

Appendix K. Limited Phase I Environmental Site Assessment



Northern Lights Express Minneapolis to Duluth, Minnesota

Limited Phase I Environmental Site Assessment

*Minnesota Department of Transportation
Federal Railroad Administration*



Executive Summary

The Minnesota Department of Transportation (MnDOT) and the Federal Railroad Administration (FRA), in cooperation with the Wisconsin Department of Transportation (WisDOT), propose to construct and operate the Northern Lights Express (NLX) Project in an existing 152-mile-long BNSF Railway corridor. The NLX Project would provide passenger rail service between Minneapolis and Duluth, Minnesota. The NLX Project traverses rural, small urban and major metropolitan areas, and would include additional property outside of the BNSF Railway right of way for rail stations, a maintenance facility and a layover facility.

A Tier 1 Service Level Environmental Assessment (EA) completed in August 2013 evaluated impacts of the NLX Project and compared multiple alternative corridors at that time. A preferred corridor was then selected. Preliminary engineering was completed for the preferred corridor and used as a basis for evaluation in the Tier 2 Project Level EA for the NLX Project. The Tier 2 EA provides further analysis of the NLX Project than the Tier 1 EA, but still does not include detailed evaluation needed once final engineering is completed and construction is slated to begin.

Project Details

The purpose of the NLX Project is to introduce a new intercity passenger rail service that would provide a reliable and cost-effective transportation option for travelers between the Twin Cities (that is, Minneapolis and St. Paul, Minnesota) and Duluth. NLX would have stations located at Target Field (Minneapolis); Coon Rapids; Cambridge; Hinckley; Superior, Wisconsin; and Duluth. A maintenance and/or layover facility is proposed in Duluth; an alternate maintenance facility location is proposed in Sandstone.

The NLX Project would share the BNSF Railway track with existing freight rail service, which would lower the implementation cost of the NLX Project. The passenger rail service is intended to reach speeds up to 90 miles per hour (mph). To meet the objectives of the NLX Project, the following improvements to the existing rail corridor are proposed:

- Safety improvements at rail grade crossings
- Track and signal improvements
- Track improvements to increase passenger train speed between Coon Rapids and Superior, Wisconsin
- Stations, and maintenance and layover facilities
- Railroad bridge construction and rehabilitation
- Additional track sidings

Figure ES-1 provides an overview of the proposed NLX Project and facilities for the NLX Project.

Figure ES-1: Project Location



Limited Phase I Environmental Site Assessment

This corridor-level Limited Phase I Environmental Site Assessment (ESA) documents hazardous materials release issues with the potential to negatively affect the NLX Project. The Limited Phase I ESA developed for the NLX Project differs in the scope and approach from a standard corridor-level Phase I ESA. The goals of the Limited Phase I ESA are to (1) document historical and existing conditions as an information baseline for future due diligence activity and (2) assess the likelihood of encountering contaminated materials in areas of substantial ground disturbance. If contamination from hazardous materials or petroleum products is present in concentrations above regulatory action levels and is encountered during construction, it may pose health risks to workers and the public, and/or waste disposal requirements for the NLX Project. This Limited Phase I ESA presents a recommendation regarding the need for further investigation based on the potential presence or absence of regulated hazardous materials or petroleum products at key locations (described in the following section) within the NLX Project. If additional investigation is recommended, it may be conducted in the form of a site-specific Phase I ESA or a Phase II ESA, or during construction under environmental construction monitoring. The specific path of further investigation will depend on the data presented in this report.

The field investigation portion of this Limited Phase I ESA was performed on July 6 and Oct. 20, 2016. The investigative methods generally conform to the ASTM International (ASTM) E1527-13 guidance document for the preparation of a Phase I ESA. The information presented in this Executive Summary is a synopsis, and the reader should refer to the other sections of this report for complete and detailed information.

Key Locations

Due to the length of the NLX Project, MnDOT and FRA determined that a focused review of specific Key Locations within the NLX Project construction limits was an appropriate approach for this stage of the project and availability of resources. This Limited Phase I ESA focused primarily on areas with a substantial amount of proposed soil disturbance and/or planned property acquisition. These Key Locations are defined as the following areas of proposed infrastructure:

- Preliminary construction limits for the stations at Target Field, Coon Rapids, Cambridge, Hinckley, Superior, and Duluth;
- Preliminary construction limits for the layover and/or maintenance facility at Sandstone and Duluth;
- New bridge construction in the City of Fridley over Mississippi Street and Rice Creek;
- New bridge construction in Isanti County at MP 111.2 and MP 112.31; and
- Sixty-eight crossing signal upgrade locations along the NLX Project.

Scope of Work

This Limited Phase I ESA included the following components that were focused at Key Locations for the NLX Project:

- Review of reasonably ascertainable and reviewable regulatory information published by federal, state, local, tribal, health, and/or environmental agencies using a national regulatory information vendor;
- Review of historical data sources, including aerial photographs, topographic maps, fire insurance maps, and city directories;
- A site reconnaissance and an environmental review of Key Locations—including a visual review of adjoining properties—with a focus on indications of hazardous substances, petroleum products, polychlorinated biphenyls (PCBs), wells, storage tanks, solid waste disposal pits and sumps, and utilities; and
- Preparation of a report outlining the findings, conclusions and recommendations relating to potential contamination at Key Locations in order to make project planning-level decisions.

Deviations from the scope of work outlined above included modifications to the regulatory governmental database search and site reconnaissance for only the crossing signal upgrades and the new bridge construction in Isanti County. The rationale for this deviation is detailed in Section 1.1.

Findings

General findings of this assessment include the following:

- **Geologic Setting** – The geology of the NLX Project is characterized by unconsolidated glacial deposits from both the Des Moines and Superior Lobes overlying Precambrian to Paleozoic Age bedrock. The thickness of the glacial cover generally ranges from 50 to 350 feet, with decreasing thicknesses and extensive bedrock exposures to the north and along major rivers. Groundwater is mainly encountered in Quaternary sand and gravel deposits throughout the NLX Project. The unconfined surficial aquifer commonly occurs within 10 to 30 feet of the land surface, and generally follows the topographic gradient toward nearby surface water features. Near-surface groundwater may also be more than 120 feet deep near the bluffs of deeply incised river valleys, such as the Mississippi, Kettle and St. Croix Rivers.
- **Regulatory Database Results**
 - Environmental Data Resources Inc. (EDR) of Southport, Connecticut, was subcontracted to conduct an environmental records search of federal, state and local files for the proposed stations, maintenance and layover facilities and new bridges (Fridley only). The Environmental Professional assessed all the

listings in the search radius for each Key Location and determined *Sites of Concern*¹ based on the type of listing (whether it could indicate subsurface contamination), location of the listing, and consideration of multiple listings for one location/business. The Sites of Concern for each Key Location are detailed in **Table 3-2** through **Table 3-8** in the body of the report. The following table summarizes the number of database listings within the search radius of each Key Location, as well as how many of those listings were considered Sites of Concern:

Table ES-1: Summary of Results within ASTM Search Distances

Key Location	Total Listings in the Search Radius	Listings within the construction limits of the Key Location	Sites of Concern in the Search Radius
Target Field	988	1	8
Coon Rapids	85	1	1
Cambridge	180	0	2
Hinckley	73	0	0
Sandstone	99	0	7
Superior	205	1	3
Duluth	781	4	13
New Bridge Construction (Fridley)	43	0	3

- A limited review of database listings adjacent to sixty-eight crossing signal upgrades and the two new bridges in Isanti County was conducted using the Minnesota Pollution Control Agency (MPCA) What’s In My Neighborhood? (WIMN) database. Of the sixty-eight crossing signal upgrades, eighteen locations had Sites of Concern that warranted further field review during the site reconnaissance. Sites of Concern were also identified at both the Isanti County new bridges. Further details regarding the Sites of Concern for the Isanti County new bridges and crossing signal upgrades are provided in Sections 4.1.8 and 4.1.9, respectively. The locations of potential Sites of Concern are shown in **Attachment D**.
- **Historical Data Review** – Historical use information was reviewed to develop an understanding of previous land uses near the NLX Project and to assess these uses for potential hazardous materials impacts that may affect the NLX Project. Historical sources that were readily available and reviewable, and likely to provide useful information, were reviewed for this Limited Phase I ESA. Given the large and primarily rural nature of the NLX Project, historical review was limited to the Key Locations (with the exception of crossing signal upgrades and Isanti County New Bridges). A more detailed discussion of historical land use by Key Location is provided in Table 3-9 in the body of the report. The following table summarizes historical land use of each Key Location:

