This document is made available electronically by the Minnesota Legislative Reference Library as part of an ongoing digital archiving project. http://www.leg.state.mn.us/lrl/lrl.asp

SOUTHWEST LIGHT RAIL TRANSIT (METRO GREEN LINE EXTENSION)

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by:
United States Department of Transportation (USDOT)
Federal Transit Administration (FTA)

and

Metropolitan Council, Minnesota (Council)

In cooperation with
United States Army Corps of Engineers (USACE)

Submitted pursuant to:

National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. Section 4332 *et seq.*; Council of Environmental Quality (CEQ) regulations, 40 CFR Section 1500 *et seq.*, Implementing NEPA; Federal Transit Laws, 49 U.S.C. Chapter 53; Environmental Impact and Related Procedures, 23 CFR Part 771, a joint regulation of the Federal Highway Administration and Federal Transit Administration implanting NEPA and CEQ regulations; Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. Section 306108; Section 4(f) of the Department of Transportation Act of 1966, as amended, 49 U.S.C. Section 303; Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965, 16 U.S.C. Section 4601 – 4 *et seq.*; Clean Air Act, as amended, 42 U.S.C. Section 7401 *et seq.*; Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. Section 4601 *et seq.*; Executive Order No. 12898 (Federal Actions to Address Environmental Justice in Minority and Low Income Populations); Executive Order No. 13166 (Improving Access to Services for Persons with Limited English Proficiency); Executive Order No. 11988 (Floodplain Management); other applicable federal laws and procedures; and all relevant laws and procedures of the State of Minnesota.

After publication of the FEIS, the Council will issue an Adequacy Determination for the Final EIS in accordance with Minnesota environmental law.

FTA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless FTA determines statutory criteria or practicability considerations preclude issue of the combined document pursuant to Section 1319.

5-11-2015
Date of Approval

Marisol Simon
Regional Administrator
Federal Transit Administration
Region V

5.11.2015
Date of Approval

Mark Fuhrmann
Program Director, Rail New Starts
Metropolitan Council

Abstract

The Metropolitan Council (Council) proposes to construct and operate the approximately 16-mile Southwest Light Rail Transit (METRO Green Line Extension) project (Southwest LRT) as an extension of the Central Corridor LRT (METRO Green Line) to provide transportation improvements in the southwest metropolitan region. The Southwest LRT would extend from Eden Prairie, Minnesota, through the cities of Minnetonka, Hopkins, and St. Louis Park, to downtown Minneapolis, passing in close proximity to Edina, and connecting to the METRO Green Line, which began revenue service in June 2014. The identified Locally Preferred Alternative (LPA) is a light rail line alignment constructed and operating on the Kenilworth-Opus-Golden Triangle alignment, reflecting adjustments to the LPA made subsequent to publication of the Draft Environmental Impact Statement (EIS). In addition to the proposed light rail alignment, stations, park-and-ride lots, and ancillary facilities, including a proposed Operations and Maintenance Facility (OMF), the LPA includes proposed related bus, roadway, bicycle/pedestrian improvements, and freight rail modifications.

This Supplemental Draft EIS restates the project's Purpose and Need Statement from the Draft EIS and provides a description of the proposed action (that is, the LPA), focusing on three areas that are evaluated within the Supplemental Draft EIS. It also includes a description of the process and analyses used to identify adjustments to the LPA in those three areas. The three areas analyzed in this limited-scope Supplemental Draft EIS are: (1) adjustments to the proposed light rail alignment and station improvements in a segment in Eden Prairie, generally between the intersections of Technology Drive and Mitchell Road and of Flying Cloud Drive and Valley View Road; (2) the location of a proposed OMF in Hopkins; and (3) adjustments to proposed light rail and freight rail alignments and LRT stations in a segment in St. Louis Park and Minneapolis, generally between Louisiana Avenue South and Penn Avenue South. This Supplemental Draft EIS augments the information and analyses provided in the Draft EIS focusing on changes that may result in significant adverse environmental impacts of the proposed project since publication of the Draft EIS in October 2012. This Supplemental Draft EIS also includes additional preliminary Section 4(f) *de minimis* impact findings not included in the Draft EIS.

Comments on this document may be submitted in writing to the contacts below or made verbally at the following public hearings, which will be conducted in conjunction with informational open houses.

Date	Hearing Time	Open House Time	Location
Tuesday, June 16, 2015	6:00 PM	5:00 PM	Hopkins Center for the Arts 1111 Mainstreet Hopkins, MN 55343
Wednesday, June 17, 2015	6:00 PM	5:00 PM	Eden Prairie City Hall 8080 Mitchell Road Eden Prairie, MN 55344
Thursday, June 18, 2015	6:00 PM	5:00 PM	Dunwoody College of Technology 818 Dunwoody Blvd Minneapolis, MN 55403

For additional information concerning this document, contact:

FTA Regional Contact

Marisol Simon
Regional Administrator
Federal Transit Administration
200 West Adams Street, Suite 320
Chicago, Il 60606
312.353.2789

Local Agency Contact

Nani Jacobson
Assistant Director, Environmental and Agreements
Metro Transit – Southwest LRT Project Office
6465 Wayzata Boulevard, Suite 500
St. Louis Park, MN 55426
612.373.3808

Table of Contents

Signature Page ..... **i**
Abstract ..... **ii**
Table of Contents ..... **v**
Introduction to the Supplemental Draft Environmental Impact Statement ..... **xiii**
Acronyms and Abbreviations ..... **xvi**
Executive Summary **ES-1**

1 Purpose and Need **1-1**
1.1 Project Purpose 1-1
1.2 Project Need 1-1

2 Alternatives Considered **2-1**
2.1 Project Overview 2-1
2.1.1 Project Participating Agencies 2-1
2.1.2 Project Background 2-4
2.2 Alternatives Analysis and Draft Environmental Impact Statement 2-4
2.3 Design Adjustments Considered Following the Draft Environmental Impact Statement 2-8
2.3.1 Eden Prairie Segment 2-8
2.3.1.1 Background 2-8
2.3.1.2 Design Adjustments Considered in the Eden Prairie Segment 2-9
2.3.2 Operations and Maintenance Facility Location 2-12
2.3.2.1 Background 2-12
2.3.2.2 Operations and Maintenance Facility Sites Considered after Publication of the Draft Environmental Impact Statement 2-14
2.3.3 St. Louis Park/Minneapolis Segment 2-19
2.3.3.1 Background 2-19
2.3.3.2 Design Adjustments Considered in the St. Louis Park/Minneapolis Segment 2-19
2.4 Design Adjustment Process 2-43
2.5 Locally Preferred Alternative Adjustments Evaluated in this Supplemental Draft Environmental Impact Statement 2-44
2.5.1 Eden Prairie Segment 2-47
2.5.2 Operations and Maintenance Facility 2-51
2.5.3 St. Louis Park/Minneapolis Segment 2-51
2.6 Locally Requested Capital Investments 2-58
2.6.1 Introduction 2-58
2.6.2 Proposed Locally Requested Capital Investment Actions 2-58
2.6.2.1 Local Roadway Improvements 2-58
2.6.2.2 Streetscape, Landscape and Aesthetic Improvements 2-58
2.6.2.3 Local Pedestrian and Bicycle Improvements 2-59
2.6.2.4 Utility Activities 2-59
2.6.2.5 Guideway Profile Adjustment 2-59
2.6.3 Next Steps 2-60

3 Affected Environment, Impacts, and Mitigation **3-1**
3.1 Environmental Resources Addressed and Related Methods and Regulations 3-2
3.1.1 Environmental Resources Addressed in this Supplemental Draft Environmental Impact Statement 3-2
3.1.2 Environmental Resources Methodologies and Regulations 3-4
3.1.2.1 Land Use 3-4

3.1.2.2 Acquisitions and Displacements 3-5
3.1.2.3 Cultural Resources 3-6
3.1.2.4 Parklands, Recreation Areas, and Open Spaces 3-7
3.1.2.5 Visual Quality and Aesthetics 3-8
3.1.2.6 Geology and Groundwater 3-10
3.1.2.7 Water Resources: Wetlands, Floodplains, Public Waters and Stormwater Management 3-11
3.1.2.8 Noise 3-12
3.1.2.9 Vibration 3-15
3.1.2.10 Hazardous and Contaminated Materials 3-15
3.1.2.11 Economic Effects 3-16
3.1.2.12 Transportation Effects: Transit, Roadway and Traffic, Parking, Freight Rail, Bicycle and Pedestrian, Safety and Security 3-17
3.1.2.13 Mitigation Measures 3-22
3.1.2.14 Environmental Justice Compliance 3-27
3.2 Eden Prairie Segment 3-27
3.2.1 Social Effects 3-30
3.2.1.1 Land Use 3-30
3.2.1.2 Acquisitions and Displacements 3-34
3.2.1.3 Cultural Resources 3-39
3.2.1.4 Parklands, Recreation Areas, and Open Spaces 3-41
3.2.1.5 Visual Quality and Aesthetics 3-45
3.2.2 Environmental Effects 3-55
3.2.2.1 Geology and Groundwater 3-55
3.2.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management 3-59
3.2.2.3 Noise 3-68
3.2.2.4 Vibration 3-73
3.2.2.5 Hazardous and Contaminated Materials 3-75
3.2.3 Economic Effects 3-78
3.2.4 Transportation Effects 3-79
3.2.4.1 Transit 3-80
3.2.4.2 Roadway and Traffic 3-81
3.2.4.3 Parking 3-86
3.2.4.4 Bicycle and Pedestrian 3-87
3.2.4.5 Safety and Security 3-89
3.2.5 Environmental Justice Compliance 3-90
3.3 Hopkins Operations and Maintenance Facility 3-99
3.3.1 Social Effects 3-100
3.3.1.1 Land Use 3-100
3.3.1.2 Acquisitions and Displacements 3-104
3.3.2 Environmental Effects 3-107
3.3.2.1 Geology and Groundwater 3-107
3.3.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management 3-110
3.3.2.3 Hazardous and Contaminated Materials 3-116
3.3.3 Economic Effects 3-121
3.3.4 Transportation Effects 3-122
3.3.4.1 Roadway and Traffic 3-122
3.3.4.2 Parking 3-124
3.3.4.3 Safety and Security 3-125
3.3.5 Environmental Justice Compliance 3-126
3.4 St. Louis Park/Minneapolis Segment 3-133

3.4.1 Social Effects 3-134
3.4.1.1 Land Use 3-136
3.4.1.2 Acquisitions and Displacements 3-140
3.4.1.3 Cultural Resources 3-145
3.4.1.4 Source: MnDOT CRU, 2014.Parklands, Recreation Areas, and Open Spaces 3-156
3.4.1.5 Visual Quality and Aesthetics 3-161
3.4.2 Environmental Effects 3-168
3.4.2.1 Geology and Groundwater 3-168
3.4.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management 3-173
3.4.2.3 Noise 3-179
3.4.2.4 Vibration 3-185
3.4.2.5 Hazardous and Contaminated Materials 3-188
3.4.3 Economic Effects 3-193
3.4.4 Transportation Effects 3-196
3.4.4.1 Transit 3-197
3.4.4.2 Roadway and Traffic 3-198
3.4.4.3 Parking 3-201
3.4.4.4 Freight Rail 3-203
3.4.4.5 Bicycle and Pedestrian 3-205
3.4.4.6 Safety and Security 3-207
3.4.5 Environmental Justice Compliance 3-209
3.5 Draft Section 4(f) Evaluation Update 3-218
3.5.1 Regulatory Background/Methodology 3-221
3.5.1.1 Types of Section 4(f) Properties 3-222
3.5.1.2 Section 4(f) Determinations 3-222
3.5.1.3 Section 4(f) Evaluation Process 3-222
3.5.1.4 Section 4(f) Use Definitions and Requirements 3-224
3.5.2 Purpose and Need 3-225
3.5.2.1 Project Purpose 3-225
3.5.2.2 Project Need 3-225
3.5.3 Description of the Locally Preferred Alternative 3-226
3.5.4 Section 4(f) Properties in the LPA Study Area 3-227
3.5.4.1 Publicly Owned Parks and Recreational Areas 3-234
3.5.4.2 Historic Properties 3-266
3.5.5 Coordination 3-327
3.5.5.1 Department of Interior (DOI) 3-327
3.5.5.2 Officials with Jurisdiction 3-327
3.5.5.3 Public 3-328
3.5.6 Preliminary Determination of Section 4(f) Use 3-328

4 Public and Agency Coordination 4-1
4.1 Accessibility to the Public 4-1
4.2 Coordination since the Draft Environmental Impact Statement 4-1
4.3 Advisory Committees 4-2
4.4 Public Involvement 4-6
4.4.1 Background 4-6
4.4.2 Communications and Public Involvement Plan 4-8
4.4.2.1 Outreach and Communications Team 4-8
4.4.2.2 Public Outreach and Events 4-9
4.4.2.3 Other Project Communication Strategies 4-14
4.5 Agency Coordination 4-17

4.5.1 Participating Agencies 4-17
4.5.1.1 Agency Coordination since Publication of the Draft Environmental Impact Statement 4-17
4.5.1.2 Preliminary Permits and Approvals Required 4-20
4.6 Public and Agency Coordination following Publication of the Supplemental Draft Environmental Impact Statement 4-22

5 Next Steps and Funding 5-1
5.1 Next Steps and Schedule 5-1
5.2 Funding 5-2
5.3 Capital Costs 5-3

Appendices

A List of Recipients
B List of Preparers
C Supporting Documents and Technical Reports (Incorporated by Reference)
D Sources and References Cited
E Agency Coordination Letters
F Development and Evaluation of Design Adjustments Since Publication of the Draft EIS
G Supplemental Draft EIS Conceptual Engineering Drawings
H Noise and Vibration Memoranda
I Responses to Comments Received on Supplemental Draft EIS Scope
J Visual Resources Technical Report
K Public Notices
L Draft 4(f) Evaluation Update Supporting Documentation

Tables

2.3-1 Eden Prairie Steps 1 and 2 Subsegments and Design Adjustments Considered 2-11
2.3-2 Operational and Site Criteria Used to Evaluate the Second-Step Operations and Maintenance Facility Sites 2-17
2.3-3 Third-Step Sites for the Operations and Maintenance Facility 2-18
2.3-4 Set 1 Design Adjustments Developed and Evaluated in the St. Louis Park/Minneapolis Segment, by Step 2-23
2.5-1 LPA Proposed LRT Alignment Length, Stations, and Park-and-Ride Lots: Draft EIS and Supplemental Draft EIS (within Supplemental Draft EIS Segments) 2-48
2.6-1 General Locally Requested Capital Investment Activities by Requestor and Identification Number 2-59
3.1-1 Environmental Resources Addressed in the Supplemental Draft EIS by Study Area 3-2
3.1-2 METRO Blue Line Reference Noise Levels 3-13
3.1-3 Locally Preferred Alternative Operating Plan 3-18
3.1-4 Existing Freight Rail Conditions on the Kenilworth Corridor, Bass Lake and MN&S Spurs 3-20
3.1-5 Freight Co-Location Crossing Blockage Times 3-21
3.1-6 Summary of Short-term and Long-term Mitigation Measures by Resource Area 3-23
3.2-1 Summary of Findings for the Eden Prairie Segment 3-28
3.2-2 Changes in Existing Land Use under the LPA – Eden Prairie Segment 3-33
3.2-3 Eden Prairie Segment – Parcel Description 3-37
3.2-4 Parklands, Recreation Areas, and Open Spaces in the Eden Prairie Segment 3-42
3.2-5 Existing Visual Quality and Aesthetics by Viewpoint in the Eden Prairie Segment 3-47
3.2-6 Anticipated Direct Change and Impact in Visual Quality and Aesthetics from Eden Prairie Segment Viewpoints 3-50
3.2-7 Eden Prairie Segment Wetland Impact Summary 3-61
3.2-8 Summary of Existing Noise Level Measurements – Eden Prairie Segment 3-69

3.2-9 Summary of Noise Impacts for Residential Land Use – Eden Prairie Segment 3-71
3.2-10 Summary of Noise Impacts for Institutional Land Use – Eden Prairie Segment 3-72
3.2-11 Summary of Vibration Impacts for Residential Land Use – Eden Prairie Segment 3-74
3.2-12 Potential High-Risk Hazardous and Contaminated Material Sites – Eden Prairie Segment 3-76
3.2-13 Intersection Level of Service – A.M. Peak Hour 3-83
3.2-14 Intersection Level of Service – P.M. Peak Hour 3-84
3.2-15 Eden Prairie Segment – Potential Off-Street Parking Displacements 3-86
3.2-16 Demographic Characteristics – Eden Prairie Segment Environmental Justice Study Area, City of Eden Prairie, and Hennepin County 3-94
3.2-17 Eden Prairie Segment Public Elementary School Demographics (2010-2011 School Year) 3-94
3.2-18 Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – Eden Prairie Segment 3-95
3.3-1 Summary of Findings for the Hopkins Operations and Maintenance Facility Site 3-102
3.3-2 Hopkins OMF Site – Parcel Descriptions 3-104
3.3-3 Summary of 2013 Soil Borings, Hopkins Operations and Maintenance Facilitya 3-109
3.3-4 Hopkins Operations and Maintenance Facility Wetland Impact Summary 3-112
3.3-5 High-Risk Hazardous and Contaminated Materials Sites of Concern at the Hopkins Operations and Maintenance Facility Site 3-120
3.3-6 Hopkins – Potential Off-Street Parking Displacements 3-125
3.3-7 Demographic Characteristics – Hopkins OMF Environmental Justice Compliance Study Area, the Cities of Hopkins and Minneapolis, and Hennepin County 3-130
3.3-8 Hopkins OMF Public Elementary School Demographics (2010-2011 School Year) 3-130
3.3-9 Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – Hopkins OMF 3-131
3.4-1 Summary of Findings for the St. Louis Park/Minneapolis Segment 3-135
3.4-2 Changes in Existing Land Use under the LPA – St. Louis Park/Minneapolis Segmenta 3-139
3.4-3 St. Louis Park/Minneapolis Segment – Potential Parcel Acquisitions under the LPAa 3-143
3.4-4 Cultural Resources in St. Louis Park/Minneapolis Segment that would be adversely effected under the LPA 3-150
3.4-5 Cultural Resources in St. Louis Park/Minneapolis Segment that would not be adversely effected under the LPA 3-151
3.4-6 Parks, Recreation Areas, and Open Spaces in the St. Louis Park/Minneapolis Segment 3-158
3.4-7 Existing Visual Quality and Aesthetics by Viewpoint in the St. Louis Park/Minneapolis Segment [Rating Range 1 (very low) to 7 (very high)] 3-163
3.4-8 Anticipated Direct Change and Impact in Visual Quality and Aesthetics from St. Louis Park/Minneapolis Segment Viewpoints 3-166
3.4-9 St. Louis Park/ Minneapolis Segment Wetland Impact Summary 3-174
3.4-10 Summary of Existing Noise Level Measurements – St. Louis Park/Minneapolis Segment 3-181
3.4-11 Summary of Noise Impacts for Residential Land Use – St. Louis Park/Minneapolis Segment 3-183
3.4-12 Summary of Noise Impacts for Category 1 and Category 3 Land Use – St. Louis Park/ Minneapolis Segment 3-184
3.4-13 Summary of Vibration Impacts for Residential Land Use – St. Louis Park/Minneapolis Segment 3-187
3.4-14 Summary of Ground-Borne Noise Impacts for Residential Land Use – St. Louis Park/ Minneapolis Segment 3-188
3.4-15 Potential High-Risk Hazardous and Contaminated Material Sites – St. Louis Park/Minneapolis Segment 3-192
3.4-16 St. Louis Park/Minneapolis Segment – Potential Off-Street Parking Displacements 3-202
3.4-17 St. Louis Park/Minneapolis Segment – Potential On-Street Parking Displacements/Additions 3-203
3.4-18 Demographic Characteristics – St. Louis Park/Minneapolis (SLPM) Segment Environmental Justice Study Area, the Cities of St. Louis Park and Minneapolis, and Hennepin County 3-213
3.4-19 St. Louis Park/Minneapolis Segment Public Elementary School Demographics (2010-2011 School Year) 3-213

3.4-20 Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – St. Louis Park/ Minneapolis Segment 3-215
3.5-1 Comparison of FTA's Preliminary Section 4(f) Property Use Determinationsa in the Draft Section 4(f) Evaluation (Draft EIS) and the Draft Section 4(f) Evaluation Update (Supplemental Draft EIS) 3-221
3.5-2 Summary of FTA's Preliminary Section 4(f) Property Use Determinationsa 3-222
3.5-3 Section 4(f) Properties Evaluated in this Draft Section 4(f) Evaluation Update 3-228
3.5-4 Summary of Permanent Section 4(f) Park and Recreational Property Usesa 3-235
3.5-5 Summary of Permanent Section 4(f) Historic Property Usesa 3-268
4.3-1 Southwest LRT Project Committee Meetings Held Since Publication of the Draft EIS (October 12, 2012) 4-3
4.4-1 Southwest LRT Project Public Open Houses and Community Meetings Held Since Publication of the Draft EIS (October 12, 2012) 4-9
4.4-2 Community Meetings and Events Attended by SPO Staff Since Publication of the Draft EIS (October 12, 2012) 4-10
4.4-3 Corridors of Opportunity Community Engagement Team Recommended Grantees and Projects by Year 4-16
4.5-1 Participating Agencies 4-18
4.5-2 Preliminary List of Required Permits/Approvals and Reviews (by Agency Jurisdiction) 4-20
5.4-1 Base-Year and Year-of-Expenditure Capital Cost Estimates of the LPA, by FTA SCC (base year in 2014 dollars, in thousands) 5-4

Exhibits

2.1-1 Proposed Southwest LRT Alignment 2-2
2.2-1 LRT Build Alternatives Evaluated in the Draft EIS 2-7
2.3-1 Step 1 and 2 Subsegments and Design Adjustments Considered, Eden Prairie Segment 2-10
2.3-2 Third Step LRT Alignment Adjustments Evaluated in the Supplemental Draft EIS, Eden Prairie Segment 2-13
2.3-3 OMF Sites Considered 2-15
2.3-4 Existing Freight Rail Owners and Operators 2-21
2.3-5 Areas of Potential Light Rail and Freight Rail-Related Adjustments, St. Louis Park/Minneapolis Segment 2-25
2.3-6 Brunswick Central Freight Rail Relocation Adjustments 2-26
2.3-7 Draft EIS and Brunswick West Freight Rail Relocation Adjustments 2-27
2.3-8 Kenilworth Corridor Adjustments Considered 2-31
2.3-9 Shallow LRT Tunnels – Over Kenilworth Lagoon Design Adjustments, St. Louis Park/ Minneapolis Segment 2-34
2.3-10 MN&S North Freight Rail Relocation Adjustments 2-36
2.3-11 Short Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon 2-40
2.3-12 Long Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon 2-41
2.5-1 SOUTHWEST LRT CORRIDOR AND SUPPLEMENTAL DRAFT EIS STUDY AREAS 2-46
2.5-2 Project Overview Eden Prairie Segment 2-49
2.5-3 Project Overview, Operations and Maintenance Facility, City of Hopkins 2-53
2.5-4 Project Overview St. Louis Park/Minneapolis Segment 2-54
2.5-5 Proposed Freight Rail Modifications 2-57
3.2-1 Property Acquisitions, Eden Prairie Segment 3-38
3.2-2 Archaeological and Historic Architectural Areas of Potential Effect, Eden Prairie Segment 3-40
3.2-3 Parklands, Recreation Areas, and Open Spaces, Eden Prairie Segment 3-43
3.2-4 Areas with Compressible Soils, Eden Prairie Segment 3-57
3.2-5 Water Resources: Wetlands, Floodplains, and Public Waters, Eden Prairie Segment 3-63
3.2-6 Noise/Vibration Impacts and Monitoring Locations, Eden Prairie Segment 3-70
3.2-7 Potential High-Risk Hazardous and Contaminated Materials Sites, Eden Prairie Segment 3-77

3.2-8 Low-Income Population Within Census Block Groups, Eden Prairie Segment 3-91
3.2-9 Minority Population Within Census Blocks, Eden Prairie Segment 3-93
3.3-1 Property Acquisitions, Hopkins Operations and Maintenance Facility 3-107
3.3-2 Water Resources: Wetlands and Floodplains, Hopkins Operations and Maintenance Facility 3-114
3.3-3 Potential High-Risk Hazardous and Contaminated Materials Sites, Hopkins Operations and Maintenance Facility 3-119
3.3-4 Low-Income Population Within Census Block Groups, Hopkins Operations and Maintenance Facility 3-128
3.3-5 Minority Population Within Census Blocks, Hopkins Operations and Maintenance Facility 3-129
3.4-1 Property Acquisitions, St. Louis Park/Minneapolis Segment 3-145
3.4-2 Architecture/History Area of Potential Effect and Resources, St. Louis Park/Minneapolis Segment 3-147
3.4-3 Archaeological Area of Potential Effect, St. Louis Park/Minneapolis Segment 3-148
3.4-4 Parklands, Recreation Areas, and Open Spaces, St. Louis Park/Minneapolis Segment 3-159
3.4-5 Water Resources: Wetlands, Floodplains, and Public Waters, St. Louis Park/Minneapolis Segment 3-176
3.4-6 Noise/Vibration Impacts and Monitoring Locations, St. Louis Park/Minneapolis Segment 3-182
3.4-7 Potential High-Risk Hazardous and Contaminated Materials Sites, St. Louis Park/Minneapolis Segment 3-191
3.4-8 Twin Cities & Western Railroad Service Extent 3-196
3.4-9 Low-income Population Within Census Block Groups, St. Louis Park/Minneapolis Segment 3-211
3.4-10 Minority Population Within Census Blocks, St. Louis Park/Minneapolis Segment 3-212
3.5-1 Proposed Southwest LRT Alignment 3-227
3.5-2 Section 4(f) Properties within the vicinity of the proposed LPA – Mitchell Station to Shady Oak Station 3-231
3.5-3 Section 4(f) Properties within the vicinity of the proposed LPA – City West Station to Beltline Station 3-232
3.5-4A Section 4(f) Recreational and Individual Historic Properties within the vicinity of the proposed LPA – Louisiana Station to Target Field Station 3-233
3.5-4B Section 4(f) Historic District Properties within the vicinity of the proposed LPA – Louisiana Station to Target Field Station 3-234
3.5-5 Draft Section 4(f) Evaluation Update – Purgatory Creek Park 3-238
3.5-6 Draft Section 4(f) Evaluation Update – Flying Cloud Dog Park 3-241
3.5-7 Draft Section 4(f) Evaluation Update – Overpass Skate Park 3-243
3.5-8 Draft Section 4(f) Evaluation Update – Edgebrook Park 3-244
3.5-10 Draft Section 4(f) Evaluation Update – Jorvig Park 3-248
3.5-11 Draft Section 4(f) Evaluation Update – Lilac Park 3-249
3.5-12 Draft Section 4(f) Evaluation Update – Alcott Triangle 3-251
3.5-13 Draft Section 4(f) Evaluation Update – Park Siding Park 3-253
3.5-14A Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon Recreational Resource (element of the Minneapolis Chain of Lakes Regional Park) 3-256
3.5-14B Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon Recreational Resource (element of the Minneapolis Chain of Lakes Regional Park) — Plan View 3-257
3.5-15 Draft Section 4(f) Evaluation Update – Bridge Construction Sequence over the Kenilworth Channel/Lagoon 3-259
3.5-16 Draft Section 4(f) Evaluation Update – Cedar Lake Park at East Cedar Beach 3-262
3.5-17 Draft Section 4(f) Evaluation Update – Cedar Lake Park at Cedar Lake Junction* 3-263
3.5-18 Draft Section 4(f) Evaluation Update – Bryn Mawr Meadows Park 3-266
3.5-19 Draft Section 4(f) Evaluation Update – Minikahda Club 3-275
3.5-20 Draft Section 4(f) Evaluation Update – Cedar Lake Parkway 3-281
3.5-21 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north) 3-286

3.5-22 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (plan view) 3-287
3.5-23 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north – relative to proposed new bridges) 3-288
3.5-24 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (from water level) 3-289
3.5-25 Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon (element of the Grand Rounds Historic District) 3-290
3.5-26 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept cross section looking west) 3-292
3.5-27 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept cross section looking north) 3-293
3.5-28 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept simulation) 3-294
3.5-29 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept simulation) 3-295
3.5-30 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept cross section looking west) 3-296
3.5-31 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept cross section looking north) 3-297
3.5-32 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation) 3-298
3.5-33 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation) 3-299
3.5-34 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation) 3-300
3.5-35 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept cross section looking west) 3-301
3.5-36 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept cross section looking north) 3-302
3.5-37 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept simulation) 3-303
3.5-38 Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept simulation) 3-304
3.5-39 Shallow LRT Tunnel – Under Kenilworth Lagoon 3-310
3.5-40 Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon 3-311
3.5-41A Construction Sequence for the Shallow LRT Tunnel – Under Kenilworth Lagoon (cut-and cover construction at the Kenilworth Lagoon, looking northeast) 3-312
3.5-41B Construction Sequence for the Shallow LRT Tunnel – Under Kenilworth Lagoon (cut-and-cover construction at the Kenilworth Lagoon, looking northeast) 3-313
3.5-42A Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Construction Sequence 3-316
3.5-42B Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Construction Sequence 3-317
3.5-43 Draft Section 4(f) Evaluation Update – St. Paul, Minneapolis & Manitoba Railroad Historic District 3-325
4.3-1 Southwest LRT Project Advisory Committee Input to Decision Process 4.3-2
4.4-1 Southwest LRT Project Communications and Public Involvement Staff 4-9

Introduction to the Supplemental Draft Environmental Impact Statement

This Introduction provides a general overview of the Supplemental Draft Environmental Impact Statement (EIS), which updates information provided in the Draft EIS, as published in October 2012. This Introduction includes a general description of the project, its current status relative to federal and state environmental processes, and an overall description of the purpose of the Supplemental Draft EIS. The information provided in this Introduction is only intended to provide a general orientation to the Supplemental Draft EIS, which should be referred to for more detailed information.

Project Description

The project's Purpose and Need Statement is provided in Chapter 1 of the Draft EIS and this Supplemental Draft EIS. The proposed project, the Southwest Light Rail Transit (METRO Green Line Extension) Project (referred to herein as Southwest LRT or the project), will operate between downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to the City of Edina. The proposed alignment will be primarily at-grade and will include up to 17 new stations and approximately 16 miles of double track. The alignment will connect major activity centers in the region, including downtown Minneapolis, Methodist Hospital in St. Louis Park, the Opus/Golden Triangle employment area in Minnetonka and Eden Prairie, and the Eden Prairie Town Center. The project will interline with the Central Corridor LRT (METRO Green Line), which will provide a one-seat ride to destinations such as the University of Minnesota, the State Capitol, and downtown St. Paul. The proposed Southwest LRT will be part of an integrated system of transitways, including connections to the METRO Blue Line (Hiawatha LRT), the Northstar Commuter Rail line, the METRO Red Line (Cedar Avenue Bus Rapid Transit), a variety of major bus routes along the alignment, and several proposed future transitways and rail lines.

National Environmental Policy Act/Minnesota Environmental Policy Act Background and Project Progress Since Publication of the Draft Environmental Impact Statement

The Federal Transit Authority (FTA), as the project's lead federal agency, will ensure that the project completes its environmental review process and documentation in compliance with the National Environmental Policy Act (NEPA). The Minnesota Environmental Policy Act (MEPA) requires that where federal laws have environmental document requirements in addition to but not in conflict with those in Minnesota Statutes, Section 116D.04, governmental units cooperate in fulfilling these requirements as well as those of state laws so that one document can comply with all applicable laws.

FTA issued its *Notice of Intent to prepare a Draft Environmental Impact Statement* for the Southwest Transitway Project in September 2008 and authorized the project to advance into Preliminary Engineering (now termed Project Development) in September 2011. The Southwest Transitway Draft EIS was published by FTA, the Hennepin County Regional Railroad Authority (HCRRA), and the Metropolitan Council, (Council) in October 2012. The public comment period for the Draft EIS concluded on December 31, 2012. The Draft EIS evaluated seven alternatives, including the No Build and Enhanced Bus alternatives and five light rail alternatives. The five light rail alternatives also included proposed locations for freight rail currently operating on the Bass Lake Spur and Cedar Lake Junction, commonly known as the Kenilworth Corridor, rail lines. Four of the light rail alternatives included relocation of freight rail from the Bass Lake Spur and Kenilworth Corridor to the Minneapolis, Northfield, and Southern Railway (MN&S) Spur near Louisiana Avenue South and the Wayzata Subdivision (LRT 1A, LRT 3A, LRT 3C-1, and LRT 3C-2). The remaining alternative was a variation of LRT 3A, consisting of the same LRT alignment, but with freight rail remaining in its current location, co-located with light rail in the Bass Lake Spur and Kenilworth Corridor (LRT 3A-1). The Draft EIS also identified the project's Locally Preferred Alternative (LPA), the LRT route included as part of LRT 3A and LRT 3A-1, which was adopted into the 2030 Transportation Policy Plan by the Council in May 2010. Within the Draft EIS, LRT 3A and LRT 3A-1 generally differ only in the location of freight rail within the St. Louis Park/Minneapolis segment of the corridor.

Following the end of the Draft EIS public comment period on December 31, 2012, local lead agency authority for completion of the environmental process transferred from HCRRA to the Council. At that time, the project's name was changed from Southwest Transitway to Southwest LRT.

Based on comments submitted on the Draft EIS, the Council continued the Project Development process by identifying and evaluating adjustments to the LPA's light rail and related improvements, as defined in the Draft EIS. The Council also developed and evaluated adjustments to the design of the two sets of freight rail modifications evaluated in the Draft EIS (termed "freight rail relocation" and "co-location") and identified the freight rail modifications to be included within the LPA. As Project Development activities continued in coordination with the project's advisory committees, stakeholders, and host cities and county, the FTA and the Council identified three areas requiring further environmental consideration based on the potential for new significant environmental impacts from the proposed project not addressed in the Draft EIS. These three areas are the focus of this Supplemental Draft EIS (see Document Purpose below).

Document Purpose

The FTA and the Council prepared this Supplemental Draft EIS to provide information and comment opportunities to agencies and the public because design of the proposed Southwest LRT has advanced since publication of the Draft EIS. The United States Army Corps of Engineers (USACE) is a federal Cooperating Agency for this project under NEPA. Impacts to waters of the United States associated with the Southwest LRT project will require an Individual Permit under Section 404 of the Clean Water Act; this permit program is administered by the USACE. This Supplemental Draft EIS reflects coordination to date between FTA and USACE on the NEPA/Section 404 merger process which has led to the USACE making a preliminary determination that the LPA as described in this Supplemental Draft EIS is the least environmentally damaging practicable alternative (LEDPA) for the Southwest LRT project.

The general objectives of the Supplemental Draft EIS are to:

- Inform the public, resource agencies, and local governments of proposed design adjustments made since publication of the Draft EIS to the LPA in the three study areas described below
- Identify any new potential significant adverse impacts associated with those design adjustments not addressed in the Draft EIS
- Invite public and agency comment on the various design adjustments evaluated within this Supplemental Draft EIS

Adjustments to the LPA evolved as a result of Project Development activities that addressed public and agency input on the Draft EIS. In reviewing the design adjustments made since publication of the Draft EIS, FTA and the Council determined that there are potential new significant environmental impacts associated with the LPA in the following three areas, which are addressed in this Supplemental Draft EIS (see maps in the Executive Summary):

- Eden Prairie Segment (generally between the intersections of Technology Drive and Mitchell Road and of Flying Cloud Drive and Valley View Road)
- The location of a new light rail Operations and Maintenance Facility (OMF) in the City of Hopkins
- St. Louis Park/Minneapolis Segment (generally between Louisiana Avenue South in St. Louis Park and Penn Avenue South in Minneapolis)

For these project areas, this Supplemental Draft EIS addresses the following items:

- The project's Purpose and Need Statement from the Draft EIS (see Chapter 1)
- An updated description of the LPA reflecting design adjustments since publication of the Draft EIS, including adjustments to the light rail alignment, stations, and park-and-ride lots in the Eden Prairie Segment (such as related bus, roadway, and bicycle/pedestrian improvements); a proposed site for an OMF in the City of Hopkins; and adjustments to the light rail alignment, stations, and park-and-ride lots

within the St. Louis Park/Minneapolis Segment (such as related bus, roadway, and bicycle/pedestrian improvements and freight rail modifications) (see Chapter 2)

- An updated analysis and documentation of the substantial social, environmental, economic, and transportation impacts associated with the current design of the LPA that have changed since publication of the Draft EIS, including changes in methodologies and identification of additional measures to avoid, minimize, or mitigate impacts, as well as an update to the project's Draft Section 4(f) Evaluation that was included in the Draft EIS (see Chapter 3)
- A summary of agency coordination and community outreach activities since publication of the Draft EIS and known governmental permits and approvals (see Chapter 4)
- A description of the next steps, funding, and actions under NEPA and MEPA (see Chapter 5)

The following list briefly describes the contents of the appendices to the Supplemental Draft EIS:

- A list of recipients of the Supplemental Draft EIS (see Appendix A)
- A list of project team members who helped prepare the Supplemental Draft EIS (see Appendix B)
- A list of the supporting documents and technical reports to the Supplemental Draft EIS that are incorporated by reference, including information on how to obtain copies of the documents (see Appendix C)
- A list of sources and references that are cited within the Supplemental Draft EIS (see Appendix D)
- Copies of resource agency coordination letters received since the close of the Draft EIS public comment period (see Appendix E)
- A description of the process and evaluation measures used in the alignment adjustment process (see Appendix F)
- Conceptual engineering drawings showing the current LPA in the Eden Prairie and St. Louis Park/ Minneapolis Segments and the conceptual layout of the Hopkins OMF (see Appendix G)
- Memoranda providing additional detail on the noise and vibration analysis included in Chapter 3 of this Supplemental Draft EIS (see Appendix H)
- Summaries of and responses to comments received on the Supplemental Draft EIS scope (see Appendix I)
- Supporting documentation for the visual resources analysis included in Chapter 3 of this Supplemental Draft EIS (see Appendix J)
- Public notices since publication of the Draft EIS (see Appendix K)
- Supporting documentation for the Draft 4(f) Evaluation Update (see Appendix L)

This page intentionally left blank.

Acronyms and Abbreviations

AA	alternatives analysis
ADA	Americans with Disabilities Act
APE	area of potential effect
BAC	Business Advisory Committee
BMP	best management practice
CAC	Community Advisory Committee
CCP	construction contingency plan
Cedar Avenue Bus Rapid Transit	METRO Red Line
Central Corridor LRT	METRO Green Line
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CET	Corridors of Opportunity's Community Engagement Team
CFR	Code of Federal Regulations
CIG	capital investment grant
CMC	Corridor Management Committee
Council	Metropolitan Council
CP	Canadian Pacific Railway
CPIP	*Communication and Public Involvement Plan*
CPT	cone penetrometer test
CRU	Cultural Resources Unit
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DEED	Minnesota Department of Employment and Economic Development
DNR	Minnesota Department of Natural Resources
DOT	Department of Transportation
EB	eastbound
ECCO	East Calhoun Community Organization
EIS	environmental impact statement
EO	executive order
EQB	Environmental Quality Board
ESA	environmental site assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
Final EIS	Final Environmental Impact Statement
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GBN	ground-borne noise
GIS	geographic information system
HCRRA	Hennepin County Regional Railroad Authority
Hiawatha LRT	METRO Blue Line

I-394	Interstate 394
I-494	Interstate 494
L_{dn}	24-hour, time-averaged, A-weighted sound level (day-night)
LEDPA	Least Environmentally Damaging Practicable Alternative
L_{eq}	equivalent continuous sound level
LOS	level of service
LPA	Locally Preferred Alternative
LRCI	Locally Request Capital Investments
LRT	light-rail transit
LRV	light-rail vehicle
MAP-21	Moving Ahead for Progress in the 21st Century
MDA	Minnesota Department of Agriculture
MDED	Minnesota Department of Economic Development
merger process	FTA and USACE are implementing a merger process between the NEPA and CWA Section 404 permitting processes
MEPA	Minnesota Environmental Policy Act
METRO Blue Line	Hiawatha LRT
METRO Green Line	Central Corridor LRT
METRO Red Line	Cedar Avenue Bus Rapid Transit
MN&S	Minneapolis, Northfield, and Southern Railway
MnDOT	Minnesota Department of Transportation
Mod	Moderate
MPCA	Minnesota Pollution Control Agency
MPRB	Minneapolis Parks and Recreation Board
NA	not available
NB	Northbound
NEPA	National Environmental Policy Act
NEPA/404 merger process	FTA and USACE are implementing a merger process between the NEPA and CWA Section 404 permitting processes
NFPA	National Fire Protection Association
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OMF	Operations and Maintenance Facility
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PD	Project Development
PEC	Preliminary Engineering Consultant
PGIS	pollutant-generating impervious surface
PIN	property identification number
project	Southwest Light Rail Transit (METRO Green Line Extension) Project
RAMP	Real Estate Acquisition and Management Plan
RAP	remedial action plan
RGU	Regional Governmental Unit
ROD	Record of Decision

SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act; A Legacy for Users
SB	Southbound
SCC	standard cost category
Supplemental Draft EIS	Supplemental Draft Environmental Impact Statement
Sev	Severe
SHPO	State Historic Preservation Office
SLPM	St. Louis Park/Minneapolis
Southwest LRT	Southwest Light Rail Transit (METRO Green Line Extension) Project
SPO	Southwest LRT Project Office
SQG	small quantity generator
STB	Surface Transportation Board
Stn	Station
TC&W	Twin Cities and Western Railway Company
TEP	Technical Evaluation Panel
TPAC	Technical Project Advisory Committee
TSAAP	transitional station area action plan
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
U.S. Census	United States Census Bureau
USDOT	United States Department of Transportation
VdB	vibration decibel
VIC	voluntary investigation and cleanup
VPN	viewpoint number
WB	Westbound
WMO	Water Management Organizations
WHPP	Wellhead Protection Plan

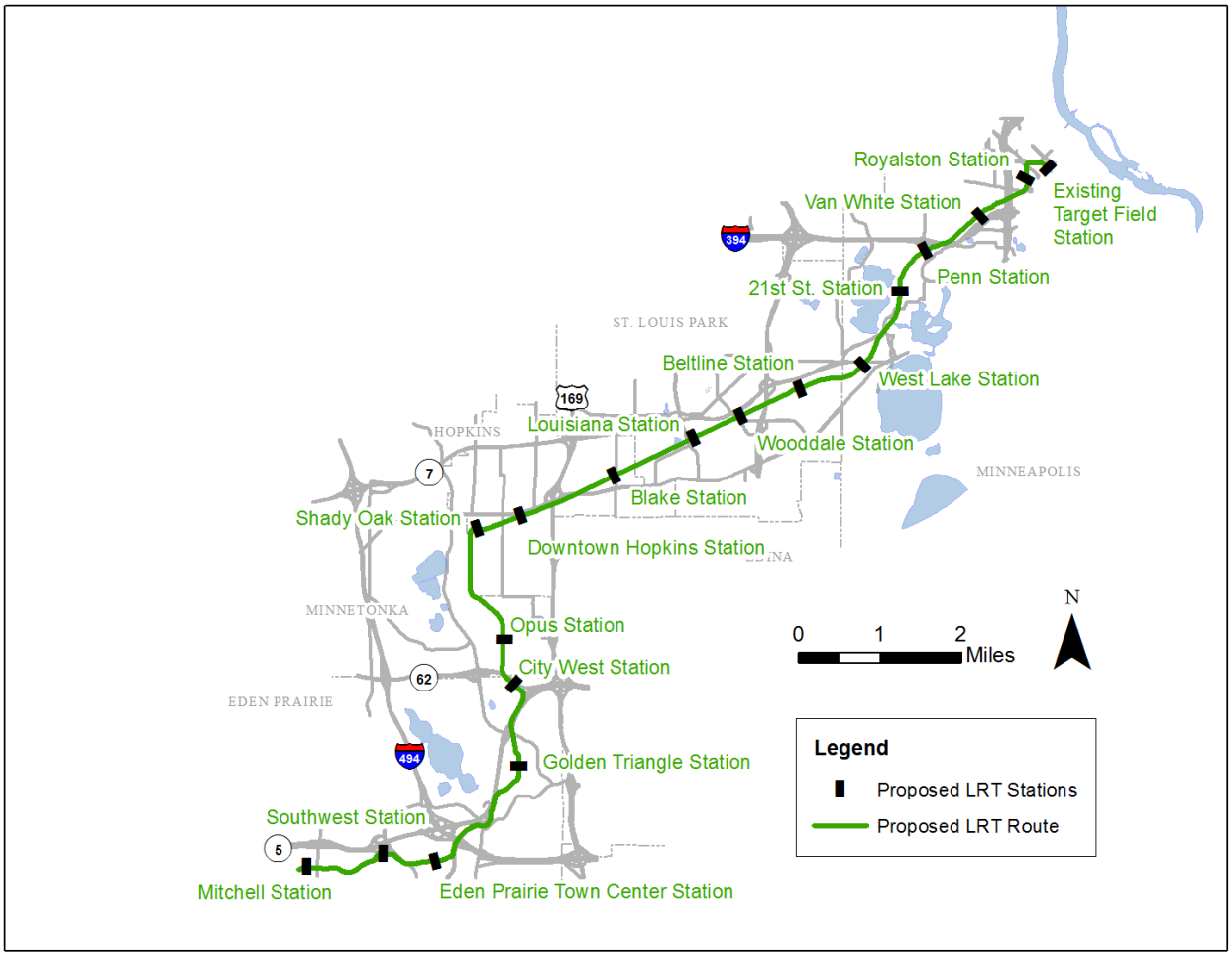
Supplemental Draft Environmental Impact Statement (EIS) Executive Summary

1. WHAT IS THE SOUTHWEST LRT (METRO GREEN LINE EXTENSION) PROJECT?

The Southwest Light Rail Transit (LRT) (METRO Green Line Extension) Project is an approximately 16-mile proposed extension of the METRO Green Line (Central Corridor LRT) that would operate from downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to Edina (see Exhibit ES-1). The proposed alignment includes the following features:

- 17 new stations
- Approximately 3,800 additional park-and-ride spaces
- Accommodations for kiss-and-ride facilities
- Bicycle and pedestrian access
- New or restructured local bus routes connecting stations to nearby residential, commercial, and educational destinations

EXHIBIT ES-1
Proposed Southwest LRT Alignment



8/2014

Under the project's Locally Preferred Alternative (LPA), major activity centers between Eden Prairie and St. Paul would be *accessible* by a one-seat ride. These activity centers include the Eden Prairie Center

regional mall, UnitedHealth Group campuses, the Opus/Golden Triangle employment area, Park Nicollet Methodist Hospital, the Minneapolis Chain of Lakes, downtown Minneapolis, the University of Minnesota, the State Capitol area, and downtown St. Paul. Passengers would be able to connect to the greater METRO system, including METRO Blue Line (Hiawatha LRT), METRO Orange Line (I-35W BRT), Northstar Commuter Rail, METRO Red Line (Cedar Ave BRT) via METRO Blue Line, and the planned METRO Blue Line Extension (Bottineau LRT). The Metropolitan Council (Council) is the Federal Transit Administration (FTA) grantee. The Council would serve as the owner-operator of the completed Southwest LRT Line.

2. WHAT IS THE PURPOSE AND NEED FOR THE PROPOSED PROJECT?

See Chapter 1 of the Supplemental Draft EIS for the project's Purpose and Need Statement. In summary, the Purpose of the Southwest LRT Project is to:

- Improve access and mobility to the jobs and activity centers in the Minneapolis central business district and the expanding southwest suburban employment centers
- Provide a competitive, cost-effective travel option to attract choice riders to the transit system in an area of the region experiencing congested roadway connections between corridor cities and downtown Minneapolis
- Be part of an efficient system of integrated regional transitways serving the Twin Cities

The Need for the project is summarized as follows:

- Since the late 1980s, the Council has identified that the Southwest Corridor warrants a high level of transit investment to respond to increasing travel demand in this highly congested area of the region. This area of the Twin Cities experiences daily congestion on the roadway network, speed and use limitations within shoulder bus operations, and capacity constraints in downtown Minneapolis.

Three primary factors make the Southwest LRT Project important for people who live and work in the southwest metropolitan area: (1) declining mobility; (2) limited competitive, reliable transit options for choice riders and people who rely on public transportation, including reverse-commute riders; and (3) the need to develop and maintain a balanced and economically competitive multimodal freight system.

3. WHO ARE THE PROJECT'S LEAD AGENCIES AND SPONSORS?

The FTA is the Federal lead agency for the project. The Council is the project's local lead agency and project sponsor. The Hennepin County Regional Railroad Authority (HCRRA) served as the local lead agency during development of the Draft EIS and its public comment period, which concluded in December 2012.

4. WHO ARE THE PROJECT'S COOPERATING AGENCIES AND WHAT ROLE DOES A COOPERATING AGENCY PLAY?

The United States Army Corps of Engineers (USACE) is the Federal cooperating agency for the project. A cooperating agency is a Federal agency with jurisdiction by law or special expertise that the lead agency has requested be involved in the environmental documentation efforts following 40 CFR 1508.5. The USACE is responsible for implementing the National Environmental Policy Act of 1969 (NEPA) and related laws and Section 404 of the Clean Water Act.

A distinguishing feature of a cooperating agency is that the CEQ regulations (40 CFR § 1506.3) permit a cooperating agency to "adopt without recirculation of the environmental impact statement of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied." This provision is particularly important to permitting agencies, such as the USACE, which, as cooperating agencies, routinely adopt USDOT environmental documents.

5. WHAT JURISDICTIONS ARE PARTICIPATING IN THE PROJECT?

Local jurisdictions that are participating in the project include: Hennepin County, the cities of Eden Prairie, Minnetonka, Edina, Hopkins, St. Louis Park, and Minneapolis, and the State of Minnesota. Section 4.5 of the Supplemental Draft EIS provides more detail about the project's participating agencies and agency coordination.

6. WHAT PROJECT PHASES PRECEDED THE SUPPLEMENTAL DRAFT EIS?

HCRRA, Hennepin County, the Minnesota Department of Transportation, and the Council have led transit studies within the Southwest Corridor study area dating back to 1988. The following project phases reflect the recent history of the project (see Sections 2.1 and 2.2 of the Supplemental Draft EIS for additional information):

- **The Southwest Transitway Alternatives Analysis** compared the benefits, costs, and impacts of a range of transit alternatives (different modes and routes) and resulted in the identification of the Locally Preferred Alternative (LPA) (known at the time as Alternative 3A). The identified LPA was light rail constructed and operating on the Kenilworth-Opus-Golden Triangle alignment.
- **NEPA Scoping**, as defined in the *Southwest Transitway Scoping Summary Report* (HCRRA 2008 and amended 2012), determined the alternatives to be considered within the Draft EIS. Scoping concluded that five light rail alternatives would be examined in the Draft EIS and that the project's Draft EIS would address whether or not to relocate Twin Cities and Western Railway Company (TC&W) freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor to the Minneapolis, Northfield, and Southern Railway (MN&S) Spur and Wayzata Subdivision (termed *Relocation* and *Co-location*, respectively).
- **The Draft EIS** evaluated five light rail alternatives, as well as the Enhanced Bus Alternative and the No Build Alternative. The project's LPA was incorporated into two of the alternatives considered: LRT 3A (Relocation); and LRT 3A-1 (Co-location). The Draft EIS documents the anticipated environmental impacts, costs, and benefits of the alternatives considered. It also includes a draft Section 4(f) Evaluation (addressing the potential use of and impacts to publically-owned parklands, recreation areas, open spaces, and historic and archaeological resources). FTA, Hennepin County and the Council published the Draft EIS in October 2012 and it was the subject of a public comment period that concluded on December 31, 2012.

7. WHY IS A SUPPLEMENTAL DRAFT EIS NEEDED?

A supplemental Draft EIS is needed because FTA and the Council determined that design adjustments made to the LPA following publication of the Draft EIS needed to be evaluated for environmental impacts that were not documented in the Project's Draft EIS and had the potential to result in new adverse impacts. Further, FTA and the Council determined that the design changes in the following three areas (and shown in Exhibit ES-2) of the LPA warranted a specific review in a supplemental draft EIS document:

- Eden Prairie Segment
- Proposed Hopkins Operations and Maintenance Facility (OMF) in Hopkins
- St. Louis Park/Minneapolis Segment

8. WHAT IS INCLUDED IN THE THREE AREAS ADDRESSED IN THE SUPPLEMENTAL DRAFT EIS?

The following paragraphs summarize information about the two segments and the proposed OMF (see Section 2.5 of the Supplemental Draft EIS for a more detailed description).

a. Eden Prairie Segment

In general, the proposed light rail alignment and western and eastern stations in the Eden Prairie Segment have been adjusted south to provide better connections to local activity centers, while avoiding or minimizing adverse impacts. The Eden Prairie Segment generally extends between just west of the intersection of Technology Drive and Mitchell Road, and just east of the intersection of Flying Cloud Drive and Valley View Road, as illustrated on Exhibit ES-3. Within this segment, the LPA includes the adjusted light rail alignment, three proposed light rail stations, three proposed park-and-ride lots (with a total capacity of approximately 1,510 spaces), and various related bus, roadway, and bicycle/pedestrian improvements.

EXHIBIT ES-2

Southwest LRT Corridor and Supplemental Draft EIS Study Areas

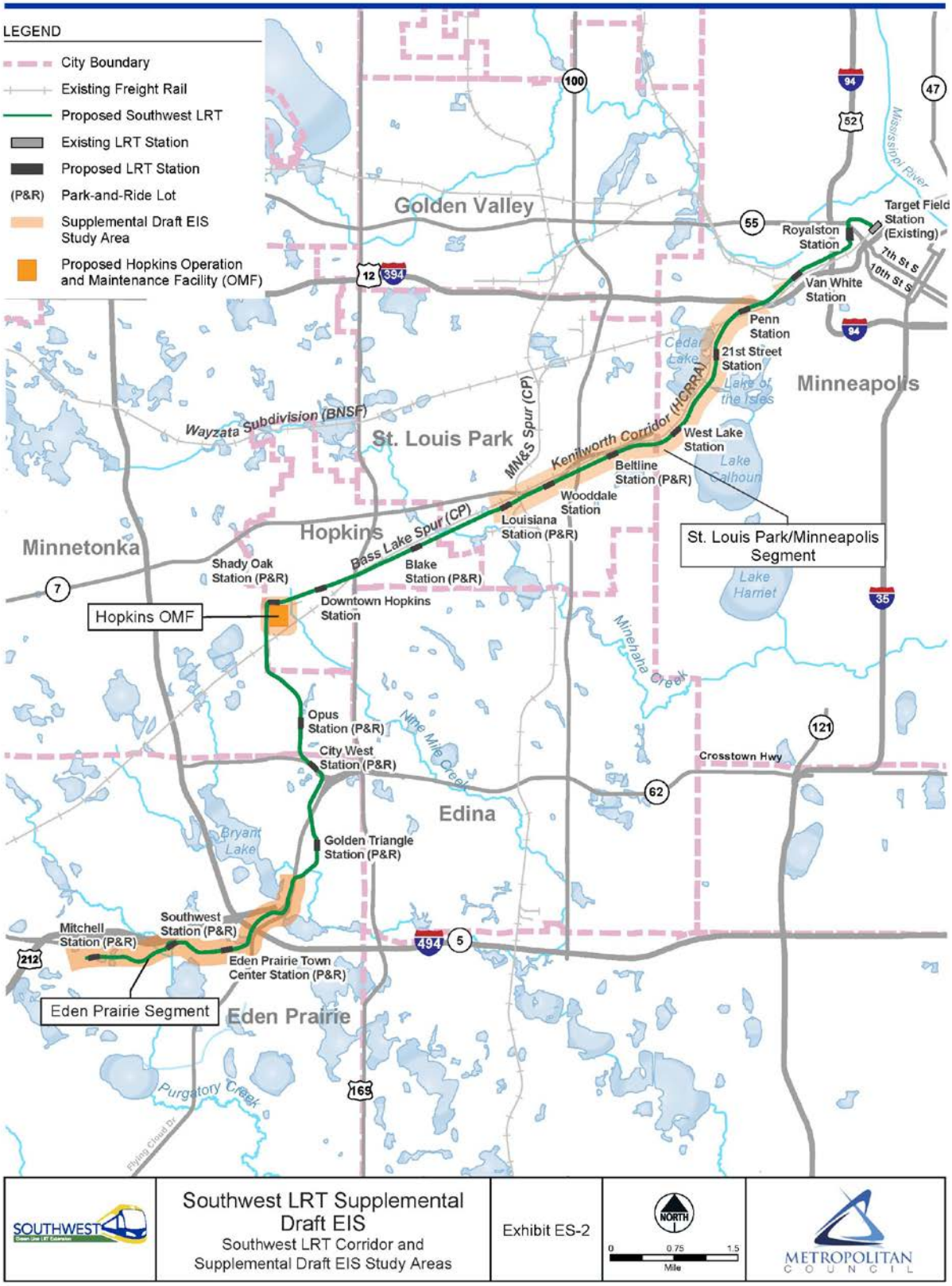
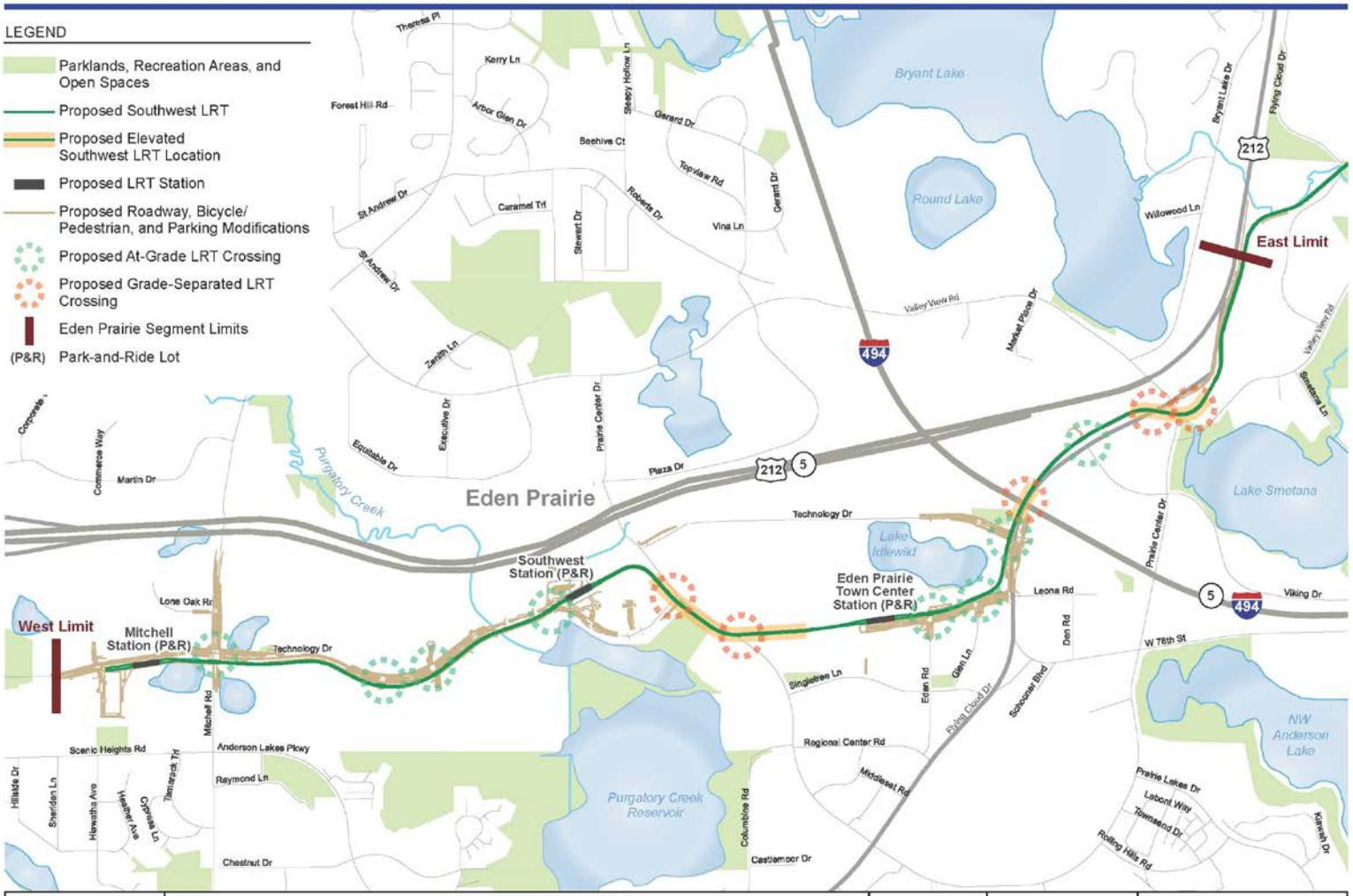


EXHIBIT ES-3
Project Overview Eden Prairie Segment



b. Hopkins Operations and Maintenance Facility

The project includes a proposed OMF in the City of Hopkins, which was not one of the four potential OMF sites identified in the Draft EIS. The proposed Hopkins OMF would be within an existing office/warehouse and light manufacturing development. It would occupy an approximately 15-acre site southwest of the intersection of 5th Street South and 15th Avenue South, as illustrated on Exhibit ES-4. In general, light maintenance activities and the storage of vehicles not in service would occur within enclosed structures, although some maintenance activities (such as moving vehicles) would occur outside of buildings. In general, the OMF site would be in operation 24 hours a day, 365 days a year.

c. St. Louis Park/Minneapolis Segment

In the St. Louis Park/Minneapolis Segment, the LPA has been adjusted to include the following:

- A proposed light rail tunnel in the Kenilworth Corridor (generally between West Lake Street and the Kenilworth Lagoon)
- Retention of existing freight rail service in the Kenilworth Corridor, with some modification to freight rail tracks to accommodate light rail (see the answers to Questions 9 and 10 for additional detail on what freight rail modifications were considered and identified through the design adjustment process)
- Adjustments to the location and capacity of proposed park-and-ride lots

These adjustments are illustrated on Exhibit ES-5. Within this segment, the LPA includes the proposed light rail alignment (including a tunnel); six proposed light rail stations; two proposed park-and-ride lots (with a total capacity of approximately 810 spaces); various related bus and roadway improvements; reconstruction of the multipurpose bicycle and pedestrian trail within the Kenilworth Corridor; and new trail bridges over freight rail and light rail.

9. WHAT DESIGN ADJUSTMENTS AND MODIFICATIONS TO THE LPA WERE CONSIDERED?

After publication of the Draft EIS, the Council implemented a multi-step process to develop and evaluate a range of potential design adjustments to the LPA. Exhibit ES-6 illustrates that general process, which was used throughout the project corridor. Following are the key components of that process:

- The process was initiated through comments on the Draft EIS from the public and participating agencies and jurisdictions
- The project team then developed various potential design adjustments to address those comments, while seeking to reduce costs and adverse impacts of the project
- Those potential design adjustments were then screened based on various evaluation measures, public comments, and committee recommendations
- At the conclusion of a step, some of the adjustments were dismissed from further study and some were advanced into a subsequent step for further development and evaluation
- The process concluded in April and July 2014, when the Council identified the design adjustments and freight rail modifications to be included in the LPA

The following items briefly summarize the range of potential design adjustments to the LPA that were considered in the Eden Prairie Segment, for the proposed OMF site, and in the St. Louis Park/Minneapolis Segment. (Sections 2.2 and 2.3 of the Supplemental Draft EIS provide additional information on the potential design adjustments evaluated and the evaluation measures considered.)

a. Eden Prairie Segment

Within the first two steps of a three-step process, the Council developed and evaluated 27 potential design adjustments in four areas within the Eden Prairie Segment. The design adjustments developed and evaluated included differing locations for the light rail alignment, stations, roadway improvements, and connections to

EXHIBIT ES-4
Project Overview, Operations and Maintenance Facility, City of Hopkins

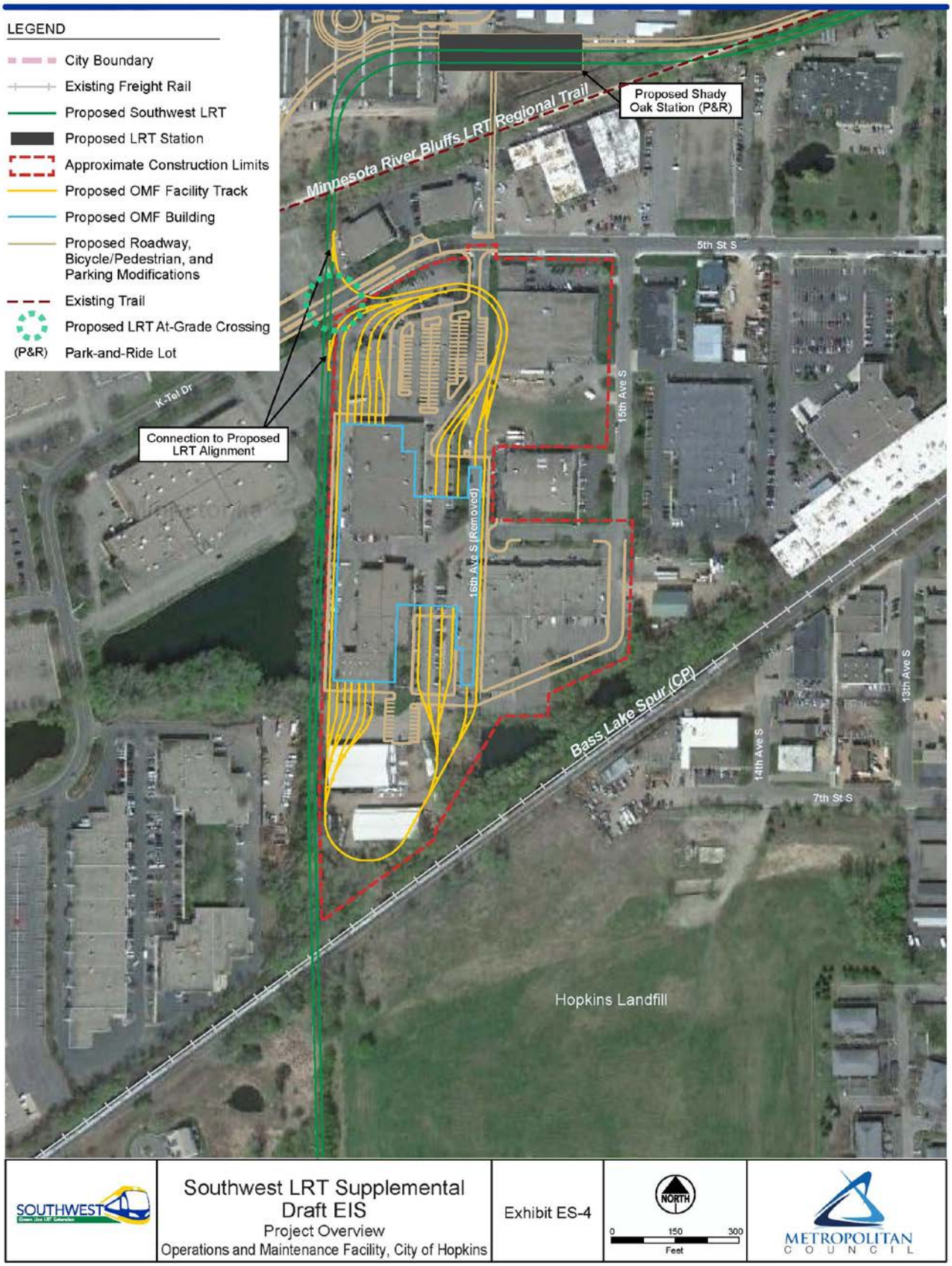


EXHIBIT ES-5
Project Overview St. Louis Park/Minneapolis Segment

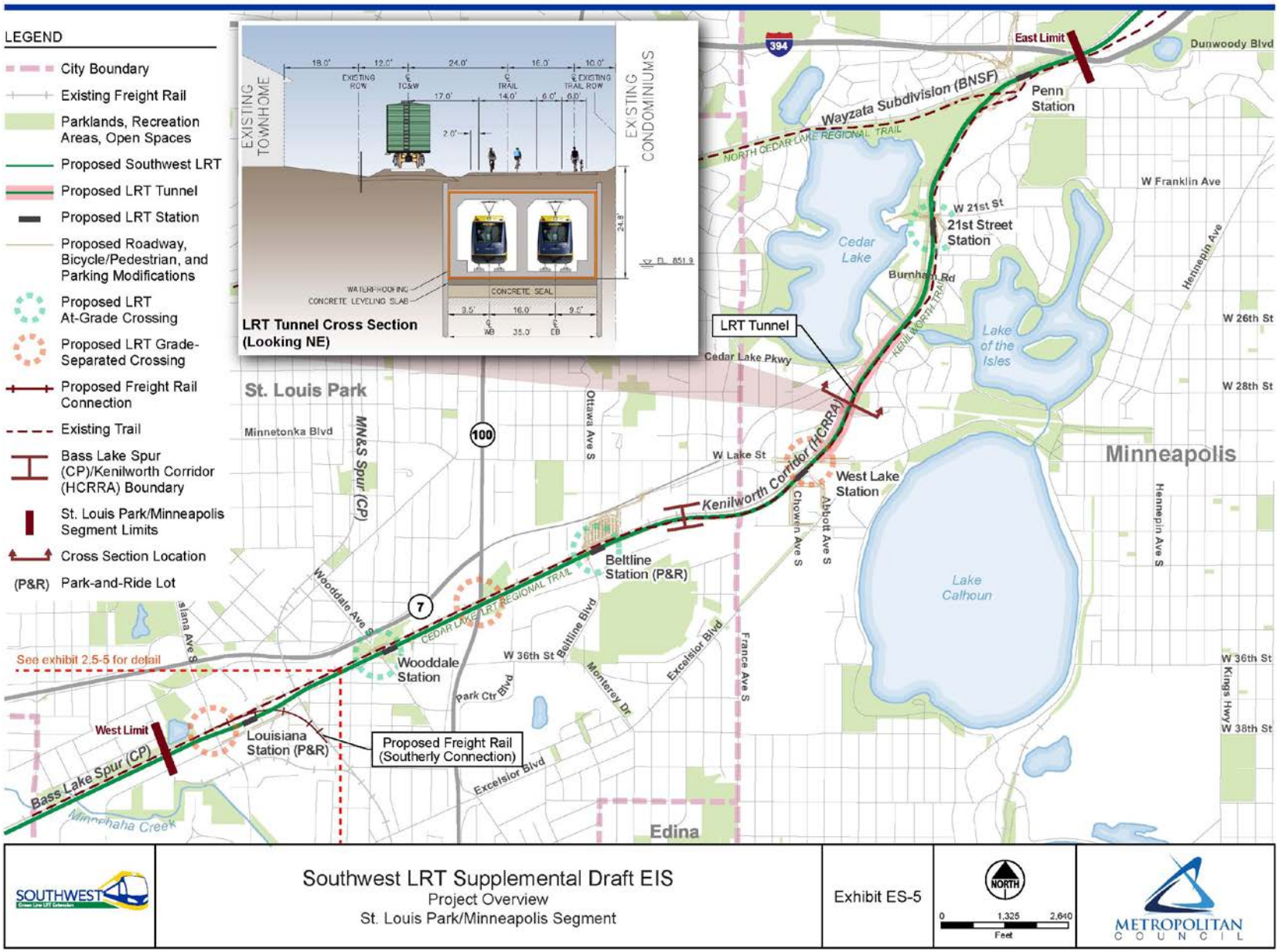
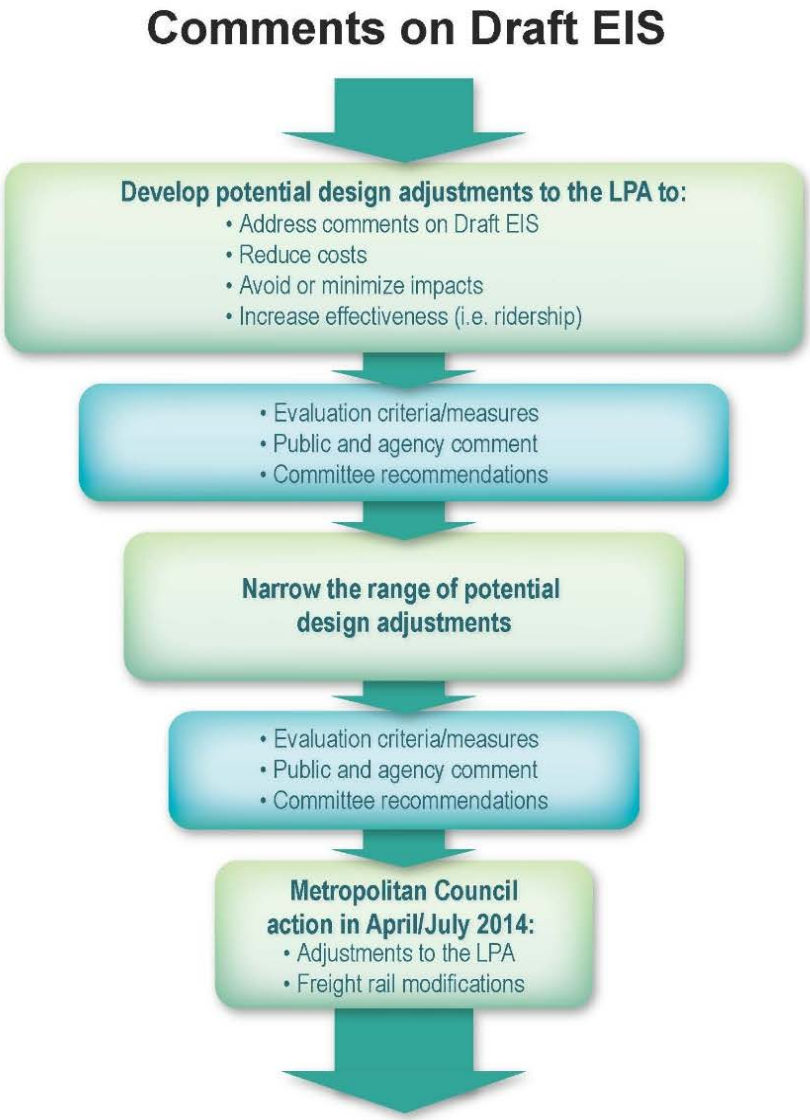


EXHIBIT ES-6
Design Adjustment Process Since Draft EIS



SOUTHWEST	Southwest LRT Supplemental Draft EIS Design Adjustment Process Since Draft EIS	Exhibit ES-6		METROPOLITAN COUNCIL

a potential OMF facility. Based on results from the first two steps, the third step evaluated two light rail alignments and stations west and east of a common Southwest Station. The process concluded with identification of the design adjustments to the LPA within the Eden Prairie Segment as described in Section ES.8a.

b. Hopkins Operations and Maintenance Facility

The development and evaluation of various potential OMF locations used a four-step process. The first step included a preliminary site evaluation that narrowed potential sites from approximately 30 (including the sites evaluated in the Draft EIS) to 18. The second step used a detailed assessment based on 13 criteria to narrow the field from 18 to seven potential OMF sites. The third step included an operational analysis, as well as public and jurisdictional review and input, which were used to narrow the choices from seven to two potential OMF sites. The fourth step used a detailed technical assessment, as well as public and jurisdictional review of the two remaining sites. The process concluded with identification of the proposed Hopkins OMF.

c. St. Louis Park/Minneapolis Segment

The process used to identify design adjustments in the St. Louis Park/Minneapolis Segment focused on the following two sets of design adjustments.

- **Set One Adjustments.** The first set of potential adjustments for the St. Louis Park/Minneapolis Segment focused on the question of whether the project's introduction of light rail facilities and service in the Kenilworth Corridor should include: (a) the relocation of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor to sections of the MN&S Spur and Wayzata Subdivision (LRT 3A in the Draft EIS – i.e., "Freight Rail Relocation"); or (b) the continued operation of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor (LRT 3A-1 in the Draft EIS – i.e., "Co-location"). For Freight Rail Relocation (LRT 3A), the design adjustment process also focused on addressing comments from the affected freight rail operators that the freight rail modifications in the Draft EIS's LRT 3A did not meet their operational or safety requirements. Design adjustments for Set One were developed and evaluated using the following four-step process.

  1) The first step included the development, evaluation, and narrowing of a relatively wide range of adjustments to the light rail improvements and freight rail-related modifications under the two freight rail operating scenarios. These adjustments focused on meeting key design parameters, while avoiding or minimizing adverse impacts and minimizing project costs.

  2) The second step included a detailed analysis of the potential adjustments retained for further study at the conclusion of the first-step evaluation. As a result of the second step, the choices were narrowed to one design adjustment under each of the two freight rail operating scenarios.

  3) The third step included refining the two design adjustments identified in the second-step (one Freight Rail Relocation design and one Co-location design, LRT 3A and LRT 3A-1 respectively). Within the third step, the CMC considered public, stakeholder, committee, and agency comments, as well as a detailed assessment of the potential adjustments, before the CMC recommended retaining the Shallow LRT Tunnel – Over Kenilworth Lagoon (Co-location, LRT 3A-1) design adjustments and dismissing the Brunswick Central (Relocation, LRT 3A) design adjustments.

  4) The fourth step included: (a) an independent engineering analysis of various freight rail relocation options; (b) the development and evaluation of additional design adjustments to the proposed light rail tunnel in the Kenilworth Corridor; and (c) adjustments the Council and the City of Minneapolis proposed within a draft memorandum of understanding intended to reduce capital costs and to incorporate a variety of bicycle and pedestrian improvements.

  In April and July 2014, after considering comments received from the public, stakeholders, and participating agencies, engineering and safety reviews by affected freight rail operators, and various evaluation measures, the Council concluded that the project's LPA would retain the existing freight rail service in the Kenilworth Corridor (LRT 3A-1), co-located with the proposed light rail alignment, which would operate in a shallow tunnel generally between West Lake Street and the Kenilworth Lagoon. As a

result of the light rail design adjustments to LRT 3A and LRT 3A-1 during the design adjustment process, the LPA with the retention of freight rail in the Kenilworth Corridor (LRT 3A-1), would be the project's environmentally preferred alternative, rather than the LPA with the relocation of freight rail (LRT 3A). In summary, with the changes made during the design adjustment process and in comparison to Freight Rail Relocation (LRT 3A), Freight Rail Co-location (LRT 3A-1), would: result in less harm to Section 4(f) protected properties[1]; maintain regional freight rail connectivity; minimize reconstruction of freight rail tracks and construction-related disruptions; avoid diminishing the potential for transit oriented development around light rail stations located in the vicinity of freight rail tracks; avoid the displacement of any residents or businesses in the St. Louis Park/Minneapolis Segment; include bicycle and pedestrian improvements that would provide connections between light rail stations and their surrounding neighborhoods; and minimize the displacement of wetlands.

- **Set Two Adjustments.** The second set of design adjustments, also identified by the Council in April and July 2014, includes relatively minor modifications to existing freight rail tracks in the segment to accommodate the introduction of light rail (i.e., the *Freight Rail and Light Rail "Swap"* and the *Southerly Connection*); adjustments to the location of the proposed Louisiana Station; and adjustments to the capacity and locations of park-and-ride lots in the segment.

10. HOW IS THE PROJECT AFFECTING FREIGHT RAIL?

Based on adjustments that the Council identified in April and July 2014, the LPA includes the continued operation of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor (similar to LRT 3A-1 in the Draft EIS – i.e., "Co-location"). The following modifications to the existing freight rail alignment would be made to accommodate the introduction of light rail in the Kenilworth Corridor.

- Beginning west of the St. Louis Park/Minneapolis Segment and extending to east of Beltline Boulevard, the existing freight rail tracks would be shifted north approximately 45 feet, allowing the proposed light rail alignment to be located south of the freight rail tracks (thereby providing better station connections to local activity centers).
- A portion of the northern leg of the existing Skunk Hollow switching wye between the Bass Lake Spur and Oxford Street would be removed and replaced with a new "Southerly Connection" between the Bass Lake Spur and the MN&S Spur.
- Relatively minor adjustments to and reconstruction of the freight tracks between Beltline Boulevard and Cedar Lake Parkway would be made.
- Existing freight tracks would be moved up to approximately 40 feet north, between Cedar Lake Parkway and the Burnham Road overpass.

While these adjustments would change the geometry of the freight rail alignment for the movement of freight rail between the Bass Lake Spur and the MN&S Spur, they would not result in long-term impacts to freight rail operations.

As described in Section ES.9c, and in greater detail in Section 2.3 of the Supplemental Draft EIS, the process used to develop and evaluate the Set One design adjustments in the St. Louis Park/Minneapolis Segment focused on the question of whether the project's introduction of light rail facilities and service in the Kenilworth Corridor should include: (1) the relocation of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor to sections of the MN&S Spur and Wayzata Subdivision; or (2) the continued operation of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor. Through that Set One design adjustment process, the proposed designs of both Freight Rail Relocation and Co-location were revised to address comments on the Draft EIS and to avoid or minimize adverse impacts. As documented in Section 2.3 of the Supplemental Draft EIS, that process found that:

[1] Based on the Section 4(f) Least Overall Harm analysis in Section 3.5 of the Supplemental Draft EIS.

- The design for Freight Rail Relocation (included in LRT 3A in the Draft EIS) needed to be revised to meet operational and safety requirements of the affected freight rail operators. Those required revisions would lead to additional adverse impacts, such as: (1) the full acquisition of approximately 32 residential, commercial, and institutional parcels; (2) the use of Park Spanish Immersion School in St. Louis Park (a protected Section 4(f) property); and (3) the adverse visual, neighborhood, and community cohesion impacts resulting from the construction of freight rail berms and structures in the vicinity of St. Louis Park High School. The design adjustments could also not avoid the displacement of approximately four acres of wetlands at the junction of the MN&S Spur and Wayzata Subdivision. The affected freight rail operators found that design adjustments considered for freight rail relocation were unacceptable because of operational and safety considerations.
- The design for the Co-location of freight rail and light rail in the Kenilworth Corridor (included in LRT 3A-1 in the Draft EIS) was revised so that many of its adverse effects were avoided or minimized. In particular, the revised design that would co-locate freight rail and light rail in the Kenilworth Corridor would not result in any residential displacements or business displacements in the Kenilworth Corridor. In addition, co-location of freight rail and light rail in the Kenilworth Corridor would avoid the displacement of approximately four acres of wetlands at the junction of the MN&S Spur and Wayzata Subdivision.

In summary, based on the analysis prepared, committee recommendations, and public comments received during the four-step process described in Section ES.9c, the Council identified the design adjustments to be incorporated into the project in the St. Louis Park/Minneapolis Segment (i.e., the Shallow LRT Tunnel – Over Kenilworth Lagoon). The Council found that, relative to the other options considered, the Shallow LRT Tunnel – Over Kenilworth Lagoon adjustments would provide the best balance of costs, benefits, and environmental impacts, and, in doing so, found that it would best meet the project's Purpose and Need.

11. WHAT ARE THE POTENTIAL LONG-TERM (DIRECT AND INDIRECT) AND SHORT-TERM (CONSTRUCTION) ENVIRONMENTAL EFFECTS OF THE LPA IN THE TWO SEGMENTS AND AT THE HOPKINS OMF?

Table ES-1 summarizes the potential long-term and short-term impacts of the LPA in the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment. These potential impacts include both direct and indirect impacts. Details related to the analysis and impact determinations are provided in the Supplemental Draft EIS Section 3.2 Eden Prairie Segment, Section 3.3 Hopkins Operations and Maintenance Facility, and Section 3.4 St. Louis Park/Minneapolis Segment.

TABLE ES-1
Summary of Impacts and Mitigation Measures for the Locally Preferred Alternative in the Eden Prairie Segment, Hopkins OMF, and St. Louis Park/Minneapolis Segment[a]

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Land Use 3.2.1.1 (EP) 3.3.1.1 (OMF) 3.4.1.1 (SLP)	Long-Term	• Direct conversion of about 22.3 acres of land to public transportation-related use • Potential indirect land use impact from possible redevelopment around station areas • LPA is compatible with adopted plans and existing land use	• Direct conversion of 18.2 acres of land to public transportation-related use • No change in the overall land use character of the surrounding area • LPA is compatible with adopted plans and existing land use	• Direct conversion of 33.6 acres of land converted to public transportation-related use • LPA is compatible with adopted plans and existing land use • St. Louis Park and Minneapolis have plans to encourage mixed use and higher densities of development and land use around the Louisiana, Beltline, Wooddale, West Lake, and Penn Stations
	Short-Term	• Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	• Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	• Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property
	Mitigation Measures	• The Council will develop and implement a Construction Communication Plan		
Acquisitions and Displacements 3.2.1.2 (EP) 3.3.1.2 (OMF) 3.4.1.2 (SLP)	Long-Term	• Acquisition of two full and 33 partial parcels • Potential relocation of an estimated nine businesses	• Acquisition of eight full and one partial parcels • Potential relocation of five businesses	• Acquisition of 23 full and 29 partial parcels • Potential relocation of up to nine businesses
	Short-Term	• Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property	• Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property	• Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property
	Mitigation Measures	• Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act		
Cultural Resources 3.2.1.3 (EP) 3.4.1.3 (SLP)	Long-Term	• Phase I/II archaeological testing needed at two remaining locations within the APE • No long-term impacts due to the proposed LPA are anticipated	• No resources in study area	• Preliminary determination of an adverse effect on the Grand Rounds Historic District and the Kenilworth Lagoon
	Short-Term	• No short-term impacts due to the proposed LPA are anticipated	• No resources in study area	• Temporary closures of the Kenilworth Lagoon • Temporary closures of one or both lanes of a short segment of Cedar Lake Parkway between Xerxes Avenue and Burnham Road
	Mitigation Measures	• Section 106 Agreement	• No resources in study area	• Section 106 Agreement

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Parklands, Recreation Areas, and Open Spaces 3.2.1.4 (EP) 3.4.1.4 (SLP)	Long-Term	• Long-term effect on the setting of Purgatory Creek Park	• No parklands/recreation areas in study area	• Indirect long-term impacts to Jorvig Park, Lilac Park, Park Siding Park, Cedar Lake Park, and Lake of the Isles Park
	Short-Term	• Short-term construction (temporary) impacts to Purgatory Creek Park (i.e., visual quality, noise, and access) and the Nine Mile Creek Conservation Area (short-term occupancy of open space during construction)	• No parklands/recreation areas in study area	• Short-term construction (temporary) impacts to Cedar Lake Park, Cedar Lake LRT Regional Trail, Kenilworth Trail, North Cedar Lake Regional Trail, and the Midtown Greenway
	Mitigation Measures	• The Council will develop and implement a Construction Communication Plan • Altered or disturbed features will be returned to pre-construction conditions or better	• No parklands/recreation areas in study area	• The Council will develop and implement a Construction Communication Plan • Altered or disturbed features will be returned to pre-construction conditions or better
Visual Quality and Aesthetics 3.2.1.5 (EP) 3.4.1.5 (SLP)	Long-Term	• Of the 10 viewpoints analyzed, two would experience a "substantial" overall level of impacts and eight would experience a "not substantial" level of impact	• No sensitive views in study area	• Of six viewpoints analyzed, three would experience a "substantial" overall level of impact and three would experience a "not substantial" level of impact
	Short-Term	• Potential construction-related visual impacts	• No sensitive views in study area	• Potential construction-related visual impacts, such as construction staging areas; concrete and form installation; removal of some of the existing vegetation along the trail; lights and glare from construction areas; and dust and debris
	Mitigation Measures	• The Council will develop aesthetic guidelines for the project	• No sensitive views in study area	• The Council will develop aesthetic guidelines for the project
Geology and Groundwater 3.2.2.1 (EP) 3.3.2.1 (OMF) 3.4.2.1 (SLP)	Long-Term	• Generally compatible geologic conditions would accommodate construction and operations • Peats and fat clays west of the proposed Eden Prairie Town Center Station, near the proposed Southwest Station, and along the alignment between the Southwest Station and the Mitchell Station would require remediation (e.g., soil replacement, pile foundations)	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term groundwater pumping due to potentially contaminated groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term pumping of water from the tunnel portals (predominantly stormwater) and of groundwater from the tunnel to underground infiltration chambers • Potential for long-term pumping of water (predominantly groundwater) from the internal tunnel to the adjacent sanitary sewer system
	Short-Term	• Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction	• Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction	• Groundwater removal would be required during construction of the light rail tunnel • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction
	Mitigation Measures	• The Council will develop a groundwater management plan		

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Water Resources 3.2.2.2 (EP) 3.3.2.2 (OMF) 3.4.2.2 (SLP)	Long-Term	Wetlands: • Permanent fill of 4.7 acres of wetlands	Wetlands: • Permanent fill of approximately 0.7 acre of wetlands	Wetlands: • Permanent fill of 0.5 acre of wetlands
		Floodplains: • 13.4 acres of fill within a floodplain	Floodplains: • Approximately 0.6 acre of permanent fill within a floodplain	Floodplains: • No long-term floodplain impacts within the St. Louis Park/Minneapolis Segment
		Public Waters and Stormwater Management: • New light rail crossing of Purgatory Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project	Public Waters and Stormwater Management: • No impacts on Nine Mile Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project	Public Waters and Stormwater Management: • New light rail crossing of Kenilworth Lagoon • Stormwater runoff would be directed into stormwater detention facilities created as part of the project
	Short-Term	Wetlands: • Short-term impacts on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction	Wetlands: • Short-term impacts to wetlands during construction such as temporary fill • Erosion and sedimentation during construction	Wetlands: • Temporary effects on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction
		Floodplains: • Potential for construction-related sedimentation flow into the floodplain	Floodplains: • Potential for construction-related sedimentation flow into the floodplain	Floodplains: • Potential for construction-related sedimentation flow into the floodplain
		Public Waters and Stormwater Management: • Erosion and sedimentation during construction	Public Waters and Stormwater Management: • Erosion and sedimentation during construction	Public Waters and Stormwater Management: • Erosion and sedimentation during construction
	Mitigation Measures	• Develop a Compensatory Mitigation Plan • Onsite project specific permittee responsible mitigation, offsite project specific permittee responsible mitigation, and/or purchase of wetland mitigation bank credits • Long-term and short-term stormwater detention facilities • Compensatory storage for floodplain and public waters impacts		
Noise 3.2.2.3 (EP) 3.4.2.3 (SLP)	Long-Term	• One moderate noise impact at Baymont Inn, and one moderate and one severe noise impact at Residence Inn[b] • Potential impacts at the Optum Auditorium on Technology Drive, which will be assessed in the Final EIS	• No sensitive noise receptors in study area	• 67 moderate and three severe noise impacts[b]
	Short-Term	• Short-term noise impacts associated with construction activities and construction vehicles	• No sensitive noise receptors in study area	• Short-term noise impacts associated with construction activities and construction vehicles, including truck traffic

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
	Mitigation Measures	• Prepare a noise mitigation plan	• No sensitive noise receptors in study area	• Prepare a noise mitigation plan
Vibration 3.2.2.4 (EP) 3.4.2.4 (SLP)	Long-Term	• No vibration impacts (potential impacts at the Optum Auditorium on Technology Drive will be assessed in the Final EIS)	• No sensitive vibration receptors in study area	• No vibration impacts • 54 ground-borne noise impacts[c]
	Short-Term	• Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles	• No sensitive vibration receptors in study area	• Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles
	Mitigation Measures	• Prepare a vibration mitigation plan	• No sensitive vibration receptors in study area	• Prepare a vibration mitigation plan
Hazardous and Contaminated Materials 3.2.2.5 (EP) 3.3.2.3 (OMF) 3.4.2.5 (SLP)	Long-Term	• If permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system	• If permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system	• Potential permanent groundwater pumping from behind the tunnel walls could encounter zones of contaminated groundwater
	Short-Term	• Six potentially high-risk sites that could affect the project • Potential spills during construction • Encountering sites with existing contamination during construction	• Four potentially high-risk sites that could affect the project • Potential spills during construction • Encountering sites with existing contamination during construction	• Six high-risk sites that could require remediation prior to construction • Potential spills during construction • Encountering sites with existing contamination during construction
	Mitigation Measures	• Prepare a Response Action Plan (RAP) • Cleanup of contamination would begin prior to, or in concert with, excavation and/or drilling activities • Develop and implement Construction Contingency Plan • Survey existing structures for contaminated materials		
Economic Effects 3.2.3 (EP) 3.3.3 (OMF) 3.4.3 (SLP)	Long-Term	• Annual reduction of $34,600 in City of Eden Prairie property tax revenue (year 2013) (0.2 percent of total)	• Annual reduction of $99,200 in City of Hopkins property tax revenues (year 2013) (0.8 percent of total) • Addition of approximately 160 long-term jobs associated with operations of the facilities and light rail vehicles	• Potential reduction of an estimated $35,940 (current dollars) in City of St. Louis Park property tax revenues (0.2 percent of total) • Potential impacts from removal of freight rail siding along the CP Bass Lake Spur
	Short-Term	• No short-term impacts due to the proposed LPA are expected	• Beneficial short-term impacts of construction include the influx of business during construction • Increased noise during construction and temporary access restrictions to businesses during construction	• Potential short-term effects on freight rail operations
	Mitigation Measures	• No mitigation measures have been identified	• See the Roadway and Traffic Environmental Category for construction mitigation measures	• No mitigation measures have been identified

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Transit 3.2.4.1 (EP) 3.4.4.1 (SLP)	Long-Term	• Extension of LRT service to Eden Prairie • No planned changes to existing bus service, however SouthWest Transit[d] could alter service	• No potential substantial issues identified	• Potential changes to fixed route bus service to coordinate service with LRT service
	Short-Term	• Road detours and construction-related congestion that could affect SouthWest Transit bus operations	• No potential substantial issues identified	• Road detours and construction-related congestion that could affect SouthWest Transit bus operations
	Mitigation Measures	• Coordination with SouthWest Transit to follow federal and local procedures regarding service changes, including a Title VI analysis • Coordination with SouthWest Transit to follow federal and local procedures regarding detours	• No potential substantial issues identified	• Follow federal and local procedures regarding service changes, including a Title VI analysis • Follow federal and local procedures regarding detours
Roadway and Traffic 3.2.4.2 (EP) 3.3.4.1 (OMF) 3.4.4.2 (SLP)	Long-Term	• Traffic delays of approximately 50 seconds, 12 times per hour, at eight new light rail at-grade crossings of roadways or private driveways • One intersection in the a.m. peak hour and three intersections in the p.m. peak hour would not meet Level of Service (LOS) standards without mitigation;[e] modifications to existing roadways (Eden Road, Technology Drive, Flying Cloud Drive, and Mitchell Road) • New unnamed roadway extending west from Eden Road to a cul-de-sac	• Permanent vacation of 16th Avenue South, between 5th and 6th Streets South • One new non-revenue light rail at-grade road crossing	• Reconstruction and/or reconfiguration of existing roadways at seven locations • Traffic delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings
	Short-Term	• Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities	• Temporary impacts to traffic on adjacent streets, with a potential increase in truck traffic due to construction activities	• Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities
	Mitigation Measures	• Contractors will be required to comply with all state and local regulations concerning the closing of roadway, effects of construction activities, and the guidelines established in the Minnesota Manual on Uniform Traffic Control Devices • Develop a construction staging plan • Develop and implement a Construction Communication Plan		
		• Site-specific mitigation will be developed for underperforming intersections	• Provide circulation to loading dock at 510 15th Avenue South	• Site-specific mitigation will be developed for underperforming intersections

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Parking 3.2.4.3 (EP) 3.3.4.2 (OMF) 3.4.4.3 (SLP)	Long-Term	• 30 on-street parking spaces added along a new street segment • Displacement of 250 private off-street parking spaces serving businesses at eight locations	• Displacement of 43 on-street parking spaces • Displacement of 310 off-street parking spaces associated with four potential full property acquisitions	• Displacement of 297 off-street parking spaces associated with the full acquisition of 10 properties • Displacement of 118 on-street parking spaces at five locations • Addition of five on-street parking spaces at one location
	Short-Term	• Short-term off-street parking impacts would generally be restricted to the eight properties where off-street parking spaces would be displaced	• Temporary displacement of parking on 15th Avenue	• Temporary displacement of on-street parking could occur
	Mitigation Measures	• Develop and implement a Construction Communication Plan		
		• Mitigation of the displacement of off-street parking for the parcels where the existing businesses would remain on their existing parcels will be determined through the property acquisition process	• All off-street parking that would be displaced is associated with businesses that would also be displaced by the OMF. Therefore, no mitigation of the displacement of off-street parking spaces has been identified.	• Mitigation of the displacement of off-street parking for the parcels where the existing businesses would remain on their existing parcels will be determined through the property acquisition process
Freight Rail 3.4.4.4 (SLP)	Long-Term	• No freight rail lines affected in study area	• No freight rail lines affected in study area	• Light rail/freight rail Swap and Southerly Connection with some modified freight rail operations • Remove approximately 11,771 feet of freight rail siding track segments in the Bass Lake Spur
	Short-Term	• No freight rail lines affected in study area	• No freight rail lines affected in study area	• Temporary movement of the freight rail tracks during construction in the Kenilworth Corridor
	Mitigation Measures	• No freight rail lines affected in study area	• No freight rail lines affected in study area	• Develop, update, and implement a freight rail operations coordination plan
Bicycle and Pedestrian 3.2.4.4 (EP) 3.4.4.5 (SLP)	Long-Term	• Long-term changes to trail alignments at light rail crossings with no change in trail connectivity • Temporary trail detours would provide for continued trail connectivity during construction	• No potential substantial issues identified	• Long-term changes to trail alignments at light rail crossings with no change in connectivity • Temporary trail detours would provide for continued trail connectivity during construction
	Short-Term	• Short closures of bicycle and pedestrian facilities during the period of construction	• No potential substantial issues identified	• Temporary trail detours during construction
	Mitigation Measures	• Construction mitigation examples include mitigated through signage, information fliers, website postings with maps of construction areas/ detours, and notices placed at bicycle shops • Develop and implement a Construction Communication Plan	• No potential substantial issues identified	• Construction mitigation examples include mitigated through signage, information fliers, website postings with maps of construction areas/detours, and notices placed at bicycle shops • Develop and implement a Construction Communication Plan

Environmental Category and Supplemental Draft EIS Section		Eden Prairie Segment	Hopkins OMF	St. Louis Park/Minneapolis Segment
Safety and Security 3.2.4.5 (EP) 3.3.4.3 (OMF) 3.4.4.6 (SLP)	Long-Term	• Potential for emergency vehicle delays of up to one minute, 12 times per hour, at eight new LRT at-grade crossings	• Potential for emergency vehicle delays of up to one minute at one new non-revenue light rail at-grade road crossing	• Emergency vehicle delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings
	Short-Term	• Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours	• Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours	• Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours
	Mitigation Measures	• Coordinate with public service providers during construction • Potential mitigation measures include signage, information fliers, and website postings with maps of construction areas/detours		
Environmental Justice Compliance 3.2.5 (EP) 3.3.5 (OMF 3.4.5 (SLP)	Long-Term	• No disproportionately high and adverse impacts on EJ populations identified	• No disproportionately high and adverse impacts on EJ populations identified	• No disproportionately high and adverse impacts on EJ populations identified
	Short-Term	• No disproportionately high and adverse impacts on EJ populations identified	• No disproportionately high and adverse impacts on EJ populations identified	• No disproportionately high and adverse impacts on EJ populations identified
	Mitigation Measures	• No mitigation measures identified		

All data within this table are approximate.

[a] This table summarizes the anticipated impacts and mitigation measures for the Southwest LRT Project's LPA identified in the Supplemental Draft EIS. See the corresponding sections of the Supplemental Draft EIS for a more detailed description of the anticipated impacts and mitigation measures.

[b] Without mitigation. Where identified and implemented, mitigation will reduce the number of noise impacts exceeding FTA criteria.

[c] Without mitigation.

[d] SouthWest Transit is a private bus service, providing local and express bus service within Eden Prairie.

[e] All intersections during a.m./p.m. peak hours would meet Level of Service (LOS) standards with potential mitigation measures (average weekday in 2030).

12. WHAT DOES THE SUPPLEMENTAL DRAFT EIS COVER RELATIVE TO SECTION 4(f)?

The Supplemental Draft EIS updates information on the project's Draft Section 4(f) Evaluation, which was included in the Draft EIS (addressing the potential use of publically-owned parks, recreation areas and wildlife/waterfowl refuges, and eligible or listed historic sites). Section 3.5, Draft Section 4(f) Evaluation Update of the Supplemental Draft EIS, identifies properties in the project study area protected by Section 4(f), evaluates the potential use of these properties by the project, (reflecting design adjustments identified by the Council in April and July 2014), and presents documentation required for FTA to approve the use of Section 4(f) properties. The Draft Section 4(f) Evaluation Update included in Section 3.5 of the Supplemental Draft EIS assesses potential Section 4(f) uses in the entire LPA study area based on preliminary engineering design. The project's Final Section 4(f) Evaluation will be included in the project's Final EIS. FTA will make its final Section 4(f) use determinations prior to signing the Record of Decision (ROD) for the project, after its consideration of public and agency comments on the Draft Section 4(f) Evaluation included in the Draft EIS and the Draft Section 4(f) Evaluation Update included in the Supplemental Draft EIS.

FTA's updated preliminary Section 4(f) use determinations for the Southwest LRT Project LPA are included in Table ES-2. As a part of the Supplemental Draft EIS comment period, FTA invites comments on these preliminary Section 4(f) determinations. Final Section 4(f) determinations, which will consider comments on these preliminary determinations, will be included in the Final Section 4(f) Evaluation.

TABLE ES-2
Summary of FTA's Preliminary Section 4(f) Property Use Determinations[a]

Section 4(f) Property	Property Type	Non-*de minimis* Use	*De minimis* Use	Temporary Occupancy: No Use
Purgatory Creek Park	Park			•
Minikahda Club	Historic			•
Cedar Lake Parkway	Historic			•
Kenilworth Lagoon/Grand Rounds Historic District[b, c]	Historic	•		
Kenilworth Channel/Lagoon (between Cedar Lake/Lake of the Isles)[c]	Park		•	
Cedar Lake Park	Park		•	
Bryn Mawr Meadows Park	Park		•	
St. Paul, Minneapolis & Manitoba Railroad Historic District	Historic		•	

[a] See Section 3.5.1.1 of this Supplemental Draft EIS for definitions of the potential types of Section 4(f) uses.

[b] Because the Kenilworth Lagoon is a contributing element of Grand Rounds Historic District and both have been preliminarily determined to be adversely affected by the LPA under Section 106, the lagoon and the district are assessed together within this draft Section 4(f) Evaluation Update.

[c] FTA, MnSHPO, and the Council have identified the Kenilworth Lagoon as a historic resource, as a contributing element of the Grand Rounds Historic District, which is similar to but distinct from the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park. The historic and park properties are treated separately within this draft Section 4(f) Evaluation Update as they have different boundaries, different Section 4(f) qualifying characteristics, and different officials with jurisdiction.

13. WHAT IS THE DIFFERENCE BETWEEN THE NOISE ANALYSIS COMPLETED FOR THE DRAFT EIS COMPARED TO THE NOISE ANALYSIS COMPLETED FOR THE SUPPLEMENTAL DRAFT EIS AND WHAT ARE THE NEXT STEPS FOR THE NOISE ANALYSIS?

The Supplemental Draft EIS noise impact analysis is based on the same noise standards and methodology used for the Draft EIS including the same FTA noise impact thresholds for severe and moderate noise impacts, which can be found in the Transit Noise and Vibration Impact Assessment (FTA, 2006). Additionally, the Minnesota Pollution Control Agency (MPCA) noise standards will be evaluated to determine their applicability as part of the noise impact assessment in the Final EIS. The Supplemental Draft EIS acknowledges that certain areas in the vicinity of the project may already approach or exceed the L10 and/or L50 noise levels and that adding operation of the light rail vehicles in those areas may contribute to an exceedance of the statutory noise levels. These locations are likely in areas near existing highways and other roadways within the corridor in

areas such as Eden Prairie, as well as areas in downtown Minneapolis. These highways and roadways are typically exempt from the noise standards (116.07 Subd. 2a). In cases where existing noise levels within the project area corridor are at or near the MPCA standards, the project may or may not contribute to an exceedance of the MPCA standards. Further, because of the way the L10 and L50 are calculated, the Project would not be able to determine if there is an exceedance of the standards, using a predictive model, prior to Southwest LRT operation, however the Council and FTA will work with MPCA to ensure that the analysis adequately considers the state standard.

Based on design adjustments made to the project since publication of the Draft EIS, which form the basis for the analyses in this Supplemental Draft EIS, additional sensitive receptors were identified. Consistent with the methodology in the Draft EIS, the noise impact assessment for LRT and freight rail was completed based on FTA and the Federal Railroad Administration's requirements and guidelines for the sensitive receptors in the Supplement Draft EIS study areas.

Additionally, project staff conducted noise monitoring in 2013 to: (1) supplement the Draft EIS noise monitoring data in areas with design adjustments that could result in new significant adverse environmental impacts ; and (2) replace the Draft EIS noise monitoring data within project areas affected by freight rail noise, such as the Kenilworth Corridor, to better reflect existing freight rail operations. As with the Draft EIS, the Supplemental Draft EIS noise assessment addresses noise during operation and construction. Projected noise levels for the Supplemental Draft EIS study areas related to light rail operations are based on noise measurements of the METRO Blue Line vehicles, which were conducted for the Central Corridor Project, and the operating characteristics and conceptual design of the light rail alignment as adjusted by the Council in 2014.

14. WHAT IS THE DIFFERENCE BETWEEN CULTURAL RESOURCES AND SECTION 106 AND HOW ARE THESE ADDRESSED IN THIS SUPPLEMENTAL DRAFT EIS?

The cultural resource analysis assesses potential impacts of the project on buildings, structures, districts, objects, and sites that are listed on or eligible to be listed on the National Register of Historic Places (NRHP). Cultural resources are generally categorized as architecture/history or archaeological resources. The cultural resources, methods, analysis, and documentation in the Supplemental Draft EIS, like the Draft EIS, continue to conform to Section 106 rules and guidance, based on the National Historic Preservation Act (NHPA) of 1966, as well as the Minnesota Field Archaeology Act, the Minnesota Historic Sites Act, and the Minnesota Private Cemeteries Act, as applicable. The methods used to prepare the cultural resource analysis for this Supplemental Draft EIS are unchanged from those used for the Draft EIS.

Reflecting the design adjustments to the LPA made since publication of the Draft EIS, the MnDOT Cultural Resources Unit (CRU), as authorized by FTA to conduct portions of the Section 106 process, in consultation with the Minnesota State Historic Preservation Officer, adjusted the LPA's architecture/history and archaeological Areas of Potential Effect (APE). Changes to the APEs and design adjustments identified by the Council in April and July 2014 led to the identification of additional qualifying historic and archaeological resources. Based on this continued analysis and consultation with MnSHPO and other Section 106 consulting parties, the Supplemental Draft EIS also includes FTA's preliminary Section 106 findings of effect for qualifying resources within the project's APEs. The project's Section 106 process will continue through to the execution of a Section 106 Agreement, which will include avoidance, minimization, and mitigation measures for adversely effected Section 106 resources.

15. WHAT MITIGATION REQUIREMENTS ARE PROPOSED FOR BOTH THE POTENTIAL LONG-TERM AND SHORT-TERM EFFECTS LPA?

Table ES-1 summarizes the mitigation measures identified in the Supplemental Draft EIS and will adopted in the project's ROD. Additional mitigation measures may be included in the project's final EIS. For additional information on mitigation measures, see Table 3.1-7 of the Draft EIS, with additional detail provided in Section 3.2 Eden Prairie Segment, Section 3.3 Hopkins Operations and Maintenance Facility, and Section 3.4 St. Louis Park/Minneapolis Segment of the Supplemental Draft EIS.

16. WHAT ARE THE PROJECT'S FUNDING STRATEGY AND ESTIMATED CAPITAL COSTS?

The Council's funding strategy for the Southwest LRT Project remains consistent with the strategy identified in the Draft EIS. The Council would secure one-half the cost of the Southwest LRT Project in federal Capital Investment Grant program funding for the project. The remaining funding is assumed to come from the Counties Transit Improvement Board (30 percent), the State of Minnesota (10 percent), and HCRRA (10 percent).

Based on the design adjustments to the LPA that the Council made in 2014, the LPA's base-year cost (in 2014 dollars) would be approximately $1,462 million, and the total cost to fund the project would be approximately $1,653 million (in year-of-expenditure dollars)[2].

17. WHAT ARE THE PROJECT'S NEXT STEPS?

Next steps for the Southwest LRT Project include the following:

- Completing the Supplemental Draft EIS comment period, and conducting and documenting the Supplemental Draft EIS open houses and public hearings
- Preparing and publishing the Final EIS (which will include responses to all substantive comments made on the Draft EIS and Supplemental Draft EIS) and issuing the ROD[3].
- Issuing an Adequacy Determination for the Final EIS in accordance with Minnesota environmental law
- Obtaining the project's Federal Clean Water Act Section 401 certification and Section 404 wetland permit, the State Wetland Conservation Act permit approval, and local jurisdiction water resource permits.

18. HOW HAS THE PUBLIC BEEN INVOLVED SINCE PUBLICATION OF THE DRAFT EIS?

Public involvement efforts have continued and evolved as local lead agency responsibility shifted from HCRRA to the Council in January 2013. Local elected officials and the public have been, and will continue to be, involved in the project during the ongoing design process and future construction phase. Exhibit ES-6 generally illustrates where public and agency comments were considered as part of the process used to identify design adjustments to the LPA since conclusion of the Draft EIS.

The following figure illustrates the Southwest LRT Project's advisory committee process. Four advisory committees work with Council staff to provide input during key steps in the advisory committee process. This input informs actions that the Council takes. Each community in the corridor has representation on the advisory committees. The Council's public involvement program includes conducting public meetings, community and business advisory committee meetings, stakeholder meetings, and individual briefings. Project-dedicated outreach staff attend neighborhood meetings, informational tables at community events, and one-to-one or small group meetings. The project has also implemented strategies and techniques aimed at involving the corridor's low-income and minority residents and stakeholder within the design adjustment process.

[2] On April 27, 2015, the Council released a revised project cost estimate of approximately $1.994 billion – an approximately $341 million increase over the year-of-expenditure budget. The additional costs are primarily related to poor ground conditions along the Southwest LRT line, soil contamination in St. Louis Park and Hopkins, project delays due to additional studies, and property acquisitions and relocations. The funding strategy discussed in Section 5.2 remains under discussion for the additional costs.

[3] FTA can determine whether the project would issue a combined FEIS and ROD based on the criteria outlined in the *Final Guidance on MAP-21 Section 1319 Accelerated Decisionmaking in Environmental Reviews* (US DOT; November 12, 2014), which reads: "Section 1319(b) directs the lead agency, to the maximum extent practicable, to expeditiously develop a single document that consists of an FEIS and ROD, unless certain conditions exist."



19. HOW CAN I OBTAIN A COPY OF THE SUPPLEMENTAL DRAFT EIS?

The Supplemental Draft EIS and supporting documentation are available on the project website (http://www.metrocouncil.org/swlrt/sdeis). Printed copies of the Supplemental Draft EIS and supporting documents are available for review during regular business hours at the following locations:

- **Eden Prairie City Hall:** 8080 Mitchell Road, Eden Prairie, MN 55344
- **Eden Prairie Public Library:** 565 Prairie Center Drive, Eden Prairie, MN 55344
- **Minnetonka City Hall:** 14600 Minnetonka Blvd, Minnetonka, MN 55345
- **Minnetonka Public Library:** 17524 Excelsior Blvd, Minnetonka, MN 55345
- **Hopkins City Hall:** 1010 First Street South, Hopkins, MN 55343
- **Hopkins Public Library:** 22 Eleventh Avenue North, Hopkins, MN 55343
- **Edina City Hall:** 4801 West 50th Street, Edina, MN 55424
- **St. Louis Park City Hall:** 5005 Minnetonka Blvd, St. Louis Park, MN 55416
- **St. Louis Park Public Library:** 3240 Library Lane, St. Louis Park, MN 55426
- **Southwest LRT Project Office:** 6465 Wayzata Blvd., Suite 500, St. Louis Park, MN 55426
- **Minneapolis City Hall:** City Engineer's Office, 350 South Fifth Street, Room 203, Minneapolis, MN 55414
- **Minneapolis Central Library:** 300 Nicollet Mall, Minneapolis, MN
- **Walker Public Library:** 2880 Hennepin Avenue, Minneapolis, MN 55408
- **Linden Hills Public Library:** 2900 West 43rd Street, Minneapolis, MN 55410
- **Sumner Public Library:** 611 Van White Memorial Blvd., Minneapolis, MN 55411
- **Franklin Public Library:** 1314 East Franklin Avenue, Minneapolis, MN 55404
- **Metropolitan Council Library:** 390 Robert Street North, St. Paul, MN 55101
- **Minnesota Department of Transportation Library:** 395 John Ireland Blvd., St. Paul, MN 55155
- **Minnesota Legislative Reference Library:** 645 State Office Building, 100 Rev. Dr. Martin Luther King, Jr. Blvd. St. Paul, MN 55155

CDs of the Supplemental Draft EIS will also be sent to interested businesses, individuals, and organizations, when requested.

20. HOW CAN THE PUBLIC COMMENT ON THE SUPPLEMENTAL DRAFT EIS?

Comments on the Supplemental Draft EIS may be submitted through:

- Mail: Nani Jacobson, Assistant Director, Environmental and Agreements
  Metro Transit – Southwest LRT Project Office
  6465 Wayzata Boulevard, Suite 500
  St. Louis Park, MN 55426
- Email: swlrt@metrotransit.org
- In person—both written and verbally—at one of the public hearings that will be held in conjunction with information open houses. Public hearings to receive comments on the Supplemental Draft EIS are scheduled as shown in Table ES-3.

21. WHEN DOES THE PUBLIC COMMENT PERIOD START AND END?

Comments on the Supplemental Draft EIS will be accepted from May 22, 2015 through July 6, 2015.

TABLE ES-3
Schedule of Public Hearings to Receive Comments on the Supplemental Draft EIS

Date	Hearing Time	Open House Time	Location
Tuesday, June 16, 2015	6:00 PM	5:00 PM	Hopkins Center for the Arts 1111 Mainstreet Hopkins, MN 55343
Wednesday, June 17, 2015	6:00 PM	5:00 PM	Eden Prairie City Hall 8080 Mitchell Road Eden Prairie, MN 55344
Thursday, June 18, 2015	6:00 PM	5:00 PM	Dunwoody College of Technology 818 Dunwoody Blvd Minneapolis, MN 55403

22. WHAT HAPPENS AFTER THE CLOSE OF THE COMMENT PERIOD?

Following the close of the Supplemental Draft EIS comment period, FTA and the Council will consider all comments submitted on the Draft EIS and Supplemental Draft EIS as they prepare the Final EIS for publication. Substantive comments received on the Draft EIS and Supplemental Draft EIS during the public comment period will be responded to in the Final EIS. The Final EIS will also document all mitigation measures for the entire project.

FTA will also prepare and issue the project's ROD. The ROD will state FTA's project decision, identify the alternatives considered and selected (including specification of the alternative or alternatives considered to be environmentally preferable), and itemize and adopt mitigation commitments. The ROD must be issued by FTA before federal funding and permits can be approved. The Council will also issue an Adequacy Determination for the Final EIS in accordance with Minnesota environmental law.

23. I COMMENTED ON THE DRAFT EIS. WHY ISN'T MY COMMENT ADDRESSED IN THE SUPPLEMENTAL DRAFT EIS?

In accordance with Federal and state requirements, substantive comments received during the Draft EIS public comment period will be addressed in the Final EIS.

1 Purpose and Need

The purpose and need statement for the proposed Southwest LRT (METRO Green Line Extension) Project (Southwest LRT), proposed to be an extension of the METRO Green Line, remains the same as that stated in Chapter 1, Section 1.3 of the Draft Environmental Impact Statement (Draft EIS), as repeated in Sections 1.1 and 1.2 of this Supplemental Draft EIS.[1]

1.1 Project Purpose

The purposes for enhancing transit service in the Southwest LRT Project study area are summarized as follows:

- The Southwest LRT Project will improve access and mobility to the jobs and activity centers in the Minneapolis central business district, as well as along the entire length of the corridor for reverse-commute trips to the expanding suburban employment centers.
- The Southwest LRT Project will provide a competitive, cost-effective travel option that will attract choice riders to the transit system. The competitive and reliable travel time for the Southwest LRT Project is attributed to the diagonal nature of the line compared to the north-south/east-west orientation of the roadway network and to the increasing levels of congestion of the roadway network.
- The Southwest LRT Project would be part of the region's system of transitways integrated to support regional transportation efficiency. Since the late 1990s, the Southwest LRT Project has been identified by the Metropolitan Council (Council) as warranting a high level of transit investment to respond to increasing travel demand in a highly congested area of the region. Due to congestion levels on the roadway network, speed and use limitations of the shoulder bus operations, and capacity constraints in downtown Minneapolis, a bus option is limited in its ability to adequately serve the travel demand and to provide reliable travel times.

1.2 Project Need

The transportation issues facing the Southwest LRT Project study area illustrate the need for improved mobility, accessibility, and system linkages to the activity centers in the study area through high-capacity transit service. The Southwest LRT Project is one of several transit corridors identified in the Council's 2040 Transportation Policy Plan as a "transitway expansion assumed to be funded within the current revenue scenario." The Southwest LRT Project study area continues to experience increases in population and employment with limited additional traffic capacity on existing streets and highways, resulting in increased travel time, delays, and air pollution. Portions of the Southwest LRT Project study area are already densely developed. New development and redevelopment occurring in the study area is expected to generate increases in travel demand.

Three primary factors make the Southwest LRT corridor important for people who live and work in the southwest metropolitan area: (1) declining mobility; (2) limited competitive, reliable transit options for choice riders and people who rely on public transportation, including reverse-commute riders; and (3) need to develop and maintain a balanced and economically competitive multimodal freight system.

Sections 1.3.2.1 through 1.3.2.3 of the Draft EIS provide additional information on the need for the proposed Southwest LRT Project.

[1] The United States Army Corps of Engineers has adopted the following overall project purpose for the Southwest LRT Project that it will use to direct the range of reasonable alternatives to be considered in the Clean Water Act Section 404 permit application process: The overall project purpose is to provide high-capacity transit service in the Southwest LRT Project study area.

2 Alternatives Considered

This chapter provides a description of the design adjustments to LRT 3A and LRT 3A-1 developed since publication of the *Southwest Transitway Draft Environmental Impact Statement* (Draft EIS) in October 2012. As identified in the Draft EIS, LRT 3A and LRT 3A-1 include an LRT alignment traveling between Mitchell Road in Eden Prairie and downtown Minneapolis. LRT 3A and LRT 3A-1 provide service between Eden Prairie, Minnetonka, Hopkins, Edina, St. Louis Park, and Minneapolis by way of Technology Drive in Eden Prairie, through the Golden Triangle/Opus areas, to Hennepin County Regional Railroad Authority (HCRRA) property through Hopkins and St. Louis Park, then along the Kenilworth Corridor through Minneapolis to Royalston Station and connecting to Target Field Station. Adjustments to the design of LRT 3A and 3A-1 incorporated by the Council after publication of the Draft EIS—where the adjustments could result in new significant impacts not addressed in the Draft EIS—are the subject of this Supplemental Draft EIS. This chapter includes the following sections:

2.1 Project Overview

2.2 Alternatives Analysis and Draft Environmental Impact Statement

2.3 Design Adjustments Considered Following the Draft Environmental Impact Statement

2.4 Design Adjustment Process

2.5 Locally Preferred Alternative Adjustments Evaluated in this Supplemental Draft Environmental Impact Statement

2.6 Locally Requested Capital Investments

2.1 Project Overview

The proposed action is an approximately 16-mile proposed extension of the METRO Green Line (Central Corridor LRT) which will operate from downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to Edina (see Exhibit 2.1-1). See Section 2.5 for a general overview of the proposed project and for a more detailed description of the proposed project in the three areas that are the focus of this Supplemental Draft EIS.

The following subsections provide a description of the federal, state, and local jurisdictions that are participating on the project and a brief description of the project's prior phases of work.

2.1.1 Project Participating Agencies

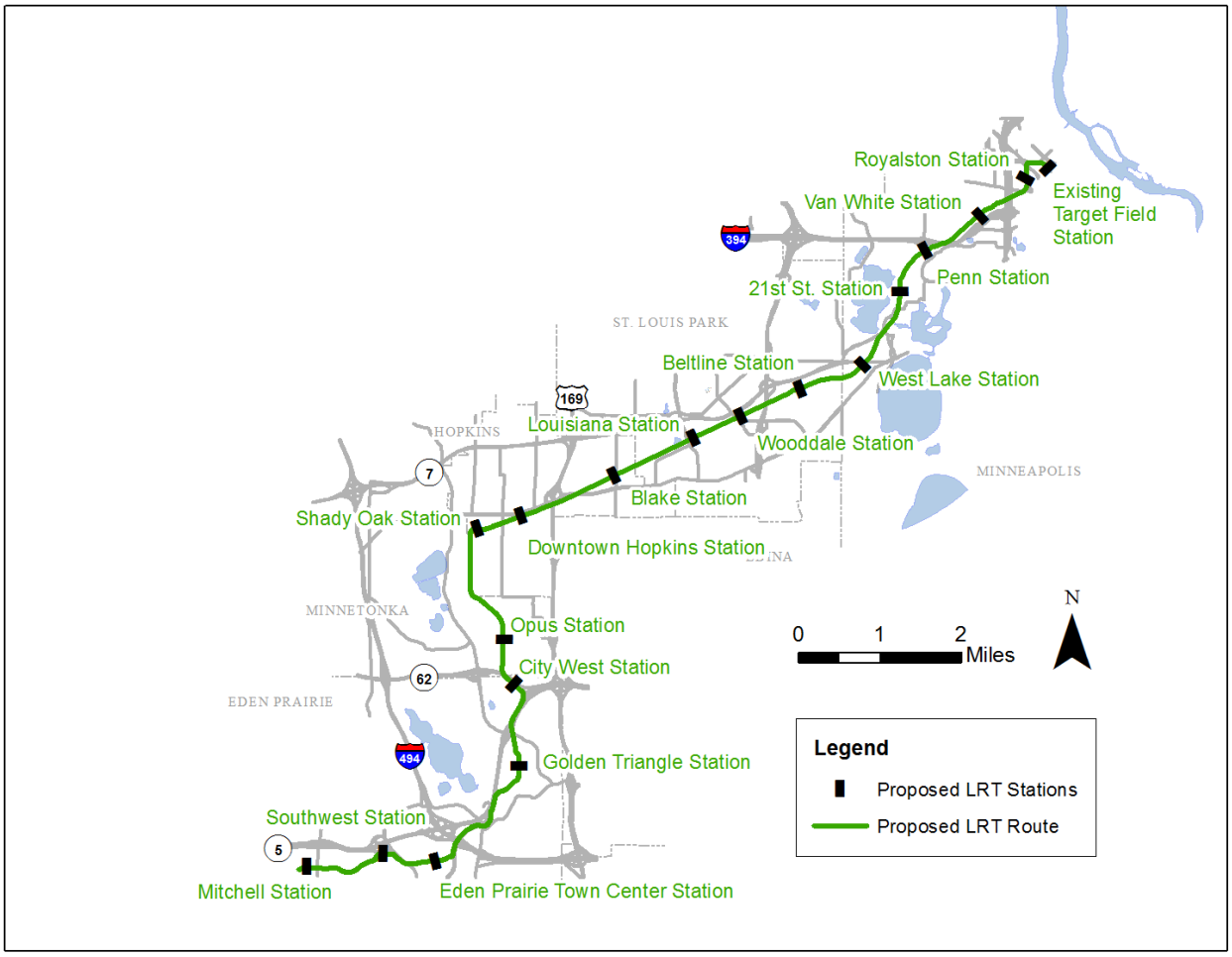
The FTA, as the project's lead federal agency, will ensure that the project completes its federal environmental review process and documentation in compliance with the National Environmental Policy Act of 1969 (NEPA) and related laws. FTA invited the federal Surface Transportation Board[1] (STB) and the United States Army Corps of Engineers[2] (USACE) to become Cooperating Agencies, in accordance with Title 40 of the Code of Federal Regulations (40 CFR 1508.5). As documented in the Draft EIS, the STB agreed to become a Cooperating Agency in August 2012 because several alternatives under evaluation at the time would have required STB approval to be implemented. Subsequent to the publication of the Draft EIS, as identified in Section 2.5, the freight rail modifications to be incorporated into the proposed action can be implemented without STB approval. As such, FTA and the STB agreed that STB would participate in the project's NEPA

[1] The STB is responsible for ensuring compliance with NEPA and related laws for cases affecting freight rail commerce filed with the agency as per Ex Parte No. 55 [Sub-No. 22 A], (*Implementation of Environmental Laws*, 7 I.C.C 2nd 807, effective September 29, 1991).

[2] The USACE is responsible for implementing NEPA and related laws and Section 404 of the Clean Water Act (CWA).

process as a Participating Agency. The USACE agreed to become a Cooperating Agency in July 2013.[3] (See Appendix E, Agency Coordination Letters, of this Supplemental Draft EIS for documentation related to the two agencies' current status.)

EXHIBIT 2.1-1
Proposed Southwest LRT Alignment



To streamline environmental permitting, FTA and USACE are implementing a merger process between the NEPA and Clean Water Act (CWA) Section 404 permitting processes (referred to as the "NEPA/404 merger process" or "merger process"). This merger process enables coordination between FTA and USACE during preparation of the EIS, which allows the USACE to satisfy the requirements of NEPA and the CWA concurrently. The NEPA/404 merger process is structured around four sequential concurrence points at key milestones during project development: (1) Project Purpose and Need, (2) Array of Alternatives and Alternatives Carried Forward, (3) Identification of the Selected Alternative, and (4) Design Phase Impact Mitigation. FTA and USACE agreement at these milestones will facilitate the issuance of a CWA Section 404 permit. Within the third milestone of the merger process, the USACE identifies the Least Environmentally Damaging and Practicable Alternative (LEDPA) from among those that meet the USACE's overall project purpose to determine whether the preferred alternative is likely to be permittable under the CWA.

[3] The roles and responsibilities of cooperating and participating agencies are similar, but cooperating agencies have a higher degree of authority, responsibility, and involvement in the environmental review process. A distinguishing feature of a cooperating agency is that the CEQ regulations (40 CFR § 1506.3) permit a cooperating agency to " adopt without recirculation of the environmental impact statement of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied." This provision is particularly important to permitting agencies, such as the U.S. Army Corps of Engineers, who, as cooperating agencies, routinely adopt USDOT environmental documents.

The USACE must determine whether the Southwest LRT project complies with the Clean Water Act Section 404(b)(1) Guidelines (Guidelines) (40 CFR Part 320). The Guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). Per the Guidelines, a practicable alternative is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

On December 20, 2012, the USACE commented on the project's Draft EIS (see Appendix E). Within those comments, the USACE noted the following: 1) a suggested overall project purpose for the 404 permit process of "to provide high-capacity transit service in the Southwest Transitway study area," which is reflected in Chapter 1 of the this Supplemental Draft EIS; 2) "the Corps concurs with the array of alternatives considered for this project as well as the alternatives that were carried forward in the DEIS;" and 3) "as proposed [in the Draft EIS] the chosen LPA, alternative LRT 3A, would not qualify as the LEDPA…, which as proposed would be alternative LRT 3A-1 (co-location)." In response to the USACE's comment on the LEDPA, and in compliance with CWA requirements for the analysis of practicable alternatives that would avoid or minimize wetland impacts, the Council included both relocation and co-location designs as it developed and evaluated potential design adjustments for the LPA, utilizing the process described in Sections 2.3 and 2.4 of this Supplemental Draft EIS. The results of those design adjustments are documented in the NEPA/404 Merger Process – Southwest LRT Concurrence Points Package, which was submitted to the USACE by the Council on May 5, 2014 (Council, May 2014). The Concurrence Points Package notes the following: "The project scope as identified by the Council on April 9, 2014, which would retain existing freight rail service in the Kenilworth Corridor, is consistent with USACE's comment letter from December 20, 2012, stating that LRT 3A-1, which would also have retained existing freight rail service in the Kenilworth Corridor, meets the USACE project purpose and has the least amount of impact to aquatic resources…" (page 5). LRT 3A-1 was advanced based on USACE's identification of LRT 3A-1 as the LEDPA. As previously noted, the USACE, based on its review of the May 2014 Concurrence Package, again made the preliminary determination that LRT 3A-1 remains the project's LEDPA.

For the project's AA and Draft EIS, HCRRA served as the project's local lead agency; upon the close of the Draft EIS comment period on December 31, 2012, the Council assumed responsibility from HCRRA as the local lead agency for continuation of the environmental process.[4] At that time, the project's name was changed from the Southwest Transitway Project to the Southwest Light Rail Transit (METRO Green Line Extension) Project (Southwest LRT). The Council also continued activities related to FTA's Project Development process (formerly referred to as Preliminary Engineering), including the development, evaluation, and identification of design adjustments to LRT 3A and LRT 3A-1 based on comments received on the Draft EIS.[5] The Council is also responsible for expanding the level of engineering needed on the LPA to prepare the Final EIS and to complete the Project Development process.

The Council is working closely with the following state and local agencies and jurisdictions as part of the development process for the project: the Minnesota Department of Transportation (MnDOT); Hennepin County; HCRRA; and the cities of Eden Prairie, Minnetonka, Hopkins, St. Louis Park, Edina, and Minneapolis. The project has several advisory committees providing input from policymakers, government entities, community groups, businesses, and residents. These committees are described in Chapter 4 of this Supplemental Draft EIS.

[4] Under the Minnesota Environmental Policy Act of 1973 (MEPA), HCRRA was designated the Regional Governmental Unit (RGU) prior to December 31, 2012, and the Council was designated the RGU after December 31, 2012. Under the authority of Minnesota Statutes 116D.04, RGU responsibilities for the project include the status as defined under the Minnesota Environmental Policy Act of 1973. Responsibilities of the RGU include determinations of whether an EIS or an Environmental Assessment Worksheet is needed for a project and for the preparation of those documents if they are required.

[5] Under MAP-21, the process that FTA uses to manages its Capital Investment Grant (CIG) Program funding process for projects like new light rail lines involves three steps: Project Development; Engineering; and Construction. Project Development generally entails completion of the project's environmental processes and preparation of conceptual and preliminary engineering documents. See the following FTA webpage for additional information about the CIG Program funding process and the Project Development phase: http://www.fta.dot.gov/12304.html.

The proposed action is included in the *2040 Transportation Policy Plan*, the region's long-range transportation plan; Hennepin County's *2030 Transportation System Plan*, which is part of the Hennepin County *2030 Comprehensive Plan*; and the comprehensive and transportation plans of the local municipalities in the project vicinity.

2.1.2 Project Background

Mobility issues and high-capacity transit improvements in the corridor extending southwest from downtown Minneapolis have been evaluated by the Council and HCRRA since the mid-1980s. In 2005, building on prior planning efforts (see Section 2.1.1 of the Draft EIS), HCRRA initiated the Southwest Transitway Alternatives Analysis (AA) process, which compared the benefits, costs, and impacts of a range of transit alternatives (modes and routes) to identify which alternative(s) would best meet the needs of the communities as expressed in the AA's Purpose and Need Statement. Section 2.1.1 of the Draft EIS provides a description of the alternatives that were developed, the results of the analysis, and the alternatives that were dismissed and carried forward for further study. The range of alternatives considered included enhanced bus, bus rapid transit, and light rail, including a range of potential alignments for bus rapid transit and light rail.

The results of the AA laid the foundation for the project's development and evaluation of alternatives under NEPA, which was initiated in September 2008 when FTA and HCRRA issued their notice of intent to publish an EIS for the Southwest Transitway Project. The project's scoping process began with FTA and HCRRA's proposal to study the alternatives resulting from the AA within a federal and state EIS. During the scoping process, HCRRA solicited public and agency comments on the range of alternatives to be studied in the EIS. As a result of comments received and additional design development and analysis, HCRRA and FTA modified the range of alternatives to be studied further in the project's Draft EIS. A description of the project's scoping process and results is provided in Section 2.1.2 of the Draft EIS.

In May 2010, the project's AA process was completed with the identification of the LPA and incorporation of the LPA into the 2030 Transportation Policy Plan by the Council. Section 2.1.3 of the Draft EIS provides an overview of the alternatives that were considered within the LPA selection process, how they were evaluated, and the rationale for the identification of the LPA. LRT 3A was identified as the LPA based on the AA's assessment of four evaluation categories: planning compatibility; performance; implementation factors; and critical environmental resources. In summary, HCRRA and the Council found that LRT 3A would best meet the AA's Purpose and Need Statement, as expressed by the goals of improving mobility, providing a cost-effective and efficient travel option, preserving the environment, protecting quality of life and supporting economic development.

The LPA was incorporated within two of the seven alternatives evaluated in the Draft EIS, as described in Section 2.2 of this Supplemental Draft EIS (i.e., LRT 3A and LRT 3A-1). After publication of the Draft EIS, the Council undertook a process to develop and evaluate potential adjustments to LRT 3A and LRT 3A-1 based on comments received on the Draft EIS. The range of adjustments considered and the measures used by the Council to evaluate them are described in Section 2.3 and 2.4 of this Supplemental Draft EIS.

2.2 Alternatives Analysis and Draft Environmental Impact Statement

This section provides brief summaries of the Southwest LRT Project's AA phase and preparation and publication of its Draft EIS. Additional detail on the AA and Draft EIS scoping phases can be found in Section 2.1 of both the Draft EIS and this Supplemental Draft EIS. Section 2.3 of the Draft EIS provides a description of the alternatives evaluated within the Draft EIS.

HCRRA initiated an AA of the Southwest Corridor in 2005 and completed the *Southwest Transitway Alternatives Analysis Report* in 2007. In that study, multiple transportation modes and alignments were evaluated against detailed performance criteria, including ridership, community impacts, environmental impacts, and cost. On May 26, 2010, based on the technical documentation produced by the AA and on an extensive public and agency review and comment process, the Council adopted the project's LPA (known at the time as Alternative 3A) and included the adopted LPA as part of the amendment to the 2030 Transportation Policy Plan. The adopted LPA included LRT as the preferred mode with the following alignment from west to east: from Mitchell Road in Eden Prairie, through the Golden Triangle and Opus

employment concentrations in Eden Prairie and Minnetonka, using HCRRA-owned rights-of-way through Hopkins, St. Louis Park, and Minneapolis to downtown Minneapolis, where it would ultimately become through-routed with the planned Central Corridor LRT.

The project proceeded under HCRRA in September 2008 with publication of the federal Notice of Intent to Prepare an EIS (FTA, 2008b) and the state Notice of EIS Preparation (Minnesota Environmental Quality Board, 2008). HCRRA began development of NEPA and MEPA documentation with a scoping process, including publication of the *Southwest Transitway Scoping Summary Report* in January 2009 (HCRRA, 2009)[6]. The NEPA and MEPA scoping process resulted in the refinement of alternatives for consideration, concluding that five LRT alternatives would be examined in the Draft EIS, along with the Enhanced Bus and No Build alternatives. On May 26, 2010, prior to the completion of the Draft EIS and based on an extensive alternatives analysis and public involvement process, the Metropolitan Council (Council) adopted the project's LPA as recommended by HCRRA and included it as part of the *2030 Transportation Policy Plan*. The identified LPA is LRT constructed and operating on the Kenilworth-Opus-Golden Triangle alignment, referred to at the time as Alternative LRT 3A.

After completion of scoping and identification of the LPA, the Federal Transit Administration (FTA) determined that the project's Draft EIS should address whether to: (1) relocate Twin Cities & Western (TC&W) freight trains currently operating along the Canadian Pacific (CP)-owned Bass Lake Spur and the HCRRA-owned Cedar Lake Junction (locally referred to as the Kenilworth Corridor and referred to as such throughout this Supplemental Draft EIS) to the CP-owned MN&S Spur and BNSF-owned Wayzata Subdivision (included in LRT 1A, LRT 3A, LRT 3C-1, and LRT 3C-2, and referred to as "relocation"); or (2) continue to operate the TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor alongside the proposed light rail alignment and stations (included in No Build Alternative, Enhanced Bus Alternative, and LRT 3A-1, and referred to as "co-location").

The Draft EIS was subsequently published on October 12, 2012, and the public comment period concluded on December 31, 2012. The Draft EIS examined seven alternatives, including the No Build Alternative, the Enhanced Bus Alternative, and five light rail transit (LRT) alternatives (LRT 1A, LRT 3A, LRT 3A-1, LRT 3C-1, and LRT 3C-2). These seven alternatives are described in Section 2.3 of the Draft EIS and briefly described below. The LRT build alternatives are illustrated on Exhibit 2.2-1 of this Supplemental Draft EIS and Section 2.3 of the Draft EIS provides additional detail, in particular, the LRT Build Alternatives are described in Section 2.3.3 of the Draft EIS:

- **The No Build Alternative**, required under the NEPA and MEPA processes, would provide planned and programmed transit facilities and operations identified in the region's fiscally constrained transportation plan (see Section 2.3.1 of the Draft EIS). In summary, the No Build Alternative would provide additional express and local bus service on existing facilities, including operation on the regional network of bus shoulder lanes.
- **The Enhanced Bus Alternative** would provide additional express routes, new limited-stop service, and enhanced bus facilities in Hopkins. Under the Enhanced Bus Alternative, combined bus stops and park-and-ride lots would be located in the vicinity of the intersection of Mitchell Road and Highway 212 and at the existing SouthWest Transit Center. These facilities would be connected to downtown Minneapolis via two new limited-stop bus lines and two existing SouthWest Transit express bus lines. The Enhanced Bus Alternative is described in Section 2.3.2 of the Draft EIS, which includes a description of the alternative's bus service plan and routes.
- **LRT 1A** would include a double-tracked light rail line between Minneapolis and Eden Prairie, generally within HCRRA-owned right-of-way. This alternative would require relocation of existing freight rail

[6] On September 25, 2012, the HCRRA amended the Southwest Transitway *Southwest Scoping Summary Report* (which serves as the Scoping Decision Document under MEPA) to include the impacts of relocating freight rail for the four build alternatives and including a collocation alternative where freight rail, light rail and the commuter bike trail collocate, share a common corridor, between Louisiana Avenue and Penn Avenue. The amendment was authorized with approval of Board Action Request 12-HCRRA-0049. Notice of the amendment to the scoping report was issued in the *Environmental Quality Board Monitor* on October 15, 2012.

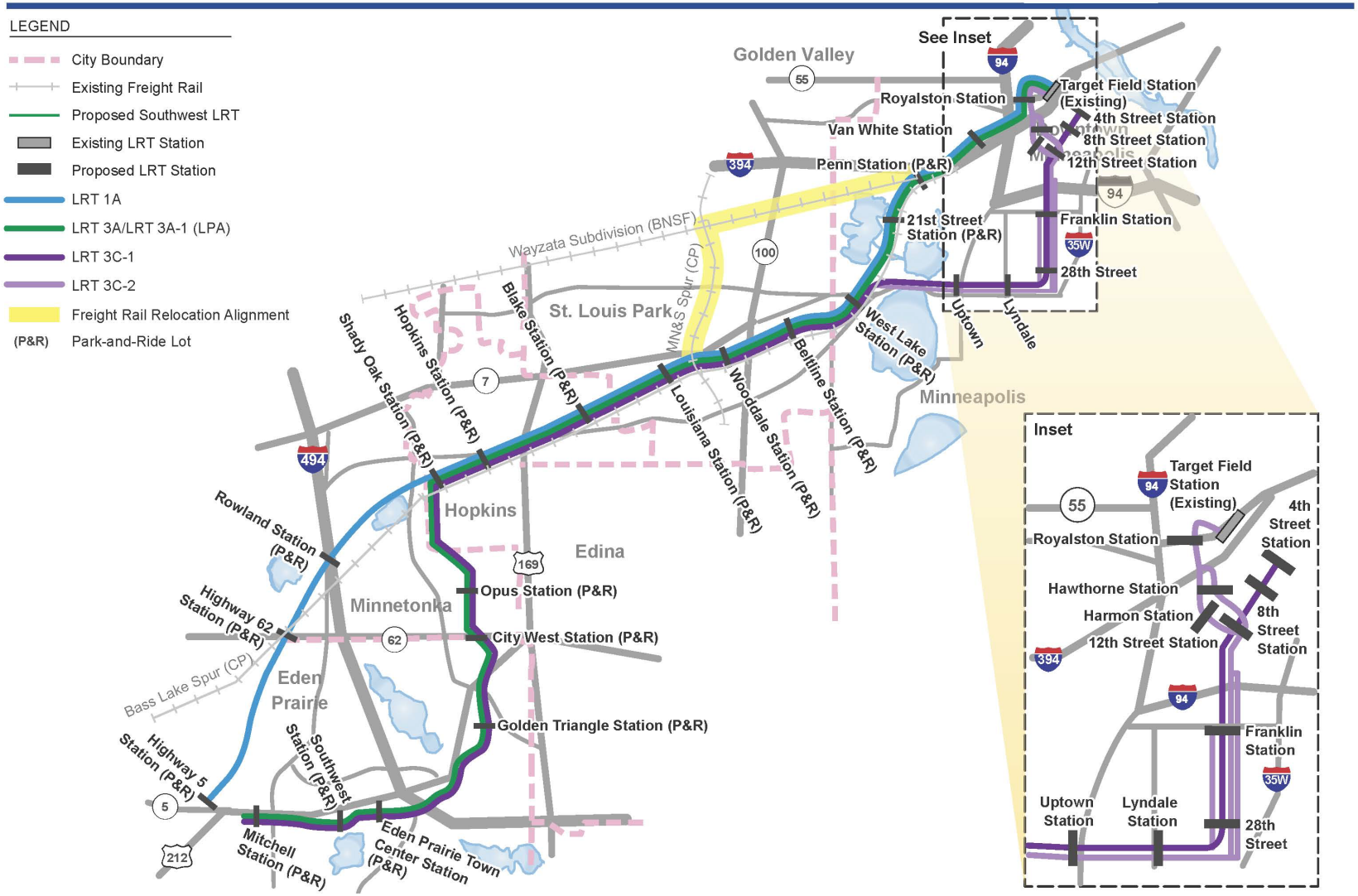
operations from a portion of the Bass Lake Spur and the entire Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision. New right-of-way would be required near Penn Avenue to serve the Van White and Royalston stations in Minneapolis before connecting into the METRO Blue Line corridor in downtown Minneapolis and interlining with other LRT service. This alternative would include 14 new light rail stations.

- **LRT 3A**, which included the LPA, would result in a double-tracked light rail line between Minneapolis and Eden Prairie. This alternative would require relocation of existing freight rail operations from a portion of the Bass Lake Spur and the entire Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision. Seventeen light rail stations were included as part of this alternative. Under this alternative, the proposed light rail alignment would run through the Golden Triangle and Opus employment areas in Eden Prairie. In St. Louis Park and Hopkins, the alignment would use HCRRA's Southwest LRT Trail. In Minneapolis, the alignment would use space within the Kenilworth Corridor. Near Penn Avenue, the alternative would require new light rail right-of-way to serve the Van White and Royalston stations in Minneapolis before connecting with the METRO Blue Line in downtown Minneapolis.
- **LRT 3A-1,** which included the same light rail service improvements as LRT 3A, was developed to examine the implications of co-locating the existing freight rail service and multiple-use path with the proposed light rail alignment and stations. LRT 3A-1 includes the same light rail alignment and stations that comprise LRT 3A; however, freight rail service currently operating in the Bass Lake Spur and Kenilworth Corridor would not be relocated.
- **LRT 3C-1** would include a double-tracked LRT line between Minneapolis and Eden Prairie, connecting 20 proposed light rail stations. This alternative would run through the Golden Triangle and Opus employment areas in Eden Prairie. In St. Louis Park and Hopkins, the alignment would use HCRRA's right-of-way. In Minneapolis, the light rail alignment would use space within the Midtown Corridor. The proposed light rail alignment would provide connections to the METRO Blue Line at 5th Street in downtown Minneapolis but would not interline with another LRT line. This alternative would require relocation of existing freight rail operations from a portion of the Bass Lake Spur and the entire Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision.
- **LRT 3C-2** would duplicate the alignment and station locations of LRT 3C-1, differing only in the westernmost entry to downtown Minneapolis. Multiple north-south links were considered to connect the Midtown Segment of LRT 3C-2 with downtown Minneapolis, including Park and Portland avenues. Under LRT 3C-2, the light rail alignment would interline with the METRO Blue Line in downtown Minneapolis. This alternative would require relocation of existing freight rail operations from a portion of the Bass Lake Spur and the entire Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision.

The potential environmental impacts of these seven alternatives were evaluated in the Draft EIS and LRT 3A was identified as the LPA.[7] HCRRA and FTA conducted a public comment period on the Draft EIS, which extended from October 12 to December 31, 2012, and included three public hearings. All substantial comments received on the Draft EIS during that comment period will be reported and responded to in the project's Final EIS.

[7] In the Draft EIS, the transit improvements included in LRT 3A and LRT 3A-1 are coupled with the proposed relocation or co-location of TC&W freight trains currently operating along the Bass Lake Spur and the Cedar Lake Junction (locally referred to as the Kenilworth Corridor). LRT 3A includes the proposed relocation of TC&W trains to the MN&S Spur and Wayzata Subdivision, while LRT 3A-1 includes the continued operations of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor. While the Draft EIS notes that LRT 3A-1 is identical to LRT 3A in the transit service it would provide (see page ES-23 and Chapter 2 of the Draft EIS), it only identifies LRT 3A as the LPA (see pages 2-31 and 2-41 of the Draft EIS for examples). The LPA is a subset of both LRT 3A and LRT 3A-1 of the Draft EIS; therefore, this Supplemental Draft EIS clarifies that the project's LPA is included within both LRT 3A and LRT 3A-1.

EXHIBIT 2.2-1
LRT Build Alternatives Evaluated in the Draft EIS



Source: Southwest Transitway Draft Environmental Impact Statement, Oct 2012

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS LRT Build Alternatives Evaluated in the Draft EIS	Exhibit 2.2-1	NORTH 0 1 Miles	METROPOLITAN COUNCIL

2.3 Design Adjustments Considered Following the Draft Environmental Impact Statement

Subsequent to the close of the public comment period on the Draft EIS on December 31, 2012, the Council assumed responsibility in moving the project forward through the Project Development phase, which includes further engineering, and design work. At the conclusion of the Draft EIS public comment period, the Council implemented a process of developing and evaluating adjustments to LRT 3A and LRT 3A-1[8], including associated freight rail modifications, based on public and agency comments received on the Draft EIS. The project team also solicited feedback from the public, businesses, cities, Hennepin County, the state, and others during a series of public and advisory committee meetings and developed recommended adjustments to LRT 3A and LRT 3A-1.

This section provides an overview of the range of design adjustments to LRT 3A and LRT 3A-1 made by the Council after publication of the Draft EIS that could result in new significant impacts not addressed in the Draft EIS in the following three areas: the Eden Prairie Segment (Section 2.3.1), the proposed Hopkins OMF (Section 2.3.2), and the St. Louis Park/Minneapolis Segment (Section 2.3.3). This section also includes summaries of the evaluation measures considered by the Council when it identified the design adjustments to LRT 3A and LRT 3A-1. Section 2.4 of this Supplemental Draft EIS provides a general description of the process used by the Council to identify its adjustments to LRT 3A and LRT 3A-1, which included various participating agencies, committees, and public review and comment. Chapter 4 provides additional detail on the agency coordination and public involvement activities related to the LRT 3A and LRT 3A-1 design adjustment process. Section 2.5 of this Supplemental Draft EIS provides a definition of the LPA resulting from the design adjustment process, focusing on the Eden Prairie Segment, the Hopkins OMF site, and the St. Louis Park/Minneapolis Segment.

2.3.1 Eden Prairie Segment

This section provides a summary of the design adjustments to LRT 3A and LRT 3A-1 in the Eden Prairie Segment that were developed and evaluated after publication of the Draft EIS. This section first provides background information on the light rail and related improvements in the segment that were evaluated in the Draft EIS. Second, this section provides a description of the range of design adjustments to LRT 3A and LRT 3A-1 considered by the Council within the Eden Prairie Segment and how those potential design adjustments were evaluated.

2.3.1.1 Background

Four of the five light rail build alternatives evaluated in the Draft EIS (LRT 3A, LRT 3A-1, LRT 3C-1, and LRT 3C-2) included common proposed light rail and related improvements in Eden Prairie. Those alternatives, shown on Exhibit 2.2-1 and described in Section 2.2 of this Supplemental Draft EIS, included the following:

- **LRT Alignment:** The light rail alignment proposed within the Draft EIS within the Eden Prairie Segment extended east from a terminus just west of Mitchell Road, staying south of Highway 212 to the Southwest Station (cohabitated with the existing SouthWest Transit Center), and continuing east along Technology Drive to the intersection of Flying Cloud Drive and I-494.
- **LRT Stations:** The Draft EIS evaluated three proposed light rail stations in the Eden Prairie Segment, from west to east: (1) Mitchell Station, west of Mitchell Road and south of Highway 212, (2) Southwest Station, within the existing SouthWest Transit Center, and (3) Eden Prairie Town Center Station, on the south side of Technology Drive between Prairie Center and Flying Cloud drives.
- **LRT Park-and-ride Lots:** The Draft EIS proposed three park-and-ride lots within Eden Prairie: 400 surface and 400 structure spaces at Mitchell Station, 400 structured spaces at Southwest Station, and 650 structured spaces at Eden Prairie Town Center Station.

[8] See Section 2.4 of this Supplemental Draft EIS for a description of the design adjustment process and Section 2.5 for a description of the design adjustments evaluated within that process. Appendix F summarizes the process and measures used to evaluate the design adjustments described in Section 2.5.

During the Draft EIS public comment period, the City of Eden Prairie asked the Council to investigate the feasibility of a more centrally located and walkable Eden Prairie Town Center Station that would provide better opportunities for transit-oriented development and redevelopment. The City noted that a station within walking distance of the Eden Prairie Center (a regional shopping mall) would help meet the City's long-term economic development goals and provide higher ridership due to its proximity to concentrations of existing and future employment and commercial activity centers. For similar reasons, the City also asked the Council to evaluate a location for the Mitchell Station that would be located south along Technology Drive, somewhere between Mitchell and Wallace Roads, additionally noting that this location for a park-and-ride lot may be better positioned to intercept automobile traffic coming from the west.

2.3.1.2 Design Adjustments Considered in the Eden Prairie Segment

Project staff developed a wide range of design adjustments to LRT 3A and LRT 3A-1 intended to address comments received by the project from the City of Eden Prairie (see Section 2.5.1.1) and others on the Draft EIS, and to help avoid or minimize adverse impacts, increase transit ridership and reduce project costs, while meeting the project's Purpose and Need (see Chapter 1 of this Supplemental Draft EIS).

To meet those objectives, project staff implemented a three-step process for the Eden Prairie Segment to develop, evaluate, and receive stakeholder comment on a wide range of potential design adjustments to LRT 3A and LRT 3A-1. Further, the stepwise process included a series of meetings with project staff, City of Eden Prairie and Hennepin County staff, and other stakeholders. The process also included presentations to and input from the TPAC, CAC, and BAC and presentations to and recommendations from the CMC (see Section 2.4 and Chapter 4 of this Supplemental Draft EIS for additional detail). In addition, the process included public meetings and open houses for the public to receive information and comment on the various design adjustments under consideration. The results of the analysis within this three-step process, along with the committee recommendations and public comments received, informed the Council in April 2014 to identify the adjustments to this segment of LRT 3A and LRT 3A-1 that are evaluated further in this Supplemental Draft EIS.

A. First-Step Evaluation

In the first step of evaluating the alignment adjustment process, project staff developed, reviewed, and discussed a wide range of potential adjustments to LRT 3A and LRT 3A-1 with affected jurisdictions and the TPAC. The first step of evaluation divided the Eden Prairie Segment into four general subsegments, with each having between six and eight potential light rail alignment-related adjustments developed and evaluated (see Exhibit 2.3-1):[9]

- The western terminus to Prairie Center Drive (with eight potential adjustments)
- Prairie Center Drive between Southwest Station and Singletree Lane (with six potential adjustments)
- Prairie Center Drive to I-494 (with seven potential adjustments)
- East of I-494 (with six potential adjustments)

This range of design adjustments included consideration of an OMF site in part on the City of Eden Prairie's existing maintenance facility garage site, which is located along Technology Drive west of Mitchell Road. Some configurations of potential adjustments would have combined the OMF site in Eden Prairie with the Mitchell Station and park-and-ride lot.

During the first step of evaluation, the potential alignment adjustments were analyzed for possible impacts to right-of-way, automobile and truck traffic, on- and off-street parking supply, and wetlands and other environmental resources. This initial analysis focused on adjustments to the proposed light rail alignment, station locations, and park-and-ride lots. As a result of the first step of analysis, between three and five alignment adjustments within each subsegment advanced into the second step of the evaluation.

[9] Some potential design adjustments spanned two or more subsegments, while others were confined to one subsegment. The proposed light rail alignment and stations for the LPA as evaluated in LRT 3A and LRT 3A-1 of the Draft EIS were included and evaluated within each of the four subsegments and are accounted for within the number of adjustments in each subsegment.

EXHIBIT 2.3-1
Step 1 and 2 Subsegments and Design Adjustments Considered, Eden Prairie Segment

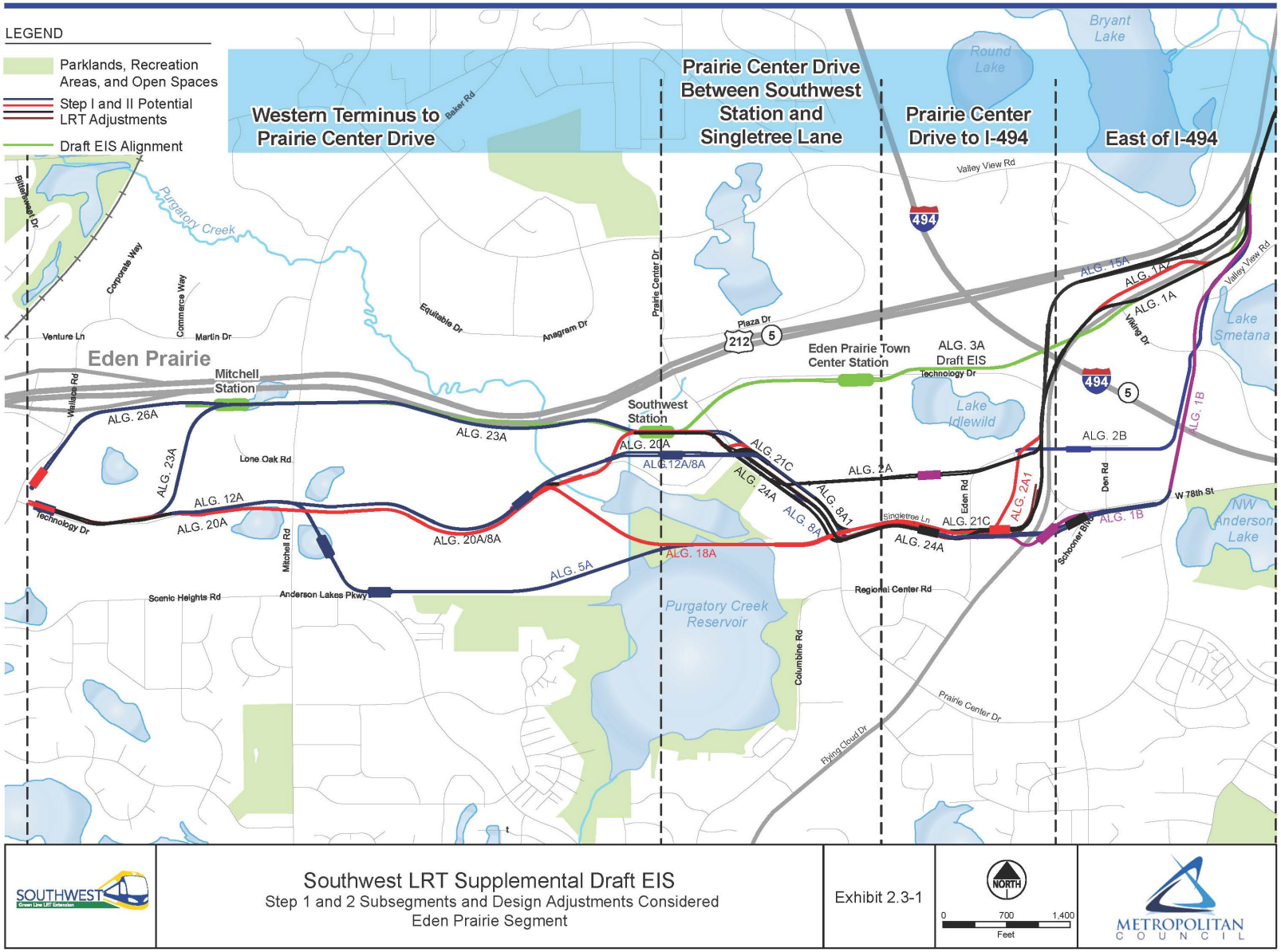


Table F.3-3 in Appendix F provides a summary of the measures used to evaluate the potential first step of adjustments to LRT 3A and LRT 3A-1. Table 2.3-1 notes which design adjustments were advanced into the second step for additional evaluation.

TABLE 2.3-1
Eden Prairie Steps 1 and 2 Subsegments and Design Adjustments Considered

Subsegment[a]/Adjustment #	First Step	Second Step	Third Step Name (Supplemental Draft EIS Status)
Western Terminus to Prairie Center Drive			
3A	Retained	Dismissed	
12A	Dismissed		
5A	Dismissed		
20A	Retained	Retained	Technology Drive (retained)
18A	Dismissed		
8A	Dismissed		
23A	Retained	Retained	Highway 212 (dismissed)
26A	Retained	Dismissed	
Prairie Center Drive between Southwest Station and Singletree Lane			
3A	Retained	Dismissed	
24A	Retained	Retained	Singletree Lane[b] (dismissed)
21C	Dismissed		
2A	Retained	Retained	Comprehensive Plan[b] (retained)
8A	Retained	Dismissed	
8A1	Retained	Dismissed	
Prairie Center Drive to I-494			
3A	Retained	Dismissed	
2A	Retained	Retained	Comprehensive Plan[b] (retained)
21C	Dismissed		
24A	Retained	Retained	Singletree Lane[b] (dismissed)
1B	Dismissed		
2A1	Dismissed		
2B	Dismissed		
East of I-494			
3A	Retained	Dismissed	
1A	Retained	Dismissed	
1A2	Retained	Retained	Retained
1B	Dismissed		
2B	Dismissed		
15A	Dismissed		

[a] The Steps 1 and 2 Western Terminus to Prairie Center Drive subsegment is equivalent to the Step 3 West subsegment. The other Steps 1 and 2 subsegments are equivalent to the Step 3 East subsegment.

[b] Steps 1 and 2 adjustments 2A and 24A in the Prairie Center Drive and Prairie Center Drive to I-494 subsegments were combined to form the Step 3 Comprehensive Plan and Singletree Lane alignment adjustments, respectively.

Source: The Council, January 2014. See Exhibit 2.3-1 for an illustration of the design adjustments referenced in this table.

B. Second-Step Evaluation

The second step of evaluating alignment adjustments in the Eden Prairie Segment included an in-depth traffic investigation, an assessment of property acquisitions and on- and off-street parking displacements, and input from local businesses and the public. Based on the second step of analysis and evaluation, the project team identified four proposed alignment adjustments in the Eden Prairie Segment to be further considered in the third step of evaluation. Table F.3-4 in Appendix F provides a summary of the measures used to evaluate the potential second-step adjustments to LRT 3A and LRT 3A-1, noting the four design adjustments that were advanced into the third step for additional evaluation.

C. Third-Step Evaluation

For the third step of analysis, the Eden Prairie Segment was divided into two subsegments that were different from the subsegments used in the first two steps: West (west of the existing SouthWest Transit Center) and East (east of the existing SouthWest Transit Center). Two potential alignment adjustments were evaluated in each of the two subsegments. Either West alignment could be paired with either East adjustment (resulting in four possible combinations): Technology Drive and Highway 212 alignment adjustments in the West subsegment and the Singletree Lane and Comprehensive Plan alignments in the East subsegment, shown on Exhibit 2.3-2. Each alignment adjustment had two or more variations, addressing possible station locations, roadway treatments, park-and-ride lot locations, and accommodation of an OMF. None of the third-step alignment adjustments was evaluated in the Draft EIS, although the proposed location of the Southwest Station would be in a similar location as proposed in the Draft EIS and in the third step of design adjustments. The third step of evaluation addressed a range of measures related to cost, transit travel times and ridership, wetland, floodplain, existing land use near proposed station areas, and various other measures.

D. Conclusion

Table F.3-5 in Appendix F provides a summary of the criteria and measures used to evaluate the potential third step of adjustments to LRT 3A and LRT 3A-1. Based on the analysis summarized in this section and documented in Appendix F and through the agency coordination and public involvement process described in Section 2.4, the Council identified the following adjustments to be incorporated into LRT 3A and LRT 3A-1:

- Combined with both the Comprehensive Plan and Singletree Lane alignments. Retaining the Technology Drive alignment in the West subsegment, which moves the western terminus station from immediately south of Highway 212 west of Mitchell Road to immediately south of Technology Drive west of Mitchell Road
- Retain the Comprehensive Plan alignment adjustment in the East subsegment and dismissing the Singletree Lane alignment adjustment

In summary, in the West subsegment, the Technology Drive alignment would provide better placement of the Mitchell Station relative to existing and planned development. In the East subsegment, relative to the Singletree alignment, the Comprehensive Plan alignment adjustment would result in fewer potential traffic conflicts and fewer property acquisitions and business displacements.

LRT 3A and LRT 3A-1, as evaluated in this Supplemental Draft EIS, reflects the inclusion of the project's western terminus at Mitchell Station by way of Technology Drive and the Comprehensive Plan alignment (see Section 2.5.1 and Exhibit 2.5-2). Other potential design adjustments developed and evaluated in this section were removed from further study.

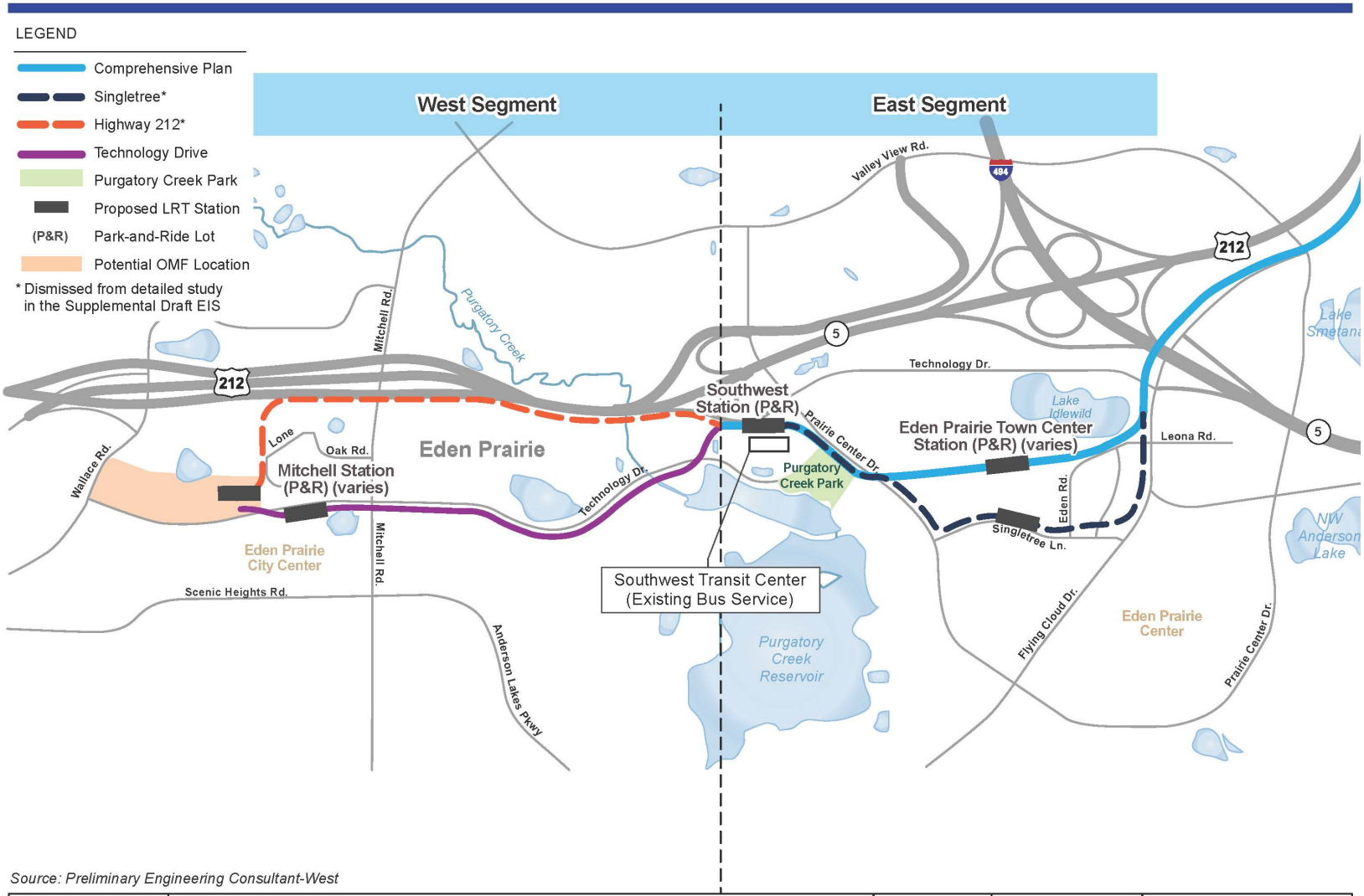
2.3.2 Operations and Maintenance Facility Location

This section provides a summary of the range of potential OMF sites that were developed and evaluated after publication of the Draft EIS. This section first provides background information on OMF sites that were addressed for the Draft EIS and provides a description of the wide range of OMF sites considered after the Draft EIS and how those potential OMF sites were evaluated. The *Draft Operations and Maintenance Facility Site Selection TI # 23* (AECOM/Kimley-Horn and Associates, 2013) provides additional detail on the evaluation of OMF sites that occurred following the Draft EIS.

2.3.2.1 Background

As noted in the Draft EIS, the light rail alternatives would need an OMF for light vehicle maintenance, running repairs for the light rail vehicles, and storage of vehicles not in service. In general, light rail vehicles would be cleaned and repaired daily inside and outside, and the vehicles would be inspected and serviced to ensure operational safety and reliability. Features and functions needed at the OMF are identified in Section 2.3.3.9 of the Draft EIS. The OMF would be designed and configured to store 30 light rail vehicles, sufficient to support Southwest LRT operations. Positioning an OMF in an efficient location along the

EXHIBIT 2.3-2
Third Step LRT Alignment Adjustments Evaluated in the Supplemental Draft EIS, Eden Prairie Segment



Source: Preliminary Engineering Consultant-West

SOUTHWEST	Southwest LRT Supplemental Draft EIS Third Step LRT Alignment Adjustments Evaluated in the Supplemental Draft EIS Eden Prairie Segment	Exhibit 2.3-2	NORTH 0 680 1,360 Feet	METROPOLITAN COUNCIL

proposed rail line is important in minimizing nonrevenue mileage traveled by trains, providing operator access, and providing for adjustments to train lengths during different periods of the day.

The following OMF site characteristics were used in the Draft EIS evaluation (see Appendix H of the Draft EIS):

- Approximately 10- to 15-acre site to store at least 30 light rail vehicles, with the ability to expand to accommodate up to 36 vehicles, and to conduct maintenance activities
- Rectangular shape, generally three times longer than wide
- Ability to move trains into and out of both ends of the facility
- Adjacent to a straight and relatively flat section (a grade equal to or less than 1 percent) of mainline track to accommodate turnouts and crossovers
- Good roadway access for equipment and employees

In addition, the Draft EIS identified the following preferred characteristics of an OMF:

- Compatibility with adjacent current and planned land uses
- Land zoned industrial, light industrial, or both
- Undeveloped property to minimize acquisition and relocation costs
- Public land
- Preferred location near one end of line to minimize deadheading of empty vehicles

The Draft EIS identified 14 sites that satisfied the project's requirements for an OMF. Of those 14 sites, four were carried forward into the Draft EIS for more detailed study. Appendix H (Part 1) of the Draft EIS summarizes the evaluation of the 14 OMF sites and the identification of four sites for inclusion in the Draft EIS. Section 2.3.3.9 of the Draft EIS contains brief descriptions of the four sites evaluated; these sites are numbered west to east in this Supplemental Draft EIS: EP-1, EP-2, EP-3, and M-4. The locations of these four potential sites are illustrated on Exhibit 2.3-3. The Draft EIS did not identify a preferred OMF site.

2.3.2.2 Operations and Maintenance Facility Sites Considered after Publication of the Draft Environmental Impact Statement

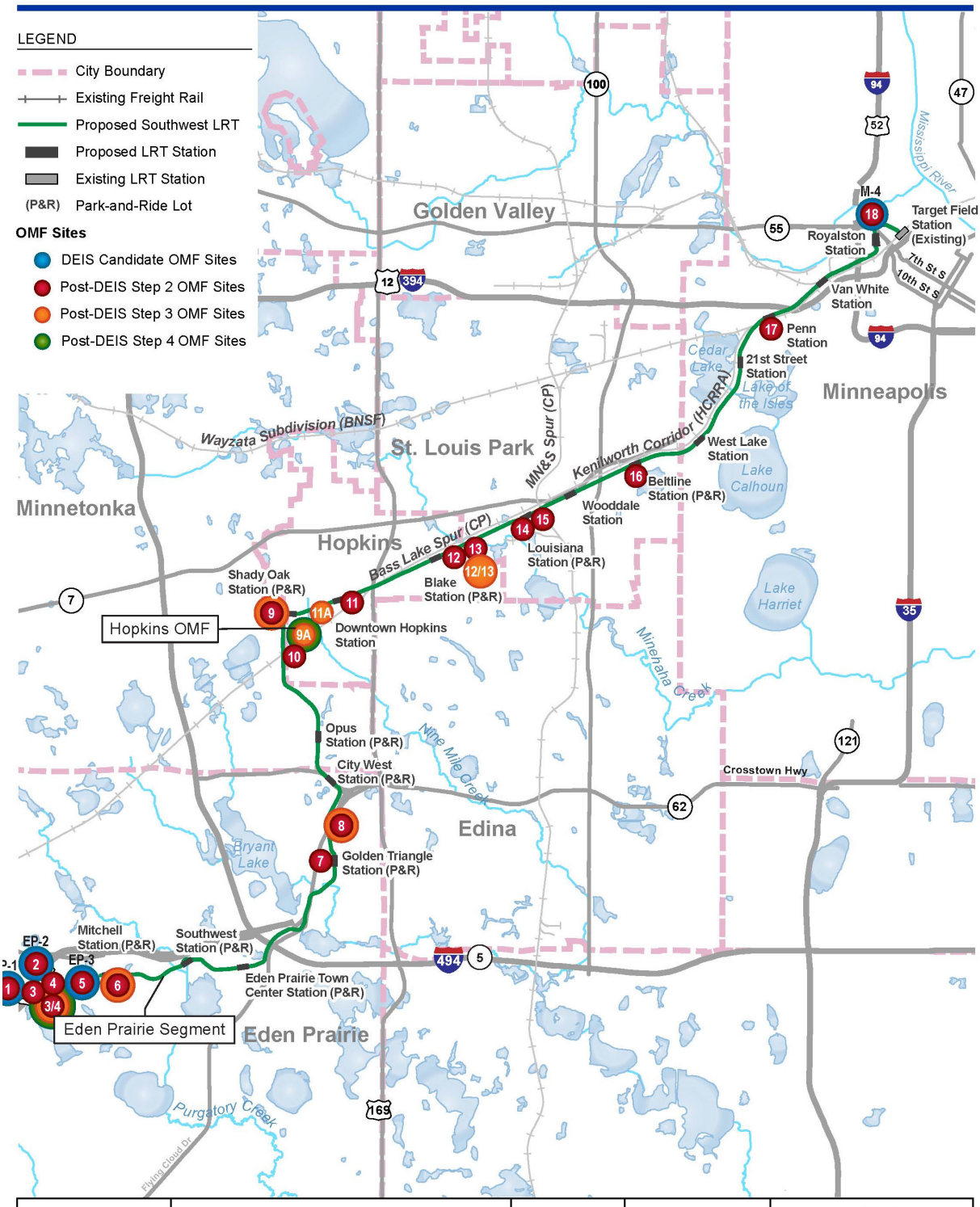
Following publication of the Draft EIS, the Council determined that selecting the proposed project's OMF site—one that accommodates its functional and spatial needs and is compatible with surrounding uses—would require additional site identification and evaluation to build upon and complement the studies conducted during the Draft EIS phase.

The project team used a four-step process to identify and evaluate the expanded range of OMF sites. The process entailed the following steps of development and evaluation:

- **First-Step Evaluation.** A preliminary site evaluation, narrowing potential sites from approximately 30 to 18.
- **Second-Step Evaluation.** A detailed assessment based on 13 criteria, narrowing from 18 to seven OMF sites.
- **Third-Step Evaluation.** An operational analysis and public and jurisdiction review and input, narrowing from seven to two sites.
- **Fourth-Step Evaluation.** A detailed assessment and public and jurisdictional review of two sites.

Throughout the OMF development and evaluation process, the project team coordinated with the project's business, community, and technical committees and with the general public to obtain a wide range of stakeholder views on the OMF sites (see Section 2.4 and Chapter 4 for additional detail). Exhibit 2.3-3 illustrates the potential OMF sites evaluated through this four-step process.

EXHIBIT 2.3-3
OMF Sites Considered



A. First-Step Evaluation

As the first step in expanding upon the OMF site search conducted for the Draft EIS, the project team conducted a preliminary site identification process. Within that process, project staff reviewed aerial photographs to understand land use patterns, parcels, the physical context, and potential environmental concerns for parcels adjacent to the proposed light rail alignments. This desktop analysis was followed by field surveys to examine candidate locations based upon parcel proximity to the proposed light rail alignment and available parcel size. As a result of this analysis, the project team identified approximately 30 first-step sites that warranted more detailed review and evaluation, including the four sites evaluated in the Draft EIS.

Concurrent with the preliminary site identification process, the project team worked with Metro Transit rail operations staff to develop a Space Needs Program for the OMFs. The Space Needs Program, which established the approximate size of the OMF building needed to accommodate its major functions (rail operations, materials management, rail maintenance, and facilities maintenance), served as the foundation for the project team to develop the initial site selection criteria. The criteria used during the first-step evaluation were similar to those used for the Draft EIS, as follows:

- Site of 10 to 15 acres
- Regular geometric parcel shape and flat
- Efficient light rail train movement to and from the site
- Good roadway access to the site
- Compatible with adjacent land use

The first step of evaluation resulted in identification of 18 candidate sites to be developed and evaluated further in the second step, which included portions of the sites studied in the Draft EIS. The first-step sites are numbered sequentially west to east, as sites 1 to 18, and their general locations are illustrated on Exhibit 2.3-3. Site EP-1 became site 1; a portion of EP-2 is included in site 2; a portion of EP-3 became site 5; and M-4 became site 18. The measures used to evaluate the first-step OMF sites are summarized in Table F.4-1 in Appendix F. The process used to identify the 18 sites and the evaluation criteria were shared with the TPAC, CAC, BAC, CMC, and Metro Transit operations and maintenance staff for their review and input.

