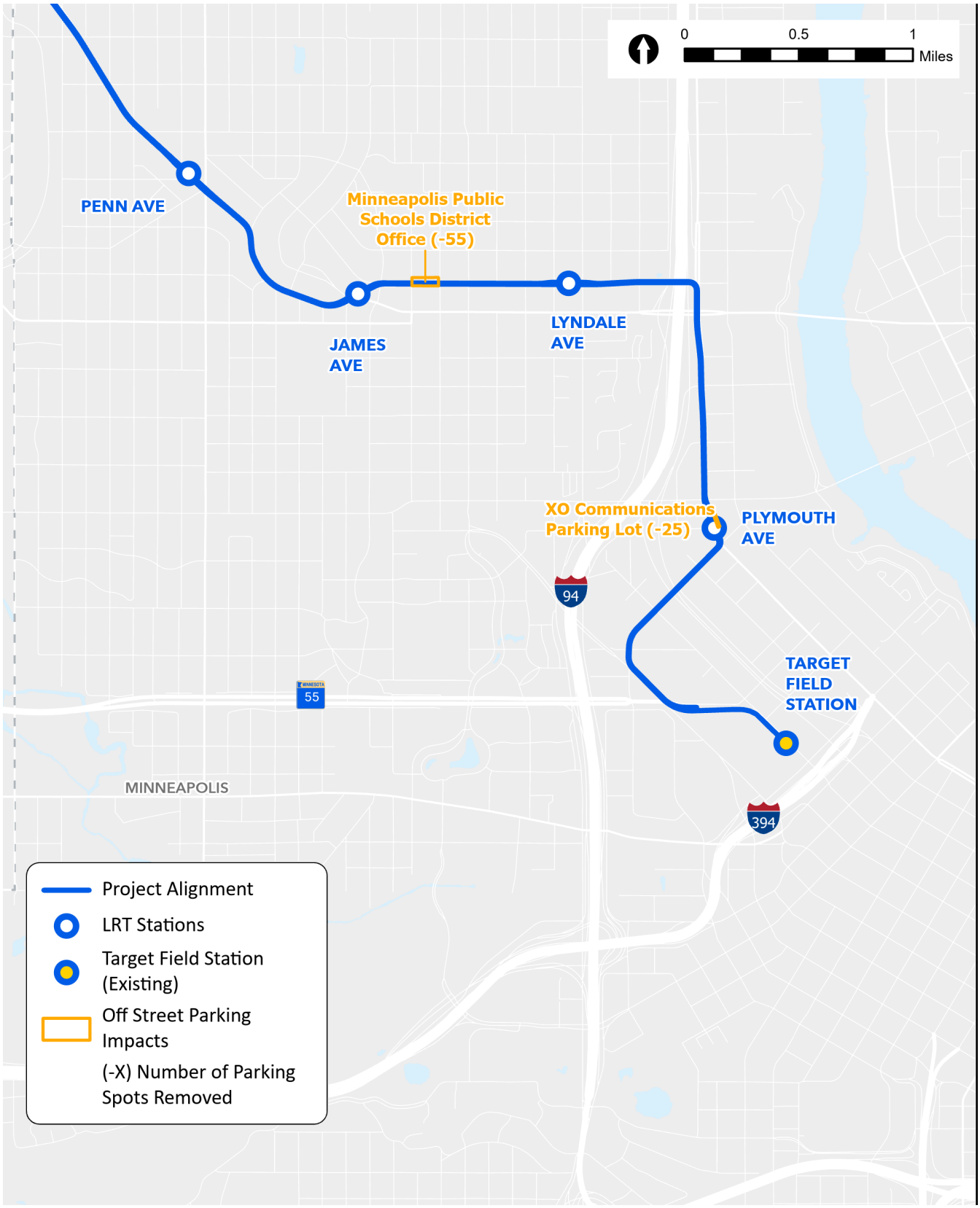
City of Minneapolis

In the City of Minneapolis, on-street parking along W Broadway Ave from N 29th Ave to Irving Ave N would be eliminated, as well as along N 21st Ave between Irving Ave N to N 4th St, where the street would also be closed to vehicle traffic (Table 3-19 and Figure 3-7). Additionally, there would be a minor reduction in off-street parking near the Penn Ave Station and Plymouth Ave Station (Figure 3-8). On-street parking would be eliminated on 10th Ave N from N Washington Ave to N 5th St (Figure 3-7). Loss of parking has been raised as a concern; impacts as they relate to EJ communities are presented in Chapter 7.