¹ *Sites of Concern are properties generally located within 500 feet of a Key Location that have known or potential contamination based on the number and type of regulatory database listings found for that property.*

Table ES-2: Summary of Historical Review

Key Location	Historical Land Use
Target Field Station	This location has been a railroad corridor since at least 1885. It was once a freight depot with numerous businesses nearby. The amount of railroad activity (and tracks) decreased during the 1970s. The surrounding area has been a highly developed urban area for at least 100 years.
Coon Rapids Station	This location was formerly an undeveloped field with a farmstead and residential houses located adjacent to the east of existing railroad tracks. The farmstead and one of the houses were removed in the 1970s and late 1990s to early 2000s, respectively. Surrounding land use was mainly agricultural until the 1970s and 1980s, when development of businesses to the northeast and southwest began.
Cambridge Station	This location was once an undeveloped field adjacent to the west of the railroad tracks until 1978. Development of the area into a government building and commercial strip mall began in the mid-1980s. The surrounding area was developed with similar commercial land uses in the same timeframe.
Hinckley Station	This location was an undeveloped field adjacent to the west of the railroad corridor since at least 1939. Development of this area into a mix of residential, commercial and public land use began in the late 1970s.
Sandstone Layover and Maintenance	This location has been a railroad corridor since at least 1914. Up to 11 tracks and a roundhouse were once present here. A mix of industrial and commercial businesses has been continually present on adjacent properties to the railroad corridor since at least the early 1900s.
Superior Station	This location is located along a very large railroad yard that extends several miles from north to south. It sits in a portion of the yard that had been vacant since the 1970s. Prior to that, a siding of several tracks leading into a former roundhouse (adjacent to the east) was present. This location had been a part of the railroad yard since at least 1915. The active portion of the yard is located adjacent to the west, along with BNSF administrative and maintenance buildings. A commercial district has been located to the east since approximately the 1980s.
Duluth Station and Layover	The station and the layover construction limits had been developed and continually used for railroad-related activity since at least the late 1800s. The layover area was once covered with multiple tracks that extended between the Depot to the east and a large railroad yard to the west. Both the layover and station construction limits have been located adjacent to industrial and commercial businesses throughout the historical coverage period. Recent developments near the station include entertainment (Bayfront), arts, hospitality and retail businesses. Industrial businesses remain near the layover construction limit.
New Bridge Construction (Fridley)	The new bridges are located along an existing railroad corridor that had been present since at least 1902. The bridges are located less than ½ mile apart in an area of Fridley that was once agricultural with residential development increasing until the 1960s and adjacent commercial/manufacturing businesses during the 1970s and 1980s.

■ **Site Reconnaissance**

- The Environmental Professional reviewed Key Locations located along the NLX Project on foot and by car on July 6 and Oct. 20, 2016. The site reconnaissance was conducted by accessing public roadways and public areas located adjacent to the NLX Project. Access to BNSF properties and right of way was not permitted during the site reconnaissance. However, the majority of the Key Locations were readily observable from adjacent public areas and crossings. All of the proposed stations, maintenance and layover facilities and new bridges in Fridley were located in developed, urban to small urban areas. The following table summarizes the current conditions noted at each Key Location reviewed:

Table ES-3: Summary of Site Reconnaissance

Key Location	Current Site Conditions
Target Field Station	This location was occupied by a Northstar Commuter Rail station and railroad tracks. The surrounding properties included Target Field, parking lots and ramps, warehouses, converted warehouses, and retail businesses. An unmarked 100-gallon plastic tote was noted in the adjacent Ford Office Building parking lot.
Coon Rapids Station	This location consisted of a long lot located adjacent to the east of the railroad corridor. The land was covered with a mix of trees and tall grass. A small single story building (boxing gym) was located on the south side off Foley Blvd. The north end of the construction limit abutted a communication tower and electrical substation. No storage of hazardous materials or petroleum products was noted. Surrounding properties included a park and ride and several warehouse-type buildings for various businesses.
Cambridge Station	This location included portions of an existing strip mall currently occupied by the city government center. The remainder of the construction limit covered portions of the shared asphalt parking lot for the strip mall on the west side and a narrow strip of land located on the back side of the strip mall used for additional parking and deliveries. No storage of hazardous materials or petroleum products was noted. Surrounding properties were commercial and retail development to the west and agri-businesses and manufacturing on the east side of the railroad corridor.
Hinckley Station	This location included land mainly occupied by the City of Hinckley maintenance building. The southern portion of the construction limit included a lawn and trees associated with a church situated directly to the south. A pile of scrap metal and appliances, compost piles and city vehicles were noted at this location. No outdoor storage of chemicals or indications of storage tanks were noted. Surrounding properties included the high school, bus parking lot, apartment building, electrical substation and church.
Sandstone Layover and Maintenance	This location consisted of a vacant strip of land nearly one mile long and located along the railroad corridor. This location was developed with railroad tracks and signals. No buildings or large structures were present on site. Piles of scrap metal, concrete plates, railroad ties and wood pallets associated with railroad maintenance/construction activity were noted within the construction limit. No storage of hazardous materials or petroleum products was noted. Surrounding land use included gas stations, lumberyard and other commercial and retail businesses.
Superior Station	This location consisted of a vacant portion of a large rail yard that was overgrown with vegetation. Worn trails used for vehicle access to the railroad property were present. No storage of hazardous materials or petroleum products was noted. Surrounding properties included a former waste management facility, gas station, bulk oil terminal, aggregate

Key Location	Current Site Conditions
Duluth Station and Layover	company and lumber company. This location included construction limits for the station (northeast end) and layover facility (southwest end). The station construction limits surrounds the existing Depot building. The construction limit for the station included portions of an existing parking ramp and railroad corridor that was used for the North Shore Scenic Railway. No storage of hazardous materials or petroleum products was noted. Surrounding properties included arts, hospitality and retail businesses to the north and the I-35 corridor and Bayfront Entertainment District to the south. The construction limit for the layover facility consisted of a vacant strip of land between the I-35 corridor and Railroad St. No structures or tracks were present. Surrounding properties included industrial businesses and shipping piers located along the length of Railroad St. An active railroad yard was located to the west.
New Bridge Construction (Fridley)	This location consisted of land located along an active railroad corridor and next to existing railroad bridges over Mississippi St. and Rice Creek (located approximately ½ mile apart). The surrounding area was mainly a mix of residential properties, public park and a place of worship. The Rice Creek Regional Trail runs under the bridges at Rice Creek and parallels the bridge at Mississippi St. Manufacturing businesses and a bus garage were located adjacent to the railroad corridor.