B. Second-Step Evaluation

To further evaluate the 18 second-step candidate sites, more detailed evaluation criteria were developed addressing four operational characteristics and nine site characteristics, listed in Table 2.3-2. As part of the second step of evaluation, the project team visited each site; reviewed community comprehensive plans, zoning codes, and county property records; and obtained information about onsite soils and subsurface conditions. Based on this research, the project team and Metro Transit staff used the criteria to qualitatively rate the second-step candidate sites. The evaluation of the sites was reviewed with corridor jurisdictions through the TPAC, CAC, BAC, and CMC.

Initially, the 18 second-step sites were narrowed to seven sites based on the 13 criteria listed in Table 2.3-2 and the evaluation measures included in Table F.4-2 in Appendix F. Members of the project team met with staff from the Cities of Eden Prairie, Minnetonka, Hopkins, and St. Louis Park to discuss the OMF evaluation process and the seven most highly rated sites.

In April 2013, the seven OMF sites were presented to TPAC, which includes the staff from cities along the proposed light rail alignment. TPAC representatives from Hopkins and Minnetonka requested the project team evaluate two additional OMF sites that were not previously evaluated: 9A and 11A, both in Hopkins, bringing the number of OMF sites under consideration to nine. The project team evaluated the two sites proposed using the criteria outlined in Table 2.3-2, and both sites ranked as high as the seven other remaining sites. Based upon more detailed analysis, the project team then combined sites 3 and 4, as well as sites 12 and 13, to better meet OMF spatial requirements and to provide more area for buffering at the edges of the site, bringing the number of sites back to seven.

TABLE 2.3-2
Operational and Site Criteria Used to Evaluate the Second-Step Operations and Maintenance Facility Sites

Criterion	Description
1. Site Configuration	OMF site's usable size and geometric characteristics with regards to its ability to accommodate buildings and trackage for optimum yard operational efficiency.
2. Alignment Proximity/Connectivity	OMF site's physical distance and operational interface to the proposed LRT mainline.
3. Alignment Location	OMF site's geometric relationship to the proposed LRT mainline and its impact on rail system operational efficiency.
4. Site Access	Ease of extending local and regional roadway access.
5. Neighborhood Compatibility	Site edge conditions and their sensitivity to OMF functions and operations.
6. Transit-oriented Development/ Mixed-use Impact/Economic Development	Minimize impact by OMF layout on transit-oriented development, mixed-use opportunities, and future use consistent with the goals of the Southwest LRT Project.
7. Zoning/Land Use	Compatibility of OMF's industrial use with existing land use guiding and zoning designation.
8. Site and Facilities Cost	Cost and schedule implications of site preparation (grading, geotechnical, demolition, remediation, utilities) for required OMF buildings and trackage.
9. Real Estate Acquisition	Cost and ease of acquiring OMF site parcels.
10. Relocation Cost	Cost and ease of relocating existing uses as a part of site acquisition.
11. Environmental Impact	Ease in addressing mitigation measures related to wetlands, woodlands, and contamination.
12. Cultural Resources	Ease in addressing mitigation measures related to historical and cultural resources.
13. Stormwater Management	Ease of meeting requirements and provisions needed to meet stormwater permitting.

C. Third-Step Evaluation

The project team prepared conceptual layout plans for each of the seven third-step OMF sites listed in Table 2.3-3. The conceptual plans also examined the relationship to adjacent edges, setbacks, environmentally sensitive areas, and remnant space within the OMF site available for redevelopment. The project team presented the seven OMF sites at three public open houses on May 13 (Eden Prairie), May 15 (St. Louis Park), and May 22, 2013 (Hopkins/Minnetonka).

TABLE 2.3-3
Third-Step Sites for the Operations and Maintenance Facility

Site Number	Name (City)
3/4	City Garage West/East (Eden Prairie)
6	Mitchell East (Eden Prairie)
8	Shady Oak/Flying Cloud (Eden Prairie)
9	K-Tel (Minnetonka)
9A	K-Tel East (Hopkins)
11A	Eleventh Avenue West (Hopkins)
12/13	Excelsior West/East (Hopkins/St. Louis Park)

Within the third step of evaluation, the project team analyzed the operational performance of the seven remaining OMF sites in greater detail based on conceptual site layouts, compliance with current land use planning and zoning, preliminary costing, and a preliminary assessment of potential environmental impacts. Based on the evaluation of the seven third-step sites (Table F.4-3 in Appendix F) and on public and committee input discussed in Chapter 4, the project team identified OMF sites 3/4 (Eden Prairie) and 9A (Hopkins) for further detailed consideration. In summary, these two potential OMF sites had the least conflict with either existing or adjacent land uses and planned development. A few sites were eliminated due to environmental factors, limitations in operations, and higher costs of construction elements. Still other sites posed potential conflict with transit-oriented development due to existing land uses adjacent to proposed light rail stations.

D. Fourth-Step Evaluation

The project's fourth step of evaluation of potential OMF sites focused on two potential sites: Site 3/4 in Eden Prairie and Site 9A in Hopkins.

Eden Prairie Site 3/4

The Eden Prairie 3/4 site is an approximately 20-acre parcel between Technology Drive on the south, Highway 5 on the north, Mitchell Road on the east, and Wallace Road to the west (see Exhibit 2.3-3). Wallace Road and Mitchell Road would provide regional access from Highway 5. The proposed OMF site would be comprised of four parcels. On the east half of the site, a large wetland abuts a building owned by the Eaton Corporation. The west half of the site includes the city's maintenance facility, and the northeast quadrant at the intersection of Wallace Road and Technology is leased by Metro Machine & Engineering. The project team considered three conceptual site layouts for the Eden Prairie OMF, because two light rail alignment adjustments and three different access possibilities were also under consideration in the Eden Prairie Segment. Exhibits F-4 to F-6 in Appendix F illustrate the three conceptual site layouts for the Eden Prairie OMF.

Hopkins Site 9A

The Hopkins 9A site is an approximately 15-acre parcel between the CP Railroad on the south, 5th Street South (K-Tel Drive) on the north, 15th Avenue South on the east, and the proposed LRT mainline on the west (see Exhibit 2.5-3). Sixteenth Avenue South runs through the middle of the site and connects to 15th Avenue South via 6th Street South. Regional access would be provided by 5th Street, 11th Avenue, Excelsior Boulevard to the north, and Highway 169 to the east. Two small constructed ponds and surrounding wetlands are located at the south end of the site adjacent to the railroad. The Hopkins OMF site would be located about 1,000 feet south of the proposed Shady Oak Station and closely adjacent to the proposed light rail alignment, about midway between downtown Minneapolis and Eden Prairie.

The OMF 9A site would be comprised from eight parcels: one undeveloped lot and seven properties with office/warehouse uses or light manufacturing and assembly. Development on parcels adjacent to the Hopkins site includes office/industrial to the north, the Hopkins landfill south of the CP tracks, office/industrial/distribution to the east across 15th Avenue, and industrial/distribution to the west beyond the proposed LRT mainline.

The development of conceptual layout plans led to one layout design for the Hopkins OMF site due to the shape and parcels, as well as its connection to the adjacent proposed light rail alignment. Fifth Street and 15th Avenue would remain in place, and access from the OMF to the LRT mainline would occur at 5th Street. Under the conceptual layout design, the proposed OMF would be located along the west edge of the site adjacent to the proposed light rail mainline. As a result of that layout, there would likely be a portion of the site to the east that would remain unused as part of the OMF. Because the eastern side of the site has relatively few buildings and other improvements, if there were any excess property remaining after construction that the Council and the FTA chose to dispose of, this land could potentially accommodate new industrial development (see Section 3.1.2.2 of this Supplemental Draft EIS for additional information on how the project could address the disposition of unused portions of parcels acquired by the project).

E. Conclusion

Based on the analysis summarized in Section 2.3.2.2.D and Table F.4-4 in Appendix F, and through the process described in Sections 2.4 and this section, the Council identified the Hopkins OMF 9A as the OMF to be incorporated into the project. A key advantage of the Hopkins OMF is the improved out-of-service operations and operating cost savings due to its relatively central location on the proposed light rail line (about midway between downtown Minneapolis and Eden Prairie), compared to the Eden Prairie OMF 3/4, which would be located west of the light rail line's western terminus.

The LPA, as evaluated in this Supplemental Draft EIS, reflects the inclusion of the Hopkins OMF 9A. Other potential OMF sites developed and evaluated in this section were dismissed from further study.

2.3.3 St. Louis Park/Minneapolis Segment

This section provides a summary of the design adjustments to LRT 3A and LRT 3A-1 in the St. Louis Park/Minneapolis Segment that were developed and evaluated after publication of the Draft EIS. Section 2.3.3.1 provides background information on the light rail-related improvements and freight rail modifications in the segment, which were addressed in the Draft EIS. Section 2.3.3.2 provides a description of the range of design adjustments to the project considered by the Council within the St. Louis Park/ Minneapolis Segment and a summary of how those potential design adjustments were evaluated.

2.3.3.1 Background

As previously noted, the Draft EIS evaluated two alternatives that combined the LPA and freight rail modifications in the area within the St. Louis Park/Minneapolis Segment: LRT 3A and LRT 3A-1. As defined in the Draft EIS, both LRT 3A and LRT 3A-1 encompass the LPA, which includes a proposed light rail alignment, stations, park-and-ride lots, and related roadway, bicycle, and pedestrian improvements. As defined in the Draft EIS, the primary difference between LRT 3A and LRT 3A-1 is how freight rail modifications would be incorporated into the LPA.

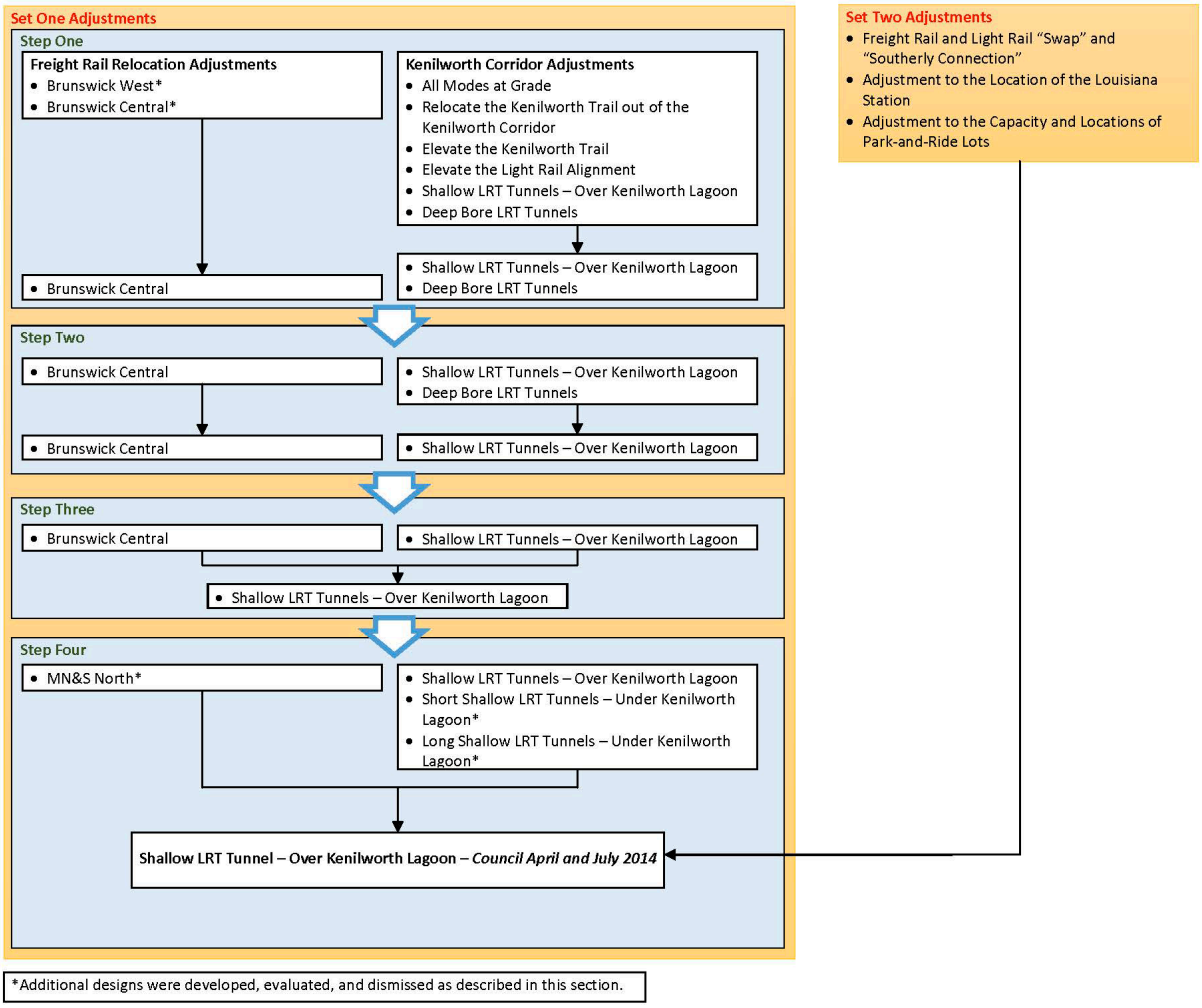
Following is a brief summary of the common proposed light rail-related improvements and differing freight rail modifications included in the Draft EIS under LRT 3A and LRT 3A-1. Sections 2.2.1.3 and 2.2.3 of the Draft EIS provide additional information.

- **Light Rail-Related Improvements.** Within the Draft EIS, LRT 3A and LRT 3A-1 included a proposed light rail alignment, stations, park-and-ride lots, and related roadway, bicycle, and pedestrian improvements. Those improvements are described in Section 2.3 of the Draft EIS under LRT 3A and LRT 3A-1 and are summarized in Section 2.2 of this Supplemental Draft EIS. The Draft EIS LPA in the St. Louis Park/Minneapolis Segment included six light rail stations and six surface park-and-ride lots, with a total capacity of 650 spaces, as summarized in Table 2.5-1 and illustrated on Exhibit 2.2-1. In general under LRT 3A, the light rail alignment would have been located primarily at-grade, north of the existing freight rail alignment and trail for the section west of the Kenilworth Corridor and north of the trail in the Kenilworth Corridor, with freight rail relocated to the MN&S Spur and Wayzata Subdivision in St. Louis Park and removed east of the MN&S Spur. Under LRT 3A-1, the light rail alignment would be located in the same location west of the MN&S Spur, with a light rail bridge over the freight tracks between the MN&S Spur and Wooddale Station, which would locate the light rail tracks south of the freight rail tracks. Within the Kenilworth Corridor, light rail would be located primarily at-grade south of the existing freight rail alignment and north of the existing trail. The trail would be located south of the light rail line, east of Wooddale Avenue South.
- **Freight Rail-Related Improvements.** The Draft EIS evaluated two ways in which freight rail modifications would be incorporated into the LPA. Under LRT 3A, TC&W freight trains currently operating along the Kenilworth Corridor would be rerouted to the MN&S Spur and Wayzata Subdivisions; or, under LRT 3A-1, the TC&W freight trains would continue to operate along the Bass Lake Spur and Kenilworth Corridor. LRT 3A and LRT 3A-1 are also referred to in the Draft EIS as “relocation” and “co-location,” respectively, and are shown on Exhibit 2.2-1.

2.3.3.2 Design Adjustments Considered in the St. Louis Park/Minneapolis Segment

After the Draft EIS public comment period, the development and evaluation of adjustments to LRT 3A and LRT 3A-1 in the St. Louis Park/Minneapolis Segment was undertaken by the Council. That process is briefly described in Section 2.3 and 2.4 of this Supplemental Draft EIS. The following figure illustrates how that process was applied to the St. Louis Park/Minneapolis Segment, noting the design adjustments developed and evaluated during the process.

St. Louis Park/Minneapolis Segment Design Adjustment Process and Adjustments Considered

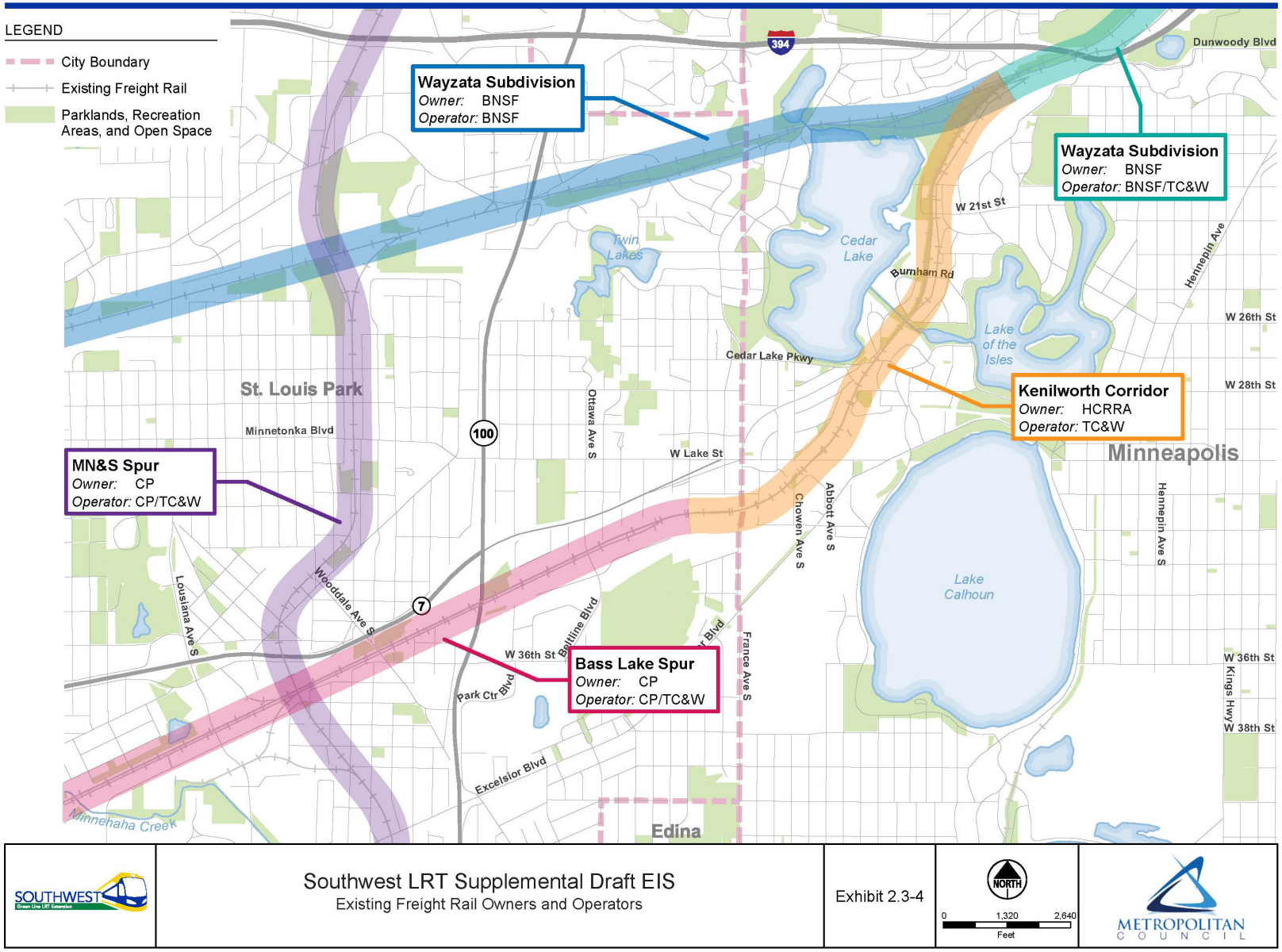


In this segment, the project team developed and evaluated two sets of potential adjustments to LRT 3A and LRT 3A-1:

- **Set 1 Adjustments.** The first set of potential adjustments for the St. Louis Park/Minneapolis Segment focused on the question of whether the project should include: (1) the relocation of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor to sections of the MN&S Spur and Wayzata Subdivision (LRT 3A); or (2) the continued operation of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor (LRT 3A-1). See Exhibit 2.3-4 for an illustration of the freight rail owners and operators within the project vicinity.
- **Set 2 Adjustments.** The second set of potential adjustments for the St. Louis Park/Minneapolis Segment focused on other potential adjustments to light rail-related improvements that would occur throughout the segment, which would affect freight rail modifications but would not entail relocation of freight rail service outside of the Kenilworth Corridor.

The project team closely coordinated the development and evaluation of these two sets of potential adjustments to LRT 3A and LRT 3A-1 in the St. Louis Park/Minneapolis Segment. The resulting design adjustments and freight rail modifications identified by the Council in April 2014 and July 2014 reflect a unified set of adjustments to the project, as described in Section 2.5 of this Supplemental Draft EIS. That unified set of adjustments forms the basis for the evaluation of potential environmental impacts addressed in Chapter 3 of this Supplemental Draft EIS.

EXHIBIT 2.3-4
Existing Freight Rail Owners and Operators



A. Set 1 Design Adjustments

After the close of the Draft EIS public comment period, the Council undertook a four-step process to develop and evaluate Set 1 Adjustments to LRT 3A and LRT 3A-1 directly related to the following: (1) whether TC&W freight trains currently operating along the Kenilworth Corridor should be rerouted to sections of the MN&S Spur and Wayzata Subdivision (termed "freight rail relocation adjustments"); or (2) whether the TC&W freight trains should continue to operate along the Bass Lake Spur and Kenilworth Corridor as they currently do (termed "Kenilworth Corridor adjustments").

The following four steps were used for evaluation of the Set 1 Adjustments (this section provides a more detailed description of each of these steps, and Appendix F of this Supplemental Draft EIS provides a description of the evaluation process and measures used by the project throughout the four-step process):

- **First-Step Evaluation.** The development of a relatively wide range of adjustments to the light rail improvements and freight rail-related modifications under the two freight rail operating scenarios, focusing on meeting key design parameters, while avoiding or minimizing adverse impacts and minimizing project costs. The resulting adjustments were then presented to the public, stakeholders and participating agencies for review and comment. Based on comments received from the public, stakeholders, and participating agencies and on the evaluation measures summarized in Tables F.5-3 and F.5-4 in Appendix F of this Supplemental Draft EIS, the design adjustments were narrowed to one freight rail relocation and two Kenilworth Corridor adjustments.
- **Second-Step Evaluation.** A detailed analysis of the potential adjustments identified in the first-step evaluation, narrowing to one design adjustment under each of the two freight rail operating scenarios. This evaluation included public and agency review of and comment on the second-step findings (see Table F.5-5 of Appendix F of this Supplemental Draft EIS for a summary of the Second-Step evaluation measures).
- **Third-Step Evaluation.** Refinement of the two second-step design adjustments, addressing public and agency comments, followed by a detailed assessment of the tradeoffs between the two potential adjustments remaining after the second-step evaluation, and identification of one design adjustment to advance into the fourth-step evaluation (see Table F.5-6 of Appendix F of this Supplemental Draft EIS for a summary of the Third-Step evaluation measures).
- **Fourth-Step Evaluation.** The Fourth Step evaluation consisted of three components:
  - An independent engineering analysis that (1) evaluated potential freight rail relocation adjustments that were developed or identified in prior studies and (2) developed and evaluated a new design adjustment that would relocate existing freight rail service from the Kenilworth Corridor (this new design adjustment (MN&S North) was compared to the freight rail relocation design adjustment (Brunswick Central) advanced from the third-step evaluation)
  - The development and evaluation of two variations of the design adjustment advanced from the third-step evaluation (these two new designs (Short Shallow LRT Tunnel – Under Kenilworth Lagoon and Long Shallow LRT Tunnel – Under Kenilworth Lagoon), suggested by a local jurisdiction, were compared to the design adjustment advanced from the third-step evaluation)
  - Identification by the Council of design adjustments incorporated into LRT 3A-1 to reduce capital costs (by eliminating the northern of two proposed tunnels in the Kenilworth Corridor) and to incorporate a variety of bicycle and pedestrian improvements.

Table 2.3-4 identifies the design adjustments developed and evaluated within each of the four steps, including identification of their status at the completion of each step. Following is a more detailed description of each step and the design adjustments developed and evaluated within each step.

TABLE 2.3-4
Set 1 Design Adjustments Developed and Evaluated in the St. Louis Park/Minneapolis Segment, by Step

Step	Adjustment Type	Design Adjustments	Status[a]
1	Freight Rail Relocation	Brunswick West	Dismissed
		Brunswick Central	Retained
	Kenilworth Corridor	All Modes at-grade	Dismissed
		Relocate the Kenilworth Trail out of the Kenilworth Corridor	Dismissed
		Elevate the Kenilworth Trail	Dismissed
		Elevate the Light Rail Alignment	Dismissed
		Shallow LRT Tunnels – Over Kenilworth Lagoon[b]	Retained
		Deep Bore LRT Tunnels	Retained
2	Freight Rail Relocation	Brunswick Central	Retained
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[b]	Retained
		Deep Bore LRT Tunnels	Dismissed
3	Freight Rail Relocation	Brunswick Central	Dismissed
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[b]	Retained
4	Freight Rail Relocation	MN&S North[c]	Dismissed
	Kenilworth Corridor	Shallow LRT Tunnels – Over Kenilworth Lagoon[b]	Retained[d]
		Short Shallow LRT Tunnel – Under Kenilworth Lagoon[e]	Dismissed
		Long Shallow LRT Tunnel – Under Kenilworth Lagoon[e]	Dismissed

[a] Status as of completion of the step.

[b] The shallow tunnels would be constructed using a cut-and-cover technique.

[c] The MN&S North design adjustment was developed and evaluated as an element of the independent engineering analysis.

[d] The Shallow LRT Tunnels – Over Kenilworth Lagoon option, which included two proposed light rail tunnels (one south and one north of the Kenilworth Lagoon), was modified by the Council on July 9, 2014, to eliminate the northern light rail tunnel and to make other related design modifications.

[e] In February 2014, the Minneapolis Parks and Recreation Board requested that the Council evaluate a design adjustment that would connect the two Shallow LRT Tunnels with a cut-and-cover constructed tunnel segment under the Kenilworth Lagoon, rather than a bridge over the lagoon. In response, the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments were developed and evaluated as a part of the fourth-step of evaluation (see Appendix F for additional detail). In addition, project staff developed variations of the Short and Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments to determine if the northern and southern cut-and-cover LRT tunnel segments could be connected under the Kenilworth Lagoon via a bored tunnel segment, rather than via a cut-and-cover constructed tunnel segment. In effect, these variations would be a combination of two cut-and-cover-constructed tunnel segments connected with a bored-constructed tunnel segment under the Kenilworth Lagoon. These two combination variations were dismissed from further study due to: complex construction considerations inherent in utilizing two tunnel construction techniques within a constrained physical environment; additional schedule delays related to mobilizing the two tunnel construction techniques; substantially higher capital costs relative to other design adjustments under consideration; potential additional property acquisitions that could be required to accommodate a southern bored-tunnel staging area; and reconstruction of the existing freight rail and trail bridges across the lagoon and the related adverse impacts during construction would not be avoided.

First-Step Evaluation

The first-step evaluation process for the Set 1 Design Adjustments in the St. Louis Park/Minneapolis Segment included the development and analysis of potential adjustments to both the existing freight rail lines and/or to the proposed light rail alignment and related improvements. However, the range of adjustments from the two efforts differ substantially: (1) the freight rail relocation adjustments focus almost exclusively on changes to the proposed freight rail alignment; and (2) the Kenilworth Corridor adjustments primarily focus on potential changes to the proposed light rail improvements within the Kenilworth Corridor. In addition to ensuring that the project continues to meet its Purpose and Need, as outlined in Chapter 1 of this Supplemental Draft EIS, both of these efforts had the same overall objectives: (1) develop potential adjustments that meet the current freight rail operator's operational and safety requirements; (2) minimize adverse impacts to the project's surrounding environment, including avoiding or minimizing property acquisitions; and (3) minimize capital and operating costs.

The design adjustment process for the Set 1 Adjustments also included discussions with the affected railroad companies, including an examination of their existing operations and an assessment of freight rail alignment conditions between the Highway 169/Highway 62 interchange in the west to Cedar Lake Junction in the east.

The potential freight rail relocation adjustments developed and considered involved a range of significant changes to the freight rail modifications envisioned under LRT 3A (as described in Section 2.3.3 of the Draft EIS). The design adjustments developed primarily focused on changes to the potential freight rail connection between the Bass Lake and MN&S spurs and, to a lesser degree, to the potential freight rail connection between the MN&S Spur and the Wayzata Subdivision.

Conversely, the Kenilworth Corridor adjustments developed focused primarily on the development and evaluation of a range of significant changes to the proposed light rail alignment within the Kenilworth Corridor, compared to those proposed under LRT 3A-1 of the Draft EIS.

The first step of the evaluation process for Set 1 Adjustments resulted in the development and evaluation of the following potential design adjustments (see Exhibits 2.3-5 to 2.3-7):

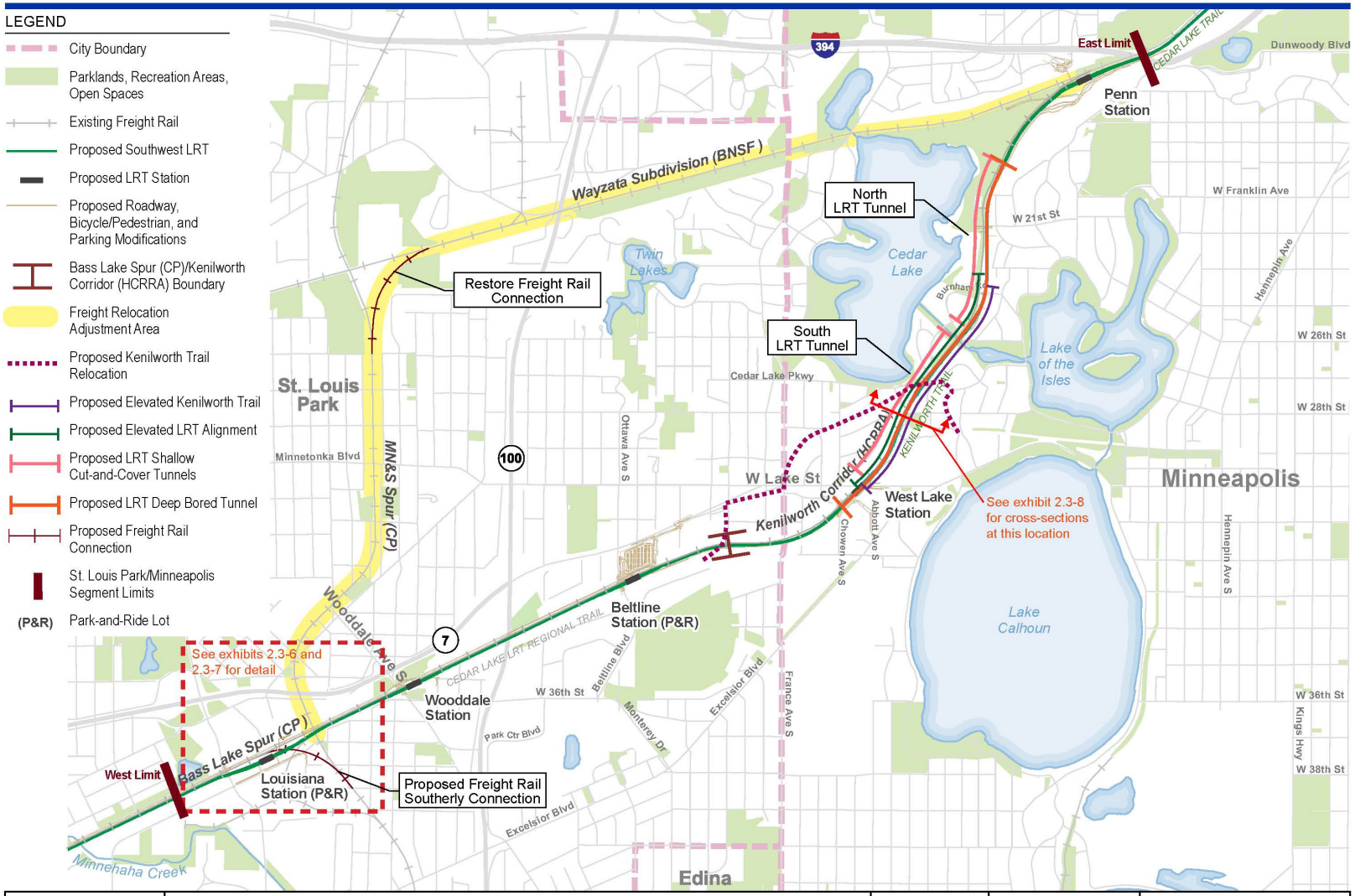
- **Set 1 Freight Rail Relocation Adjustments**
  - Brunswick West – the relocation of freight rail to the MN&S Spur and Wayzata Subdivision primarily above grade and on new right-of-way between Bass Lake Spur and 33rd Street
  - Brunswick Central – the relocation of freight rail to the MN&S Spur and Wayzata Subdivision primarily above grade, slightly east of the Brunswick West alignment between Bass Lake Spur and 33rd Street
- **Set 1 Kenilworth Corridor Adjustments**
  - All Modes at-grade—light rail, freight rail, and trails at-grade through Kenilworth Corridor
  - Relocate the Kenilworth Trail out of the Kenilworth Corridor—the relocation of the Kenilworth Trail between the Midtown Greenway and Cedar Lake Parkway
  - Elevate the Kenilworth Trail—the placement of the Kenilworth trail on structure above the light rail alignment, east of the West Lake Street bridge to north side of Burnham Road bridge
  - Elevate the Light Rail Alignment—the placement of proposed light rail alignment on an elevated structure in the Kenilworth Corridor, east of the West Lake Street bridge to north side of Burnham Road bridge
  - Place the Light Rail Alignment in Shallow Cut-and-Cover Tunnels—the placement of the proposed light rail alignment within two cut-and-cover tunnels (the south tunnel segment between north of the West Lake Street bridge and south of the Kenilworth Lagoon; the north tunnel segment between north of the Kenilworth Lagoon and approximately 1,000 feet north of 21st Street) and a light rail bridge over the Kenilworth Lagoon between the two tunnels
  - Place the Light Rail Alignment in Deep Bore Tunnels—the placement of the proposed light rail alignment within twin bored tunnels between west of West Lake Station and approximately 1,000 feet north of 21st Street, with West Lake Station below grade

Set 1 Freight Rail Relocation Adjustments Considered in the First-Step Evaluation

During the Draft EIS public comment period, individuals, organizations, and jurisdictions expressed concerns with the proposed freight rail track connection in St. Louis Park that would allow for the relocation of freight rail out of the Kenilworth Corridor. In particular, TC&W, the existing freight rail operator in the Kenilworth Corridor, raised safety and operational concerns with the horizontal and vertical curvature of the proposed new connection between the Bass Lake Spur and the MN&S Spur, as well as insufficient lengths of straight track, based on their design standards for operating up to 120-car-unit trains. TC&W also noted that the proposed routing of their freight trains from the Bass Lake Spur and the Kenilworth Corridor to the MN&S Spur and the Wayzata Subdivision could adversely affect the railroad's operational costs due to track geometry, increased track distances, and operating environments.

EXHIBIT 2.3-5

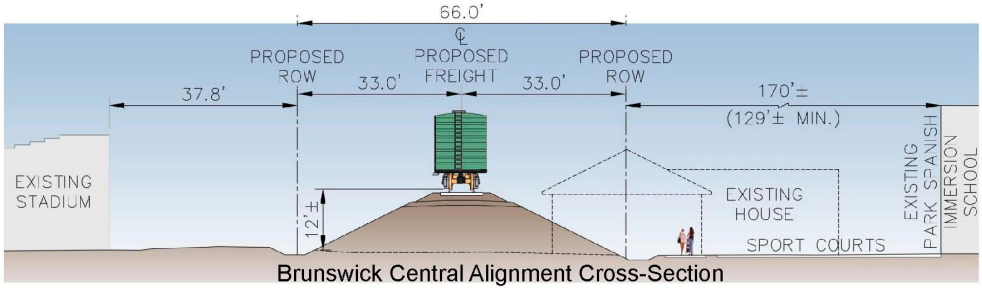
Areas of Potential Light Rail and Freight Rail-Related Adjustments, St. Louis Park/Minneapolis Segment



SOUTHWEST	Southwest LRT Supplemental Draft EIS Areas of Potential Light Rail and Freight Rail-Related Adjustments St. Louis Park/Minneapolis Segment	Exhibit 2.3-5	NORTH 0 1,325 2,640 Feet	METROPOLITAN COUNCIL

EXHIBIT 2.3-6
Brunswick Central Freight Rail Relocation Adjustments





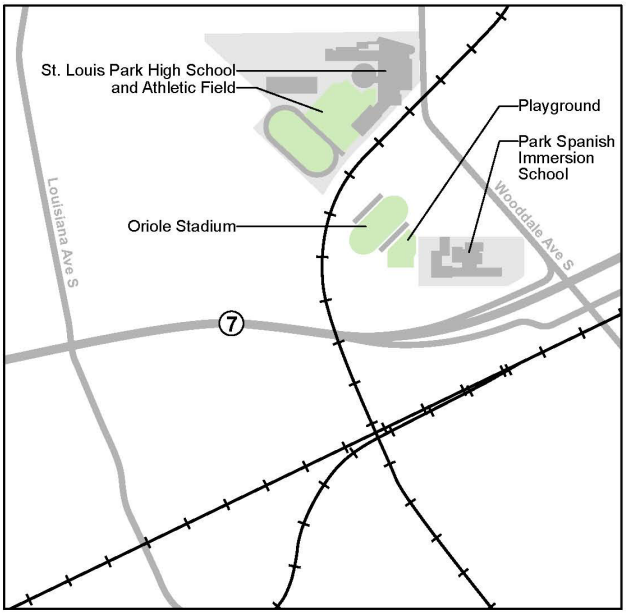
Brunswick Central Alignment Cross-Section

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Brunswick Central Freight Rail Relocation Adjustments	Exhibit 2.3-6	NORTH 0 300 600 Feet	METROPOLITAN COUNCIL

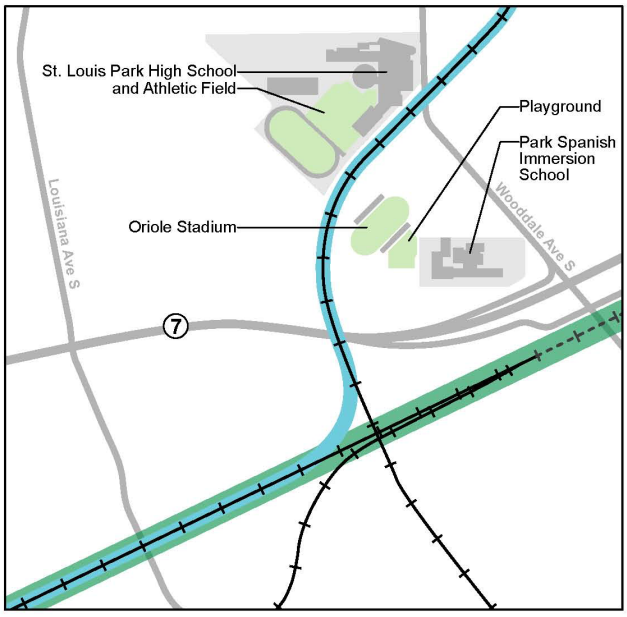
EXHIBIT 2.3-7
Draft EIS and Brunswick West Freight Rail Relocation Adjustments

LEGEND

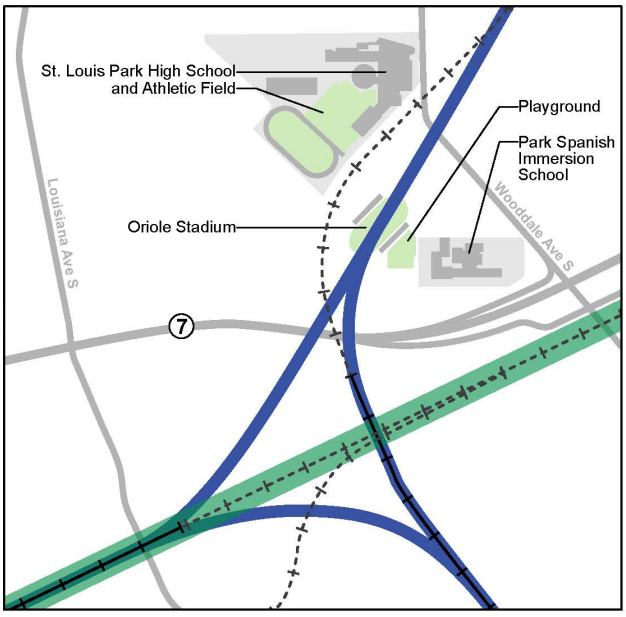
- Proposed Draft EIS Freight Rail Relocation Alignment
- Proposed Brunswick West Freight Rail Relocation Alignment
- Existing Freight Rail
- Proposed Removal of Freight Rail
- Proposed Southwest LRT



Existing Freight Rail Alignment



Draft EIS Relocation Design



Proposed Brunswick West Alignment

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft EIS and Brunswick West Freight Rail Relocation Adjustments	Exhibit 2.3-7	NORTH 0 500 1,000 Feet	METROPOLITAN COUNCIL

Based on those and other comments received on the Draft EIS, the project team developed a variety of design adjustments to allow for the relocation of freight rail service while balancing two primary objectives: design the connection to meet the safety and operational design standards of the affected railroads; and maintain the adjusted freight rail alignment within the existing right-of-way as much as possible. This effort focused on adjustments to the potential freight rail connection between the Bass Lake and MN&S spurs and adjustments to the track alignment along the MN&S Spur to the reconstructed connection to the Wayzata Subdivision. The adjustments developed for the potential freight rail connection were termed Brunswick Central and Brunswick West (see Exhibits 2.3-6 and 2.3-7):[10]

- **Brunswick West.** The Brunswick West freight rail relocation adjustment would provide a freight rail connection between the Bass Lake and MN&S spurs that would meet the freight rail operators' design and safety standards for horizontal and vertical track curvature. The vertical profile of this alignment would require the light rail track to be elevated between the Bass Lake Spur and approximately 33rd Street. However, the design adjustment would require full or partial acquisition of approximately 46 residential, business, or public properties; construction of freight rail bridge structures; lowering of the south frontage road at Highway 7; and reconfiguration of several local roads that would be severed due to the adjusted freight rail alignment. The Brunswick West freight rail relocation adjustment would realign and re-establish the MN&S tracks between the Bass Lake Spur and 33rd Street on a new freight rail right-of-way. The alignment would also include realignment of the MN&S Spur to the south of the Bass Lake Spur. It also would displace Oriole Stadium, which serves as St. Louis Park High School's football field and as a community recreation facility and most likely would meet the qualifications for a Section 4(f)-protected property. The Brunswick West alignment would also close through access at Walker Street/Library Lane and would realign Lake Street from Walker Street to Dakota Avenue. It would also require additional roadway modifications to continue to provide vehicular access to the high school's athletic field. The modified freight rail alignment would generally meet up with the existing MN&S Spur alignment east of Brunswick Avenue South, in the vicinity of West 32nd Street, with relatively minor modifications to the existing tracks. Those modifications would be to the elevation of the existing freight rail tracks to accommodate the connection between the new and existing alignment. Finally, there would be a restored freight rail connection made between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.
- **Brunswick Central.** The Brunswick Central freight rail relocation adjustment was developed to minimize impacts to commercial, residential, and public properties associated with the Brunswick West alignment. This design adjustment would shift the existing MN&S rail tracks to the east, south of Highway 7, replacing the current freight rail bridge over the Bass Lake Spur and realigning the MN&S Spur between Bass Lake Spur and 33rd Street on new railroad right-of-way. Under the Brunswick Central design adjustment, the potential freight rail connection would be elevated to minimize the number of vertical curves and vertical grade changes and flatten horizontal curves needed to meet the railroad operator's operational and safety requirements. This design adjustment would require full or partial acquisition of approximately 32 residential, business, or public properties; two new structures over Highway 7; and a new freight rail structure over the MN&S Spur. Both Highway 7 and the frontage road would be lowered approximately five feet to provide the required vertical bridge clearance over Highway 7. This design adjustment would result in relocating the Park Spanish Immersion School playground, a property that would likely meet the qualifications for protection under Section 4(f). Under this design adjustment, all freight rail street crossings would be grade-separated, except for an at-grade crossing at 28th Street. Underpasses would allow the Spanish Immersion School to retain access to Oriole Field and would provide vehicle, bicycle, and pedestrian access at other locations where the freight alignment would be elevated on retained fill (which is the construction of retaining walls to support fill where tracks are raised above existing grade). New freight rail bridges would be constructed over, Wooddale Avenue, 34th Street, and Lake Street. The modified freight rail alignment

[10] Additional freight rail design adjustments, including those that would keep the freight rail alignment at-grade, were also developed during the first step, but they were dismissed from consideration due to railroad safety, operational, and economic concerns.

would generally meet up with the existing MN&S Spur alignment east of Brunswick Avenue South, in the vicinity of West 32nd Street, with relatively minor modifications to the existing tracks. Those modifications would be to the elevation of the existing freight rail tracks to accommodate the connection between the new and existing alignment. Finally, there would be a restored freight rail connection made between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.

Appendix F of this Supplemental Draft EIS provides a description of the development and evaluation of design adjustments after publication of the Draft EIS, including the criteria and evaluation measures used to evaluate these freight rail relocation adjustments (see Table F.5-3 in Appendix F).

Set 1 Kenilworth Corridor Adjustments Considered in the First-Step Evaluation

Concurrent with the potential freight rail relocation adjustment process, the project team reviewed comments submitted on the Draft EIS and advanced design activities to identify adjustments that would allow freight rail to continue operations in the Kenilworth Corridor.

As described in the Draft EIS, under LRT 3A-1, TC&W trains would not have been rerouted from the Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision. Instead, the proposed double-tracked light rail alignment would be located adjacent to the existing Bass Lake Spur until entering the Kenilworth Corridor, where the light rail alignment would run parallel to the current single freight rail track and the Kenilworth Trail. Based on the conceptual design at the time, the Draft EIS analysis reflected a 94-foot cross section for LRT 3A-1 in the Kenilworth Corridor. Because of the limited width of the existing HCRRA-owned Kenilworth Corridor right-of-way at several locations, LRT 3A-1 would have resulted in the acquisition of approximately 55 residential and two commercial properties. Responding to a wide variety of comments on the Draft EIS, the project team developed and evaluated a range of design adjustments to the LRT 3A-1 that would allow for freight rail service to be retained within the Kenilworth Corridor along with the proposed light rail alignment and related improvements.

The project team developed and evaluated five potential design adjustments in addition to advancing the conceptual design of LRT 3A-1 from the Draft EIS that would have placed the freight rail, light rail, and trail alignments at-grade throughout the Kenilworth Corridor.[11] The six potential design adjustments developed and evaluated for the Kenilworth Corridor, that would retain freight rail within the corridor, are briefly described below, and are illustrated on Exhibits 2.3-5 and 2.3-8 of this Supplemental Draft EIS:

- **All Modes at-Grade.** As previously noted, the conceptual design of LRT 3A-1 in the Draft EIS would have placed the existing freight rail and Kenilworth Trail alignments and the proposed light rail alignment at-grade within the Kenilworth Corridor. The cross section of this design was adjusted based on additional information from the railroad operator[12] and on consideration of the potential acquisition of BNSF-owned right-of-way located immediately west of the Kenilworth Corridor. The adjusted typical cross section for this placing all modes at-grade within the Kenilworth Corridor would require 81 feet of right-of-way and would have required full acquisition of approximately 26 residential properties.
- **Relocate the Kenilworth Trail out of the Kenilworth Corridor.** This potential adjustment would generally require a typical cross-section width of approximately 61 feet for the existing freight and proposed light rail alignments. In summary, this design adjustment would avoid full residential property acquisitions but would likely require some partial property acquisitions and the construction of a new trail route from Inglewood Avenue South to Cedar Lake Parkway, including trail overpass structures over Highway 25 and France Avenue.

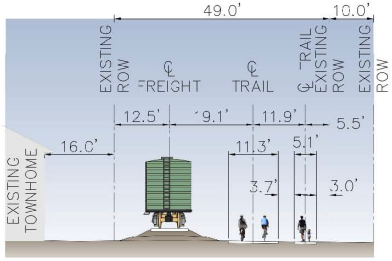
[11] A single-track light rail alignment within the most constrained sections of the Kenilworth Corridor was considered and dismissed due to unacceptable constraints that it would place on operating light rail service in the Southwest and Central corridors.

[12] These adjustments were unable to achieve a 25-foot clearance envelope between the centerline of the freight track and the right-of-way line. TC&W reviewed their existing operating clearance envelope within the Kenilworth Corridor, which is a minimum of 12 feet. TC&W has indicated that the existing operating clearance is acceptable.

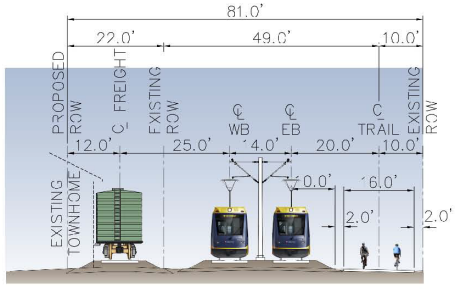
- **Elevate the Kenilworth Trail.** This potential adjustment generally requires a typical cross-section width of approximately 61 feet. The trail structure would be south of and parallel to the existing right-of-way north of West Lake Street and south of Burnham Road. At these locations, the trail would be elevated on retained fill, transitioning to bridge structure across the freight rail and light rail alignments. The trail would be elevated approximately 30 feet above grade, with a 20-foot-wide trail surface supported by eight-foot-wide piers. This option would not require any full residential property acquisitions, but it would require the construction of an elevated trail structure, including an ADA-accessible connection to Cedar Lake Parkway.
- **Elevate the Light Rail Alignment.** This potential adjustment would require a typical cross section of approximately 59 feet. The proposed light rail structure would be approximately 3,000 feet long with 10-foot-wide bridge piers. Generally, the light rail structure would be located between the Midtown Greenway and Burnham Road and would be approximately 35 feet high. This design adjustment would not result in any full residential property acquisitions.
- **Shallow LRT Tunnels – Over Kenilworth Lagoon.** This potential adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within the two tunnels. The two light rail tunnels would generally be within the Kenilworth Corridor (with some relatively minor exceptions, illustrated in Appendix G, Conceptual Engineering Drawings. In general, the tunnels would be under the reconstructed Kenilworth Trail (Exhibit 2.3-8 illustrates a typical cross section), about 25 feet deep (at track level). The south light rail tunnel would extend approximately 2,200 feet from just north of West Lake Street to approximately 400 feet south of the Kenilworth Lagoon, which is a constructed channel connecting Lake of the Isles to Cedar Lake. The light rail alignment would rise back to grade to cross the lagoon on a new bridge with approximately the same vertical clearance over the lagoon as is provided today under the existing freight rail and bicycle/pedestrian trail bridges. After crossing the lagoon, the light rail alignment would descend and enter the north tunnel approximately 600 feet north of the lagoon. The north light rail tunnel would extend for approximately 2,500 feet, rising back to the surface approximately 1,000 feet north of 21st Street. Due to the relatively high cost of a tunnel station construction and the relatively low ridership projected at the proposed 21st Street Station, the design refinement eliminated the station. Each end of the two tunnels would include portal areas that would span approximately 300 to 500 feet, which would provide for the transition between the at-grade and tunnel alignments. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions.
- **Deep Bore LRT Tunnels**. Under this potential design adjustment, a portion of the proposed light rail alignment in the Kenilworth Corridor would be in two parallel tunnels that would be approximately 30 to 50 feet deep. The two parallel tunnels would be constructed using boring machines and each tunnel would be approximately 5,900 feet long. The tunnels' south portal would be north of West Lake Street and the north portal would be approximately 1,000 feet north of 21st Street. Each of the two light rail tunnels would be approximately 20 feet in diameter, with the depth of cover ranging from 30 feet at the West Lake Station to approximately 50 feet where the tunnels would cross under the Kenilworth Lagoon (at track level). This potential design adjustment would require a typical cross section in the Kenilworth Corridor of 59 feet to accommodate the at-grade freight rail and trail alignments where the light rail alignment would be within the two parallel tunnels. The deep bore tunnel would also require an underground station at West Lake Street,[13] as well as reconstruction of the existing West Lake Street bridge over the Kenilworth Corridor and the approaches to the bridge (generally between Market Plaza

[13] Under the Deep Bore LRT Tunnels adjustment, an at-grade station at West Lake Street would require the tunnel portal to be located north of the West Lake Street bridge, which would result in the acquisition and displacement of residential properties in this area.

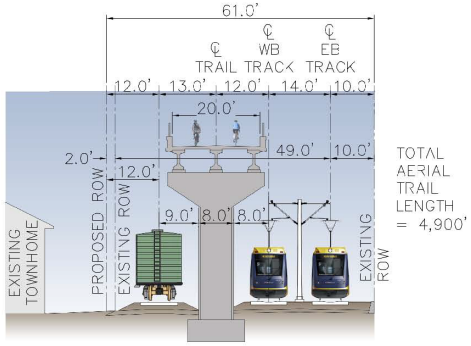
EXHIBIT 2.3-8
Kenilworth Corridor Adjustments Considered



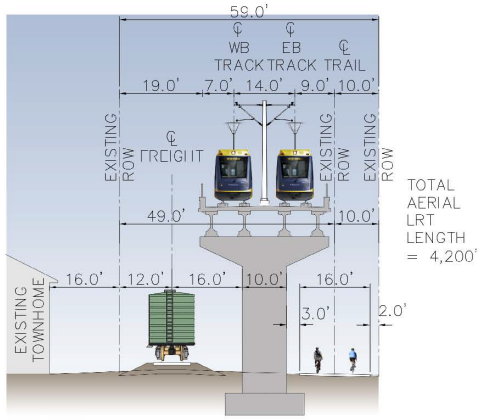
Existing



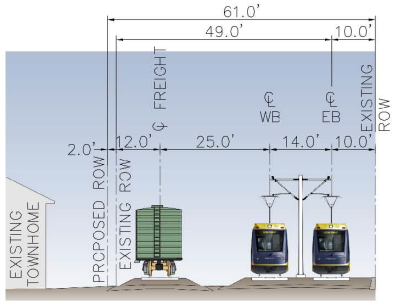
Conceptual Design from the Draft EIS (All Modes At-Grade)



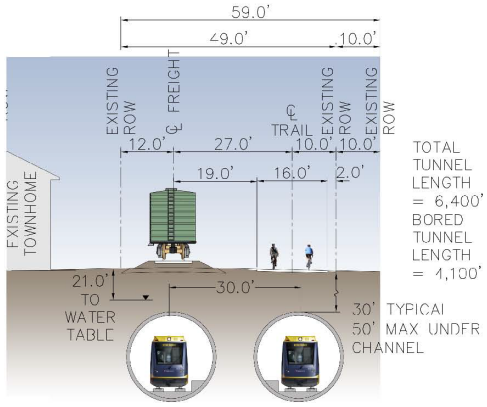
Elevate the Kenilworth Trail



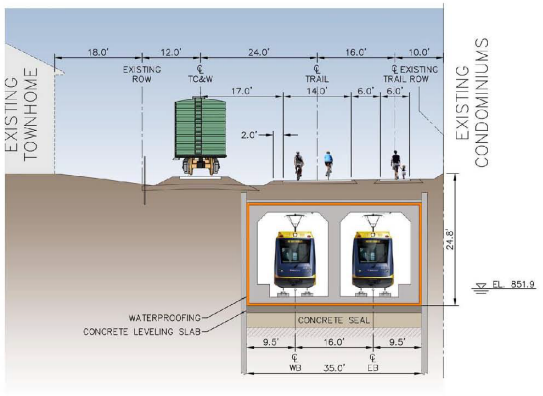
Elevate the Light Rail Alignment



Relocate the Kenilworth Trail out of the Kenilworth Corridor (see Exhibit 2.3-3 for trail relocation route)



Place LRT in Deep Bored Tunnels



Place LRT in Shallow Cut-and-Cover Tunnel

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Kenilworth Corridor Adjustments Considered	Exhibit 2.3-8		METROPOLITAN COUNCIL

and Drew Avenue South).[14] Due to the relatively high cost of a tunnel station construction and the relatively low ridership projected at the proposed 21st Street Station, this design refinement would eliminate the 21st Street Station.[15] This potential design adjustment would not require any full residential property acquisitions.

Conclusion of the First-Step Evaluation

During the first step of evaluation, the Council held public open houses during July 2013 to present the design adjustments developed to date and to receive comments on those potential adjustments. Primary concerns raised through that process included noise, visual effects on adjacent residences, and narrower distances between residential properties and proposed rail or light rail tracks. The design adjustments developed during the first-step evaluation were also reviewed by the CAC and BAC and were presented to the St. Louis Park and Minneapolis city councils and to the St. Louis Park School Board.

Based on the evaluation measures prepared for the first-step evaluation, provided in Tables F.5-3 and F.5-4 in Appendix F, the public and agency comments received and the committee recommendations made, the range of potential freight rail relocation and Kenilworth Corridor adjustments were narrowed to the following for further study in the second-step evaluation:

- Freight Rail Relocation with Brunswick Central Alignment Adjustment
- Kenilworth Corridor Shallow LRT Tunnels
- Kenilworth Corridor Deep Bore LRT Tunnel

Second-Step Evaluation

Relatively minor changes were made to the potential design adjustments in the St. Louis Park/Minneapolis Segment during the second-step evaluation. For example, additional design detail was added or modified, in response to questions or requests from jurisdictions, to meet a specific design requirement or to avoid or minimize an identified adverse environmental impact. Additional elements were included in the designs, such as additional pedestrian access points under the Brunswick Central adjustment, and minor modifications to the location of crash walls between the proposed freight rail and light rail alignments and fencing details at the tunnel portals were added to the tunnel alignments.

The Council used the criteria and the measures reported in Table F.5-5 in Appendix F to evaluate the three potential freight rail-related design adjustments to LRT 3A and LRT 3A-1. Based on the evaluation measures prepared for the second-step evaluation, the Deep Bore LRT Tunnel adjustment was dropped from the third-step evaluation, as recommended by the CMC. In summary, the Deep Bore LRT Tunnel adjustment was dismissed from further study based upon the following:

- Highest capital costs, which would likely be economically infeasible at the regional level.
- Demolition and reconstruction of the existing West Lake Street bridge over the Kenilworth Corridor and approach spans to the bridge, generally between Market Plaza and Chowen Avenue South, which would require the closure of West Lake Street bridge and approach spans to the bridge for approximately 12 to 18 months, resulting in rerouting of approximately 26,500 vehicle trips per average weekday.
- Walk access time to and from West Lake Station, which would be the highest ridership station, would increase by approximately one minute due to additional time to access below ground station, resulting in reduced transit ridership at that station.

[14] Due to various constraints (such as existing development on either side of the roadway and the conflict of existing bridge piers in relationship to the proposed tunnel), West Lake Street, generally between Market Plaza and Chowen Avenue South, would be closed to through traffic for approximately 12 to 18 months to allow for demolition of the existing bridge and approaches and for construction of the new bridge and approaches.

[15] The tunnels would be bored within the HCRRA and BNSF right-of-way at the Kenilworth Lagoon and the existing freight rail and trail bridges across the lagoon would need to be replaced because the existing wood bridge piers would likely extend into the tunneling area. Because the existing bridge piers are wood and there are no as-build construction drawings available, it would be difficult to determine precisely how deep the existing piers extend under the lagoon. However, even if they do not extend in the bored tunnel construction area, the piers would be susceptible to settlement during tunnel construction due to soil conditions at the site.

- Increased operating and maintenance costs associated with an underground West Lake Station.
- Longer and deeper transition areas with retaining walls between the proposed at-grade light rail alignment and the two tunnel portals, which would lead to additional adverse impacts to visual quality and aesthetics in the Kenilworth Corridor.
- Reconstruction of the existing freight rail and light rail bridges across the Kenilworth Lagoon and the adverse effects of those construction activities would not be avoided.
- Potential risk of settlement to existing buildings and other structures immediately adjacent to the deep bore tunnels.

Third-Step Evaluation

The third step of evaluation involved the detailed comparison of the Freight Rail Relocation Brunswick Central and the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustments. Based on a recommendation adopted by the CMC in October 2013, the analysis concluded that the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustments would provide the best balance of costs, benefits, and environmental impacts, compared to the Freight Rail Relocation Brunswick Central adjustments. In summary, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment is that it would avoid the various adverse impacts associated with the Freight Rail Relocation Brunswick Central design, including: additional capital costs; the full acquisition of approximately 32 residential, commercial, and institutional parcels; the use of the Park Spanish Immersion School playground; and the adverse visual, neighborhood, and community cohesion impacts resulting from the construction of berms and structures associated with the modified freight rail alignment in the vicinity of St. Louis Park High School. By comparison, the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment would not result in the full acquisition of any residential, commercial, or institutional properties or displacement of residences or commercial/institutional buildings, or uses. The third-step evaluation measures are summarized in Table F.5-6 in Appendix F. As a result of the third-step evaluation, the Freight Rail Relocation Brunswick Central design adjustment was dismissed from further study and the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment was advanced into the fourth-step evaluation (see Exhibit 2.3-9).[16]

Fourth-Step Evaluation

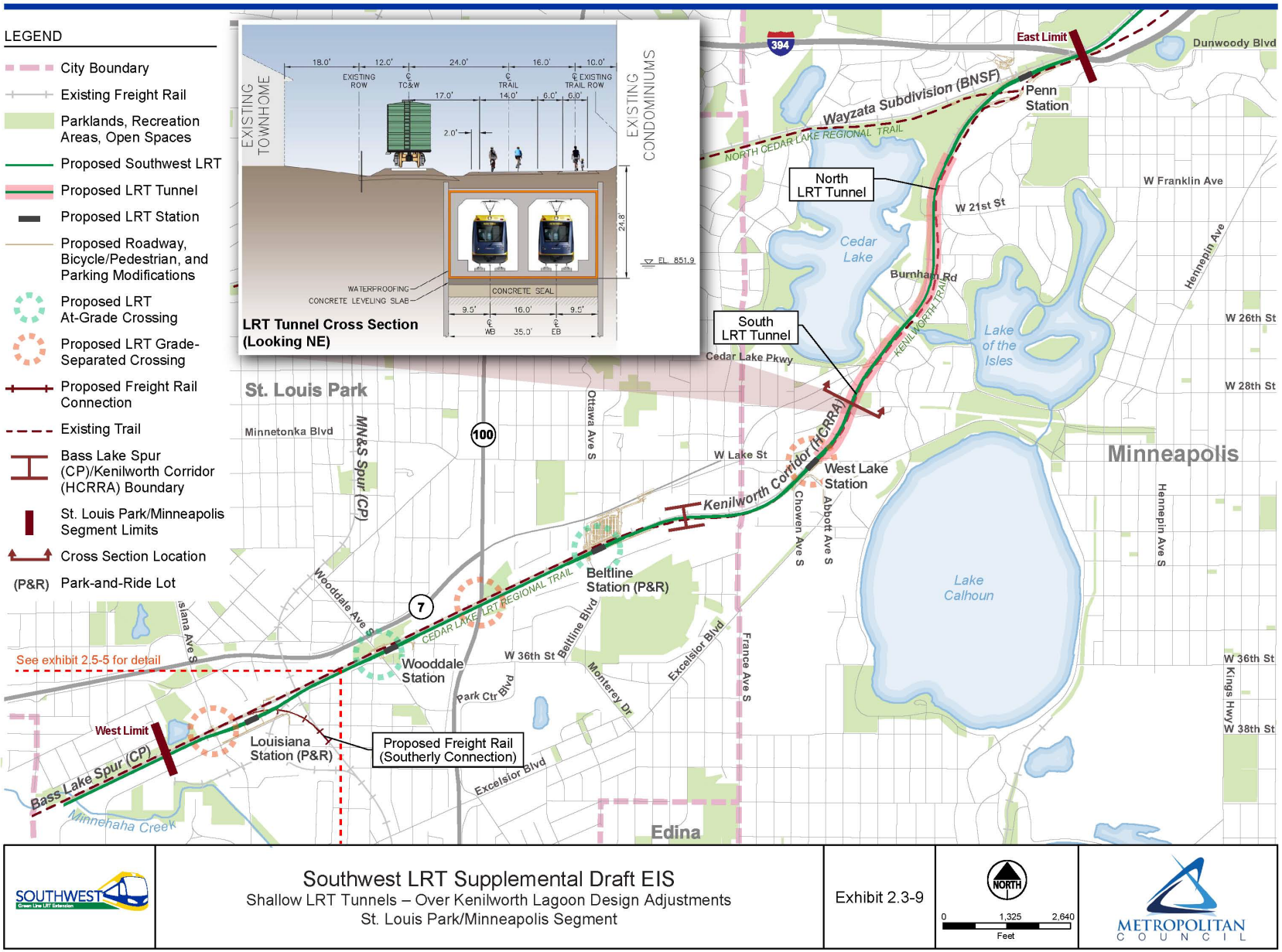
The fourth step of evaluation was initiated in October 2013 and involved three primary components: (1) preparation of the independently-prepared *SWLRT Engineering Evaluation of Freight Rail Relocation Alternatives* (TranSystems, 2014),[17] which identified the MN&S North design adjustment for further evaluation; (2) the development and evaluation of variations of the Shallow Cut-and-Cover Tunnels design

[16] The findings reached in the third step evaluation addressed issues raised with LRT 3A-1 identified in the Draft EIS's evaluation of alternatives, which preliminarily found that LRT 3A-1 would "fail to rise to the environmentally preferred alternative" (see Chapter 11 of the Draft EIS – p. 11-12). As a result of the light rail design adjustments to LRT 3A and LRT 3A-1 described in this section, the LPA with the retention of freight rail in the Kenilworth Corridor (LRT 3A-1), would be the project's environmentally preferred alternative, rather than the LPA with the relocation of freight rail (LRT 3A). In particular, compared to the relocation of freight rail, the LPA with the co-location of freight rail and light rail in the Kenilworth Corridor would: 1) result in less harm to Section 4(f) protected properties (compared to the displacement of the Park Spanish Immersion School playground with freight rail relocation); 2) include the southerly connection replacing the Skunk Hollow switching wye that would facilitate freight rail movements; 3) minimize the reconstruction of freight rail tracks and related adverse impacts; 4) include design refinements that would help avoid diminishing the potential for transit oriented development around light rail stations that would be in close proximity of freight rail tracks; 5)provide safe and convenient pedestrian crossings of freight rail tracks at the proposed Wooddale, Beltline, and 21st Street stations; 6) avoid the displacement of any residences or businesses in the St. Louis Park/Minneapolis Segment (compared to the full acquisition of approximately 32 residential, commercial, and institutional parcels under freight rail relocation); 7) include bicycle and pedestrian improvements and the study of potential traffic-related improvements that would improve access to light rail stations and across the light rail and freight rail alignment in the Kenilworth Corridor (compared to the construction of a berm for the freight rail alignment in St. Louis Park that would tend to divide a residential and commercial neighborhood); and 8) would permanently displace approximately six fewer acres of wetland.

[17] The report was funded by the Council and the Council submitted comments on the draft report during its public comment period. However, the report was independently prepared by TranSystems and the Council did not have editorial control over the report. See Appendix D for details on how to access the final report.

EXHIBIT 2.3-9

Shallow LRT Tunnels – Over Kenilworth Lagoon Design Adjustments, St. Louis Park/Minneapolis Segment



SOUTHWEST	Southwest LRT Supplemental Draft EIS Shallow LRT Tunnels – Over Kenilworth Lagoon Design Adjustments St. Louis Park/Minneapolis Segment	Exhibit 2.3-9	NORTH 0 1,325 2,640 Feet	METROPOLITAN COUNCIL

adjustment; and (3) additional design adjustments reflected in a memorandum of understanding between the Council and the City of Minneapolis (Council and City, 2014 – see Appendix D, Sources and References Cited, for instructions on how to access the executed memorandum). Following is a description of the design concepts considered in the fourth-step evaluation and a summary of how they were evaluated by the Council.

Independent Engineering Evaluation of Freight Rail Relocation

The first component of the fourth step of evaluation was the independent study commissioned by the Council to provide an analysis of prior freight rail relocation designs that would provide for the rerouting of TC&W freight rail trains out of the Kenilworth Corridor and identification of new design adjustments or concepts.[18] In particular, the study, which was performed by TranSystems, consisted of an analysis of the technical, safety, and operational considerations of eight options that would allow for the rerouting of TC&W freight trains that were developed in prior freight rail studies and two additional concepts developed by the Southwest LRT Project Office (SPO) during the first step of the four-step evaluation process. The scope of the analysis generally covered the following: identification of operational cost drivers; identification of community and other impacts; and assessment of possible operational adjustments.

In summary, the independent report made the following recommendations:

1. The study finds that five of the freight rail relocation options evaluated are "fatally flawed" for a variety of reasons, primarily related to an assessment showing that the affected freight rail operators would not find them acceptable due to economic, operations, or safety concerns. As such, the report does not recommend any additional study of those five options.
2. In addition, the independent report does not recommend further study of two other freight rail options that it evaluated, primarily due to significant impediments to their implementation. The final report finds that, while the Brunswick Central alignment was acceptable to the affected freight rail operator from an operational, economic, and safety perspective, it was dismissed from further study (in step three of the evaluation) due to its wide range of adverse impacts. The final report also finds that an option termed the MN&S South, which would connect the Bass Lake Spur south to the MN&S Spur, might be able to be designed to meet engineering standards, but that it "would face severe obstacles with respect to property acquisition and permitting..." (TranSystems, 2014; page 34).
3. The independent study by TranSystems also resulted in the identification of an additional freight rail relocation alignment in the vicinity of St. Louis Park High School that could potentially accommodate the relocation of freight rail from the Kenilworth Corridor to the MN&S Spur and the Wayzata Subdivision. The report recommends that this design adjustment receive further consideration by the Council. This freight rail modification design adjustment, which has many similarities to other options previously developed and considered by the Council, was termed the MN&S North design adjustment (see Exhibit 2.3-10).

Following is a description of the MN&S North design adjustment:[19]

- **MN&S North.** The MN&S North freight rail relocation adjustment was developed to avoid or minimize the adverse impacts of the elevated and straightened freight rail alignment between Highway 7 and 34th Street and the adverse impacts to commercial, residential, and public properties associated with the Brunswick Central design adjustments. The MN&S North design adjustment would maintain the existing MN&S rail tracks south of Highway 7, including the current freight rail bridge over the Bass Lake Spur to a connection with the existing alignment between Library Lane and Dakota Avenue. Under the MN&S North design, the potential freight rail connection between the Bass Lake Spur and the MN&S Spur would begin with an elevated grade on bridge structure on the Bass Lake Spur west of Louisiana Avenue, with the freight rail alignment continuing east on bridge

[18] The Council also commissioned an independent review of the project's prior groundwater studies in the Kenilworth Corridor related to the Shallow LRT Tunnels adjustments, documented in the *Southwest Light Rail Transit: Kenilworth Shallow LRT Tunnels Water Resources Evaluation* (Burns & McDonnell, 2014). See Appendix D for a link to the final report.

[19] The *Conclusion* at the end of this section and Table F.5-7 in Appendix F summarizes the Council's evaluation of the MN&S North design adjustment.

EXHIBIT 2.3-10
MN&S North Freight Rail Relocation Adjustments



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS MN&S North Freight Rail Relocation Adjustments	Exhibit 2.3-10	NORTH 0 300 600 Feet	METROPOLITAN COUNCIL

structure over the west corner of the Xcel Substation and across Highway 7, matching existing grades at Library Lane and connecting to the existing MN&S between Library Lane and Dakota Avenue. Approximately 800 feet of tangent (i.e., straight) track would be provided between two reversing curves located between the Bass Lake Spur and the existing MN&S. This design adjustment would require full or partial acquisition of approximately 20 residential, business, or public properties and a new structure over Louisiana Avenue and Highway 7. Both Highway 7 and the south frontage road would be lowered to provide the required vertical bridge clearances under the freight rail bridge. This design adjustment would result in undetermined impacts to the Xcel Substation property and facilities. Under this design adjustment, existing at-grade freight rail street crossings would be closed at Walker Street, West Lake Street, 28th Street, and 29th Street. Existing at-grade freight rail crossings at Library Lane and Dakota Avenue would be maintained and a new freight rail bridge would be constructed over 27th Street, with 27th Street becoming a through street. In general, the modified freight rail alignment would connect to the existing MN&S Spur alignment between Library Lane and Dakota Avenue, with relatively minor modifications to the existing freight rail tracks to the north. Those modifications would be made to adjust the profile of the existing freight rail tracks to flatten grades south and north of the existing Minnetonka Boulevard freight rail bridge. Underpasses and overpasses across the freight rail alignment would provide vehicle, bicycle, and pedestrian access at locations where the freight alignment would be elevated (which would entail the construction of retaining walls to support fill where tracks would be raised above existing grade). Finally, there would be a restored freight rail connection constructed between the MN&S Spur and the Wayzata Subdivision, as illustrated in Appendix G, Conceptual Engineering Drawings, of the Draft EIS.

Preparation of the independent report and the development and evaluation of the MN&S North design adjustment utilized an extensive public involvement process that included:[20]

- Availability of the documents online
- Town hall meetings on January 7 and 9, 2014
- Public review and comment period for the draft report that spanned from January 30 to March 12, 2014;
- Studies discussed and reviewed by:
  - BAC (at February 26, 2014 meeting),
  - CAC (at February 27 and March 27, 2014 meetings), and
  - CMC (at February 5 and 20; March 12 and 26. 2014 meetings);
- Town hall meetings on February 10 and 12, 2014, to discuss and take comment on the draft reports; and
- Release of the final report on March 21, 2014, which addressed comments received on the draft report.

Shallow LRT Tunnels – Over Kenilworth Lagoon Variations

At the request of the Minneapolis Parks and Recreation Board (MPRB) in February 2014, the Council developed and evaluated two variations of the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment as a part of the fourth step of evaluation in the St. Louis Park/Minneapolis Segment. As previously described in this section, the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment would have the light rail alignment cross the Kenilworth Lagoon on a new bridge, located between the freight rail and trail alignments, connecting the two light rail tunnels. The MPRB asked the Council to develop and evaluate a variation of the design adjustment that would continue the tunnels under the Kenilworth Lagoon, thus avoiding some of the project's long-term impacts to the Kenilworth Lagoon that could result from the new light rail bridge across the lagoon. In response, the Council developed and evaluated two additional design adjustments: (1) Long Shallow LRT Tunnel – Under Kenilworth Lagoon; and (2) Short Shallow LRT Tunnel – Under Kenilworth Lagoon. Under these two design adjustments, construction of the tunnel under the Kenilworth Lagoon would be achieved through utilization of the cut-and-cover technique.[21]

[20]This public review and comment process was also used for the *Kenilworth Shallow LRT Tunnels Water Resources Evaluation* (Burns & McDonnell; March 2014).

[21] A variation of the Short and Long LRT Tunnel – Under Kenilworth Lagoon adjustments that would have bored a deep LRT tunnel under the Kenilworth Lagoon (rather than use the cut-and-cover construction technique) was also developed; however, it was dismissed from further study due to complex construction considerations (e.g., the existing freight and trail

Following are descriptions of those two design adjustments:

- **Short Shallow LRT Tunnel – Under Kenilworth Lagoon.** This potential design adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within one tunnel. The light rail tunnel would generally be within the Kenilworth Corridor, with some relatively minor exceptions (see Exhibit 2.3-11). Except at the two tunnel portals and in the vicinity of the Kenilworth Lagoon, the light rail tunnel would be under the reconstructed Kenilworth Trail, about 25-feet deep, from existing ground elevation to light rail track level (similar to the Shallow LRT Cut-and-Cover Tunnels adjustment illustrated on Exhibit 2.3-9). The light rail tunnel would extend approximately 3,100 feet from just north of West Lake Street to approximately 400 feet north of the Kenilworth Lagoon. Beneath the lagoon, the tunnel would descend to about 45-feet deep, from existing freight and trail bridge elevation to LRT track level. A portal area at each end of the tunnel would span approximately 300 feet, which would provide for the transition between the at-grade and tunnel alignment. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions and the proposed 21st Street Station would be retained at-grade.
- **Long Shallow LRT Tunnel – Under Kenilworth Lagoon.** This potential design adjustment would result in a typical cross section of approximately 62 feet for the at-grade freight rail and trail alignments where the double-tracked light rail alignment would be within one tunnel. The light rail tunnel would generally be within the Kenilworth Corridor, with some relatively minor exceptions (see Exhibit 2.3-12). Except at the two tunnel portals and in the vicinity of the Kenilworth Lagoon, the tunnel would be under the reconstructed Kenilworth Trail, about 25-feet deep, from existing ground elevation to light rail track level (similar to the Shallow LRT Cut-and-Cover Tunnels adjustment illustrated on Exhibit 2.3-9). The light rail tunnel would extend approximately 5,800 feet between just north of West Lake Street and approximately 1,000 feet north of 21st Street. Beneath the lagoon, the tunnel would descend to about 45-feet deep, from existing freight and trail bridge elevation to LRT track level. A portal area at each end of the tunnel would span approximately 300 feet, which would provide for the transition between the at-grade and tunnel alignment. Fencing and other facilities would protect the tunnel portals from unauthorized entry. This design adjustment would not result in any full residential property acquisitions.

Identified Design Adjustments – April 2014

Based on the analysis prepared, committee recommendations, and public comments received during the four-step process described in this section, the Council identified in April 2014 the design adjustments to be incorporated into the project: the Shallow LRT Tunnels – Over Kenilworth Lagoon (see Exhibit 2.3-9).[22] In doing so, the MN&S North, the Short Shallow LRT Tunnel – Under Kenilworth Lagoon and the Long Shallow LRT Tunnel – Under Kenilworth Lagoon design adjustments were dismissed from further study (see Table 2.3-4). The Council found that, relative to the other options considered, the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment would provide the best balance of costs, benefits, and environmental impacts, and in doing so found that it would best meet the project's Purpose and Need (see Chapter 1).

Following is a description of the benefits of the Shallow LRT Tunnels – Over Kenilworth Lagoon design adjustment, compared to the other design adjustments developed and evaluated in the step four evaluation.

- **Shallow LRT Tunnels – Over Kenilworth Lagoon and MN&S North Adjustments.** Table F.5-7 in Appendix F provides a summary of the evaluation measures considered by the Council as it compared the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment to the MN&S North adjustments. First, the MN&S North adjustments were opposed by the affected freight rail operator (TC&W), primarily based on safety and operational concerns, including three reversing curves in the proposed freight rail

bridges over the lagoon would still need to be replaced and the new bridges would need to be designed to accommodate the tunnels), schedule delays, substantially higher capital costs, and potential additional property acquisitions.

[22] See Appendix F for additional information on the process and measures used to identify the design adjustments to be incorporated into the LPA.

alignment that would be especially problematic (the operator did not express similar concerns about the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment). In addition, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon, relative to the MN&S North adjustment, is that it would avoid: the potential displacement of approximately six residences and seven businesses and the acquisition of some St. Louis Park High School property; additional cost increases due to project delay of approximately $45 to $50 million; closure of local streets; and extension of the project's construction schedule by up to two years.[23]

- **Shallow LRT Tunnels – Over Kenilworth Lagoon; Short Shallow LRT Tunnel – Under Kenilworth Lagoon; and Long Shallow LRT Tunnel – Under Kenilworth Lagoon Adjustments**. Table F.5-8 in Appendix F provides a summary of the evaluation measures considered by the Council as it compared the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment to the two variations. In summary, the advantage of the Shallow LRT Tunnels – Over Kenilworth Lagoon adjustment, relative to the Short Shallow LRT Tunnel – Under Kenilworth Lagoon and the Long Shallow LRT Tunnel – Under Kenilworth Lagoon adjustments, is that it would: avoid closure of recreational traffic on the Kenilworth Lagoon for approximately one additional year; reduce short-term impacts to the Kenilworth Lagoon during construction, including the disruption of existing habitat within and adjacent to the Lagoon and closure of fish passage between Lake of the Isles and Cedar Lake during construction of the tunnel under the Lagoon; reduce long-term impacts to the Kenilworth Lagoon due to its reconstruction; avoid additional construction costs of $30 to $85 million and additional costs due to project delay of $45 to $90 million; and avoid extension of the project's construction schedule by up to one year.

Additional Design Adjustments – July 2014

In July 2014, the Council and the City of Minneapolis proposed a set of additional adjustments to the design of the Shallow LRT Tunnels – Over Kenilworth Lagoon option. The proposed additional design adjustments were outlined in a memorandum of understanding between the Council and the City (Council and City, 2014b). (See Appendix D, Sources and References Cited, for instructions on how to access the subsequently executed memorandum.) In summary, the proposed additional design adjustments were intended to: (1) reduce project capital costs by eliminating the northern of the two proposed light rail tunnels in the Kenilworth Corridor (including the re-establishment of the proposed at-grade light rail station at West 21st Street) and (2) incorporate into the project a variety of bicycle and pedestrian improvements associated with proposed light rail stations in the City of Minneapolis.

On July 9, 2014, the CMC voted to recommend the additional design adjustments and, considering the recommendation from the CMC, the Council voted to approve the additional design adjustments proposed in the memorandum between the Council and the City of Minneapolis.

The proposed project, as evaluated in this Supplemental Draft EIS, reflects LRT 3A-1, including the Shallow LRT Tunnel – Over Kenilworth Lagoon and the other light rail-related improvements and freight rail modifications described in this section as identified by the Council on April 9, 2014, and amended on July 9, 2014 (see Section 2.5, Exhibit 2.5-4, and Appendix G, Conceptual Engineering Drawings). Other potential light rail-related improvements and freight rail modifications developed and evaluated in this section were removed from further study.

[23] Approximately one year of the anticipated delay is for the pursuit of an adverse abandonment with the STB for existing freight rail service on the CP-owned Bass Lake Spur, east of the MN&S Spur, and the HCRRA-owned Kenilworth Corridor. The outcome and actual duration of this process would remain uncertain until conclusion of the process. Approval by STB could require TC&W and CP to cease freight rail operations in the Kenilworth Corridor and relocate those operations from the current location.

EXHIBIT 2.3-11
Short Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon

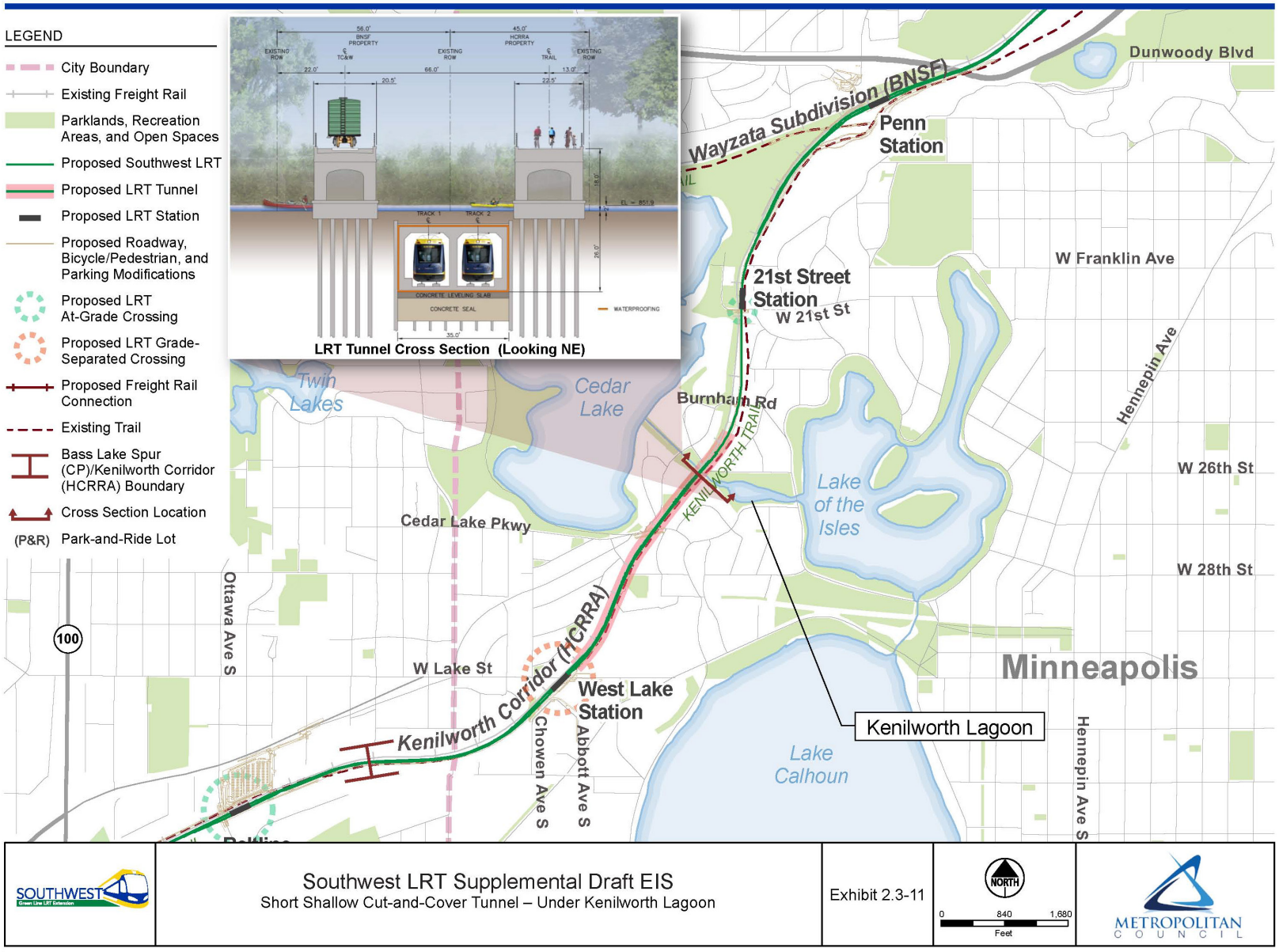
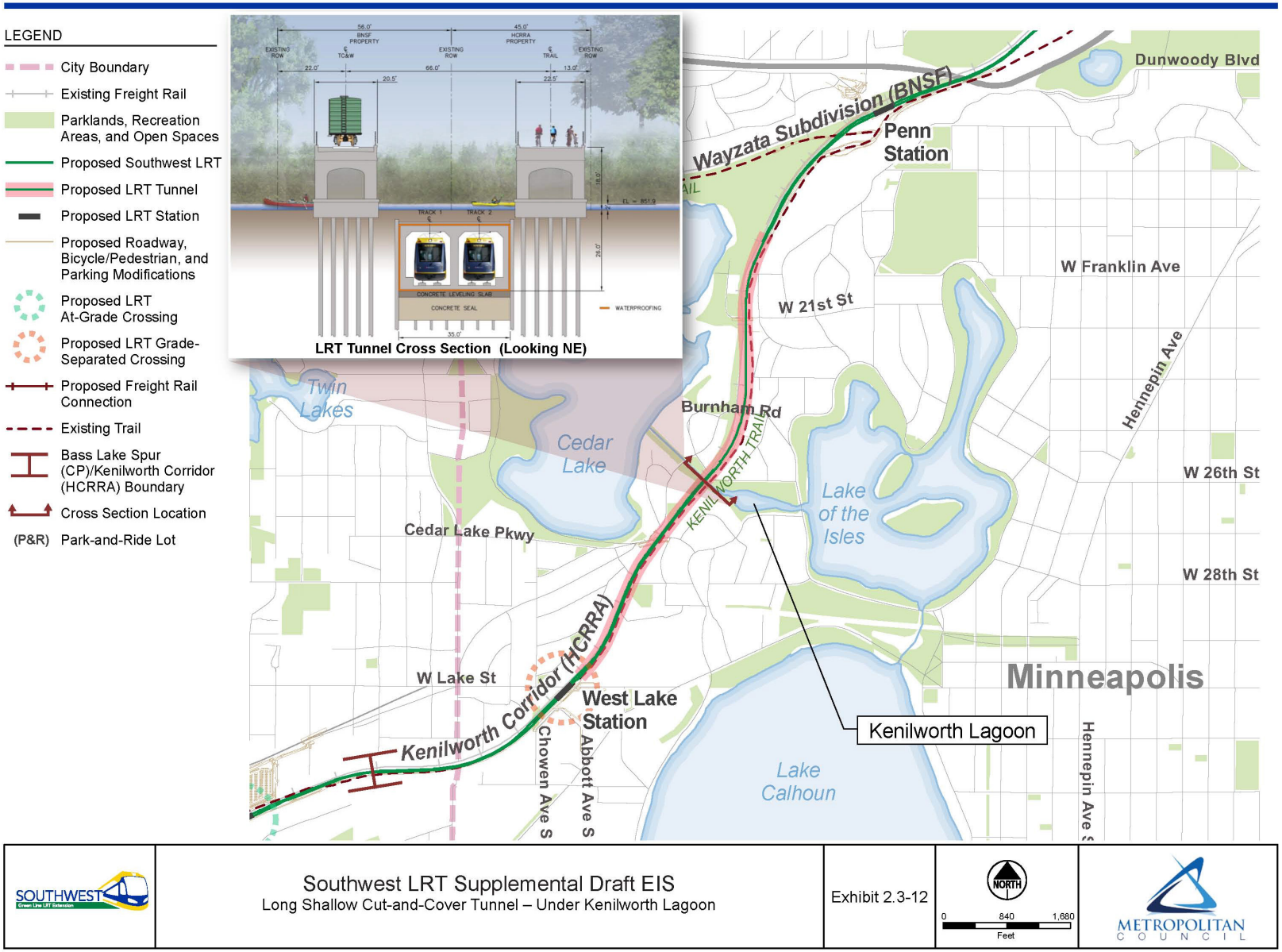


EXHIBIT 2.3-12
Long Shallow Cut-and-Cover Tunnel – Under Kenilworth Lagoon



B. Set 2 Design Adjustments

Following is a summary of the Set 2 Adjustments made to LRT 3A-1. As previously noted in Section 2.3.3.2 of this Supplemental Draft EIS, these design adjustments, which were approved by the Council in April 2014, were developed and evaluated in a process that paralleled the Set 1 Design Adjustment process. Further, these Set 2 Adjustments and the Set 1 Adjustments have been fully integrated into the revised LRT 3A-1, and they form the basis of the environmental analysis in this Supplemental Draft EIS for the St. Louis Park/ Minneapolis Segment.

- **The Freight Rail and Light Rail "Swap" and "Southerly Connection."** In coordination with the cities and affected railroad owners, the project developed and evaluated a design adjustment (i.e., the freight rail and light rail "Swap") that would place the proposed Blake, Louisiana, and Wooddale stations south of a portion of the existing CP freight line (under the Draft EIS conceptual design, those stations would have been located north of the existing CP freight line). The intent of the adjustment is to situate those proposed light rail stations closer to primary existing activity centers and potential development/ redevelopment sites, which are predominantly south of the existing freight line. The design adjustment would generally place the proposed light rail alignment and stations within the current freight rail right-of-way, and the freight rail alignment would be moved approximately 45 feet north onto right-of-way currently owned by HCRRA (purchased as future light rail right-of-way and where light rail would have been under the conceptual design of LRT 3A and LRT 3A-1 within Draft EIS). In addition, the Cedar Lake LRT Trail, which is a permitted temporary use within the HCRRA-owned right-of-way north of the existing freight rail alignment, would be reconstructed further north within that same right-of-way, staying north of the repositioned freight rail alignment. The design adjustment, illustrated on Exhibit 2.5-5, would include a grade-separated crossing of the proposed light rail alignment over the existing freight rail alignment immediately east of Excelsior Boulevard to permit the freight rail and light rail alignments to swap locations in the corridor. The adjustment also would require the elimination of the northern branch of the Skunk Hollow switching wye and its replacement with the "Southerly Connection" (allowing TC&W trains continued access between the Bass Lake Spur eastbound to the southbound MN&S Spur and the reverse), also illustrated on Exhibit 2.5-5. The Swap would also require the modification of the Cedar Lake LRT Trail at several locations, although continuity of and connections to the trail would be maintained. Further, this would result in the closure of approximately 11,771 feet of freight rail siding track segments, generally between the Downtown Hopkins Station and east of Beltline Boulevard. The Council incorporated the Swap design modification into the proposed project in April 2014 because the potential land use and economic development benefits and improved transit access to existing activity centers outweighed its additional cost and adverse environmental impacts, such as the additional moderate visual impacts of the new light rail overcrossing of the freight rail alignment in St. Louis Park.
- **Adjustment to the Location of Louisiana Station.** At the request of the City of St. Louis Park, the project team developed a range of potential design adjustments that would place the proposed Louisiana Station further south than it would have been under the conceptual design of LRT 3A and LRT 3A-1 in the Draft EIS, based on the freight and light rail swap previously discussed. The objective of these proposed design adjustments was to bring the light rail station further south, closer to activity centers North of Excelsior Boulevard. Two general design adjustments were developed and evaluated. The first would place the light rail station approximately halfway between the location of the existing freight rail tracks and Oxford Street. The second would use the north leg of the Skunk Hollow switching wye (to be abandoned and replaced with the Southerly Connection under the freight and light rail swap) to place the Louisiana Station approximately 300 feet north of Louisiana Circle. The second potential design adjustment would also have resulted in abandonment of the south leg of the Skunk Hollow switching wye and relocation of the Robert B. Hill Company salt facility at the end of the switching wye because it would no longer have freight rail access. The Council incorporated the first design refinement into the proposed project in April 2014, because of its relatively lower costs and property acquisition needs compared to the second design refinement and because of the potential development and redevelopment benefits of placing a light rail station closer to Oxford Street.

- **Adjustment to the Capacity and Locations of Park-and-Ride Lots.** Based on the City of Minneapolis' comments on the Draft EIS, the project team developed design adjustments that would change the proposed location and capacities of park-and-ride lots in the area included within the St. Louis Park/ Minneapolis Segment. In particular, the City asked that proposed surface park-and-lots be removed from the stations within the City of Minneapolis. Concurrently, to help ensure park-and-ride lot capacity to meet the forecast demand, the project team also developed and evaluated options for increased capacity at the Beltline Station because of its relatively direct automobile access to and from Highway 100 (via Highway 7, Highway 25 and West Lake Street). As a result of the proposed design adjustment, the number of park-and-ride lots in the segment would be reduced from six to two, while the park-and-ride capacity would increase from 650 to 810 spaces (see Table 2.5-1), relative to the conceptual design of LRT 3A and LRT 3A-1 in the Draft EIS (see Section 2.3.3 of the Draft EIS). The Council incorporated the design adjustment into LRT 3A-1 because of the generally improved access between regional highways and proposed park-and-ride lot locations.
- **Bicycle, Pedestrian, and Bus Access Improvements at West Lake and Penn Stations.** Based on the City of Minneapolis' comments on the Draft EIS, the project team developed and evaluated adjustments to the proposed bicycle, pedestrian, and bus facilities at West Lake and Penn stations. The adjustments developed include the addition of vertical circulation connecting the West Lake Station and the West Lake Street bridge and on-street bus transfer facilities on West Lake Street. The adjustments also include grade-separated bicycle and pedestrian connections and improved kiss-and-ride facilities at the Penn Station. The Council incorporated the design adjustment into LRT 3A-1 in April and July 2014 due to the relatively high level of projected ridership at the two stations and the improved access that the adjustments would provide to walk-on and bus-transfer riders. See Appendix G, Conceptual Engineering Drawings, for additional detail.

2.4 Design Adjustment Process

This section summarizes the process used by the Council to identify design adjustments to LRT 3A and LRT 3A-1 since the end of the Draft EIS public comment period on December 31, 2012. The project team developed and evaluated the design adjustments in response to comments submitted on the Draft EIS, including proposed adjustments to: accommodate local goals and objectives; improve the performance of the proposed light rail extension; reduce project costs; and avoid or minimize the project's adverse environmental impacts.

The design adjustment process implemented since completion of the Draft EIS was supported by the project's Technical Project Advisory Committee (TPAC), which is composed of staff from MnDOT, the Council's Metro Transit Operations Division and affected local jurisdictions. Elected officials of the corridor cities and Hennepin County, MnDOT, and the Council, and a representative from the project's Community Advisory Committee (CAC) serve on the project's Corridor Management Committee (CMC), which advises the Council on project-related issues. Agency coordination is described in more detail in Chapter 4 of this Supplemental Draft EIS.

The project's ongoing engagement and communication with the affected public has been a fundamental element of planning for the Southwest LRT Project, including the design adjustment process implemented since completion of the Draft EIS public comment period. Community representatives serve on the project's Business Advisory Committee (BAC) and CAC, which provide input and recommendations to the CMC, including design adjustments developed and evaluated since publication of the Draft EIS. Since early 2013, the Council held approximately 20 public open houses and community meetings (see Table 4.4-1 in this Supplemental Draft EIS) and provided dozens of presentations at the request of various groups throughout the project corridor. Meetings with the public have been tailored to present information and solicit feedback on specific project issues. Chapter 4 of this Supplemental Draft EIS provides additional detail on the project's public involvement process and activities since the end of the Draft EIS public comment period, and it provides additional information on the makeup of the CAC and BAC.

On March 31, 2014, Council staff released a draft recommendation of the design adjustments to be incorporated into the proposed project. Following receipt of public comment on those recommendations at

its meeting on April 2, 2014, the CMC adopted a resolution recommending the design adjustments to be incorporated into the proposed project's scope and budget. On April 9, 2014, the Council identified the adjustments to be incorporated into the proposed project. The Council's action was based on its consideration of the technical analysis of the range of potential design adjustments to the proposed project, as summarized in Section 2.3 of this Supplemental Draft EIS. The Council also considered comments received from the public, agencies, jurisdictions, and committees within the project's public involvement and agency coordination activities since the close of the Draft EIS public comment period, as summarized in Chapter 4 of this Supplemental Draft EIS, including public testimony received at its meeting on April 9, 2014. On July 9, 2014, the CMC considered additional design adjustments within the City of Minneapolis that were proposed in a memorandum of understanding between the Council and the City of Minneapolis. (See Appendix D, Sources and References Cited, for instructions on how to access the executed memorandum.) The CMC endorsed the additional proposed design adjustments, which the Council subsequently approved on July 9, 2014 (Council and City, 2014b).

These design adjustments to LRT 3A and LRT 3A-1 were screened by FTA and the Council to determine whether they individually or collectively warranted evaluation in terms of social, environmental, economic, and transportation impacts under NEPA. The project team, in coordination with FTA staff, reviewed each of the design adjustments to identify any substantive changes to LRT 3A and LRT 3A-1 not addressed in the Draft EIS. The review was based on NEPA and MEPA environmental review procedures to determine whether project adjustments were substantial enough to warrant detailed study in this Supplemental Draft EIS (40 CFR 1502.9(c)and Minn. R. 4410.3000, subparts 3 and 5, respectively). During this process, the design adjustments were reviewed and screened based on the following questions:

- Do the design adjustments under evaluation introduce new alternatives not identified in the Draft EIS that meet the project's purpose and need?
- Would the design adjustments likely cause new significant adverse impacts not disclosed in the Draft EIS?

Based on this assessment of adjustments made to LRT 3A and LRT 3A-1 since publication of the Draft EIS, FTA and the Council determined that there were no new reasonable alternatives identified through the design adjustment process that would meet the project's Purpose and Need (see Chapter 1 of this Supplemental Draft EIS). However, because of the potential for new significant adverse impacts in the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment that were not addressed in the Draft EIS, FTA and the Council also determined that the proposed adjustments in these areas should be evaluated in a Supplemental Draft EIS. Adjustments to LRT 3A and LRT 3A-1 made since completion of the Draft EIS that did not meet these criteria will be addressed in the Final EIS.

In addition, project staff considered whether substantive corrections or updates were needed to the methods used to prepare the analyses presented in the Draft EIS. Those that have been updated for this Supplemental Draft EIS are described in Section 3.1.

2.5 Locally Preferred Alternative Adjustments Evaluated in this Supplemental Draft Environmental Impact Statement

This section describes proposed adjustments to LRT 3A and LRT 3A-1 in the three areas evaluated within this Supplemental Draft EIS: the Eden Prairie Segment, the Hopkins OMF site, and the St. Louis Park/ Minneapolis Segment. The two segments and the Hopkins OMF site are shown on Exhibit 2.5-1 as part of the proposed approximate 16-mile Southwest LRT Project.

As described in Section 2.3 of this Supplemental Draft EIS, the LPA is included within LRT 3A and LRT 3A-1 of the Draft EIS, with the difference between these two alternatives being the "relocation" or "co-location" of TC&W trains currently operating in the Bass Lake Spur and Kenilworth Corridor. In April and July 2014, based on the design adjustment process, technical analysis, and agency and public involvement process described in this chapter, the Council identified adjustments to the LPA throughout the approximate 16-mile proposed project based on the following:

- The transit elements included in LRT 3A and LRT 3A-1 as described in the Draft EIS and adjusted as described in this Supplemental Draft EIS
- The freight rail modifications of LRT 3A-1 (i.e., retention of freight rail service in the Kenilworth Corridor, termed "co-location" in the Draft EIS, with fright rail modifications described in this Supplemental Draft EIS)

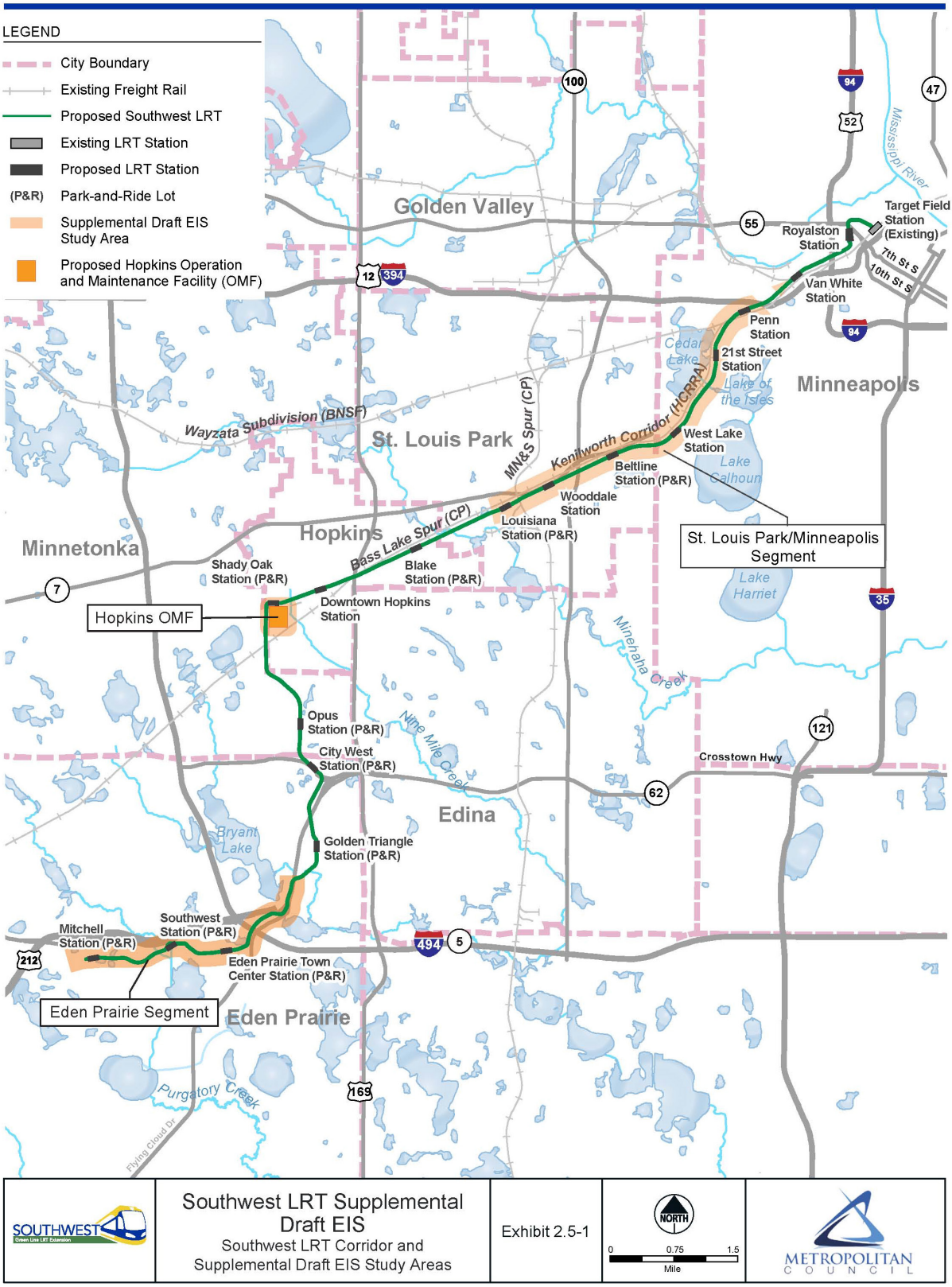
The approximate 16-mile LPA includes the proposed light rail alignment, 17 new stations, additional park-and-ride spaces, an OMF, and ancillary facilities (such as signal systems and substations). The proposed LPA light rail improvements in the Eden Prairie Segment, the Hopkins OMF site, and the St. Louis Park/ Minneapolis Segment are described in Sections 2.5.1, 2.5.2, and 2.5.3, respectively, and are illustrated in Appendix G, Conceptual Engineering Drawings. Appendix F provides a description of the process and measures used during the design adjustment process. Sections 2.3.3.5 through 2.3.3.7 of the Draft EIS also provide additional detail on the proposed light rail improvements, such as typical drawings of the light rail alignment cross sections, traction power substations, and traffic and train control facilities.

The LPA also includes light rail-related bus, roadway, and bicycle/pedestrian improvements and retainment of freight rail in its current location with proposed modifications. Proposed bus improvements to facilitate connections to light rail stations include some or all of the following: new or changes to existing bus routes; new or modifications to existing bus stops and platforms; and new or relocated bus shelters and other amenities. Proposed roadway improvements include changes to local streets to accommodate the light rail alignment, access to park-and-ride lots and drop-off points, and at-grade crossings. Proposed bicycle/pedestrian improvements include changes to trails, sidewalks, and other bicycle and pedestrian facilities to accommodate the light rail alignment and to provide safe and convenient access to light rail stations. Proposed freight rail modifications include the adjustment of freight rail tracks to accommodate the light rail alignment, including modified at-grade street crossings, and modifications to freight rail connections to meet freight rail operating requirements. Proposed improvements included within the LPA in the Eden Prairie Segment, at the Hopkins OMF site, and in the St. Louis Park/Minneapolis Segment are described and illustrated in Sections 2.5.1, 2.5.2, and 2.5.3, respectively, and are illustrated in greater detail in Appendix G, Conceptual Engineering Drawings.

The current configuration of the LPA in the three areas evaluated in this Supplemental Draft EIS is the result of a local process, as described in Sections 2.3 and 2.4, led by the Council to develop, evaluate, and identify adjustments to the LPA since publication of the Draft EIS. Chapter 3 of this Supplemental Draft EIS provides additional information on environmental consequences for the LPA within these three areas based on adjustments made after the Draft EIS. The segments described in this section correspond to the areas identified by the Council and FTA where adjustments to the LPA made since publication of the Draft EIS could result in additional significant adverse impacts not identified in the Draft EIS. Refer to Section 2.3.3.4 of the Draft EIS for a description and illustration of the segments used in the Draft EIS.

Section 2.3 of the Draft EIS provides an overall description of the LPA, which was included within alternatives LRT 3A and LRT 3A-1. In general, the overall scope of the LPA addressed in this Supplemental Draft EIS remains as it was described in the Draft EIS under LRT 3A and LRT 3A-1: the proposed light rail line would operate from downtown Minneapolis through the southwestern suburban cities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in proximity to the City of Edina. The double-tracked light rail alignment would be primarily at-grade, with some sections of below- and above-grade alignment and a mix of at-grade and grade-separated roadway crossings. As described in the Draft EIS, the proposed project would be an extension of the METRO Green Line (Central Corridor LRT). When completed, the two projects' light rail trains would provide a one-seat ride (with no transfer) between the two corridors. In addition, the Southwest LRT line would be part of an integrated system of transitways, including connections to the METRO Blue Line (Hiawatha) LRT (hereinafter referred to as "the Blue Line"), the Northstar Commuter Rail line, a variety of major bus routes along the alignment, and proposed future transitway and rail lines.

EXHIBIT 2.5-1
Southwest LRT Corridor and Supplemental Draft EIS Study Areas



In April and July 2014, the Council adopted adjustments to the LPA throughout the project area. Those adjustments include freight rail modifications incorporated into the LPA that are based on freight rail modifications that were included in LRT 3A-1 in the Draft EIS (i.e., retention of freight rail service in the Kenilworth Corridor).

Section 2.4 provides a description of the criteria that FTA and the Council used to identify the relatively substantial adjustments to the LPA that are addressed in this Supplemental Draft EIS and the other adjustments that will be addressed in the Final EIS. Following is a brief description of the key adjustments to the LPA that were made since publication of the Draft EIS. These adjustments are described in this section and evaluated in Chapter 3:[24]

- **Eden Prairie Segment.** The proposed light rail alignment and stations in the Eden Prairie Segment have been adjusted south to provide better connections to local activity centers, while avoiding or minimizing adverse impacts (see Section 2.5.1).
- **Hopkins OMF.** The project now includes a proposed OMF in the City of Hopkins. The proposed site is not one of the four potential OMF sites identified in the Draft EIS (see Section 2.5.2).
- **St. Louis Park/Minneapolis Segment.** In the St. Louis Park/Minneapolis Segment, the LPA has been adjusted to include a proposed light rail tunnel in the Kenilworth Corridor; proposed freight rail modifications; and adjustments to the location and capacity of proposed park-and-ride (see Section 2.5.3).

The proposed light rail and bus operating plans for the LPA are summarized in Section 2.3.3.10 of the Draft EIS. One adjustment to the proposed light rail operating plan under the LPA is that light rail trains would generally operate every 10 minutes during peak periods, compared to approximately every 7.5 minutes identified under LRT 3A and LRT 3A-1 in the Draft EIS. The LPA's proposed bus operating plan will be updated as part of the completion of Project Development and will be reflected in the project's Final EIS.

In summary, the remainder of this Supplemental Draft EIS is based on the definition of the LPA adopted by the Council in April and July 2014, as it identified light rail related design adjustments throughout the project length and as it identified freight rail modifications to be incorporated into the LPA. The two segments and the OMF site described and evaluated in this Supplemental Draft EIS are included within the LPA's full project length as identified by the Council in April and July 2014. Table 2.5-1 provides a summary of the LPA's proposed light rail alignment length, stations, and park-and-ride lots as evaluated in the Draft EIS and Supplemental Draft EIS for the Eden Prairie and St. Louis Park/Minneapolis Segments.

Section 2.3 of the Draft EIS also provides a description of the project's No Build Alternative, required under both NEPA and the Minnesota Environmental Policy Act (MEPA). The No Build Alternative has not been adjusted for this Supplemental Draft EIS.

2.5.1 Eden Prairie Segment

The Eden Prairie Segment evaluated in this Supplemental Draft EIS generally extends between just west of the intersection of Technology Drive and Mitchell Road and just east of the intersection of Flying Cloud Drive and Valley View Road, as shown on Exhibit 2.5-2.[25] Within this segment, the LPA includes a proposed light rail alignment, three proposed light rail stations, three proposed park-and ride lots, and various related bus,

[24] Section 3.1 provides a summary of the environmental categories that are addressed under each of the three areas evaluated within this Supplemental Draft EIS. It also includes a summary of methods and data used for this Supplemental Draft EIS that have been updated since publication of the Draft EIS.

[25] As part of the design and engineering process, the Council developed a design adjustment that would initially implement a western terminus of the proposed light rail line at the Southwest Station. As a result of that western terminus, there would be no light rail alignment west of Southwest Station, no Mitchell Station or park-and-ride lot, and the proposed structured park-and-ride lot at Southwest Station would be increased by approximately 610 spaces. The western terminus would also include additional northbound and southbound through lanes on Prairie Center Drive, generally between Highway 212 and Technology Drive. The design plans for this western terminus would not preclude a later extension of LRT further to the west. The environmental impact analysis of the LPA within Section 3.2 of this Supplemental Draft EIS is based on a western terminus at Mitchell Station, with notes where the implementation of the western terminus at the Southwest Station would potentially increase impacts (i.e., visual and aesthetics, traffic, and transit).

roadway, and bicycle/pedestrian improvements, as described below. The description also notes changes to the proposed light rail-related improvements within the segment since publication of the Draft EIS.[26] The general location and configuration of the proposed improvements described below are shown on Exhibit 2.5-2 and are illustrated in greater detail in Appendix G, Conceptual Engineering Drawings.

TABLE 2.5-1
LPA Proposed LRT Alignment Length, Stations, and Park-and-Ride Lots: Draft EIS and Supplemental Draft EIS (within Supplemental Draft EIS Segments)

Proposed LRT Improvements	Eden Prairie Segment		St. Louis Park/Minneapolis Segment	
	Draft EIS[a]	Supplemental Draft EIS[b]	Draft EIS[a]	Supplemental Draft EIS
LRT Alignment Length	2.7 miles	3.0 miles	4.5 miles	4.5 miles
LRT Stations	Mitchell Southwest Eden Prairie Town Center	Mitchell Southwest Eden Prairie Town Center	Louisiana Wooddale Beltline West Lake 21st Street Penn	Louisiana Wooddale Beltline West Lake 21st Street Penn
Park-and-ride Lots (lots/spaces)[b]	Surface: 1/400[c] Structured: 3/1,450[c] Total Spaces: 1,850	Surface: 1/160 Structured: 2/1,350[d] Total Spaces: 1,510	Surface: 6/650 Structured: 0/0 Total Spaces: 650	Surface: 2/810 Structured: 0/0 Total Spaces: 810

[a] Based on LRT 3A and LRT 3A-1 of the Draft EIS.

[b] As part of the design and engineering process, the Council developed a design adjustment that would initially implement a western terminus of the proposed light rail line at the Southwest Station. As a result of that western terminus, there would be no light rail alignment west of Southwest Station and no Mitchell Station or park-and-ride lot and the proposed structured park-and-ride lot at Southwest Station would be increased by approximately 600 spaces (from 450 spaces to 1,050 spaces).

[c] Within the Draft EIS, there would have been 400-space surface and 400-space structured park-and-ride lots at the Mitchell Station, which are accounted for in this table as one surface and one structured lot.

[d] Existing surface off-street parking spaces that would be displaced by the proposed structured park-and-ride lots would be replaced within the proposed lots, thus increasing the overall capacity of the structured lots.

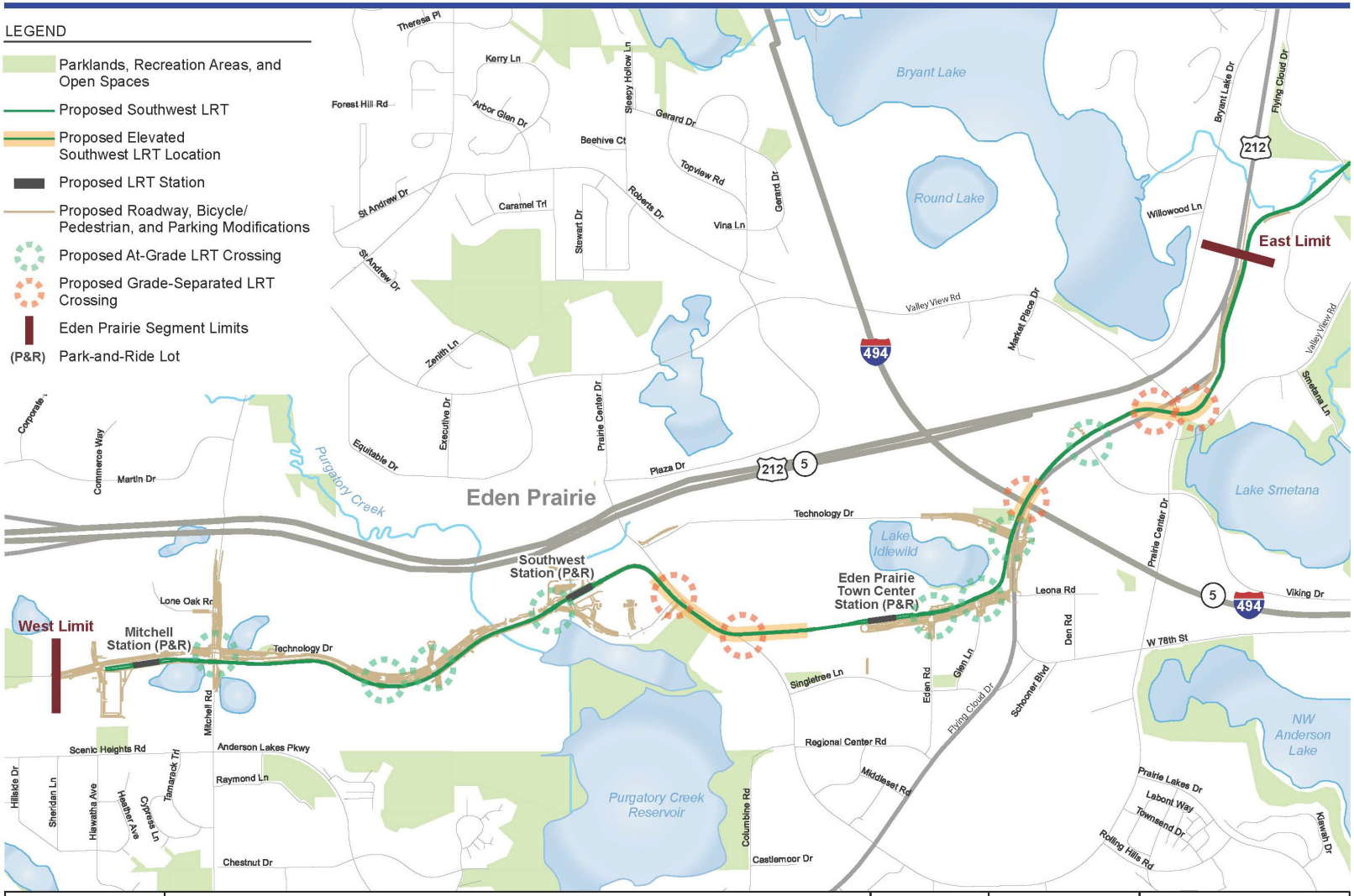
Source: Council, 2014; Draft EIS (Section 2.3.3).

Section 2.3.3 of the Draft EIS provides a description of the improvements that were included in the proposed LPA at that time and that are referenced below.

- **Light Rail Alignment.** Under the LPA, a new double-tracked light rail alignment in the Eden Prairie Segment would extend from the project's western terminus on Technology Drive, just west of Mitchell Road, to just east of the intersection of Flying Cloud Drive and Valley View Road where it would align with the light rail alignment described in the Draft EIS for LRT 3A and LRT 3A-1. The proposed light rail alignment under the LPA would include ancillary facilities, such as overhead catenary, substations, signal systems, tail and/or storage tracks, and stormwater facilities. The terminus of the light rail alignment would be located on the south side of Technology Drive, immediately east of the existing main driveway entrance to the Eden Prairie City Center (west of Mitchell Road), rather than in the vicinity of Mitchell Road immediately south of Highway 212, as proposed in the Draft EIS (see Section 2.3.1 for additional detail). From its terminus, the light rail alignment would extend east, crossing Mitchell Road at-grade, staying on the south side of Technology Drive. In the vicinity of the bus-only entrance to the SouthWest Transit Center, the alignment would turn north and cross Technology Drive at-grade. The light rail alignment would turn east and remain at-grade immediately south of Highway 212 and north of the existing SouthWest Transit Center park-and-ride lot. The alignment would continue east before turning south on the west side of Prairie Center Drive, ascending to an elevated structure over Technology Drive. The structured light rail alignment would then turn east and cross over Prairie Center Drive. The alignment would continue east at-grade generally within undeveloped property. Then the light rail alignment would run parallel to and north of a proposed new unnamed east/west roadway and north of Eden Road to its intersection with Flying Cloud Drive, where the light rail alignment would turn north.

[26] Section 3.2 of this Supplemental Draft EIS provides updated information on the anticipated environmental impacts in the Eden Prairie Segment related to the LPA, noting a comparison of impacts as identified in the Draft EIS.

EXHIBIT 2.5-2
Project Overview Eden Prairie Segment



The alignment would continue north at-grade on the west side of Flying Cloud Drive before crossing Technology Drive at-grade. The alignment would continue northeast, crossing over I-494 on an elevated structure staying at-grade south of and parallel to Flying Cloud Drive. Approaching Prairie Center Drive, the alignment would start to ascend on retained fill and would cross over the intersection of Flying Cloud and Prairie Center drives on a new structure. The alignment would then continue northeast, returning back to grade, staying east and generally parallel to the on ramp onto Highway 212, where this segment ends. From there, the light rail alignment would continue generally north and then generally east to downtown Minneapolis.

- **Light Rail Stations.** Similar to the Draft EIS, the Eden Prairie Segment includes three proposed light rail stations: Mitchell Station, Southwest Station, and Eden Prairie Town Center Station. The proposed Mitchell Station, which was included in the Draft EIS located immediately south of Highway 212 west of Mitchell Road, would be located on the south side of Technology Drive, west of Mitchell Road. The proposed location of the Southwest Station, immediately west of the existing SouthWest Transit Center structured park-and-ride lot, is relatively unchanged since publication of the Draft EIS. Since publication of the Draft EIS, the proposed location of the Eden Prairie Town Center Station has been adjusted to the south to provide closer access to the activity centers north and south of Singletree Lane.
- **Park-and-ride Lots.** Under the LPA, there would be three park-and-ride lots in the Eden Prairie Segment. Working west to east, the first would be an approximately 900-space structured park-and-ride lot immediately south of the Mitchell Station. The second would be an approximately 450-space structured park-and-ride lot immediately west of the proposed Southwest Station, sharing vehicular connections with the existing SouthWest Transit Center park-and-ride lot. The structured lots would also replace existing off-street parking spaces displaced by the park-and-ride lots, thus increasing their overall capacity. The third would be an approximately 160-space leased lot in the vicinity of the Eden Prairie Town Center Station. The proposed leased lot would be located on an existing parking lot, and its location would be determined through negotiations with property owners during the engineering and construction phases of the project.
- **Bus Improvements.** SouthWest Transit, a transit agency serving Chanhassen, Chaska, Eden Prairie, and downtown Minneapolis, currently provides bus service in to and out of the SouthWest Transit Center. The proposed Southwest Station would be located adjacent to the transit center, which would be moved to the west to accommodate the introduction of the light rail alignment and stations, providing for the continuation of SouthWest Transit's bus operations. Section 2.3.3.10 of the Draft EIS describes the LPA proposed bus service plan for 2030, including proposed modification to bus lines serving the Mitchell and Southwest stations. Changes to the LPA's proposed bus service plan, which would include local and express bus service and potentially local feeder bus service, will be made as Project Development is completed and will be reflected in the project's Final EIS, recognizing that SouthWest Transit would be responsible for determining any changes to its bus service operating out of the SouthWest Transit Center. Under the LPA, there would be bus facilities accommodating transfers between buses and light rail stations at the Southwest and Eden Prairie Town Center stations.
- **Roadway Improvements.** Under the LPA, there would be a variety of roadway improvements within the Eden Prairie Segment, generally to accommodate the proposed light rail alignment or operations or to address potential impacts to roadway and traffic. Key proposed roadway improvements would include: (1) capacity improvements (for example, additional through and/or turn lanes) and lane adjustments to accommodate the light rail alignment on Prairie Center Drive, generally between Highway 212 and Singletree Lane, Mitchell Road at Technology Drive, and Technology Drive generally between Mitchell Road and Purgatory Creek; (2) the construction of a new, unnamed local street that would extend west approximately one block from Eden Road to the Eden Prairie Town Center Station; and (3) modifications to Eden Road to accommodate the proposed at-grade light rail alignment.
- **Bicycle and Pedestrian Improvements.** Under the LPA, there would be a variety of bicycle and pedestrian improvements in the Eden Prairie Segment. In general, those improvements would be made to provide safe and convenient bicycle and pedestrian crossings of the proposed light rail alignment, to

accommodate the proposed light rail and roadway improvements, and/or to provide bicycle and pedestrian connections to the proposed light rail stations. Of note is the proposed new short section of sidewalk that, together with existing parking lots, would provide a paved pedestrian connection between the Eden Prairie Town Center Station and Singletree Lane.

2.5.2 Operations and Maintenance Facility

The LPA for the Southwest LRT Project includes a site for a proposed OMF within the City of Hopkins, referred to as the Hopkins OMF. Exhibit 2.5-3 and Appendix G, Conceptual Engineering Drawings, provide illustrations of the OMF site and a potential layout for the site. The Hopkins OMF site was not included in the Draft EIS, which identified three potential OMF sites in the City of Eden Prairie and one in the City of Minneapolis (see Section 2.3.3.9 of the Draft EIS).

The proposed Hopkins OMF would be within an existing office/warehouse and light manufacturing development. The proposed Hopkins OMF would occupy an approximately 15-acre site between the Canadian Pacific (CP) Railway to the south, 5th Street South (K-Tel Drive) to the north, 15th Avenue South on the east, and the proposed LRT mainline to the west, as shown on Exhibits 2.5-1 and 2.5-3. The Hopkins OMF would be located approximately 1,000 feet south of the proposed Shady Oak Station. The Hopkins OMF would result in the closure of 16th Avenue South, which is in the middle of the proposed site, between K-Tel Drive and 6th Street South. In addition, a cul de sac would be constructed on 6th Street South, immediately east of 16th Avenue South. Automobile and truck access to the OMF site would be provided on the existing roadway network via 5th Street South, K-Tel Drive, and 15th Avenue South. Appendix G, Conceptual Engineering Drawings, provides additional detail. Light rail transit vehicles would access the OMF site via the inbound tracks of the proposed Southwest LRT alignment. One track connection between the OMF and the light rail mainline would cross K-Tel Drive at-grade. Inbound light rail trains would access the site directly from the inbound tracks. Outbound light rail trains would pass the OMF, cross over to the inbound tracks, reverse direction, and enter the OMF site via the inbound tracks.

In general, light maintenance activities and the storage of vehicles not in service would occur within enclosed structures, although some maintenance activities, such as moving vehicles, would occur outside of buildings. Activities on the site would include washing, routine cleaning, routine maintenance, and inspections of the trains; parts storage; and maintenance-related office functions. In general, the OMF site would be in operation 24 hours a day, 365 days a year. The site would include a network of light rail switching track, a 70-space surface parking lot for employees and visitors, storage and maintenance of nonrevenue vehicles, and office space for employees. Heavy maintenance of the project's light rail vehicles, which would include wheel truing and major body repair, would occur at the Franklin Street OMF, which is outside of the project area and which would not need to be expanded to accommodate the project's light rail vehicle fleet.

2.5.3 St. Louis Park/Minneapolis Segment

The St. Louis Park/Minneapolis Segment addressed in this Supplemental Draft EIS generally extends between Louisiana Avenue South in St. Louis Park and I-394 near the junction of the Wayzata Subdivision and the Kenilworth Corridor in Minneapolis. Within this segment, the LPA includes a proposed light rail alignment, six proposed light rail stations, two proposed park-and-ride lots, and various related bus, roadway, and bicycle/pedestrian improvements and freight rail modifications, which are described below and illustrated on Exhibit 2.5-4. The light rail and related improvements and the freight rail modifications for this segment are illustrated in greater detail in Appendix G, Conceptual Engineering Drawings. Section 2.3.3 of the Draft EIS provides a description of the elements included in LRT 3A-1 at that time and that are referenced below.

In summary, the proposed LPA would: (1) construct a light rail alignment within the St. Louis Park/ Minneapolis Segment, portions of which would be at-grade, above-grade, or below-grade; (2) provide for continuation of freight rail operations within the Kenilworth Corridor with relatively minor adjustments to freight rail facilities and operations; and (3) reconstruct the multipurpose bicycle and pedestrian trail generally within its current location, with modifications to new trail bridges over freight rail and light rail east of Beltline Station and west of Penn Station to accommodate the new light rail alignment and related

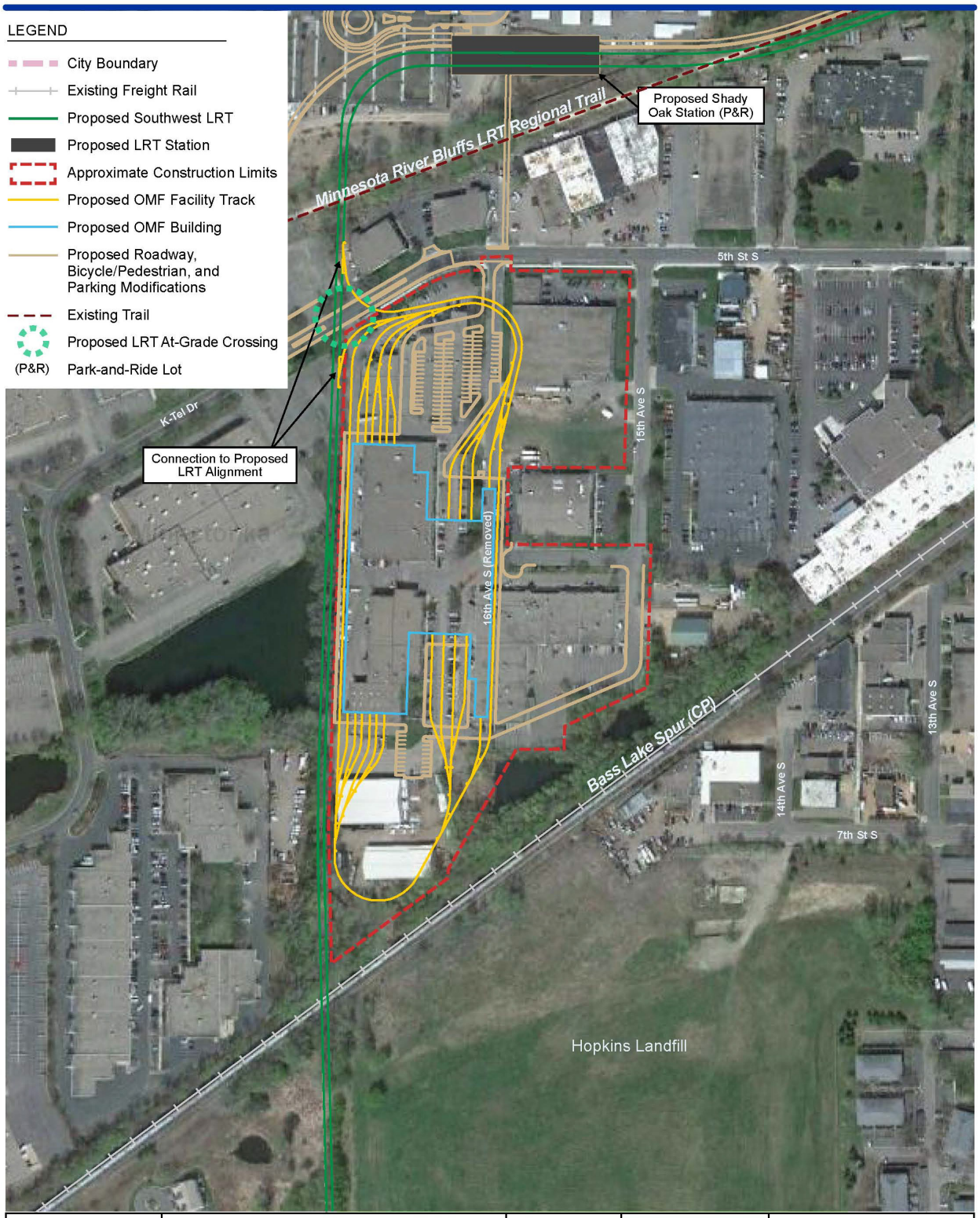
facilities. These and other proposed improvements within this segment, reflecting adjustments made after publication of the Draft EIS, are described in this subsection in greater detail.

As previously noted, the Draft EIS evaluated two freight rail configurations, termed LRT 3A and LRT 3A-1. LRT 3A would relocate TC&W freight trains currently operating along the Bass Lake Spur and the Kenilworth Corridor to the MN&S Spur and Wayzata Subdivision, and LRT 3A-1 would continue operations of TC&W freight trains along the Bass Lake Spur and Kenilworth Corridor. Sections 2.3 and 2.4 of this Supplemental Draft EIS provide an overview of the development and evaluation of freight rail modifications incorporated into the proposed LPA since publication of the Draft EIS. As defined in this Supplemental Draft EIS, the LPA includes the retention of TC&W freight rail service within the Kenilworth Corridor, termed "co-location" in the Draft EIS.

Primary differences in this segment between the light rail-related elements of the LPA described in this section and those described in Section 2.3.3 in the Draft EIS include (generally from west to east): (1) expansion of the park-and-ride lot at Beltline Station from 500 to 540 spaces; (2) modification of the location of the Louisiana Station, and an expansion of the park-and-ride lot from 100 to 270 spaces; (3) removal of the park-and-ride lots at Wooddale, 21st Street, West Lake, and Penn stations; and (4) placement of the proposed light rail alignment in a tunnel to the west of the Kenilworth Lagoon, which is the constructed waterway that connects Lake of the Isles and Cedar Lake in the Kenilworth Corridor. Following is a summary of the proposed light rail alignment, stations, park-and-ride lots, and related bus, roadway, bicycle/pedestrian, and freight rail modifications that are included within the LPA in the St. Louis Park/Minneapolis Segment:

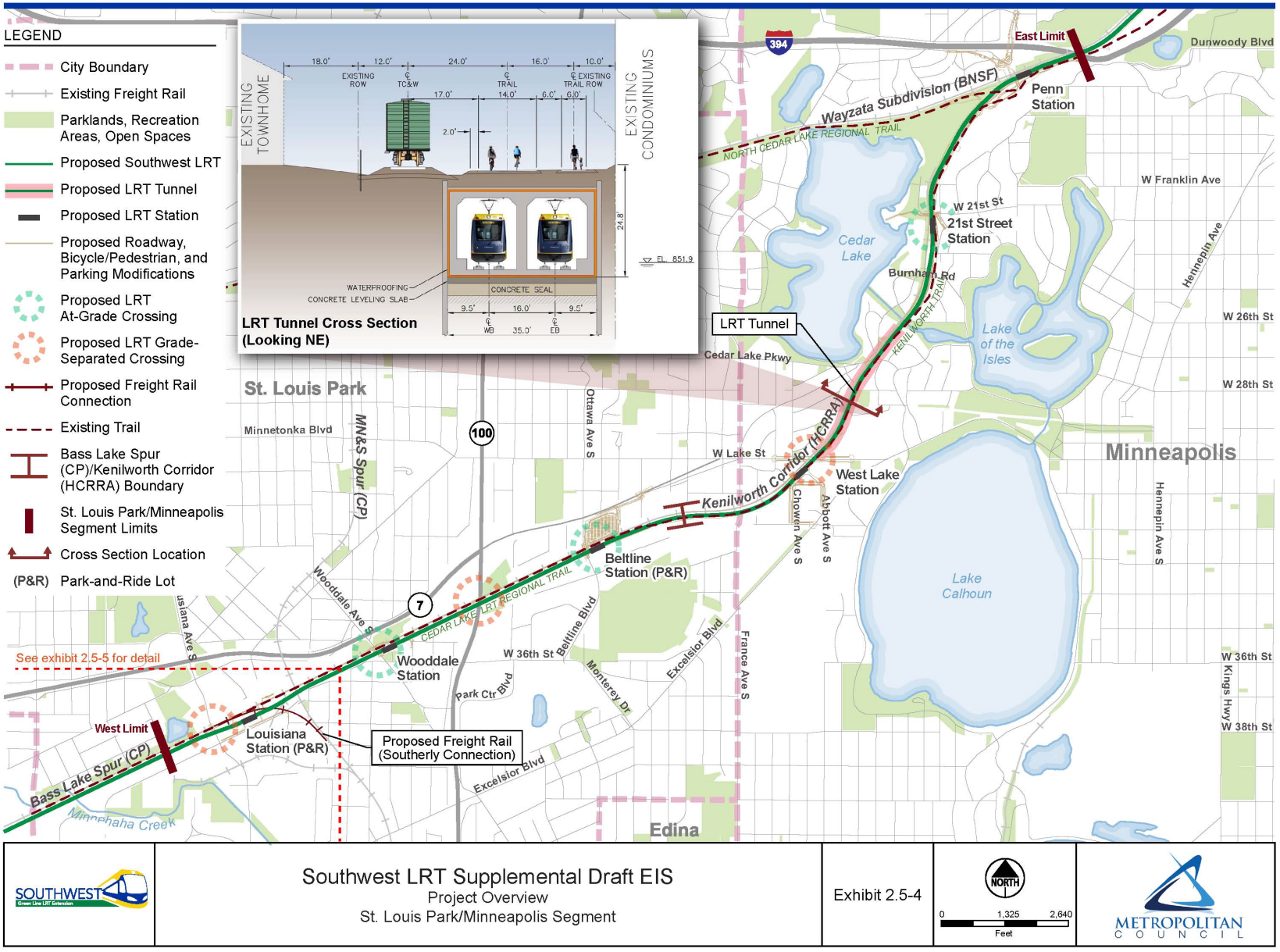
- **LRT Alignment.** Within the St. Louis Park/Minneapolis Segment, the LPA would include a new double-tracked light rail alignment that would extend the length of the segment, as shown on Exhibit 2.5-4. The proposed light rail alignment would be located south of and parallel to freight rail tracks, which would be adjusted northward to accommodate the light rail alignment, as described below. The light rail improvements in this segment would include ancillary facilities, such as overhead catenary, substations, signal systems, and stormwater facilities. Working west to east, the LRT alignment in this segment would cross over Louisiana Avenue South on an elevated structure and would shift slightly to the south to enter the proposed Louisiana Station. Just east of the Louisiana Station, the light rail alignment would cross under the proposed southerly freight rail connection to the MN&S line and the existing MN&S grade-separated crossing. Proceeding east, the LRT alignment would continue at-grade and cross over Highway 100 on a new structure. The alignment would then continue to the east and remain at-grade within the Kenilworth Corridor, crossing under West Lake Street. Immediately north of West Lake Street, the double-tracked light rail alignment would descend into an approximately 25-foot-deep tunnel (at track level), constructed using cut-and-cover construction techniques. The light rail tunnel would begin north of West Lake Street, avoiding the need to reconstruct the existing West Lake Street bridge, and would allow the West Lake Station to be located at-grade (generally at the same grade as the freight rail alignment and bicycle/pedestrian trail). The light rail tunnel would extend approximately 2,200 feet from just north of West Lake Street to approximately 400 feet south of the Kenilworth Lagoon, which is a constructed channel connecting Lake of the Isles to Cedar Lake. The light rail tunnel would be located within the Kenilworth Corridor and would generally be located under the reconstructed Kenilworth Trail, shown on Exhibit 2.5-4 as a cross section. Each end of the tunnel would include a portal spanning approximately 300 to 500 feet, which would provide for the transition between the at-grade and tunnel alignments. Fencing and other safety measures would protect the tunnel portals from unauthorized entry. The light rail alignment would rise back to grade to cross the lagoon on a new bridge with approximately the same vertical clearance over the lagoon as provided today under the existing freight rail and bicycle/pedestrian bridges. The light rail alignment would continue at-grade throughout the remaining eastern portion of the Kenilworth Corridor.

EXHIBIT 2.5-3
Project Overview, Operations and Maintenance Facility, City of Hopkins



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Project Overview Operations and Maintenance Facility, City of Hopkins	Exhibit 2.5-3	NORTH 0 150 300 Feet	METROPOLITAN COUNCIL

EXHIBIT 2.5-4
Project Overview St. Louis Park/Minneapolis Segment



- **Light Rail Stations.** Under the LPA, the St. Louis Park/Minneapolis Segment would include six new light rail stations. From southwest to northeast, these proposed stations are Louisiana Station, Wooddale Station, Beltline Station, West Lake Station, 21st Street Station, and Penn Station. Situated within the City of St. Louis Park, the Louisiana, Wooddale, and Beltline stations would be located east of Louisiana Avenue South, Wooddale Avenue South, and Beltline Boulevard, respectively. The proposed location of each of these stations is similar to the location proposed in the Draft EIS, except they would be located on the south side of the existing freight rail tracks and Louisiana Station would now be closer to Oxford Street. As proposed in the Draft EIS, the West Lake Station would be at-grade, approximately 25 feet below and immediately south of West Lake Street, with stairs and elevators connecting the station and the West Lake Street bridge (elevators were not included as proposed station elements in the Draft EIS). There would also be pedestrian access to the station via Chowen Avenue South and Abbott Avenue South, which would also accommodate passenger drop-offs and bus transfers, as well as via West Lake Street. As proposed in the Draft EIS, the at-grade 21st Street Station would be accessed using the local street, bicycle, and pedestrian network. Penn Station would be located immediately south of the I-394/ Penn Avenue South interchange. While the proposed location of the Penn Station has not changed substantially since the Draft EIS, improvements associated with it have been adjusted, such as the addition and reconfiguration of pedestrian connections and the addition of a kiss-and-ride facility.
- **Park-and-ride Lots.** Under the LPA, the St. Louis Park/Minneapolis Segment would include the following park-and-ride lots (the proposed capacities and specific sites have been adjusted since publication of the Draft EIS): a 270-space surface lot at Louisiana Station and a 540-space surface lot at the Beltline Station.
- **Bus Improvements.** The specific designs and locations of proposed bus improvements under the LPA have been adjusted since publication of the Draft EIS. Bus stops and other related facilities would be provided at the Louisiana, Wooddale, and Beltline stations. West Lake station would include improvements to South Chowen Avenue, West 31st Street, and Abbott Avenue South that would accommodate bus connections between Excelsior Boulevard and the station, and connections to bus stops on West Lake Street.
- **Roadway Improvements.** Under the LPA, there would be a variety of roadway improvements within the St. Louis Park/Minneapolis Segment, to accommodate the proposed light rail alignment. In general, the location and/or specific design of the proposed roadway improvements have been adjusted since publication of the Draft EIS. The adjustments covered in this Supplemental Draft EIS include the following:
  - Reconstruction and reconfiguration of Oxford Street at Edgewood Avenue to accommodate the construction of the new southerly freight rail connection between the Bass Lake and MN&S spurs
  - Expansion of the Wooddale Avenue crossing from two to four lanes to accommodate relocated freight rail tracks and the two additional at-grade LRT track crossings and two new signalized intersections on Wooddale Avenue at ramps connecting to Highway 7
  - Reconstruction of the Beltline Boulevard crossing to accommodate relocated freight rail tracks and the two additional at-grade light rail track crossings; the addition of a second left-turn lane on the northbound approach to Highway 25; the closure and partial removal of the Highway 25 Service Road east of Beltline Boulevard; the reconstruction of the intersection of Highway 25, Highway 25 Service Road, and Lynn Avenue (to restrict access between Highway 25, Highway 25 Service Road, and Lynn Avenue and to include a new traffic signal); and the addition of a new right-turn lane from eastbound on Highway 25 to the Highway 25 Service Road
  - Reconstruction of the Cedar Lake Parkway to accommodate construction of the light rail tunnel
  - Realignment and widening of Abbott Avenue and Chowen Avenue in the vicinity of the proposed Westlake Station to accommodate a proposed kiss-and-ride facility, bus stops, and bus layover
  - Reconstruction of 21st Street to accommodate an at-grade light rail crossing

- Reconstruction of Wayzata Boulevard and Penn Avenue near I-394 to accommodate kiss-and-ride facilities and pedestrian connections to Penn station

- **Bicycle and Pedestrian Improvements.** Under the LPA, there would be a variety of bicycle and pedestrian improvements in the St. Louis Park/Minneapolis Segment. In general, those improvements would be made to provide safe and convenient bicycle and pedestrian crossings of the proposed light rail alignment, to reflect proposed roadway improvements, and/or to provide bicycle and pedestrian connections to the proposed light rail stations. These improvements would affect several trails and sidewalks within the vicinity of the proposed project. In particular, a connection between the Cedar Lake Trail and the Louisiana Station would be grade-separated under the realigned freight rail tracks. Cedar Lake Trail would be grade-separated over the proposed light rail alignment east of the Beltline Station, where the trail would transition from being north of to south of the light rail alignment. The existing Kenilworth Trail[27] between north of West Lake Street and south of the Kenilworth Lagoon would be reconstructed to accommodate the introduction of the at-grade and tunnel sections of the light rail alignment in the Kenilworth Corridor. In sections where the light rail alignment would be at-grade, including the crossing of the Kenilworth Lagoon, or would be transitioning from an at-grade alignment to the tunnel portals, the trail alignment would generally be southeast of the proposed light rail alignment. Generally, within the segments where the light rail alignment would be within the tunnel, the Kenilworth Trail would be reconstructed above the proposed light rail tunnel. There would be a variety of bicycle and pedestrian improvements in the vicinity of the West Lake and 21st Street stations, intended to improve bicycle and pedestrian safety and access to and from the two stations. The North Cedar Lake Trail would be grade-separated where it would cross over the existing freight rail tracks in the Kenilworth Corridor and the proposed light rail tracks immediately to the east of the freight rail tracks near Penn Station. A grade-separated pedestrian connection over the existing freight rail tracks in the Kenilworth Corridor and the Wayzata Subdivision would connect the proposed Penn Station to a proposed kiss-and-ride facility on South Wayzata Boulevard. In addition, modifications to existing connections to other trails and local streets would be made as needed.

- **Freight Rail Modifications.** Under the LPA, freight rail service would continue to operate in its existing location in the Bass Lake Spur and Kenilworth Corridor with the following general areas of freight rail modifications in the St. Louis Park/Minneapolis Segment (see Exhibits 2.5-4 and 2.5-5):

  - Beginning west of the St. Louis Park/Minneapolis Segment and extending through much of the St. Louis Park/Minneapolis Segment to east of Beltline Boulevard, the existing freight rail tracks (i.e., the Bass Lake Spur, owned by CP) would be shifted north approximately 45 feet, allowing the proposed light rail alignment to be located south of the freight rail tracks thereby providing better station connections to local activity centers[28]

  - A portion of the northern leg of the existing Skunk Hollow switching wye between the Bass Lake Spur and Oxford Street would be removed and replaced with a new southerly connection between the Bass Lake Spur and the MN&S Spur (which is also owned by CP) that would cross over the proposed light rail alignment on a structure, which would allow freight trains traveling on the Bass Lake Spur tracks to continue to access the MN&S Spur tracks[29]

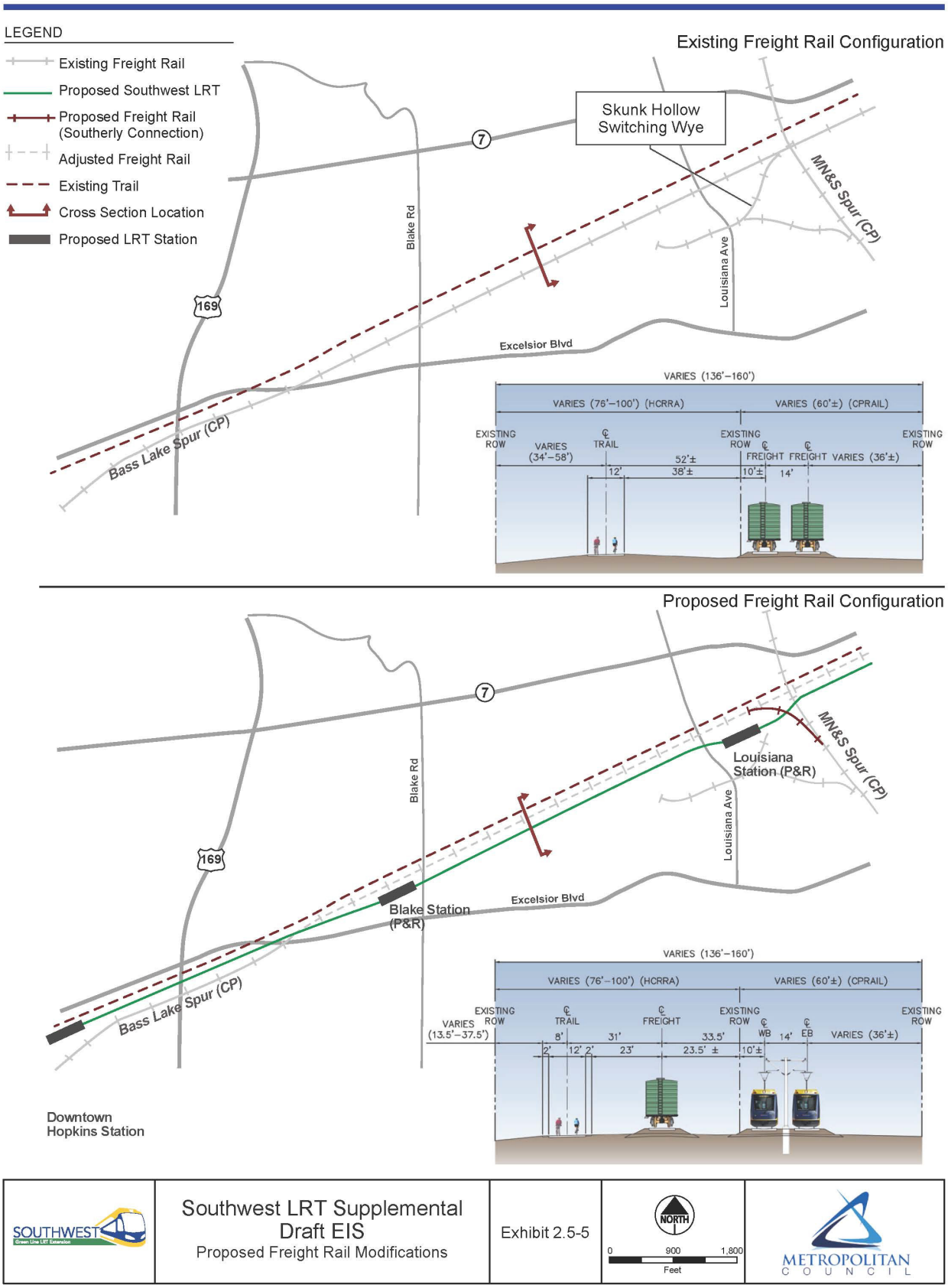
[27] The Kenilworth Trail, which extends between the Midtown Greenway and the Cedar Lake Trail, was constructed by the City of Minneapolis and is maintained by the MPRB. The trail is located on HCRRA-owned right-of-way as a temporary use under Permit Agreement 73-31016 between HCRRA and the City of Minneapolis.

[28] The existing freight rail tracks are on existing right-of-way owned by CP. In general, the tracks would be relocated approximately 45-feet north onto right-of-way owned by HCRRA. The proposed light rail alignment would be on what is now the CP right-of-way. To accommodate these proposed improvements, there would likely be an exchange of right-of-way between CP and HCRRA, as well as agreements for continuing property ownership of right-of-way for use by light rail. The nature of the exchange and agreements has not been determined. See Section 3.4.2.5 for additional detail.

[29] Removal of a portion of the northern leg of the Skunk Hollow switching wye would be required to accommodate the placement of the light rail alignment south of the freight rail alignment on the existing northern switching wye alignment (see Exhibit 2.5-5). The southern leg of the Skunk Hollow switching wye would remain in place, providing the continuation of freight rail service to the Robert B. Hill Company salt facility at the west end of the switching wye.

EXHIBIT 2.5-5

Proposed Freight Rail Modifications



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Proposed Freight Rail Modifications	Exhibit 2.5-5	NORTH 0 900 1,800 Feet	METROPOLITAN COUNCIL

- There would be relatively minor adjustments to and reconstruction of the freight tracks between Beltline Boulevard and Cedar Lake Parkway
- The existing freight tracks would be moved up to approximately 40 feet north between Cedar Lake Parkway and the Burnham Road overpass
- There would be no adjustments or reconstruction of the existing freight alignment between the Burnham Road overpass and Cedar Lake Junction

2.6 Locally Requested Capital Investments

2.6.1 Introduction

The stakeholder cities and County of the Southwest LRT project, including Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Hennepin County have each gone through their respective local planning and decision making processes to identify improvements they propose to be undertaken separate from, but contingent upon, implementation of the Southwest LRT project (hereinafter referred to as Locally Requested Capital Investments [LRCIs]). These proposed activities are not needed to support the base function of the Southwest LRT project, nor do they represent mitigation for any impact of the Southwest LRT project. These proposed activities may be implemented independently by the stakeholder cities at a future date, and are not conditions of the Southwest LRT project. If constructed by the Southwest LRT project contractor, the LRCIs will be included as part of the Southwest LRT project construction bid packages and activities; the construction documents will clearly separate out the LRCI activities and costs from the Southwest LRT project that is proposed to be funded through FTA's Capital Investment Grant (CIG) Program.

The Supplemental Draft EIS outlines the proposed LRCI actions identified by each of the cities and Hennepin County. The preliminary LRCI list was presented to the Corridor Management Committee (CMC) in October 2014 and an updated preliminary list was presented to the Executive Change Control Board (ECCB) in December 2014. Each of the proposed LRCIs that advance through the city and county decision making processes will undergo environmental review and impact evaluation, with results reported in the Final EIS; however, the current list of proposed LRCIs are not anticipated to result in significant adverse impacts.

2.6.2 Proposed Locally Requested Capital Investment Actions

The proposed LCRI actions may be within, adjacent to or outside the Southwest LRT project construction boundaries. The types of LRCI actions are defined as follows:

2.6.2.1 Local Roadway Improvements

The cities of Eden Prairie, Minnetonka and St. Louis Park have identified local roadway improvements to enhance connectivity to the proposed Southwest LRT stations. While the LRT project includes required improvements to access stations, the LRCI activities under this category go beyond the requirements of the Southwest LRT project. Improvements under this category include local roadway underpasses that would extend under the LRT project and roadway extensions from the LRT station area to the existing roadway network that would provide additional connections beyond the requirements for the Southwest LRT project. These improvements are not required for Southwest LRT project, however if funded by the requesting city, would be included as part of the construction of the Southwest LRT project.

2.6.2.2 Streetscape, Landscape and Aesthetic Improvements

In addition to the streetscaping, landscaping and aesthetic treatments included as part of the proposed Southwest LRT project, additional improvements were requested by the cities of Eden Prairie and Hopkins in conjunction with Southwest LRT construction. Improvements under this category include treatments such as decorative lighting along roadways, additional pedestrian lighting beyond requirements of the LRT project, decorative catenary poles, decorative fencing and bridge railings, aesthetic treatments to bridge structures, planter boxes along roadways, and embedded track alongside a roadway. These improvements are not required for the Southwest LRT project, however if funded by the requesting city, would be included as part of the construction of the Southwest LRT project.

2.6.2.3 Local Pedestrian and Bicycle Improvements

In addition to the pedestrian and bicycle connections proposed as part of the Southwest LRT project, the cities of Eden Prairie and St. Louis Park and Hennepin County have identified additional trail and bicycle projects. Improvements under this category include construction of new trail sections to improve connections to existing facilities beyond the requirements of the Southwest LRT project, additional wayfinding signage, bike lane striping and bike boulevard markings, additional parking facilities, storage facilities, self-service bike repair and grade separation of trail crossings. These improvements are not required for the Southwest LRT project, however if funded by the requesting city and/or county, would be included as part of the construction of the Southwest LRT project.

2.6.2.4 Utility Activities

Utility relocations and/or replacements are expected when existing facilities are in conflict with the LRT improvements. These improvements are part of the federally funded CIG Southwest LRT project. However, when improvements extend beyond the limits of the transitway and stations or include upgrading the size and/or capacity of utilities, associated costs will be funded locally. Improvements under this category have been identified by the city Hopkins and Hennepin County, and include burying power lines along existing trail, new water and sanitary sewer to serve future development, providing fiber optic conduit along the length of the corridor, and providing steam line to surrounding land use. These improvements are not required for the Southwest LRT project, however if funded by the requesting city and/or county, would be included as part of the construction of the Southwest LRT project.

2.6.2.5 Guideway Profile Adjustment

The City of Minnetonka has identified an adjustment to the guideway profile to accommodate a future potential infill station at Smetana Road, which at the time of planning will undertake a separate environmental review. This includes additional excavation and retaining structures beyond that required for the Southwest LRT project to accommodate a level area for a potential future station. This potential future infill station is not part of the LRT project, however if funded by the requesting city, the additional excavation and retaining structures to allow for a future infill station would be included as part of the construction of the Southwest LRT Project.

A summary of the proposed LRCIs by defined category is included in Table 2.6-1.

TABLE 2.6-1
General Locally Requested Capital Investment Activities by Requestor and Identification Number

LRCI Category	LRCI Requestor and Identification Number[a]					
	Eden Prairie (LRCI ID #)	Minnetonka (LRCI ID #)	Hopkins (LRCI ID #)	St. Louis Park (LRCI ID #)		Hennepin County (LRCI ID #)
Local Roadway Improvements	X (1, 11)	X (12)		X (17,19, 32)		
Streetscape/Landscape/ Aesthetic Improvements	X (4-10)		X (16)			
Local Pedestrian/Bicycle Improvements	X (2, 3)			X (33)		X (26, 28-30)
Utility Activities			X (14)			X (27)
Guideway Profile Adjustment		X (13)				

[a]Appendix F includes a draft LRCI activity table, by LRCI number and local requestor, and accompanying figure for general geographic reference.

2.6.3 Next Steps

The Council will continue to work with each of the cities and Hennepin County in the refinement and development of the LRCIs. Through that process, a final LRCI list will be developed, and the environmental impacts of the proposed LRCIs evaluated, and the findings presented in the Final EIS. The Final EIS will include both the impacts and proposed mitigation, if required for the LRCI. If a LRCI included in the Supplemental Draft EIS does not move forward following further coordination with the cities and Hennepin County, it will not be evaluated as part of the Final EIS.

3 Affected Environment, Impacts, and Mitigation

This chapter describes the affected environment, potential impacts on the environment and potential mitigation measures for the proposed adjustments to the Locally Preferred Alternative (LPA) within the context of three study areas: Eden Prairie Segment, the Hopkins Operations and Maintenance Facility (OMF) site, and the St. Louis Park/Minneapolis Segment (see Exhibit 2.5-1). As such, it supplements information provided in the project's Draft EIS (October 2012) for the three study areas. The LPA, as adjusted in the Eden Prairie Segment, the Hopkins OMF site, and the St. Louis Park/Minneapolis Segment, is described in Section 2.5 of this Supplemental Draft EIS. The analysis summarized in this chapter is restricted to only the adjustments in Eden Prairie Segment, the Hopkins OMF site, and the St. Louis Park/Minneapolis Segment of the LPA.

This chapter includes the following sections:

3.1 Environmental Resources Addressed and Related Methods and Regulations
3.2 Eden Prairie Segment
3.3 Hopkins Operations and Maintenance Facility
3.4 St. Louis Park/Minneapolis Segment
3.5 Draft Section 4(f) Evaluation Update

Section 3.1 identifies the environmental categories that are evaluated within each of the three study areas. For those environmental categories that are evaluated in this chapter, Section 3.1 summarizes the analytical methods and data sources that were used to assess impacts, providing references to the Draft EIS where additional detail on methods and regulations may be found. Where appropriate, this section also updates the methods used for the environmental analysis summarized in this Supplemental Draft EIS, compared to those used for the Draft EIS. Differences in the data sources used in this Supplemental Draft EIS compared to those used in the Draft EIS are also identified in Section 3.1.

The remainder of this chapter is organized by the Eden Prairie Segment in Section 3.2; the proposed Hopkins OMF site in Section 3.3; and the St. Louis Park/Minneapolis Segment in Section 3.4. Each of the three sections begins with a brief summary of key findings for that study area and, if applicable, a description of the related resource agency coordination that has occurred since publication of the Draft EIS. These sections then describe the existing affected environment, the potential impacts of the proposed adjustments to LPA and the mitigation measures[1] to address those impacts, each noting changes since the Draft EIS. The focus of the environmental analysis within Sections 3.2, 3.3, and 3.4 of this Supplemental Draft EIS is the new substantial environmental impacts that could result from adjustments to the LPA that were made after publication of the Draft EIS. The impact analysis within these sections addresses long-term direct and indirect impacts, as well as short-term impacts that would occur during construction of the LPA. Cumulative impacts identified in Chapter 9 of the Draft EIS under LRT 3A-1 would be substantially similar to those anticipated under the LPA as adjusted by the Council in April and July 2014. The Final EIS will include a full analysis of cumulative impacts under the LPA. Section 3.5 provides updated information on the project's Draft Section 4(f) Evaluation, which was included in the Draft EIS (addressing the potential use of publically-owned parks, recreation areas and wildlife/waterfowel refuges, and eligible or listed historic resources and archaeological sites). The project's Final Section 4(f) Evaluation will be included in the project's Final EIS and Record of Decision (ROD).

As previously noted, light-rail transit (LRT) 3A and LRT 3A-1 of the Draft EIS include the LPA, coupled with different sets of freight rail modifications termed "relocation" and "co-location," respectively (see Section 2.2 of this Supplemental Draft EIS for additional information). See Chapters 3, 4, 5, 6, 9, and 10 of the Draft EIS

[1] Under applicable environmental categories, this Supplemental Draft EIS identifies best management practices (BMPs) that would be incorporated into the design of the LPA. BMPs are not considered mitigation measures and they are described, where applicable, within the impacts subsections of Sections 3.2, 3.3, and 3.4 of this Supplemental Draft EIS.

for the description of methods, regulations, impacts and mitigation LRT 3A and LRT-3A-1 for environmental categories not supplemented in this chapter, which are addressed under Draft EIS Segments 3, 4, A, and FRR (freight railroad relocation) (see Figure 2.3-9 of the Draft EIS for an illustration of the Draft EIS segments). In the Draft EIS, Segments 3, 4, FRR and A apply to LRT 3A and Segments 3, 4, and A apply to LRT 3A-1 (see Table 3.0-1 of the Draft EIS for the segments that apply to other alternatives addressed in the Draft EIS).

The potential environmental effects as evaluated in this Supplemental Draft EIS are based on technical issue areas implemented by the Metropolitan Council (Council) after publication of the Draft EIS (see Section 2.4 of this Supplemental Draft EIS). The segments used in the Supplemental Draft EIS focus on study areas with adjustments to the project proposed since publication of the Draft EIS that could result in impacts to the environment, although these do not correspond directly to the segments used in the Draft EIS. See Section 2.3.3.4 of the Draft EIS for additional information on Draft EIS segments. Finally, note that the Hopkins OMF site evaluated in this Supplemental Draft EIS was not among the four OMF sites evaluated within the Draft EIS.

3.1 Environmental Resources Addressed and Related Methods and Regulations

This section first describes the environmental categories included within this Supplemental Draft EIS, followed by a summary of the applicable methods and environmental regulations that guide the analysis of resources.

3.1.1 Environmental Resources Addressed in this Supplemental Draft Environmental Impact Statement

As described in Section 2.5 of the Supplemental Draft EIS, Federal Transit Administration (FTA) and the Council began preparation of the Supplemental Draft EIS by considering whether the design adjustment process described in Sections 2.4 and 2.3 resulted in any new alternatives or any likely new significant adverse impacts not addressed in the Draft EIS. FTA and the Council concluded that there were no new alternatives identified, but there was the potential for new significant adverse impacts caused by the design adjustments to the proposed project that were not identified in the Draft EIS in the Eden Prairie Segment; the Hopkins OMF; and the St. Louis Park/Minneapolis Segment. Subsequently, FTA and the Council reviewed each resource category addressed in the Draft EIS for each study area to determine which environmental categories should be addressed in the Supplemental Draft EIS. The determinations were based on whether there would likely be new substantial environmental impacts for a particular resource category within each study area. Table 3.1-1 summarizes the results of that review.

As shown in Table 3.1-1 of this Supplemental Draft EIS, the following environmental categories are addressed in one or more of the three study areas of the Supplemental Draft EIS: land use; acquisitions and displacements; cultural resources; parklands, recreation areas, and open spaces; visual quality and aesthetics; geology and groundwater; water resources: wetlands, floodplains, public waters and stormwater management; noise; vibration; hazardous and contaminated materials; economic effects; and transportation effects (transit, roadway and traffic, parking, freight rail, bicycle and pedestrian, and safety and security). Furthermore, environmental justice compliance is addressed for all three study areas.

TABLE 3.1-1
Environmental Resources Addressed in the Supplemental Draft EIS by Study Area

Resource Group/ Environmental Category	Eden Prairie Segment		Hopkins OMF		St. Louis Park/Minneapolis Segment	
	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]
Social Effects						
Land Use	Yes		Yes		Yes	
Socioeconomics	No	Draft EIS study area encompasses adjustments to the LPA and primarily uses current 2010 US Census data[c]	No	Draft EIS study area encompasses adjustments to the LPA and uses current 2010 US Census data[c]	No	Draft EIS study area encompasses adjustments to the LPA and uses current 2010 U.S. Census data[c]

Resource Group/ Environmental Category	Eden Prairie Segment		Hopkins OMF		St. Louis Park/Minneapolis Segment	
	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]
Neighborhoods and Community	No	LPA is generally within 0.5-mile study area; no major changes since data were provided in Section 3.2 of Draft EIS	No	LPA is generally within 0.5-mile study area; no major changes since data were provided in Section 3.2 of Draft EIS	No	LPA is generally within 0.5-mile study area; no major changes since data were provided in Section 3.2 of Draft EIS
Acquisitions and Displacements	Yes		Yes		Yes	
Cultural Resources	Yes		No	No resources in study area	Yes	
Parklands, Recreation Areas, and Open Spaces	Yes		No	No parklands, recreation areas, and open spaces in study area	Yes	
Visual Quality and Aesthetics	Yes		No	No sensitive views in study area	Yes	
Environmental Effects						
Geology and Groundwater	Yes		Yes		Yes	
Water Resources	Wetlands: Yes		Yes		Yes	
	Floodplains: Yes		Yes		Yes	
	Public waters and stormwater management: Yes		Yes		Yes	
Biota and Habitat	No	No potential substantial issues identified	No	No potential substantial issues identified	No	No potential substantial issues identified
Threatened and Endangered Species	No	No new species within 1 mile; Draft EIS preliminarily determined no effect; Final EIS will finalize determination of effect	No	No new species within 1 mile; Draft EIS preliminarily determined no effect; Final EIS will finalize determination of effect	No	No new species within 1 mile; Final EIS preliminarily determined no effect; Final EIS will finalize determination of effect
Farmlands	No	No farmland in study area	No	No farmland in study area	No	No farmland in study area
Air Quality	No	No potential substantial issues identified	No	No potential substantial issues identified	No	No potential substantial issues identified
Noise	Yes		No	No sensitive noise receptors in study area	Yes	
Vibration	Yes		No	No sensitive vibration receptors in study area	Yes	
Hazardous and Contaminated Materials	Yes		Yes		Yes	
Electromagnetic Interference and Utilities	No	No potential substantial issues identified	No	No potential substantial issues identified	No	No potential substantial issues identified
Energy and Climate Change	No	No potential substantial issues identified	No	No potential substantial issues identified	No	No potential substantial issues identified
Economic Effects						
Economics	Yes		Yes		Yes	
Transportation Effects						
Transit	Yes		No	No potential substantial issues identified	Yes	

Resource Group/ Environmental Category	Eden Prairie Segment		Hopkins OMF		St. Louis Park/Minneapolis Segment	
	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]	Addressed[a]	Rationale[b]
Roadway and Traffic	Yes		Yes		Yes	
Parking	Yes		Yes		Yes	
Freight Rail	No	No freight rail lines in study area	No	No freight rail lines affected in study area	Yes	
Bicycle and Pedestrian	Yes		No	No potential substantial issues identified	Yes	
Safety and Security	Yes		Yes		Yes	
Environmental Justice Compliance	Yes		Yes		Yes	

[a] Yes = category addressed in the Supplemental Draft EIS; No = category addressed in the Draft EIS and forthcoming Final EIS.

[b] Rationale for not addressing the environmental category in the Supplemental Draft EIS (Section 2.4 of the Supplemental Draft EIS).

[c] More site-specific and recent low-income data were reported by Census block group and discussed under EJ Compliance.

In summary, eight environmental categories were eliminated from further study in the Supplemental Draft EIS within the three study areas: socioeconomics; neighborhoods and community; biota and habitat; threatened and endangered species; farmlands; air quality; electromagnetic interference and utilities; and energy and climate change. In addition: freight rail is not addressed in the Eden Prairie Segment, and cultural resources; parklands, recreation areas, and open spaces; visual quality and aesthetics; noise; vibration; transit; freight rail; and bicycle and pedestrian are not addressed for the Hopkins OMF. These environmental categories were not further studied in the Supplemental Draft EIS because there would likely be no substantial changes in impacts within those categories since publication of the Draft EIS. These environmental categories are addressed in the Draft EIS for the No-Build, Enhanced Bus, and LRT Build Alternatives and all will be addressed in the forthcoming Final EIS for the No-Build alternative and for the entire LPA.

3.1.2 Environmental Resources Methodologies and Regulations

This section summarizes the methodologies and data sources used to analyze impacts on social, environmental, economic, and transportation resources in this Supplemental Draft EIS. The methodologies described in this section are presented in the order of the environmental categories listed in Table 3.1-1. This section notes whether or not the methods or data sources used for the environmental analysis in this Supplemental Draft EIS are different than those used for the Draft EIS, and it provides a description of the changes that have occurred. Where applicable, this section also provides a description of any new data resources used for this analysis and a summary of resource agency coordination activities that have occurred since publication of the Draft EIS. Regulations in the Legal and Regulatory Context sections of the Draft EIS for applicable environmental categories are also identified in this section as they pertain to the Supplemental Draft EIS environmental categories and analysis.

3.1.2.1 Land Use

Using the methodologies described in the Draft EIS, this Supplemental Draft EIS provides additional analysis of potential land use impacts resulting from the LPA, based on the design adjustments identified by the Council. The land use impact analysis within the Draft EIS focuses on the following: compatibility with local land use plans; changes to existing land uses at the parcel level that would result from the proposed action and whether or not those changes would result in changes to the overall land use character of the study area; and the indirect effect of the proposed action on land uses within station areas. The long-term direct land use analysis for the Draft EIS was completed following the methodology presented in Section 3.1.1.1 of the Draft EIS.

As part of the design adjustments to the LPA, the design of proposed light rail improvements and freight rail modifications in the Kenilworth Corridor would change from those studied under the Draft EIS. Therefore, the compatibility of the LPA with local planning documents within the St. Louis Park/Minneapolis segment

was re-evaluated. Based on this evaluation, the LPA was found to be either compatible or neutral to each of the plans and studies reviewed as part of the Draft EIS. Because the Draft EIS determines that the LPA was consistent with local land use plans for the other segments evaluated, the Supplemental Draft EIS does not reevaluate this issue. The methodology used in the Draft EIS for the long-term indirect land use analysis is described in Section 9.2.1 of the Draft EIS and the methodology used in this Supplemental Draft EIS is consistent with the Draft EIS. In particular, the analysis supporting the indirect land use analysis included in this Supplemental Draft EIS involved a review of existing land uses in station areas where improved transportation could support higher-density or mixed-use developments, including high-density residential, commercial, and office-related uses. While there are no specific federal regulations guiding land use, existing zoning and land use codes, as well as overarching comprehensive plan policies, guide the initial assessments of the types of changes that could occur with the redevelopment actions by others. In addition to using existing zoning and plans as a guide, other changes could also occur if local jurisdictions propose or enact changes in their existing zoning and land use codes to allow for higher levels of development and/or redevelopment in station areas. The assessment of the potential for station area development recognizes local goals, partnerships, and implementation, where applicable. Several specific transit area plans have been updated since the Draft EIS was published. These were reviewed as part of the analysis for land use consistency of the LPA and are noted in the appropriate Eden Prairie, Hopkins OMF, and St. Louis Park/ Minneapolis areas. Consistent with the study area definition in Section 9.2.3.1 of the Draft EIS, indirect land use impacts assessed for this Supplemental Draft EIS are analyzed within a 0.5-mile radius from the station location.

As part of the development of mitigation strategies for potential short-term (construction) land use impacts, the Council will develop and implement a Construction Communication Plan to prepare project-area residents, businesses and commuters for what to expect during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects, as described in the Communications and Public Involvement Plan for the project (see Chapter 4 “Public and Agency Coordination” for additional detail). Strategies included in the construction communications plan may include:

- Issuing regular construction updates and posting them on the Project website
- Providing advance written notice of roadway closures, driveway closures and utility shutoffs
- Conducting public construction meetings
- Establishing a 24-hour construction hotline
- Preparing brochure with information about construction
- Posting special “open for business” and way-finding signage
- Addressing property access issues
- Assigning staff to serve as liaisons between the public and contractors during construction

3.1.2.2 Acquisitions and Displacements

The identification of potential property acquisitions and displacements for this Supplemental Draft EIS follows the same methodology described in Section 3.3.2 of the Draft EIS. The acquisitions and displacement analysis in this Supplemental Draft EIS reflects the design adjustments identified by the Council in March 2014, as well as updated Hennepin County parcel data (provided by the Hennepin County Assessor’s Office) and updated aerial photography.

Section 3.3.1 of the Draft EIS outlines the applicable federal and state laws governing property acquisition. In particular, Article 6 of the Cooperation Agreement (Council and MnDOT, 2012) states that Minnesota Department of Transportation (MnDOT), acting for the Council, may acquire all lands, easements, and rights-of-way required for the project, as described in Section 3.3.5 of the Draft EIS. The Council reserves the right to acquire any and all real property interests itself. Project acquisitions and displacements would comply with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended (42 United States Code [U.S.C.] 4601 et seq.) and state law. Acquisitions and displacements would also be consistent with the final design plans for the project. The acquisition process would also follow the project’s Real Estate Acquisition and Management Plan, which will be developed and maintained during preliminary engineering, final design, and construction.

Following construction, the Council and the FTA may dispose of excess property based on Council policy and applicable state law, and in conformity with FTA's Circular 5010.1D (FTA, 2008a). The sale of the excess property would likely return the land to its general use prior to the project's acquisition process (e.g., commercial use), but not necessarily to the former property owner.

3.1.2.3 Cultural Resources

The cultural resource analysis assesses potential impacts of the project on buildings, structures, districts, objects, and sites that are listed on or eligible to be listed on the National Register of Historic Places (NRHP). Cultural resources are generally categorized as architecture/history or archaeological resources. The cultural resources, methods, analysis, and documentation in the Supplemental Draft EIS, like the Draft EIS, continues to conform to Section 106 rules and guidance, based on the National Historic Preservation Act (NHPA) of 1966 (54 U.S.C. Section 306108), as well as the Minnesota Field Archaeology Act, the Minnesota Historic Sites Act, and the Minnesota Private Cemeteries Act, as applicable, as discussed in Section 3.4 of the Draft EIS. The methods used to prepare the cultural resource analysis for this Supplemental Draft EIS are unchanged from those used for and documented in the Draft EIS (see Section 3.4.4 of the Draft EIS).