Table 3-19. Parking Impacts in the City of Minneapolis

City	Affected Location or Business(es)	Loss of On-Street Spaces	Loss of Off-Street Spaces	Reason for Impact
Minneapolis	W Broadway Ave from N 29th Ave to Irving Ave N	364	0	Accommodate LRT tracks
Minneapolis	Broadway Flats (residential)	0	2	Accommodate Penn Ave Station
Minneapolis	Minneapolis Public School District Parking Lot	0	55 (12% loss)	Accommodate LRT tracks
Minneapolis	N 21st Ave from N Irving Ave to N 4th St	215	0	N 21st Ave closed to vehicle traffic
Minneapolis	XO Communications	0	25 (27% loss)	Accommodate Plymouth Ave Station
Minneapolis	N Washington Ave from N 10th Ave to N 22nd Ave	134	0	Accommodate LRT tracks
Minneapolis	N 10th Ave from N Washington Ave to N 5th St	33	0	Accommodate transit mall
Total		746	82	

Figure 3-8 Off-Street Parking Impacts in the City of Minneapolis



3.5.3.2 Construction-Phase (Short-Term) Impacts

With the Project, on-street parking spaces could be temporarily removed at locations to facilitate construction of the Project (for example, to facilitate truck movements or to provide a temporary truck loading zone). The No-Build Alternative would have no short-term impacts.

3.5.4 Avoidance, Minimization, and/or Mitigation Measures

The Council has engaged with potentially affected business owners on parking impacts through surveys, door knocking, and meetings. General concerns from business owners are how a loss of parking spaces (on- or off-street) would negatively impact their business by making it more difficult for customers to access their business by car. Where off-street parking spaces would be lost but buildings and businesses remain, the Council plans to compensate business owners for the loss of off-street parking spaces. The Council would compensate property owners through the property acquisition process, consistent with state and federal law, which includes the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Refer to Section 4.3, Displacement of Residences and Businesses, for additional information regarding the Uniform Act.

The Council would coordinate mitigation for the loss of on-street parking spaces with local jurisdictions (the Cities of Minneapolis and Robbinsdale) to identify whether suitable replacement locations are necessary. In the City of Minneapolis, the character of the Project area has been designed to facilitate multimodal transportation options with greater emphasis on transit, bicycle, and pedestrian modes. The City of Minneapolis has a Complete Streets policy supporting the prioritization of street space for people walking, bicycling, and using transit over vehicles. Furthermore, parking would remain on nearby streets and at off-street parking lots associated with the adjacent buildings. The Council will continue to refine the street design of the blocks surrounding the Penn Ave/W Broadway Ave intersection to lessen parking impacts. Adjustments will focus on making space for on-street parking, which will include accessible parking stalls that allow people using wheelchairs and other mobility devices to better navigate from vehicles to the sidewalk.

In other portions of the Project in the City of Minneapolis, parking utilization studies will be completed to better understand parking needs and identify locations where parking mitigation warrants further exploration and coordination.

Opportunities for TOD in the City of Robbinsdale could provide the opportunity for parking that is better integrated into planned development.

3.6 Freight Rail Conditions

This section discusses impacts that the Project would have on the existing freight rail infrastructure in the Project area.

3.6.1 Regulatory Context and Methodology

Project engineering drawings were referenced to identify the physical impacts of the Project to freight rail infrastructure. Because the Project Alignment has moved out of the BNSF right-of-way (see Chapter 2), there are no longer any shared uses of freight rail rights-of-way.

3.6.2 Study Area and Affected Environment

The Project Alignment generally runs within existing street right-of-way from the Target North Campus in the City of Brooklyn Park to Target Field in the City of Minneapolis. Unlike the 2016 Alignment for the Project that was within the BNSF right-of-way, there is minimal interaction between the Project Alignment and the existing freight railroads.

3.6.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be experienced after the Project has opened, and construction phase, meaning short-term impacts experienced during the construction of the Project.