- The new bridges in Isanti County were not included in the site reconnaissance, since the bridges were identified after the site reconnaissance was conducted.
- Eighteen crossing signals with identified Sites of Concern following the database review were visited along the NLX Project on July 6, 2016. The crossing signals reviewed included:

Table ES-4: Summary of Site Reconnaissance of Crossing Signal Upgrades

Crossing Signal	Cross Street	City	Current Site Conditions
CS-11	Foley Blvd	Coon Rapids	The proposed Coon Rapids Station is located adjacent to the northeast.
CS-28	191 st Ave	Cedar	Main St. was located approximately 150 ft. to the east. Small businesses located on the east side of Main St. A county recycling center with an outdoor used oil disposal AST inside a shallow containment basin was located approximately 300 feet southeast.
CS-49	11 th Ave SW	Cambridge	A former gas station and automotive sales lots were located adjacent to the north.
CS-51	Emerson Ave N	Cambridge	A tank manufacturing and engineering facility with a laydown yard was located adjacent to the east of the crossing.
CS-53	39 th Ave NE	Cambridge	A Great River Energy substation and peaking plant was located adjacent to the southeast of the crossing. A MnDOT materials yard was located 250 ft. to the southwest.
CS-56	CSAH 6	Cambridge	A large lumber/mulch company was located approximately 200 ft. to the southwest.
CS-57	369 th Ave NE	Cambridge	Two former gas stations (massage and boat storage sites) and bulk anhydrous ammonia site were located within 200 feet of the crossing.
CS-65	CSAH 4	Braham	A natural gas lift station was located adjacent to the southeast of the

Crossing Signal	Cross Street	City	Current Site Conditions
			crossing.
CS-67	Central Dr.	Braham	Adjacent commercial businesses included restaurants and retail shops. A Sinclair gas station was located approximately 500 feet to the north.
CS-70	115 th Ave	Braham	A concrete vault manufacturer was located over 500 feet to the east. No other businesses or development was present near the intersection.
CS-80	1 st St SE	Henriette	Houses with poorly maintained yards, including items such as wood pallets, trailers, tires, etc., were located nearby and adjacent to the crossing. A former/vacant gas station was noted approximately 600 feet north on Main St. Overgrown vegetation covered the entire site.
CS-85	3 rd St.	Brook Park	House with several vehicles and outdoor storage of items was noted adjacent to west of the crossing. An active Tesoro Gas Station was located approximately 400 feet to the southwest.
CS-115	Deerfield Rd	Kerrick	A vacant automotive service building was located adjacent to the west of the crossing. The condition of the building indicated that it likely has been out of use for decades.
CS-118	Range Line Rd	Duquette	An active Gas Station (Duquette General Store) was located approximately 250 feet to the west of the crossing. Other nearby businesses included a former post office, tavern and event hall.
CS-124	Main St.	Nickerson	A single building with a communication tower was located adjacent to the north of the crossing and parallel to the railroad tracks. Piles of used ballast, rail, railroad ties and concrete pipes were noted at this site. No storage of chemicals was present outside the building.
CS-159	N 58 th St.	Superior	A mix of residential and commercial properties was located nearby. Storage garages and Viant Crane were located adjacent to the southeast and northwest, respectively.
CS-161	N 28 th St.	Superior	Undeveloped areas were located to the west of the crossing. An apartment building, residential homes, restaurant and a plumbing and heating business were located to the east.
CS-168	S 37 th Ave W	Duluth	This crossing was located in a heavily developed area with industrial properties in all directions. The crossing was located at the entrance to Dock 5. Multiple tenants, one of which included a roll off and disposal company, was located in the building adjacent to the west.

Conclusions

The data gathered for this Limited Phase I ESA support the following general conclusions regarding potential for contamination at Key Locations within the NLX Project:

- The entire NLX Project has been used as a railroad corridor since at least the late 1800s according to the historical review. The amount of rail activity has diminished over time, with the height of use and amount

of infrastructure occurring during the mid-1900s. Areas of residual contamination due to historical spills and releases along the entire length of the track and right of way are likely, based on the corridor's consistent use as a rail corridor for decades.

- The likelihood of substantial amounts of contamination that could impact the NLX Project (both during construction and property acquisition) was evaluated and Key Locations were ranked based on factors such as historical land use and surrounding land use, the number and type of database listings, documented contamination, and observations made during the site reconnaissance. Based on these factors, the following rankings were assigned to Key Locations, which includes proposed NLX Project infrastructure:
 - High Risk Locations – All or portions of these locations are within railroad right-of-way and have a history of known contamination associated with them or with directly adjacent properties. Numerous listings indicating contamination and multiple contaminants of concern (VOCs, PAHs, metals, PCBs, petroleum, etc.) have been documented in these areas. High risk locations for the NLX Project include the following:
 - **Target Field Station.** This proposed station is located in a highly developed, urban area. Historical review indicates that substantial amounts of railroad activity were present from the late 1800s through the 1970s. This location is still a railroad corridor (Northstar Commuter Rail Station) and surrounding industrial and commercial businesses remain. A total of 988 listings were identified in the database search radius; evaluation of these listings indicated that there are nine Sites of Concern located on or near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
 - **Sandstone Maintenance Facility.** This proposed maintenance and/or layover facility is mostly vacant land adjacent to an active railroad. It was once a rail yard/large siding with a roundhouse and adjacent industrial businesses (i.e. creosote plant) from the early 1900s through the 1970s. A total of 99 listings were identified in the search radius; evaluation of these listings indicated that there are seven Sites of Concern near the maintenance facility construction limits. Continuous railroad activity dates back to at least the early 1900s. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
 - **Superior, Wisconsin Station.** This proposed station is a vacant railroad corridor that was once an active portion of the overall rail yard in Superior. Numerous tracks and a roundhouse were present from the early 1900s through the 1970s, when rail activity at this location was ceased. A total of 205 listings were identified in the database search radius; evaluation of these listings indicated there are four Sites of Concern located on or near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
 - **Duluth Station and Maintenance and/or Layover Facility.** This proposed station and nearby layover facility are located in a highly developed, urban area with a history of industrial land uses. Historical review indicates that substantial amounts of railroad activity have been

present since the late 1800s. The station construction limits consists of parking areas and portions of a rail corridor surround the Depot in downtown Duluth. The layover facility construction limits (approximately 1/3mile southwest of the station site) is a vacant strip of land that lies adjacent to industrial businesses along Railroad St. near Duluth's Bayfront area. A total of 781 listings were identified in the database search radius; evaluation of these listings indicated there are seventeen Sites of Concern located on or near the station and layover facility construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.

- **Medium Risk Locations** – These properties are located mostly outside the railroad right-of-way, but have a history of contamination associated with them or with adjacent properties. Non-agricultural or residential development of these properties has occurred only within the last 50 years. The contaminants of concern identified for each location is typically petroleum based. Medium risk properties for the NLX Project include the following:
 - **Coon Rapids Station.** This station location lies in a Twin Cities suburb and is currently a vacant parcel adjacent to the railroad corridor with several commercial businesses nearby. Historical review indicates that it was a farmstead and commercial development in the area occurred during the 1970s to 1980s. A total of 85 listings were identified in the database search radius; evaluation of these listings indicated there are two Sites of Concern located on or near the station construction limits. An active SRS and VIC site with soil and groundwater contamination was identified nearby. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.
 - **Cambridge Station.** This station location is within a commercial district of the City of Cambridge and lies adjacent to the railroad corridor. A strip mall with a government center is located here. Historical review indicated that commercial development did not begin until the 1980s. A total of 180 listings were identified in the database search radius; evaluation of these listings indicated there are two Sites of Concern located near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.
 - **New bridge construction in Fridley (at Mississippi Street and Rice Creek).** These new bridges are located along a narrow railroad corridor that traverses a mostly residential area in Fridley. Several manufacturing businesses and a bus garage are located nearby both bridge locations. Historical review indicates adjacent commercial/manufacturing businesses were developed during the 1970s and 1980s. A total of 43 listings were identified in the database search radius; evaluation of these listings indicated there are three Sites of Concern located near the new bridge construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.
- **Low Risk Locations** – These areas are located outside the railroad right of way and have been developed with only residential or light commercial land uses. Documented releases or potential offsite contamination from adjacent sources is not associated with the property. Minor releases may have

occurred onsite, but are likely *de minimis* or highly localized. Low risk properties for the NLX Project include the following:

- Hinckley Station. This station location is sited on portions of a city maintenance property and church property. It does not have a history of rail use. A school bus parking lot, substation and residential properties are located on adjacent lots. No storage and/or use of hazardous materials or petroleum products were noted during the site reconnaissance. A total of 73 listings were identified in the database search radius; evaluation of these listings indicated there are no Sites of Concern located near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is low.
- The proposed new bridges in Isanti County are located in a less developed area than the new bridge construction in Fridley (at Mississippi Street and Rice Creek). Proposed soil disturbance and overall bridge construction limits would be considerably less because these two areas span a drainage ditch and small stream. Adjacent land use includes agricultural fields, a recreational facility, a waste water treatment plant and a biodiesel plant. The likelihood of encountering contamination during construction that would require offsite disposal is uncertain, but can be addressed in a Contaminated Materials Management Plan that would guide small-volume excavation protocols.
- Crossing signal upgrades would require a minimal amount of soil disturbance. Proposed depths of disturbance are not likely to exceed 5 feet below ground surface. Adjacent and nearby commercial businesses such as gas stations, electrical substations, motor repair facilities, tank sites, and manufacturers were identified in the limited database review, aerial review and site reconnaissance. The likelihood of encountering contamination during construction that would require offsite disposal is uncertain, but can be addressed in a Contaminated Materials Management Plan that would guide small-volume excavation protocols.