Reflecting the design adjustments to the LPA made since publication of the Draft EIS, the MnDOT Cultural Resources Unit (CRU), as authorized by FTA to conduct portions of the Section 106 process, in consultation with the Minnesota State Historic Preservation Officer, adjusted the LPA's architecture/history and archaeological Areas of Potential Effect (APE). Both adjustments to the APE for architecture/history and archaeology followed the methodologies identified in the Draft EIS for revisions to account for modifications to the project. The architecture/history APE methodology was also updated by MnDOT CRU to capture project improvements that extend beyond the ¼-mile APE around stations to include these elements of the project. The project improvements that utilized this methodology included the proposed OMF and new roadway and pedestrian/bicycle improvements. The APEs used for the cultural resources analysis for the Draft EIS and this Supplemental Draft EIS are illustrated in the Section 106 Consultation Package – Potential Effects on Historic Properties (April 2012 and October 2014) located at the end of Appendix H of the Draft EIS and in Appendix E of this Supplemental Draft EIS, respectively. Areas that were not previously surveyed for potential architectural and archaeological resources for the Draft EIS were included in a Phase I architecture/ history survey and a Phase Ia archaeological investigation (106 Group, 2014a and 2014b) or are in the process of being surveyed to identify properties that are listed on or are eligible for inclusion on the NRHP. The Phase I archaeological surveys and Phase I architecture/history surveys that are underway will be reported in the Final EIS. The methodology used for the earlier studies was also used for these studies (see Section 3.4.4 of the Draft EIS).

The revised cultural resources APEs and results of these surveys are reflected in the Supplemental Draft EIS cultural resources analysis in this chapter. Section 3.2 of this Supplemental Draft EIS describes the changes in the Eden Prairie Segment. The revised cultural resources APEs and results in the Eden Prairie Segment are described and illustrated in Section 3.2 of this Supplemental Draft EIS. No cultural resources were identified within the revised cultural resources APEs for the Hopkins OMF site and, as such, no further discussion of cultural resources is provided in Section 3.3 of this Supplemental Draft EIS. The revised cultural resources APEs and results along the St. Louis Park/Minneapolis Segment are described and illustrated in Section 3.4 of this Supplemental Draft EIS.

FTA, MnDOT CRU, and the Council are responsible for the implementation of the Section 106 consultation process, including coordination with the USACE, which has Section 106 responsibilities as a NEPA Cooperating Agency. The USACE recognizes FTA as the Lead Federal Agency for the Section 106 process[2] – see Section 2.1.1 of this Supplemental Draft EIS for additional information on the USACE. The Section 106

[2] In a letter dated January 15, 2015, the USACE recognized FTA as the Lead Federal Agency pursuant to 36 CFR 800.2(a)(2), to act on its behalf for meeting the requirements of Section 106. The USACE will remain a signatory party to the Section 106 Agreement for the Southwest LRT Project. See Appendix E for documentation of the USACE's designation of FTA as the lead Federal agency for the Section 106 process.

consultation on project effects has continued with MnSHPO and other Section 106 consulting parties since publication of the Draft EIS and will continue through development of a Section 106 Agreement.[3]

On April 30, 2014, the Council and MnDOT CRU held a consultation meeting to review listed and eligible historic properties and potential project effects. Comments from the consulting parties were solicited during the meeting and in written form after the meeting on these resources. A subsequent meeting was held on November 24, 2014, to (1) present project adjustments identified since the April 30, 2014 meeting, as adopted at the July 9, 2014 Council meeting, (2) consult to consider effects to historic properties and reach agreement on preliminary determinations of effect , and (3) identify measures to avoid, minimize, or mitigate impacts to architecture/history and archaeology resources for inclusion in the Section 106 Agreement.

In February 2015, the Council and MnDOT CRU held two Section 106 consultation meetings. At the February 6, 2015 meeting, the Council and MnDOT CRU presented revised bridge design concepts and discussed effects related to the new crossing over the Kenilworth Lagoon. At the February 24, 2015 meeting, the Council and MnDOT CRU led a discussion on effects to historic properties throughout the project area and provided an overview of the content and consulting parties roles in the development of a Section 106 agreement. The Section 106 consultation process is ongoing and will continue through execution of the Section 106 Agreement.

A Section 106 agreement is documentation that will commit FTA and the Council to implement measures to avoid, minimize or mitigate adverse effects on historic properties and archaeological resources. The Section 106 agreement for the LPA will be developed in consultation with MnSHPO, FTA, MnDOT CRU, the Council, and appropriate consulting parties and will be included in the Final EIS. Mitigation measures for impacts to cultural resources will be developed and coordinated under the Section 106 consultation process and included in the Section 106 agreement. Mitigation measures included in the Section 106 agreement may include the following:

- Consultation with MnSHPO and other consulting parties during the development of project design and engineering activities for locations within and/or near historic properties
- Integration of information about historic properties into station area planning efforts
- Recovering data from eligible archaeological properties before construction
- Consultation with MnSHPO and other consulting parties during construction to minimize impacts on historic properties
- Preparation of NRHP nominations to facilitate preservation of historic properties
- Public education about historic properties in the project area

Section 106 consultation will continue throughout the project engineering, design and construction phases, as specified in the Section 106 agreement, to identify measures to avoid, minimize or mitigate impacts including coordination on design efforts for project elements near historic resources and development of monitoring plans and measures to minimize impacts during construction.

3.1.2.4 Parklands, Recreation Areas, and Open Spaces

The analysis of potential impacts on parklands, recreation areas, and open spaces within the Supplemental Draft EIS is based on the same methodology as described in Section 3.5.2 of the Draft EIS. Specifically, the methodology involved identifying existing and planned parklands, recreation areas, and open spaces within 350 feet on either side of the light rail alignment and then determining whether the LPA would have any long-term direct or indirect or short-term impacts on those parklands, recreation areas, and open spaces. New data on parklands, recreation areas, and open spaces, as well as some additional effects of the LPA on

[3] Section 106 consulting parties for the Southwest LRT project include: MnSHPO; USACE; Hennepin County; Cities of Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Minneapolis; Minneapolis Park and Recreation Board; Three Rivers Park District; Cedar-Isles-Dean Neighborhood Association; and Kenwood Isles Area Association.

parklands, recreation areas, and open spaces, are provided for the Eden Prairie and St. Louis Park/ Minneapolis Segments, in Sections 3.2 and 3.4 of this Supplemental Draft EIS, respectively. See Section 3.5 of this Supplemental Draft EIS for information on the project's compliance to date with Section 4(f) regulations.

Lands purchased or developed by state and local governments using Land and Water Conservation Fund (LWCF) Act grant funds are protected as Section 6(f) properties (16 U.S.C. 460). Any property so acquired and/or developed shall not be wholly or partly converted to other than public outdoor recreational uses without the approval of the National Park Service pursuant to 36 CFR 59. An analysis of the proximity of 6(f) properties was completed as part of this Supplemental Draft EIS and is documented in *Southwest LRT Project Identification of Grant-Funded Parks and Natural Areas Technical Memorandum* (see Appendix C for instructions on how to access this report). Based on this analysis and consistent with the Draft EIS, no Section 6(f) encumbered properties will be permanently converted by the project.

From 1965 to 2008, Minnesota has received $69 million from the LWCF. Each grant dollar is matched by an equal amount of state or local funding. Minnesota allocates one half of each annual apportionment to three grant programs available to local units of government through the DNR's Local Grant Initiatives Program: Outdoor Recreation Grants, Regional Park Grants, and Natural & Scenic Areas Grants. These local government grants have been awarded to counties, cities, and townships throughout the state. [4] Minnesota has adopted grant guidelines similar to the federal 6(f) guidelines for the administration of recreation grants to local governments. The Department of Natural Resources, Office of Management and Budget Services, is responsible for overseeing the program and is the main liaison between the state and the National Park Service. As such, converting any properties funded through those programs requires prior approval by the State Commissioner of Natural Resources. Based on this analysis summarized in the *Southwest LRT Project Identification of Grant-Funded Parks and Natural Areas Technical Memorandum*, no properties under the State of Minnesota grant program will be permanently converted by the project.

As part of the development of mitigation strategies for potential short-term (construction) impacts to parklands, recreation areas, and open spaces, the Council will develop and implement a Construction Communications Plan to provide advance notice of construction activities, prepare project-area residents, businesses and commuters for what to expect during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects, as described in the Communications and Public Involvement Plan for the project (see Chapter 4 "Public and Agency Coordination" for additional detail). Strategies included in the construction communications plan may include:

- Issuing regular construction updates and posting them on the Project website
- Providing advance written notice of roadway closures, driveway closures and utility shutoffs
- Conducting public construction meetings
- Establishing a 24-hour construction hotline
- Preparing brochure with information about construction
- Posting special "open for business" and way-finding signage
- Addressing property access issues
- Assigning staff to serve as liaisons between the public and contractors during construction

3.1.2.5 Visual Quality and Aesthetics

This section summarizes the methodology used to conduct the visual quality and aesthetics assessments summarized in this Supplemental Draft EIS. First, it provides background on the general similarities and differences between the visual quality methods used in the Draft EIS and in this Supplemental Draft EIS. Second, it summarizes the methodology used to identify and assess the viewpoints included in the Supplemental Draft EIS's visual assessment. Third, it describes the methodology used to gauge the level of impact that the LPA would have on the identified viewpoints, compared to existing conditions.

[4] The MnDNR maintains the list of 6(f) resources on the "Grant Funded Parks and Natural Areas Subject to Permanent Grant Program Requirement" list, which is available at http://www.dnr.state.mn.us/aboutdnr/lawcon/index.html (as of 7/28/2014).

A. Background

The visual and aesthetic assessment in Section 3.6 of the Draft EIS was based on a project-specific methodology that considered visual and aesthetic resources contributing to visual quality, sensitive viewers or receptors, and changes to the character of the area, resulting in potential visual impacts categorized as: generally not substantial, possibly substantial, or substantial. The categories used in this analysis to evaluate impacts are the same as those used in the Draft EIS. The methodology used to assess the visual impacts in this analysis differ from the Draft EIS. Because the Draft EIS evaluated a large number of alternatives, it used a qualitative analysis to reach its conclusions. Because the Supplemental Draft EIS evaluated a single alternative for which more design information was available than at the Draft EIS phase, it was possible to use a standard visual impact assessment method that made extensive use of drawings and photo simulations and employed a systematic evaluation protocol.

The analysis of the project's visual quality and aesthetic effects in this Supplemental Draft EIS applies the principles of the standardized approach for visual impact assessment developed by the Federal Highway Administration (FHWA) (FHWA, 1988). This method has been widely adopted by state highway departments and other agencies responsible for development of transportation facilities as the standard for evaluation of project visual effects. For reference, a copy of the FHWA Visual Impact Assessment manual is included in Appendix J to provide complete documentation of the FHWA methodology. Based on the FHWA assessment methodology, the discussion below provides a brief summary of how that approach was applied in preparing this section of the Supplemental Draft EIS.

B. Identifying and Assessing Viewpoints

Based on the FHWA methodology, which entails photographically documenting representative views along linear transportation projects, the identification of viewpoints to be used within this Supplemental Draft EIS focused on views in locations that are relatively highly sensitive to visual changes and where major visual changes are likely to occur.

Once identified, the existing visual quality of these views was evaluated using a systematic procedure that entails application of numerical ratings. Under the FHWA methodology, the visual quality of a view was evaluated in terms of its vividness, intactness, and unity (which are defined below) and each of these dimensions were scored on a scale of from 1 to 7 for each of these three attributes, where a low score (1) represents low visual quality and a higher score (7) represents high visual quality. The individual attribute scores were then summed and divided by three to produce a summary rating of the view's overall level of visual quality. This assessment methodology answered the following questions: Is this particular view common or dramatic? Is it a pleasing composition (a mix of elements that seem to belong together) or not (a mix of elements that either do not belong together or contrast with the other elements in the surroundings)? The resulting metrics supported the overall visual impact determinations.

The visual quality of the identified viewpoints was evaluated and discussed using these terms:

- ***Vividness*** is the degree of drama, memorability, or distinctiveness of the landscape components. Overall vividness is an aggregated assessment of landform, vegetation, water features, and human-made components in views.
- ***Intactness*** is a measure of the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well-kept urban and rural landscapes, as well as in natural settings. High intactness means that the landscape is free of unattractive features and is not broken up by features and elements that appear out of place. Low intactness means that visual elements that are unattractive and/or detract from the quality of the view can be seen.
- ***Unity*** is the degree of visual coherence and compositional harmony of the landscape considered as a whole. High unity can be found with an undisturbed natural landscape or in developed environments where individual components of a landscape are well designed and "fit" well in the landscape.

In summary, the visual quality analysis for this Supplemental Draft EIS was initiated by reviewing the viewpoints identified in the Draft EIS and identifying any additional viewpoints that would be warranted due

to changes in the definition of the project (i.e., new visually-sensitive areas affected or new major visual changes would occur). In this analysis, an assessment was then made of the visual quality of each of the representative viewpoints as they now exist and of the views as they would appear with the project in place. A more detailed discussion of the identification, analysis and evaluation process of viewpoints can be found in Appendix J.

C. Assessing Visual Change

For many of the viewpoints evaluated in this Supplemental Draft EIS, images were prepared to provide an understanding of how the project features would relate to the view, and these visualizations provided the basis for making the assessments of the project-related changes in the visual quality of the view. In locations where visualizations were not prepared for a viewpoint, the assessments of the visual changes were evaluated based on review of project plans and drawings and by evaluating the visualizations that had been prepared for other views in which similar changes are proposed.

The visual conditions under the LPA were evaluated using the same numerical rating system that was used for evaluating the existing view. The numerical ratings of the existing views and views under the LPA were compared to determine the degree of visual change. In evaluating the numerical changes in visual quality between the existing and with-project conditions, a change in visual quality score in the range of 0.1 through 0.5 point was considered to indicate a low level of visual change; a change from 0.6 through 1.0 point as moderately low; a change from 1.1 through 2.0 points as medium; and a change of more than 2.0 points as high.

The assessments of the level of visual change were then related to the sensitivity of the views to those who see them to identify the overall degree of impact. In assessing the sensitivity of the views, factors taken into account included:

- The numbers and kinds of people who see the view.
- How long do viewers see the view? Some of the assumptions made include assuming that residents and recreationists generally have views of long duration, whereas motorists often experience views that are short in duration.
- What are the viewers' likely levels of concern about the visual character and quality of the view? Level of concern is a subjective response that is affected by factors such as the visual character of the surrounding landscape, the activity a viewer is engaged in, and the viewer's values, expectations, and interests. Some of the assumptions about level of concern are that residents and recreationists are likely to be highly sensitive viewers, while commuters and employees in industrial areas may be less sensitive.

Low viewer sensitivity would occur in situations where there are few viewers who experience a defined view, or when viewers may not particularly concerned about the view. High viewer sensitivity would occur when there are many viewers who have a view frequently or for a long duration, as well as viewers (many or few) who are likely to be very aware of and concerned about the view, such as viewers in a residential neighborhood.

The overall levels of visual impact identified in the Supplemental Draft EIS are expressed in terms of the three impact levels (generally not substantial, possibly substantial, and substantial) used in the Draft EIS. In all situations in which the degree of visual change is low (a change in visual quality score in the range of 0.1 through 0.5 point), the impacts were assumed to be generally not substantial. Impacts were assumed to be potentially substantial in situations with moderately low to medium levels of visual change (i.e., a change from 0.6 through 1.0 point [moderately low] or a change from 1.1 through 2.0 points [medium] and high levels of sensitivity, and substantial impacts were assumed to occur in situations with high levels of visual change (i.e. a change of more than 2.0 points) and moderate to high levels of sensitivity.

3.1.2.6 Geology and Groundwater

The geology, soils, and groundwater analysis within this Supplemental Draft EIS uses the same methodology as described in Section 4.1.2 of the Draft EIS. Additional geologic and groundwater data were collected as part of the Supplemental Draft EIS analysis.

There are regulations concerning groundwater removal in the study area. In Minnesota, a permit is required to appropriate groundwater if the amount to be used is more than 1.0 million gallons per year or more than 100,000 gallons in any day. A permanent or temporary groundwater removal system is considered a groundwater appropriation. The appropriation permit would be obtained from the Minnesota Department of Natural Resources. Discharge of groundwater from water removal systems also may be regulated. Water removal during construction would be included under the National Pollutant Discharge Elimination System (NPDES) permit, which would be required for construction activities. If the water being removed is contaminated, the discharge would be managed either through an individual NPDES permit obtained from the Minnesota Pollution Control Agency (MPCA) or through a permitted discharge to the sanitary sewer administered by Metropolitan Council Environmental Services.

3.1.2.7 Water Resources: Wetlands, Floodplains, Public Waters and Stormwater Management

The identification of water resources for this Supplemental Draft EIS follows the same methodology described in Section 4.2.2 of the Draft EIS other than for the assessment of wetlands. The primary change to the water resources methodology for the Supplemental Draft EIS was the completion of Level 1 offsite and Level 2 onsite wetland boundary delineations in 2013 and 2014. There have been no changes to the methods used to assess impacts on floodplains or public waters and stormwater management since publication of the Draft EIS. See Sections 4.2.2.1 and 4.2.2.2 of the Draft EIS for more information about the floodplain and public waters methodologies.

To facilitate the Level 2 onsite wetland delineations, project staff developed a field investigation area based on the range of adjustments being evaluated within the design adjustment process during the survey period (see Section 2.3 of this Supplemental Draft EIS for a description of the range of adjustments). The field investigation extent was developed using a 100-foot radius "buffer" around potential light rail related improvements and freight rail modifications to ensure the delineation of wetlands that had the potential to be directly or indirectly impacted.

Wetland field delineations, including test pits for soil types and hydrology, occurred between July and October 2013, and between August and October 2014. Field crews used the *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) and applicable supplements, under the oversight of a Minnesota Certified Wetland Delineator, to conduct the field delineations. For one parcel where Level 2 onsite delineation could not be completed, offsite methods were used to determine the boundary of the wetland using aerial photographs, soil maps, and other geographical information system data to determine the potential presence of a wetland, identify its type, and sketch its approximate boundaries. Delineated wetlands were reviewed in the field by USACE, state, county, and local jurisdictional staff in September and October 2013 and September and October 2014. Minor adjustments were made in late November 2013 and October 2014 to individual wetland flags for a total of six wetland basins located in Minnetonka based on City of Minnetonka preliminary field review comments.

The Supplemental Draft EIS uses the Minnesota Routine Assessment Method for evaluating the wetland functions of delineated wetlands; local governments also provided information from their own wetland inventories as available.

The primary federal regulations or statutes that apply to wetlands, streams, floodplains, and public waters are the CWA Section 404 (33 U.S.C. 1344); EO 11988 Floodplain Management (May 24, 1977; 42 *Federal Register* 26951); and USDOT *Order 5650.2, Floodplain Management and Protection*. In addition to these federal regulations and statutes, there are state and local regulatory requirements associated with water resources. See Section 4.5.1.2 of this Supplemental Draft EIS for a preliminary list of water resources permits needed for the project.

Impacts to wetlands will require permits from federal, state, and local agencies. The primary federal regulation associated with wetland impact is Section 404 of the Federal Clean Water Act (CWA) which is implemented by the USACE. The primary state administrative rule associated with wetland impact is the Minnesota Wetland Conservation Act (WCA) which is under the purview of the Minnesota Board of Soil and Water Resources (BWSR) and is implemented by Local Government Units. In addition, most Local Government Units have a local rule or ordinance associated with wetland protection.

The USACE is leading the project's CWA Section 404 Permit review process. FTA and the USACE are implementing a NEPA/404 merger process, which includes the following four sequential concurrence points at key milestones: (1) Project Purpose and Need; (2) Array of Alternatives and Alternatives Carried Forward; (3) Identification of the Selected Alternative; and (4) Design Phase Impact Minimization. Their concurrence is intended to facilitate the issuance of a CWA Section 404 permit. To date, FTA and the USACE have reached concurrence on the first three of the four milestones, including the USACE's preliminary identification of the least environmentally damaging practicable alternative (LEDPA) (i.e., the LPA, which was based on LRT 3A-1, which would provide for continued freight rail service in the Kenilworth Corridor[5]). Documentation of the FTA's and the USACE's concurrence with the first three key milestones is provided in Appendix E.

Prior to publication of the Final EIS, the Council will submit wetlands permit applications to all applicable federal, state, and local agencies. Completed permit applications will include specific wetland mitigation measures and will meet applicable state and local permit requirements, as well as the USACE's requirement for the project to submit a completed Permit for Discharges of Dredged or Fill Material Into Waters of the United States, in compliance with part 33 CFR 323, pursuant to Section 404 of the CWA. USACE evaluation of a Section 404 permit application involves multiple analyses, including (1) evaluating the impacts in accordance with NEPA (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

3.1.2.8 Noise

This section describes the federal and state regulations and methods applicable to the Southwest LRT Project.

The Supplemental Draft EIS noise impact analysis is based on the same noise standards and methodology used for the Draft EIS (see Section 4.7 of the Draft EIS), including the same FTA noise impact thresholds for severe and moderate noise impacts, which can be found in *Transit Noise and Vibration Impact Assessment* (FTA, 2006).

After the publication of the Draft EIS, project staff conducted additional noise monitoring in 2013. The purpose of that additional noise monitoring was to: (1) supplement the Draft EIS noise monitoring data in project areas unaffected by freight rail noise; and (2) replace the Draft EIS noise monitoring data within project areas affected by freight rail noise to better reflect existing freight rail operations (for example, within the Kenilworth Corridor). Additional noise monitoring was conducted at locations in Eden Prairie, St. Louis Park, and Minneapolis adjacent to the alignment adjustments. In the St. Louis Park/Minneapolis Segment the measurements were intended to reflect changes in freight traffic operations since measurements were made in 2010 and 2011 for the Draft EIS. Because the thresholds for impact in the FTA

[5] On December 20, 2012, the USACE commented on the project's Draft EIS (see Appendix E). Within those comments, the USACE noted the following: 1) a suggested overall project purpose for the 404 permit process of "to provide high-capacity transit service in the Southwest Transitway study area," which is reflected in Chapter 1 of the this Supplemental Draft EIS; 2) "the Corps concurs with the array of alternatives considered for this project as well as the alternatives that were carried forward in the Draft EIS;" and 3) "as proposed [in the Draft EIS] the chosen LPA, alternative LRT 3A, would not qualify as the LEDPA…, which as proposed would be alternative LRT 3A-1 (co-location)." In response to the USACE's comment on the LEDPA, and in compliance with CWA requirements for the analysis of practicable alternatives that would avoid or minimize wetland impacts, the Council included both relocation and co-location designs as it developed and evaluated potential design adjustments for the LPA, utilizing the process described in Sections 2.3 and 2.4 of this Supplemental Draft EIS. The results of those design adjustments are documented in the NEPA/404 Merger Process – Southwest LRT Concurrence Points Package, which was submitted to the USACE by the Council on May 5, 2014 (Council, May 2014). The Concurrence Package notes the following: "The project scope as identified by the Council on April 9, 2014, which would retain existing freight rail service in the Kenilworth Corridor, is consistent with USACE's comment letter from December 20, 2012, stating that LRT 3A-1, which would also have retained existing freight rail service in the Kenilworth Corridor, meets the USACE project purpose and has the least amount of impact to aquatic resources…" (page 5). Based on the USACE's identification of LRT 3A-1 as the LEDPA, LRT 3A-1 was advanced as part of the Project Development phase. As previously noted, the USACE, based on its review of the May 2014 Concurrence Package, again made the preliminary determination that LRT 3A-1 remains the project's LEDPA.

noise criteria are based on the existing noise levels, measuring the existing noise and characterizing noise levels at sensitive locations near the proposed light rail alignment is an important step in the impact assessment. The noise measurements included both long-term (24-hour) and short-term (one-hour) monitoring of the A-weighted[6] sound level at noise-sensitive locations near the alignment adjustments.

Additional sensitive receptors were also identified, based on design adjustments identified by the Council in March 2014. Consistent with the methodology in the Draft EIS, freight rail noise modeling used to prepare estimated future noise levels within this Supplemental Draft EIS is based on FTA guidance as well as the Federal Railroad Administration Chicago Rail Efficiency and Transportation Efficiency model. The noise impact assessment for freight rail is also based on the FTA noise impact criteria, in compliance with Federal Railroad Administration guidelines and similar to the methods used within the Draft EIS.

As with the Draft EIS, the Supplemental Draft EIS noise assessment addressed noise during operation and construction. Projected noise levels for the Supplemental Draft EIS study areas related to light rail operations are based on noise measurements of the METRO Blue Line vehicles, which were conducted for the Central Corridor Project, and the operating characteristics and conceptual design of the light rail alignment as adjusted by the Council in March 2014. Specific inputs used in the noise impact assessment include:

- Light rail train speeds would generally range from 20 miles per hour (mph) to 55 mph for revenue operations, except for entry and exit from station areas. Light rail trains would travel up to 10 mph inside the Hopkins OMF, and light rail vehicles would travel at approximately 45 mph within the proposed light rail tunnel in the Kenilworth Corridor.
- Light rail trains would be comprised of three rail cars during all hours of operation.
- The operating hours and headways (the average time between a light rail train operating in the same direction) would be as follows:
  - Early morning hours (4:00 a.m. to 5:30 a.m.): 15-minute headways[7]
  - Peak operating hours (5:30 a.m. to 9:00 p.m.): 10-minute headways
  - Evening hours (9:00 p.m. to 11:00 p.m.): 15-minute headways
  - Late evening hours (11:00 p.m. to 2:00 a.m.): 30-minute headways
- The same vehicle reference noise levels were used as in the Draft EIS and are based on measurements conducted for the Draft EIS; these levels are shown in Table 3.1-2.

TABLE 3.1-2
METRO Blue Line Reference Noise Levels

Noise Source	Sound Exposure Level (dBA)
LRT on embedded track or direct fixation track	84
LRT on ballast and tie track	81
Crossing bells	106
LRT bells	88
LRT horn	99

Note: The sound exposure level is the cumulative noise from a single noise event taking into account both the level and duration of the sound.
Acronym: dBA = decibels, A-weighted.

- Noise at proposed light rail tunnel portals is projected to increase noise levels by 1 decibel for locations within 100 feet of the tunnel portal to account for reverberation inside the tunnel.
- Noise from bells and horns devices was based on the following:
  - LRT bells would be sounded for approximately five seconds as vehicles approach and cross grade crossings.

[6] The A-weighted sound level is the basic noise unit for transit noise. It describes a receiver's (such as a residence) noise at any moment in time and is read directly from noise-monitoring equipment with the "weighting switch" set on "A." See Section 4.7.1 of the Draft EIS for additional detail.

[7] Headways are the average time between transit vehicles operating in the same direction by a common point over a given period of time (e.g., four inbound light rail trains passing by a station within one hour would result in a 15-minute headway).

- Bells would be sounded twice when entering and exiting station platforms.
- LRT horns would be sounded at at-grade crossings where speeds exceed 45 mph.
- Grade crossing bells would be used at at-grade crossings for 20 seconds for each train.
- LRT bells/horns would not be used at tunnel portals (entrances and exits) under normal operating conditions. This was included as part of the project's operation assumptions to limit noise levels in sensitive areas, such as near residences.

FTA guidance states that severe impacts should be mitigated unless there are no feasible or practical means to do so. For moderate noise impacts, project-specific factors will be included in the consideration of whether to mitigate the noise impact, and if so how the noise impact would be mitigated. The project-specific factors can include both the existing noise levels and the projected increase in noise levels; the types and number of noise-sensitive land uses with impacts; existing sound insulation of buildings; and the cost-effectiveness of providing noise mitigation. Final determinations of noise mitigation measures to be incorporated into the project will be made in a noise mitigation plan and documented in the project's Final EIS. The project's noise mitigation plan will address the following:

- Additional noise monitoring and/or testing, where appropriate
- Documentation of the evaluation of mitigation measures relative to their feasibility, practicality, and project-specific factors used to identify the committed noise mitigation measures
- Identification of committed long-term and short-term (construction) noise mitigation measures and their effectiveness:
  - Long-term noise mitigation measure that will be considered for inclusion in the noise mitigation plan will be dependent upon several factors, such as the location, intensity, and source of the noise impact, and will consider a variety of potential mitigation measures, such as noise barriers, operational changes (e.g., use of bells/horns), and architectural treatments (e.g., sound insulating windows)
  - Short-term (construction) mitigation measures that will be considered for inclusion in the noise mitigation plan will be dependent upon several factors, such as the location, intensity, and source of the noise impact, and will consider a variety of potential mitigation measures, such as equipment specification and operational requirements and time-of-day work restrictions
  - Construction contractors will be required to develop a noise mitigation plan that will include a summary of noise-related criteria for construction contractors to abide by, including: compliance with local ordinances, minimization of noise impacts on adjacent noise-sensitive stakeholders while maintaining construction progress, an outline of the project's noise control objectives and potential components, and coordination of construction activities through a web-based schedule to allow contractors and stakeholders to schedule noisier activities to avoid noise-sensitive events

Within the state, the MPCA is empowered to enforce the state of Minnesota noise rules (§7030 Noise Pollution) and statute (§116.07 Powers and Duties). Minnesota's noise limits are set by "noise area classifications" based on the land use at the location of the person that hears the noise. They are also based on the sound level in decibels (dBA) over ten percent (L10) or six minutes and fifty percent (L50) or thirty minutes of an hour.

Certain areas in the vicinity of the project may already approach or exceed the L10 and/or L50 noise levels. Adding operation of the light rail vehicles in those areas may contribute to an exceedance of the statutory noise levels. These locations are likely in areas near existing highways and other roadways within the corridor in areas such as Eden Prairie and downtown Minneapolis. These highways and roadways are typically exempt from the noise standards (116.07 Subd. 2a). In cases where existing noise levels within the project area corridor are at or near the MPCA standards, the project may or may not contribute to an exceedance of the MPCA standards. Further, because of the way the L10 and L50 are calculated, the Project would not be able to determine if there is an exceedance of the standards, using a predictive model, prior to Southwest LRT operation, however the Council and FTA will work with MPCA to ensure that the analysis adequately considers the state standard.

The Minnesota noise pollution rules and statute are not well suited to evaluate noise impacts from a transit project (See Appendix H, MPCA Noise Approach Technical Memorandum). The noise analysis results in the Draft EIS and this Supplemental Draft EIS do not reflect the noise rules enforced by the MPCA. However, the Council is working with MPCA to determine the best approach to addressing Minnesota noise pollution rules and statute for those areas of the project that are subject to them. This approach and its results will be documented in the Final EIS in the Project's Noise & Vibration Analysis.

3.1.2.9 Vibration

For the Draft EIS, a General Vibration Assessment was conducted using FTA procedures, consistent with FTA's *Transit Noise and Vibration Impact Assessment* (see Section 8.1 of the FTA Assessment and Section 4.8.1 of the Draft EIS). The FTA General Vibration Assessment methodology uses generalized information and assumptions to make projections of potential vibration impacts. For the Supplemental Draft EIS, a Detailed Vibration Assessment methodology was used, also based on FTA procedures (see Section 8.2 of the FTA Assessment). The Detailed Vibration Assessment considers vehicle-specific vibration characteristics, as well as uses vibration propagation testing at locations throughout the project corridor. Vibration propagation testing for the vibration analysis (used to determine how well the soil at a specific location transmits vibration) was conducted in July 2013.

As with the noise analysis, proposed light rail operating characteristics, including span of service, frequencies, and speeds, were updated based on the project's current proposed light rail operating plan. Freight rail operations plans were based on updated field observations and data provided by the freight rail owners/operators. Additional vibration-sensitive land uses were identified based on adjustments to the proposed light rail alignment and freight rail modifications.

The Supplemental Draft EIS is based on the detailed vibration assessment criteria and methodology, as outlined in the transit noise and vibration impact assessment provided in Appendix H of this Supplemental Draft EIS. Additional vibration-sensitive land uses were identified based on adjustments to the proposed light rail alignment and freight rail modifications and potential OMF site. The analysis in this Supplemental Draft EIS also includes an assessment of ground-borne noise, which is not included in the Draft EIS. Ground-borne noise is only assessed for underground operations and particular sensitive receptors, such as recording studios. The LPA assessed in the Draft EIS does not include a proposed light rail tunnel; therefore, ground-borne noise is not assessed in the Draft EIS.

Final determinations of vibration mitigation measures to be incorporated into the project will be made in a vibration mitigation plan and documented in the project's Final EIS. The project's vibration mitigation plan will address the following:

- Additional testing, where appropriate
- Documentation of the evaluation of mitigation measures relative to their feasibility, practibility, and project-specific factors used to identify the committed mitigation measures
- Identification of committed long-term mitigation measures (dependent upon several factors, such as the location, intensity, type, and source of the impact) and their effectiveness
- Identification of committed short-term (construction) mitigation measures (dependent upon several factors, such as the location, intensity, type, and source of the impact)and their effectiveness, including coordinating the construction schedule to reduce interference with vibration-sensitive activities, limiting the use of high-vibration procedures such as impacted pile driving, and using alternative low vibration construction procedures

3.1.2.10 Hazardous and Contaminated Materials

The analysis of hazardous and contaminated materials in the Draft EIS was based on a preliminary assessment of known contaminated sites, as discussed in Section 4.9.2 of the Draft EIS. The Draft EIS notes that a Phase I environmental site assessment (ESA) would be performed as a part of Preliminary Engineering (now a component of Project Development).

The Draft EIS methodology for hazardous and contaminated materials consists of a review of three online databases, supplemented by a records database search for the Freight Rail Relocation Segment, as discussed in Section 4.9.1 of the Draft EIS. The Supplemental Draft EIS hazardous and contaminated materials methodology for the Eden Prairie Segment is based on the same methodology used for the Draft EIS, because of the limited occurrence of contaminated soils within that segment. A Phase I ESA of hazardous and contaminated materials will be conducted in the Eden Prairie Segment for the Final EIS. The hazardous and contaminated material methodology used for the Hopkins OMF site and the St. Louis Park/Minneapolis Segment in this Supplemental Draft EIS is based on an assessment of the *Modified Phase I Environmental Site Assessment, Southwest Light Rail Transit – Segment A and Freight Rail Co-location* (Short Elliott Hendrickson Inc., 2013a) and the *Modified Phase I Environmental Site Assessment, Southwest Light Rail Transit – Segment 4* (Short Elliot Hendrickson Inc., 2013b.) (See Appendix C for a listing of related project reports). Phase II ESAs will be completed, where determined appropriate based on the Phase I ESAs, prior to construction. All environmental investigative work will be conducted within the MPCA Brownfield Program regulatory framework with the Southwest LRT project having been entered in the Brownfield Program on September 8, 2014, and having received site identification numbers PB4648/VP31670 from the MPCA.

The Phase I ESA consisted of reviewing two of the same databases as the Draft EIS: the MPCA and Minnesota Department of Agriculture (MDA), which includes information from the MPCA leaking underground storage tank (LUST) database, the MPCA Master Entity System, and the MDA AgChem database, as described in the Draft EIS. The Phase I ESA environmental database search covered an area of a 550-foot buffer on either side of the proposed light rail alignment and freight rail improvements. The Phase I ESA also included site reconnaissance; interviews with local government officials and watershed district representatives; and review of historical fire insurance maps, aerial photographs, and topographic maps. To identify recognized environmental conditions and historical recognized environmental conditions for the issues analyzed in this Supplemental Draft EIS, files were reviewed for specific high- and medium-risk sites having potential to impact the project or to be affected by construction of the project.

High-, medium-, and low-risk levels are defined by the MnDOT Office of Environmental Stewardship for transportation projects in Minnesota as follows:

- **High Risk:** active and inactive Voluntary Investigation and Cleanup (VIC) sites and Minnesota Environmental Response and Liability Act sites, active and inactive dump sites, active LUST sites, and historical industrial sites with likely chemical use on the premises.
- **Medium Risk:** closed LUST sites, sites with underground storage tanks and aboveground storage tanks, and sites with historic vehicle repair activities.
- **Low Risk:** hazardous waste generators, and some farmsteads and residences.

The primary federal laws regulating hazardous and contaminated materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The Resource Conservation and Recovery Act provides for "cradle to grave" regulation of wastes, as well as regulating underground storage tanks, which are a common source of contamination. The purpose of Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. Other relevant federal laws and regulations include Community Environmental Response Facilitation Act of 1992; CWA (1972); Clean Air Act (as amended 1990); Safe Drinking Water Act (as amended 1996); Hazardous Waste Operations and Emergency Response regulations (29 CFR 1910.120 and 29 CFR 1926.65); the Toxic Substances Control Act (as amended 2002); and the Federal Insecticide, Fungicide, and Rodenticide Act (as amended 1988).

3.1.2.11 Economic Effects

The Draft EIS analyzes direct economic impacts in two ways, as described in Chapter 5 of the Draft EIS: (1) assessing the effects of the project on the local economy based on the project's capital and operating expenditures (Section 5.1); and (2) assessing the project's potential to effect commercial and residential development near proposed transit locations (Section 5.2). The methodology used to assess potential indirect economic impacts of the project is briefly described in Section 9.2 of the Draft EIS. That methodology

focused on changes in land use and the intensity of development that could occur within a half-mile of proposed station areas.

The methodology for the economic analysis for this Supplemental Draft EIS includes a quantitative analysis of the potential property tax revenue impacts as a result of property acquisitions. The conversion of private property into transit right-of-way would decrease the number of properties paying property taxes to local governments. In the analysis, the decrease in property tax revenue as a result of property acquisitions is compared to the overall local government's tax base. In some cases, the Council may determine following construction of the project that an economic portion of an acquired parcel may no longer be needed. In these cases, the excess property would be disposed of in conformity with Council policy and the FTA's Circular 5010.1D (FTA, 2008a). In those cases, the remainder parcel could be sold and returned to compatible land use, as discussed in Section 3.1.2.1 of this Supplemental Draft EIS, which could reduce the projected loss in property tax revenue.

Indirect economic impacts assessed in this Supplemental Draft EIS include evaluating the potential for future development or redevelopment around stations. The analysis of these impacts is based, in part, on the results of the land use analysis for the Supplemental Draft EIS (see Section 3.1.2.1) and on related station area planning efforts that would involve local jurisdictions. The methodology for addressing indirect economic impacts in the Supplement Draft EIS are generally the same as presented in Sections 5.2 and 9.2.1 of the Draft EIS. As such, this Supplemental Draft EIS provides qualitative assessments of transit-oriented development opportunities, focusing on the indirect economic impact of potential changes to businesses and other development within a half-mile of proposed stations.

In addition, direct economic impacts are assessed in this Supplemental Draft EIS for changes to freight operations along the St. Louis Park/Minneapolis Segment (see Section 3.4). The methodology for analyzing the direct economic impact of freight operations included identifying and evaluating the effect of any changes to existing operating freight rail tracks on the operations and economics of the affected freight railroad and related impacts customers of the affected freight railroad. No indirect effects to freight rail transportation are anticipated under the LPA and freight rail modifications.

The short-term (construction-related) economic impacts to freight railroads is based on the analysis of the duration of downtime required during construction, ranging from hourly to weekly increments. The methodology also analyzed the impact of individual interruptions on freight rail operations. For the construction period, the freight rail economic analysis considers whether slow orders for freight rail trains would be in place, which could result in increased freight rail costs and/or reduced freight rail revenues. Slow orders are restrictions on a train's top speed over a certain track segment.

3.1.2.12 Transportation Effects: Transit, Roadway and Traffic, Parking, Freight Rail, Bicycle and Pedestrian, Safety and Security

This section addresses the methods used to assess effects that the LPA would have on the following elements of the transportation system: transit; roadway and traffic; parking; freight rail; bicycle and pedestrian; and safety and security.

A. Transit

The general methodology for transit presented in Section 6.1.1 of the Draft EIS remains the same for the Supplemental Draft EIS. In general, the LPA, based on design adjustments identified by the Council in March 2014, would not modify effects on existing transit routes or interruptions during construction from those reported in the Draft EIS, Section 6.1.2. In the Draft EIS, the Southwest LRT ridership forecasts were developed using the Council's regional travel demand model for the Twin Cities metropolitan area. The model uses the standard four-step transportation forecasting process of trip generation, trip distribution, mode choice, and traffic/transit assignment. The forecast year for the model is 2030. Refer to Section 6.1.3 of the Draft EIS for current ridership projections. Southwest LRT ridership will be updated during the development of the Final EIS. The primary inputs used in the model are the study area population, employment, household socioeconomic characteristics, transit fares, automobile operating costs, tolls, and highway and transit networks.

An updated operating plan for the proposed LPA is shown in Table 3.1-3. The Draft EIS proposes an operating plan with 7.5-minute peak headways; this has been changed to 10-minute peak headways for the Supplemental Draft EIS.

TABLE 3.1-3
Locally Preferred Alternative Operating Plan

Green Line Westbound (from Minneapolis)	Headway	Green Line Eastbound (from Eden Prairie)	Headway
Weekday			
4:00 a.m. to 5:30 a.m.	15 to 20 minutes	4:15 a.m. to 5:30 a.m.	15 to 20 minutes
5:30 a.m. to 9:00 p.m.	10 minutes	5:30 a.m. to 10:00 p.m.	10 minutes
9:00 p.m. to 11:00 p.m.	15 to 20 minutes	10:00 pm to midnight	15 to 20 minutes
11:00 p.m. to midnight	30 minutes		
Midnight, 1:00, 1:30, 2:00 a.m.	30 to 60 minutes	Midnight, 12:30, 1:00, 2:00, 3:00 a.m.	30 to 60 minutes
Saturday/Sunday/Holiday			
4:30 a.m. to 9:00 a.m.	15 to 20 minutes	4:30 a.m. to 10:00 a.m.	15 minutes
9:00 a.m. to 7:00 p.m.	10 minutes	10:00 a.m. to 6:30 p.m.	10 minutes
7:00 p.m. to 9:00 p.m.	15 minutes	6:30 p.m. to 10:00 p.m.	15 minutes
9:00 p.m. to 11:00 p.m.	15 to 20 minutes	10:00 p.m. to midnight	15 to 20 minutes
11:00 p.m. to midnight	30 minutes		
Midnight, 1:00, 1:30, 2:00 a.m.	30 to 60 minutes	Midnight, 12:30, 1:00, 2:00, 3:00 a.m.	30 to 60 minutes

Source: Metro Transit, Service Development, 2013.

B. Roadway and Traffic

The general methodology for traffic presented in Section 6.2.2 and Appendix H(1) (Traffic Analysis Memorandum Update 2012) of the Draft EIS generally remains the same for the Eden Prairie Segment, proposed Hopkins OMF, and St. Louis Park/Minneapolis Segment evaluated in this Supplemental Draft EIS, with updates to data as necessary. The steps followed in the traffic methodology for the two segments and proposed OMF are listed below with key updates to the methodology for the Supplemental Draft EIS where necessary.

- Identify study area intersection/crossing locations to evaluate if these locations would operate at acceptable Level of Service (LOS). LOS A through D were identified as acceptable while LOS E or F were identified as unacceptable. These criteria are consistent with the operational intersection impacts analysis completed for the Draft EIS. Beyond the at-grade LRT/roadway intersections analyzed in the Draft EIS, the Supplemental Draft EIS methodology includes all proposed at-grade LRT crossings of proposed full access roadways and intersections (including private driveway intersections with public roadways) directly impacted by LRT operations regardless of volume. See Section 6.2 of the Draft EIS and the Supplemental Draft EIS Traffic Modeling Technical Memorandum (March, 2014) for additional information on intersection LOS analysis.
- Collect existing baseline data, including traffic volumes from April through June 2013, roadway geometric/intersection configurations as of April to June 2013, signal timing and phasing adjusted for current conditions.
- Determine analysis scenarios.
- Develop local roadway traffic volume forecasts for the intersection-level traffic analyses. The Draft EIS used a single 20-year growth factor for all traffic volumes. As such, this analysis did not account for localized variability in traffic growth that is typical of individual roadway segments and would be further expected to occur due to differences in changes in land use and development. The Supplemental Draft EIS developed 20-year growth rates on a roadway segment with the roadway segment as a basis to more

accurately evaluate traffic impacts. The growth rates were determined utilizing updated traffic counts (made in 2013) and traffic forecasts obtained from adopted local and county comprehensive plans. The land use and socioeconomic data used to develop the local traffic forecasts is consistent with the data used by the Council in the regional travel demand forecasting model to develop the 2030 forecasts for the regional roadway network. In general, the process resulted in larger forecast growth rates than were used in the Draft EIS. The methodology used for this Supplemental Draft EIS will also be used in the forthcoming Final EIS, which will address all affected local intersections within the project's traffic study area.

- Define potential build alignment adjustments with updates to LRT schedule (the Draft EIS uses 7.5 minutes between LRT trains while the Supplemental Draft EIS used 10 minutes), crossing location, crossing time, and LRT defined geometric and operational improvements.
- Determine intersection operations. The Supplemental Draft EIS used an additional software package to complete the LOS analysis not used during the Draft EIS analyses.

As part of the development of mitigation strategies for potential short-term (construction) traffic impacts, the Council will develop and implement a Construction Communication Plan to prepare project-area residents, businesses and commuters for what to expect during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects, as described in the Communications and Public Involvement Plan for the project (see Chapter 4 "Public and Agency Coordination" for additional detail). Strategies included in the construction communications plan may include:

- Issuing regular construction updates and posting them on the Project website
- Providing advance written notice of roadway closures, driveway closures and utility shutoffs
- Conducting public construction meetings
- Establishing a 24-hour construction hotline
- Preparing brochure with information about construction
- Posting special "open for business" and way-finding signage
- Addressing property access issues
- Assigning staff to serve as liaisons between the public and contractors during construction

C. Parking

The Supplemental Draft EIS assesses the potential change in on-street and off-street parking spaces that would result from the LPA in the Eden Prairie and St. Louis Park/Minneapolis segments and in the vicinity of the proposed Hopkins OMF. On-street parking is parking in the public street right-of-way, which could be either eliminated, relocated, or added as a result of the LPA. Off-street parking is contained within parking lots that are generally privately owned and serve related industrial, commercial, and retail businesses. The analysis notes whether or not the LPA would also affect the businesses associated with the displaced parking. New park-and-ride lots (surface and structured) that would be associated with various proposed light rail stations are addressed in Section 2.5 and in the transit sub-sections of Sections 3.2, 3.3, and 3.4 of this Supplemental Draft EIS.

As part of the development of mitigation strategies for potential short-term (construction) parking impacts, the Council will develop and implement a Construction Communication Plan to prepare project-area residents, businesses and commuters for what to expect during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects, as described in the Communications and Public Involvement Plan for the project (see Chapter 4 "Public and Agency Coordination" for additional detail). Strategies included in the construction communications plan may include:

- Issuing regular construction updates and posting them on the Project website
- Providing advance written notice of roadway closures, driveway closures and utility shutoffs
- Conducting public construction meetings
- Establishing a 24-hour construction hotline
- Preparing brochure with information about construction

- Posting special "open for business" and way-finding signage
- Addressing property access issues
- Assigning staff to serve as liaisons between the public and contractors during construction

D. Freight Rail

The Supplemental Draft EIS documents long-term and short-term (construction-related) impacts of the proposed rail modifications on freight rail operations in the St. Louis Park/Minneapolis Segment (see Section 3.4 of this Supplemental Draft EIS). For the construction period, the freight rail analysis considers whether slow orders for freight rail trains would be in place, which could result in increased delays. For the analysis of potential long-term impacts on rail operations, potential modifications to freight rail service due to the proposed Southerly Connection are assessed.

As noted in Section 2.5 of this Supplemental Draft EIS, the LPA would result in short-term and long-term shifting of the freight rail tracks prior to tunnel construction of the light rail tunnel in the Kenilworth Corridor. Changing the physical operations of freight railroads can result in an impact when the change affects the efficiency and level of service that can be maintained. These changes can have either a positive or negative result, depending on the circumstances. The schedule of operations and, ultimately, service to the customer could be negatively impacted when there are delays.

Table 3.1-4 provides a summary of existing freight rail operating characteristics in the project area, based on information provided by freight rail owners and operators since publication of the Draft EIS. The analysis included within Section 3.4 of this Supplemental Draft EIS is based on the continuation of these operating characteristics under the LPA, noting that freight rail operations can change in the future, depending on factors such as market conditions and the discretion of the freight rail owners and operators.

TABLE 3.1-4
Existing Freight Rail Conditions on the Kenilworth Corridor, Bass Lake and MN&S Spurs

Freight Rail Characteristic	Kenilworth Corridor	Bass Lake Spur	MN&S Spur
Class of Track	2	2	1
Maximum Design Speed	25-mph	25-mph	10-mph
Maximum Operating Speed[a]	10-mph	25-mph	10-mph
10-20 Car Trains per Week[a]	0	0	10 (CP)
65-75 Car Trains per Week[a]	14 (TC&W)	14 (TC&W)	0
80-125 Car Trains per Week[a]	5-6 (TC&W)	5-6 (TC&W)	0

[a] Subject to change based on market demand and operational adjustments
Source: TC&W/CP; 2013.

Sections 2.3.3 and 2.5.3 of this Supplemental Draft EIS describe in greater detail the following modifications to freight rail facilities that would result from the LPA:

- Beginning west of the St. Louis Park/Minneapolis Segment and extending east of Beltline Boulevard, the existing Bass Lake Spur freight rail tracks would be shifted north approximately 30 feet, allowing the proposed light rail alignment to be located south of the freight rail tracks
- A portion of the northern leg of the existing Skunk Hollow switching wye between the Bass Lake Spur and Oxford Street would be removed and replaced with a new southerly connection between the Bass Lake Spur and the Minneapolis, Northfield, and Southern Railway (MN&S) Spur
- There would be relatively minor adjustments to and reconstruction of the freight tracks between Beltline Boulevard and Cedar Lake Parkway
- The existing freight tracks would be moved up to 40 feet north between Cedar Lake Parkway and the Burnham Road overpass

Construction period activities that could affect freight rail operations include the following:

- The proposed light rail tunnel would be constructed using cut-and-cover techniques that would require the temporary relocation of existing freight rail tracks
- Fencing would be required in certain parts of the work zones, mainly in publicly accessible areas
- Severing the northern connection of the Skunk Hollow switching wye would not affect the freight rail service to shipper Robert Hill Company during construction

The methodology for the traffic queuing analysis related to at-grade freight rail crossings in the Supplemental Draft EIS is largely the same as the methodology in the Draft EIS, but with updated data and a focus solely on the St. Louis Park/Minneapolis Segment (co-location corridor). Because of the potential for freight rail to disrupt traffic at at-grade intersections of freight track and roadways, the project team performed a queuing analysis. The queuing analysis simulates the length of the delayed vehicles queue when a freight train blocks an at-grade crossing.

The queuing methodology evaluated three primary factors: the time of day at which the train arrives; the length of the train (number of cars); and the speed at which the train travels through the crossing. The analysis presented in the Draft EIS relative to one train arriving in the peak 15-minute period is still considered to be the worst case and is used in the Supplemental Draft EIS. The differences between the Draft EIS and Supplemental Draft EIS methodologies concerning the intersections evaluated, freight train length, and freight train speed are summarized in Table 3.1-5.

TABLE 3.1-5
Freight Co-Location Crossing Blockage Times

Location	2030 Draft EIS Crossing Analysis	2030 Updated Crossing Analysis[a]
Wooddale Avenue	50-car train at 10 mph = 232 seconds	75-car train at 25 mph = 3.0 minutes (177 seconds)
Beltline Avenue	50-car train at 10 mph = 232 seconds	75-car train at 25 mph = 3.0 minutes (177 seconds)
Cedar Lake Parkway	50-car train at 10 mph = 232 seconds	75-car train at 10 mph = 7.4 minutes (441 seconds) 75-car train at 25 mph = 3.0 minutes (177 seconds)
21st Street	Not Analyzed	75-car train at 10 mph = 7.4 minutes (441 seconds) 75-car train at 25 mph = 3.0 minutes (177 seconds)

[a] Change in train length and speed assumptions are based on updated and refined information obtained through the project development process and from Twin City & Western Railroad. A detailed discussion of the assumptions can be found in the Technical Memorandum regarding Southwest Transitway Draft EIS – Traffic Analysis Update.

Sources: Delmore, Sean and Chad Ellos. 2010 (Updated 2012). Technical Memorandum regarding Southwest Transitway Draft EIS – Traffic Analysis Update, WSB Project No. 01837-050. WSB & Associates, Inc., Minneapolis, MN. April 20, 2010 (Updated on March 21, 2012); Kimley-Horn and Associates, Inc., October 2013.

E. Bicycle and Pedestrian

Section 6.3.1.4 of the Draft EIS does not have a formal methodology section, however; the Draft EIS assesses the potential impacts on the bicycle and pedestrian trails within the Hennepin County Regional Railroad Authority (HCRRA) right-of-way. Bicycle and pedestrian use data from the trail systems was gathered from the City of Minneapolis and Transit for Livable Communities. See Table 6.3-3 in the Draft EIS. LRT design standards developed by Metro Transit were then applied to all locations where trails would cross the proposed improvements to determine the appropriate safety measures required to accommodate bicyclists and pedestrians and determine where rerouting trails may be needed during construction. The project team will follow the process identified in the Draft EIS to allow bicyclists and pedestrians to cross the proposed light rail alignment and modified freight rail tracks.

As part of the development of mitigation strategies for potential short-term (construction) parking impacts, the Council will develop and implement a Construction Communication Plan to prepare project-area residents, businesses and commuters for what to expect during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects, as described in the Communications and Public Involvement Plan for the project (see Chapter 4 "Public and Agency Coordination" for additional detail). Strategies included in the construction communications plan may include:

- Issuing regular construction updates and posting them on the Project website

- Providing advance written notice of roadway closures, driveway closures and utility shutoffs
- Conducting public construction meetings
- Establishing a 24-hour construction hotline
- Preparing brochure with information about construction
- Posting special "open for business" and way-finding signage
- Addressing property access issues
- Assigning staff to serve as liaisons between the public and contractors during construction

F. Safety and Security

The Draft EIS includes safety and security under the broader category of Section 3.7, Social Effects. Within this Supplemental Draft EIS, safety and security issues are addressed in the transportation sections of Sections 3.2, 3.3, and 3.4. This Supplemental Draft EIS identifies new LRT at-grade crossings or roadways not identified in the Draft EIS, as well as addresses safety and security issues associated with light rail tunnels, which also are not addressed in the Draft EIS.

Relative to rail transit systems, the project is being developed to conform to FTA's State Safety Oversight Program for Rail Safety. This program was developed in response to Congressional concern regarding the potential for accidents and incidents on rail transit systems as part of the Intermodal Surface Transportation Efficiency Act of 1991 added Section 28 to the Federal Transit Act (codified at 49 U.S.C. 5330). The FTA has created a state-managed oversight program for rail transit safety. Additional information on the State Safety Oversight Program for Rail Safety is available at: http://www.transit-safety.volpe.dot.gov/Safety/oversight.asp. For additional information, see also FTA's *Safety and Security Guidance for Recipients with Major Capital Projects*, covered under 49 CFR part 633, "Project Management Oversight."

In addition, Moving Ahead for Progress in the 21st Century Act (MAP-21[8]) includes several elements related to rail safety. MAP-21 gives FTA authority to establish safety criteria for all modes of public transportation and establish minimum safety standards for public transportation vehicles used in revenue operations. To initiate that process, FTA issued an Advanced Notice of Proposed Rulemaking in October 2013 requesting comment on a number of questions related to the implementation of the new MAP-21 requirements for a National Transit Safety Plan, for Transit Agency Safety Plans, a Safety Certification Training Program, and a National Transit Asset Management System. FTA also established the Office of Transit Safety and Oversight, which is responsible for administering and overseeing the National Transit Safety Program. It will also facilitate the partnership between FTA and states with state safety oversight obligations under MAP-21.

The Council will also work with the Federal Railroad Administration on the evaluation and potential implementation of any quiet zones that could be associated with proposed light rail grade crossings of roads. In October 2014, the project received a jurisdiction determination from the Federal Railroad Authority (FRA). FRA concluded that the proposed Southwest LRT project will be an urban rapid transit (URT) operation, therefore FRA will exercise its safety jurisdiction and regulations over the five shared highway-rail grade crossings for the Southwest LRT project, and these regulations will not apply to other locations (See Appendix E of the Supplemental Draft EIS for a copy of this letter and description of the five shared highway-rail grade crossings).

3.1.2.13 Mitigation Measures

Table 3.1-6 summarizes the mitigation measures included in Sections 3.2, 3.3, and 3.4 of this Supplemental Draft EIS. The mitigation measures are identified by environmental resource area for the Eden Prairie Segment, the proposed Hopkins OMF, and the St. Louis Park/Minneapolis Segment. The table also notes instances where mitigation measures are the same for the entire LPA, or specific to a particular location. Refer to Section 3.2, 3.3, and 3.4, respectively, for a more detailed discussion of mitigation measures.

[8] MAP-21, Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law on July 6, 2012.

TABLE 3.1-6
Summary of Short-term and Long-term Mitigation Measures by Resource Area

Environmental Resources	Summary of Mitigation Measures for the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment
Land Use	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segment • The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.1 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to ensure consistency with existing land uses and to determine need for providing alternative access to neighborhoods, properties, and businesses during construction • Implementation of the LPA, anticipated intensification of land uses near proposed light rail stations, and potential changes resulting from the proposed OMF are consistent with existing plans and policies, no mitigation measures addressing long-term land use impacts have been identified Hopkins OMF • As design progresses for the Shady Oak Station, the Council will continue to work with the City of Hopkins to ensure that the proposed OMF would remain compatible with existing land uses and will be consistent with the City of Hopkins Comprehensive Plan
Acquisitions and Displacements	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segment • All property will be acquired in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). • Businesses or persons displaced from the property will be compensated in accordance with the provisions of the Uniform Act.
Cultural Resources	Eden Prairie and St. Louis Park/ Minneapolis Segments • Mitigation for impacts will be developed in consultation with MnSHPO, FTA, MnDOT CRU, the Council, and consulting parties, and will be included in the Section 106 agreement. The draft Section 106 agreement will be included in the Final EIS and executed prior to the ROD. Mitigation measures that may be included in the Section 106 agreement can be found in Section 3.1.2.3 of this Supplemental Draft EIS.
Parklands, Recreation Areas, and Open Spaces	Eden Prairie and St. Louis Park/ Minneapolis Segments • There are no long-term direct impacts to parklands, recreation areas, and open spaces, therefore no long-term mitigation measures have been identified • Impacts during construction related to temporary changes to parking and access to parks will be mitigated by development of a Construction Communication Plan, which will include coordination with the park owners, advance notice of construction activities, highlighting road, sidewalk, and trail closures and detour routes (refer to Section 3.1.2.4 for additional detail) • Areas and features of parks and recreation areas that are altered or disturbed as the result of construction activities will be returned to pre-construction conditions or better.
Visual Quality and Aesthetics	Eden Prairie and St. Louis Park/ Minneapolis Segments • The Council will develop aesthetic guidelines for the design of the project. These guidelines will consider input from affected communities and include mitigation measures for visual impacts. The aesthetic guidelines will be described in the Final EIS • Based in part on the forthcoming aesthetic guidelines, mitigation measures for substantial adverse visual impacts resulting from the light rail elements will be identified during advanced engineering and could include measures such landscaping, visual treatments and continuity with the elevated structure design, lighting, and signage • Construction related mitigation measures will include elements such as locating construction staging areas in places not viewable by trail users or by otherwise visually screening staging areas, preservation of existing vegetation to the extent possible, implementation of dust suppression efforts, shielding of nighttime construction lights, continuous cleanup of trash and debris, and timely restoration of areas disturbed during construction
Geology and Groundwater	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segments • A groundwater management plan will be prepared by the Council, and approved by the appropriate regulatory agency, before construction. The plan will include required groundwater monitoring and management practices during construction. The management plan will also address collection, storage, and disposal of surface water runoff from the light rail track system, stations, and other infrastructure developed as part of the project. Mitigation measures related to existing groundwater contamination and hazardous and contaminated materials are discussed in the respective Hazardous and Contaminated Materials Sections of this Supplemental Draft EIS (Section 3.2.2.5, Section 3.3.2.3, and Section 3.4.2.5) St. Louis Park/ Minneapolis Segment • The groundwater management plan will include groundwater monitoring during operation, which will be used to assess excessive groundwater infiltration and to prioritize any repairs to the waterproofing systems. The groundwater management plan will be based on an appropriate safety factor, to be determined in consultation with the Minnehaha Creek Watershed District and the MnDNR, which will be applied to pumping rates and yearly pumping volumes in calculating maximum inflow amounts.
Water	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segments

Environmental Resources	Summary of Mitigation Measures for the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment
Resources: Wetlands, Floodplains, Public Waters and Stormwater Management	• A Compensatory Mitigation Plan will be developed by the Council, and reviewed by USACE and state and applicable local jurisdictions, prior to the submittal of the Section 404 permit application • Mitigation for permanent wetland impacts will include onsite project specific permittee responsible mitigation, offsite project specific permittee responsible mitigation, and/or the purchase of wetland mitigation bank credits that meet USACE regulatory requirements, as well as state and local regulatory requirements • Stormwater runoff (both long-term and short-term) will be directed into stormwater detention facilities created as part of the project. Temporary impacts on soils and vegetation (e.g., due to temporary pumping during construction) within and surrounding the wetlands will be restored upon completion of construction • Impacts on floodplains and public waters will be mitigated by appropriate compensatory storage. After Project Development, the amount of floodplain impacts will be calculated and coordination with the regulatory entities will occur to determine the appropriate type, location, and extent of compensatory floodplain storage (likely in the form of excavation) required. The project will require coordination with, and permitting from local, state, and federal water resources agencies. Development of permit applications will be completed during the Engineering phase of the project
Noise	Eden Prairie and St. Louis Park/ Minneapolis Segments • Based on the projected noise impacts identified and in compliance with FTA guidance, final determinations of noise mitigation measures to be incorporated into the project will be made in a noise mitigation plan and that will be included in the Final EIS • The contents of that plan will include: additional noise monitoring and/or testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed noise mitigation measures; and identification of committed long-term and short-term (construction) noise mitigation measures and an assessment of their effectiveness • See Section 3.1.2.8 for additional detail on FTA noise mitigation guidance and on the contents of a noise mitigation plan
Vibration	Eden Prairie Segment • There are no projected long-term vibration impacts in the Eden Prairie Segment, therefore no mitigation is identified • If vibration impacts are identified in the Final EIS, a vibration mitigation plan will be developed, and will include: additional testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed mitigation measures; and identification of committed long-term and short-term (construction) mitigation measures and an assessment of their effectiveness See Section 3.1.2.9 for additional detail on FTA noise mitigation guidance and on the contents of a vibration mitigation plan St. Louis Park/ Minneapolis Segment Based on the projected vibration impacts identified, and in compliance with FTA guidance, final determinations of vibration mitigation measures to be incorporated into the project will be made in a vibration mitigation plan and documented in the project's Final EIS The contents of that plan will include: additional testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed mitigation measures; and identification of committed long-term and short-term (construction) mitigation measures and an assessment of their effectiveness See Section 3.1.2.9 for additional detail on FTA noise mitigation guidance and on the contents of a vibration mitigation plan
Hazardous and Contaminated Materials	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segment • Mitigation for hazardous and contaminated materials impacts will be conducted within the MPCA Brownfield Program regulatory framework • A response action plan (RAP) will be developed by the Council and approved by MPCA to address the risks identified in Phase I and Phase II ESAs • Upon MPCA approval of the RAP, cleanup of identified contamination would begin prior to, or in concert with, project excavation and/or drilling activities All clean-up activity will be conducted with prior MPCA approval and in accordance with the approved Site Safety and Health Plan and will be continuously monitored by qualified inspectors • A Construction Contingency Plan shall be prepared by the Council and approved by MPCA prior to the start of construction to account for the discovery of unknown contamination. This plan will outline procedures for initial contaminant screening, soil and groundwater sampling, laboratory testing, and removal, transport, and disposal of contaminated materials at licensed facilities • Any existing structures will be surveyed for the presence of hazardous/regulated materials prior to their demolition or modification. Potentially hazardous and contaminated materials will be handled and managed in compliance with all applicable regulatory standards and will be disposed in accordance with an approved remediation plan
Economic Effects	Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segment No long-term or short-term (construction) impacts are anticipated. Therefore, no mitigation measures have been identified.
Transit	Eden Prairie Segment • During project development and engineering any potential impacts to SouthWest Transit bus operations would be identified and addressed in consultation with

Environmental Resources	Summary of Mitigation Measures for the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment
	SouthWest Transit. If construction-related detours are required that would affect SouthWest Transit bus routes, Metro Transit will communicate those detours as soon as possible to allow SouthWest Transit time to plan for changes to bus routes and to notify affected patrons • The Council will coordinate with SouthWest Transit to ensure Federal and local procedures for any route modifications or the suspension of transit service are followed. This would include a Title VI analysis to determine how service changes would affect low-income and minority communities, as appropriate. **St. Louis Park/ Minneapolis Segment** If the LPA affects fixed route bus service, Metro Transit will follow Federal and local procedures for route modifications or the suspension of transit service, which will include a Title VI analysis to determine how service changes would affect low-income and minority communities. This will include a community outreach process for designing route changes, a public hearing for the proposed service changes, and ongoing outreach efforts to communicate service changes prior to implementation.
Roadway and Traffic	**Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segments** • During construction, contractors will be required to comply with all state and local regulations concerning the closing of roadway, effects of construction activities, and the guidelines established in the Minnesota Manual on Uniform Traffic Control Devices. • The Council will develop a construction staging plan (staging plan), which will be reviewed with all appropriate jurisdictions and railroads, and the contractor will be required to secure all necessary permits and follow the staging plan, unless otherwise approved. Components of a staging plan include: — Traffic management plans will be reviewed by all appropriate jurisdictions prior to the start of construction activities. In some cases, intersections may need to be modified to minimize vehicle delay. Measures may include the addition of turn lanes, the construction of temporary traffic signals, the revision of existing signal timing plans, or the addition of warning signs — Detailed construction timeline will be developed before the initiation of construction activities that would inform roadway users and adjacent property owners about when the activities would begin, the type of work being performed, an estimate of when the work will be completed, and recommendations on how individuals and entities can minimize disruption to their activities • The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.12 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to determine the need for providing alternative access to neighborhoods, properties, and businesses during construction **Eden Prairie and St. Louis Park/Minneapolis Segments** • Mitigation will be identified for the following conditions: — Intersections that would operate at LOS D or better under No Build Alternative conditions in the forecast year which would operate at LOS E or F in the forecast year under the LPA would be mitigated to operate at LOS D or better — Intersections that would operate at LOS E or F in the forecast year under No Build Alternative conditions which would operate at a worse LOS in the forecast year under the LPA would be mitigated to operate at No Build Alternative conditions or better • Following are general strategies that could be used to improve operations at intersections where mitigation would be warranted: — Optimizing signal splits (green time) and offsets — Adding new traffic signal controllers, pedestrian controllers, and signage at crossings — Modifying a light rail at-grade crossing from preemption to a priority strategy — Adding left- or right-turn lanes — Lengthening left- or right-turn lanes — Adding lanes to the cross-street approaches — Providing a grade separation between the roadway and LRT guideway (or in specific circumstances) — Restricting or removing full access **Hopkins OMF** Mitigation measures related to the partial acquisition of the parcel at 510 15th Avenue South will include providing circulation to the loading dock located on the west corner of the building. These details will be refined as part of Project Development.
Parking	**Eden Prairie Segment, Hopkins OMF, and St. Louis Park/Minneapolis Segments** The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.12 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to determine the need for providing alternative access to neighborhoods, properties, and businesses during construction **Eden Prairie Segment and St. Louis Park/Minneapolis Segments** • Mitigation of the displacement of off-street parking spaces for the parcels that would be fully acquired by the project is not be warranted, because the businesses that the parking spaces are associated with would also be displaced

Environmental Resources	Summary of Mitigation Measures for the Eden Prairie Segment, the Hopkins OMF, and the St. Louis Park/Minneapolis Segment
	• Mitigation of the displacement of off-street parking for the parcels where the existing businesses would remain on their existing parcels will be determined through the property acquisition process, which would occur during the Engineering and construction phases. The primary mitigation measure that would be considered through that process would be potential modifications to the layout of the remaining parking lot to increase the number of off-street parking spaces and potential modifications to the design of the project to reduce the number of displaced off-street parking spaces. Property owners would be compensated for loss of parking in compliance with the Uniform Relocation Act. Where eliminated spaces are associated with partial property acquisitions, mitigation will be determined in the final agreement with the property owner consistent with the requirements of the Uniform Act **Eden Prairie Segment** Because the project would increase the supply of on-street parking spaces in the segment, no mitigation measures for on-street parking impacts have been identified. **Hopkins OMF** • Because the proposed OMF site would contain adequate off-street parking for employees and visitors, mitigation for the displacement of on-street parking is not needed • All off-street parking that would be displaced is associated with businesses that would also be displaced by the OMF. Therefore, no mitigation of the displacement of off-street parking spaces has been identified.
Freight Rail	**St. Louis Park/ Minneapolis Segment** • No long-term impacts to freight rail transportation in the St. Louis Park/Minneapolis Segment are anticipated. Therefore, no long-term mitigation measures have been identified • In order to mitigate short-term impacts to freight rail operations related to construction activities, the Council will develop and update a freight rail operations coordination plan. The purpose of the plan is to facilitate coordination between the project and the freight railroads throughout the construction period in order to minimize impacts on freight rail owners and operators in the St. Louis Park/Minneapolis Segment without creating unreasonable constraints during construction of the LPA. Freight rail owners and operators in the project area will review and approve the coordination plan, prior to the start of construction. As part of this effort, Council staff will also work with the freight railroads to provide provisions in the construction contract to identify how the contractor will interact with the railroads. Further, Council staff will work with the freight railroads to sequence construction to minimize effects on freight movements and to identify optimal periods for closing the rail service and reducing speeds. • During construction activities, flaggers will be used to allow freight railroad operations to continue without interruption, except for the following proposed activities and durations: — Four- to eight-hour stoppage when completing the freight rail track swap — Two-day (likely over a weekend) stoppage for MN&S and TC&W trains for turnout construction for the new southerly connection to MN&S tracks — One-day stoppage to shift the bridge over Highway 100 from its location along the current alignment to a location north of the light rail mainline
Bicycle and Pedestrian	**Eden Prairie and St. Louis Park/ Minneapolis Segments** • Because there would be no long-term adverse impacts from the LPA on bicycle and pedestrian facilities, no long-term mitigation measures have been identified • Short-term effects on pedestrian and bicycle routes would be mitigated through signage, information fliers, website postings with maps of construction areas/ detours, and notices placed at bicycle shops, for example • The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.12 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to determine the need for providing alternative access to neighborhoods, properties, and businesses during construction
Safety and Security	**Eden Prairie Segment, Hopkins OMF, and St. Louis Park/ Minneapolis Segments** • Metro Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times • Other mitigation measures will include signage, information fliers, and website postings with maps of construction areas/detours. More specific mitigation concepts will be included in the Final EIS when additional design and construction information will be available, in accordance with Federal, state and local requirements

3.1.2.14 Environmental Justice Compliance

The environmental justice analysis for the Supplemental Draft EIS was completed following the methodology presented in Section 10.3 of the Draft EIS. The environmental justice analysis included in this Supplemental Draft EIS supplements the analysis provided in the Draft EIS for the Eden Prairie and St. Louis Park/ Minneapolis segments and provides new information related to the Hopkins OMF. The environmental justice assessment in this Supplemental Draft EIS reflects the design adjustments identified by the Council in March 2014, as well as the following updated data sources:

- The Draft EIS uses 2000 US Census data to identify low-income populations. The Supplemental Draft EIS environmental justice analysis includes new US Census data (2007-2011 American Community Survey data) to determine low-income populations.
- The Supplemental Draft EIS uses a secondary source of data (elementary school data), which was not used for the Draft EIS. The elementary school data are used to supplement the United States Census Bureau (U.S. Census) data and could identify demographic changes related to minority and low-income populations since the publication of the U.S. Census data.
- The study area for the Supplemental Draft EIS environmental justice analysis for the Hopkins OMF site is a 1,000-foot radius around the site. The 1,000-foot radius was selected because this is the area in which most of the impacts, both positive and negative, would likely occur. The environmental justice study area for the Eden Prairie and St. Louis Park/Minneapolis segments remains at 0.5 mile, consistent with the Draft EIS.
- The environmental justice analyses in this chapter are based on the updated environmental impacts also included in this chapter. Environmental elements where there has been either no change in impacts from the Draft EIS or where no impact would occur are not included in the analysis.

The environmental justice compliance sections of this Supplemental Draft EIS also describe related public involvement activities, as does Chapter 4.

Section 10.6 of the Draft EIS includes a preliminary finding of no disproportionately high or adverse impact to environmental justice populations for alternatives LRT 3A and LRT 3A-1, which both include the LPA, with varying freight rail modifications. This Supplemental Draft EIS updates the assessment of project impacts on environmental justice populations in the Eden Prairie Segment, in the vicinity of the Hopkins OMF, and in the St. Louis Park/Minneapolis Segment. The final environmental justice finding for the entire LPA will be included in the Final EIS.

As with the Draft EIS, the analysis in the Supplemental Draft EIS was prepared in compliance with: the Presidential Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, (February 11, 1994); the USDOT *Order to Address Environmental Justice in Minority Populations and Low-Income Populations* (USDOT Order; May 2, 2012); and the FTA's Circular FTA C4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* (FTA, 2012).

3.2 Eden Prairie Segment

This section provides a summary of the potential environmental impacts that would result from the LPA within the Eden Prairie Segment and supplements information provided in the project's Draft EIS. This section addresses existing conditions within the vicinity of the proposed light rail-related improvements and potential long-term and short-term (construction-related) impacts resulting from the LPA within the segment. Mitigation measures are also identified.

As described and illustrated in Section 2.5 of this Supplemental Draft EIS, in April 2014, the Council identified adjustments to the LPA in the Eden Prairie Segment[9]. Appendix G of this Supplemental Draft EIS

[9] See Section 2.5.1 for a description and illustration of the Eden Prairie Segment and the elements of the LPA included within that segment. The scope of the LPA as identified by the Council includes a proposed western terminus at the Mitchell Station south of Technology Drive and west of Mitchell Road. As part of the design and engineering process, the Council also

includes the conceptual engineering drawings of the proposed light rail related improvements in the segment. As shown on Exhibit 2.5-1 in this Supplemental Draft EIS, the LPA would construct a light rail alignment and associated stations and park-and-ride lots within the Eden Prairie Segment. The LPA would also result in related roadway and bicycle/pedestrian improvements in the segment.

The analysis discussed in this section focuses on the following environmental categories that could potentially identify new significant adverse impacts not previously disclosed in the Draft EIS:

- Land use
- Acquisitions and displacements
- Cultural resources
- Parklands, recreation areas, and open spaces
- Visual quality and aesthetics
- Geology and groundwater
- Water resources: wetlands, floodplains, public waters, and stormwater management
- Noise
- Vibration
- Hazardous and contaminated materials
- Economic effects
- Transit
- Roadway and traffic
- Parking
- Bicycle and pedestrian
- Safety and security

An assessment of impacts to environmental categories that would not differ substantially from those addressed in the Draft EIS will be updated in the Final EIS. Section 3.1 of this Supplemental Draft EIS provides a description of the environmental categories addressed in this section, as well as a description of the methodologies, data and regulations used to prepare this analysis, including updates made since publication of the Draft EIS. Table 3.2-1 identifies the environmental categories evaluated in this section and summarizes the key findings of that analysis by environmental category.

TABLE 3.2-1
Summary of Findings for the Eden Prairie Segment

Resource Group/ Environmental Category	Summary of Findings
Social Effects	
Land Use	• Direct conversion of about 22.3 acres of land to public transportation-related use • Potential indirect land use impact from possible redevelopment around station areas • LPA is compatible with adopted plans and existing land use • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property

developed a design adjustment that would implement a western terminus of the proposed light rail line at the Southwest Station. As a result of that western terminus, there would be no light rail alignment west of Southwest Station and no Mitchell Station or associated structured park-and-ride lot. Further, the proposed structured park-and-ride lot at Southwest Station would be increased by approximately 600 spaces (increasing from 450 spaces under the Mitchell Station terminus to 1,050 spaces under the interim Southwest Station terminus). The western terminus at the Southwest Station would also include additional northbound and southbound through lanes on Prairie Center Drive, generally between Highway 212 and Technology Drive. The environmental impact analysis of the LPA within the Eden Prairie Segment provided in Section 3.2 of this Supplemental Draft EIS is based on a western terminus at Mitchell Station, with notes where the implementation of the western terminus at the Southwest Station would potentially increase impacts (i.e., visual quality and aesthetics, traffic, and transit).

Resource Group/ Environmental Category	Summary of Findings
Acquisitions and Displacements	• Acquisition of two full and 33 partial parcels • Potential relocation of an estimated nine businesses • Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property
Cultural Resources	• Phase I/II archaeological testing needed at two remaining locations within the APE • No long-term impacts due to the proposed LPA are anticipated • No short-term impacts due to the proposed LPA area anticipated
Parklands, Recreation Areas, and Open Spaces	• Long-term effect on the setting of Purgatory Creek Park • Short-term construction (temporary) impacts on Purgatory Creek Park (i.e., visual quality, noise, and access) and the Nine Mile Creek Conservation Area (short-term occupancy of open space during construction)
Visual Quality and Aesthetics	• Of the 10 viewpoints analyzed, two would experience a "substantial" overall level of impacts and eight would experience a "not substantial" level of impact • Potential construction-related visual impacts
Environmental Effects	
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Peats and fat clays west of the proposed Eden Prairie Town Center Station, near the proposed Southwest Station, and along the alignment between the Southwest Station and the Mitchell Station, would require remediation (e.g., soil replacement, pile foundations) • Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction
Water Resources	• Wetlands: • Permanent fill of 4.7 acres of wetlands • Short-term impacts on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction
	• Floodplains: • 13.4 acres of fill within a floodplain • Potential for construction-related sedimentation flow into the floodplain
	• Public Waters and Stormwater Management: • New light rail crossing of Purgatory Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction
Noise	• One moderate noise impact at Baymont Inn, and one moderate and one severe noise impact at Residence Inn[a] • Potential impacts at the Optum Auditorium on Technology Drive, which will be assessed in the Final EIS • Short-term noise impacts associated with construction activities and construction vehicles
Vibration	• No vibration impacts (potential impacts at the Optum Auditorium on Technology Drive will be assessed in the Final EIS) • Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles
Hazardous and Contaminated Materials	• Six potentially high-risk sites that could affect project • If permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system • Potential spills during construction • Encountering sites with existing contamination during construction
Economic Effects	
Economic	• Annual reduction of $34,600 in City of Eden Prairie property tax revenue (year 2013) (0.2 percent of total) • No short-term impacts due to the proposed LPA are expected
Transportation Effects	
Transit	• Extension of LRT service to Eden Prairie • No planned changes to existing bus service, but SouthWest Transit[b] could alter service • Road detours and construction-related congestion that could affect SouthWest Transit bus operations

Resource Group/ Environmental Category	Summary of Findings
Roadway and Traffic	• Traffic delays of approximately 50 seconds, 12 times per hour, at eight new light rail at-grade crossings of roadways or private driveways • One intersection in the a.m. peak hour and three intersections in the p.m. peak hour would not meet Level of Service (LOS) standards without mitigation;[c] modifications to existing roadways (Eden Road, Technology Drive, Flying Cloud Drive, and Mitchell Road) • New unnamed roadway extending west from Eden Road to a cul-de-sac • Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities
Parking	• 30 on-street parking spaces added along a new street segment • Displacement of 250 private off-street parking spaces serving businesses at eight locations • Short-term off-street parking impacts would generally be restricted to the eight properties where off-street parking spaces would be displaced
Bicycle and Pedestrian	• Long-term changes to trail alignments at light rail crossings with no change in trail connectivity • Temporary trail detours would provide for continued trail connectivity during construction • Short closures of bicycle and pedestrian facilities during the period of construction
Safety and Security	• Potential for emergency vehicle delays of up to one minute, 12 times per hour, at eight new LRT at-grade crossings • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours
Environmental Justice Compliance	
Environmental Justice Compliance	• No disproportionately high and adverse impacts on EJ populations identified

[a] Without mitigation. Where identified and implemented, mitigation will reduce the number of noise impacts exceeding FTA criteria. Mitigation measures at the hotels will be determined in the Final EIS – see Section 3.2.2.3 for additional information.

[b] SouthWest Transit is a private bus service, providing local and express bus service within Eden Prairie.

[c] All intersections during a.m./p.m. peak hours would meet LOS standards with potential mitigation measures (average weekday in 2030).

Note: Data are approximate.

Source: CH2M HILL, 2014.

This section also provides an update of the project's environmental justice compliance within the Eden Prairie Segment. Section 3.2.5 provides a summary of: updated demographic characteristics of environmental justice populations in the segment; the project's environmental justice-related public involvement efforts in the segment since publication of the Draft EIS; and the updated impacts relative to environmental justice populations in the segment.

3.2.1 Social Effects

This section addresses the following environmental categories in the Eden Prairie Segment: land use; acquisitions and displacements; cultural resources, parklands, recreation areas, and open spaces; and visual quality and aesthetics. In general, this section describes the existing conditions, potential environmental impacts, and mitigation measures for each environmental category addressed.

3.2.1.1 Land Use

This section addresses how the LPA would affect land use in the Eden Prairie Segment. In particular, this section describes:

- Existing land uses and land use designations in the segment.
- The compatibility of the LPA with local land use plans.
- How the current use of parcels of land would change under the LPA (e.g., from private commercial use to public transportation) and how that could affect the overall land use characteristics of the segment.
- How the LPA would indirectly affect adjacent properties by indirectly attracting transit-oriented development.

Changes in transportation systems can influence changes in nearby land uses. The project can directly affect land use through property acquisition required for the project; and, conversely, the project can be a factor in

considering development patterns of an area. Light rail development can act as a catalyst for development and/or redevelopment in those station locations where jurisdictions have identified the desire for greater density and mixture of land uses. In those areas where no land use changes are desired, the local jurisdictions control land use regulations and only the jurisdictions have the ability to make changes to directly influence land uses. In areas where the jurisdictions decide to influence land use changes, light rail can indirectly influence development patterns and decisions toward a pedestrian-friendly environment around stations in support of transit ridership. The potential indirect land use impacts of the LPA are discussed in further detail in the *Long-Term Indirect Land Use Impacts* section below. For the evaluation contained in this section, the project's land use compatibility and conformance with existing land use policies and plans was measured and compared to the following plans:

- *Comprehensive Guide Plan, Future Land Use Plan* (City of Eden Prairie, 2009): Describes planned land uses for the year 2030. Supports LRT in the transit corridor by planning for transit supportive uses and densities within one-half mile of the proposed Eden Prairie Town Center and Golden Triangle Stations.
- *Eden Prairie Town Center Design Guidelines* (City of Eden Prairie, 2007): Design guidelines for the area surrounding the proposed Eden Prairie Town Center Station. Enables and encourages planning principles that promote transit supportive uses.
- *Eden Prairie Major Center Area Study* (City of Eden Prairie, 2006): Contains a future land use plan for the area surrounding the proposed Eden Prairie Town Center Station. Plans for increased intensity of development surrounding the proposed Eden Prairie Town Center Station.

A. Existing Conditions

This section describes existing conditions related to land use in the Eden Prairie Segment. The existing land uses and zoning for the Eden Prairie Segment of the LPA are documented in Sections 3.1.2 and 5.2.1 (a portion of Segment 3) of the Draft EIS and have not changed substantially since publication of the Draft EIS. The adjustments to the LPA within the Eden Prairie Segment would not extend proposed light rail-related improvements in the segment beyond the original study area for the land use analysis completed as part of the Draft EIS, and therefore, they are not described in detail here. In summary, land uses within the segment are predominantly institutional/public, industrial, retail-commercial, office-industrial, multi-unit residential, and vacant.

Planned land use tends to be industrial in the west portion of the segment and commercial and mixed use in the east portion of the segment. The proposed light rail-related improvements in the Eden Prairie Segment would be allowable uses under Eden Prairie's existing comprehensive plan and zoning designations, and they would be compatible with existing surrounding land uses.

B. Potential Land Use Impacts

This section discusses the potential impacts on the land use patterns and the consistency of the adjustments made to the Eden Prairie section of the LPA with regional, state, and local policies. Direct land use impacts would occur in locations where the LPA would require private or public property acquisition for the alignment, stations, or parking and traction power substations. These property acquisitions would convert property to a transportation-related use. Direct impacts also include proximity impacts (e.g., traffic, noise, and visual quality impacts) that could cause changes in adjacent land uses.

Indirect land use impacts affect the development and/or redevelopment of land (such as transit-oriented development) in the vicinity of the proposed project facilities (i.e., light rail line, stations, parking facilities, traction power substations). In addition to those uses allowed by current zoning and land use codes, jurisdictions could enact changes in their codes to spur other development and/or redevelopment.

Long-Term Direct Land Use Impacts

For the purpose of this land use analysis, the entire area of property that would be acquired by the project, as reported in Section 3.2.1.2 of this Supplemental Draft EIS, is defined as a direct change in land use. A change in the use of a parcel of land is not the same as a change in the land use of the surrounding neighborhood. That is, a commercial district that loses one or more commercial buildings is still a commercial district;

similarly, a residential neighborhood that gains higher density residential uses, or compatible mixed use or commercial development, would still be a residential neighborhood. While the LPA would result in changes to the existing use of particular parcels of land, those would not change the overall land use characteristics of the segment.

Following is a summary of the primary adjustments to the LPA within the Eden Prairie Segment made since publication of the Draft EIS and, generally, how those adjustments would affect the amount of land permanently incorporated into the transportation project:[10]

- The location of the proposed Mitchell Station studied in the Draft EIS has been adjusted to the south, and the proposed alignment between the Mitchell and Southwest stations has been modified. The Mitchell Station would be located on the south side of Technology Drive, west of Mitchell Road, and adjacent to the Eden Prairie Town Center (rather than on the south side of Highway 212, west of Mitchell Road). The structured park-and-ride lot adjacent to the Mitchell Station would have approximately 900 spaces (relative to 400 spaces within the Draft EIS). The light rail alignment between the stations would generally be via Technology Drive, rather than generally via Highway 212. Compared to land use impacts described in the Draft EIS, the adjusted station location, park-and-ride lot size and location, and light rail alignment would result in decreased conversion of industrial land and increased conversion of public land to transportation use. The location of the Mitchell Station in the Draft EIS can be seen on Figures 2.3-5 and 2.3-8 of the Draft EIS. In this Supplement Draft EIS, it is shown on Exhibit 2.5-2.
- The proposed Southwest Station location is generally unchanged from the Draft EIS. However, the proposed adjacent structured park-and-ride lot, which would be west (rather than east) of the existing structured park-and ride lot, would be smaller than what was studied in the Draft EIS (approximately 450 spaces, compared to approximately 650 spaces), resulting in conversion of less land to a transportation use than reported in the Draft EIS. The changes to the proposed park-and-ride structure would relocate the SouthWest Transit office, relocate or close the Culvers Restaurant to allow a larger kiss-and-ride facility, and reconfigure the SouthWest Transit bus access road from Technology Drive. The location of the Southwest Station in the Draft EIS can be seen on Figures 2.3-5 and 2.3-8. In this Supplement Draft EIS, it is shown on Exhibit 2.5-2.
- The proposed Eden Prairie Town Center Station would be located between Technology Drive and Singletree Lane, on the north side of a new unnamed road that would extend west from Eden Road, rather than on the south side of Technology Drive, between Prairie Center Drive and Flying Cloud Drive, as described in the Draft EIS. The proposed light rail alignment connecting to the station was shifted south (from along Technology Drive to along Eden Road and along the new unnamed road extending west of Eden Road). This alignment adjustment would result in an increase in the amount of land that would be converted to a transportation land use. However, the LPA would also include a 160-space leased surface park-and-ride lot in the vicinity of the station, rather than the 650-space structured lot included in the Draft EIS, which would reduce the amount of land converted to a transportation use. The location of the Eden Prairie Town Center Station in the Draft EIS can be seen on Figures 2.3-5 and 2.3-8. In this Supplement Draft EIS, it is shown on Exhibit 2.5-2.

Table 3.2-2 summarizes the anticipated changes to use of land within the Eden Prairie Segment at the parcel level as a result of the LPA (by land use type). In summary, approximately 22.3 acres of land would be acquired for the project and converted to transportation use. Most of that land is privately owned and used for industrial and commercial purposes. Parcel acreages will continue to be developed as the project completes Project Development and reported in the Final EIS. Refer to Section 3.2.1.2 of this Supplemental Draft EIS for more information on property acquisitions that would occur within this segment.

[10] As noted in Section 2.5.1 of this Supplemental Draft EIS, design adjustments to the LPA made since publication of the Draft EIS include modifications to the size and location of proposed park-and-ride lots. In general, the adjustments to the size and location of park-and-ride lots were in response to requests from the City of Eden Prairie to minimize the use of land in the core of the activity center for park-and-ride lots and to help intercept park-and-ride lot trips outside of the core of the activity center (i.e., near the Eden Prairie Town Center).

While the acquisition of property in the Eden Prairie Segment would change the land use of specific parcels, the acquisitions would not change the overall character of land within the segment.

TABLE 3.2-2
Changes in Existing Land Use under the LPA – Eden Prairie Segment

General Land Use Category[a]	Area Converted to Public Transportation Use (acres)	Percent of Total Project Land Converted
Parklands, Recreation Areas, and Open Spaces	0.0	0.0%
Industrial	6.9	30.1%
Commercial	11.0	48.9%
Mixed Use	0.0	0.0%
Residential	1.0	4.4%
Public/Institutional	3.4	16.6%
TOTAL	22.3	100%

[a] The conversion of land from existing land uses to a transportation use is consistent with relevant local land use plans and policies, which generally plan for increased intensity of development surrounding the proposed LRT stations, as previously described.

Note: Total impacts are based on estimated and rounded property acquisition.

Sources: MnDOT, 2014; and Hennepin County Property Tax Information Search.

Long-Term Indirect Land Use Impacts

As noted in the Draft EIS, construction of the LPA within the Eden Prairie Segment could indirectly attract transit-oriented development, primarily within proposed station areas. Improved transit access could increase the desirability of surrounding residential, commercial, office and industrial properties. If other market conditions are present, that improved access could help accelerate and/or concentrate development and redevelopment patterns. As a result, the type of development or redevelopment near stations with available land and supportive zoning in place generally tends to be more intense, mixed-use development that supports higher-density residential, commercial, and office-related uses. The following is a summary of the potential for indirect impacts to development patterns surrounding each of the proposed station within the Eden Prairie Segment.

- Mitchell Station: The LPA will complement the existing industrial and institutional uses and, because there is some vacant land within the vicinity of the proposed station, there is some potential for development/redevelopment in the area. However, existing structures on parcels in the area currently meet the maximum density (floor-to-area ratio of 0.30) allowable under the current zoning (I-2), which could affect the potential redevelopment of land in the proposed station area. While the City of Eden Prairie is supportive of transit-oriented development surrounding station areas, there are no adopted plans for redevelopment in the area surrounding the Mitchell Station. Wetlands north of the proposed station, adjacent to Technology Drive, could also limit development potential of some parcels.
- Southwest Station: The city's future land use plan (City of Eden Prairie, 2009), calls for continued regional commercial uses, high-density residential uses, and parks and open space in the area surrounding the proposed Southwest Station. However, because most of the surrounding land is already built out to relatively high densities, no immediate land use changes in this area are anticipated.
- Eden Prairie Town Center Station: This station would be located in an area planned for future mixed-use redevelopment. Future land use plans (City of Eden Prairie, 2009) designate this area as a regional activity center in support of future light rail service and transit-supportive uses surrounding this station. Of the three stations that would be located within the segment, the area encompassing the Eden Prairie Town Center Station would be the most likely to see earlier and more intense development due, in part, to the extension of light rail service into Eden Prairie, especially if the city targets infrastructure improvements to this area.

Short-Term Land Use Impacts

This section describes the short-term land use impacts anticipated during construction of the LPA. In general, construction-related activities associated with the light rail-related improvements in the Eden Prairie Segment would not change the land use of the area in the long-term. Short-term land use impacts resulting from the LPA could include temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities throughout all or part of the construction period. Temporary occupancies of parcels would include the use of construction easements or intergovernmental agreements and would not change existing land uses in the long term. The short-term impacts to property that could indirectly affect their use could include potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing residential, commercial, and other-use properties. See Sections 3.2.1.5 – Visual Quality and Aesthetics, 3.2.2.3 – Noise, and 3.2.4.2 – Roadway and Traffic of this Supplemental Draft EIS for additional information on temporary construction impacts from the LPA that could temporarily affect the use of property in the Eden Prairie Segment. Although some businesses may experience hardship during construction due to those types of impact, the impacts would not affect land use type unless the property became vacant.

Based on the project's conceptual engineering, no temporary construction easements have been identified beyond the property to be permanently acquired for the LPA. If temporary easements are identified at the conclusion of the Project Development or during the subsequent Engineering phase, construction easements might affect portions of property on residential, commercial, industrial, and public properties. Any construction easements would be temporary and would be returned to preconstruction conditions upon completion, depending on executed agreements. See also the short-term impacts subsection of Section 3.2.1.2 – Acquisitions and Displacements of this Supplemental Draft EIS.

BMPs identified in Section 3.1 of the Draft EIS, including development of a BMP construction plan, will apply to construction within the Eden Prairie Segment. Construction BMPs, including preparation of a BMP construction plan, will be developed prior to construction to address optimum traffic re-routing measures, minimization of temporary lane, sidewalk, and trail closures, and maintenance and timely removal of temporary traffic control devices. In addition, potential modifications to the construction schedule and other measures will be incorporated into the plan to minimize temporary impacts. For example, the BMPs would include working with residents and businesses to provide alternative access, as well as providing advance notice of construction activities, temporary trail or sidewalk closures, and detour routes. To minimize construction-related noise and dust impacts on adjacent land uses, contractors will be required to comply with applicable laws regarding proper use of construction equipment and onsite construction and public safety standards applicable to ADA access requirements and with keeping construction equipment outfitted with appropriate environmental protection features, such as noise mufflers and air filters, to minimize exhaust.

C. Mitigation Measures

Because the implementation of the LPA in the Eden Prairie Segment, as well as the anticipated intensification of land uses near proposed light rail stations, are consistent with existing plans and policies, no mitigation measures addressing long-term land use impacts have been identified.

The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.1 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to ensure consistency with existing land uses and to determine need for providing alternative access to neighborhoods, properties, and businesses during construction.

3.2.1.2 Acquisitions and Displacements

This section identifies potential long-term and short-term impacts related to the purchase of parcels in the Eden Prairie Segment that would be needed to accommodate the light rail-related improvements included within the LPA, including the closure and/or relocation of business occupants that are currently housed in buildings on these parcels. As summarized in Table 3.2-1, the LPA would result in the acquisition of two full and 33 partial parcels of land and the potential relocation of up to an estimated nine businesses.

As with the overall project, the Eden Prairie Segment remains in the Project Development phase of design, based on the conceptual engineering design (see Appendix G). As the level of detail in the design increases, the project team will continue to work to avoid or minimize property acquisitions required for the LPA. Changes in property acquisitions and displacements associated with the proposed light rail-related improvements in the Eden Prairie Segment will be presented in the forthcoming Final EIS.

A. Existing Conditions

This section describes existing conditions related to the purchase of land parcels needed to accommodate the project, as well as the requirement that current parcel occupants must move as a result of land acquisitions. Since the publication of the Draft EIS, the Council has continued to review and attempt to minimize property acquisitions and displacements due to the Southwest LRT Project LPA. While the Supplemental Draft EIS reflects more advanced design development, the design is still conceptual; therefore, right-of-way impacts presented in this document remain preliminary and are subject to change as the project design proceeds.

When an acquisition occurs, it typically results in either a full or partial acquisition of a parcel's inherent real estate property interests and rights, or an easement. A partial acquisition would occur if only a portion of the entire parcel was required to accommodate the project infrastructure and facility needs. This would occur if, for example, a portion of a commercial parking lot fronting the alignment is required, but not the adjacent commercial building located away from the immediate alignment area. A full acquisition could occur when the majority of the property is required to provide sufficient right-of way for elements such as the horizontal alignment of stations with park and ride facilities or for maintenance facilities. A full acquisition could result from a severe loss of access (e.g., driveway access is eliminated) that reduces the useful operation of a property, despite all attempts to avoid or offset the impact through restored ingress/egress. An easement can involve a general or specific portion of the property and can be either on, below, or above (aerial) the surface of the property. As applicable, easements can be temporary (during construction) or permanent. A temporary construction easement is an easement required during construction that would revert back to the owner of record after completion of construction activities. Its use is not limited to construction staging or equipment use. It could also include actual construction of temporary facilities that would be removed prior to reversion of the property to the owner of record (e.g., temporary shoring, temporary retaining walls, temporary erosion control, temporary drainage system, temporary detour, etc.). Permanent easements may be obtained for access to another property, usually called "access and egress" easements. An easement can involve a general or specific portion of the property and can be either at the surface level, beneath or above (aerial) the property. Permanent underground easements are used when tunneling for a subway and for underground utilities. Permanent aerial easements are used for the operation of an elevated transit line, where necessary, if located within property outside of the project's right-of-way.

Article 6 of a Cooperation Agreement between the Council and MnDOT states that MnDOT, acting for the Council, may acquire all lands, easements, and rights-of-way required for the project in the name of the Council, unless the Council and MnDOT mutually agree otherwise. The Council also reserves the right to acquire any and all real property interests itself. Project acquisitions and displacements would comply with the Uniform Relocation Act and state law and would be consistent with the design plans for the project. The acquisition process would also follow the Real Estate Acquisition and Management Plan, which will be developed and maintained during Project Development, Engineering, and construction phases. In carrying out property acquisitions, MnDOT would use all powers available to them under applicable law (Council and MnDOT, 2012).

The acquisitions and displacements analysis and documentation in this Supplemental Draft EIS, like the Draft EIS, conform to applicable federal and state laws governing property acquisition, including the Uniform Relocation Act. In addition, disposition of excess property as determined by the Council and FTA, would conform to Council policy, applicable state law, and FTA's Circular 5010.1D (FTA, 2008a). See Section 3.1.2.2 of this Supplemental Draft EIS and Section 3.3.1 of the Draft EIS for additional detail.

B. Potential Acquisitions and Displacements Impacts

This section identifies the potential long-term and short-term impacts that would result from the need to acquire land for implementation of the LPA in the Eden Prairie Segment. The number of parcels that would need to be acquired and the potential for relocation of existing businesses are discussed in this section.

Long-Term Direct and Indirect Acquisitions and Displacement Impacts

This section addresses how businesses and other land uses could be affected by the proposed LPA in the long term. Implementation of the LPA in the Eden Prairie Segment would result in full acquisition of two parcels and partial acquisition of 33 parcels, as summarized in Table 3.2-3 and illustrated on Exhibit 3.2-1.

All potential acquisitions within the segment will be within the City of Eden Prairie.

The two parcels to be fully acquired by the project are currently used for commercial purposes. The acquisition of these parcels could result in the need for up to nine businesses to relocate. Refer to Appendix G (Eden Prairie Segment) for conceptual engineering drawings showing the potential acquisitions associated with the LPA. Approximately one acre of residential property would be acquired (two separate parcels of approximately 0.5 acres each); however, no residential displacements are anticipated because of these acquisitions.[11] As noted in the Draft EIS in Sections 5.2 and 9.5, the potential for increased development and redevelopment in areas surrounding proposed light rail stations due to improved transit access could indirectly result in additional displacements resulting from implementation of the LPA (see Section 3.2.1.1 of this Supplemental Draft EIS for additional information).

Short-Term Acquisition and Displacement Impacts

This section describes the short-term acquisition and displacement impacts that may occur as a result of construction of the LPA in the Eden Prairie Segment. Based on the project's conceptual engineering plans (see Appendix G), all construction activities would occur within parcels that would be permanently acquired by the Council or are currently owned by the Council or HCRRA. However, during Engineering, temporary property acquisitions (e.g., construction easements) may be identified. These temporary property acquisitions could include short-term changes to property access or temporary conversion of land use to transportation use for construction staging and other construction activities throughout all or part of the construction period. Short-term occupancies of parcels would include the use of construction easements or intergovernmental agreements and would change existing land uses in the short term. The short-term impacts would include potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing residential, commercial, and other uses. Some businesses may experience hardship during construction and may choose to temporarily or permanently change business location or terminate the business. In addition, some of the property acquired by the project, as identified in Table 3.2-3, may not be needed in the long term after construction of the project is complete. In these cases, unneeded areas of property would be considered remnant parcels, and could be sold in compliance with FTA Circular 5010.1D (FTA, 2008a) and applicable state regulations, thereby changing acquisition and land use impacts of the remnant parcels from long-term to short-term impacts. See Section 3.1.2.2 for additional information on the sale of excess property.

C. Mitigation Measures

All property will be acquired in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Any businesses or persons displaced from the property will be compensated in accordance with provisions of the Uniform Act. Relocation benefits will be available, under the provisions of the Uniform Act, for displaced businesses and non-profit organizations including moving costs, tangible personal property loss as a result of relocation or discontinuance of operations, reestablishment expenses, and costs incurred in finding a replacement site.

[11] These parcels are currently used for multifamily residential. The potential partial acquisitions would involve strip takings at the edge of the parcel, which are not anticipated to directly impact the structure. Therefore, no residential relocations are anticipated.

TABLE 3.2-3
Eden Prairie Segment – Parcel Description

Property Address	Hennepin County PIN	Current Use	Parcel Size (acres)	Area to be Acquired (acres)	Acquisition Type
14900 Technology Drive	16-116-22-12-0009	Industrial	32.9	0.5	Partial
14615 Lone Oak Road	16-116-22-11-0007	Commercial	17.3	0.5	Partial
Address Unassigned	15-116-22-22-0009	Public	9.6	0.5	Partial
14000 Technology Drive	15-116-22-22-0011	Industrial	34.9	0.5	Partial
Address Unassigned	15-116-22-23-0004	Public	0.3	<0.3	Partial
Address Unassigned	15-116-22-23-0003	Public	0.1	<0.1	Partial
Address Unassigned	15-116-22-21-0005	Industrial	14.2	0.5	Partial
13600 Technology Dr	15-116-22-21-0006	Commercial	4.9	0.5	Partial
Address Unassigned	15-116-22-12-0004	Residential	2.9	0.5	Partial
11800 Technology Drive	14-116-22-12-0029	Public	1.2	0.5	Partial
14949 Technology Dr	16-116-22-13-0009	Industrial	4.3	0.5	Partial
13500 Technology Drive	15-116-22-11-0012	Public	4.7	0.7	Partial
12950 Technology Drive	15-116-22-11-0008	Commercial	1.1	0.5	Partial
12900 Technology Drive	15-116-22-11-0009	Commercial	1.9	0.5	Partial
13550 Technology Drive	15-116-22-11-0011	Commercial	1.0	1.0	Full
775 Prairie Center Drive	14-116-22-23-0015	Commercial	8.1	0.1	Partial
800 Prairie Center Drive	14-116-22-22-0007	Commercial	2.9	0.5	Partial
12011 Technology Drive	14-116-22-22-0008	Commercial	18.1	0.5	Partial
12001 Technology Drive	14-116-22-21-0008	Industrial	32.9	2.9	Partial
13000 Technology Drive	15-116-22-11-0010	Commercial	2.8	<0.1	Partial
13250 Technology Drive	15-116-22-11-0007	Commercial	1.7	<0.1	Partial
12200 Singletree Lane	14-116-22-24-0021	Commercial	5.0	0.5	Partial
Address unassigned	14-116-22-24-0022	Public	0.5	<0.5	Partial
12100 Singletree Lane	14-116-22-24-0026	Residential	4.8	0.5	Partial
8000 Eden Road	14-116-22-12-0034	Commercial	2.9	0.5	Partial
8022 Glen Lane	14-116-22-13-0043	Commercial	3.4	0.5	Partial
7915 Eden Road	14-116-22-12-0011	Commercial	1.2	0.5	Partial
7900 Eden Road	14-116-22-12-0016	Commercial	2.3	2.3	Full
8080 Mitchell Road	16-116-22-14-0004	Public	25.8	0.8	Partial
Address Unassigned	15-116-22-23-0005	Industrial	35.8	2.0	Partial
13625 Technology Drive	15-116-22-13-0002	Commercial	53.8	0.7	Partial
7780 Flying Cloud Drive	11-116-22-43-0003	Commercial	4.3	0.5	Partial
Address Unassigned	11-116-22-44-0011	Commercial	0.8	0.5	Partial
Address Unassigned	11-116-22-44-0012	Commercial	0.2	<0.2	Partial
7740 Flying Cloud Drive	11-116-22-44-0010	Commercial	3.2	<0.5	Partial
Total[a]			Approximately 341.8	Approximately 22.3	

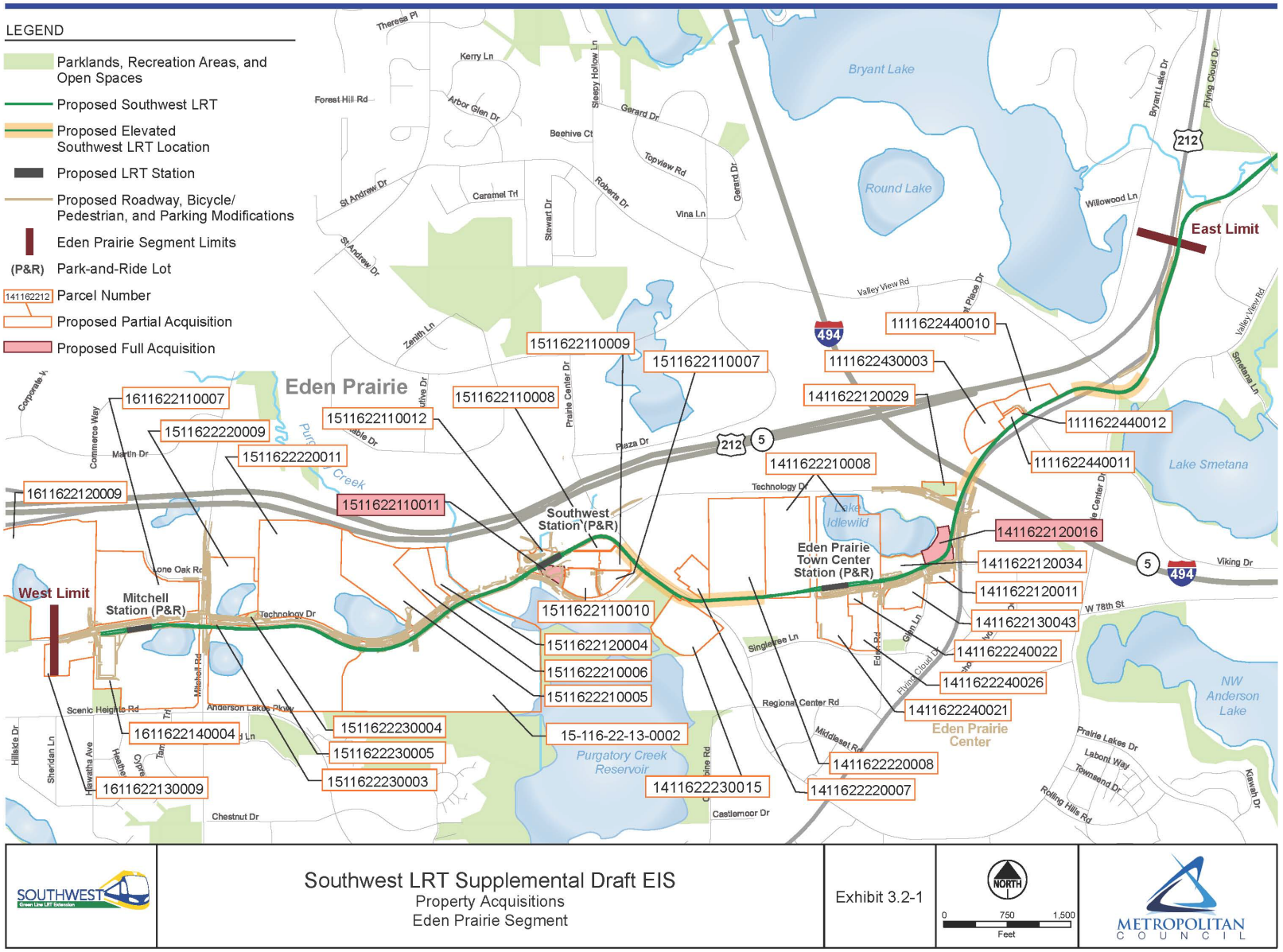
[a] The acreage of public parcels required for project development is still pending. Public and private parcel acreages will continue to be developed, and reported in the Final EIS. Parcel impacts of <0.5 acre are approximated at 0.5 acre or less than total parcel size (whichever is less). The total land use impacts reported are approximate; more refined impact information for these parcels will be provided as project details emerge.

Note: For the purpose of this analysis, parcels within or partially within the construction limits for the LPA were quantified.

Acronyms: PIN = property identification number; ROW = right-of-way

Sources: MnDOT, 2014, and Hennepin County Property Tax Information Search.

EXHIBIT 3.2-1
Property Acquisitions, Eden Prairie Segment



3.2.1.3 Cultural Resources

This section identifies archaeological and architecture/history resources listed on or eligible for the NRHP and the project's potential impacts on those resources that are located within an area of potential effect (APE) surrounding the proposed light rail improvements in the Eden Prairie Segment.

As noted in Section 3.1.2.3 of this Supplemental Draft EIS, the project's archaeological and architecture/history APEs were updated to reflect adjustments in the LPA since publication of the Draft EIS. The revised APEs are illustrated on Exhibit 3.2-2. As summarized in Table 3.2-1, the revised archaeological APE for the Eden Prairie Segment includes two locations that have been identified as requiring further Phase I/II archaeological investigation. There are no architecture/history resources in the architecture/history APE for this segment that would be affected by the LPA.

FTA initiated the Section 106 consultation on the Southwest Light Rail Project with the MnSHPO in November of 2009. FTA designated MnDOT's Cultural Resources Unit (CRU) to carry out many aspects of the Section 106 review. MnDOT CRU developed an APE for the project, and identified and evaluated historic properties in the APE in consultation with MnSHPO, the Council, and the consulting parties. The project's coordination efforts since publication of the Draft EIS included meetings with the consulting parties in April 2014, November 2014, and February 2015. Appendix E provides documentation of related correspondence with the MnSHPO and other consulting parties that has occurred since publication of the Draft EIS. MnDOT CRU will continue to consult with the consulting parties in reaching final findings of effects to historic properties. If the required further Phase I/II archaeological investigation results in the identification of any additional historic properties, MnDOT CRU, on behalf of FTA, will consult with the MnSHPO, consulting parties, and the public to consider effects to these properties. Measures to mitigate, minimize, or avoid adverse effects on all historic properties will be stipulated in a Section 106 agreement, which will be included in the project's Final EIS (see Chapter 4 for a listing of parties that will be invited to sign the agreement).

A. Existing Conditions

This section describes existing archaeological and architecture/history resources in the Eden Prairie Segment. The Supplemental Draft EIS *Phase I Architectural History Survey Southwest LRT Project, Hennepin County, Minnesota, Volume Six, Supplemental Report Number Three (SDEIS)* (The 106 Group Ltd., 2014a), the *Phase 1a Archaeological Investigation, Southwest Light Rail Transit, Hennepin County, Minnesota, SDEIS Areas: Eden Prairie Segment, Hopkins Operations and Maintenance Facility, and St. Louis Park/Minneapolis Segment* (The 106 Group Ltd., 2014b), and the *Phase I Archaeological Investigation for the Proposed Southwest LRT Project, Hennepin County, Minnesota - SDEIS Area: Eden Prairie Segment Archaeological Potential Area C* (The 106 Group Ltd., 2014c) utilized the same methodology that had been used for earlier investigations completed during the Draft EIS. The cultural resources analysis and documentation in the Supplemental Draft EIS, like the Draft EIS, conform to the requirements of Section 106 of the National Historic Preservation Act, (NHPA), which protects properties that are on or eligible for listing on the National Register of Historic Places (NRHP), as discussed in Section 3.4.1 of the Draft EIS.

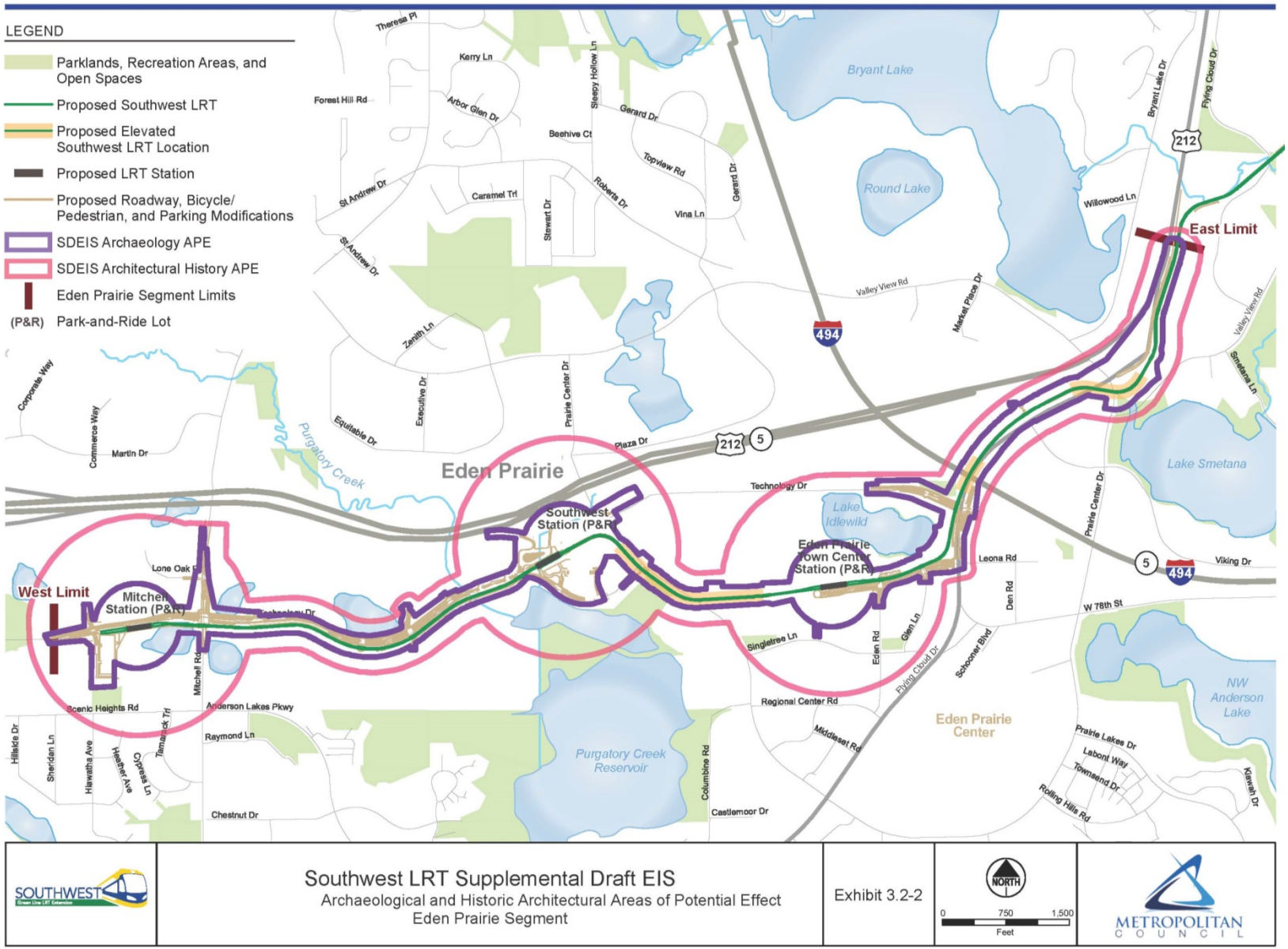
The Supplemental Draft EIS Phase 1a archaeological investigation identified three areas of archaeological potential within the revised Eden Prairie Segment APE. A Phase I archaeological survey, including pedestrian surveys and shovel testing, will be conducted in consultation with the Minnesota State Historic Preservation Office (MnSHPO) to determine whether any intact archaeological resources are present and to evaluate any identified sites for eligibility to the NRHP. A Phase II archaeology survey will be completed, if needed, based on the Phase I survey results. The survey for one of these sites was completed in October 2014 and no archaeological material was recovered and determined not to meet NRHP criteria. Therefore, no additional archaeological investigations were recommended for that area.

B. Potential Cultural Resources Impacts

This section identifies the potential long-term and short-term impacts to the archaeological and historic architectural resources listed in or eligible for the NRHP.

EXHIBIT 3.2-2

Archaeological and Historic Architectural Areas of Potential Effect, Eden Prairie Segment



Long-Term Direct and Indirect Cultural Resources Impacts

This section addresses long-term direct and indirect impacts on cultural resources within the segment's APEs. Between August 2013 and early 2014, a Phase I architecture/history survey and Phase 1a archaeological investigation were prepared to supplement similar investigations conducted during the Draft EIS phase where the current APE for archaeological and historical resources extends beyond the APEs identified in the Draft EIS.[12] To date, no NRHP listed or eligible architecture/history resources have been identified in the revised Eden Prairie segment. If any archaeological sites are identified in the Phase I/II archaeological survey of the two remaining probability areas identified in the Phase 1a investigation, and if, in consultation with MnSHPO, any of those sites are found to meet NRHP criteria, potential effects to those sites will need to be considered.

Potential Short-Term Cultural Resources Impacts

This section addresses the potential short-term impacts to archaeological and historic architectural resources during construction of the LPA. In summary, based on the analysis completed to date, no short-term impacts to cultural resource due to the proposed LPA are expected to occur within the Eden Prairie Segment. As previously noted, if any archaeological sites are identified in the Phase I/II archaeological survey of the two remaining probability areas identified in the Phase 1a investigation, and if, in consultation with MnSHPO, any of those sites are found to meet NRHP criteria, potential short-term effects to those sites will need to be considered and addressed in the Section 106 consultation process and documentation.

C. Mitigation Measures

Mitigation for impacts will be developed in consultation with MnSHPO, the FTA, MnDOT CRU, the Council, and appropriate consulting parties, and will be documented in the Section 106 agreement. Additional information about the Section 106 agreement can be found in Section 3.1.2.3 of this Supplemental Draft EIS.

3.2.1.4 Parklands, Recreation Areas, and Open Spaces

This section identifies parklands, recreation areas, and open spaces in the Eden Prairie Segment, along with long-term direct and indirect, and short-term impacts that would occur as a result of the LPA. Some potential effects of the LPA on parklands, recreation areas, and open spaces in the segment have changed since publication of the Draft EIS; these are also identified and addressed in this section.

As summarized in Table 3.2-1, there would be no long-term direct impacts (defined as the permanent incorporation of parklands, recreation areas, and open spaces into the project) from the LPA on parklands, recreation areas, and open spaces in the segment. Indirect long-term and short-term temporary construction impacts (i.e., visual, noise, and access) from the LPA would occur at the Purgatory Creek Park, which is adjacent to an elevated segment of the proposed light rail alignment. Short-term temporary construction impacts would also occur at one conservation area, which is an unincorporated open space within Nine Mile Creek Conservation Area, that will be adjacent to the proposed light rail extension.

A. Existing Conditions

This section describes the parklands, recreation areas, and open spaces, in the Eden Prairie Segment. The Eden Prairie Segment includes two resources identified as parklands, recreation areas, and open spaces within 350 feet on either side of the light rail alignment. Those two resources are Purgatory Creek Park and a small isolated parcel of Nine Mile Creek Conservation area, as shown on Exhibit 3.2-3 (see Table 3.2-4). Purgatory Creek Park was not addressed in the Draft EIS because none of the improvements associated with the alternatives evaluated within the Draft EIS would have been located in proximity to the park.

Purgatory Creek Park

Located at 13001 Technology Drive, Purgatory Creek Park contains a 125-person-capacity pavilion, bicycle and walking trails, the Mayor Jean Harris Gathering Bridge, gardens, a dock, a fountain, the Eden Prairie Veterans' Memorial, the Lambert Pavilion, a 54-space parking lot, and restrooms. The approximately 5.2-acre

[12] See Appendix C of this Supplemental Draft EIS for instructions on how to access the links to technical reports that provide additional information related to the archaeological and architectural surveys and analysis described in this section.

park is bordered on two sides by Technology Drive and Prairie Center Drive, and on the remaining two sides by a business center parking lot and by Purgatory Creek Park reservoir. The park is accessible, free of charge, to the public all days of the year, from dawn to dusk. Events at the memorial, which is within the park, include an annual Memorial Day celebration that highlights honoring specific Eden Prairie veterans.

TABLE 3.2-4
Parklands, Recreation Areas, and Open Spaces in the Eden Prairie Segment

Parklands, Recreation Areas, and Open Spaces	Types of Impacts	Section 4(f) Property?[a]
Purgatory Creek Park	Changes to visual setting, noise, access; temporary changes to access, noise, and visual quality during construction	Yes
Nine Mile Creek Conservation Area[b]	Changes to visual setting, noise; potential for construction activities within the parcel	No

[a] See Section 3.5 of this Supplemental Draft EIS for information on Section 4(f) and Section 4(f) properties.

[b] Due to the recent reconstruction of Valley View Road, a small portion of the northeast corner of the conservation area was recently separated from a much larger portion of the parcel that extends south into the western half of Lake Smetana. The area, located on the north side of Valley View Road immediately east of Prairie Center Drive, is an open space, landscaped median separating Valley View Road from the freeway on-ramp from Prairie Center Drive to Highway 212 eastbound.

The park's parking lot is accessed via Technology Drive and via Prairie Center Drive, through the adjacent business center's parking lot. Bicycle and pedestrian access to the park is provided by connections to city sidewalks and off-street trails. The park is owned by the City of Eden Prairie and is maintained and operated by the city's Park and Recreation Department. Although the park's setting is primarily urban/suburban, there are also views of natural areas to the southwest. Purgatory Creek Park is a protected property under Section 4(f) (see Section 3.5 for additional information on Section 4[f]).

Nine Mile Creek Conservation Area

The Nine Mile Creek Conservation Area is an 89.7-acre conservation area made up of several parcels that generally surround Lake Smetana and a segment of Nine Mile Creek north of the lake (see Exhibit 3.2-3). The Conservation area includes Lake Smetana Park, which is on the northeast shore of the lake near Smetana Lane. Lake Smetana Park includes a boat ramp and picnic tables and benches. The park is not within the Eden Prairie Segment's parklands, recreation areas, and open spaces study area. The conservation area contains a paved public walking path that circles Lake Smetana. Within the Eden Prairie Segment parklands, recreation areas, and open spaces study area, the path stays south of the recently reconstructed portion of Valley View Road.

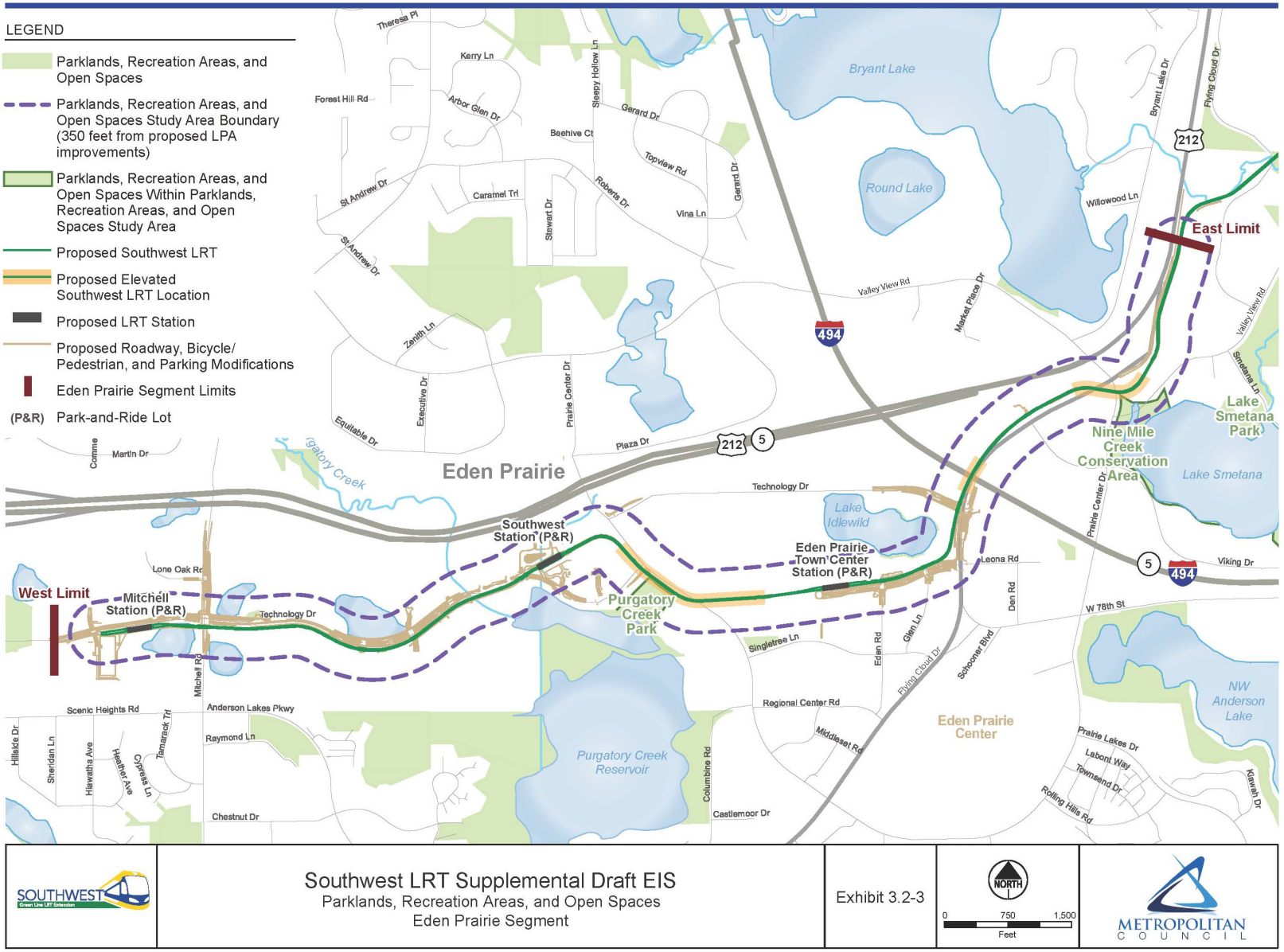
Due to the recent reconstruction of Valley View Road, a small portion of the northeast corner of the conservation area was recently separated from a much larger portion of the parcel that extends south into the western half of Lake Smetana. The area, located on the north side of Valley View Road immediately east of Prairie Center Drive, is an open space, landscaped median separating Valley View Road from the freeway on-ramp from Prairie Center Drive to Highway 212 eastbound. With no parklands, recreation areas, and open spaces, no connection to the trail that encompasses the lake, and no vehicle or pedestrian access, this area serves no recreation purpose. This area is not a protected property under Section 4(f) (see Section 3.5.4.1 for additional information on Section 4[f]). Sections of the conservation area to the east and north contain large stands of mature deciduous vegetation. The majority of the lake and conservation area is surrounded by industrial and commercial land uses.

B. Potential Parklands, Recreation Areas, and Open Spaces Impacts

This section identifies the potential long-term and short-term impacts to parklands, recreation areas, and open spaces that could be impacted by implementation of the project within the Eden Prairie Segment. Specifically, this includes discussion of potential impacts to Purgatory Creek Park and the small isolated parcel of Nine Mile Creek Conservation Area.

EXHIBIT 3.2-3

Parklands, Recreation Areas, and Open Spaces, Eden Prairie Segment



Long-Term Direct and Indirect Parklands, Recreation Areas, and Open Spaces Impacts

This section addresses the potential long-term direct and indirect impacts to parklands, recreation areas, and open spaces. A direct long-term impact to parklands, recreation areas, and open spaces is defined as the permanent incorporation of parklands, recreation areas, and open spaces into the transportation project. Long-term indirect impacts to parklands, recreation areas, and open spaces are defined as changes to their access, setting, views, or noise.

Purgatory Creek Park

As illustrated on Exhibit 3.2-3, an elevated section of the LRT alignment is be located adjacent to the northeast boundary of the Purgatory Creek Park, avoiding any long-term direct impacts to the park. Permanent improvements can be contained within the existing right-of-way of Flying Cloud Drive. As previously noted, this alignment was not evaluated within the Draft EIS. As described in Section 2.3 of this Supplemental Draft EIS, project staff consulted with the City of Eden Prairie, the park owner, on design adjustments to the light rail alignment and associated facilities within the vicinity of the park.

Existing bicycle, pedestrian, and vehicular access to the park would be maintained under the proposed LPA. The proposed Southwest Station is within walking distance of Purgatory Creek Park, thereby providing improved transit access to the park. Although the sound of light rail trains can be audible from within the park, this sound does not constitute an impact based on FTA's noise threshold criteria, as discussed in Section 3.1.2.8 of this Supplemental Draft EIS and in Section 4.7 of the Draft EIS. Changes in development density in areas surrounding proposed transit stations could result in an increase in Purgatory Park usage, which could have potential for both positive and negative consequences.

The proposed project would have an indirect impact to Purgatory Creek Park by altering the park's setting in the following ways:

- Users who access the park via the pathway connecting to the sidewalks and crosswalks at the corner of Prairie Center Drive and Technology Drive would pass underneath the elevated light rail structure and by one or more columns supporting the structure.
- Portions of the sidewalk, trees, and decorative lampposts adjacent to, and outside of, the northeastern boundary of the park would now be located underneath the overhead LRT structure.
- Most park users would see the proposed light rail structure, depending on their orientation, from most places within the park.

These changes in the park's setting would change a Purgatory Creek Park visitor's visual experience, resulting in a moderately-low and low impact to views into and from the park, respectively. In particular, some users' visual experiences could be perceived as adversely affected by the introduction of the elevated light rail structure immediately east of the park, as discussed in Section 3.2.1.5 of this Supplemental Draft EIS. However, the visual changes and impacts will not alter or impair the overall use or function of the park.

Another potential indirect effect of the LPA on parklands, recreation areas, and open spaces could be that potential increases in development density in areas surrounding proposed transit stations (see Section 3.2.1.1 of this Supplemental Draft EIS) could result in an increase in park and recreation area use. Depending on the parklands, recreation areas, and open spaces, an increase in the number of users could have positive and/or negative consequences.

Nine Mile Creek Conservation Area

Exhibit 3.2-3 also shows that an elevated section of the light rail alignment would be located immediately north of the small isolated parcel of the Nine Mile Creek Conservation Area, which primarily functions as open space. The light rail alignment would be located adjacent to the northwest corner of the isolated parcel of the conservation area, thus avoiding any long-term direct impacts to the conservation area. A portion of the conservation area that is removed from this location is designated as a park (i.e., Smetana Park on Smetana Lane) and would not be directly or indirectly effected by the LPA. The isolated parcel of the conservation area is north of Valley View Drive and does not contain any parklands/recreational amenities or improvements, nor does it serve any recreation purpose. The proximity of an elevated segment of the

proposed light rail alignment would have a low visual impact on the area, and it reflects a change from the Draft EIS, which evaluated an at-grade light rail alignment in proximity to this portion of the conservation area.

No indirect impacts would affect the small isolated parcel of the Nine Mile Creek Conservation Area. There is no public access to the small parcel and there are no views from the parcel.

Short-Term Parklands, Recreation Areas, and Open Spaces Impacts

This section describes the potential short-term impacts to parklands, recreation areas, and open spaces that would occur during construction of the LPA. Activities associated with construction of the proposed LPA would not directly extend into Purgatory Creek Park but could result in temporary and short-duration closures of the pedestrian access to the park (from the corner of Prairie Center Drive and Technology Drive) and the sidewalk adjacent to the northeastern park boundary; these temporary closures, which are anticipated to last for up to approximately one or two days, would occur periodically over the course of construction. Temporary short-term disruption of vehicle access to Purgatory Creek Park via Flying Cloud Drive and the adjacent commercial parking lot could be required, such as closure of one of the two access points between the commercial parking lot and Flying Cloud Drive. Construction would result in visual, noise, and dust impacts that could inconvenience those using the northeast side of the park. Short-term effects will be minimized by using standard construction BMPs, such as dust control, erosion control, and proper mufflers.

During construction of the LPA, there could be temporary construction activities within the isolated parcel north of Valley View Drive that is part of the Nine Mile Creek Conservation Area (open space). Some project construction activities may need to occur within the parcel, outside of the open space area. Project construction activities, including those that would occur within the parcel, would be coordinated with the Eden Prairie Park and Recreation Department.

Smetana Lake Park, which is a small portion of the conservation area, is not in the vicinity of the where construction activities would occur and thus it would not be affected during construction of the LPA.

C. Mitigation Measures

Actions associated with the LPA in the Eden Prairie Segment, since publication of the Draft EIS, would not result in long-term, direct impacts to parklands, recreation areas, and open spaces; therefore, no long-term mitigation measures have been identified. Mitigation measures addressing indirect impacts (i.e., visual, noise, and access) are addressed below and in the respective sections of this Supplemental Draft EIS. Impacts related to temporary changes to parking and access will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.4 for additional detail on the Construction Communication Plan. Areas and features of parklands, recreation areas, and open spaces that are altered or disturbed as the result of construction activities will be returned to pre-construction conditions or better.

3.2.1.5 Visual Quality and Aesthetics

This section documents the existing visual conditions and project visual impacts in the area along the Eden Prairie Segment where there would be proposed light rail-related improvements that have changed substantially since publication of the Draft EIS. In particular, this section focuses on the adjustments to the locations of two proposed light rail stations and the light rail alignments that would connect to those stations. This section identifies long-term direct and indirect and short-term (construction-related) impacts that the LPA would have on visual quality that would be experienced by sensitive user groups. Mitigation strategies to minimize adverse visual impacts are also identified. This section supplements the analysis used in the Draft EIS by applying the standardized approach developed by the FHWA (FHWA, 1988) for visual impact assessments, which was not used for the Draft EIS visual assessment. The application of the FHWA methodology in conducting this analysis is described in Section 3.1.2.5 of this Supplemental Draft EIS, and a copy of the FHWA *Visual Impact Assessment for Highway Projects* (FHWA, 1988) is provided in Appendix J. The information presented in this section is a summary of the full visual analysis that is documented in detail

in Appendix J. The exhibits referred to in this section can be found at the end of the technical report in Appendix J.

In addition to the light rail related improvements described above, the LPA will also include TPSS facilities. The specific locations for TPSS's have not been defined; however, siting of these facilities will be determined by utilizing fully developed areas, including surface parking lots, existing roadway right-of-way, and vacant parcels where feasible. The mitigation strategies referenced below to minimize adverse visual impacts would also apply to the TPSS facilities.

A. Existing Conditions

This section documents the existing visual quality at 10 viewpoints in the Eden Prairie Segment which were not evaluated in the Draft EIS, but where changes to visual quality are possible.

A general description of visual elements within the Eden Prairie Segment is provided in Section 3.6.2.2 of the Draft EIS. As indicated in Table 3.6-2 of the Draft EIS, the environment in this area offers a moderate to low visual quality experience. The visual environment in the Eden Prairie Segment is dominated by relatively recent urban and suburban development. Prominent features include roadways, mid- to low-rise office building campuses, multi-family residential buildings, commercial buildings, water retention ponds, and Purgatory Creek Park. These elements exist in the foreground of the study area, the middle ground, and the background.

Many of the commercial developments and office parks in the segment have landscaping, including lawns and trees, with gently rolling hills toward the north of the segment, providing topographical relief. The individual developments have architectural treatments on their facades and other specific design elements, but there are no consistent visual or design elements that link all of the developments together to create a visually integrated whole.

Ten viewpoints represent areas where changes to the visual environment (not discussed in the Draft EIS) could potentially occur as a result of the LPA. The locations of these viewpoints are shown on the key map, Exhibit J-1 in Appendix J. Photographs depicting the existing conditions seen in the views from these locations are presented in Appendix J on the exhibits indicated in the list below.

- **Viewpoint 1** is the view looking southwest from Technology Drive at Mitchell Road (Exhibit J-2).
- **Viewpoint 2** is the view looking southwest along Technology Drive in front of the Optum Health Services headquarters (Exhibit J-3).
- **Viewpoint 3** is the view from Purgatory Creek Trail looking north (Exhibit J-4).
- **Viewpoint 4** is the view from Technology Drive West of the SouthWest Transit Center (Exhibit J-5).
- **Viewpoint 5** is the view looking south along Prairie Center Drive at Technology Drive (Exhibit J-6).
- **Viewpoint 6** is the view from east side of Prairie Center Drive toward Purgatory Creek Park (Exhibit J-7).
- **Viewpoint 7** is the view from Purgatory Creek Park looking east (Exhibit J-8).
- **Viewpoint 8** is the view north along Prairie Center Drive south of proposed elevated crossing of roadway (Exhibit J-9).
- **Viewpoint 9** is the view from Eden Road looking west (Exhibit J-10).
- **Viewpoint 10** is the Valley View Drive, view looking south toward the intersection with Flying Cloud Drive (Exhibit J-11).

Table 3.2-5 summarizes the existing visual quality of the views seen from these viewpoints using the visual assessment criteria and rating system developed by the Federal Highway Administration. As described in more detail in Section 3.1.2.5, the existing conditions in these views have been evaluated on a numerical scale from 1 to 7 where 1 = very low visual quality, 4 = medium or average visual quality, and, 7 = very high visual quality.

TABLE 3.2-5
Existing Visual Quality and Aesthetics by Viewpoint in the Eden Prairie Segment

			Existing Visual Quality and Aesthetics						
			Vividness		Intactness		Unity		
View Point	Viewpoint Description	Elements of the Visual Environment	Description	Rating	Description	Rating	Description	Rating	Overall Visual Quality and Aesthetics Rating (Scale of 1-7; 7=very high and 1=very low)
1	View looking southwest from Technology Drive at Mitchell Road	Arterial roadways, asphalt jogging path, and landscaping to the north; natural vegetation and wetlands to the south. Buildings are set back with low visibility.	The overall level of vividness is moderately low.	3.5	With the presence of natural and landscaped vegetation, the visual intactness is medium.	4	Landscaping compatible with natural areas, but no unifying features. Medium overall visual unity.	4	3.8 Moderately Low
2	View looking southwest along Technology Drive in front of the Optum Health Services headquarters	The dominant element is a three-story building in a landscaped business park setting. There are trails and park-like landscaping rather than sidewalks along the arterial.	The overall level of vividness is moderate due to degree of extra landscaping and compatible building design.	4.3	Components consistent with business park: setbacks, distance between buildings, parking and landscaping. Moderately low visual intactness.	3.8	While relatively new developments, there are no unifying features. Moderately low overall visual unity.	3	3.7 Moderately Low
3	View from the Purgatory Creek Trail looking north	The trail is raised from the natural terrain level with the road. The north side of the trail parallels Purgatory Creek, which is crossed by a rustic pedestrian bridge just south of the Technology Drive. There is low vegetation cover and a few trees.	The overall level of vividness is moderate, with a glimpse of the water in the adjacent creek and views of the natural vegetation adjacent to the trail.	4.2	The balance between the natural and landscaped vegetation and the small-scale infrastructure elements results in a medium level of visual intactness.	4	The trail, the adjacent creek, the vegetation, and the low-scale infrastructure features combine to create a visual composition with a medium level of visual unity.	4	4.1 Medium
4	View from Technology Drive west of the SouthWest Transit Center	View of multifamily residential and commercial buildings with landscaping and roadways. Architecture combines similar colors, textures. Views of Purgatory Creek Reservoir and a trail.	The commercial architecture and water features provide a moderate level of vividness.	4	The buildings and landscaping create a moderate level of intactness.	4.5	The surroundings and generally consistent architectural scale and materials create a moderately low level of unity.	3.6	4.2 Medium
5	View looking south along Prairie Center Drive at Technology Drive	View of divided arterial boulevard with large structures supporting traffic signals and road lighting. Dense landscape trees are present along the east side of the road. Purgatory	Flat landform with low vividness. Lawns/planted trees with average level of vividness. Human-made features include roadway, support structures for signals/lighting, large, boxy office buildings.	3.3	Given the presence of the visually dominant roadway and associated equipment, the visual intactness of this view is medium.	4.0	Given the somewhat visually disparate set of elements visible in this view, the overall level of visual unity is medium.	4.0	3.8 Moderately Low

			Vividness		Existing Visual Quality and Aesthetics Intactness		Unity		
View Point	Viewpoint Description	Elements of the Visual Environment	Description	Rating	Description	Rating	Description	Rating	Overall Visual Quality and Aesthetics Rating (Scale of 1-7; 7=very high and 1=very low)
		Creek Park is to the west of the boulevard, with trees and lawn. A large office building is in the background.	Moderately low level of vividness.						
6	View from east side of Prairie Center Drive toward Purgatory Creek Park	The view is a divided arterial boulevard and a landscaped park with a large decorative picnic pavilion structure. A large brick-faced parking ramp is present at Southwest Station.	The landform is flat, low level of vividness. Lawns and planted trees with an average level of vividness. Roadway, large parking ramp, the roof of the picnic pavilion, average level of vividness. Moderately low overall vividness.	3.6	Except for the visually dominant roadway, this view is relatively free of intrusive visual elements, creating a moderately high level of visual intactness.	5	The consistent scale and material of the structures and the dense mass of landscape trees across the middle of the view create a moderately high level of visual unity.	5.5	4.7 Medium
7	View from Purgatory Creek Park looking east	A parking lot is in the foreground, with lawns and dense plantings of evergreen and deciduous landscape trees. Dense tree plantings screen much of the commercial development located in the area east of Prairie Center Drive.	Landform is flat, low vividness. Lawns, planted trees with moderately high vividness. Human-made features have average level vividness. Moderately low overall vividness.	3.6	This view is relatively free of significant encroaching elements and has a moderately high degree of intactness.	5	The dense mass of landscape trees across the middle of the view creates a high level of visual unity.	6	4.9 Medium
8	View north along Prairie Center Drive south of elevated crossing of roadway	The view is a divided arterial boulevard, a large parking ramp at Southwest Station, lawns and landscape trees, and an asphalt trail.	Landform is flat, low vividness. Lawns, planted trees, average level of vividness. Roadway, large parking ramp, roof of picnic pavilion with average vividness. Moderately low overall vividness.	3.5	Except for the visually dominant roadway, this view is relatively free of intrusive visual elements, creating a moderately high level of visual intactness.	5	The consistent scale and material of the structures and the presence of landscape trees across the view create a moderately high level of visual unity.	5	4.5 Medium
9	View from Eden Road looking west	The view includes a portion of a parking lot for existing commercial establishments to the north and south of Eden Road. The view forward is of a natural, undeveloped area with deciduous trees with a large,	There is a moderately low level of vividness due to a mixture of commercial and natural elements, and a large water tower in view.	3.2	There is moderately low intactness since there is a mixture of development features, natural areas, and parking areas.	3	The unity is low to moderate. Unifying features are the grass and trees along the roadway, softening the asphalt parking areas in the view. The water tower breaks up the unity of the landscaping and natural areas.	3	3.1 Moderately Low

			Existing Visual Quality and Aesthetics						
			Vividness		Intactness		Unity		
View Point	Viewpoint Description	Elements of the Visual Environment	Description	Rating	Description	Rating	Description	Rating	Overall Visual Quality and Aesthetics Rating (Scale of 1-7; 7=very high and 1=very low)
		white water tower over the horizon.							
10	Valley View Drive, view looking south toward the intersection with Flying Cloud Drive	The view is of a major arterial intersection with multiple office complexes in the background.	The level of vividness is moderately low due to a dominant office park that does not provide any outstanding features.	3.2	Moderately low intactness because the large, dominant arterials intrude and contrast with visual pattern of landscaped office parks.	3.4	There is low unity among the office buildings' architectural styles and the dominant transportation features.	2.8	3.1 Moderately Low

Note: Scale is taken from Publication FHWA-HI-88-054, *Visual Impact Assessment for Highway Projects* (FHWA, 1988).

The existing visual conditions seen in each of these views is discussed in narrative form in the visual resources technical report in Appendix J.

Viewer Groups and Viewer Sensitivity

Viewer groups in the Eden Prairie Segment include park users, drivers, pedestrians, and cyclists on the existing street network; workers; and shoppers. Residents and park users are assumed to be more sensitive to change than the other viewer groups, and this is assumed to be particularly true for any visual changes that might affect their enjoyment of Purgatory Creek Park. Viewer groups and view sensitivity are discussed in greater detail in the visual resources technical report in Appendix J.

B. Potential Visual Quality and Aesthetic Impacts

This section identifies both the potential long-term and short-term visual and aesthetic impacts of the visual changes that the project would bring about in the area along the Eden Prairie Segment. This analysis focuses on the changes that would occur in the views seen from each of the 10 representative viewpoints. Based on the impacts predicted, an identification is made of appropriate measures to mitigate the project's aesthetic effects.

Long-Term Direct and Indirect Visual Quality and Aesthetic Impacts

Impacts will result primarily from the construction of light rail elements, such as elevated concrete light rail structures, catenary wires, signal equipment, TPSS siting, and removal of vegetation. New elements introduced with the LPA in the Eden Prairie Segment would consist of light rail guideway (some at-grade and some structured), including tracks, signal systems, and overhead wires; stations; structured and surface park-and-ride lots; and traction power and signal substations. Viewpoints were selected in areas of potential change to the visual and aesthetic environment. Exhibits J-2 through J-11 in Appendix J present photographs of the existing view from each viewpoint, and below some of the photographs is a preliminary rendering that depicts the view as it would appear with the project elements in place. Comparison of the rendering of the view with the project in place with the photograph of the existing view provides a basis for making a determination of the visual change the development of the project would bring about and the nature and level of any visual impacts that would be created. Because visualizations were not prepared for all views evaluated in the Eden Prairie Segment, the assessments of the visual changes were made based on review of project plans and drawings and of the visualizations that had been prepared for other views in which similar changes were proposed.

Table 3.2-6 summarizes the anticipated visual changes that would occur within each of the 10 views and evaluates the changes to visual quality through application of the FHWA visual impact assessment system to assess the view as it would appear with the project in place. An assessment is made of each of the three landscape dimensions (vividness, intactness, and unity), rating each dimension using the 7-point evaluation scale. Comparison of these scores and the overall score for the view with the scores for the view's existing condition provides a basis for pinpointing the nature and degree of the changes to the view's level of visual quality. The table is followed by a brief narrative that summarizes the visual changes and the nature and degree of visual impact to each of the views.

TABLE 3.2-6
Anticipated Direct Change and Impact in Visual Quality and Aesthetics from Eden Prairie Segment Viewpoints

Viewpoint Number, Viewpoint Description, and Identification of New Visual Elements	Vividness		Intactness		Unity		Overall Rating[a]	Visual Quality and Aesthetics Change and Impact[a] (Scale of 1-7; 7=very high and 1=very low)
	Description of Change	Rating[a]	Description of Change	Rating[a]	Description of Change	Rating[a]		
1. View looking southwest from Technology Drive at Mitchell Road At-grade LRT would require removing vegetation and adding fill on the south side of the road in a corridor that extends to Mitchell Station.	The overall level of vividness of this view, which is currently moderately low, would remain the same.	3.5	The intactness of this view would be reduced by the removal of vegetation and widening the infrastructure corridor.	3.5	The level of visual unity would remain about the same because the LRT would be a consistent element along this roadway.	3.5	3.5	From 3.8 to 3.5 Low
2. View looking southwest along Technology Drive in front of the Optum Health Services headquarters The at-grade LRT alignment would locate along the south side of Technology Road and require relocating the trail and landscaping.	The overall level of vividness would remain moderate because the LRT would be integrated into the landscaping.	4.1	While there would be a noticeable change, the visual intactness would remain moderate because landscaping and park-like features would remain.	3.7	The overall level of visual unity is medium to low and may be enhanced through integrating the LRT to unify the infrastructure with the landscaping.	3.4	3.7	From 3.7 to 3.7 Low
3. View from the Purgatory Creek Trail looking north The trail would be relocated to the south of the LRT. The LRT guideway would cross Purgatory Creek in front of the existing pedestrian bridge.	The overall level of vividness may be lowered; signs and crossing arms visible among the natural setting nearest the trail. LRT facilities may be dominant in view from trail.	3.2	Visual intactness level would remain about the same. Although elements would be added to the view, they would be designed to be compatible with the existing landscape features.	3.5	The moderate unity would remain through sensitive design and features to accommodate the trail into the design, such as native landscaping and detouring the trail to avoid an unsafe crossing of the LRT tracks.	4	3.6	From 4.1 to 3.6 Low
4. View from Technology Drive west of the SouthWest Transit Center[b] The at-grade light rail would travel from the south side of Technology Drive, adjacent to Purgatory Creek Reservoir and cross the road	The overall level of vividness of this view, which is currently moderate, would remain the same.	4	The intactness of this view would be slightly reduced by the LRT corridor removing some natural areas along the Purgatory Creek Reservoir and some of the landscaping now visible in front of	4.0	The level of visual unity would be increased to some degree because the linear LRT features would visually tie together the disparate elements in the view.	4	4.0	From 4.2 to 4.0 Low

Viewpoint Number, Viewpoint Description, and Identification of New Visual Elements	Vividness		Intactness		Unity		Overall Rating[a]	Visual Quality and Aesthetics Change and Impact[a] (Scale of 1-7; 7=very high and 1=very low)
	Description of Change	Rating[a]	Description of Change	Rating[a]	Description of Change	Rating[a]		
diagonally to access the SouthWest Transit Center. A parking ramp would extend diagonally from the west side of the Transit Center, following the alignment of the light rail line, and the area between this parking ramp and Technology Drive would be converted to access drives.			the Transit Center.					
5. View looking south along Prairie Center Drive at Technology Drive A concrete elevated light rail structure would travel along the western edge of the roadway, adding a visually prominent structure to the setting that would split the view.	The overall level of vividness of this view, which is currently moderately low, would remain the same.	3.3	The intactness of this view would be substantially reduced by the addition of the large, visually dominant LRT structure in the immediate foreground.	2.0	The level of visual unity would remain about the same because of the consistency of the elevated light rail structure's alignment with the other linear features in the view and because the structure would serve as a visually unifying view element.	4.5	3.3	From 3.8 to 3.3 Low
6. View from east side of Prairie Center Drive toward Purgatory Creek Park A concrete elevated light rail structure would pass along the opposite side of the road, adjacent to the park, adding a visually prominent structure to the setting. Because of the structure's height and widely spaced supports, views into the park would be maintained.	The vividness of this view would be slightly increased by the addition of the visually striking LRT structure.	4.0	The change to visual intactness would be large because of the introduction of a new and visually dominant element into the view.	2.0	The level of visual unity would remain about the same because of the consistency of the elevated light rail structure's alignment with the other linear features in the view and because the structure would serve as a visually unifying view element.	5.5	3.8	From 4.7 to 3.8 Moderately Low
7. View from Purgatory Creek Park looking east A concrete elevated light rail structure along eastern edge of park, adding prominent structure to setting. Densely planted landscape trees between the park's primary use areas and the elevated structure would reduce the structure's visibility	The addition of the elevated LRT structure would create a slight increase in the overall vividness of this view.	4.3	The overhead LRT structure would contrast with the visual character of the other elements in the view, reducing the overall level of visual intactness.	3.0	The level of visual unity would remain about the same because of the consistency of the elevated light rail structure's alignment with the other linear features in the view.	6.0	4.4	From 4.9 to 4.4 Low

Viewpoint Number, Viewpoint Description, and Identification of New Visual Elements	Vividness		Intactness		Unity		Overall Rating[a]	Visual Quality and Aesthetics Change and Impact[a] (Scale of 1-7; 7=very high and 1=very low)
	Description of Change	Rating[a]	Description of Change	Rating[a]	Description of Change	Rating[a]		
and integrate it into the view. Over time, with tree growth, the degree of visual integration would increase.								
8. View north along Prairie Center Drive south of proposed elevated crossing of roadway A large, concrete elevated light rail structure would cross the boulevard at this viewpoint and travel northwest along the opposite edge of the roadway, adding a visually prominent structure to the setting.	The vividness of this view would be slightly increased by the addition of the visually striking LRT structure.	4.0	The LRT structure would dominate and intrude on what is now an open view with a suburban character, substantially decreasing the level of intactness.	2.0	Large visual change because new visually dominant element. Level of visual unity would remain due to consistency of elevated structure's alignment with other linear features, as the structure would be a unifying element.	5.0	3.6	From 4.5 to 3.6 Moderately Low
9. View from Eden Road looking west The LPA includes a Town Center Station, which would extend Eden Road, replace some parking areas, and remove the natural vegetation north of Market Place Shopping Center.	The LPA may enhance the low to moderate vividness with the addition of modern transportation features.	3.6	The intactness of the view may be slightly reduced with the addition of rails and catenaries are likely to contrast with their surroundings.	2.5	Unless appropriate design and landscape measures are taken, the new project elements may have the potential to reduce the visual unity of the view.	2.5	3.6	From 3.1 to 2.9 Low
10. Valley View Drive, view looking south toward intersection with Flying Cloud Drive LRT alignment would be elevated east from Viking Drive to Prairie Center Drive. The guideway would block views from office building in southwest corner of this intersection.	The elevated guideway would not reduce the low to moderate vividness since the area is dominated by large infrastructure features.	3.2	The elevated guideway may lower the moderately low level of intactness to low, since it may increase the views of concrete transportation features to this area.	2.5	The LRT would slightly lower the low unity since the structure may block views of the office park, but it is dominated by arterial roadways and access to the highway.	2.8	2.8	From 3.1 to 2.8 Low

[a] Scale is taken from Publication FHWA-HI-88-054, *Visual Impact Assessment for Highway Projects* (FHWA, 1988). This rating is an assessment of the visual quality change. The overall level of impact is described in the text below.

[b] The scope of the LPA as identified by the Council includes a proposed western terminus at the Mitchell Station south of Technology Drive and west of Mitchell Road. As part of the design and engineering process, the Council also developed a design adjustment that would implement a western terminus of the proposed light rail line at the Southwest Station. Under this adjustment, the proposed structured park-and-ride lot at the Southwest Station would increase by approximately 600 spaces (from 450 spaces with the western terminus at Mitchell Station to 1,050 spaces under the western terminus at Southwest Station). With the western terminus at the Southwest Station, the height of proposed structured park-and-ride lot at the Southwest Station would increase by two floors and its footprint would approximately double (generally extending further to the south). Because of the nature of the proposed improvements and the existing visual environment, there would be little change in the level of visual impacts at this viewpoint.

Viewpoint 1 - View Looking Southwest from Technology Drive at Mitchell Road (Exhibit J-2)

Overall Level of Impact: Not Substantial

Development of the at-grade LRT would require removing vegetation and adding fill on the south side of the road in a corridor that extends to Mitchell Station. Although the visual character of this view would change somewhat in that the view would appear more developed, the overall change to the visual quality of the view would be low, particularly with attention to careful design and placement of LRT elements and installation of appropriate landscaping.

Viewpoint 2 – View Looking Southwest along Technology Drive in front of the Optum Health Services Headquarters (Exhibit J-3)

Overall Level of Impact: Not Substantial

The at-grade LRT alignment would locate along the south side of Technology Road and require relocation of the trail and landscaping. The visual character of the view will change with installation of the tracks and catenaries in the area in front of the buildings, but the overall change to the visual quality of this view would be low, particularly with careful design and placement of LRT elements and installation of appropriate landscaping to tie all of the elements of this view together.

Viewpoint 3 - View From Purgatory Creek Trail Looking North (Exhibit J-4)

Overall Level of Impact: Not Substantial

The trail would be relocated to the south of the LRT alignment. The LRT guideway would cross Purgatory Creek in front of the existing pedestrian bridge. Project features visible in this view would include a new bridge structure located in front of the existing bridge, tracks, catenaries, and a fence along the LRT right-of-way. These features would be readily visible from this view and would create a moderate level of increase in the intensity of development seen in the view. However, the impact to the overall visual quality of the view would be low in that the project features will be similar in form and in their linear alignment to the other features along Technology Drive, and as a consequence, the effects on the visual intactness and unity of the view will be low. The new LRT bridge across Purgatory Creek is likely to result in a small increase in the vividness of the view. Taking these factors into account, overall, the change in the visual quality of the view will be low.

Viewpoint 4 - View from Technology Drive West of the SouthWest Transit Center (Exhibit J-5)

Overall Level of Impact: Not Substantial

The at-grade light rail would travel from the south side of Technology Drive, adjacent to Purgatory Creek Reservoir and cross the road diagonally to access the SouthWest Transit Center. A structured park-and-ride lot would extend diagonally from the west side of the Transit Center, following the light rail alignment, and the area between this parking ramp and Technology Drive would be converted to access drives. As a result of the project's development, there will be some removal of natural areas along Purgatory Creek Reservoir and the view will appear more intensively developed. The view's level of vividness will remain about the same, and there will be a moderate decrease in the level of visual intactness. The level of visual unity will increase because the LRT's tracks, catenaries, and fencing will create a linear feature that visually ties together the disparate visual elements now seen on the left and right sides of Technology Drive.

Viewpoint 5 - View Looking South Along Prairie Center Drive at Technology Drive (Exhibit J-6)

Overall Level of Impact: Not Substantial

A concrete elevated light rail structure would be constructed along the western edge of the roadway, adding a visually prominent structure to the setting that would split the view. With the addition of the overhead structure, the visual character of this view would be changed by the enclosure of the view and the greatly increased level of development. The overall level of vividness of this view, which is currently moderately low, would remain the same. The intactness of this view would be substantially reduced by addition of the large, visually dominant LRT structure in the immediate foreground. The level of visual unity would remain about

the same because of the consistency of the elevated light rail structure's alignment with the other linear features in the view, and because the structure would serve as a visually unifying view element. The overall change to the level of visual quality of this view would be low.

Viewpoint 6 - View From East Side of Prairie Center Drive Toward Purgatory Creek Park (Exhibit J-7)

Overall Level of Impact: Substantial

A concrete elevated light rail structure would pass along the opposite side of the road, adjacent to the park, adding a visually prominent structure to the setting. Because of the structure's height and widely spaced supports, views into the park would be maintained. The overhead structure will become a visually dominant element in the view and will change the visual character of this view, specifically the area seen in the view will appear to be more intensively developed and creating a sense of enclosure. The overall change to visual quality will be moderately low. The sensitivity of this view is moderate to high because of its visibility to high numbers of roadway users and pedestrians. Even though the change to visual quality will be moderate, given the view's visual sensitivity, the visual impact will be substantial.

Viewpoint 7 - View From Purgatory Creek Park Looking East (Exhibit J-8)

Overall Level of Impact: Not Substantial

A concrete elevated light rail structure would be constructed along the eastern boundary of the park, adding a visually dominant linear element to setting that will frame the park's eastern edge. Densely planted landscape trees between the park's primary use areas and the elevated structure would have high potential to reduce the structure's visibility and integrate it into the view. Over time, with tree growth, the degree of visual integration would increase. Even though this view is highly sensitive because it is seen by recreational viewers, because of the visual screening provided by the trees in the park, the LRT's overall impact on the visual quality of this view would be low.

Viewpoint 8 - View North Along Prairie Center Drive South of Proposed Elevated Crossing of Roadway (Exhibit J-9)

Overall Level of Impact: Substantial

A concrete elevated light rail structure would cross the boulevard at this viewpoint and travel northwest along the opposite edge of the roadway, adding a visually dominating structure to the setting. Although the presence of this structure will make this view feel more enclosed and intensively developed, the change to overall visual quality would be moderately low. This view is moderately sensitive because it is seen by large numbers of roadway users at close range. Even though the change to visual quality will be moderately low, given the view's visual sensitivity, the visual impact will be substantial.

Viewpoint 9 - View From Eden Road Looking West (Exhibit J-10)

Overall Level of Impact: Not Substantial

The LPA includes a Town Center Station, which would include the construction of a short segment of local roadway extending west from Eden Road, replace some parking areas, and remove the natural vegetation north of Market Place Shopping Center. The visual character of this view would be substantially changed, with replacement of the lower density development, now hidden by trees, with the LRT and LRT station. The visual quality of the view would be reduced because of the removal of vegetation and the introduction of the tracks and catenaries, which could reduce the visual intactness and visual unity for this view. The overall level of change in the visual quality of this view would be moderate.

Viewpoint 10 - View from Valley View Drive Looking South Toward the Intersection with Flying Cloud Drive (Exhibit J-11)

Overall Level of Impact: Not Substantial

An elevated LRT structure would pass across this view from left to right and then continue along the north side of Flying Cloud Drive, seen on the right side of the photo. With the addition of the elevated structure, the visual character of this view would be substantially changed, and there is likely to be obstruction of views

from the upper stories of the office building seen in the center of the photo. The visual quality of this view is already moderately low. With the visual changes brought about by the project, the level of vividness of the view remains the same, but the presence of the contrasting overhead LRT structure would contribute to small decreases in the intactness and unity of the view. Overall, there would be a low level of change in the visual quality of the view.

Short-Term Visual Quality and Aesthetic Impacts

This section addresses the potential short-term temporary impacts to the 10 key viewpoints as a result of constructing the LPA. Potential construction-related visual impacts may occur because of the placement of construction staging areas and equipment/materials storage in areas visible to sensitive users such as residences and recreational areas abutting the alignment. The contractor would comply with appropriate federal, state, and local regulations concerning the removal of existing vegetation. Prior to construction, a plan for protecting existing trees and vegetation that could be injured during construction activities would be developed.

C. Mitigation Measures

Based on FHWA guidelines, the Council will consider visual mitigation measures for visual quality impacts that are deemed substantial and will identify the mitigation measures to be incorporated into the project in the Final EIS. The Council will develop aesthetic guidelines for the design of the project. These guidelines will address mitigation measures for visual impacts identified in the Final EIS and will consider input from the affected communities. Mitigation measures for substantial adverse impacts resulting from the light rail elements will be identified during advanced engineering and could include measures such as landscaping, visual treatments and continuity with the elevated light rail structure design, lighting, and signage.

Where appropriate, construction related mitigation measures will include elements such as locating construction staging areas in places not viewable by trail users or by otherwise visually screening staging areas, preservation of existing vegetation to the extent possible, implementation of dust suppression efforts, shielding of nighttime construction lights, continuous cleanup of trash and debris, and timely restoration of areas disturbed during construction.

3.2.2 Environmental Effects

This section addresses the existing natural environment in the Eden Prairie Segment and the potential long-term and short-term direct and indirect impacts to that environment that would result from the proposed LPA, including potential impacts to: geology and groundwater; water resources (wetlands, floodplains, public waters, and stormwater management); noise; vibration; and hazardous and contaminated materials.

3.2.2.1 Geology and Groundwater

This section describes the existing geologic, soil and groundwater conditions in the Eden Prairie Segment and how the proposed LPA would be affected by or affect geology and groundwater. Geology and groundwater considerations important to the Southwest LRT Project include geology, soil characteristics, groundwater conditions, and geologic hazards. These considerations would affect the type of construction methods used for the project and, if not adequately considered during project design, could affect the long-term operations and safety of the light rail system or nearby buildings, roadways, and utilities. Geology and soil considerations are closely related to groundwater conditions. Construction activities and potential light rail-related improvements both have the potential to affect groundwater by potentially changing the flow of or contaminating groundwater within the project vicinity.

As summarized in Table 3.2-1, the vicinity of the proposed light rail-related improvements generally has soil types that would accommodate construction of the proposed facilities. However, peats and fat clays[13] west of the proposed Eden Prairie Town Center Station, near the proposed Southwest Station, and along the alignment between the Southwest Station and the Mitchell Station would require remediation (e.g., soil replacement, pile foundations). Further, there is the potential for short-term pumping of groundwater at the proposed structured park-and-ride lots.

[13] Fat clays are fine-grained, inorganic soils that have a high plasticity (i.e., that can be easily molded or altered).

A. Existing Conditions

This section describes the existing geologic and groundwater conditions within the Eden Prairie Segment. Section 4.1.3 of the Draft EIS describes the existing geologic conditions in the study area, which include surficial geology (soils), bedrock geology, and groundwater. Geology and groundwater information and mapping provided in the Draft EIS for the greater project area cover all areas addressed in this Supplemental Draft EIS, including the Eden Prairie Segment (see Section 2.5 for a description of the segments used in this Supplemental Draft EIS).

Most soils within the Eden Prairie Segment are silts, sands, and gravels. These soils are typically resistant to settlement and would provide good bearing support for light rail structures, including stations and track sections. However, zones of organic deposits (such as peats) and silty clays exist along the south side of Lake Idlewild and surrounding the location of the proposed Southwest Station (Exhibit 3.2-4). Between the locations of the proposed Southwest and the Mitchell stations, there is also a deposit of organic soils adjacent to the water body on the north side of Technology Drive and where Technology Drive crosses Purgatory Creek. These types of organic soils are typically characterized by high settlement potential and have low bearing strength.

As determined by geotechnical investigations in the 1990s in the project vicinity, bedrock in the area is expected to be 50 feet or more below the ground surface along the proposed light rail alignment. As noted in Figure 4.1-7 of the Draft EIS, if bedrock is encountered, it would be expected to consist of St. Peter Sandstone (sandstone) and Prairie du Chien Group (dolostone). The depth of the rock is such that it should have little effect on the design and construction of the project. There is a potential for karst[14] conditions along the portions of the Eden Prairie Segment underlain by the Prairie du Chien Group bedrock (Draft EIS Figure 4.1-7). As noted, this bedrock unit appears to be located at least 50 feet below the ground surface based on the exploration information available for the segment. At such depths, the potential risk of karst conditions posing constraints for construction of the LPA appears to be limited. As geologic studies are conducted in the Eden Prairie Segment, additional evaluation of this potential hazard will be conducted and reported in the forthcoming Final EIS.

Groundwater is close to the ground surface within the Eden Prairie Segment, often occurring within 10 feet of the ground surface. Wetlands located along the proposed light rail alignment near Lake Idlewild, west of the proposed Eden Prairie Town Center Station, near the proposed Southwest Station, next to Purgatory Creek, and between Purgatory Creek and the Mitchell Station confirm the shallow occurrence of groundwater in these locations. In areas with high groundwater elevations and granular soils, there is an increased potential for groundwater contamination as a result of hazardous material spills.

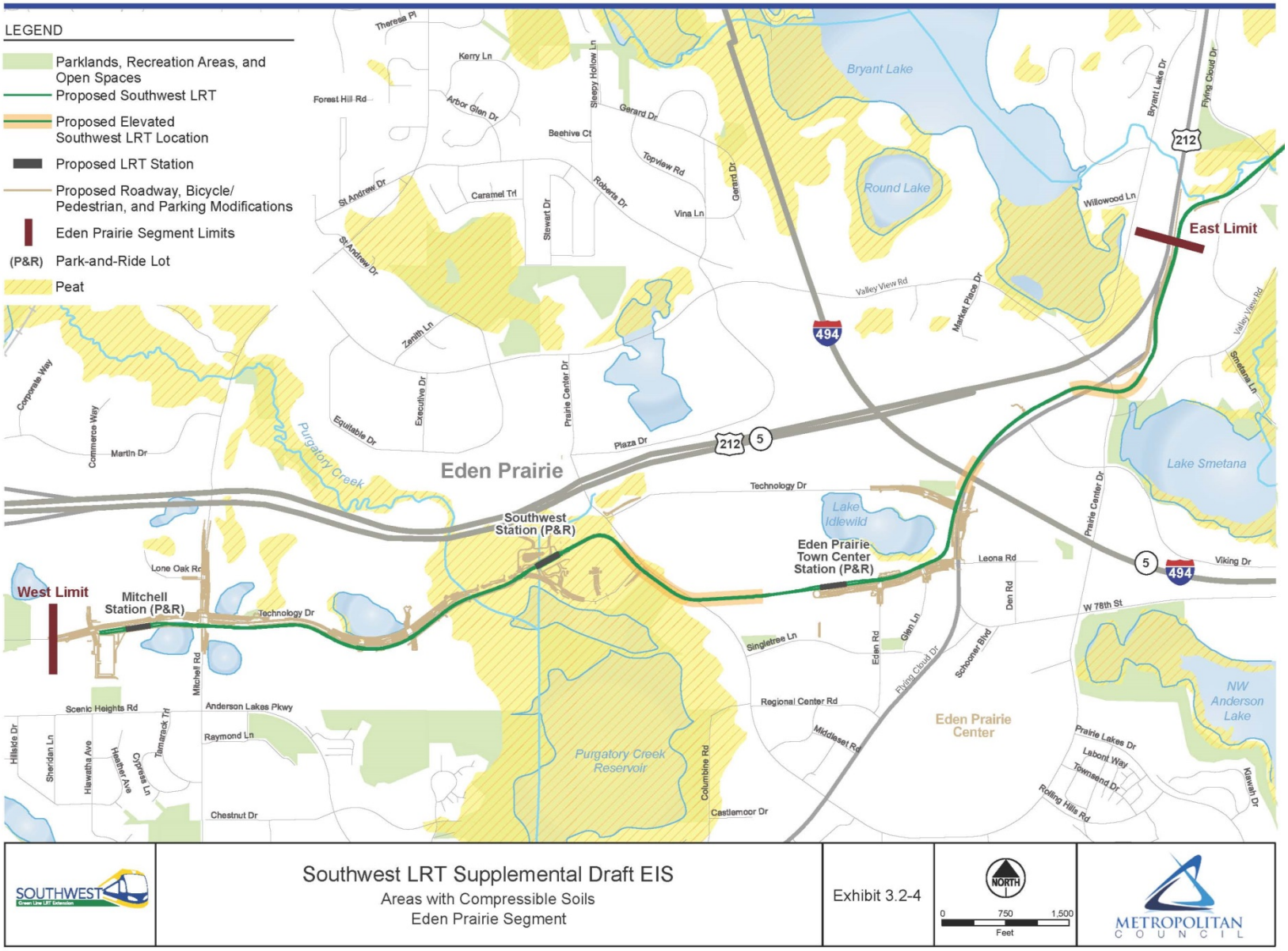
Additional geotechnical data will be collected along the proposed light rail alignment in the Eden Prairie Segment during the later stages of Project Development to support preparation of the forthcoming Final EIS. This additional information is expected to include soil explorations to define soil types and groundwater location along the alignment. Results of these explorations would be used to evaluate requirements for supporting at-grade and elevated segments of the alignment, including where unsuitable soft clays and peats can be removed and replaced with granular soils; where deep foundations such as drilled shafts or driven piles can be used; or where ground improvement is more suitable. Results of these explorations will also be used to identify the need for pumping of groundwater and its potential effects on nearby structures, roadways, and utilities, as well as the occurrence of groundwater and soil contamination.

B. Potential Geology and Groundwater Impacts

This section identifies the potential long-term and short-term geology and groundwater impacts. Potential geology and groundwater impacts include long-term direct and indirect impacts that will be important during the operational life of the project, and short-term impacts during construction.

[14] Karst is a geological formation that results from portions of a layer or layers of soluble bedrock being dissolved by water. The dissolution of rock can lead to features such as caves, sinkholes, and springs

EXHIBIT 3.2-4
Areas with Compressible Soils, Eden Prairie Segment



Long-Term Direct and Indirect Geology and Groundwater Impacts

This section describes potential long-term direct and indirect impacts to geology and groundwater.

Geology

In most locations within the segment, foundations supporting the elevated section of the proposed light rail alignment would be in glacial soil. This type of soil would provide foundations for elevated light rail structures that would undergo little settlement during construction and operation. The nature of the glacial soil is also such that normal construction methods can be used to construct foundations for the elevated light rail structures. Foundations for elevated guideways and stations could include either driven piles or drilled shafts. Both foundation types perform well in these types of soil. Typically, there would be little need for pumping of groundwater during construction if drilled shaft foundations are used. Driven pile foundations may require limited pumping of groundwater during construction of pile caps. Impacts on areas of glacial soil from these foundations would be minimal.

In areas where the light rail alignment would be located at existing grade or constructed on earth fills, explorations will be required to determine whether soil conditions are appropriate for supporting the light rail structures. Where peats and fat clays are found (see Exhibit 3.2-4), particularly between the Mitchell and Southwest stations and to the west of the location of the proposed Eden Prairie Town Center Station, there would be the potential for ground settlement and bearing failure associated with constructing foundations for the light rail alignment and stations and surface parking lots/parking structures, unless the peats and fat clays are removed or deep foundations are used. Uneven ground settlement could create structural problems for transit stations and parking structures and would be expected to increase the amount of maintenance required to maintain an acceptable driving surface, if these conditions are not mitigated (see Section 3.2.2.1.C of this Supplemental Draft EIS).

Groundwater

The LPA was assessed to determine if the construction of foundations for the light rail system's features, including stations and park-and-ride facilities, or the construction of new earth fills would result in localized changes in groundwater flow. In areas within the Eden Prairie Segment where the soil is granular in consistency, water flow would be around or under the new structures, resulting in no noticeable changes in the groundwater flow regime. In areas where the light rail alignment would be located on organic soils or clays, drainage features such as French or trench drains may be needed to allow normal groundwater flow through areas where the alignment is on earth fills to prevent ponding. The potential to contaminate groundwater from operation of the light rail system would be low, because the trains would be electric and, generally, no activities that generate pollutants would occur in this area. Although the light rail system would generate few, if any, pollutants, there would be a risk of unexpected contamination during routine maintenance of the light rail system. The contamination could be in the form of solvents used to clean greases and oil. In view of the potential for groundwater contamination along the alignment, particularly along Prairie Center Drive near the proposed Southwest Station, maintenance practices would be adopted that minimize the risk of these occurrences. These practices could include the use of lining systems and other containment methods when risk of contamination exists (see Figure 4.1-13 in the Draft EIS).

The Phase I Environmental Site Assessment (ESA) of potential groundwater contamination for this segment is ongoing and will be included in the Final EIS. A Phase II ESA will be completed, where determined appropriate based on the Phase I ESA, prior to construction. Acquiring land with known contamination that cannot be easily remediated or contained would be avoided, to the extent possible, based on Phase I and/or II ESAs as the project advances. The long term risk to the project will be determined once remediation is completed in areas of known and encountered contamination during construction. See Section 3.2.2.5 of this Supplemental Draft EIS for additional information on hazardous and contaminated material sites within or adjacent to the Eden Prairie Segment and how potential contamination to groundwater would be addressed. In 2004, the City of Eden Prairie completed the second part of its Wellhead Protection Plan (WHPP), in accordance with Minnesota Rules Chapter 4720.5200. The purpose of the WHPP is to assure that the water supply for the City of Eden Prairie is adequately protected through existing and new land use ordinances, in association with Hennepin County oversight. The WHPP includes the Wellhead Protection

Area (which covers an area in the north half of Eden Prairie that supplies water to city wells) and the Drinking Water Supply Management Area (which is the remainder of the city that is to be protected and managed). The west end of the Eden Prairie Segment, including the area around the Mitchell Station, is located within the Wellhead Protection Area, and the remainder of the segment is located in the Drinking Water Supply Management Area. In advance of construction, the Council will coordinate with the City of Eden Prairie to insure that the construction and operation of the LPA meets the provisions of the WHPP.

No indirect effects for geology or groundwater are expected.

Short-Term Geology and Groundwater Impacts

This section describes the potential short-term impacts to soil, geology, and groundwater during construction of the LPA. Short-term impacts to the geology, such as soil erosion when the earth is exposed during construction or sedimentation associated with run-off, would be avoided through implementation of normal BMPs and implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP is discussed in Section 3.2.2.2.B of this Supplemental Draft EIS.

The short-term impacts of the LPA on groundwater include the risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction. While the portion of the Eden Prairie Segment from Prairie Center Drive west about 2,300 feet was identified as an area susceptible to groundwater pollution in the Draft EIS (Section 4.1.3.6), the risk of groundwater contamination in this segment would be reduced because, in most locations, construction within the Eden Prairie Segment would be either at- or above-grade. For this type of construction, little pumping of groundwater would be anticipated.