3.6.3.1 Operating-Phase (Long-Term) Impacts

For the Project, all potential impacts to freight rail resources would occur in the Cities of Brooklyn Park, Crystal, and Robbinsdale. There would be no impacts in the City of Minneapolis.

The Project includes a pedestrian bridge over the BNSF tracks near 63rd Ave N, an LRT bridge crossing over the Canadian Pacific Kansas City (CPKC) tracks with CR 81, and the addition of LRT running at-grade and parallel to the existing freight tracks at intersections with W Broadway Ave, 63rd Ave N, and Bass Lake Rd. Each intersection would require modifications of the existing street signal system, which in turn would require coordination with BNSF's railroad signal preemption. The reconstruction of 42nd Ave N in the City of Robbinsdale west of CR 81 could include reconstruction west of the BNSF right-of-way and may include quiet zone–ready elements such as channelized lanes and gates. No operating-phase impacts to freight rail would occur under the No-Build Alternative.

3.6.3.2 Construction-Phase (Short-Term) Impacts

No construction-phase impacts to freight rail would occur under the No-Build Alternative.

3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Permits, agreements, and flagging would be needed for temporary work within the railroad right-of-way for the Project. Freight rail operation coordination plans will be developed to manage coordination with affected freight railroads during construction. No long-term mitigation measures are anticipated.

3.7 Aviation

The only aviation facility within the Project area is Crystal Airport, a regional airport owned and operated by the Metropolitan Airports Commission (MAC). This section discusses Project impacts to the Crystal Airport facility.

3.7.1 Regulatory Context and Methodology

According to the Federal Aviation Administration's (FAA's) *Advisory Circular 150/5300-13B*,[14] a Runway Protection Zone (RPZ) is a clear zone located at the end of each airport runway intended for the protection of people and property on the ground. The State Statutes and Rules require additional State Safety Zones, implemented through airport overlay zoning ordinances. The MAC also adopted an airport zoning ordinance in 1952 that regulates the use of property near Crystal Airport.

The Council coordinated with FAA and MAC in 2022 and 2023 to update the 2014 RPZ AA.

The update included background, a summary of changes since the 2014 RPZ AA, a review of alternatives, and a recommended preferred alternative. Several alternatives were explored to avoid conflicts between Project structures and the RPZ approach and departure surface. A concurrence letter from FAA to the Council dated July 19, 2023, and additional exhibits are included in Appendix A-3.

3.7.2 Study Area and Affected Environment

The study area for aviation is defined as the area where the LOD of the Project overlaps the Runway 24R Departure RPZ and the Runway 6L State Safety Zone A (see green dashed shape in MIC 2023 RPZ AA Approved LRT Alternative.pdf and MnDOT Safety Zones and Clear Zones.pdf in Appendix A-3). Crystal Airport hosted approximately 47,000 flight operations in 2022. CR 81 and BNSF right-of-way intersect the Runway 24R Departure RPZ. Residential land uses currently occupy a portion of State Safety Zone A beyond Crystal Airport's property boundary.

3.7.3 Environmental Consequences

Impacts are described as operating phase, meaning long-term impacts that are projected to be relevant after the Project has opened, and construction phase, meaning short-term impacts relevant during the construction of the Project.

3.7.3.1 Operating-Phase (Long-Term) Impacts

The Project is within the median of CR 81 and is an at-grade transitway with 16-foot-tall LRT vehicles and a 23-foot-tall OCS to supply power. During operation, LRT trains would occupy the Runway 24R Departure RPZ for about 5.1 seconds per pass. The Council anticipates that passes would occur about every 10 to 15 minutes throughout the day.