Recommendations

The findings included in this report are the result of investigative procedures outlined in the Limited Phase I ESA methodology in Section 1.2 in the body of the report. These findings should be reviewed in the context of the limitations outlined in the Section 1.3, Assessment Limitations, in the body of the report. Further investigation should be performed in the form of targeted Phase I ESAs (once funding is secured) in areas of substantial soil disturbance (that is, stations, maintenance and layover facilities and new bridge construction) and at properties slated for acquisition (in accordance with MnDOT right of way policies and procedures).

Further, additional studies following the Phase I ESA could include Phase II drilling and sampling projects to verify or refute the actual concentrations and locations of subsurface impacts prior to construction. If the Phase I/II ESA efforts verify that contamination is present at actionable concentrations, a Contaminated Materials Management Plan would be developed and be implemented during construction as a proper method of handling waste material and providing protection for construction workers. As appropriate, the Phase

I/Phase II ESA work would be conducted in accordance with the MPCA Brownfields program (and/or other applicable regulatory programs) to obtain liability protection.

February 14, 2017 Draft

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1. Introduction

A Limited Phase I Environmental Site Assessment (ESA) was conducted for the Northern Lights Express (NLX) Project, a proposed intercity passenger rail project that would provide service between Minneapolis and Duluth, Minnesota. The NLX Project is led by the Minnesota Department of Transportation (MnDOT) and the Federal Railroad Administration (FRA), in cooperation with the Wisconsin Department of Transportation (WisDOT). This Limited Phase I ESA has been prepared for MnDOT and FRA, in cooperation with WisDOT, who have requested this Limited Phase I ESA in support of the NLX Tier 2 Project Level Environmental Assessment (EA).

This Limited Phase I ESA documents potential contamination issues at certain locations along the NLX Project. The goals of the Limited Phase I ESA are to (1) establish existing conditions as a baseline of information for site acquisition due diligence (including Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] liability protection) and (2) assess the likelihood of encountering contaminated materials in areas of proposed ground disturbance. If contamination from hazardous materials or petroleum products is present in concentrations above regulatory action levels and is encountered during construction, it may pose health risks to workers and the public, and/or waste disposal liabilities for the NLX Project.

1.1 Limited Phase I ESA Methodology

The Limited Phase I ESA was designed to generally comply with the level of documentation recommended in ASTM International (ASTM) E1527-13 for the performance of Phase I ESAs. Four primary activities taken from ASTM guidance (conforming to the U.S. Environmental Protection Agency's [EPA's] All Appropriate Inquiry [AAI] requirements) were applied: (1) regulatory records review, (2) site reconnaissance, (3) review of historical information regarding land use and (4) report preparation. Deviations from the ASTM standard included deletion of certain sources determined to be inapplicable or of limited value to the specific needs of this study. Because of the preliminary nature of the study, the following ASTM report elements were omitted:

- Interviews with specific site property owners or business operators
- Regulatory records review outside areas of substantial soil disturbance or proposed property acquisition
- Environmental lien and Activity and Use Limitation (AUL) searches

The Limited Phase I ESA is considered a qualitative review and attempts to evaluate certain locations along the NLX Project that have a history of chemical usage and the potential that such usage may have impacted the soil and/or groundwater which may be encountered during the construction and operation of the NLX Project. However, the Limited Phase I ESA did not address the entire NLX Project construction limits. MnDOT and FRA determined that a focused review of specific **Key Locations** within the NLX Project construction limits

was an appropriate approach for this stage of the project and availability of resources. These Key Locations are where substantial disturbance of soil and/or groundwater could be possible due to construction of stations, maintenance/layover facilities, bridges and crossing signals as understood based on current NLX Project conceptual engineering.

A modified approach for the regulatory records review and site reconnaissance was performed for the crossing signal upgrades and new bridges in Isanti County. Due to the number of crossing signal upgrades and small volume of proposed soil disturbance at each location, only a limited records review was conducted for the crossing signal upgrades. Following the limited records and aerial review, only select crossing signal locations with a higher potential for contamination were carried forward into the site reconnaissance (additional details provided in Section 4.1.10). The new bridge construction in Isanti County was identified following the records review and site reconnaissance. Therefore, only a limited records review was conducted at these new bridge locations.

This investigation does not attempt to measure the severity of hazardous materials or regulated materials that may be found onsite, or identify individual Recognized Environmental Conditions (RECs) associated with each Key Location. Rather, the following rankings will be used to rate the Key Locations based on the potential to encounter contamination during construction.

- **High Risk for Contamination** – These Key Locations are located within the NLX Project construction limits and have a history of known contamination associated with them or with directly adjacent properties. They also incorporate areas of active railroad or historical railroad-related land use dating back to at least the late 1800s. Numerous sources of contamination and contaminants of concern have been documented at or adjacent to these locations.
- **Medium Risk for Contamination** – These Key Locations are located within the NLX Project construction limits but mostly outside the existing BNSF right of way, and have a history of contamination associated with them or with adjacent properties. Non-agricultural or residential development of these properties has occurred only within the last 50 years. The contaminants of concern are typically petroleum based.
- **Low Risk for Contamination** – These Key Locations are located within the NLX Project construction limits but outside the BNSF right of way and have been developed with only residential or light commercial land uses. Documented releases or potential offsite contamination from adjacent sources is not associated with the location. Minor releases may have occurred onsite, but are likely *de minimis*² or highly localized.

This Limited Phase I ESA will present a determination of whether further investigation is warranted to determine the presence or absence of regulated hazardous materials and petroleum products in areas of proposed soil disturbance or future property acquisition. If additional investigation were to be required, it may

² A *de minimis* condition is defined as a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of regulatory enforcement if brought to the attention of the appropriate agencies.

be conducted in the form of site-specific Phase I ESAs or Phase II ESAs, or during construction through a defined environmental construction monitoring process.

1.2 Project Details

1.2.1 Proposed Project Improvements

The proposed NLX Project would be co-located on BNSF Railway track and would generally stay within the existing right of way. The proposed NLX Project improvements (outlined below) consist primarily of aboveground and on-track construction along the entire length of the NLX Project. To facilitate the objectives of the NLX Project, improvements to the existing corridor for passenger rail service would include:

- Stations – The construction of a passenger platform and other infrastructure is proposed at each station location. Soil disturbance and property acquisition would occur at these sites.
- Maintenance Facility – The maintenance facility would be sited on existing BNSF property, located alongside existing track in Sandstone or Duluth. Soil disturbance would occur to construct the maintenance facility.
- Layover Facility – The layover facility would be sited on existing BNSF property in Duluth. Soil disturbance would occur to construct the layover facility.
- New Bridge Construction – New bridges would be constructed to accommodate areas where additional track would be placed next to existing rail bridges in Fridley and Isanti County.
- Crossing Signal Additions and Upgrades – New or upgraded gates at some of the existing crossings would be installed to meet safety requirements. Minor soil disturbance is required for installation of signal and gate footings.
- Changes to the Track Curvature – Modifications to the existing track to meet curvature requirements for higher speeds would be made at various locations along the NLX Project. This would mostly be accomplished using an on-track machine that would bend the existing rail.
- Track Under-cutting – Improvements to the existing ballast would be made using a machine that would undercut the existing ballast and replace it with new material.
- Bridge Deck Upgrades – Upgrades from open bridge decks to ballasted bridge decks would occur at select bridge locations along the NLX Project.
- Additional Siding/Parallel Track – Areas of additional siding and parallel track would be placed along the NLX Project to help facilitate train traffic. The installation of additional track would require minimal to no grading and ground disturbance.