Reducing the amount of groundwater pumping would lessen: 1) the potential for groundwater contamination 2) impacts to wetland hydrology and vegetation (where wetlands are groundwater fed) and 3) the risk of settling that could affect structures, roadways, and utilities. In areas where groundwater pumping may be needed during construction, such as near the proposed Southwest Station, a temporary drainage system could be developed that would treat water through the use of filtration tanks and infiltration basins. To minimize the potential impact of settlement in areas where groundwater pumping would be necessary, a monitoring plan would be developed and implemented to ensure that if any building, road, or parking area settlement occurs, it would be detected as soon as possible so that additional remediation methods could be employed.

As noted, most of the proposed improvements in the Eden Prairie Segment would be either at- or above-grade. For construction of these types of improvements, sub-soil would be exposed during construction when topsoil is removed. This soil would be susceptible to surface water and wind erosion. Normal BMPs, such as sub-soiling (turning, breaking, or stirring the subsoil) in compacted areas and establishment of long-term vegetation in areas where erosion may be a concern, would be used to avoid or mitigate these potential effects.

C. Mitigation Measures

A groundwater management plan will be prepared by the Council, and approved by the Minnesota Department of Natural Resources, the City of Eden Prairie, Riley Purgatory Bluff Creek Watershed District, and Nine Mile Creek Watershed District before construction. That plan will include required groundwater monitoring and management practices during construction. The management plan will also address collection, storage, and disposal of surface water runoff from the light rail track system, stations, and other infrastructure developed as part of the project. Mitigation measures related to potential existing groundwater contamination and hazardous and contaminated materials are discussed in Section 3.2.2.5 of this Supplemental Draft EIS.

3.2.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management

This section describes existing water resources (i.e., wetlands, floodplains, public waters, and stormwater management) within the Eden Prairie Segment and assesses how the LPA would impact those water resources in the long term and short term (during construction). Mitigation measures for these impacts are also covered in this section.

Public waters are lakes, wetlands, and watercourses (streams and rivers) are under the jurisdiction of the Minnesota Department of Natural Resources (MnDNR). MnDNR defines public waters as all water basins (lakes and wetlands) and watercourses that meet the criteria set forth in Minnesota Statutes, Section 103G.005.

As summarized in Table 3.2-1, the LPA would result in the following impacts to water resources in the Eden Prairie Segment: permanent fill of approximately 4.7 acres of wetlands, temporary effects on wetlands during construction, a new light rail crossing of Purgatory Creek, and 13.4 acres of fill within a floodplain. Field-validated wetland delineations were conducted since publication of the Draft EIS. These, along with refinements and adjustments to the LPA, have resulted in potential wetland impacts higher than those reported in the Draft EIS.

Agency Coordination

Coordination with the federal, state, and local permitting agencies and jurisdictions has been ongoing throughout development of this Supplemental Draft EIS. Beginning in July 2013, the SPO convened a monthly Technical Evaluation Panel (TEP) meeting with permitting agencies with jurisdiction under the federal Clean Water Act, the state Wetland Conservation Act (WCA) and local water resources rules. The TEP is a panel of technical experts, specified by WCA, to assist the Local Government Unit (LGU) responsible for implementing WCA. Formally specified TEP membership includes technical professional employees of the Board of Water and Soil Resources (BWSR), the soil and water conservation district of the county, the Minnesota Department of Natural Resources, and the LGU(s). The TEP membership may be informally expanded to include other technical members as necessary. Monthly TEP meetings were attended by USACE, the BWSR, MnDOT, Hennepin County Conservation District, and the following LGUs with permitting authority: the cities of Eden Prairie and Minnetonka, Nine Mile Creek Watershed District, and Minnehaha Creek Watershed District. The MnDNR was also invited to the monthly TEP meetings but has declined to participate at this time. However, they retain permitting authority on Minnesota public waters and wetlands. Additionally, the following agencies were invited to participate: Minnesota Pollution Control Agency (MPCA), Riley-Purgatory-Bluff Creek Watershed District, City of St. Louis Park, City of Minneapolis, Bassett Creek Water Management Organization (BCWMO), and the Mississippi River Water Management Organization (MWMO). The Riley-Purgatory-Bluff Creek Watershed District and cities of St. Louis Park and Minneapolis have participated in some of the scheduled monthly TEP meetings. The MPCA, BCWMO, MWMO have declined to participate in monthly TEP meetings at this time.

Section 3.1.2.7 of this Supplemental Draft EIS explains the process for merging NEPA and Section 404 requirements. Furthermore, the MPCA overseeing the Section 401 certification process under the Clean Water Act requested that the information necessary for Section 401 certification be incorporated into the USACE's 404 wetland permit application. Coordination will continue through development of the forthcoming Final EIS and through review of applicable permit applications listed in Table 4.5-2 of this Supplemental Draft EIS. Specific to the Eden Prairie Segment, the wetland sites considered, as described in Section 2.3.1 of this Supplemental Draft EIS, were reviewed with the USACE and state and local jurisdictions taking into consideration potential impacts to wetlands. Table 3.2-7 lists wetlands that would be filled by the proposed improvements. These wetlands are described in Section 3.2.2.2.B of this Supplemental Draft EIS.

In addition to wetland permitting authority, Nine Mile Creek Watershed District, Riley Purgatory Bluff Creek Watershed District, and Minnehaha Creek Watershed District have authority on floodplain impacts.

A. Existing Conditions

This section describes the water resource features (wetlands, floodplains, public waters, and stormwater management) in the Eden Prairie Segment. Field delineations of wetlands, which were not conducted for the Draft EIS, were conducted in August and September 2013, and between August and October 2014 within the Eden Prairie Segment. Field crews used the *US Army Corp of Engineers Wetlands Delineation Manual* and applicable supplements (USACE, 1987), under the oversight of a Minnesota Certified Wetland Delineator, to conduct the field delineations. See Section 3.1 of this Supplemental Draft EIS for more information. In addition to the wetland delineations the project team conducted in the Eden Prairie Segment in 2013 and 2014, the City of Eden Prairie and the USACE verified the wetland boundaries and types.

TABLE 3.2-7
Eden Prairie Segment Wetland Impact Summary

Wetland I.D.	Wetland Size (acres)	Wetland Impact (fill) (acres)	Wetland Type (Circular 39[a])
EP-EP-07	4.36	0.57	Type 3/7 (shallow marsh/hardwood swamp)
EP-EP-08	1.72	0.06	Type 3 (shallow marsh)
EP-EP-11	9.89	0.67	Type 3/5 (shallow marsh/shallow open water)
EP-EP-15	90.00	0.11	Type 3 (shallow marsh)
EP-EP-16	8.00	0.84	Type 2/5 (fresh wet meadow/ shallow open water)
EP-EP-17	2.23	0.01	Type 3/4/6 (shallow marsh/deep marsh/scrub carr)
EP-EP-18	0.81	0.81	Type 5 (shallow open water)
EP-EP-22	0.20	0.20	Type 3 (shallow marsh)
EP-EP-23	3.74	0.01	Type 3 (shallow marsh)
EP-EP-24	0.38	0.38	Type 5 (shallow open water)
DIG-EP-EP-04	0.65	0.65	Type 1[b] (seasonally flooded basin)
DOT-EP-03	0.27	0.07	Type 2/3 (fresh wet meadow/shallow marsh)
DOT-EP-07	0.01	0.01	Type 2 (fresh wet meadow)
DOT-EP-17	2.21	0.29	Type 2/5 (fresh wet meadow/shallow open water)
DOT-EP-18	0.10	< 0.01	Type 3 (shallow marsh)
DOT-EP-20	0.08	0.02	Type 1 (seasonally flooded basin)
Total	**124.65**	**4.70**	

[a] USFWS Circular 39 System (Shaw and Fredine, 1956).
[b] Wetland type not field-verified for digitized wetlands. Based on USFWS National Wetlands Inventory mapping.
Notes: Permitting agencies would be USACE, MnDNR, and City of Eden Prairie.
Sources: Wetland field delineation performed in August and September 2013, and August and October 2014, Anderson Engineering, LLC.

Wetlands

The Draft EIS identifies wetlands in this segment based on available mapping databases. The result was wetlands identified along Purgatory Creek; north of Lake Idlewild; along an unnamed tributary immediately east of the Town Center Station and west of Purgatory Creek; and along Nine Mile Creek east of Highway 212. Field delineations conducted as part of the Supplemental Draft EIS in this segment in August and September 2013, and between August and October 2014, identified/delineated wetland locations that are illustrated on Exhibit 3.2-5. Wetlands were delineated at the following locations: along both sides of Technology Drive between the proposed Mitchell Station to Southwest Station, within the Purgatory Creek Reservoir, along the proposed light rail alignment east of Prairie Center Drive, along the south side of Highway 212, and along Flying Cloud Highway. Additional information about Eden Prairie Segment wetlands can be found in the *Wetland Investigation Report* (Anderson Engineering of Minnesota, LLC, 2013) and the *2014 Supplemental Wetland Investigation Report* (Anderson Engineering of Minnesota, LLC, 2014). See Appendix C for instructions on how to access these reports.

Floodplains

While the Federal Emergency Management Agency (FEMA) is in the process of evaluating flood elevations within the Eden Prairie Segment, there has been no adopted change to their 100-year floodplains identified in Section 4.2.3.4 of the Draft EIS. MnDNR's floodplain data are derived from the FEMA Flood Insurance Rate Maps. A large floodplain associated with Purgatory Creek is within the Eden Prairie Segment (see Exhibit 3.2-5).

MnDNR mapping for this area shows the floodplain following Purgatory Creek from the north and then into the park, with floodplains identified at the location of the SouthWest Transit Center, across Technology Drive, and then surrounding the entire reservoir at Purgatory Creek Park. The floodplain is classified by FEMA as Special Flood Hazard Area Zone A[15] (Flood Insurance Maps, No. 27053C0430E, 2004). The floodplain is also associated with Nine Mile Creek at the east end of the segment as it crosses under

[15] Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed to date, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply (http://www.fema.gov/floodplain-management/zone).

Highway 212. The data layer used to identify flood plain boundaries was obtained from the MnDNR GIS Data Deli (MnDNR, 2013). The MnDNR floodplain data are derived from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. No other MnDNR-mapped floodplains were identified in the Eden Prairie Segment.

Public Waters and Stormwater Management

No additional public watercourses were identified by analysis of MnDNR GIS data for the Eden Prairie Segment beyond those disclosed in Section 4.2.3.2 of the Draft EIS. Lake Idlewild and Lake Smetana, which are close to, but outside of the LPA's construction limits, are not discussed in this section because the LPA would not directly or indirectly affect either lake.

B. Potential Water Resources Impacts

This section identifies the potential long-term and short-term impacts on wetlands, floodplains, public waters, and stormwater management that would occur in the Eden Prairie Segment.

Long-Term Direct and Indirect Water Resources Impacts

This section describes the long-term direct and indirect impacts on water resources in the segment.

Wetlands

The proposed Eden Prairie Segment improvements would place fill in 16 wetlands, as illustrated on Exhibit 3.2-5. These basins are primarily adjacent to Technology Drive, between the proposed Mitchell and Southwest stations and Purgatory Creek Reservoir. The total wetlands filled in this segment would be approximately 4.7 acres, as summarized in Table 3.2-7. The wetland types that would be filled include:

Type 1 (seasonally flooded basin), Type 2 (fresh wet meadow), Type 3 (shallow marsh), Type 4 (deep marsh), Type 5 (shallow open water), Type 6 (scrub carr), and Type 7 (hardwood swamp).

EP-EP-07 is a moderately sized isolated Type 3/7, shallow marsh/hardwood swamp south of Technology Drive and west of Mitchell Road. Wetland vegetation is dominated by American elm (*Ulmus americana*), reed canary grass (*Phalaris arundinacea*), and narrow-leaf cat-tail (*Typha angustifolia*). The upland vegetation adjacent to the wetland is dominated by American elm (*Ulmus americana*), common buckthorn (*Rhamnus cathartica*), garlic mustard (*Alliaria petiolata*), and common burdock (*Arctium minus*).

EP-EP-08 is a created Type 3, shallow marsh north of Technology Drive and east of Mitchell Road. Wetland vegetation is dominated by swamp milkweed (*Asclepias incarnata*), common spikerush (*Eleocharis palustris*), reed canary grass (*Phalaris arundinacea*), foxtail barley (*Hordeum jubatum*), and American water horehound (*Lycopus americanus*). The upland vegetation adjacent to the wetland is dominated by big bluestem (*Andropogon gerardii*), and Kentucky bluegrass (*Poa pratensis*).

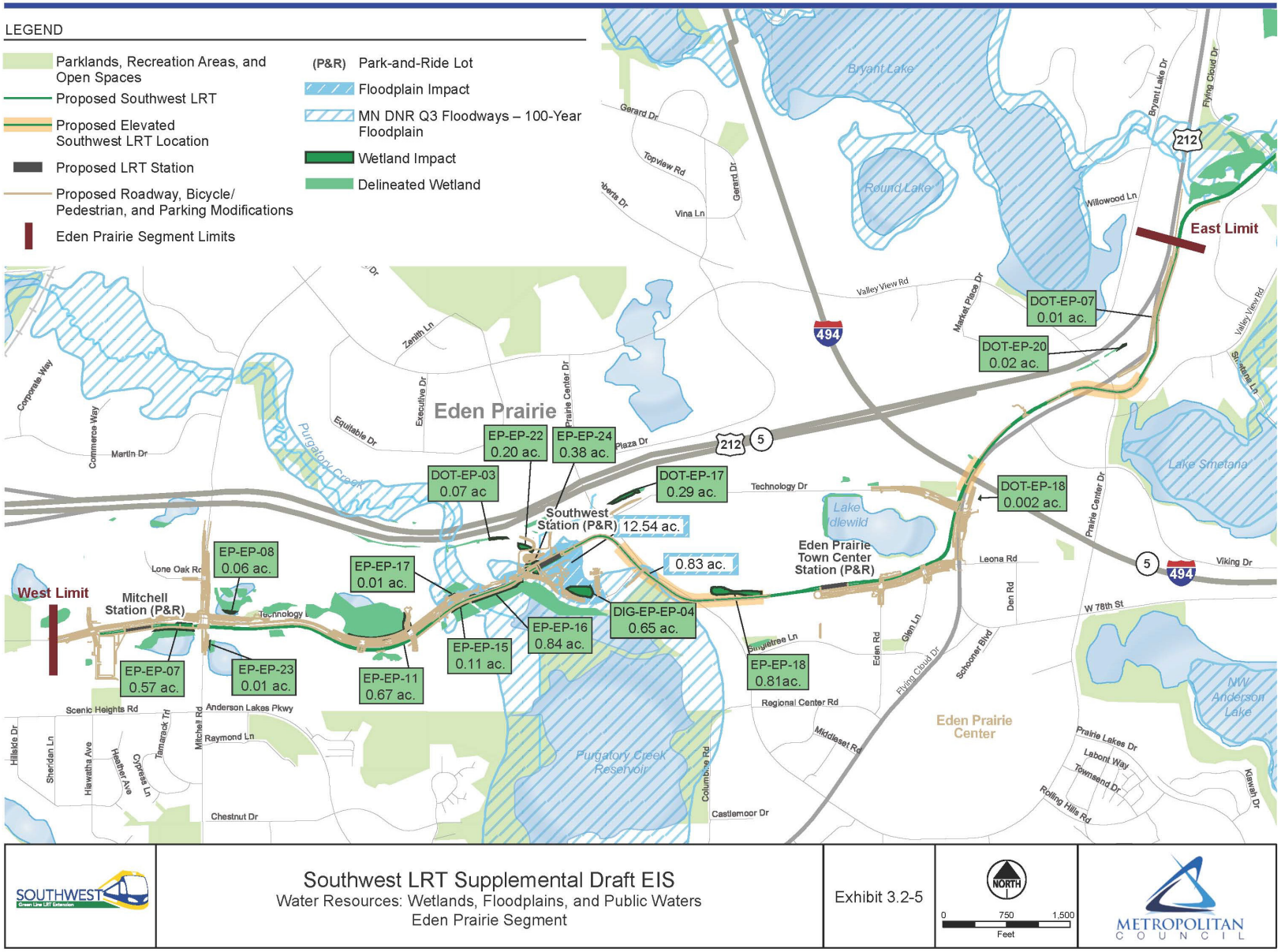
EP-EP-11 is an isolated Type 3/5, shallow marsh/shallow open water wetland that is used for stormwater treatment. The wetland, which is north of Technology Drive and west of SouthWest Station, is part of a larger wetland complex. The wetland is dominated by black willow (*Salix nigra*), and reed canary grass (*Phalaris arundinacea*). The adjacent upland vegetation is dominated by green ash (*Fraxinus pennsylvanica*), reed canary grass (*Phalaris arundinacea)*, water smartweed (*Persicaria amphibium)*, and Kentucky bluegrass (*Poa pratensis*).

EP-EP-15 is a Type 3, shallow marsh and is part of a larger wetland complex. The wetland vegetation is dominated by sandbar willow *(Salix interior)* and common spikerush (*Eleocharis palustris*). The adjacent upland vegetation is dominated by Eastern cottonwood (*Populus deltoides*), common buckthorn (*Rhamnus cathartica*), Canada goldenrod (*Solidago canadensis*), and big bluestem (*Andropogon gerardii*).

EP-EP-16 is a large Type 2/5, fresh wet meadow/shallow open water wetland that is part of a larger wetland complex that receives stormwater runoff. The wetland is dominated by box elder (*Acer negundo*), reed canary grass (*Phalaris arundinacea*), and sandbar willow *(Salix interior)*. The adjacent upland vegetation is dominated by smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*) along the wetland edge.

EXHIBIT 3.2-5

Water Resources: Wetlands, Floodplains, and Public Waters, Eden Prairie Segment



EP-EP-17 contains both Purgatory Creek and a stormwater treatment pond and is located north of Technology Drive and west of SouthWest Station. The wetland associated with Purgatory Creek is classified as a Type 3/6 shallow marsh/shrub carr and the stormwater pond is classified as a Type 4 deep marsh. These wetland areas are dominated by black willow (*Salix nigra*), box elder (*Acer negundo*), jewelweed (*Impatiens capensis*), and reed canary grass (*Phalaris arundinacea*). The upland vegetation adjacent to the wetland is dominated by black willow (Acer negundo), green ash (*Fraxinus pennsylvanica*), and Kentucky bluegrass (*Poa pratensis*).

EP-EP-18 is a created Type 5 shallow open water stormwater treatment pond on the south side of Technology Drive opposite EP-EP-17. The wetland vegetation is dominated by box elder (*Acer negundo*) and narrow-leaf cat-tail (*Typha angustifolia*). The adjacent upland vegetation is dominated by field thistle (*Cirsium discolor*) and crown vetch (*Vicia sativa*).

EP-EP-22 is a Type 3 shallow marsh constructed storm pond that was excavated out of historic wetland. The wetland vegetation is dominated by narrow-leaf cat-tail (*Typha angustifolia*) and purple loosestrife (*Lythrum salicaria*). The upland vegetation is dominated by smooth brome grass (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*).

EP-EP-23 is a Type 3 shallow marsh. The wetland vegetation is dominated by reed canary grass (*Phalaris arundinacea*) and common buckthorn (*Rhamus cathatrica*). Upland vegetation is dominated by common buckthorn (*Rhamus cathatrica*) and America basswood (*Tilia americana*).

EP-EP-24 is a Type 5, shallow open water excavated stormwater pond (two connected stormwater ponds) that was excavated out of historic wetland. The wetland vegetation is dominated by sandbar willow (*Salix interior*) and narrow-leaf cat-tail (*Typha angustifolia*). Upland vegetation is dominated by prickly lettuce (*Lactuca serriola*) and Kentucky bluegrass (*Poa Pratensis*).

DIG-EP-EP-04 is mapped as a Palustrine emergent, Type 1 wetland according to the NWI. This wetland was modified for use as a stormwater detention basin and decorative pond. It appears that this area is hydrologically connected to Purgatory Creek.

DOT-EP-03 is a linear Type 2/3, fresh wet meadow/shallow marsh that is part of the Highway 212 drainage system. The wetland vegetation is dominated by reed canary grass (*Phalaris arundinacea*). The adjacent upland vegetation is dominated by smooth brome (*Bromus inermis*) and reed canary grass (*Phalaris arundinacea*).

DOT-EP-07 is a small, Type 2, fresh wet meadow that is part of the Technology Drive drainage system. The wetland vegetation is dominated by narrow-leaf cat-tail (*Typha angustifolia*) and reed canary grass (*Phalaris arundinacea*). The adjacent upland vegetation is dominated by Canada goldenrod (*Solidago canadensis*) and reed canary grass (*Phalaris arundinacea*).

DOT-EP-17 is a large, isolated Type 2/5, fresh wet meadow/shallow open water wetland. The wetland vegetation is dominated by reed canary grass (*Phalaris arundinacea*) and stinging nettle (*Urtica diocia*). The upland vegetation is dominated by reed canary grass (*Phalaris arundinacea*) and stinging nettle (*Urtica diocia*).

DOT-EP-18 is a small, isolated Type 3 shallow marsh. The wetland vegetation is dominated by common spikerush (*Eleocharis palustris*). The upland vegetation is dominated by field thistle (*Cirsium discolor*) and smooth brome (*Bromus inermis*).

DOT-EP-20 is a small, isolated Type 1 seasonally flooded basin. The wetland vegetation is dominated by reed canary grass (*Phalaris arundinacea)* and narrow-leaf cat-tail (*Typha angustifolia*). The upland vegetation is dominated by smooth brome (*Bromus inermis*).

Floodplains

Long-term direct impacts to floodplains are defined as the introduction of fill material into an area currently mapped as a 100-year floodplain. The floodplain surrounding Purgatory Creek and the Purgatory Creek Reservoir would be crossed by the proposed light rail alignment in the vicinity of the proposed Southwest

Station and along Prairie Center Drive, adjacent to Purgatory Creek Park. The area immediately surrounding the proposed Southwest Station includes the proposed location of the station platform.

The location where the floodplain would be crossed along Prairie Center Drive at Purgatory Creek Park would be grade-separated, with the light rail alignment on structure, allowing vehicles and pedestrians to cross under the alignment on existing roads and sidewalks. The light rail structure would be supported by piers at this crossing of floodplain, which would minimize fill within the 100-year floodplain.

Although the proposed light rail alignment in this segment differs from that evaluated in the Draft EIS, the floodplain impacts would be similar. As shown on Exhibit 3.2-5, approximately 13.4 acres of floodplain within the proposed Eden Prairie improvements would be filled by the proposed improvements. This approach to estimating floodplain impacts likely overestimates the potential impacts due to the conservative approach to include all portions of floodplain within the project footprint as impacts. Project design elements (such as the use of piers to place the light rail alignment on structure above the floodplain) would help to reduce the total impact to floodplain volume. The proposed light rail alignment would be designed to prevent a rise in the floodplain elevation of no more than one foot.

Public Waters and Stormwater Management

Under the LPA, Purgatory Creek, a public waterway, would be spanned by the proposed light rail alignment, immediately south of where Technology Drive currently spans the creek. The LPA construction limits would be close to Lake Idlewild, but would not extend into the lake.

Impervious surfaces associated with the LPA's proposed improvements would increase stormwater runoff rates, volumes, and pollutant loads. These, in turn, could cause higher flows and degraded water quality in affected storm sewers and streams. Impervious surfaces could also result in decreased infiltration and aquifer recharge. New impervious areas from the project would include tracks and guideways, stations, park-and-ride lots, maintenance facilities, and roads. Ballasted (gravel) track sections would be considered as impervious areas because of the high compaction and low permeability of the subsoils underlying the tracks.

The pollutant-generating impervious surface (PGIS) associated with the LPA would consist primarily of new or reconstructed roadways in the vicinity of the proposed light rail alignment that would need to be reconstructed to accommodate the proposed light rail tracks.

Because the proposed light rail alignment would generally be near or commingled with automobile roadways, it would be treated as PGIS for purposes of stormwater treatment. Some proposed new parking surfaces would create impervious surface, notably at new park-and-ride facilities, but even at those locations, the new facilities would generally be built on areas with existing parking surfaces, so the additional new impervious surface would be minimized. Elevated areas, such as the portion of the proposed light rail alignment that would be located adjacent to Prairie Center Drive, have little or no need for road reconstruction and therefore would have relatively low PGIS values. In contrast, at-grade alternatives within urban settings frequently require relocating lanes of roadway parallel to the alternative, which would result in a relatively large PGIS. Stormwater runoff from project-related PGIS would receive water quality treatment.

The stormwater systems managed by local jurisdictions in this area typically discharge to local streams and wetlands. Urbanization has changed many of the land uses in the area from forested areas to urban development. Higher peak flows that are caused by impervious surface prevent infiltration from occurring and result in channel scour and degradation of stream habitat. To reduce the high flows that would otherwise occur within the streams, the City of Eden Prairie operates a system of regional detention ponds. Runoff from developments constructed less than 15 to 20 years ago generally receives treatment and detention before discharging into the city stormwater systems. Eden Prairie and the Riley-Purgatory-Bluff Creek Watershed District have stormwater management regulations and program. The project would construct additional stormwater facilities as needed, and construction would be coordinated with the local jurisdictions to connect the new facilities to existing stormwater management facilities.

If it occurs, development and/or redevelopment around transit station areas may result in an increase in impervious surfaces that could indirectly affect water quality. However, that development would comply with stormwater requirements applicable at the time of their permitting and construction, which would tend to avoid or minimize adverse impacts to water quality.

Short-Term Water Resources Impacts

This section describes the potential short-term impacts to water resources in the segment caused by constructing the LPA.

Wetlands

Short-term fill within wetlands due to construction activities, and potentially other related construction activities, could affect wetlands along Prairie Center Drive. These impacts would generally be limited because much of the new light rail alignment would be built adjacent to existing roadways, providing direct access to the construction site. Construction activities may result in loss or disturbance of soils and vegetation or potential for inorganic solids to reach the wetlands. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and deposit the eroded materials downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations

Implementing appropriate BMPs would help minimize erosion and sedimentation impacts. These BMPs will include the preparation of a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, if needed. BMPs that will be implemented during construction will be designed to minimize the potential for soil erosion and sedimentation and to protect water quality, if needed. Potential BMPs that could be implemented during construction include the following:

- Minimizing the amount of cleared area at a construction site
- Stabilizing construction entrances and haul roads using quarry spalls
- Washing truck tires at construction entrances, as necessary
- Constructing silt fences downslope from exposed soil
- Protecting catch basins from sediment
- Containing and controlling concrete and hazardous and contaminated materials onsite
- Installing temporary ditches to route runoff around or through construction sites, with straw bales or rock check dams strategically located to slow and settle runoff
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil
- Using straw wattles to reduce the length of unbroken slopes and minimize runoff concentration
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established
- Constructing temporary sedimentation ponds to remove solids from concentrated runoff and groundwater pumping before being discharged
- Conducting vehicle fueling and maintenance activities no closer than 100 feet from a wetland

Floodplains

No short-term direct impacts to floodplains are expected to occur due to the proposed project, although sedimentation flow into the floodplain could indirectly occur during construction if a substantial storm event were to occur. Construction staging would be located outside the floodplain areas to minimize the potential for temporary impacts.

Public Waters and Stormwater Management

The potential water quality impacts resulting from construction activities may increase turbidity and sedimentation in the receiving streams as a result of stormwater runoff from disturbed construction sites. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and deposit the eroded materials downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations such as pier foundations, trenches, and tunnels

The runoff from newly poured concrete surfaces can have high alkalinity, often above pH 9, which can result in degraded water quality and can adversely affect fish. In addition, total suspended solids from the concrete fines might result in a milky-white appearance of the runoff, exceeding turbidity requirements. Because the total amount of ground disturbance during construction would be more than one acre, a National Pollutant Discharge Elimination System general construction stormwater permit would be required for this project. One of the permit requirements is a project-specific SWPPP. The SWPPP plan would be developed and implemented in accordance with Council Environmental Services guidance and procedures. This plan would include a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, and would employ BMPs during construction to minimize the potential for soil erosion and sedimentation and to protect water quality. Potential BMPs would include those listed above for wetlands.

A temporary erosion and sediment control plan also would include a water quality monitoring plan and a schedule for inspecting the erosion control measures for effectiveness. Water pumped from the construction site, such as from guideway pier construction, would be treated as required to meet discharge requirements identified on the SWPPP. Pavement slurry and residue from road cutting and grinding would be collected and properly disposed of offsite, and a concrete containment and disposal plan would also be prepared. An MnDNR-certified erosion and sediment control specialist would be employed to conduct the inspections, and deficiencies would be promptly corrected. These measures would minimize the likelihood for serious water quality problems occurring during construction.

The concrete used for the project would take several months to cure enough so that the pH of exposed surfaces would decrease to acceptable levels. Stormwater runoff would be tested, and if excessive levels of pH or turbidity are found, the runoff would be treated before it is released to storm sewers or a receiving water body. If discharge of treated construction or process water to a sanitary sewer is proposed, approval must be obtained from the City of Eden Prairie.

Additional Construction BMPs

The proposed project will comply with applicable state, federal and local regulations and will install BMPs to control and minimize erosion and potential impacts to surface water resources as determined during the permitting process. Construction BMPs may include some or all of the following:

- Inlet protection of catch basins (filters, bio-bags, catch-basin drop-filters)
- Excavation silt control (silt fence, bio-bags)

- Temporary seeding of open excavations and stockpiles as appropriate for surface soil areas that remain exposed for several weeks or longer
- Swales with check dams – surface waterways with periodic check dams for silt removal
- Temporary paving of area to receive traffic prior to final restoration
- Infiltration of stormwater runoff after removal of heavy sediments
- Temporary rerouting of stormwater away from exposed slopes and stockpiles
- Temporary rock construction entrances to remove mud for construction vehicles before they leave the site

When applicable, these BMPS will be installed prior to earthwork and grading activities, and would be kept in good working order for the duration of the project. The project would be monitored under grading permits issued by the watershed districts, WMOs, and the cities in the corridor.

Runoff volume control techniques would be considered during Engineering to minimize the rate, volume and quality of surface runoff, including: green swales, infiltration strips, rainwater gardens, subsurface storage, grit chambers, and sump manholes.

C. Mitigation Measures

The Section 404 permit application will identify compensatory mitigation for unavoidable impacts to wetlands and other aquatic resources. A Compensatory Mitigation Plan will be developed by the Council, and reviewed by USACE, prior to the submittal of the Section 404 permit application.

Mitigation options to off-set permanent wetland impacts include onsite project specific permittee responsible mitigation, offsite project specific permittee responsible mitigation, and/or the purchase of wetland mitigation bank credits that meet USACE regulatory requirements, as well as state and local regulatory requirements. Wetland impacts could be reduced by continued project design refinements to limit the affected areas within the wetlands, including the placement of construction fencing to control construction limits. The actual mitigation ratio for the loss of wetlands will depend on the location, type, and functional value of the wetland being impacted and permits obtained from agencies with regulatory authority. Compensatory wetland mitigation required for this project will depend on final footprint of wetland fill, as well as the ecological value of the wetlands affected. Impacts to waters and wetlands will be detailed in the Final EIS.

Stormwater runoff (both long-term and short-term) will be directed into stormwater detention facilities created as part of the project (see prior discussion concerning stormwater). Temporary impacts on soils and vegetation (e.g., due to temporary pumping during construction) within and surrounding the wetlands will be restored upon completion of construction.

Impacts on floodplains and public waters will be mitigated by compensatory storage. After Project Development, the amount of floodplain impacts will be calculated, and coordination with the appropriate entities will occur to determine the type, location, and extent of compensatory floodplain storage (likely in the form of excavation) required. The project will require coordination with, and permitting from local, state, and federal water resources agencies. Development of permit applications will be completed during the Engineering phase of the project.

3.2.2.3 Noise

This section provides a summary of the existing noise levels around noise-sensitive properties within the Eden Prairie Segment, and an assessment of how those properties would be affected by the LPA and how those impacts could be mitigated. As summarized in Table 3.2-1, there would be a moderate noise impact at one hotel and a moderate and severe noise impact at another hotel without mitigation.

Background information on how noise is defined, the noise generated by LRT, and FTA noise impact guidelines can be found in the Noise Fact Sheet in Appendix H of this Supplemental Draft EIS. Appendix H of the Draft EIS also contains background information on noise and FTA evaluation criteria. Detailed

information regarding noise measurements, impact methodology, and the impact assessment can also be found in Appendix H. The Final EIS will contain a comprehensive technical appendix with detailed information regarding all inputs, measurements, an impact assessment, and mitigation.

A. Existing Conditions

This section describes existing noise-sensitive land uses in the Eden Prairie Segment and existing noise levels, which are used within the noise impact analysis summarized in Section 3.2.2.3.B of this Supplemental Draft EIS. Subsequent to publication of the Draft EIS, additional noise monitoring was conducted in July and August of 2013, to supplement the measurements conducted during the Draft EIS, and based on design refinements within the Eden Prairie Segment. The noise analysis conducted for this Supplemental Draft EIS followed FTA guidelines published in *Transit Noise and Vibration Impact Assessment* (FTA, 2006). As discussed in Section 3.1.2.8 of this Supplemental Draft EIS, this monitoring updates monitoring used for the Draft EIS. Noise-sensitive land use for the Eden Prairie Segment was identified based on aerial photography, project drawings, and a site survey, and identified noise-sensitive land uses were categorized using FTA's land use categories. Based on the information from these sources, the noise-sensitive land uses for the Eden Prairie Segment are the Southwest Station Condominiums, Purgatory Creek Park, two apartment complexes on Singletree Lane, the Optum Auditorium on Technology Drive, and several hotels on Flying Cloud Drive. The existing dominant noise sources in this segment include traffic on local streets, Highway 212, and I-494.

Table 3.2-8 summarizes the results of the existing noise level measurements, and Exhibit 3.2-6 shows the location of the three long-term noise monitoring sites and one short-term noise monitoring site for the Eden Prairie Segment. At each site, the measurement was conducted at the approximate setback of the building or buildings relative to the proposed light rail alignment. The results of the existing noise measurements were used to calculate the existing noise levels for all the noise-sensitive locations in the study area. The noise measurement results at each site are described below.

- **Site N2 – Southwest Station Condominiums.** The 24-hour, time-averaged, A-weighted sound level (day-night) (L_{dn}) measured at this location was 71 dBA. The dominant noise source was traffic on Highway 212. Noise levels were measured for 24 hours in a landscaped area on the Highway 212 side of the condominiums. This site is representative of the ambient noise conditions at the Southwest Station Condominiums.

TABLE 3.2-8
Summary of Existing Noise Level Measurements – Eden Prairie Segment

Site No.	Measurement Location	Measurement Start		Measurement Duration (hrs)	Noise Level (dBA)[c]	
		Date	Time		L_{dn}	L_{eq}
N2[a]	Optum Auditorium	TBD	TBD	TDB	TDB	TDB
N2[b]	Southwest Station Condominiums	7/25/2013	14:00	24	71	--
N3[b]	Purgatory Creek Park	7/25/2013	07:30	1	--	54
N4[b]	Lincoln Park Apartments	8/7/2013	16:00	24	62	--
N25[d]	Homestead Hotel	3/8/2010	10:07	24	61	-

[a] The auditorium at the Optum facility on Technology Drive has been identified as a noise sensitive receptor. The project is awaiting right of entry to conduct the testing, therefore the measurements are not available at the time of publication of this Supplemental Draft EIS. The noise measurements and analysis will be included in the Final EIS.

[b] Noise sites from Supplemental Draft EIS measurements conducted during July and August 2013.

[c] L_{dn} is used for Category 2 (residential) land use and L_{eq} is used for Category 3 (institutional) land use.

[d] Noise sites from Draft EIS measurements conducted during March 2010.

Acronyms

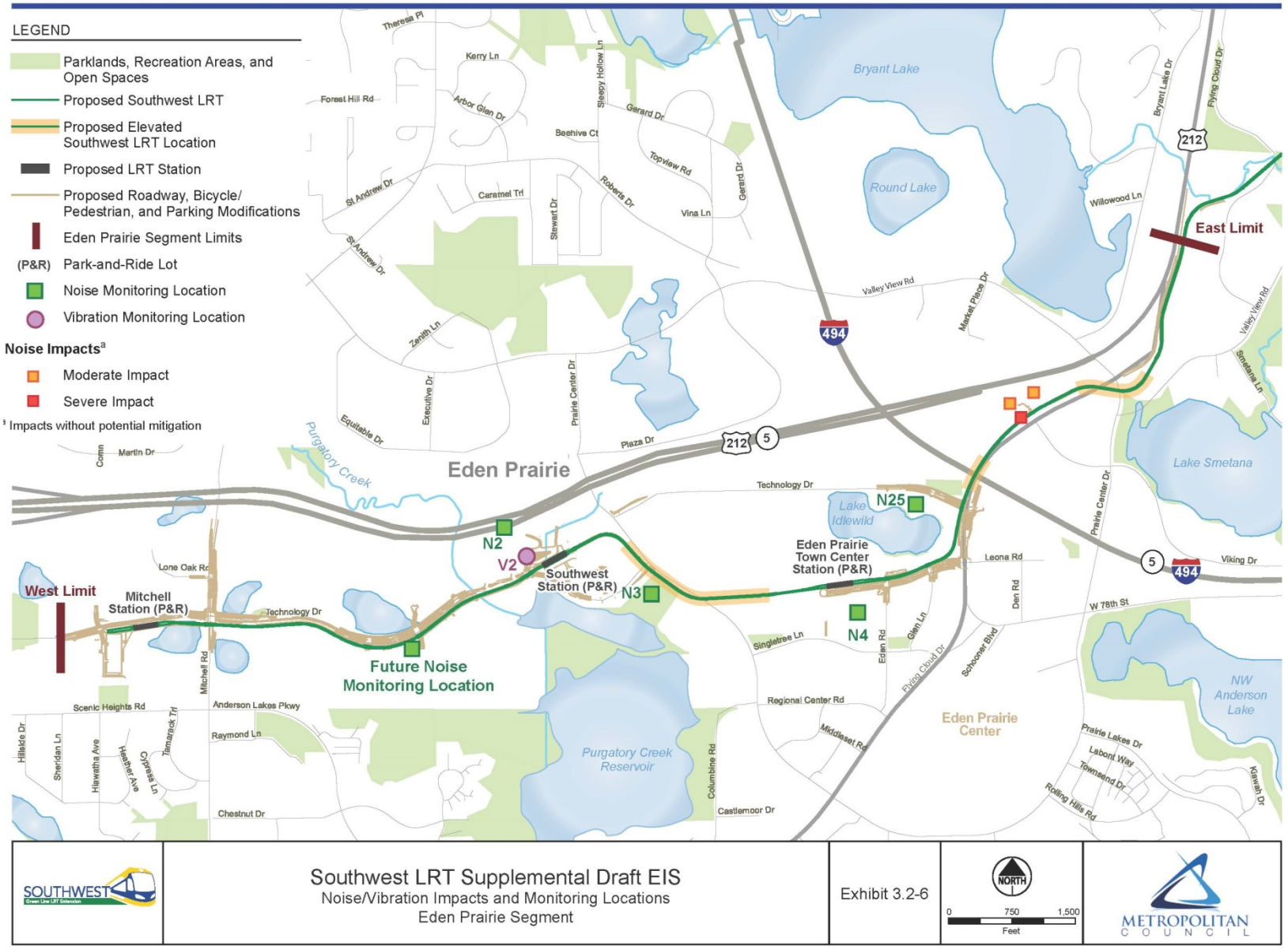
dBA = A-weighted decibel

L_{dn} = 24-hour, time-averaged, A-weighted sound level (day-night)

L_{eq} = equivalent continuous sound level

Source: Cross-Spectrum Acoustics LLC, 2013.

EXHIBIT 3.2-6
Noise/Vibration Impacts and Monitoring Locations, Eden Prairie Segment



- **Site N3 – Purgatory Creek Park.** The equivalent continuous sound level measured at this location was 54 dBA. The dominant noise source was traffic on local roads. Noise levels were measured for 1 hour at the gazebo in the park. This site is representative of the ambient noise conditions at the Purgatory Creek Park.
- **Site N4 – Lincoln Park Apartments.** The L_{dn} measured at this location was 62 dBA. The dominant noise sources were traffic on local streets and Highway 212. Noise levels were measured for 24 hours near the Eden Prairie Marketplace water tower. This site is located near the alignment and is representative of the ambient noise conditions at the Lincoln Park and Water Tower apartments on Singletree Lane.

Site N25 (Draft EIS) – Homestead Hotel. The L_{dn} measured at this location was 61 dBA. The dominant noise sources were traffic on Highway 212 and I-494. Noise levels were measured for 24 hours adjacent to the hotel. This site is representative of the ambient noise conditions at the hotels on Flying Cloud Drive north of I-494.

B. Potential Noise Impacts

This section identifies the potential long-term and short-term direct and indirect noise impacts that would occur in the Eden Prairie Segment. The long-term noise impact evaluation considered the potential increase in noise levels for sensitive receptors closest to the proposed LRT stations and track in the segment as a result of the operation of light rail.

Short-term noise impacts are those that may occur during construction of the LPA.

Long-Term Direct and Indirect Noise Impacts

This section identifies the potential long-term and short term noise impacts in the Eden Prairie Segment. The project team conducted a Detailed Noise Analysis in the Eden Prairie Segment. See Appendix H of this Supplemental Draft EIS for more information. The results of the analysis, which are presented in Tables 3.2-9 and 3.2-10, include both residential and institutional (e.g., parks, churches, and schools) land uses. The results include a tabulation of all noise-sensitive locations in the segment and detailed descriptions of any locations with noise impacts. The tables show the location information for each sensitive receptor group, the existing noise levels, the projections of future noise levels, the impact criteria, and whether there are any noise impacts.

TABLE 3.2-9
Summary of Noise Impacts for Residential Land Use – Eden Prairie Segment

Location	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Existing Noise Level (dBA)	Project Noise Levels (dBA)			Impact?	Type and # of Impacts	
				LRT	Criteria Mod	Criteria Sev		Mod	Sev
Lincoln Park Apartments	138	30	62	57	59	64	No	0	0
Water Tower Apartments	113	30	62	58	59	64	No	0	0
Southwest Station Condos	95	20	71	64*	65	70	No	0	0
Residence Inn	44	45	61	65	58	64	Sev	1	1
Baymont Inn	69	35	61	62	58	64	Mod	1	0

*Includes an increase in bus noise due to change in SW Transit operations.

Notes: the reported noise levels are rounded to the nearest decibel, except for the noise level increases. The "Type and # of Impacts" column identifies whether the LRT noise level exceeds FTA's moderate or severe noise impact criteria thresholds, which are also found under the "Project Noise Levels" column. It also reports the number of units that would experience a moderate or severe noise impact.

Acronyms

Mod = moderate
Sev = severe.

Source: Cross-Spectrum Acoustics LLC, 2013 and 2014.

TABLE 3.2-10
Summary of Noise Impacts for Institutional Land Use – Eden Prairie Segment

Location	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Existing Noise Level (dBA)	Project Noise Levels (dBA)			Impact?	# of Impacts	
					Criteria				
				LRT	Mod	Sev		Mod	Sev
Purgatory Creek Park	269	25	54	53	60	66	No	0	0

Note: the reported noise levels are rounded to the nearest decibel, except for the noise level increases.

Acronyms

Mod = moderate
Sev = severe.

Source: Cross-Spectrum Acoustics LLC, 2013.

In summary, the LPA would result in the following noise impacts to residential land uses in the Eden Prairie Segment:

- **Baymont Inn and Residence Inn.** These two hotels are located adjacent to Highway 212 on Flying Cloud Drive and are projected to have moderate and severe noise impacts (Table 3.2-9). The projected noise impacts would be due to the nearby at-grade crossing and the proximity of the buildings to the light rail alignment.

Indirectly, increased development density that could occur around transit stations due to the LPA may put more people near the noise produced by light rail and park-and-ride facilities (see Section 9.5, Table 9.5-1, of the Draft EIS).

Additionally, the auditorium at the Optum facility on Technology Drive has been identified as a noise sensitive receptor. Site-specific measurements will be conducted at this location during the Final EIS to determine the potential for impacts and the corresponding need for any mitigation.

Short-Term Noise Impacts

This section describes the potential short-term noise impacts that would be caused by constructing the LPA. Employees and travelers in the Eden Prairie Segment would experience temporary increases in noise levels from construction activities and construction vehicles. Noise generated by construction equipment varies, depending on equipment type/model/make, duration of operation, and specific type of work effort. Typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet. Construction noise impacts are expected to be localized, temporary, and transient, and they would be regulated by applicable local noise ordinances. Construction-related noise impacts generally would increase with proximity to the physical improvements. Potential short-term noise impacts will be addressed further in the forthcoming Final EIS when additional design and construction information is available.

C. Mitigation Measures

Based on the projected noise impacts identified in the Eden Prairie Segment and in compliance with FTA guidance, final determinations of noise mitigation measures to be incorporated into the project will be made in a noise mitigation plan and documented in the project's Final EIS. The contents of that plan will include: additional noise monitoring and/or testing, where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed noise mitigation measures; and identification of committed long-term and short-term (construction) noise mitigation measures and their effectiveness. See Section 3.1.2.8 for additional detail on FTA noise mitigation guidance and on the contents of a noise mitigation plan.[16]

[16] The auditorium at the Optum facility on Technology Drive has been identified as a noise sensitive receptor. Assessment of the facility will be conducted during the Final EIS to determine the potential for impacts and the corresponding need for any mitigation.

3.2.2.4 Vibration

This section provides a summary of the findings of the vibration analysis, which evaluated the project's vibration (motion of the ground or building) impacts on vibration-sensitive properties within the Eden Prairie Segment. As summarized in Table 3.2-1, based on the project's General Vibration Assessment, there would be no vibration impacts in the Eden Prairie Segment as a result of the LPA.

Background information on how vibration is defined, the vibration generated by light rail vehicles, and FTA vibration impact guidelines can be found in the Vibration Fact Sheet in Appendix H of this Supplemental Draft EIS. Appendix H of the Draft EIS also contains background information on vibration and FTA evaluation criteria used to assess vibration impacts. Detailed information regarding vibration measurements and the impact assessment can be found in Appendix H of this Supplemental Draft EIS. The forthcoming Final EIS will contain a comprehensive technical appendix with detailed information regarding all inputs, measurements, an impact assessment, and mitigation.

A. Existing Conditions

This section describes existing vibration-sensitive land uses in the Eden Prairie Segment and existing vibration levels. In the Draft EIS, a General Vibration Assessment was conducted using FTA procedures. The General Vibration Assessment methodology uses generalized information and assumptions to make projections of potential vibration impacts. For this Supplemental Draft EIS, a Detailed Vibration Assessment methodology using FTA procedures was used. The Detailed Vibration Assessment considers the vehicle-specific vibration characteristics, as well as using vibration propagation testing at locations throughout the project corridor. The Detailed Vibration Assessment followed FTA guidelines published in *Transit Noise and Vibration Impact Assessment* (FTA, 2006).

Vibration-sensitive land uses for the Eden Prairie Segment were identified based on aerial photography, project drawings, and a site survey, and identified vibration-sensitive land uses were categorized based on FTA's guidelines. Based on the information from these sources, the vibration-sensitive land uses for the Eden Prairie Segment include the Optum Auditorium on Technology Drive, two apartment complexes on Singletree Lane, the Southwest Station Condos, and several hotels on Flying Cloud Drive. There are no noticeable sources of existing vibration in the area.

A vibration measurement conducted in July 2013 was used to characterize the response of the soil at a location in the Eden Prairie Segment. No vibration measurements were conducted during the Draft EIS. At the measurement site, a vibration propagation test was conducted by impacting the ground with an instrumented weight and measuring the response of the soil at distances ranging from 25 to 150 feet. The results of the vibration propagation tests were combined with the force density (vehicle input force) to project vibration levels from LRT operations at vibration-sensitive locations near the alignment adjustments. The location of the vibration measurement site for the study area is described as follows and is shown on Exhibit 3.2-6:

- **Site V2 – SouthWest Station.** The vibration propagation measurement was conducted in the driveway of the existing SouthWest Transit Station. The measurements at this site are representative of all vibration-sensitive land uses in the Eden Prairie Segment.

B. Potential Vibration Impacts

This section identifies the potential long-term direct and indirect vibration impacts as well as short-term impacts that would occur in the Eden Prairie Segment. The long-term vibration impact evaluation considers the potential increase in vibration that sensitive receptors closest to the proposed LRT stations and track may experience as a result of the operation of light rail and freight rail. There may be indirect changes in vibration levels as increased development density anticipated around transit stations may cause more people to experience vibrations produced by light rail vehicles.

Short-term vibration impacts are those that may occur during construction of the LPA while jackhammers, rock drills, and impact pile-drivers are being used, for example.

Long-Term Direct and Indirect Vibration Impacts

This section describes the potential long-term direct and indirect vibration impacts in the segment. The project team conducted a Detailed Vibration Analysis for the Eden Prairie Segment. The results are presented in Table 3.2-11 for residential land use (there are no vibration-sensitive institutional land uses in the Eden Prairie Segment). The table includes a tabulation of all sensitive locations and detailed descriptions of any locations with vibration impacts. The table also indicates the location information for each sensitive receptor group, the projections of future vibration levels, the impact criteria, and whether there are any impacts. The table also shows the total number of impacts for each location. The results in Table 3.2-11 indicate operation of the light rail line under the LPA would not result in any vibration impacts to residential land uses within the Eden Prairie Segment, based on FTA's vibration impact threshold criteria.

TABLE 3.2-11
Summary of Vibration Impacts for Residential Land Use – Eden Prairie Segment

Location	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Max Vibration Velocity Level (VdB) in any 1/3-Octave Band		# of Impacts
			Project Vibration Level	Impact Criterion	
Lincoln Park Apartments	113	30	56	72	0
Water Tower Apartments	225	30	53	72	0
SouthWest Station Condos	95	20	53	72	0
Baymont Inn	69	35	58	72	0
Residence Inn	44	45	62	72	0

Note: Vibration levels are rounded to the nearest decibel.

Acronyms

VdB = Vibration velocity level is reported in decibels relative to a level of $1x10^{-6}$ inches per second.
Impact Criterion = The threshold for a vibration impact under FTA guidance.

Source: Cross-Spectrum Acoustics LLC, 2013 and 2014.

However, the auditorium at the Optum facility on Technology Drive has been identified as a vibration and ground-borne noise sensitive receptor. Site-specific measurements will be conducted at this location during the Final EIS to determine the potential for impacts and the corresponding need for any mitigation.

A potential vibration-related indirect impact is that changes in development density anticipated around transit stations would put more people near transportation-induced vibration generated by light rail vehicles, buses, and other vehicles at proposed stations and park-and-ride facilities (see Section 9.5, Table 9.5-1, of the Draft EIS).

Short-Term Vibration Impacts

This section describes short-term vibration impacts that would be caused by construction of the LPA.

As with short-term noise impacts, residents in the Eden Prairie Segment would experience vibration effects from construction activities and, to a lesser extent, construction vehicles. Vibration would be expected during construction activities using jackhammers, rock drills, and impact pile-drivers. Construction of the proposed piers for the elevated segments of the proposed light rail alignment, where installing sheetpiling would be required, is an example of a construction activity that would generate vibrations. Construction vibration impacts are expected to be localized, temporary, and transient. These impacts generally would increase with proximity to the physical improvements. Construction BMPs will be used during construction to minimize or mitigate short-term construction-related vibration impacts.

C. Mitigation Measures

There are no projected long-term vibration impacts in the Eden Prairie Segment, therefore no mitigation is identified.[17]

[17] The auditorium at the Optum facility on Technology Drive has been identified as a vibration and ground-borne noise sensitive receptor. Assessment of the facility will be conducted during the Final EIS to determine the potential for impacts and the corresponding need for any mitigation.

Based on the projected short-term vibration impacts identified in the Eden Prairie Segment and in compliance with FTA guidance, final determinations of short-term vibration mitigation measures to be incorporated into the project for this segment will be made in a vibration mitigation plan and documented in the project's Final EIS. The contents of that plan will include: additional testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed mitigation measures; and identification of committed long-term and short-term (construction) mitigation measures and their effectiveness. See Section 3.1.2.9 for additional detail on FTA noise mitigation guidance and on the contents of a vibration mitigation plan.

3.2.2.5 Hazardous and Contaminated Materials

This section provides an overview of hazardous and contaminated materials that could be located on parcels that either would be acquired for the Eden Prairie Segment of the LPA or would be near enough to construction activities that there would be a risk that the project would encounter contaminated soils and/or groundwater. It also describes potential control or cleanup requirements for the project as a result of hazardous and contaminated materials that might be mobilized or released as a result of project activities. Hazardous and contaminated materials can be classified in a number of different categories based on laws and regulations that define their characteristics and uses. These categories include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

As summarized in Table 3.2-1, there are six high-risk sites in proximity to the proposed light rail-related improvements of the LPA that could require remediation prior to construction. In addition, there is the potential that long-term groundwater pumping could encounter zones of contaminated groundwater.

A. Existing Conditions

This section describes the existing hazardous and contaminated materials sites in the Eden Prairie Segment. The Phase I Environmental Site Assessment (ESA) for this segment is ongoing and will be included in the Final EIS, therefore the same tools applied in the Draft EIS were applied for the Supplemental Draft EIS. A review of MPCA and MDA databases was performed to identify potential high-, medium-, and low-risk sites that could affect the project. The online environmental database search and review of files revealed 44 potential sites in the Eden Prairie Segment. Of these sites, six were classified as high-risk sites, six were classified as medium-risk sites, and 32 were classified low-risk sites. The potential high-risk sites are listed in Table 3.2-12 and shown on Exhibit 3.2-7. These findings are preliminary and the total site count could change with the forthcoming Phase I ESA, which will be documented in the forthcoming Final EIS. A Phase II ESA will be completed, where determined appropriate based on the Phase I ESA, prior to construction.

B. Potential Hazardous and Contaminated Materials Impacts

This section identifies the potential long-term and short-term impacts to hazardous and contaminated materials that could result from implementation of the Eden Prairie Segment. These impacts could result from earthwork or other disturbance at or in proximity to contaminated areas that might mobilize or result in the release of hazardous and contaminated materials.

Long-Term Direct and Indirect Hazardous and Contaminated Materials Impacts

This section addresses long-term direct and indirect hazardous and contaminated material impacts in the segment. As described in Section 4.9 of the Draft EIS, long-term hazardous and contaminated material impacts are not expected as a result of the LPA because the project would not generate hazardous and contaminated materials or regulated wastes. In addition, the Draft EIS notes if third-party contamination is present near a project site if permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system.

A potential indirect impact on properties with known and unknown hazardous and contaminated materials is that these materials could be cleaned up as redevelopment occurs near proposed transit stations.

TABLE 3.2-12
Potential High-Risk Hazardous and Contaminated Material Sites – Eden Prairie Segment

Site Name	Details from MPCA database	Potential Use of the Site by the LPA
Rosemount, Inc. Eden Prairie Facility (12001 Technology Drive)	• Has an open petroleum leak site (Leak site 19163) • A diesel release was reported there on June 28, 2013, but the report does not specify whether there is offsite contamination • Unlikely, but possible, potential for impact to the alignment	• Direct disturbance to parcel due to project construction
Gander Mountain 489 (12160 Technology Drive)[a]	• Inactive VIC site (VP 5452) • No details are provided regarding participation in the VIC program, but the MPCA VIC website indicates that participation was related to offsite contamination from the adjacent Applied Coating Technologies site • The offsite contamination scenario would indicate that the facility is not a contamination source area of concern to the LPA, but that Applied Coating Technologies is a high-risk contamination source area	• No direct disturbance and no indirect disturbance anticipated
Applied Coating Technologies and Fotomart (12150 Technology Drive)[b]	• Includes an unpermitted dump site (REM0460), active VIC sites (VP 5450 and 5451), and an inactive Superfund/CERCLIS (MN 245068) site • Contaminated Groundwater; VIC program groundwater monitoring reports indicate that groundwater has been affected by non-petroleum compounds, although the site reportedly received a No Action letter on December 24, 1996	• No direct disturbance and no indirect disturbance anticipated
One Hour Martinizing (7910 Eden Road)	• Recently activated VIC site (VP 29010) • No information is available on the VIC program website; however, the site (a drycleaner) is a former Small Quantity Generator (SQG) of tetrachloroethene, and it is thus suspected that VIC participation is related to a chlorinated hydrocarbon release	• Direct disturbance to parcel due to project construction for LRT
Former Amoco 2095 (8100 Flying Cloud Drive)[c]	• Has a closed petroleum leak site (Leak site 1523) • Contaminated Groundwater: Soil and groundwater contamination documented, with up to 2.9 feet of liquid phase petroleum on the water table • Vapor intrusion risk from residual petroleum contamination	• No direct disturbance and no indirect disturbance anticipated
Phillips Petroleum (8045 Flying Cloud Drive)[d]	• Has a closed petroleum leak site (Leak site 15560) • Contaminated Groundwater: Soil and groundwater contamination documented, with up to 7.4 feet of liquid phase petroleum on the water table • Vapor intrusion risk from residual petroleum contamination	• No direct disturbance and no indirect disturbance anticipated

[a] Site no longer occupied by Gander Mountain

[b] Site currently occupied by Gander Mountain

[c] Site currently occupied by a BP gas station and Bobby & Steve's Auto World

[d] Site currently occupied by a Holiday gas station

Acronyms

CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System.
SQG = Small Quantity Generators.
VIC = Voluntary Investigation and Cleanup.

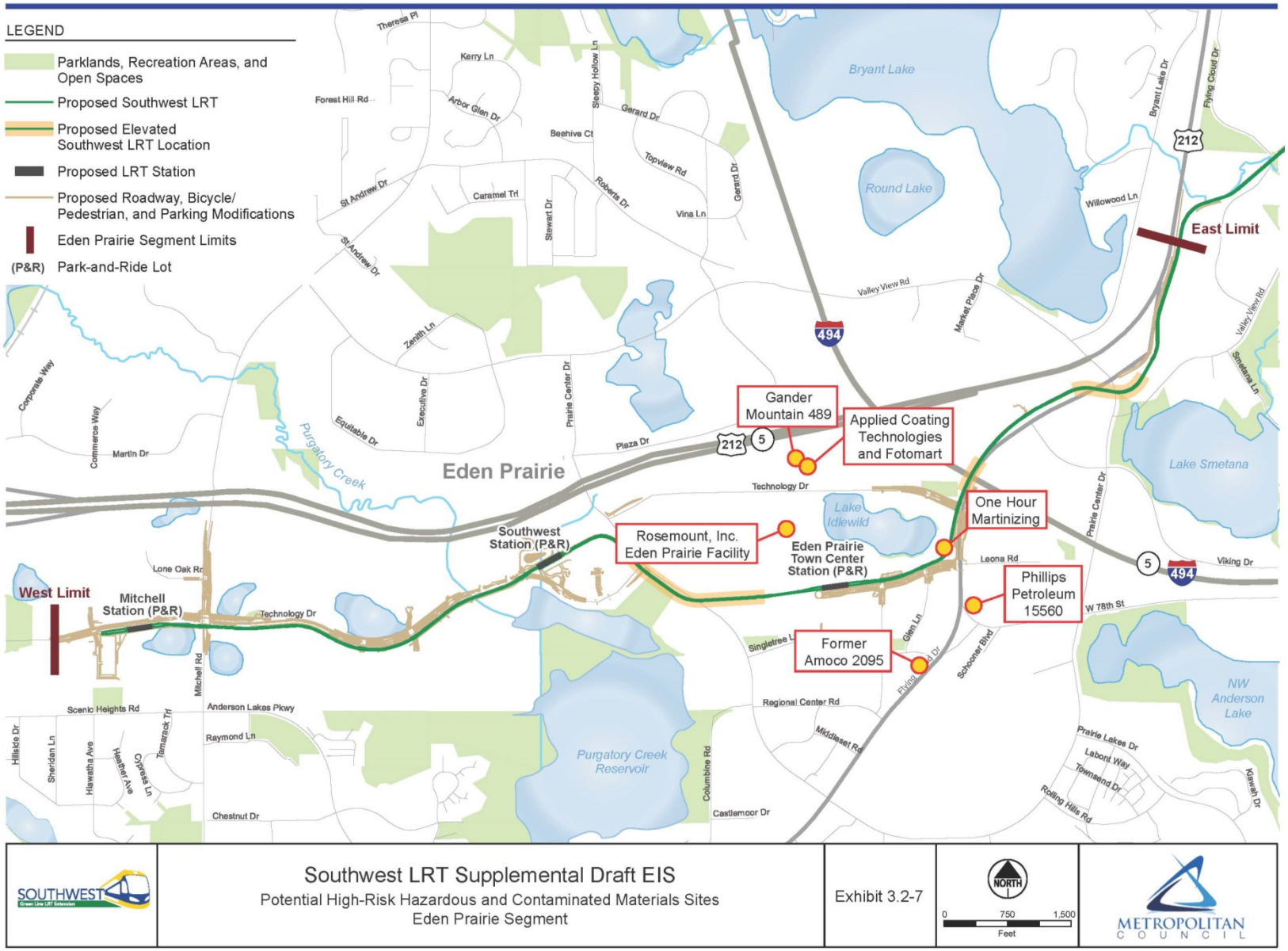
Sources: Minnesota Department of Agriculture (MDA), 2013; Minnesota Pollution Control Agency, (MPCA), 2013.

Short-Term Hazardous and Contaminated Material Impacts

This section describes short-term hazardous and contaminated material impacts caused by constructing the LPA. Table 3.2-12 identifies the potential high-risk hazardous and contaminated material sites in the Eden Prairie Segment that would be directly disturbed by construction activities associated with the LPA.

Of the six high-risk sites identified in Table 3.2-12, the sites with contaminated groundwater are a concern in the event that deep excavation is necessary during construction (these areas were not previously discussed in the Draft EIS). The sites are identified in Table 3.2-12 and will be investigated in the Phase I ESA. Table 3.2-12 lists the potential impacts related to potential high-risk sites. Two sites would be directly

EXHIBIT 3.2-7
Potential High-Risk Hazardous and Contaminated Materials Sites, Eden Prairie Segment



disturbed by construction activities related to the LPA (i.e., Rosemount, Inc. Eden Prairie Facility and One Hour Martinizing).

The potential residual offsite groundwater contamination and the presence of liquid-phase petroleum increase the chances of encountering petroleum-contaminated soil during construction. These factors will need to be considered during groundwater pumping efforts and disposal of water captured during the pumping process. Vapor intrusion to utilities adjacent to these sites is also a concern; the risk will be better characterized in the site assessment(s) to be conducted.

Potential construction impacts could result from use of hazardous and contaminated materials (for example, lubricants, fuels, and solvents) during construction or from encountering sites with existing soil or groundwater contamination as described in more detail in the Draft EIS. The potential short-term construction impacts specified in the Draft EIS, including cost and schedule impacts and potential public and worker exposure to hazardous and contaminated materials, can be reduced or avoided by following the procedures in the MPCA Brownfields Program regulatory framework.

C. Mitigation Measures

Mitigation for potential hazardous and contaminated materials impacts in the Eden Prairie Segment will be conducted within the MPCA Brownfield Program regulatory framework with the Southwest LRT project having been entered in the Brownfield Program on September 8, 2014, and having received site identification numbers PB4648/VP31670 from the MPCA. In accordance with MPCA Brownfield Program guidelines, the forthcoming Phase I ESA and subsequent documents will be submitted to the MPCA Brownfield Program as part of the regulatory process. All mitigation measures will be implemented in accordance with the investigation and mitigation documents submitted to the MPCA. Implementation of these measures would result in controlled management of hazardous and contaminated materials and low risk of human exposure to unhealthy contaminants. A Response Action Plan (RAP) will be developed by the Council and approved by MPCA to address the risks identified in the Phase I and II ESAs. Upon MPCA approval of the RAP, cleanup of identified contamination would begin prior to, or in concert with, project excavation and/or drilling activities. All clean-up activity will be conducted with prior MPCA approval and in accordance with the approved Site Safety and Health Plan and will be continuously monitored by qualified inspectors. A final report shall be prepared and submitted to the MPCA documenting all removal and disposal activity.

It is reasonable to expect that previously undocumented soil or groundwater contamination may be encountered during construction. A Construction Contingency Plan shall be prepared by the Council and approved by MPCA prior to the start of construction to account for the discovery of unknown contamination. This plan will outline procedures for initial contaminant screening, soil and groundwater sampling, laboratory testing, and removal, transport, and disposal of contaminated materials at licensed facilities. Contaminated material removal and disposal would be in accordance with this plan, monitored by qualified inspectors, and documented in final reports for submittal to MPCA.

In addition to contaminated soil and groundwater, the potential exists for structures on acquired lands to contain asbestos, lead paint, or other hazardous and contaminated materials. Any existing structures will be surveyed for the presence of hazardous/regulated materials prior to their demolition or modification. Potentially hazardous and contaminated materials will be handled and managed in compliance with all applicable regulatory standards and will be disposed in accordance with an approved remediation plan.

3.2.3 Economic Effects

New infrastructure projects may affect local businesses, jobs and the influx of money into the economy. This section addresses the potential tax base losses caused by the potential displacement and relocation of businesses in the Eden Prairie Segment. It also discusses the potential for increased property tax revenues from the potential redevelopment of property around the proposed light rail stations within the Eden Prairie Segment and potential mitigation measures for economic effects.

A. Existing Conditions

As discussed in Section 3.2.1.1 of this Supplemental Draft EIS, the Eden Prairie Segment is characterized by commercial, industrial, and mixed land uses. Section 3.2.1.2 and Table 3.2-3 of this Supplemental Draft EIS identify full and partial parcel acquisitions that would need to occur to accommodate the proposed Eden Prairie Segment improvements. The majority of the budgeted general fund revenues for the City of Eden Prairie are from property taxes, comprising 76-percent of the total general fund revenues (City of Eden Prairie, 2012). This Supplemental Draft EIS analyzes the changes related to the City of Eden Prairie property taxes.

B. Potential Economic Impacts

This section identifies the long-term and short-term economic impacts that would result from the conversion of private businesses into transit right-of-way in the Eden Prairie Segment.

Long-Term Direct and Indirect Economic Impacts

This section describes the long-term direct and indirect economic impacts associated with property acquisitions in the Eden Prairie Segment. Within the Eden Prairie Segment, the proposed LPA would require an estimated: two full and 33 partial acquisitions of private properties[18]; and an estimated nine potential business relocations. The property acquisitions would result in an annual reduction in property tax revenue to the City of Eden Prairie of approximately $34,600 per year in property tax revenue, which is approximately 0.2 percent of the total city property tax revenues (based on 2013 property tax receipts)[19]. This loss of property tax revenue could be reduced if less land area is actually used for construction of the LPA. For example, in some cases, the Council may determine that an entire parcel would need to be acquired to accommodate construction, but later, following construction, some property may no longer be needed for the project. In these cases, the excess property would be disposed of per Council policy and applicable federal and state regulations and would likely be sold to return to compatible land use, as discussed in Section 3.1.2.2 of this Supplemental Draft EIS. Further, the loss in property tax revenue due to the acquisition of privately held land has the potential to be offset with increased property tax revenues, if the station areas within the affected city result in higher property values due to improved access and other benefits associated with the proposed light rail stations are within the city limits. The loss of property tax revenue could also be offset if the affected businesses relocate elsewhere within the affected city. Businesses displaced by the project would receive compensation and relocation assistance, as discussed in Section 3.1.2.2 of this Supplemental Draft EIS.

As an indirect economic impact, there is also the potential for increased property tax revenues from the potential redevelopment of property around the proposed light rail stations within the Eden Prairie Segment. Improved transit access can increase the convenience and desirability of surrounding residential, commercial, and office properties. Light rail transit can contribute to existing market forces that can increase the potential for transit-oriented development or redevelopment.

Short-Term Economic Impacts

No short-term economic impacts are expected in the Eden Prairie Segment.

C. Mitigation Measures

No adverse impacts are expected and therefore no mitigation measures have been identified.

3.2.4 Transportation Effects

This section addresses the impacts that the proposed LPA would have on transportation facilities in the Eden Prairie Segment, addressing transit, roadway and traffic, bicycle and pedestrian facilities, and safety and security. Where appropriate, mitigation measures to alleviate adverse impacts are also identified.

[18] Publicly owned parcels acquired by the project are not currently taxed and their acquisition will not change the tax status.
[19] Tax base loss was calculated by dividing the property taxes lost as a result of full property acquisitions by the total property tax collected in Eden Prairie in 2013.

Methodologies and data used to prepare these analyses, updated since publication of the Draft EIS, may be found in Section 3.1.2.12 of this Supplemental Draft EIS.

3.2.4.1 Transit

This section describes impacts that the LPA would have on the existing transit system in the Eden Prairie Segment (express and local bus service), which is operated by SouthWest Transit. As summarized in Table 3.2-1, there is the potential for the LPA to affect fixed route bus service, as well as for changes in service frequencies that are needed to coordinate with light rail service.

The introduction of light rail service in the Eden Prairie segment would include the construction of bus facilities at or near one or more of the proposed light rail stations to facilitate transfers between both light rail and buses and between buses and buses. The Council will continue to coordinate with SouthWest Transit regarding the integration of light rail service with bus service in Eden Prairie during Project Development, Engineering, and Construction.

A. Existing Conditions

This section describes the existing transit system in the Eden Prairie Segment. The existing transit system, including current service and the planned transit system based on the Council's 2030 Transportation Policy Plan (Council, 2010, amended May 2013), are described in Chapter 6 of the Draft EIS. The Draft EIS includes a discussion of SouthWest Transit, a carrier service operating between Chanhassen, Chaska and Eden Prairie, and downtown Minneapolis, which currently provides express bus service to and from the SouthWest Transit Station and local bus service. As noted in Section 6.1.2.1 of the Draft EIS, the principal type of weekday service is intercity express service, with some intercity local and circulating loop services. The type of service currently provided is reflective of the trip-making behaviors of transit users in the study area. Most are commuters making either home-based work or school trips. On weekends, transit service is available on a limited basis within the study area, and is intended to serve home-based work and shopping trips. Most of the express routes operate during the weekday morning and afternoon peak periods, and some off-peak early morning, mid-day, and evening express service is provided at reduced frequencies. Although service headways vary, the majority of the current routes operate at approximately 30-minute headways (or more frequent) during peak periods. Off-peak service is provided by the local and circulating loop routes, running at increased headways, generally between 30 and 60 minutes apart. Directionally, most of the routes provide inbound service to downtown Minneapolis during the morning peak period, with outbound service provided in the afternoon peak period.

The updated proposed operating plan for the Southwest LRT extension is shown in Section 3.1.2.12 and Table 3.1-3 of this Supplemental Draft EIS. This discussion includes changes to the light rail operating plan from what was reported in the Draft EIS, including changing from 7.5-minute headways described in the Draft EIS to 10-minute headways, which are used for analysis in this Supplemental Draft EIS.

B. Potential Transit Impacts

This section identifies the potential long-term and short-term transit impacts that would result from the proposed LPA within the Eden Prairie Segment.

Long-Term Direct and Indirect Transit Impacts

This section describes the potential long-term direct and indirect transit impacts in the Eden Prairie Segment. The primary change in transit service that would occur in the Eden Prairie Segment under the LPA would be the introduction of light rail service to the area, consistent with the Draft EIS. Section 2.3.3.10 of the Draft EIS provides a description of potential transit operations changes that could result from the LPA, including changes that could occur within the Eden Prairie Segment (see Table 2.3-10 of the Draft EIS). In general, bus service (e.g., routing, frequency) could be modified to: provide or improve feeder service to light rail stations; provide service to new or relocated bus facilities; remove or relocate bus service that would duplicate the new light rail service. Those potential changes to transit operations are currently under development and review, which will include consultation with SouthWest Transit. Based on that continuing effort, the forthcoming Final EIS will include a description of changes to transit operations that could result from the implementation of Southwest LRT.

In addition, coordination with SouthWest Transit will continue as the design of the Southwest LRT project elements continues to be developed. Under the LPA, there would be some changes to the layout of the existing SouthWest Station to accommodate the introduction of the light rail platform, light rail alignment, and park-and-ride lot. Those changes in layout, which would be developed in coordination with SouthWest Transit, could affect existing transit facilities on the site, such as bus lanes, staging areas, and passenger amenities. The LPA would provide an indirect benefit of enhanced intermodal transit accessibility that could lead to having higher ridership for both SouthWest Transit service and the Southwest LRT.

Indirect transit impacts would be a coordinated transit service, which may result in additional bus ridership associated with transfers to the new light rail line.

Short-Term Transit Impacts

This section describes the short-term transit impacts in the Eden Prairie Segment caused by constructing the LPA. Construction activities in the segment could lead to road detours and construction-related congestion that could affect SouthWest Transit bus operations. Those potential road detours and construction-related congestion could temporarily lead to increased bus travel times and reduced reliability. Some bus stops in the segment, if located within construction zones, may need to be temporarily closed or relocated. There could also be some short-term temporary effects on waiting passengers at bus stops from project construction noise and dust, depending on the proximity of bus stops and construction sites.

C. Mitigation Measures

Because there would be no long-term adverse impacts from the LPA on transit in the Eden Prairie Segment, no transit mitigation measures have been identified. However, through coordination with SouthWest Transit during project development and engineering, any potential impacts to SouthWest Transit bus operations will be identified and addressed in consultation with SouthWest Transit. If construction-related detours are required that would affect SouthWest Transit bus routes, Metro Transit will communicate those detours as soon as possible to allow SouthWest Transit time to plan for changes to bus routes and to notify affected patrons. The Council will coordinate with SouthWest Transit to ensure Federal and local procedures for any route modifications or the suspension of transit service are followed. This could include a Title VI analysis to determine how service changes would affect low-income and minority communities, as appropriate.

3.2.4.2 Roadway and Traffic

This section describes the proposed roadway modifications and anticipated traffic impacts resulting from the LPA in the Eden Prairie Segment. The traffic impacts analysis completed for this segment is based on projected travel demand, transportation network capacity, transportation system performance measures, and proposed changes to the roadway network.

As summarized in Table 3.2-1, the LPA would result in the following impacts to roadway and traffic in the Eden Prairie Segment:

- There would be eight new light rail at-grade crossings of roadways or driveways.
- One intersection in the a.m. peak hour and three intersections in the p.m. peak hour (2030 average weekday) would not meet LOS standards without mitigation; all intersections during a.m./p.m. peak hours would meet LOS standards with mitigation measures.
- Modifications would be made to existing roadways to accommodate the proposed light rail alignment (Eden Road, Technology Drive, Flying Cloud Drive, and Mitchell Road).
- A new unnamed roadway would be constructed extending west from Eden Road to a cul-de-sac to accommodate the proposed light rail alignment.

A. Existing Conditions

This section describes the roadway and traffic operations in the Eden Prairie Segment. The general transportation analysis methodologies and existing roadway network and traffic operation conditions presented in Chapter 6 of the Draft EIS remain the same for this Supplemental Draft EIS. A description of updated and changed data used in the analysis is described in Section 3.1.2.12 of this Supplemental Draft EIS.

B. Potential Roadway and Traffic Impacts

This section identifies the potential long-term and short-term roadway and traffic impacts that would result from the transportation-related changes within the Eden Prairie Segment.

Long-Term Direct and Indirect Roadway and Traffic Impacts

This section describes the potential long-term direct and indirect roadway and traffic impacts in the Eden Prairie Segment. The proposed LPA would include roadway improvements as described in Section 2.5.1 and shown on Exhibit 2.5-2 of this Supplemental Draft EIS. In general, the proposed roadway improvements would maintain current traffic operations and safety for the integration light rail train operations within the local street network at several locations. There would also be locations where roadway alignments would be shifted to accommodate construction of the proposed light rail alignment within constrained existing right-of-way. Roadway improvements would also include traffic signals that would coordinate both light rail and vehicle movements, and turn lanes for any vehicle movements that would cross the proposed light rail tracks.

Within the Eden Prairie Segment, the LPA would include eight at-grade crossings of existing roadways or private driveways, crossing the following streets: Mitchell Road adjacent to Technology Drive; West Optum Access; realigned East Optum Access/St. Andrew's access drive; Technology Drive, southwest of the Southwest Station; Technology Drive/Flying Cloud Drive; and private driveways at intersections with Eden Road; Glen Lane; Viking Drive (see Exhibit 2.5-2). In addition, one at-grade crossing of a planned *Main Street* that would be a north-south roadway located at the western end of the new, unnamed roadway to be constructed off of Eden Road as part of the Eden Prairie Town Center Station. Proposed at-grade crossings would be gated or signalized.

Following is a list of the key changes to the local roadway network in the Eden Prairie Segment that would result from the LPA:[20]

- Technology Drive would be reconstructed and reconfigured from a two-lane roadway to a three-lane roadway between Mitchell Road and Mitchell Station. At the intersection of Mitchell Road and Technology Drive, an additional left-turn lane would be added to eastbound and westbound Technology Drive, the left-turn lanes would be extended for both northbound and southbound Mitchell Road, and the northbound right turn lane would also be extended.
- Technology Drive would be shifted to the north for 0.3 mile to accommodate the light rail alignment along the south side of the roadway between Southwest Station and Mitchell Road.
- To accommodate the light rail alignment and the new unnamed roadway off of Eden Road between Glen Lane and future "Main Street," Eden Road would be re-constructed and re-configured from a two-lane roadway to a three-lane roadway (one through lane in each direction and a left-turn lane for both eastbound and westbound traffic at each access). The new unnamed roadway off of Eden Road would also be a three-lane roadway. Right-turn lanes would accommodate traffic movements across the LRT tracks.

A LOS analysis was completed for the at-grade intersections with the Eden Prairie Segment for the a.m. and p.m. peak hours. Details of the traffic analysis can be found in the *Supplemental Draft EIS Traffic Analysis – Technical Issue #1 Memo* (AECOM, 2013).

Results of the a.m. and p.m. traffic operations analysis are summarized in Tables 3.2-13 and 3.2-14, respectively. Based on state and local standards, intersections that operate or would operate at LOS E or F

[20] All of these modifications would be confirmed as design proceeds and any changes would be reflected in the forthcoming Final EIS. As part of the design and engineering process, the Council also developed a design adjustment that would implement a western terminus of the proposed light rail line at the Southwest Station. As a result of that western terminus, there would be no Mitchell Station or park-and-ride lot and the proposed structured park-and-ride lot at Southwest Station would be increased by approximately 600 spaces. The western terminus at the Southwest Station would also include additional northbound and southbound through lanes on Prairie Center Drive, generally between Highway 212 and Technology Drive, designed to accommodate increased peak-period traffic to and from the larger park-and-ride lot.

are considered congested and do not meet standards. The analysis results for unsignalized intersections are shown with two levels of service: (1) the LOS for the overall intersection and (2) the LOS for the approach with the highest average delay.

As shown in Table 3.2-13, one intersection, at Mitchell Road and Technology Drive, would exceed LOS D in the forecast year under the LPA during the a.m. peak hour. During the p.m. peak hour, the intersection at Flying Cloud Drive/Technology Drive/I-494 South Ramp would operate at LOS E under the LPA in both 2018 and the forecast year, as shown in Table 3.2-14. This deterioration in operations would be the result of additional delays and queuing of the eastbound right-turn movement, which would be restricted to no right turns on red because of the light rail at-grade crossing. The eastbound left-turn and through movements and the northbound left-turn movement would also be delayed by light rail vehicles passing through the intersection.

In addition, the intersection of Mitchell Road/Technology Drive would operate at LOS F in the forecast year in the p.m. peak hour under the LPA. This LOS would be the result of longer delays and queuing for several movements including northbound, eastbound, and westbound left-turn and right-turn lanes, which would be delayed due to the at-grade light rail crossing.

TABLE 3.2-13
Intersection Level of Service – A.M. Peak Hour

Intersection	Existing	2018 No Build	2018 LPA	2030 No Build	2030 LPA	2030 LPA Mitigated
Flying Cloud Drive/Viking Drive	A/C	A/D	B	B/F	B	-
Flying Cloud Drive/I-494 North Ramp	B	B	B	B	C	-
Flying Cloud Drive/Technology Drive/I-494 South Ramp	B	B	C	B	D	-
Flying Cloud Drive/Eden Road	B	B	B	B	B	-
Eden Road/Glen Lane	A/A	A/A	B	A/B	B	-
Eden Road/Eden Road	A/A	A/A	B	A/A	B	-
Technology Drive/SW Station west bus access	A/B	A/B	C	A/B	C	-
Technology Drive/Southwest Condos (East Driveway)	A/B	A/C	A/C	A/C	A/D	-
Technology Drive/Southwest Condos (West Driveway)	A/B	A/B	A/B	A/C	A/C	-
Technology Drive/St Andrews (East Driveway)	A/B	A/B	A/B	A/C	A/C	-
Technology Drive/MTS (East Driveway)	A/B	A/B	(1)	A/C	(1)	-
Technology Drive/Optum (East Driveway)	A/B	A/C	C	A/C	C	-
Technology Drive/Optum (West Driveway)	A/A	A/B	B	A/B	C	-
Mitchell Road/Technology Drive	C	C	D	D	F	D
Technology Drive/Hiawatha Avenue/Mitchell Station Access	A/B	A/B	B	A/C	B	-

Notes: At unsignalized intersections, the first LOS is for the overall intersection, while the second represents the LOS on the most heavily traveled roadway approach. Shaded and hatched cells denote locations with LOS E or F.
(1) = Roadway realigned to create four-legged intersection with Technology Drive/Optum (East Driveway) under LPA.
Source: Council, 2013.

Preliminary intersection configuration changes, accounting for park-and-ride traffic, are included in the current LPA design, particularly on Prairie Center Drive and Technology Drive adjacent to the Southwest Station. LOS operations will be evaluated and presented in the Final EIS to confirm that no other mitigation is necessary for these intersections and the results of that analysis will be included in the forthcoming Final EIS.

TABLE 3.2-14
Intersection Level of Service – P.M. Peak Hour

Intersection	Existing	2018 No Build	2018 LPA	2030 No Build	2030 LPA	2030 LPA Mitigated
Flying Cloud Drive/Viking Drive	A/E	A/F	B	C/F	B	-
Flying Cloud Drive/I-494 North Ramp	C	C	C	D	D	-
Flying Cloud Drive/Technology Drive/I-494 South Ramp	C	C	E	D	E	D
Flying Cloud Drive/Eden Road	C	C	C	C	C	-
Eden Road/Glen Lane	A/B	A/B	B	A/C	C	-
Eden Road/Eden Road	A/A	A/A	B	A/B	B	-
Technology Drive/SW Station west access	A/B	A/B	C	A/B	C	-
Technology Drive/Southwest Condos (east driveway)	A/B	A/C	A/C	A/C	A/E	-
Technology Drive/Southwest Condos (west driveway)	A/B	A/B	A/B	A/B	A/C	-
Technology Drive/St Andrews (east driveway)	A/B	A/B	A/C	A/C	A/C	-
Technology Drive/MTS (east driveway)	A/B	A/C	(1)	A/D	(1)	-
Technology Drive/Optum (east driveway)	A/B	A/B	C	A/B	C	-
Technology Drive/Optum (west driveway)	A/B	A/C	B	E/F	C	-
Mitchell Road/Technology Drive	C	C	D	D	F	D
Technology Drive/Hiawatha Avenue/Mitchell Station Access	A/B	A/B	B	A/C	C	-

Notes: At unsignalized intersections, the first LOS is for the overall intersection, while the second represents the LOS on the most heavily traveled roadway approach. Shaded and hatched cells denote locations with LOS E or F.
(1) = Roadway realigned to create four-legged intersection with Technology Drive/Optum (East Driveway) under LPA.
Source: Council, 2013.

Short-Term Roadway and Traffic Impacts

This section describes the short-term roadway and traffic impacts associated with construction of the LPA. The LPA would result in changes to traffic and local circulation patterns during construction, particularly at the station areas, at the at-grade crossings, and where grade separations are planned, as shown on Exhibit 2.5-2. Construction of the LPA would result in temporary impacts on arterials, local streets, and parking within the construction areas. While the overall construction would last approximately 3 years, most impacts would occur during the civil construction period (light rail and/or roadway construction) that would range from approximately one to two years.

Construction activities that would be expected to have roadway impacts include utility relocation, roadway construction, light rail construction, truck hauling, demolition, and construction staging. Additional modifications to existing roadways in the Eden Prairie Segment would include:

- Roadway closures or lane reductions due to construction of the light rail overpass at Flying Cloud Drive/ Valley View Road intersection
- Reconstruction of the intersection of Flying Cloud Drive/Technology Drive/I-494 South Ramp to accommodate the proposed light rail alignment on the north side of the roadway and additional turn lanes on Flying Cloud Drive and Technology Drive
- Reconstruction of Eden Road between Flying Cloud Drive and where Eden Road turns to the south, to accommodate the proposed light rail alignment and additional turn lanes on Eden Road
- Reconstruction of Technology Drive at the western access into the proposed Southwest Station park-and-ride lot to provide capacity improvements

- Reconstruction and realignment of Technology Drive for 0.3 mile between the proposed Southwest Station and Mitchell Road
- Reconstruction of the east and north approaches to Mitchell Road/Technology Drive intersection
- Reconstruction and reconfiguration of Technology Drive between Mitchell Road and Mitchell Station

C. Mitigation Measures

Mitigation will be identified for the following conditions:[21]

- Intersections that would operate at LOS D or better under No Build Alternative conditions in the forecast year which would operate at LOS E or F in the forecast year under the LPA will be mitigated to operate at LOS D or better
- Intersections that would operate at LOS E or F in the forecast year under No Build Alternative conditions which would operate at a worse LOS in the forecast year under the LPA will be mitigated to operate at No Build Alternative conditions or better

Following are general strategies that could be used to improve operations at intersections where mitigation would be warranted:

- Optimizing signal splits (green time) and offsets
- Adding new traffic signal controllers, pedestrian controllers, and signage at crossings
- Modifying a light rail at-grade crossing from preemption to a priority strategy
- Adding left- or right-turn lanes
- Lengthening left- or right-turn lanes
- Adding lanes to the cross-street approaches
- Providing a grade separation between the roadway and LRT guideway (or in specific circumstances)
- Restricting or removing full access

Based on preliminary analysis, these strategies will improve the operations of congested intersections as a result of the project to acceptable levels. More detailed analysis and impacts of mitigation measures will be included in the Final EIS.

During construction, contractors will be required to comply with all state and local regulations concerning the closing of roadway and the effects of construction activities. Contractors will also be required to comply with the guidelines established in the Minnesota Manual on Uniform Traffic Control Devices. The Council will develop a construction staging plan (staging plan), which will be reviewed with all appropriate jurisdictions and railroads, and the contractor will be required to secure all necessary permits and follow the staging plan, unless otherwise approved. Components of a staging plan will include:

- Traffic management plans reviewed by all appropriate jurisdictions prior to the start of construction activities. In some cases, intersections may need to be modified to minimize vehicle delay. Measures could include the addition of turn lanes, the construction of temporary traffic signals, the revision of existing signal timing plans, or the addition of warning signs.

  Detailed construction timeline developed before the initiation of construction activities that would inform roadway users and adjacent property owners about when the activities would begin, the type of work being performed, an estimate of when the work will be completed, and recommendations on how individuals and entities can minimize disruption to their activities.

Impacts related to temporary changes to access will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

[21] Final mitigation measures will be included in the Final EIS, and will be determined based on a combination of factors such as traffic operations, impacts, and effectiveness of the proposed mitigation.

3.2.4.3 Parking

This section describes the potential changes to on- and off-street parking in the Eden Prairie Segment due to the LPA. As summarized in Table 3.2-1, the LPA would result in the addition of 30 new on-street parking spaces related to the construction of a new roadway segment and the displacement of approximately 250 private off-street parking spaces that serve existing businesses at eight locations. Proposed park-and-ride lots in the segment that are associated with the three proposed light rail stations in the segment are described in Section 2.5.1 of this Supplemental Draft EIS and the cumulative supply of parking spaces within those lots would meet demand in the forecast year.

A. Existing Conditions

Parking for personal automobiles in the Eden Prairie Segment is predominantly privately owned, off-street parking associated with individual businesses, office complexes, and commercial retail malls. Off-street parking in the segment is generally provided on surface parking lots, with some structured parking facilities, including a structured park-and-ride lot serving the existing SouthWest Transit Station near the intersection of Highway 212 and Prairie Center Drive. On-street parking is relatively limited in the segment and is generally prohibited along the arterial street network in the vicinity of the proposed light rail alignment.

B. Potential Parking Impacts

This section describes the anticipated long-term and short-term (construction-related) impacts to parking in the Eden Prairie Segment that would result from the LPA.

Long-Term Direct and Indirect Parking Impacts

This section describes the long-term direct and indirect impacts to parking in the Eden Prairie Segment that would result from the LPA.

Long-term direct impacts to parking in the Eden Prairie Segment would result from the LPA through the addition of approximately 30 on-street spaces and the displacement of approximately 250 off-street parking spaces. The additional 30 on-street parking spaces would be along the proposed new unnamed local street that would extend west from the existing Eden Road. The displacement of approximately 250 off-street parking spaces would generally be associated with the potential full or partial property acquisitions by the project.[22] Table 3.2-15 summarizes the off-street parking displacements that would result from the LPA. The number of off-street parking spaces displaced and the layout of the affected off-street parking spaces would ultimately be determined through the property acquisition process, which will occur during the Engineering and construction phases.

TABLE 3.2-15
Eden Prairie Segment – Potential Off-Street Parking Displacements

Location	Existing	Displaced	Type of Property Acquisition
13550 Technology Drive	41	41	Full
13250 Technology Drive	132	14	Partial
13000 Technology Drive	52	4	Partial
12001 Technology Drive	583	42	Partial
8000 Eden Road	179	36	Partial
7900 Eden Road	103	103	Full
7915 Eden Road	41	9	Partial
7740 Flying Cloud Drive	135	1	Partial
Total	1,266	250	

Source: Council, 2014.

[22] One location where approximately four off-street parking spaces would potentially be displaced would not result from the acquisition of property. Instead, they would be a result of a potential change to the layout of an existing surface parking lot. The changes to the existing parking lot could occur, with agreement by the property owner, as a way to address anticipated increased automobile traffic in the parking lot due to the addition of the structured park-and-ride lot adjacent to the proposed Southwest Station (at 13000 Technology Drive).

Indirectly, the LPA could affect the supply of and demand for off-street parking in the Eden Prairie Segment due to development that could be attracted to the new light rail station areas. Any development occurring within the segment would, however, be required to comply with the City of Eden Prairie's parking requirements, which would tend to ensure a long-term balance of parking supply and demand.

Sizing the park-and-ride lots in this segment to cumulatively meet forecast demand for park-and-ride spaces in this segment would help to minimize spill-over park-and-ride parking at the proposed light rail stations in the segment.

Short-Term Parking Impacts

This section describes the short-term (construction related) parking impacts associated with construction of the LPA in the Eden Prairie Segment. In general, there would be no short-term impacts to on-street parking in the segment because there are no on-street parking spaces within the direct vicinity of the project's construction area. Short-term off-street parking impacts would generally be restricted to the eight properties where off-street parking spaces would be displaced. Additional off-street parking spaces within those parking lots could be temporarily displaced if the layouts of those parking lots are modified to adjust for the displaced off-street parking spaces.

C. Mitigation Measures

Because the project would increase the supply of on-street parking spaces in the segment, no mitigation measures for on-street parking impacts have been identified. Mitigation of the displacement of off-street parking spaces for the parcels that would be fully acquired by the project is not be warranted, because the businesses that the parking spaces are associated with would also be displaced. Mitigation of the displacement of off-street parking for the parcels where the existing businesses would remain on their existing parcels will be determined through the property acquisition process, which would occur during the Engineering and construction phases. The primary mitigation measure that would be considered through that process would be potential modifications to the layout of the remaining parking lot to increase the number of off-street parking spaces and potential modifications to the design of the project to reduce the number of displaced off-street parking spaces. Property owners would be compensated for loss of parking in compliance with the Uniform Relocation Act. Where eliminated spaces are associated with partial property acquisitions, mitigation will be determined in the final agreement with the property owner consistent with the requirements of the Uniform Act.

Impacts related to temporary changes to parking will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.2.4.4 Bicycle and Pedestrian

This section describes the potential changes to bicycle and pedestrian facilities that would result from implementation of the LPA within the Eden Prairie Segment. As summarized in Table 3.2-1, there would be long-term changes to trail alignments at light rail crossings with no change in trail connectivity and temporary trail detours would provide for continued trail connectivity during construction.

A. Existing Conditions

This section describes the existing bicycle and pedestrian facilities in the Eden Prairie Segment. Section 3.2.1.4 of this Supplemental Draft EIS provides a description of the existing trails' relationships to recreation areas in the Eden Prairie Segment, including trails within parklands, recreation areas, and open spaces. Those trails are Purgatory Creek Park Trails and Nine Mile Creek Conservation Area Trails.

In general, sidewalks or trails are currently available on at least one side of adjacent roadways to the LPA within the Eden Prairie Segment, with pedestrian crossings at all major signalized intersections providing sufficient pedestrian connections across the right-of-way and adjacent to the LPA corridor. There is a mid-block pedestrian crossing located on Technology Drive, midway between Mitchell Road and Prairie Center Drive. Bicycle routes typically follow existing street networks.

B. Potential Bicycle and Pedestrian Impacts

This section identifies the potential long-term and short-term impacts that would result from the changes to bicycle and pedestrian facilities within the Eden Prairie Segment.

Long-Term Direct and Indirect Bicycle and Pedestrian Impacts

This section describes the long-term direct and indirect bicycle and pedestrian impacts in the segment. The LPA would not have long-term effects on the Purgatory Creek Park Trails or Nine Mile Creek Conservation Area Trails within the Eden Prairie Segment.

Portions of local trails and sidewalks adjacent to the west side of Flying Cloud Drive, both sides of Eden Road, and both sides of Technology Drive, between the Southwest Station and Mitchell Station, would be maintained. Those trails and sidewalks would be reconstructed as part of the roadway reconstruction necessary to accommodate the LPA. The reconstructed trail on the west side of Flying Cloud Drive would remain outside of Purgatory Creek Park and it would continue to connect to the park's trails and sidewalks. A new segment of sidewalk/trail would be added along the south side of Technology Drive between West Mitchell Road and the Mitchell Station.

A new sidewalk connection would be constructed between the existing trail on the north side of Singletree Lane into the parking area located just south of the Eden Prairie Town Center Station to provide pedestrian connection between Singletree Lane and the station. A new sidewalk would also be constructed along Eden Road at the Eden Prairie Town Center.

Further design refinements affecting bicycle and pedestrian facilities could be incorporated into the LPA through the completion of the Project Development phase and addressed in the forthcoming Final EIS.

As noted in the Draft EIS, a potential indirect effect of the LPA could include a change in demand using existing pedestrian and bicycle facilities to access proposed light rail stations. The Draft EIS notes that there would be a potential for greater use of bicycle and pedestrian facilities located near transit stations and demand for more facilities, goods, and services related to those modes.

Short-Term Bicycle and Pedestrian Impacts

This section describes the short-term bicycle and pedestrian impacts associated with construction of the LPA in the Eden Prairie Segment.

Reconstruction of bicycle and pedestrian facilities would result in only short closures during the period of construction. Trails and sidewalks would be reconstructed in their new locations before the existing trail is removed and traffic would be diverted to the new trail, or an acceptable detour route providing the same connections would be provided and signed during construction. Potential impacts on other local pedestrian and bicycle facilities would be minimized by providing detours or clearly delineated facilities within construction areas, such as protected walkways. The public would be notified of temporary detours, closures, and new facilities, as appropriate. Short-term effects on pedestrian and bicycle routes within the Eden Prairie Segment would be minimized through, signage, information fliers, website postings with maps of construction areas/detours, and notices placed at bicycle shops. Construction documents would require the contractor to comply with all traffic management best practices and local regulations. A traffic management plan will be developed to document how pedestrians and bicyclists, as well as motor vehicle traffic, would be accommodated during construction.

C. Mitigation Measures

Because there would be no long-term adverse impacts from the LPA on bicycle and pedestrian facilities in the Eden Prairie Segment, no long-term mitigation measures have been identified. Short-term effects on pedestrian and bicycle routes will be mitigated through signage, information fliers, website postings with maps of construction areas/detours, and notices placed at bicycle shops, for example.

Impacts related to temporary changes to bicycle and pedestrian facilities will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and

highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.2.4.5 Safety and Security

This section discusses potential safety and security issues for pedestrians, automobile traffic, and emergency service providers at at-grade intersections with light rail tracks. Mitigation measures to alleviate these potential impacts are also identified. The Draft EIS addresses safety and security under the broader category of Social Effects (see Section 3.7 of the Draft EIS). As summarized in Table 3.2-1, there would be eight new at-grade light rail crossings of roadways where emergency vehicles could be delayed for up to one minute, typically 12 times per hour.

A. Existing Conditions

See Section 3.7.2 of the Draft EIS for a description of existing conditions for the safety and security assessment, which has not changed since publication of the Draft EIS.

As discussed in Section 3.1.2.12 of this Supplemental Draft EIS, the Southwest LRT Project will conform to the FTA's State Safety Oversight Program for Rail Safety. This topic will be covered in detail in the forthcoming Final EIS.

B. Potential Safety and Security Impacts

This section identifies the potential long-term and short-term impacts on safety and security that would result in the Eden Prairie Segment that are specifically associated with at-grade intersections that would be introduced by the proposed Eden Prairie Segment improvements.

Long-Term Direct and Indirect Safety and Security Impacts

This section describes the long-term direct and indirect safety and security impacts in the Eden Prairie Segment. Under the LPA, the proposed light rail alignment in the Eden Prairie Segment would predominantly be located in dedicated right-of-way, which would minimize conflicts with vehicular traffic, bicycles, and pedestrians. However, in areas where light rail trains would operate at-grade, the potential for train-vehicle or train-pedestrian conflicts would be present. Eight light rail at-grade crossings of roadways or driveways, shown on Exhibit 2.5-2, would be introduced in the Eden Prairie Segment under the LPA. These would be crossings of the following roads: Mitchell Road adjacent to Technology Drive, West Opus Access, realigned East Opus Access/St. Andrew's access drive, Technology Drive southwest of the Southwest Station, Eden Road, Glen Lane, Technology Drive/Flying Cloud Drive, and Viking Drive. There would also be one at-grade crossing of a planned "Main Street" that is a new north/south roadway located at the western end of the extension of Eden Drive for the Eden Prairie Town Center Station. There would be the potential for emergency vehicle delays of up to approximately one minute, 12 times per hour, at the eight new light rail at-grade crossings.

To avoid the potential for incidents at at-grade intersections, crossings would be signalized or equipped with gates with bells to warn of oncoming trains. The trains will also have bells and horns. Bells, gates, and horns would be activated according to Metro Transit operating procedures and safety guidelines. Light rail trains that cross streets or intersections with automatic gate crossings would require emergency vehicles to yield for their movement. Further details associated with signal prioritization and protocols will be developed in coordination with local jurisdictions.

Short-Term Safety and Security Impacts

This section describes the short-term safety and security impacts caused by construction of the LPA in the Eden Prairie Segment. Construction activities in the Eden Prairie Segment under the LPA would temporarily result in increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours. This temporary increase in roadway congestion could affect access and response times for public service providers, including emergency service providers and public utilities and transportation. However, provisions would be made to maintain required accesses during established periods or to keep one lane of traffic open on main arterials. Before construction, traffic control plans would be reviewed and approved by applicable agencies before implementation. Before construction,

the Council will coordinate with public service providers on required detour routes and lane closures in order to minimize increases in travel and response times and to minimize impacts on solid waste and recyclables collections and the transportation of students.

C. Mitigation Measures

During construction, roadways could temporarily be fully or partially closed, limiting access and requiring temporary detours. These temporary detours could cause minor delays in emergency response times and cause detours for other public services. Metro Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times. Other mitigation measures could include signage, information fliers, and website postings with maps of construction areas/detours. Specific mitigation measures will be discussed in the Final EIS when additional design and construction information will be available, in accordance with Federal, state and local requirements.

3.2.5 Environmental Justice Compliance

This section describes: (a) the minority and/or low-income populations in the Eden Prairie Segment; (b) the opportunities provided to minority and/or low-income populations to participate in the Southwest LRT Project planning process; and (c) a summary of impacts in the Eden Prairie Segment that could impact environmental justice populations. In summary, changes to the anticipated environmental impacts in the Eden Prairie Segment would not change the preliminary environmental justice finding for the LPA[23] in the Draft EIS (see Table 10.6-1 in Section 10.6 of the Draft EIS). A final corridor-wide environmental justice analysis, including a final project-wide finding, will be completed as part of the Final EIS.

The Eden Prairie Segment environmental justice study area is illustrated on Exhibits 3.2-8 and 3.2-9 and defined in Section 3.1.2.14 of this Supplemental Draft EIS.

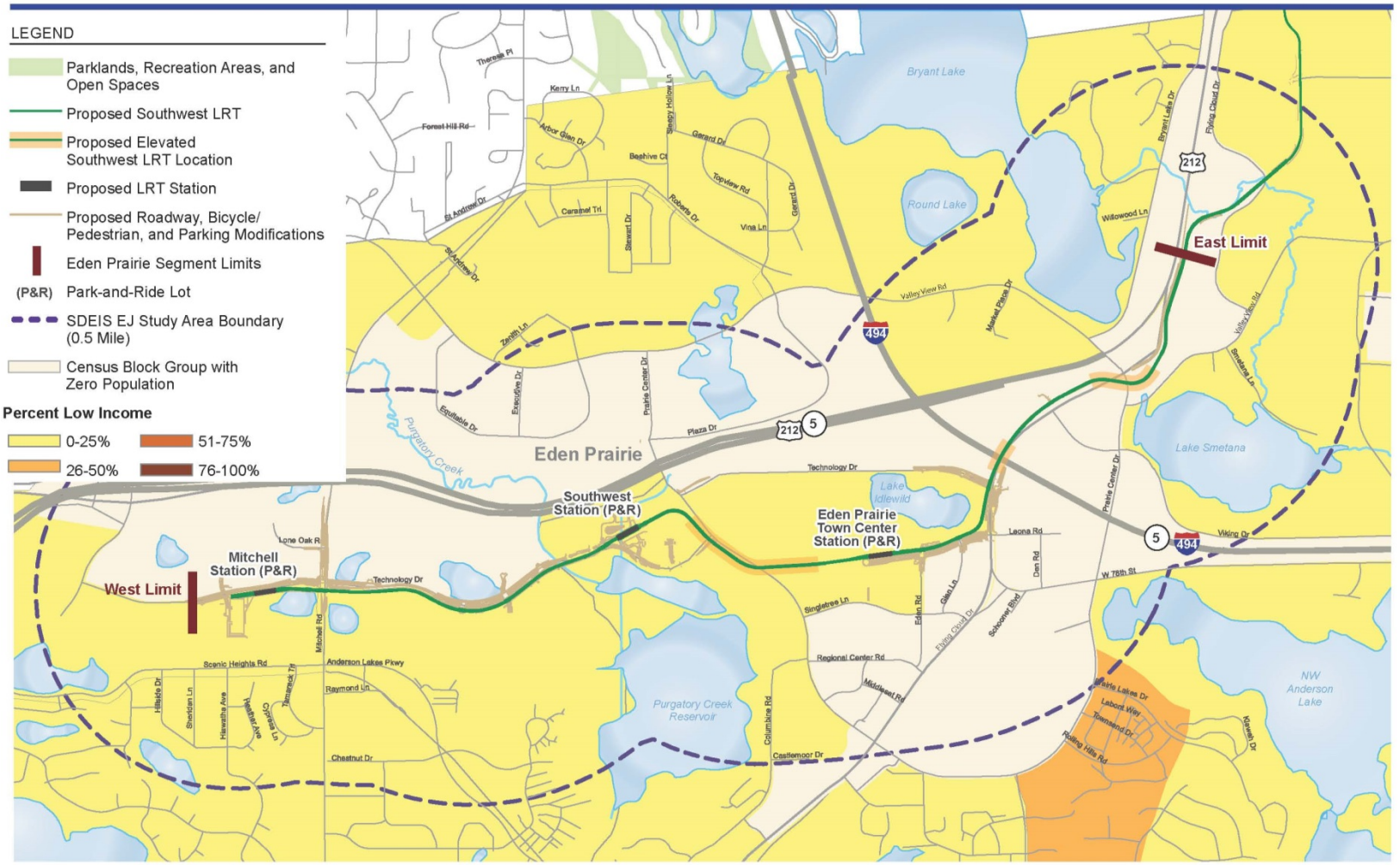
A. Demographic Characteristics

This section provides updated demographic data for the environmental justice study area, defined in Section 3.1.2.14, that have changed since publication of the Draft EIS. Other data and characteristics that have not changed since publication of the Draft EIS can be found in Section 10.3 of the Draft EIS and are not repeated herein. The environmental justice analysis in this section of the Supplemental Draft EIS is based on new and updated data sources to describe demographic characteristics surrounding and within the Eden Prairie Segment environmental justice study area, such as updated 2010 U.S. Census data and minority and school lunch enrollment data for public elementary schools that have attendance boundaries encompassing the study area. Additional information on these new and updated data is provided in Section 3.1.2.14 of this Supplemental Draft EIS. Table 3.2-16 provides updated information on the demographic characteristics of the LPA in the Eden Prairie Segment environmental justice study area, compared to the City of Eden Prairie and Hennepin County. Exhibits 3.2-8 and 3.2-9 illustrate the concentration of minority and low-income populations within the segment's study area. The exhibits also illustrate areas in the study area with no population (as identified in 2010 U.S. Census block groups or Census blocks with zero population). The exhibits show that the majority of the population in the study area is located towards the outer edges of the study area. The segment's environmental justice study area contains a higher minority population than greater Eden Prairie and Hennepin County (35.2 percent, compared to 20.0 and 28.3 percent, respectively). The percent of the study area's low-income population (6.4 percent) is similar to that of greater Eden Prairie, but almost half that of Hennepin County's low-income population (5.3 and 12.3 percent, respectively).

Providing additional context for the U.S. Census data, Table 3.2-17 contains information on the 2010-2011 school year collected from the National Center for Education Statistics for the two elementary schools that draw students from larger areas encompassing portions of the segment's environmental justice study area. Of the students enrolled in the two elementary schools, 55.8 and 38.6 percent were identified as minority students and 43.7 and 8.6 percent were enrolled in the school's free-lunch program, respectively.

[23] The LPA was included within LRT 3A and LRT 3A-1 of the Draft EIS. See Chapter 2 of this Supplemental Draft EIS and of the Draft EIS for additional information on the LPA as described in the Draft EIS.

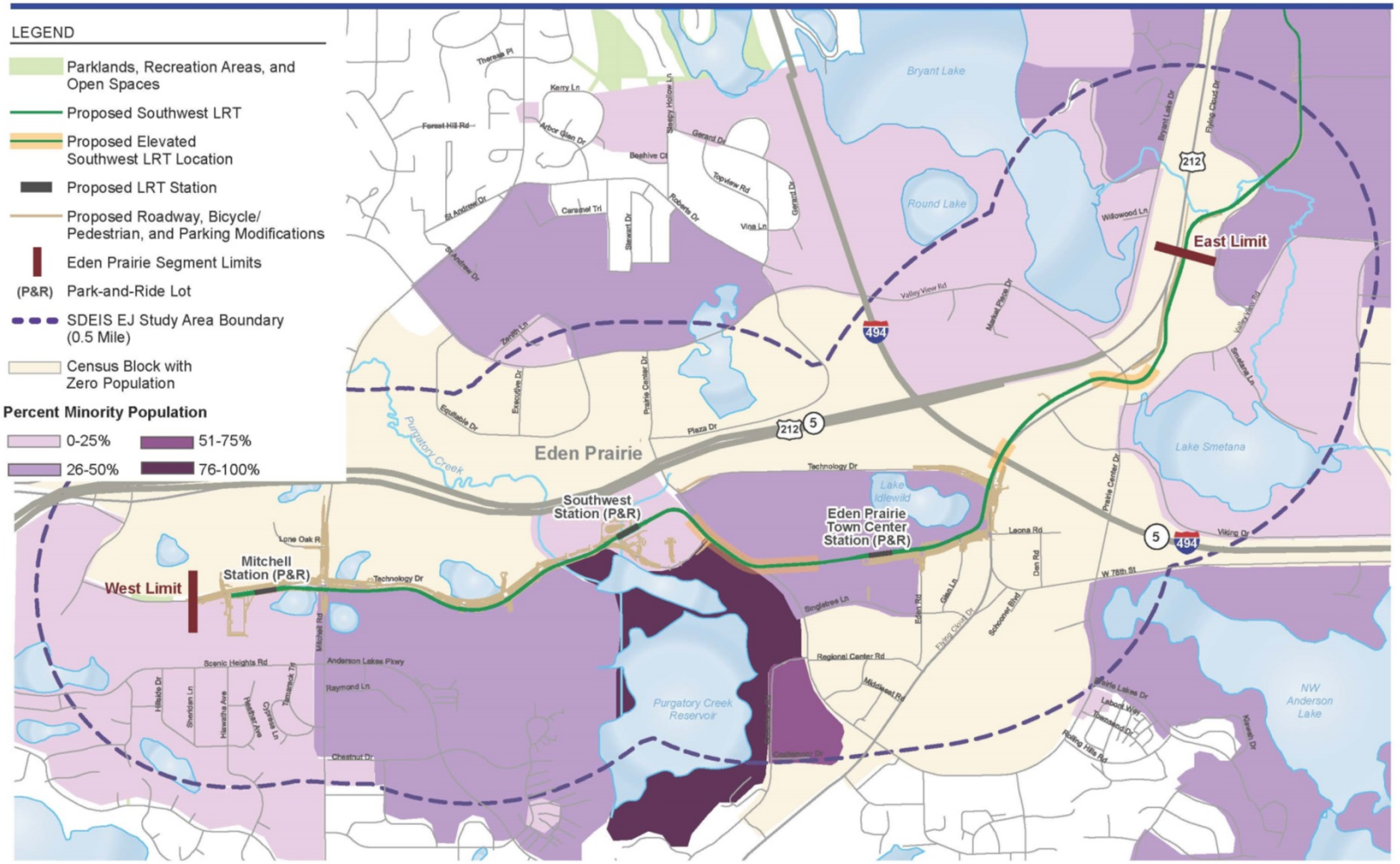
EXHIBIT 3.2-8
Low-Income Population Within Census Block Groups, Eden Prairie Segment



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Low-Income Population Within Census Block Groups Eden Prairie Segment	Exhibit 3.2-8	NORTH 0 750 1,500 Feet	METROPOLITAN COUNCIL

EXHIBIT 3.2-9
Minority Population Within Census Blocks, Eden Prairie Segment



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Minority Population Within Census Blocks Eden Prairie Segment	Exhibit 3.2-9	NORTH 0 750 1,500 Feet	METROPOLITAN COUNCIL

TABLE 3.2-16
Demographic Characteristics – Eden Prairie Segment Environmental Justice Study Area, City of Eden Prairie, and Hennepin County

Characteristic	Eden Prairie Environmental Justice Study Area	City of Eden Prairie	Hennepin County
Total Population[a]	7,694	60,797	1,152,425
Minority Population[a]	2,711 (35.2%)	12,143 (20.0%)	325,755 (28.3%)
Population for whom Low-Income Determined[b]	13,168	59,927	1,124,293
Low-Income Population[b]	838 (6.4%)	3,180 (5.3%)	138,258 (12.3%)

[a] Information based upon 2010 U.S. Census data.
[b] Information based upon 2007-2011 American Community Survey data.
Sources: U.S. Census, 2010; 2012.

TABLE 3.2-17
Eden Prairie Segment Public Elementary School Demographics (2010-2011 School Year)

School	Total Students	Minority Population	Free Lunch
Forest Hills Elementary	577	322 (55.8%)	252 (43.7%)
Cedar Ridge Elementary	914	353 (38.6%)	79 (8.6%)

Sources: National Center for Education Statistics, 2012. U.S. Department of Education Institute of Education Sciences.

B. Outreach to Minority and Low-Income Populations

Section 10.4 of the Draft EIS summarizes environmental justice-related public involvement performed as part of the Draft EIS process. Since completion of the Draft EIS, the Southwest LRT Project provided project information via its website, distributed information at community events, coordinated with the media, and conducted public meetings and open houses. Those activities were used to convey information on the various steps in the project process and opportunities to the public on the overall project, including proposed adjustments to the light rail-related improvements included within the Eden Prairie Segment. Those activities were also used as a venue to the public to comment on the various design adjustments under consideration at the time. Additional information on these public engagement activities is provided in Chapter 4 of this Supplemental Draft EIS.

As part of the technical issue areas included within the Eden Prairie Segment (described in Section 2.3.1.2 of this Supplemental Draft EIS), evaluation criteria and measures on potential design adjustments being considered at the time were presented to several committees, including the CAC. CAC members represent neighborhood groups, special-interest groups, advocacy groups, educational institutions, and ethnic communities, several of which represent areas that include environmental justice populations. The project team also participated in numerous meetings and events at the request of CAC members. The project team also responded to requests for meeting participation made by community groups that are not officially part of the CAC, including those groups representing environmental justice communities. Throughout the technical issue area process, members of the committees were provided information on the potential design adjustments to the LPA under consideration for review and comment. In addition, open houses were held at milestones during the evaluation process to allow the communities, including the City of Eden Prairie, an opportunity to comment on the potential design adjustments. Section 2.4 of this Supplemental Draft EIS describes the process used by the Council to develop, evaluate, and identify the potential design adjustments considered for incorporation into the LPA. Section 2.3.1 of this Supplemental Draft EIS provides additional information on the range of potential design adjustments to the LPA in the Eden Prairie Segment that were considered and the various criteria and measures used to evaluate them.

C. Environmental Justice Analysis Summary

The USDOT Order on environmental justice (USDOT, 2012) states that policies, programs, and activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations. Table 3.2-1 summarizes the long-term impacts that would be associated with the proposed Eden Prairie

Segment, which are described in greater detail throughout Section 3.2 of this Supplemental Draft EIS. The table also summarizes by environmental category whether or not the LPA has the potential to result in

disproportionately high and adverse impacts to EJ populations. The DOT Order defines "disproportionately high and adverse effect on human health or the environment," to include:

"an adverse effect that:

(a) is predominantly borne by a minority population and/or a low-income population, or

(b) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

Section 8.b of the USDOT Order on environmental justice (USDOT, 2012) states that, in making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account.

As previously noted, the Draft EIS included a preliminary finding that the LPA would not result in a disproportionately high and adverse impact to EJ populations (see Table 10.6-1 in Section 10.6 of the Draft EIS). Table 3.2-18 provides a summary of the preliminary assessment of whether the anticipated environmental impacts within the Eden Prairie Segment would likely change the preliminary assessment in the Draft EIS and result in disproportionately high and adverse impacts to environmental justice populations. This assessment considers the potential environmental benefits the project would have for environmental justice populations, as well as mitigation measures identified throughout Section 3.2 of this Supplemental Draft EIS. The project's Final EIS will include a final project-wide environmental justice assessment, which will include FTA's final environmental justice finding for the project.

TABLE 3.2-18
Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – Eden Prairie Segment

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Social Effects		
Land Use	• Direct conversion of about 22.3 acres of land to public transportation-related use • Potential indirect land use impact from possible redevelopment around station areas • LPA is compatible with adopted plans and existing land use • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	None: LPA is consistent with adopted land use plans and would not change overall land use character of the segment *No disproportionately high and adverse impacts on EJ populations*
Acquisitions and Displacements	• Acquisition of two full and 33 partial parcels • Potential relocation of an estimated nine businesses • Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property	None: no residential displacements and potentially displaced businesses do not predominantly serve EJ populations *No disproportionately high and adverse impacts on EJ populations*
Cultural Resources	• Phase I/II archaeological testing needed at two remaining locations within the APE • No long-term impacts due to the proposed LPA are anticipated • No short-term impacts due to the proposed LPA area anticipated	None: no adverse effects on cultural resources in the segment *No disproportionately high and adverse impacts on EJ populations*
Parklands, Recreation Areas, and Open Spaces	• Long-term effect on the setting of Purgatory Creek Park • Short-term construction (temporary) impacts on Purgatory Creek Park (i.e., visual quality, noise, and access) and the Nine Mile Creek Conservation Area (short-term occupancy of open space during construction)	None: adverse indirect impacts (visual) to one park would impact both EJ and non-EJ populations and would be offset by improved transit access to/from the park *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Visual Quality and Aesthetics	• Of the 10 viewpoints analyzed, two would experience a "substantial" overall level of impact and eight would experience a "not substantial" level of impact • Potential construction-related visual impacts	None: visual impacts in the segment would be moderate or lower and would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Environmental Effects		
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Peats and fat clays west of the proposed Eden Prairie Town Center Station, near the proposed Southwest Station, and along the alignment between the Southwest Station and the Mitchell Station, would require remediation (e.g., soil replacement, pile foundations) • Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction	None: generally compatible with geologic conditions and no long-term effect groundwater; short-term water pumping would include BMPs to avoid adverse temporary impacts on groundwater and soils *No disproportionately high and adverse impacts on EJ populations*
Water Resources	Wetlands: • Permanent fill of 4.7 acres of wetlands • Short-term impacts on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction	None: impacts on wetlands would be mitigated in compliance with federal and local requirements and adverse impacts would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
	Floodplains: • 13.4 acres of fill within a floodplain • Potential for construction-related sedimentation flow into the floodplain	None: impacts on floodplains would be mitigated in compliance with federal and local requirements and adverse impacts would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
	Public Waters and Stormwater Management: • New light rail crossing of Purgatory Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction	None: new light rail crossing of Purgatory Creek would comply with federal and local requirements and stormwater would be treated to meet local requirements *No disproportionately high and adverse impacts on EJ populations*
Noise	• One moderate noise impact at Baymont Inn, and one moderate and one severe noise impact at Residence Inn[b] • Potential impacts at the Optum Auditorium on Technology Drive, which will be assessed in the Final EIS • Short-term noise impacts associated with construction activities and construction vehicles	None: no moderate or severe noise impacts with identified mitigation measures; short-term noise impacts would be avoided or minimized through BMPs and adverse impacts would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Vibration	• No vibration impacts (potential impacts at the Optum Auditorium on Technology Drive will be assessed in the Final EIS) • Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles	None: no vibration impacts *No disproportionately high and adverse impacts on EJ populations*
Hazardous and Contaminated Materials	• If permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system • Six potentially high-risk sites that could affect the project • Encountering sites with existing contamination during construction	None: no likely risks of hazardous and contaminated material contamination during operations; BMPs would effectively manage risks during construction and known sites that would be disturbed are removed from residential properties *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Economic Effects		
Economic	• Annual reduction of $34,600 in City of Eden Prairie property tax revenue (year 2013) (0.2 percent of total) • No short-term impacts due to the proposed LPA are expected	None: effect on local tax revenues is minor and adverse effects on EJ populations would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Transportation Effects		
Transit	• Extension of LRT service to Eden Prairie • No planned changes to existing bus service, but SouthWest Transit[c] could alter service • Road detours and construction-related congestion that could affect SouthWest Transit bus operations	None: transit service would be improved for EJ populations *No disproportionately high and adverse impacts on EJ populations*
Roadway and Traffic	• Traffic delays of approximately 50 seconds, 12 times per hour, at eight new light rail at-grade crossings of roadways or private driveways • One intersection in the a.m. peak hour and three intersections in the p.m. peak hour would not meet Level of Service (LOS) standards without mitigation;[d] modifications to existing roadways (Eden Road, Technology Drive, Flying Cloud Drive, and Mitchell Road) • New unnamed roadway extending west from Eden Road to a cul-de-sac • Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities	None: all intersection would meet LOS standards or would not be worse than no-build conditions and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Parking	• 30 on-street parking spaces added along a new street segment • Displacement of 250 private off-street parking spaces serving businesses at eight locations • Short-term off-street parking impacts would generally be restricted to the eight properties where off-street parking spaces would be displaced	None: on-street parking spaces would increase and displacement of private off-street parking spaces would and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Bicycle and Pedestrian	• Long-term changes to trail alignments at light rail crossings with no change in trail connectivity • Temporary trail detours would provide for continued trail connectivity during construction • Short closures of bicycle and pedestrian facilities during the period of construction	None: all trail and sidewalk connections would be maintained and temporary detours would be provided during construction as needed *No disproportionately high and adverse impacts on EJ populations*
Safety and Security	• Potential for emergency vehicle delays of up to one minute, 12 times per hour, at eight new LRT at-grade crossings • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours	None: potential for emergency vehicle delays of up to 1 minute at new LRT at-grade street crossings would be minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

[a] Considering mitigation measures identified in Section 3.2 of this Supplemental Draft EIS and whether the adverse impacts of the project suffered by the minority population and/or low-income population and would be appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

[b] Without mitigation. Where identified and implemented, mitigation will reduce the number of noise impacts exceeding FTA criteria. Mitigation measures at the hotels will be determined in the Final EIS – see Section 3.2.2.3 for additional information.

[c] SouthWest Transit is a private bus service, providing local and express bus service within Eden Prairie.

[d] All intersections during a.m./p.m. peak hours would meet LOS standards with mitigation measures (average weekday in 2030).

Note: Data are approximate.

Source: CH2M HILL, 2014.

Following is a description of the preliminary findings summarized in Table 3.2-18. As noted, the preliminary finding associated with impacts in the Eden Prairie Segment will not change the preliminary finding in the

Draft EIS that the LPA does not result in disproportionately high and adverse impacts to environmental justice populations.

Based on the analysis described in Section 3.2 of this Supplemental Draft EIS and summarized in Table 3.2-18, the following environmental categories would not result in any disproportionately high and adverse impacts on EJ populations within the Eden Prairie segment in terms of: land use; cultural resources; parklands, recreation areas, and open spaces; geology and groundwater; wetlands; floodplains; public waters and stormwater management; hazardous and contaminated materials; vibration; economic effects; transit; and roadway and traffic. In addition, the following environmental categories were not evaluated within this Supplemental Draft EIS for the Eden Prairie Segment, for reasons outlined in Section 3.1.1 of this Supplemental Draft EIS: socioeconomics; neighborhoods and community; biota and habitat; threatened and endangered species; farmlands; air quality; electromagnetic interference and utilities; energy and climate change; and freight rail.

Acquisitions and Displacements

Section 3.2.1.2 (including Exhibit 3.2-1) of this Supplemental Draft EIS describes the analysis of potential property acquisitions and displacements resulting from the LPA. While the LPA would result in the acquisition of approximately one acre of residential property, it would not result in the long term or temporary displacement of any residents within the Eden Prairie Segment. The LPA would result in the purchase of two full commercial parcels in the Eden Prairie Segment, which could result in the need for up to nine businesses to relocate. One of those parcels is occupied by a family restaurant chain and the other is occupied by a strip mall housing approximately nine businesses, such as a fast food restaurant, an international delivery service, and a credit union. None of the businesses predominantly serve environmental justice populations and it is likely that at least some of the businesses could be relocated within Eden Prairie through the property acquisition process. A third full parcel acquisition in the Eden Prairie Segment is a vacant publicly-owned parcel serving as a roadway median between Technology Drive and Highway 212 east of Prairie Center Drive.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse acquisitions and displacements affecting environmental justice populations in the Eden Prairie Segment.

Visual Quality and Aesthetics

Section 3.2.1.5 of this Supplement Draft EIS describes the potential impacts that the LPA would have on visual quality and aesthetics in the Eden Prairie Segment (see Appendix J – Visual Resources Technical Report). Of the impacts of the LPA on the visual environment, eight are considered to be "low" and two are considered to be "moderately low." In summary, the at-grade light rail elements, including overhead catenary wires, would be compatible with adjacent roadway infrastructure and would not lower the visual quality of the commercial and office park development patterns. The segments on elevated structures, in some cases, have the potential to create a higher, but still moderate, level of visual effect. Project design and landscaping have the potential to attenuate the project's impacts, and in general, the project would have an appropriate visual fit with its setting. None of the viewpoints assessed would be predominantly viewed by environmental justice populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse impacts to visual quality and aesthetics affecting environmental justice populations in the Eden Prairie Segment.

Noise

Section 3.2.2.3 of this Supplemental Draft EIS describes the potential impacts that the LPA would have on noise in the Eden Prairie Segment (see also Appendix H – Noise and Vibration Memoranda). In summary, the analysis found that there would be no severe or moderate noise impacts to homes, condominiums, or apartments in the segment. The analysis found that there would be one moderate and one severe noise impacts without mitigation, each to a different hotel in the same general location south of Highway 212 and

west of Valley View Road. Both of these noise impacts could be avoided through mitigation measures. Neither hotel predominantly serves minority or low-income populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse noise impacts to environmental justice populations in the Eden Prairie Segment.

Parking

Section 3.2.4.3 of this Supplemental Draft EIS describes the potential impacts to parking resulting from the LPA in the Eden Prairie Segment. On-street parking would increase in the segment under the LPA by approximately 30 spaces, associated with the construction of a new local unnamed street segment extending west from the existing Eden Road. This increase in on-street parking would be a noticeable beneficial impact in the vicinity of the new street segment, as there is relative limited on-street parking in the vicinity of the proposed Eden Prairie Town Center Station. The LPS would also result in the displacement of approximately 250 privately owned off-street parking spaces. Over half of those displaced off-street parking spaces are currently associated with businesses that would also be displaced by the project (see Table 3.2-15). In general, the remaining displaced parking spaces would be associated with six properties that would be partially acquired by the project. It is anticipated that the existing businesses would remain on those properties following the property acquisition process. Mitigation of those displaced parking spaces would be determined through the property acquisition process, which would occur during the Engineering and construction phases. The primary mitigation measure that would be considered through that process would be modifications to the layout of the remaining parking lots to increase the number of remaining off-street parking spaces, as well as the consideration of modifications to the design of the project to reduce the number of displaced off-street parking spaces. None of the areas of displaced off-street parking spaces serve existing businesses that predominantly serve environmental justice populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse parking impacts to environmental justice populations in the Eden Prairie Segment.

Bicycle and Pedestrian

Section 3.2.4.4 of this Supplemental Draft EIS describes the impacts that the LPA would have on the bicycle and pedestrian facilities within the Eden Prairie Segment. Specifically, portions of local trails and sidewalks adjacent to the west side of Flying Cloud Drive, both sides of Eden Road, and both sides of Technology Drive, between the Southwest Station and Mitchell Station, would be maintained. Those trails and sidewalks would be reconstructed as part of the roadway reconstruction necessary to accommodate the LPA. A new sidewalk/trail would be added along the south side of Technology Drive between West Mitchell Road and the Mitchell Station. A new sidewalk connection would be constructed between the existing trail on the north side of Singletree Lane into the parking area located just south of the Eden Prairie Town Center Station to provide pedestrian connection between Singletree Lane and the station. A new sidewalk would also be constructed along Eden Road at the Eden Prairie Town Center. In summary, all existing bicycle and pedestrian connections would be maintained or improved with the reconstructed trails and sidewalks. If sidewalks or trails are temporarily closed during construction, alternate detour routes and signage would be provided.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse bicycle and pedestrian impacts to environmental justice populations in the Eden Prairie Segment.

Safety and Security

Section 3.2.4.5 of this Supplemental Draft EIS describes the effects that the LPA would have on safety and security in the Eden Prairie Segment. In particular, the section notes that the LPA would result in the addition of eight new light rail grade crossings of local streets within the Eden Prairie Segment. To avoid the potential for incidents at at-grade intersections, crossings would be signalized or equipped with gates with bells to warn of oncoming trains. The trains would also have bells and horns. Bells, gates, and horns would be activated according to Metro Transit operating procedures and safety guidelines. Light rail trains that cross

streets or intersections with automatic gate crossings would require emergency vehicles to yield for up to one minute for their movement. Further details associated with signal prioritization and protocols would be developed in coordination with local jurisdictions. Adverse effects on emergency vehicle travel times would not would not be predominantly borne by EJ populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse safety and security impacts to environmental justice populations in the Eden Prairie Segment.

3.3 Hopkins Operations and Maintenance Facility

This section provides a summary of the potential environmental impacts that would result from a proposed light rail Operations and Maintenance Facility (OMF), which would be an element of the Southwest LRT Project, and supplements information provided in the project' s Draft EIS. This section addresses existing conditions within the vicinity of the proposed OMF site, potential long-term and short-term (construction-related) impacts resulting from the proposed OMF, and identifies mitigation measures.

As described and illustrated in Section 2.5 of this Supplemental Draft EIS, the Council identified a proposed site for an OMF in the City of Hopkins that is now incorporated into the project's LPA. A conceptual engineering drawing of the proposed Hopkins OMF is in Appendix G of this Supplemental Draft EIS. The proposed Hopkins OMF would be located approximately 1,000 feet south of the proposed Shady Oak Station. As shown on Exhibit 2.5-3 in this Supplemental Draft EIS, the proposed OMF site would occupy an approximately 15-acre site between the Bass Lake Spur to the south, 5th Street South (K-Tel Drive) to the north, 15th Avenue South to the east, and the proposed light rail mainline to the west.

While the Draft EIS addresses four potential OMF sites (see Section 2.3.3.9 of the Draft EIS for a description of those sites), it also notes that a broader and more detailed evaluation of potential locations would occur after the Draft EIS. Section 2.4 of this Supplemental Draft EIS summarizes the process used by the Council to identify design adjustments to the LPA since publication of the Draft EIS. Section 2.3.2 provides a summary of the range of potential OMF sites that were developed and evaluated after publication of the Draft EIS, including the criteria and evaluation measures used by the Council to identify the OMF site to incorporate into the LPA.

The analysis conducted for this Supplemental Draft EIS focuses on the following environmental categories that could potentially identify new significant adverse impacts not previously disclosed in the Draft EIS:

- Land use
- Acquisitions and displacements
- Geology and groundwater
- Water resources: wetlands, floodplains, public waters, and stormwater management
- Hazardous and contaminated materials
- Economic effects
- Roadway and traffic
- Parking
- Safety and security

An assessment of impacts to environmental categories that would not differ substantially from those addressed in the Draft EIS will be updated in the Final EIS. Section 3.1 of this Supplemental Draft EIS provides a description of the environmental categories addressed in this section. It also provides a general description of the methodologies, data, and regulations used to prepare this analysis, including a description of updates since the Draft EIS. Where applicable by resource category, Section 3.1 also includes a description of agency coordination that has occurred since publication of the Draft EIS. Table 3.3-1 identifies the environmental categories evaluated in this section and summarizes the key findings of that analysis by environmental category.

This section concludes with an update of the project's environmental justice compliance for the proposed Hopkins OMF, addressing the environmental categories evaluated throughout Sections 3.3.1 to 3.3-4.

Section 3.3.5, Environmental Justice Compliance, provides a summary of: updated demographic characteristics of environmental justice populations in the segment; the project's environmental justice-related public involvement efforts in the segment since publication of the Draft EIS; and the updated impacts relative to environmental justice populations in the OMF environmental justice study area.

3.3.1 Social Effects

This section addresses the following environmental categories that would be affected by the proposed Hopkins OMF: land use and acquisitions and displacements. In general, this section describes the existing conditions, potential environmental impacts, and mitigation measures for each environmental category addressed.

3.3.1.1 Land Use

This section describes how the proposed Hopkins OMF (as part of the LPA) would affect land use. In particular, this section describes:

- Existing land uses and land use designations in the segment.
- The compatibility of the LPA with local land use plans
- How the current use of parcels of land would change under the LPA (e.g., from private commercial use to public transportation) and how that might affect the overall character of land uses within the vicinity of the site
- How the LPA could indirectly affect adjacent properties by attracting transit-oriented development

While changes in transportation systems can influence changes in nearby land uses, local jurisdictions control land use regulations and only the jurisdictions have the ability to make changes to directly influence land uses. For the evaluation contained in this section, the project's land use compatibility and conformance with existing land use policies and plans was measured and compared to the following plans:

- *Hopkins Comprehensive Plan* (City of Hopkins, 2009): Provides a vision for the city that includes enhancing downtown Hopkins, redeveloping transportation corridors, and protecting open spaces. Includes a future land use plan for the city which calls for continued industrial use for the proposed Hopkins OMF.
- *City of Minnetonka Comprehensive Guide Plan* (City of Minnetonka, 2009): Includes a future land use plan for the city which shows continued industrial use adjacent to and west of the proposed Hopkins OMF, and mixed use to the south and west.

As summarized in Table 3.3-1, the proposed Hopkins OMF would result in the direct conversion of 18.2 acres of private land to a public transportation use, which would not change the overall character of land within the vicinity of the OMF, and it would be compatible with existing land uses and zoning within the vicinity of the proposed site.

A. Existing Conditions

This section describes existing conditions at the OMF site related to land use. The existing land uses and zoning within the City of Hopkins are documented in Section 3.1.2 of the Draft EIS. The land uses in the vicinity of the proposed Hopkins OMF site illustrated in the Draft EIS remain unchanged.

In summary, the proposed Hopkins OMF site currently has mixed industrial land uses and is zoned for industrial uses. Existing land use on parcels adjacent to the proposed OMF site include: office and industrial to the north; the former Hopkins landfill south of the Bass Lake Spur; office, industrial, and distribution development east of 15th Avenue; and industrial and distribution development to the west beyond the proposed light mainline, which is in the City of Minnetonka. There is a mixed-use development approximately 800 feet southwest of the site, which is zoned as Planned Unit Development that includes some residential use. The proposed OMF improvements would be allowable under Hopkins's existing Comprehensive Plan and zoning designations, as well as compatible with surrounding land uses.

TABLE 3.3-1
Summary of Findings for the Hopkins Operations and Maintenance Facility Site

Resource Group Environmental Category	Summary of Findings
Social Effects	
Land Use	• Direct conversion of 18.2 acres of land to public transportation-related use • No change in the overall land use character of the surrounding area • LPA is compatible with adopted plans and existing land use • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property
Acquisitions and Displacements	• Acquisition of eight full and one partial parcels • Potential relocation of five businesses • Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property
Environmental Effects	
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term groundwater pumping due to potentially contaminated groundwater • Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction
Water Resources	• Wetlands: • Permanent fill of approximately 0.7 acre of wetlands • Short-term impacts to wetlands during construction such as temporary fill • Erosion and sedimentation during construction
	• Floodplains: • Approximately 0.6 acre of permanent fill within a floodplain • Potential for construction-related sedimentation flow into the floodplain
	• Public Waters and Stormwater Management: • No impacts on Nine Mile Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction
Hazardous and Contaminated Materials	• Four high-risk sites of concern, two onsite and two adjacent to the site • If permanent pumping of groundwater is needed, there is potential for contaminated groundwater to enter the groundwater pumping system • Potential spills during construction • Encountering sites with existing contamination during construction
Economic Effects	
Economic	• Annual reduction of $99,200 in City of Hopkins property tax revenues (year 2013) (0.8 percent of total) • Addition of approximately 160 long-term jobs associated with operations of the facilities and light rail vehicles • Beneficial short-term impacts of construction include the influx of business during construction • Increased noise during construction and temporary access restrictions to businesses during construction
Transportation Effects	
Roadway and Traffic	• Permanent vacation of 16th Avenue South, between 5th and 6th Streets South • One new non-revenue light rail at-grade road crossing • Temporary impacts to traffic on adjacent streets, with a potential increase in truck traffic due to construction activities
Parking	• Displacement of 43 on-street parking spaces • Displacement of 310 off-street parking spaces associated with four potential full property acquisitions • Temporary displacement of parking on 15th Avenue

Resource Group Environmental Category	Summary of Findings
Safety and Security	• Potential for emergency vehicle delays of up to one minute at one new non-revenue light rail at-grade road crossing • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours
Environmental Justice Compliance	
Environmental Justice Compliance	• No disproportionately high and adverse impacts on EJ populations identified

Note: Data are approximate.
Source: CH2M HILL, 2014.

B. Potential Land Use Impacts

This section discusses the potential impacts on the land use patterns related to the Hopkins OMF. Direct land use impacts would occur in locations where the LPA would require private or public property acquisition for the OMF. These property acquisitions would convert property to a transportation-related use. Direct impacts also include proximity impacts (e.g., traffic, noise, and visual impacts) that could cause changes in adjacent land uses.

Indirect land use impacts affect the development and/or redevelopment of land (such as transit-oriented development) in the vicinity of the proposed project facilities (i.e., light rail line, stations, parking facilities, traction power substations). In addition to those uses allowed by current zoning and land use codes, jurisdictions could enact changes in their codes to spur other development and/or redevelopment.

Long-Term Direct Land Use Impacts

For the purpose of this land use analysis, the entire area of property that would be acquired by the project, as reported in Section 3.3.1.2 of this Supplemental Draft EIS, is defined as a direct change in land use.

Implementation of the OMF would require the permanent conversion of approximately 18.2 acres of industrial land to a public transportation-related use, as shown in Table 3.3-1. The proposed Hopkins OMF site will consist of nine existing parcels: one undeveloped lot, two driveways, and six properties with office/ warehouse uses or light manufacturing and assembly. All of these properties are both zoned and used for industrial purposes.

Under the site's conceptual layout design, the proposed OMF would be located along the west edge of the site, adjacent to the proposed light rail mainline. As an allowed use within this industrially- zoned area of Hopkins, the OMF is consistent with its surrounding land uses and would not change the overall character of land uses in the area around the OMF.

Long-Term Indirect Land Use Impacts

As noted in Sections 3.1.5.1 and 9.6.3.2 and Table 9.5-1 of the Draft EIS, indirect impacts from the proposed light rail project would be more likely to occur as a result of and in the vicinity of light rail stations, such as the Shady Oak Station, which would be located north of the OMF site. In summary, the Draft EIS notes that it would be through changes in accessibility that the LPA would have most of its effect on land uses. Further, those changes in accessibility to and from properties would primarily be due to the presence of new light rail stations. In particular, the presence of light rail stations may most likely make undeveloped parcels in the vicinity of stations more attractive to developers and lead to higher-density residential development, enhanced employment opportunities, and improved transit connections to new or existing services, activity centers, and public facilities.

Because the proposed Hopkins OMF would be used to perform light maintenance on light rail vehicles and is not a light rail station, the OMF is not anticipated to attract transit-oriented development nor would it influence growth patterns and neighborhood characteristics on adjacent land. However, portions of the proposed OMF site are within the area of potential land use influence of the proposed Shady Oak Station. As such, the Hopkins OMF would proportionately reduce the overall size of the area that could be influenced by the proposed station for more intense development and redevelopment. Because the proposed Hopkins OMF

and uses that would occur within it are compatible with existing adjacent land uses, it would not limit future development of adjacent parcels, which would remain as industrial uses.

Short-Term Land Use Impacts

This section describes the short-term land use impacts anticipated during construction of the proposed Hopkins OMF. In general, construction-related activities associated with the proposed Hopkins OMF would not change the land use of the area in the long-term. Short-term land use impacts resulting from the Hopkins OMF could include temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities throughout all or part of the construction period. Temporary occupancies of parcels would include the use of construction easements or intergovernmental agreements and would not change existing land uses in the long-term. The short-term impacts to nearby property that could indirectly affect their use could include potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing other properties. Although some businesses may experience hardship during construction due to those types of impact, the impacts would not affect land use type unless the property became vacant. Construction activities could also affect access to adjacent parcels through temporary road, trail, and sidewalk closures. Those temporary closures are anticipated from activities such as connecting road reconstruction, construction of the non-revenue track connecting the OMF to the light rail mainline, or utility relocations or extensions. Construction activities are anticipated to require easements beyond the property acquisition needed within the project limits. If needed, these easements might affect portions of other properties. Any construction easements would be temporary and will be returned to preconstruction conditions upon completion, depending on executed agreements.

In addition, some of the property acquired by the project, as identified in Table 3.3-2, may not be needed in the long-term after construction of the project is complete. For example, there is a portion on the east side of the site that would remain unused as part of the OMF. In this or similar cases, unneeded areas of property would be considered remnant parcels, which would be identified after construction is complete and could be sold in compliance with the FTA Circular 5010.1D, and applicable state regulations, thereby changing land use impacts to the remnant parcels from long-term to short-term impacts.

TABLE 3.3-2
Hopkins OMF Site – Parcel Descriptions

Property Address	Hennepin County PIN	Current Use[a]	Building Footprint (square feet)	Parcel Size (acres)	Area to be Acquired[b] (acres)	Acquisition Type
1600 5th Street South	25-117-22-23-0059	Industrial	42,253	2.23	2.23	Full
544 16th Avenue South	25-117-22-23-0060	Industrial	43,560	2.15	2.15	Full
610 16th Avenue South	25-117-22-23-0049	Industrial	67,953	5.09	5.09	Full
1520 5th Street South	25-117-22-23-0045	Industrial	43,560	1.86	1.86	Full
Address Unassigned	25-117-22-23-0046	Industrial	0	0.94	0.94	Full
510 15th Avenue South	25-117-22-23-0047	Industrial	22,651	1.13	0.50	Partial
1515 6th Street South	25-117-22-23-0050	Industrial	60,548	5.33	5.33	Full
Address Unassigned	25-117-22-23-0054	Industrial (driveway)	0	0.08	0.08	Full
Address Unassigned	25-117-22-23-0055	Industrial (driveway)	0	0.05	0.05	Full
Total			280,525		18.2	

[a] The conversion from existing land uses to transportation use is consistent with relevant local land use plans and policies, which generally call for continued industrial use in the area of the Hopkins OMF, as previously described.

[b] Public and private parcel acreages will continue to be developed, and reported in the Final EIS. Parcel acquisitions of <0.5 acre are approximated at 0.5 acre or at the total parcel size (whichever is less).

Note: For the purpose of this analysis, parcels within or partially within the construction limits for the Hopkins OMF were quantified.

Acronym: PIN = property identification number

Sources: MnDOT 2014 and Hennepin County Property Tax Information Search.

BMPs identified in Section 3.1 of the Draft EIS, including development of a BMP construction plan, will apply to construction of the Hopkins OMF. Construction BMPs, including preparation of a BMP construction plan, will be developed prior to construction to address optimum traffic re-routing measures, minimization of lane and sidewalk closures, and maintenance and timely removal of temporary traffic control devices. In addition, potential modifications to the construction schedule and other measures will be incorporated into the plan to minimize temporary impacts. For example, the BMPs could include working with residents and businesses to provide alternative access, as well as providing advance notice of construction activities, trail or sidewalk closures and detour routes. To minimize construction-related noise and dust impacts on adjacent land uses, contractors would be required to comply with applicable laws regarding proper use of construction equipment and onsite construction and public safety standards applicable to ADA access requirements and with keeping construction equipment outfitted with appropriate environmental protection features, such as noise mufflers and air filters, to minimize exhaust.

C. Mitigation Measures

Because the potential land use changes resulting from the proposed OMF are consistent with existing plans and policies, no mitigation measures addressing long-term land use impacts have been identified. As design progresses for the Shady Oak Station, the Council will continue to work with the City of Hopkins to ensure that the proposed OMF would remain compatible with existing land uses and will be consistent with the City of Hopkins Comprehensive Plan.

The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.1 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to ensure consistency with existing land uses and to determine need for providing alternative access to neighborhoods, properties, and businesses during construction.

3.3.1.2 Acquisitions and Displacements

This section identifies potential long-term and short-term impacts related to the purchase of parcels needed to accommodate the proposed Hopkins OMF. As summarized in Table 3.3-1, the proposed Hopkins OMF will result in the acquisition of eight full and one partial parcels of land and the potential relocation of up to an estimated five businesses.

As with the overall project, the proposed Hopkins OMF remains in the Project Development phase of design, based on the conceptual engineering design (see Appendix G). As the level of detail in the design increases, the project team will continue to work to avoid and minimize property acquisitions and displacements required for the LPA, including the proposed Hopkins OMF. Changes in property acquisitions and displacements associated with the proposed Hopkins OMF will be presented in the Final EIS.

A. Existing Conditions

This section describes existing conditions related to the purchase of land parcels needed to accommodate the project, as well as the requirement that current parcel occupants would be required to vacate as a result of some of the land acquisitions. Because the proposed Hopkins OMF site was incorporated into the LPA after publication of the Draft EIS, discussion of acquisitions and displacements directly related to the site were not included in the Draft EIS. Right-of-way impacts presented in this document remain preliminary and are subject to change as the project design proceeds.

When an acquisition occurs, it typically results in either a full or partial acquisition of a parcel's inherent real estate property interests and rights, or an easement. A partial acquisition would occur if only a portion of the entire parcel was required to accommodate the project infrastructure and facility needs. This would occur if, for example, a portion of a commercial parking lot fronting the alignment is required, but not the adjacent commercial building located away from the immediate alignment area. A full acquisition could occur when the majority of the property is required to provide sufficient right-of-way for elements such as the horizontal alignment of stations with park and ride facilities or for maintenance facilities. A full acquisition could result from a severe loss of access (e.g., driveway access is eliminated) that reduces the useful operation of a property, despite all attempts to avoid or offset the impact through restored ingress/egress. An easement can involve a general or specific portion of the property and can be either on, below, or above (aerial) the

surface of the property. As applicable, easements can be temporary (during construction) or permanent. A temporary construction easement is an easement required during construction that would revert back to the owner of record after completion of construction activities. Its use is not limited to construction staging or equipment use. It could also include actual construction of temporary facilities that would be removed prior to reversion of the property to the owner of record (e.g., temporary shoring, temporary retaining walls, temporary erosion control, temporary drainage system, temporary detour, etc.). Permanent easements may be obtained for access to another property, usually called "access and egress" easements. An easement can involve a general or specific portion of the property and can be either at the surface level, beneath or above (aerial) the property. Permanent underground easements are used when tunneling for a subway and for underground utilities. Permanent aerial easements are used for the operation of an elevated transit line, where necessary, if located within property outside of the project's right-of-way.

Article 6 of a Cooperation Agreement between the Council and MnDOT states that MnDOT, acting for the Council, may acquire all lands, easements, and rights-of-way required for the project in the name of the Council, unless the Council and MnDOT mutually agree otherwise. The Council also reserves the right to acquire any and all real property interests itself. Project acquisitions and displacements would comply with the Uniform Relocation Act and state law and would be consistent with the design plans for the project. The acquisition process would also follow the Real Estate Acquisition and Management Plan, which will be developed and maintained during Project Development, Engineering, and construction phases. In carrying out property acquisitions, MnDOT would use all powers available to them under applicable law (Council and MnDOT, 2012). See Section 3.1.2.2 of this Supplemental Draft EIS and Section 3.3.1 of the Draft EIS for detail on the methodology used to determine potential acquisitions and displacements.

B. Acquisitions and Displacements Impacts

This section describes potential long-term and short-term impacts that would result from the need to acquire land for implementation of the proposed Hopkins OMF. The numbers of parcels that would need to be acquired and the potential for relocation of existing businesses are discussed in this section.

Long-Term Direct and Indirect Acquisitions and Displacements Impacts

This section identifies the potential long-term and short-term impacts that would result from the need to acquire land for implementation of the Hopkins OMF. Implementation of the proposed Hopkins OMF would result in the acquisition of nine parcels within the proposed Hopkins OMF site plan: eight full acquisitions and one partial acquisition, all within the City of Hopkins. These sites are listed in Table 3.3-2 and are shown on Exhibit 3.3-1.

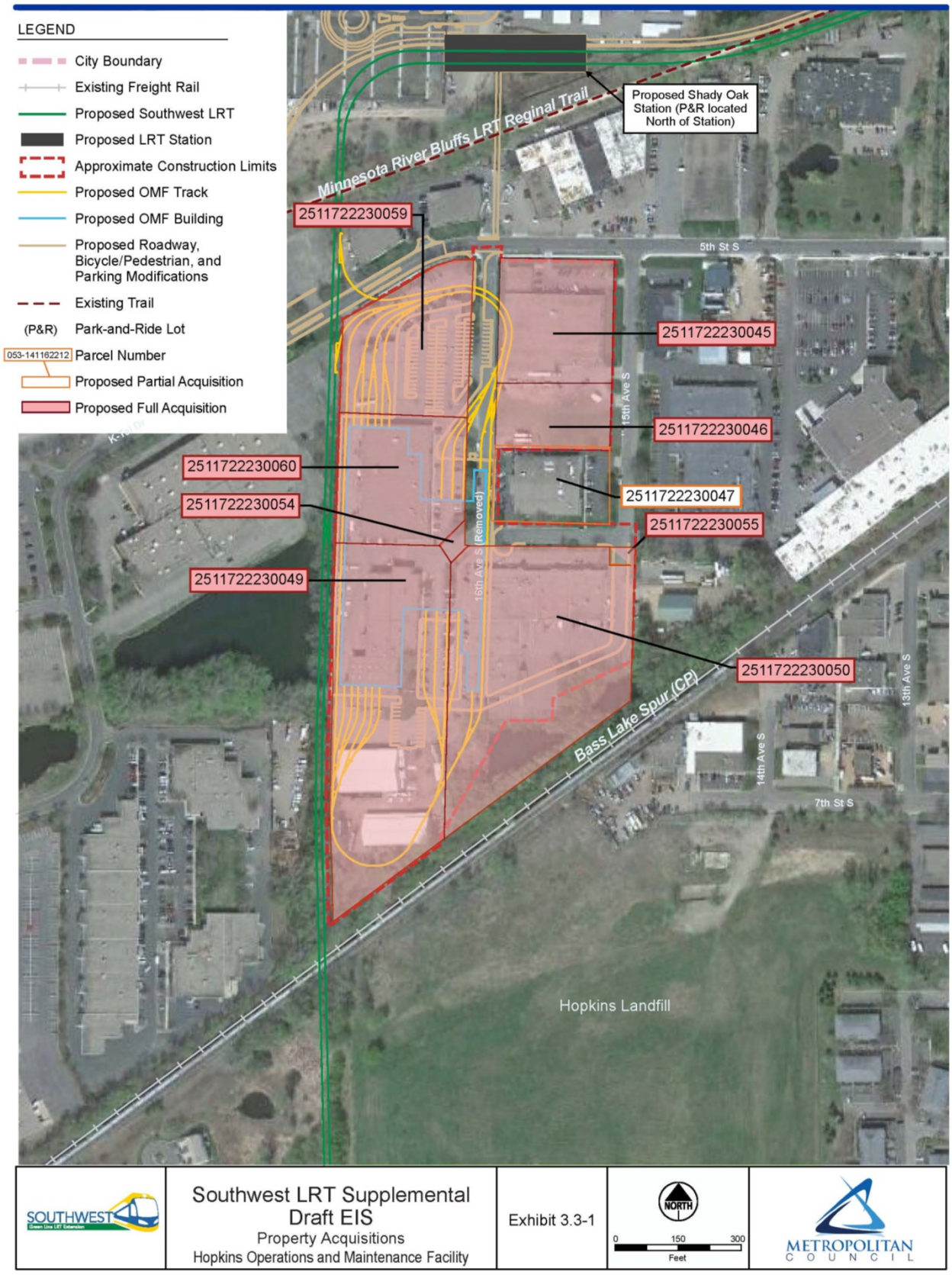
Of the nine parcels that would be fully or partially acquired, all of them are actively being used for industrial purposes. Three of the parcels do not have buildings on them, including two that serve as driveways to other parcels that would be acquired by the project. In total, implementation of the proposed Hopkins OMF site is anticipated to require relocation of up to five businesses. Depending on the preferences of the owner, the project will work to relocate displaced businesses. All properties would be acquired in accordance with the Uniform Relocation Act, which includes provisions for compensation. Additional detail is included in Section 3.3.1.2, C "Mitigation Measures."

Because the Hopkins OMF would not include a light rail station, the proposed Hopkins OMF would not indirectly result in any acquisitions or displacements through induced development or redevelopment.

Short-Term Acquisitions and Displacements Impacts

This section describes the short-term acquisition and displacement impacts that may occur as a result of construction of the proposed OMF. Based on the project's conceptual engineering plans (see Appendix G), all construction activities would occur within parcels that would be permanently acquired by the Council or are currently owned by the Council or HCRRA. However, during Engineering, temporary property acquisitions (e.g., construction easements) may be identified. These temporary property acquisitions could include short-term changes to property access or temporary conversion of land use to transportation use for construction staging and other construction activities throughout all or part of the construction period. Short-term occupancies of parcels would include the use of construction easements or intergovernmental agreements

EXHIBIT 3.3-1
Property Acquisitions, Hopkins Operations and Maintenance Facility



and would change existing land uses in the short term. The short-term impacts would include potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing residential, commercial, and other uses. Some businesses may experience hardship during construction and may choose to temporarily or permanently change business location or terminate the business. The project's area of construction activities at the proposed Hopkins OMF site is illustrated on Exhibit 3.3-1.

Following construction, the Council and the FTA may dispose of excess property based on Council policy and applicable state law, and in conformity with FTA's Circular 5010.1D (FTA, 2008a). The sale of the excess property would likely return the land to its general use prior to the project's acquisition process (e.g., commercial use), but not necessarily to the former property owner.

C. Mitigation Measures

All property will be acquired in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Any businesses or persons displaced from the property will be compensated in accordance with provisions of the Uniform Act. Relocation benefits will be available for displaced businesses and non-profit organizations including moving costs, tangible personal property loss as a result of relocation or discontinuance of operations, reestablishment expenses, and costs incurred in finding a replacement site.

3.3.2 Environmental Effects

This section describes how the proposed Hopkins OMF would affect the following environmental categories that are included within the Environmental resource group: geology and groundwater, water resources (wetlands, floodplains, public waters, and stormwater management), and hazardous and contaminated materials. Discussions for each environmental category addressed include description of existing conditions, potential environmental impacts, and mitigation measures.

3.3.2.1 Geology and Groundwater

This section describes the existing geologic, soil, and groundwater conditions in the proposed Hopkins OMF site and how the proposed OMF would be affected by or affect geology and groundwater. Geology considerations important to the Southwest LRT Project include topography, soil characteristics, groundwater conditions, and geologic hazards. These considerations can affect the type of construction methods used for the project and, if not adequately considered during project design, could affect the long-term operations and safety of the OMF or nearby buildings, roadways, and utilities. Geology and soil conditions are closely related to groundwater conditions.

Construction activities and potential light rail-related improvements both have the potential to affect groundwater by potentially changing the flow of or contaminating groundwater within the project vicinity. The analysis in this section is more detailed than that found in the Draft EIS, which identified potential OMF sites but did not evaluate resource impacts to the extent found in this document.

As summarized in Table 3.3-3, the vicinity of the proposed Hopkins OMF site generally has soil types that would accommodate construction and operations of the facility. Further, some of the properties on the proposed OMF site are likely contaminated with hazardous material (soil and groundwater) and development of the site as an OMF would be beneficial because the existing contamination would be remediated prior to development.

A. Existing Conditions

This section describes the existing geologic and groundwater conditions at the proposed Hopkins OMF site. Section 4.1.3 of the Draft EIS describes the existing geological conditions in the vicinity of the proposed Hopkins OMF site; the Draft EIS documents the presence of surficial geology (soils), bedrock geology, and groundwater. Geologic and groundwater information and mapping provided in the Draft EIS for the greater project area cover all areas addressed in this Supplemental Draft EIS, including the proposed Hopkins OMF site.

TABLE 3.3-3
Summary of 2013 Soil Borings, Hopkins Operations and Maintenance Facility[a]

Boring Number	Soils	Depths
1	Fill, primarily silty sand and poorly graded sand. Water observed at 7 feet.	0-10 feet
	Poorly graded loose sand (glacial outwash).	10-31 feet
2	Fill, primarily silty sand and poorly graded sand. Water observed at 5 feet.	0-7 feet
	Clay and silt from swamp deposits.	7-12 feet
	Poorly graded, medium dense sand (glacial outwash) and clayey sand (glacial till).	12-31 feet
3	Fill, silty sand under pavement.	0-2 feet
	Peat, water observed at 4 feet.	2-12 feet
	Loose alluvium, glacial outwash, and glacial till (alternating layers of clay, sand, and silt).	12-31 feet
4	Fill, primarily silty sand and poorly graded sand under paved surface. Water observed at 4 feet.	0-9 feet
	Loose to medium dense glacial outwash (poorly graded sand and clayey sand).	9-31 feet
5	Fill, mixed clay and sand. Water observed at 9 feet.	0-9 feet
	Loose to medium dense alluvium, glacial outwash, and glacial till (alternating layers of clay, sand, and silt). Water-bearing sand lenses at 12 and 16 feet.	9-31 feet
6	Fill, primarily silty sand and poorly graded sand under paved surface. Water observed at 7 feet.	0-9 feet
	Loose to medium dense glacial outwash and stiff to very stiff till (sandy clay, silty sand, and clayey sand).	9-31 feet

[a] Additional borings have occurred within the project area through publication of this Supplemental Draft EIS and the results to date have been consistent with the 2013 borings.

Source: Council, 2013.

The surficial geology in the vicinity of the proposed OMF site is dominated by glacial soil; however, peat and soft clays occur in the upper five to 15 feet at various locations. Because the proposed Hopkins OMF site is developed for industrial uses, the top seven to 10 feet of most of the site appears to be composed of fill material. In some locations soft silt and clay underlies the fill, but in other locations, the fill is located on top of glacial deposits. Figure 4.1-4 in the Draft EIS shows area of peat—an organic soil—in the vicinity of the OMF site.

In 2013, the Council performed six soil borings at the OMF site to better define the near-surface soil conditions. The results of these borings, which are summarized in Table 3.3-3, show that the site is characterized by fill and soft soils near the ground surface and denser glacial deposits at deeper depth, and that groundwater depths generally vary between four and nine feet below ground surface. Rock was not encountered in the borings.

Groundwater is close to the surface within the vicinity of the proposed Hopkins OMF. In areas with high groundwater elevations and granular soils, there is an increased potential for groundwater contamination as a result of hazardous material spills. See Section 3.3.2.3 of this Supplemental Draft EIS for information on hazardous and contaminated materials.

B. Potential Geology and Groundwater Impacts

This section identifies the potential long-term impacts to geology and groundwater, as well as the short-term impacts, which apply to groundwater only.

Long-Term Direct and Indirect Geology and Groundwater Impacts

This section addresses potential long-term direct and indirect impacts to geology and groundwater related to the Hopkins OMF.

Geology

No long-term impacts on geology at the proposed Hopkins OMF site are anticipated, as soft deposits would be either removed and replaced with engineered fill enhancements or resolved through other methods, such as driven piles or drilled shaft supported foundations.

Groundwater

Because the proposed Hopkins OMF site is near wetlands and the North Branch of Nine Mile Creek, and there is a relatively high groundwater level on the site, pumping of groundwater from the site may be required during construction of the OMF and associated tracks. Based on the project's Phase I ESA investigation, two of the properties on the proposed OMF site are likely contaminated with hazardous material (soil and groundwater), and development of the site as an OMF would be beneficial because the existing contamination would be remediated prior to development.

Acquiring land with known contamination that cannot be easily remediated or contained would be avoided to the extent possible based on a Phase I and/or II Environmental Site Assessment of potential for contamination as the project advances into further stages of project development. The long term risk to the project will be determined once remediation is completed in areas of known and encountered contamination during construction. A Phase II ESA will be conducted prior to any construction activities and will include a summary of remediation efforts to be incorporated into the project. Depending on the results of this remediation, long-term pumping of groundwater may be necessary to remove the contaminated groundwater. See Section 3.3.2.3 of this Supplemental Draft EIS for additional information on hazardous and contaminated material sites within or adjacent to the proposed OMF site and how potential contamination to groundwater would be addressed.

Section 3.3.2.3 of this Supplemental Draft EIS also describes hazardous and contaminated materials that would be used at the OMF site for maintenance activities and how these materials would be managed to minimize exposure to groundwater. The likelihood of releases of hazardous and contaminated materials into soils or groundwater from project operations and maintenance activities would be low because of design features that would address containment of hazardous and contaminated materials used at the OMF and as a result of implementation of BMPs required for the storage and handling of hazardous and contaminated materials.

No indirect geology or groundwater impacts are anticipated.

Short-Term Geology and Groundwater Impacts

No short-term geological impacts are anticipated as a result of the proposed Hopkins OMF. Short-term groundwater impacts include the potential risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction. Reducing the amount of groundwater pumping would lessen: 1) the potential for groundwater contamination; 2) impacts to wetland hydrology and vegetation (where wetlands are groundwater fed); and 3) the risk of settling that could affect structures, roadways, and utilities. In areas where groundwater pumping may be needed during construction, a temporary drainage system could be developed that would treat water through the use of filtration tanks and infiltration basins. To minimize the potential impact of settlement in areas where groundwater pumping would be necessary, a monitoring plan would be developed and implemented to ensure that if any building, road, or parking area settlement occurs, it would be detected as soon as possible so that additional remediation methods could be employed.

For construction activities at- or above-grade, sub-soil would be exposed during construction when topsoil is removed. This soil would be susceptible to surface water and wind erosion. Normal BMPs, such as sub-soiling (turning, breaking, or stirring the subsoil) in compacted areas and implementation of a stormwater pollution prevention plan (SWPPP), will be employed to help avoid the surface water and wind erosion. The SWPPP is discussed in Section 3.3.2.2.B of this Supplemental Draft EIS.

C. Mitigation Measures

A groundwater management plan will be prepared by the Council, and approved by the Minnesota Department of Natural Resources and Nine Mile Creek Watershed District, before construction that will include required groundwater monitoring and management practices during construction. The management plan will also address collection, storage, and disposal of surface water runoff from the light rail track system, stations, and other infrastructure developed as part of the project. Mitigation measures related to

potential existing groundwater contamination and hazardous and contaminated materials are discussed in Section 3.3.2.3 of this Supplemental Draft EIS.

3.3.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management

This section describes existing water resources (i.e., wetlands, floodplains, public waters, and stormwater management) within the proposed Hopkins OMF site and assesses how the OMF would impact those water resources in the long-term and short-term (during construction). Mitigation measures for these impacts are also covered in this section.

Public waters are lakes, wetlands, and watercourses (streams and rivers) are under the jurisdiction of the Minnesota Department of Natural Resources (MnDNR). MnDNR defines public waters as all water basins (lakes and wetlands) and watercourses that meet the criteria set forth in Minnesota Statutes, Section 103G.005.

As summarized in Table 3.3-1, the proposed Hopkins OMF would result in approximately 0.7 acre of permanent fill into a wetland and the introduction of approximately 0.6 acre of fill into a 100-year floodplain. These figures are higher than those identified in the Draft EIS, largely due to field-verified wetland delineations that were conducted as part of this Supplemental Draft EIS and the identification of a proposed location for the OMF that was not included in the Draft EIS.

Agency Coordination

Coordination with the federal, state, and local permitting agencies and jurisdictions has been ongoing throughout development of the Supplemental Draft EIS. Beginning in July 2013, the SPO convened a monthly Technical Evaluation Panel (TEP) meeting with permitting agencies with jurisdiction under the federal Clean Water Act, the state Wetland Conservation Act and local water resources rules. See Section 3.2.2.2 of this Supplemental Draft EIS for additional information on the TEP. Section 3.1.2.7 of this Supplemental Draft EIS explains the process for merging NEPA and Section 404 requirements. Further, the MPCA overseeing the Section 401 certification process under the Clean Water Act requested that the information necessary for Section 401 certification be incorporated into the USACE's 404 wetland permit application. Coordination will continue through development of the Final EIS and through review of applicable permit applications listed in Table 4.5-2 of this Supplemental Draft EIS. Specific to the Hopkins OMF site, the wetland sites considered, as described in Section 2.3.2.2, were reviewed with the USACE and state and local jurisdictions taking into consideration potential impacts to wetlands.

A. Existing Conditions

This section describes the water resource features (wetlands, public waters and stormwater management, and floodplains) in the vicinity of the proposed Hopkins OMF site. As noted in Section 3.2.2.2 of this Supplemental Draft EIS, while existing conditions for water resources in the Draft EIS generally apply to this Supplemental Draft EIS, this Supplemental Draft EIS has more detailed information about potentially affected wetlands than was presented in the Draft EIS (see Section 3.1.2.7 of this Supplemental Draft EIS for additional detail). In 2013, the project team delineated wetlands at the proposed OMF site. These delineations were then field-verified by the USACE, MN Board of Water Supply, Minnehaha Creek Watershed District, and the City of Minnetonka for wetland boundaries and types.

Wetlands

The proposed Hopkins OMF site contains two wetlands, both of which are natural, historical basins that include areas excavated for stormwater retention. Wetland NM-HOP-13, which was surveyed on July 23, 2013, is located along the southern border of the proposed site, and wetland MTA-MTA-12 is located along the western edge of the site. It was surveyed on August 22, 2013. Due to shallow onsite groundwater levels, both wetlands have perennial standing water (see Exhibit 3.3-2). The proposed Hopkins OMF site is within the Nine Mile Creek Watershed District, which covers a large area extending southeast of the OMF site (see Figure 4.2-1 in the Draft EIS). The site's surveyed delineations were field-verified with a representative from the Nine Mile Creek Watershed District. Additional information about the proposed OMF site wetlands can be found in the *Wetland Investigation Report* (Anderson Engineering of Minnesota, LLC, 2013). See Appendix C for instructions on how to access this report.

Floodplains

While FEMA is in the process of evaluating flood elevations within the Hopkins OMF site, there has been no adopted change to the 100-year floodplains identified in Section 4.2.3.4 of the Draft EIS. MnDNR's floodplain data are derived from the FEMA Flood Insurance Rate Maps. MnDNR floodplain mapping shows a 100-year floodplain extending into the southwest corner of the Hopkins OMF site that includes a portion of wetland NM-HOP-13, as illustrated on Exhibit 3.3-2. Background information on floodplains can be found in Section 3.2.2.2 of this Supplemental Draft EIS.

Public Waters and Stormwater Management

Although the proposed Hopkins OMF site was not evaluated in the Draft EIS, the site was included in the evaluation of water resources in Draft EIS Segment 4. No additional public water bodies were identified by analysis of MnDNR GIS data for the Hopkins OMF site beyond those disclosed in Chapter 4.2.3.2 of the Draft EIS. Figure 4.2-5 of the Draft EIS includes the area of Hopkins OMF site under the LPA; this figure shows that the OMF would be in the general area of, but would not cross, Nine Mile Creek.

B. Potential Water Resources Impacts

This section identifies the potential long-term and short-term impacts to wetlands, floodplains, and public waters and stormwater management that would occur at the proposed Hopkins OMF.

Long-Term Direct and Indirect Water Resources Impacts

This section describes the long-term direct and indirect impacts to water resources at the proposed Hopkins OMF site.

Wetlands

Long-term direct impacts to wetlands are defined as the introduction of fill into, dredging material out of, or spanning a wetland. Long-term indirect impacts to wetlands are related to elements of the LPA that would change the hydrology of a wetland, such as increasing or decreasing the flow of water into a wetland or allowing untreated contaminated water to flow into a wetland.

The construction of the proposed Hopkins OMF would place fill in one wetland, as shown on Exhibit 3.3-2. This basin is on the southern border of the OMF site (NM-HOP-13). The total wetland fill would be approximately 0.68 acre to the 2.67-acre wetland, as shown in Table 3.3-4. The wetland type that would be filled is a linear Type 3/6 (shallow marsh/shrub carr) wetland dominated by black willow (*Salix nigra*), sandbar willow (*Salix interior*), reed canary grass (*Phalaris arundinacea*), and purple loosestrife (*Lythrum salicaria*). The upland vegetation adjacent to the wetland is dominated by common ragweed (*Ambrosia artemisiifolia*) and tall goldenrod (*Solidago altissima*). The wetland fill would be in an area where OMF circulation tracks and the realignment of an existing interior roadway would be located. The circulation tracks would also affect wetland buffer areas, but these areas would be limited to relatively thin boundaries and would be bordered by asphalt surfaces. However, the conceptual design of the OMF site would allow for wetland expansion adjacent to the site.

TABLE 3.3-4
Hopkins Operations and Maintenance Facility Wetland Impact Summary

Wetland I.D.	Wetland Size (acres)	Wetland Impact (fill) (acres)	Wetland Type (Circular 39[a])
NM-HOP-13	2.67	0.68	Type 3/6 (shallow marsh/shrub carr)
Totals	2.67	0.68	

[a] USFWS Circular 39 System (Shaw and Fredine, 1956).

Note: Permitting agencies would be USACE, MnDNR, and Nine Mile Creek Watershed District, and City of Minnetonka.
Source: Wetland field delineation performed July 23, 2013

Wetlands in the vicinity of the proposed Hopkins OMF were evaluated to determine if there would be any long-term indirect impacts to their hydrology, such as increasing or decreasing the flow of water into a wetland, affecting the depth of groundwater that supports the wetland, or allowing untreated contaminated water to flow into a wetland. In summary, that analysis found that long-term indirect impacts to the

hydrology of the wetland in the vicinity of the OMF site are not anticipated to occur because drainage from the site would continue to be directed to the two existing stormwater detention ponds and the Project will modify the detention ponds as needed to accommodate a potential increase in runoff volumes.

Additional analysis will be needed to determine whether the pumping of groundwater from the shallow aquifer at the site that may be required during construction of the OMF and associated tracks would affect NM-HOP-13 or offsite wetlands. Phase II ESA investigations are planned during the Final EIS phase to evaluate the four high-risk hazardous and contaminated materials sites that have the potential to directly impact the OMF site. Until the Council conducts the investigations, it is unclear whether permanent groundwater pumping may be required to remediate groundwater contamination and whether the level of pumping could affect the groundwater supporting onsite and offsite wetlands. Results of the analysis should be available in the Final EIS.

Because maintenance activities at the proposed OMF would be conducted in an enclosed area away from the wetlands, there is little possibility of maintenance activities contaminating onsite or offsite wetlands. Further, stormwater from the proposed Hopkins OMF site will be treated onsite prior to being directed into the wetland or nearby stormwater system. BMPs would be applied to the long-term operations of the OMF, resulting in no additional pollutant loads flowing into the wetland. Further analysis will be conducted during the design phase to determine whether the OMF site would affect Wetland MTA-MTA-12 by potentially changing the amount of runoff entering the property west of the proposed OMF site.

Floodplains

Long-term direct impacts to floodplains are defined as the introduction of fill material into an area currently mapped as a 100-year floodplain. Approximately 0.61 acre of MnDNR-mapped floodplain would be filled as a result of the proposed Hopkins OMF (see Exhibit 3.3-2), due to the need to raise circulation tracks in the southwest corner of the site above the floodplain. The 0.61-acre impact would eliminate the mapped floodplain in the OMF site. The tracks would be supported by impervious subballast and ballast material, thereby serving as a barrier for the floodplain. While this displacement would not increase the water surface more than 1 foot, Engineering would work to avoid floodplain overflow impacts onto offsite locations. Further, the LPA would include balanced cut and fill within any mapped floodplains, which would account for the fill that would occur due to the proposed Hopkins OMF.

Because of the increase in impervious surface with the construction the proposed OMF site, a long-term indirect impact to the floodplain west of the site may be that it would receive more runoff from the OMF site than it currently does from the existing industrial development. Permitting requirements, established during the design phase will determine whether additional runoff would enter the floodplain west of the proposed OMF site; and, if so, whether the potential increase in runoff would affect the adjacent floodplain or Wetland MTA-MTA-12 (see Exhibit 3.3-2).

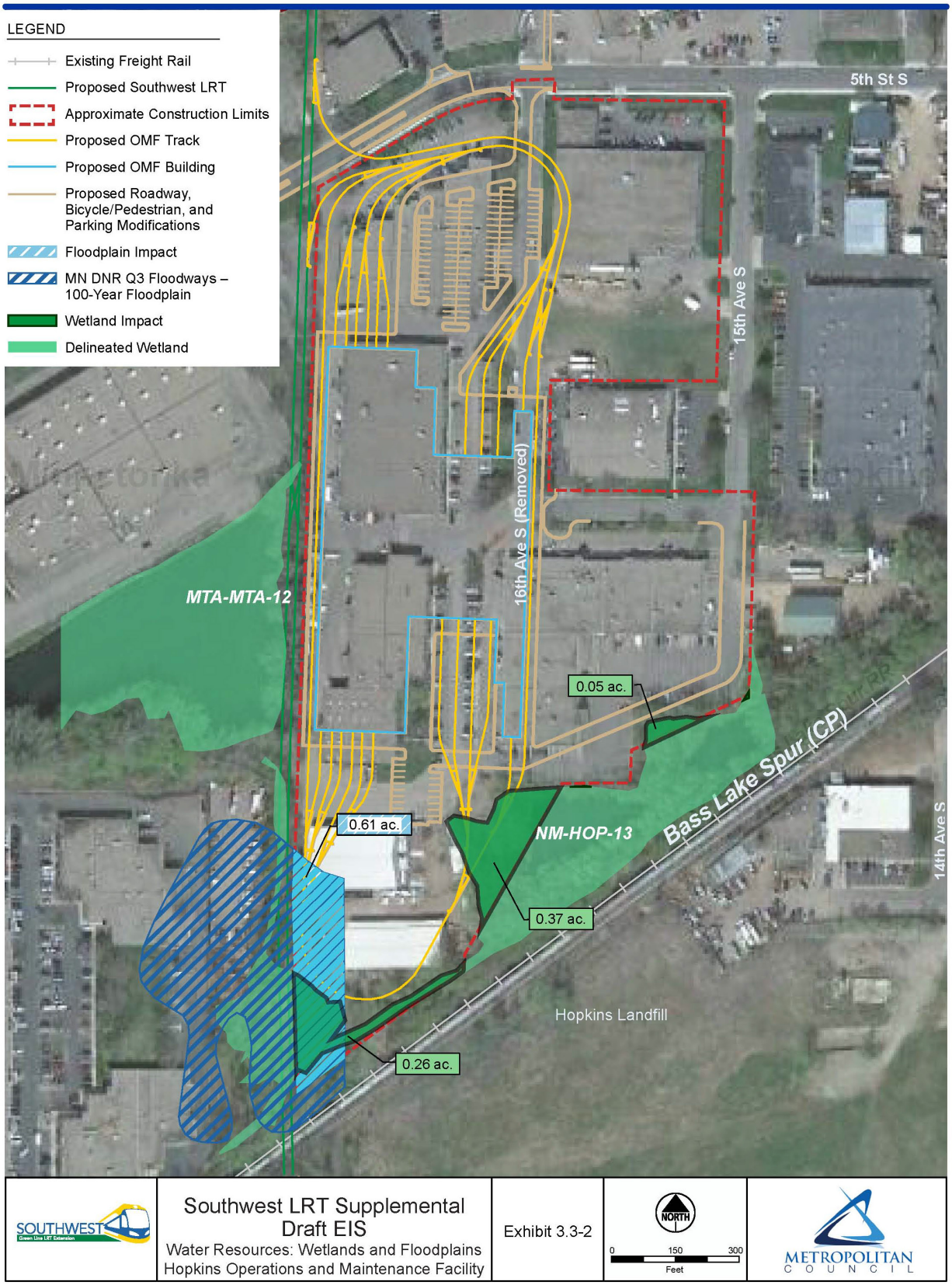
Public Waters and Stormwater Management

Under the LPA, Nine Mile Creek, a public waterway in the general area of the proposed OMF site, would not be affected by the proposed improvements. New impervious surfaces associated with the proposed OMF could increase stormwater runoff rates, volumes, and pollutant loads, which could, in turn, cause higher flows and degraded water quality in affected storm sewers and receiving streams. Impervious surfaces could also result in decreased infiltration and aquifer recharge. New impervious areas within the proposed OMF site would include portions of tracks, the OMF building and associated parking lot, and the extension of 15th Avenue S serving the site. Ballasted (gravel) track sections would be considered as impervious areas because of the high compaction and low permeability of the sub-soils underlying the tracks.