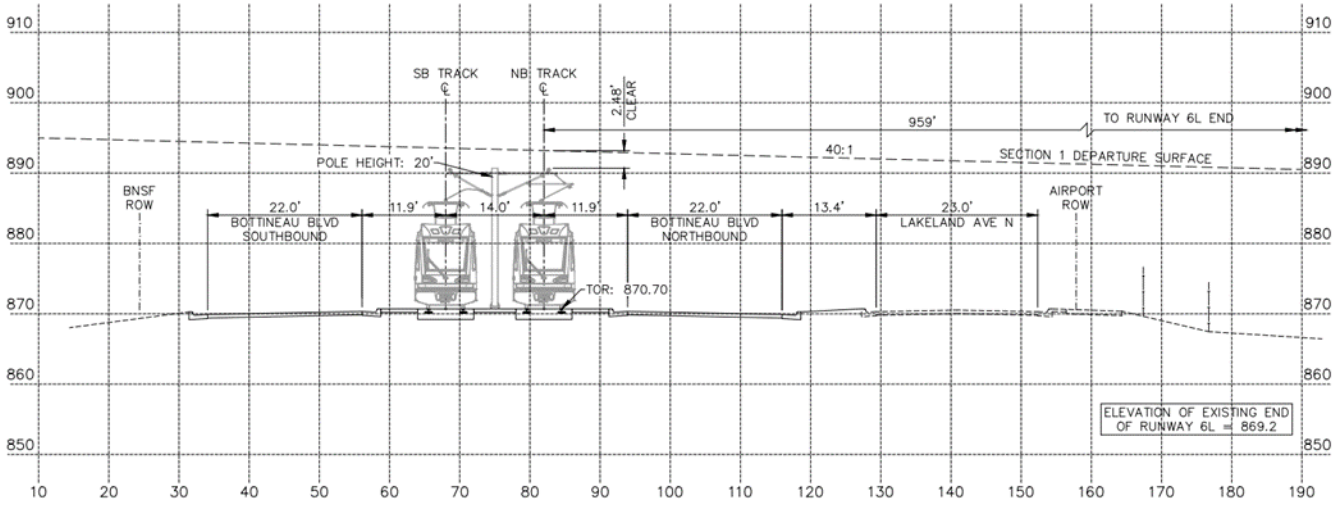
Approximately two to three OCS poles are anticipated in the Runway 24R Departure RPZ. After considering several alternatives to reduce conflict between LRT infrastructure and the RPZ surfaces, the Council determined that the OCS poles in the median of CR 81 would not encroach on the RPZ surface (see Figure 3-9) and would also be located as far from the RPZ centerline as possible. Final OCS pole spacing and locations would be determined during the final design of the Project. The No-Build Alternative would not include any improvements within the RPZ; therefore, no operating-phase aviation impacts would occur under the No-Build Alternative.

3.7.3.2 Construction-Phase (Short-Term) Impacts

Construction of the Project, including the OCS, would occur within the Runway 24 Departure RPZ. Construction operations and phasing in the RPZ would be coordinated with MAC and FAA during the Project's final design phase to mitigate these impacts. The Council would consider the FAA *Form 7460-1* process complete if the FAA were to issue a statement of no objection to the proposed activity. On July 19, 2023, the FAA issued a letter indicating concurrence on the conclusion of the updated 2023 Crystal Airport RPZ AA for revisions to the Project. A copy of the letter regarding the Crystal Airport (MIC) RPZ AA is included in Appendix A-3.

Construction equipment height would be restricted within the runway approach surface. To discourage bird nesting, no open water would be allowed within the RPZ during construction. The No-Build Alternative would not involve any improvements within the RPZ; therefore, no construction-phase impacts on aviation would occur under the No-Build Alternative.

Figure 3-9 Crystal Airport Runway Protection Zone and State Safety Zone Effects



3.7.4 Avoidance, Minimization, and/or Mitigation Measures

The RPZ AA identified the full range of alternatives that could avoid and/or minimize the effects of the Project on the land use within the RPZ, as well as mitigate the risks to people and property on the ground. The recommendation identified in the RPZ AA was a transitway within the CR 81 median as the preferred alternative. FAA reviewed the findings and recommendations of the RPZ AA and stated in a letter dated July 19, 2023, that it concurred with the RPZ AA findings (see Appendix A-3).

The FAA conditionally approved the Crystal Airport Layout Plan on May 26, 2020. The Crystal Airport Layout Plan includes integration of LRT infrastructure and operations in the CR 81 median. Based on the decisions rendered by the FAA through the RPZ AA and confirmed through the FAA's issuance of a letter of no objection (Form 7460-1 application), the Project will be included in the next update of the Crystal Airport Layout Plan.

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