1.2.2 Key Locations

Due to the length of the NLX Project, MnDOT and FRA determined that a focused review of specific Key Locations within the NLX Project construction limits was an appropriate approach for this stage of the project and availability of resources. These Key Locations include areas with proposed soil disturbance and/or planned property acquisition as described above in Section 1.2.1. The following sections further describe each of the Key Locations, which will include stations, layover facility, maintenance facilities, new bridges and crossing signal upgrades. While track rehabilitation and new track construction within the existing right of way may also involve soil disturbance, these areas were not assessed for potential contamination concerns due to the lack of regulatory data and the inability to access BNSF right of way. Additional study of track improvement areas may be warranted as the project progresses into final design.

1.2.2.1 Stations

The NLX Project proposes six stations, to be located at Target Field (Minneapolis); Coon Rapids; Cambridge; Hinckley; Superior, Wisconsin; and Duluth. Each station is described below, and **Figure 1-1** depicts the proposed construction limits of each station.

Target Field Station – The southern terminus of the proposed NLX Project would be at the intermodal station located at 5th Street and 3rd Avenue in Minneapolis. This station is adjacent to the existing Northstar Commuter Rail platform. The NLX Project would extend the platform by approximately 490 feet.

Coon Rapids Station – The proposed station in Coon Rapids is in an area that includes commercial, low density and light industrial uses, and a park and ride lot. The proposed Coon Rapids Station is located primarily on developed land, with the exception of 0.2 acre in a wetland area.

Cambridge Station – The Cambridge Station would be located behind the Cambridge City Hall and City Center Mall. The station area is currently developed.

Hinckley Station – The Hinckley Station is located at 1st Street Northeast and Power Avenue North. This location is primarily developed land, with the exception of 0.1 acre of open land.

Superior, Wisconsin Station – The proposed Superior, Wisconsin Station is located adjacent to Highway 2, near the intersection of Oakes Avenue and North 14th Street in Superior, Wisconsin. This location was previously developed railroad land.

Depot in Duluth – The northern terminus of the proposed NLX Service would be adjacent to the historic Depot in Duluth, located at Michigan Street and 5th Avenue in Duluth. An existing platform is located at the Depot

that services the North Shore Scenic Railroad. A new platform to serve NLX would be constructed. In addition, separation of passenger and freight operations within the yard would be required to accommodate the proposed NLX Service. This location is primarily developed land.

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Figure 1-1: Project Detail Schematic (Stations)

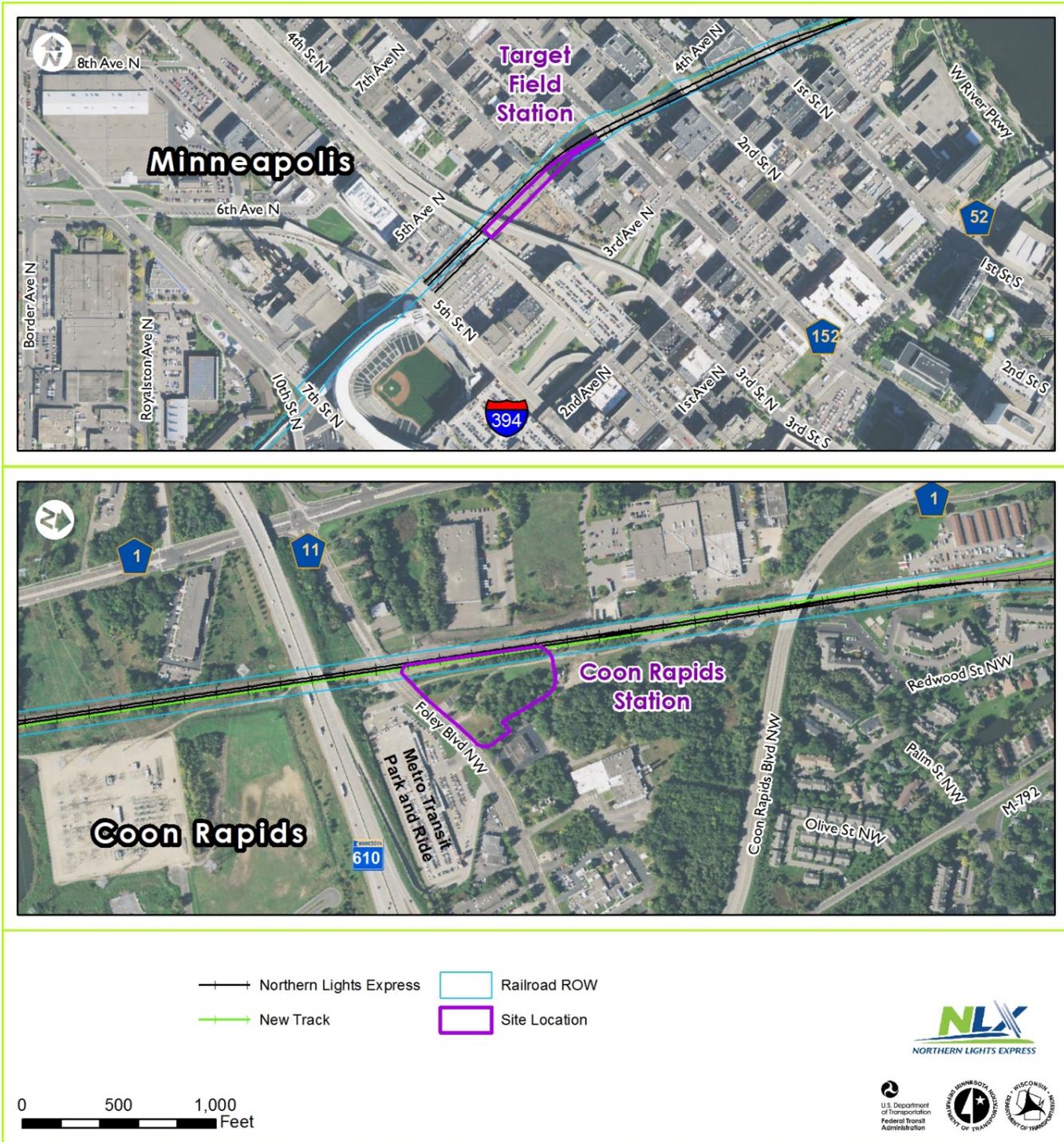


Figure 1-1: Project Detail Schematic (Stations) (Continued)



Figure 1-1: Project Detail Schematic (Stations) (Continued)



1.2.2.2 Maintenance and Layover Facilities

Two maintenance facility sites and one layover facility site are being considered for the NLX Project. One of the proposed maintenance sites is in Sandstone, and the other maintenance site option is in Duluth approximately 1/3 mile to the southwest of the proposed Duluth Station. The layover facility would be located in Duluth as well, and would be co-located with the maintenance site if the Duluth option were selected. For this assessment, both facilities were reviewed. **Figure 1-2** depicts the proposed construction limits of each maintenance and/or layover facility.

The maintenance facility would be used for inspection, service, maintenance and repair activities required to keep NLX trains in service and incorporate train layover and storage needs. The maintenance building would accommodate a 650-foot-long train consist. Additional features of the maintenance facility include a train wash, office and shop space, yard and lead tracks, shop equipment, vehicular access, exterior lighting and signage and security systems. The maintenance facility would not be used for major rebuilds, main engine change-outs, wreck repairs or component rebuilds.

The layover facility would provide a location away from BNSF main tracks to store up to two complete trains. For NLX, the 650-foot-long train consist would include six 85-foot-long coaches, and two 70-foot-long push-pull locomotives. The layover facility would also provide a location to perform limited servicing, inspections and minor repairs. The layover facility would consist of yard and lead tracks, a support building, vehicle access, parking, exterior lighting and signage and security systems.

1.2.2.3 New Bridge Construction

Four new bridges would be constructed along existing railroad right of way for the NLX Project. **Figure 1-3** depicts the proposed location of the new bridges.