The PGIS associated with the proposed OMF site would consist primarily of the proposed parking area, equipment maintenance and fuel and chemical transfer areas at the proposed OMF and 15th Avenue South that would serve the facility.

The additional new impervious surface would be minimized at the proposed OMF site because this location is already a developed industrial area served by public roads. Because a large portion of the impervious surface on the developed portion of the site would be the OMF building and associated trackway, it would

EXHIBIT 3.3-2
Water Resources: Wetlands and Floodplains, Hopkins Operations and Maintenance Facility



have relatively low PGIS values. Stormwater runoff from project-related PGIS would receive water quality treatment.

The stormwater systems managed by local jurisdictions in this area typically discharge to local streams and wetlands. Urbanization has changed many of the land uses in the area from forested areas to urban development. Higher peak flows caused by impervious surface prevent infiltration from occurring and result in channel scour and degradation of stream habitat. Drainage from the site would continue to be directed to the two existing stormwater detention ponds to reduce the stormwater flows from the OMF site that could affect streams. The Project would modify the existing detention ponds as needed, and construction would be coordinated with the City of Hopkins to insure that it meets all applicable stormwater management guidelines.

No development and/or redevelopment is expected as a result of the proposed OMF that could indirectly affect water quality.

Short-Term Water Resources Impacts

This section describes the short-term water resource impacts that would be associated with construction of the proposed OMF.

Wetlands

Short-term fill resulting from construction activities could affect the wetlands located on the proposed Hopkins OMF site (see Exhibit 3.3-2). These impacts may result in loss or disturbance of soil and vegetation or in the potential for inorganic solids to reach the wetlands. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and the eroded materials are deposited downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations

Implementing appropriate BMPs would help minimize erosion and sedimentation impacts. These BMPs will include the preparation of a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, if needed. BMPs that will be implemented during construction will be designed to minimize the potential for soil erosion and sedimentation and to protect water quality, if needed. Potential BMPs that could be implemented during construction include the following:

- Minimizing the amount of cleared area at a construction site
- Stabilizing construction entrances and haul roads using quarry spalls
- Washing truck tires at construction entrances, as necessary
- Constructing silt fences downslope from exposed soil
- Protecting catch basins from sediment
- Containing and controlling concrete and hazardous and contaminated materials onsite
- Installing temporary ditches to route runoff around or through construction sites, with straw bales or rock check dams strategically located to slow and settle runoff
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil
- Using straw wattles to reduce the length of unbroken slopes and minimize runoff concentration
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established

- Constructing temporary sedimentation ponds to remove solids from concentrated runoff and groundwater pumping before being discharged
- Conducting vehicle fueling and maintenance activities no closer than 100 feet from a wetland

Floodplains

No short-term direct impacts to floodplains are expected to occur due to the proposed project, although sedimentation flow into the floodplain could indirectly occur during construction if a substantial storm event were to occur. The adjacent wetlands would be expected to receive the temporary overflows. BMPs will include protecting the wetlands from sedimentation during construction.

Public Waters and Stormwater Management

The potential water quality impacts resulting from construction activities may increase turbidity and sedimentation in the receiving water features as a result of stormwater runoff from disturbed construction sites. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and deposit the eroded materials downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations such as pier foundations, trenches, and tunnels

The runoff from newly poured concrete surfaces can have high alkalinity, often above pH 9, which can result in degraded water quality and can adversely affect fish. In addition, total suspended solids from the concrete fines might result in a milky-white appearance of the runoff, exceeding turbidity requirements. Because the total amount of ground disturbance during construction would be more than 1 acre, a National Pollutant Discharge Elimination System general construction stormwater permit would be required for this project. One of the permit requirements is a project-specific SWPPP. The SWPPP would be developed and implemented in accordance with Council Environmental Services guidance and procedures. This plan would include a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, and would employ BMPs during construction to minimize the potential for soil erosion and sedimentation and to protect water quality. Potential BMPs would include those listed above for wetlands.

A temporary erosion and sediment control plan also would include a water quality monitoring plan and a schedule for inspecting the erosion control measures for effectiveness. Water pumped from the construction site, such as from guideway pier construction, would be treated as required to meet discharge requirements identified on the SWPPP. Pavement slurry and residue from road cutting and grinding would be collected and properly disposed of offsite, and a concrete containment and disposal plan would also be prepared. An MnDNR-certified erosion and sediment control specialist would be employed to conduct the inspections, and deficiencies would be promptly corrected. These measures would minimize the likelihood for serious water quality problems occurring during construction.

The concrete used for the project would take several months to cure enough so that the pH of exposed surfaces would decrease to acceptable levels. Stormwater runoff would be tested and, if excessive levels of pH or turbidity are found, the runoff would be treated before it is released to storm sewers or a receiving water body. If discharge of treated construction or process water to a sanitary sewer is proposed, approval must be obtained from the City of Hopkins.

Additional Construction Best Management Practices

The proposed project will comply with applicable state, federal, and local regulations and will install BMPs to control and minimize erosion and potential impacts to surface water resources as determined during the permitting process. Construction BMPs may include some or all of the following:

- Inlet protection of catch basins (filters, bio-bags, catch-basin drop-filters)
- Excavation silt control (silt fence, bio-bags)
- Temporary seeding of open excavations and stockpiles as appropriate for surface soil areas that remain exposed for several weeks or longer
- Swales with check dams – surface waterways with periodic check dams for silt removal
- Temporary paving of area to receive traffic prior to final restoration
- Infiltration of stormwater runoff after removal of heavy sediments
- Temporary rerouting of stormwater away from exposed slopes and stockpiles
- Temporary rock construction entrances to remove mud for construction vehicles before they leave the site

When applicable, these BMPS will be installed prior to earthwork and grading activities, and will be kept in good working order for the duration of the project. The project would be monitored under grading permits issued by the watershed districts, WMOs, and the cities in the corridor.

Runoff volume control techniques will be considered during Engineering to minimized the rate, volume and quality of surface runoff, including: green swales, infiltration strips, rainwater gardens, subsurface storage, grit chambers, and sump manholes.

C. Mitigation Measures

The Section 404 permit application must identify compensatory mitigation for unavoidable impacts to wetlands and other aquatic resources. A Compensatory Mitigation Plan will be developed by the Council, and reviewed by USACE, prior to the submittal of the Section 404 permit application.

Mitigation options to off-set permanent wetland impacts include onsite project specific permittee responsible mitigation, offsite project specific permittee responsible mitigation, and/or the purchase of wetland mitigation bank credits that meet USACE regulatory requirements, as well as state and local regulatory requirements. Wetland impacts could be reduced by continued project design refinements to limit the affected areas within the wetlands, including the placement of construction fencing to control construction limits. The actual mitigation ratio for the loss of wetlands will depend on the location, type, and functional value of the wetland being impacted and permits obtained from agencies with regulatory authority. Compensatory wetland mitigation required for this project will depend on final footprint of wetland fill, as well as the ecological value of the wetlands affected. Impacts to waters and wetlands will be detailed in the Final EIS.

Stormwater runoff (both long-term and short-term) will be directed into stormwater detention facilities created as part of the project (see prior discussion concerning stormwater). Temporary impacts on soils and vegetation (e.g., due to temporary pumping during construction) within and surrounding the wetlands will be restored upon completion of construction.

Impacts on floodplains and public waters will be mitigated by compensatory storage. After Project Development, the amount of floodplain impacts will be calculated, and coordination with the appropriate entities will occur to determine the type, location, and extent of compensatory floodplain storage (likely in the form of excavation) required. The project will require coordination with, and permitting from local, state, and federal water resources agencies. Development of permit applications will be completed during the Engineering phase of the project.

3.3.2.3 Hazardous and Contaminated Materials

This section provides an overview of hazardous and contaminated materials that could be located on parcels that either would be acquired for the proposed Hopkins OMF site or that would be near enough to construction activities that there would be a risk that the project would encounter contaminated soils and/or groundwater. The section also describes potential control or cleanup requirements for the project as a result of hazardous and contaminated materials that might be mobilized or released as a result of project activities.

Hazardous and contaminated materials can be classified in a number of different categories based on laws and regulations that define their characteristics and use. These categories include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

As summarized in Table 3.3-1, there are four high-risk sites with documented hazardous and contaminated materials (two onsite and two adjacent to the site) that would require additional investigation to determine if remediation would be required before construction of the proposed Hopkins OMF.

A. Existing Conditions

This section describes existing conditions at the proposed OMF site. The analysis of hazardous and contaminated materials summarized in Section 4.9 of the Draft EIS was based on a preliminary assessment of known contaminated sites using online databases. The hazardous and contaminated materials assessment for the proposed Hopkins OMF site in this Supplemental Draft EIS is based on a more detailed Phase I environmental site assessment (ESA) conducted for the LPA, as described in Section 3.1 of this Supplemental Draft EIS. A Phase II ESA will be completed, where determined appropriate based on the Phase I ESA, prior to construction.

To identify documented hazardous and contaminated soils in the vicinity of the proposed Hopkins OMF site, an online search of MPCA and MDA environmental databases was conducted. The online environmental database search and review of files revealed 23 potential sites within 500 feet of the proposed Hopkins OMF, including four high-risk sites of concern, two of which would be acquired by the project (see subsection B for a description of those four sites of concern) and two that are in close proximity to the OMF site's area of construction. The document review process identified specific sites with a high- and medium-risk that potentially contain hazardous or contaminated materials and could potentially impact the project. Of the 23 sites, it was concluded that nine sites are high-risk for the Hopkins OMF (shown on Exhibit 3.3-3), 12 are medium-risk, and two are low-risk. Of the high-risk sites identified, four were VIC sites, two were petroleum leak sites, one Agchem file, and one solid waste file (Short Elliott Hendrickson Inc., 2013a, 2013b). See Appendix C for instructions on how to access the reports.

B. Potential Hazardous and Contaminated Materials Impacts

This section identifies the potential long-term and short-term impacts to hazardous and contaminated materials that could occur in the proposed Hopkins OMF site. These impacts could result from earthwork or other disturbances at or in proximity to contaminated areas that might mobilize or result in the release of hazardous and contaminated materials.

Long-Term Direct and Indirect Hazardous and Contaminated Materials Impacts

This section describes the long-term direct and indirect hazardous and contaminated material impacts that could occur at the proposed Hopkins OMF site. As described in Section 4.9 of the Draft EIS, long-term hazardous and contaminated material impacts are not expected as a result of the LPA, because the project would not generate hazardous and contaminated materials or regulated wastes. However, of the nine high-risk sites located within 500 feet of the proposed Hopkins OMF, four are considered sites of concern due to their proximity to the proposed Hopkins OMF (listed in Table 3.3-5). Two of those sites of concern would be acquired by the project and two of the sites could have contaminated solid waste extending into the area of construction for the proposed Hopkins OMF site.

The four sites of concern would receive a Phase II ESA investigation prior to any construction activities to further evaluate risks from hazardous and contaminated materials. Unlike Phase I investigations, which typically involve review of site information and regulatory files, a site inspection, and interviews with owners and operators, Phase II investigations generally include collecting soil and/or groundwater samples for laboratory analysis.

Other high-risk sites shown on Exhibit 3.3-3 are not sites of concern for the Hopkins OMF, because they have a low potential to directly affect the proposed Hopkins OMF site based on the file review.

EXHIBIT 3.3-3
Potential High-Risk Hazardous and Contaminated Materials Sites, Hopkins Operations and Maintenance Facility

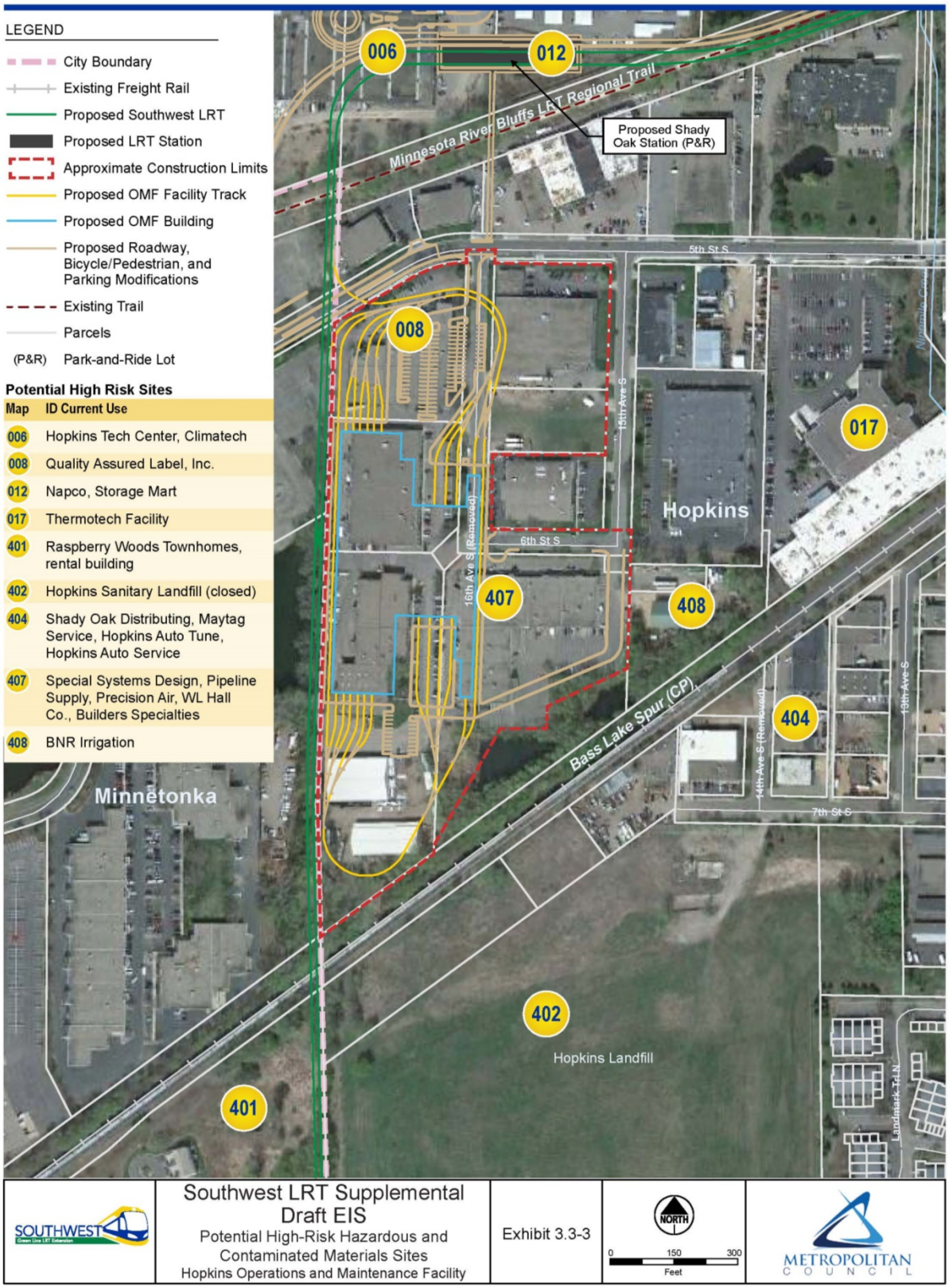


TABLE 3.3-5
High-Risk Hazardous and Contaminated Materials Sites of Concern at the Hopkins Operations and Maintenance Facility Site

Map ID	Site Name[a]	Potential Impacts	Potential Use of the Site by the LPA
008	Quality Assured Label, Inc.	• Soil and groundwater are contaminated with metals, petroleum hydrocarbons, and nonpetroleum volatile organic compounds (chlorinated hydrocarbons), and an institutional control is in place for the site.[b] • Earthwork would require specific planning to address the various types of contamination and to address the institutional control.	Direct disturbance to parcel due to project construction for OMF
407	Special Systems Design Pipeline Supply Precision Air WL Hall Co. Builders Specialties	• Soil and groundwater are contaminated with metals, petroleum hydrocarbons, and nonpetroleum volatile organic compounds (chlorinated hydrocarbons), and an institutional control is in place for the site.[c] • Earthwork would require specific planning to address the various types of contamination and to address the institutional control.	Direct disturbance to parcel due to project construction for OMF
408	BNR Irrigation[d]	• Shallow soil contamination is possible based on review of historical aerial photographs Phase I/II is required to evaluate for solid waste and fill of unknown origin.	No direct disturbance to the parcel (adjacent to the area of construction)
402	Hopkins Sanitary Landfill (closed)	• The site contains methane vapor contamination. • Solid waste from the landfill may encroach to the north onto railroad property and possibly be encountered during construction.[e] • Groundwater contamination risk is low.	No direct disturbance to the parcel (adjacent to the area of construction)

[a] See Exhibit 3.3-3 for the site locations. These four sites will receive a Phase II ESA investigation prior to any construction activities. The three other high-risk sites illustrated in Exhibit 3.3-3 have a low potential to directly affect the proposed Hopkins OMF site based on the file review.

[b] The institutional control is an affidavit filed with Hennepin County by the partnership that purchased the property in 2004. The affidavit was required by the Minnesota Pollution Control Agency (MPCA) under the Voluntary Investigation and Cleanup (VIC) program as a condition of a No Association Determination (NAD). The affidavit and the NAD were based on the results of two Phase II ESA efforts, which were reviewed for this project's Phase I ESA.

[c] The institutional control is an affidavit filed with Hennepin County by the partnership that purchased the property in 2009. The affidavit was required by the MPCA under the VIC program as a condition of a NAD. The affidavit and the NAD were based on the results of a Phase II ESA, which was reviewed for this project's Phase I ESA.

[d] This area was combined with the pond area as a high-risk concern because of the apparent filling of a marsh necessary for development of both parcels.

[e] Documentation on the Hopkins Sanitary Landfill prepared by others was reviewed for this analysis. That documentation included the results of that site's Phase II ESA and other additional site reviews, which were reviewed for this project's Phase I ESA.

While there would be a permanent beneficial effect of removing contamination to meet MPCA risk-based guidance and/or capping known contaminated sites, there is also the potential that a high water table in the vicinity of construction activities could require permanent groundwater pumping in zones of remaining contaminated groundwater within the OMF site. Phase II ESA investigations will evaluate long-term risks associated with possible exposure to soil or groundwater contamination. Specific plumes of concern for the proposed Hopkins OMF consist of the following:

- Chlorinated hydrocarbons in shallow and deep groundwater and petroleum hydrocarbons in shallow groundwater related to historic onsite operations by Honeywell Advanced Circuits and ARI (Sites 008 and 407).
- Shallow groundwater contamination at the south end of the site and offsite related to historical marsh infill with fill of unknown origin (Site 408 and adjacent pond area between the OMF site and Bass Lake Spur).

Additionally, long-term management of methane-related indirect impacts to the proposed Hopkins OMF site from the Hopkins Sanitary Landfill using methods described in MPCA's *Guidelines for Monitoring Landfill Gas at and Near Former Dumps* may also be necessary to limit potential worker exposure to methane.

The operation of the proposed Hopkins OMF would require responsible management and containment of hazardous and contaminated materials that would be used and stored onsite consistent with applicable regulatory standards, principally Minnesota Rules Chapter 7045. The OMF would be defined as a Hazardous Waste Generator and required to obtain a Generator License through Hennepin County. It would comply with applicable requirements for annual reporting/licensing, storage, shipping, record keeping, emergency

planning, and disposal requirements. In addition, the proposed Hopkins OMF would be constructed with engineering controls to limit and contain releases and spills. The likelihood of impacts (that is, releases) from project operation and maintenance activities would be low.

Short-Term Hazardous and Contaminated Materials Impacts

This section describes the short-term hazardous and contaminated material impacts associated with constructing the potential OMF site. Potential spills within the proposed Hopkins OMF could result from use of hazardous materials (for example, lubricants, fuels, and solvents) during construction or from encountering sites with existing soil or groundwater contamination. The potential for encountering hazardous and contaminated materials during construction of the OMF is related to the number of displaced businesses that have a history of using hazardous and contaminated materials and the extent of excavation near sites containing hazardous and contaminated materials that would be required during construction. Other potential short-term impacts could be associated with methane gas from the Hopkins Sanitary Landfill and the high water table in the vicinity of construction activities that may require pumping of groundwater in zones of contaminated groundwater. Phase II ESA investigations will evaluate short-term risks associated with possible exposure to soil or groundwater contamination.

The potential short-term construction effects, specified in the Draft EIS of cost and schedule impacts and potential public and worker exposure to hazardous and contaminated materials, can be avoided or substantially minimized by following the due diligence procedures in the MPCA Brownfields Program regulatory framework. Also, the effects can be avoided or substantially minimized by preparing and implementing a spill prevention, control, and countermeasure plan and a SWPPP to manage and prevent the release of pollution and hazardous substances to the environment.

C. Mitigation Measures

Mitigation for potential hazardous and contaminated materials impacts will be conducted within the MPCA Brownfield Program regulatory framework with the Southwest LRT Project having been entered in the Brownfield Program on September 8, 2014, and having received site identification numbers PB4648/VP31670 from the MPCA. In accordance with MPCA Brownfield Program guidelines, the Phase I ESA was submitted to the MPCA Brownfields Program and subsequent documents will be submitted to the MPCA Brownfield Program as part of the regulatory process. All mitigation measures will be implemented in accordance with the investigation and mitigation documents submitted to the MPCA. Implementation of these measures would result in controlled management of hazardous and contaminated materials and low risk of human exposure to unhealthy contaminants. A Response Action Plan (RAP) will be developed by the Council and approved by MPCA to address the risks identified in the Phase I and II ESAs. Upon MPCA approval of the RAP, cleanup of identified contamination would begin prior to, or in concert with, project excavation and/or drilling activities. All clean-up activity will be conducted with prior MPCA approval and in accordance with the approved Site Safety and Health Plan and will be continuously monitored by qualified inspectors. A final report will be prepared and submitted to the MPCA documenting all removal and disposal activity.

It is reasonable to expect that previously undocumented soil or groundwater contamination may be encountered during construction. A Construction Contingency Plan shall be prepared by the Council and approved by MPCA prior to the start of construction to account for the discovery of unknown contamination. This plan will outline procedures for initial contaminant screening, soil and groundwater sampling, laboratory testing, and removal, transport, and disposal of contaminated materials at licensed facilities. Contaminated material removal and disposal will be in accordance with this plan, monitored by qualified inspectors, and documented in final reports for submittal to MPCA.

In addition to contaminated soil and groundwater, the potential exists for structures on acquired lands to contain asbestos, lead paint, or other hazardous and contaminated materials. Any existing structures will be surveyed for the presence of hazardous/regulated materials prior to their demolition or modification. Potentially hazardous and contaminated materials will be handled and managed in compliance with all applicable regulatory standards and will be disposed in accordance with an approved remediation plan.

3.3.3 Economic Effects

This section addresses the potential tax base losses caused by the potential displacement and relocation of businesses that would result from the construction and operation of the OMF, including potential reductions in property tax revenue in the City of Hopkins and creation of new jobs. The potential positive and negative economic effects related to an OMF facility in the City of Hopkins were not addressed in the Draft EIS. Mitigation measures are also discussed in this section.

A. Existing Conditions

As discussed in Section 3.3.1.1, the proposed Hopkins OMF site is characterized by industrial land uses, resulting from activities occurring on nine parcels. Section 3.3.1.2 and Table 3.3-2 of this Supplemental Draft EIS identify full and partial parcel acquisitions that would need to occur to accommodate the proposed Hopkins OMF. The majority of the budgeted revenues for the City of Hopkins are from property taxes comprising 54 percent of the total revenues (City of Hopkins, 2012).

B. Potential Economic Impacts

This section identifies the potential long-term and short-term economic impacts that would result from the conversion of private businesses into transit right-of-way to accommodate the construction and operation of the proposed Hopkins OMF. Section 3.1.2.11 provides a summary of data used for this analysis, some of which has been updated since publication of the Draft EIS.

Long-Term Direct and Indirect Economic Impacts

This section describes the long-term direct and indirect economic impacts associated with the proposed Hopkins OMF, which would require full acquisition of eight properties, one partial acquisition, and potential displacement of five businesses associated with these parcels. This reduction in the number of businesses would result in an annual reduction in property tax revenue to the City of Hopkins of about $99,200 (0.8 percent of the total city property tax revenues in 2013)[24]. See Section 3.1.2.11 for additional information on methodology. This loss of property tax revenue could be reduced if less land area is actually used for the OMF. For example, in some cases, the Council may determine that an entire parcel would need to be acquired to accommodate construction, but later, following construction, some property may no longer be needed for the project. In these cases, the excess property would be disposed of per Council policy and applicable federal and state regulations and would likely be sold to return to compatible land use, as discussed in Section 3.1.2.2 of this Supplemental Draft EIS.

Further, the loss in property tax revenue due to the acquisition of privately-held land has the potential to be offset with increased property tax revenues, if the station areas within the city result in higher property values due to improved access and other benefits associated with the proposed light rail stations within the Hopkins city limits. Background on the potential for increased property tax revenues in proposed light rail station areas is discussed in more detail under the Eden Prairie Segment in Section 3.2.3. The loss of property tax revenue could also be reduced if the affected businesses relocate elsewhere within the City of Hopkins.

The proposed Hopkins OMF would result in approximately 160 long-term jobs associated with operations of the facilities and light rail vehicles. These new jobs may offset jobs located in the businesses that are proposed for acquisition and that could be displaced. In addition, the businesses that would be displaced as a result of acquisition might choose to relocate within the City of Hopkins. Businesses displaced by the proposed Hopkins OMF site would receive compensation and relocation assistance.

Section 3.2.1.2 of the Eden Prairie Segment of this Supplemental Draft EIS addresses development potential presented by the improved access. In general, this type of benefit would not be recognized by the proposed Hopkins OMF, given the nature of the facility. However, increased development potential in the surrounding area could occur since station areas can influence development activity and the LPA includes the proposed Shady Oak Station just to the northwest of the proposed OMF site.

[24] Tax base loss was calculated by dividing the property taxes lost as a result of full property acquisitions by the total property tax collected in Hopkins in 2011.

Short-Term Economic Impacts

This section describes the short-term economic impacts associated with constructing the proposed OMF. Beneficial short-term impacts of construction include the influx of business during construction, as outlined in Chapter 5 of the Draft EIS. Short-term construction-related economic effects may occur as a result of implementation of the proposed Hopkins OMF. These construction-related impacts would include increased noise during construction and temporary access restrictions to businesses during construction.

C. Mitigation Measures

Because the proposed Hopkins OMF would result in a decrease in property tax revenue of less than one percent, no adverse impacts are expected and therefore no mitigation measures have been identified.

3.3.4 Transportation Effects

This section describes the impacts the proposed Hopkins OMF would have on transportation facilities, addressing roadway and traffic; parking; and safety and security. The proposed Hopkins OMF would not affect transit revenue operations, freight rail operations, or bicycle and pedestrian facilities. This section also identifies related mitigation measures. Methodologies and data used to prepare these analyses, updated since publication of the Draft EIS, may be found in Section 3.1.2.12 of this Supplemental Draft EIS.

As summarized in Table 3.3-1, the proposed Hopkins OMF would vacate short sections of two existing local streets and it would introduce one new non-revenue light rail track at-grade crossing of one street, which could affect both traffic operations and safety and security.

3.3.4.1 Roadway and Traffic

This section describes the proposed roadway modifications and anticipated traffic impacts resulting from the proposed OMF. Transportation analysis of the proposed Hopkins OMF site is based on projected travel demand, transportation network capacity, transportation system performance measures, and resulting impacts to the roadway network as a result of the proposed Hopkins OMF. The traffic impacts described in Section 3.3.4.1 of this Supplemental Draft EIS were not included in the Draft EIS because the Hopkins OMF site was incorporated into the project after completion of the Draft EIS.

A. Existing Conditions

This section describes the roadway and traffic operations within and surrounding the proposed OMF site. The proposed Hopkins OMF would be located on 5th Street/K-Tel Drive as illustrated on Exhibit 2.5-3 of this Supplemental Draft EIS. The roadway network around the proposed Hopkins OMF site consists of the local street connections of 16th Avenue, 15th Avenue, and 6th Street. These roadways are two-lane, low-volume (less than 3,000 vehicles per day) local streets that provide access to the individual parcels off of 5th Street/ K-Tel Drive, a collector street. To the east, 5th Street connects to 11th Avenue, a four-lane major collector that connects to Excelsior Boulevard, with a functional classification of a major reliever 0.25 mile north of 5th Street that provides regional access to Highway 169 to the east and I-494 to the west. K-Tel Drive connects to Shady Oak Road (County Road 61), which also connects to Excelsior Avenue 0.5 mile to the north. The parcels within the site designated for the proposed Hopkins OMF are characterized by land uses, which currently generate truck traffic.

B. Potential Roadway and Traffic Impacts

This section identifies the long-term and the short-term impacts that would result from the traffic changes related to the proposed Hopkins OMF.

Long-Term Direct and Indirect Roadway and Traffic Impacts

This section describes the potential long-term direct roadway and traffic operation impacts as a result of the proposed OMF. The proposed Hopkins OMF would result in the permanent vacation of 16th Avenue South between 5th and 6th Streets South and a cul de sac would be constructed on 6th Street South immediately east of 16th Avenue South. Fifteenth Avenue South would be extended from its current terminus at 6th Street South to the south and southwest, connecting 15th Avenue South to the proposed Hopkins OMF site. The partial acquisition of the parcel at 510 15th Avenue South would eliminate one access point to the

property on 16th Avenue South. The parcel would continue to have one access on 6th Street South and one access on 15th Avenue South. The proposed Hopkins OMF would also result in a new at-grade crossing of non-revenue light rail tracks at K-Tel Drive. That at-grade crossing would be used relatively infrequently, but it would result in slight delays to traffic on K-Tel Drive and 5th Street South when used by non-revenue light rail vehicles.

No long-term indirect impacts to traffic from the proposed Hopkins OMF are anticipated. The traffic analysis for the Hopkins OMF followed the same general methodology used in the Draft EIS, as described in Section 3.1.1.12 "Transportation: Transit, Traffic, Freight Rail, Bicycle and Pedestrian, and Safety and Security." Traffic operations analyses were conducted at locations which meet the following criteria:

- Signalized intersections located within 200 feet of an at-grade LRT crossing
- Intersections where a signal, roundabout, or stop sign controlling the roadway crossing the tracks was located within 600 feet of the LRT crossing
- Intersections where the roadway annual average daily traffic (AADT) is greater than 5,000 vehicles per day

While the proposed Hopkins OMF would result in one new at-grade roadway crossing of non-revenue light rail tracks at K-Tel Drive, that intersection would not meet the criteria listed above. This at-grade crossing would result in slight delays to traffic, on K-Tel Drive and 5th Street South when K-Tel Drive is crossed by non-revenue light rail vehicles. Typical delays are anticipated to be a maximum of 35 seconds and operations are not expected to be reduced to an unacceptable level (LOS E or F) on K-tel Drive as a result of this delay. The OMF will not significantly impact any arterial roadways and will not result in changes to any signalized intersections. In addition, the OMF facility itself will not significantly change traffic patterns in the area as it will have similar characteristics to the industrial uses currently in place and is expected to decrease trip generation over the current use.

Short-Term Roadway and Traffic Impacts

This section describes the short-term roadway and traffic impacts associated with construction of the proposed Hopkins OMF. Constructing the Hopkins OMF would result in temporary impacts to traffic on adjacent streets, with a potential increase in truck traffic due to construction activities. Construction would also result in the demolition and removal of numerous buildings. Construction activities would involve the use of 11th Avenue South, Shady Oak Road, and 5th Street South/K-Tel Drive from Excelsior Boulevard by trucks hauling debris away from the site during the building demolition and removal period, as well as supply of equipment, personnel, and construction material to the site using the same local street network. Because parcels that would be acquired currently generate truck traffic as part of the industrial activities that take place on these sites, the subsequent removal of truck traffic associated with the parcels would offset some of the increase in construction truck traffic.

C. Mitigation Measures

Because there are no adverse long-term impacts to traffic, no mitigation measures were identified. Mitigation measures related to the partial acquisition of the parcel at 510 15th Avenue South will include providing circulation to the loading dock located on the west corner of the building. These details will be refined as part of Project Development.

During construction, contractors will be required to comply with all state and local regulations concerning the closing of roadway and the effects of construction activities. Contractors will also be required to comply with the guidelines established in the Minnesota Manual on Uniform Traffic Control Devices. The Council will develop a construction staging plan (staging plan), which will be reviewed with all appropriate jurisdictions and railroads, and the contractor will be required to secure all necessary permits and follow the staging plan, unless otherwise approved. The various components of a staging plan include:

- Traffic management plans approved by all appropriate jurisdictions prior to the start of construction activities. In some cases, intersections may need to be modified to minimize vehicle delay. Measures may

include the addition of turn lanes, the construction of temporary traffic signals, the revision of existing signal timing plans, or the addition of warning signs.

- Detailed construction timeline developed before the initiation of construction that would inform roadway users and adjacent property owners about when construction activities would begin, the type of work being performed, an estimate of when the work will be completed, and recommendations on how individuals and entities can minimize disruption to their activities.

Impacts related to temporary changes to access will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.3.4.2 Parking

This section describes the potential changes to on- and off-street parking due to the Hopkins OMF. As summarized in Table 3.3-1, the LPA would result in the displacement of 43 existing on-street parking spaces and the displacement of approximately 310 private off-street parking spaces that serve four existing businesses that would also be displaced by the OMF.

A. Existing Conditions

Parking for personal automobiles in the vicinity of the proposed Hopkins OMF is a mix of privately-owned, off-street parking associated with individual businesses and on-street parking. Off-street parking in the segment is provided on surface parking lots. On-street parking is allowed on both sides of 6th Street South and 16th and 15th Avenues South and on the south side of 5th Street South.

B. Potential Parking Impacts

This section describes the anticipated long-term and short-term impacts to parking in the vicinity of the proposed Hopkins OMF that would result from the LPA.

Long-Term Direct and Indirect Parking Impacts

This section describes the long-term direct and indirect impacts to parking that would result from construction of the Hopkins OMF.

The Hopkins OMF would result in the displacement of approximately 43 on-street and 310 off-street parking spaces. The displaced on-street parking spaces would be from either side of 16th Avenue South (37 displaced spaces) and on the south side of 6th Street South (six displaced spaces). The displacement of approximately 310 off-street parking spaces would be associated with four potential full property acquisitions by the project (partial acquisitions could result in the displacement of additional off-street depending on the results of the property acquisition process). Table 3.3-6 summarizes the off-street parking displacements by affected parcel that would result from the LPA.

TABLE 3.3-6
Hopkins – Potential Off-Street Parking Displacements

Location	Existing	Displaced	Type of Property Acquisition
1600 5th Street S	59	59	Full
544 16th Avenue S	68	68	Full
610 16th Avenue S	49	49	Full
1515 6th Street S	134	134	Full
Total	310	310	

Source: Council, May 2014.

There would be no indirect impact to parking related to the Hopkins OMF, because the OMF site would include approximately 110 off-street spaces, which would be enough capacity to meet the needs of the facility's anticipated employees and visitors.

Short-Term Parking Impacts

This section describes the short-term parking impacts that would be associated with construction of the LPA in the vicinity of the proposed Hopkins OMF. There could be the temporary displacement of parking on 15th Avenue South to accommodate the extension of that street south of 6th Street South and on 6th Avenue South to accommodate the construction of the cul de sac. No additional short-term parking impacts would result from the Hopkins OMF.

C. Mitigation Measures

Because the proposed OMF site would contain adequate off-street parking for employees and visitors, mitigation for the displacement of on-street parking is not needed. All off-street parking that would be displaced is associated with businesses that would also be displaced by the OMF. Therefore, no mitigation of the displacement of off-street parking spaces has been identified.

Impacts related to temporary changes to parking will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.3.4.3 Safety and Security

This section discusses potential safety and security issues for pedestrians, automobile traffic, and emergency service providers at at-grade intersections light rail tracks as part of the proposed Hopkins OMF, including identification of potential related mitigation measures. As summarized in Table 3.3-1, the proposed Hopkins OMF would result in one new non-revenue light rail at-grade crossing of a roadway, which could delay emergency vehicles when light rail vehicles are present in the crossing. Potential mitigation measures to alleviate these potential impacts are also identified. The Draft EIS addresses Safety and Security under the broader category of Social Effects (see Section 3.7 of the Draft EIS).

A. Existing Conditions

This document identifies new LRT at-grade crossings or roadways not identified in the Draft EIS. Existing roadway conditions described in Section 3.7.2 of the Draft EIS and Section 3.3.4.1.A of this Supplemental Draft EIS apply. As discussed in Section 3.1.2.12 of this Supplemental Draft EIS, the Southwest LRT Project will conform to the FTA's State Safety Oversight Program for Rail Safety. This topic will be covered in more detail in the Final EIS.

B. Potential Safety and Security Impacts

Potential long-term and short-term safety and security impacts related to a new non-revenue light rail at-grade crossing are identified in this section.

Long-Term Direct and Indirect Safety and Security Impacts

This section describes the long-term direct and indirect safety and security impacts associated with the proposed OMF. The proposed Hopkins OMF would result in one new at-grade roadway crossing of non-revenue light rail tracks at K-Tel Drive, as shown on Exhibit 2.5-3 of this Supplemental Draft EIS. That at-grade crossing would be used relatively infrequently, but it would result in slight delays to traffic, which could include emergency vehicles, on K-Tel Drive and 5th Street South when K-Tel Drive is crossed by non-revenue light rail vehicles. Section 3.2.4.4 of this Supplemental Draft EIS discusses safety measures that could be implemented to warn motorists, bicyclists, and pedestrians of oncoming LRT trains. No long-term indirect impacts to safety and security from the proposed Hopkins OMF are anticipated.

Short-Term Safety and Security Impacts

This section describes the short-term safety and security impacts caused by construction of the proposed OMF. Construction activities related to the Hopkins OMF under the LPA would temporarily result in increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours. This temporary increase in roadway congestion could affect access and response times for public service providers, including emergency service providers and public utilities and

transportation. However, provisions would be made to maintain required accesses during established periods or to keep one lane of traffic open on main arterials. Before construction, traffic control plans would be reviewed and approved by applicable agencies before implementation. Before construction, the Council will coordinate with public service providers on required detour routes and lane closures in order to minimize increases in travel and response times and to minimize impacts on solid waste and recyclables collections and the transportation of students.

C. Mitigation Measures

During construction, roadways will temporarily be fully or partially closed, limiting access and requiring temporary detours. These temporary detours could cause minor delays in emergency response times and cause detours for other public services. Metro Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times. Other mitigation measures will include signage, information fliers, and website postings with maps of construction areas/detours. More specific mitigation concepts will be discussed in the Final EIS when additional design and construction information will be available, in accordance with Federal, state and local requirements.

3.3.5 Environmental Justice Compliance

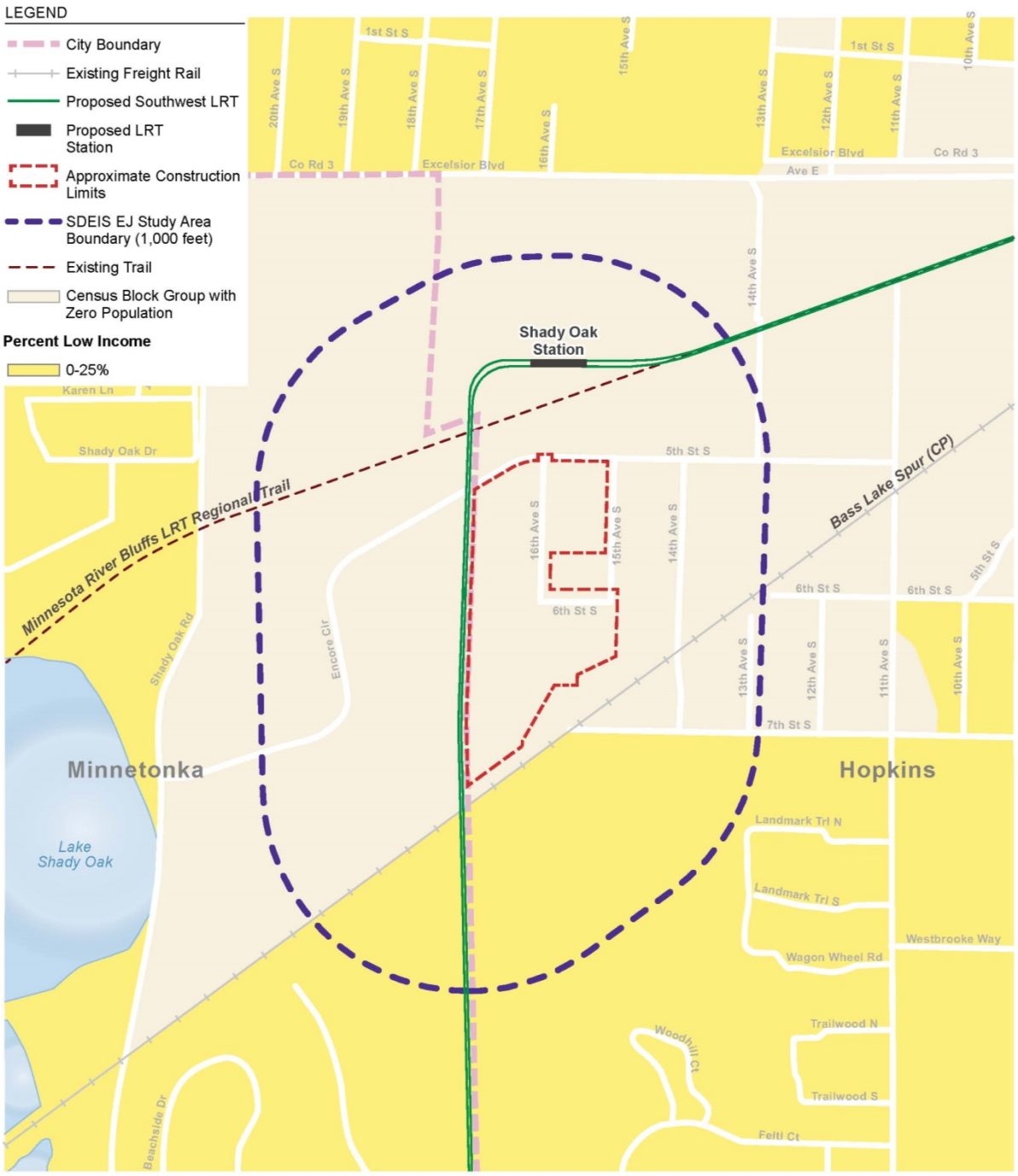
This section describes: (a) the minority and/or low-income populations in the vicinity of the proposed Hopkins OMF; (b) the opportunities provided to minority and/or low-income populations to participate in the Southwest LRT Project planning process; and (c) a summary of impacts associated with the proposed Hopkins OMF that could impact environmental justice populations. The Hopkins OMF environmental justice study area is illustrated on Exhibits 3.3-4 and 3.3-5 and defined in Section 3.1.2.14 of this Supplemental Draft EIS. In summary, the anticipated environmental impacts associated with the Hopkins OMF would not change the preliminary environmental justice finding for the LPA[25] in the Draft EIS (see Table 10.6-1 in Section 10.6 of the Draft EIS). The LPA would not result in disproportionately high and adverse impacts to environmental justice populations. A final corridor-wide environmental justice analysis, including a final project-wide finding, will be completed as part of the Final EIS.

A. Demographic Characteristics

While the proposed Hopkins OMF site was not specifically included in the Draft EIS, the overview of existing conditions in the environmental justice analysis in Chapter 10 does encompass the Hopkins OMF site, as illustrated on Figures 10.3-3 and 10.3-8 of the Draft EIS. The environmental justice analysis in this section of the Supplemental Draft EIS includes updated and new data sources to describe the demographic characteristics surrounding the Hopkins OMF, such as updated U.S. Census data and minority and school lunch enrollment data for the public elementary school that has attendance boundaries that encompasses the proposed Hopkins OMF environmental justice study area. Additional information on these new and updated data is provided in Section 3.1.2.14 of this Supplemental Draft EIS. Population and demographic characteristics provide information about the region's social context, and race and income information identify environmental justice populations within the study area. Table 3.3-7 provides information on the demographic characteristics of the Hopkins OMF study area, compared to the cities of Hopkins and Minneapolis and Hennepin County. In summary, the percent of the population within the OMF environmental justice study area that is minority or low-income (24.2 and 7.1 percent, respectively) is less than those of the Cities of Hopkins and Minneapolis and of Hennepin County. Exhibits 3.3-4 and 3.3-5 illustrate the concentration of minority and low-income populations within and immediately surrounding the Hopkins OMF environmental justice study area. The exhibits also identify the 2010 U.S. Census block groups or Census blocks that had zero population to illustrate the relative lack of population residing within the study area.

[25] The Draft EIS evaluated four potential OMF sites, which did not include the proposed Hopkins OMF site. However, the overview of existing conditions in the environmental justice analysis in Chapter 10 does encompass the Hopkins OMF site, as illustrated on Figures 10.3-3 and 10.3-8 of the Draft EIS. See Chapter 2 of this Supplemental Draft EIS and of the Draft EIS for additional information on the LPA as described in the Draft EIS.

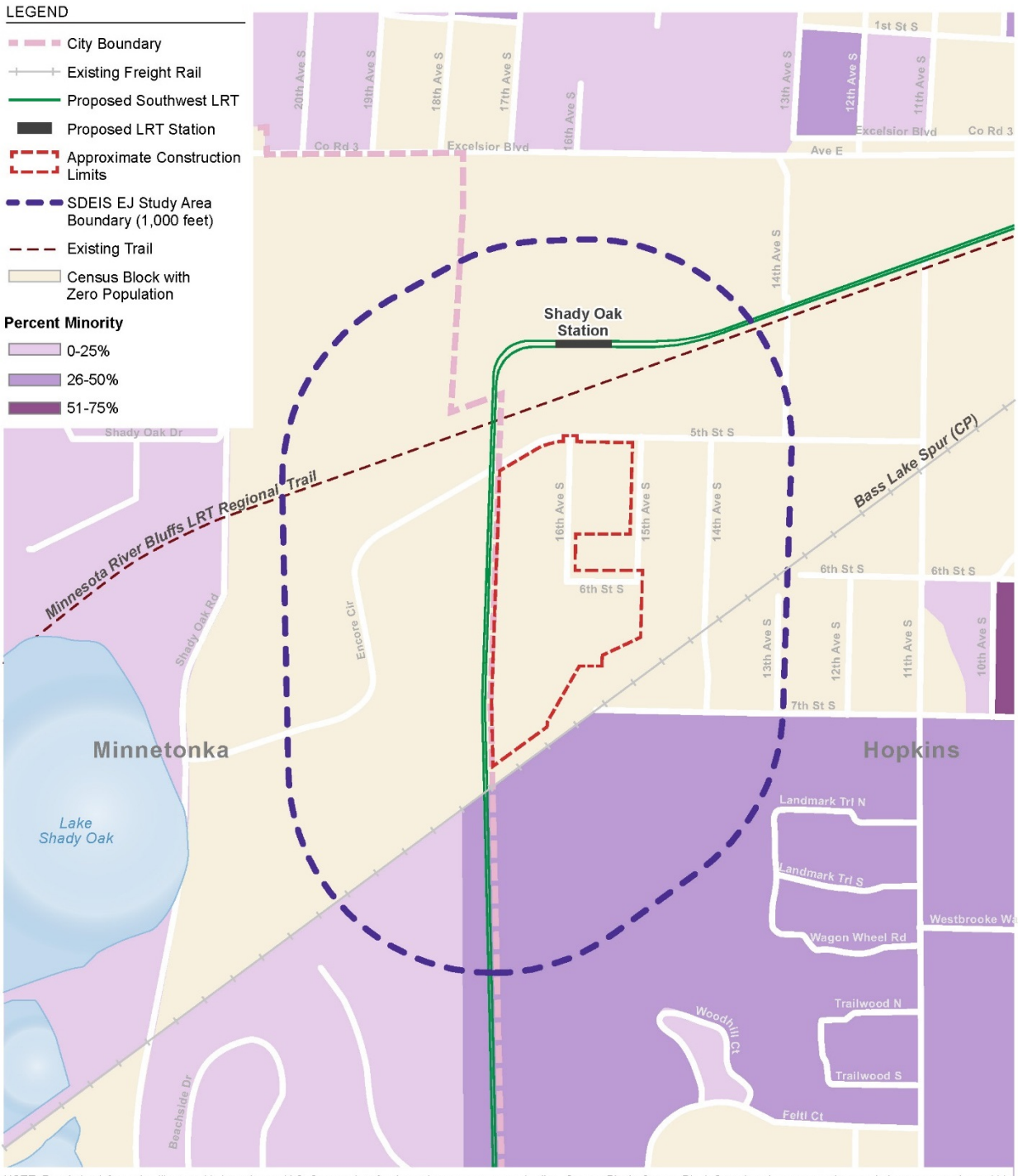
EXHIBIT 3.3-4
Low-Income Population Within Census Block Groups, Hopkins Operations and Maintenance Facility



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

SOUTHWEST	Southwest LRT Supplemental Draft EIS Low-Income Population Within Census Block Groups Hopkins Operations and Maintenance Facility	Exhibit 3.3-4	NORTH 0 300 600 Feet	METROPOLITAN COUNCIL

EXHIBIT 3.3-5
Minority Population Within Census Blocks, Hopkins Operations and Maintenance Facility



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

SOUTHWEST	Southwest LRT Supplemental Draft EIS Minority Population Within Census Blocks Hopkins Operations and Maintenance Facility	Exhibit 3.3-5	NORTH 0 300 600 Feet	METROPOLITAN COUNCIL

TABLE 3.3-7
Demographic Characteristics – Hopkins OMF Environmental Justice Compliance Study Area, the Cities of Hopkins and Minneapolis, and Hennepin County

Characteristic	Hopkins OMF Environmental Justice Compliance Study Area	Hopkins	Minneapolis	Hennepin County
Total Population[a]	1,201	17,591	382,578	1,152,425
Minority Population[a]	291 (24.2%)	5,870 (33.4%)	151,928 (39.7%)	325,755 (28.3%)
Population for whom Low-Income Determined[b]	5,934	17,253	366,536	1,124,293
Low-Income Population[b]	422 (7.1%)	2,045 (11.9%)	81,889 (22.3%)	138,258 (12.3%)

[a] Information based upon 2010 U.S. Census data.

[b] Information based upon 2007-2011 American Community Survey data.

Note: Study area is generally 1,000 feet around the proposed OMF site (see Exhibit 3.3-1).

Source: U.S. Census, 2010; 2012.

Providing additional context for the U.S. Census data, Table 3.3-8 contains information on the 2010-2011 school year collected from the National Center for Education Statistics for the Gatewood Elementary School (located west of I-494 and north of Highway 62), which draws students from a much larger area that encompasses the Hopkins OMF study area. Of the students enrolled at the school, approximately 42 percent were identified as belonging to a minority and 33 percent were enrolled in the school's free lunch program.

TABLE 3.3-8
Hopkins OMF Public Elementary School Demographics (2010-2011 School Year)

School	Total Students	Minority Population	Free Lunch
Gatewood Elementary	531	224 (42.2%)	176 (33.1%)

Source: National Center for Education Statistics, 2012.

B. Outreach to Minority and Low-Income Populations

Section 10.4 of the Draft EIS summarizes environmental justice-related public involvement performed as part of the Draft EIS process. Since completion of the Draft EIS, the Southwest LRT Project provided project information via its website, distributed information at community events and neighborhoods adjacent to proposed OMF locations, coordinated with the media, and conducted public meetings and open houses. Those activities were used to convey information on the various steps in the project process and opportunities to the public on the overall project, including the requirement to site a new light rail OMF within the corridor. Those activities were also used as a venue to the public to comment on the various design adjustments under consideration at the time. Additional information on these public engagement activities is provided in Chapter 4 of this Supplemental Draft EIS.

As part of the Hopkins OMF site evaluation, site location and evaluation criteria were presented to several committees, including the Community Advisory Committee (CAC). CAC members represent neighborhood groups, special-interest groups, advocacy groups, educational institutions, and ethnic communities, several of which represent areas that include environmental justice populations. The project team also participated in numerous meetings and events at the request of CAC members. The project team also responded to requests to meet with community groups that are not officially part of the CAC, including those groups representing environmental justice communities. More information about the CAC and the groups it represents is found in Section 4.3 of this Supplemental Draft EIS and at the communications tab of the Council's Southwest LRT Project website (http://www.swlrt.org). Throughout the OMF site evaluation process, members of the committees were provided information on the potential sites under consideration for their review and comment. In addition, open houses were held at milestones during the evaluation process to allow the communities, including Hopkins, an opportunity to comment on the OMF site locations.

Selection of the OMF site was also done in compliance with FTA's Title VI guidance, which requires that an equity analysis be completed for proposed OMF sites to ensure that the location does not disproportionately impact populations identified on the basis of race, color or national origin. Three open houses were held to

solicit public input on possible OMF locations. To encourage greater participation by low income and minority populations, the project coordinated communication efforts with community leaders and interest groups. This effort included working with Corridors of Opportunity grant recipients to engage low income and minority populations on OMF issues; door knocking and flyering area neighborhoods surrounding potential OMF locations, especially those sites with nearby low income and/or minority populations are located. This effort also included coordinating with Corridors of Opportunity grant recipients to hold special meetings in which public feedback was sought. Community feedback and public input received resulted in elimination of OMF sites near Blake road, due to community concerns and potential impacts to low income and minority populations (Council, 2014b, *Communications and Public Involvement Plan* – see Appendix C for details on accessing this plan).

C. Environmental Justice Compliance Analysis Summary

The USDOT Order on environmental justice (USDOT, 2012) states that policies, programs, and activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations. Table 3.3-1 summarizes the long-term impacts that would be associated with the proposed Hopkins OMF, which are described in greater detail throughout Section 3.3 of this Supplemental Draft EIS. The DOT Order defines "disproportionately high and adverse effect on human health or the environment" to include:

"an adverse effect that:

(c) is predominantly borne by a minority population and/or a low-income population, or

(d) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

As previously noted, the Draft EIS included a preliminary finding that the LPA would not result in a disproportionately high and adverse impact to EJ populations (see Table 10.6-1 in Section 10.6 of the Draft EIS). Table 3.3-9 provides a summary of the preliminary assessment of whether the anticipated environmental impacts for the Hopkins OMF would likely change the preliminary assessment in the Draft EIS and result in disproportionately and high adverse impacts to environmental justice populations. This assessment considers the potential environmental benefits the project would have for environmental justice populations, as well as mitigation measure identified throughout Section 3.3 of this Supplemental Draft EIS. The project's Final EIS will include a final project-wide environmental justice assessment, which will include FTA's final environmental justice finding for the project.

TABLE 3.3-9
Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – Hopkins OMF

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Social Effects		
Land Use	• Direct conversion of 18.2 acres of land to public transportation-related use • No change in the overall land use character of the surrounding area • LPA is compatible with adopted plans and existing land use • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	**None:** LPA is consistent with adopted land use plans and would not change overall land use character in the vicinity of the OMF *No disproportionately high and adverse impacts on EJ populations*
Acquisitions and Displacements	• Acquisition of eight full and one partial parcels • Potential relocation of five businesses • Potential increases in noise levels, dust, traffic congestion, visual quality, and increased difficulty accessing property	None: no residential displacements and potentially displaced businesses do not predominantly serve EJ populations *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Environmental Effects		
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term groundwater pumping due to potentially contaminated groundwater • Temporary groundwater pumping • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction	None: generally compatible with geologic conditions and no long-term effect groundwater; potential long-term water pumping would include BMPs to avoid adverse impacts on groundwater and soils *No disproportionately high and adverse impacts on EJ populations*
Water Resources	Wetlands: • Permanent fill of approximately 0.7 acre of wetlands • Short-term impacts on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction	None: impacts on wetlands would be mitigated in compliance with federal and local requirements and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
	Floodplains: • Approximately 0.6 acre of permanent fill within a floodplain • Potential for construction-related sedimentation flow into the floodplain	None: impacts ono floodplains would be mitigated in compliance with federal and local requirements and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
	Public Waters and Stormwater Management: • No impacts on Nine Mile Creek • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction	None: stormwater would be treated to meet local requirements *No disproportionately high and adverse impacts on EJ populations*
Hazardous and Contaminated Materials	• Four high-risk sites of concern, two onsite and two adjacent to the site • Further investigation required to determine need for remediation • Potential spills during construction • Encountering sites with existing contamination during construction	None: no likely risks of hazardous and contaminated materials contamination during operations; BMPs would effectively manage risks during construction and known sites that would be disturbed are removed from residential properties *No disproportionately high and adverse impacts on EJ populations*
Economic Effects		
Economic	• Annual reduction of $99,200 in City of Hopkins property tax revenues (year 2013) (0.8 percent of total) • Addition of approximately 160 long-term jobs associated with operations of the facilities and light rail vehicles • Beneficial short-term impacts of construction include the influx of business during construction • Increased noise during construction and temporary access restrictions to businesses during construction	None: effect on local tax revenues is minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Transportation Effects		
Roadway and Traffic	• Permanent vacation of 16th Avenue South, between 5th and 6th Streets South • One new non-revenue light rail at-grade road crossing • Temporary impacts on traffic on adjacent streets, with a potential increase in truck traffic due to construction activities	None: all changes to the roadway system would be minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Parking	• Displacement of 43 on-street parking spaces • Displacement of 310 off-street parking spaces associated with four potential full property acquisitions • Temporary displacement of parking on 15th Avenue	None: removal of on and off-street parking would not adversely effect EJ populations access to services and facilities and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Findings	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Safety and Security	• Potential for emergency vehicle delays of up to one minute at one new non-revenue light rail at-grade road crossing • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours	None: potential for emergency vehicle delay at the new non-revenue LRT at-grade street crossing would be less than one minute on average and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

[a] Considering mitigation measures identified in Section 3.3 of this Supplemental Draft EIS and whether the impacts would also be borne by non-environmental justice populations.

Note: Data are approximate.

Source: CH2M HILL, 2014.

A description of the preliminary findings is summarized in Table 3.3-9 of this Supplemental Draft EIS. As noted, these preliminary findings associated with impacts of the Hopkins OMF would not change the preliminary finding in the Draft EIS that the LPA would not result in disproportionately high and-adverse impacts to environmental justice populations.

Based on the analysis described in Section 3.3 of this Supplemental Draft EIS and summarized in Table 3.3-9, the following environmental categories would not result in any adverse high impacts or the impacts would be borne by all populations regardless of race, ethnicity, or socioeconomic status: land use; geology and groundwater; wetlands; floodplains; public waters and stormwater management; hazardous and contaminated materials; economic; and roadway and traffic. In addition, the following environmental categories were not evaluated within this Supplemental Draft EIS for the Hopkins OMF, for reasons outlined in Section 3.1.1 of this Supplemental Draft EIS: socioeconomics; neighborhoods and community; cultural resources; parklands, recreation areas, and open spaces; visual quality and aesthetics; biota and habitat; threatened and endangered species; farmlands; air quality; noise; vibration; electromagnetic interference and utilities; energy and climate change; transit; bicycle and pedestrian; and freight rail.

Acquisitions and Displacements

Section 3.3.1.2 (including Exhibit 3.3-1) of this Supplemental Draft EIS describes the analysis of potential property acquisitions and displacements resulting from the proposed Hopkins OMF. The proposed Hopkins OMF would not result in the acquisition of any residential property it would not result in the long-term or temporary displacement of any residents. The LPA would result in the purchase of eight full and one partial industrial parcels in Hopkins, which could result in the need for up to five businesses to relocate. All of the parcels are actively being used for industrial purposes. Six of the parcels have occupied buildings on them and three parcels have no buildings (two of the three parcels serve as driveways to other parcels that would be acquired). Existing businesses that could be displaced include an industrial supply company, a specialized ventilation company, and a printing company. None of the potentially-displaced businesses predominantly serve environmental justice populations and it is likely that at least some of the businesses could be relocated within Hopkins through the property acquisition process.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and-adverse acquisitions and displacements affecting environmental justice populations in the Hopkins OMF environmental justice study area.

Parking

Section 3.3.4.2 of this Supplemental Draft EIS describes the potential impacts to parking resulting from the proposed Hopkins OMF. The proposed Hopkins OMF would result in the displacement of approximately 43 on-street parking spaces and approximately 310 privately-owned off-street parking spaces. The displaced on-street parking spaces would be from either side of 16th Avenue South and the south side of 6th Street South. None of the areas of displaced on-street parking spaces serve existing businesses that predominantly serve environmental justice populations. The proposed Hopkins OMF site would include approximately 110 off-street parking spaces, which would accommodate anticipated employees at and visitors to the facility. All of the displaced off-street parking spaces are currently associated with businesses that would also be displaced by the project (see Table 3.3-6). All off-street parking that would be displaced is associated

with businesses that would also be displaced by the OMF. Therefore, no mitigation of the displacement of off-street parking spaces has been identified.

Preliminary Finding: based on the findings previously described, the Hopkins OMF would not result in disproportionately high and adverse parking impacts to environmental justice populations.

Safety and Security

Section 3.3.4.3 of this Supplemental Draft EIS describes the effects that the proposed Hopkins OMF would have on safety and security. In particular, the section notes that the LPA would result in the addition of one new non-revenue light rail grade crossing of K-Tel Drive. The potential delay of emergency vehicles at the new non-revenue at-grade light rail street crossing would be relatively minor (less than one minute on average) and the adverse effects would not be predominantly borne by EJ populations.

Preliminary Finding: based on the findings previously described, the proposed Hopkins OMF would not result in disproportionately high and adverse safety and security impacts to environmental justice populations.

3.4 St. Louis Park/Minneapolis Segment

This section provides a summary of the potential environmental impacts that would result from the LPA within the St. Louis Park/Minneapolis Segment and supplements information provided in the project' s Draft EIS. This section addresses existing conditions within the vicinity of the proposed light rail-related improvements and freight rail modifications, describes potential long-term and short-term (construction-related) impacts resulting from the LPA within the segment, and identifies mitigation measures.

As described and illustrated in Section 2.5 of this Supplemental Draft EIS, in April and July 2014, the Council identified adjustments to the LPA in the St. Louis Park/Minneapolis Segment. In summary, the LPA has been adjusted in the St. Louis Park/Minneapolis Segment to include: a proposed light rail tunnel in the Kenilworth Corridor; proposed modifications to freight rail currently operating in the Kenilworth Corridor and a portion of the Bass Lake Spur; and adjustments to the location and capacity of proposed park-and-ride lots. Appendix G of this Supplemental Draft EIS includes conceptual engineering drawings of the proposed light rail-related improvements and freight rail modifications in the segment. As shown on Exhibit 2.5-4 in this Supplemental Draft EIS, the proposed LPA would: (1) construct a light rail alignment within the St. Louis Park/Minneapolis Segment, portions of which would be at-grade, above-grade, or below-grade; (2) provide for continuation of freight rail operations within the Kenilworth Corridor with relatively minor adjustments to freight rail facilities and operations; and (3) reconstruct the multipurpose bicycle and pedestrian trail generally within its current location, with modifications to new trail bridges over freight rail and light rail east of Beltline Station and west of Penn Station to accommodate the new light rail alignment and related facilities.

This section supplements the environmental analysis provided in the Draft EIS for the St. Louis Park/ Minneapolis Segment (see Section 2.5 for a description of the segments used in this Supplemental Draft EIS). This analysis focuses on the environmental categories that could potentially identify new significant adverse impacts not previously disclosed in the Draft EIS:

- Land use
- Acquisitions and displacements
- Cultural resources
- Parklands, recreation areas, and open spaces
- Visual quality and aesthetics
- Geology and groundwater
- Water resources: wetlands, floodplains, public waters, and stormwater management
- Noise
- Vibration
- Hazardous and contaminated materials
- Economic effects
- Transit

- Roadway and traffic
- Parking
- Freight rail
- Bicycle and pedestrian
- Safety and security

An assessment of impacts to environmental categories that would not differ substantially from those addressed in the Draft EIS will be updated in the forthcoming Final EIS. Section 3.1 of this Supplemental Draft EIS provides a description of the environmental categories addressed in this section. It also provides a general description of the methodologies, data, and regulations used to prepare this analysis, including a description of updates since the Draft EIS.

Table 3.4-1 identifies the environmental categories evaluated in this section and it summarizes the key findings of that analysis by environmental category.

This section also provides an update of the project's environmental justice compliance within the St. Louis Park/Minneapolis Segment. Section 3.4.5 provides a summary of: updated demographic characteristics of environmental justice populations in the segment; the project's environmental justice-related public involvement efforts in the segment since publication of the Draft EIS; and the updated impacts relative to environmental justice populations in the segment.

3.4.1 Social Effects

This section addresses how the proposed LPA would affect the St. Louis Park/Minneapolis Segment for the following environmental categories that are included within the Social Effects resource group: land use; acquisitions and displacements; cultural resources; parklands, recreation areas, and open spaces; and visual quality and aesthetics. In general, this section describes the existing conditions, potential environmental impacts, and mitigation measures for each environmental category addressed.

TABLE 3.4-1
Summary of Findings for the St. Louis Park/Minneapolis Segment

Resource Group Environmental Category	Summary of Findings
Social Effects	
Land Use	• Direct conversion of 33.6 acres of land converted to public transportation-related use • LPA is compatible with adopted plans and existing land use • St. Louis Park and Minneapolis have plans to encourage mixed use and higher densities of development and land use around the Louisiana, Beltline, Wooddale, West Lake, and Penn Stations • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property
Acquisitions and Displacements	• Acquisition of 23 full and 29 partial parcels • Potential relocation of up to nine businesses • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property
Cultural Resources	• Preliminary determination of an adverse effect on the Grand Rounds Historic District and the Kenilworth Lagoon • Temporary closures of the Kenilworth Lagoon • Temporary closures of one or both lanes of a short segment of Cedar Lake Parkway between Xerxes Avenue and Burnham Road
Parklands, Recreation Areas, and Open Spaces	• Indirect long-term impacts to Jorvig Park, Lilac Park, Park Siding Park, Cedar Lake Park, and Lake of the Isles Park • Short-term construction (temporary) impacts to Cedar Lake Park, Cedar Lake LRT Regional Trail, Kenilworth Trail, North Cedar Lake Regional Trail, and the Midtown Greenway
Visual Quality and Aesthetics	• Of six viewpoints analyzed, three would experience a "substantial" overall level of impact and three would experience a "not substantial" level of impact • Potential construction-related visual impacts, such as construction staging areas; concrete and form installation; removal of some of the existing vegetation along the trail; lights and glare from construction areas; and dust and debris

Resource Group Environmental Category	Summary of Findings
Environmental Effects	
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term pumping of water from the tunnel portals (predominantly stormwater) and of groundwater from the tunnel to underground infiltration chambers • Potential for long-term pumping of water (predominantly groundwater) from the internal tunnel to the adjacent sanitary sewer system • Groundwater removal would be required during construction of the light rail tunnel • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction
Water Resources	Wetlands: • Permanent fill of 0.5 acre of wetlands • Temporary effects on wetlands during construction, such as temporary fill • Erosion and sedimentation during construction
	Floodplains: • No long-term floodplain impacts within the St. Louis Park/Minneapolis Segment • Potential for construction-related sedimentation flow into the floodplain
	Public Waters and Stormwater Management: • New light rail crossing of Kenilworth Lagoon • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction
Noise	• 67 moderate and three severe noise impacts[a] • Short-term noise impacts associated with construction activities and construction vehicles, including truck traffic
Vibration	• No vibration impacts • 54 ground-borne noise impacts[b] • Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles
Hazardous and Contaminated Materials	• Six high-risk sites that could require remediation prior to construction • Potential permanent groundwater pumping from behind the tunnel walls could encounter zones of contaminated groundwater • Potential spills during construction • Encountering sites with existing contamination during construction
Economic Effects	
Economic	• Potential reduction of an estimated $35,940 (current dollars) in City of St. Louis Park property tax revenues (0.2 percent of total)Potential impacts from removal of freight rail siding along the CP Bass Lake Spur • Potential short-term effects on freight rail operations
Transportation Effects	
Transit	• Potential changes to fixed route bus service to coordinate service with LRT service • Road detours and construction-related congestion that could affect SouthWest Transit bus operations
Roadway and Traffic	• Reconstruction and/or reconfiguration of existing roadways at seven locations • Traffic delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings • Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities
Parking	• Displacement of 297 off-street parking spaces associated with the full acquisition of 10 properties • Displacement of 118 on-street parking spaces at five locations • Addition of five on-street parking spaces at one location • Temporary displacement of on-street parking could occur
Freight Rail	• Light rail/freight rail Swap and Southerly Connection with some modified freight rail operations • Remove approximately 11,771 feet of freight rail siding track segments in the Bass Lake Spur • Temporary movement of the freight rail tracks during construction in the Kenilworth Corridor

Resource Group Environmental Category	Summary of Findings
Bicycle and Pedestrian	• Long-term changes to trail alignments at light rail crossings with no change in connectivity • Temporary trail detours during construction • Temporary trail detours would provide for continued trail connectivity during construction
Safety and Security	• Emergency vehicle delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours
Environmental Justice Compliance	
Environmental Justice Compliance	• No disproportionately high and adverse impacts on EJ populations identified

[a] Without mitigation. Where identified and implemented, mitigation will reduce the number of noise impacts exceeding FTA criteria. Mitigation measures will be determined in the Final EIS – see Section 3.4.2.3 for additional information.

[b] Without mitigation. Ground-borne noise mitigation will be determined in the Final EIS.

Note: Data are approximate.

Source: CH2M HILL, 2014.

3.4.1.1 Land Use

This section describes how the LPA would directly affect land use in the St. Louis Park/Minneapolis Segment. In particular, this section describes:

- Existing land uses and land use designations in the segment.
- The compatibility of the LPA with local land use plans.
- How the current use of parcels of land would change under the LPA (e.g., from private commercial use to public transportation), and how that could affect the overall land use characteristics of the segment.
- How the LPA would indirectly affect adjacent properties by indirectly attracting transit-oriented development.

Changes in transportation systems can influence changes in nearby land uses. The project can directly affect land use through property acquisition required for the project; and, conversely, the project can be a factor in considering development patterns of an area. Light rail development can act as a catalyst for development and/or redevelopment in those station locations where jurisdictions have identified the desire for greater density and mixture of land uses. In those areas where no land use changes are desired, the local jurisdictions control land use regulations and only the jurisdictions have the ability to make changes to directly influence land uses. In areas where the jurisdictions decide to influence land use changes, light rail can indirectly influence development patterns and decisions toward a pedestrian-friendly environment around stations in support of transit ridership. For the evaluation contained in this section, the project's land use compatibility and conformance with existing land use policies and plans was measured and compared to the following plans:

- *St. Louis Park Comprehensive Plan (City of St. Louis Park, 2009)*: Includes a future land use plan for the city, including the areas surrounding the three stations proposed in St. Louis Park. Generally calls for increased intensity of land use surrounding stations.
- *Elmwood Area Land Use, Transit and Transportation Study* (City of St. Louis Park, 2003): Guides decisions on land use redevelopment, infill development, and infrastructure changes in the Elmwood neighborhood, which is located between the Louisiana and Beltline Stations. Results were incorporated into the 2009 City of St. Louis Park Comprehensive Plan. Includes future land use and infrastructure plans for the proposed Beltline and Louisiana Stations which encourage transit supportive uses and densities within station areas.
- *Access Minneapolis* (City of Minneapolis, 2011): Comprises six main components that include the Downtown Action Plan, the Citywide Action Plan, Design Guidelines for Streets and Sidewalks, Street Car Planning, the Pedestrian Master Plan, and the Bicycle Master Plan. Identifies specific actions that the City

and its partner agencies (Metro Transit, Metropolitan Council, Hennepin County, MnDOT) need to take within the next 10 years to implement the transportation policies.

- *Minneapolis Parks and Recreation Board Comprehensive Plan* (Minneapolis Parks and Recreation Board, 2007): Provides a general vision and strategies for implementation for parks within the City of Minneapolis. Identifies continued park/open space use for the land adjacent to the Kenilworth Corridor near Cedar Lake.
- *Bryn Mawr Neighborhood Land Use Plan* (City of Minneapolis. 2005): Includes a land use plan for the area around the proposed Penn Ave Station. Identifies the potential for additional neighborhood residential and commercial development.

A. Existing Conditions

This section describes existing conditions related to land use in the St. Louis Park/Minneapolis Segment. The existing land uses and zoning for the St. Louis Park/Minneapolis Segment are documented in Sections 3.1.2 and 5.2.1 of the Draft EIS (Segment 4 and Segment A) and have not changed substantially since publication of the Draft EIS. The adjustments to the LPA within the St. Louis Park/Minneapolis Segment would not extend proposed light rail-related improvements in the segment beyond the original study area for the land use analysis completed as part of the Draft EIS and, therefore, they are not described in detail here. In summary, land uses within this segment are predominately industrial, commercial, and multi-unit residential.

Planned land use in the segment is a mix of industrial, commercial, residential, railroad, transportation, and park and open space designations. The proposed light rail-related improvements and freight rail modifications in the St. Louis Park/Minneapolis Segment would be allowable uses under the St. Louis Park's and Minneapolis' existing comprehensive plan and zoning designations, and they would be compatible with existing surrounding land uses.

B. Potential Land Use Impacts

This section discusses the potential impacts on the land use patterns and the consistency of the adjustments made to the St. Louis Park/Minneapolis section of the LPA with regional, state, and local policies. Direct land use impacts would occur in locations where the LPA would require private or public property acquisition for the alignment, stations, or parking and traction power substations. These property acquisitions would convert property to a transportation-related use. Direct impacts also include proximity impacts (e.g., traffic, noise, and visual impacts) that could cause changes in adjacent land uses.

Indirect land use impacts affect the development and/or redevelopment of land (such as transit-oriented development) in the vicinity of the proposed project facilities (i.e., light rail line, stations, parking facilities, traction power substations). In addition to those uses allowed by current zoning and land use codes, jurisdictions could enact changes in their codes to spur other development and/or redevelopment.

Long-Term Direct Land Use Impacts

For the purpose of this land use analysis, the entire area of property that would be acquired by the project, as reported in Section 3.4.1.2 of this Supplemental Draft EIS, is defined as a direct change in land use.

Direct changes in land use that would occur within the St. Louis Park/Minneapolis Segment under the LPA would primarily be limited to station areas and access/circulation improvements to those stations because the LRT alignment would be located primarily within existing public rights-of-way, such as the Kenilworth Corridor, which is owned by HCRRA and is planned for light rail use.

A change in the use of a parcel of land is not the same as a change in the land use of the surrounding neighborhood. That is, a commercial district that loses one or more commercial buildings is still a commercial district; similarly, a residential neighborhood that gains higher density residential uses, or compatible mixed use or commercial development, would still be a residential neighborhood. While the LPA would result in changes to the existing use of particular parcels of land, those would not change the overall land use characteristics of the segment.

Three adjustments to the LPA within the St. Louis Park/Minneapolis Segment have been made since publication of the Draft EIS, which result in additional land converted to transportation use in the segment: (1) the Louisiana Station in St. Louis Park would be shifted slightly south and east from the location described in the Draft EIS, to be located outside of the HCRRA-owned right-of-way, and the proposed surface park-and-ride lot at that station has increased in size from 100 spaces to approximately 270 spaces; (2) there would be a new southerly connection between the Bass Lake and MN&S Spurs (which would replace the northern leg of the existing Skunk Hollow switching wye to all continued freight rail movement in the area); and (3) the Beltline Station is now proposed to include an approximate 540-space, rather than a 100-space, surface park-and-ride lot.

Conversely, the removal of four surface park-and-ride lots in the segment from the proposed LPA would result in less land converted to transportation use in the segment than was identified in the Draft EIS (i.e., the removed park-and-ride lots were to have the following capacities: 100 spaces each at Wooddale, 21st Street, and Penn Avenue Stations, and 150 spaces at West Lake Street).

Table 3.4-2 summarizes the anticipated direct land use changes resulting from the LPA within the St. Louis Park/Minneapolis Segment by land use type. Approximately 81.7 acres of land within the St. Louis Park/Minneapolis Segment would be acquired for the project and converted to public transportation use. The affected land would include the acquisition of privately-owned industrial, commercial, and residential land, as well as both publicly-owned right-of-way (i.e., HCRRA) and privately-owned railroad right-of-way (i.e., CP and BNSF). Approximately 33.6 acres of the acquired land (all of the land included in Table 3.4-2, except the HCRRA right-of-way and the public/institutional land) would be converted from private to public ownership. The exchange of land currently owned by HCRRA and dedicated for public transportation use to CP, and of land from CP to HCRRA, would reduce the amount of land that will need to be acquired to accommodate the light rail and the moved freight rail corridor by 27.2 acres. Approximately 22 acres of privately-owned railroad land will need to be acquired and converted to a public transportation use. Parcel acreages will continue to be developed as the project completes Project Development, and will be reported in the Final EIS. Refer to Section 3.4.1.2 of this Supplemental Draft EIS for more information on property acquisitions that would occur within this segment.

TABLE 3.4-2
Changes in Existing Land Use under the LPA – St. Louis Park/Minneapolis Segment[a]

General Current Land Use Category[b]	Area Converted to Public Transportation Use (acres)[c]	Percent of Land Converted
Parks and Open Space	0.0	0.00%
Industrial	8.3[d]	10.16%
Commercial	2.1	2.57%
Residential	1.0	1.22%
Public/Institutional	3.8	4.65%
Privately-Owned Railroad Right-of-Way	22.2	27.17%
Publicly-Owned Right-of-Way (HCRRA)	44.3	54.22%
TOTAL	81.7	100%

[a] Existing HCRRA right-of-way within the St. Louis Park/Minneapolis Segment is reserved for transportation use; this right-of-way consists of an approximately 100-foot corridor. The CP corridor, on which freight rail now operates, is currently located between the HCRRA-owned trail and the planned LRT corridor. The existing freight rail tracks are on existing right-of-way owned by CP. In general, the existing freight rail tracks would be relocated approximately 45-feet north onto right-of-way owned by HCRRA. The proposed light rail alignment would be on what is now the CP right-of-way. To accommodate these proposed improvements, there would likely be an exchange of right-of-way between CP and HCRRA, as well as agreements for continuing property ownership of right-of-way. The nature of the exchange and agreements has not been determined. Under this potential framework for implementing the LPA, HCRRA and CP could transfer ownership of approximately 13.6 acres each. This possible exchange of land between HCRRA and CP, which could affect a total of approximately 27.2 acres of land, is not considered to be a change in land use, and is, therefore, not included in this table.

[b] All land, except the right-of-way currently owned by HCRRA and public land owned by the cities of St. Louis Park and Minneapolis, is considered privately-owned land within this table and related analysis. The acreage of some city-owned parcels required for project development is pending and not included in the table or analysis above.

[c] The conversion from existing land uses to transportation use is consistent with relevant local land use plans and policies, which generally plan for increased intensity of development surrounding the proposed LRT stations, as previously described. The proposed

LPA improvements in the St. Louis Park/Minneapolis Segment would be allowable uses under existing comprehensive plan and zoning designations for St. Louis Park and Minneapolis, and would be compatible with existing surrounding land uses.

[d] Includes approximately 2.9 acres of land that would be used for the proposed freight railroad connection between the Bass Lake and MN&S Spurs.

Note: Total impacts are based on estimated and rounded property acquisition.

Sources: MnDOT, 2014; and Hennepin County Property Tax Information Search, 2013b.

While the acquisition of property in the St. Louis Park/Minneapolis Segment would change the land use of specific parcels, the acquisitions would not change the overall character of land within the segment.

Long-Term Indirect Land Use Impacts

As noted in the Draft EIS, construction of the LPA within the St. Louis Park/Minneapolis Segment could indirectly attract transit-oriented development, primarily within proposed station areas. Improved transit access could increase the desirability of surrounding residential, commercial, and office properties. If other market conditions are present, that improved access could help accelerate and/or concentrate development and redevelopment patterns. As a result, the type of development or redevelopment near stations with available land and supportive zoning in place generally tends to be more intense, mixed-use development that supports higher-density residential, commercial, and office-related uses.

Hennepin County and the local jurisdictions completed a station area planning document for this project (Hennepin County, 2014). This document is intended as a guide for transit-related investments along the Southwest Corridor, with emphasis around the corridor's 17 stations. Within the St. Louis Park/Minneapolis Segment, the station area planning document includes transitional station area action plans (TSAAPs) for the Louisiana, Beltline, Wooddale, West Lake, and Penn Stations.

Development of the Framework was led by Hennepin County's Southwest LRT Community Works in conjunction with the Hennepin County Regional Rail Authority, the Cities of St. Louis Park and Minneapolis, the Minnehaha Creek Watershed District, the Minneapolis Park and Recreation Board, and the Council, as well as other jurisdictions in other parts of the project area.

In addition, the City of St. Louis Park has been conducting planning studies supporting redevelopment opportunities around the Louisiana and Beltline Stations, as has the City of Minneapolis for the West Lake and Penn Stations. The cities have plans to encourage mixed use and higher densities of development around the Louisiana, Beltline, Wooddale, West Lake, and Penn Stations, and land uses surrounding those stations would generally be expected to increase in density, relative to both existing and No Build Alternative conditions. The development and redevelopment expected to occur in these proposed station areas would include the conversion of some land from industrial to commercial/mixed uses and from single-family to multifamily residential. While some redevelopment within the West Lake 21st Street, and Penn Station areas would be possible, land uses surrounding the stations would be expected to generally remain unchanged because of the relatively high level of existing development in those areas.

Short-Term Land Use Impacts

This section describes the short-term land use impacts anticipated during construction of the LPA. In general, construction-related activities associated with the light rail-related improvements and freight rail modifications in the St. Louis Park/Minneapolis Segment would not change the land use of the area in the long term. Short-term land use impacts from construction activities in the segment could include temporary changes to property access or temporary conversion of land use to transportation use for construction staging and other construction activities throughout all or part of the construction period. Temporary occupancies of parcels would include the use of construction easements or intergovernmental agreements and would change existing land uses in the short term, but not in the long term. The construction activities that would result in short-term land use impacts would include potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing residential, commercial, and other properties. Although some businesses may experience hardship during construction, this would not affect land use type unless the property became vacant.

Based on the project's conceptual engineering, no temporary construction easements have been identified beyond the property to be permanently acquired for the LPA. If identified during project development or

engineering, construction easements might affect portions of property on residential, commercial, industrial, and public properties. Any construction easements would be temporary and would be returned to preconstruction conditions upon completion, depending on executed agreements. See also the short-term impacts subsection of Section 3.2.1.2.

BMPs identified in Section 3.1 of the Draft EIS, including development of a BMP construction plan, would apply to construction within the St. Louis Park/Minneapolis Segment. Construction BMPs, including preparation of a BMP construction plan, will be developed prior to construction to address optimum traffic re-routing measures, minimization of temporary lane, sidewalk, and trail closures, and maintenance and timely removal of temporary traffic control devices. In addition, potential modifications to the construction schedule and other measures will be incorporated into the plan to minimize temporary impacts. For example, the BMPs could include working with residents and businesses to provide alternative access, as well as providing advance notice of construction activities, trail or sidewalk closures, and detour routes. To minimize construction-related noise and dust impacts on adjacent land uses, contractors will be required to comply with applicable laws regarding the proper use of construction equipment and onsite construction, as well as public safety standards applicable to ADA access requirements; contractors will also keep construction equipment outfitted with appropriate environmental protection features, such as noise mufflers and air filters, to minimize exhaust.

C. Mitigation Measures

Because the potential land use changes resulting from the LPA in the St. Louis Park/Minneapolis Segment would be consistent with existing plans and policies, no mitigation measures addressing long-term land use impacts have been identified.

The Council will develop and implement a Construction Communication Plan (refer to Section 3.1.2.1 for additional detail) to coordinate with city, neighborhood groups, and commercial interests to ensure consistency with existing land uses and to determine need for providing alternative access to neighborhoods, properties, and businesses during construction.

3.4.1.2 Acquisitions and Displacements

This section identifies potential long-term and short-term impacts related to the purchase of parcels needed to accommodate the light rail-related improvements and freight rail modifications included within the LPA, including the closure and/or relocation of business occupants that are currently housed in buildings on these parcels. As summarized in Table 3.4-1, the LPA would result in the acquisition of 23 full and 29 partial parcels of land and the potential relocation of up to nine businesses.

As with the overall project, the St. Louis Park/Minneapolis Segment remains in the Project Development phase of design, based on the conceptual engineering design (see Appendix G). As the level of detail in the design increases, the project team will continue to work to avoid or minimize property acquisitions and displacements required for the LPA. Changes in property acquisitions and displacements associated with the proposed light rail-related improvements and freight rail modifications in the St. Louis Park/Minneapolis Segment will be presented in the Final EIS.

A. Existing Conditions

This section describes existing conditions related to the purchase of land parcels needed to accommodate the project, as well as the requirement that current parcel occupants would be required to move as a result of some of the land acquisitions. Since the publication of the Draft EIS, the Council has continued to review and attempted to minimize property acquisitions due to the Southwest LRT Project. The right-of-way impacts discussed in this Supplemental Draft EIS are based on information known at current level of design.

When an acquisition occurs, it typically results in either a full or partial acquisition of a parcel's inherent real estate property interests and rights, or an easement. A partial acquisition would occur if only a portion of the entire parcel was required to accommodate the project infrastructure and facility needs. This would occur if, for example, a portion of a commercial parking lot fronting the alignment is required, but not the adjacent commercial building located away from the immediate alignment area. A full acquisition could occur when the majority of the property is required to provide sufficient right-of-way for elements such as the horizontal

alignment of stations with park and ride facilities or for maintenance facilities. A full acquisition could result from a severe loss of access (e.g., driveway access is eliminated) that reduces the useful operation of a property, despite all attempts to avoid or offset the impact through restored ingress/egress. An easement can involve a general or specific portion of the property and can be either on, below, or above (aerial) the surface of the property. As applicable, easements can be temporary (during construction) or permanent. A temporary construction easement is an easement required during construction that would revert back to the owner of record after completion of construction activities. Its use is not limited to construction staging or equipment use. It could also include actual construction of temporary facilities that would be removed prior to reversion of the property to the owner of record (e.g., temporary shoring, temporary retaining walls, temporary erosion control, temporary drainage system, temporary detour, etc.). Permanent easements may be obtained for access to another property, usually called "access and egress" easements. An easement can involve a general or specific portion of the property and can be either at the surface level, beneath or above (aerial) the property. Permanent underground easements are used when tunneling for a subway and for underground utilities. Permanent aerial easements are used for the operation of an elevated transit line, where necessary, if located within property outside of the project's right-of-way.

Article 6 of a Cooperation Agreement between the Council and MnDOT states that MnDOT, acting for the Council, may acquire all lands, easements, and rights-of-way required for the project in the name of the Council, unless the Council and MnDOT mutually agree otherwise. The Council also reserves the right to acquire any and all real property interests itself. Project acquisitions and displacements would comply with the Uniform Relocation Act and state law and would be consistent with the design plans for the project. The acquisition process would also follow the Real Estate Acquisition and Management Plan, which will be developed and maintained during Project Development, Engineering, and construction phases. In carrying out property acquisitions, MnDOT would use all powers available to them under applicable law (Council and MnDOT, 2012).

The acquisitions and displacement analysis and documentation in this Supplemental Draft EIS, similar to those within the Draft EIS, conform to applicable federal and state laws governing property acquisition, including the Uniform Relocation Act. In addition, disposition of excess property, as determined by the Council and FTA, would conform to Council policy, applicable state law, and FTA's Circular 5010.1D (FTA, 2008a). See Section 3.1.2.2 of this Supplemental Draft EIS and Section 3.3.1 of the Draft EIS for additional details.

B. Potential Acquisitions and Displacements Impacts

This section identifies the potential long-term and short-term impacts that would result from the need to acquire land to implement the LPA in the St. Louis Park/Minneapolis Segment. The numbers of parcels that would need to be acquired and the potential for relocation of existing businesses are discussed in this section.

Long-Term Direct and Indirect Acquisitions and Displacements Impacts

This section addresses how businesses and other land uses could be affected by the proposed LPA in the long term. Implementation of the LPA in the St. Louis Park/Minneapolis Segment would result in full acquisition of 23 parcels and partial acquisition of 29 parcels, including those with industrial, commercial, railroad, and residential land uses, as summarized in Table 3.4-3 and illustrated on Exhibit 3.4-1. All potential acquisitions within the segment will be within the cities of St. Louis Park and Minneapolis.

The full acquisition of the 11 parcels with industrial and commercial uses could potentially result in the relocation of up to nine businesses that currently operate on or use these parcels. The acquisition of three parcels owned by a construction company and used for storage could result in the displacement of that business if the storage area needs to be in close proximity to the company's operation that is not affected by acquisition. Depending on the preferences of the owner, the project would work to relocate displaced businesses. A combined total of approximately one acre of land would be acquired from a total of seven residential parcels occupied by multiple condominiums and apartments, and would result in no displacements or relocations.

TABLE 3.4-3
St. Louis Park/Minneapolis Segment – Potential Parcel Acquisitions under the LPA[a]

Property Address	Hennepin County PIN	Current Use	Parcel Size (acres)	Area to be Acquired[b] (acres)	Acquisition Type
St. Louis Park					
3830 Georgia Ave S	20-117-21-12-0001	Railroad	10.0	5.0	Partial
3900 Pennsylvania Ave S	20-117-21-21-0002	Railroad	6.3	6.3	Full
6900 Oxford St	20-117-21-12-0041	Industrial	1.1	0.1	Partial
6850 Oxford St	20-117-21-12-0035	Industrial	1.1	1.1	Full
6830 Oxford St	20-117-21-12-0004	Industrial	0.9	0.9	Full
6610 Oxford St	20-117-21-11-0004	Industrial	0.9	0.9	Full
6606 Oxford St	20-117-21-11-0039	Industrial	0.9	0.9	Full
6600 Oxford St	20-117-21-11-0040	Industrial	1.5	1.5	Full
6500 Oxford St	17-117-21-44-0063	Industrial	0.3	0.3	Full
6425 Oxford St	17-117-21-44-0064	Industrial	0.5	0.5	Full
3825 Edgewood Ave S	20-117-21-11-0042	Industrial	1.6	1.6	Full
6410 Oxford St	17-117-21-44-0062	Industrial	0.5	0.5	Full
7710 Oxford St	17-117-21-44-0005	Railroad	0.7	0.7	Full
3633 Dakota Ave S	17-117-21-44-0001	Railroad	3.4	1.7	Partial
3700 Dakota Ave S	17-117-21-44-0053	Railroad	2.2	2.2	Full
3524 Yosemite Ave S	16-117-21-31-0005	Railroad	6.5	3.3	Partial
3530 Yosemite Ave S	16-117-21-31-0006	Railroad	4.3	4.3	Full
3565 Wooddale Ave	16-117-21-34-0069	Commercial	0.65	0.1	Partial
3548 Xenwood Ave	16-117-21-31-0076	Railroad	0.80	0.1	Partial
3250 Natchez Ave S	06-028-24-24-0003	Railroad	9.3	4.7	Partial
3220 Natchez Ave S	06-028-24-24-0037	Commercial	0.6	0.6	Full
4725 Highway 7	06-028-24-24-0038	Commercial	1.0	1.0	Full
3121 Joppa Ave S	06-028-24-11-0001	Railroad	2.0	2.0	Full
3300 Belt Line Blvd	06-028-24-13-0014	Railroad	6.4	6.4	Full
3301 Belt Line Blvd	06-028-24-11-0072	Railroad	4.6	2.3	Partial
3251 Natchez Ave	06-028-24-13-0004	Railroad	0.01	<0.1	Partial
Minneapolis					
3100 Drew Ave S	05-028-24-22-0127	Railroad	1.9	1.9	Full
3655 31st St W	05-028-24-22-0128	Railroad	3.1	1.6	Partial
3016 Chowen Ave S	05-028-24-22-0006	Railroad	0.3	<0.3	Partial
3421 Lake St W	05-028-24-21-0243	Railroad	1.5	<0.1	Partial
3430 List Pl	05-028-24-22-0035	Residential	4.4	<0.1	Partial
3600 Lake Street	32-029-24-33-0126	Commercial	0.40	<0.1	Partial
2933 Drew Ave	32-029-24-33-0093	Residential	0.13	<0.1	Partial
3500 Lake St W	32-029-24-34-0509	Railroad	8.7	<0.2	Partial

Property Address	Hennepin County PIN	Current Use	Parcel Size (acres)	Area to be Acquired[b] (acres)	Acquisition Type
3426 Lake St W	32-029-24-34-0508	Railroad	3.8	3.8	Full
3120 Excelsior Blvd	05-028-24-21-0038	Commercial	0.29	<0.1	Partial
3149 Excelsior Blvd	05-028-24-21-0018	Commercial	0.11	<0.1	Partial
2936 Drew Ave S	32-029-24-33-0176	Residential	0.13	<0.1	Partial
3000 Cedar Lake Pkwy	32-029-24-42-0001	Railroad	0.8	0.8	Full
3400 Cedar Lake Pkwy	32-029-24-12-0001	Railroad	2.7	2.7	Full
3141 Dean Ct.	32-029-24-34-0164	Residential	5.6	0.2	Partial
2820 Cedar Lake Pkwy	32-029-24-42-0101	Residential	0.31	<0.1	Partial
2820 26th St W	32-029-24-13-0001	Railroad	5.6	2.8	Partial
2622 24th St W	32-029-24-12-0003	Railroad	1.4	1.4	Full
2603 21st St W	32-029-24-12-0005	Railroad	2.4	<0.5	Partial
2600 21st St W	32-029-24-12-0045	Railroad	0.2	<0.2	Partial
2012 Thomas Ave S	32-029-24-12-0046	Railroad	0.9	<0.5	Partial
1800 Kenwood Pkwy	29-029-24-41-0044	Railroad	32.4	14.0	Partial
3129 28th St W	32-029-24-34-0078	Railroad	0.3	0.3	Full
3301 St Louis Ave	32-029-24-34-0418	Residential	1.6	0.4	Partial
1011 Madeira Ave	29-029-24-41-0039	Commercial	0.9	<0.1	Partial
2501 Wayzata Blvd	29-029-24-41-0042	Commercial	2.1	<0.1	Partial
St. Louis Park/Minneapolis Segment Total:			**Approximately 150.0**	**Approximately 81.7**	

[a] There are four public parcels (3506 Wooddale Ave, 5925 Highway 7, 3130 Monterey Ave, and 4601 Highway 7) in the City of St. Louis Park, which will require partial acquisition for this project. The acreage required for these parcels is pending, and they are excluded from the Table 3.4-3 and the related analysis. Public and private parcel acreages will continue to be developed, and will be reported in the forthcoming Final EIS.

[b] Public and private parcel acreages will continue to be developed, and will be reported in the forthcoming Final EIS. Parcel acquisitions of <0.5 acre are approximated at 0.5 acre or at the total parcel size (whichever is less).**Acronym:** PIN = property identification number

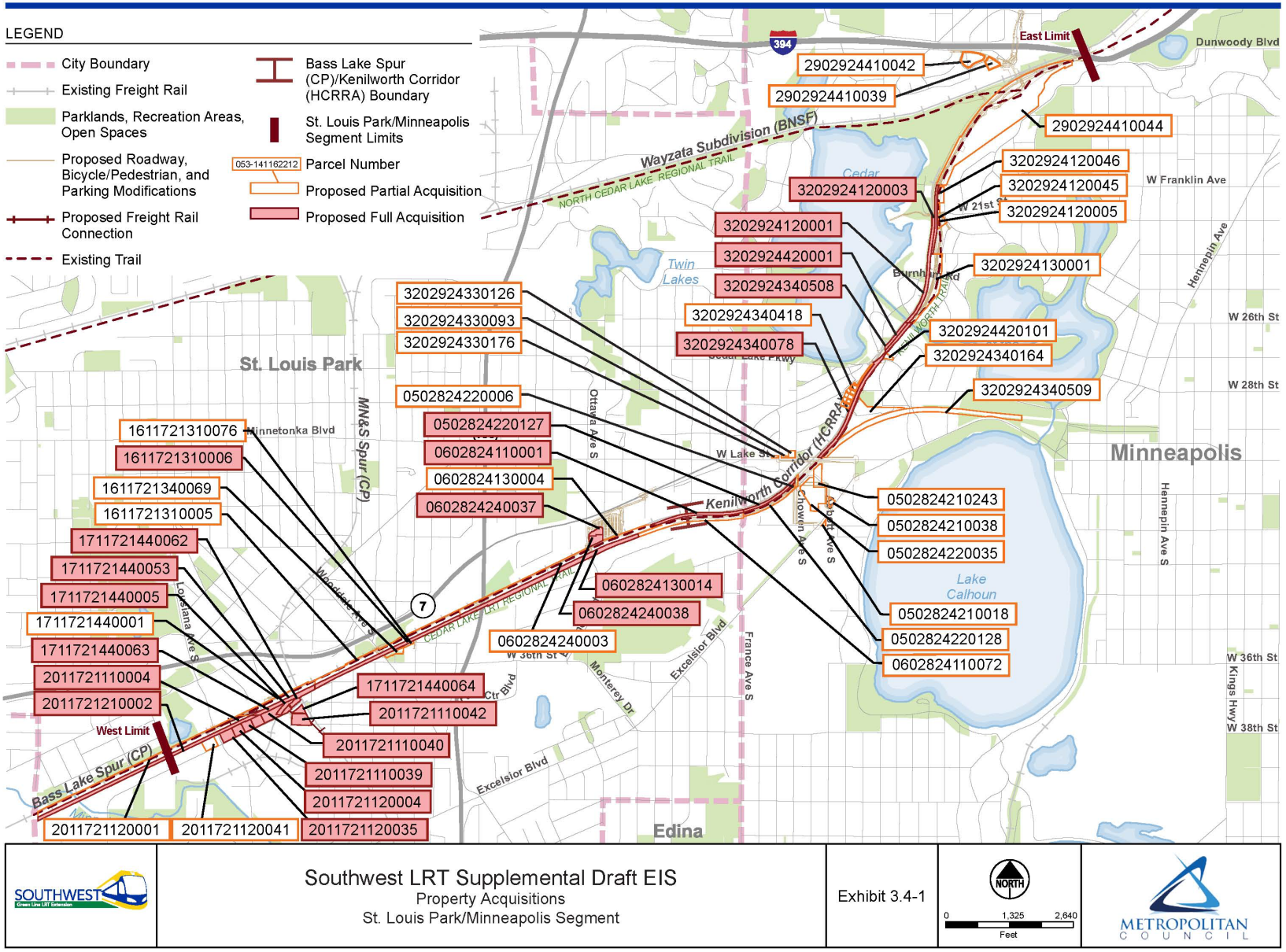
Sources: MnDOT, 2014; and Hennepin County Property Tax Information Search, 2013b.

The potential property acquisitions that would occur as a result of the LPA in the St. Louis Park/Minneapolis Segment would be less than those identified in the Draft EIS for a similar area under the alternative that would retain freight rail service in the Kenilworth Corridor. As described in Section 2.3.3.2 of this Supplemental Draft EIS, adjustments to the proposed light rail and freight rail alignments in the Kenilworth Corridor have narrowed the width of the right-of-way that was reported as required in the Draft EIS.

This reduction in required right-of-way is due in part to the addition of the LRT tunnel in the Kenilworth Corridor to accommodate the light rail alignment. This design adjustment, which would eliminate residential displacements, would also reduce the number of commercial-industrial displacements anticipated in the Draft EIS under LRT 3A-1 (see Section 2.3.3.2.A of this Supplemental Draft EIS for additional information on displacements associated with LRT 3A-1).

As noted in Sections 5.2.4 and 9.5 of the Draft EIS, the potential for increased development and redevelopment in areas surrounding proposed light rail stations due to improved transit access could result in additional displacements indirectly resulting from implementation of the LPA. (See Section 3.4.1.1 of this Supplemental Draft EIS for additional information).

EXHIBIT 3.4-1
Property Acquisitions, St. Louis Park/Minneapolis Segment



Short-Term Acquisition and Displacement Impacts

This section describes the short-term acquisition and displacement impacts that may occur as a result of construction of the LPA in the St. Louis Park/Minneapolis Segment. Based on the project's conceptual engineering plans (see Appendix G), all construction activities would occur within parcels that would be permanently acquired by the Council or are currently owned by the Council or HCRRA. However, during Engineering, temporary property acquisitions (e.g., construction easements) may be identified. These temporary property acquisitions could include short-term changes to property access or temporary conversion of land use to transportation use for construction staging and other construction activities throughout all or part of the construction period. Short-term occupancies of parcels would include the use of construction easements or intergovernmental agreements and would change existing land uses in the short term. The short-term impacts would include potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing residential, commercial, and other uses. Some businesses may experience hardship during construction and may choose to temporarily or permanently change business location or terminate the business.

In addition, some of the property acquired by the project as identified in Table 3.4-3 may not be needed after construction is complete. Those unneeded areas of property would be identified after construction is complete and would be considered as remnant parcels. Remnant parcels could be sold in compliance with FTA Circular 5010.1D (FTA, 2008a) and applicable state regulations, thereby changing land use impacts to the remnant parcels from long-term to short-term impacts. See Section 3.1.2.2 for additional information on the sale of excess property.

C. Mitigation Measures

All property will be acquired all property in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Any businesses or persons displaced from property will be compensated in accordance with provisions of the Uniform Act. Relocation benefits are available, under the provisions of the Uniform Act, for displaced businesses and non-profit organizations including moving costs, tangible personal property loss as a result of relocation or discontinuance of operations, reestablishment expenses, and costs incurred in finding a replacement site.

3.4.1.3 Cultural Resources

This section identifies architecture/history and archaeological resources listed in or eligible for inclusion in the NRHP and the project's potential impacts on those resources. The cultural resources analysis and documentation in this Supplemental Draft EIS, like the Draft EIS, conform to Section 106 of the National Historic Preservation Act rules and guidance, which protects properties that are listed in or eligible for listing in the NRHP, as discussed in Section 3.4.1 of the Draft EIS.

The resources described in this section are located within APEs surrounding the proposed light rail improvements and freight rail modifications in the St. Louis Park/Minneapolis Segment. As noted in Section 3.1.2.3 of this Supplemental Draft EIS, the project's architecture/history and archaeological APEs were revised to reflect adjustments in the LPA since publication of the Draft EIS. The revised architecture/history and archaeological APEs are illustrated on Exhibits 3.4-2 and 3.4-3, respectively, of this Supplemental Draft EIS. The APEs follow the parameters outlined in Section 3.1.2.3 of this Supplemental Draft EIS, which are more fully described in Appendix H of the Draft EIS. As noted later in this section, the revised APE for the St. Louis Park/Minneapolis Segment of the LPA includes four NRHP eligible or listed historic districts and 18 individually listed or eligible resources (17 architecture/history properties and one archaeological site).

Agency Coordination

The Council and MnDOT CRU have continued with coordination activities related to the cultural resources analysis since publication of the Draft EIS. This coordination has included correspondence between MnDOT CRU and the MnSHPO concerning items such as revisions to the APEs, determinations of eligibility, assessment of effects, and background on the Section 106 agreement, as well as correspondence with other cultural resources consulting parties (see Appendix E). Coordination activities have included a project-wide site visit to listed and eligible sites with the MnSHPO in December 2013 and meetings with all of the cultural

EXHIBIT 3.4-2

Architecture/History Area of Potential Effect and Resources, St. Louis Park/Minneapolis Segment

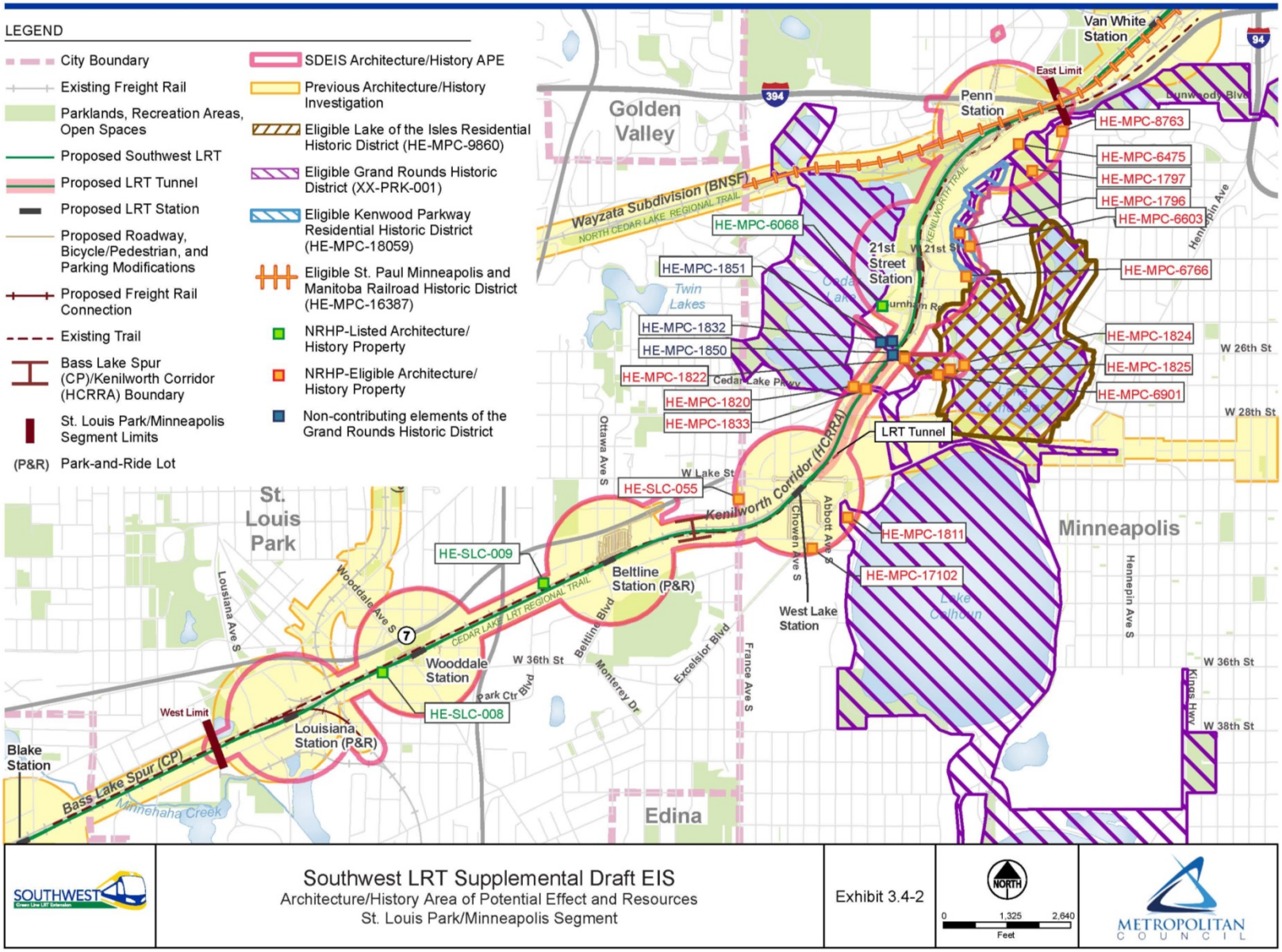
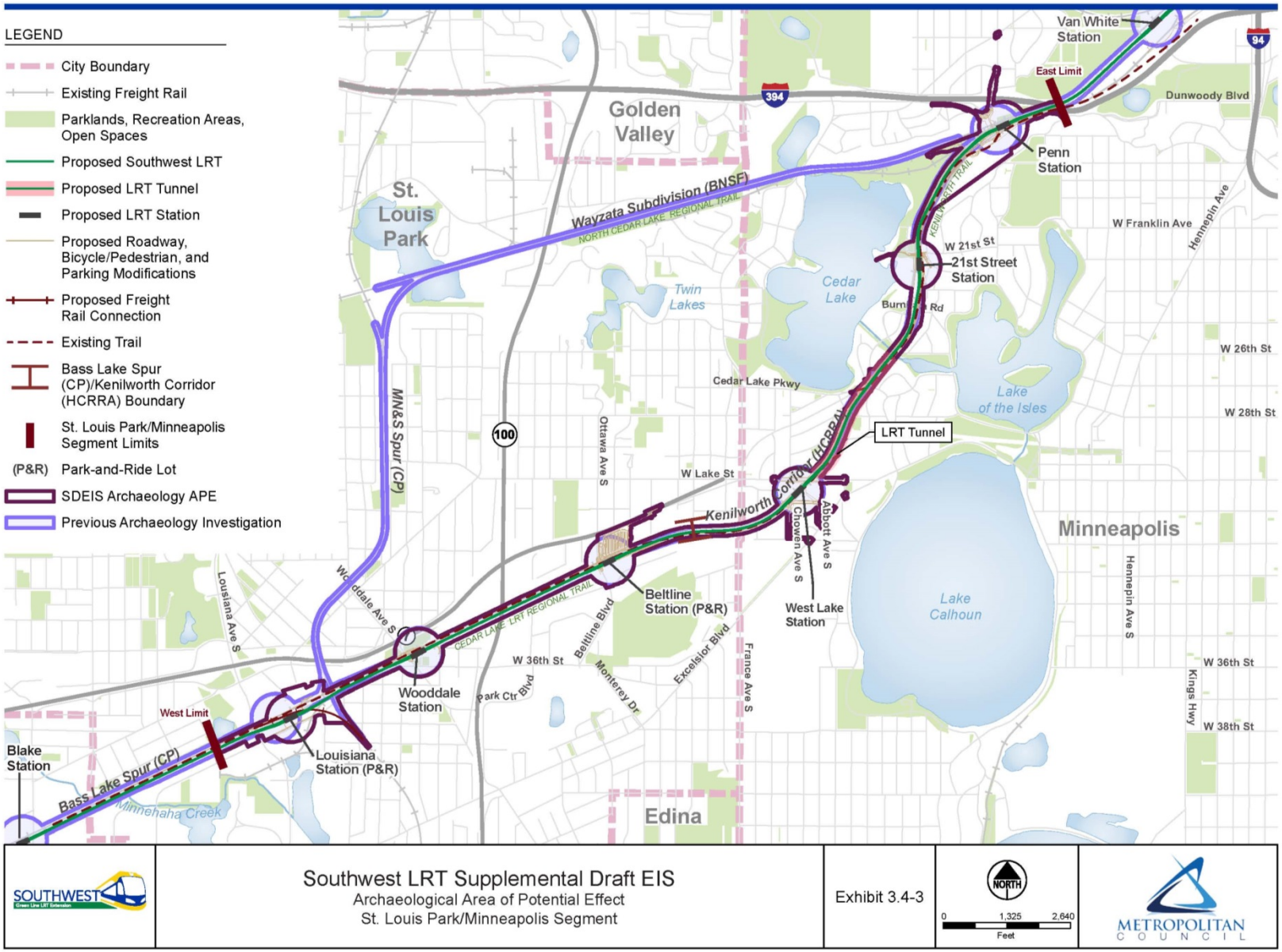


EXHIBIT 3.4-3
Archaeological Area of Potential Effect, St. Louis Park/Minneapolis Segment



resources consulting parties in April 2014, November 2014 and February 2015. Additional information on the Council's Section 106 coordination efforts since publication of the Draft EIS can be found in Section 3.1.2.3 of this Supplemental Draft EIS.

A. Existing Conditions

This section describes existing architecture/history and archaeological resources in the St. Louis Park/ Minneapolis Segment.

The following reports were completed since publication of the Draft EIS:[26]

- Phase I/Phase II Architectural History Investigation for the Proposed Southwest Light Rail Transit Project, Hennepin County, Minnesota, Volume Six, Supplemental Report Number Three [SDEIS] (The 106 Group Ltd., 2014a);[27]
- *Phase 1a Archaeological Investigation* Southwest Light Rail Transit, Supplemental Draft EIS Areas: Eden Prairie Segment, Hopkins OMF, St. Louis Park/Minneapolis Segment (The 106 Group Ltd., 2014b)[28]
- Phase I/Phase II Architecture History Investigation for the Proposed Southwest Light Rail Transit Project, Hennepin County, Minnesota, Volume Five, Supplemental Report Number Two (Mead & Hunt, Inc., 2014)[29]
- Phase II Archaeological Survey for the Southwest Light Rail Transit Project (10,000 Lakes Archaeology, Inc., 2014)[30]

The locations of architecture/history properties within the APE for the St. Louis Park/Minneapolis Segment are listed in Tables 3.4-4 and 3.4-5 and shown on Exhibit 3.4-2. MnSHPO has concurred on the eligibility of all properties in Tables 3.4-4 and 3.4-5. Additional information on the listed and eligible architecture/history resources in the segment, including documentation of their determinations of listing or eligibility for listing, may be found in Appendix H of the Draft EIS or in the reports cited in this section. There are no listed archaeological resources in the St. Louis Park/Minneapolis Segment. The eligible archaeological resource in the St. Louis Park /Minneapolis Segment is listed in Table 3.4-5. The project will continue to evaluate the APE and determine if additional investigation and survey work is needed. If additional studies are needed, these will be included in the Final EIS.

Table 3.4-4 identifies the historic properties that would be adversely effected under the LPA and the rationale for that preliminary finding.

Table 3.4-5 identifies the historic properties that would not be adversely effected under the LPA and the rationale for that preliminary finding.

B. Potential Cultural Resources Impacts

This section identifies the potential long-term and short-term impacts to the archaeological and architecture/history resources listed in or eligible for the NRHP.

Long-Term Direct and Indirect Cultural Resources Impacts

This section describes long-term direct and indirect impacts on cultural resources within the segment's APEs.

Tables 3.4-4 and 3.4-5 provide preliminary determinations of effect that the LPA could have on the architecture/history and archaeological resources in the St. Louis Park/Minneapolis Segment and, identifies

[26] See Appendix C of this Supplemental Draft EIS for instructions on how to access the links to technical reports that provide additional information related to the archaeological and architectural surveys and analysis described in this section.
[27] Identifies listed and eligible properties within the current APE which are outside of the APE used for the Draft EIS.
[28] Identifies listed and potentially eligible properties within the current APE which are outside of the APE used for the Draft EIS.
[29] Continuation of survey and investigations of the APE as identified in the Draft EIS
[30] Identifies listed and eligible properties within the current APE that are outside of the APE used for the Draft EIS.

areas for continued consultation. Long-term direct and indirect effects include changes to historic properties and their settings, including visual effects, resulting from the construction of the project and new development and redevelopment around transit stations. Long-term indirect effects include noise effects and changes in traffic and parking patterns associated with operation of the project, as well as new development and redevelopment around transit stations. Final determinations of effects (i.e., whether they would be adverse or not) will be made by FTA, in consultation with MnDOT CRU, MnSHPO, and other consulting parties, in the forthcoming Final EIS.

TABLE 3.4-4
Cultural Resources in St. Louis Park/Minneapolis Segment that would be adversely effected under the LPA

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Rationale for Preliminary Adverse Effect Finding and avoidance/minimization/mitigation measures
Historic Districts					
XX-PRK-001	Grand Rounds Historic District (GRHD)	Minneapolis	Eligible as a historic district	Criteria: A & C[a] Areas of Significance: • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Rational for Preliminary Adverse Effect Finding: Based on preliminary adverse effect finding for HE-MPC-1822, which is a contributing resource to the GRHD. Within the GRHD there are ten discrete contributing resources and three non-contributing resources that will be affected by the Southwest LRT project. Since each resource has unique characteristics that qualify it for the NRHP, each may be impacted in different ways by the project, which could effect the GRHD. Discussions of effects to individual contributing resources to the district are presented in the Individual Resources section of this table and Table 3.4-5. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during project design on the GRHD as part of the consultation efforts for the individual resources to avoid/minimize/mitigate adverse effects — Develop a Section 106 agreement[b]
Individual Resources					
HE-MPC-1822	Kenilworth Lagoon	Minneapolis	Eligible as a contributing element to the GRHD and the LIRHD	Criteria: A & C[a] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Rationale for Preliminary Adverse Effect Finding: Based on changes to the resource and its setting, including: — Removal of the existing non-contributing railroad and trail bridges (HE-MPC-1850 and HE-MPC-1851 [non-contributing based on association, not age, design or integrity]) across the lagoon[c] — Replacement of the existing railroad and trail bridges with new light rail, freight rail, and trail bridges over the lagoon ○ Design and visibility of the new bridge structure across the lagoon ○ Impact of the width of the new crossing on the character and feeling of the middle section of the Kenilworth Lagoon and on the experience of using the waterway when passing under the new structure — Partial removal and/or alterations of contributing WPA retaining walls — Removal and/or replacement of some existing vegetation on a portion of the lagoon banks — Reconstruction of portions of the lagoon banks • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of the new bridges and related work on the lagoon to avoid, minimize, and/or mitigate adverse effect(s) from construction and operation of the project through sensitive design and the incorporation of protective measures. — Develop a Section 106 agreement[b]

[a] Minnesota State Historic Preservation Office.
[b] A Section 106 agreement is documentation that will commit FTA and the Council to implement measures to avoid, minimize and/or mitigate adverse effects on historic properties. For additional information on the contents on the forthcoming Section 106 agreement see Section 3.1.2.3 of this Supplemental Draft EIS.
[c] Two existing wood pile bridges spanning the Kenilworth Lagoon within the Kenilworth Corridor were evaluated for NRHP eligibility as Section 106 historic resources (i.e., HE-MPC-1850 and HE-MPC-1851; see Exhibit 3.4-2). The Burnham Road Bridge, a two-lane automobile bridge with a steel beam span, was also evaluated for NRHP eligibility as a Section 106 historic property (HE-MPC-1832). The three bridges were found to be non-contributing elements of the Grand Rounds Historic District and were found to not be eligible for listing on the NRHP as individual properties.
Note: references to avoidance/minimization/mitigation measures in this table refer to those measures that will be included in the forthcoming Section 106 agreement, as determined through continuation of the Section 106 consultation process.
Source: MnDOT CRU, 2014.

TABLE 3.4-5
Cultural Resources in St. Louis Park/Minneapolis Segment that would not be adversely effected under the LPA

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
Historic Districts					
HE-MPC-9860	Lake of the Isles Residential Historic District (LIRHD)	Vicinity of E/W Lake of the Isles Parkway Minneapolis	Eligible as a historic district	Criterion: A[a] Areas of Significance: • Architecture • Community Planning & Development • Landscape Architecture	• Effects considered: — Changes to the district's visual character and setting due to the design and visibility of the new bridge structures across the Kenilworth Lagoon, which is partially located in the district[b] — Changes to traffic patterns in the district — Noise effects from LRT operations[c] • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of the new bridges and related work on the Kenilworth Lagoon to avoid/minimize/mitigate adverse effect(s) from both the construction and operation of the project through sensitive design and incorporation of protective measures to minimize effects to the visual setting. — Develop a Section 106 agreement[d]
HE-MPC-18059	Kenwood Parkway Residential Historic District (KPRHD)	1805-2216 Kenwood Pkwy. Minneapolis	Eligible as a historic district	Criterion: A[a] Area of Significance: • Community Planning & Development	• Effects Considered: — Resource is located within ¼ mile radius of 21st Street and Penn Stations — Station access — Possible station area development adjacent to and within the district — Noise effects from LRT operations[c] • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing: o Station access o Station area development — Develop a Section 106 agreement[d]
HE-MPC-16387	St. Paul Minneapolis & Manitoba RR Historic District (StPM&MHD)	Minneapolis	Eligible as a historic district	Criterion: A[e] Area of Significance: • Transportation	• Effects Considered:[f] — Alignment shift — Introduction of LRT to corridor • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and consultation to date. BNSF operations will continue. In one section of the line, from approximately I-94 to approximately Royalston Avenue (total length of 2,543 feet), the tracks will be shifted from 0 to 11 feet northward, but the continuity of the linear resource will be maintained within the historic corridor. • Avoidance/minimization/mitigation measures: — None. No further consultation unless continued plan development results in additional and/or increased effects.
Individual Resources[g]					
HE-SLC-008	Chicago, Milwaukee, St. Paul & Pacific RR Depot	6210 W. 37th St. St. Louis Park	Listed as an individual resource	Criterion: A[h] Area of Significance • Transportation	— Effects Considered: Resource is located within a ¼ mile radius of Wooddale Station — Change to the resource's setting, including: o Introduction of LRT tracks and catenary to nearby railroad corridor o Potential placement of a signal bungalow

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
					near the depot o Possible station area development • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. The LRT guideway that passes the depot follows the rail corridor and does not infringe on the depot property and views of the signal bungalow from the depot will be screened by existing vegetation. No other project related work is proposed in the immediate vicinity of the depot. • Avoidance/minimization/mitigation measures: — Continued consultation with SHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s) to the views of the property — Develop a Section 106 agreement[d]
HE-SLC-009	Peavey-Haglin Experimental Concrete Grain Elevator	Hwys 100 and 7 St. Louis Park	Listed as an individual resource (also a National Historic Landmark)	Criterion: C[h] Areas of Significance • Economics • Engineering	• Effects Considered: — Change in access to/from the Cedar Lake Trail — Change to the resource's setting, including: o Introduction of LRT tracks and catenary to adjacent railroad corridor o Construction of a traction power substation nearby — Operations noise and vibration • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. The LRT guideway that passes the elevator is located across the existing railroad line from the elevator and does not infringe on the depot property. The trail and trail access near the elevator are maintained. Given the low-rise nature of the traction power substation, it will have a minimal impact on the setting of the elevator and views of it. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s) on the setting — Provide design plans and final construction plans and provisions to SHPO and consulting parties for review — Develop a Section 106 agreement[d]
HE-SLC-055	Hoffman Callan Building	3907 Hwy 7 St. Louis Park	Eligible as an individual resource	Criterion: C[i] Area of Significance • Architecture	• Effects Considered: — Resource is located within a ¼ mile radius of West Lake Station, however no work is proposed in the immediate vicinity of the building • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and consultation to date. No work is proposed in the immediate vicinity of the building. • Avoidance/minimization/mitigation measures: — None. No further consultation unless continued plan development results in additional effects.
HE-MPC-17102	Minikahda Club	3205 Excelsior Blvd Minneapolis	Eligible as an individual resource	Criterion: C[j] Area of Significance • Landscape Architecture	• Effects Considered: — Resources is located within ¼ mile radius of West Lake Station — Pedestrian and roadway improvements along north side of the Minikahda Club, near the club entrance. — Temporary easement over a small portion of the Minikahda Club driveway to remove existing crosswalk striping and place new striping on adjacent street right-of-way. • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and consultation to

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
					date. • Avoidance/minimization/mitigation measures: — None. No further consultation unless continued plan development results in additional effects.
HE-MPC-1811	Lake Calhoun	Minneapolis	Eligible as a contributing element to the GRHD	Criteria: A & C[h] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Resource is within ¼ mile radius of West Lake Station — Minor pedestrian and roadway improvements near the Lake Calhoun Playing Fields — Changes in traffic and parking patterns around the Lake Calhoun Playing Fields related to West Lake Station access • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of project to minimize or avoid/minimize/mitigate adverse effect(s), including addressing changes in traffic within the park and to parking around the Lake Calhoun Playing Fields — Develop a Section 106 agreement[d]
HE-MPC-1833	Cedar Lake Parkway	Minneapolis	Eligible as a contributing element to the GRHD	Criteria: A & C[h] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Reconstruction of approximately 320 feet of the roadway and raising it approximately 8 inches or less to construct the shallow LRT tunnel and reconstruct the at-grade trail and freight crossing. — Change to the parkway's setting[b] o Introduction of LRT tracks and catenary to adjacent railroad corridor o LRT tunnel portal outside of the parkway o Noise effects from operations related to LRT entering and exiting tunnel[c] • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. Cedar Lake Parkway will be reconstructed in its existing configuration with slight increase in elevation (less than 8 inches) and the railroad crossing will be shifted approximately 3 feet within rail corridor. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the shallow LRT tunnel and other project elements adjacent to the parkway to avoid/minimize/mitigate adverse effect(s) — Develop a Section 106 agreement[d]
HE-MPC-1820	Cedar Lake	Minneapolis	Eligible as a contributing element to the GRHD	Criteria: A & C[h] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Change in the lake's setting due to the new Kenilworth crossing — Potential modifications to a trail between 21st Street station and East Cedar Beach on Cedar Lake[b] — Noise effects from LRT operations[c] • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. Design and visibility of the new bridge structures across the Kenilworth Lagoon will be minimized by their distance from the lake, the narrowness of the channel corridor in which they are visible, and by the intervening Burnham Road Bridge that further blocks them from view[i]. Noise from LRT operations will not introduce noise levels to the lake that are greater than those present within its period of significance, thus noise from operations will not adversely affect the integrity or feeling of the resource. • Avoidance/minimization/mitigation measures:

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
					— Continued consultation with MnSHPO and identified consulting parties during the design of the new bridge structure across the Kenilworth Lagoon and related work on the lagoon, and on the East Cedar Beach trail improvements to avoid/minimize/mitigate adverse effect(s) — Develop a Section 106 agreement[d]
HE-MPC-6901	Park Bridge #4/Bridge L-5729	W. Lake of the Isles Pkwy over Kenilworth Lagoon Minneapolis	Eligible individually and as a contributing element to the GRHD and the LIRHD	Criterion: C (individual)[a] Area of Significance • Engineering Criteria: A & C (historic districts)[a] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects considered: — Change in the bridge's setting due to the visibility of the new bridge structures across the Kenilworth Lagoon • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of the new bridges and related work on the Kenilworth Lagoon to avoid/minimize/mitigate adverse effect(s) from visual effects related to the design of the new crossing — Develop a Section 106 agreement[d]
HE-MPC-1825	Lake of the Isles Parkway	Minneapolis	Eligible as a contributing element to the GRHD and the LIRHD	Criteria: A & C[a] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects considered: — Change in the parkway's setting due to the visibility of the new bridge structures across the Kenilworth Lagoon • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of the new bridges and related work on the Kenilworth Lagoon to avoid/minimize/mitigate adverse effect(s) from visual effects related to the design of the new crossing — Develop a Section 106 agreement[d]
HE-MPC-1824	Lake of the Isles	Minneapolis	Eligible as a contributing element to the GRHD and the LIRHD	Criteria A & C[a] • Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects considered: — Change in the resource's setting due to the visibility of the new bridge structures across the Kenilworth Lagoon • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design of the new bridges and related work on the Kenilworth Lagoon to avoid/minimize/mitigate adverse effect(s) from visual effects related to the design of the new crossing — Develop a Section 106 agreement[d]
HE-MPC-6068	Frieda and J. Neils House	2801 Burnham Blvd Minneapolis	Listed as an individual resource	Criteria: C[h] Area of Significance • Architecture	• Effects Considered: — Resource is within ¼ mile radius of 21st Street Station — Station access • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
					avoid/minimize/mitigate adverse effect(s), including addressing station access — Develop a Section 106 agreement[d]
HE-MPC-6766	Mahalia & Zachariah Saveland House (aka Benjamin & Cora Franklin Residence)	2405 W 22nd St Minneapolis	Eligible as an individual resource	Criteria: C[a] Area of Significance • Architecture	• Effects Considered: o Resources is within ¼ mile radius of 21st Street Station o Station access • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: o Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing station access o Develop a Section 106 agreement[d]
HE-MPC-1796	Kenwood Parkway	Minneapolis	Eligible as a contributing element to the GRHD and the KPRHD	Criteria A & C[a,h] Areas of Significance: • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Resource is within ¼ mile radius of 21st Street and Penn stations — Station access — Possible station area development • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing: o Station access o Station area development o Develop a Section 106 agreement[d]
HE-MPC-6603	Frank and Julia Shaw House	2036 Queen Ave S Minneapolis	Eligible as an individual resource	Criterion: C[a] Area of Significance • Architecture	• Effects Considered: — Resources is within ¼ mile radius of 21st Street Station — Station access • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing station access — Develop a Section 106 agreement[d]
HE-MPC-1797	Kenwood Park	Minneapolis	Eligible as a contributing element to the GRHD	Criteria: A & C[h] Area of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Resource is within ¼ mile radius of Penn Station — Changes to the park's setting — Station access — Possible station area development • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing: o Station access o Station area development

Inventory Number	Site Name	Property Address	NRHP Status	NRHP Eligibility Criteria & Area of Significance	Effects Considered for Preliminary No Adverse Effect Finding and avoidance/minimization/mitigation measures
					○ Develop a Section 106 agreement[d]
HE-MPC-6476	Kenwood Water Tower	1724 Kenwood Pkwy Minneapolis	Eligible individually and as a contributing element to the GRHD	Criterion: C (individual)[h] Area of Significance • Engineering or Architecture Criteria: A & C ((historic districts.)[h] Areas of Significance • Community Planning & Development • Entertainment/ Recreation • Landscape Architecture	• Effects Considered: — Resources is within ¼ mile radius of Penn Station — Change to the tower's setting — Station access — Possible station area development • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation. • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including addressing station area development — Develop a Section 106 agreement[d]
HE-MPC-8763	Mac Martin House	1828 Mt. Curve Ave Minneapolis	Eligible as an individual resource	Criterion: B[i] Area of Significance • Commerce	• Effects Considered: — Resources is within ¼ mile radius of Penn Station — Change to the resource's setting ○ Seasonal views of lighting and signage improvements along connection between Cedar Lake Trail and Kenwood Parkway • Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and consultation to date. • Avoidance/minimization/mitigation measures: — None. No further consultation unless continued plan development results in additional effects.
21HE0409[h]	—[k]	Minneapolis	Eligible as an individual resource	Criterion: D[l]	• Effects Considered: — None, current conceptual engineering and design plans avoid this archaeological site. — Rationale for Preliminary No Adverse Effect Finding: Based on conceptual engineering and continued consultation • Avoidance/minimization/mitigation measures: — Continued consultation with MnSHPO and identified consulting parties during the design and construction of the project, to avoid/minimize/mitigate adverse effect(s), including outlining measures to be taken during project construction to protect the site area from any project related activities, including staging areas. — Develop a Section 106 agreement[d]

[a] Mead & Hunt. 2014.

[b] Assessing visual impacts under NEPA and potential visual impacts to inform a determination of effect under Section 106 are two separate processes that may have similar or different conclusions. The results of an evaluation of impacts to visual quality and aesthetics per NEPA can be found in Section 3.4.1.5.

[c] Under FTA guidance, historic sites are designated as noise or vibration sensitive depending on the land use of the site, not their designation as historic. Sites of national significance with considerable outdoor use required for site interpretation would be in Category 1. Historical sites that are currently used as residences would be in Category 2. Historic buildings with indoor use of an interpretive nature involving meditation and study would be in Category 3, including museums, significant birthplaces and buildings in which significant historical events occurred. Most downtown areas have buildings which are historically significant because they represent a particular architectural style or are prime examples of the work of a historically significant designer. If the buildings or structures are used for commercial or industrial purposes and are located in busy commercial areas, they are not considered noise or vibration sensitive and the noise and vibration impact criteria do not apply. Similarly, historical transportation structures, such as terminals and railroad depots, are not considered noise or vibration sensitive land uses. See Appendix H of this Supplemental Draft EIS for additional information.

[d] A Section 106 agreement is documentation that will commit FTA and the Council to implement measures to avoid, minimize and/or mitigate adverse effects on historic properties. For additional information on the contents on the forthcoming Section 106 agreement see Section 3.1.2.3 of this Supplemental Draft EIS.

[e] Summit Envirosolutions. 2010.

[f] While the potential area of change is outside of the study area for the Supplemental Draft EIS, the larger resource extends within the St. Louis Park/Minneapolis segment and therefore is included in the Supplemental Draft EIS.

[g] This table also includes contributing resources to the Grand Rounds Historic District since they are discrete units, each with unique attributes and characteristics, which will be effected differently by the Southwest LRT Project.

[h] Minnesota State Historic Preservation Office

[i] Mead & Hunt. 2010.

[j] Hess, Roise, and Company. 2012.

[k] This property is considered a sensitive historic resource under Section 304 of the National Historic Preservation Act of 1966, as amended. In accordance with Section 304, information on this sensitive historic resource may cause a significant invasion of privacy and/or put the resource at risk to harm and is not included in this document.

[l] 10,000 Lakes Archaeology, LLC, Archaeological Research Services, Archaeo-Physics, LLC, and Merjent, Inc. 2014.

[k l] Names, locations, and areas of significance of archaeological sites are not disclosed to help preserve the resource.

Note: references to avoidance/minimization/mitigation measures in this table refer to those measures that will be included in the forthcoming Section 106 agreement, as determined through continuation of the Section 106 consultation process.

Potential Short-Term Cultural Resources Impacts

This section describes short-term direct and indirect impacts on cultural resources within the segment's APEs.

The project would necessitate temporary closures of the Kenilworth Lagoon within the HCRRA-owned right-of-way and BNSF-owned freight rail right-of-way. The temporary closures would be for specified durations during removal of the existing bridges and construction of the new bridges that would span the lagoon. The closures would only affect connectivity between the east and west sides of the lagoon (and thus between Lake of the Isles and Cedar Lake), and would not extend outside the HCRRA- and BNSF-owned rights-of-way.

The project would also necessitate temporary closures of one or both lanes of a short segment of Cedar Lake Parkway between Xerxes Avenue and Burnham Road. The temporary closures would be for specified durations during construction of the new shallow LRT tunnel under the parkway.

The project will continue to develop plans for construction, in consultation with MnSHPO and consulting parties, for locations near historic resources. Other potential short-term construction impacts on architecture/history and archaeological resources are identified in Section 3.4.6.3 of the Draft EIS.

C. Mitigation Measures

Mitigation for impacts will be developed in consultation with MnSHPO, the FTA, MnDOT CRU, the Council, and appropriate consulting parties, and will be documented in the Section 106 agreement. Additional information about the Section 106 agreement can be found in Section 3.1.2.3 of this Supplemental Draft EIS.

3.4.1.4 Source: MnDOT CRU, 2014.Parklands, Recreation Areas, and Open Spaces

This section identifies parklands, recreation areas, and open spaces in the St. Louis Park/Minneapolis Segment, along with potential long-term direct and indirect, and short-term impacts that would occur as a result of the LPA. Some potential effects of the LPA on parklands, recreation areas, and open spaces in the segment have changed since publication of the Draft EIS; these are also identified and addressed in this section.

As summarized in Table 3.4-1, there would be no long-term direct impacts (defined as the permanent incorporation of parklands, recreation areas, or open spaces into the project) from the LPA on parklands, recreation areas, and open spaces in the segment. Long-term indirect and short-term temporary construction impacts (i.e., visual, noise, and access) from the LPA would occur at four parks that would be directly adjacent to the proposed light rail extension.

A. Existing Conditions

This section describes the parklands, recreation areas, and open spaces in the St. Louis Park/Minneapolis Segment. This segment includes seven parklands, recreation areas, and open spaces (regional trail system

segments counted as one) within 350 feet on either side of the light rail alignment, as shown on Exhibit 3.4-4. Parklands in this segment of the LPA include Jorvig Park, Lilac Park, Alcott Triangle, Park Siding Park, Kenilworth Lagoon/Lake of the Isles Park, Cedar Lake Park, and Bryn Mawr Meadows. These publicly-owned, publicly-accessible parklands and recreation areas are Section 4(f) properties (see Section 3.5 of this Supplemental Draft EIS for additional information on Section 4[f]). The regional trails are described below. Section 3.5.3 of the Draft EIS describes and illustrates the parklands, recreation areas, and open spaces within the St. Louis Park/Minneapolis Segment that were studied in the Draft EIS. (Also see Figure 3.5-2, Figure 3.5-3, and Table 3.5-1 in the Draft EIS.)

Table 3.4-6 lists and Exhibit 3.4-4 illustrates the parklands, recreation areas, open spaces, and trails within the St. Louis Park/Minneapolis Segment that are included in the analysis for this Supplemental Draft EIS. Except for the addition of Lilac Park, these parklands, recreation areas, and open spaces are unchanged from those identified in Section 3.5 of the Draft EIS. However, trails, which were not addressed in the parklands and recreation areas analysis of the Draft EIS (Section 3.5), are included in the analysis for this Supplemental Draft EIS.

Five paved multi-use trails within the St. Louis Park/Minneapolis Segment study area comprise a relatively unified paved multi-use trail system that extends from Chanhassen in the south to the Mississippi River riverfront in downtown Minneapolis. Each trail, except for the North Cedar Lake Regional Trail, generally follows and is included within HCRRA-owned right-of-way, except at a few connections across roadways or where geographic features require the trails to deviate from that right-of-way. Portions of the trails within HCRRA-owned right-of-way were constructed under permit agreements between HCRRA and the applicable jurisdictional agency that recognized the potentially temporary term of the agreements and specified that the primary purpose of the right-of-way was for the construction of light rail and other transportation purposes. As such, these trails are not Section 4(f) properties (see Section 3.5 of this Supplemental Draft EIS for additional information on Section 4[f]). These trails include the following (see Exhibit 3.4-4):

1 **Cedar Lake LRT Regional Trail,** which extends from a point approximately 0.15 mile northeast of Highway 169 (connecting to the Minnesota River Bluffs LRT Regional Trail that continues southwest to Chanhassen) and a point approximately 0.10 mile northeast of West Lake Street, where the trail continues as the Kenilworth Trail. In the St. Louis Park/Minneapolis Segment study area, the Cedar Lake LRT Regional Trail is located on property owned by HCRRA and is operated/maintained by Three Rivers Park District.

TABLE 3.4-6
Parks, Recreation Areas, and Open Spaces in the St. Louis Park/Minneapolis Segment

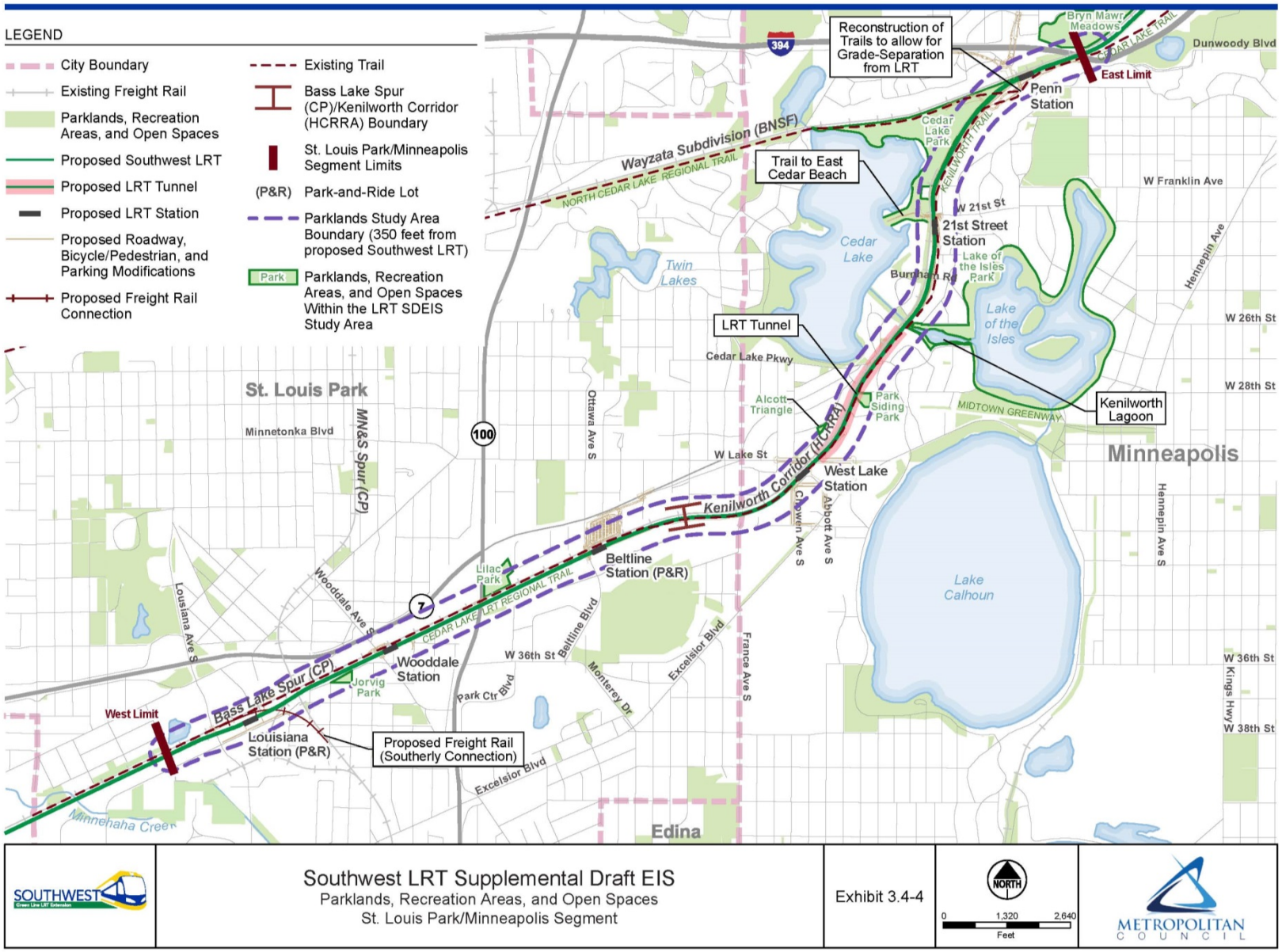
Parks, Recreation Areas, and Open Spaces	Types of Impacts	Section 4(f) Property?a
Jorvig Park	Changes to visual setting, noise, access; temporary changes to access, noise, and visual changes during construction	Yes
Lilac Park	Changes to visual setting, noise; temporary changes to access, noise, and visual changes during construction	Yes
Alcott Triangle	No impacts are anticipated	Yes
Park Siding Park	Changes to visual setting, access, temporary changes to access, noise, and visual changes during construction	Yes
Kenilworth Lagoon/Lake of the Isles Park	Changes to visual setting, noise, access; temporary changes to access, noise, and visual changes during construction	Yes
Cedar Lake Park	Changes to visual setting, noise, access; temporary construction within the park to construct a bicycle/pedestrian overpass	Yes
Bryn Mawr Meadows	Changes to visual setting; temporary visual changes during construction	Yes
Regional Trailsb	Relocation of trails within HCRRA right-of-way with no loss of connectivity; temporary construction detours and short closures	No

[a] See Section 3.5 of this Supplemental Draft EIS for information on Section 4(f) and Section 4(f) properties.

[b] Includes the following trails within HCRRA as temporary uses under lease agreements: Cedar Lake LRT Regional Trail, Kenilworth Trail, Midtown Greenway, Cedar Lake Trail, and North Cedar Lake Regional Trail.

EXHIBIT 3.4-4

Parklands, Recreation Areas, and Open Spaces, St. Louis Park/Minneapolis Segment



2. **Kenilworth Trail,** which begins approximately 0.10 mile northeast of West Lake Street and terminates near Highway 2, where the trail continues as the Cedar Lake Trail. The Kenilworth Trail is located on property owned by HCRRA and is operated/maintained by the MPRB.
3. **Midtown Greenway,** which connects to the Kenilworth Trail and Cedar Lake LRT Regional Trail in the vicinity of West Lake Street. The Midtown Greenway is approximately 5.5 miles in length, connecting to paths along the Mississippi River. In the St. Louis Park/Minneapolis Segment study area, the Midtown Greenway is on property owned by HCRRA and is dually operated/maintained by the City of Minneapolis and Hennepin County.
4. **Cedar Lake Trail,** which continues eastward from its connection to the Kenilworth Trail. The part of the Cedar Lake Trail in the St. Louis Park/Minneapolis Segment study area extends eastward from the Kenilworth Trail to the Mississippi River riverfront in downtown Minneapolis. In the St. Louis Park/ Minneapolis Segment study area, the Cedar Lake Trail is owned by HCRRA and is operated/maintained by the MPRB.
5. **North Cedar Lake Regional Trail,** which continues westward from its junction with both the Kenilworth Trail and the Cedar Lake Trail, extends through St. Louis Park and then arcs southward where it connects to the Cedar Lake LRT Regional Trail just east of Highway 169 in Hopkins. In the St. Louis Park/Minneapolis Segment study area, the North Cedar Lake Regional Trail is owned and maintained by the Three Rivers Park District west of Cedar Lake Park. Within Cedar Lake Park, the trail is known as the Cedar Lake Regional Trail and it is owned and maintained by the MPRB.

B. Potential Parklands, Recreation Areas, and Open Spaces Impacts

This section identifies the potential long-term and short-term impacts to parklands, recreation areas, and open spaces that could be impacted by implementation of the St. Louis Park/Minneapolis Segment under the proposed LPA.

Long-Term Direct and Indirect Parklands, Recreation Areas, and Open Spaces Impacts

This section describes the potential long-term direct and indirect impacts to parklands, recreation areas, and open spaces. A direct long-term impact on parklands, recreation areas, and open spaces is defined as the permanent incorporation of parkland, recreation area, or open space into the transportation project. Reflecting design adjustments since publication of the Draft EIS, the LPA would not result in the direct long-term impact of any parklands, recreation areas, or open spaces within the St. Louis Park/Minneapolis Segment (see Exhibit 3.4-4). All permanent light rail improvements and freight rail modifications in the segment under the LPA as currently defined would generally occur within the HCRRA-owned right-of-way or within current railroad right-of-way to be purchased for the project. No existing parkland, recreation area, or open space property would be permanently acquired for use by the project.

This assessment reflects a change from the Draft EIS. The Draft EIS reports that LRT 3A, which included the LPA, would result in no direct impacts to parklands or recreation areas in the St. Louis Park/Minneapolis Segment. The Draft EIS also reports that 0.82 acre of parkland would have been used under LRT 3A-1, which also included the LPA (see Draft EIS Table 7.4-1: 0.81-acre direct impact at Cedar Lake Park and 0.01-acre impact at Kenilworth Lagoon/Lake of the Isles Park). Neither of those permanent property acquisitions would be required under the LPA based on design adjustments made by the Council in April 2014.

While the LPA would result in the reconstruction and realignment of the Cedar Lake LRT Regional Trail, the Kenilworth Trail, the North Cedar Lake Regional Trail, and the Midtown Greenway Trail, it would not result in long-term direct or indirect impacts to the trails because their connectivity and function would be maintained.

Indirect impacts of the LPA to Jorvig Park, Lilac Park, Park Siding Park, Cedar Lake Park, Kenilworth Channel/Lagoon, Lake of the Isles Park, and Bryn Mawr Meadows within the Supplemental Draft EIS study area would occur due to the proximity of those parks to the proposed light rail line and related improvements. The indirect impacts of the LPA would be in the form of visual, noise, and/or access impacts, addressed in greater detail in Sections 3.4.1.5, 3.4.2.3, and 3.4.4.4 of this Supplemental Draft EIS.

Another potential indirect effect of the LPA on parklands, recreation areas, or open spaces could be that potential increases in development density in areas surrounding proposed transit stations could result in an increase in parkland, recreation area, and open space use. Depending on the parkland, recreation area, or open space, an increase in the number of users could have positive and/or negative consequences. Under the LPA, indirect visual, noise, and access impacts to parklands, recreation areas, and open spaces directly adjacent to the Kenilworth Corridor as identified in the Draft EIS would be the same as the No Build Alternative conditions in the segments where the proposed light rail alignment would be located within the proposed light rail tunnel (see Exhibit 3.4-4).

None of the indirect impacts on parklands, recreation areas, and open spaces from the LPA in the St. Louis Park/Minneapolis Segment would substantially impair the recreational activities, features, or attributes of those parklands, recreation areas, and open spaces.

Short-Term Parklands, Recreation Areas, and Open Spaces Impacts

This section describes the potential short-term impacts to parklands, recreation areas, and open spaces that would occur during construction of the LPA.

The LPA would result in temporary construction within the boundary of Cedar Lake Park to accommodate the reconstruction of North Cedar Lake Regional Trail. Reconstruction of the trail would grade-separate the trail from the existing freight rail tracks and from the proposed light rail tracks (Exhibit 3.4-4). Also in Cedar Lake Park, the sidewalk along the south side of West 21st Street would extend to the existing driveway curb that leads to the existing gravel-surfaced trail connecting East Cedar Beach with West 21st Street. While temporary construction under the LPA would take place within the boundary of the park, the project's construction activities within the park would take place explicitly for a park-related purpose: reconstructing the existing trails within park boundaries to maintain and improve trail connectivity.

The LPA would result in short-term impacts to the Cedar Lake LRT Regional Trail, the Kenilworth Trail, and the North Cedar Lake Regional Trail during construction of improvements to grade-separate the light rail tracks from these trails (in the area northeast of Cedar Lake Park where these three trails intersect). The Midtown Greenway could incur temporary short-term impacts due to construction activities being performed to realign the trail in the area where it intersects with the Cedar Lake LRT Regional Trail. All trails would temporarily be relocated or detoured during construction and would be replaced following construction; the connectivity of these trails would be maintained during construction. The Council is committed to maintaining trail access and continuity throughout the project's construction period, with only short periods (typically less than a week) of closure to accommodate specific construction activities or to make connections to trail relocations or detours.

The project's construction activities would necessitate temporary closures of the Kenilworth Lagoon within the HCRRA-owned right-of-way and BNSF-owned freight rail right-of-way that would be purchased for the project.[31] The temporary closures would be for specified durations during removal of the existing bridges and construction of the new bridges that would span the lagoon. The closures would only affect connectivity between the east and west sides of the lagoon (and thus between Lake of the Isles and Cedar Lake), and would not extend outside the HCRRA- and BNSF-owned rights-of-way. For safety purposes, recreational users of the lagoon would not be allowed to pass through the rights-of-way during certain construction periods, including removal of the existing bridges and installation of overhead components of the proposed bridges. BMPs and a detailed construction phasing plan will be developed for use during removal of the existing bridges and construction of the new bridges over the lagoon to reduce the duration of the closure of the lagoon to recreational users. In addition, signage will be posted at the boat launch areas of the affected lakes alerting users of construction closure periods. The project will also place advanced alerts of closures on

[31] This area also includes a publicly-owned easement obtained in 1912 through a condemnation action by the Board of Park Commissioners in the name of the City of Minneapolis. (See Appendix C for instructions on how to obtain a copy of the easement.) See Section 3.5 of this Supplemental Draft EIS for additional information on the easement and the LPA's effects on the easement area.

the project website and will coordinate with the City of Minneapolis to provide similar alerts on the City Parks website.

Construction activities could result in short-term indirect impacts to parklands, recreation areas, and open spaces that would be located directly adjacent to the project's construction zones (i.e., Jorvig Park, Lilac Park, Park Siding Park, Cedar Lake Park, and Lake of the Isles Park). These short-term indirect impacts could include temporary generation of dust, noise, and increased truck traffic (see Sections 4.6.5 and 4.6.6 of the Draft EIS for further information on short-term air quality impacts and mitigation measures; and see Section 3.4.2.3 of this Supplemental Draft EIS for additional information on short-term noise impacts and mitigation measures, including noise generated by increased truck traffic). These impacts would be of short duration and will be minimized through the implementation of standard related construction BMPs, such as dust control, erosion control, and proper mufflers.

C. Mitigation Measures

Actions associated with the LPA in the St. Louis Park/Minneapolis Segment since publication of the Draft EIS would not result in direct long-term or short-term (construction) impacts to parklands, recreation areas, or open spaces; therefore, no mitigation measures have been identified. Mitigation measures addressing indirect impacts (i.e., visual, noise, and access) are addressed in Sections 3.4.1.5, 3.4.2.3, and 3.4.4.4 of this Supplemental Draft EIS, respectively. Impacts related to temporary changes to parking and access will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities, highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.4 for additional detail on the Construction Communication Plan. Areas and features of parklands, recreation areas, and open spaces that are altered or disturbed as the result of construction activities will be returned to pre-construction conditions or better.

3.4.1.5 Visual Quality and Aesthetics

This section documents the existing visual conditions and potential project impacts in the area within the St. Louis Park/Minneapolis Segment where there would be proposed light rail-related improvements and freight rail modifications that have changed substantially for the LPA since publication of the Draft EIS. In particular, this section focuses on the introduction of a light rail tunnel that would generally be located between the proposed West Lake Station and the Kenilworth Channel. The section identifies long-term and short-term (construction-related) impacts that the LPA would have on visual quality that would be experienced by sensitive user groups. Mitigation strategies to minimize adverse impacts are also identified. This Supplemental Draft EIS supplements the analysis used in the Draft EIS by applying the standardized approach developed by the FHWA for visual impact assessments, which uses a standard visual impact assessment method that includes use of drawings and photo simulations and employs a systematic evaluation protocol. The application of the FHWA methodology in conducting this analysis is described in Section 3.1.2.5 of this Supplemental Draft EIS, and a copy of the FHWA Visual Impact Assessment Manual is provided in Appendix J2. The information presented in this section is a summary of the full visual analysis that is documented in detail in Appendix J1. The exhibits referred to in this section, except for Exhibit 3.4-4 under the Existing Conditions discussion, can also be found at the end of the technical report in Appendix J1.

In addition to the light rail-related improvements and freight rail modifications described above, the LPA will also include TPSS facilities. The specific locations for TPSS's has not been defined; however, siting of these facilities will be determined by utilizing fully developed areas, including surface parking lots, existing roadway right-of-way, and vacant parcels where feasible. The mitigation strategies referenced below to minimize adverse visual impacts would also apply to the TPSS facilities.

As summarized in Table 3.4-1, there would be a positive visual effect at one viewpoint and low visual impacts at two viewpoints; these impacts would not be substantial. Visual impacts that would be moderate and potentially substantial were identified at three viewpoints in the Kenilworth Corridor.

A. Existing Conditions

This section describes the existing visual quality at six viewpoints in the St. Louis Park/Minneapolis Segment not evaluated in the Draft EIS where changes to visual quality are possible. The visual environment in the

St. Louis Park/Minneapolis Segment generally falls within the HCRRA-owned right-of-way, which includes existing trails throughout the length of the segment (i.e., Cedar Lake LRT Regional Trail, Kenilworth Trail, Midtown Greenway, and Cedar Lake Trail; see Exhibit 3.4-4) and directly adjacent properties. Views of the right-of-way and adjacent properties are primarily provided from the existing trails. Views within the segment are dominated by the existing trails themselves and adjacent active freight rail track. The trails and freight rail alignment are generally surrounded by overstory and understory deciduous vegetation. There are some areas of clearing at several locations along the right-of-way that open up the bicycle and pedestrian trail to views of its surrounding built urban environment, such as at locations where the trail crosses roads, areas have been cleared adjacent to residential developments, and at the open, maintained trail corridor north of Burnham Pond. The trails include occasional views of adjacent residential development and occasional views of the distant Minneapolis skyline in the background. A further general description of visual elements along this portion of the segment is provided in Section 3.6.2.4 of the Draft EIS.

Six key viewpoints represent areas where major changes to the visual environment (not discussed in the Draft EIS) could potentially occur as a result of the LPA, reflecting design adjustments since publication of the Draft EIS. Appendix J presents exhibits with viewpoint locations (see Exhibit J-12), as well as photographs and renderings (see Exhibits J-13 through J-18) for each viewpoint. A project overview of the segment is shown on Exhibit 2.5-4 and is described in Section 2.3.3 of this Supplemental Draft EIS.

- **Viewpoint 1** (Exhibit J-13) is the view northwest from South Chowen Avenue toward the existing rail and trail corridor.
- **Viewpoint 2** (Exhibit J-14) is the view looking north near Lake Street.
- **Viewpoint 3** (Exhibit J-15) is the view from a point north of Cedar Lake Parkway looking north toward the tunnel portal south of the channel crossing.
- **Viewpoint 4** (Exhibit J-16) is the view from the bike trail at the south side of the channel crossing
- **Viewpoint 5** (Exhibit J-17) is the view from the channel looking northwest toward the channel crossing.
- **Viewpoint 6** (Exhibit J-18) is the view northwest from West 21st Street at Thomas Avenue toward the existing rail and trail corridor.

Table 3.4-7 summarizes the existing visual quality of the views seen from these viewpoints using the FHWA visual assessment criteria and rating system. As described in more detail in Section 3.1.2.5, the existing conditions in these views have been evaluated on a numerical scale from 1 to 7, where 1 = very low visual quality, 4 = medium or average visual quality, and 7 = very high visual quality.

TABLE 3.4-7
Existing Visual Quality and Aesthetics by Viewpoint in the St. Louis Park/Minneapolis Segment
[Rating Range 1 (very low) to 7 (very high)]

			Existing Visual Quality and Aesthetics						
			Vividness		Intactness		Unity		
View Point	Viewpoint Description	Elements of the Visual Environment	Description	Rating	Description	Rating	Description	Rating	Overall Rating[a]
1	View northwest from South Chowen Avenue toward the existing rail and trail corridor	Paved city street, on-street parking and no sidewalks bordered by low vegetation and dense rows of overhanging trees. Break in trees provides partial view into rail and trail corridor bordered at the far side by a dense mass of tall trees.	No topographic variation. The paved street is the only visible human-made element. The tree canopy over the street and the mass of trees bordering the far side of the rail and trail corridor are the most memorable	3.8	View is relatively free of visual encroachment. The most visually intrusive elements are the cars parked along the street.	5	The parallel street and rail/trail corridors enframed by dense walls of trees create a degree of visual cohesion, but the view does not have focal point or a high level of visual organization.	4	4.3 Medium

View Point	Viewpoint Description	Elements of the Visual Environment	Existing Visual Quality and Aesthetics						Overall Rating[a]
			Vividness		Intactness		Unity		
			Description	Rating	Description	Rating	Description	Rating	
			elements.						
2	View looking north near Lake Street	Paved bike and pedestrian trails paralleled by a narrow, at-grade freight rail line behind a rustic split rail fence. Corridor bordered by trees of a variety of species. Glimpses through trees of nearby low-rise and high-rise residential structures.	No topographic variation. Human-made features mostly utilitarian. Trees bordering corridor the most memorable element.	3.5	View is relatively free of visual encroachment. Visual intrusiveness of the rail line is reduced by its small scale and location behind the split rail fence.	5	Unity of the view is slightly reduced by the curving alignment of the corridor and the contrasting appearance of the trees of widely varying species planted along this segment.	5	4.5 Medium
3	View from a point north of Cedar Lake Parkway looking north toward the tunnel portal south of the channel crossing	Wide, paved bike trail paralleled by a narrow, at-grade freight rail line, cutting through an area of overstory and understory deciduous vegetation. Rustic split rail fence separates trail from rail line.	No topographic variation. Human-made features mostly utilitarian. Dense regular mass of trees bordering corridor create a highly memorable element.	4	View is relatively free of visual encroachment. Visual intrusiveness of the rail line is reduced by its small scale and location behind the split rail fence.	5	Parallel trail and rail corridors enframed by dense wall of trees create a cohesive visual pattern.	6	5.0 Moderately High
4	View from the bike trail at the south side of the channel crossing	Wide, paved trail paralleled by a narrow, at-grade freight rail line, cutting through an area of overstory and understory deciduous vegetation. Rustic split rail fence separates trail from rail line. View includes at-grade bridges that cross over channels.	No topographic variation. Human-made features mostly utilitarian. Most vivid feature is dense massing of trees bordering corridor.	4	View is relatively free of visual encroachment. Visual intrusiveness of freight rail line is reduced by its small scale and location behind the split rail fence.	5	Parallel trail and rail corridors enframed by dense wall of trees create a cohesive visual pattern.	6	5.0 Moderately High
5	View from the channel looking northwest toward the channel crossing	Waterway framed by banks with a dense cover of understory and overstory deciduous trees. Rustic and massive appearing trestle constructed of heavy timber is the focal point of the view.	Water and sloped banks add to vividness of view, along with dense massing of trees, and distinctive-looking trestle.	4.6	View is relatively free of visual encroachment. Heavy construction of trestle that partially blocks view down the channel creates an element of encroachment.	5	The view's elements generally combine to create a coherent composition.	5.5	5.0 Moderately High
6	View northwest from West 21st Street at Thomas Avenue toward the existing rail and trail corridor.	Street intersection bordered by tall thick trees. View toward point where rail/trail corridor through heavily forested area crosses a two-lane street	No topographic variation. The human-made elements include the paved streets, the bike trail, and rail lines as they cross the streets. The tree	4	View is relatively free of visual encroachment.	5	The view up the tree-bordered road provides a focal point for the view, and the hint of the rail/trail corridor cut through the forest provides a point of visual	5.5	4.8 Medium

View Point	Viewpoint Description	Elements of the Visual Environment	Existing Visual Quality and Aesthetics						Overall Rating[a]
			Vividness		Intactness		Unity		
			Description	Rating	Description	Rating	Description	Rating	
			masses that border the streets, and the glimpse of the cleared rail/trail corridor through the thick trees create a moderate degree of memorability				interest.		

[a] Scale is taken from Publication FHWA-HI-88-054, *Visual Impact Assessment for Highway Projects* (FHWA, 1988).
Source: CH2M HILL, 2013.

The sensitive viewer groups present in the St. Louis Park/Minneapolis Segment include adjacent residents and recreational users of the trails and the channel connecting the lakes. As described in Table 3.6-2 of the Draft EIS, residents and recreational users have a high visual sensitivity.

B. Potential Visual Quality and Aesthetics Impacts

This section identifies both the potential long-term and short-term visual and aesthetic impacts that would be experienced by viewers along this segment of the LRT route as a result of new elements of the visual environment. These elements include two tunnel portals and two parallel bridges crossing the channel. The impact assessment is used as a basis for identifying appropriate mitigation activities.

Long-Term Direct and Indirect Visual Quality and Aesthetics Impacts

This section describes the potential long-term direct and indirect impacts to the six key viewpoints. Visual changes associated with the LPA at the six viewpoints would include the effects of the underground tunnel transition points and segments of light rail guideway, including tracks, stations, signal systems, and catenary wires. There would be a mix of at-grade, below-grade, and above-grade segments. The viewpoints selected to assess the visual changes that the light rail-related improvements and freight rail modifications would create in the St. Louis Park/Minneapolis Segment are located primarily in areas where the highest levels of visual change would take place. For four of the viewpoints analyzed, Appendix J presents a photograph of the existing view from the viewpoint and a preliminary rendering that depicts the view as it could appear with the project elements in place. A comparison between the rendered view with the project in place and the photograph of the existing view provides a basis for making the visual change determination the project could bring about and the nature and level of any visual impacts. For the two views for which simulations were not prepared, the assessment of the visual changes in views was based on reviews of project plans and drawings, and of the visualizations that were prepared for other views in which similar changes were proposed.

Table 3.4-8 summarizes the anticipated visual changes that would occur within each of the six views and evaluates the changes to visual quality through application of the FHWA visual impact assessment system. An assessment is made of each of the three landscape dimensions (vividness, intactness, and unity), rating each dimension using the 7-point evaluation scale. A rating system comparison between the overall view score and the view's existing condition score provides a basis for pinpointing the nature and degree of the changes to the level of visual quality. Table 3.4-8 is followed by a brief narrative that summarizes the visual changes and the nature and degree of visual impact on each of the six views. In evaluating the numerical changes in visual quality, a change in visual quality score in the range of 0.1 through 0.5 points was considered to be low; a change from 0.6 through 1.0 points as moderately low; a change from 1.1 through 2.0 points as moderate; and a change of more than 2.0 points as high.

TABLE 3.4-8
Anticipated Direct Change and Impact in Visual Quality and Aesthetics from St. Louis Park/Minneapolis Segment Viewpoints

	Vividness		Intactness		Unity			
VPN, Viewpoint Description, and Identification of New Visual Elements	Description of Change	Rating[a]	Description of Change	Rating[a]	Description of Change	Rating[a]	Overall Rating[a]	Visual Quality and Aesthetics Change[a] and Impact (Scale of 1-7; 7=very high and 1=very low)
1. View northwest from South Chowen Avenue toward the existing rail and trail corridor Addition of LRT right-of-way in corridor with catenaries and perimeter fencing on left side of view. Bike and pedestrian trails pushed closer to the street. Addition of West Lake Station with waiting platform, catenaries, and perimeter fencing.	Removal of trees along north side of street and along the northern perimeter of the rail/trail corridor will decrease the vividness of the vegetation. The addition of the station structures will make a positive contribution to the level of vividness that counterbalances the loss of vividness due to vegetation removal.	3.8	Intactness reduced by the removal of trees, the addition of the station infrastructure. and the overhead equipment required by the LRT.	4.5	The visual unity of this view is likely to be increased by the tree clearing that will open the view corridor along the road and open up a view toward the station, which will provide the visual focal point of a well-ordered rail/trail/transit corridor.	5	4.4	From 4.3 to 4.4 Low (positive increase)
2. View looking north near Lake Street LRT would be out of sight, buried under bike and pedestrian trail. Substantial removal of existing vegetation along the east side of the corridor.	Removal of trees along south side of corridor decreases vividness of vegetation. Exposure of distinctive residential tower structures increases vividness of human-made elements.	3.5	Intactness reduced by removal of trees along southern edge of corridor and the exposure of the tall, visually-intrusive residential towers.	3.5	Removal of trees and visibility of the residential towers combine to create a substantial decrease in the visual unity of the view.	3.5	3.5	From 4.5 to 3.5 Moderate
3. View from a point north of Cedar Lake Parkway looking north toward the tunnel portal south of the channel crossing Addition of LRT right-of-way to north of bike and pedestrian trail, with shift of freight line into a widened area along the northern edge of the corridor. Addition of a fenced transition to the tunnel portal next to the bike trail.	Removal of large trees along the edges of the corridor that now contribute substantially to the vividness of the view would reduce the vividness of the view.	3.3	Intactness reduced by reduction in the tree canopy and by addition of fencing and overhead equipment required by the LRT.	4.0	Unity reduced by reduction of the extent of the tree canopy that currently frames the view and gives it a high level of visual unity.	4.5	3.9	From 5.0 to 3.9 Moderate

4. View from the bike trail at the south side of the channel crossing Trail corridor would be widened to accommodate aboveground segment of the LRT as it approaches the channel crossing. Freight line moved north up to 4 feet. Installation of fencing on both sides of the bike/pedestrian trail corridor.	Reduction in tree masses immediately adjacent to the trail and elimination of the fencing along the trail would reduce the vividness of the view.	3.3	Fencing located immediately adjacent to the trail corridor and presence of new rail corridor with overhead infrastructure would intrude on the view, reducing intactness.	3.5	View's current high level of unity would be reduced by reduction in the tree masses that now enframe the view and by the addition of disparate built elements.	4.5	3.8	From 5.0 to 3.8 Moderate
5. View from the channel looking northwest toward the channel crossing Vegetation on the banks at the channel crossing would be cleared to accommodate building a bridge across the channel to carry the LRT, bike and pedestrian trails, and freight.	The clearing would slightly decrease the vividness of the vegetation. The new bridge would have an attractive design that would add to the vividness of the view.	5.0	The intactness of the view would be reduced by the creation of the cleared area adjacent to the bridge and the addition of more built elements to the view.	3.5	The attractive design of the bridge to carry bike and pedestrian trails, light rail, and freight rail would serve as a visually unifying element. The increased clearance and openness under the bridge would create a visual connection between the segments of the lagoon north/south of the new bridges.	5.5	4.6	From 5.0 to 4.6 Low
6. View northwest from West 21st Street at Thomas Avenue toward the existing rail and trail corridor. Substantial clearing of vegetation currently screens views into station site. Station and associated catenaries and fencing would be visible. Wide sidewalks installed along edges of streets in views.	Removal of trees on left side of view will decrease the vividness of the vegetation. The addition of the station structures will make a positive contribution to the level of vividness that counterbalances the loss of vividness due to vegetation removal.	4	Intactness reduced by the removal of trees and the addition of the station infrastructure and the overhead equipment required by the LRT.	4.5	Intactness reduced by the removal of trees and the addition of the station infrastructure and the overhead equipment required by the LRT.	6	4.7	From 4.8. to 4.7 Low

[a] Scale is taken from Publication FHWA-HI-88-054, *Visual Impact Assessment for Highway Projects* (FHWA, 1988). This rating is an assessment of the visual quality change. The overall level of impact is described in the text below.

Acronym: VPN = viewpoint number.

Source: CH2M HILL, 2013.

Viewpoint 1 – View Northwest from South Chowen Avenue toward the Existing Rail and Trail Corridor

Overall Level of Impact: Not Substantial (Exhibit J-13)

In this view, clearance of the trees and other vegetation along the left side of the street will open up the views into to the rail/trail/transit corridor. The corridor will have a more developed appearance, with the addition of the LRT with its catenaries and perimeter fences and with the addition of the West Lake Station, with its waiting platform, catenaries, fencing, and surrounding paved circulation areas. The existing pedestrian and bike trails will be pushed up closer to the street, where they will be more visible. The overall visual effects of the project will, on balance, be slightly positive. The removal of the dense trees along Chowen Avenue South will make the view more expansive and the West Lake Station will provide a visual

focal point, making the view more interesting and memorable than it is at present. The linear features within the rail/trail transit corridor will be consistent with each other and with the lines of the street, contributing to the creation of a visually unified composition. Because this view is seen by the residents of the high density buildings along South Chowen Avenue and Abbott Avenue, there is a high level of sensitivity, so while the project's visual effects will be slightly positive, careful design of the project in this area will be required.

Viewpoint 2 – View Looking North near Lake Street (Exhibit J-14)

Overall Level of Impact: Substantial

The LRT alignment would be out of sight, located under the bike and pedestrian trail. The primary visual impact would consist of removal of existing vegetation along the east side of the corridor. This tree removal would decrease the mass of the existing vegetation that is an important contributor to this area's visual quality, and will reveal the tall, visually intrusive residential tower structures located south of the trail corridor. The overall level of change to the visual quality of this view would be moderate. Given the high visual sensitivity of views in this area to recreational and nearby residential viewers, this moderate level of change to visual quality is considered to be significant.

Viewpoint 3 – View from a Point North of Cedar Lake Parkway Looking North toward the Tunnel Portal South of the Channel Crossing (Exhibit J-15)

Overall Level of Impact: Substantial

In this view, insertion of the LRT portal tunnel and right-of-way in the area to the north of bike and pedestrian trail, and shifting of the freight line into a widened area along the northern edge of the corridor would give the corridor a more highly developed character. In addition, these changes will require removal of many large trees along the edges of the corridor that now contribute substantially to visual quality. As a result, there would be a moderate level of change in the view's level of visual quality. As in other areas along the Kenilworth corridor, the level of visual sensitivity is high. As a result, this moderate level of change to visual quality is substantial.

Viewpoint 4 – View from the Bike Trail at the South Side of the Channel Crossing (Exhibit J-16)

Overall Level of Impact: Substantial

The trail corridor seen in this view will be widened to accommodate the aboveground segment of the LRT alignment as it approaches the channel crossing. The freight line will be shifted slightly to the north. Fencing will be installed on both sides of the bike/pedestrian trail corridor. Reduction in the tree masses immediately adjacent to the trail and elimination of the existing split rail fencing along the trail will further reduce the visual quality of the view. The overall reduction in the visual quality of this view would be moderate. As in other areas along the Kenilworth Corridor, the level of visual sensitivity is high. As a consequence, this moderate level of change to visual quality is substantial

Viewpoint 5 - View from the Channel Looking Northwest toward the Channel Crossing (Exhibit J-17)

Overall Level of Impact: Not Substantial

Vegetation on the banks at the channel crossing would be cleared to accommodate construction of a bridge to carry the LRT alignment, bike and pedestrian trails, and freight across the channel. The vegetative clearing would cause some reduction in the visual quality of the view. However, the bridge, as currently conceived, will have an attractive design that will become a positive focal point in the view. The overall change to the view's level of visual quality would be low. Because of the recreational activity in the channel this view is visually sensitive. Even though the view is visually sensitive, because the potential level of change to visual quality will be low the potential visual impact will be not substantial.

Viewpoint 6 – View Northwest from West 21st Street at Thomas Avenue toward the Existing Rail and Trail Corridor (Exhibit J-18)

Overall Level of Impact: Not Substantial

Removal and thinning of the vegetation on the left side of the view will open the view up, making it more expansive. The tree removal will permit views into the rail/trail/transit corridor, and will make the new 21st Street Station a focal point in the view. The addition of the light rail infrastructure will cause a moderate reduction in the visual intactness. Overall, though, the change in the level of visual quality will be low. Because this view is seen by the occupants of homes in the nearby residential areas and those traveling to the recreational facilities on Cedar Lake, the level of visual sensitivity is high. Although the sensitivity of the viewers in this area is high, because the change to the level of visual quality will be low, the overall level of visual impact will not be substantial.

Short-Term Visual Quality and Aesthetics Impacts

Potential short-term temporary impacts to the six key viewpoints as a result of constructing the LPA are consistent with those described in Section 3.6.4 of the Draft EIS and would be associated with construction staging areas; concrete and form installation; removal of some of the existing vegetation along the trail; lights and glare from construction areas; and dust and debris.

C. Mitigation Measures

Based on FHWA guidelines, the Council will consider mitigation measures for visual quality impacts that are deemed substantial and will identify the mitigation measures to be incorporated into the project in the Final EIS. The Council will develop aesthetic guidelines for the design of the project. These guidelines will address mitigation measures for visual impacts identified in the Final EIS and will consider input from the affected communities. Mitigation measures for substantial adverse impacts resulting from the light rail elements will be identified during advanced engineering and could include measures such as landscaping, visual treatments and continuity with the elevated light rail structure design, lighting, and signage.[32]

Where appropriate, construction related mitigation measures will include elements such as locating staging areas in places not viewable by trail users or by otherwise incorporating visually screening, preservation of existing vegetation to the extent possible, implementation of dust suppression efforts, shielding of nighttime construction lights, continuous cleanup of trash and debris, and timely restoration of areas disturbed during construction.

3.4.2 Environmental Effects

This section addresses how the proposed LPA would affect the following environmental categories that are included within the Environmental Effects resource group: geology and groundwater; water resources (wetlands, floodplains, public waters, and stormwater management); noise; vibration; and hazardous and contaminated materials.

3.4.2.1 Geology and Groundwater

This section describes the existing geologic and groundwater conditions in the St. Louis Park/Minneapolis Segment and how the proposed LPA would be affected by or affect geology and groundwater. Geologic considerations important to the Southwest LRT Project include geology, soil characteristics, groundwater conditions, and geologic hazards. These considerations would affect the type of construction methods used for the project and, if not adequately considered during project design, could affect the long-term operations and safety of the light rail system or nearby buildings, roadways, and utilities. Geology and soil considerations are closely related to groundwater conditions. Construction activities and potential light rail-related improvements both have the potential to affect groundwater by potentially changing the flow of or contaminating groundwater within the project vicinity. This section evaluates the potential impacts of the proposed light rail tunnel in the Kenilworth Corridor that were not considered during the Draft EIS.

As summarized in Table 3.4-1, the vicinity of the proposed light rail-related improvements and freight rail modifications generally has soil types that would accommodate construction of the proposed facilities. Further, there is the potential for long-term pumping of surface water from the tunnel portals

[32] See also Section 3.4.1.3 of this Supplemental Draft EIS for information on the effect of the LPA on the Kenilworth Lagoon's setting, which includes visual characteristics of the setting, and on the forthcoming Section 106 agreement, which will address proposed mitigation measures for the historic property.

(predominantly stormwater) that collects inside and at the lowest point of the tunnel portals and is routed to underground infiltration chambers. In addition, in order to build the tunnel, groundwater removal would be required during construction of the light rail tunnel.

A. Existing Conditions

This section describes the existing geologic and groundwater conditions within the St. Louis Park/ Minneapolis Segment. Section 4.1.3 of the Draft EIS describes the existing geological conditions in the study area, which include surficial geology (soils), bedrock geology, and groundwater. Geologic and groundwater information and mapping provided in the Draft EIS for the greater project area cover all areas addressed in this Supplemental Draft EIS, including the Kenilworth Corridor.

Since publication of the Draft EIS, the Council has performed 37 soil borings and 8 cone penetrometer test (CPT) soundings between the proposed West Lake Station and Penn Station. Of these, 17 soil borings and 4 CPTs were performed within the area where a light rail tunnel would be constructed. See Section 2.5.3 for a description of the proposed light rail tunnel. The *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report* ([Council, 2014d]; see Appendix C for instructions on how to access this report) summarizes the soil, geologic, and groundwater conditions in the vicinity of the proposed light rail tunnel based in part on the results of the 37 soil borings and 8 CPT soundings[33]. The technical report supplements the soil and groundwater analysis conducted as part of the Draft EIS. Results of the soil borings and CPT soundings reveal that soils along the tunnel alignment generally consist of deep alluvial sands with pockets of silty clay soils and organic (peat) deposits in some areas. Areas of soft soils (organics or silt and clays) occur near West Lake Street and just south of the Kenilworth Channel. The soft soils are approximately 4 feet in thickness in both locations. Silt and clays near West Lake Street extend to depth of approximately 20 feet or greater. Bedrock is located approximately 150 feet below the ground surface near West Lake Street (Minnesota Geologic Survey). No geologic hazards (such as sinkholes, shallow limestone formations, or near-surface karst) are expected.

Cedar Lake and Lake of the Isles are hydraulically connected by the Kenilworth Lagoon, which is often termed the Kenilworth Channel. Prior to construction of the lagoon in the early 1900s, the water level in Cedar Lake was several feet higher than in Lake of the Isles, causing an eastward groundwater flow from Cedar Lake east toward Lake of the Isles. Construction of the lagoon allowed stabilization of water levels in the two lakes to a common level, and the groundwater gradient between the two lakes was minimized or eliminated. Groundwater is shallow in the vicinity of the proposed tunnel (approximately 10 feet below ground surface in some places near West Lake Street and approximately 17 feet below ground surface along the length of the tunnel). Seasonal fluctuations in groundwater occur, depending on rainfall, snowmelt, and temperature changes. As described in the Draft EIS, in areas with high groundwater elevations and granular soils, there is an increased potential for groundwater contamination as a result of previous hazardous and contaminated materials spills.

B. Potential Geology and Groundwater Impacts

This section identifies the potential long-term impacts to geology and groundwater, as well as short-term impacts, which apply to groundwater only.

Long-Term Direct and Indirect Geology and Groundwater Impacts

This section addresses how geology and groundwater can impact and be impacted by the proposed LPA in the long and short terms.

[33] The *Southwest Light Rail Transit: Kenilworth Shallow LRT Tunnels Water Resources Evaluation* (Burns & McDonnell, 2014) provides an independent review of the draft of the *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report*, as well as five other related documents. The final *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report* (Council, 2014e) addresses recommendations included in the Water Resources Evaluation report (Burns & McDonnell, 2014). See Appendix C for instructions on how to access these reports.

Geology

Because the proposed light rail tunnel would result in removal of soil and water within the tunneled zones, the tunnel would be relatively light in weight compared to the soil that currently exists at the tunnel location, resulting in little if any change in load. Settlement of the non-organic soils would, therefore, not be likely. In this case, when the load change is small and the soils are not compressible, the amount of settlement below and in the vicinity of the tunnel would be negligible. For these conditions, construction and operation of the light rail system would not affect the performance of the proposed tunnel or other structures located in the vicinity of the tunnel, such as roadways, utilities, and nearby buildings.

Potential long-term direct and indirect impacts outside of the tunnel area are similar to those addressed in Section 4.1.4 of the Draft EIS.

Groundwater

The long-term impacts of the proposed LPA on groundwater involve a number of possible considerations such as whether groundwater could affect long-term operations of the light rail tunnel; whether the proposed tunnel would affect the levels of the adjacent lakes; and whether the proposed tunnel would increase the risk of groundwater contamination.

Long-Term Tunnel Operations. As described in the *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report* (Council, 2014d), the light rail tunnel would be designed to minimize the inflow of groundwater through use of a water proofing system and the permanent use of the steel sheetpile retaining wall system. The tunnel design and construction is comprised of a relatively impermeable steel sheetpile system on the outside, waterproofing installed between the inside faces of the sheetpile walls and the surface of the concrete seal base, and the outside of the concrete tunnel and waterproofing applied to the outside of a sloped concrete cap on top of the tunnel. Further, the report notes that, in the long term, stormwater and groundwater would be addressed using two relatively distinct water control systems: 1) the tunnel portal control system; and 2) the internal tunnel water control system.

***Tunnel Portals*.** Water collected at the tunnel portals would be predominantly stormwater, but could also include melted ice from the light rail trains. Water entering the tunnel portals would be collected and prevented from entering inside the tunnel with drains located in the base of the tunnel portals near the tunnel openings. The water would be routed through pumps, through a pretreatment system that would capture debris and sediments and through an underground infiltration chamber, which would allow the water to enter into the groundwater system.[34]

Internal Tunnel. If water enters the internal tunnel, it would likely be predominantly groundwater entering via small cracks or joints in the concrete walls, floors, and ceilings. In addition, some water could enter the internal tunnel by light rail trains (e.g., dripping, melting ice). The drainage system inside the tunnel is designed as a closed waterproofing system that excludes groundwater from entering the tunnel. In order to provide a basis for the waterproofing system design and the design of the internal tunnel water control system, an allowable seepage rate of 0.002 gal/ft^2/day (as recommended by FHWA-NHI_10_034) is used. Applying the allowable seepage rate to the tunnel design results in as much as approximately 190,000 gallons of water per year that could be collected by the internal tunnel water control system. Water collected in the tunnel would be treated, if required, and pumped to the adjacent sanitary sewer systems owned by either the City of Minneapolis or the Council Environmental Services.

The Tunnel's Effects on Lake Level. Groundwater and lake levels in the area surrounding Cedar Lake, Lake of the Isles, and Lake Calhoun are very similar, with little change in elevation across the system. The three lakes are connected by free-flowing surface water channels, effectively making the lakes act as one water body. As a result, there is little or no groundwater gradient among the lakes; groundwater does not "flow" from one water body to another. Precipitation and evaporation processes are the dominant factors in lake

[34] The infiltration chambers that are part of the light rail tunnel portal water management system would be sized to accommodate stormwater volumes associated with a 100-year storm event. Drains in the tunnel portals would be sized for volumes in excess of that level. Volumes of water in excess of the 100-year storm event would pass through the infiltration chambers and would overflow into the existing storm sewer system and surface water bodies in the vicinity of the tunnel.

level fluctuation for this area. Groundwater modeling studies carried out to evaluate the effects of the tunnel on water levels in the vicinity of the tunnel show that due to the predominately sandy soil conditions and lack of groundwater "flow" in the vicinity of the tunnel, groundwater will rise and fall equally around the tunnel. The amount of water that could be collected by the internal water control system as described earlier is expected to be a very small percentage of the water budget for the lakes, and when the role of precipitation is considered on the broader Kenilworth Corridor area, this seepage would not affect groundwater or lake levels.

Risk of Groundwater Contamination during Tunnel Operations. The area of the proposed light rail tunnel was identified in the Draft EIS as an area susceptible to groundwater pollution because of its shallow groundwater depth in combination with the highly permeable nature of soils, which is typical of sands and gravels. However, the potential for contamination to groundwater from the tunnel is low because the trains would be electric and there would generally be no activities in the tunnel that would generate pollutants that could contaminate groundwater. In the very unlikely event of a hazardous materials spill within the tunnel, the tunnel would have a base slab and drainage system, which would prevent infiltration through the tunnel bottom and would allow contaminated materials to be collected, ensuring that the hazardous materials or contaminated stormwater in the tunnel would not be released into the groundwater. Finally, the internal tunnel water control system previously described in this section would channel water collected in the internal tunnel to the adjacent sanitary sewer systems, treated as required, avoiding entry of that water into the groundwater system. Section 3.4.2.5 of this Supplemental Draft EIS describes the hazardous material sites in this area and potential groundwater contamination issues.

The Phase I Environmental Site Assessment (ESA) of potential groundwater contamination for this segment is ongoing and will be included in the Final EIS. A Phase II ESA will be completed, where determined appropriate based on the Phase I ESA, prior to construction. Acquiring land with known contamination that cannot be easily remediated or contained would be avoided to the extent possible based on a Phase I and/or II ESAs as the project advances into further stages of project development. The long term risk to the project will be determined once remediation is completed in areas of known and encountered contamination during construction. See Section 3.4.2.5 of this Supplemental Draft EIS for additional information on hazardous and contaminated material sites within or adjacent to the St. Louis Park/Minneapolis Segment and how potential contamination to groundwater would be addressed.

Direct Impacts Outside of the Tunnel Area. The LPA was assessed to determine if the construction of foundations for the light rail system's features, including stations and park-and-ride facilities, or the construction of new earth fills would result in localized changes in groundwater flow. Because the native soil along most of the St. Louis Park/Minneapolis Segment is granular in consistency, water flow would be around or under the new structures, resulting in no noticeable changes in the groundwater flow regime. If the light rail alignment is located on areas of organic soils or clays, drainage features may be needed to allow normal groundwater flow through areas where the alignment is on earth fills to prevent ponding. The potential to contaminate groundwater from operation of the light rail system would be low, because the trains would be electric and, generally, no activities that generate pollutants would occur in this area. Although the light rail system would generate few, if any, pollutants, there would be a risk of unexpected contamination during routine maintenance of the light rail system. The contamination could be in the form of solvents used to clean greases and oil. In view of the potential for groundwater contamination along the alignment, particularly along the Louisiana Station, Beltline Station, Kenilworth Lagoon, and 21st Street Station areas, maintenance practices would be adopted that minimize the risk of these occurrences. These practices could include the use of lining systems and other containment methods when risk of contamination exists (see Figure 4.1-13 in the Draft EIS).

Indirect Effects. No indirect effects for geology or groundwater are expected.

Short-Term Geology and Groundwater Impacts

This section describes the potential short-term impacts to soil, geology, and groundwater during construction of the LPA.

There would be no short-term impacts of the LPA on soils and geology, other than the potential for typical soil erosion resulting from ground-disturbing construction activities, which would be avoided through the implementation of industry-standard construction BMP and a stormwater pollution prevention plan (SWPPP).The SWPPP is discussed in Section 3.4.2.2.B of this Supplemental Draft EIS. Short-term impacts related to construction of the LPA would be limited to potential impacts to groundwater. The potential short-term impacts of the proposed LPA on groundwater include the risk of contamination during construction and the risk of settlement due to groundwater pumping during construction.

The Risk of Groundwater Contamination during Construction. Removal of groundwater from the tunnel construction area would be necessary during construction of the cut-and-cover tunnel due to the high groundwater level. Groundwater removal, however, would be limited to the construction cells bounded by steel sheetpiling. The concrete tunnel would be built in stages within construction cells as described in the *Kenilworth Shallow LRT Tunnel Basis of Design Report* (Council, 2014d). A drainage system comprised of sumps and collection trenches would be installed to collect both groundwater seeping into the construction area and any stormwater runoff. As documented in the *Kenilworth Shallow LRT Tunnel Basis of Design Technical Report*, this drainage system would treat the water through use of filtration tanks and infiltration basins or other means as approved by the Minnehaha Creek Watershed District (MCWD) and the MnDNR, and would be designed to accommodate up to a 100-year storm event. In the case of a larger storm event, the water would be discharged to the sanitary sewer system or other means as approved by the MCWD and the MnDNR.

Outside of the tunnel area, the Louisiana Station, Beltline Station, Kenilworth Lagoon, and 21st Street Station areas were identified as areas susceptible to groundwater pollution in the Draft EIS (Section 4.1.3.6). However, the risk of groundwater contamination in these areas would be reduced because most construction within these areas would be either at- or above-grade. For this type of construction, little pumping of groundwater would be anticipated.

The Risk of Settlement due to Groundwater Removal during Construction. Within the tunnel area, the primary potential impact during construction associated with groundwater removal could be settlement of nearby buildings, roadways, and utilities. Removing water from surrounding soils increases the risk for soil subsidence and the potential for building movement and settlement cracks in foundations or pavements. The risk of groundwater removal during construction causing building settlement would be very low because proper BMPs would be employed during construction and groundwater removal would be limited to construction cells that would be specifically designed to avoid the settlement of any nearby structures. Further, the specifications will include requirements for the contractor to develop a plan that includes sheetpile test areas to determine the effect of pile operations. Pile operations would then be conducted in these areas and monitoring would be conducted, and the contractor would provide results before operations begin.

Outside of the tunnel area, in areas where groundwater pumping may be needed during construction, a temporary drainage system could be developed that would treat water through the use of filtration tanks and infiltration basins. To minimize the potential impact of settlement in areas where groundwater pumping would be necessary, a monitoring plan would be developed and implemented to ensure that if any building, road, or parking area settlement occurs, it would be detected as soon as possible so that additional remediation methods could be employed.

C. Mitigation Measures

A groundwater management plan will be prepared by the Council, and approved by the Minnesota Department of Natural Resources and MCWD, before construction. That plan will include required groundwater monitoring and management practices during construction. The management plan will also address collection, storage, and disposal of surface water runoff from the light rail track system, stations, and other infrastructure developed as part of the project. Mitigation measures related to potential existing groundwater contamination and hazardous and contaminated materials are discussed in Section 3.4.2.5 of this Supplemental Draft EIS.

Within the St. Louis Park/Minneapolis Segment, the groundwater management plan will include monitoring, which will be used to assess excessive groundwater infiltration and to prioritize any potential repairs to the waterproofing systems. The project's plan will be based on an appropriate safety factor, to be determined in consultation with the MCWD and the MnDNR, which will be applied to pumping rates and yearly pumping volumes in calculating maximum inflow amounts.

3.4.2.2 Water Resources: Wetlands, Floodplains, Public Waters, and Stormwater Management

This section describes existing water resources (i.e., wetlands, floodplains, public waters, and stormwater management) within the St. Louis Park/Minneapolis Segment and assesses how the LPA would impact those water resources in the long term and short term (during construction). Mitigation measures for these impacts are also covered in this section.

Public waters are lakes, wetlands, and watercourses (streams and rivers) are under the jurisdiction of the Minnesota Department of Natural Resources (MnDNR). MnDNR defines public waters as all water basins (lakes and wetlands) and watercourses that meet the criteria set forth in Minnesota Statutes, Section 103G.005.

As summarized in Table 3.4-1, the LPA would result in the following impacts to water resources in the St. Louis Park/Minneapolis Segment: permanent fill of approximately 0.5 acre of wetlands; temporary effects on wetlands during construction; one new light rail crossing of a public waterway; stormwater treated before entering the municipal storm drain systems; and no long-term floodplain impacts. The Draft EIS wetland impacts in the St. Louis Park/Minneapolis area are similar to those identified in this Supplemental Draft EIS. However, floodplain impacts in the St. Louis Park/Minneapolis Segment identified in the Draft EIS have been eliminated through a Letter of Map Revision (LOMR), which is described is greater detail below in the floodplains discussion.

Agency Coordination

Coordination with the federal, state, and local permitting agencies and jurisdictions has been ongoing throughout development of the Supplemental Draft EIS and will continue through development of the forthcoming Final EIS and issuance of applicable permits listed in Table 4.4-5 of this Supplemental Draft EIS. Specific to the St. Louis Park/Minneapolis Segment, the wetland sites considered, as described in Section 2.3.3, were reviewed with the USACE and state and local jurisdictions taking in to consideration potential impacts to wetlands. Table 3.4-9 summarizes wetlands impacts that would occur within the St. Louis Park/Minneapolis Segment. Beginning in July 2013, the SPO convened a monthly Technical Evaluation Panel (TEP) meeting with permitting agencies with jurisdiction under the federal Clean Water Act, the state Wetland Conservation Act and local water resources rules. See Section 3.2.2.2 for additional information on the TEP.

TABLE 3.4-9
St. Louis Park/Minneapolis Segment Wetland Impact Summary

Wetland I.D.	Wetland Size (acres)	Wetland Impact (Fill) (acres)	Wetland Type (Circular 39[a])
DOT-MPL-11	1.44	0.06	Type 3 (shallow marsh)
MC-MPL-13	NA	0.15	Type 90 (permanently flooded riverine system)
MC-SLP-08	0.28	0.28	Type 7 (hardwood swamp)
Total	1.72	0.49	

[a] USFWS Circular 39 System (Shaw and Fredine, 1956).

Note: Permitting agencies would be USACE, MnDNR, Minnehaha Creek Watershed District, and City of Minneapolis.

Acronym: NA = not available.

Source: Wetland field delineation performed August 26 and September 12, 2013, Anderson Engineering, LLC.

Section 3.1.2.7 of this Supplemental Draft EIS explains the process for merging NEPA and Section 404 requirements. Further, the Minnesota Pollution Control Agency (MPCA) overseeing the Section 401 certification process under the Clean Water Act requested that the information necessary for Section 401 certification be incorporated into the USACE's 404 wetland permit application. Coordination will continue

through development of the forthcoming Final EIS and through review of applicable permit applications listed in Table 4.5-2 of this Supplemental Draft EIS. Specific to the St. Louis Park/Minneapolis Segment, the wetland sites considered were reviewed with the USACE and state and local jurisdictions taking in to consideration potential impacts to wetlands.

A. Existing Conditions

This section describes the water resource features (wetlands, floodplains, public waters, and stormwater management) in the St. Louis Park/Minneapolis Segment. Field delineations of wetlands, which were not conducted for the Draft EIS, were conducted between July and November 2013, and in September 2014 within the St. Louis Park/ Minneapolis Segment. Field crews used the *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) and applicable supplements (USACE, 1987), under the oversight of a Minnesota Certified Wetland Delineator, to conduct the field delineations. See Section 3.1.2.7 for more information. In addition to the wetland delineations the project team conducted in the St. Louis Park/ Minneapolis Segment in 2013, the Minnehaha Creek Watershed District, the Cities of Minneapolis and St. Louis Park, and the USACE verified the wetland boundaries and types.

Wetlands

The Draft EIS identifies wetlands in this segment based on mapping databases available at that time. The result was wetlands identified near Minnehaha Creek associated with the channel crossing between Cedar Lake and Lake of the Isles and immediately north of the proposed location of Penn Station. Field delineations conducted as part of this Supplemental Draft EIS in this segment on August 26 and September 12, 2013, and September 4, 2014, identified 12 wetlands, illustrated on Exhibit 3.4-5. Wetlands were delineated at the following locations: near the proposed West Lake Station; near the Kenilworth Lagoon that connects Cedar Lake and Lake of the Isles; near the proposed Penn Station; in the vicinity of Bryn Mawr Meadows; and near the proposed Beltline Station at the location of a proposed park-and-ride facility. Additional information about St. Louis Park/Minneapolis Segment wetlands can be found in the *Wetland Investigation Report* (Anderson Engineering of Minnesota, LLC, 2013) and *2014 Supplemental Wetland Investigation Report* (Anderson Engineering of Minnesota, LLC, 2014). See Appendix C for instructions on how to access these reports.

Floodplains

There are no 100-year floodplains within the St. Louis Park/Minneapolis Segment of the LPA. The Draft EIS (Figure 4.2-2) shows a 100-year floodplain extending northeast from Minnehaha Creek toward and crossing over the project alignment. The Draft EIS figure was produced using MnDNR floodplain data. MnDNR's floodplain data are derived from the FEMA Flood Insurance Rate Maps (Flood Insurance Rate Map, No. 27053C0361E, 2004). However, the FEMA data were produced in 2004 and have since been amended through a Letter of Map Revision,[35] which eliminated the 100-year floodplain within the St. Louis Park/ Minneapolis Segment (FEMA, 2007).

Public Waters and Stormwater Management

No additional public watercourses were identified by analysis of MnDNR GIS data for this segment beyond those disclosed in Section 4.2.3.2 of the Draft EIS. As described in the Draft EIS, proposed improvements in the St. Louis Park/Minneapolis Segment under the LPA would be near, but would not cross, Minnehaha Creek. See Draft EIS Section 4.2.3.2 for more information.

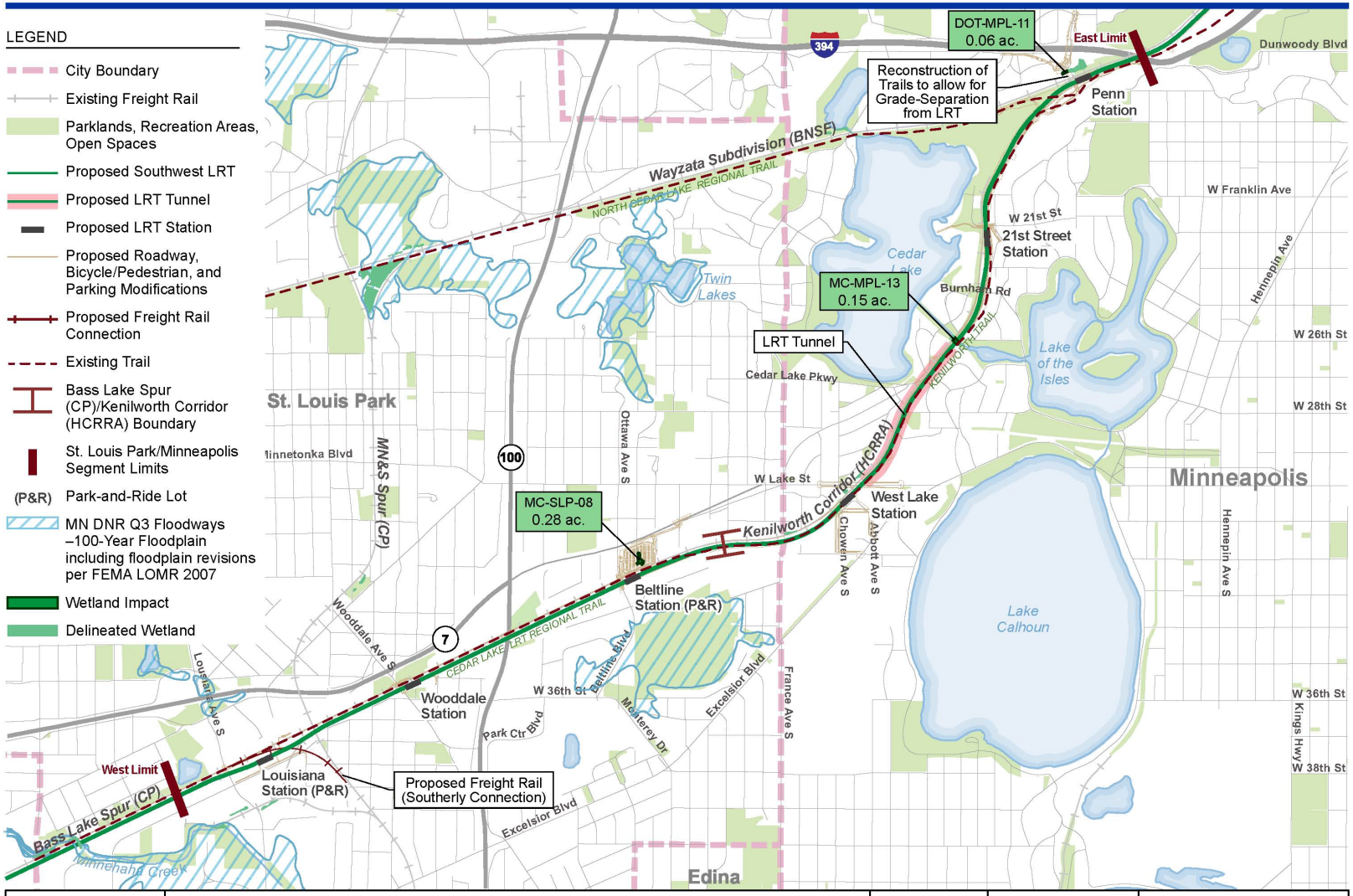
B. Potential Water Resources Impacts

This section identifies the potential long-term and short-term impacts of the LPA on wetlands, public waters and stormwater management, and floodplains that would occur in the St. Louis Park/Minneapolis Segment.

[35] A Letter of Map Revision is FEMA's modification to an effective Flood Insurance Rate Map, or Flood Boundary and Floodway Map, or both) https://www.fema.gov/national-flood-insurance-program-2/letter-map-revision).

EXHIBIT 3.4-5

Water Resources: Wetlands, Floodplains, and Public Waters, St. Louis Park/Minneapolis Segment



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Water Resources: Wetlands, Floodplains, and Public Waters St. Louis Park/Minneapolis Segment	Exhibit 3.4-5	NORTH 0 1,325 2,640 Feet	METROPOLITAN COUNCIL

Long-Term Direct and Indirect Wetlands, Floodplains, and Public Waters and Stormwater Management Impacts

This section describes the long-term direct and indirect impacts on water resources in the segment.

Wetlands

The St. Louis Park/Minneapolis Segment would place fill in three wetland basins as shown on Exhibit 3.4-5. Wetlands that would be filled by the proposed light rail-related improvements and freight rail modifications are described below. Table 3.4-9 summarizes wetlands impacts that would occur within the St. Louis Park/ Minneapolis Segment. These basins are primarily adjacent to the existing freight rail alignment in the segment, with one exception near the Beltline Station where the permanent fill would be due to a proposed park-and-ride lot. The total wetlands filled in this project segment would be approximately 0.5 acre. The wetland types that would be filled include Type 3 (shallow marsh), Type 7 (hardwood swamp), and Type 90 (permanently flooded riverine system).

Wetland DOT-MPL-11, near the proposed Penn Station, is a Type 3 (shallow marsh) wetland that is part of the highway drainage system. The wetland vegetation is dominated by narrow-leaved cattail (*Typha angustifolia*) and duckweed (*Lemna minor*). The upland vegetation on the highway ditch slope is dominated by black willow (*Salix nigra*), sandbar willow (*Salix interior*), common buckthorn (*Rhamnus cathartica*), Canada goldenrod (*Solidago canadensis*), and Canada thistle (*Cirsium arvense*).

Wetland MC-MPL-13 is an unclassified manmade channel between Cedar Lake and Lake of the Isles (i.e., Kenilworth Lagoon). This Type 90 (permanently flooded riverine system) wetland extends offsite to the west and east. Wetland vegetation is dominated by green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), box elder (*Acer negundo*), and common buckthorn (*Rhamnus cathartica*). The upland vegetation adjacent to the channel is dominated by white mulberry (*Morus alba*) and garlic mustard (*Alliaria petiolata*).

Wetland MC-SLP-08, near the proposed Beltline Station, is an isolated Type 7 (hardwood swamp) wetland that is used for stormwater treatment. The wetland vegetation is dominated by common buckthorn (*Rhamnus cathartica*), garlic mustard (*Alliaria petiolata*), and reed canary grass (*Phalaris arundinacea*). Adjacent upland vegetation is dominated by box elder (*Acer negundo*), common buckthorn (*Rhamnus cathartica*), and garlic mustard (*Alliaria petiolata*).

Floodplains

Long-term direct impacts to floodplains are defined as the introduction of fill material into an area currently mapped as a 100-year floodplain. The LPA would not result in any direct impacts to 100-year floodplains within the St. Louis Park/Minneapolis Segment, because there are no 100-year floodplains within the segment.

As noted in Section 9.6.11.2 of the Draft EIS, the LPA would not result in any long-term indirect impacts to floodplains because any anticipated development and redevelopment around station areas would be required to implement applicable BMPs that would avoid impacts to floodplains.

Public Waters and Stormwater Management

The LPA would result in a new light rail crossing of the Kenilworth Lagoon, addressed and identified in Section 4.2.3.5 of the Draft EIS as an unnamed channel connecting Cedar Lake and Lake of the Isles.

A general description of changes to impervious surfaces and potential impacts to stormwater runoff is found in Section 3.2.2.2 of this Supplemental Draft EIS. Specific to the St. Louis Park/Minneapolis Segment, the proposed park-and-ride lots at Louisiana and Beltline Stations; station platforms; LRT guideway and the light rail tunnel portals in the Kenilworth Corridor would create new impervious surface. The tunnel would create stormwater management needs because stormwater collected at the tunnel portals would need to be pumped out of the facility. Such water pumping activities would need to comply with stormwater permit requirements. See Section 3.4.2.1.B for additional information on the light rail tunnel water control systems.

The stormwater systems managed by local jurisdictions in this area typically discharge to local streams and wetlands. Urbanization has changed many of the land uses in the area from forested areas to urban development. In the St. Louis Park/Minneapolis Segment, the Cities of St. Louis Park and Minneapolis, in

conjunction with the Minnehaha Creek Watershed District, have active stormwater management regulations and programs.

Short-Term Wetlands, Floodplains, and Public Waters and Stormwater Management Impacts

This section describes the potential short-term impacts to water resources in the segment caused by constructing the LPA.

Wetlands

Short-term fill within wetlands due to construction activities, and potentially other related construction activities, could affect wetlands within the St. Louis Park/Minneapolis Segment. These impacts would generally be limited because much of the new light rail alignment would be built on existing railroad right-of-way. Construction activities may result in loss or disturbance of soils and vegetation or potential for inorganic solids to reach the wetlands. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and deposit the eroded materials downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations

Implementing appropriate BMPs would help minimize erosion and sedimentation impacts. These BMPs will include the preparation of a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, if needed. BMPs that will be implemented during construction will be designed to minimize the potential for soil erosion and sedimentation and to protect water quality, if needed. Potential BMPs that could be implemented during construction include the following:

- Minimizing the amount of cleared area at a construction site
- Stabilizing construction entrances and haul roads using quarry spalls
- Washing truck tires at construction entrances, as necessary
- Constructing silt fences downslope from exposed soil
- Protecting catch basins from sediment
- Containing and controlling concrete and hazardous and contaminated materials onsite
- Installing temporary ditches to route runoff around or through construction sites, with straw bales or rock check dams strategically located to slow and settle runoff
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil
- Using straw wattles to reduce the length of unbroken slopes and minimize runoff concentration
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established
- Constructing temporary sedimentation ponds to remove solids from concentrated runoff and groundwater pumping before being discharged
- Conducting vehicle fueling and maintenance activities no closer than 100 feet from a wetland

Floodplains

No short-term direct impacts to floodplains are expected due to the proposed project, although sedimentation flow into the floodplain could indirectly occur during construction if a substantial storm event

were to occur Construction staging will be located outside the floodplain areas to minimize the potential for temporary effects.

Public Waters and Stormwater Management

The potential water quality impacts resulting from construction activities may increase turbidity and sedimentation in the receiving water features as a result of stormwater runoff from disturbed construction sites. Erosion and sedimentation typically occur when rainfall and stormwater runoff erode soil and deposit the eroded materials downslope or downstream from the construction area. Erosion and sedimentation can result from a variety of potential actions associated with construction, including the following:

- Removing vegetation that exposes soil to erosion
- Exposing soil by way of grading, filling, and excavation
- Tracking soils onto roads by vehicles
- Constructing in or near wetlands, lakes, streams, or drainage courses
- Constructing slopes that collect and concentrate stormwater, causing erosion
- Pumping of groundwater at excavations such as pier foundations, trenches, and tunnels

The runoff from newly poured concrete surfaces can have high alkalinity, often above pH 9, which can result in degraded water quality and can adversely affect fish. In addition, total suspended solids from the concrete fines might result in a milky-white appearance of the runoff, exceeding turbidity requirements. Because the total amount of ground disturbance during construction would be more than one acre, a National Pollutant Discharge Elimination System general construction stormwater permit would be required for this project. One of the permit requirements is a project-specific SWPPP. The SWPPP would be developed and implemented in accordance with Council Environmental Services guidance and procedures. This plan would include a temporary erosion and sediment control plan and a hazardous and contaminated materials management plan, and would employ BMPs during construction to minimize the potential for soil erosion and sedimentation and to protect water quality. Potential BMPs would include those listed above for wetlands.

A temporary erosion and sediment control plan also would include a water quality monitoring plan and a schedule for inspecting the erosion control measures for effectiveness. Water pumped from the construction site, such as from guideway pier construction, would be treated as required to meet discharge requirements identified in the SWPPP. Pavement slurry and residue from road cutting and grinding would be collected and properly disposed of offsite, and a concrete containment and disposal plan would also be prepared. An MnDNR-certified erosion and sediment control specialist would be employed to conduct the inspections, and deficiencies would be promptly corrected. These measures would minimize the likelihood of serious water quality problems occurring during construction.

The concrete used for the project would take several months to cure enough so that the pH of exposed surfaces decreased to acceptable levels. Stormwater runoff would be tested, and if excessive levels of pH or turbidity are found, the runoff would be treated before it is released to storm sewers or a receiving water body. If discharge of treated construction or process water to a sanitary sewer is proposed, approval must be obtained from the appropriate jurisdictions.

Additional Construction BMPs

The proposed project will comply with applicable state, federal, and local regulations and will install BMPs to control and minimize erosion and potential impacts to surface water resources as determined during the permitting process. Construction BMPs may include some or all of the following:

- Inlet protection of catch basins (filters, bio-bags, catch-basin drop-filters)
- Excavation silt control (silt fence, bio-bags)
- Temporary seeding of open excavations and stockpiles as appropriate for surface soil areas that remain exposed for several weeks or longer
- Swales with check dams – surface waterways with periodic check dams for silt removal

- Temporary paving of area to receive traffic prior to final restoration
- Infiltration of stormwater runoff after removal of heavy sediments
- Temporary rerouting of stormwater away from exposed slopes and stockpiles
- Temporary rock construction entrances to remove mud for construction vehicles before they leave the site

When applicable, these BMPS will be installed prior to earthwork and grading activities, and would be kept in good working order for the duration of the project. The project would be monitored under grading permits issued by the watershed districts, water management organizations (WMOs), and the cities in the corridor.

Runoff volume control techniques would be considered during Engineering to minimize the rate, volume, and quality of surface runoff, including green swales, infiltration strips, rainwater gardens, subsurface storage, grit chambers, and sump manholes.

C. Mitigation Measures

The Section 404 permit application will identify compensatory mitigation for unavoidable impacts to wetlands and other aquatic resources. A Compensatory Mitigation Plan will be developed by the Council, and reviewed by USACE, prior to the submittal of the Section 404 permit application.

Mitigation options to off-set permanent wetland impacts include onsite project-specific permittee-responsible mitigation, offsite project-specific permittee-responsible mitigation, and/or the purchase of wetland mitigation bank credits that meet USACE regulatory requirements, as well as state and local regulatory requirements. Wetland impacts will be reduced, as feasible, by continued project design refinements to limit the affected areas within the wetlands, including the placement of construction fencing to control construction limits. The actual mitigation ratio for the loss of wetlands will depend on the location, type, and functional value of the wetland being impacted and permits obtained from agencies with regulatory authority. Compensatory wetland mitigation required for the project will depend on final footprint of wetland fill, as well as ecological value of the wetlands affected. Impacts to waters and wetlands will be detailed in the Final EIS.

Stormwater runoff (both long-term and short-term) will be directed into stormwater detention facilities created as part of the project (see discussion of stormwater above). Temporary impacts on soils and vegetation within and surrounding the wetlands will be restored upon completion of construction.

Impacts on floodplains and public waters shall be mitigated by compensatory storage. During Engineering, the amount of floodplain impacts will be calculated, and coordination with the appropriate entities (WMOs) will occur to determine the type, location, and extent of compensatory floodplain storage (likely in the form of excavation) required. The Council will coordinate with, and obtain permits from, local, state, and federal water resources agencies. Development of permit applications will be completed during the Engineering phase of the project.

3.4.2.3 Noise

This section provides a summary of the existing noise levels around noise-sensitive properties within the St. Louis Park/Minneapolis Segment; an assessment of how those properties would be impacted by the LPA; and how those impacts could be mitigated. As summarized in Table 3.4-1, there would be 67 moderate noise impacts and three severe noise impacts without mitigation.

Background information on how noise is defined, the noise generated by LRT and freight rail, and FTA noise impact guidelines can be found in the Noise Fact Sheet in Appendix H of this Supplemental Draft EIS. Appendix H of the Draft EIS also contains background information on noise and FTA evaluation criteria. In addition, detailed information regarding noise measurements, impact methodology, and the impact assessment can be found in Appendix H of this Supplemental Draft EIS. The Final EIS will contain a comprehensive technical appendix with updated and detailed information regarding all noise-related inputs, measurements, an impact assessment, and mitigation.

A. Existing Conditions

This section describes existing noise-sensitive land uses in the St. Louis Park/Minneapolis Segment and existing noise levels. The existing number and location of sensitive noise receptors in the St. Louis Park/ Minneapolis Segment are the same as those described in the Draft EIS. However, prior to publication of this Supplemental Draft EIS, additional noise monitoring was conducted (July and August 2013) to better reflect existing freight rail operations within the freight rail corridor. As discussed in Section 3.1.2.8, this monitoring represents an update to the monitoring used for the Draft EIS.

Noise-sensitive land uses within the St. Louis Park/Minneapolis Segment were identified based on aerial photography, project drawings, and field surveys. Based on the information from these sources, the noise-sensitive land uses within the St. Louis Park/Minneapolis Segment include a mix of single-family and multifamily residences generally along the south side of the light rail alignment west of West Lake Station. East of West Lake Station and the Kenilworth Lagoon, the noise-sensitive land uses are primarily multifamily residences and single-family residences. Currently, the dominant noise source in the segment is existing freight rail traffic. Other noise sources include vehicle traffic on local roadways and aircraft overflights.

Table 3.4-10 summarizes the results of the existing noise level measurements and Exhibit 3.4-6 shows the location of the four long-term noise monitoring sites for the St. Louis Park/Minneapolis Segment that were monitored after publication of the Draft EIS. At each site, the measurement was conducted at the approximate setback of the building or buildings relative to the alignment adjustment. The results were used to determine the existing noise levels for the noise-sensitive locations in the study area.

TABLE 3.4-10
Summary of Existing Noise Level Measurements – St. Louis Park/Minneapolis Segment

Site No.	Measurement Location	Measurement Start		Measurement Duration	Noise Level (dBA)[b]	
		Date	Time	(hours)	L_{dn}	L_{eq}
N14[a]	Railroad Avenue and 37th Street West	7/23/2013	11:00 a.m.	24	58	54
N15[a]	Calhoun Isle Condos	7/23/2013	11:00 a.m.	24	64	--
N16[a]	Kenilworth Place and Upton Avenue South	7/23/2013	10:00 a.m.	24	61	54
N17[a]	21st Street and Upton Street	7/23/2013	11:00 a.m.	24	56	--

[a] Noise sites from Supplemental Draft EIS measurements conducted during July and August 2013.

[b] L_{dn} is used for Category 2 (residential) land use and L_{eq} is used for Category 1 (highly sensitive) and Category 3 (institutional) land use.

Acronyms: dBA = A-weighted decibel; L_{dn} = 24-hour, time-averaged, A-weighted sound level (day-night); L_{eq} = equivalent continuous sound level.

Source: Cross-Spectrum Acoustics LLC, 2013.

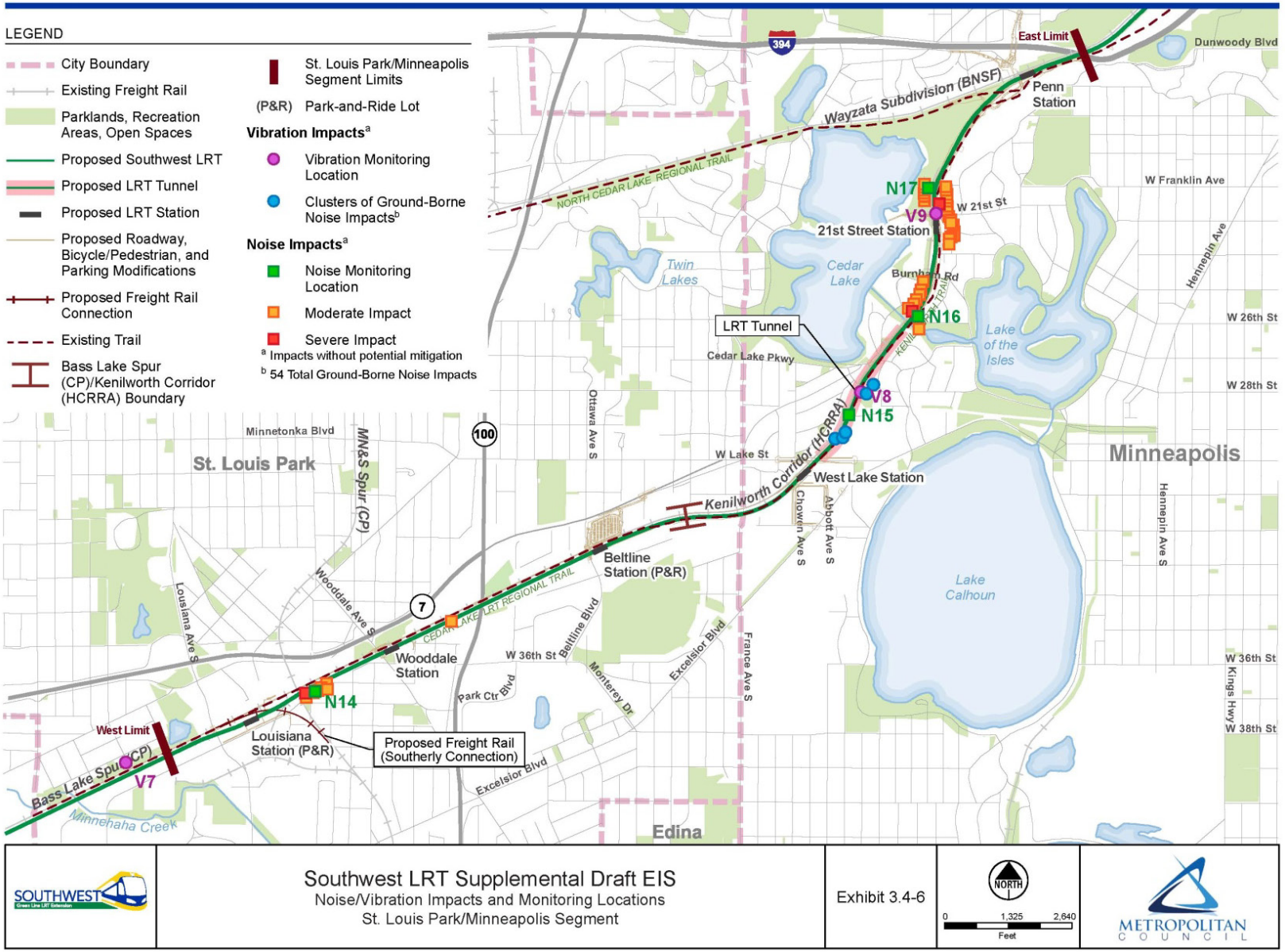
Site N14 – Railroad Ave and 37th Street West. The 24-hour, time-averaged, A-weighted sound level (day-night) (L_{dn}) measured at this location was 58 A-weighted decibels (dBA) and the hourly equivalent continuous sound level (L_{eq}) was 54 dBA. The dominant noise source was freight rail activity in the Kenilworth Corridor. Other noise sources included local roadway traffic and bike path activities. Noise levels were measured for 24 hours at a residence facing the corridor. This site is representative of the ambient noise conditions at residences and apartments in the southern portion of the St. Louis Park/Minneapolis Segment.

Site N15 – Calhoun Isle Condos. The L_{dn} measured at this location was 64 dBA. The dominant noise sources were freight rail activity in the Kenilworth Corridor and aircraft overflights. Other noise sources included local roadway traffic and bike path activities. Noise levels were measured for 24 hours at the side of the condominiums facing the corridor. This site is representative of the ambient noise conditions at residences and condominiums in the southern portion of the St. Louis Park/Minneapolis Segment tunnel.

Site N16 – Kenilworth Place and Upton Avenue South. The L_{dn} measured at this location was 61 dBA and the hourly Leq was 54 dBA. The dominant noise sources were freight rail activity in the Kenilworth Corridor and aircraft overflights. Other noise sources included local roadway traffic and bike path activities. Noise levels were measured for 24 hours in the back yard of a residence facing the corridor adjacent to the channel

EXHIBIT 3.4-6

Noise/Vibration Impacts and Monitoring Locations, St. Louis Park/Minneapolis Segment



crossing. This site is representative of the ambient noise conditions at residences and condominiums in the middle portion of the St. Louis Park/Minneapolis Segment tunnel section near the proposed crossing of the Kenilworth Lagoon.

Site N17 – 21st Street and Upton Street. The L_{dn} measured at this location was 56 dBA. The dominant noise sources were freight rail activity in the Kenilworth Corridor and aircraft overflights. Other noise sources included local roadway traffic and bike path activities. Noise levels were measured for 24 hours in the backyard of a residence facing the corridor. This site is representative of the ambient noise conditions at residences and condominiums in the northern portion of the St. Louis Park/Minneapolis Segment tunnel.

B. Potential Noise Impacts

This section identifies and evaluates the potential long-term and short-term noise impacts that would occur in the St. Louis Park/Minneapolis Segment. The long-term noise impact evaluation considers the potential increase in noise levels for sensitive receptors closest to the proposed LRT stations and track as a result of the operation of light rail and freight rail. The assessment of potential long-term noise impacts also considers indirect changes in noise levels, including increased development density anticipated around transit stations that could place sensitive receptors near the noise-generating sources like the LRT and park-and-ride facilities. Short-term noise impacts are those that may occur during construction of the LPA.

Long-Term Direct and Indirect Noise Impacts

This section describes the long-term direct and indirect noise impacts in the St. Louis Park/Minneapolis Segment. The project team conducted a Detailed Noise Analysis in this segment (see Appendix H for more information) and summaries of the analysis results are presented in Tables 3.4-11 and 3.4-12 for residential and institutional (e.g., churches and schools) land uses, respectively.

The results include a tabulation of location information for each sensitive receptor group, the existing noise levels, the projections of future noise levels, the impact criteria, and whether there would be noise impacts. The tables also show the total number of moderate and severe noise impacts for each location, without mitigation measures.

As shown in Table 3.4-11, proposed improvements in the St. Louis Park/Minneapolis Segment would result in 67 moderate noise impacts and three severe noise impacts for residential land uses (Exhibit 3.4-6). The presence of the proposed tunnel in the Kenilworth Corridor eliminates almost all noise impacts relative to an at-grade LRT system within the same segment of the corridor. A summary of each residential location that would experience noise impacts follows.

TABLE 3.4-11
Summary of Noise Impacts for Residential Land Use – St. Louis Park/Minneapolis Segment

Location	Side of Track	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Existing Noise Level (dBA)	Project Noise Levels (dBA)			Type and # of Impacts	
						Criteria			
					LRT	Mod	Sev	Mod	Sev
Railroad Avenue	E	50	55	58	64	57	62	6	1
Camerata Way	E	50	55	64	64	60	66	32[a]	0
Highway 7 Service Road	W	125	55	64	58	60	66	0	0
Park Glen Road	E	113	45	64	57	60	66	0	0
Glenhurst Avenue	W	250	45	64	51	60	66	0	0
Ewing Avenue South	W	100	45	64	58	60	66	0	0
Lake Shore Drive	W	88	20	64	52	60	66	0	0
Chowen Avenue South	E	75	35	64	58	60	66	0	0

Location	Side of Track	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Existing Noise Level (dBA)	Project Noise Levels (dBA)			Type and # of Impacts	
					LRT	Criteria			
						Mod	Sev	Mod	Sev
St. Louis Avenue	W	63	45	64	58	60	66	0	0
Benton Boulevard	E	88	45	61	56	58	64	0	0
Upton Avenue South	E	100	45	61	57	58	64	0	0
Thomas Lane	E	130	35	56	54	56	62	0	0
Burnham Road South	W	100	45	61	55	58	64	0	0
Burnham Road North	W	50	45	61	64	58	64	6	1
Thomas Avenue South	E	50	35	56	66	56	62	16	1
Sheridan Avenue South	E	135	45	56	55	56	62	0	0
South Upton Avenue	W	125	40	56	59	56	62	6	0
Total:								66	3

Notes: The reported noise levels are rounded to the nearest decibel. The "Type and # of Impacts" column identifies whether the LRT noise level exceeds FTA's moderate or severe noise impact criteria thresholds, which are found under the "Project Noise Levels" column. It also reports the number of units that would experience a moderate or severe noise impact.

The noise levels for each location are the highest levels projected for that location. Noise projections at other receptors within each location would be lower.

The reported noise levels are rounded to the nearest decibel.

[a] 32 units in one apartment complex.

Acronyms: Mod = moderate; Sev = severe

Source: Cross-Spectrum Acoustics LLC, 2013.

TABLE 3.4-12
Summary of Noise Impacts for Category 1 and Category 3 Land Use – St. Louis Park/Minneapolis Segment

Location	Land Use Category	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Existing Noise Level (dBA)	Project Noise Levels (dBA)			Type and # of Impacts	
					LRT	Criteria			
						Mod	Sev	Mod	Sev
Lilac Park	3	150	55	54	53	60	66	0	0
Kenilworth Channel	3	40[a]	45	54	60	60	66	1[b]	0
Kenilworth Lagoon Bank	1	225	45	54	53	55	61	0	0

[a]The distance reported is the range of moderate impact for this location. All locations on the channel within 40 feet of the tracks would experience moderate impacts. The distance to severe impact would not extend beyond the right-of-way.

[b]The moderate noise impacts to the channel (Category 3) is at the lowest moderate level at the farthest point from the Southwest LRT line with those levels increasing as you move closer to the Southwest LRT line, but not exceeding the moderate noise threshold.

Note: The reported noise levels are rounded to the nearest decibel.

Acronyms: Mod = moderate; Sev = severe

Source: Cross-Spectrum Acoustics LLC, 2015.

- **Railroad Avenue.** These residences are to the east of the proposed Louisiana Station, located along Railroad Avenue and 37th Street West. One residence is projected to have severe noise impacts and six are projected to have moderate noise impacts, without noise mitigation. The noise impacts would be due to the proximity of the residences to the proposed LRT alignment.

- **Camerata Way.** This apartment complex (Hoigaard Village) is to the west of Highway 100 and is projected to have 32 moderate noise impacts without noise mitigation. The noise impacts would be due to the complex's proximity to the proposed LRT alignment.
- **Burnham Road North.** These residences are located to the west of the proposed light rail alignment, adjacent to the aboveground portion of the corridor to the north of the Kenilworth Lagoon. There would be one severe and six moderate noise impacts, without noise mitigation. The dominant source of projected noise impacts are due to the proximity to the proposed LRT alignment.
- **Thomas Avenue South.** These residences are located to the east of the proposed light rail alignment, adjacent to the aboveground portion of the corridor to the north of the channel crossing in the vicinity of the 21st Street Station and at-grade crossing. There would be one severe and 16 moderate noise impacts, without noise mitigation. The projected noise impacts would be due to the proximity to the proposed LRT alignment, noise from the grade-crossing bells, and station activity.
- **South Upton Avenue.** These residences are located to the west of the proposed light rail alignment, adjacent to the aboveground portion of the corridor to the north of the channel crossing in the vicinity of the 21st Street Station and at-grade crossing. There would be six moderate noise impacts, without noise mitigation. The dominant source of the projected noise impacts would be due to the proximity to the proposed LRT alignment and noise from the grade-crossing bells.

The results in Table 3.4-12 indicate there would be one moderate noise impacts to institutional land uses for the St. Louis Park/Minneapolis Segment.

- **Kenilworth Channel/Lagoon Bank.** A moderate noise impact has been identified at the Kenilworth Channel crossing for the channel itself. The channel is considered a Category 3 sensitive noise receptor due to the presence of noise-sensitive activities that occur on the channel. There would be a moderate noise impact within 40 feet of the tracks on both sides of the channel. The grassy area on the banks of the lagoon is considered a Category 1 land use due to the passive and noise-sensitive recreational activities that occur there (where quietude is essential feature of the park), however there would be no impact to this area because of the distance from the tracks to the sensitive location.[36] These two sensitive noise receptors are also included within the Kenilworth Lagoon and Grand Rounds Historic District, which are Section 106 historic properties (see Section 3.4.1.3 for additional detail on the historic resources).

A potential noise-related indirect effect is that changes in development density anticipated around transit stations might put more people near the noise produced by light rail equipment and park-and-ride facilities. In addition, an increase in light rail ridership might reduce roadway traffic noise elsewhere in the communities served by light rail.

Short-Term Noise Impacts

This section describes the potential short-term noise impacts that would be caused by constructing the LPA. Residents and travelers in the St. Louis Park/Minneapolis Segment would experience noise effects from construction activities and construction vehicles, including truck traffic. Noise generated by construction equipment would vary, depending on equipment type/model/make, duration of operation, and specific type of work effort. Typical noise levels might occur in the 67- to 107-dBA range at a distance of 50 feet. Construction noise impacts are expected to be localized, temporary, and transient. These impacts would increase with proximity to the physical improvements. Additional details regarding potential short-term noise impacts will be evaluated further and provided in the forthcoming Final EIS, based on the equipment, duration, and type of work effort. These details and the respective short-term impact determinations will be provided when additional design and construction information is available.

C. Mitigation Measures

Based on the projected noise impacts identified in the St. Louis Park/Minneapolis Segment and in compliance with FTA guidance, final determinations of noise mitigation measures to be incorporated into the

[36] Land use categorizations were made in consultation with the MPRB and the MnSHPO.

project will be made in a noise mitigation plan and documented in the project's Final EIS. The contents of that plan will include: additional noise monitoring and/or testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed noise mitigation measures; and identification of committed long-term and short-term (construction) noise mitigation measures and their effectiveness. See Section 3.1.2.8 for additional detail on FTA noise mitigation guidance and on the contents of a noise mitigation plan.

3.4.2.4 Vibration

This section provides a summary of the findings of the vibration analysis. This analysis evaluated the project's vibration (motion of the ground or building) and ground-borne noise (reradiated noise generated by vibration of walls and ceiling) impacts on vibration-sensitive properties within the St. Louis Park/ Minneapolis Segment. As summarized in Table 3.4-1, there would be no vibration impacts and 54 ground-borne noise impacts without mitigation.

Background information on how vibration is defined, the vibration generated by light rail and freight rail vehicles, and FTA vibration impact guidelines can be found in the Vibration Fact Sheet in Appendix H of this Supplemental Draft EIS. Appendix H of the Draft EIS also contains background information on vibration and FTA evaluation criteria used to assess vibration impacts. In addition, detailed information regarding vibration measurements and the impact assessment can be found in Appendix H of this Supplemental Draft EIS. The Final EIS will contain a comprehensive technical appendix with detailed information regarding all vibration-related inputs, measurements, impact assessment, and mitigation.

A. Existing Conditions

This section describes existing vibration-sensitive land uses in the St. Louis Park/Minneapolis Segment and existing vibration levels. In the Draft EIS, a general vibration assessment was conducted using FTA procedures. The assessment methodology used generalized information and assumptions to make projections of potential vibration impacts. For this Supplemental Draft EIS, a detailed assessment methodology using FTA procedures was used. The detailed assessment considers the vehicle-specific vibration characteristics, as well as using vibration propagation testing at locations throughout the project corridor. The vibration analysis followed FTA guidelines published in *Transit Noise and Vibration Impact Assessment* (FTA, 2006).

Vibration-sensitive land uses for the St. Louis Park/Minneapolis Segment alignment adjustments were identified based on aerial photography, project drawings, and a site survey. Based on the information from these sources, the vibration-sensitive land uses include a mix of single-family and multifamily residences generally on the south side of the light rail alignment west of West Lake Station. East of West Lake Station and the Kenilworth Lagoon, the land uses are primarily multifamily residences and single-family residences. The freight trains operating in the Kenilworth Corridor are the only source of existing vibration in the area.

Vibration measurements conducted in July 2013 were used to characterize the response of the soil at locations in the St. Louis Park/Minneapolis Segment. No vibration measurements were conducted during the Draft EIS. At each of the measurement sites, a vibration propagation test was conducted by impacting the ground with an instrumented weight and measuring the response of the soil at distances ranging from 25 to 150 feet. The results of the vibration propagation tests were combined with the force density (vehicle input force) to project vibration levels from LRT operations at vibration-sensitive locations near the alignment adjustments. The locations of the vibration measurement sites for the St. Louis Park/Minneapolis Segment are described below and shown on Exhibit 3.4-6. No vibration measurements were conducted as a part of the Draft EIS.

Site V7 – Edgebrook Park. The vibration propagation measurement was conducted at Edgebrook Park near the corner of Edgebrook Drive and Pennsylvania Avenue South. Although outside of the St. Louis Park/ Minneapolis Segment, the measurements at this site are representative of vibration-sensitive land use in the southern portion of the alignment adjustments in this segment.

Site V8 – Dean Court and 28th Street West. The vibration propagation measurement was conducted on the street at the corner of Dean Court and 28th Street West. The measurements at this site are representative of vibration-sensitive land use in the southern portion of the St. Louis Park/Minneapolis Segment tunnel.

Site V9 – 21st Street. The vibration propagation measurement was conducted on the street at the intersection of 21st Street and the bikeway. The measurements at this site are representative of vibration-sensitive land use in the northern portion of the St. Louis Park/Minneapolis Segment.

B. Potential Vibration Impacts

This section identifies the potential long-term and short-term vibration impacts that would occur in the St. Louis Park/Minneapolis Segment. The long-term vibration impact evaluation considers the potential increase in vibration or ground-borne noise that sensitive receptors closest to the proposed LRT stations and track might experience as a result of the operation of light rail and freight rail. A potential vibration-related indirect effect is that changes in development density anticipated around transit stations would put more people near transportation-induced vibration and ground-borne noise generated by light rail, buses, and vehicles at stations and park-and-ride facilities.

Short-term vibration impacts are those that might occur during construction of the LPA while jackhammers, rock drills, and impact pile-drivers are being used.

Long-Term Direct and Indirect Vibration Impacts

This section describes the potential long-term direct and indirect vibration impacts in the segment. A Detailed Vibration Analysis was conducted for the St. Louis Park/Minneapolis Segment. The results of that analysis are presented in Table 3.4-13 for residential land use. The results of ground-borne noise impacts for residential land use are presented in Table 3.4-14. There would be no vibration or ground-borne noise-sensitive institutional land uses in the St. Louis Park/Minneapolis Segment. See Appendix H for more information on the Detailed Vibration Analysis.

TABLE 3.4-13
Summary of Vibration Impacts for Residential Land Use – St. Louis Park/Minneapolis Segment

Location	Side of Track	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Max Vibration Velocity Level (VdB) in any 1/3-Octave Band		# of Impacts
				Project Vibration Level	Impact Criterion	
Railroad Avenue	E	50	55	62	72	0
Camerata Way	E	50	55	62	72	0
Highway 7 Service Road	W	125	55	58	72	0
Park Glen Road	E	113	45	57	72	0
Glenhurst Avenue	W	250	45	55	72	0
Ewing Avenue South	W	100	45	57	72	0
Lake Shore Drive	W	88	20	54	72	0
Chowen Avenue South	E	75	35	57	72	0
St. Louis Avenue	W	44	45	57	72	0
Calhoun Isle Condos	E	43	45	57	72	0
Dean Court	E	45	45	57	72	0
Xerxes Avenue South	E	45	45	57	72	0
Benton Boulevard	E	43	45	57	72	0
Upton Avenue South	E	100	45	57	72	0
Thomas Lane	E	130	45	58	72	0
Burnham Road South	W	102	45	56	72	0
Burnham Road North	W	50	45	65	72	0
Thomas Avenue South	E	50	35	62	72	0
Sheridan Avenue South	E	130	45	54	72	0
South Upton Avenue	W	125	40	54	72	0
Total:						0

Notes: The vibration levels for each location are the highest levels projected for that location. Vibration projections at other receptors within each location would be lower. The threshold of human perception to LRT and freight rail vibration is approximately 65 VdB or less, and annoyance begins to occur for frequent events at vibration levels over 70 VdB.

Acronyms: VdB = vibration velocity level is reported in decibels relative to a level of $1x10^{-6}$ inches per second; Impact Criterion = the threshold for a vibration impact under FTA guidance.

Source: Cross-Spectrum Acoustics LLC, 2013.

TABLE 3.4-14
Summary of Ground-Borne Noise Impacts for Residential Land Use – St. Louis Park/Minneapolis Segment

Location	Side of Track	Distance from near LRT Track Centerline (feet)	LRT Speed (mph)	Ground-Borne Noise Level (dBA)		# of Impacts
				Project Ground-Borne Level	Impact Criterion	
St. Louis Avenue	W	44	45	37	35	3
Calhoun Isle Condos	E	43	45	37	35	36[a]
Dean Court	E	45	45	37	35	6
Xerxes Avenue South	E	45	45	37	35	8
Benton Boulevard	E	43	45	37	35	1
Total:						54

Notes: The ground-borne noise levels for each location are the highest levels projected for that location. Ground-borne noise projections at other receptors within each location would be lower. Ground-borne noise at the impact criterion of 35 dBA or less is generally acceptable to people for sleeping areas. Ground-borne noise levels are only assessed for tunnel sections.

[a] Up to an approximate number of impacted residential units within a single building.

Source: Cross-Spectrum Acoustics LLC, 2013.

The results include a tabulation of sensitive locations and detailed descriptions of locations with vibration (motion of the ground or building) impacts (see Table 3.4-13) or ground-borne noise impacts (reradiated noise generated by vibration of walls and ceilings in buildings, assessed for the tunnel sections only where airborne noise is not present) (see Table 3.4-14). The tables show the location information for each sensitive receptor group; the projections of future vibration or ground-borne noise levels; the impact criteria; and whether there are any impacts. The tables also show the total number of projected vibration or ground-borne noise impacts for each location.

The results in Table 3.4-13 indicate no vibration impacts for residential land uses along the St. Louis Park/ Minneapolis Segment.

There are no vibration-sensitive institutional land uses (e.g., churches, schools, and hospitals) near the St. Louis Park/Minneapolis Segment. Therefore, no institutional vibration impacts are projected.

The results in Table 3.4-14 indicate 54 ground-borne noise impacts for residential land uses in the St. Louis Park/Minneapolis Segment. Ground-borne noise is only assessed for tunnel locations. A summary of each location with ground-borne noise impacts follows:

- **St. Louis Avenue:** These townhomes would be located immediately adjacent to the tunnel alignment and are projected to have three ground-borne noise impacts, without mitigation. The projected ground-borne noise impacts would be due to the LRT vehicle force input characteristics and the proximity of the buildings to the alignment. Force input characteristics relate to the vehicle vibration characteristics; it is the component of the vibration levels related to the suspension and mass of the vehicle.
- **Calhoun Isle Condominiums:** These condominiums would be located immediately adjacent to the tunnel alignment and are projected to have up to approximately 36 ground-borne noise impacts, without mitigation. The projected ground-borne noise impacts would be due to the vehicle force input characteristics and the proximity of the buildings to the alignment.
- **Dean Court:** These residences would be located immediately adjacent to the tunnel alignment and are projected to have six ground-borne noise impacts, without mitigation. The projected ground-borne noise impacts would be due to the vehicle force input characteristics and the proximity of the buildings to the alignment.

- **Xerxes Avenue South:** These residences would be located immediately adjacent to the tunnel alignment and are projected to have eight ground-borne noise impacts, without mitigation. The projected ground-borne noise impacts are due to the vehicle force input characteristics and the proximity of the buildings to the alignment.
- **Benton Boulevard:** These residences would be located immediately adjacent to the tunnel alignment and are projected to have one ground-borne noise impact, without mitigation. The projected ground-borne noise impacts would be due to the vehicle force input characteristics and the proximity of the buildings to the alignment.

A potential vibration-related indirect effect is that changes in development density anticipated around transit stations would put more people near transportation-induced vibration and ground-borne noise generated by light rail, buses, and vehicles at stations and park-and-ride facilities.

Short-Term Vibration Impacts

This section describes short-term vibration impacts caused by construction of the LPA. As with short-term noise impacts, residents in the St. Louis Park/Minneapolis Segment would experience vibration effects from construction activities and, to a lesser extent, construction vehicles. Vibration would occur during construction activities using jackhammers, rock drills, and impact pile-drivers. Tunnel excavation and sheetpiling installation would also generate vibrations near the proposed light rail tunnel. Construction vibration impacts would be localized, temporary, and transient. These vibrations generally would increase with proximity to the physical improvements. Additional details regarding potential short-term vibration impacts will be evaluated further and provided in the forthcoming Final EIS, based on the equipment, duration, and type of work effort. These details and the respective short-term impact determinations will be provided when additional design and construction information is available.

C. Mitigation Measures

Based on the projected vibration impacts identified in the St. Louis Park/Minneapolis Segment and in compliance with FTA guidance, final determinations of vibration mitigation measures to be incorporated into the project will be made in a vibration mitigation plan and documented in the project's Final EIS. The contents of that plan will include: additional testing where appropriate; documentation of the evaluation of mitigation measures relative to their feasibility, practicability, and project-specific factors used to identify the committed mitigation measures; and identification of committed long-term and short-term (construction) mitigation measures and their effectiveness. See Section 3.1.2.8 for additional detail on FTA noise mitigation guidance and on the contents of a vibration mitigation plan.

3.4.2.5 Hazardous and Contaminated Materials

This section provides an overview of hazardous and contaminated materials that could be located on parcels that either would be acquired for the St. Louis Park/Minneapolis Segment of the LPA or would be near enough to construction activities that there would be a risk that the project would encounter contaminated soils and/or groundwater. It also describes potential control or cleanup requirements for the project as a result of hazardous and contaminated materials that might be mobilized or released as a result of project activities. Hazardous and contaminated materials can be classified in a number of different categories based on laws and regulations that define their characteristics and uses. These categories include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

As summarized in Table 3.4-1, there are six high-risk sites in close proximity to the proposed light rail-related improvements and freight rail modifications of the LPA that could require remediation prior to construction. In addition, there is the potential that long-term groundwater pumping in the proposed light rail tunnel could encounter zones of contaminated groundwater (see Section 3.4.2.1 for additional information on groundwater treatment in the proposed light rail tunnel).

A. Existing Conditions

This section describes the existing hazardous and contaminated materials sites in the St. Louis Park/ Minneapolis Segment. The analysis of hazardous and contaminated materials summarized in Section 4.9 of

the Draft EIS was based on a preliminary assessment of known contaminated sites using online databases. The hazardous and contaminated material assessment for the St. Louis Park/Minneapolis Segment in this Supplemental Draft EIS also used online databases and information from a Phase I ESA conducted for the LPA, as described in Section 3.1.2.10 of this Supplemental Draft EIS.[37] A Phase II ESA will be completed, where determined appropriate based on the Phase I ESAs, prior to construction.

To identify documented hazardous and contaminated soils in the vicinity of improvements within the St. Louis Park/Minneapolis Segment, an online search of MPCA and MDA environmental databases was conducted. The online environmental database search and review of files revealed 79 potential sites in the St. Louis Park/Minneapolis Segment. The document review process identified specific sites with a high and medium risk that potentially contain hazardous or contaminated materials and could potentially impact the project. It was determined that 14 individual sites registered as having high-, medium-, or low-risk rankings. Of the 14 sites, it was concluded that six sites were high-risk (shown on Exhibit 3.4-7) and eight were medium-risk. Of the high-risk sites identified in the MPCA files, four were VIC sites and two were petroleum leak sites.

The Phase I ESA also documented historic railroad operations along this segment as being among the six high-risk sites. Specifically, the Cedar Lake Rail Yard was identified as the primary risk in the St. Louis Park/ Minneapolis Segment (Short Elliot Hendrickson Inc., 2013a, 2013b [see Appendix C for instructions on how to access these reports]). See the short-term impacts section below for more information.

B. Potential Hazardous and Contaminated Materials Impacts

This section identifies the potential long-term and short-term impacts to hazardous and contaminated materials that could occur in the St. Louis Park/Minneapolis Segment. These impacts could result from earthwork or other disturbance at or in proximity to contaminated areas that might mobilize or result in the release of hazardous or contaminated materials.

Long-Term Direct and Indirect Hazardous and Contaminated Materials Impacts

This section describes long-term direct and indirect hazardous and contaminated materials impacts in the segment. As described in Section 4.9 of the Draft EIS, long-term hazardous and contaminated material impacts are not expected as a result of the LPA because the project would not generate hazardous materials or regulated wastes. However, potential hazardous and contaminated materials impacts associated with the proposed tunnel in this segment were not previously evaluated in the Draft EIS. The following is an assessment of the hazardous and contaminated materials risks that could be associated with the proposed light rail tunnel.

As previously described, the proposed tunnel would pass through an area of high groundwater sensitivity resulting from shallow groundwater depth in combination with the highly permeable nature of the soils. Despite these conditions, the potential for contamination to groundwater from operation of the light rail tunnel would be low because the light rail trains would be electric and there would generally be no activities in the tunnel that would generate pollutants that could contaminate groundwater. In the unlikely event of a spill of hazardous or contaminated materials in the tunnel, the proposed tunnel designs include measures to prevent infiltration through the tunnel bottom and allow contaminated materials to be collected, ensuring that hazardous materials or contaminated stormwater in the tunnel would not be released into the groundwater.

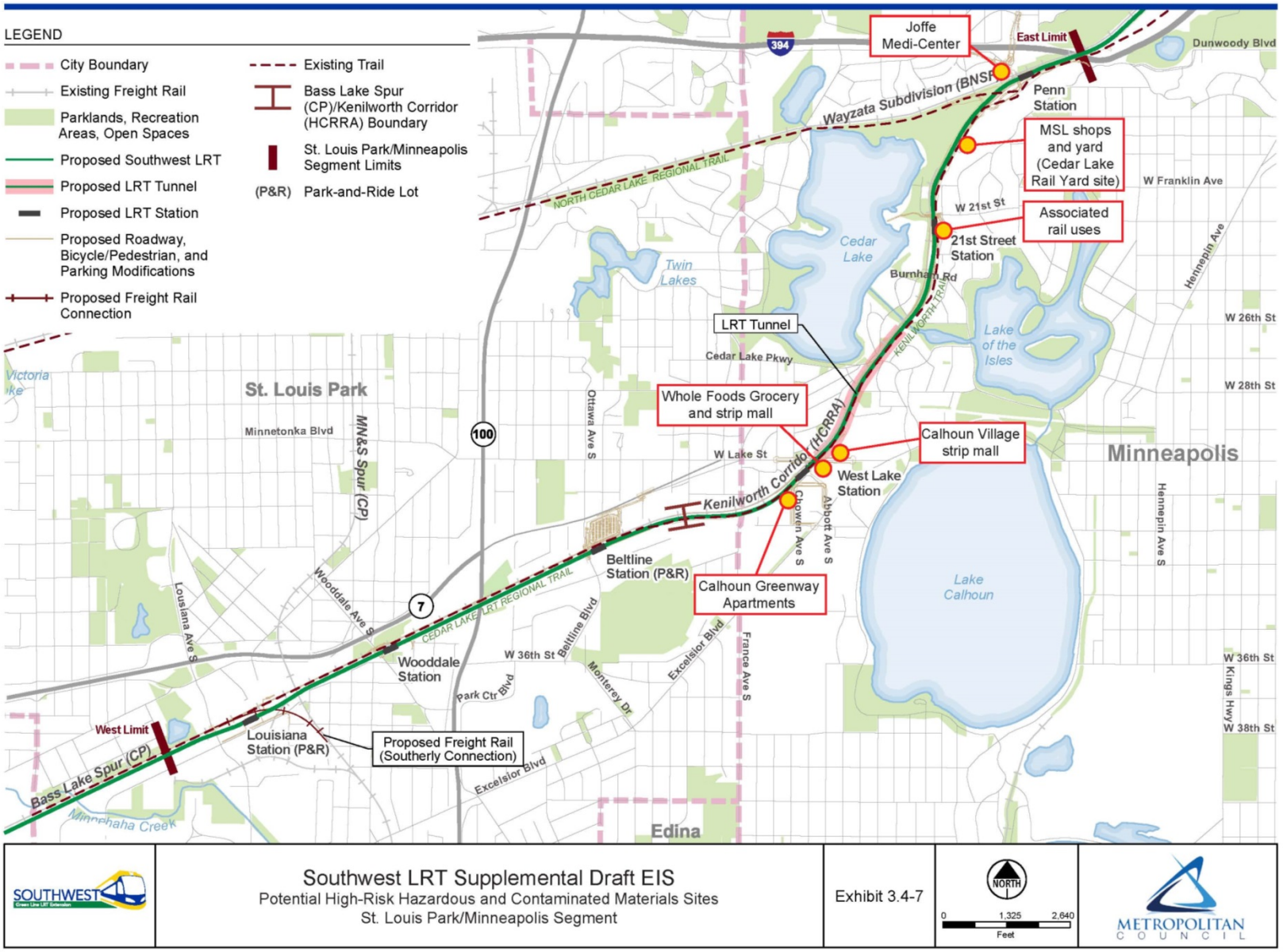
Permanent pumping of water from the light rail tunnel in zones of contaminated groundwater potentially may encounter the following:

- Chlorinated and petroleum hydrocarbons in shallow and deep groundwater at the south end of the segment related to the contamination documented at the former dump sites (VIC sites), the Whole Foods Grocery and strip mall site (149), the Calhoun Greenway Apartments site (146), and the Calhoun Village strip mall site (150)

[37] Additional Phase I ESA will be conducted in this segment and the results will be summarized in the Final EIS.

EXHIBIT 3.4-7

Potential High-Risk Hazardous and Contaminated Materials Sites, St. Louis Park/Minneapolis Segment



- Petroleum hydrocarbons in liquid-phase petroleum or shallow groundwater at the north end of the segment related to the Cedar Lake Rail Yard site (248) and associated rail uses (306)

These potential high-risk hazardous and contaminated material sites, shown on Exhibit 3.4-7 and listed in Table 3.4-15, would require more intensive Phase II ESA investigation to further evaluate the risk and identify actions that might be needed to minimize or avoid the risk. Unlike Phase I investigations (which typically involve review of site information, regulatory files, a site inspection, and interviews with owners and operators), Phase II investigations generally include collecting soil and/or groundwater samples for laboratory analysis. The Phase II ESA investigation would be completed prior to any construction activities. In addition, interaction with the MPCA would be included to complete due diligence for acquisition of potentially contaminated properties. Specifically, following preparation of Phase II ESA work plans, the project would be entered into the MPCA Brownfields Program (which includes both the former VIC Program and former Petroleum Brownfields Program) to request applicable letters of assurance to reduce long-term liability and avoid Superfund liability.

A potential indirect impact on properties with known and unknown hazardous and contaminated materials is that these materials could be cleaned up as redevelopment occurs near proposed transit stations.

Short-Term Hazardous and Contaminated Materials Impacts

This section describes short-term hazardous and contaminated materials impacts caused by constructing the LPA. Table 3.4-15 identifies the potential high-risk hazardous and contaminated material sites in the St. Louis Park/Minneapolis Segment that would be directly disturbed by construction activities associated with the LPA.

Potential construction impacts could result from use of hazardous or contaminated materials (for example, lubricants, fuels, and solvents) during construction or from encountering sites with existing soil or groundwater contamination as described in more detail in the Draft EIS. The potential short-term construction impacts specified in the Draft EIS, including cost and schedule impacts and potential public and worker exposure to hazardous and contaminated materials, can be reduced or avoided by following the procedures in the MPCA Brownfields Program regulatory framework.

TABLE 3.4-15
Potential High-Risk Hazardous and Contaminated Material Sites – St. Louis Park/Minneapolis Segment

Map ID	Site Name	Risk Analysis and Background	Potential Use of the Site by the LPA
146	Calhoun Greenway Apartments	• Three combined VIC sites. • A restrictive covenant is in place at the Whole Foods site. • Former dump sites with solid waste in the fill. • Fill being contaminated by polynuclear aromatic hydrocarbons, polychlorinated biphenyls, petroleum hydrocarbons, arsenic, lead, and mercury.	• No construction on parcel, which abuts the Kenilworth Corridor. Construction would be immediately adjacent but not on parcel.
149	Whole Foods Grocery and strip mall	• The Whole Foods site also had chlorinated hydrocarbons in soil, groundwater, and in soil vapors. • The covenant at Whole Foods would require special coordination with the MPCA and specific permission to disturb soil or groundwater at either site. • Groundwater impacts could be migrating onto the alignment from these sites.	• Direct Disturbance. Construction activity would be limited to sidewalk construction.
150	Calhoun Village strip mall	• Soil and fill between the redeveloped properties and the alignment is likely impacted by the same contaminants as have been observed on the VIC sites.	• No construction on parcel, which abuts the Kenilworth Corridor. Construction would be immediately adjacent but not on parcel
248	MSL shops and yard (Cedar Lake Rail Yard site)	• Two combined freight rail use sites. • Petroleum hydrocarbons were detected during extensive investigation of the MSL shops and yard site (248) in the 2000s. • Monitoring wells are present at the MSL shops and yard site (248) with significant petroleum contamination in groundwater.	• Direct disturbance within the parcel.

Map ID	Site Name	Risk Analysis and Background	Potential Use of the Site by the LPA
		• Liquid-phase petroleum product was present in at least five monitoring wells at the MSL shops and yard site (248) as recently as 2008.	
306	Associated rail uses	• Intensive investigation of this site would be necessary if earthwork is planned for light rail or freight rail construction. • Associated rail site (#306) has former freight rail usage; however, this site has not been investigated for specific contamination.	• Direct disturbance within the parcel.
250	Joffe Medi-Center	• Although it is unlikely that contaminated fill would be encountered, there is potential for shallow groundwater contamination.	• Direct Disturbance. Minor driveway reconstruction on parcel.

Acronym: VIC = Voluntary Investigation and Cleanup
Sources: MDA, 2013; MPCA, 2013.

Over the short term, four of the high-risk sites have the potential to directly affect LPA-related construction activities in the St. Louis Park/Minneapolis Segment (see Table 3.4-15). As previously noted, the high-risk sites would be investigated prior to construction using a Phase II ESA, which would include preliminary soil and groundwater investigations. Of the six high-risk sites shown on Exhibit 3.4-7, two are rail properties along the proposed light rail alignment. The potential short-term construction effects specified in the Draft EIS of cost and schedule impacts and potential public and worker exposure to hazardous and contaminated materials might also be impacts, but those risks could be reduced by following the due diligence procedures in the MPCA Brownfields Program regulatory framework.

The majority of the proposed light rail alignment under the LPA in the St. Louis Park/Minneapolis Segment would be situated along a railroad grade with historical sidings. In addition, the Cedar Lake Rail Yard former shops and yard complex was noted as a high-risk site at the north end of the segment. Railroad corridors and associated property often require heavy industrial facilities, as well as the use of industrial chemicals and compounds, thereby presenting high-risk environmental concerns. Common railroad facilities include paint shops, car and locomotive washing facilities, foundries, gas works, creosoting plants, fuel storage, battery shops, and laundries. Some historical freight rail operations used chemicals that might have resulted in soil contamination. The most commonly reported contamination along rail lines includes metals, pesticides, and constituents of lubricating oil or diesel fuel (petroleum products) that include coal ash from engines, creosote from ties, and polynuclear aromatic hydrocarbons from the diesel exhaust. Contaminated material requiring special disposal, such as old railroad ties and contaminated soil, could also be generated from construction activities within and along railway corridors and crossings.

The chemicals and contaminated materials associated with normal railroad operations would likely be found along the proposed light rail and freight rail alignment within the St. Louis Park/Minneapolis Segment. For example, arsenic is commonly present in the soil along a railroad right-of-way as a result of old railroad ties dipped in an arsenic solution, arsenic weed-control sprays, and arsenic-laced slag used as railroad bed fill. As noted above, potential public and worker exposure to hazardous and contaminated materials associated with normal railroad operations might also be impacts, but could be minimized as described below.

C. Mitigation Measures

Mitigation for potential hazardous and contaminated materials impacts will be conducted within the MPCA Brownfield Program regulatory framework, with the Southwest LRT project having been entered in the Brownfield Program on September 8, 2014, and having received site identification numbers PB4648/ VP31670 from the MPCA. In accordance with MPCA Brownfield Program guidelines, the Phase I ESA was submitted to the MPCA Brownfields Program and subsequent documents will be submitted to the MPCA Brownfield Program as part of the regulatory process. All mitigation measures will be implemented in accordance with the investigation and mitigation documents submitted to the MPCA. Implementation of these measures would result in controlled management of hazardous and contaminated materials and low risk of human exposure to unhealthy contaminants. A Response Action Plan (RAP) will be developed by the Council and approved by MPCA to address the risks identified in the Phase I and II ESAs. Upon MPCA

approval of the RAP, cleanup of identified contamination would begin prior to, or in concert with, project excavation and/or drilling activities. All clean-up activity will be conducted with prior MPCA approval and in accordance with the approved Site Safety and Health Plan and will be continuously monitored by qualified inspectors. A final report shall be prepared and submitted to the MPCA documenting all removal and disposal activity.

It is reasonable to expect that previously undocumented soil or groundwater contamination may be encountered during construction. A Construction Contingency Plan will be prepared by the Council and approved by MPCA prior to the start of construction to account for the discovery of unknown contamination. This plan will outline procedures for initial contaminant screening, soil and groundwater sampling, laboratory testing, and removal, transport, and disposal of contaminated materials at licensed facilities. Contaminated material removal and disposal would be in accordance with this plan, monitored by qualified inspectors, and documented in final reports for submittal to MPCA.

In addition to contaminated soil and groundwater, the potential exists for structures on acquired lands to contain asbestos, lead paint, or other hazardous or contaminated materials. Any existing structures will be surveyed for the presence of hazardous/regulated materials prior to their demolition or modification. Potentially hazardous and contaminated materials will be handled and managed in compliance with all applicable regulatory standards and will be disposed in accordance with an approved remediation plan.

3.4.3 Economic Effects

New infrastructure projects may affect local businesses, jobs, and the influx of money into the economy. This section addresses the potential tax base losses caused by the potential displacement and relocation of businesses in the St. Louis Park/Minneapolis Segment. It also discusses the potential for increased property tax revenues from the potential redevelopment of property around the proposed light rail stations within the St. Louis Park/Minneapolis Segment and potential mitigation measures for economic effects. This section also addresses the potential long-term and short-term effects of the LPA on freight rail operations and economics. Modification of the freight rail connection between the CP-owned Bass Lake and MN&S Spurs to allow continued access to the north and south would improve the geometry of the freight rail alignment and would allow for more efficient movement of freight in that section of the corridor than exists currently. Further, constructing the LPA would have some effects on freight movements that would be temporary in nature, as described below. Mitigation measures are also discussed in this section.

A. Existing Conditions

As discussed in Section 3.4.1.1 of this Supplemental Draft EIS, the St. Louis Park/Minneapolis Segment is characterized by commercial, industrial, and mixed land uses. Section 3.4.1.2 and Table 3.4-3 of this Supplemental Draft EIS identify full and partial parcel acquisitions that would need to occur to accommodate the proposed St. Louis Park/Minneapolis Segment improvements. The majority of the budgeted general fund revenues for the Cities of St. Louis Park and Minneapolis are from property taxes. This Supplemental Draft EIS analyzes the changes related to property taxes for the Cities of St. Louis Park and Minneapolis.

This section also describes existing freight rail operations in the St. Louis Park/Minneapolis Segment. Freight railroad owners and operators in the St. Louis Park/Minneapolis Segment are illustrated on Exhibit 2.3-4 of this Supplemental Draft EIS. The Bass Lake Spur, MN&S Spur, Kenilworth Corridor, and Wayzata Subdivision are active freight corridors. The Bass Lake and MN&S Spurs are owned by CP, and both CP and TC&W have operating rights for the spurs. Trains can connect to the MN&S Spur to travel to the north and south from the Bass Lake Spur. The Kenilworth Corridor is owned by HCRRA, and TC&W operates freight trains in the corridor to make the connection to the Wayzata Subdivision. The Wayzata Subdivision is owned by BNSF, and TC&W has operating rights from the Cedar Lake Junction to the east.

B. Potential Economic Impacts

This section identifies the potential long-term and short-term economic impacts that would result from the conversion of private businesses into transit right-of-way in the St. Louis Park/Minneapolis Segment. This section also identifies the impacts that the project could potentially have on the economics of freight rail

lines operating in the St. Louis Park/Minneapolis Segment. Section 3.1.2.11 provides a summary of data used for this analysis, some of which has been updated since publication of the Draft EIS.

Long-Term Direct and Indirect Economic Impacts

This section describes the long-term direct and indirect economic impacts associated with property acquisitions and modifications of freight rail operations. Within the St. Louis Park/Minneapolis Segment, the proposed LPA would result in the full acquisition of 11 parcels associated with commercial and industrial uses (see Section 3.4.1.2 for additional detail). The acquisition of those properties would result in an annual reduction in property tax revenue to the City of St. Louis Park of approximately $35,940, which is approximately 0.2 percent of the city's current total property tax revenues (in current dollars). This loss of property tax revenue could be reduced if less land area is actually used for construction of the LPA. For example, in some cases, the Council may determine that an entire parcel would need to be acquired to accommodate construction, but later, following construction, some property may no longer be needed for the project. In these cases, the excess property would be disposed of per Council policy and applicable federal and state regulations and would likely be sold to return to compatible land use, as discussed in Section 3.4.1.2 of this Supplemental Draft EIS.

Further, the loss in property tax revenue due to the acquisition of privately-held land has the potential to be offset with increased property tax revenues, if the station areas within the affected city result in higher property values due to improved access and other benefits associated with the proposed light rail stations within the city limits. The loss of property tax revenue could also be reduced if the affected businesses relocate elsewhere within the affected city. Depending on the preferences of the owner, the project would work to relocate the five displaced businesses in this segment. All acquisitions made for the St. Louis Park/ Minneapolis Segment and all potential displacements and relocations of businesses resulting from those acquisitions would conform to the applicable federal and state laws. Businesses displaced by the project would receive compensation and relocation assistance, as discussed in Section 3.1.2.2 of this Supplemental Draft EIS.

As an indirect economic impact, there is also the potential for increased property tax revenues from the potential redevelopment of property around the proposed light rail stations within the Cities of St. Louis Park and Minneapolis. Improved transit access can increase the convenience and desirability of surrounding residential, commercial, and office properties. Light rail transit can contribute to existing market forces that can increase the potential for transit-oriented development or redevelopment.

Within the St. Louis Park/Minneapolis Segment, the proposed LPA would generally result in no changes to current operations of existing freight rail. Construction of the Southerly Connection between the CP Bass Lake Spur and the MN&S Spur (see Section 2.5.3, Exhibit 2.5-5 and Section 3.4.4.4 for additional detail) would maintain all movements between the two spurs in that section of the corridor (see Exhibit 3.4-8 that illustrates TC&W's current freight rail market area, which extends north and south onto the MN&S Spur).

The LPA would result in the removal of 11,771 feet of siding along the CP Bass Lake Spur, eliminating the backing of freight trains at the Wooddale Avenue crossing that occurs under existing conditions. The removal of the siding tracks will be negotiated with the freight railroad owner and operator, which could include negotiated compensation for adverse effects to their operations.

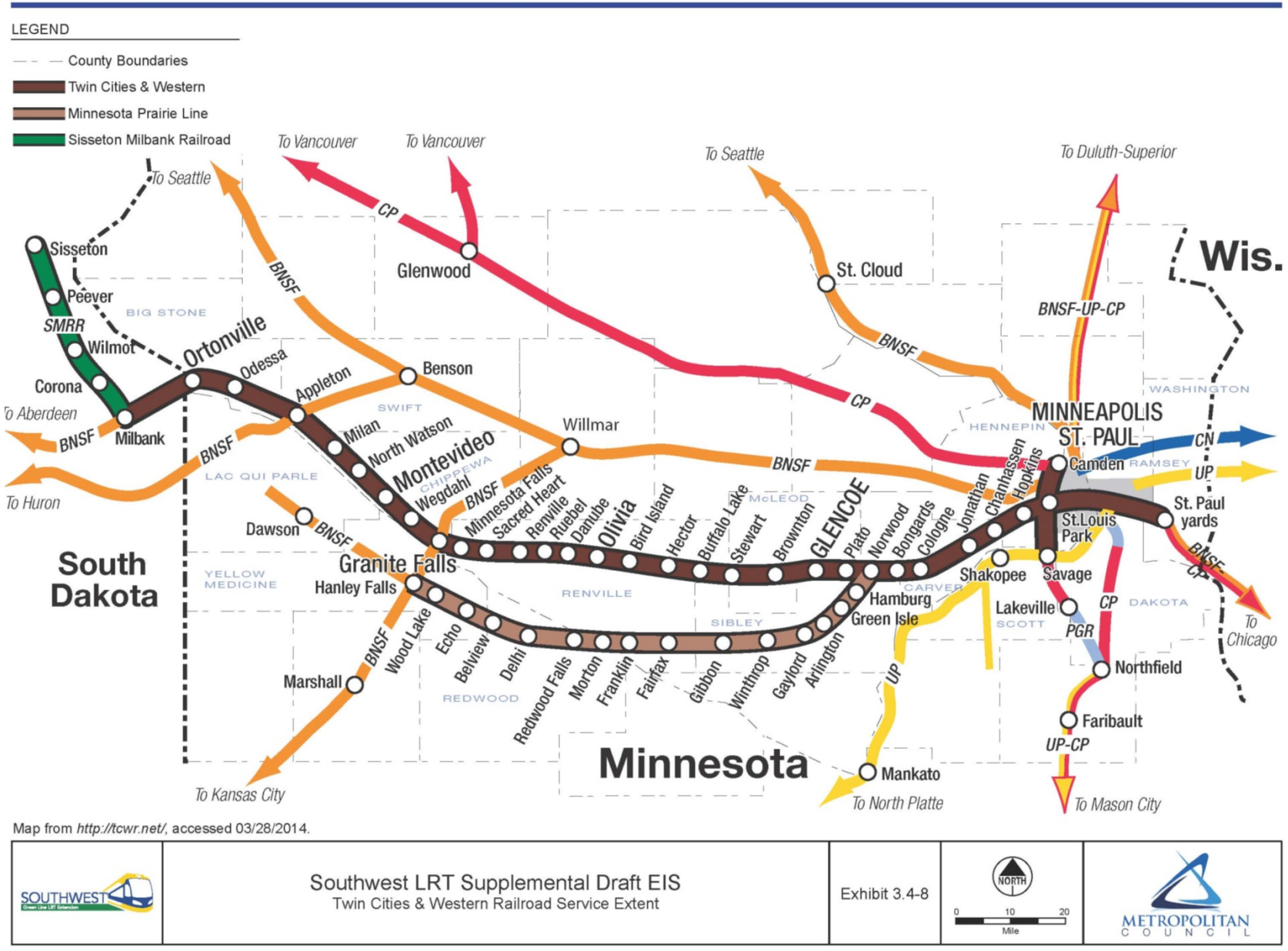
No indirect effects to freight rail transportation are anticipated under the LPA and freight rail modifications.

Short-Term Economic Impacts

This section describes the potential short-term economic impacts associated with constructing the LPA. Constructing the LPA would have some effects on freight movements in the corridor that would be temporary in nature. During construction, freight rail would be affected as follows:

- In general, the freight rail traffic would experience slower operations during construction of the LPA between 7:00 a.m. and 7:00 p.m., which would be managed with onsite flaggers paid for by the project. There may be short periods of freight stoppage required to make some modifications to the freight rail

EXHIBIT 3.4-8
Twin Cities & Western Railroad Service Extent



Map from *http://tcwr.net/*, accessed 03/28/2014.

SOUTHWEST	Southwest LRT Supplemental Draft EIS Twin Cities & Western Railroad Service Extent	Exhibit 3.4-8	NORTH 0 10 20 Mile	METROPOLITAN COUNCIL

track, expected to be less than four to eight hours in duration. These infrequent situations would be coordinated with and agreed upon by the affected operating railroads (CP and TC&W).

- At the proposed Louisiana Station, two new freight rail turnouts would be required to connect the new Southerly Connection to the MN&S Spur. One turnout would be on the Bass Lake Spur while the other would be on the MN&S Spur. Constructing the switch to these turnouts would require approximately one weekend (48-hour period) shutdown for trains operating on the MN&S Spur and the Bass Lake Spur.
- Reconstruction of the freight rail tracks north over Highway 100, which would move the freight rail tracks approximately 30-feet north, would require one approximately 24-hour shutdown of the freight rail tracks.
- Shifting the freight rail tracks between West Lake Street and Cedar Lake Parkway 2 to 3 feet north into a temporary location to allow for construction of the southern light rail tunnel, and then returning the tracks into their permanent position, would require approximately one week. This process of track movement would be gradual and would progress through the alignment over that week, helping to prevent freight rail operations stoppages. The track-shifting process would be able to accommodate existing operational speeds of 10 mph without stopping normal freight movements in this portion of the tracks.
- Construction of a new freight bridge over Kenilworth Lagoon and a new track south to Cedar Lake Parkway and north to Burnham Road would require cut-overs on each end that would require approximately less than a day to reconnect the track.

The Beltline Boulevard pedestrian bridge and the Cedar Lake Trail pedestrian bridge would require an approximately two- to four-hour closure to set bridge beams over the freight rail line, which would be coordinated with and agreed to by the TC&W.

The intermittent freight train stoppage periods would affect freight rail operations during the project's construction period. Temporary service interruptions on the freight rail lines would mean that freight rail operators would need to temporarily adjust their operation plans, which might temporarily inconvenience their clients. Construction-related changes in freight rail operating plans could temporarily delay the delivery of goods or could lead to customers choosing alternative shipping methods. Stoppages would occur for up to 48 hours, but would likely be limited to two to four hours. The overall effect of an individual interruption in freight rail service, when spread over the entire trip of a freight rail train, may be negligible, depending on the average length of haul, the scheduling requirements, and the cargo value for the freight moving on the train. Similarly, while reduced freight rail operating speeds are not anticipated, they might occur, depending on circumstances. In the unlikely event that a slowdown occurs, the effect would be minimal because the operating speed in the Kenilworth Corridor is already 10 mph.

To avoid short-term economic impacts on freight operators and owners during construction, the Council will develop and update a freight rail operations coordination plan to facilitate coordination between the project and the freight railroads throughout the construction period. Refer to Section 3.4.4.4 "Short-Term Freight Railroad Operation Impacts" for additional detail on the freight rail operations and coordination plan. Because freight rail operators and owners in the project area will review and approve the coordination plan prior to the start of construction, no short-term economic impacts are anticipated.

C. Mitigation Measures

No long-term or short-term (construction) impacts to freight rail transportation in the St. Louis Park/ Minneapolis Segment are anticipated. Therefore, no mitigation measures have been identified.

3.4.4 Transportation Effects

This section addresses the impacts that the proposed LPA would have on transportation facilities in the St. Louis Park/Minneapolis Segment, addressing transit; roadway and traffic; parking; freight rail; bicycle and pedestrian; and safety and security. Where appropriate, mitigation measures to alleviate adverse impacts are also identified. Methodologies and data used to prepare these analyses, updated since publication of the Draft EIS, may be found in Section 3.1.2.12 of this Supplemental Draft EIS.

3.4.4.1 Transit

This section describes impacts that the LPA would have on the existing transit system within the St. Louis Park/Minneapolis Segment, which is operated by Metro Transit. As summarized in Table 3.4-1, there is the potential for the LPA to affect fixed route bus service or for changes in service frequencies to be made to coordinate service with the LRT. The introduction of light rail service in the segment would include the construction of bus facilities at or near proposed light rail stations to facilitate transfers between light rail and buses.

A. Existing Conditions

This section describes the existing transit system in the St. Louis Park/Minneapolis Segment. The existing transit system, including current service and the planned transit system based on the Council's 2030 Transportation Policy Plan (Council, 2010, amended 2013), is described in Chapter 6 of the Draft EIS. Projected 2030 bus and light rail ridership levels are found in Table 6.1-3 and Appendix H of the Draft EIS. The updated proposed operating plan for the Southwest LRT extension is discussed in Section 2.5, Section 3.1.2.12 and Table 3.1-3 of this Supplemental Draft EIS. This discussion includes changes to the light rail operating plan from what was reported in the Draft EIS, including changing from 7.5-minute headways described in the Draft EIS to 10-minute headways, which are used for analysis in this Supplemental Draft EIS.

B. Potential Transit Impacts

This section identifies the potential long-term and short-term impacts that would result from the transit-related changes within the St. Louis Park/Minneapolis Segment.

Long-Term Direct and Indirect Transit Impacts

This section describes the long-term direct and indirect transit impacts in the St. Louis Park/Minneapolis Segment. As noted in Chapter 6.1.3 of the Draft EIS, there is the potential for the LPA to affect fixed route bus service or for changes in service frequencies to be made to coordinate bus service with light rail service. Section 2.3.3.10 of the Draft EIS provides a description of potential transit operations changes that could result from the LPA, including changes that could occur within the St. Louis Park/Minneapolis Segment (see Table 2.3-10 of the Draft EIS). In general, bus service (e.g., routing, frequency) could be modified to: provide or improve feeder service to light rail stations, provide service to new or relocated bus facilities, and remove or relocate bus service that would duplicate the new light rail service. Those potential changes to transit operations are currently under development and review, which will include consultation with SouthWest Transit. Based on that continuing effort, the Final EIS will include a description of changes to transit operations that could result from the implementation of the Southwest LRT Project.

Coordination with Metro Transit on potential changes to the bus transit system within the St. Louis Park/ Minneapolis Segment will continue as the project advances through the Project Development, Engineering, and Construction phases. The LPA does include proposed transit access enhancements, such as new or improved bicycle and pedestrian connections.

Bus facility improvements that would enhance bus service include the following (use of these facilities by buses may require minor changes to bus routes and/or schedules):

- Bus stops and shelters on Louisiana Avenue at Oxford for the Louisiana Station
- Bus stops and shelters on 36th Street and Yosemite westbound for the Wooddale Station
- Bus accommodations (stop, sidewalk/platform area) within the Beltline park-and-ride lot
- Bus stops on West Lake Street for the West Lake Street Station
- Bus stops on West 21st Street for the 21st Street Station

Indirect transit impacts would be a coordinated transit service, which may result in additional bus ridership to connect with light rail ridership.

Short-Term Transit Impacts

This section describes the potential short-term transit impacts caused by construction of the LPA. Construction activities in the segment could lead to road detours and construction-related congestion that

could affect bus operations. Those potential road detours and construction-related congestion could temporarily lead to increased bus travel times and reduced reliability. Some bus stops in the segment, if located within construction zones, may need to be temporarily closed or relocated. There could also be some short-term temporary effects on waiting passengers at bus stops from project construction noise and dust, depending on the proximity of bus stops and construction sites.

Existing bus stop locations would generally not be impacted by construction activities associated with the proposed new bus stop locations because all proposed bus stops would be at new locations, providing access to proposed light rail stations.

C. Mitigation Measures

Because there would be no long-term adverse impacts from the LPA on transit in the St. Louis Park/Minneapolis Segment, no transit mitigation measures have been identified. However, as the project develops and if the LPA affects fixed route bus service in the St. Louis Park/Minneapolis Segment, Metro Transit will follow Federal and local procedures for route modifications or the suspension of transit service, which will include a Title VI analysis to determine how service changes would affect low-income and minority communities. This will include a community outreach process for designing route changes, a public hearing for the proposed service changes, and ongoing outreach efforts to communicate services changes prior to implementation

3.4.4.2 Roadway and Traffic

This section describes the proposed roadway modifications and anticipated traffic impacts that would result from implementation of the LPA in the St. Louis Park/Minneapolis Segment. The traffic impacts analysis completed for this segment is based on projected travel demand, transportation network capacity, transportation system performance measures, and impacts to the roadway network.

As summarized in Table 3.4-1, there would be three new at-grade light rail crossings of roadways within the segment (Wooddale Avenue, Beltline Boulevard, and West 21st Street). At each crossing, light rail operations would impede vehicular traffic for approximately 50 seconds approximately 12 times per hour (six times per hour in both directions).

A. Existing Conditions

This section describes the existing roadway and traffic conditions in the St. Louis Park/Minneapolis Segment. The general transportation analysis methodologies and existing roadway network and traffic operation conditions remain the same for this Supplemental Draft EIS, as described in Chapter 6 of the Draft EIS. However, this analysis of traffic impacts in the St. Louis Park/Minneapolis Segment is based on a revised analysis of the existing at-grade freight rail crossings in the segment. Vehicular traffic within the St. Louis Park/Minneapolis Segment is currently affected by freight rail operations on the Bass Lake Spur and Kenilworth Corridor. Freight trains currently cause delay and vehicle queuing at the following at-grade intersections: Wooddale Avenue, Beltline Boulevard, Cedar Lake Parkway, and 21st Street. The length of the queues caused by freight trains crossing local roads is related to the amount of time a freight train blocks the intersection (a function of the speed and length of the train) and the time that the delay occurs (longer queues tend to develop during peak traffic hours, compared to off-peak traffic periods).

Since completion of the Draft EIS, the project team obtained updated freight train operating data and revised the queuing analysis for the at-grade freight rail crossings in the St. Louis Park/Minneapolis Segment. The updated analysis included a longer typical train length of 75 cars, based on information provided by the freight railroads in 2013. Freight train operation speeds were increased from 10 mph, used in the Draft EIS (see Section 6.2.2.3 of the Draft EIS), to 25 mph at the Wooddale Avenue and Beltline Boulevard at-grade crossings, as freight trains can currently operate at 25 mph in this segment of track (which would be unchanged under the LPA). The Cedar Lake Parkway and 21st Street at-grade crossings were analyzed at both 10 mph and 25 mph (under the LPA, freight trains could operate at speeds up to 25 mph, but the freight rail operator has indicated that they may continue to operate at 10 mph). Compared to the analysis included in the Draft EIS, these changes of inputs to the freight train operations analysis resulted in a lower amount of projected blockage time due to freight trains crossing Wooddale Avenue and Beltline Boulevard at-grade, but

a slightly higher amount of blockage at Cedar Lake Parkway. Additional detail on existing and 2030 No Build traffic conditions at at-grade freight train crossings can be found in the *Freight Alignment – Traffic Impact Evaluation Memorandum* (Kimley-Horn and Associates, Inc., 2013 [see Appendix C for instructions on how to access this report]).

B. Potential Roadway and Traffic Impacts

This section identifies the potential long-term and short-term impacts to roadway and traffic that would result from changes to the proposed light rail-related improvements and freight rail modifications under the LPA on vehicular traffic on local roadways within the St. Louis Park/Minneapolis Segment. The proposed light rail and roadway improvements and freight rail modifications in the LPA are described in Section 2.5.3 of this Supplemental Draft EIS.

Long-Term Direct and Indirect Roadway and Traffic Impacts

This section describes the potential long-term direct and indirect roadway and traffic impacts in the St. Louis Park/Minneapolis Segment. The proposed light rail alignment would be located parallel to the existing freight rail corridor, generally within existing HCRRA-owned or freight rail-owned right-of-way (see Section 3.4.1.2 for additional information on railroad property acquisitions associated with the LPA). The following changes have been made to the LPA since publication of the Draft EIS:

- Removal of existing rail sidings in the Bass Lake Spur, generally from Highway 169 to Beltline Boulevard, eliminating the backing of trains at at-grade freight rail crossings, which currently occurs under existing conditions
- Change in for the frequency of light rail trains in the peak period from 7.5 minutes to 10 minutes, which would reduce the number of light rail vehicles by approximately four per hour in the peak period
- A reduction in the delay to roadway traffic that would occur at at-grade light rail crossings in the segment, generally proportionate to the reduction in the proposed frequencies of light rail trains

The LPA would result in reconstruction and/or reconfiguration of roadways at seven locations in the St. Louis Park/Minneapolis Segment (see Short-Term Roadway and Traffic Impacts below and Section 2.5.3 for additional detail).

Freight rail operations would not be affected by light rail operations, so there would be no change in the vehicle delay and queue lengths at at-grade freight rail crossings due to passing freight rail trains (except for the changes resulting from the removal of existing rail sidings).

The LPA would result in three new at-grade light rail crossings in the St. Louis Park/Minneapolis Segment at Wooddale Avenue, Beltline Boulevard, and West 21st Street (see Exhibit 2.5-4). At each at-grade crossing, light rail operations would impede vehicular traffic for approximately 50 seconds, approximately 12 times per hour (six times per hour in both directions).

Short-Term Roadway and Traffic Impacts

This section describes the short-term roadway and traffic impacts caused by construction of the LPA. The LPA would result in changes to local circulation patterns during construction, particularly at the station areas, at the at-grade crossings and where grade separations are planned. Construction of the proposed light rail-related improvements and freight rail modifications would result in temporary impacts to traffic operations on local roadways and would result in the temporary closure and/or relocation of on- and off-street parking within the construction areas. The project's construction duration in this segment would be up to approximately three years, although construction activities at a particular location are expected to be of shorter duration.

Construction activities that would potentially result in impacts to roadway operations include utility relocation, roadway construction, light rail construction, truck hauling, demolition, and construction staging. In addition, modifications to existing roadways that are included in the LPA and that would temporarily impact roadway operations would occur at the following locations:

- Reconstruction and reconfiguration of approximately 340 feet of Oxford Street at Edgewood Avenue to accommodate the construction of the new southerly freight rail connection between the Bass Lake and MN&S spurs.
- Reconstruction of approximately 250 feet of Wooddale Avenue at the existing at-grade crossing of the freight tracks, to accommodate the two proposed light rail tracks, utility relocation, and movement of the existing freight rail tracks.
- Reconstruction of approximately 300 feet of Beltline Boulevard, between the Highway 7 service road and West 36th Street, to accommodate the two proposed light rail tracks, utility relocation, and movement of the existing freight rail tracks.
- Reconstruction of Cedar Lake Parkway to construct the proposed light rail tunnel and to relocate existing utilities, the existing freight rail track, and the trail at-grade crossings of Cedar Lake Parkway. Reconstruction would include approximately 400 feet of Cedar Lake Parkway and 150 feet of Burnham Road, and would include utility relocation.
- Realignment and widening of approximately 840 feet of the loop road formed by Abbott Avenue and Chowen Avenue in the vicinity of the proposed Westlake Station to accommodate a proposed kiss-and-ride facility, bus stops, and bus layover.
- Reconstruction of West 21st Street at the existing at-grade crossing of the freight tracks to accommodate the at-grade light rail crossing, utility relocation, and relocation of the freight rail tracks at-grade at 21st Street. Reconstruction would include approximately 270 feet of 21st Street.
- Reconstruction of approximately 405 feet of Wayzata Boulevard and Penn Avenue near I-394 to accommodate kiss-and-ride facility and pedestrian connections to Penn station.

C. Mitigation Measures

Mitigation will be identified for the following conditions:[38]

- Intersections that would operate at LOS D or better under No Build Alternative conditions in the forecast year which would operate at LOS E or F in the forecast year under the LPA will be mitigated to operate at LOS D or better
- Intersections that would operate at LOS E or F in the forecast year under No Build Alternative conditions which would operate at a worse LOS in the forecast year under the LPA will be mitigated to operate at No Build Alternative conditions or better

Following are general strategies that could be used to improve operations at intersections where mitigation would be warranted:

- Optimizing signal splits (green time) and offsets
- Adding new traffic signal controllers, pedestrian controllers, and signage at crossings
- Modifying a light rail at-grade crossing from preemption to a priority strategy
- Adding left- or right-turn lanes
- Lengthening left- or right-turn lanes
- Adding lanes to the cross-street approaches
- Providing a grade separation between the roadway and LRT guideway (or in specific circumstances)
- Restricting or removing full access

Based on preliminary analysis, these strategies will improve the operations of congested intersections as a result of the project to acceptable levels. More detailed analysis and impacts of mitigation measures will be included in the Final EIS.

[38] Final mitigation measures will be included in the Final EIS, and will be determined based on a combination of factors such as traffic operations, impacts, and effectiveness of the proposed mitigation.

During construction, contractors will be required to comply with all state and local regulations concerning the closing of roadway and the effects of construction activities. Contractors will also be required to comply with the guidelines established in the Minnesota Manual on Uniform Traffic Control Devices. The Council shall develop a construction staging plan (staging plan), which will be reviewed with all appropriate jurisdictions and railroads, and the contractor will be required to secure all necessary permits and follow the staging plan, unless otherwise approved. Components of a construction staging plan may include:

- Traffic management plans reviewed by all appropriate jurisdictions prior to the start of construction activities. In some cases, intersections may need to be modified to minimize vehicle delay. Measures will include the addition of turn lanes, the construction of temporary traffic signals, the revision of existing signal timing plans, or the addition of warning signs.
- Detailed construction timeline developed before the initiation of construction activities that will inform roadway users and adjacent property owners about when activities would begin, the type of work being performed, an estimate of when the work will be completed, and recommendations on how individuals and entities can minimize disruption to their activities.

Impacts related to temporary changes to access will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.4.4.3 Parking

This section describes the potential changes to on- and off-street parking in the St. Louis Park/Minneapolis Segment due to the LPA. As summarized in Tables 3.4-16 and 3.4-17, the LPA would result in the displacement of approximately 297 private off-street parking spaces that serve existing businesses at 10 locations and the displacement of approximately 118 on-street parking spaces at five locations (as well as the addition of five new on-street parking spaces at one location), respectively. Proposed park-and-ride lots in the segment that are associated with the three proposed light rail stations in the segment are described in Section 2.5.3 of this Supplemental Draft EIS and the cumulative supply of parking spaces within those lots would meet demand in the forecast year.

TABLE 3.4-16
St. Louis Park/Minneapolis Segment – Potential Off-Street Parking Displacements

Location	Existing	Displaced	Type of Property Acquisition
168 Blake Rd. (150 Blake Rd)	71	71	Full
140 Blake Rd	59	59	Full
126 Blake Rd	24	24	Full
7710 Oxford St	14	14	Full
6600 Oxford St	10	10	Full
6500 Oxford St	11	11	Full
6460 Oxford St. (6425 Oxford St)	21	21	Full
3825 Edgewood Ave.	22	22	Full
4615 CSAH 25 Service Rd (4601 Highway 7 and 3130 Monterey Ave S)	14	14	Full
4767 CSAH 25 Service Rd. (4725 Highway 7 and 3220 Natchez Ave S)	51	51	Full
Total	297	297	

Source: Council, 2014.

TABLE 3.4-17
St. Louis Park/Minneapolis Segment – Potential On-Street Parking Displacements/Additions

Location	Displaced Spaces	New Spaces	Reason for Impact/Type of Impact
North side of Oxford St between Louisiana Ave. and Edgewood Ave	11	5	Removed to provide driveway access from Oxford St to Louisiana Station, new parking spaces provided by the removal of existing accesses
South side of CSAH 25 Service Rd in front of 4601 Hwy 7	10	0	Removed to provide driveway access from Hwy 7 Service Rd to Beltline Station
East side of Abbott Ave between Chowen Ave and Excelsior Blvd	31	0	Removed to provide sufficient lane width for buses serving the West lake Street Station
West side of Chowen Ave between 32nd St and Abbott Ave	53	0	Removed to provide sufficient lane width for buses serving the West lake Street Station
South side of W 32nd St between Chowen Ave and Excelsior Blvd	13	0	Removed to provide sufficient lane width for buses serving the West lake Street Station
Total	**118**	**5**	

Source: Council, 2014.

A. Existing Conditions

Parking for personal automobiles in the St. Louis Park/Minneapolis Segment is a mix of privately-owned, off-street parking associated with individual businesses, office complexes, commercial retail businesses, and residential complexes. Off-street parking in the segment is generally provided on surface parking lots, with some structured parking facilities. On-street parking is provided on a wide variety of local streets within the segment.

B. Potential Parking Impacts

This section describes the anticipated long-term and short-term (construction-related) impacts to parking in the St. Louis Park/Minneapolis Segment that would result from the LPA.

Long-Term Direct and Indirect Parking Impacts

This section describes the long-term direct and indirect impacts to parking in the St. Louis Park/Minneapolis Segment that would result from the LPA.

Long-term direct impacts to parking in the St. Louis Park/Minneapolis Segment would include the displacement of approximately 297 off-street parking spaces and 118 on-street parking spaces. The displacement of off-street parking spaces would be associated with the potential full acquisitions by the project. Table 3.4-16 summarizes the off-street parking displacements that would result from the LPA. The number off-street parking spaces displaced and the layout of the affected off-street parking spaces would ultimately be determined through the property acquisition process, which would occur during the Engineering and construction phases. The LPA would also result in the addition of five on-street parking spaces at one location. Table 3.4-17 identifies the location of the on-street parking displacements and the reason for impact.

Indirectly, the LPA could affect the supply of and demand for off-street parking in the St. Louis Park/ Minneapolis Segment due to development new light rail station areas. Any development occurring within the segment would, however, be required to comply with the City of St. Louis Park's and the City of Minneapolis' parking requirements, which would tend to ensure a long-term balance of parking supply and demand.

Sizing the park-and-ride lots in this segment to cumulatively meet forecast demand for park-and-ride spaces in this segment would help to minimize spill-over park-and-ride parking at the proposed light rail stations in the segment.

Short-Term Parking Impacts

This section describes the short-term (construction related) parking impacts associated with construction of the LPA in the St. Louis Park/Minneapolis Segment. The short-term temporary displacement of on-street

parking could occur at locations throughout the segment in the vicinity of the project alignment. These potential displacements would be identified during Engineering and would help to facilitate construction of the light rail improvement and associated roadway and freight rail modifications (e.g., to facilitate truck movement, to provide a temporary truck loading zone).

C. Mitigation Measures

As noted in Section 6.3.4 of the Draft EIS, mitigation of the displacement of off-street parking spaces for the parcels that would be fully acquired by the project is not be warranted, because the businesses that the parking spaces are associated with would also be displaced. Mitigation of the displacement of off-street parking for the parcels where the existing businesses would remain on their existing parcels will be determined through the property acquisition process, which would occur during the Engineering and construction phases. The primary mitigation measure that would be considered through that process would be potential modifications to the layout of the remaining parking lot to increase the number of off-street parking spaces and potential modifications to the design of the project to reduce the number of displaced off-street parking spaces. Property owners would be compensated for loss of parking in compliance with the Uniform Relocation Act. Where eliminated spaces are associated with partial property acquisitions, mitigation will be determined in the final agreement with the property owner consistent with the requirements of the Uniform Act. Also, consistent with the Draft EIS, no mitigation is identified for the displacement of on-street parking spaces.

Impacts related to temporary changes to parking will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.4.4.4 Freight Rail

This section provides a summary of existing freight rail operations in the St. Louis Park/Minneapolis Segment and how the proposed LPA could impact those operations in the long term and short term. In addition, mitigation measures addressing adverse impacts to freight rail operations are identified.

As summarized in Table 3.4-1, the LPA would result in the light rail/freight rail Swap and Southerly Connection, with some modified freight rail operations; the removal of approximately 10,375 feet of freight rail siding track segments in the Bass Lake Spur; and temporary movement of the freight rail tracks during construction in the Kenilworth Corridor.

A. Existing Conditions

This section describes the existing freight rail ownership and operators in the St. Louis Park/Minneapolis Segment.

Exhibit 2.3-4 illustrates the existing freight rail ownership and operators in the St. Louis Park/Minneapolis Segment. In summary, CP owns the Bass Lake Spur, on which TC&W currently operates freight rail service. The Bass Lake Spur directly connects to the HCRRA-owned Kenilworth Corridor, on which TC&W trains operate, before connecting to the BNSF-owned Wayzata Subdivision. The Bass Lake Spur also connects to the MN&S Spur via the Skunk Hollow switching wye (illustrated on Exhibit 2.5-5). The switching wye provides freight rail access to the Robert B. Hill Company salt facility at the west end of the switching wye, which is the only business in the St. Louis Park/Minneapolis Segment that receives direct rail service. The switching wye also allows CP and TC&W trains to connect between the Bass Lake Spur and the MN&S Spur, which is also owned by CP.

TC&W railroad operations have changed since the Draft EIS (refer to the *Freight Alignment – Traffic Impact Evaluation Memorandum*; Kimley-Horn and Associates, Inc., 2013; see Appendix C for instructions on how to access this report). Currently, TC&W typically operates 14 weekly trains (about two per day) with 65 to 75 cars and 5 to 6 weekly unit trains[39] (currently, no more than one per day) with approximately 80 to

[39] A unit train is made up of approximately 100 cars that come from the same origin and travel to the same destination, without being stored or split up during their travel.

125 cars per train. CP operations remain unchanged from the Draft EIS, with 10 weekly trains with one to two locomotives with 10 to 25 cars per train.

B. Potential Freight Rail Impacts

This section identifies the potential long-term and short-term impacts that would result from the changes to how the LPA would change the freight rail movements within the St. Louis Park/Minneapolis Segment.

Long-Term Direct and Indirect Freight Rail Impacts

This section describes the long-term direct and indirect freight rail operation impacts in the St. Louis Park/ Minneapolis Segment. Proposed modifications to existing freight rail facilities within the St. Louis Park/ Minneapolis Segment are described in Section 2.5.3 of this Supplemental Draft EIS. The proposed LPA would generally result in no changes to existing freight rail operations because all segments of existing mainline freight rail track would remain unchanged, except for relatively minor modifications to some track to accommodate the construction of the proposed light rail line. This includes construction of the Southerly Connection between the CP Bass Lake and the MN&S spurs (see Section 2.5.3 and Exhibit 2.5-5 of this Supplemental Draft EIS for additional detail) to replace the existing Skunk Hollow switching wye to allow continuation of freight in that section of the corridor. While this would change the geometry of the freight rail alignment for the movement of freight rail between the Bass Lake Spur and the MN&S Spur, it would not result in substantial long-term impacts to freight rail operations.

In addition, the LPA would result in the removal of 11,771 feet of siding along the CP Bass Lake Spur, eliminating the backing of freight trains at the Wooddale Avenue crossing that occurs under existing conditions. The removal of the siding tracks would be negotiated with the freight rail owner and operators, which could include negotiated compensation for adverse effects to their operations. No indirect effects to freight rail transportation are anticipated.

Short-Term Freight Rail Impacts

This section describes potential short-term freight rail operation impacts caused by construction of the LPA. Constructing the LPA would have some effects on freight movements in the corridor that would be temporary in nature.

Construction of the proposed south light rail tunnel in the Kenilworth Corridor would require the temporary movement of the freight rail alignment at various locations along the Kenilworth Corridor. The shift would be about 2 to 3 feet to the northwest and would facilitate construction of the proposed light rail tunnel. During the time when the freight rail tracks are shifted to a temporary location, freight rail operations would not be obstructed, discontinued, or slowed. Instead, light rail construction would be stopped by a flagger, and the workers and machines would be moved away from the track whenever a freight train comes through the work area. The cost of the flagging operation for labor and equipment delay would be borne by the project. Despite this, the freight rail operator might choose to continue to travel through the corridor at lower speeds based on its operating procedures. During this reconstruction period, the freight track would be maintained for a maximum 25-mph track speed, which is the existing condition. However, the TC&W has agreed to hold speed to 10 mph within the Kenilworth Corridor, their existing operating speed at that location (see Section 3.1.2.12.C of this Supplemental Draft EIS for additional detail). Potential short-term impacts to freight operations beyond the construction of the south light rail tunnel are described under Short-Term Economic Impacts (see Section 3.4.3.B of this Supplemental Draft EIS for additional detail).

C. Mitigation Measures

No long-term impacts to freight rail transportation in the St. Louis Park/Minneapolis Segment are anticipated. Therefore, no long-term mitigation measures have been identified.

In order to mitigate short-term impacts to freight rail operations related to construction activities, the Council will develop and update a freight rail operations coordination plan. The purpose of this plan is to facilitate coordination between the project and the freight railroads throughout the construction period in order to minimize impacts on freight owners and operators without creating unreasonable constraints during construction of the LPA. Freight rail owners and operators in the project area will review and

approve the coordination plan, prior to the start of construction. As part of this effort, Council staff will also work with the freight railroads to provide provisions in the construction contract to identify how the contractor will interact with the railroads. Further, Council staff will work with the freight railroads to sequence construction to minimize effects on freight movements and to identify optimal periods for closing the rail service and reducing speeds.

During construction activities, flaggers will be used to allow freight rail operations to continue without interruption, except for the following proposed activities and durations:

- Four- to eight-hour stoppage when completing the freight rail track swap
- Two-day (likely over a weekend) stoppage for MN&S and TC&W trains for turnout construction for the new southerly connection to MN&S tracks
- One-day stoppage to shift the bridge over Highway 100 from its location along the current alignment to a location north of the light rail mainline

Dates and times for all stoppages will be determined by CP, the owning railroad for the Bass Lake Spur, and HCRRA for the Kenilworth Corridor. TC&W will also be coordinated with, as the freight rail operator on the Bass Lake Spur and Kenilworth Corridor. The use of flaggers will require construction activities to halt while freight trains traverse the construction area at regular speeds. Other construction activities will include shifting the existing track into a temporary location (two to three feet to the north/west) to allow for construction of the proposed light rail tunnel. This shift would be gradual, and is estimated to take approximately a week to shift the tracks and another week to shift the tracks back after the light rail tunnel is complete. Coordination between the contractor and the railroads will assist in minimizing disruptions and planning for the expected shutdowns to occur at times that would cause the least impact on freight rail operations. More detailed information on the impacts on freight rail carriers will be identified as construction plans are developed. The Final EIS and freight rail operations coordination plan will include details regarding construction sequencing, schedule, means, and methods.

3.4.4.5 Bicycle and Pedestrian

This section describes the changes to bicycle and pedestrian facilities that would result from implementation of the LPA in the St. Louis Park/Minneapolis Segment. As summarized in Table 3.4-1, there would be long-term changes to trail alignments at light rail crossings with no change in trail connectivity and temporary trail detours would be provided for continued trail connectivity during construction.

A. Existing Conditions

This section describes existing bicycle and pedestrian facilities in the St. Louis Park/Minneapolis Segment. Section 3.4.1.4 of this Supplemental Draft EIS provides a description of the existing regional trails in the St. Louis Park/Minneapolis Segment that are generally within HCRRA-owned right-of-way. Those trails are the Cedar Lake LRT Regional Trail, the Kenilworth Trail, the Midtown Greenway, the Cedar Lake Trail, and the North Cedar Lake Regional Trail.

Sidewalks are currently available at all arterial street crossings of the existing HCRRA-owned right-of-way within the St. Louis Park/Minneapolis Segment. These sidewalks provide sufficient pedestrian connections across the right-of-way, which currently includes active trails. However, there are some adjacent roadways that are missing sidewalks on one or both sides of some streets. Streets that lack sidewalks are typically in industrial areas, on local access streets, or on streets with low pedestrian volumes. Bicycle routes typically follow existing street networks. There are on-street bicycle-designated lanes on Cedar Lake Avenue on the east side of the St. Louis Park/Minneapolis Segment. These bicycle-designated lanes provide a connection to the bicycle boulevard on Dean Parkway, which connects the Kenilworth Trail to the trail system around the Lake of the Isles. Within the St. Louis Park/Minneapolis Segment, the Cedar Lake LRT Regional and the Kenilworth multi-use trails provide transportation value in addition to recreational use.

B. Potential Bicycle and Pedestrian Impacts

This section identifies the potential long-term and short-term impacts that would result from the changes to bicycle and pedestrian facilities within the St. Louis Park/Minneapolis Segment.

Long-Term Direct and Indirect Bicycle and Pedestrian Impacts

This section describes the potential long-term direct and indirect bicycle and pedestrian impacts in the St. Louis Park/Minneapolis Segment. There would be no long-term effects of the LPA on either the Cedar Lake Trail or the Kenilworth Trail within the St. Louis Park/Minneapolis Segment. Although both trails would be maintained, they would be reconstructed and the existing at-grade trail crossing of the railroad track just northeast of Beltline Boulevard would be replaced with a grade-separated crossing of both the freight rail and light rail tracks.

At Beltline Boulevard, a sidewalk that now ends at Cedar Lake Trail (and that does not extend south of the existing freight rail corridor) would be extended under the LPA to the west side of the crossing, which would be done in conjunction with construction of the Beltline Boulevard roadway crossing.

As described in Section 2.3.3.2 of this Supplemental Draft EIS, the LPA incorporates a variety of bicycle and pedestrian safety and access improvements associated with and in the vicinity of the West Lake, 21st Street, and Penn stations (see Appendix G for the conceptual design of those proposed improvements), in accordance with a memorandum of understanding between the Council and the City of Minneapolis. (Council and City, 2014; see Appendix D, Sources and References Cited, for instructions on how to access the subsequently executed memorandum.) These improvements include, but are not limited to the following:

- Enhanced pedestrian connections between the Royalston Station and the nearby Minneapolis Farmer's Market, from both the north and south, via the frontage road and Holden and Border Avenues
- Sidewalk improvements along Dunwoody Boulevard near Van White Station, including improvements to the under-bridge area and intersection improvements at Stadium Pkwy/Emerson Ave S
- A pedestrian bridge to Bryn Mawr Meadows at Van White Station
- Enhanced pedestrian connections from the Penn Ave station across I-394 and north to Mount View Ave, near Penn Station
- Additional ADA compliance improvements to be made at each intersection along Penn continuing north to Cedar Lake Road, near Penn Station
- Additional sidewalks, as enhanced pedestrian connections, along the south side of Wayzata Blvd from I-394 pedestrian bridge at Thomas Ave east to the access to Penn Station
- Light and sign the existing trail segment from Cedar Lake Trail to Kenwood Parkway, near Penn Station
- Enhanced pedestrian connections along West Lake Street between Drew Ave S and Market Plaza and along Excelsior Blvd between Market Plaza and W 32nd St, near West Lake Station
- Enhanced pedestrian connections along Chowen and Abbott Aves and along the newly realigned street segment, near West Lake Station

Further design refinements affecting these and other bicycle and pedestrian facilities could be incorporated into the LPA through the completion of the Project Development phase and would be addressed in the Final EIS.

As noted in the Draft EIS, a potential indirect effect could include a change in demand using existing pedestrian and bicycle facilities to access proposed light rail stations. The Draft EIS notes that there would be a potential for greater use of bicycle and pedestrian facilities located near transit stations, and a demand for more facilities, goods, and services related to those modes.

Short-Term Bicycle and Pedestrian Impacts

This section describes the potential short-term bicycle and pedestrian impacts associated with construction of the LPA.

Reconstruction of bicycle and pedestrian facilities would result in only short closures during the period of construction. Trails and sidewalks would be reconstructed in their new locations before the existing trails are removed and diverted to the new trails, or acceptable detour routes providing the same connections would be provided and signed during construction. In particular, connectivity to the Kenilworth and Cedar Lake LRT regional trails would be retained through construction with use of phased temporary detour plans that would be established through coordination with the Cities of Minneapolis and St. Louis Park and the MPRB. Potential impacts on other local pedestrian and bicycle facilities would be minimized by providing detours or clearly delineated facilities within construction areas, such as protected walkways. Reconstruction of bicycle and pedestrian facilities and establishment of detours would result in only short closures during the period of construction. The public would be notified of temporary detours, closures, and new facilities, as appropriate. Short-term effects on pedestrian and bicycle routes within the St. Louis Park/ Minneapolis Segment would be minimized through, signage, information fliers, website postings with maps of construction areas/detours, and notices placed at bike shops. Construction documents would require the contractor to comply with all traffic management best practices and local regulations. A traffic management plan will be developed to document how pedestrians and bicyclists, as well as motor vehicle traffic, would be accommodated during construction.

C. Mitigation Measures

Because there would be no long-term adverse impacts from the LPA on bicycle and pedestrian facilities, no long-term mitigation measures have been identified. Short-term effects on pedestrian and bicycle routes will be mitigated through signage, information fliers, website postings with maps of construction areas/detours, and notices placed at bicycle shops, for example.

Impacts related to temporary changes to bicycle and pedestrian facilities will be mitigated by development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes. Refer to Section 3.1.2.12 for additional detail on the Construction Communication Plan.

3.4.4.6 Safety and Security

This section discusses potential safety and security issues for pedestrians, automobile traffic, and emergency service providers at at-grade intersections with freight rail and LRT tracks, as well as within the proposed light rail tunnel. Mitigation measures to alleviate these potential impacts are also identified. The Draft EIS addresses Safety and Security under the broader category of Social Effects (see Section 3.7 of the Draft EIS). As summarized in Table 3.4-1, there would be three new at-grade light rail crossings of roadways and emergency vehicle delays of approximately 50 seconds, 12 times per hour (six times per hour in both directions), could occur at those new light rail at-grade crossings.

A. Existing Conditions

See Section 3.7.2 of the Draft EIS for a description of existing conditions for the safety and security assessment, which has not changed since publication of the Draft EIS. As discussed in Section 3.1.2.12 of this Supplemental Draft EIS, the Southwest LRT Project will conform to the FTA's State Safety Oversight Program for Rail Safety. This topic will be covered in more detail in the forthcoming Final EIS.

B. Potential Safety and Security Impacts

This section identifies the potential long-term and short-term impacts that would result from the changes to safety and security in the St. Louis Park/Minneapolis Segment.

Long-Term Direct and Indirect Safety and Security Impacts

This section describes the potential long-term direct and indirect safety and security impacts in the St. Louis Park/Minneapolis Segment. In the St. Louis Park/Minneapolis Segment, the proposed light rail alignment would be located parallel to the existing freight rail corridor, generally within existing HCRRA-owned or

freight rail-owned right-of-way (see Section 3.4.1.2 for additional information on railroad property acquisitions associated with the LPA). Safety-related freight rail modifications in the Kenilworth Corridor would include the installation of approximately 4,000 feet of freight rail guardrail. Freight rail operations would not be affected by light rail operations, so there would generally be no change in the vehicle delay and queue lengths at at-grade freight rail crossings due to passing freight rail trains.

The LPA would result in three new at-grade light rail crossings in the St. Louis Park/Minneapolis Segment at Wooddale Avenue, Beltline Boulevard, and West 21st Street (see Exhibit 2.5-4).[40] Those at-grade light rail crossings would be located adjacent to the existing freight rail at-grade crossings. During the peak weekday hour, up to 12 light rail trains (6 in each direction) would pass through those two at-grade crossings.[41] The amount of vehicle delay caused by light rail operations at these two locations would be approximately 50 seconds per light rail vehicle crossing, compared to 3 to 7 minutes of delay caused by existing freight train crossings. The increased delay of approximately 50 seconds, potentially 12 times in the peak hour, would cause short queues that would quickly dissipate after the light rail train clears the crossing. In addition, the headway for light rail vehicles was changed from the Draft EIS from 7.5 minutes to 10 minutes, thereby reducing the number of light rail vehicles crossing the at-grade roadway crossings and, in turn, reducing the amount of delay caused by light rail vehicles. These at-grade crossings could potentially affect the safety of pedestrians and vehicles crossing the light rail alignment. Further, delays at the crossings could increase fire and emergency medical services and police emergency response times on routes using the crossings. Alternative motor vehicle routes would be identified for emergency providers.

To avoid the potential for incidents at at-grade intersections, crossings would be signalized or equipped with gates with bells to warn of oncoming trains. The trains will also have bells and horns. Bells, gates, and horns would be activated according to Metro Transit operating procedures and safety guidelines. Light rail trains that cross streets or intersections with automatic gate crossings would require emergency vehicles to yield for their movement. Further details associated with signal prioritization and protocols will be developed in coordination with local jurisdictions.

The safety and security of the stations would generally be the same as proposed in the Draft EIS, with the exception of the Louisiana Station. The shift of the Louisiana Station removes the station from the freight rail corridor, which would reduce the potential for conflicts with freight rail operations.

The proposed light rail tunnel in the Kenilworth Corridor would include a number of safety design features to address fire prevention, ventilation and fire protection, and evacuation. Safety design features will include the following:

- Construction using noncombustible materials
- The tunnel will include fire standpipe systems with detection and monitoring equipment and systems of emergency ventilation fans that would direct fresh air into selected areas and remove smoke from areas during an emergency
- Passenger evacuation plans will be prepared that could include any of the following: reversing trains out of the tunnel, transferring passengers to a rescue train, allowing passengers to exit the tunnel by walking out of the tunnel or by having passengers use a cross passage (a passage connecting two tunnels) to access an adjacent tunnel
- Signs will be located in the tunnel to identify the locations of passages and tunnel openings
- The tunnel will include emergency lighting, telephone connections, and underground communications for safety officials

[40] Under the LPA as defined in the Draft EIS, there would have been four at-grade light rail crossings in the St. Louis Park/ Minneapolis Segment. One of those proposed at-grade crossings (at 21st Street) was eliminated from the LPA by the Council in March 2014 when it identified design adjustments to be incorporated into the LPA.

[41] The traffic analysis in Chapter 6.2.2.3 of the Draft EIS was based on a light rail operating plan that included 7.5-minute headways and would have resulted in 16 LRT crossings in the peak hours.

Short-Term Safety and Security Impacts

This section describes the short-term safety and security impacts caused by construction of the LPA in the St. Louis Park/Minneapolis Segment. Construction activities in the St. Louis Park/Minneapolis Segment under the LPA would temporarily result in increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours. This temporary increase in roadway congestion could affect access and response times for public service providers, including emergency service providers and public utilities and transportation. However, provisions would be made to maintain required accesses during established periods or to keep one lane of traffic open on main arterials. Before construction, traffic control plans would be reviewed and approved by applicable agencies before implementation. Before construction, the Council will coordinate with public service providers on required detour routes and lane closures in order to minimize increases in travel and response times and to minimize impacts on solid waste and recyclables collections and the transportation of students.

C. Mitigation Measures

During construction, roadways could temporarily be fully or partially closed, limiting access and requiring temporary detours. These temporary detours could cause minor delays in emergency response times and cause detours for other public services. Metro Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times. Other mitigation measures could include signage, information fliers, and website postings with maps of construction areas/detours. Specific mitigation measures will be discussed in the Final EIS when additional design and construction information will be available, in accordance with Federal, state and local requirements.

3.4.5 Environmental Justice Compliance

This section describes: (a) the minority and/or low-income populations in the St. Louis Park/Minneapolis Segment; (b) the opportunities provided to minority and/or low-income populations to participate in the Southwest LRT Project planning process; and (c) a summary of impacts in the St. Louis Park/Minneapolis Segment that could impact environmental justice populations. In summary, changes to the anticipated environmental impacts in the St. Louis Park/Minneapolis Segment would not change the preliminary environmental justice finding for the LPA[42] in the Draft EIS (see Table 10.6-1 in Section 10.6 of the Draft EIS). A final corridor-wide environmental justice analysis, including a final project-wide finding, will be completed as part of the forthcoming Final EIS.

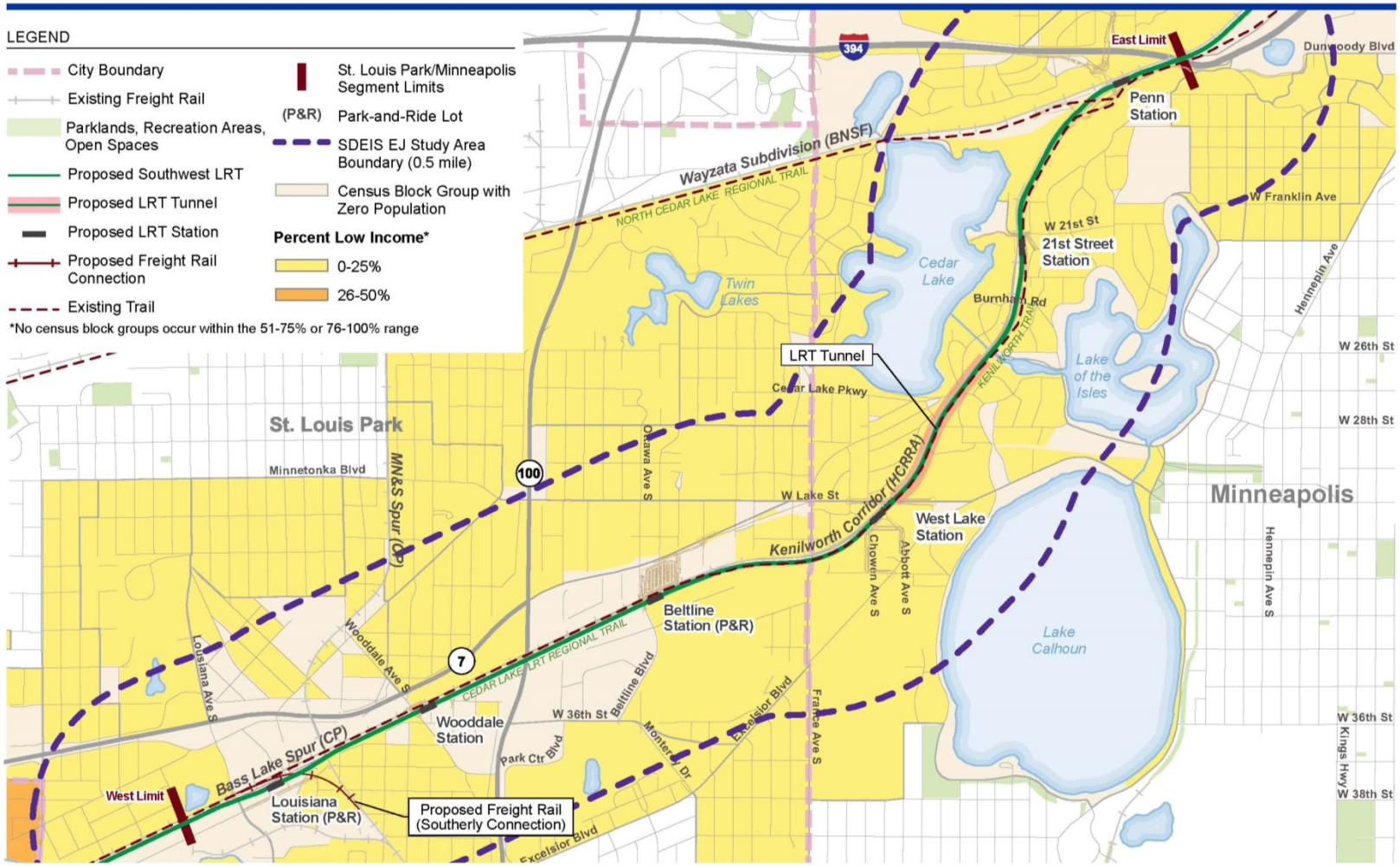
The St. Louis Park/Minneapolis Segment environmental justice study area is defined in Section 3.1.2.14 of this Supplemental Draft EIS. The study area is illustrated on Exhibits 3.4-9 and 3.4-10 of this Supplemental Draft EIS and Section 10.3.2 of the Draft EIS contains comparable figures.

A. Demographic Characteristics

This section provides updated demographic data for the environmental justice study area that have changed since publication of the Draft EIS. Other data and characteristics that have not changed since publication of the Draft EIS can be found in Section 10.3 of the Draft EIS and are not repeated herein. The environmental justice analysis in this section of the Supplemental Draft EIS is based on new and updated data sources to describe demographic characteristics surrounding and within the St. Louis Park/Minneapolis Segment environmental justice study area, such as updated 2010 U.S. Census data and minority and school lunch enrollment data for public elementary schools that have attendance boundaries encompassing the study area. Additional information on these new and updated data is provided in Section 3.1.2.14 of this Supplemental Draft EIS.

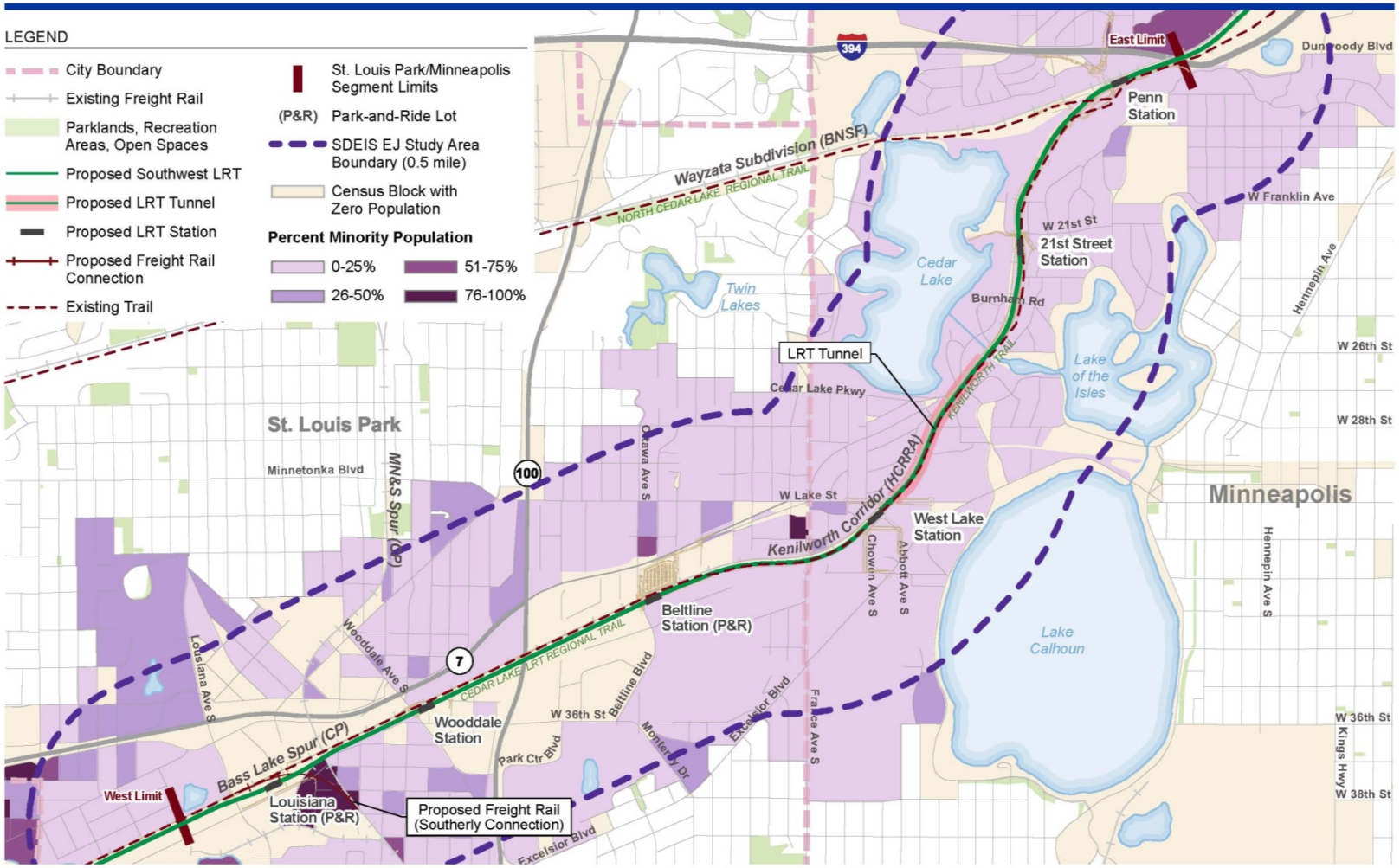
[42] The LPA was included within LRT 3A and LRT 3A-1 of the Draft EIS. See Chapter 2 of this Supplemental Draft EIS and of the Draft EIS for additional information on the LPA as described in the Draft EIS.

EXHIBIT 3.4-9
Low-income Population Within Census Block Groups, St. Louis Park/Minneapolis Segment



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

EXHIBIT 3.4-10
Minority Population Within Census Blocks, St. Louis Park/Minneapolis Segment



NOTE: Population information illustrated is based upon U.S. Census data for the entire census geography (i.e., Census Block, Census Block Group) and represents the population concentrations within that geography. The census geographies typically include other land uses that do not contain any populations (i.e., commercial, industrial, parks, and infrastructure), so to better illustrate where the populations may reside within the census geographies additional information including water bodies and known areas with no population are overlain on the representative census data. Even with the additional information there is still the possibility that portions of the study area shown with population concentrations may have no population.

SOUTHWEST	Southwest LRT Supplemental Draft EIS Minority Population Within Census Blocks St. Louis Park/Minneapolis Segment	Exhibit 3.4-10	NORTH 0 1,325 2,640 Feet	METROPOLITAN COUNCIL

Table 3.4-18 provides updated information on the demographic characteristics of the St. Louis Park/ Minneapolis Segment environmental justice study area, the Cities of St. Louis Park and Minneapolis, and Hennepin County. Exhibits 3.4-9 and 3.4-10 illustrate the concentration of minority and low-income populations within the segment's study area. The exhibits also illustrate areas in the study area with no population (as identified in 2010 U.S. Census block groups or Census blocks with zero population). The minority and low-income characteristics of the study area are most similar to St. Louis Park (17.6/6.5 percent and 18.8/8.8 percent, respectively), as both of these areas have lower percentages of minority and low-income populations than Minneapolis and Hennepin County (39.7/22.3 percent and 28.3/12.3 percent, respectively). In summary, there is a small percentage of low-income residents in the segment (6.5 percent) and no U.S. Census blocks where low-income residents are concentrated. While the percentage of minority residents in the environmental justice study area is also low (17.6 percent), there are small areas along the proposed light rail alignment at Louisiana Avenue South and France Avenue South where the percentage of minority residents in the U.S. Census blocks is notably higher than the percentage of minorities in the study area.

TABLE 3.4-18
Demographic Characteristics – St. Louis Park/Minneapolis (SLPM) Segment Environmental Justice Study Area, the Cities of St. Louis Park and Minneapolis, and Hennepin County

Characteristic	SLPM Environmental Justice Study Area	City of St. Louis Park	City of Minneapolis	Hennepin County
Total Population (for minority comparison)[a]	23,564	45,250	382,578	1,152,425
Minority Population[a]	4,157 (17.6%)	8,505 (18.8%)	151,928 (39.7%)	352,755 (28.3%)
Total Population (for low-income comparison)[b]	22,822	44,465	366,536	1,124,293
Low-Income Population[b]	1,493 (6.5%)	3,899 (8.8%)	81,889 (22.3%)	138,258 (12.3%)

[a] Information based upon 2010 U.S. Census data.
[b] Information based upon 2007-2011 American Community Survey data.
Sources: U.S. Census, 2010; 2012.

Providing additional context for the U.S. Census data, Table 3.4-19 contains information on the 2010-2011 school year collected from the National Center for Education Statistics for five elementary schools that draw students from larger areas that encompass portions of the segment's environmental justice study area. Of the students enrolled in the three elementary schools within St. Louis Park, 27.2 to 44.7 percent were identified as belonging to a minority and 10.8 to 33.8 percent were enrolled in the school's free lunch program. Of the students enrolled in the two elementary schools within Minneapolis, 39.7 and 85.2 percent were identified as belonging to a minority and 28.4 and 68.5 percent were enrolled in the school's free lunch program.

TABLE 3.4-19
St. Louis Park/Minneapolis Segment Public Elementary School Demographics (2010-2011 School Year)

School	Total Students	Minority Population	Free Lunch
St. Louis Park			
Susan Lindgren Elementary	491	188 (38.3%)	155 (31.6%)
Peter Hobart Elementary	557	249 (44.7%)	188 (33.8%)
Park Spanish Immersion Elementary	518	141 (27.2%)	56 (10.8%)
Minneapolis			
Bryn Mawr Elementary	378	322 (85.2%)	259 (68.5%)
Kenwood Elementary	464	184 (39.7%)	132 (28.4%)

Sources: National Center for Education Statistics, U.S. Department of Education Institute of Education Sciences, 2012.

B. Outreach to Minority and Low-Income Populations

Section 10.4 of the Draft EIS summarizes environmental justice-related public involvement performed as part of the Draft EIS process. Since completion of the Draft EIS, the Southwest LRT Project provided project information via its website, distributed information at community events, coordinated with the media, and conducted public meetings and open houses. Those activities were used to convey information on the

various steps in the project process and opportunities to the public on the overall project, including proposed adjustments to the light rail-related improvements and freight rail modifications included within the St. Louis Park/Minneapolis Segment. Those activities were also used as a venue for the public to comment on the various design adjustments under consideration at the time. Additional information on these public engagement activities is provided in Chapter 4 of this Supplemental Draft EIS.

As part of the technical issue areas included within the St. Louis Park/Minneapolis Segment (described in Section 2.3.3.2 of this Supplemental Draft EIS), evaluation criteria and measures on potential design adjustments being considered at the time were presented to several committees, including the Community Advisory Committee (CAC). CAC members represent neighborhood groups, special-interest groups, advocacy groups, educational institutions, and ethnic communities, several of which represent areas that include environmental justice populations. The project team also participated in numerous meetings and events at the request of CAC members. The project team also responded to requests for meeting participation made by community groups that are not officially part of the CAC, including those groups representing environmental justice communities. Throughout the technical issue area process, members of the committees were provided information on the potential design adjustments to the LPA under consideration for their review and comment. In addition, open houses were held at milestones during the evaluation process to allow the communities, including residents of the Cities of St. Louis Park and Minneapolis, an opportunity to comment on the potential design adjustments. Section 2.4 of this Supplemental Draft EIS describes the process used by the Council to develop, evaluate, and identify the potential design adjustments considered for incorporation into the LPA. Section 2.3.3 of this Supplemental Draft EIS provides additional information on the range of potential design adjustments to the LPA in the St. Louis Park/Minneapolis Segment that were considered and the various criteria and measures used to evaluate them.

C. Environmental Justice Analysis Summary

The USDOT Order on environmental justice (USDOT, 2012) states that policies, programs, and activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations. Table 3.4-1 summarizes the long-term impacts that would be associated with the proposed St. Louis Park/ Minneapolis Segment. The DOT Order defines "disproportionately high and adverse effect on human health or the environment," to include:

"an adverse effect that:

(e) is predominantly borne by a minority population and/or a low-income population, or
(f) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

Section 8.b of the USDOT Order on environmental justice (USDOT, 2012) states that, in making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account.

As previously noted, the Draft EIS included a preliminary finding that the LPA would not result in a disproportionately high and adverse impact on EJ populations (see Table 10.6-1 in Section 10.6 of the Draft EIS). Table 3.4-20 provides a summary of the preliminary assessment of whether the anticipated environmental impacts within the St. Louis Park/Minneapolis Segment would likely change the preliminary assessment in the Draft EIS and result in disproportionately and high adverse impacts on environmental justice populations. This assessment considers the potential environmental benefits the project would have for environmental justice populations, as well as mitigation measures identified throughout Section 3.4 of this Supplemental Draft EIS. The project's Final EIS will include a final project-wide environmental justice assessment, which will include FTA's final environmental justice finding for the project.

TABLE 3.4-20

Potential Impacts by Alternative and Potential for Disproportionately High and Adverse Impacts on EJ Populations – St. Louis Park/ Minneapolis Segment

Resource Group/ Environmental Category	Summary of Potential Impacts	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Social Effects		
Land Use	• Direct conversion of 33.6 acres of land converted to public transportation-related use • LPA is compatible with adopted plans and existing land use • St. Louis Park and Minneapolis have plans to encourage mixed use and higher densities of development and land use around the Louisiana, Beltline, Wooddale, West Lake, and Penn Stations • Temporary changes to property access during construction or temporary conversion of land to a transportation use for construction staging and other construction activities • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	None: LPA is consistent with adopted land use plans and would not change overall land use character of the segment *No disproportionately high and adverse impacts on EJ populations*
Acquisitions and Displacements	• Acquisition of 23 full and 29 partial parcels • Potential relocation of up to nine businesses • Potential increases in noise levels, dust, traffic congestion, visual changes, and increased difficulty accessing property	None: no residential displacements and potentially displaced businesses do not predominantly serve EJ populations *No disproportionately high and adverse impacts on EJ populations*
Cultural Resources	• Preliminary determination of an adverse effect on the Grand Rounds Historic District and the Kenilworth Lagoon • Temporary closures of the Kenilworth Lagoon • Temporary closures of one or both lanes of a short segment of Cedar Lake Parkway between Xerxes Avenue and Burnham Road	None: adverse effects on cultural resources in the segment would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Parklands, Recreation Areas, and Open Spaces	• Indirect long-term impacts to Jorvig Park, Lilac Park, Park Siding Park, Cedar Lake Park, and Lake of the Isles Park • Short-term construction (temporary) impacts to Cedar Lake Park, Cedar Lake LRT Regional Trail, Kenilworth Trail, North Cedar Lake Regional Trail, and the Midtown Greenway	None: adverse indirect impacts (visual) to four parks would be minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Visual Quality and Aesthetics	• Of six viewpoints analyzed, three would experience a "substantial" overall level of impact and three would experience a "not substantial" level of impact • Potential construction-related visual impacts, such as construction staging areas; concrete and form installation; removal of some of the existing vegetation along the trail; lights and glare from construction areas; and dust and debris	None: visual impacts in the segment would be medium or lower and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Environmental Effects		
Geology and Groundwater	• Generally compatible geologic conditions would accommodate construction and operations • Potential for long-term pumping of water from the tunnel portals (predominantly stormwater) and of groundwater from the tunnel to underground infiltration chambers • Potential for long-term pumping of water (predominantly groundwater) from the internal tunnel to the adjacent sanitary sewer system • Groundwater removal would be required during construction of the light rail tunnel • Risk of contamination during construction and the risk of settlement due to pumping of groundwater during construction	None: generally compatible with geologic conditions and no long-term effect groundwater; short-term water pumping would include BMPs to avoid adverse temporary impacts to groundwater and soils *No disproportionately high and adverse impacts on EJ populations*
Water Resources	• Wetlands: • Permanent fill of 0.5 acre of wetlands • Temporary effects on wetlands during construction such as temporary fill • Erosion and sedimentation during construction	None: impacts to wetlands would be mitigated in compliance with federal and local requirements and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Potential Impacts	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
	• Floodplains: • No long-term floodplain impacts within the St. Louis Park/Minneapolis Segment • Potential for construction-related sedimentation flow into the floodplain	None: impacts to floodplains would be mitigated in compliance with federal and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
	• Public Waters and Stormwater Management: • New light rail crossing of Kenilworth Lagoon • Stormwater runoff would be directed into stormwater detention facilities created as part of the project • Erosion and sedimentation during construction	None: new light rail crossing of Kenilworth Lagoon would comply with federal and local requirements and stormwater would be treated to meet local requirements *No disproportionately high and adverse impacts on EJ populations*
Noise	• 67 moderate and three severe noise impacts[b] • Short-term noise impacts associated with construction activities and construction vehicles, including truck traffic	None: forthcoming noise mitigation plan will seek to avoid or minimize impacts with mitigation measures; short-term noise impacts would be avoided or minimized through BMPs; and adverse impacts would not be predominantly borne by EJ *No disproportionately high and adverse impacts on EJ populations*
Vibration	• No vibration impacts • 54 ground-borne noise impacts[c] • Short-term vibration effects from construction activities and, to a lesser extent, construction vehicles	None: no vibration impacts; the 54 ground-borne noise impacts would not be predominantly borne by EJ populations; and the forthcoming vibration mitigation plan will seek to avoid or minimize ground-borne noise impacts with mitigation measures *No disproportionately high and adverse impacts on EJ populations*
Hazardous and Contaminated Materials	• Potential permanent groundwater pumping from behind the tunnel walls could encounter zones of contaminated groundwater • Six high-risk sites that could require remediation prior to construction • Potential spills during construction • Encountering sites with existing contamination during construction	None: no likely risks of hazardous material contamination during operations; BMPs would effectively manage risks during construction *No disproportionately high and adverse impacts on EJ populations*
Economic Effects		
Economic	• Potential reduction of an estimated $35,940 (current dollars) in City of St. Louis Park property tax revenues (0.2 percent of total) • Potential impacts from removal of freight rail siding along the CP Bass Lake Spur • Potential short-term effects on freight rail operations	None: effect on local tax revenues is minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Transportation Effects	•	
Transit	• Potential changes to fixed route bus service to coordinate service with LRT service • Road detours and construction-related congestion that could affect SouthWest Transit bus operations	None: transit service would be improved for EJ populations *No disproportionately high and adverse impacts on EJ populations*
Roadway and Traffic	• Reconstruction and/or reconfiguration of existing roadways at seven locations • Traffic delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings • Changes to traffic and local circulation patterns during construction, with a potential increase in truck traffic due to construction activities	None: all intersections would meet LOS standards or would not be worse than no-build conditions and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

Resource Group/ Environmental Category	Summary of Potential Impacts	Potential for Disproportionately High and Adverse Impacts on EJ Populations[a]
Parking	• Displacement of 297 off-street parking spaces associated with the full acquisition of 10 properties • Displacement of 118 on-street parking spaces at five locations • Addition of five on-street parking spaces at one location • Temporary displacement of on-street parking could occur	None: the adverse effect of displacement of private off-street parking spaces and public on-street parking spaces to EJ populations would be relatively minor and adverse impacts would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Freight Rail	• Light rail/freight rail Swap and Southerly Connection with some modified freight rail operations • Remove approximately 11,771 feet of freight rail siding track segments in the Bass Lake Spur • Temporary movement of the freight rail tracks during construction in the Kenilworth Corridor	None: the effect of construction on freight rail operations would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*
Bicycle and Pedestrian	• Long-term changes to trail alignments at light rail crossings with no change in connectivity • Temporary trail detours during construction • Temporary trail detours would provide for continued trail connectivity during construction	None: all trail and sidewalk connections would be maintained and temporary detours would be provided during construction as needed *No disproportionately high and adverse impacts on EJ populations*
Safety and Security	• Emergency vehicle delays of approximately 50 seconds, 12 times per hour, at three new LRT at-grade crossings • Temporarily increased congestion along adjacent roadways as a result of temporary lane and roadway closures, shifts in roadway alignments, and detours	None: potential for emergency vehicle delay (<1 minute) at new LRT at-grade street crossings would be minor and adverse effects would not be predominantly borne by EJ populations *No disproportionately high and adverse impacts on EJ populations*

[a] Considering mitigation measures identified in Section 3.4 of this Supplemental Draft EIS and whether the impacts would also be borne by non-environmental justice populations.

[b]Without mitigation. Where identified and implemented, mitigation will reduce the number of noise impacts exceeding FTA criteria. Mitigation measures will be determined in the Final EIS – see Section 3.4.2.3 for additional information.

[c]Without mitigation. Ground-borne noise mitigation will be determined in the Final EIS

Note: Data are approximate.

Source: CH2M HILL, 2014.

Following is a description of the preliminary findings summarized in Table 3.4-20. As noted, the preliminary finding associated with impacts in the St. Louis Park/Minneapolis Segment will not change the preliminary finding in the Draft EIS that the LPA does not result in disproportionately high and adverse impacts to environmental justice populations.

Based on the analysis described in Section 3.4 of this Supplemental Draft EIS and summarized in Table 3.4-20, the following environmental categories would not result in any adverse high impacts or the impacts would be borne by all populations regardless of race, ethnicity, or socioeconomic status: land use; cultural resources; parklands, recreation areas, and open spaces; geology and groundwater; wetlands; floodplains; public waters and stormwater management; hazardous and contaminated materials; economics; transit; roadway and traffic; and freight rail. In addition, the following environmental categories were not evaluated within this Supplemental Draft EIS for the St. Louis Park/Minneapolis Segment, for reasons outlined in Section 3.1.1 of this Supplemental Draft EIS: socioeconomics; neighborhoods and community; biota and habitat; threatened and endangered species; farmlands; air quality; electromagnetic interference and utilities; and energy and climate change.

Acquisitions and Displacements

Section 3.4.1.2 (including Exhibit 3.4-1) of this Supplemental Draft EIS describes the analysis of potential property acquisitions and displacement resulting from the LPA in the St. Louis Park/Minneapolis Segment. While the LPA would result in the acquisition of approximately one acre of residential property, it would not result in the long-term or temporary displacement of any residents within the segment. The LPA would result in the acquisition of 23 full and 29 partial parcels in the St. Louis Park/Minneapolis Segment, which

could result in the need for up to nine businesses to be displaced and to potentially relocate. The businesses that could be displaced or relocated include a tax preparer, a bank, a heating and cooling supply company, a building maintenance company, an automobile repair garage, and a construction materials supplier. None of these businesses predominantly serve environmental justice populations and it is likely that at least some of the businesses could be relocated within the vicinity of the St. Louis Park/Minneapolis Segment through the property acquisition process.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse acquisitions and displacements affecting environmental justice populations in the St. Louis Park/Minneapolis Segment.

Visual Quality and Aesthetics

Section 3.4.1.5 of this Supplement Draft EIS describes the potential impacts that the LPA would have on visual quality and aesthetics in the St. Louis Park/Minneapolis Segment (see also Appendix J – Visual). Of the impacts of the LPA on the visual environment, one is considered to be "no change," one is considered to be "low," and three are considered to be "medium." In summary, the removal of existing vegetation in the Kenilworth Corridor would be the most predominant visual change in the segment. None of the viewpoints assessed would be predominantly viewed by environmental justice populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse impacts to visual quality and aesthetics affecting environmental justice populations in the St. Louis Park/Minneapolis Segment.

Noise

Section 3.4.2.3 of this Supplemental Draft EIS describes the potential impacts that the LPA would have on noise in the St. Louis Park/Minneapolis Segment (see also Appendix H – Noise and Vibration Memoranda). In summary, the forthcoming noise mitigation plan will be prepared and documented in the Final EIS. That plan will seek to avoid or minimize the identified noise impacts.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse noise impacts to environmental justice populations in the St. Louis Park/Minneapolis Segment.

Vibration

Section 3.4.2.4 of this Supplemental Draft EIS describes the potential impacts that the LPA would have on vibration in the St. Louis Park/Minneapolis Segment (see also Appendix H – Noise and Vibration Memoranda). In summary, the forthcoming vibration mitigation plan will be prepared and documented in the Final EIS. That plan will seek to avoid or minimize the identified ground-borne noise impacts.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse vibration impacts on environmental justice populations in the St. Louis Park/Minneapolis Segment.

Parking

As summarized in Table 3.4-20, the LPA would result in the displacement of approximately 297 private off-street parking spaces that serve existing businesses at 10 locations that would also be displaced, and the displacement of approximately 118 on-street parking spaces at five locations (as well as the addition of five new on-street parking spaces at one location), respectively. Proposed park-and-ride lots in the segment that are associated with three proposed light rail stations in the segment are described in Section 2.5.3 of this Supplemental Draft EIS and the combined supply of parking spaces within those lots would meet forecast demand.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse parking impacts to environmental justice populations in the St. Louis Park/Minneapolis Segment.

Bicycle and Pedestrian

Section 3.4.4.5 of this Supplemental Draft EIS describes the impacts that the LPA would have on the bicycle and pedestrian facilities within the St. Louis Park/Minneapolis Segment. In summary, there would be no long-term effects of the LPA on either the Cedar Lake Trail or the Kenilworth Trail within the St. Louis Park/ Minneapolis Segment. Although both trails would be maintained, they would be reconstructed and the existing at-grade trail crossing of the railroad track just northeast of Beltline Boulevard would be replaced with a grade-separated crossing of both the freight rail and light rail tracks. At Beltline Boulevard, a sidewalk that now ends at Cedar Lake Trail (and that does not extend south of the existing freight rail corridor) would be extended under the LPA to the west side of the crossing, which would be done in conjunction with construction of the Beltline Boulevard roadway crossing. If sidewalks or trails are temporarily closed during construction, alternate detour routes and signage would be provided.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse bicycle and pedestrian impacts to environmental justice populations in the St. Louis Park/Minneapolis Segment.

Safety and Security

Section 3.4.4.6 of this Supplemental Draft EIS describes the effects that the LPA would have on safety and security in the St. Louis Park/Minneapolis Segment. In particular, the section notes that the LPA would result in the addition of three new light rail at-grade crossings of local streets within the St. Louis Park/ Minneapolis Segment. To avoid the potential for incidents at at-grade intersections, crossings would be signalized or equipped with gates with bells to warn of oncoming trains. The trains would also have bells and horns. Bells, gates, and horns would be activated according to Metro Transit operating procedures and safety guidelines. Light rail trains that cross streets or intersections with automatic gate crossings would require emergency vehicles to yield for up to approximately 50 seconds for their movement. Further details associated with signal prioritization and protocols would be developed in coordination with local jurisdictions. Adverse effects on emergency vehicle travel times for EJ populations would not would not be predominantly borne by EJ populations.

Preliminary Finding: based on the findings previously described, the LPA would not result in disproportionately high and adverse safety and security impacts to environmental justice populations in the St. Louis Park/Minneapolis Segment.

3.5 Draft Section 4(f) Evaluation Update

This section provides an update to the project's Draft Section 4(f) Evaluation that was included in the project's Draft EIS. An update is being provided to reflect: 1) design adjustments to the LPA identified by the Council in April and July 2014; 2) preliminary determinations of effect on historic properties on properties within the LPA made by FTA, in consultation with the Council, MnSHPO and consulting parties as part of the project's Section 106 assessment of historical and archaeological resources; 3) provide opportunity for public comment in FTA's intent to make a de minimis impact determination, and 4) revised preliminary determinations for Section 4(f) protected properties, including preliminary non-*de minimis* and *de minimis* use determinations and temporary occupancy exception determinations. This update includes the following sections:

- 3.5.1 – Regulatory Background/Methodology: an overview of the Section 4(f) regulations, determinations, and terminology addressed in this update.
- 3.5.2 – Purpose and Need: a copy of the project's Purpose and Need Statement, which is also provided in Chapter 1 of this Supplemental Draft EIS.
- 3.5.3 – Description of the Locally Preferred Alternative: a summary description of the project's proposed LPA, reflecting design adjustments identified by the Council in April and July 2014.
- 3.5.4 – Use of Section 4(f) Properties in the LPA Study Area: a property-by-property assessment of how the LPA would use all park/recreation and historic Section 4(f) protected properties within the park and

recreation study area and the historic and archaeological areas of potential effect, respectively, including preliminary Section 4(f) determinations for each property[43].

- 3.5.5 – Coordination: a summary of Section 4(f) coordination that has occurred between FTA and the Council and the DOI, Section 4(f) officials with jurisdiction, and the public.
- 3.5.6 – Preliminary Determination of Section 4(f) Use: a summary of the project's updated Section 4(f) determinations identified in Section 3.5.4.

In summary, this section documents FTA's updated preliminary Section 4(f) use determinations for Section 4(f) properties that would be used or temporarily occupied as a result of the LPA. In addition, this section documents the analysis of other Section 4(f) properties that would be in proximity to the LPA but that would not be used by the LPA. Appendix L of this Supplemental Draft EIS provides additional supporting documentation for this Draft Section 4(f) Evaluation Update.

A. Draft EIS Section 4(f) Evaluation Summary

Chapter 7 of the Draft EIS includes the project's Draft Section 4(f) Evaluation, which was circulated for public and agency review concurrently with the Draft EIS (the comment period closed on December 31, 2012). A Draft Section 4(f) Evaluation was prepared and included in the Draft EIS because it was anticipated that the proposed project could use Section 4(f) protected properties. In addition to other alternatives, the Draft EIS's Draft Section 4(f) Evaluation included an assessment of LRT 3A-1, which included the LPA and[44] would allow for the continued operations of TC&W freight trains currently operating along the Bass Lake Spur and Kenilworth Corridor (see Section 7.4.1 of the Draft EIS). Table 7.4-1 in the Draft EIS provides a summary of the preliminary findings for LRT 3A-1 that were included in the Draft EIS's Draft Section 4(f) Evaluation for the areas of the project that are addressed in this Supplemental Draft EIS (see Section 2.5 of this Supplemental Draft EIS for a description of those areas).

As noted in the Draft EIS's Draft Section 4(f) Evaluation (Table 7.4-1 and Section 7.4.1), FTA preliminarily concluded that LRT 3A-1 would have resulted in the following[45]:

- A 0.277-acre use of Nine Mile Creek Conservation Area
- A use of the Kenilworth Lagoon (historic property – acreage of use is not specified in the Draft EIS)
- A 0.016-acre temporary occupancy during construction of Park Siding Park (park property)
- A 0.81-acre use of Cedar Lake Park (park property)
- A 0.07-acre use of Cedar Lake Parkway (historic property)

Additional background information on the preliminary findings for the Draft EIS Draft Section 4(f) Evaluation may be found in the following parts of the Draft EIS:

- Executive Summary
- Section 3.4 – Cultural Resources
- Section 3.5 – Parklands and Recreation Areas
- Chapter 7 – Draft Section 4(f) Evaluation
- Chapter 9 – Indirect Effects and Cumulative Impacts
- Chapter 11 – Evaluation of Alternatives
- Appendix H – Supporting Technical Reports and Memoranda (Section 106 Information)

[43] For the Section 4(f) property that FTA has preliminarily determined would have a non-*de minimis use* (Kenilworth Corridor/Grand Rounds Historic District), this section includes a preliminary No Feasible and Prudent Alternatives Analysis, a preliminary All Possible Planning to Minimize Harm finding, and a preliminary Least Overall Harm Analysis (see Section 3.5.4.2.O of this Supplemental Draft EIS).

[44] LRT 3A also included the LPA, but would have relocated TC&W freight rail trains out of a portion of the Bass Lake Spur and out of the Kenilworth Corridor. See Sections 2.0 and 2.2 of this Supplemental Draft EIS for additional detail on LRT 3A and LRT 3A-1.

[45] The potential for temporary occupancies of the Kenilworth Channel (historic), Cedar Lake Park, Lake of the Isles, and Cedar Lake Parkway were not known at the time of the Draft EIS (see Table 7.4-1 of the Draft EIS).

B. Changes from the Draft Section 4(f) Evaluation (Draft EIS) to Section 4(f) Evaluation Update (Supplemental Draft EIS)

Table 3.5-1 provides a summary of the changes in preliminary Section 4(f) determinations made within this Draft Section 4(f) Evaluation Update compared to those made for LRT 3A-1 (co-location) in the Draft Section 4(f) Evaluation that was included in the Draft EIS.

TABLE 3.5-1
Comparison of FTA's Preliminary Section 4(f) Property Use Determinations[a] in the Draft Section 4(f) Evaluation (Draft EIS) and the Draft Section 4(f) Evaluation Update (Supplemental Draft EIS)

Property	Draft Section 4(f) Evaluation (Draft EIS)	Draft Section 4(f) Evaluation Update (Supplement Draft EIS)
Purgatory Creek Park	• No Section 4(f) Use	• Preliminary Temporary Occupancy Exception
Nine Mile Creek Conservation Area	• *De minimis* Use	• Not a Section 4(f) Property
Minikahda Club	• No Section 4(f) Use	• Preliminary Temporary Occupancy Exception
Park Siding Park	• Preliminary Temporary Occupancy Exception	• Section 4(f) Use Avoided
Cedar Lake Parkway/Grand Rounds Historic District[b]	• Section 4(f) Use	• Preliminary Temporary Occupancy Exception
Kenilworth Lagoon/Grand Rounds Historic District[c]	• Preliminary Section 4(f) Use	• Preliminary Section 4(f) Use
Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park)	• Not identified as a Section 4(f) Property	• Preliminary *de minimis* Use
Lake of the Isles Park	• Section 4(f) Use	• Section 4(f) Use Avoided
Cedar Lake Park	• Section 4(f) Use	• Preliminary *de minimis* Use
Bryn Mawr Meadows Park	• No Section 4(f) Use	• Preliminary *de minimis* Use
St. Paul, Minneapolis & Manitoba Railroad Historic District	• No Section 4(f) Use	• Preliminary *de minimis* Use

[a] See Section 3.5.1.1 of this Supplemental Draft EIS for definitions of the potential types of Section 4(f) uses.

[b] Because the Cedar Lake Parkway is a contributing element of Grand Rounds Historic District and both have been preliminarily determined to be temporarily occupied by the LPA under Section 106, the parkway and the district are assessed together within this draft Section 4(f) Evaluation Update.

[c] Because the Kenilworth Lagoon is a contributing element of Grand Rounds Historic District and both have been preliminarily determined to be adversely affected by the LPA under Section 106, the lagoon and the district are assessed together within this draft Section 4(f) Evaluation Update.

Source: Chapter 7 of the Draft EIS and Section 3.5.4.1 of this Supplemental Draft EIS.

C. Supplemental Draft EIS Section 4(f) Evaluation Update Summary

FTA's updated preliminary Section 4(f) use determinations for the Southwest LRT Project LPA are summarized in Table 3.5-2. These updated preliminary determinations are documented in Section 3.5.4 of this Supplemental Draft EIS and supporting documentation is provided in Appendix L. In summary, FTA's preliminary determination in this Draft Section 4(f) Update is that as a result of the LPA there would be a Section 4(f) use (non-*de minimis*) of the Kenilworth Lagoon/Grand Rounds Historic District (based on a preliminary Section 106 adverse effect finding); this preliminary determination was also made under Alternative 3A-1 in the Draft Section 4(f) Evaluation.

FTA has preliminarily determined that:

1. There would be a Section 4(f) non de minimis use of one historic property (Kenilworth Lagoon/contributing element of the Grand Rounds Historic District)[46]

[46] See Section 3.5.4.2.O of this Supplemental Draft EIS for the preliminary No Feasible and Prudent Alternatives Analysis, a preliminary All Possible Planning to Minimize Harm finding, and a preliminary Least Overall Harm Analysis for the Kenilworth Corridor/Grand Rounds Historic District.

2. There would be a Section 4(f) *de minimis* use of three park properties (Kenilworth Channel/Lagoon park property, Cedar Lake Park, and Bryn Mawr Meadows Park) and one historic property (St. Paul, Minneapolis & Manitoba Railroad Historic District); and
3. There would be Section 4(f) temporary occupancies of one park (Purgatory Creek Park) and two historic properties (Minikahda Club and Cedar Lake Parkway).

TABLE 3.5-2
Summary of FTA's Preliminary Section 4(f) Property Use Determinations[a]

Section 4(f) Property	Property Type	Official with Jurisdiction	Non-*de minimis* Use	*De minimis* Use	Temporary Occupancy: No Use
Purgatory Creek Park	Park	City of Eden Prairie			•
Minikahda Club	Historic	MnSHPO			•
Cedar Lake Parkway/Grand Rounds Historic District[b]	Historic	MnSHPO			•
Kenilworth Lagoon/Grand Rounds Historic District[c]	Historic	MnSHPO	•		
Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park)	Park	MPRB		•	
Cedar Lake Park	Park	MPRB		•	
Bryn Mawr Meadows Park	Park	MPRB		•	
St. Paul, Minneapolis & Manitoba Railroad Historic District	Historic	MnSHPO		•	

[a] See Section 3.5.1.1 of this Supplemental Draft EIS for definitions of the potential types of Section 4(f) uses.

[b] Cedar Lake Parkway is a contributing element of Grand Rounds Historic District. FTA has made a Section 106 preliminary determination of no adverse effect to Cedar Lake Parkway.

[c] Kenilworth Lagoon is a contributing element of Grand Rounds Historic District. FTA has made a Section 106 preliminary determination of adverse effect to Kenilworth Lagoon historic property and Grand Rounds Historic District.

In general, this draft Section 4(f) Evaluation Update is based on the Southwest LRT Project's approximately 30 percent preliminary engineering and design work. The preliminary engineering plans provide design details throughout the corridor, including station designs, site-specific and typical cross sections, and various other design details (additional information on project-wide elements of the LPA can be found in Chapter 2 of the Draft EIS, including descriptions of light rail vehicles and ancillary light rail facilities).

For reference, Appendix L provides a copy of the preliminary engineering plan sheets where the project would permanently or temporarily use a Section 4(f) property as described in Section 3.5.4. Exhibits within Section 3.5.4 of the Supplemental Draft EIS provide additional detail on proposed project improvements and construction activities for Section 4(f) properties that would be used by the project (non-de minimis and de minimis) and where Section 4(f) properties would be temporarily occupied by the project during construction. These exhibits supplement the preliminary engineering plans by providing additional detail and/or reflecting additional design adjustments, which have preliminarily resulted from FTA's and the Council's on-going coordination with officials with jurisdiction to avoid, minimize, and mitigate impacts to Section 4(f) properties.

Section 2.5 of this Supplemental Draft EIS provides a more detailed description of the light rail related improvements and freight rail modification included within the LPA since publication of the Draft EIS for the Supplemental Draft EIS study area. Appendix J (Attachment J-1.1) of this Supplemental Draft EIS includes a variety of conceptual visual renderings of proposed project improvements at various locations throughout the corridor based on the project's conceptual engineering plans (updated visual renderings reflecting the preliminary engineering plans will be provided in the project's Final EIS).