Two new bridges would be built in Fridley to accommodate the addition of a new 6.2-mile-long section of track alongside two existing tracks. The bridges would be constructed adjacent to existing bridges over Mississippi Street (MP 16.5) and Rice Creek (MP 16.9) in a highly developed urban area. Soil disturbance would occur in order to construct piers for each bridge.

Two new bridges would also be built in Isanti County to accommodate the addition of new track along this segment. The bridges would be constructed adjacent to existing bridges at MP 111.20 and MP 112.31 (Isanti Parkway NE). The proposed bridge at MP 111.20 would be constructed adjacent to the east of an existing bridge over Isanti Brook, which is surrounded by agricultural fields. The proposed bridge at MP 112.31 would be constructed over a drainage ditch in a lightly developed area on the northern edge of the city of Isanti. The

overall construction limits and soil disturbance for these new bridges is estimated to be less than that for the new bridges in Fridley.

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Figure 1-2: Project Detail Schematic (Maintenance and/or Layover Facilities)



Figure 1-3: Project Detail Schematic (New Bridges)



Figure 1-3: Project Detail Schematic (New Bridges) (Continued)



1.2.2.4 Crossing Signal Upgrades

Upgrades to crossing signals requiring subsurface excavation are proposed at selected crossings along the NLX Project (68 of 178 crossings³). Crossing signal improvements would include the installation of dual gates, or upgrades to quad gates. Each upgrade would result in the disturbance of between about 0.5 and 1 cubic yard of soil to a depth of approximately 5 feet below ground surface. Crossing signals slated for upgrade are proposed in both rural and urban areas along the NLX Project.

1.3 Assessment Limitations

This Limited Phase I ESA has been prepared for use by MnDOT and FRA, in cooperation with WisDOT. The information presented in this report is based on the NLX Project scope of work, which included a review of regulatory listings, review of historical information (for example, historical aerials, topographic maps, fire insurance maps) and a site reconnaissance by qualified environmental professionals of Key Locations outlined in Section 1.2.2. The Environmental Professional has relied on information provided by others in its description of historical conditions and its review of regulatory databases and files. However, no warranties or guarantees regarding the accuracy or completeness of the information provided or compiled by others is being made.

Phase I ESAs cannot completely eliminate uncertainty regarding the potential for contamination at or adjacent to Key Locations noted previously. This Limited Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the presence of contamination. Site contamination that was not identified during this Limited Phase I ESA is possible but cannot be adequately assessed without additional research beyond the stated scope of work. Further evaluation of these types of risks could include subsurface exploration, sampling and/or other forms of sampling and analysis.

³ This includes all public and private crossings of the BNSF rail corridor.

2. Description of NLX Project Setting

2.1 NLX Project Development Characteristics

The NLX Project traverses rural, small urban and major metropolitan areas across eight counties in both Minnesota and Wisconsin. The NLX Project begins in Minneapolis, the most populated city in Minnesota (population approximately 400,000). It winds its way north into the outlying suburbs of the Twin Cities metropolitan area and through mostly rural areas. Several stops are located in small urban communities along the way, before ending in Duluth, Minnesota's second largest city outside the Twin Cities metropolitan area (population approximately 86,000). The NLX Project shares the track not only with BNSF freight rail, but also with the Northstar Commuter Rail. Both lines would share the tracks until approximately 0.5 mile north of the Coon Rapids Station, where the Northstar Commuter Rail separates from the proposed NLX Project and continue west toward Anoka.

Development along the NLX Project varies from urban to rural. Most of the NLX Project abuts farmland and wooded or natural areas. The majority of the industrial, commercial and residential development occurs in urbanized areas along the NLX Project. The NLX Project passes through historically industrial areas in Minneapolis; Superior, Wisconsin; and Duluth.

2.2 Area Geology and Hydrogeology

The NLX Project lies in the Central Lowland Physiographic Province. The Central Lowlands make up the largest physiographic province in the United States and cover the region from western New York to North Dakota and down to Texas. The Central Lowlands are characterized by elevations below 2,000 feet above mean sea level (amsl), are generally flat, and in this region, include geomorphic remnants of glaciation (National Park Service, 2015).

Portions of the NLX Project in the northern counties of Pine, Carlton and St. Louis, in Minnesota, and Douglas County, Wisconsin, are included in an area known as the Superior Upland. The Superior Upland is the southern extension of the Laurentian Upland Province (this area is also referred to as the Canadian Shield) that makes up the nucleus of North America.

In the northern portion of the NLX Project, near surface bedrock originates from the MesoProterozoic Era (0.9 to 1.6 billion years ago) and includes intrusive igneous (gabbro), sedimentary (sandstone) and volcanic (basalt) rocks resulting from the failed midcontinent rift. Bedrock exposures are extensive along the north shore of Lake Superior (near Duluth and Superior, Wisconsin) and discontinuous in portions of Carlton and Pine

Counties. Lake Superior lobe deposits of mainly till with some outwash obscure the underlying bedrock in the remaining areas. The alignment of the NLX Project generally follows the axis of the Douglas Fault (a major northeast-southwest trending fault) in Pine and Carlton Counties and Douglas County, Wisconsin (Minnesota Geological Survey, 2013).

The southern portion of the NLX Project in Hennepin, Anoka, Isanti and Kanabec Counties is dominated by Des Moines lobe glacial deposits from the Pleistocene Epoch. Glacial cover in these areas ranges from 50 to 350 feet below ground surface with the exception of near Target Field Station, where glacial cover is generally less than 50 feet in the vicinity of the Mississippi River. The glacial deposits in this portion of the NLX Project are mostly till (that is, a mixture of clay, sand, gravel and boulders). A large area of glacial outwash sand (known as the Anoka Sand Plain) is centered on Anoka County. Alluvium and terrace deposits also occur locally in the vicinity of the Mississippi River and other large rivers along the NLX Project. Underlying bedrock includes Paleozoic Age (about 500 million years ago) sandstone, limestone and shale (Minnesota Geological Survey, 2013).

Groundwater is mainly encountered in Quaternary sand and gravel deposits in the glacial sediment present throughout the NLX Project. The unconfined surficial aquifer commonly occurs within 10 to 30 feet of the land surface and generally follows the topographic gradient toward nearby surface water features (Minnesota Department of Natural Resources, 2016). Near-surface groundwater can also be more than 120 feet deep near the bluffs of deeply incised river valleys, such as the Mississippi, Kettle and St. Croix Rivers.

3. Environmental Database and Historical Information Review

The ASTM standard for Phase I ESAs (E1527-13) requires a review of the regulatory and site use history of a Subject Property (defined as the Key Locations proposed for the NLX Project) and its surrounding properties. This requirement was met by using an automated database search service and reviewing selected historical sources further discussed in Sections 3.1 and 3.2, respectively. The following sections describe the results of the environmental database and historical information source review.

3.1 Regulatory Database Search

Environmental Data Resources Inc. (EDR) of Southport, Connecticut, was subcontracted to perform an environmental records search of federal, state and local files for certain Key Locations (detailed below) along the NLX Project. ASTM guidance defines specific radii of concern for different databases, ranging up to a distance of 1 mile from the boundary of a defined area. The EDR database information was received from Sept. 20 to 27, 2016, and Nov. 22, 2016.

The EDR records search reports, including a full list of databases searched and a full list of acronyms used for the various databases and regulatory agencies, are provided in Attachment B. The listings include facilities that have environmental histories ranging from active Superfund sites to service stations.

The EDR report also includes orphan sites, or sites with insufficient address information for mapping. The orphan sites list was reviewed, and when possible, the data were correlated to sites identified during the site reconnaissance.

3.1.1 Risk Ranking

A relative risk ranking system was employed in summarizing the database search results. Each database listing was categorized as high, medium or low contamination potential. These rankings were developed to gauge the level of contamination typically associated with (1) a database type, (2) listing status, (3) clean-up requirements, (4) onsite and offsite risk for contamination and (5) other known factors. The following ranks are described below and later used to summarize the types of database listings for the Key Locations in **Table 3-1**.