3.5.1 Regulatory Background/Methodology

Section 4(f) of the US Department of Transportation Act of 1966, 49 USC 303(c) is a federal law that protects publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, as well as significant historic sites, whether publicly or privately owned. Section 4(f) requirements apply to all transportation projects that

require funding or other approvals by the USDOT. As a USDOT agency, FTA must comply with Section 4(f). FTA's Section 4(f) regulations are at 23 CFR Part 774.

This documentation has been prepared in accordance with legislation established under the United States Department of Transportation Act of 1966 (49 U.S.C. 303; 23 U.S.C. 138, hereafter referred to as "Section 4(f)) and the joint Federal Highway Administration (FHWA)/Federal Transit Authority (FTA) regulations for Section 4(f) compliance codified as Title 23 of the Code of Federal Regulations Section 774 (23 CFR 774). Additional guidance was obtained from *FHWA Technical Advisory T6640.8A* (FHWA, 1987) and the revised *FHWA Section 4(f) Policy Paper* (FHWA, 2012).

The same methods utilized in the Draft 4(f) Evaluation to identify potential Section 4(f) resources within 350 feet of the proposed LPA and to assess the potential use of those resources have been utilized for this Section 4(f) Evaluation Update (this 350-foot buffer area is referred to herein as the study area). Three hundred fifty feet is the unobstructed screening distance for FTA noise impact assessments and allows for identification of potential constructive uses of Section 4(f) resources. Maps, aerial photography, and local comprehensive plans were reviewed to determine the location of parks and recreational lands. Cultural resources studies of historical properties for the Southwest LRT Project have been completed under Section 106 of the National Historic Preservation Act (Section 106).

FTA will make its final Section 4(f) determinations in the project's Final EIS and ROD for the project, and subsequent to its consideration of public and agency comments. FTA will seek concurrence from the Official(s) With Jurisdiction on the preliminary determinations, prior to the publication of a Final EIS and issuance of a ROD, as required by regulations.

3.5.1.1 Types of Section 4(f) Properties

Section 4(f) requires consideration of:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public that are listed in, or eligible for, the National Register of Historic Places (NRHP)

3.5.1.2 Section 4(f) Determinations

FTA cannot approve the use of a Section 4(f) resource, as defined in 23 CFR 774.17, unless FTA determines that:

- There is no feasible and prudent avoidance alternative, as defined in 23 CFR 774.1, to the use of land from the property
- The action includes all possible planning, as defined in 23 CFR 774.17, to minimize harm to the property resulting from such use

3.5.1.3 Section 4(f) Evaluation Process

After identifying the Section 4(f) properties in the project study area, FTA determined whether and to what extent the LPA would use each property. The type of Section 4(f) use was then determined according to the following Section 4(f) use definitions:

- ***Permanent Use*.** Pursuant to 23 CFR 774.17, a permanent use occurs when land from a Section 4(f) property is permanently incorporated into a transportation project. This may occur as a result of partial or full acquisition of the Section 4(f) property, permanent easements, or temporary easements that exceed regulatory limits.
- ***Temporary Use***. As defined in 23 CFR 774.13(d), a temporary use occurs when there is a temporary use of land that is "adverse in terms of the statute's preservation purpose as determined by the criteria in 23

CFR 774.13(d)." If the criteria in 23 CFR 774.13(d) are met, the "temporary use exception" applies in which there is no "use" of the Section 4(f) property. If the criteria in 23 CFR 774.13(d) are not met, the use is evaluated as permanent (see Section 3.5.1.5 for a listing of the temporary occupancy criteria).

- ***Constructive Use***. As defined in 23 CFR 774.15(a), a constructive use occurs when a transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features or attributes that qualify a property for protection under Section 4(f) are substantially impaired.

The primary steps in a Section 4(f) evaluation are described below:

- ***Analyze Avoidance Alternatives:*** In this step, FTA considers alternatives that completely avoid the use of a Section 4(f) property. The avoidance analysis applies the Section 4(f) feasible and prudent criteria (23 CFR 774.17(2) and (3)). An alternative is not feasible if it cannot be built as a matter of sound engineering judgment (2). An avoidance alternative is not considered prudent (3) if:

  i. It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

  ii. It results in unacceptable safety or operational problems;

  iii. After reasonable mitigation, it still causes:

  (a) severe social, economic, or environmental impacts;
  (b) severe disruption to established communities;
  (c) severe disproportionate impacts to minority or low income populations, or
  (d) severe impacts to environmental resources protected under other Federal statutes;

  iv. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

  v. It causes other unique problems or unusual factors; or

  vi. It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

- ***Consider All Possible Planning to Minimize Harm:*** After determining that there are no feasible and prudent alternatives to avoid the use of Section 4(f) property, the project approval process for an individual Section 4(f) evaluation requires the consideration and documentation of all possible planning to minimize harm to Section 4(f) property (see 23 CFR 774.3(a)(2)). *All possible planning*, defined in 23 CFR 774.17, means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or to mitigate for adverse impacts and effects must be included in the project. All possible planning to minimize harm does not require analysis of feasible and prudent avoidance alternatives, as such analysis will have already occurred in the context of searching for feasible and prudent alternatives that would avoid Section 4(f) properties altogether under 23 CFR 774.3(a)(a). Minimization and mitigation measures should be determined through consultation with the official(s) with jurisdiction. Mitigation measures involving public parks, recreation areas, or wildlife or waterfowl refuges may involve replacement of land and/or facilities of comparable value and function, or monetary compensation to enhance remaining land. Mitigation of historic sites usually consists of those measures necessary to preserve the integrity of the site and agreed to in the project's Section 106 Agreement in accordance with 36 CFR 800 by FTA, SHPO, and other consulting parties.

- ***Determine Alternative/s with Least Overall Harm:*** If no feasible and prudent alternatives are identified that would avoid using a Section 4(f) property, FTA also determines the alternative that would cause the least overall harm to Section 4(f) properties using the following factors (23 CFR 774.3(c)1) and the results of considering all possible planning to minimize harm:

  i. The ability to mitigate adverse impacts to each Section 4(f) property

  ii. The relative severity of the remaining harm after mitigation

iii. The relative significance of each Section 4(f) property

iv. The views of the officials with jurisdiction over each property

v. The degree to which each alternative meets the project purpose and need;

vi. The magnitude of adverse effects to resources not protected by Section 4(f)

vii. Substantial cost differences among the alternatives

- ***Coordinate with Officials with Jurisdiction:*** FTA and the Council are coordinating with the officials with jurisdiction over each of the protected properties for which a determination is made in the project's Draft Section 4(f) Evaluation.

3.5.1.4 Section 4(f) Use Definitions and Requirements

This section provides definitions of types of potential Section 4(f) uses that are used throughout Section 3.5 and their related requirements, including: Individual Section 4(f) Evaluation; Temporary Occupancy Exception, *de minimis* Impact Determinations; and Constructive Use.

A. Individual Section 4(f) Evaluation

The term "individual Section 4(f) evaluation" is used in this section to refer to the process of assessing avoidance alternatives, determining the alternative with the least overall harm, and considering all possible planning to minimize harm for each property that would be used by the project and where that use would not be de minimis. This analysis is required for all uses of a Section 4(f) property, except in the case of a de minimis use determination (de minimis use is described below in Section 3.5.1.6).

B. Temporary Occupancy Exception

Temporary occupancies do not constitute a use and, are, therefore, not subject to the provisions of Section 4(f) if they meet each of the following five criteria for temporary occupancy exception in 23 CFR 774.13(d):

i. Duration of occupancy must be temporary; i.e. less than the time needed for construction of the project, and there can be no change in ownership of the land.

ii. The scope of work must be minor; i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal.

iii. There can be no anticipated permanent adverse physical impacts, nor can there be interference with the activities, features or attributes of the property, on either a temporary or permanent basis.

iv. The land being used must be fully restored; i.e. the property must be returned to a condition that is at least as good as that which existed prior to the project.

v. Written concurrence must be obtained from the officials with jurisdiction, documenting agreement with the above conditions. If the official with jurisdiction does not agree with a temporary occupancy exception determination, an analysis of use must be conducted. If concurrence is obtained from the officials with jurisdiction over the properties, a final determination will be made by FTA in the Final Section 4(f) Evaluation, which will be included in the Record of Decision.

C. *De Minimis* Impact Determinations

A determination of *de minimis* use can be made only if the project will not adversely affect the features, attributes or activities that make the Section 4(f) property significant, after receipt and consideration of public comment, and FTA receives concurrence with the official(s) with jurisdiction. If the official with jurisdiction does not agree with a *de minimis* use determination, an analysis of avoidance alternatives must be conducted. If the analysis concludes that there is no feasible and prudent alternative to use of the Section 4(f) property, FTA may only approve the alternative or alternatives that cause the least overall harm. A least overall harm analysis is conducted to determine which alternative/s may proceed. A *de minimis* use determination is inappropriate where a project results in a constructive use (23 CFR 774.3(b) and 23 CFR 774.17).

- ***Parks, Recreation, and Refuges.*** A *de minimis* use on a public parkland, recreational area, or wildlife and waterfowl refuge is defined as that which does not "adversely affect the features, attributes or activities qualifying the property for protection under Section 4(f)." This determination can be made only with the concurrence of the official with jurisdiction, and can be made only after an opportunity for public review and comment on the proposed determination.
- ***Historic Properties.*** As defined in 23 CFR 774.5 and 774.17, a *de minimis* use determination is made for an historic site if FTA makes a determination for a property of "No Adverse Effect" or "No Historic Properties Affected" through consultation under Section 106 of the National Historic Preservation Act (NHPA), and the State Historic Preservation Officer (SHPO) concurs with that determination.

D. Constructive Use

A constructive use involves no actual physical use of the Section 4(f) property via permanent incorporation of land or a temporary occupancy of land into a transportation facility. A constructive use occurs when the proximity impacts of a proposed project adjacent to, or nearby, a Section 4(f) property result in substantial impairment to the property's activities, features, or attributes that qualify the property for protection under Section 4(f). As a general matter this means that the value of the resource, in terms of its Section 4(f) purpose and significance, will be meaningfully reduced or lost. The types of impacts that may qualify as constructive use are addressed in 23 CFR 774.15. A project's proximity to a Section 4(f) property is not in itself an impact that results in constructive use. Also, the assessment for constructive use should be based upon the impact that is directly attributable to the project under review, not the overall combined impacts to a Section 4(f) property from multiple sources over time.

3.5.2 Purpose and Need

The Southwest LRT Project's Purpose and Need was included in Chapter One of the Draft EIS and is included in Chapter One of this Supplemental Draft EIS. It is included in this section as reference for the draft Section 4(f) Evaluation update.

3.5.2.1 Project Purpose

The purposes for enhancing transit service in the Southwest LRT Project study area are summarized as follows:

- The Southwest LRT Project will improve access and mobility to the jobs and activity centers in the Minneapolis central business district, as well as along the entire length of the corridor for reverse-commute trips to the expanding suburban employment centers.
- The Southwest LRT Project will provide a competitive, cost-effective travel option that will attract choice riders to the transit system. The competitive and reliable travel time for the Southwest LRT Project is attributed to the diagonal nature of the line compared to the north-south/east-west orientation of the roadway network and to the increasing levels of congestion of the roadway network.
- The Southwest LRT Project would be part of the region's system of transitways integrated to support regional transportation efficiency. Since the late 1990s, the Southwest LRT Project has been identified by the Council as warranting a high level of transit investment to respond to increasing travel demand in a highly congested area of the region. Due to congestion levels on the roadway network, speed and use limitations of the shoulder bus operations, and capacity constraints in downtown Minneapolis, a bus option is limited in its ability to adequately serve the travel demand and to provide reliable travel times.

3.5.2.2 Project Need

The transportation issues facing the Southwest LRT Project study area illustrate the need for improved mobility, accessibility, and system linkages to the activity centers in the study area through high-capacity transit service. The Southwest LRT Project is one of two light rail transitway corridors identified in the Council's 2040 Transportation Policy Plan as a "transitway expansion assumption to be funded within the current revenue scenario." The Southwest LRT Project study area continues to experience increases in population and employment with limited additional traffic capacity on existing streets and highways, resulting in increased travel time, delays, and air pollution. Portions of the Southwest LRT Project study area

are already densely developed. New development and redevelopment occurring in the study area is expected to generate increases in travel demand.

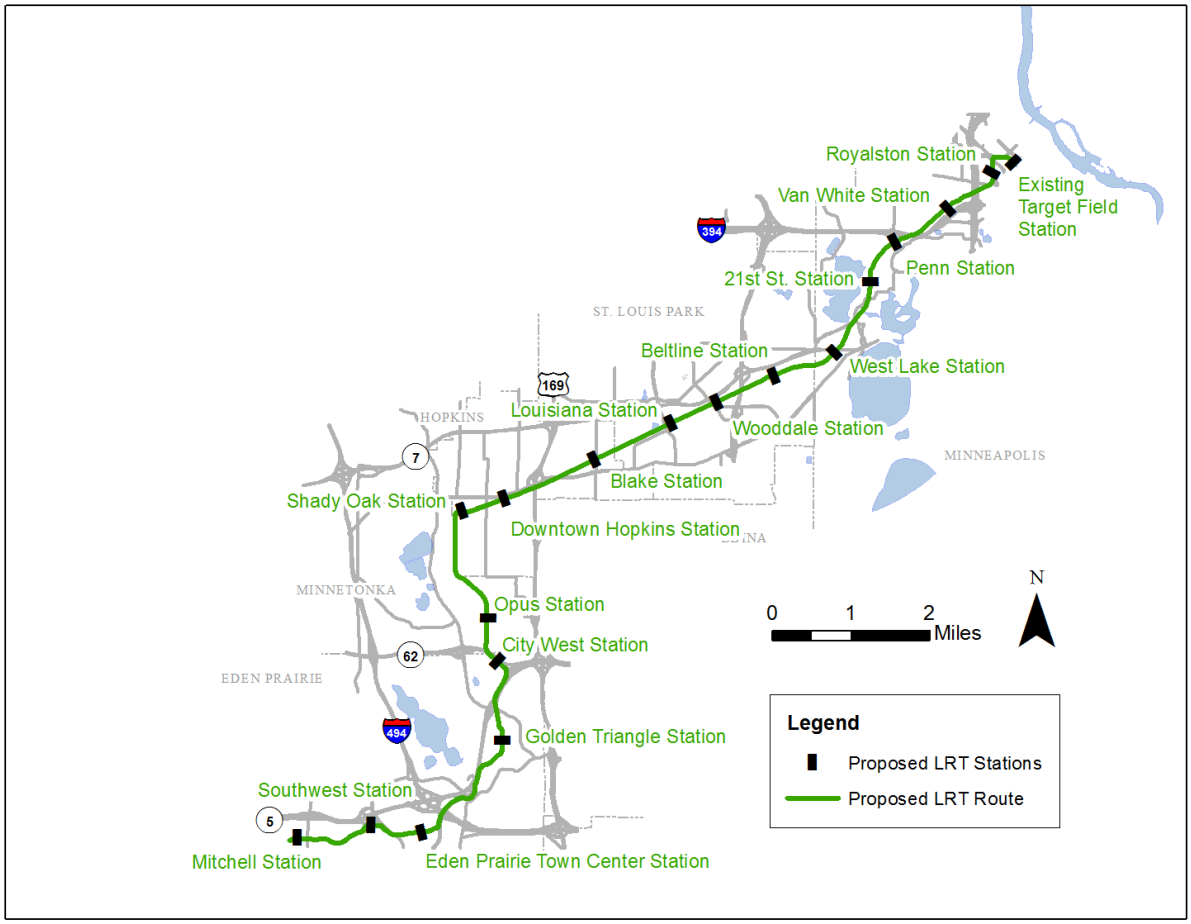
Three primary factors make the Southwest LRT corridor important for people who live and work in the southwest metropolitan area: (1) declining mobility; (2) limited competitive, reliable transit options for choice riders and people who rely on public transportation, including reverse-commute riders; and (3) need to develop and maintain a balanced and economically competitive multimodal freight system.

Sections 1.3.2.1 through 1.3.2.3 of the Draft EIS provide additional information on the need for the proposed Southwest LRT Project.

3.5.3 Description of the Locally Preferred Alternative

The proposed LPA is an approximately 16-mile proposed extension of the METRO Green Line (Central Corridor LRT) which will operate from downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to Edina (see Exhibit 3.5-1).[47]

EXHIBIT 3.5-1
Proposed Southwest LRT Alignment



[47] As described in Section 2.3 of this Supplemental Draft EIS, the LPA is included within LRT 3A and LRT 3A-1 of the Draft EIS, with the difference between these two alternatives being the "relocation" or "co-location" of TC&W trains currently operating in the Bass Lake Spur and Kenilworth Corridor. In April and July 2014, based on the design adjustment process, technical analysis, and agency and public involvement process described in Chapter 2 of this Supplemental Draft EIS, the Council identified adjustments to the LPA throughout the approximate 16-mile proposed project based on the following: the transit elements included in LRT 3A and LRT 3A-1 as described in the Draft EIS and adjusted as described in the Supplemental Draft EIS; the freight rail modifications of LRT 3A-1 (i.e., retention of freight rail service in the Kenilworth Corridor, termed "co-location" in the Draft EIS, with freight rail modifications described in the Supplemental Draft EIS).

The approximate 16-mile LPA includes the proposed light rail alignment, 17 new stations, additional park-and-ride spaces, an OMF, and ancillary facilities (such as signal systems and substations). The LPA also includes light rail-related bus, roadway, and bicycle/pedestrian improvements and retains the existing freight rail in its current location with proposed modifications. Proposed bus improvements to facilitate connections to light rail stations include some or all of the following: new or changes to existing bus routes; new or modifications to existing bus stops and platforms; and new or relocated bus shelters and other amenities. Proposed roadway improvements include changes to local streets to accommodate the light rail alignment, access to park-and-ride lots and drop-off points, and at-grade crossings. Proposed bicycle/pedestrian improvements include changes to trails, sidewalks, and other bicycle and pedestrian facilities to accommodate the light rail alignment and to provide safe and convenient access to light rail stations. Proposed freight rail modifications include the adjustment of freight rail tracks to accommodate the light rail alignment, including modified at-grade street crossings, and modifications to freight rail connections to meet freight rail operating requirements.

The double-tracked light rail alignment would be primarily at-grade, with some sections of below- and above-grade alignment and a mix of at-grade and grade-separated roadway crossings. As described in the Draft EIS, the proposed project would be an extension of the METRO Green Line (Central Corridor LRT). When completed, the two projects' light rail trains would provide a one-seat ride (with no transfer) between the two corridors. In addition, the Southwest LRT line would be part of an integrated system of transitways, including connections to the METRO Blue Line (Hiawatha) LRT (hereinafter referred to as "the Blue Line"), the Northstar Commuter Rail line, a variety of major bus routes along the alignment, and proposed future transitway and rail lines.

The proposed light rail and bus operating plans for the LPA are summarized in Section 2.3.3.10 of the Draft EIS. One adjustment to the proposed light rail operating plan under the LPA is that light rail trains would generally operate every 10 minutes during peak periods, compared to approximately every 7.5 minutes identified under LRT 3A and LRT 3A-1 in the Draft EIS. The LPA's proposed bus operating plan will be updated as part of the completion of Project Development and will be reflected in the project's Final EIS.

Chapter 5 of this Supplemental Draft EIS provides a summary of the project's capital and operating costs and finance plans, including a line-itemization of capital costs based on FTA's Standard Cost Categories (see Table 5.4-1). In summary, the LPA's base-year cost (in 2014 dollars without contingency) would be approximately $1,462 million, and total cost to fund the project would be approximately $1,653 million (in year-of-expenditure dollars).

3.5.4 Section 4(f) Properties in the LPA Study Area

This section addresses the Section 4(f) properties that are within the project's Section 106 Area of Potential Effect and within the project's park and recreation study area (see Sections 3.1.2.3 and 3.1.2.4, respectively). The 35 Section 4(f) properties that are evaluated within this section are listed and briefly described in Table 3.5-3 and their locations are illustrated on Exhibits 3.5-2 through 3.5-4A/B. Section 3.5.4.1 address 12 publically-owned park and recreation areas. Section 3.5.4.2 address 28 Section 106 historic properties. No wildlife or waterfowl refuges were identified within 350 feet of the proposed LPA alignment centerline and therefore there are no wildlife or waterfowl refuges addressed in this section.

TABLE 3.5-3
Section 4(f) Properties Evaluated in this Draft Section 4(f) Evaluation Update

Property Name	Property Type	Location	Official with Jurisdiction	Section 4(f) Qualifying Description[a]
Parks and Recreational Areas				
Purgatory Creek Park	Park	13001 Technology Drive, Eden Prairie	City of Eden Prairie	5.2 acre park
Flying Cloud Dog Park	Park	7171 Flying Cloud Drive, Eden Prairie	City of Eden Prairie	9.3 acre park
Overpass Skate Park	Park	100 Washington Ave S, Hopkins	City of Hopkins	0.4 acre park

Property Name	Property Type	Location	Official with Jurisdiction	Section 4(f) Qualifying Description[a]
Edgebrook Park	Park	3920 Pennsylvania Avenue South, St. Louis Park	City of St. Louis Park	1.3 acre park
Isaak Walton League Creekside Park	Park	7341 Oxford Street, St. Louis Park	City of St. Louis Park	1.8-acre park
Jorvig Park	Park	6210 West 37th Street, St. Louis Park	City of St. Louis Park	0.6 acre park
Lilac Park	Park	Located at Highway 7 Service Road & Highway 100 in St. Louis Park	City of St. Louis Park	2.7 acre park
Alcott Triangle	Park	At St. Louis Avenue and West 29th Street, Minneapolis	MPRB	0.3 acre park
Park Siding Park	Park	3113 28th Street West, Minneapolis	MPRB	1.4 acre park
Kenilworth Channel/ Lagoon (an element of the Minneapolis Chain of Lakes Regional Park)	Park	Located between Cedar Lake and Lake of the Isles	MPRB	10.3 acre park
Cedar Lake Park	Park	Located at Cedar Lake Parkway and Basswood Road in Minneapolis	MPRB	208.4 acre park
Bryn Mawr Meadows Park	Park	601 Morgan Avenue South, Minneapolis	MPRB	51.6 acre park
Historic Resources				
Hopkins City Hall	Individual Historic Property	1010 1st Street in Hopkins; SHPO Inventory#HE-HOC-026	MnSHPO	Eligible for NRHP
Hopkins Commercial Historic District	Historic District	Located along Mainstreet between 8th Avenue and 11th Avenue in Hopkins; SHPO Inventory#HE-HOC-027	MnSHPO	Eligible for NRHP
Minneapolis and St. Louis Railroad Depot	Individual Historic Property	9451 Excelsior Boulevard in Hopkins; SHPO Inventory# HE-HOC-014	MnSHPO	Eligible for NRHP
Chicago, Milwaukee, St. Paul and Pacific RR Depot	Individual Historic Property	6210 West 37th Street in St. Louis Park; SHPO Inventory# HE-SLC-008	MnSHPO	Listed on NRHP
Peavey-Haglin Experimental Concrete Grain Elevator	Individual Historic Property	TH 100 and TH 7 in St. Louis Park; SHPO Inventory# HE-SLC-009	MnSHPO	Listed on NRHP; National Historic Landmark (NHL)
Hoffman Callan Building	Individual Historic Property	3907 Highway 7 in St. Louis Park; SHPO Inventory# HE-SLC-055	MnSHPO	Eligible for NRHP
Minikahda Club	Individual Historic Property	3205 Excelsior Boulevard in Minneapolis; SHPO Inventory#HE-MPC-17102	MnSHPO	Eligible for NRHP
Grand Rounds Historic District (GRHD)	Historic District	Minneapolis; SHPO Inventory# XX-PRK-001	MnSHPO	Eligible for NRHP
Lake Calhoun	Contributing Element to Historic District	Minneapolis; SHPO Inventory# MPC-01811	MnSHPO	Contributing element to GRHD
Lake of the Isles	Contributing Element to Historic Districts	Minneapolis; SHPO Inventory# MPC-1824	MnSHPO	Contributing element to GRHD and contributing element to Lake of the Isles Residential Historic District
Lake of the Isles Parkway	Contributing Element to Historic Districts	Minneapolis; SHPO Inventory# MPC-1825	MnSHPO	Contributing element to GRHD Lake of the Isles Residential Historic District
Park Bridge #4	Historic Property and Contributing Element to Historic Districts	W. Lake of the Isles Parkway over Kenilworth Lagoon in Minneapolis; SHPO Inventory# HE-MPC-6901	MnSHPO	Eligible for NRHP and contributing element to GRHD and Lake of the Isles Residential Historic District

Property Name	Property Type	Location	Official with Jurisdiction	Section 4(f) Qualifying Description[a]
Lake of the Isles Residential Historic District	Historic District	Minneapolis; SHPO Inventory# HE-MPC-9860	MnSHPO	Eligible for NRHP
Cedar Lake Parkway	I Contributing Element to Historic District	Minneapolis; SHPO Inventory# MPC-01833	MnSHPO	Contributing element to Grand Rounds Historic District
Cedar Lake	Individual Historic Property and Contributing Element to Historic District	Minneapolis; SHPO Inventory# MPC-1820	MnSHPO	Eligible for NRHP; contributing element to GRHD
Kenilworth Lagoon[b]	Contributing Element to Historic Districts	Minneapolis; SHPO Inventory# MPC-1822	MnSHPO	Contributing element to GRHD and to Lake of the Isles Residential Historic District
Frieda and J. Neils House	Individual Historic Property	2801 Burnham Blvd, Minneapolis; SHPO Inventory# HE-MPC-6068	MnSHPO	Listed on NRHP
Mahalia & Zachariah Saveland House	Individual Historic Property	2405 W 22nd Street, Minneapolis; SHPO Inventory# HE-MPC-6676	MnSHPO	Eligible for NRHP
Frank and Julia Shaw House	Individual Historic Property	2036 Queen Ave S, Minneapolis; SHPO Inventory# HE-MPC-6603	MnSHPO	Eligible for NRHP
Kenwood Parkway	Contributing Element to Historic Districts	Minneapolis; SHPO Inventory# MPC-01796	MnSHPO	Contributing element to GRHD and the Kenwood Parkway Residential Historic District
Kenwood Park	Contributing Element to Historic District	Minneapolis; SHPO Inventory# MPC-01797	MnSHPO	Contributing element to GRHD
Kenwood Parkway Residential Historic District	Historic District	Minneapolis; SHPO Inventory# HE-MPC-18059	MnSHPO	Eligible for NRHP
Kenwood Water Tower	Individual Historic Property and Contributing Element to Historic District	Minneapolis; SHPO Inventory# MPC-06475	MnSHPO	Eligible for NRHP; contributing element to GRHD
Mac Martin House	Individual Historic Property	1828 Mt. Curve Ave, Minneapolis; SHPO Inventory# HE-MPC-8763	MnSHPO	Eligible for NRHP
St. Paul, Minneapolis & Manitoba Railroad Historic District	Historic District	Minneapolis; SHPO Inventory#HE-MPC-16387	MnSHPO	Eligible for NRHP
Osseo Branch of the St. Paul, Minneapolis & Manitoba RR Historic District	Historic District	Minneapolis; SHPO Inventory# XX-RRD-010 (district), HE-MPC-16389 (portion of district in Minneapolis)	MnSHPO	Eligible for NRHP
Minneapolis Warehouse Historic District	Historic District	Located in the vicinity of 1st Avenue N., N. 1st. Street., 10th Avenue N., and N. 6th Street in Minneapolis; SHPO Inventory# HE-MPC-0441	MnSHPO	Eligible for NRHP
Dunwoody Institute	Individual Historic Property	818 Dunwoody Boulevard in Minneapolis; SHPO Inventory# HE-MPC-6641	MnSHPO	Eligible for NRHP

[a] All listed parks are publically owned, publically accessible and of local significance.

[b] Includes topographical features, vegetation and WPA-era retaining walls.

Acronyms: MPRB = Minneapolis Park and Recreation Board; MnSHPO = Minnesota State Historic Preservation Officer; NRHP = *National Register of Historic Places*.

Note: see Exhibits 3.5-2 through 3.5-4A/B for an illustration of the location of the Section 4(f) properties listed in this table.

EXHIBIT 3.5-2

Section 4(f) Properties within the vicinity of the proposed LPA – Mitchell Station to Shady Oak Station

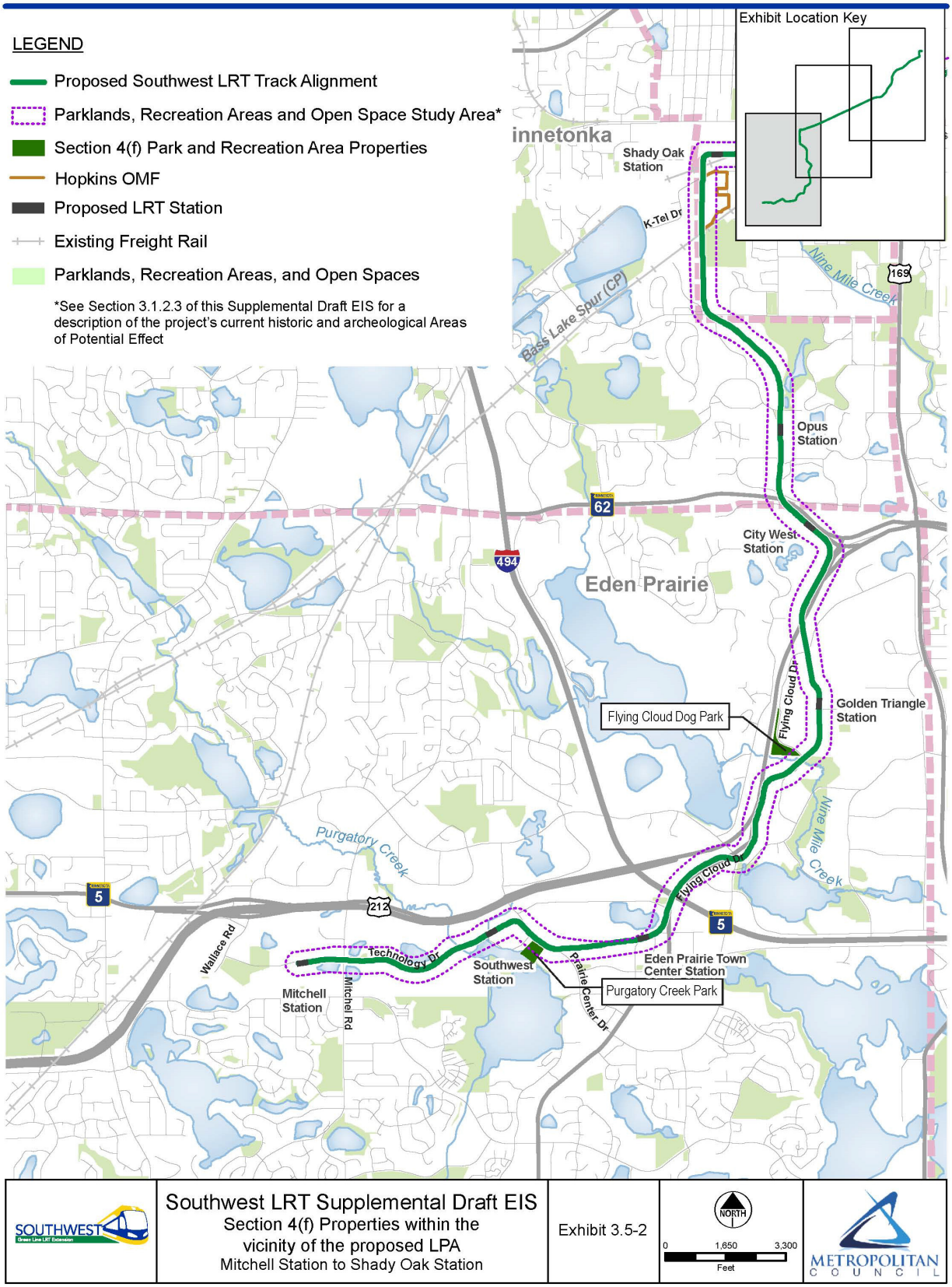
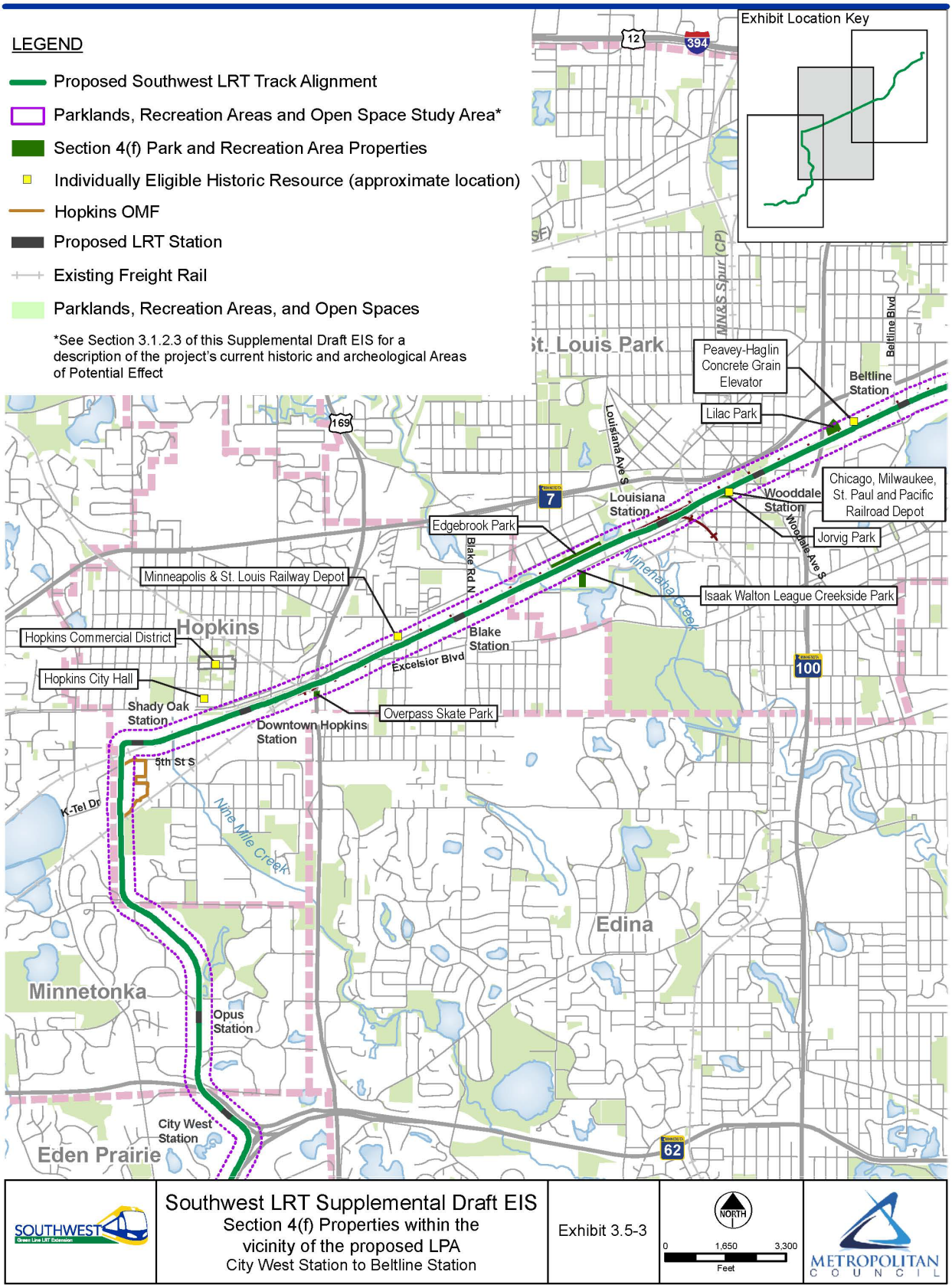


EXHIBIT 3.5-3

Section 4(f) Properties within the vicinity of the proposed LPA – City West Station to Beltline Station



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Section 4(f) Properties within the vicinity of the proposed LPA City West Station to Beltline Station	Exhibit 3.5-3	NORTH 0 1,650 3,300 Feet	METROPOLITAN COUNCIL

EXHIBIT 3.5-4A

Section 4(f) Recreational and Individual Historic Properties within the vicinity of the proposed LPA – Louisiana Station to Target Field Station

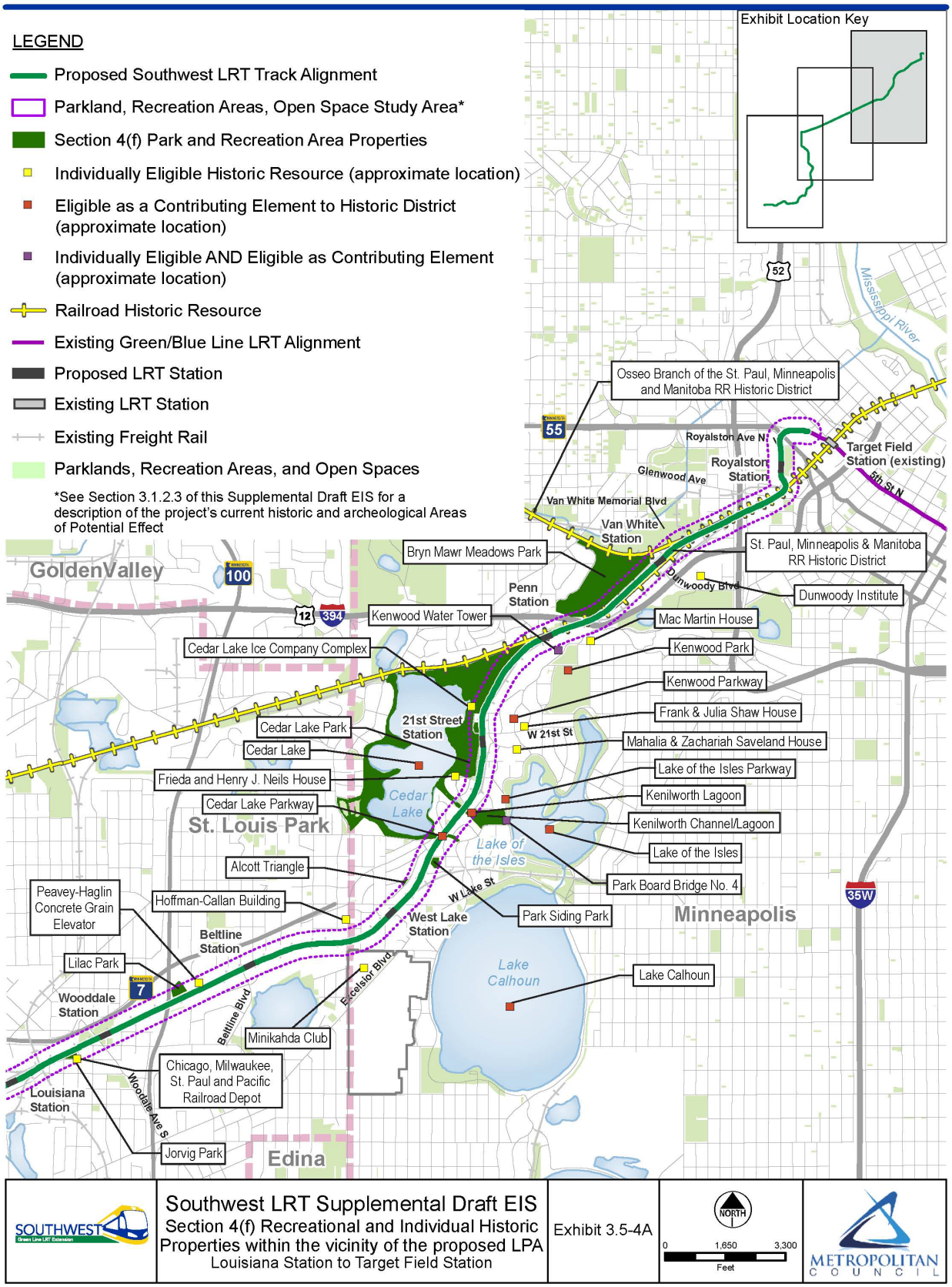
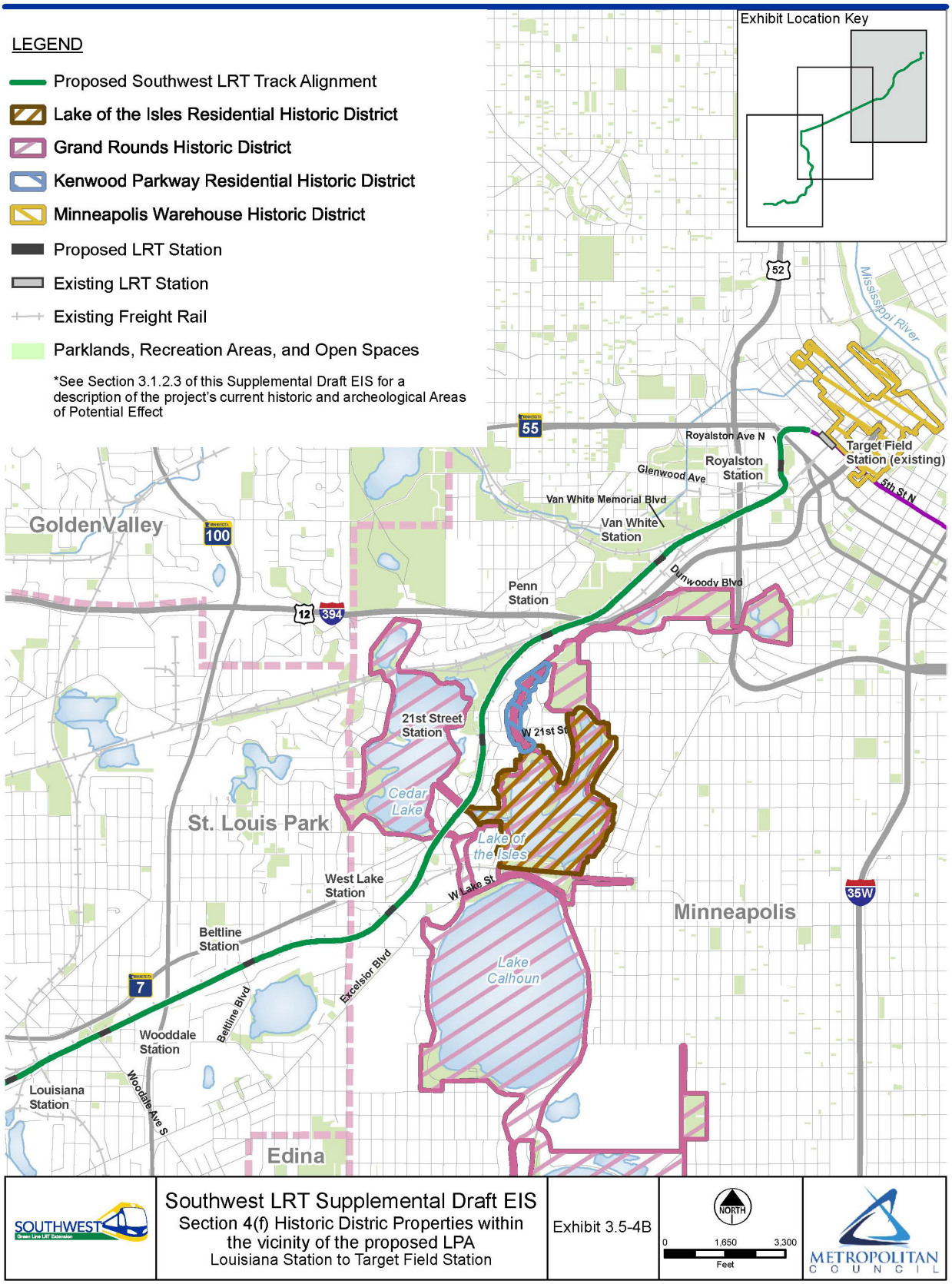


EXHIBIT 3.5-4B

Section 4(f) Historic District Properties within the vicinity of the proposed LPA – Louisiana Station to Target Field Station



3.5.4.1 Publicly Owned Parks and Recreational Areas

Exhibits 3.5-2 through 3.5-4A illustrate the location of Section 4(f) park and recreation area properties in the LPA study area. Table 3.5-3 lists the resource name, location, and jurisdictional owner. Table 3.5-4 summarizes FTA's preliminary Section 4(f) use determination for each of the Section 4(f) park and recreation properties within the LPA's study area. Table 3.5-4 also includes how many acres, if any, of the property would be used under the LPA (compared to the property's acreage). Park and recreation properties are generally listed from south-to-north in the LPA study area.

TABLE 3.5-4
Summary of Permanent Section 4(f) Park and Recreational Property Uses[a]

Section 4(f) Property	Non-*de minimis* Use	*De minimis* Use	No Use	Existing Property Acreage	Acres Permanently Used	% of Property Used
Purgatory Creek Park			•[b]	5.2	0.0	0.0%
Flying Cloud Dog Park			•	9.3	0.0	0.0%
Overpass Skate Park			•	0.4	0.0	0.0%
Edgebrook Park			•	1.3	0.0	0.0%
Isaak Walton League Creekside Park			•	1.8	0.0	0.0%
Jorvig Park			•	0.6	0.0	0.0%
Lilac Park			•	2.7	0.0	0.0%
Alcott Triangle			•	0.3	0.0	0.0%
Park Siding Park			•	1.4	0.0	0.0%
Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park)		•		10.3	0.3	0.3%
Cedar Lake Park		•		208.4	0.7	<0.1%
Bryn Mawr Meadows Park		•		51.6	0.4	0.1%

[a] See Section 3.5.1.1 of this Supplemental Draft EIS for definitions of the potential types of Section 4(f) uses.

[b] Purgatory Creek Park would be temporarily used by the project during construction of the Southwest LRT Project. FTA has preliminarily determined that this temporary use would meet the criteria for a Temporary Occupancy Exception under 23 CFR 774.13(d). See Section 3.5.1.5 of this Supplemental Draft EIS for a description of the criteria for a Temporary Occupancy Exception and Section 3.5.4.1 of this Supplemental Draft EIS for a description of temporary construction activities at Purgatory Creek Park and the rationale for why those temporary construction activities would likely meet the Temporary Occupancy Exception criteria.

All acreages in this table are approximate. The estimates of acres that would be permanently used are based on current plans illustrated in this section and may change as designs are refined and as FTA and the Council coordinate with the officials with jurisdiction and consider public comment to determine appropriate final avoidance, minimization, and mitigation measures.

The following properties in the LPA study area not considered Section 4(f) park/recreation properties:

- The Grand Rounds National Scenic Byway consists of a network of parkways, regional parks, and regional trails that encircle Minneapolis[48]. The Grand Rounds National Scenic Byway was designated a National Scenic Byway by the FHWA in 1998. The designation of a road as a scenic byway is not intended to create a park or recreation area within the meaning of 49 U.S.C. 303 or 23 U.S.C. 138. Therefore, the Grand Rounds National Scenic Byway as a roadway is not identified as a Section 4(f) resource in regards to park and recreational lands.
- The existing trails adjacent to the LPA (Cedar Lake Trail, Kenilworth Trail, Cedar Lake LRT Regional Trail, and Minnesota Bluffs LRT Regional Trail) were constructed on HCRRA property under temporary agreements between HCRRA and trail permittees. As documented in each trail's interim use agreement in Appendix G of the Draft EIS, HCRRA permitted these trails as temporary uses with the stipulation that they may be used until HCRRA develops the corridor for a LRT system or other permitted transportation use; therefore, these trails are not subject to protection as Section 4(f) property (as per 23 CFR 774.11[h]). See Section 3.4.1.4 and Exhibit 3.4-4 of this Supplemental Draft EIS for more information on

[48] For a map of the Ground Rounds Scenic Byway and for additional information on the byway, see http://www.fhwa.dot.gov/byways/byways/2243.

and an illustration of the referenced trails, respectively (see Chapter 7 and Appendix G of the Draft EIS for additional detail, including copies of the permit agreements).

- In addition to the previously-mentioned trails within HCRRA, project staff also identified tails, paths, bikeways, and sidewalks that that fall within the project's park and recreation area study area but that are located outside of the boundaries of parks and recreation areas. The identified trails, paths, bikeways, and sidewalks are exempt from Section 4(f) because they: 1) occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, and the continuity of the trail, path, bikeway, or sidewalk will be maintained under the LPA, as per 23 CFR 774.13(f)(3); and/or 2) they are part of the local transportation system and function primarily for transportation purposes, as per 23 CFR 774.13(f)(4).
- Section 4(f) was found to not apply to the Nine Mile Creek Conservation Area within the project study area because its primary purpose is not as a park or recreation area but rather as a conservation area that is not a designated wildlife or waterfowl refuge. The *Eden Prairie Comprehensive Guide Plan* (City of Eden Prairie; 2008) is the master planning document for the Nine Mile Creek Conservation Area (there is no adopted master plan specifically for the Nine Mile Creek Conservation Area). The *Comprehensive Guide Plan* (page 7-10) notes that Eden Prairie's "conservation areas consist of large floodplain preservation areas, wetlands, bluffs and sensitive woodland areas…[that] have some limited active passive recreation facilities… [and that] consist of large wetland/floodplain preservation areas." The plan does not cite wildlife or waterfowl or their habitat in the purpose of the conservation areas and there is no specific adopted management plan for the Nine Mile Creek Conservation Area. Based on the City of Eden Prairie's adopted *Comprehensive Guide Plan* and on 23 CFR 774.11, FTA has determined that Section 4(f) protection is not applicable to the Nine Mile Creek Conservation Area because its primary purpose is not recreation or to provide a refuge for wildlife or waterfowl refuge and it is not managed as such.

Following is a description of the 12 Section 4(f) park and recreation properties within the LPA's park and recreation are study area (generally from south to north), including:

- A description of the Section 4(f) property;
- A preliminary Section 4(f) permanent use determination;
- A preliminary Section 4(f) temporary use determination/temporary occupancy exception determination (for those properties that would not have a Section 4(f) use or a Section 4(f) *de minimis* use);
- A preliminary Section 4(f) constructive use determination (for those properties that would not have a Section 4(f) use); and
- A preliminary overall Section 4(f) determination.

A. Purgatory Creek Park – Preliminary Temporary Occupancy Exception/No Section 4(f) Use

Section 4(f) Property Description

Located at 13001 Technology Drive, Purgatory Creek Park contains a 125 person-capacity pavilion (for active recreation activities), bicycle and walking trails, the Mayor Jean Harris Gathering Bridge, gardens, a dock, a fountain, the Eden Prairie Veterans' Memorial (which is a quiet and contemplative area of the park), the Lambert Pavilion, a 54-space parking lot, and restrooms (see Exhibit 3.5-2). The approximately 5.2 acre park is bordered on two sides by Technology Drive and Prairie Center Drive, and on the remaining two sides by a business center parking lot and by Purgatory Creek Park reservoir. The park is accessible, free of charge, to the public all days of the year, from dawn to dusk. Events at the memorial, which is within the park, include an annual Memorial Day celebration that highlights honoring specific Eden Prairie veterans. The park's parking lot is accessed via Technology Drive and via Prairie Center Drive, through the adjacent business center's parking lot. Bicycle and pedestrian access to the park is provided by connections to city sidewalks and off-street trails. The park is owned by the City of Eden Prairie and is maintained and operated by the city's Park and Recreation Department. Consultation between city and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of

the Draft EIS. In addition, project staff held a meeting with city staff focused on Purgatory Creek Park, the Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 20, 2015[49]. Although the park's setting is primarily urban/suburban, there are also views of natural areas to the southwest. As the park is a publicly owned, publicly accessible park of local significance, Purgatory Creek Park is considered by FTA to be a Section 4(f) protected property.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated on Exhibit 3.5-5, the LPA would not result in a permanent incorporation of land from Purgatory Creek Park, therefore, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Occupancy Exception

The LPA would require a temporary occupancy of approximately 0.3 acres along the northeastern edge of Purgatory Creek Park to facilitate project construction activities (see Exhibit 3.5-5). Section 4(f) temporary occupancy exception criteria are addressed below with respect to the construction impacts at Purgatory Creek Park:

1. ***Criterion:*** *Duration is temporary (that is, the occupancy is shorter than the time needed for construction of the project, and there is no change in ownership of the property).*

   Preliminary Finding*:* The overall duration of construction for the entire project is approximately four years. The duration of the construction activities for the portion near Purgatory Creek Park is estimated would extend for approximately up to 24 calendar months – additional time may be needed for restoration activities within the park, depending on variables, such as seasonal timing of the activities and weather conditions. There will be no change in ownership of the parkland that would be temporarily occupied.

2. ***Criterion:*** *Scope of work is minor (that is, the nature and magnitude of the changes to the Section 4(f) properties are minimal).*

   Preliminary Finding*:* The part of Purgatory Creek Park to be temporarily occupied during construction includes a portion of the park's access path from the intersection of Technology Drive and Prairie Center Drive as well as the park's secondary parking lot access. Pedestrians entering from the Technology Drive/Prairie Center Drive intersection would be provided a temporary pedestrian path detour. The park would still be accessible to the public throughout construction for vehicles, bicycles, and pedestrians via the main driveway off Technology Drive and also for bicycles and pedestrians via the respective off-street sidewalk paths located adjacent to the west side of Prairie Center Drive and north side of Technology Drive. The part of the park to be temporarily occupied also includes an open grass landscaped area and a portion of the park driveway; this part of the park does not contain any recreational features or amenities. There would be no permanent change to Purgatory Creek Park as a result of project actions.

3. ***Criterion:*** *There are no anticipated permanent adverse physical impacts or permanent interference with the protected activities, features, or attributes of the property.*

   Preliminary Finding*:* None of the aforementioned activities, features, or attributes of Purgatory Creek Park will be permanently impacted nor will temporary construction actions at the park permanently or temporarily interfere with visitors utilizing the park as they do currently. Council staff will coordinate construction activities with park staff from the City of Eden Prairie to schedule construction activities so that they avoid park activities identified by the city that should be considered when setting the schedule for construction activities. As illustrated in Exhibit 3.5-5, vehicular access to/from the park will be maintained in the southeast corner of the temporary occupancy area (i.e., approximately 1,400 square feet), with only short closures needed to safely complete some construction activities (e.g., beam placement). Impacts related to temporary changes to parking and access will be mitigated by

[49] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

EXHIBIT 3.5-5
Draft Section 4(f) Evaluation Update – Purgatory Creek Park



development of a Construction Communication Plan, which will include advance notice of construction activities and highlighting road, sidewalk, and trail closures and detour routes.

4. ***Criterion:*** *The property is restored to the same or better condition that existed prior to the project.*

   Preliminary Finding*:* The portion of the park to be temporarily occupied during construction will be restored to existing conditions or better – this includes the previously described pedestrian path, landscaped area (including signage and lighting) and secondary parking lot driveway access.

5. ***Criterion:*** *There is documented agreement from the appropriate federal, state, or local officials having jurisdiction over the property regarding the above conditions.*

   Preliminary Finding*:* FTA and Council staff met with City of Eden Prairie staff on February 20, 2015, to review the project's preliminary construction plan for Purgatory Creek Park. As a result of the meeting, modifications to the plan were made by the Council, as reflected in this assessment and in Exhibit 3.5-5 (see Appendix L for meeting notes and materials). Those modifications included bifurcating the area of construction activities within the park into two categories – one larger area for the full duration of the construction activities within the park and the other of intermittent construction activities. The modifications to the plan were made to minimize closures to the eastern vehicular access to the park's parking lot. The project will continue consulting with the City of Eden Prairie regarding obtaining written concurrence on a final determination that the project would meet the above temporary occupancy exception criteria.

Preliminary Determination of Constructive Section 4(f) Use

Although the sound of passing light rail trains would be audible from within the park, this increased sound would not constitute an impact based on FTA's noise threshold criteria. As discussed in Section 3.1.2.8 of this Supplemental Draft EIS, the war memorial within the park is considered to be a sensitive noise receptor (Category 3). The detailed noise analysis performed for this Supplemental Draft EIS indicates that noise levels at the war memorial within the park would not exceed FTA's noise impact criteria (i.e., noise levels under the LPA at the war memorial would be 53 dBA, which is under the criteria of 60 dBA for a moderate noise impact for a Category 3 land use – see Section 3.1.2.8 of this Supplemental Draft EIS for additional detail).

Changes in development density in areas surrounding proposed transit stations could result in an increase in Purgatory Creek Park usage, which could have potential for both positive and negative consequences.

The LPA would also result in changes to the park's setting and a visitor's visual experience, resulting in a moderately-low and low impact to views into and from the park, respectively. In particular, some users' visual experiences could be perceived as adversely affected by the introduction of the elevated light rail structure immediately east of the park, as discussed in Section 3.2.1.5 of this Supplemental Draft EIS. However, the visual changes and impacts will not alter or impair the overall use or function of the park.

As illustrated on Exhibit 3.5-5, an elevated section of the light rail alignment is to be located adjacent to the northeast boundary of Purgatory Creek Park, avoiding any long-term direct impacts to the park. Permanent improvements can be contained within the existing right-of-way of Flying Cloud Drive. As described in Section 2.3 of this Supplemental Draft EIS, project staff consulted with the City of Eden Prairie, the park owner, on design adjustments to the light rail alignment and associated facilities within the vicinity of the park. Existing bicycle, pedestrian, and vehicular access to the park would be maintained under the proposed LPA. The proposed Southwest Station is within walking distance of Purgatory Creek Park, thereby providing improved transit access to the park.

In summary, the proximity impacts of the LPA on Purgatory Creek Park would not substantially impair the qualifying activities, features, or attributes of the park and, therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Purgatory Creek Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent Section 4(f) use of Purgatory Creek Park and that proposed construction activities within the park would meet the criteria for a Temporary Occupancy Exception described in 23 CFR 774.13(d).

B. Flying Cloud Dog Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Located at 7171 Flying Cloud Drive, Eden Prairie, Flying Cloud Dog Park is approximately one-acre fenced park that provides year-round use by dogs and dog owners (see Exhibit 3.5-2). The fenced area includes a section for small or fragile dogs and a larger area for big dogs. The park includes a small parking lot, obstacle equipment for dogs, benches, and a portable toilet. The park is owned and managed by the City of Eden Prairie. As the park is a publicly owned, publicly accessible park of local significance, Flying Cloud Dog Park is considered by FTA to be a Section 4(f) protected property.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and see Exhibit 3.5-6, the LPA would not result in a permanent incorporation of land from Flying Cloud Dog Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Flying Cloud Dog Park during construction.

Preliminary Determination of Constructive Section 4(f) Use

Because the Flying Cloud Dog Park would be located away from the proposed light rail alignment, there would be no proximity impacts to the park as a result of the Southwest LRT LPA. In particular, the park is not a sensitive noise receptor, the light rail alignment would mostly be shielded from view from the park due to existing and retained vegetation, and there would be no change in transit, vehicle, bicycle, or pedestrian access to the park.

In summary, there would be no proximity impacts on Flying Cloud Dog Park under the LPA and thus the Southwest LRT LPA would not substantially impair the qualifying activities, features, or attributes of the park. Therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Flying Cloud Dog Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Flying Cloud Dog Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Flying Cloud Dog Park.

C. Overpass Skate Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

The Overpass Skate Park is located at 100 Washington Avenue South in Hopkins, Minnesota (see Exhibit 3.5-3). The approximately 0.4-acre park is under the Highway 169 bypass. The park has a variety of features for skateboard, inline skaters and BMX bikers, including piano banks, fun boxes, kinked rails, and staircases. Protective helmets and pads are also available. The park is seasonal and operates as weather permits – generally extending from May through October). Hours of operation are noon to dusk, weekends during spring and fall and seven days a week during the summer. There is a fee for park use, which is currently $8.00 per day for non-residents, with a $2.00 discount for residents. First-time users are required to sign a waiver, with parent signature required for those under the age of 18. The park is owned by the City of Hopkins and it is operated by 3rd Lair under a management agreement with the city. As the park is a publicly owned, publicly accessible park of local significance, Overpass Skate Park is considered by FTA to be a Section 4(f) protected property.

EXHIBIT 3.5-6
Draft Section 4(f) Evaluation Update – Flying Cloud Dog Park



Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-7, the LPA would not result in a permanent incorporation of land from Overpass Skate Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Overpass Skate Park during construction.

Preliminary Determination of Constructive Section 4(f) Use

The Overpass Skate Park is not considered a sensitive noise receptor as it is an active recreation area and it is not part of a sensitive visual landscape unit. Therefore the park would not be adversely affected by elevated noise levels from the operation of light rail trains or the presence of new light rail facilities, such as tracks and overhead wires. Changes in development density in areas surrounding proposed transit station could result in an increase in Overpass Skate Park usage, which could have potential for both positive and negative consequences. The park would see an improvement in transit access, with the addition of the proposed Downtown Hopkins Station approximately one-third mile to the west. Vehicular, bicycle, and pedestrian access to the park would not change.

In summary, there would be no proximity impacts of the LPA on Overpass Skate Park and thus the Southwest LRT LPA would not substantially impair the qualifying activities, features, or attributes of the park. Therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Overpass Skateboard Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Overpass Skate Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Overpass Skate Park.

D. Edgebrook Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Edgebrook Park is located at 3920 Pennsylvania Avenue South in St. Louis Park, Minnesota, immediately north of and paralleling the Cedar Lake Trail, generally between Brookview Drive and Taft Avenue South (see Exhibit 3.5-3). The approximately 1.3-acre park includes a play structure, basketball courts, and access to Cedar Lake Trail. During the winter, the park houses a figure lighted skating rink. The park is owned and managed by the City of St. Louis Park. As the park is a publicly owned, publicly accessible park of local significance, Edgebrook Park is considered by FTA to be a Section 4(f) protected property..

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-8, the LPA would not result in a permanent incorporation of land from Edgebrook Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Edgebrook Park during construction.

Preliminary Determination of Constructive Section 4(f) Use

While light rail trains would be audible from within the park, Edgebrook Park is not considered a sensitive noise receptor under FTA noise guidelines, as it is an active recreation area. Therefore, under FTA noise criteria there would be no noise impact to the park under the LPA. While light rail trains and light rail improvements (e.g., tracks, overhead wires) would be visible from within the park under the LPA, this change in the visual setting of the park would not adversely affect the activities, features, or attributes of the

EXHIBIT 3.5-7
Draft Section 4(f) Evaluation Update – Overpass Skate Park

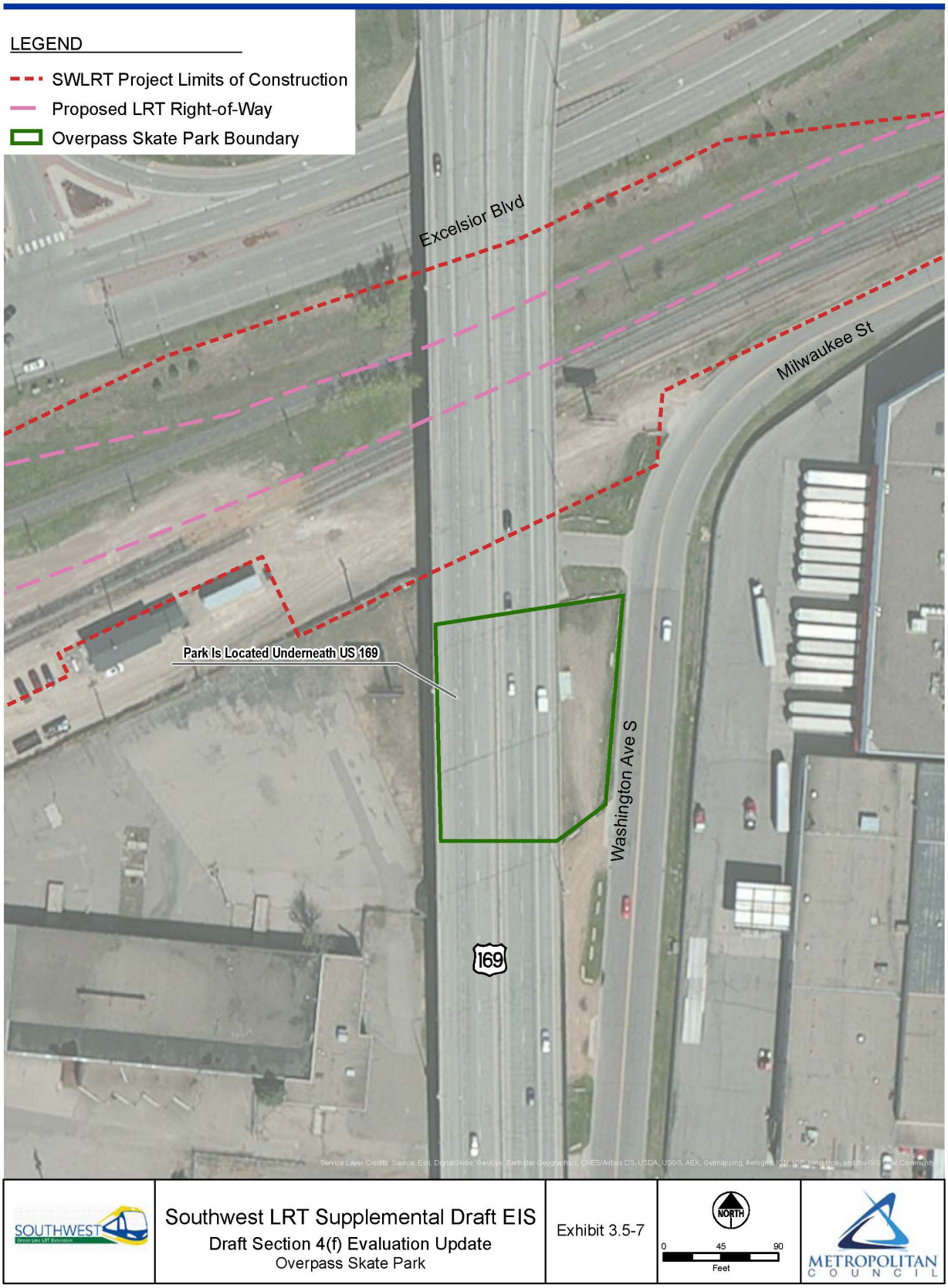
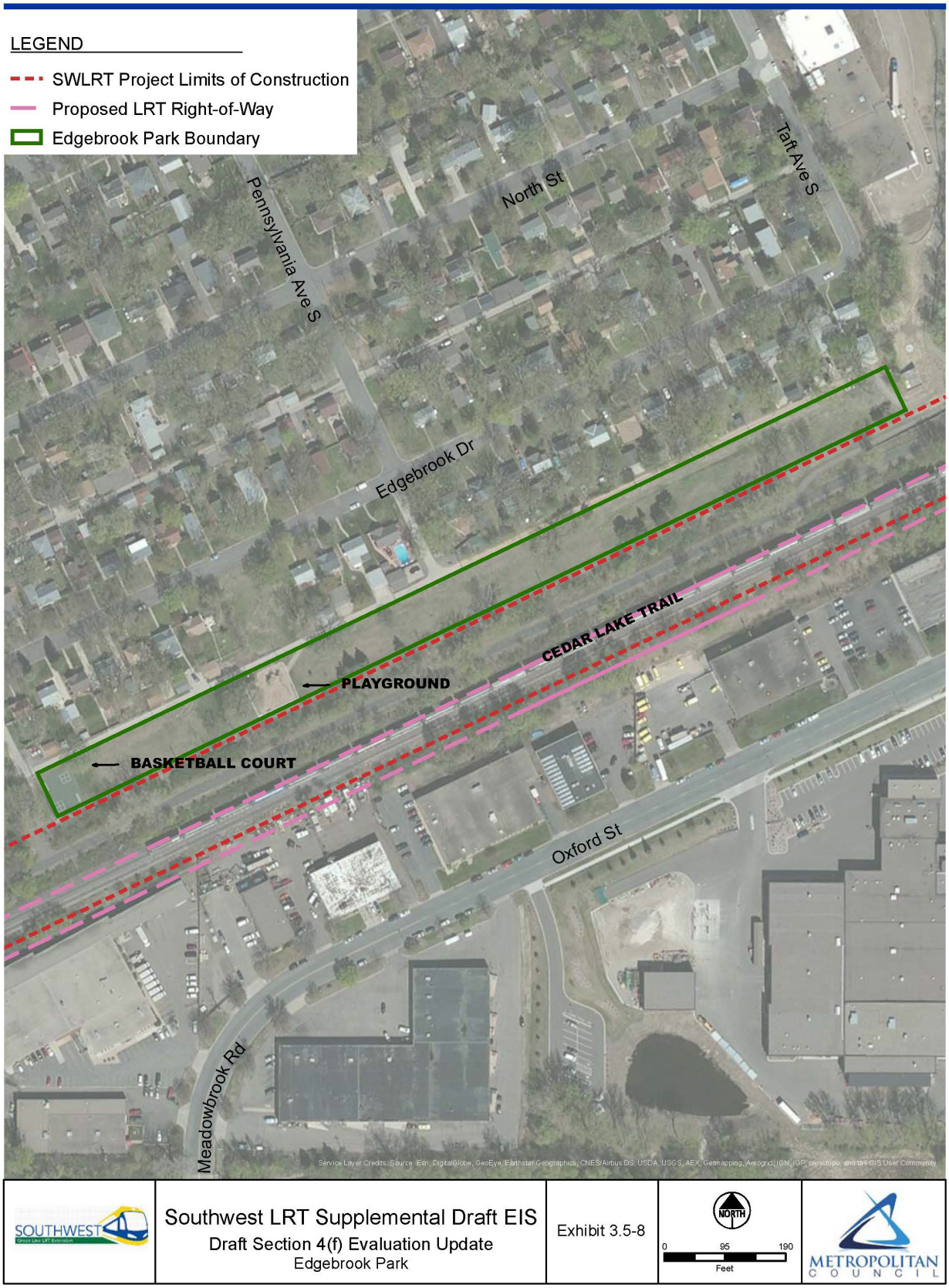


EXHIBIT 3.5-8
Draft Section 4(f) Evaluation Update – Edgebrook Park



park. Changes in development density in areas surrounding proposed transit station could result in an increase in Edgebrook Park usage, which could have potential for both positive and negative consequences. The park would see an improvement in transit access, with the addition of the proposed Louisiana Station approximately one-third mile to the east. Vehicular, bicycle, and pedestrian access to the park would not change.

In summary, there would be no proximity impacts of the LPA on Edgebrook Park and thus the Southwest LRT LPA would not substantially impair the qualifying activities, features, or attributes of the park. Therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Edgebrook Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Edgebrook Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Edgebrook Park.

E. Isaak Walton League Creekside Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Isaak Walton League Creekside Park is located at 7341 Oxford Street in St. Louis Park, Minnesota, immediately north of Minnehaha Creek (see Exhibit 3.5-3). The approximately 1.8-acre park includes a canoe landing, an off-street parking lot, trail access, and outdoor cooking grills. The park is owned and managed by the City of St. Louis Park. As the park is a publicly owned, publicly accessible park of local significance, Isaak Walton League Creekside Park is considered by FTA to be a Section 4(f) protected property..

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-9, the LPA would not result in a permanent incorporation of land from Isaak Walton League Creekside Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Isaak Walton League Creekside Park during construction

Preliminary Determination of Constructive Section 4(f) Use

Due to existing buildings and vegetation between the park and the proposed light rail alignment, the Southwest LRT LPA would not change the visual setting of the park. Although some sound from light rail trains would be audible from within the park, the park is not considered a sensitive noise receptor based on FTA's criteria, which are discussed in Section 3.1.2.8 of this Supplemental Draft EIS. Therefore, under FTA noise criteria there would be no noise impact to the park under the LPA. Changes in development density in areas surrounding proposed transit station could result in an increase in Isaak Walton League Creekside Park usage, which could have potential for both positive and negative consequences. The park would see an improvement in transit access, with the addition of the proposed Louisiana Station approximately one-quarter mile to the east. Vehicular, bicycle, and pedestrian access to the park would not change.

In summary, there would be no proximity impacts of the LPA on Isaak Walton League Creekside Park and thus the Southwest LRT LPA would not substantially impair the qualifying activities, features, or attributes of the park. Therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Isaak Walton League Creekside Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Isaak Walton League Creekside Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Isaak

Walton League Creekside Park.



F. Jorvig Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Jorvig Park is located at 6100 West 37th Street in St. Louis Park, northwest of the intersection of Brunswick Avenue South and West 37th Street and immediately south of the Bass Lake Spur (see Exhibit 3.5-3). The approximately 0.6 acre park includes a play structure, horseshoe pits, picnic tables, and outdoor cooking grills. The park also houses a relocated historic train depot (i.e., the Chicago, Milwaukee, St. Paul and Pacific Railroad Depot – see resource HE-SLC-008 in Section 3.4.1.3 for more information). The park is owned and maintained by the City of St. Louis Park. As the park is a publicly owned, publicly accessible park of local significance, Jorvig Park is considered by FTA to be a Section 4(f) protected property.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-10, the LPA would not result in a permanent incorporation of land from Jorvig Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Jorvig Park during construction.

Preliminary Determination of Section 4(f) Constructive Use

Existing bicycle, pedestrian, and vehicular access to Jorvig Park would be maintained under the proposed LPA. The proposed Wooddale Station is within walking distance of Jorvig Park, thereby providing improved transit access to the park. Although the sound of light rail trains would be audible from within the park, the park is not considered a sensitive noise receptor based on FTA's criteria, which are discussed in Section 3.1.2.8 of this Supplemental Draft EIS. Changes in development density in areas surrounding proposed transit station could result in an increase in Jorvig Park usage, which could have potential for both positive and negative consequences. The LPA would result in changes in the park's setting and a visitor's visual experience through the introduction of the light rail alignment immediately north of the park. The visual changes and impacts will not alter or impair the overall use or function of the park.

In summary, the proximity impacts of the LPA on Jorvig Park would not substantially impair the qualifying activities, features, or attributes of the park and, therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Jorvig Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Jorvig Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Jorvig Park.

G. Lilac Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Lilac Park (originally Roadside Park) is located immediately north of the Bass Lake Spur, east of Highway 100 (see Exhibit 3.5-4A). The approximately 2.7-acre park is accessed by a service road that connects to Beltline Boulevard and by a connecting bicycle path. The park includes a relocated and restored "Beehive" stone structure that houses three non-functional fireplaces, limestone picnic tables, "council ring" and fire pit, bicycle racks, trash receptacles, and an information kiosk. The park was restored by the City of St. Louis Park and others in 2009. As the park is a publicly owned, publicly accessible park of local significance, Lilac Park is considered by FTA to be a Section 4(f) protected property..

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-11, the LPA would not result in a permanent incorporation of land from Lilac Park – as such, there would not be a Section 4(f) permanent use of the property.

EXHIBIT 3.5-10
Draft Section 4(f) Evaluation Update – Jorvig Park

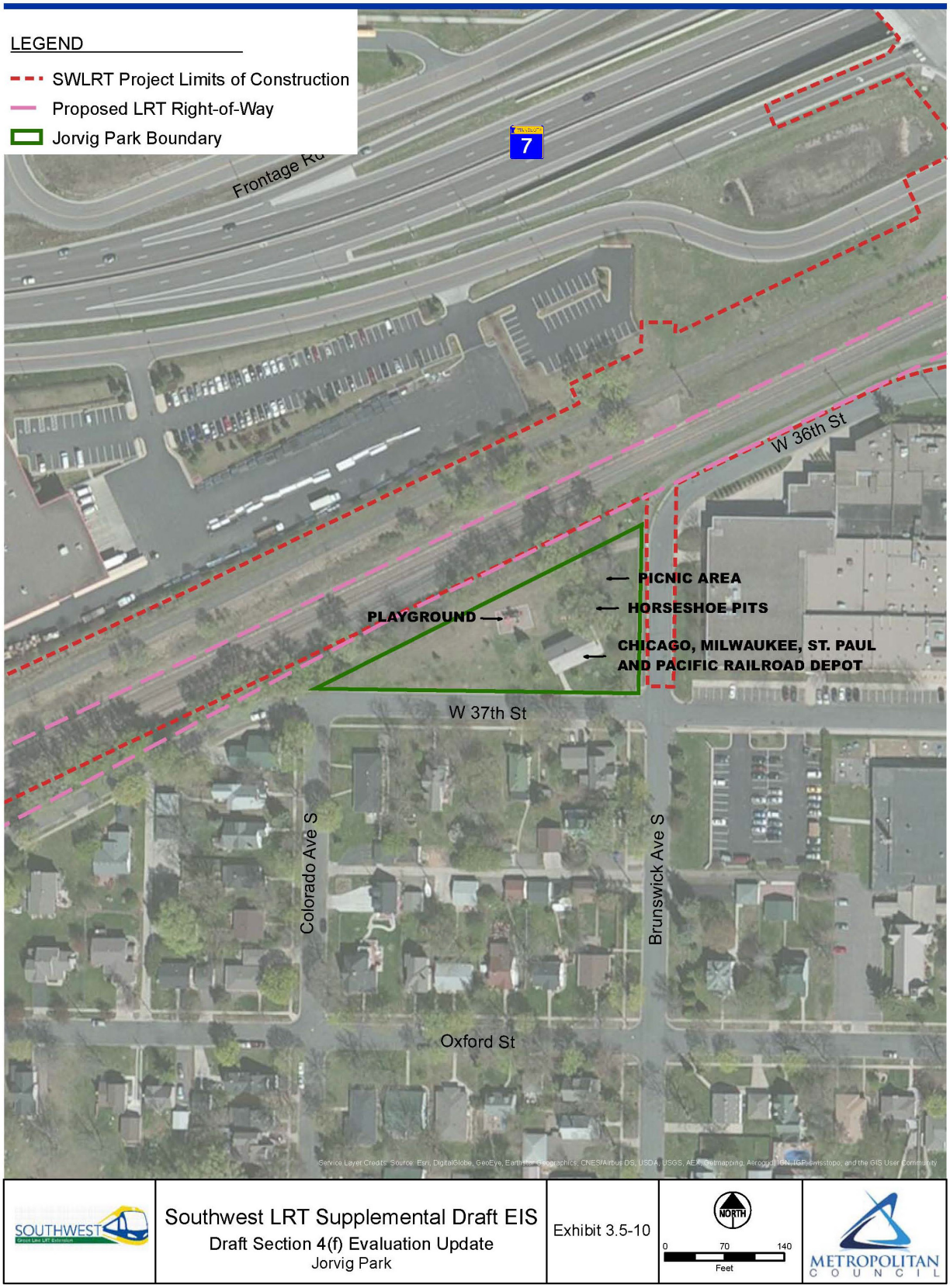
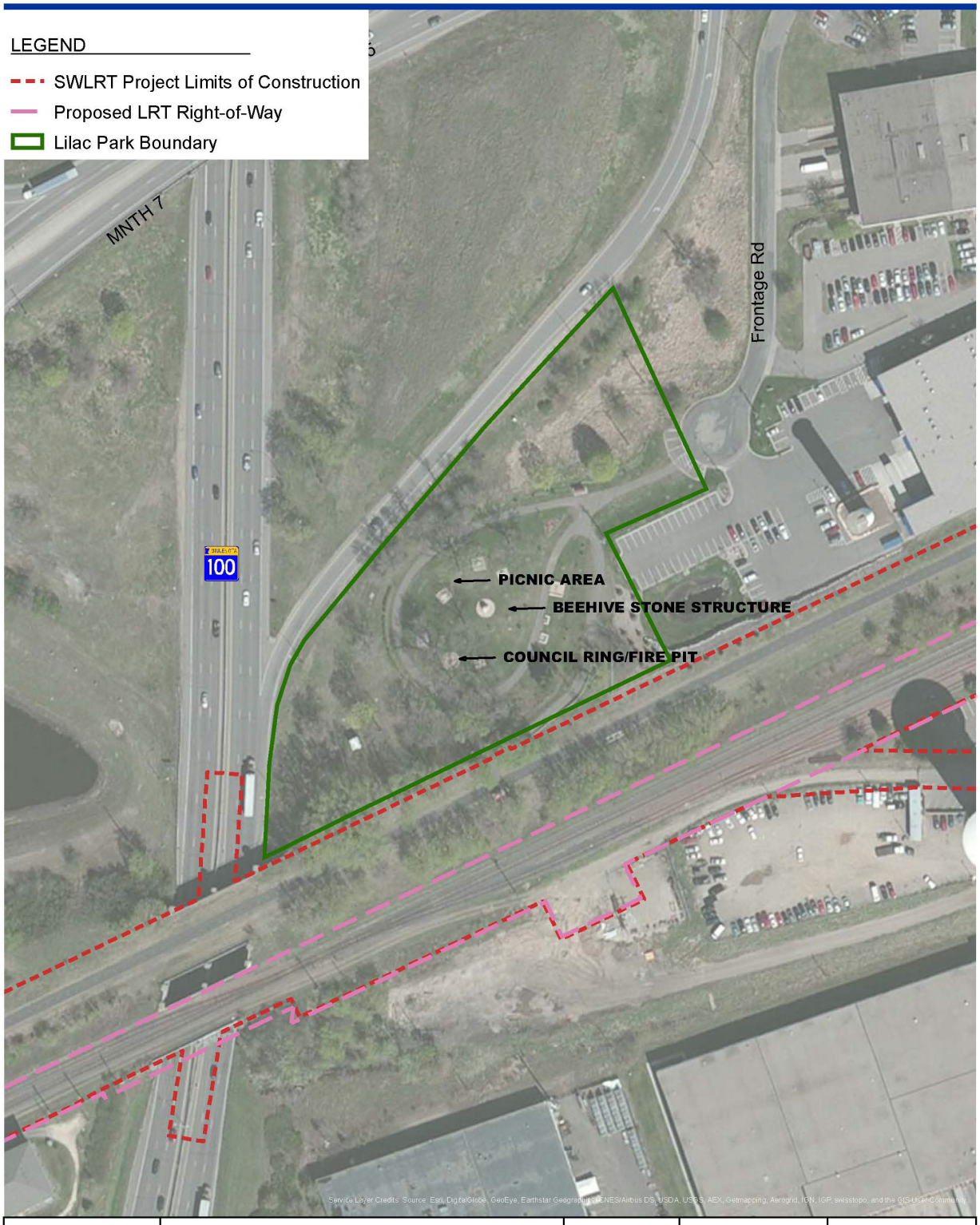


EXHIBIT 3.5-11
Draft Section 4(f) Evaluation Update – Lilac Park



SOUTHWEST	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Lilac Park	Exhibit 3.5-11	NORTH 0 70 140 Feet	METROPOLITAN COUNCIL

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Lilac Park during construction.

Preliminary Determination of Constructive Section 4(f) Use

Existing bicycle, pedestrian, and vehicular access to the park would be maintained under the proposed LPA. Although the sound of light rail trains would be audible from within the park, the park is not considered a sensitive noise receptor based on FTA's criteria, which are discussed in Section 3.1.2.8 of this Supplemental Draft EIS. Changes in development density in areas surrounding proposed transit station could result in an increase in Lilac Park usage, which could have potential for both positive and negative consequences. The LPA would result in changes in the park's setting and a visitor's visual experience through the introduction of the light rail alignment immediately south of the park. The visual changes and impacts will not alter or impair the overall use or function of the park.

In summary, the proximity impacts of the LPA on Lilac Park would not substantially impair the qualifying activities, features, or attributes of the park and, therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Lilac Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Lilac Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Lilac Park.

H. Alcott Triangle – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Located at the junction of St. Louis Avenue and West 29th Street in Minneapolis, Alcott Triangle is an approximately 0.3 acre park owned and managed by the MPRB (see Exhibit 3.5-4). The park has limited facilities, including trees, a bench, picnic table, and waste can. The park is primarily used for picnicking, walking, and open space. As the park is a publicly owned, publicly accessible park of local significance, Alcott Triangle is considered by FTA to be a Section 4(f) protected property. Further information about Alcott Triangle can be found in the MPRB information request letter provided in Appendix L of this Supplemental Draft EIS. Consultation between MPRB, City of Minneapolis, and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of the Draft EIS. In addition, project staff held meetings with MPRB staff focused on parks owned and operated by the MPRB, the Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 13 and March 6, 2015[50].

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-12, the LPA would not result in a permanent incorporation of land from Alcott Triangle – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Alcott Triangle during construction.

Preliminary Determination of Constructive Section 4(f) Use

Existing bicycle, pedestrian, and vehicular access to the park would be maintained under the proposed LPA. Although the sound of light rail trains would be audible from within the park, the park is not considered a sensitive noise receptor based on FTA's criteria, which are discussed in Section 3.1.2.8 of this Supplemental

[50] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

EXHIBIT 3.5-12
Draft Section 4(f) Evaluation Update – Alcott Triangle



Draft EIS. Changes in development density in areas surrounding proposed transit station could result in an increase in Alcott Triangle usage, which could have potential for both positive and negative consequences. The LPA would result in changes in the park's setting and a visitor's visual experience through the introduction of the light rail alignment immediately south of the park. The visual changes and impacts will not alter or impair the overall use or function of the park.

In summary, the proximity impacts of the LPA on Alcott Triangle would not substantially impair the qualifying activities, features, or attributes of the park and, therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Alcott Triangle under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Alcott Triangle under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of Alcott Triangle.

I. Park Siding Park – Preliminary No Section 4(f) Use Determination

Section 4(f) Property Description

Park Siding Park is located between the Kenilworth Corridor, Dean Court, and West 28th Street. Under the LPA, the proposed light rail alignment would be located west of the park (see Exhibit 3.5-4A). Park Siding Park is owned and managed by the MPRB. Facilities within the 1.4-acre park include two play areas with various in-place playground equipment, a picnic area, benches, bicycle parking, ornamental lighting and fencing, and a pergola seating area. Recreational activities within the park include picnicking, a stopover point for users of nearby multiple use paths, and child's play area. As the park is a publicly owned, publicly accessible park of local significance, Park Siding Park is considered by FTA to be a Section 4(f)-protected property. Further information about Park Siding Park can be found in the MPRB information request letter provided in Appendix L of this Supplemental Draft EIS. Consultation between MPRB, City of Minneapolis, and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of the Draft EIS. In addition, project staff held meetings with MPRB staff focused on parks owned and operated by the MPRB, the Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 13 and March 6, 2015[51].

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-13, the LPA would not result in a permanent incorporation of land from Park Siding Park – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

The Southwest LRT Project's Draft Section 4(f) Evaluation includes the preliminary finding that LRT 3A-1 would require construction activities that would have resulted in the temporary occupancy of approximately 0.016 acre of the park by the project to construct and remove a temporary detour trail associated with construction of the proposed light rail alignment. Through additional design refinement, the Council has determined that the Southwest LRT Project can be constructed without requiring a temporary trail detour into Park Siding Park, thus avoiding the approximately 0.016 acre temporary occupancy anticipated in the Draft Section 4(f) Evaluation. As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of Lilac Park during construction.

Preliminary Determination of Constructive Section 4(f) Use

Existing bicycle, pedestrian, and vehicular access to the park would be maintained under the proposed LPA. Because the light rail alignment would be in a tunnel in the vicinity of Park Siding Park, the sound of light rail

[51] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

EXHIBIT 3.5-13
Draft Section 4(f) Evaluation Update – Park Siding Park



SOUTHWEST	Southwest LRT Supplemental Draft EIS Section 4(f) Evaluation Update Park Siding Park	Exhibit 3.5-13	NORTH 0 45 90 Feet	METROPOLITAN COUNCIL

trains would not be noticeable from within the park and the park is not considered a sensitive noise receptor based on FTA's criteria, which are discussed in Section 3.1.2.8 of this Supplemental Draft EIS. Changes in development density in areas surrounding proposed transit station could result in an increase in Park Siding Park usage, which could have potential for both positive and negative consequences. The LPA would result in changes in the park's setting and a visitor's visual experience through the construction of the light rail tunnel and reconstruction of the existing freight rail tracks and bicycle and pedestrian path in HCRRA right-of-way just south of the park. The primary visual change would be the removal and replacement of existing vegetation in the HCRRA right-of-way. A landscaping plan for the area is currently under development, which includes the participation of the MPRB staff. The visual changes and impacts resulting from the LPA would not alter or impair the overall use or function of the park.

In summary, the proximity impacts of the LPA on Park Siding Park would not substantially impair the qualifying activities, features, or attributes of the park and, therefore, FTA has preliminarily determined that there would be no Section 4(f) constructive use of Park Siding Park under the LPA, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of Park Siding Park under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Park Siding Park.

J. Kenilworth Channel/Lagoon (as an Element of the Minneapolis Chain of Lakes Regional Park) – Preliminary *De Minimis* Determination

Property Description

The Kenilworth Channel/Lagoon[52] is an element of the Minneapolis Chain of Lakes Regional Park[53] (see Exhibit 3.4-4A). The Kenilworth Channel/Lagoon connects Cedar Lake and Lake of the Isles, which are also part both of the Minneapolis Chain of Lakes Regional Park. The approximately 10.3-acre waterway and banks were constructed by the MPRB in the early 1900s, replacing a meandering creek. Construction of the waterway allowed the elevations of Cedar Lake and Lake of the Isles to equalize and for watercraft to freely move between the two lakes (and ultimately throughout the lakes that are encompassed by the Minneapolis Chain of Lakes Regional Park).

While most of the land making up the Kenilworth Channel/Lagoon is owned fee simple by the MPRB, two areas approximately mid-point in the channel/lagoon (within the Kenilworth Corridor and where the corridor crosses the channel/lagoon) are owned fee simple by BNSF and HCRRA. Within those two areas (i.e., the portions of the channel/lagoon owned fee simple by BNSF and HCRRA), the MPRB owns, for park purposes, a permanent easement for a right-of-way for a canal connecting Lake of the Isles and Cedar Lake.

Recreational features within the channel/lagoon include the large curved lagoon to the east of the Kenilworth Corridor and the narrow and relatively straight channel to the west of the Kenilworth Corridor. Most of the area around the lagoon has relatively long and gently-sloping grass banks, where the banks of the channel are generally steeper, narrower, and have some remaining wood and stone retaining walls. The

[52] FTA, MnSHPO, and the Council have also identified the Kenilworth Lagoon as a historic resource, as a contributing element of the Grand Rounds Historic District, similar to but distinct from the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park. The historic and park properties are treated separately within this draft Section 4(f) Evaluation Update as they have somewhat different boundaries, different Section 4(f) qualifying characteristics, and different officials with jurisdiction. See the *Kenilworth Lagoon Historic Property and Kenilworth Channel/Lagoon Park Property Section 4(f) Classification Technical Memorandum* in Appendix L of this Supplemental Draft EIS for more detail. See Section 3.5.4.2 of this Supplemental Draft EIS for the updated Section 4(f) analysis for the Kenilworth Lagoon historical resource.

[53] The approximately 1555.3-acre Minneapolis Chain of Lakes Regional Park encompasses the following: Lake Harriet, Lyndale Park, Lyndale Farmstead, Lake Calhoun, Lake of the Isles, Cedar Lake and Brownie Lake (and waterway connections between the lakes). Per annual use estimates by the MPRB, approximately 5,361,200 people visited the Minneapolis Chain of Lakes Regional Park in 2012.

channel typically free-flows during late spring, summer and early fall months and it is typically frozen during late fall, winter, and early spring months. During summer months, activities through the waterway include canoeing, kayaking, and paddle boarding (docks are provided at several locations within the Chain of Lakes Regional Park and rentals are provided on Lake Calhoun). During winter months, activities through the frozen waterway include cross country skiing, snowshoeing, fat-tire biking, and walking. Weather and ice/snow conditions permitting, a groomed cross country ski trail is maintained in the Chain of Lakes Park during mid-winter months. The annual City of Lakes Loppet Cross Country Ski Festival, which encompasses much of the Chain of Lakes Regional Park and passes through the Kenilworth Channel/Lagoon, typically occurs within early February, weather and ice/snow conditions permitting. The event, which is organized by a non-profit foundation and which includes a wide variety of activities, spans a weekend, and attracts approximately 10,000 participants. Activities on the northern grassy banks of the lagoon, between West Lake of the Isles Parkway and South Upton Avenue, include picnicking, walking, sightseeing, wildlife viewing, and passive relaxation.

As the park is a publicly owned, publicly accessible park of local significance, the Kenilworth Channel/Lagoon is considered by FTA to be a Section 4(f)-protected property. Consultation between MPRB, City of Minneapolis, and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of the Draft EIS. In addition, project staff held meetings with MPRB staff focused on parks owned and operated by the MPRB, the Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 13 and March 6, 2015[54]. Further information about the Kenilworth Channel/Lagoon can be found in the MPRB information request letter provided in Appendix L.

Preliminary Determination of Permanent Section 4(f) Use: Section 4(f) *de minimis* Use

The LPA would result in changes to the facilities currently located within the Kenilworth Channel/Lagoon, including the following (see Exhibit 3.5-14A/B):

- Removal of the two existing wood bridges, supported by wood piers in the channel, that carry the existing freight rail tracks and multipurpose trail across the waterway;
- Construction of new bridges with new supporting piers in the channel, with a combined bridge width that would be approximately double that of the existing wood bridges (to carry freight rail and light rail tracks and the multipurpose trail); and
- Modifications to the topographical features, vegetation, and WPA-era retaining walls of the channel that would be needed to accommodate the new bridges.

The proposed light rail improvements and modifications to the freight rail and trail alignments would occur within approximately 0.3 acres of the approximately 10.3-acre Kenilworth Channel/Lagoon. While conceptual designs of the proposed new bridges have been developed and reviewed, the design of the bridges remains under development as the project works to avoid, minimize, and mitigate impacts to the Kenilworth Channel/Lagoon (see Section 3.5.4.2.O for examples of various bridge designs that have been developed within early stages of the project's Section 106 process).

Under the LPA, the Council would acquire the right-of-way within the Kenilworth Corridor from BNSF and HCRRA and the existing recreational easement attached to the two rights-of-way and owned by the MPRB would remain unchanged. In the long-term, the existing recreational activities, features, and attributes within the Kenilworth Channel/Lagoon would not be adversely affected under the LPA and the horizontal clearances between the banks and the new piers would be of sufficient width to accommodate recreational activities that occur within the channel/lagoon. Further, the project would not have an adverse effect on the activities, features, or attributes qualifying the easement for protection under Section 4(f). Removal of the

[54] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

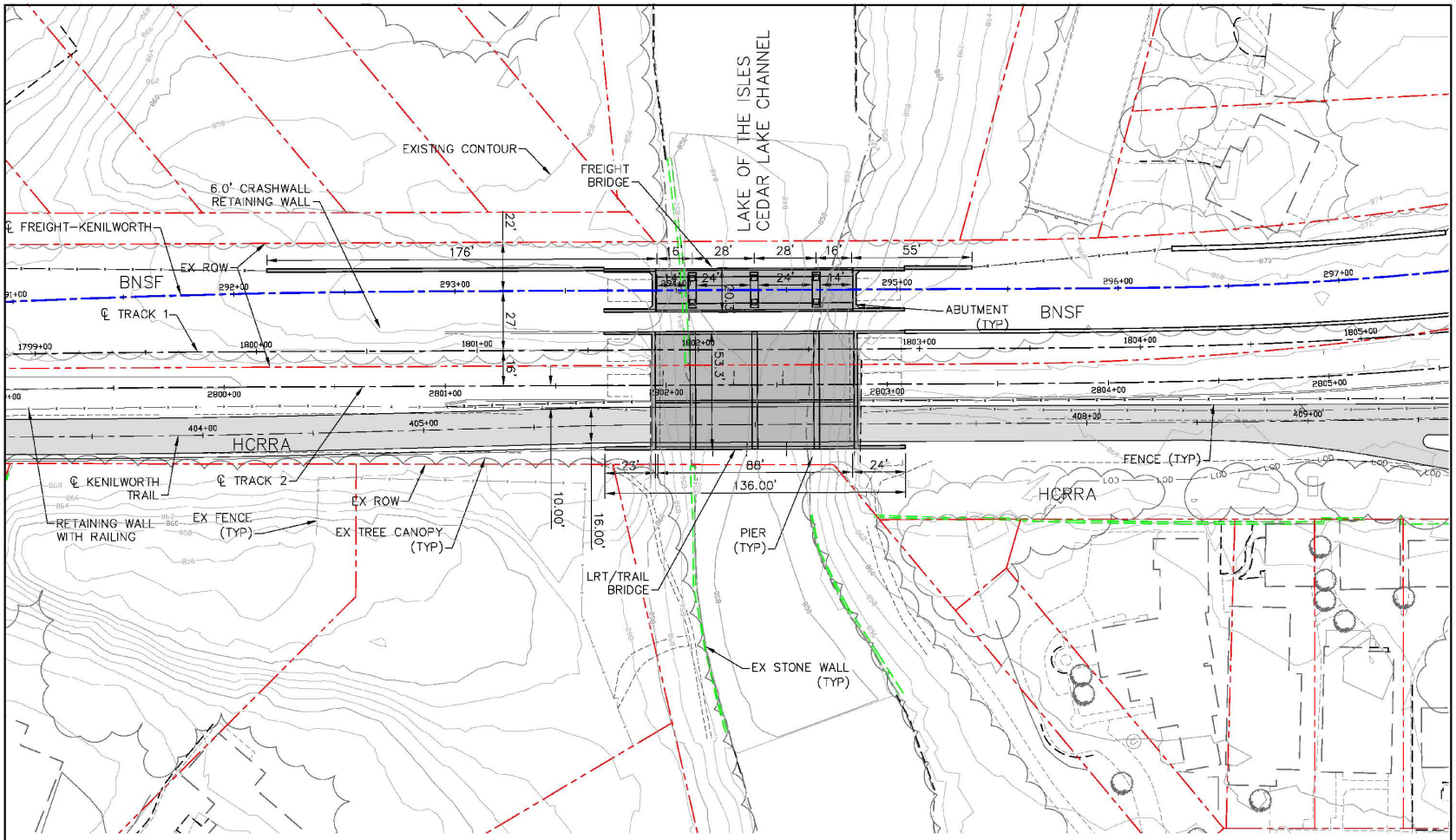
EXHIBIT 3.5-14A

Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon Recreational Resource (element of the Minneapolis Chain of Lakes Regional Park)



EXHIBIT 3.5-14B

Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon Recreational Resource (element of the Minneapolis Chain of Lakes Regional Park) — Plan View



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Channel/Lagoon Recreational Resource (element of Minneapolis Chain of Lakes Regional Park) – Plan View	Exhibit 3.5-14B		METROPOLITAN COUNCIL

existing bridges and construction of the new bridges would allow for the continuation of park uses and recreational activities within the easement – recreational watercraft would be able to utilize the channel connection between Cedar Lake and Lake of the Isles in the same manner they do currently.

As noted in Section 3.4.1.5 of this Supplemental Draft EIS, the LPA would affect the view within the Kenilworth Channel/Lagoon (Viewpoint 5 – see Exhibit J-17 in Appendix J of this Supplemental Draft EIS), however the assessment is that the overall level of visual impact would be "Not Substantial"[55]. Vegetation on the banks at the channel crossing would be cleared to accommodate construction of bridge to carry the light rail alignment, bike and pedestrian trails, and freight rail across the channel. The vegetative clearing would cause some reduction in the visual quality of the view. However, the bridges, as currently conceived, would have an attractive design that would become a positive focal point in the view. The overall change to the view's level of visual quality would be low. Because of the recreational activity in the channel, this view is visually sensitive. Even though the view is visually sensitive, because the potential level of change to visual quality will be low the potential visual impact will be not substantial.

The Kenilworth Channel/Lagoon would also be affected by light rail-generated noise as light rail vehicles would cross the waterway on a new bridge (see Section 3.4.2.3 of this Supplemental Draft EIS). For the noise analysis, two separate areas of the Channel/Lagoon were identified as sensitive noise receptors. First, the waterway itself (termed the Kenilworth Channel in the noise analysis) was classified as a Category 3 land use. That area of the Kenilworth Channel Lagoon (approximately 40 feet on either side of the proposed light rail alignment) would have a Moderate noise impact based on FTA's light rail noise criteria. That Moderate noise impact would occur without any mitigation measures. Mitigation measures would reduce or eliminate the area of Moderate noise impacts in the Kenilworth Channel/Lagoon and will be developed and evaluated through the Council's and FTA's continuing coordination efforts with the MPRB and MnSHPO (under the Section 106 consultation process).

Second, the northern bank of the lagoon, generally between West Lake of the Isles Parkway and South Upton Avenue (termed the Kenilworth Lagoon Bank in the noise analysis), was classified as a Category 1 land use, with stricter noise impact standards than the Category 3 land use. However, because of the distance between the light rail tracks and the western point of the Category 1 land use, noise levels under the LPA at that location would not exceed FTA's Severe or Moderate criteria.

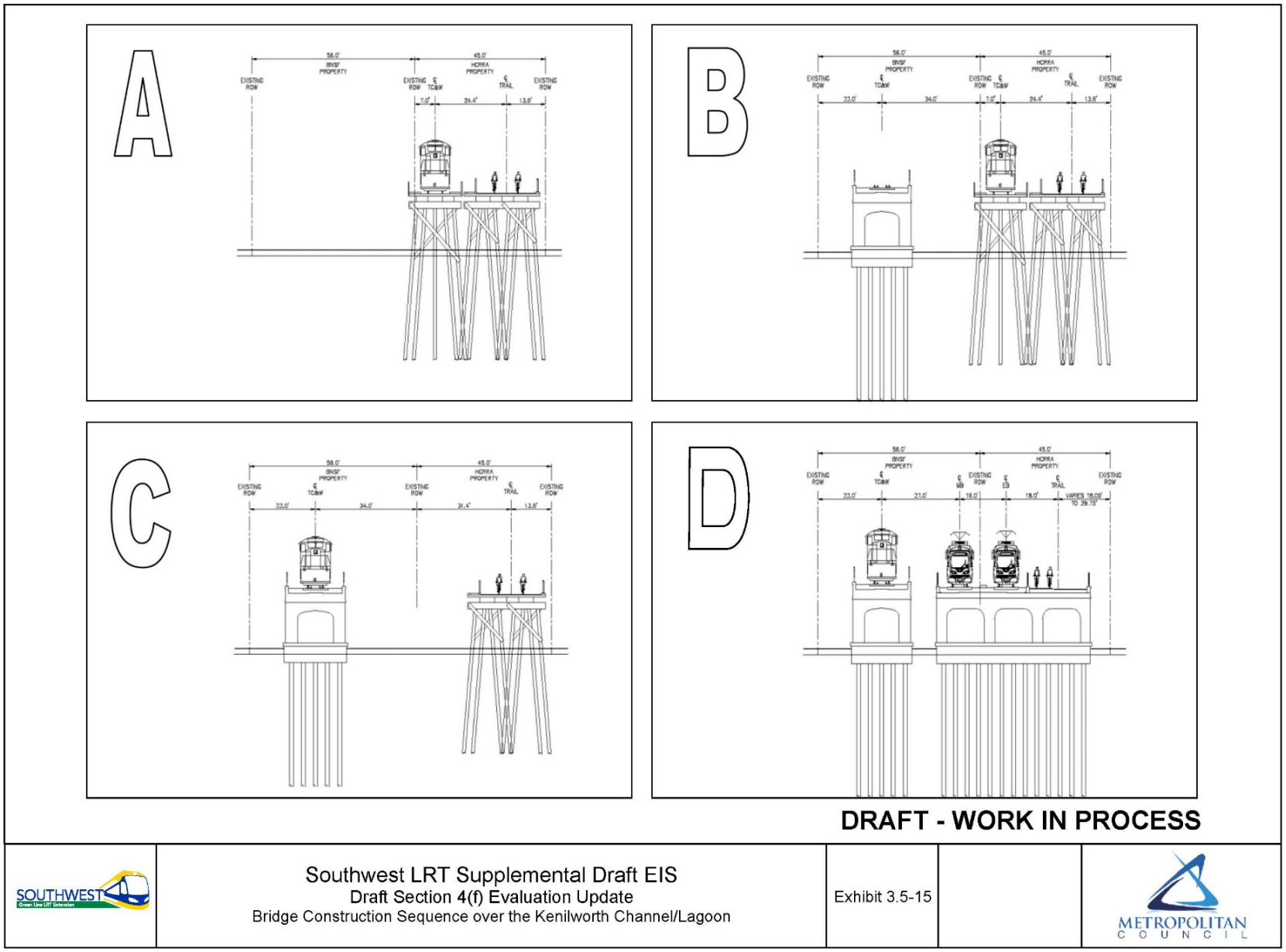
The FTA and Council began working with the MPRB to identify avoidance, minimization, and mitigation measures to address the project's use of and effects on the recreational attributes, facilities, and activities of the Kenilworth Channel/Lagoon, as previously described. The coordination efforts between the Council and the MPRB may include the development of additional bridge design concepts and minimization and mitigation measures. The Council and FTA have committed to continue Section 4(f) coordination activities with the MPRB through to the completion of the project's Final Section 4(f) Evaluation, Final EIS, and Record of Decision. These Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon and will be coordinated with the development of a Section 106 Agreement for the Kenilworth Lagoon historic resource (see Section 3.5.4.2 of this Supplemental Draft EIS for additional information on the historic resource).

Under the LPA, construction activities within the easement area would occur to allow for the removal of the two existing wood bridges and construction of the new bridges. Those construction activities would require temporary closure/s of the lagoon for safety, and minimization and mitigation measures related to the closure/s would be developed and evaluated, with MPRB consultation, before publication of the Final EIS. Exhibit 3.5-15 illustrates the construction sequence that would be used to construct the new bridges over the Kenilworth Channel/Lagoon.

The FTA, Council, and MPRB considered alternatives and design adjustments that would have avoided or minimized the use of the Kenilworth Channel/Lagoon. Those avoidance alternatives and minimization

[55] Based on the FHWA visual guidelines and the project's conceptual engineering plans – see Section 3.5.4.2 of this Supplemental Draft EIS for additional information on the project's visual and aesthetic analysis.

EXHIBIT 3.5-15
Draft Section 4(f) Evaluation Update – Bridge Construction Sequence over the Kenilworth Channel/Lagoon



design adjustments are described in greater detail in Section 3.5.4.2 of this Supplemental Draft EIS, under the discussion of the preliminary non-*de minimis* use of Kenilworth Lagoon, the Section 106 historic resource. In summary, the No Build Alternative and Enhanced Bus Alternative as evaluated in the Draft EIS are the only full Section 4(f) avoidance alternatives identified to date and neither of them would be prudent because they would not meet the project's purpose and need. Further, the Council and the MPRB independently developed and evaluated design adjustments that would have placed the proposed light rail alignment in a tunnel under the Kenilworth Channel/Lagoon using cut-and-cover and jacked-box tunnel construction techniques, respectively. Those analyses both concluded that the design adjustments would not be prudent due to substantial cost increases and delays in project benefits that would result from protracted construction schedules required to construct the tunnel segments under the Kenilworth Channel/Lagoon. See Section 2.3.3 and Appendix F of this Supplemental Draft EIS for additional information on the design adjustment that would have constructed a cut-and-cover tunnel under the Kenilworth Channel/Lagoon; and see Appendix L of this Supplemental Draft EIS for additional information on the design adjustment that would have constructed a jacked-box tunnel under the Kenilworth Channel/Lagoon.

FTA and the Council will continue to coordinate with the MPRB to help avoid, minimize and mitigate impacts to the Kenilworth Channel/Lagoon. Based on the analysis and design to date as summarized in this section, FTA has preliminarily concluded that there would be a Section 4(f) *de minimis* use of the Kenilworth Channel/Lagoon where the HCRRA and BNSF rights-of-way cross the property, consistent with 23 CFR 774.5(b). While the LPA would result in the placement of new bridge piers and bridge abutments within the park property boundary, the LPA would not affect the protected activities, features, and attributes of the property with appropriate minimization and mitigation measures as document in the project's Section 106 Agreement.

Preliminary Section 4(f) Use Determination

Through coordination with MPRB to date and based on the design and analysis to date as described in this section, FTA has preliminarily determined that the proposed permanent and temporary uses by the LPA would not adversely affect the features, attributes or activities that qualify the Kenilworth Channel/Lagoon for Section 4(f) protection. Consistent with the requirements of 23 CFR 774.5(b), FTA is, therefore, proposing a *de minimis* use determination for the LPA at the Kenilworth Channel/Lagoon. Supporting this preliminary determination is FTA's expectation that mitigation measures will be incorporated into the project that will avoid adverse effects to the protected activities, features, and attributes of the property. Those measures will be identified through continued coordination with the MPRB, which will continue through preparation of the project's Final Section 4(f) Evaluation. The MPRB must concur in writing with the *de minimis* impact determination after the opportunity for public comment on the preliminary Section 4(f) *de minimis* use determination.

K. Cedar Lake Park – Preliminary *De Minimis* Determination

Property Description

Cedar Lake Park[56] is a 288-acre regional park located at Cedar Lake Parkway and Basswood Road in Minneapolis and is part of the Chain of Lakes Regional Park (see Exhibit 3.4-4A). Cedar Lake makes up approximately 173 acres of Cedar Lake Park. Cedar Lake Park is owned and operated by MPRB. There is an existing freight rail track in the park that occupies approximately 0.4 acres of undeveloped land just inside the northeastern boundary the park. The Cedar Lake Trail traverses the northernmost portion of the park, crossing the existing freight rail tracks at-grade and then connecting to the Kenilworth Trail within the HCRRA right-of-way. Per annual use estimates, approximately 418,700 people visited Cedar Lake Park in 2012 (Council, 2013). Per MPRB 2014 beach attendance counts, East Cedar Beach had 16,649 visitors and

[56] FTA, MnSHPO, and the Council have also identified Cedar Lake Park as a historic resource, as a contributing element of the Grand Rounds Historic District, similar to but distinct from Cedar Lake Park as a recreational element of the Minneapolis Chain of Lakes Regional Park. The historic and park properties are treated separately within this draft Section 4(f) Evaluation Update as they have somewhat different boundaries, different Section 4(f) qualifying characteristics, and different officials with jurisdiction. See Section 3.5.4.2 of this Supplemental Draft EIS for the updated Section 4(f) analysis for the Kenilworth Lagoon historical resource.

facilities within the park include Cedar Lake, beaches, wooded areas, picnic areas, a canoe/kayak launch and racks, paths, and off-street parking. Recreational activities within the park include boating, fishing, cross country skiing, skating, picnicking, hiking, running, and bicycling. Additional information on Cedar Lake Park as an element of the Chain of Lakes Regional Park can be found in the prior property description for the Kenilworth Channel/Lagoon; further information about Cedar Lake Park, including detailed user count data, can be found in Appendix L of this Supplemental Draft EIS. Consultation between MPRB, City of Minneapolis, and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of the Draft EIS. In addition, project staff held meetings with MPRB staff focused on parks owned and operated by the MPRB, the Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 13 and March 6, 2015[57].

As the park is a publicly owned, publicly accessible park of local significance, Cedar Lake Park is considered, by FTA, to be a Section 4(f) protected property.

Preliminary Determination of Permanent Section 4(f) Use: Section 4(f) *de minimis* Use

Two areas of Cedar Lake Park would be affected by the Southwest LRT LPA: East Cedar Beach; and Cedar Lake Junction.

- **East Cedar Beach.** As illustrated in Exhibit 3.5-16, the LPA would result in the extension of the sidewalk on the south side of South Upton Avenue, between the existing HCRRA right-of-way and the pedestrian entryway into East Cedar Beach. The sidewalk extension would be included within a permanent maintenance easement (approximately 1,300 square feet or 0.03 acres) for the sidewalk. That permanent maintenance easement could be acquired by another jurisdiction (discussions on ownership of the permanent easement, if there is one, are on-going). The area where the sidewalk would be constructed is not currently used or planned for recreational activities. The area generally consists of non-landscaped vegetation. No other modifications would be made to Cedar Lake Park at East Cedar Beach as a result of the LPA. Transit access to the park would be improved due to its proximity to the proposed 21st Street Station. East Cedar Beach has not been identified as a noise sensitive land use, therefore, no noise impacts to that area of Cedar Lake Park have been identified (see Section 3.4.2.3 of this Supplemental Draft EIS for additional information on the project's noise analysis). Because of existing vegetation that would be retained between the park and the HCRRA right-of-way, the proposed light rail alignment and station would generally not be visible from East Cedar Beach.
- **Cedar Lake Junction.** As illustrated in Exhibit 3.5-17, the LPA would result in a variety of permanent and short-term (construction-related) changes to Cedar Lake Park at Cedar Lake Junction (where the Kenilworth Corridor and the Wayzata Subdivision meet). In general, the changes would affect the North Cedar Lake Trail within the Cedar Lake Park. In summary, the trail would be realigned within Cedar Lake Park to allow the trail to cross over the existing freight rail alignment and the proposed light rail alignment on an elevated structure, connecting to the Kenilworth Trail to the east of the existing HCRRA right-of-way. A portion of the existing at-grade trail would be relocated to a new at-grade location and a portion of the existing at-grade trail would be replaced with an elevated trail at a new location. The proposed elevated section of North Cedar Lake Trail within Cedar Lake Park would be located within an approximately 0.7-acre proposed permanent maintenance easement, which could be acquired by another jurisdiction (discussions on ownership of the permanent easement, if there is one, are on-going). All existing trail connections for the North Cedar Lake Trail would be maintained in the long-term under the LPA. Existing delays from freight trains experienced by trail users at the existing at-grade crossing of the freight rail tracks would be eliminated with the proposed elevated trail crossing over the freight rail and light rail tracks. Except for the potential for short trail closures to ensure trail user safety, all existing trail connections would be maintained during construction of the new trail alignment and elevated trail crossing. Under the current construction plan, temporary trails would be constructed to allow for the removal of existing trail segments and construction of new trail segments. Under the current design,

[57] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

EXHIBIT 3.5-16
D Draft Section 4(f) Evaluation Update – Cedar Lake Park at East Cedar Beach

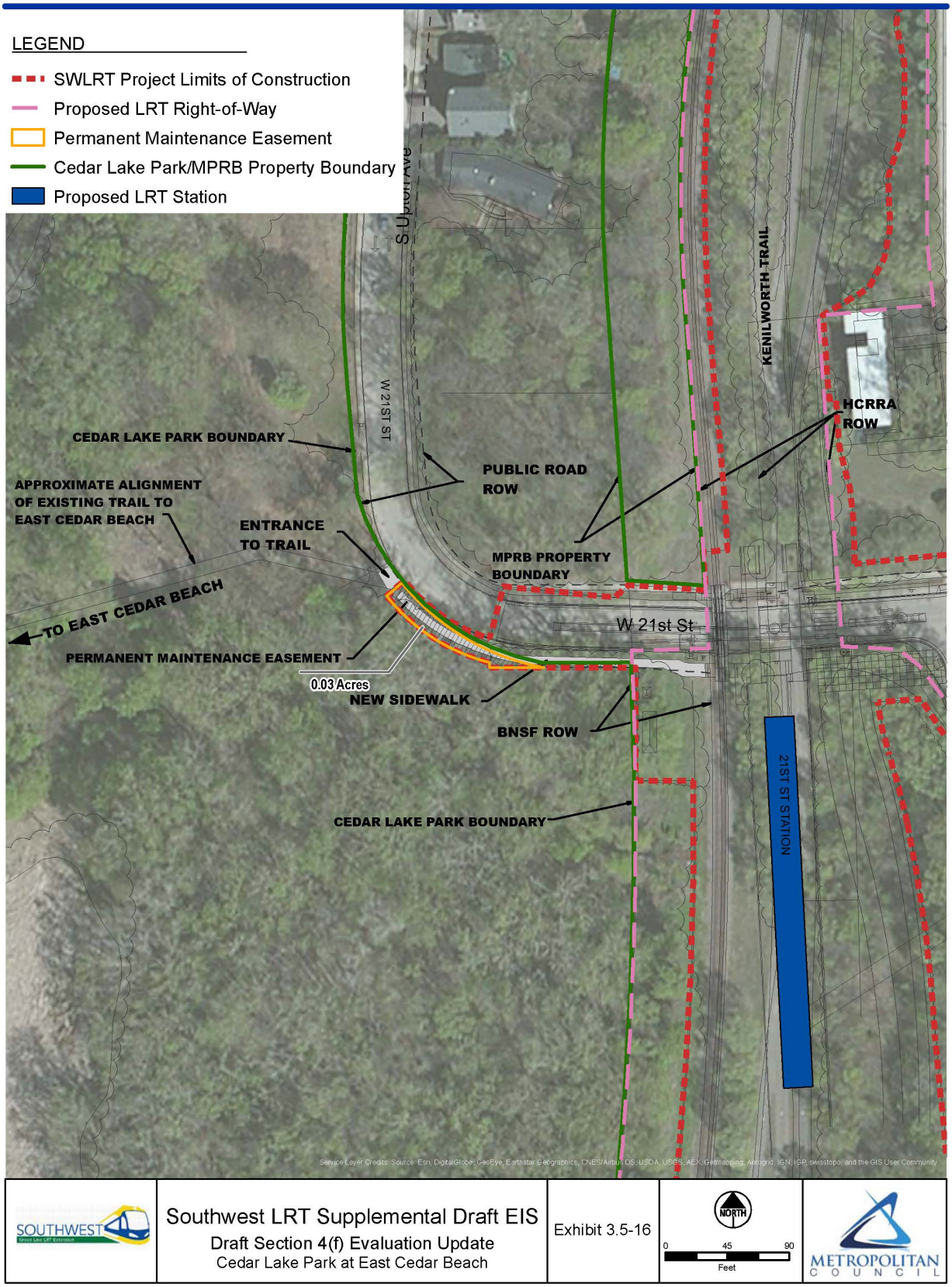
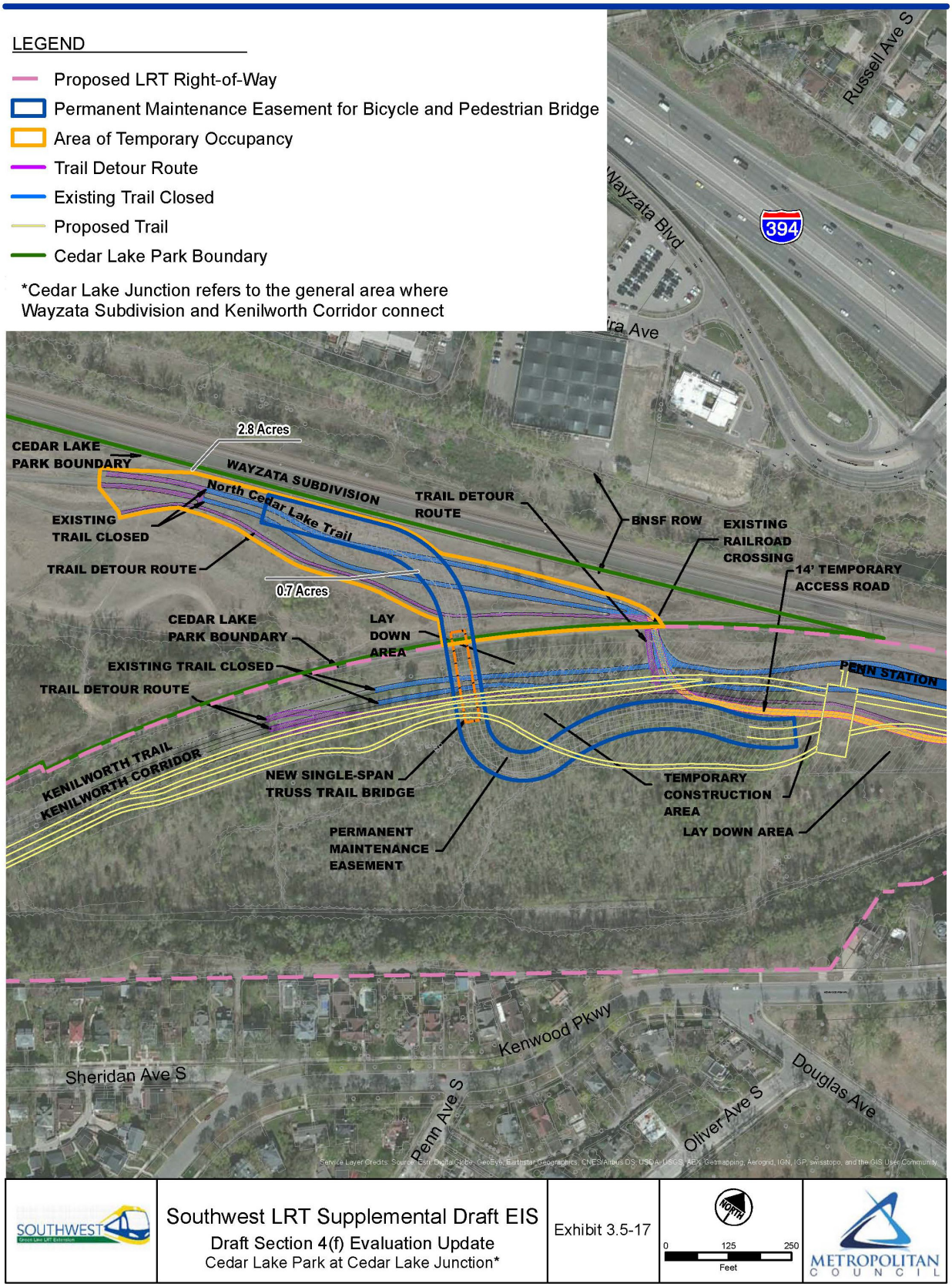


EXHIBIT 3.5-17
Draft Section 4(f) Evaluation Update – Cedar Lake Park at Cedar Lake Junction*



construction activities outside of the permanent maintenance easement area would occur within approximately 2.8 acres of the park. The maintenance easement would include an area around the bridge that will allow for continued maintenance of the bridge and would stipulate limitations on improvements and vegetation allowed within the maintenance area (to ensure continued maintenance access to the bridge). Construction activities within the park will be closely coordinated with MPRB to help avoid and minimize effect on recreational activities within the park. The project will also provide the MPRB and the public with ongoing notification of construction activities within the park, such as the timing and location of trail detours. All areas of the park that are affected by construction activities outside of the permanent easement area will be restored to existing conditions or better. Except for recreation activities on the North Cedar Lake Trail, the area of Cedar Lake Park affected by the reconstruction of the trail does not include recreational activities, features, and attributes that qualify the park as a Section 4(f) recreational property.

FTA, MPRB, and the Council have initiated efforts to help avoid, minimize, and mitigate impacts to Cedar Lake Park, including participation in Section 4(f) Coordination meetings in February and March 2015. Those meetings also included participation by staff from Hennepin County and the City of Minneapolis. Notes and materials for those meetings can be found in Appendix L of this Supplemental Draft EIS. For both areas of Cedar Lake Park that would be affected by the LPA, FTA, MPRB, and the Council will continue to coordinate to help avoid, minimize, and mitigate impacts to the park through publication of the Final Section 4(f) Evaluation.

Based on the analysis, design, and avoidance, minimization, and mitigation measures identified to date as summarized in this section, FTA has preliminarily concluded that there would be a Section 4(f) *de minimis* use of the Kenilworth Channel/Lagoon, consistent with 23 CFR 774.5(b).

Preliminary Section 4(f) Use Determination

Through coordination with MPRB to date and based on the design and analysis to date as described in this section, FTA has preliminarily determined that the proposed permanent and temporary uses by the LPA would not adversely affect the features, attributes or activities that qualify Cedar Lake Park for Section 4(f) protection as a park/recreation area. Consistent with the requirements of 23 CFR 774.5(b), FTA is, therefore, proposing a *de minimis* use determination for the LPA at Cedar Lake Park (at East Cedar Beach and at Cedar Lake Junction). Minimization and mitigation measures will be incorporated into the project that will avoid adverse effects on the protected activities, features, and attributes of the property. The measures will be identified through continued coordination with the MPRB. Also consistent with 23 CFR 774.5(b), the ROD would include a final Section 4(f) *de minimis* use determination. The MPRB must concur in writing with the *de minimis* impact determination after the opportunity for public comment on the preliminary Section 4(f) *de minimis* use determination.

L. Bryn Mawr Meadows Park – Preliminary *De Minimis* Determination

Section 4(f) Property Description

Bryn Mawr Meadows Park is a 51-acre regional park located at 601 Morgan Avenue South in Minneapolis. Bryn Mawr Meadows Park is owned and operated by MPRB and contains two baseball fields, two broomball rinks, cricket field, ice rink, 10-table picnic area, restroom facilities, soccer field, eleven softball fields, biking path, sports facility, tennis court, tot lot/playground, wading pool, and walking path. As the park is a publicly owned, publicly accessible park of local significance, Bryn Mawr Meadows Park is considered by FTA to be a Section 4(f) protected property. Further information about Bryn Mawr Meadows Park can be found in the MPRB information request letter provided in Appendix L of this Supplemental Draft EIS. Consultation between MPRB, City of Minneapolis, and project staff on design issues related to the park has occurred throughout the design refinement process that occurred after publication of the Draft EIS. In addition, project staff held meetings with MPRB staff focused on parks owned and operated by the MPRB, the

Section 4(f) process and documentation, and FTA's preliminary determination for the park on February 13 and March 6, 2015[58].

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in Exhibit 3.5-18, the LPA would result in a variety of permanent and short-term (construction-related) changes to Bryn Mawr Meadows Park, described as follows.

The proposed changes would affect the Luce Line Trail in Bryn Mawr Meadows Park, as well as two internal park trails. In particular, the Luce Line Trail would be realigned within Bryn Mawr Meadows Park to allow the trail to cross over a new bridge that would cross BNSF freight tracks to the east, connecting to the proposed Van White Station and Cedar Lake Trail (which provides connections to the Kenilworth Trail). A new bicycle/pedestrian bridge would replace the existing bridge that crosses BNSF freight rail tracks toward the south. The existing bridge is owned and maintained by MnDOT and the northern bridgehead is partially located within Bryn Mawr Meadows Park. A portion of the new bridge would be located within Bryn Mawr Meadows Park; this new bridge would be north of, and parallel to, the southern border of the park (just north of the BNSF freight rail right-of-way). The remaining portion of the new bridge would provide a connection between the portion located within the park and the proposed Van White Station and Cedar Lake Trail, across the BNSF freight rail and proposed light rail tracks.

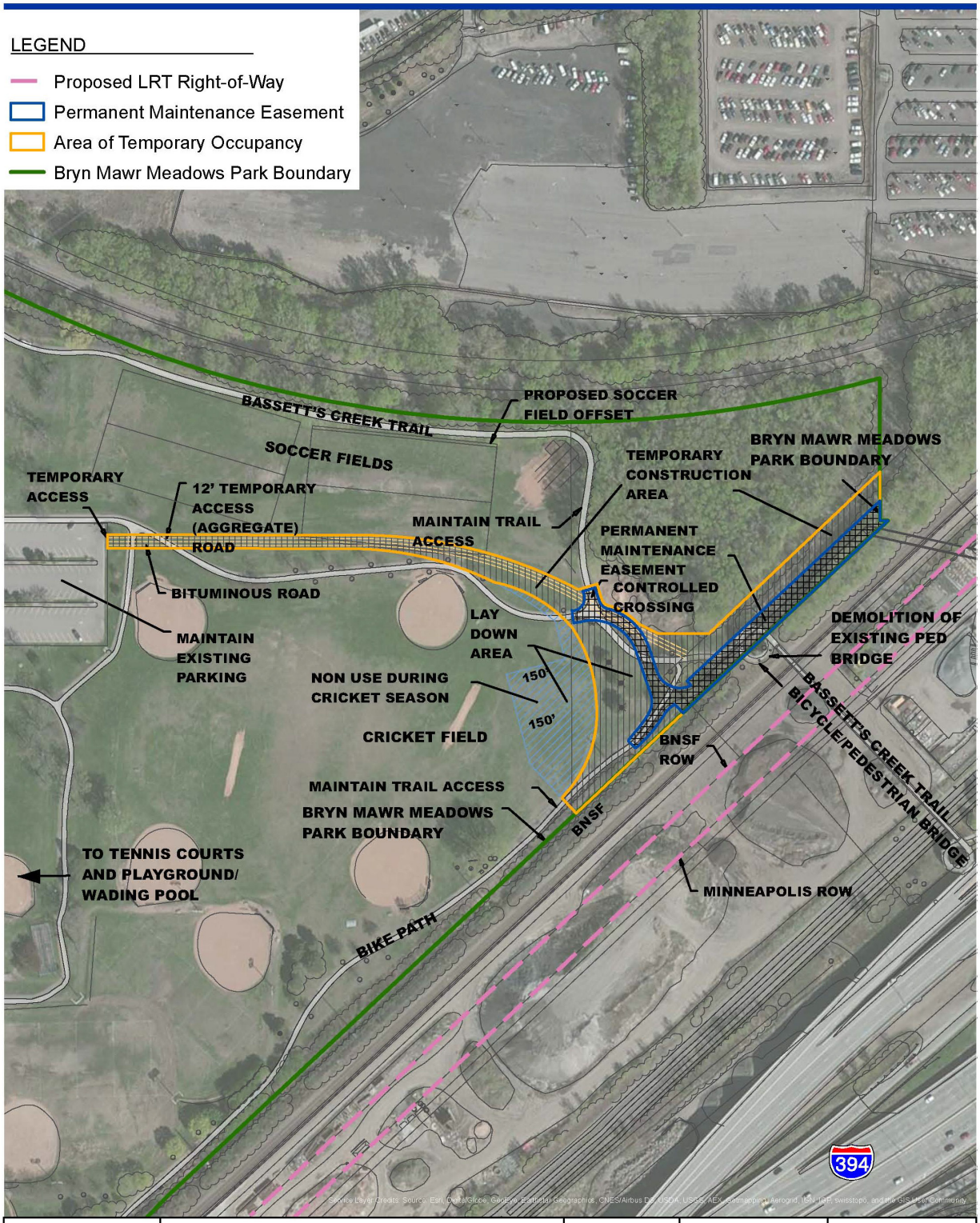
A portion of the existing at-grade trail within Bryn Mawr Meadows Park would be relocated to connect to the new bridge and a portion of the existing at-grade trail would be replaced with an at-grade trail segment at a new location within the park. The new elevated section of Luce Line Trail within the park would be located within an approximately 0.4-acre proposed permanent maintenance easement, which could be acquired by the another jurisdiction (discussions on ownership of the permanent easement, if there is one, are on-going). The maintenance easement would include an area around the bridge that will allow for continued maintenance of the bridge and would stipulate limitations on improvements and vegetation allowed within the maintenance area (to ensure continued maintenance access to the bridge). The realignment of the trails within the park will ultimately be determined through continued consultation between FTA, the Council, and MPRB, which will work to avoid, minimize, and mitigate impacts to the park's qualifying activities, features, and attributes.

Under the current design, construction activities outside of the permanent maintenance easement area would occur within approximately 1.5 acres of the park; those areas are illustrated in Exhibit 3.5-16. Construction activities within the park would include:

- The construction of a temporary bituminous access road connecting the existing park parking lot to the site of the new Luce Line Trail bridge (use of the parking lot by park visitors would be maintained during construction);
- Truck and other equipment use of the temporary access road, laydown area, temporary safety barriers to separate the temporary construction activities from park activities, and permanent maintenance easement area as required to construct the proposed improvements;
- Removal of existing trees in the construction laydown area and temporary access road;
- Preparation and use of a construction laydown area (e.g., for the staging of construction material and equipment), the area of which would be reduced during cricket season to avoid impacting the existing cricket field;
- Grading, paving, bridge construction, landscaping, and other activities associated with construction of the new trail bridge and at-grade trail segments;
- Temporary realignment of the existing eastern soccer field to accommodate construction of the temporary construction access road;

[58] See Section 3.5.6 of this Supplemental Draft EIS for a project-wide description of the FTA's and the Council's Section 4(f) consultation process and activities that have occurred following publication of the Draft EIS.

EXHIBIT 3.5-18
Draft Section 4(f) Evaluation Update – Bryn Mawr Meadows Park



SOUTHWEST	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Bryn Mawr Meadows Park	Exhibit 3.5-18	NORTH 0 105 210 Feet	METROPOLITAN COUNCIL

- Temporary realignment of park trail segments to allow for the construction of the temporary construction access road, the new western bridge, and the new at-grade trail segments;
- Removal of existing trail segments that would be replaced with the new trail segments, which would include replanting and landscaping as per specifications agreed upon between the Council and MPRB;
- Construction detour information, flagging at controlled crossings, and other related activities; and
- Restoration of all park features to pre-construction conditions or better, based on specifications agreed to between the Council and MPRB (e.g., replacement of trees, restoration of landscaping within the construction laydown area, construction access road and temporary trail segments).

All existing trail connections for the Luce Line Trail would be maintained in the long-term under the LPA. Except for the potential for short-term trail closures to ensure trail user safety, all existing trail connections would be maintained during construction of the new trail alignment and elevated trail crossing. During those short trail closures, trail users would be provided with detour routes and information. Under the current construction plan, temporary trails would be constructed to allow for the removal of existing trail segments and construction of new trail segments. Construction activities within Bryn Mawr Meadows Park will be closely coordinated with MPRB to help avoid and minimize effects on recreational activities within the park. The project will also provide the MPRB and the public with ongoing notification of construction activities within the park, such as the timing and location of trail detours. All areas of the park that are affected by construction activities outside of the permanent easement area will be restored to existing conditions or better.

FTA, MPRB, and the Council have initiated efforts to help avoid, minimize, and mitigate impacts to Bryn Mawr Meadows Park, including participation in Section 4(f) coordination meetings in February and March 2015. Those meetings also included participation by staff from Hennepin County and the City of Minneapolis. Notes and materials for those meetings can be found in Appendix L of this Supplemental Draft EIS. For the areas of Bryn Mawr Meadows Park that would be affected by the LPA, FTA, MPRB, and the Council will continue to coordinate to help avoid, minimize, and mitigate impacts to the park through the period when the Final Section 4(f) Evaluation is published.

Based on the analysis, design, and avoidance, minimization, and mitigation measures identified to date as summarized in this section, FTA has preliminarily concluded that there would be a Section 4(f) *de minimis* use of Bryn Mawr Meadows Park, consistent with 23 CFR 774.5(b).

Preliminary Section 4(f) Use Determination

Through coordination with MPRB to date and based on the design and analysis to date as described in this section, FTA has preliminarily determined that the proposed permanent and temporary uses by the LPA would not adversely affect the features, attributes or activities that qualify Bryn Mawr Meadows Park for Section 4(f) protection as a park/recreation area. Consistent with the requirements of 23 CFR 774.5(b), FTA is, therefore, proposing a *de minimis* use determination for the LPA at Bryn Mawr Meadows Park because the proposed and anticipated mitigation measures that have and will continue to be identified through coordination undertaken with the MPRB to minimize harm to the property. The MPRB must concur in writing with the *de minimis* impact determination after the opportunity for public comment on the preliminary Section 4(f) *de minimis* use determination.

3.5.4.2 Historic Properties

Exhibits 3.5-2 through 3.5-4 show the locations of historical properties within the LPA study area identified as listed on or eligible for the NRHP and assessed for Section 4(f) use[59]. Detailed maps of these resources are provided in subsequent sections of this document, as appropriate. Table 3.5-5 lists the resource name,

[59] Areas that were not previously surveyed with the APEs for architecture/history and archaeological resources, as revised in October 2014, are in the process of being surveyed to identify properties that are listed on, or are eligible for, inclusion on the NRHP. To date, a Phase I archaeological survey has been completed for one area along the Eden Prairie Segment (106 Group, 2014c). Additional Phase I archaeological surveys and Phase I architecture/history survey are underway and will be reported in the Final EIS.

location, and jurisdictional owner and indicates preliminary Section 4(f) use assessment; park/recreation resources are listed from south-to-north in the LPA study area.

TABLE 3.5-5
Summary of Permanent Section 4(f) Historic Property Uses[a]

Section 4(f) Property – Park/Recreation Area / (MnSHPO Inventory Number)	Section 106 Effect	Non-*de minimis* Use	*De minimis* Use	No Use	Existing Property Acreage	Acres Permanently Used	% of Property Used
Hopkins City Hall (HE-HOC-026)	No adverse effect			•	1.9	0.0	0%
Hopkins Commercial Historic District (HE-HOC-027)	No adverse effect			•	7.0	0.0	0%
Minneapolis and St. Louis Railroad Depot (HE-HOC-014)	No adverse effect			•	0.24	0.0	0%
Chicago, Milwaukee, St. Paul and Pacific Railroad Depot (HE-SLC-008)	No adverse effect			•	1.3	0.0	0%
Peavey-Haglin Experimental Concrete Grain Elevator (HE-SLC-009)	No adverse effect			•	0.1	0.0	0%
Hoffman Callan Building (HE-SLC-055)	No adverse effect			•	1.2	0.0	0%
Minikahda Club (HE-MPC-17102)	No adverse effect			•	156.0	0.0	0%
Grand Rounds Historic District (XX-PRK-001)	Adverse effect	•			— 1,657.2[b]	0.0	0%
Lake Calhoun (MPC-01811)[c]	No adverse effect			•	N/C	0.0	0%
Lake of the Isles (MPC-1824)[c]	No adverse effect			•	N/C	0.0	0%
Lake of the Isles Parkway (MPC-1825)[c]	No adverse effect			•	N/C	0.0	0%
Park Bridge #4 (HE-MPC-6901)[c]	No adverse effect			•	N/C	0.0	0%
Cedar Lake Parkway (MPC-01833)[c]	No adverse effect			•	N/C	0.0	0%
Cedar Lake (MPC-1820)[c]	No adverse effect			•	N/C	0.0	0%
Kenilworth Lagoon (MPC-1822)[c]	Adverse effect	•			— 10.3[d]	0.3	0.3%
Kenwood Parkway (MPC-01796)[c]	No adverse effect			•	N/C	0.0	0%
Kenwood Park (MPC-01797)[c]	No adverse effect			•	N/C	0.0	0%
Frieda and J. Neils House (HE-MPC-6068)	No adverse effect			•	0.5	0.0	0%
Lake of the Isles Residential Historic District (HE-MPC-9860)	No adverse effect			•	232.9	0.0	0%
Mahalia & Zachariah Saveland House (HE-MPC-6676)	No adverse effect			•	0.3	0.0	0%
Frank and Julia Shaw House (HE-MPC-6603)	No adverse effect			•	0.2	0.0	0%
Kenwood Parkway Residential Historic District (HE-MPC-18059)	No adverse effect			•	22.7	0.0	0%
Kenwood Water Tower (MPC-06475)	No adverse effect			•	N/C	0.0	0%
Mac Martin House (HE-MPC-8763)	No adverse effect			•	0.3	0.0	0%

Section 4(f) Property – Park/Recreation Area / (MnSHPO Inventory Number)	Section 106 Effect	Non-*de minimis* Use	*De minimis* Use	No Use	Existing Property Acreage	Acres Permanently Used	% of Property Used
St. Paul, Minneapolis & Manitoba Railroad Historic District (HE-MPC-16387)	No adverse effect		•		N/C	0.0	0%
Osseo Branch of the St. Paul, Minneapolis & Manitoba R.R. Historic District Minneapolis [XX-RRD-010 (district); HE-MPC-16389 (portion of district in Minneapolis)]	No adverse effect			•	N/C	0.0	0%
Minneapolis Warehouse Historic District (HE-MPC-0441)	No adverse effect			•	116.5	0.0	0%
Dunwoody Institute (HE-MPC-6641)	No adverse effect			•	12.8	0.0	0%

[a] All Section 4(f) determinations and Section 106 findings of effect are preliminary. See Section 3.5.1.1 of this Supplemental Draft EIS for definitions of the potential types of Section 4(f) uses. The Minikahda Club and Cedar Lake Parkway would be temporarily used by the project during construction of the Southwest LRT Project. FTA has preliminarily determined that each of those temporary uses would meet the criteria for a Temporary Occupancy Exception under 23 CFR 774.13(d). See Section 3.5.1.5 of this Supplemental Draft EIS for a description of the criteria for a Temporary Occupancy Exception. All acreages in this table are approximate. The estimates of acres that would be permanently used are based on current plans illustrated in this section and may change as designs are refined and as FTA and the Council coordinate with the officials with jurisdiction and consider public comment to determine appropriate final avoidance, minimization, and mitigation measures.

[b] Acreage estimate only includes the Chain of Lake and the Kenwood elements.

[c] Contributing element of Grand Rounds Historic District.

[d] Estimate based on the size of the Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park).

N/C = size not calculated.

Per the Section 106 analysis performed for the project, there are two NRHP-eligible archaeological sites in the LPA study area (Site 21HE0436 and Site 21HE0437)[60] that would be adversely affected by the LPA. However, analysis performed and subsequent consultation with MnSHPO has resulted in a preliminary determination that these archaeological sites are important chiefly because of what can be learned by data recovery and have minimal value for preservation in place. Based on this assessment, per 23 CFR 774.13(b), Section 4(f) does not apply to these two archaeological sites.

The remainder of this section addresses Section 4(f) historic properties where LPA actions would result in potential uses. Following is a description of the Section 4(f) historic properties within the LPA's park and recreation study area (generally from south to north), including:

1) A description of the Section 4(f) property;
2) A preliminary Section 4(f) permanent use determination;
3) A preliminary Section 4(f) temporary use determination/temporary occupancy exception determination (for those properties that would not have a Section 4(f) use or a Section 4(f) *de minimis* use);
4) A preliminary Section 4(f) constructive use determination (for those properties that would not have a Section 4(f) use); and
5) A preliminary overall Section 4(f) determination.

For the historic property where FTA has made a preliminary Section 4(f) non-*de minimis* use determination (i.e., the historic Kenilworth Lagoon/Grand Rounds Historic District), this section includes a preliminary no prudent and feasible determination, an assessment of all possible planning to minimize harm to date, and a preliminary least overall harm analysis.

[60] FTA does not disclose the location of archeological sites to help protect their integrity.

A. Hopkins City Hall – Preliminary No Use

Property Description

Hopkins City Hall is located at 1010 1st Street in Hopkins. Hopkins City Hall has been found eligible for the NRHP under NRHP Criterion A (see Exhibit 3.5-3). For more detailed information on this historic property see Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Hopkins City Hall historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Hopkins City Hall historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Hopkins City Hall historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). No work is proposed in the immediate vicinity of the Hopkins City Hall; however, it is located within 0.25 mile radius of the Downtown Hopkins Station.

Based on the preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Hopkins City Hall historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Hopkins City Hall historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Hopkins City Hall historic resource.

B. Hopkins Commercial Historic District – Preliminary No Use

Property Description

The Hopkins Commercial Historic District is located along Mainstreet between 8th Avenue and 11th Avenue in Hopkins. The Hopkins Commercial Historic District has been found eligible for the NRHP under NRHP Criterion A (see Exhibit 3.5-3). For more detailed information on this historic property see Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Hopkins Commercial Historic District historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Hopkins Commercial Historic District historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Hopkins Commercial Historic District historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of

this Supplemental Draft EIS). The only potential effects to the district area are related to potential redevelopment catalyzed by the project.

Based on the preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Hopkins Commercial Historic District historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Hopkins Commercial Historic District historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Hopkins Commercial Historic District historic resource.

C. Minneapolis and St. Louis Railroad Depot – Preliminary No Use

Property Description

The Minneapolis and St. Paul Railroad Depot is located at 9451 Excelsior Boulevard in Hopkins. The depot has been found eligible for the NRHP because it meets Requirement 1 of NRHP Criterion A.

Preliminary Determination of Permanent Section 4(f) Use

The LPA would not result in a permanent incorporation of property from the Minneapolis and St. Louis Railroad Depot historic property.

Preliminary Determination of Temporary Section 4(f) Use

The LPA would not result in a temporary occupancy of the Minneapolis and St. Louis Railroad Depot historic resource property.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Minneapolis and St. Louis Railroad Depot historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). The proposed LRT bridge over Excelsior Boulevard and the TC&W rail line will have an effect on the setting of the Minneapolis and St. Louis Railroad Depot. The western approach to the LRT bridge has been shifted east to minimize impacts to the depot's setting. The western approach begins approximately 25 feet west of the depot, with the LRT tracks rising as they extend eastward past the depot towards Excelsior Boulevard. At the east end of the depot the LRT tracks will be raised approximately 2 feet above the existing tracks.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Minneapolis and St. Louis Railroad Depot historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Minneapolis and St. Louis Railroad Depot historic resource under the Southwest LRT LPA and that the proximity impacts associated with the SWLRT Project would not result in a Section 4(f) constructive use of the Minneapolis and St. Louis Railroad Depot historic resource.

D. Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot – Preliminary No Use

Property Description

The Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot is at 6210 West 37th Street in St. Louis Park, inside Jorvig Park, and is listed on the NRHP (see Exhibit 3.5-3). The depot was moved from the intersection of Wooddale and 36th Street on Alabama Avenue, where it sat next to the railroad tracks. The depot served the Milwaukee Road from 1887 to 1968 and now serves as a museum for the St. Louis Park Historical

Society. For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). The LRT guideway, which passes the depot, follows the rail corridor and does not infringe on the depot property and will have no effect on the depot. A signal bungalow is proposed just west of the depot on the same side of the alignment and an access road may be constructed to the signal bungalow within the railroad right-of-way, between the LRT tracks and depot property. Although the signal bungalow, LRT catenary, and access road will introduce new visual elements to the depot's setting, they will not infringe on the depot property, and views of the signal bungalow from the depot will be screened by existing vegetation. The water main under Brunswick Avenue will be reconstructed and lowered, but will not impact the depot.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Chicago, Milwaukee, St. Paul, and Pacific Railroad Depot historic resource.

E. Peavey-Haglin Experimental Concrete Grain Elevator – Preliminary No Use

Property Description

The Peavey-Haglin Experimental Concrete Grain Elevator is at the junction of Highway 100 and Highway 7 in St. Louis Park (see Exhibit 3.5-3). It is listed on the NRHP and is a national historical landmark. For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Peavey-Haglin Experimental Concrete Grain Elevator historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Peavey-Haglin Experimental Concrete Grain Elevator historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Peavey-Haglin Experimental Concrete Grain Elevator historic resource property (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). The LRT guideway passes the property within the existing the rail corridor and does not infringe on the elevator property and will result in no effects that would impact the significance of the property.

A traction power substation (TPSS) is also proposed to be located across the alignment, 500 feet southwest of the elevator, thus it will have a negligible visual effect on the elevator's setting. Access to the elevator area from the recreational trail is maintained.

The LRT guideway that passes the elevator is located across the existing railroad line from the elevator and does not infringe on the depot property. The trail and trail access near the elevator are maintained. Given the low-rise nature of the traction power substation, it will have a minimal impact on the setting of the elevator and views of it.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Peavey-Haglin Experimental Concrete Grain Elevator historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Peavey-Haglin Experimental Concrete Grain Elevator historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Peavey-Haglin Experimental Concrete Grain Elevator historic resource.

F. Hoffman Callan Building – Preliminary No Use

Property Description

The Hoffman Callan Building, located at 3907 Highway 7 in St. Louis Park, has been determined eligible for the NRHP under Criterion C for Architecture (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Hoffman Callan Building historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Hoffman Callan Building historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Hoffman Callan Building historic resource property (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS); no work is proposed in the immediate vicinity of the property.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Hoffman Callan Building historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Hoffman Callan Building historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Hoffman Callan Building historic resource.

G. Minikahda Club – Preliminary Temporary Occupancy Exception/No Section 4(f) Use

Property Description

The Minikahda Club, located at 3205 Excelsior Boulevard in Minneapolis, has been determined eligible for the NRHP under Criterion C for Landscape Architecture (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

The LPA would not result in a permanent incorporation of land from the Minikahda Club historic resource.

Preliminary Determination of Temporary Section 4(f) Use

The LPA would require a minor temporary occupancy of land at the very northern edge of the property in the landscaped triangle at the driveway entrance to the club. A part of this landscaped grass area will need to be closed while the intersection of Excelsior Boulevard and W. 32nd Street is repaved and restriped (both travel lane markings and crosswalk markings – see Exhibit 3.5-19). Section 4(f) temporary occupancy exception criteria are addressed below with respect to the construction impacts at the Minikahda Club historic resource:

Section 4(f) temporary occupancy exception criteria are addressed below:

1. ***Criterion:*** *Duration is temporary (that is, the occupancy is shorter than the time needed for construction of the project, and there is no change in ownership of the property).*

   Preliminary Finding: The overall duration of construction for the entire project is approximately four years. The duration of the construction activities for the portion of the project at the Minikahda Club property is estimated at approximately less than one month. There will be no change in ownership of the parkland that would be temporarily occupied.

2. ***Criterion:*** *Scope of work is minor (that is, the nature and magnitude of the changes to the Section 4(f) properties are minimal).*

   Preliminary Finding: The part of the Minikahda Club property to be temporarily occupied during construction is the grass-only part of the triangle median that sits between the entrance and exit driveway lanes of the club. The club would still be accessible to the public throughout construction for vehicles, bicycles, and pedestrians via the main driveway at the intersection of Excelsior Boulevard and W. 32nd Avenue. There would be no permanent change to the Minikahda Club as a result of project actions.

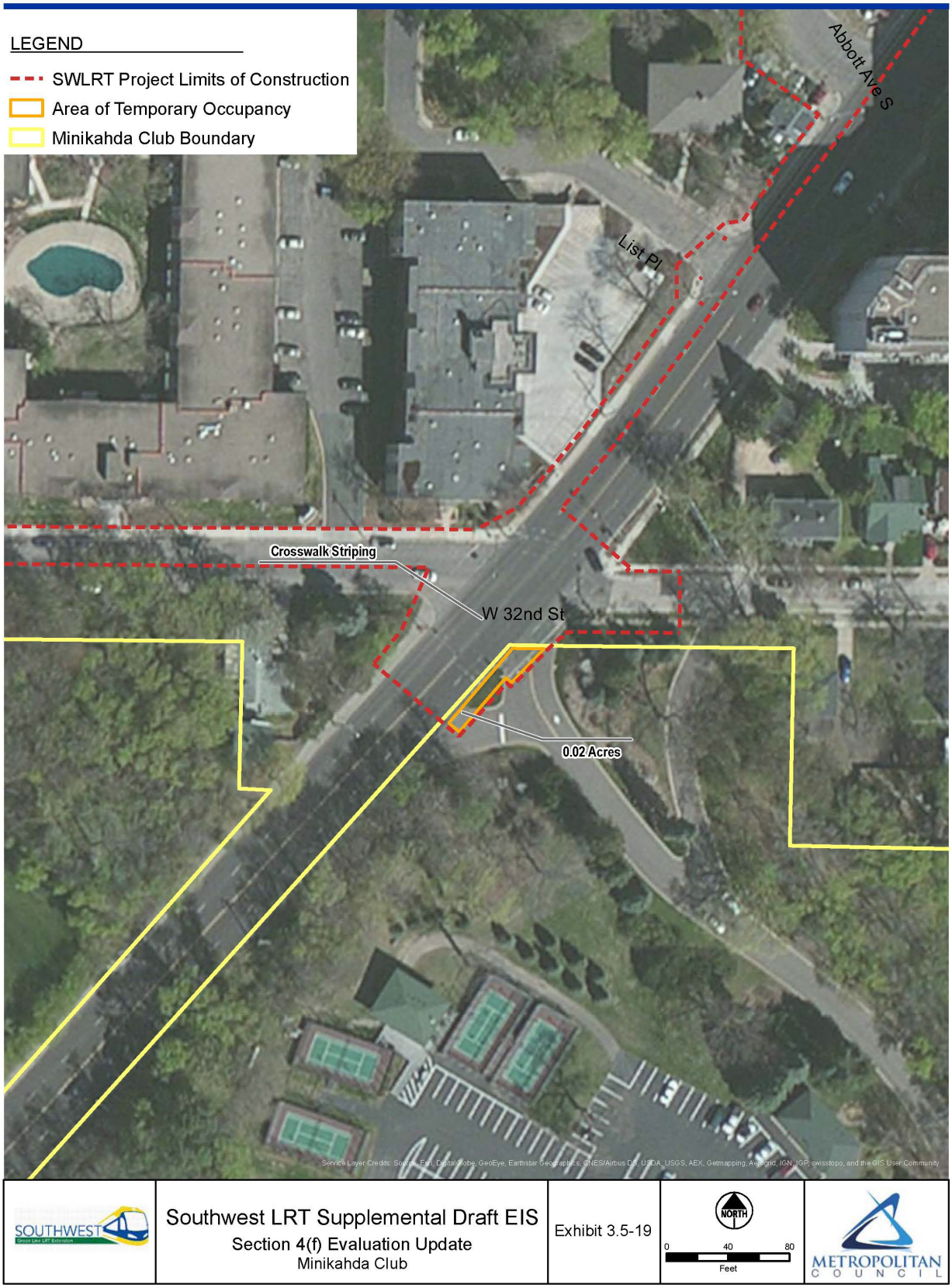
3. ***Criterion:*** *There are no anticipated permanent adverse physical impacts or permanent interference with the protected activities, features, or attributes of the property.*

   Preliminary Finding: The Minikahda Club has been determined eligible for the NRHP based on its landscape architecture. The project would not alter, either temporarily or permanently, the landscaping of the Minikahda Club. Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Minikahda Club (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

4. ***Criterion:*** *The property is restored to the same or better condition that existed prior to the project.*

   Preliminary Finding*:* The aforementioned grass part of the driveway triangle that would be temporarily occupied during construction will be restored to better conditions then exist currently.

EXHIBIT 3.5-19
Draft Section 4(f) Evaluation Update – Minikahda Club



5. ***Criterion:*** *There is documented agreement from the appropriate federal, state, or local officials having jurisdiction over the property regarding the above conditions.*

Preliminary Finding*:* FTA and Council staff have consulted with MnSHPO through the Section 106 process to review the project's preliminary construction plan in the vicinity of the Minikahda Club, and the project will continue coordinating with MnSHPO regarding obtaining written concurrence on a final determination that the project would meet the above temporary occupancy exception criteria.

Preliminary Determination of Constructive Section 4(f) Use

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can be preliminarily concluded that the Minikahda Club historic resource would not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent Section 4(f) use of the Minikahda Club and that proposed construction activities within the park would meet the criteria for a Temporary Occupancy Exception described in 23 CFR 774.13(d).

H. Lake Calhoun – Preliminary No Use

Property Description

Lake Calhoun, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District (see Exhibit 3.5-4A).

Preliminary Determination of Permanent Section 4(f) Use

The LPA would not result in a permanent incorporation of land from the Lake Calhoun historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Lake Calhoun historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Lake Calhoun (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). There will be potential changes in traffic and parking near the Lake Calhoun Playing Fields which need further assessment. There will also be minor pedestrian improvements at the intersection of Excelsior Boulevard and Market Plaza, but these improvements will have a negligible visual effect on the setting of the Lake Calhoun Playing Fields.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect and the requirements under 23 CFR 774.15(f)(1), it can subsequently be concluded that the Lake Calhoun historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur.

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Lake Calhoun historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Lake Calhoun historic resource.

I. Lake of the Isles – Preliminary No Use

Property Description

Lake of the Isles, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District, which qualifies under Criterion C (Community Planning & Development; Entertainment/Recreation; Landscape Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Lake of the Isles historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Lake of the Isles historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

The LPA would result in a change in the lake's setting due to the design, visibility, and visual prominence of the new bridge structures across the Kenilworth Lagoon; however, based on Section 106 analysis and continued consultation with MnSHPO, this change would be minor and a subsequent preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Lake of the Isles historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Lake of the Isles historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Lake of the Isles historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Lake of the Isles historic resource.

J. Lake of the Isles Parkway – Preliminary No Use

Property Description

Lake of the Isles Parkway, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District , which qualifies under Criterion A and Criterion C (Community Planning & Development; Entertainment/Recreation; Landscape Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Lake of the Isles Parkway historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Lake of the Isles Parkway historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

The LPA would result in a change in the parkway's setting due to the design, visibility, and visual prominence of the new bridge structures across the Kenilworth Lagoon; however, based on Section 106 analysis and continued consultation with MnSHPO, this change would be minor and a subsequent preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Lake of the Isles Parkway historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Lake of the Isles Parkway historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Lake of the Isles Parkway historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Lake of the Isles Parkway historic resource.

K. Park Bridge #4 – Preliminary No Use

Property Description

Park Bridge #4, which spans the Kenilworth Lagoon along West Lake of the Isles Parkway, is considered a contributing site within the overall potential Grand Rounds Historic District and has been individually determined eligible for the NRHP under Criterion C (Engineering) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix .

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Park Bridge #4 historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Park Bridge #4 historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Park Bridge #4 (see Supplemental Draft EIS Section 3.4).The LPA would result in a change in the bridge's setting due to the design, visibility, and visual prominence of the new bridge structures across the Kenilworth Lagoon; however, based on Section 106 analysis and consultation this change would be minor and a subsequent preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Park Bridge #4 historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Park Bridge #4 historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Park Bridge #4 historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Park Bridge #4 historic resource.

L. Lake of the Isles Residential Historic District – Preliminary No Use

Property Description

Lake of the Isles Residential Historic District, located in the vicinity of East and West Lake of the Isles parkways in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District and has been individually determined eligible for the NRHP under Criterion A (Architecture; Community Planning & Development) (see Exhibit 3.5-4B). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Lake of the Isles Residential Historic District – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Lake of the Isles Residential Historic District during construction.

Preliminary Determination of Constructive Section 4(f) Use

The LPA would result in potential changes in noise and traffic patterns in the district and a change in the district's visual character and setting due to the design, visibility, and visual prominence of the new bridge structures across the Kenilworth Lagoon (which is partially located within the district); however, based on Section 106 analysis and continued consultation with MnSHPO, this change would be minor and a subsequent preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Lake of the Isles Residential Historic District historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Lake of the Isles Residential Historic District will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Park Bridge #4 historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Park Bridge #4 historic resource.

M. Cedar Lake Parkway/Grand Rounds Historic District – Preliminary Temporary Occupancy Exception/No Section 4(f) Use

Property Description

Cedar Lake Parkway, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District, which has been determined eligible for the NRHP under Criterion A and Criterion C (Landscape Architecture; Community Planning & Development; Entertainment/Recreation) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-20, the LPA would not result in a permanent incorporation of land from the Cedar Lake Parkway historic resource – as such, there would not be a Section 4(f) permanent use of the property. Based on design to date and continued consultation with MnSHPO and other consulting parties, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA at Cedar Lake Parkway (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Preliminary Determination of Temporary Occupancy Exception

As illustrated in the Southwest LRT preliminary engineering plan set and Exhibit 3.5-20, the LPA would result in the temporary use of property from the Cedar Lake Parkway historic resource during construction. Section 4(f) temporary occupancy exception criteria are addressed below:

1. ***Criterion:*** *Duration is temporary (that is, the occupancy is shorter than the time needed for construction of the project, and there is no change in ownership of the property).*

   Preliminary Finding*:* The overall duration of construction for the entire project is approximately four years. The duration of the construction activities for the portion in Cedar Lake Parkway is estimated at approximately 18 calendar months. There will be no change in ownership of the historic property that would be temporarily occupied.

2. ***Criterion:*** *Scope of work is minor (that is, the nature and magnitude of the changes to the Section 4(f) properties are minimal).*

   Preliminary Finding*:* The proposed light rail alignment would pass under Cedar Lake Parkway in a shallow tunnel, requiring the reconstruction of approximately 320 feet of the parkway to accommodate tunnel construction. The parkway would be reconstructed to its existing width and configuration as it crosses the corridor over the light rail tunnel, with a slight increase in elevation (less than eight inches). The current at-grade intersections of the parkway with the recreational trail and with the freight rail tracks would continue, with the freight rail tracks shifting approximately three feet to the west. A new bicycle and pedestrian crossing signal would be added to the path's crossing of the parkway. The MnSHPO preliminarily concurred with the Section 106 finding of no adverse effect for the Cedar Lake Parkway and , based on the current design and the Section 106 finding of no adverse effect, the resource would be returned to current conditions or better.

3. ***Criterion:*** *There are no anticipated permanent adverse physical impacts or permanent interference with the protected activities, features, or attributes of the property.*

   Preliminary Finding*:* During construction activities that would require the closure of Cedar Lake Parkway, the project will provide signed detour routes for vehicles, pedestrians, and bicyclists. Notification of the detours would be provided to the public through various media, consistent with the project's construction management plan.

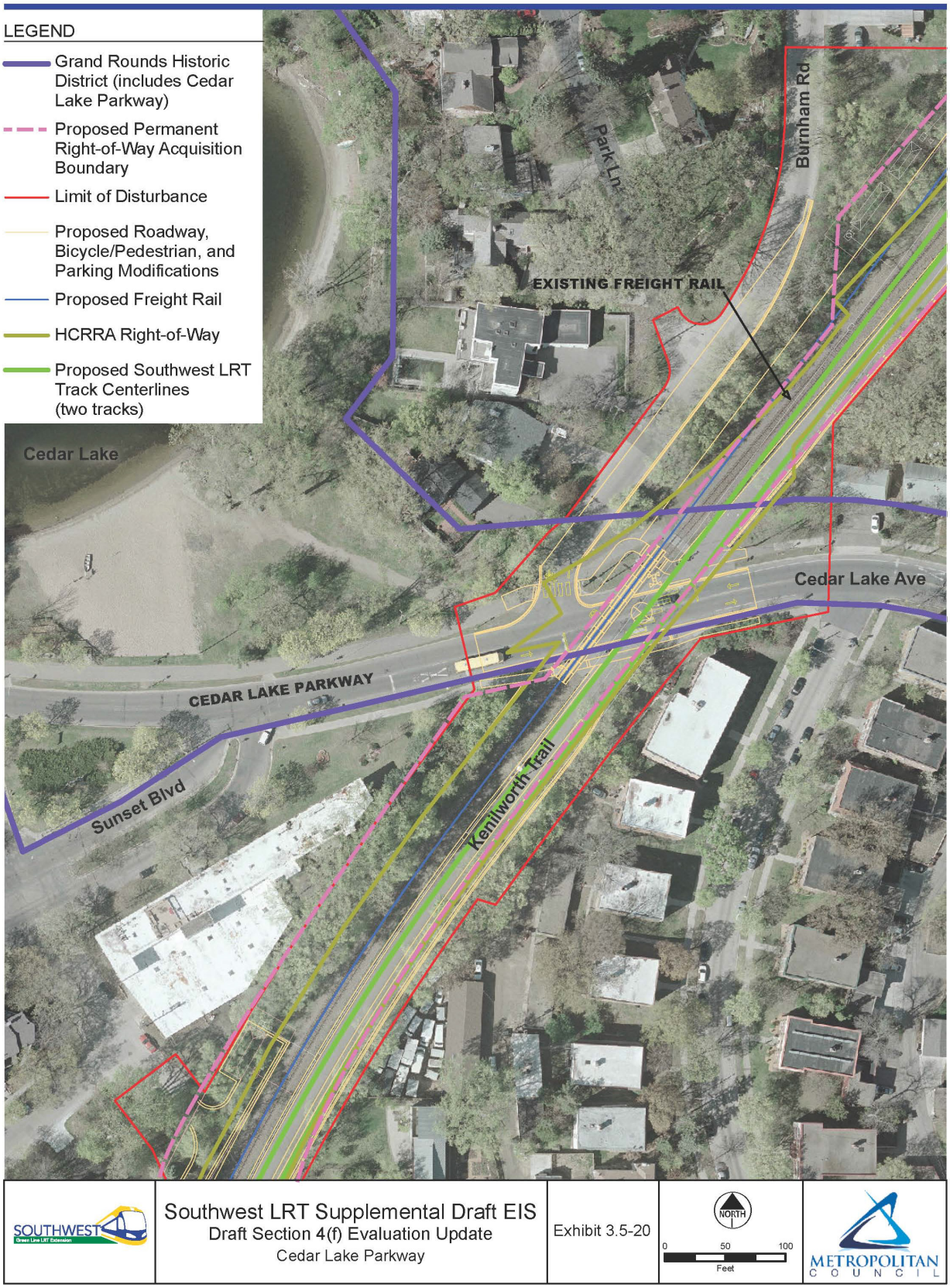
4. ***Criterion:*** *The property is restored to the same or better condition that existed prior to the project.*

   Preliminary Finding: as noted under criterion 2, Cedar Lake Parkway would be reconstructed to its existing width and configuration as it crosses the corridor over the LRT tunnel, with a slight increase in elevation (less than eight inches). The current at-grade intersections of the parkway with the recreational trail and freight rail tracks would continue, with the freight rail tracks shifting approximately three feet to the west. The MnSHPO preliminarily concurred with the Section 106 finding of no adverse effect for the Cedar Lake Parkway and , based on the current design and the Section 106 finding of no adverse effect, the resource would be returned to current conditions or better.

5. ***Criterion:*** *There is documented agreement from the appropriate federal, state, or local officials having jurisdiction over the property regarding the above conditions.*

   Preliminary Finding: FTA and Council staff have consulted with MnSHPO through the Section 106 process to review the project's preliminary construction plan effecting Cedar Lake Parkway, and the project will continue coordinating with MnSHPO regarding obtaining written concurrence on a final determination that the project would meet the above temporary occupancy exception criteria. Based on design to date and continued consultation with MnSHPO and other consulting parties, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA at Cedar Lake Parkway (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

EXHIBIT 3.5-20
Draft Section 4(f) Evaluation Update – Cedar Lake Parkway



Preliminary Determination of Constructive Section 4(f) Use

Because Cedar Lake Parkway will be reconstructed in its existing configuration with slight increase in elevation (less than eight inches) a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Lake of the Isles Residential Historic District historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can be preliminarily concluded that the Cedar Lake Parkway historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent Section 4(f) use of the Cedar Lake Parkway historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Cedar Lake Parkway historic resource. Further, FTA has preliminary determined that the construction activities that would occur within the Cedar Lake Parkway would meet the criteria for a Temporary Occupancy Exception described in 23 CFR 774.13(d).

N. Cedar Lake – Preliminary No Use

With regard to a discussion of potential Section 4(f) impacts to the Cedar Lake historic resource it is important to note that the boundary of this historic resource is not coincident with the boundary of the Cedar Lake Park recreation property (see Exhibit 3.5-4A/B). Because the historic and recreation property boundaries are different, they are treated as two distinct Section 4(f) properties within this evaluation and the anticipated uses and impacts to the two properties are not the same. For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Property Description

Cedar Lake has been determined eligible for listing in the National Register under Criteria A and C (areas of significance: Community Planning & Development, Entertainment/Recreation, and Landscape Architecture). Cedar Lake is considered a contributing site within the overall potential Grand Rounds Historic District.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Cedar Lake historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from Cedar Lake historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Cedar Lake (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). Design and visibility of the new bridge structures across the Kenilworth Lagoon will be minimized by their distance from the lake, the narrowness of the channel corridor in which they are visible, and by the intervening Burnham Road Bridge that further blocks them from view. Noise from LRT operations will not introduce noise levels to the lake that are greater than those present within its period of significance, thus noise from operations will not adversely affect the integrity or feeling of the resource.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Cedar Lake historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Cedar Lake historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Cedar Lake Park historic resource.

O. Kenilworth Lagoon/Grand Rounds Historic District – Preliminary non-*De Minimis* Use

This section provides the following for the Kenilworth Lagoon[61]/Grand Rounds Historic District:

- A property description;
- A summary of FTA's and the Council's preliminary avoidance alternatives analysis and determinations;
- A summary of all possible planning to minimize harm and FTA's and the Council's preliminary determination; and,
- A summary of FTA's and the Council's preliminary least overall harm analysis and determinations.

Property Description

The Kenilworth Lagoon is a constructed body of water that connects Cedar Lake and Lake of the Isles in Minneapolis, as shown on Exhibit 3.5-4A. The Kenilworth Lagoon is a contributing element of the Grand Rounds Historic District, which is eligible for listing in the *National Register of Historic Places* based on Criteria A and C (areas of significance: Community Planning & Development, Entertainment/Recreation, and Landscape Architecture)[62]. The boundary of the Grand Rounds Historic District within the project vicinity, including the Kenilworth Lagoon, is illustrated on Exhibit 3.5-4B.

Documentation of the Kenilworth Lagoon's and the Grand Rounds Historic District's determination of eligibility is provided in Section 3.4 and Appendix H of the Draft EIS and Section 3.4.1.3 and Appendix C and Appendix E of this Supplemental Draft EIS. Additional documentation on the Kenilworth Lagoon can be found in the *Kenilworth Lagoon/Channel Context, History, and Physical Description for the Proposed Southwest LRT Project* (Mathis, 2014), which is included in Appendix E of this Supplemental Draft EIS. Following is an excerpt from that report that describes the creation of the Grand Rounds (ibid. pages 2-3).

> "In 1883, a series of events occurred that were critical to the creation of the present-day park system in Minneapolis. The first occurred in February, when the Minnesota Legislature approved enabling legislation for the creation of an independent park board. The second was in April, when Minneapolis voters approved a referendum, the Park Act, to establish an independent board of park commissioners to oversee the development of parks in the city. The Minneapolis Board of Park Commissioners (MBPC) was authorized to obtain land for park development, issue bonds to pay for land acquisition and park development, and to levy a citywide tax to repay the bonds (MPRB 2014a). Another major event occurred shortly thereafter, when noted landscape architect Horace William Shaler (H.W.S.) Cleveland came to Minneapolis and presented his "Suggestions for a System of Parks and Parkways for the City of Minneapolis" (Roise et al. 2012a). Cleveland's vision called for the creation of an interconnected park system that featured a system of landscaped parkways to link the Mississippi River, Minnehaha Falls, Minnehaha Creek, and the numerous lakes in the City (Cleveland 1883).

[61] Kenilworth Lagoon, which is a constructed channel connecting Lake of the Isles to Cedar Lake, is made up of two distinct components: a narrow channel with segments of retaining walls within its banks (between the Kenilworth Corridor and Cedar Lake); and the wide lagoon that typically has gently sloping and landscaped banks (between the Kenilworth Corridor and Lake of the Isles).

[62] FTA, MnSHPO, and the Council have also identified the Kenilworth Channel/Lagoon as a Section 4(f) park and recreation property, as part of the Grand Rounds Regional Park, similar to but distinct from the Kenilworth Lagoon as an individual historic resource and a contributing element of the Grand Rounds Historic District. The historic and park properties are treated separately within this draft Section 4(f) Evaluation Update as they have somewhat different boundaries, different Section 4(f) qualifying characteristics, and different officials with jurisdiction. See Section 3.5.4.1 of this Supplemental Draft EIS for the updated Section 4(f) analysis for the Kenilworth Channel/Lagoon park and recreation property.

> "Enamored with Cleveland's vision, the MBPC set about with its implementation… In 1887, the MBPC began to develop the Chain of Lakes. In 1890, the MBPC established a Special Committee on Park Engagement. This committee looked at the park system, as developed along Cleveland's ideas, and in 1891 made recommendations for expanding the system throughout the city. It was at this time that the phrase "Grand Rounds" was first used to describe a parkway system that would form a loop around the entire city and pass through several large parks. The proposal was thoroughly endorsed by the MBPC, who continued to support it through the 1890s. However, aggressive implementation did not move forward until 1906, when Theodore Wirth became the new superintendent of Minneapolis parks. During Wirth's 30-year tenure, the Minneapolis parks system nearly tripled in size, growing from 1,800 acres to around 5,200 acres (Roise et al. 2012a).
>
> "The modern-day Grand Rounds is an approximately 50-mile long, interconnected system of parks and parkways that encircles most of Minneapolis. Encompassing approximately 4,662 acres, small portions of the system also extend into the adjacent cities of Golden Valley, Robbinsdale, Saint Anthony, and Saint Louis Park. The Grand Rounds is organized into seven segments: Kenwood, Chain of Lakes, Minnehaha, Mississippi River, Northeast, Victory Memorial, and Theodore Wirth. Each segment is further divided into sub-segments that include parkways, boulevards, and the parks they connect (Roise et al. 2012a)...
>
> "The Chain of Lakes encompasses the major lakes within the Grand Rounds system. It extends from the parkway bridge over Interstate 394 to the start of Minnehaha Parkway on the southeast side of Lake Harriet. The Chain of Lakes includes the following sub-segments: Cedar Lake, including Brownie Lake, Lake of the Isles, Dean Parkway, the Mall, Lake Calhoun, William Berry Park, originally Interlachen Park, Linden Hills Boulevard, Lake Harriet; Lyndale Park; Kings Highway, and Lyndale Farmstead (Roise et al. 2012a).
>
> "The park system that evolved into the Grand Rounds has experienced several significant periods of development over the last 130 years. They include: initial development following H.W.S. Cleveland's recommendations; the early 1890s, when the vision for the system was expanded and it became known as the Grand Rounds; the Theodore Wirth period between 1906 and 1935, when the system was greatly expanded and improved; the 1970s when a substantial reworking of the system occurred following the recommendations of San Francisco landscape architects Eckbo, Dean, Austin and Williams, as modified by the Citizen Parkway Committee, and implemented by the landscape architecture firm InterDesign and the engineering firm BRW; and finally after 1998, when the Grand Rounds was designated by the Federal Highway Administration as the first urban National Scenic Byway and new layer of signage and other elements were installed (Roise et al. 2012a).

Connecting the Chain of Lakes was one of the most important improvements undertaken by the MBPC in the early period of Theodore Wirth's tenure. By the early twentieth century there was widespread interest in water sports on the lakes and streams in Minneapolis, which resulted in a strong public desire to create a continuous navigable waterway to connect the Chain of Lakes. Construction of the Kenilworth Lagoon (EH-MPC-01822) was part of the major effort between 1907 and 1931 to make improvements to the Lake District in western Minneapolis, which included substantial dredging operations. This dredging work commenced at Lake of the Isles and dredging work to create the Kenilworth Lagoon was substantially completed in November 2012. The following year the MPRB adopted the name "Kenilworth" for the lagoon. In 1913, the Minneapolis and Saint Louis Railway Company constructed what was characterized at the time as a "temporary" wood timbered bridge across the lagoon. Work on the lagoon continued into the fall of 2013, including the grading and planting of the banks between Cedar Lake and the railroad bridge. Walks were planted along both sides of the lagoon leading from Lake of the Isles Boulevard to Cedar Lake Avenue, which had its name changed to Burnham Avenue. The waterway officially opened on November 8, 1913. In 1938, WPA crews stopped erosion of the banks by constructing approximately 2,400 cubic feet of retaining wall. In 1961 the MPRB completed the replacement of the timber retaining wall on the north side of the west end of the lagoon running from Cedar Lake to the Burnham Road Bridge.

The existing freight rail and bicycle/pedestrian bridges crossing the Kenilworth Lagoon are known collectively as Bridge No. 5 in the Section 106 documentation (the bridges are also collectively known as

Bridge 27A43). The two bridges are seven-span creosoted timber trestles that historically carried two Minneapolis and St. Louis Railway siding tracks that were part of the railroad's Cedar Lake Yard. The bridges were originally built in 1913 and replaced in the 1950s. FTA and MnSHPO have determined that neither of the two existing timber trestles that make up Bridge No. 5 are contributing elements to the Kenilworth Lagoon or Grand Rounds Historic District and they are not eligible for listing in the *National Register of Historic Places*.

Exhibits 3.5-21 through 3.5-24[63] illustrate existing conditions of the Kenilworth Lagoon at the BNSF/HCRRA rights-of-way, including the existing non-contributing wood trestle bridges.

Because the area of the Kenilworth Lagoon that would be used by the LPA is identical to the area of the Grand Rounds Historic District that would be used by the LPA, and because the Kenilworth Lagoon is a contributing element of the Grand Rounds Historic District, this preliminary Section 4(f) non-*de minimis* use determination applies to both the Kenilworth Lagoon and the Grand Rounds Historic District. Throughout the remainder of this section, the two historic resources are collectively referred to as the Kenilworth/Lagoon/Grand Rounds Historic District (as the Section 4(f) property under review).

Preliminary Determination of Permanent Section 4(f) Use

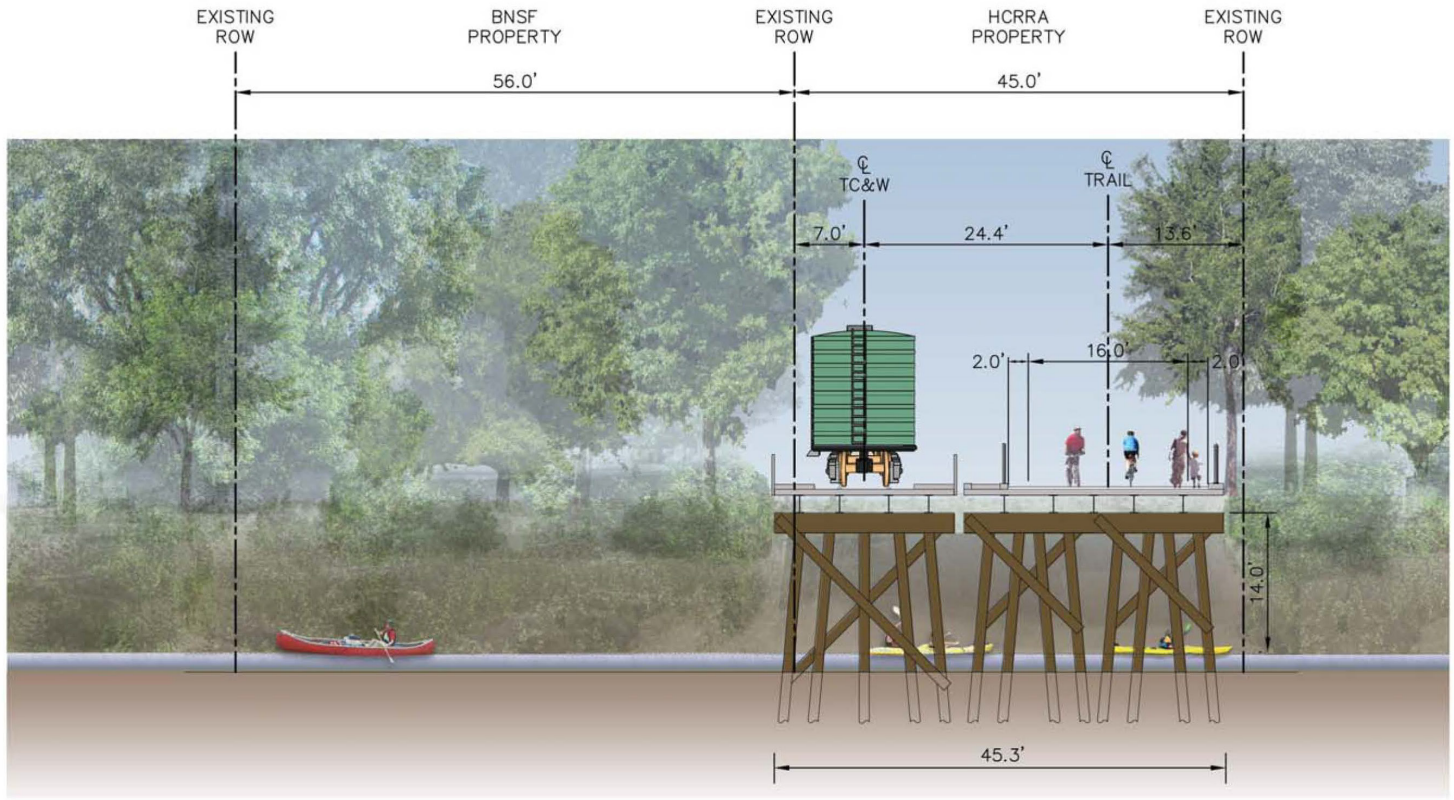
The LPA would result in the permanent incorporation of approximately 0.3 acres of property from the historic Kenilworth Lagoon/Grand Rounds Historic District (see Exhibit 3.5-25). At the Kenilworth Lagoon, the LPA is based on the Shallow LRT Tunnel – Over Kenilworth Tunnel option that was developed and evaluated by the Council through the design adjustment process described in Section 2.3.3.2 and Appendix F of this Supplemental Draft EIS.

Based on the Section 106 analysis performed to date, FTA and the MnSHPO have preliminarily determined that the LPA would result in an adverse effect on the Kenilworth Lagoon/Grand Rounds Historic District. The rationale for this preliminary effect determination is based on proposed changes to the historic resource and its setting, including the following:

- Removal of the existing non-contributing railroad and trail bridges across the channel
- Replacement of the existing railroad and trail bridges with new light rail, freight rail, and trail bridges over the channel
- Design and visibility of the new bridge structures across the channel
- Visual impact from the width of the new crossing on the character and feeling of the middle section of the channel and on the experience of using the waterway when passing under the new structure
- Partial removal and/or alterations of contributing WPA-era retaining walls
- Removal and/or replacement of some existing vegetation on a portion of the channel banks and reconstruction of portions of the channel banks

[63] Note that Exhibit 2.5-23 also illustrates in profile the location of the existing bridges relative to the proposed new bridges. The exhibit was included in the November 12, 2014, Southwest LRT Project's Section 106 Consultation Package, which were presented and discussed at the project's November 24, 2014, Consultation Meeting. The exhibit was based on draft for discussion designs also presented at that meeting. The design of the bridges, including span configurations, materials, and railing options, continue to be developed as part of the advancement of the design for the project.

EXHIBIT 3.5-21
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north)	Exhibit 3.5-21		METROPOLITAN COUNCIL

EXHIBIT 3.5-22

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (plan view)

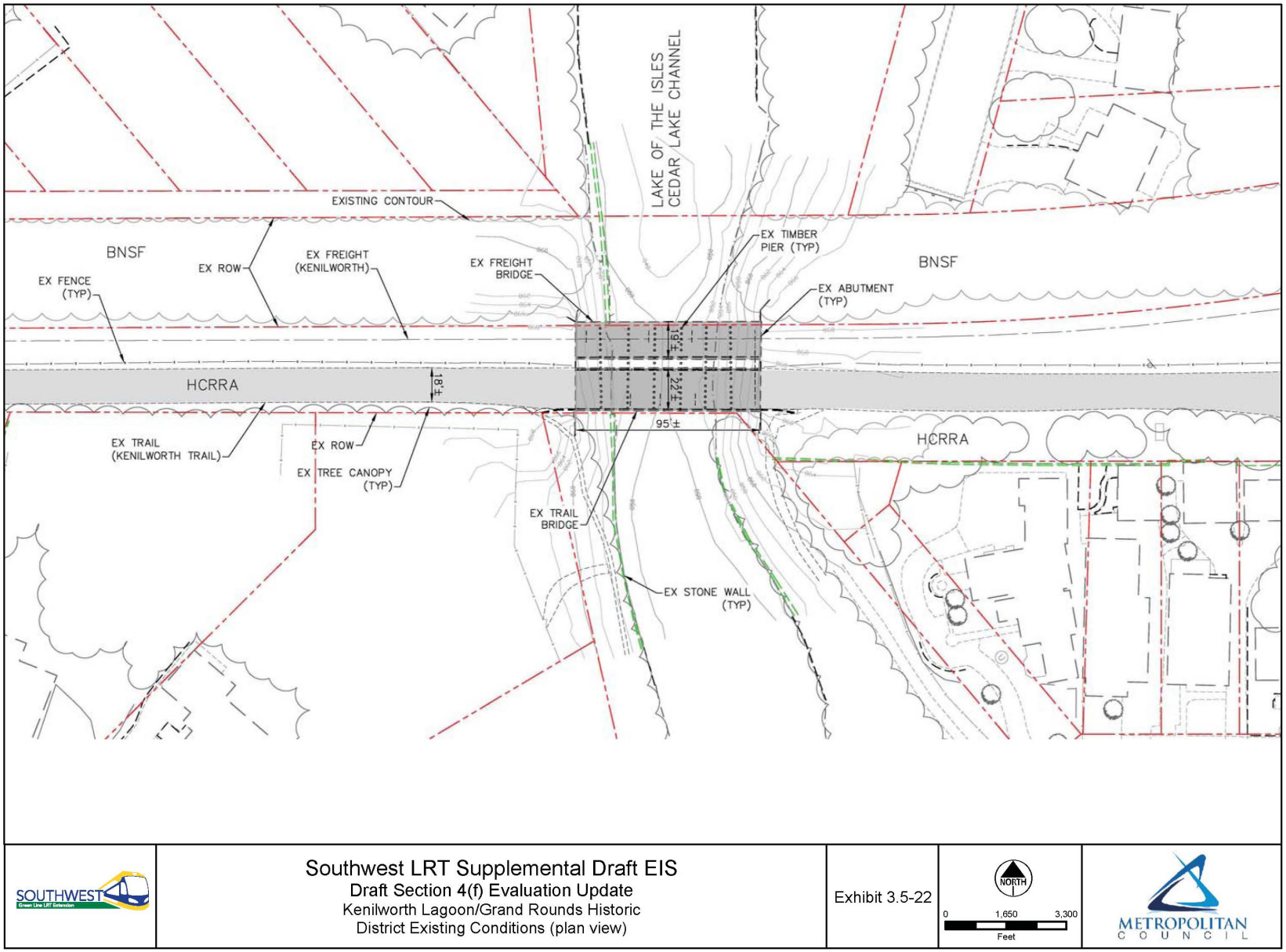
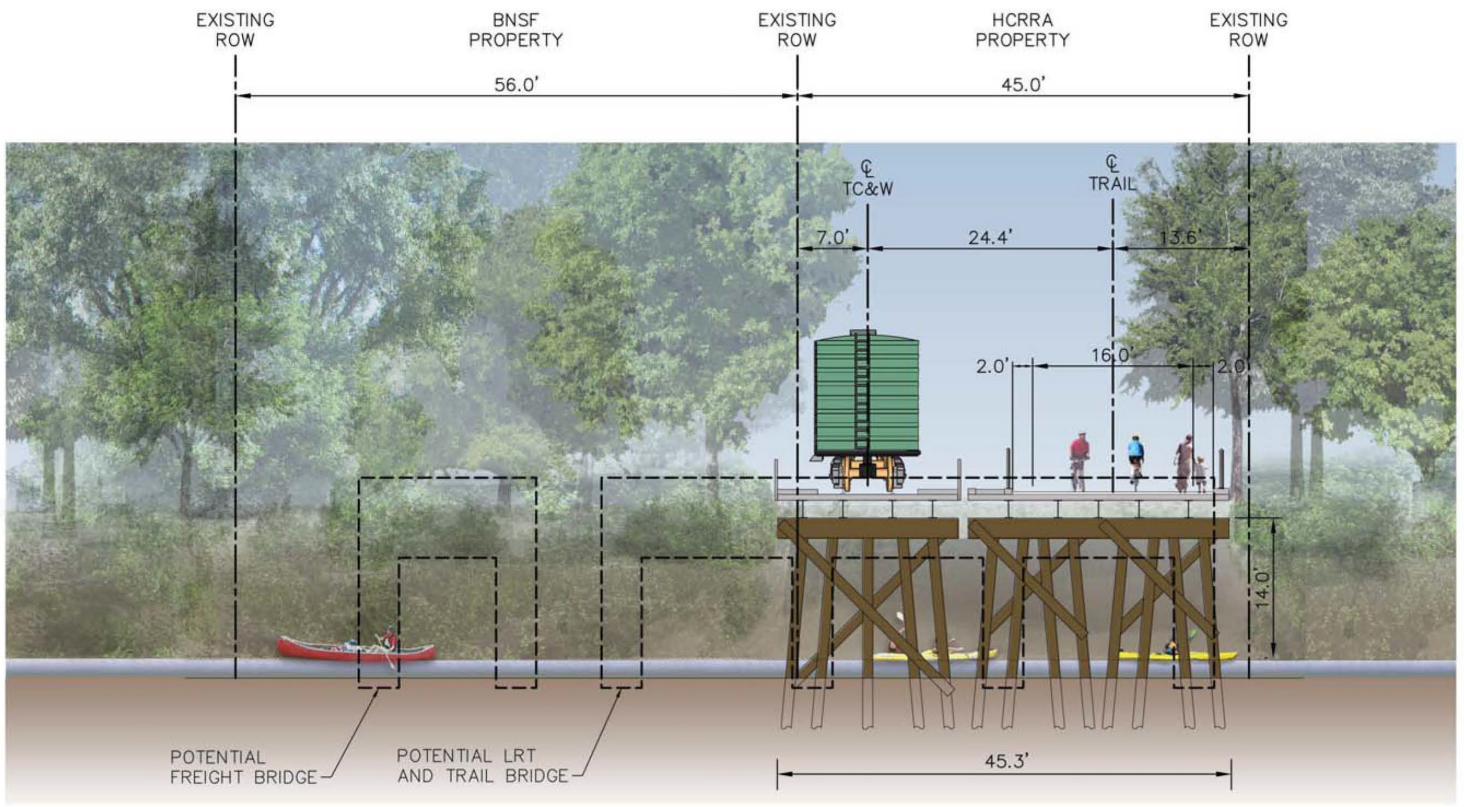


EXHIBIT 3.5-23
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north – relative to proposed new bridges)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (looking north – relative to proposed new bridges)	Exhibit 3.5-23		METROPOLITAN COUNCIL

EXHIBIT 3.5-24
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (from water level)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Existing Conditions (from water level)	Exhibit 3.5-24		METROPOLITAN COUNCIL

EXHIBIT 3.5-25
Draft Section 4(f) Evaluation Update – Kenilworth Channel/Lagoon (element of the Grand Rounds Historic District)



Exhibits 3.5-26 through 3.5-38 illustrate a variety of cross sections and simulations of potential bridge types, designs, and railing treatments that were developed by project staff to help facilitate early steps in the project's Section 106 consultation process to minimize and mitigate adverse effects to the Kenilworth Lagoon/Grand Rounds Historic District. The potential bridge simulations were presented and discussed at the project's November 24, 2014, Section 106 Consultation Meeting to help initiate the project's coordination effort with the consulting parties on potential ways to resolve a preliminary Section 106 adverse effect on the historic resource. These exhibits were used by the project to initiate the project's avoidance, minimization, and mitigation process for the Kenilworth Lagoon/Grand Rounds Historic District. Continuing that process, additional draft designs, bridge span configurations, and railing options were discussed during the project's February 6 and 24, 2015, Section 106 Consultation Meetings. The consultation process, including development and evaluation of additional bridge types, span configurations, materials, rail options, and other minimization and mitigation measures will continue and the process for design review by the consulting parties will be included in the project's Section 106 Agreement. In addition, design options to minimize or mitigate adverse effects to topographical features (vegetation and WPA-era retaining walls) will be discussed with the consulting parties and be included in the Section 106 agreement. The Consultation Meeting materials are included in Appendix C and Appendix E of this Supplemental Draft EIS.

As noted in Section 3.5.4.1 of this Supplemental Draft EIS, the Council and FTA have initiated coordination activities with the MPRB to identify avoidance, minimization, and mitigation measures to address the project's use of and effects on the recreational attributes, facilities, and activities of the Kenilworth Channel/Lagoon (park and recreation property). The coordination efforts between the Council and the MPRB may include the development of additional bridge design concepts and minimization and mitigation measures. The Council and FTA have committed to continue Section 4(f) coordination activities with the MPRB. In general, these Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon and will be coordinated with the development of a Section 106 Agreement for the Kenilworth Lagoon/Grand Rounds Historic District.

Based on the information summarized in this section, FTA has preliminarily concluded that the LPA would result in a non-*de minimis* use of the historic Kenilworth Lagoon Section 4(f) resource.

Preliminary Avoidance Alternatives Analysis

The Section 4(f) statute requires the selection of an alternative that completely avoids the use of Section 4(f) property if that alternative is deemed feasible and prudent. Based on project analysis performed to-date, the No Build and Enhanced Bus Alternative as described and evaluated in the project Draft EIS would completely avoid the use of any Section 4(f) property. No other alternatives developed and evaluated to date would completely avoid the use of a Section 4(f) property. Following is a summary of FTA and the Council assessment of the feasibility and prudence of those two alternatives. In summary, the preliminary determination is that both the No Build Alternative and the Enhanced Bus Alternative would be feasible but not prudent avoidance alternatives as per the criteria provided in 23 CFR 774.17(3)(i) and described in Section 3.5.1.4 of this Supplemental Draft EIS.

No Build Alternative

The No Build Alternative is required by the NEPA/MEPA process and includes all existing and committed transportation infrastructure, facilities, and services contained in the region's fiscally constrained and federally approved transportation plan, the Metropolitan Council's Transportation Policy Plan (TPP).

As defined in Chapter 2 of the Draft EIS and summarized in Section 2.2 of this Supplemental Draft EIS, the No Build Alternative would completely avoid a use of all Section 4(f) resources.

Preliminary Evaluation of Feasibility

As per 23 CFR 774.17(2) of the Section 4(f) regulations, an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. FTA and the Council have determined that the No Build Alternative would be feasible from an engineering perspective, because no construction would be required to implement the alternative.

EXHIBIT 3.5-26

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept cross section looking west)

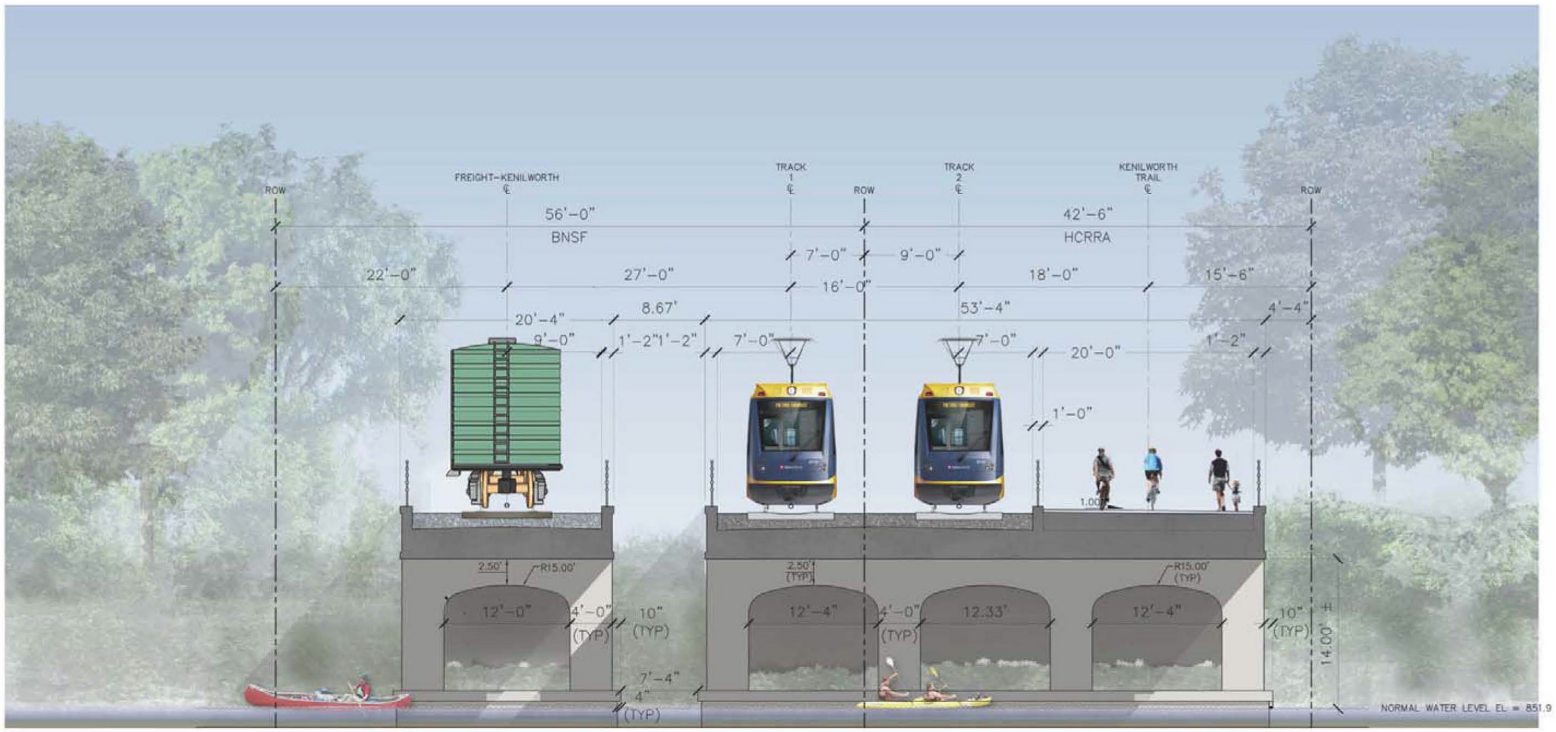


DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (arched pier concept cross section looking west)	Exhibit 3.5-26		METROPOLITAN COUNCIL

EXHIBIT 3.5-27

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept cross section looking north)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (arched pier concept cross section looking north)	Exhibit 3.5-27		METROPOLITAN COUNCIL

EXHIBIT 3.5-28

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (arched pier concept simulation)	Exhibit 3.5-28		METROPOLITAN COUNCIL

EXHIBIT 3.5-29
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (arched pier concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (arched pier concept simulation)	Exhibit 3.5-29		METROPOLITAN COUNCIL

EXHIBIT 3.5-30

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept cross section looking west)

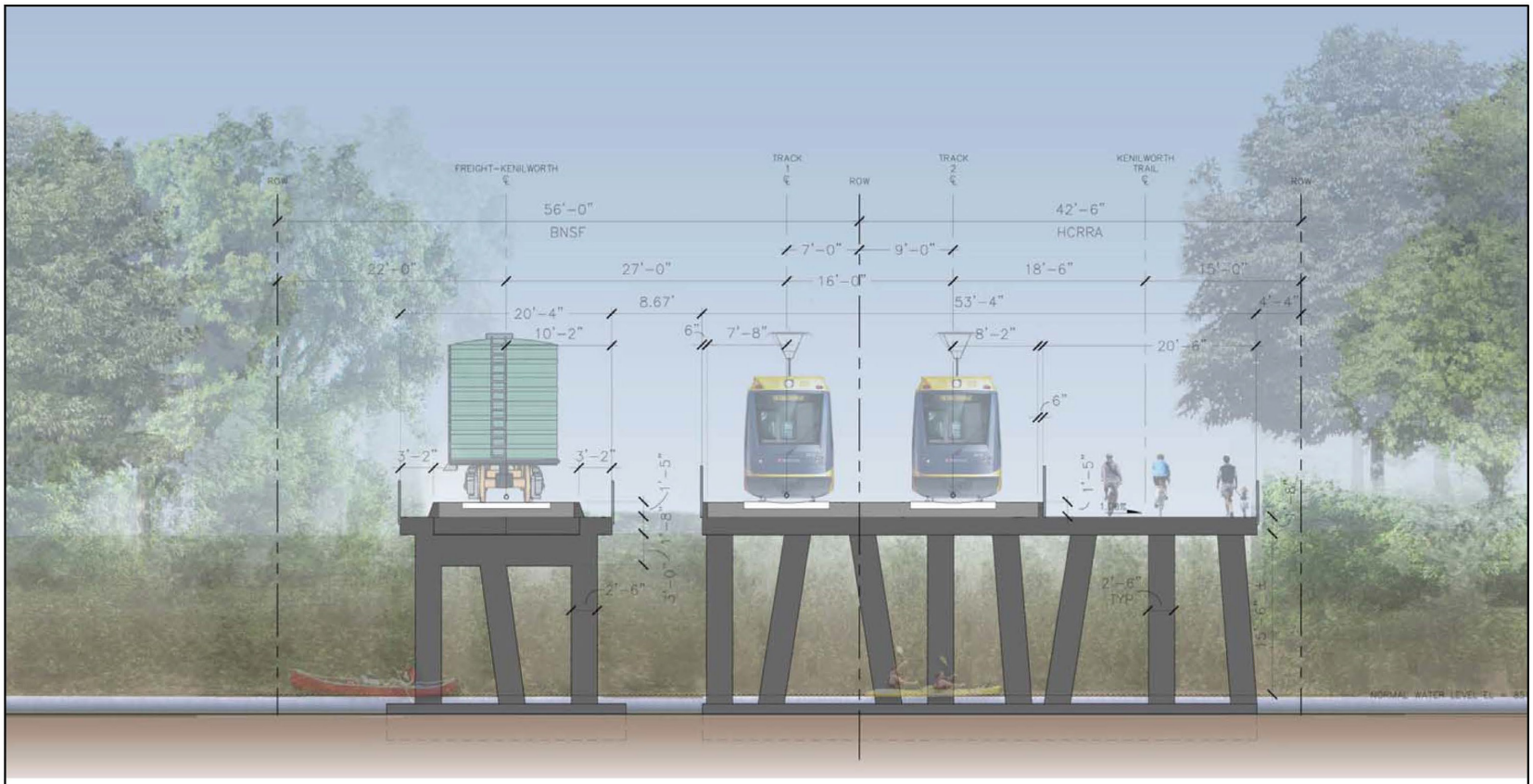


DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (thin deck concept cross section looking west)	Exhibit 3.5-30		METROPOLITAN COUNCIL

EXHIBIT 3.5-31

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept cross section looking north)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (thin deck concept cross section looking north)	Exhibit 3.5-31		METROPOLITAN COUNCIL

EXHIBIT 3.5-32

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (thin deck concept simulation)	Exhibit 3.5-32		METROPOLITAN COUNCIL

EXHIBIT 3.5-33

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (thin deck concept simulation)	Exhibit 3.5-33		METROPOLITAN COUNCIL

EXHIBIT 3.5-34
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (thin deck concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (thin deck concept simulation)	Exhibit 3.5-34		METROPOLITAN COUNCIL

EXHIBIT 3.5-35

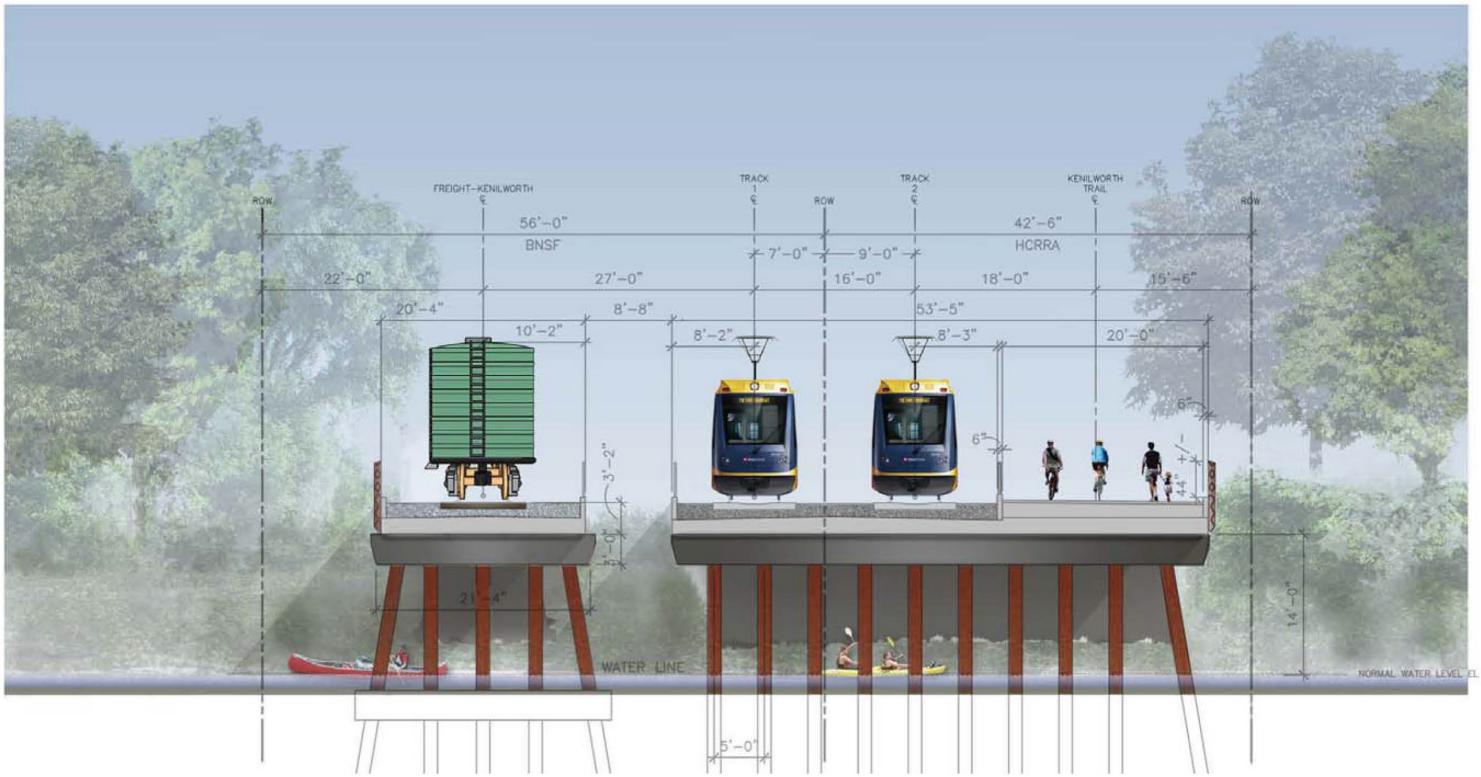
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept cross section looking west)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (steel pier concept cross section looking west)	Exhibit 3.5-35		METROPOLITAN COUNCIL

EXHIBIT 3.5-36

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept cross section looking north)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (steel pier concept cross section looking north)	Exhibit 3.5-36		METROPOLITAN COUNCIL

EXHIBIT 3.5-37

Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (steel pier concept simulation)	Exhibit 3.5-37		METROPOLITAN COUNCIL

EXHIBIT 3.5-38
Draft Section 4(f) Evaluation Update – Kenilworth Lagoon/Grand Rounds Historic District under the LPA Conditions (steel pier concept simulation)



DRAFT - WORK IN PROCESS

SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update Kenilworth Lagoon/Grand Rounds Historic District Under the LPA Conditions (steel pier concept simulation)	Exhibit 3.5-38		METROPOLITAN COUNCIL

Preliminary Evaluation of Prudence

Section 3.5.1.4 of this Supplemental Draft EIS lists the Section 4(f) criteria used by FTA to determine the prudence of a full avoidance alternative as per 23 CFR 774.17(3).

i. *Effectiveness in Meeting Purpose and Need*

The project's Purpose and Need is summarized in Section 3.5.2 of this Supplemental Draft EIS and in Chapter 1 of the Draft EIS. In the Draft EIS, FTA and the Council concluded that, while the No Build Alternative would avoid potential disruption to neighborhoods, commercial districts, and historic areas in the corridor, the No Build Alternative would not adequately support the Purpose and Need of the project as expressed through the project's evaluation goal, objectives, criteria, and measures (see Section 11.2.1 of the Draft EIS). In summary, the No Build Alternative would be inconsistent with local and regional comprehensive plans, which include or are consistent with implementation of the Southwest LRT Project. Furthermore, the No Build Alternative would not improve mobility, provide a cost-effective efficient travel option, or support economic development and an economically competitive freight rail system, which are key elements of the project's Purpose and Need (see Chapter 1 of this Supplemental Draft EIS).

FTA and the Council have preliminarily determined that the No Build Alternative would compromise the project to a degree that under the No Build Alternative the stated Purpose and Need for the project would not be met; therefore, the No Build Alternative does not constitute a prudent alternative that would fully avoid the use of Section 4(f) properties.

ii. *Safety* and *Operational Considerations*
- None.

iii. *Social, Economic, Environmental, and Community Impacts*
- None.

iv. *Cost*
- None.

v. *Unique Problems or Unusual Factors*
- None.

vi. Cumulative Consideration of Factors
- None.

Preliminary Avoidance Alternative Determination: The No Build Alternative would avoid uses of all Section 4(f) resources, but it is deemed not prudent under the definition in 23 CFR 774.17(3). The No Build Alternative is not prudent per 23 CFR 774.17(3)(i) because it neither addresses nor corrects the transportation purpose and need that prompted the proposed project.

Enhanced Bus Alternative

The Enhanced Bus Alternative, carried forward into the Draft EIS from the Southwest Transitway Alternatives Analysis and scoping, was refined with FTA input into the New Starts Baseline/Transportation System Management Alternative for the purpose of the New Starts project development process[64]. By definition, the Enhanced Bus Alternative is a low-capital cost alternative that would provide the best transit service to the corridor without a major capital investment. The Enhanced Bus Alternative included the same highway and roadway network improvements contained in the No Build Alternative. The Enhanced Bus Alternative did not include any modifications to the existing highway or roadway infrastructure in the project study area.

The Enhanced Bus Alternative would have included two new limited-stop bus routes providing bidirectional service between Eden Prairie and downtown Minneapolis, with stops in Minnetonka, Hopkins, and St. Louis Park. The alternative also included minor modifications to the existing express bus service along with

[64] A baseline alternative is no longer required by FTA for their New Starts rating process.

increased service frequencies and restructured local service to provide access to stops along the new express routes.

As defined in Chapter 2 of the Draft EIS and summarized in Section 2.2 of this Supplemental Draft EIS, the Enhanced Bus Alternative would completely avoid a use of all Section 4(f) resources.

Preliminary Evaluation of Feasibility

As per 23 CFR 774.17(2) of the Section 4(f) statute, an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. FTA and the Council have determined that the Enhanced Bus Alternative could be built as a matter of sound engineering judgment and therefore it would be feasible from an engineering perspective.

Preliminary Evaluation of Prudence

Section 3.5.1.4 of this Supplemental Draft EIS lists the Section 4(f) criteria used by FTA to determine the prudence of a full avoidance alternative as per 23 CFR 774.17(3).

i. *Effectiveness in Meeting Purpose and Need*

The project's Purpose and Need is summarized in Section 3.5.2 of this Supplemental Draft EIS and in Chapter 1 of the Draft EIS. In the Draft EIS, FTA and the Council concluded that, while the Enhanced Bus Alternative would avoid potential disruption to neighborhoods, commercial districts, and historic areas in the corridor, the Enhanced Bus Alternative would not adequately support the Purpose and Need of the project as expressed through the project's evaluation goal, objectives, criteria, and measures (see Section 11.2.1 of the Draft EIS). In summary, the Enhanced Bus Alternative would be inconsistent with local and regional comprehensive plans, which include or are consistent with implementation of the Southwest LRT Project. The Enhanced Bus Alternative would only marginally improve mobility, and it would not provide an efficient travel option, or support economic development and an economically competitive freight rail system. FTA and the Council have preliminarily determined that the Enhanced Bus Alternative would compromise the project to a degree that, under the Enhanced Bus Alternative, the stated Purpose and Need for the project would not be met; therefore, the Enhanced Bus Alternative does not constitute a feasible and prudent alternative that would fully avoid the use of Section 4(f) properties.

ii. *Safety and Operational Considerations*
- None.

iii. *Social, Economic, Environmental, and Community Impacts*
- None.

iv. *Cost*
- None.

v. *Unique Problems or Unusual Factors*
- None.

vi. *Cumulative Consideration of Factors*
- None.

Preliminary Avoidance Alternative Determination: The Enhanced Bus Alternative would avoid uses of all Section 4(f) resources, but it is deemed not prudent under the definition of in 23 CFR 774.17(3). The Enhanced Bus Alternative is not prudent per 23 CFR 774.17(3)(i) because it neither addresses nor corrects the transportation purpose and need that prompted the proposed project.

Preliminary All Possible Planning to Minimize Harm Analysis

In addition to a determination that there is no feasible and prudent alternative that avoids the use of a Section 4(f) resource, the Section 4(f) regulations also states that FTA may not approve the use of a Section 4(f) resource unless it determines that the proposed action includes all possible planning, as defined in 23 CFR 774.17, to minimize harm to the property resulting from such use.

In evaluating the reasonableness of measures to minimize harm under §774.3(a)(2), FTA will consider the preservation purpose of the Section 4(f) statute and:

- The views of the official(s) with jurisdiction over the Section 4(f) property;
- Whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property, in accordance with §771.105(d) of this chapter; and
- Any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.

Project staff have consulted with MnSHPO and identified consulting parties during the design of the new bridges and related work on the lagoon to avoid, minimize, and/or mitigate adverse effects from construction and operation of the project through sensitive design and the incorporation of protective measures. The design of the bridges, including span configurations, materials, and railing options, continue to be developed as part of the advancement of the design for the project.

FTA, MnDOT CRU, and the Council are responsible for the project's implementation of the Section 106 consultation process, including coordination with the USACE, which has Section 106 responsibilities as a NEPA Cooperating Agency. The USACE recognizes FTA as the Lead Federal Agency for the Section 106 process. The Section 106 consultation on project effects has continued with MnSHPO and other Section 106 consulting parties since publication of the Draft EIS and will continue through development of a Section 106 Agreement.

Since its Section 106 consultation efforts reported in the Draft EIS (see Section 3.4 of the Draft EIS), FTA and the Council have continued the project's Section 106 consultation efforts. On April 30, 2014, the Council and MnDOT CRU held a consultation meeting to review listed and eligible historic properties and potential project effects. Comments from the consulting parties were solicited during the meeting and in written form after the meeting on these resources. A subsequent meeting was held on November 24, 2014, to:

1) Present project adjustments identified since the April 30, 2014, meeting, as adopted at the July 9, 2014, Council meeting;
2) Consult to consider effects to historic properties and reach agreement on preliminary determinations of effect; and,
3) Identify measures to avoid, minimize, or mitigate impacts to architecture/history and archaeology resources for inclusion in the Section 106 Agreement.

In February 2015, the Council and MnDOT CRU held two Section 106 consultation meetings. At the February 6, 2015, meeting, the Council, and MnDOT CRU presented revised bridge design concepts and discussed effects related to the new crossing over the Kenilworth Lagoon/Grand Rounds Historic District. At the February 24, 2015, meeting, the Council and MnDOT CRU led a discussion on effects to historic properties throughout the project area and provided an overview of the content and consulting parties' roles in the development of a Section 106 agreement. As previously noted, the exhibits within this section that illustrate various aspects of the Kenilworth Lagoon/Grand Rounds Historic District under the LPA were used to help initiate the consultation process for this property. The design of the bridges, including span configurations, materials, and railing options, will continue to be developed as part of the advancement of the design for the project, as will designs to minimize or mitigate adverse effects on the lagoon's topographical features, vegetation, and WPA-era retaining walls. The consultation process, including meetings, is ongoing and will continue to proceed through execution of the Section 106 Agreement. Appendix E includes documentation of Section 106 consultation packages and meetings to date. The Council and FTA have also committed to continue Section 4(f) coordination activities with the MPRB related to proposed bridge crossing designs. The continuing coordination efforts between the Council and the MPRB may include the development of additional bridge design concepts and minimization and mitigation measures. In general, these Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park and will be coordinated with the MnSHPO through development of a Section 106 Agreement for the Kenilworth

Lagoon/Grand Rounds Historic District. A Section 106 Agreement is documentation that will commit FTA and the Council to implement measures to avoid, minimize, or mitigate adverse effects on historic properties and archaeological resources.

Preliminary All Possible Planning to Minimize Harm Determination: Based on the summary within this section, FTA has preliminarily determined in accordance with 23 CFR 774.17 that all possible planning to minimize harm will be conducted and implemented through the completion of the project's Section 106 process with the execution of a Section 106 Agreement prior to the issuance of the ROD.

Preliminary Least Overall Harm Analysis

Per 23 CFR 774.3(c), if the Section 4(f) analysis for a property that would be used by a project concludes that there is no feasible and prudent avoidance alternative, then FTA may approve, from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the statute's preservation purpose. If the assessment of least overall harm finds that two or more alternatives are substantially equal, FTA can approve any of those alternatives. To determine which of the alternatives would cause the least overall harm, FTA must compare seven factors set forth in 23 CFR 774.3(c)(1) concerning the alternatives under consideration (see Section 3.5.1.4 for a description of those seven criteria).

The consultation process, including meetings, is ongoing and will continue to proceed through execution of the Section 106 Agreement. The Council and FTA have also committed to continue Section 4(f) coordination activities with the MPRB related to proposed bridge crossing designs. The continuing coordination efforts between the Council and the MPRB may include the development of additional bridge design concepts and minimization and mitigation measures. In general, these Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park and will be coordinated with the MnSHPO through development of a Section 106 Agreement for the Kenilworth Lagoon/Grand Rounds Historic District.

A final determination of least overall harm requires the completion of the process to determine all possible planning to minimize harm. Because the Kenilworth Lagoon/Grand Rounds Historic District is a Section 106 resource, all possible planning to minimize harm for it will be completed when the Section 106 process concludes with an executed Section 106 Agreement. That Section 106 Agreement will specify how the project will resolve the preliminary adverse effect it would have on the Kenilworth Lagoon/Grand Rounds Historic District (see the previous Section C for additional information on the status and continuing efforts to determine all possible planning to minimize harm). This update includes a preliminary least overall harm analysis based on an anticipated Section 106 Agreement that will address the adverse effect to the Kenilworth Lagoon/Grand Rounds Historic District.

As this Draft Section 4(f) Evaluation Update was being prepared, two options (in addition to the LPA) that would result in the use of the Kenilworth Lagoon/Grand Rounds Historic District remained under consideration: a) Shallow LRT Tunnel – Under Kenilworth Lagoon[65] (Exhibit 3.5-39); and b) Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon (Exhibit 3.5-40). Following is a description of those two options that remained under consideration and a comparison of those options with the LPA, based on the Shallow LRT Tunnel – Over Kenilworth Lagoon option that was developed and evaluated as a part of the project's design adjustment process (see Section 2.3.3.2 and Appendix F of this Supplemental Draft EIS for additional information on the evaluation process and measures). Detailed descriptions of the LPA, including where light rail would cross the Kenilworth Lagoon, are provided in Section 2. 5 of this Supplemental Draft

[65] Two variations of the Shallow LRT Tunnel – Over Kenilworth Lagoon option were initially developed; one short and one long. Exhibits 2.3-11 and 2.3-12 in this Supplemental Draft EIS illustrate the extent of the LRT tunnel under the short and long options, respectively. Both variations of the Shallow LRT Tunnel – Under Kenilworth Lagoon would have identical use and impacts to the Kenilworth Lagoon. The short tunnel variation was used for this least overall harm analysis because the overall tunnel length in that variation would be more similar to the tunnel length under the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon.

EIS, as well as previously within this section. Base costs of the LPA are provided in Chapter 5 of this Supplemental Draft EIS.

Shallow LRT Tunnel – Under Kenilworth Lagoon Option

The Shallow LRT Tunnel – Under Kenilworth Lagoon option, which is a variation of the Shallow LRT Tunnel – Over Kenilworth Lagoon option, would extend the LRT alignment under the Kenilworth Lagoon to a portal north of the lagoon, and it would eliminate the need for a light rail bridge over the lagoon. However, because the LRT tunnel would be constructed where there are existing wood piles, the existing wood pile bridges carrying freight rail and the trail would need to be replaced with new freight rail and trail bridges. Those two new bridges would be located on either side of the LRT tunnel alignment. Due to the tunnel's cut-and-cover construction and bridge demolition and construction, approximately all of the area across the Kenilworth Lagoon would be reconstructed, including the banks, retaining walls, and vegetation. The result would be that all of the historic components of the Kenilworth Lagoon/Grand Rounds Historic District would be removed, replaced, and reconstructed.

Beneath the lagoon, the tunnel would descend to where the tunnels would cross under the Kenilworth Lagoon, approximately 10 feet from the Kenilworth Lagoon water surface elevation (in part, the depth of the tunnel under the lagoon would be needed to provide space to replace the channel soils above the top of the tunnel after construction). Two variations of the Shallow LRT Tunnel – Over Kenilworth Lagoon option were initially developed; one short and one long. Exhibit 2.3-11 and Exhibit 2.3-12 illustrate the extent of the LRT tunnel under the short and long options, respectively.

Both variations of the Shallow LRT Tunnel – Under Kenilworth Lagoon would have identical use and impacts to the Kenilworth Lagoon. The short tunnel variation was used for the Shallow LRT Tunnel – Over Kenilworth Lagoon option (Exhibit 3.5-39) this least overall harm analysis because the overall tunnel length in that variation would be more similar to the tunnel length under the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon (Exhibit 3.5-40).

Exhibit 3.5-41A/B illustrates the general sequence that would be used to construct the cut-and-cover tunnel under the Kenilworth Lagoon and to demolish and replace the existing freight rail and trail bridges.

Construction of the Shallow LRT Tunnel – Under Kenilworth Lagoon option would extend the overall project's construction schedule by up to one year, delaying benefits of the project for up to one year. Tunnel construction would also result in the closure of the Kenilworth Lagoon to recreational use at the construction site intermittently for approximately one year, which would effectively isolate Lake of the Isles and Cedar Lake from each other for water and ice-related activities. The tunnel construction would directly increase project costs by approximately $60 to $75 million (depending on the length of the tunnel extension) and the project would incur approximately $45 to $50 million in additional costs due to the project delay. As noted in Section 5.4 of this Supplemental Draft EIS, on April 27, 2015, the Council released a revised project cost estimate of approximately $1.994 billion, an approximately $341 million increase over the year-of-expenditure budget, citing project delays as one factor contributing to the increased costs. The cost increases and project delays that would result from the Shallow LRT Tunnel - Under Kenilworth Lagoon would be over and above the cost increases and contributing project delays released by the Council on April 27, 2015.

FTA and the Council have preliminarily concluded that the Shallow LRT Tunnel – Over Kenilworth Lagoon option would result in the least overall harm to the protected Section 4(f) property. That preliminary conclusion is based on the following (see Section 2.3 and Appendix F of this Supplemental Draft EIS for additional information):

- At the November 24, 2014 Section 106 Consulting meeting, which included MnSHPO and other consulting parties, the parties discussed whether minimization and mitigation efforts can adequately address the adverse effects under the Shallow LRT Tunnel – Under Kenilworth Lagoon option. The parties agreed that under (23 CFR 774.3(c)1(i)), the Shallow LRT Tunnel – Under Kenilworth tunnel cannot adequately be addressed, as this option would leave little (if any) of the contributing elements of the Grand Rounds Historic District.

EXHIBIT 3.5-39
Shallow LRT Tunnel – Under Kenilworth Lagoon

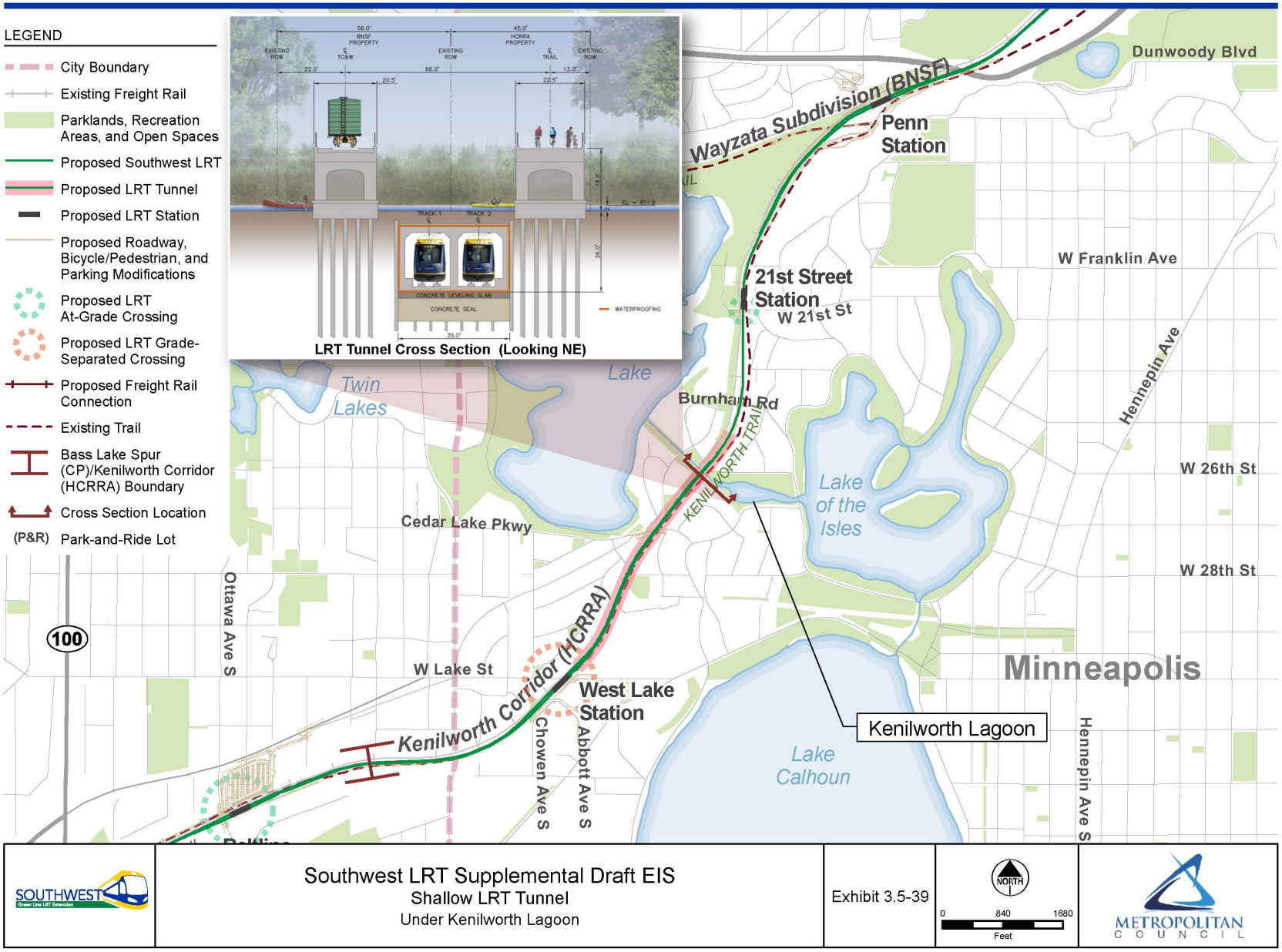


EXHIBIT 3.5-40
Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon

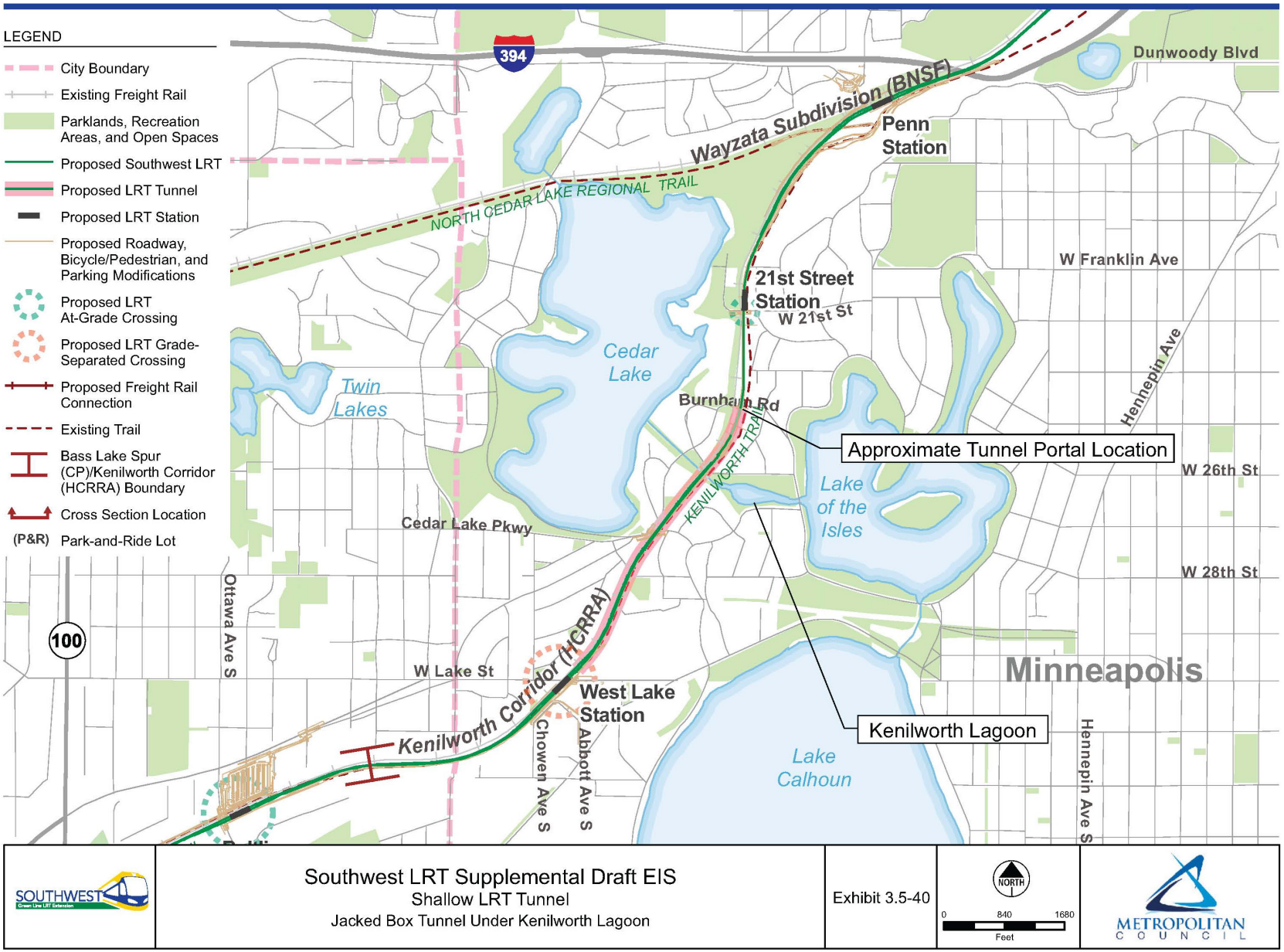
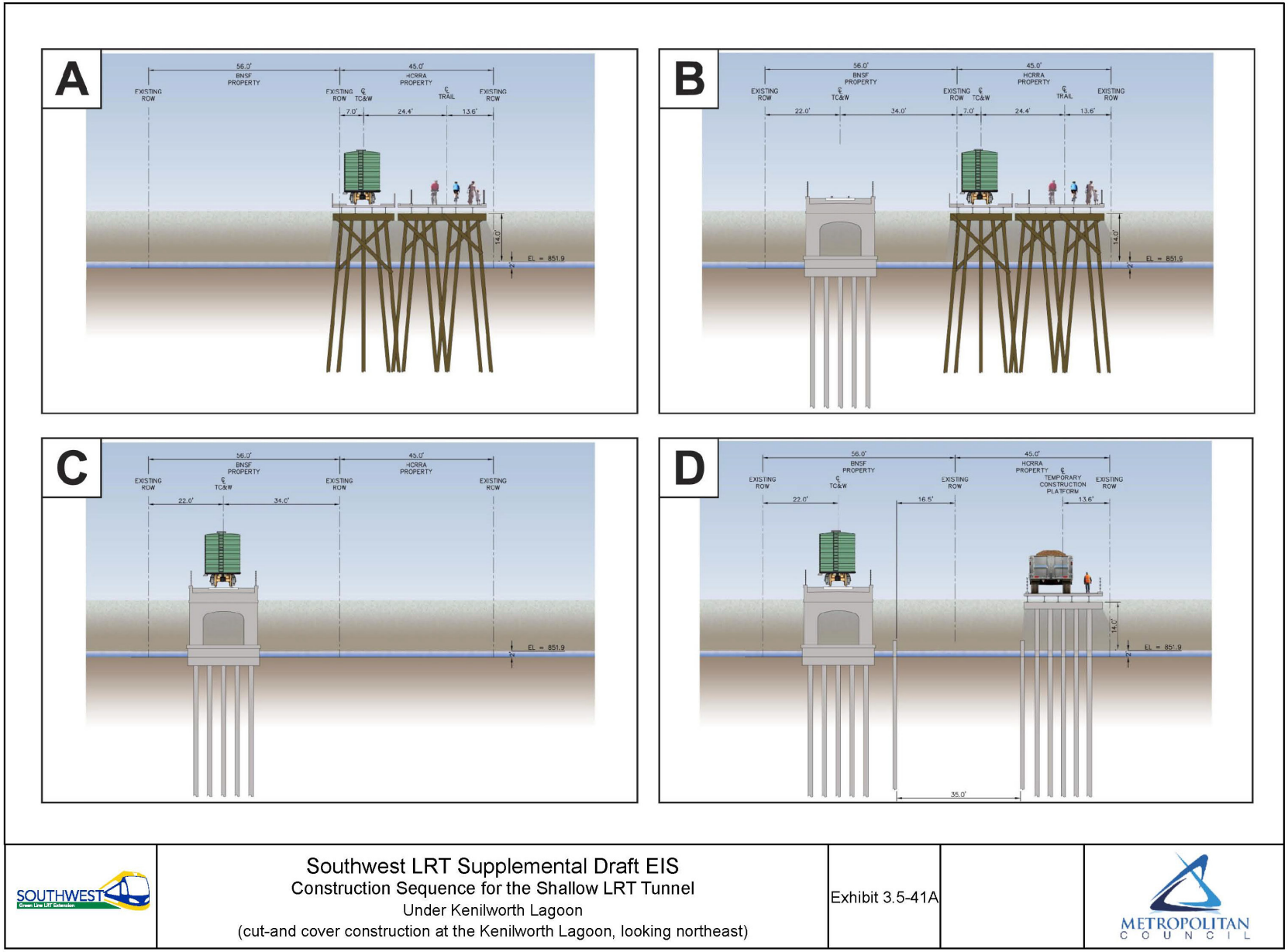


EXHIBIT 3.5-41A

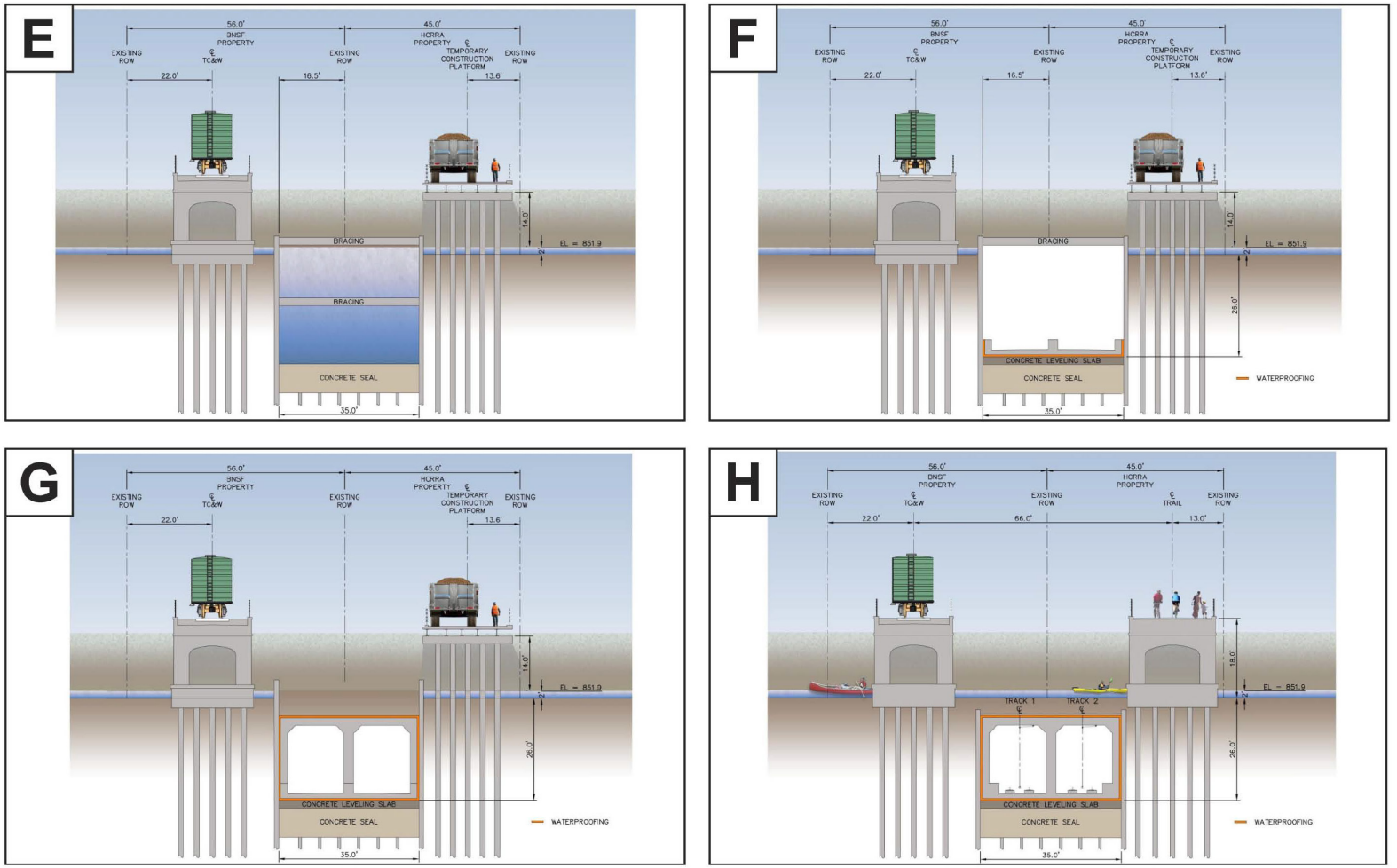
Construction Sequence for the Shallow LRT Tunnel – Under Kenilworth Lagoon (cut-and cover construction at the Kenilworth Lagoon, looking northeast)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Construction Sequence for the Shallow LRT Tunnel Under Kenilworth Lagoon (cut-and cover construction at the Kenilworth Lagoon, looking northeast)	Exhibit 3.5-41A		METROPOLITAN COUNCIL

EXHIBIT 3.5-41B

Construction Sequence for the Shallow LRT Tunnel – Under Kenilworth Lagoon (cut-and-cover construction at the Kenilworth Lagoon, looking northeast)



SOUTHWEST Green Line LRT Extension	Southwest LRT Supplemental Draft EIS Construction Sequence for the Shallow LRT Tunnel Under Kenilworth Lagoon (cut-and cover construction at the Kenilworth Lagoon, looking northeast)	Exhibit 3.5-41B		METROPOLITAN COUNCIL

- There would be a substantial cost difference. The Shallow LRT Tunnel – Under Kenilworth Lagoon option would result in $60 to $75 million in additional direct costs and $45 to $50 million in cost increases due to the schedule delay, for a total additional project costs of up to $125 million. The Council approved the Project's scope and budget in July 2014. Local funding partners capped their funding commitments based on the Council budget; therefore, additional cost increases from this option are not authorized and would require the support and approval from the local funding partners. Further, there would be little if any environmental benefit or benefit to the protected Section 4(f) property as a result of the substantial cost increase and project schedule delay. (23 CFR 774.3(c)1(vii))

For the reasons outlined in this section, FTA and the Council have preliminarily determined that, compared to the Shallow LRT Tunnel – Under Kenilworth Lagoon option, the Shallow LRT Tunnel – Over Kenilworth Lagoon would result in the least overall harm to the Kenilworth Lagoon/Grand Rounds Historic District (23 CFR 774.3(c)1). The final least overall harm analysis is dependent on the measures outlined in the project's Section 106 Agreement, and therefore, subject to change. For this reason, the final determination of the least overall harm analysis will be included in the Final EIS, along with the project's Section 106 Agreement.

Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Option

The Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Option (Exhibit 3.5-40) was proposed and conceptually developed and evaluated by the MPRB. Project staff coordinated with MPRB as they independently developed and evaluated the option through a series of staff meeting in late 2014 and early 2015. Documentation of the MPRB's efforts to develop and evaluate the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Option is provided in Appendix L of this Supplemental Draft EIS.

As proposed by the MPRB, the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option, which is a variation of the Shallow LRT Tunnel – Over Kenilworth Lagoon option, would extend the LRT alignment under the Kenilworth Lagoon to a portal approximately 400 feet north of the lagoon and would eliminate the need for a light rail bridge over the lagoon. However, because the LRT tunnel would be constructed where there are existing wood piles, the existing wood pile bridges carrying freight rail and the trail would need to be replaced with two new bridges. Those two new bridges would be located on either side of the LRT tunnel alignment. Due to the tunnel construction and bridge demolition and construction, compared to the Shallow LRT Tunnel – Over Kenilworth Lagoon, a similar area across the Kenilworth Lagoon would be reconstructed, including the banks, retaining walls, and vegetation.

Beneath the lagoon, the tunnel would descend to where the tunnel would cross under the Kenilworth Lagoon, approximately 10 feet from the Kenilworth Lagoon water surface elevation (in part, the additional depth of the tunnel would be needed to maintain the integrity of the lagoon during construction of the tunnel under the lagoon). Exhibit 3.5-40 illustrates the extent of the LRT tunnel under the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option. Exhibit 3.5-42A/B illustrates the general sequence that would be used to construct the jacked box tunnel under the Kenilworth Lagoon and to demolish and replace the existing freight rail and trail bridges. Following is a description of the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option as provided in the MPRB's independent draft report *Kenilworth Channel – Tunnel Crossing Study* (MPRB; March 2015; page 8 – see Appendix L):

> "The Jacked Box method [of tunnel construction] involves digging a pit on either side of the Kenilworth Channel and supporting the pit walls in similar fashion to the cut and cover method (sheet pile walls with bracing and bottom slab). The pits are identified as launching and receiving pits, respectively. The launching pit is larger in order to accommodate the construction of the tunnel box. For Kenilworth, the box will be approximately 205 feet in length and the pit must be at least that large to allow the box and clearances for construction. The receiving pit on the opposite side of the channel is significantly smaller. The jacking process is accomplished by hydraulic equipment and can be done either by pulling the box with high strength steel cables or pushing it with hydraulic rams. We have chosen the pulling method as the most effective for Kenilworth as it also provides improved alignment tolerances compared to the pushing method. Controlling the ground during the tunneling method is critical. As mentioned previously, the alluvial soils present along with a submerged condition result in a 'flowing ground' condition without ground support.

> "Controlling the ground at the open face of the tunnel can be accomplished by ground modification methods such as freezing, grouting with either chemical or cement grouts, or dewatering. Dewatering is not practical due to the high permeability of the soil, the shallow design, and the presence of the channel water as a nearly infinite source of water. Ground freezing is a good option; however, consideration should be given to potential for freezing of portions of the channel water. Grouting of the soil was chosen as the best option for ground improvement. The grouting will provide a stable face at the leading edge of the tunnel during construction, minimize ground water intrusion during construction, and will also serve to impede ground water permanently.
>
> "Permanent waterproofing of the tunnel box is imperative to prevent water intrusion and ice damming during cold months. The methods of membrane installation that are considered for the cut and cover tunnel are not practical for the jacked box method. For the Jacked Box method of construction, the tunnel can be effectively waterproofed by a combination of several design features."

Construction of the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would extend the project's overall construction schedule by up to 12 months, delaying benefits of the project for up to 12 months. The tunnel construction would directly increase project costs by approximately $80 to $95 million and the project would incur approximately $45 to $50 million in additional costs due to the project delay, increasing the overall cost burden for the project by up to $145 million. As noted in Section 5.4 of this Supplemental Draft EIS, on April 27, 2015, the Council released a revised project cost estimate of approximately $1.994 billion, an approximately $341 million increase over the year-of-expenditure budget, citing project delays as one factor contributing to the increased costs. The cost increases and project delays that would result from the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would be over and above the cost increases and contributing project delays released by the Council on April 27, 2015.

In comparing the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option to the Shallow LRT Tunnel – Over Kenilworth Lagoon option and its effects on the Kenilworth Lagoon/Grand Rounds Historic District, FTA and the Council have preliminarily concluded that the Shallow LRT Tunnel – Over Kenilworth Lagoon option would result in the least overall harm to the protected Section 4(f) property. That preliminary conclusion is based on the following (see Appendix L of this Supplemental Draft EIS for additional draft information on the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option that was prepared by the MPRB):

- There would be a substantial cost difference between the alternatives, as the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would result in additional costs up to $145 million (not accounting for potential additional delay due to a potentially-longer review process – source: MPRB 2015). The Council approved the Project's scope and budget in July 2014. Local funding partners capped their funding commitments based on the Council budget; therefore, additional cost increases from this option are not authorized and would require the support and approval from the local funding partners. Further, there would be little if any environmental benefit or benefit to the protected Section 4(f) property as a result of the substantial cost increase and project schedule delay. (23 CFR 774.3(c)1(vii))
- The tradeoffs between the Shallow LRT Tunnel – Over Kenilworth Lagoon option and the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option were reviewed and discussed at the February 6, 2015, Section 106 Consultation meeting, which included the MnSHPO (see Appendix C and Appendix E) (23 CFR 774.3(c)1(iv)). In summary, it was noted that both the Shallow LRT Tunnel – Over Kenilworth Lagoon and Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would have an adverse effect on the Kenilworth Lagoon/Grand Rounds Historic District. Specifically, it was noted that the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would result in the removal of the existing freight rail and trail bridges and construction of replacement bridges, because the tunnel would be constructed in the same location as the wood piers for the existing bridges. The Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon would also disturb and

EXHIBIT 3.5-42A

Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Construction Sequence

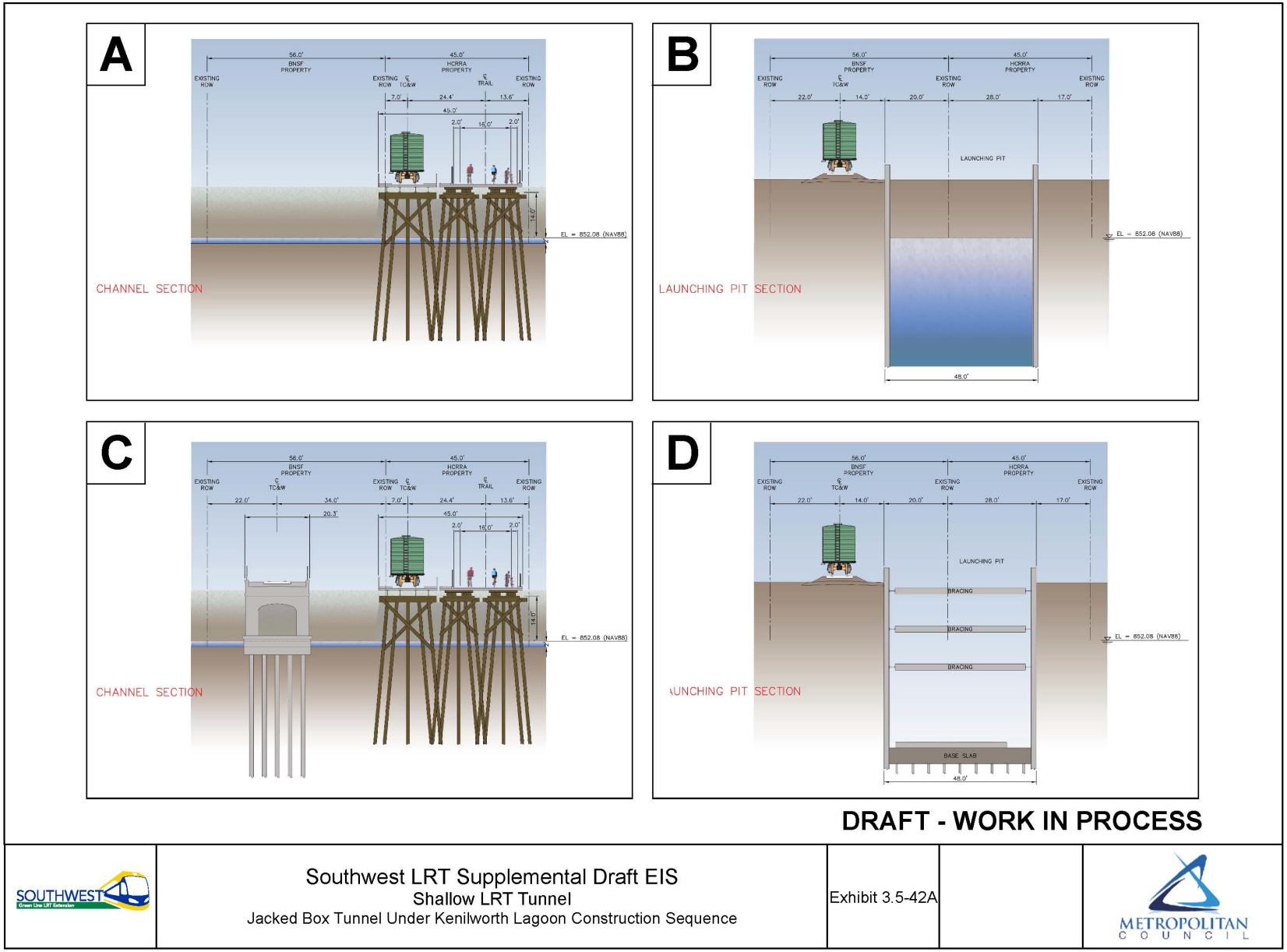
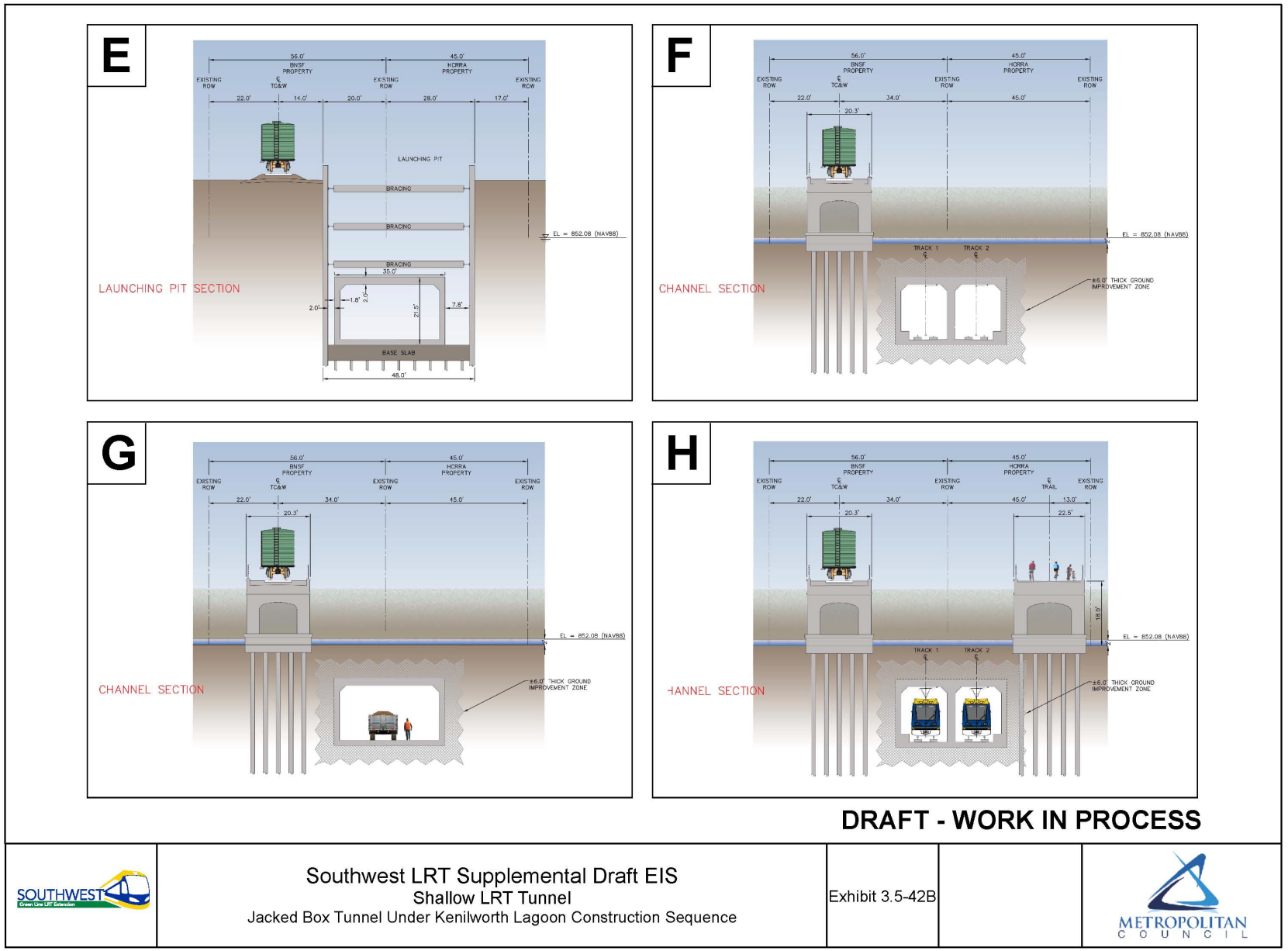


EXHIBIT 3.5-42B

Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon Construction Sequence



eliminate the WPA-era retaining walls and vegetation along the banks, both of which are contributing elements to the Grand Rounds Historic District. In response to an MnSHPO inquiry, MPRB staff noted that the MPRB has not identified concerns related to deeply-buried archaeological deposits in vicinity of where the jacked box tunnel would be located.

- On March 5, 2015, the MPRB provided the Council with a letter that summarizes the MPRB's understanding of the project's consultation efforts to date with the Council and FTA on Section 4(f) issues, particularly related to the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park (see Appendix L). The letter documents the MPRB's finding that, based on its independent engineering study, the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would not be prudent, because of the additional costs and extended schedule under that option, compared to the Shallow LRT Tunnel – Over Kenilworth Lagoon. In particular, the letter states that MPRB determined that the additional costs and extended schedule the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option would "not be prudent."

For the reasons outlined in this section, FTA and the Council have preliminarily determined that, compared to the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option, the Shallow LRT Tunnel – Over Kenilworth Lagoon option would result in the least overall harm to the Kenilworth Lagoon/Grand Rounds Historic District (23 CFR 774.3(c)1). The final least overall harm analysis is dependent on the measures outlined in the project's Section 106 Agreement, and therefore, subject to change. For this reason, the final determination of the least overall harm analysis will be included in the FEIS, along with the project's Section 106 Agreement.

Preliminary Section 4(f) Determination: Based on the above analysis performed to-date and summarized in this section, FTA and the Council have preliminarily determined that the LPA (i.e., Shallow LRT Tunnel – Over Kenilworth Lagoon option) would result in a non-*de minimis* use of the Kenilworth Lagoon/Grand Rounds Historic District Section 4(f) property and that there is no feasible and prudent alternative that would avoid a use of this historic resource. In addition, based on the summary within this section, FTA has preliminarily determined, in accordance with 23 CFR 774.17, that all possible planning to minimize harm will be conducted and implemented through the completion of the project's Section 106 process through the execution of a Section 106 Agreement prior to making the Section 4(f) final determination in the FEIS. FTA and the Council have preliminarily determined that the LPA would be the alternative that would result in the least overall harm to the Kenilworth Lagoon/Grand Rounds Historic District. The final avoidance alternatives discussion, all possible planning to minimize harm, and least overall harm analysis will be provided in the 4(f) Evaluation in the Final EIS.

P. Frieda and J. Neils House – Preliminary No Use

Property Description

The Frieda and J. Neils House is located at 2801 Burnham Boulevard in Minneapolis and is listed on the NRHP under Criterion C (Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Frieda and J. Neils House historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Frieda and J. Neils historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Frieda and J. Neils House (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

The Frieda and J. Neils House is located within 0.25 mile of the 21st Street Station. While it will not be affected by station infrastructure, operation of the station may result in possible changes to traffic patterns and parking that would require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Frieda and J. Neils House historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Frieda and J. Neils House historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Frieda and J. Neils House historic resource.

Q. Mahalia & Zachariah Saveland House – Preliminary No Use

Property Description

The Mahalia & Zachariah Saveland House is located at 2405 W. 22nd Street in Minneapolis It is eligible for the NRHP under Criterion C (Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Mahalia & Zachariah Saveland House historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Mahalia & Zachariah Saveland House historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Mahalia & Zachariah Saveland House (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

The Mahalia & Zachariah Saveland House is located within 0.25 mile of the 21st Street Station. While it will not be affected by station infrastructure, operation of the station may result in possible changes to traffic patterns and parking that would require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Frieda and J. Neils House historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Mahalia & Zachariah Saveland House historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Mahalia & Zachariah Saveland House historic resource.

R. Frank and Julia Shaw House – Preliminary No Use

Property Description

The Frank and Julia Shaw House is located at 2036 Queen Avenue S. in Minneapolis It is eligible for the NRHP under Criterion C (Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Frank and Julia Shaw House historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Frank and Julia Shaw House historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Frank and Julia Shaw House (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

The Frank and Julia Shaw House is located within 0.25 mile of the 21st Street Station. While it will not be affected by station infrastructure, operation of the station may result in possible changes to traffic patterns and parking that would require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Frank and Julia Shaw House historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Frank and Julia Shaw House historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Frank and Julia Shaw House historic resource.

S. Kenwood Parkway – Preliminary No Use

Property Description

Kenwood Parkway, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District, which has been determined eligible for the NRHP under Criterion A and Criterion C (Landscape Architecture; Community Planning & Development; Entertainment/Recreation) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Kenwood Parkway historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Kenwood Parkway historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Kenwood Parkway (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Kenwood Parkway is located within 0.25 mile of the Penn Station. The provision of access routes to the station from Kenwood Parkway (including the existing trail from the foot of Kenwood Hill along the south side of I-394, and potential additional routes as illustrated by the conceptual trail in the Southwest Corridor Investment Framework report) may result in potential minor direct effects to the Parkway where the improvements connect to it, as well as indirect visual effects resulting from changes to its setting from these improvements. There may be potential changes to traffic and/or parking patterns along the parkway related to development and operation of the 21st Street and Penn stations, which would require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Kenwood Parkway historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Kenwood Parkway historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Kenwood Parkway historic resource.

T. Kenwood Park – Preliminary No Use

Property Description

Kenwood Park, located in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District, which has been determined eligible for the NRHP under Criterion A and Criterion C (Landscape Architecture; Community Planning & Development; Entertainment/Recreation) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Kenwood Park historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Kenwood Park historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Kenwood Park (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). Kenwood Park is located within 0.25 mile of the Penn Station. The provision of access routes to the station from Kenwood Parkway (including the existing trail from the foot of Kenwood Hill along the south side of I-394, and potential additional routes as illustrated by the conceptual trail in the Southwest Corridor Investment Framework report) may result in potential changes to traffic and/or parking patterns, which need would require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Kenwood Park historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Kenwood Park historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Kenwood Park historic resource.

U. Kenwood Parkway Residential Historic District – Preliminary No Use

Property Description

Kenwood Parkway Residential Historic District is located on Kenwood Parkway (1805-2216 Kenwood Parkway) in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District and has been individually determined eligible for the NRHP under Criterion A (Community Planning & Development) (see Exhibit 3.5-4B). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Kenwood Parkway Residential Historic District – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Kenwood Parkway Residential Historic District during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Kenwood Parkway Residential Historic District (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). The historic district is located within 0.25 mile of both the 21st Street and Penn Stations. The provision of access routes to Penn Station from Kenwood Parkway (including the existing trail from the foot of Kenwood Hill along the south side of I-394, and any additional routes as illustrated by the conceptual trail in the Southwest Corridor Investment Framework report) may result in potential minor direct effects from construction of access routes to connect with Kenwood Parkway and from visual effects of access route elements on the setting of the district. There may be potential changes to traffic and/or parking patterns along the parkway related to development and operation of the 21st Street and Penn stations, which would require further assessment. There may be potential auditory effects on some houses in the northern part of the district, which would also require further assessment.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Kenwood Parkway Residential Historic District will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Kenwood Parkway Residential Historic District under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Kenwood Parkway Residential Historic District.

V. Kenwood Water Tower – Preliminary No Use

Property Description

The Kenwood Water Tower is located at 1724 Kenwood Parkway in Minneapolis, is considered a contributing site within the overall potential Grand Rounds Historic District and has been individually determined eligible for the NRHP under Criterion A and Criterion C (Community Planning & Development;

Entertainment/Recreation; Landscape Architecture) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Kenwood Water Tower historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Kenwood Water Tower historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at Kenwood Water Tower (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). The Kenwood Water Tower is located within 0.25 mile of the Penn Station. The provision of access routes to the station from Kenwood Parkway (including the existing trail from the foot of Kenwood Hill along the south side of I-394, and potential additional routes as illustrated by the conceptual trail in the Southwest Corridor Investment Framework report) may result in potential changes to the setting of the water tower. The potential access routes may also result in potential changes to traffic and/or parking patterns, but this would not impact the significance or use of the water tower.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Kenwood Water Tower historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Kenwood Water Tower historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Kenwood Water Tower historic resource.

W. Mac Martin House – Preliminary No Use

Property Description

The Mac Martin House is located at 1828 Mt. Curve Avenue in Minneapolis It is eligible for the NRHP under Criterion B (Commerce) (see Exhibit 3.5-4A). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Mac Martin House historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Mac Martin House historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Mac Martin House (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS). Negligible change to the resource's setting from lighting and signage improvements along trail connection between Cedar Lake Trail and Kenwood Parkway that may be seasonally visible from the Mac Martin House.

Based on the above discussion and preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Mac Martin House historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Mac Martin House historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Mac Martin House historic resource.

X. St. Paul, Minneapolis & Manitoba Railroad Historic District – Preliminary *De Minimis* Determination

Property Description

The St. Paul, Minneapolis & Manitoba Railroad Historic District, located in Minneapolis, has been determined eligible for the NRHP under Criterion A (Transportation) (see Exhibit 3.5-4B). For more detailed information on this historic property see Section 3.4 of this Supplemental Draft EIS and Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

The LPA would result in the permanent incorporation of approximately 1.53 acre of property from the historic St. Paul, Minneapolis & Manitoba Railroad Historic District; approximately 5.42 acres would be temporarily occupied for construction access (see Exhibit 3.5-43).

A portion of this rail line in Minneapolis is located within the project corridor. The project will shift a segment of the existing railroad tracks, from approximately I-94 to Royalston Avenue (total length of 2,543 feet), 0 to 11 feet north within the existing railroad right-of-way. The continuity of the linear resource will be maintained within the historic right-of-way, resulting in a minor effect to the alignment of the tracks. BNSF trains will continue to be able to use the line. There will also be minor visual effects from the introduction of the LRT catenary along this section of the rail corridor. None of these impacts will have an adverse effect on the ability of this resource to convey its historic significance or on its historic uses as a railroad and its movement of goods on the tracks. Based on the preceding discussion and consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to project impacts at the St. Paul, Minneapolis & Manitoba Railroad Historic District (see Section 3.4 and the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Preliminary Determination of Permanent Section 4(f) Use: Section 4(f) de minimis Use

As defined in 23 CFR 774.5 and 774.17, a *de minimis* use determination is made for an historic site if FTA makes a determination for a property of "No Adverse Effect" or "No Historic Properties Affected" through consultation under Section 106 of the National Historic Preservation Act (NHPA), and the SHPO concurs with that determination. Because a preliminary Section 106 Finding of No Adverse Effect has been made with respect to LPA actions at the St. Paul, Minneapolis & Manitoba Railroad Historic District in tandem with consultation with the MnSHPO, a subsequent *de minimis* impact determination is concluded in this document. The MnSHPO must concur in writing with the *de minimis* impact determination after the opportunity for public comment on the preliminary Section 4(f) *de minimis* use determination.

Y. Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District – Preliminary No Use

Property Description

The Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District is within 0.25 mile of the proposed Van White Station (see Exhibit 3.5-4B). The Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District has been found eligible for the NRHP under NRHP Criterion A. For more detailed information on this historic property see Draft EIS Appendix H.

EXHIBIT 3.5-43
Draft Section 4(f) Evaluation Update – St. Paul, Minneapolis & Manitoba Railroad Historic District



SOUTHWEST	Southwest LRT Supplemental Draft EIS Draft Section 4(f) Evaluation Update St. Paul, Minneapolis & Manitoba Railroad Historic District	Exhibit 3.5-43	NORTH 0 500 1,000 Feet	METROPOLITAN COUNCIL

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

No changes will be made to the railroad line. There will be minor visual effects from the introduction of the LRT catenary to a section of the rail corridor, but the introduction of these elements will not have an adverse effect on the ability of this resource to convey its historic significance on its historic use as a railroad and its movement of goods on tracks.

Based on the preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Osseo Branch of the St. Paul, Minneapolis & Manitoba Railroad Historic District.

Z. Minneapolis Warehouse Historic District – Preliminary No Use

Property Description

The Minneapolis Warehouse Historic District is located in the vicinity of 1st Avenue N., N. 1st. Street, 10th Avenue N., and N. 6th Street in Minneapolis (see Exhibit 3.5-4B). The Minneapolis Warehouse Historic District has been found eligible for the NRHP under NRHP Criterion A and Criterion C. For more detailed information on this historic property see Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Minneapolis Warehouse Historic District – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Minneapolis Warehouse Historic District during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Minneapolis Warehouse Historic District (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

A portion of the Minneapolis Warehouse Historic District is located within 0.25 mile radius of the Target Field (aka Interchange) Station. However, the Target Field Station (which was previously termed the "Interchange Station") was recently reviewed under its own Section 106 review, and the new work to connect the Southwest LRT line with the station infrastructure occurs in the west part of the station site, away from the Warehouse District and its closest element, the Ford Building. The Section 106 Review for the Interchange also assessed redevelopment around the district that would be catalyzed by the station, including when the Southwest LRT was put in operation.

Based on the preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Minneapolis Warehouse Historic District will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Minneapolis Warehouse Historic District under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Minneapolis Warehouse Historic District.

AA. Dunwoody Institute – Preliminary No Use

Property Description

The Dunwoody Institute is located at 818 Dunwoody Boulevard in Minneapolis (see Exhibit 3.5-4A). The Dunwoody Institute has been found eligible for the NRHP under NRHP Criterion A. For more detailed information on this historic property see Draft EIS Appendix H.

Preliminary Determination of Permanent Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in a permanent incorporation of land from the Dunwoody Institute historic resource – as such, there would not be a Section 4(f) permanent use of the property.

Preliminary Determination of Temporary Section 4(f) Use

As illustrated in the Southwest LRT preliminary engineering plan set, the LPA would not result in the temporary use of property from the Dunwoody Institute historic resource during construction.

Preliminary Determination of Constructive Section 4(f) Use

Based on conceptual engineering and continued consultation with MnSHPO, a preliminary Section 106 finding of No Adverse Effect has been made with respect to LPA impacts at the Dunwoody Institute historic resource (see the Section 106 consultation documentation in Appendix C and Appendix E of this Supplemental Draft EIS).

Pedestrian lights and ramps will be added to sidewalks along a portion Dunwoody Boulevard on the south side of the Dunwoody Institute's parking lot and at its driveway. The center median (island) in the street in front of the building will also be modified. All of these elements would have a negligible visual impact on the property's setting.

Based on the preliminary Section 106 finding of No Adverse Effect, it can subsequently be concluded that the Dunwoody Institute historic resource will not be substantially impaired by proximity impacts associated with the LPA, and therefore no constructive use would occur, consistent with 23 CFR 774.15(a).

Preliminary Section 4(f) Use Determination

Based on the above findings, FTA has preliminarily determined that there would be no permanent or temporary Section 4(f) use of the Dunwoody Institute historic resource under the Southwest LRT LPA and that the proximity impacts associated with the Southwest LRT Project would not result in a Section 4(f) constructive use of the Dunwoody Institute historic resource.

3.5.5 Coordination

This section summarizes the project's Section 4(f) coordination activities that have occurred since publication of the draft Section 4(f) Evaluation and the Draft EIS, which address Section 4(f) coordination and concurrence requirements set forth in 23 CFR 774.

3.5.5.1 Department of Interior (DOI)

The Draft Section 4(f) Evaluation was provided to the DOI for review and comment during the Draft EIS comment period, which concluded on December 31, 2012. The DOI's comments on the Draft Section 4(f) Evaluation are included in Appendix L. The DOI will also have the opportunity to review and comment on this Draft Section 4(f) Evaluation Update during the comment period for this Supplemental Draft EIS.

3.5.5.2 Officials with Jurisdiction

Following is a summary of the Section 4(f) coordination activities that have occurred with officials with jurisdiction since publication of the Draft Section 4(f) Evaluation and the Draft EIS. See Appendix E for documentation of the Section 106 consultation process and Appendix L for documentation of Section 4(f) coordination meetings with officials with jurisdiction, including meeting agendas, notes, and handouts.

- **Eden Prairie.** FTA and Council staff met with City of Eden Prairie staff on February 20, 2015, to review the project's preliminary construction plan for Purgatory Creek Park and modifications to the plan were subsequently made by the Council, as reflected in this assessment. See Appendix L for meeting notes and materials. The project will continue consulting with the City of Eden Prairie regarding obtaining written concurrence on a final determination that the project would meet the temporary occupancy exception criteria.
- **Minneapolis Park and Recreation Board.** FTA and Council staff met with MPRB staff on February 13 and March 6, 2015, to coordinate on preliminary determinations and avoidance, minimization, and mitigation measures for MPRB Section 4(f) properties that are addressed within this Draft Section 4(f) Evaluation Update – those meetings also included staff from Hennepin County and Minneapolis. Agendas, notes, and handouts from those meetings are provided in Appendix L of this Supplemental Draft EIS. On March 5, 2015, the MPRB provided the Council with a letter that summarizes the MPRB's understanding of the project's consultation efforts to date with the Council and FTA on Section 4(f) issues, particularly related to the Kenilworth Channel/Lagoon as an element of the Minneapolis Chain of Lakes Regional Park (see Appendix L). In particular, the letter states that MPRB determined that the additional costs and extended schedule for the Shallow LRT Tunnel – Jacked Box Tunnel Under Kenilworth Lagoon option "would not be prudent." The project will continue consulting with MPRB regarding obtaining written concurrence on FTA's preliminary Section 4(f) *de minimis* impact determinations and seek feedback on this Draft Section 4(f) Evaluation Update. The Council and FTA have committed to continue Section 4(f) coordination activities with the MPRB through to the completion of the project's Final Section 4(f) Evaluation, Final Environmental Impact Statement, and Record of Decision. These Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon and will be coordinated with the development of a Section 106 Agreement for the Kenilworth Lagoon historic resource.
- **Minnesota State Historic Preservation Officer.** Since its Section 106 consultation efforts reported in the Draft EIS (see Section 3.4 of the Draft EIS), FTA and the Council have continued the project's Section 106 consultation efforts. On April 30, 2014, the Council and MnDOT CRU held a consultation meeting to review listed and eligible historic properties and potential project effects. Comments from the consulting parties were solicited during the meeting and in written form after the meeting on these resources. A subsequent meeting was held on November 24, 2014, to: 1) present project adjustments identified since the April 30, 2014, meeting, as adopted at the July 9, 2014, Council meeting; 2) consult to consider effects to historic properties and reach agreement on preliminary determinations of effect; and 3) identify measures to avoid, minimize, or mitigate impacts to architecture/history and archaeology resources for inclusion in the Section 106 Agreement. In February 2015, the Council and MnDOT CRU held two Section 106 consultation meetings. At the February 6, 2015 meeting, the Council and MnDOT CRU presented

revised bridge design concepts and discussed effects related to the new crossing over the Kenilworth Lagoon. At the February 24, 2015, meeting, the Council and MnDOT CRU led a discussion on effects to historic properties throughout the project area and provided an overview of the content and consulting parties' roles in the development of a Section 106 agreement. The consultation process, including meetings, is ongoing and will continue to proceed as needed through execution of the Section 106 Agreement. Documentation related to the Section 106 consultation process can be found in Appendix C and Appendix E of this Supplemental Draft EIS. In addition to the Section 106 consultation meetings, a meeting between the MnSHPO, FTA, and Council was also held on March 2, 2015 to review and discuss MnSHPO's role in the project's Section 4(f) process as the official with jurisdiction for historic properties and FTA's preliminary Section 4(f) determinations in this Draft Section 4(f) Evaluation Update, which reflect the project's preliminary Section 106 findings of effect (see Appendix L for related meeting materials).

In addition, the project's Draft Section 4(f) Evaluation was provided to the officials with jurisdiction for review and comment during the official Draft EIS comment period, which concluded on December 31, 2012. The officials with jurisdiction will also have the opportunity to review and comment on this Draft Section 4(f) Evaluation Update during the comment period for this Supplemental Draft EIS. All substantive comments received from officials with jurisdiction on the Draft EIS, the Draft Section 4(f) Evaluation, this Supplemental Draft EIS (including this Draft Section 4(f) Evaluation Update) will be addressed in the Final EIS.

3.5.5.3 Public

The Draft Section 4(f) Evaluation was provided to the public for review and comment during the official Draft EIS comment period, which concluded on December 31, 2012. The public will also have the opportunity to review and comment on this Draft Section 4(f) Evaluation Update during the comment period for this Supplemental Draft EIS. All substantive comments received from the public on the Draft EIS, the Draft Section 4(f) Evaluation, this Supplemental Draft EIS (including this draft Section 4(f) Evaluation Update) will be addressed in the Final EIS.

3.5.6 Preliminary Determination of Section 4(f) Use

Based on preliminary engineering designs and analysis conducted to-date FTA has made the following preliminary Section 4(f) determinations:

- The LPA would result in a non-*de minimis* use of the Kenilworth Lagoon/Grand Rounds Historic District historic Section 4(f) property and that there is no feasible and prudent alternative that would avoid a use of this historic resource. In addition, based on the summary within this section, FTA has preliminarily determined in accordance with 23 CFR 774.17 that all possible planning to minimize harm will be conducted and implemented through the completion of the project's Section 106 process through the execution of a Section 106 Agreement prior to completion of the Section 4(f) process. Further, FTA and the Council have preliminarily determined that the LPA would be the alternative that would result in the least overall harm to the Kenilworth Lagoon/Grand Rounds Historic District. A final avoidance alternatives discussion, all possible planning to minimize harm, and least overall harm analysis will be provided in the Supplemental Draft 4(f) Evaluation that will be provided in the Final EIS.
- The LPA would have Section 4(f) *de minimis* impacts on three Section 4(f) park/recreational properties, Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park), Cedar Lake Park, and Bryn Mawr Meadows Park, and a Section 4(f) *de minimis* impacts on one historic resource, the St. Paul, Minneapolis & Manitoba Railroad Historic District. Measures to minimize harm, such as avoidance, minimization, mitigation, and enhancement measures, are proposed and subject to written concurrence by the officials with jurisdiction over these four properties. Such measures include, but are not limited to the following:

    1. **Kenilworth Channel/Lagoon (as an element of the Minneapolis Chain of Lakes Regional Park).** The Council and MPRB have initiated coordination activities with the MPRB to identify avoidance, minimization, and mitigation measures to address the project's use of and effects on the recreational

attributes, facilities, and activities of the Kenilworth Channel/Lagoon, as described in Section 3.5.4.1.J. The coordination efforts between the Council and the MPRB may include the development of additional bridge design concepts and minimization and mitigation measures. The Council and FTA have committed to continue Section 4(f) coordination activities with the MPRB through to the completion of the project's Final Section 4(f) Evaluation, Final EIS, and Record of Decision, and during design and construction. These Section 4(f) coordination activities will focus on the visual and noise effects of the LPA on the Kenilworth Channel/Lagoon and will be coordinated with the development of a Section 106 Agreement for the Kenilworth Lagoon historic resource (see Section 3.5.4.2 of this Supplemental Draft EIS for additional information on the historic resource).

2. **Cedar Lake Park.** Construction activities within the park will be closely coordinated with MPRB to help avoid and minimize effect on recreational activities within the park. The project will also provide the MPRB and the public with ongoing notification of construction activities within the park, such as the timing and location of trail detours. All areas of the park that are affected by construction activities outside of the permanent easement area will be restored to existing conditions or better. For both areas of Cedar Lake Park that would be affected by the LPA, FTA, MPRB, and the Council will continue to coordinate to help avoid, minimize, and mitigate impacts to the park through publication of the Final Section 4(f) Evaluation, Final EIS, Record of Decision, and during design and construction.
3. **Bryn Mawr Meadows Park.** All existing trail connections for the Luce Line Trail would be maintained in the long-term under the LPA. Except for the potential for short-term trail closures to ensure trail user safety, all existing trail connections would be maintained during construction of the new trail alignment and elevated trail crossing. During those short trail closures, trail users would be provided with detour routes and information. Under the current construction plan, temporary trails would be constructed to allow for the removal of existing trail segments and construction of new trail segments. Construction activities within Bryn Mawr Meadows Park will be closely coordinated with MPRB to help avoid and minimize effects on recreational activities within the park. The project will also provide the MPRB and the public with ongoing notification of construction activities within the park, such as the timing and location of trail detours. All areas of the park that are affected by construction activities outside of the permanent easement area will be restored to existing conditions or better. For the areas of Bryn Mawr Meadows Park that would be affected by the LPA, FTA, MPRB, and the Council will continue to coordinate to help avoid, minimize, and mitigate impacts to the park through the period when the Final Section 4(f) Evaluation is published, Final EIS, Record of Decision, and during design and construction.
4. **St. Paul, Minneapolis & Manitoba Railroad Historic District.** All possible planning to minimize harm to the historic district will be conducted and implemented through the completion of the project's Section 106 process through the execution of a Section 106 Agreement prior to completion of the Final Section 4(f) Evaluation, Final EIS and Record of Decision.

- The LPA would result in Section 4(f) temporary occupancies during construction of one Section 4(f) park/recreation property, Purgatory Creek Park, and two historic properties Minikahda Club and Cedar Lake Parkway; it has been preliminarily determined that Section 4(f) temporary occupation exception criteria in 23 CFR 774.13(d) would be met in all three of these instances and therefore no use would result at any of these three properties.

4 Public and Agency Coordination

This chapter provides an overview of public and agency coordination activities performed for the Southwest LRT Project since completion of the Southwest Transitway Draft EIS public comment period on December 31, 2012. This chapter also addresses the background, advisory committee structures, agency participation and coordination activities, public meetings and events, and other information-dissemination activities implemented during the Project Development and environmental processes in compliance with NEPA, MEPA, and Moving Ahead for Progress in the 21st Century (MAP-21).

This chapter includes the following sections:

4.1 Accessibility to the Public

4.2 Coordination since the Draft Environmental Impact Statement

4.3 Advisory Committees

4.4 Public Involvement

4.5 Agency Coordination

4.6 Public and Agency Coordination following Publication of the Supplemental Draft Environmental Impact Statement

4.1 Accessibility to the Public

Public and agency coordination are managed by the Southwest LRT Project Office at 6465 Wayzata Boulevard, Suite 500, St. Louis Park, Minnesota 55426. The Project Office can be reached by telephone (612) 373-3800, fax (612) 373-3899, and email (swlrt@metrotransit.org). Media events, news releases, advisory and management committee agendas, presentations, and meeting minutes are posted on the project website (http://www.swlrt.org). These materials and this Supplemental Draft EIS comply with the requirements of Minnesota Statutes 363A.42 regarding the accessibility of public records.

4.2 Coordination since the Draft Environmental Impact Statement

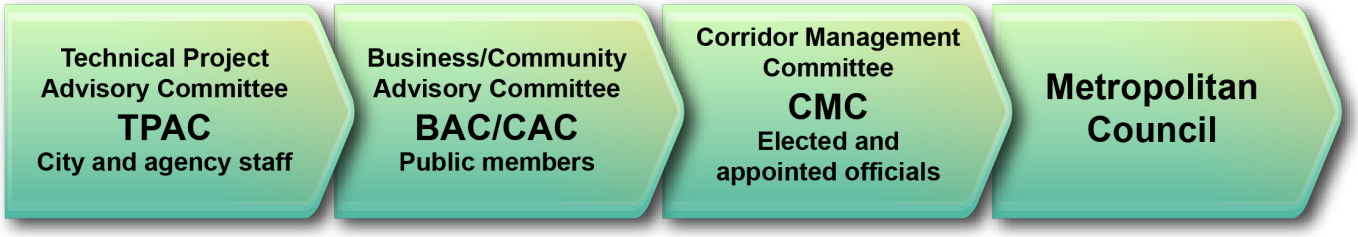
The project has an extensive history of outreach and collaboration with the affected public throughout the corridor. The "affected public," as stated in Section 12.1 of the Draft EIS, includes not only the community members residing in the project corridor, but individuals, businesses, groups, clubs, civic organizations, and others interested in the project as well. Beginning with the HCRRA, which was the project's local lead agency for the environmental process through the Draft EIS, followed by the Council, which became the local lead agency for the environmental process upon completion of the Draft EIS public comment period, the project's commitment to public involvement and agency coordination has been integral to providing for early and continuing involvement during the planning and project development processes.

The project's committee structure, outreach activities, and agency coordination efforts continue to evolve as project development activities progress. The project's public and agency plans and activities have been developed and implemented in compliance with MAP-21; Title VI of the Civil Rights Act of 1964, FTA Circular, *FTA C 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, effective October 1, 2012 (Title VI Requirements and Guidelines Circular); and EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (Clinton, 1994), including the USDOT *Final Environmental Justice Order (Order 5610.2(a): Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), updated May 2, 2012; and the FTA Circular, *FTA C 4703.1*, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, effective August 15, 2012 (Environmental Justice Circular [FTA, 2012a]).

4.3 Advisory Committees

The project's advisory committee structure remains consistent since publication of the Draft EIS, with the exception of the addition of the Technical Project Advisory Committee (TPAC) implemented during the Project Development phase. Exhibit 4.3-1 illustrates the key steps in the process used by the Council to make adjustments to the LPA since publication of the Draft EIS. After project staff developed concepts for adjustments to the LPA that addressed comments received from stakeholders and on the Draft EIS, those proposed adjustments were taken through this advisory process, concluding with identification of the adjustments to the LPA by the Council in April 2014.

EXHIBIT 4.3-1
Southwest LRT Project Advisory Committee Input to Decision Process



Committee and Council meeting schedules, agendas, presentations, and minutes are posted on the Council's Southwest LRT Project website (http://www.swlrt.org). BAC, CAC, CMC and Council meetings are open to the public. The advisory committees include the following:

- **Technical Project Advisory Committee (TPAC).** The TPAC was established by the Southwest LRT Project Office (SPO) to provide technical input on project-related design, engineering, construction, and operation. The TPAC includes senior level staff, as well as engineering and planning staff from SPO, Metro Transit Rail Operations, city and county staff, MnDOT, and Three Rivers Park District. The TPAC also advises on the communication of technical issues with other committees; supports integration of design work with community land use and development goals and objectives; and identifies issues to avoid, minimize and mitigate impacts of the project. Membership includes staff from the TPAC first met in February 2013 after Project Development activities began in earnest and is chaired by the Southwest LRT Project Director.
- **Community Advisory Committee (CAC).** The CAC was formed in January 2007. The CAC serves as a primary avenue for public and community involvement, advising the Corridor Management Committee (see below) and providing feedback to Council staff on issues related to environmental documents, design, engineering, and construction of the Southwest LRT Project. The CAC advises on station location and design, feeder bus service, public art, traffic and parking, station/pedestrian access, and construction mitigation and impacts on corridor communities. The CAC also provides feedback to Hennepin County Community Works initiatives on land use and development issues in the corridor. The CAC represents a variety of interests and issues, including neighborhood and community groups; underrepresented populations, including new immigrant communities, communities of color, low-income communities, and persons with disabilities; educational institutions; environmental groups; religious organizations; freight rail concerns; transit riders; park, bike, and trail interests; station areas; seniors; youth; and affordable housing. The CAC generally meets on a monthly basis and holds a joint meeting with the BAC (described below) at least twice a year. Council staff manages and supports the work of the CAC with assistance and input from Hennepin County staff. Agendas, presentations, and meeting minutes for CAC meetings are posted on the Council's Southwest LRT Project website (http://www.swlrt.org). A representative of the CAC serves on the CMC and is a voting member.
- **Business Advisory Committee (BAC).** The BAC, formed in August 2012 by the Council and HCRRA, advises the CMC on project design and construction from a specific business perspective and serves as an information resource to the business community. The BAC also provides input on station area vision and character from a business point of view, addressing the needs of employees, customers, deliveries, and

other aspects relevant to business retention and expansion. This committee represents a diversity of business establishments along the corridor, including small entrepreneurs, chambers of commerce and business organizations, corporate headquarters, nonprofit organizations, developers, and land owners. The BAC generally meets on a monthly basis and holds a joint meeting with the CAC at least twice a year. Council staff manages and supports the work of the BAC with assistance and input from Hennepin County staff. Agendas, presentations, and meeting minutes for BAC meetings are posted on the Council's Southwest LRT Project website (http://www.swlrt.org). A representative of the BAC serves on the CMC and is a voting member.

- **Corridor Management Committee (CMC).** The CMC was established in December 2010 to provide advice to the Council on the Southwest LRT Project design and construction, as mandated by Minnesota Statutes 473.3994. The CMC advises the Council on issues relating to the environmental review, preliminary through final design and engineering, implementation method, and construction of the Southwest LRT. The committee comprises representatives from the Council; HCRRA; the Cities of Minneapolis, St. Louis Park, Hopkins, Minnetonka, Eden Prairie, and Edina; Metro Transit; MnDOT; Minnesota Department of Management and Budget; the CAC and BAC; and the Counties Transit Improvement Board. The CMC is chaired by the Chair of the Council and generally meets monthly, or more often as needed. CMC recommendations are transmitted to the Council. Agendas, presentations, and meeting minutes for CMC meetings are posted on the Council's Southwest LRT Project website (http://www.swlrt.org).
- **Metropolitan Council**. The Southwest LRT project receives input from the Council's Transportation Committee, which focuses on regional transportation issues specifically concerning transportation policy and planning and transit operations. This Committee is composed of Council Members and meets on the 2nd and 4th Monday's of each month. The full Council meets on the 2nd and 4th Wednesday's of each month on a broad range of topics impacting communities, parks, transportation, wastewater and water, housing, and planning. These meetings are public and agendas, presentations, and meeting minutes are posted on the Council's website (http://www.metrocouncil.org).

In addition to the above advisory structure, the Southwest LRT Community Works Steering Committee was established in 2009 by Hennepin County to focus on public investment and community benefits in the Southwest LRT Project area. The Steering Committee meets monthly and includes members from the cities of Eden Prairie, Edina, Hopkins, Minneapolis, Minnetonka, and St. Louis Park; Hennepin County Board of Commissioners; HCRRA; the Council; Minnehaha Creek Watershed District; Minneapolis Park & Recreation Board; SouthWest Transit Board; and Minnesota Urban Land Institute. Additional information regarding the Community Works program is available at Hennepin County's Southwest Corridor website (http://www.southwesttransitway.org).

Committee meetings held on topics related to the Southwest LRT project held since publication of the Draft EIS are provided in Table 4.3-1.

TABLE 4.3-1
Southwest LRT Project Committee Meetings Held Since Publication of the Draft EIS (October 12, 2012)

Date	Committee
10/18/2012	Southwest LRT Community Works Steering Committee
10/22/12	Metropolitan Council Transportation Committee
11/7/12	Southwest LRT CMC
11/15/12	Southwest LRT Community Works Steering Committee
12/20/12	Southwest LRT Community Works Steering Committee
1/2/13	Southwest LRT CMC
1/9/13	Southwest LRT BAC
1/10/13	Southwest LRT CAC
1/17/13	Southwest LRT Community Works Steering Committee

Date	Committee
2/6/13	Southwest LRT CMC
2/21/13	Southwest LRT Community Works Steering Committee
2/21/13	Southwest LRT CAC
3/6/13	Southwest LRT CMC
3/11/13	Metropolitan Council Transportation Committee
3/21/13	Southwest LRT Community Works Steering Committee
3/27/13	Metropolitan Council
3/27/13	Southwest LRT BAC
3/28/13	Southwest LRT CAC
4/3/13	Southwest LRT CMC
4/18/13	Southwest LRT Community Works Steering Committee
4/24/13	Southwest LRT BAC
4/25/13	Southwest LRT CAC
5/1/13	Southwest LRT CMC
5/8/13	Metropolitan Council
5/16/13	Southwest LRT Community Works Steering Committee
5/29/13	Southwest LRT BAC
5/30/13	Southwest LRT CAC
6/5/13	Southwest LRT CMC
6/6/13	Southwest LRT CAC
6/12/13	Southwest LRT CMC
6/12/13	Metropolitan Council
6/20/13	Southwest Community Works Steering Committee
6/26/13	Southwest LRT BAC
6/27/13	Southwest LRT CAC
7/10/13	Southwest LRT CMC
7/10/13	Metropolitan Council
7/18/13	Southwest LRT Community Works Steering Committee
7/25/13	Southwest LRT CAC
8/7/13	Southwest LRT CMC
8/14/13	Southwest LRT CMC
8/14/13	Metropolitan Council
8/15/13	Southwest LRT Community Works Steering Committee
8/28/13	Southwest LRT CMC
8/29/13	Southwest LRT CAC
9/4/13	Southwest LRT CMC
9/11/13	Southwest LRT CMC
9/11/13	Metropolitan Council
9/19/13	Southwest LRT Community Works Steering Committee
9/25/13	Southwest LRT CMC
9/26/13	Southwest LRT CAC
10/1/13	Southwest LRT BAC
10/2/13	Southwest LRT CMC

Date	Committee
10/7/13	Metropolitan Council Transportation Committee
10/9/13	Southwest LRT CMC
10/14/13	Metropolitan Council Transportation Committee (Public Testimony)
10/16/2013	Metropolitan Council
10/17/2013	Southwest Community Works Steering Committee
10/30/13	Southwest LRT BAC
11/6/13	Southwest LRT CMC
11/7/13	Southwest LRT CAC
11/13/13	Metropolitan Council
11/21/13	Southwest LRT Community Works Steering Committee
11/27/13	Southwest LRT BAC
12/4/13	Southwest LRT CMC
12/5/13	Southwest LRT CAC
12/19/13	Southwest Community Works Steering Committee
1/15/14	Southwest LRT BAC
1/16/14	Southwest LRT Community Works Steering Committee
2/5/14	Metropolitan Council
2/5/14	Southwest LRT CMC
2/5/14	Metropolitan Council
2/20/14	Southwest LRT Community Works Steering Committee
2/26/14	Southwest LRT BAC
2/27/14	Southwest LRT CAC
3/11/14	Joint CAC/BAC
3/12/14	Southwest LRT CMC
3/14/14	Southwest LRT CAC
3/19/14	Metropolitan Council
3/20/14	Southwest LRT Community Works Steering Committee
3/25/14	Southwest LRT BAC
3/26/14	Southwest LRT CMC
3/27/14	Southwest LRT CAC
4/2/14	Southwest LRT CMC (Public Testimony)
4/9/14	Metropolitan Council (Public Testimony)
4/17/14	Southwest LRT Community Works Steering Committee
4/23/14	Southwest LRT BAC
4/24/14	Southwest LRT CAC
5/15/14	Southwest LRT Community Works Steering Committee
6/4/14	Southwest LRT CMC
6/19/14	Southwest LRT Community Works Steering Committee
7/9/14	Southwest LRT CMC
7/9/14	Metropolitan Council (Public Testimony)
7/17/14	Southwest LRT Community Works Steering Committee
9/3/14	Southwest LRT CMC
9/18/14	Southwest LRT Community Works Steering Committee

Date	Committee
10/16/14	Southwest LRT Community Works Steering Committee
11/5/2014	Southwest LRT CMC
12/3/14	Southwest LRT CMC
1/7/15	Southwest LRT CMC
2/4/15	Southwest LRT CMC
2/12/2015	SWLRT Joint Business and Community Advisory Committee Meeting, Kick-off meeting
2/19/15	Southwest LRT Community Works Steering Committee
2/24/15	Southwest LRT CAC
2/25/15	Southwest LRT BAC

4.4 Public Involvement

This section provides an overview of the public involvement activities associated with the preparation of this Supplemental Draft EIS. Ongoing engagement and communication with the affected public has been a fundamental element of the Southwest LRT Project since it was initiated. Maintaining an open dialogue and offering opportunities for input and discussion—especially related to the identified technical issues and items of concern to the affected public—will continue to be a key component throughout the implementation of the Southwest LRT Project.

4.4.1 Background

Public involvement for the project's environmental review process began with the Draft EIS scoping process. Chapter 12 of the Draft EIS provides a summary of project coordination activities that occurred prior to publication of the Draft EIS and describes the public outreach and advisory committee activities that occurred during this period. Section 10.4 in Chapter 10 of the Draft EIS describes targeted outreach to environmental justice populations in the project corridor. Chapter 12 of the Draft EIS also describes the public scoping process, as well as the media channels employed to disseminate project information and solicit public feedback. The information gathered during scoping led to the development of a range of reasonable alternatives, as well as the range of issues to be studied in the Draft EIS. The Notice of Intent for the Draft EIS was published in the *Federal Register* on September 23, 2008 (FTA, 2008b), and in the *EQB Monitor* on September 8, 2008 (Minnesota Environmental Quality Board, 2008). The FTA and HCRRA published the Draft EIS in October 2012 (HCRRA, 2012). The Notice of Availability was published in the *Federal Register* on October 12, 2012, and in the *EQB Monitor* on October 15, 2012. These notices were followed by a public comment period that concluded on December 31, 2012. Copies of the Draft EIS were available at the following locations for public review during the comment period:

- Hennepin County Housing, Community Works & Transit: 701 Fourth Avenue South, Suite 400, Minneapolis
- Southwest LRT Project Office: 6465 Wayzata Boulevard, Suite 500, St. Louis Park
- Libraries:
  - Eden Prairie: 565 Prairie Center Drive, Eden Prairie
  - Edina: 5280 Grandview Square, Edina
  - Franklin: 1314 East Franklin Avenue, Minneapolis
  - Hopkins: 22 11th Avenue North, Hopkins
  - Linden Hills: 2900 West 43rd Street, Minneapolis
  - Minneapolis Central: 300 Nicollet Mall, Minneapolis

  - Minnetonka: 17524 Excelsior Boulevard, Minnetonka
  - Sumner: 611 Van White Memorial Boulevard, Minneapolis
  - St. Louis Park: 3240 Library Lane, St. Louis Park
- City Halls:
  - Eden Prairie: 8080 Mitchell Road, Eden Prairie
  - Edina: 4801 West 50th Street, Edina
  - Hopkins: 1010 1st Street South, Hopkins
  - Minneapolis: 350 South 5th Street, Minneapolis
  - Minnetonka: 14600 Minnetonka Boulevard, Minnetonka
  - St. Louis Park: 5005 Minnetonka Boulevard, St. Louis Park

In addition, the Draft EIS was available on Hennepin County's webpage and can now be found at http://www.swlrt.org. HCRRA also provided an Executive Summary document, *Southwest Transitway Draft Environmental Impact Statement Executive Summary*, and a supporting guide, *Guide to Commenting on the Draft Environmental Impact Statement.* Both documents were provided in four languages: English, Spanish, Hmong, and Somali.

Public hearings on the Draft EIS were held on November 13, November 14, and November 29, 2012. Each public hearing was preceded by an open house. Translation services and ADA accommodations were provided upon request.

After the close of the Draft EIS public comment period, the Council became the lead agency for the remainder of the project's environmental process. On July 22, 2013, the Council issued a Notice of Intent to complete a Supplemental Draft EIS in the *Federal Register* (FTA, 2013). On the same day, the Notice of Supplemental Draft EIS Preparation was issued in the *EQB Monitor* (Minnesota Environmental Quality Board, 2013). The Notice was published in the *Star Tribune* on July 24, 2013. Substantive comments on the scope of the Supplemental Draft EIS that were received during the MEPA comment period are documented in Appendix I.

Chapter III of FTA's Environmental Justice Circular contains recommended strategies and techniques for ensuring that environmental justice populations have a voice in the decision-making process and describes nontraditional outreach strategies and practical suggestions that may result in greater participation by environmental justice populations. The project implemented these recommendations by conducting a strategic planning process and developing a *Communications and Public Involvement Plan* (CPIP) ([Council, 2014b) that includes a demographic analysis of the corridor (ethnicity, languages spoken and income level). The CPIP identifies the following outreach strategies for engaging ethnic and low income populations:

- Providing translators at events and translating materials in languages other than English.
- Inviting community representatives to join the CAC and BAC.
- Proactively seeking opportunities to engage communities in dialogue about the project.
- Establishing and maintaining connections between SPO outreach staff and community representatives.
- Reviewing efforts regularly to ensure effectiveness.

In addition to traditional communication strategies, the project established community and business advisory committees and hired outreach staff to attend neighborhood meetings, staff tables at community events, and meet with people one to one or in small groups. Chapter 3 of this Supplemental Draft EIS provides a summary of environmental justice-related public coordination activities performed by the Council to support publication of this Supplemental Draft EIS. The CPIP provides a summary of the outreach plans to select an OMF site and to accommodate and engage individuals with limited English proficiency.

Public involvement efforts have continued and evolved as local lead agency responsibility shifted from HCRRA to the Council in January 2013. The Council has continued to work with local public transportation agencies and local jurisdictions to implement a public involvement program in support of its effort to continue design and engineering for the LPA described in Section 2.4 of this Supplemental Draft EIS. That effort spanned from January 2013 through April 2014, when the Council took action on the project's scope and budget, including adjustments to be incorporated into the LPA since publication of the Draft EIS. The Council's action was based on: (1) its consideration of the technical evaluation of the range of potential design adjustments to the LPA; and (2) comments received from the public, agencies, jurisdictions, and advisory committees on the potential design adjustments during the project's public involvement and agency coordination activities since the close of the Draft EIS public comment period. Additional information on potential design adjustments to the LPA, including comments received are included in Section 2.3 of this Supplemental Draft EIS.

4.4.2 Communications and Public Involvement Plan

As previously stated, the Council developed a CPIP that provides the structure for coordination between FTA, the Council, project partners, and the public during the Project Development process, including the preparation of this Supplemental Draft EIS to satisfy the requirements of NEPA and its implementing regulations. The CPIP supports the project's *Agency Coordination Plan*, as, updated by the Council. The CPIP also provides for compliance with the EQB Environmental Review Program, pursuant to MEPA and Minnesota Statutes, Section 116D.04. Agency review and approval under Minnesota's Municipal Consent Process (Minnesota Statutes 473.3993 and 473.3994) was also incorporated into the project CPIP.

The goals of the CPIP are to:

- Develop and maintain public understanding of and support for the project as an essential means to improve our transportation system and maintain regional competitiveness.
- Build mutual trust among the Council, project partners, and the public by creating transparency through information-sharing and regular, clear two-way communication about the project with community members, residents, businesses, and interested groups in the corridor.
- Promote public involvement by providing opportunities for public participation and dialogue between the Council and the public.
- Maintain ongoing communication with project partners and ensure that key messages are consistent, clear, and responsive to changing needs.
- Inform elected officials and funding partners about the project's status, timing, and needs.
- Encourage meaningful public participation in the project.
- Avoid schedule delays and cost increases due to misunderstanding of project objectives or opposition to project activities.

The CPIP identifies strategies for engaging the community and engaging the public input during the decision-making process, including project technical issues developed during Project Development (see Section 2.4). Section 6.1 of the CPIP identifies the process to identify strategies for involving the public in project technical issue resolution. This process is based on the level of public interest and type of input required. Considerations for involving the public include the mechanism by which the public provides input and how public input would be used in decision-making. The following subsections describe the project team's organizational structure and the project's advisory committees as documented in the CPIP.

4.4.2.1 Outreach and Communications Team

Project staff dedicated to communications and outreach includes the Assistant Director for Administration, Public Involvement and Communications; Communications Manager; Public Involvement Manager; Communications Specialist; three Community Outreach Coordinators; and a Technical Writer, as shown on Exhibit 4.4-1. The efforts of the communications and public outreach staff are guided by the CPIP. The staff

works closely with stakeholders, including several established stakeholder groups to enhance continuous engagement with the public to serve as a part of the overall decision-making process.

4.4.2.2 Public Outreach and Events

Council staff hosted public events in locations throughout the Southwest LRT corridor to provide the public with the opportunity to provide input on project design efforts and receive updates and information about project activities. Public events were tailored to present information and solicit feedback on specific project aspects, including alignment options in Eden Prairie, station locations, freight rail alignment options in St. Louis Park and Minneapolis, and OMF site options. These public events offered an opportunity for the public to provide feedback on various features of the project and make connections with project staff. Project ideas and requests provided by the affected public were documented and considered in project design (see Chapter 2 of this Supplemental Draft EIS for more information on the Project Development process). Public events were typically conducted in an open house format and were publicized on the project website and through press releases and email alerts. Advisory committee members also aided in promoting the public events in their communities. Public events were accessible to those with disabilities in accordance with the ADA. Translation services and ADA accommodations were provided upon request. SPO selected meeting locations based on ease of access to the location and meeting room, and proximity to potentially affected areas.

EXHIBIT 4.4-1
Southwest LRT Project Communications and Public Involvement Staff

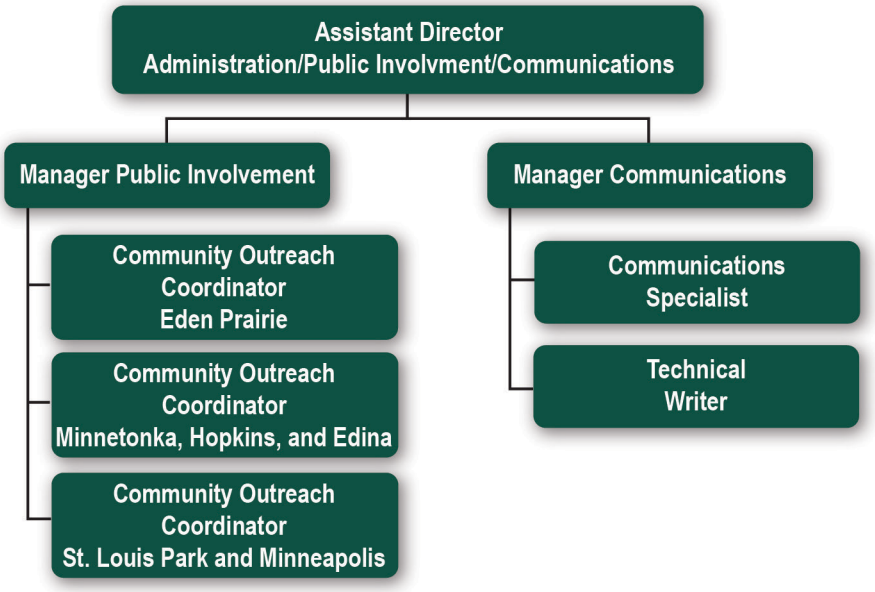


Table 4.4-1 lists the project's public events held since publication of the Draft EIS.

TABLE 4.4-1
Southwest LRT Project Public Open Houses and Community Meetings Held Since Publication of the Draft EIS (October 12, 2012)

Date	Meeting Topic and Location	Approximate Number of Attendees[a]
4/18/13	Transitional Station Area Action Plans Open House, St. Louis Park	50
4/23/13	Transitional Station Area Action Plans Open House, Hopkins	165
5/2/13	Transitional Station Area Action Plans Open House, Minneapolis	125
5/13/13	Transitional Station Area Action Plans/OMF Open House, Eden Prairie	72
5/15/13	OMF Open House, St. Louis Park	7
5/22/13	OMF Open House, Hopkins	125
6/13/13	Freight Rail Open House (morning and evening open houses held), St. Louis Park	300
6/17/13	LRT Station Open House, (morning and evening open houses held), Minneapolis	75

Date	Meeting Topic and Location	Approximate Number of Attendees[a]
6/18/13	LRT Station Open House, Minnetonka/Hopkins	65
6/20/13	LRT Station Open House, St. Louis Park	40
6/24/13	LRT Station Open House, Minneapolis	125
6/26/13	LRT Station Open House, Eden Prairie	45
7/17/13	Freight Rail Open House, Minneapolis (Public Testimony)	325
7/18/13	Freight Rail Open House, St. Louis Park (Public Testimony)	450
8/1/13	Town Center Business Meeting, Eden Prairie	60
10/10/13	Minneapolis Community Open House, Minneapolis	150
1/7/14	Southwest LRT Scope of Freight Rail Relocation and Water Resources Studies Open House and Town Hall, Minneapolis (Public Testimony)	300
1/9/14	Southwest LRT Scope Freight Rail Relocation and Water Resources Studies Open House and Town Hall, St. Louis Park (Public Testimony)	300
2/10/14	Southwest LRT Freight Rail Relocation and Water Resources Draft Studies Open House and Town Hall, Minneapolis (Public Testimony)	125
2/12/14	Southwest LRT Freight Rail Relocation and Water Resources Draft Studies Open House and Town Hall, St. Louis Park (Public Testimony)	500

[a] Approximate number of attendees based on number of those who opted to sign in plus staff observations.

In addition to hosting public open houses and other events, SPO team members frequently attended and presented at community meetings throughout the Southwest LRT project area. Attending such meetings allowed groups that may have specific concerns or questions to interact with staff and to provide feedback in a more personal, less formal setting. Any concerns expressed at these meetings were shared with the appropriate SPO team members. Table 4.4-2 provides a list of meetings and events attended by SPO staff since the close of the Draft EIS public comment period.

SPO staff also reached out to individual businesses, residential complexes, and industry-related organizations and met with individual owners and small residential or business area groups to provide project information.

TABLE 4.4-2
Community Meetings and Events Attended by SPO Staff Since Publication of the Draft EIS (October 12, 2012)

Date	Event and Location
1/29/13	Shady Oak Road Open House, Eden Prairie
1/29/13	Tonka Progressives Meeting, Minnetonka
1/29/13	Midtown Corridor Open House, Minneapolis
2/5/13	Cedar Lake Crossing Event, Minneapolis
2/5/13	Creative City Making Open House, Minneapolis
2/11/13	State of the Region Event, St. Paul
2/23/13	Kenilworth Alliance Meetings
3/4/13	Kenwood Neighborhood Meeting, Minneapolis
3/6/13	Minneapolis Breakfast Club, Minneapolis
3/8/13	TwinWest Legislative Breakfast Event, West Metro area
3/12/13	West Calhoun Neighborhood Meeting, Minneapolis
3/16/13	Safety in the Park Walk, St. Louis Park
3/23/13	Kenilworth Alliance Group Neighborhood Meeting, Minneapolis
4/2/13	Downtown Minneapolis Transportation Summit, Minneapolis
4/6/13	West Calhoun/Cedar-Isles-Dean Neighborhood Walking Tour, Minneapolis
4/8/13	City Council Meeting, St. Louis Park

Date	Event and Location
4/1013	Cedar-Isles-Dean Association Board Meeting, Minneapolis
4/17/13	North Loop Residents Meeting, Minneapolis
4/24/13	Thrive MSP 2040 Meeting
4/27/13	Kenilworth Alliance Meeting, Minneapolis
4/29/13	North Loop Neighborhood Committee Meeting, Minneapolis
5/1/13	Royalston Business Meeting, Minneapolis
5/7/13	City Council Meeting, Eden Prairie
5/8/13	Cedar-Isles-Dean Annual Meeting, Minneapolis
5/8/13	Bryn Mawr Annual Meeting, Minneapolis
5/9/13	Great River Gathering Event, St. Paul
5/11/13	Harrison Neighborhood Meeting, Minneapolis
5/14/13	West Calhoun Neighborhood Annual Meeting, Minneapolis
5/16/13	South Oaks Neighborhood Meeting, St. Louis Park
5/18/13	Arts in the Park Event
5/18/13	Mainstreet Days Event
5/19/13	20th Annual Children First Ice Cream Social
5/21/13	Harrison ROC Meeting, Minneapolis
5/30/13	Eden Prairie Chamber Meeting
6/6/13	TwinWest Chamber of Commerce Meeting, St. Louis Park
6/9/13	Minnesota Jazz Festival on the Prairie, Eden Prairie
6/10/13	School Board Meeting, St. Louis Park
6/11/13	Wooddale Area Meeting, St. Louis Park
6/13/13	I-494 Corridor Commission Meeting, Richfield
6/15/13	Parktacular Event, St. Louis Park
6/21/13	St. Louis Park Rotary Club Meeting, St. Louis Park
6/24/13	School Board Meeting, St. Louis Park
6/25/13	Brooklawn Neighborhood Meeting, St. Louis Park
7/1/13	New American Academy Graduation, Eden Prairie
7/4/13	Fourth of July Festival, Eden Prairie
7/15/13	Hennepin County Bike Advisory Committee Meeting, Minneapolis
7/16/13	Village in the Park Meeting, St. Louis Park
7/20/12	Kenilworth Alliance Meeting, Minneapolis
7/20/13	Hopkins Raspberry Festival, Hopkins
7/29/13	St. Louis Park Rotary Club Meeting, St. Louis Park
7/29/13	School Board Meeting, St. Louis Park
8/15/13	Minneapolis Pedestrian Advisory Committee Meeting
8/21/13	Van White Bridge Opening Ceremony, Minneapolis
8/22 - 9/2/13	MN State Fair, St. Paul
8/28/13	Basset Creek Valley and Kenilworth Corridor Bike Tour, Start in Minneapolis
9/16/13	Biking Tour Van White Station to Blake Station, Start in Minneapolis
9/17/13	Minneapolis Bike Advisory Committee Meeting
9/18/13	Minnetonka Rotary Club Meeting, Hopkins

Date	Event and Location
9/18/13	North Loop Neighborhood Board Meeting, Minneapolis
9/22/13	Sierra Club Annual Bike Tour, Start in St. Louis Park
9/24/13	City Hosted Wooddale LRT Station Area Community Meeting, St. Louis Park
9/25/13	City Hosted Louisiana Station Planning Community Meeting, St. Louis Park
10/1/13	Healthy Living Fair, Hopkins
10/8/13	Minnetonka City-Wide Open House
10/10/13	Minneapolis Open House
10/13/13	CIDNA Fall Festival, Minneapolis
10/14/13	Cedar Lake Ave/Burnham Road Resident Meeting, Minneapolis
10/29/13	Wooddale Area TOD Workshop, Part 3, St. Louis Park
11/1/13	Minneapolis Regional Chamber of Commerce Meeting
11/8/13	Saint Louis Park Business Council - TwinWest Chamber of Commerce
11/12/13	Wooddale Area TOD Workshop, Part 4, St. Louis Park
11/23/13	Creative Citymaking Forum, Minneapolis
11/25/13	Harrison Neighborhood Association, Transit Equity Committee, Minneapolis
12/17/13	East Calhoun Community Organization (ECCO), Minneapolis
12/19/13	Eden Prairie Chamber of Commerce
1/3/14	Harrison Neighborhood Association, Ryan Companies, City of Minneapolis Staff, Hennepin County Staff, Minneapolis
1/13/14	Urban Land Institute and Regional Council of Mayors, Minneapolis
1/14/14	Calhoun Isles Condo Association, Minneapolis
1/27/14	State of the Region, St. Paul
1/31/14	Eden Prairie School District
2/9/14	Minnetonka Kids' Fest
2/24/14	St. Louis Park School Board Meeting
3/18/14	Tower Light Senior Community Residents, St. Louis Park
3/18/14	Eden Prairie City Council Workshop
3/19/14	Organizer Roundtable: Equitable Transit Oriented Development - Southwest LRT and Beyond, St. Paul
3/24/14	Spanish speaking residents by St. Louis Park Reroute
3/26/14	Calhoun Isles Condo Association, Minneapolis
3/31/14	Transit Equity Forum hosted by Congressman Keith Ellison, Minneapolis
4/30/14	Minnesota Valley Transit Authority Board Meeting, Burnsville
5/2/14	Minneapolis Chamber of Commerce Policy Committee, Minneapolis
5/2/14	North Moves, Minneapolis
5/12/14	Transit Equity Working Group, Minneapolis
5/12/14	Hennepin County Informational Table, Minneapolis
5/13/14	West Calhoun Neighborhood Council Annual Meeting, Minneapolis
5/14/14	Open House for Southwest Condo Residents, Eden Prairie
5/14/14	Bryn Mawr Neighborhood Association Annual Meeting, Minneapolis
5/16/14	United Health Group & Angelo-Gordon Meeting, Eden Prairie
5/17/14	Mainstreet Days, Hopkins

Date	Event and Location
5/17/14	Ecopalooza, Eden Prairie
5/20/14	Meet and greet with HNA new staff for transit and housing, Minneapolis
5/21/14	HNA Annual Meeting, Minneapolis
5/28/14	Collaborations-in-place: Creating Opportunities along the Southwest LRT Corridor, Hopkins
6/5/14	CIDNA Meeting with Congressman Ellison speaking on Southwest LRT, Minneapolis
6/10/14	Presentation to Eden Prairie Chamber of Commerce, Eden Prairie
6/11/14	Discover St. Louis Park, St. Louis Park
6/14/14	Green Line Opening, Target Field Station, Minneapolis
6/17/14	Hopkins City Council Municipal Consent Action, Hopkins
6/23/14	Minnetonka City Council Municipal Consent Action, Minnetonka
6/24/14	Southwest LRT Advanced Design DBE Meet and Greet, Hopkins
6/24/14	Bryn Mawr Neighborhood Association Transit Meeting with Rep. Hornstein and Senator Champion, Minneapolis
6/25/14	Blake Road Corridor Study, Hopkins
6/28/14	Minnetonka Summer Festival, Minnetonka
7/1/14	Hopkins City Council, Hopkins
7/3/14	Rockin' the Round Festival, Eden Prairie
7/7/14	Municipal Consent Consideration, St. Louis Park
7/8/14	Municipal Consent Action for St. Louis Park, Hopkins, Minnetonka and Eden Prairie; Minneapolis
7/8/14	Minneapolis Public Forum, Minneapolis
7/9/14	CINDA Meeting, Minneapolis
7/14/14	St. Louis Park City Council Municipal Consent Action, St. Louis Park
7/14/14	Eden Prairie City Council Municipal Consent Action, Eden Prairie
7/19/14	Hopkins Raspberry Festival, Hopkins
7/23/14	North Transit Projects Meeting, Minneapolis
7/31/14	Edina Rotary Club, Edina
8/5/14	National Night Out, St. Louis Park
8/7/14	Cedar Lake Shores Town Homes Association Meeting, Minneapolis
8/12/14	Summer's Cool Field Trip on Green Line, Meadowbrook Collaborative, St. Louis Park
8/13/14	Joint Met Council/Hennepin County/Hennepin County Regional Railroad Authority Open House/Public Hearing, Minneapolis
8/19/14	Minneapolis Public Hearing, Minneapolis
8/20/14	Community Links Neighborhood Event, St. Louis Park
8/21/14 – 9/1/14	Minnesota State Fair, St. Paul
9/10/14	MN Public Transit Conference, St. Paul
9/16/14	Bassett Creek Valley Redevelopment Oversight Committee (ROC), Minneapolis
9/17/14	American Planning Association – MN Chapter, Golden Valley
9/19/14	Harrison Neighborhood Association Staff, Minneapolis
9/21/14 – 9/24/14	Rail-Volution Southwest LRT Sessions, Minneapolis
9/28/14	Park the Streets, St. Louis Park

Date	Event and Location
10/7/14	Minnetonka City Wide Open House, Minnetonka
10/9/14	Blake Road Corridor Study Open House #2, Hopkins
11/15/2014	West Lake Station Walkabout with Cedar Isles Dean Neighborhood Association and West Calhoun Neighborhood Council, Minneapolis
11/18/14	Basset Creek Valley Redevelopment Oversight Committee, Minneapolis
11/22/14	Latino Workers Forum, Minneapolis
11/25/14	Metro Transit Service Improvement Plan meeting with Hopkins School District staff, Hopkins
12/12/14	Meeting with Property Owners near West Lake Station, St. Louis Park
12/16/14	Project Partner Open House, Hopkins
1/8/2015	Artist meet and greet, Hopkins
1/13/2015	Hopkins City Council Work Session, Hopkins
1/21/2015	Cedar Isles Dean Neighborhood Association, Kenwood Isles Area Association, and Cedar Lake Park Association, Minneapolis
1/27/2015	Joint Hopkins and Minnetonka City Council Work Session, Hopkins
2/4/2015	Minneapolis Park and Recreation Board, Minneapolis
2/27/2015	Mujeres con Poder- Mia Ambriz Latinas Group, Brooklyn Center

4.4.2.3 Other Project Communication Strategies

The Southwest LRT Project conducted a wide variety of other project activities used to help implement the Council's public involvement program in support of the effort to identify and evaluate potential adjustments to the LPA.

A. Project Website

The Council's Southwest LRT Project website serves as a communications forum and resource to the public, allowing stakeholders to keep informed about project history, current activities and data, and upcoming milestones. The project website, which is part of the Council website and is available at http://www.swlrt.org, provides information on the EIS process, and offers downloads of environmental documents, including the Scoping Summary, Draft EIS, and public comments submitted on the Draft EIS.

During the summer of 2013, when the Southwest LRT Project was engaged in intensive public outreach efforts, the project website generated approximately 10 percent of all Council web traffic as visitors sought information about public meetings and downloaded environmental documents. Combined, the Southwest and Central Corridor LRT projects generated up to 30 percent of the Council's monthly unique page views during this period. Information posted on the project website includes:

- Current project status information and timeline
- Project facts and frequently asked questions
- LPA route information
- Information about the proposed stations
- Public meeting announcements and presentations
- Environmental process information
- Links to project partners
- CAC, BAC, and CMC information and meeting documents
- Contact information, including community outreach coordinators and SPO information

- Current Southwest LRT Project announcements and newsletters
- Project funding information
- Project documents, including public and committee meeting documents, environmental documents (Draft EIS), and other reports
- Route visualization video

B. E-list

Early during Project Development, the Council established a project "e-list," which was used to send out newsletters, press releases, and meeting information. The ability to sign up for email updates was made available at public meetings held by the project and on the project website. The list currently has more than 1,000 subscribers.

C. Social Media

The Southwest LRT Project used Twitter to provide project updates, including new website information, press releases, upcoming public meetings, project visualizations, project newsletters, and other project-related material. The Council used its Twitter and Facebook account to share selected Southwest LRT project information.

D. Newsletters

The Council published and printed six editions of the Southwest LRT Project newsletter, called *Extending Tracks,* during preparation of this Supplemental Draft EIS. The newsletter was produced in March, May-June, July, and December of 2013 and Spring, Summer, and Fall 2014, and provided an additional resource to the public for the latest Southwest LRT Project news and announcements. The newsletter was distributed by mail throughout the project area, provided to project advisory and management committees, and posted to the Southwest LRT Project website.

E. Other Outreach Efforts

A variety of other project communication activities are available to outreach staff to use as needed. This includes door-to-door outreach, including distributing fliers for upcoming meetings or notifying property owners about right of entry required for field work. Targeted mailings are also used to notify stakeholders of upcoming meetings and notifications of field work. Corridor wide mailings are also used to announce activities and decisions that affect the entire project area.

Additionally, a variety of project specific print material has been developed for this project, including a project brochure and fact sheets (e.g., relating to noise and vibration), frequently asked questions, and the Field Guide to LRT Elements. These materials are provided at project meetings and open houses.

In 2014, a Southwest LRT Project mobile office began providing office hours at locations and events located throughout the project corridor. The mobile office is a Metro Transit bus reconfigured to bring information on the project to the community in an effort to engage minority communities and other typically under-served communities. Mobile office hours will be coordinated with events when applicable, during the day, as well as during evening and weekend hours. The intent of the mobile office is to provide community members with an opportunity to provide input without having to attend formal project meetings.

F. Media

Southwest LRT communication staff frequently coordinates with nearly 100 local reporters who represent print, electronic, and television network media. News sources include city and neighborhood newspapers and minority and ethnic media sources. Project coordination with media includes media tours and issuing press releases regarding upcoming project events, such as open houses and significant project milestones.

G. Corridors of Opportunity/Partnership for Regional Opportunity

The Council worked with and through an enterprise called Corridors of Opportunity, which ran from 2011 through the end of 2013. This enterprise promoted a Twin Cities regional transit system working in tangent

with economic development and inclusive benefits for stakeholders. The Southwest LRT Corridor is one of seven corridors that Corridors of Opportunity worked with. Work done by the Corridors of Opportunity included outreach and engagement within project communities and for stakeholders boosting social and economic development that would have far-reaching public benefits for all groups, including underrepresented populations.

The Corridors of Opportunity's Community Engagement Team (CET) identified and promoted existing community assets along the Southwest Corridor and ensured that communities located within the project area were involved in the planning process. "The CET recommends grants to community groups that support innovative and effective place-based initiatives that engage and involve underrepresented communities (low-income, communities of color, immigrant communities, persons with disabilities) in participation, decision-making and leadership roles related to Southwest corridor planning and implementation" (http://www.corridorsofopportunity.org/activities/engagement). A list of CET grant recipients within the Southwest Corridor and the project title for which the grant was provided is listed below in Table 4.4-3:

TABLE 4.4-3
Corridors of Opportunity Community Engagement Team Recommended Grantees and Projects by Year

Grantee	Project Title	Year
Intercongregation Communities Association	Blake Road Neighborhood Discussion Circles	2011
New American Academy	SW Corridor Immigrant Opportunities Outreach and Engagement	2011
La Asamblea de Derechos-Civiles	Emancipation Campaign: Corridors to Freedom	2012
Centro de Trabajadores Unidos en la Lucha (CTUL)	Good Job Opportunities in Corridor Development	2012
Metropolitan Interfaith Council on Affordable Housing (MICAH)	Interfaith Housing, Transit and Equitable Development Organizing	2012
New American Academy	N/A	2012

Source: http://www.corridorsofopportunity.org/activities/engagement.

The project team invited groups that have received CET grants to have a representative participate on the CAC. Additional information about Corridors of Opportunity's work in relation to Southwest LRT Project is available on the Corridors of Opportunity website (http://www.corridorsofopportunity.org/).

In late 2013, the Corridors of Opportunity was re-named The Partnership for Regional Opportunity (the Partnership). This name change is intended to reflect the group's region-wide focus, extending beyond transitways. The Partnership's Policy Board, which adopted this new vision for its work: *Growing a prosperous, equitable, and sustainable region*, agreed to meet for one additional year through the end of 2014. The Partnership generally meets on a monthly basis. The goals of the Partnership are to:

1. Improve the economic prospects of low-income people and low-wealth communities
2. Promote high quality development near existing assets (e.g., employment centers, transitways, and commercial and industrial corridors)
3. Advance a 21st century transportation system

Additional information about the Partnership is available here: http://www.corridorsofopportunity.org/Corridors_News/partnership-regional-opportunity-corridors-opportunity-lives-2014.

H. Southwest LRT Transitional Station Area Action Plans

The Hennepin County Southwest LRT Community Works staff partnered with Council staff on the Transitional Station Area Action Plans (TSAAPs) planning effort for Southwest LRT communities The objectives of TSAAPs were to address infrastructure, planning, and development needs at station locations to encourage area growth and a foundation for the community when the Southwest LRT line opens. To create plans for prioritizing investment, TSAAP leaders reached out to the communities in the Southwest LRT corridor to generate ideas and input. A community engagement plan was developed for the TSAAP process

which included outreach methods to involve public participation and create comprehensive community plans. Information about TSAAPs, including the final report, completed in late 2013, is posted on Hennepin County's Community Works website (http://www.southwesttransitway.org).

4.5 Agency Coordination

This section provides a description of the project's participating agencies and the Council's agency coordination efforts that supported the development and evaluation of design adjustments to the LPA.

4.5.1 Participating Agencies

The Southwest LRT Agency Coordination Plan (Council and FTA, 2014), which helps guide the project's agency coordination efforts, is based on the requirements of MAP-21, NEPA, and the EQB Environmental Review Program. The project's original Coordination Plan for the Preparation of the Southwest Transitway Draft Environmental Impact Statement (HCRRA, 2008) was updated in 2014 to reflect agency and municipal coordination procedures underway during project development subsequent to the Draft EIS process. The updated Agency Coordination Plan summarizes the structure for coordination between the FTA, the Council, participating agencies, cooperating agencies, and the public.

A participating agency, as defined in the MAP-21 1305(c) guidance, is a federal, state, tribal, or local government agency that has an interest in the project and that agrees to participate in the project's NEPA and related processes. In general, participating agencies provide input, identify project concerns, and partake in issue resolution processes to further the project within the NEPA framework. The project's federal and local lead agencies and federal cooperating agencies under NEPA are included as participating agencies. Chapter 12 and Appendix H of the Draft EIS describe the process used to identify potential participating agencies, including the FTA invitation to agencies to participate in the project and the agencies' responses to those invitations. Table 4.5-1 lists the parties which accepted participating agency status as identified in Section 1.1.1 of the Draft EIS. The SPO worked with many of the Project's participating agencies during the Project Development process to provide input to adjustments to the LPA.

A cooperating agency is a federal agency with jurisdiction by law or special expertise that has been requested by the lead agency to be involved in the environmental documentation efforts per 40CFR 1508.5 Cooperating agency. A cooperating agency is included as a participating agency, but not all participating agencies are NEPA cooperating agencies. The cooperating agency for the Supplemental Draft EIS is the USACE. The USACE is responsible for implementing NEPA and related laws and Section 404 of the Clean Water Act (CWA).

4.5.1.1 Agency Coordination since Publication of the Draft Environmental Impact Statement

This section provides an overview of the Council's agency coordination efforts since publication of the Draft EIS that supported the Council's efforts to develop and evaluate design adjustments to the LPA and that supported preparation of this Supplemental Draft EIS. These efforts were also supported by and implemented in coordination with the committee and public involvement activities described in Section 4.3 and 4.4 of this Supplemental Draft EIS, respectively. Agency coordination during the project's AA and Draft EIS phases is documented in Section 12.2 of the Draft EIS.

Key elements of the project's agency coordination efforts since publication of the Draft EIS included the following:

- **Technical Issue.** Following publication of the Draft EIS, the Council implemented a process to help identify and evaluate design adjustments to the LPA. The design adjustment process was organized around 25 technical issues. Each issue was addressed in detail by the project team, working closely with state and local jurisdictions and with representatives of affected railroads (for technical issue 21). See Sections 2.3 and 2.4 for additional information on the technical issues process and how it was implemented in the Eden Prairie and St. Louis Park/Minneapolis Segments and for the OMF site.

TABLE 4.5-1
Participating Agencies

Federal Agencies
Advisory Council on Historic Preservation
Unites States Army Corps of Engineers
United States Department of Agriculture
United States Department of Housing and Urban Development
United States Department of Interior
United States Department of Transportation, Federal Highway Administration
United States Environmental Protection Agency
United States Department of Transportation, Federal Aviation Administration
United States Federal Emergency Management Agency
United States Department of Transportation, Federal Railroad Administration
United States Fish and Wildlife Service
United States Department of Homeland Security
Surface Transportation Board
State Agencies
Minnesota Pollution Control Agency
Minnesota Department of Health
Minnesota Department of Transportation
Minnesota Environmental Quality Board
Minnesota Department of Natural Resources
Indian Affairs Council
Board of Water and Soil Resources
Office of the State Archaeologist
Minnesota Department of Agriculture
Minnesota Department of Commerce
State Historic Preservation Office
Minnesota Historical Society
Regional Authorities
Three Rivers Park District
Minnehaha Creek Watershed District
Nine-Mile Creek Watershed District
Mississippi Watershed Management Organization
County Agencies
Hennepin County
Hennepin County Research, Planning and Development
Hennepin Conservation District
Local Government Agencies/Municipalities
City of Eden Prairie
City of Edina
City of Hopkins
City of Minneapolis
City of Minnetonka
City of St. Louis Park
Minneapolis Park and Recreation Board

Source: Southwest Transitway Draft Environmental Impact Statement (HCRRA, 2012).

- **Clean Water Act Section 404 Coordination.** The U.S. Army Corps of Engineers (USACE) issued a preliminary jurisdictional determination in 2009 that stated that there may be waters and/or wetlands subject to USACE oversight. Based on information provided during Project Development, the USACE issued a second preliminary jurisdictional determination in 2015, which presumes that all aquatic resources listed on the preliminary jurisdictional determination are jurisdictional under the Federal CWA. The USACE is in the process of completing an approved jurisdictional determination for the aquatic resources that were delineated within the project corridor but are likely not regulated by the Federal CWA. The USACE also issued a determination of the Least Environmentally Damaging Practicable Alternative (LEDPA) in 2014. For CWA Section 404 purposes, the LEDPA is the alternative that meets the project purpose, is available to the project, and which has the least amount of impact to aquatic resources. Using a NEPA/404 merger process implemented since publication of the Draft EIS, FTA, the Council, and the USACE—which is a federal Cooperating Agency on the project's Supplemental Draft EIS—have been coordinating on activities that will support the project's CWA Section 404 wetland permit process. The merger process focuses on four key milestones, which are described in Section 2.1.1 of this Supplemental Draft EIS. In particular, this Supplemental Draft EIS includes an update of the USACE's LEDPA where USACE provided concurrence on the first three of the four key milestones and preliminarily determined that LRT 3A-1[1] is the LEDPA for the project (see Section 3.1.2.7 and Appendix E of this Supplemental Draft EIS for additional detail). Chapter 3 also identifies specific coordination activities with the USACE relative to the project's compliance with the CWA.
- **Technical Evaluation Panel.** As prescribed under the Minnesota Wetland Conservation Act of 1991, a Technical Evaluation Panel (TEP) was established in July 2013 to institute coordination procedures as wetlands are delineated throughout the corridor, wetlands qualities are assessed, and mitigation options are considered. Chaired by the Assistant Director of Environmental and Agreements, the project's TEP has members representing the USACE, Minnesota Board of Water and Soil Resources, MnDNR, MnDOT, City of Eden Prairie, City of Minneapolis, City of Minnetonka, City of St. Louis Park, Bassett Creek Watershed District, Minnehaha Creek Watershed District, Mississippi Watershed Management Organization, and Nine Mile Creek Watershed District. Representatives from Hennepin County and Riley Purgatory Bluff Creek Watershed District also participate in the TEP. Prior to publication of this Supplemental Draft EIS, the TEP first met on July 2, 2013, and generally meets on a monthly basis. The meetings are anticipated to continue through preparation and approval of the project's wetland permits. Chapter 3 identifies specific coordination activities with local governmental units responsible for local wetland permitting.
- **Section 106 of the National Historic Preservation Act Coordination.** The Draft EIS identified tasks and coordination efforts occurring as part of the Section 106 process. Tasks described in the Draft EIS included identifying buildings, structures, and known archaeological sites within the project Area of Potential Effect (APE) to determine whether a Section 106 Agreement (documenting the terms and conditions agreed upon to resolve adverse effects related to historic properties) would need to be developed among the FTA, the Advisory Council on Historic Preservation, MnSHPO, the Council, and other interested parties during the Final EIS process. Section 106 coordination is documented in Section 12.2.2 of the Draft EIS and has been ongoing since publication of the Draft EIS. Chapter 3 of this Supplemental Draft EIS documents the evaluation of Section 106 resources within the scope of this document and related coordination activities between the Council, FTA, the MnDOT Cultural Resources Unit, and the MnSHPO.

[1] As described in Section 2.5 of this Supplemental Draft EIS, the Locally Preferred Alternative (LPA) is LRT 3A-1 which includes the approximate 16-mile light rail alignment, 17 stations, park-and-ride spaces, an OMF, ancillary facilities, light rail-related bus, roadway, and bicycle/pedestrian improvements, co-location of freight rail, and associated freight rail modifications, along with the design adjustments documented in Section 2.5 of this Supplemental Draft EIS in Eden Prairie, the Hopkins OMF, and adjustments to the alignment in the cities of St. Louis Park/Minneapolis.

- **Tribal Coordination.** In September and November 2009 and February 2010, the FTA sent letters to potentially affected Indian tribes, requesting that they identify any concerns about potential project impacts. The letters were sent to the Prairie Island Indian Community, Lower Sioux Indian Community Council, Shakopee Mdewakanton Sioux Community, Fort Peck Tribes, Santee Sioux Nation, Sisseton-Wahpeton Oyate (Tribal Historic Preservation Office), and the Upper Sioux Indian Community. Additionally, a meeting opportunity was offered to tribal representatives in 2010; none of the representatives expressed an interest in meeting at that time. Section 12.2.3 of the Draft EIS documents tribal coordination.
- **Communication Steering Committee.** The Communications Steering Committee establishes, reviews, implements, and updates the CPIP to maintain a coordinated communication and public involvement effort for the Southwest LRT Project. The Steering Committee includes communication and public affairs staff from the Council, Metro Transit, MnDOT, Hennepin County, and the corridor cities and is chaired by the Southwest LRT Assistant Director of Administration/Communication/Public Involvement.

4.5.1.2 Preliminary Permits and Approvals Required

The Draft EIS identified preliminary permits, approvals, or reviews required for the project in Table 12.2-2. Table 4.5-2 of this Supplemental Draft EIS updates this information. [2] Project staff continue to work with the applicable agencies on the permits, approvals, and reviews required for the project.

TABLE 4.5-2
Preliminary List of Required Permits/Approvals and Reviews (by Agency Jurisdiction)

Government Agency	Type and/or Name of Document	Permit	Approval	Other
Federal				
Federal Transit Administration (FTA)	Environmental Impact Statement		√	
	Section 4(f)		√	
	Section 106 of the National Historic Preservation Act – Agreement		√	
	Record of Decision		√	
U.S. Army Corps of Engineers	Environmental Impact Statement		√	
	Section 404 Wetlands Permit	√		
	Section 106 of the National Historic Preservation Act – Agreement		√	
U.S. Fish and Wildlife Services (USFWS)	Section 7 of the Threatened and Endangered Species Act			√
Federal Highway Administration	Design Review			√
Advisory Council on Historic Preservation	Section 106 of the National Historic Preservation Act – Agreement		√	
Department of the Interior	Section 4(f)			√
State				
MN Department of Health	Permits to Cap and Abandon Wells	√		
Minnesota Department of Transportation	Permit to Construct on MnDOT Right of Way	√		
	Wetland Conservation Act (WCA) permit	√		
MN Department of Natural Resources	Work in Protected Waters Permit	√		
	Natural Heritage Information System Review for Rare Features			√

[2] This section complies with MN Administrative Rules 4410.2300(F) by listing all known governmental permits and approvals required for the project, including identification of the governmental unit that is responsible for each permit or approval. Permits and approvals are defined under MN Administrative Rules 4410.0200 Subp. 4 and Subp. 5.

Government Agency	Type and/or Name of Document	Permit	Approval	Other
MN Pollution Control Agency	National Pollutant Discharge Elimination System Permit	√		
	Section 401 Water Quality Certification	√		
	Response Action Plan		√	
	Air Quality Permit	√		
	Application for Voluntary Brownfield Program Participation (addresses non-petroleum and petroleum contamination)		√	
State Board of Electricity, MN Department of Labor and Industry	Electrical Permits	√		
State Historic Preservation Office (MnSHPO)	Section 106 of the National Historic Preservation Act – Agreement		√	
	Design Review			√
Local and Regional				
Metropolitan Council	Environmental Impact Statement		√	
	Section 106 of the National Historic Preservation Act – Agreement		√	
	EIS Adequacy Determination (state process)		√	
City of Minneapolis	Right of Way Permit	√		
	Utility Permits (water, sewer, electrical, storm)	√		
	Erosion and Sedimentation Control Plan		√	
	Section 106 of the National Historic Preservation Act – Agreement			√[a]
City of St. Louis Park				
	Utility Permits (water, sewer, electrical, storm)	√		
	Erosion and Sedimentation Control Plan		√	
	Section 106 of the National Historic Preservation Act - Agreement			√[a]
City of Hopkins	Utility Permits (water, sewer, electrical, storm)	√		
	Erosion and Sedimentation Control Plan		√	
	Section 106 of the National Historic Preservation Act - Agreement			√ a
City of Minnetonka	Utility Permits (water, sewer, electrical, storm)	√		
	Erosion and Sedimentation Control Plan		√	
	Wetland Conservation Act Wetland Replacement Plan		√	
	Wetland Permit	√		
	Section 106 of the National Historic Preservation Act - Agreement			√[a]
City of Eden Prairie	Utility Permits (water, sewer, electrical, storm)	√		
	Wetland Conservation Act Wetland Replacement Plan		√	
	Wetland Permit	√		
	Erosion and Sedimentation Control Plan		√	
	Section 106 of the National Historic Preservation Act - Agreement			√[a]
Minneapolis Park & Recreation Board	Construction Permit	√		
	Section 106 of the National Historic Preservation Act - Agreement			√[a]

Government Agency	Type and/or Name of Document	Permit	Approval	Other
Burlington Northern Santa Fe Railroad	Permit to Construct on Railroad Right of Way	√		
Canadian Pacific Railroad	Permit to Construct on Railroad Right of Way	√		
Nine Mile Creek Watershed District	Sediment and Erosion Control Permits	√		
	Stormwater Management		√	
	Work in Floodplain Permit	√		
	Wetland Conservation Act Wetland Replacement Plan		√	
	Wetland Permit	√		
	Waterbody Crossings/Structures	√		
Minnehaha Creek Watershed District	Sediment and Erosion Control Permits	√		
	Work in Floodplain Permit	√		
	Wetland Conservation Act Wetland Replacement Plan		√	
	Wetland Permit	√		
	Waterbody Crossings & Structures Permit	√		
	Stormwater Management	√		
Riley Purgatory Bluff Creek Watershed District	Sediment and Erosion Control Permits	√		
	Stormwater Management	√		
	Work in Floodplain Permit	√		
	Wetland, Lake, Creek Buffer		√	
Three Rivers Park District	Section 106 of the National Historic Preservation Act – Agreement			√[a]
Kenwood Isles Area Association	Section 106 of the National Historic Preservation Act – Agreement			√[a]

[a] 36 CFR 800.6(c)(3)

Source: Update of the Draft EIS Table 12.2-2.

In addition to the above permits/approvals/reviews, in October 2014 the project received a jurisdiction determination from the Federal Railroad Authority (FRA). FRA has safety jurisdiction, delegated from the Secretary of Transportation, over any type of railroad carriers regardless of the type of equipment that it uses or its connection to the general system, with the exception of rapid transit operations in an urban area that are not connected to the general system[3]. FRA will however exercise jurisdiction over commuter, short-haul railroads and urban rapid transit (URT) to the extent that it is necessary to ensure railroad safety at shared connection points.[4] FRA concluded that the proposed Southwest LRT project will be a URT operation, therefore FRA will exercise its safety jurisdiction and regulations over the five shared highway-rail grade crossings for the Southwest LRT project, and these regulations will not apply to other locations (See Appendix E for a copy of this letter and description of the five shared highway-rail grade crossings).

4.6 Public and Agency Coordination following Publication of the Supplemental Draft Environmental Impact Statement

Coordination with agencies will be ongoing throughout preparation of the Southwest LRT Final EIS and ROD. Subsequent to the publication of the Notice of Availability of the Supplemental Draft EIS in the *Federal Register* and the *EQB Monitor*, FTA and the Council will provide a public comment period on the Supplemental Draft EIS. That comment period will comply with NEPA and MEPA requirements and will

[3] See 49 U.S.C. Section 20102(2)(B) and 49 CFR Part 189.

[4] See 49 U.S.C. Section 20102(2)(A)(i) and Appendix A to 49 CFR Part 209.

include public hearings, as outlined in the Executive Summary of this Supplemental Draft EIS. Substantive comments received on the Supplemental Draft EIS and Draft EIS will be documented and responded to in the Final EIS. FTA intends to concurrently publish the project's Final EIS and Record of Decision, as provided under MAP-21.

5 Next Steps and Funding

This chapter provides a summary of the key next steps in the Southwest LRT Project Development process, as well as a brief description of the project's proposed funding and estimated capital costs. This chapter includes the following sections:

5.1 Next Steps and Schedule

5.2 Funding

5.3 Capital Costs

5.1 Next Steps and Schedule

After this Supplemental Draft EIS is published, the following project milestones for the Southwest LRT Project are anticipated:

- **Supplemental Draft EIS Comment Period.** The Supplemental Draft EIS is now available for public and agency comment. In addition, public hearings will be held during the comment period. See the Abstract at the beginning of this document for: how to obtain or view the Supplemental Draft EIS, appendices, and supporting documents; the duration of the public comment period; the times, dates, and locations of the public hearings; and how to submit comments on the Supplemental Draft EIS.
- **Final Environmental Impact Statement (Final EIS) and Record of Decision (ROD).** The Federal Transit Administration (FTA) and the Metropolitan Council (Council) will prepare and publish the Final EIS and the project's ROD[1]. The Final EIS will document and address the comments received on the 2012 Draft EIS and this Supplemental Draft EIS. The Final EIS will also describe the mitigation measures associated with the project. The ROD will state FTA's project decision, identify the alternatives considered and selected, and itemize mitigation commitments. The ROD must be issued before federal funding and permits can be issued.
- **Final EIS Adequacy Determination.** Following publication of the Final EIS, the adequacy of the Final EIS will be determined in accordance with Minnesota Statute (MS) 4410.2800. This statute notes that the Final EIS must sufficiently address the following to be determined adequate: (1) the potentially significant issues and alternatives raised in scoping so that all significant issues for which information can be reasonably obtained have been analyzed (as per MS 4410.2300, items G and H); (2) responses to the substantive comments received during the draft EIS review concerning issues raised in scoping; and (3) that the Final EIS was prepared in compliance with the procedures of the Minnesota Environmental Policy Act and MS 4410.0200 to 4410.6500. All persons receiving copies of the Final EIS will be notified of the adequacy determination and public notice of the determination will be published in the *Environmental Quality Board Monitor*.

[1] FTA can determine whether the project would issue a combined FEIS and ROD based on the criteria outlined in the *Final Guidance on MAP-21 Section 1319 Accelerated Decision making in Environmental Reviews* (US DOT; November 12, 2014), which reads: "Section 1319(b) directs the lead agency, to the maximum extent practicable, to expeditiously develop a single document that consists of an FEIS and ROD, unless certain conditions exist." Whether combining the FEIS and ROD is practicable is a determination specific to the EIS process for a particular proposed project. In light of the statutory purposes of MAP-21 provisions on expediting project delivery, including the section 1319 purpose of accelerating environmental reviews and decision making, FTA considers the facts and circumstances relevant to the EIS process when deciding whether the use of a combined FEIS/ROD process for a particular project is practicable. Traditionally, and in accordance with the CEQ Regulations (40 CFR 1506.10(b)(2)), FEIS and ROD documents are issued as separate documents with a minimum 30-day period between the FEIS and ROD. Section 1319(b) directs the lead agency to combine the FEIS and ROD into a single document, unless the lead agency determines that certain considerations warrant separate documents.

- **Clean Water Act (CWA) 401/404 Permit Approval.** Concurrent with the NEPA review of the Southwest LRT Project, the USACE is leading the project's Section 404 Permit review process. FTA and the USACE are implementing a NEPA/404 merger process, which includes the following four sequential concurrence points at key milestones: (1) Project Purpose and Need; (2) Array of Alternatives and Alternatives Carried Forward; (3) Identification of the Selected Alternative (including USACE's determination that the project's LPA is the apparent least environmentally damaging practicable alternative); and (4) Design Phase Impact Minimization. Documentation of the USACE's concurrence with the first three of these four key milestones is provided in Appendix E, Agency Coordination Letters. Based on that concurrence, the Council will submit to the USACE a Permit for Discharges of Dredged or Fill Material Into Waters of the United States in the form of a *Joint Application Form for Activities Affecting Water Resources in Minnesota*, in compliance with part 33 CFR 323, pursuant to Section 404 of the CWA. The USACE will provide a public comment period on the application. USACE evaluation of a Section 404 permit application involves multiple analyses, including (1) evaluating the impacts in accordance with NEPA (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230. See Section 3.1.2.7 of this Supplemental Draft EIS for additional information on the wetland permitting processes. Section 401 of the CWA requires any applicant for a federal license or permit to conduct an activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the State in which the discharge originates that the discharge complies the applicable water quality standards. The 401 certification will become a condition of the USACE Section 404 permit.
- **Minnesota Wetland Conservation Act (WCA) State/Local Permit Approval.** A *Joint Application Form for Activities Affecting Water Resources in Minnesota* will be completed and submitted to the MN Board of Soil and Water Resources and each applicable Local Government Unit that is responsible for reviewing wetland impacts and implementing the WCA within their respective jurisdiction. This application will document the project's efforts to meet the WCA requirements and will include a replacement plan with mitigation measures for proposed wetland impacts. Upon receipt of a complete application, each Local Government Unit will provide a Notice of Application and comment period for the Technical Evaluation Panel. Based on input provided by the Technical Evaluation Panel, the Local Government Units will make a decision on whether or not the project's request meets the WCA rules. Each Local Government Unit will then issue an official Notice of Decision that either approves or denies the project's request to move forward with the wetland impact and mitigation associated with the project. Beyond the WCA requirements listed above, each Local Government Unit generally requires an additional permit(s) specific to locally enforced ordinances that are associated with wetland impact. The submittal and approval of the local permit applications will follow the same general timeline as the joint application mentioned above.

5.2 Funding

The Council funds its facilities, services, and programs through a combination of revenue sources, including a sales tax dedicated for transit capital and operating costs, motor vehicle excise tax, state and federal grants, passenger fares, and bond proceeds. The Southwest LRT Project is one project in the Transit System Plan, which is a component of the 2030 Transportation Policy Plan adopted by the Council on November 10, 2010.

The Council intends to seek Capital Investment Grant (CIG) Program funding from FTA for the Southwest LRT Project, as examined in the Draft EIS and this Supplemental Draft EIS. The CIG program, more commonly known as the New Starts, Small Starts, and Core Capacity program, involves a multi-year, multi-step process that project sponsors must complete before a project is eligible for funding. The steps in the process and the basic requirements of the program can be found on FTA's website at http://www.fta.dot.gov.

FTA must evaluate and rate proposed projects seeking funding from the CIG Program under a set of project justification and local financial commitment criteria specified in law. The criteria evaluate the merits of the project and the project sponsor's ability to build and operate it as well as the existing transit system. FTA assigns ratings from low to high based on information that project sponsors submit on the project cost,

benefits, requested amount of CIG Program funds, and overall financial plan. Projects must receive a medium or better overall rating to advance through the steps in the process and be eligible for funding from the program. As projects proceed through the steps in the process, information concerning costs, benefits, and impacts is refined and the ratings are updated to reflect new information. Changes in federal law instituted by the Moving Ahead for Progress in the 21st Century Act (commonly known by the abbreviation MAP-21) will require FTA to evaluate and rate the project for federal funding after the completion of the NEPA process.

Chapter 8 of the Draft EIS provides an overview of the project's capital and operating funding strategies, which the project's 2010 New Starts submittal to FTA was based on. The Council's financial strategy remains consistent with the strategy identified in the Draft EIS, assuming that the agency would secure one-half the cost of the Southwest LRT Project in New Starts funding for the project. The remaining funding is assumed to come from the Counties Transit Improvement Board (CTIB) (30 percent), the State (10 percent) and the Hennepin County Regional Railroad Authority (HCRRA) (10 percent). The Council has secured similar size grants in the past, receiving 50 percent federal funding to help fund the Blue Line and Green Line.

The Council updated the project's New Starts submittal in September 2014 to reflect ridership, costs, and other evaluation measures current at the time of the submittal. The project's Final EIS will reflect the latest New Starts submittal.

The proposed Locally Requested Capital Investments (LRCIs) (see Section 2.6) are currently anticipated to be funded in full by the respective local agencies. The costs of implementing the proposed LRCIs are currently not part of the CIG Program project for which the Council is requesting funding from the FTA. At the time this Supplemental Draft EIS was prepared, sources of funds to finance the construction of the proposed LRCIs had not been finalized.

5.3 Capital Costs

This section provides a summary of the capital cost estimates provided in the Draft EIS for the light rail alternatives under consideration at that time, as well as the LPA's capital cost estimates reflecting adjustments identified by the Council on April 9, 2014, and July 9, 2014. Both sets of capital cost estimates are based on FTA's Standard Cost Category (SCC) workbook, current at the time the capital cost estimates were prepared.

The SCC workbook is a tool developed by FTA to calculate and summarize capital costs into 10 common cost categories for projects seeking CIG funds. The SCC workbook is used to help calculate capital costs using current base year dollars and year-of-expenditure dollars. Base year dollars for the Draft EIS were 2012 dollars and base year dollars for the Supplemental Draft EIS are 2014 dollars, reflecting the documents' publication years. Year-of-expenditure dollars escalate the base year dollars into future year dollars based on when those dollars would actually be spent by the project and a projected future inflation rate per year. Year-of-expenditure dollars, which also include projected finance costs, are used to determine the level of funding needed to construct the project.

Table 8.1-1 in the Draft EIS (as corrected, November 21, 2012) provides a summary of the capital cost estimates for LRT 1A, LRT 3A, LRT 3A-1, LRT 3C-1, and LRT 3C-2 by FTA SCC. (See Section 2.2 of this Supplemental Draft EIS for a brief description of the LRT build alternatives evaluated in the Draft EIS.) All costs in the Draft EIS are expressed in 2012 dollars, which was the current base year for costing when the Draft EIS was published. The total project capital costs documented in the Draft EIS ranged from approximately $927 million to $1,732 million (in 2012 dollars), depending on the alternative.

Table 5.4-1 summarizes the project's current cost estimate for the LPA, reflecting adjustments identified by the Council on April 9, 2014 and July 9, 2014. (See Section 2.4 of this Supplemental Draft EIS for a summary of the process used by the Council to identify those adjustments.) The costs in Table 5.4-1 are by FTA SCC and are expressed in both 2014 base-year dollars and year-of-expenditure dollars. Year-of-expenditure dollars use an inflation rate of 3.0 percent per year from the base year to the year that they are expended, compounded annually, and include estimated finance costs, which are not included in the base-year cost estimate. In summary, the LPA's base-year cost (in 2014 dollars without contingency) would be

approximately $1,462 million, and total cost to fund the project would be approximately $1,653 million (in year-of-expenditure dollars).

TABLE 5.4-1
Base-Year and Year-of-Expenditure Capital Cost Estimates of the LPA, by FTA SCC (base year in 2014 dollars, in thousands)

SCC	Base Year (2014) ($1,000)	Year-of-Expenditure ($1,000)
Guideway & Track Elements	$383,264	$418,181
Stations, Stops, Terminals, Intermodal	$75,200	$81,825
Support Facilities: Yards, Shops, Administration Buildings	$56,500	$61,938
Sitework & Special Conditions	$134,837	$145,863
Systems	$154,790	$173,241
Right-of-Way, Land, Existing Improvements	$163,209	$176,579
Vehicles	$117,757	$126,846
Professional Services	$243,205	$258,732
Unallocated Contingency	$132,861	$145,244
Finance Costs	$0	$65,000
Total	**$1,461,622**	**$1,653,449**[a]

[a] On April 27, 2015, the Council released a revised project cost estimate of approximately $1.994 billion – an approximately $341 million increase over the year-of-expenditure budget. The additional costs are primarily related to poor ground conditions along the Southwest LRT line, soil contamination in St. Louis Park and Hopkins, project delays due to additional studies, and property acquisitions and relocations. The funding strategy discussed in Section 5.2 remains under discussion for the additional costs.

Source: Council, July 2014.
Note: does not include cost of LRCIs (see Section 2.6)

Differences in the base-year cost estimates from the Draft EIS to this Supplemental Draft EIS generally reflect the following:

- Change in the base year dollars from 2012 to 2014 (based on an annual inflation rate of 3.0 percent)
- Adjustments to the LPA identified by the Council in April and July 2014
- Updated unit costs, based in part on more recent actual costs from the Central Corridor LRT project
- Revised unit costs and quantities for light rail vehicles, based in part on more recent actual costs from the Central Corridor LRT project and a revised light rail operating plan
- Incorporation of projected land acquisition costs for parcels that would be acquired for the Hopkins OMF site, rather than a general cost per square foot of land cost
- Updated land acquisition cost estimates, based on more recent available property values, including costs associated with freight rail alignment in the corridor
- Revised allocated contingency rates, based in part on experience from the Central Corridor LRT project and on changes to the scope of the LPA

The project's forthcoming application to FTA to enter Engineering and the supporting New Starts submittal and Final EIS will include revised capital cost estimates in base-year and year-of-expenditure dollars that will reflect the project's scope, level of design, and capital costing methods at that time.