- Low-risk Database Listings – RCRA Small Quantity Generator (RCRA-SQG), RCRA Conditionally-exempt SQG (RCRA-CESQG), RCRA Non-generator/No Longer Reporting (RCRA Non-Gen/NLR), Manifest, MPCA What's In My Neighborhood? (WIMN), Underground Storage Tank (UST removed), Aboveground Storage Tank (AST removed), Enforcement & Compliance History Information (ECHO), FINDS, Mines, and National

Pollutant Discharge Elimination System (NPDES), Toxic Release Inventory System (TRIS), and Integrated Compliance Information System (ICIS).

- Medium-risk Database Listings – Solid Waste Facilities/Landfill (MN SWF/LF), Closed Leaking UST (LUST), Closed Leaking AST (LAST), active AST, active UST, Closed Voluntary Investigation and Cleanup Program (VIC), Recycling Facilities (SWRCY), Site Remediation Section (SRS), MN Deleted Permanent List of Priorities (Deleted PLP), Hazardous Waste Sites (HWS) Permit, Minnesota List of Sites (MN LS), EDR Historical Auto, EDR Historical Cleaners, Recovered Government Archive LUST (RGA LUST), Tier 2 Facility Listing, Emergency Response Notification System (ERNS), Spills, Wisconsin Waste Management Program (WI SHWIMNS).
- High-risk Database Listings – National Priorities List (NPL), Delisted NPL, Superfund Enterprise Management Systems (SEMS), SEMS-Archive, RCRA Corrective Action Reports (CORRACTS), MN PLP, State Superfund Site Information Listing (MN SHWS), Unpermitted Landfill, Active LUST, Active LAST, Institutional Control, Active VIC, Brownfields, Record of Decision (ROD), Consent, Manufactured Gas Plants (EDR MGP), and Wisconsin Emergency Repair Program (WI ERP).

A more detailed discussion of the database listings at Key Locations is provided in Sections 3.1.3 through 3.1.10. Due to the number of listings identified in the database search at each of the Key Locations, **Sites of Concern** were identified and highlighted for discussion. Sites of Concern are a subset of properties listed on the EDR database. These Sites of Concern were identified as being generally located within 500 feet of a Key Location and having known or potential contamination. A map of the Sites of Concern relative to the Key Locations are shown in Attachment A.

3.1.2 Governmental Database Search Summary

Table 3-1 displays the results of the regulatory database search for the proposed stations, maintenance and layover facilities and new bridges (Key Locations). A limited review using the MPCA's WIMN database was the only database review conducted for the crossing signal upgrade locations and the bridges in Isanti County.

Table 3-1: Summary of Results within ASTM Search Distances

Contamination Potential	Databases ^a	Listings within Construction Limits (CLs)	Listings within 500 Feet	Total Number of Listings
Target Field Station				
High	Delisted NPL, SEMS, SEMS-Archive, CORRACTS, MN PLP, MN SHWS, Unpermitted Landfill, Active LUST, Active LAST, INST Control, Active VIC, Brownfields, ROD, Consent, EDR MGP	1	12	118
Medium	MN SWF/LF, Closed LUST, Closed LAST, Active AST, Active UST, Closed VIC, SWRCY, SRS, MN Deleted PLP, HWS Permit, MN LS, EDR Hist. Auto, EDR Hist. Cleaners	1	39	239
Low	RCRA-SQG, RCRA-CESQG, RCRA Non-Gen, Manifest, WIMN, UST(removed), AST (removed)	1	130	631
Orphan	Unmappable listings	—	—	14
Coon Rapids Station				
High	MN SHWS, Active VIC, Brownfields	1	1	14
Medium	Closed LUST, Active AST, SRS, MN LS	2	3	12
Low	RCRA-SQG, RCRA-CESQG, RCRA Non-Gen, Manifest, UST (removed), AST (removed), WIMN	1	4	55
Orphan	Unmappable listings	—	—	8
Cambridge Station				
High	Active LUST, Active LAST	0	1	2
Medium	Inactive VIC, SRS, MN LS, Active AST, Active UST Closed LUST, Closed LAST	0	3	28
Low	RCRA-CESQG, RCRA-NonGen, UST (removed), AST (removed), Manifest, WIMN, ECHO	3	25	150
Orphan		—	—	0
Hinckley Station				
High	Inst. Control	0	0	1
Medium	Closed LUST, VIC (inactive), SRS, UST (active)	0	1	18
Low	RCRA-CESQG, RCRA-NonGen, AST(removed), UST (removed), WIMN	0	6	54
Orphan		—	—	0
Sandstone Maintenance Facility				
High	SHWS, Brownfields	0	1	2
Medium	SWF/LF, LUST, UST (active), AST (active), VIC (inactive)	0	10	15
Low	RCRA-SQG, RCRA-CESQG, RCRA-NonGen/NLR, UST (removed), Manifest, WIMN, EDR Hist. Auto	0	41	82
Orphan		—	—	1
Superior, Wisconsin Station				

Contamination Potential	Databases ^a	Listings within Construction Limits (CLs)	Listings within 500 Feet	Total Number of Listings
High	SWRCY, WI ERP (active), Active LUST, Active LAST, AUL, Brownfields	1	0	21
Medium	SHWIMS, Spills, WI ERP (closed), Closed LUST, Closed LAST, WI ERP (closed), AUL (closed), WI VCP (closed), EDR Hist. Auto	2	6	133
Low	NPDES, RCRA-CESQG, RCRA-NonGen, UST (removed), AST (removed), Mines, Manifest	2	6	51
Orphan		—	—	7
Duluth Station and Duluth Maintenance and/or Layover Facility				
High	SEMS-Archive, Corrracts, RCRA Cor Action, SHWS, Unpermitted Landfill, Active LUST, Active LAST, Inst. Control, Brownfields, SRS, MGP	0	21	66
Medium	Closed LUST, Closed LAST, UST (active), AST (active), MN LS, EDR Hist. Auto	0	25	86
Low	RCRA-SQG, RCRA-CESQG, RCRA-NonGen, UST (closed), AST (closed), Mines, Manifest, WIMN, NPDES, FINDS, ECHO	14	138	629
Orphan		—	—	4
New Bridge Construction (Fridley)				
High	SRS, MN LS	0	2	2
Medium	Closed LUST, ERNS, AST (active), VIC (inactive), Spills, Tier 2, RGA LUST	0	15	15
Low	RCRA-SQG, RCRA-CESQG, UST (closed), AST (closed), WIMN, TRIS, ICIS, AIRS, FINDS, Financial Assurance, Manifest, ECHO	3	26	26
Orphan		—	—	4

Source: Environmental Data Resources Inc., 2016

^a Definitions of abbreviations and acronyms used in this table are provided in Attachment B.

3.1.3 Summary of Sites of Concern for Target Station

Table 3-1 lists 988 records located within the search area for Target Field Station. A review of the data provided in the EDR report identified eight Sites of Concern for Target Field Station. One site, with multiple database listings, was found within the proposed construction limits of Target Field Station. Details regarding each of the Sites of Concern are provided in **Table 3-2**.

Table 3-2: Listings of Concern for Target Field Station

Site	Dist.	Dir.	Address	Database(s)	Details
MnDOT Northstar Minneapolis	Within CLs	N/A	N/A	MN VIC, MN SRS, and WIMN	Inactive VIC status (05/2007-06/2011): Arsenic, Lead, Mercury, and DRO were listed as contaminants. Residual soil contamination remains.
Dock Street Apartments	36–98 feet	NE	333 Washington Ave. N	MN VIC, MN SRS, LUST (closed), UST (removed), Financial Assurance, WIMN	Inactive VIC status (12/2011-08/2013). The developer was seeking a No Association Determination (NAD) for existing contamination associated with the land for the asphalt parking lot of the Union Plaza Building. Arsenic, Benzo(a)pyrene equivalents, naphthalene, TCE, Lead, and Mercury were the listed contaminants. A previously unregistered 6,000-gallon fuel oil UST was removed from the site (10/2012). Soil and groundwater contamination was identified during removal. The leak closure was issued 07/2013.
Belair Excavating/ Stewart ME	102 feet	NNE	401 N 3rd St.	LUST (closed), MN Spills, RCRA Non- Generator/NLR, ECHO, FINDS, Financial Assurance, WIMN, Hist. Auto	Fuel oil release from a leaking UST was discovered 06/2010. Soil and groundwater were impacted. It was listed as unknown if residual contamination remained. The listing was closed 02/2011. A 10-gallon diesel spill was reported 06/1999 due to equipment failure. Sand was applied, and impacted soil was excavated. The spill cleanup was considered complete, and the incident was closed immediately.
Ford Center et. al (various tenants)	102 feet	WSW	420 N 5th St.	MN Inst. Control, MN VIC, SRS, LUST (closed), Spills, Financial Assurance, RCRA Generators, ECHO, WIMN, NPDES, FINDS, Financial Assurance	Contaminants identified: PCBs, Lead, benzo(a)pyrene, Mercury, PCE/TCE, and Arsenic. PCB was removed from the building, as well as mercury sludge from the sumps and traps. Two 10,000-gallon ASTs were also removed from the building. A soil venting system was installed under the building. Residual contamination was identified under the building slab. An active Sub Slab Depressurization System (SSDS) is present under a portion of the building. Former tenants of the building include Ford Motor Company, Honeywell (thermostat manufacturing), and printing and photography businesses. Thirteen RCRA generators are listed at this address. A

Site	Dist.	Dir.	Address	Database(s)	Details
					closed LUST site (07/2010) involving fuel oil was listed at the site.
T3	131 feet	E	323 Washington Ave. N & 316 3rd St. N	Active VIC, SRS, Brownfields, Financial Assurance, WIMN	An active VIC site (start 02/2015). Investigation still occurring. The site is listed as a petroleum brownfield site. No additional data regarding contaminants was provided.
Target Field Station Parcel A	231 feet	WSW	5th St. SE & 6th Ave. N	Financial Assurance, WIMN	This site was listed as a petroleum brownfield.
Milwaukee Road Depot	282 feet	ENE	300 Washington Ave. N	RCRA-SQG, LUST, LAST, VIC, SRS, Spills, FINDS, Financial Assurance, WIMN, ECHO	LUST (closed) listing related to a release from a fuel oil UST. Free product and offsite groundwater contamination was reported. The release was reported 12/1994 and later closed 03/2000 with contaminated soils remaining. Diesel and fuel oil releases from ASTs were reported. Residual soil contamination, free product (2 inches), and offsite contamination were identified in associated with this release as well. Closure for the LAST was listed 04/1995. Remedial action relating to an ash and slag trench was noted in the inactive VIC listing (09/2001–06/2006). PAHs and mercury were listed as the contaminants. A minor anti-freeze release to the sanitary sewer was also reported.
Gardner Hardware	418 feet	N	515 Washington Ave. N	LUST (closed), Financial Assurance, WIMN	A fuel oil release from a UST was discovered 06/2015. It is unknown if residual soil contamination remains, but groundwater was impacted. Soil vapor was evaluated below an existing slab, and VOC levels were below actionable levels.
Shapco Printing Redevelopment /Print Stars Inc.	475 feet	W	524 5th St. N	Inst. Control, VIC, SRS, Spills, Financial Assurance, RCRA Non-Gen/NLR, FINDS, WIMN, ECHO	Inactive VIC (03/2013–11/2015). No association determinations issued to current tenants/landowners. Former printer property with contaminants identified in groundwater (PCE, TCE, VC, 1,2-DCE, Naphthalene, and PAHs) and soil (Arsenic, Lead, Mercury, PCE, TCE, benzo(a)pyrene, and naphthalene).

3.1.4 Summary of Sites of Concern for Coon Rapids Station

Table 3-1 lists 81 records located within the search area for Coon Rapids Station. A review of the data provided in the EDR report identified two Sites of Concern for the Coon Rapids Station. One site, with multiple database listings, was listed within the proposed construction limits of the Coon Rapids Station. Details regarding the Sites of Concern are provided in **Table 3-3**.

Table 3-3: Listings of Concern for Coon Rapids Station

Site	Dist.	Dir.	Address	Database(s)	Details
VIP Sales, Inc.	within CLs	N/A	9418 Foley Boulevard	Inactive VIC, SRS, MN LS, WIMN	An inactive VIC site (08/2006– 10/2006) with a no association determination issued 10/2006. A Phase I ESA and limited Phase II ESA were performed.
Berry Plastics	627 feet	NE	9534 Foley Boulevard	SHWS, MN VIC, SRS, Tier 2	This site was formerly known as Plastics, Inc. It is an active SRS and active VIC site. Soil and groundwater sampling from 04/2014 indicate the presence of PCE, TCE, and 1,2-DCE.

3.1.5 Summary of Sites of Concern for Cambridge Station

Table 3-1 lists 180 records located within the search area for Cambridge Station. A review of the data provided in the EDR report identified two Sites of Concern for Cambridge Station. However, no sites of concern were found within the proposed construction limits for the station. Details regarding the Sites of Concern are provided in **Table 3-4**.

Table 3-4: Listings of Concern for Cambridge Station

Site	Dist.	Dir.	Address	Database(s)	Details
Cambridge Union 76	535 feet	SSE	329 1st Ave. E	Active LUST, Financial Assurance, WIMN	Groundwater contamination with free product was reported. Offsite contamination is unknown. Soil vapor issues with benzene were discovered at 19 times the ISV next to the adjacent American Legion Building. The petroleum leak was discovered in 1994, but the investigation is still ongoing, with a report last submitted to the Minnesota Pollution Control Agency (MPCA) in 02/2016.
Cortec Advanced Films	493 feet	SSE	410 1st Ave. E	RCRA-CESQG, FINDS, ECHO, AST, WIMN, Financial Assurance	This business manufactures unlaminated plastics, film, and sheet. An 800-gallon anti-freeze tank is the only AST registered to the site, though approximately a dozen ASTs were noted on the exterior of the facility (refer to site reconnaissance). The site lists lead and ignitable wastes as being generated at the facility. Notices of violation were given during compliance inspections in 1996 and 2005.

3.1.6 Summary of Sites of Concern for Hinckley Station

Table 3-1 lists 73 records located within the search area for Hinckley Station. A review of the data provided in the EDR report did not identify any Sites of Concern for Hinckley Station.

3.1.7 Summary of Sites of Concern for Sandstone Maintenance Facility

Table 3-1 lists 99 records located within the search area for the Sandstone Maintenance Facility. A review of the data provided in the EDR report found seven Sites of Concern, including five petroleum sites, for the Sandstone Maintenance Facility. However, no Sites of Concern were found within the proposed construction limits of the facility. Details regarding the Sites of Concern are provided in **Table 3-5**.

Table 3-5: Sites of Concern for Sandstone Maintenance Facility

Site	Dist.	Dir.	Address	Database(s)	Details
Kettle River Company-Creosote	15 feet	SW	202 Hwy 23 S	SHWS, SRS, RCRA NonGen/NLR, WIMN	Former wood treatment plant (creosote). In 10/2002, the site was listed as a lead site by MDA on the Permanent List of Priorities (PLP). It was removed 06/2011.
Sandstone Salvage and Auto	15 feet	SW	202 Hwy 23 S	SPILLS, Enforcement, Financial Assurance, Manifest, WIMN	Approximately 40 gallons of used oil was spilled in 2002 when a barrel of used oil was found leaking inside the salvage yard. The response was listed as complete, but no details regarding cleanup were reported. A letter of enforcement was issued by the state in 08/1993 for violation 262.A - generators-general.
Petroleum Sites				Closed LUST	Five Closed LUST sites, an active UST, and an active AST were identified within 500 feet.

3.1.8 Summary of Sites of Concern for Superior, Wisconsin Station

Table 3-1 lists 205 records located within the search area for the Superior, Wisconsin Station. A review of the data provided in the EDR report identified three Sites of Concern for the Superior, Wisconsin Station. One site, with multiple database listings, was found within the proposed construction limits of the Superior Station. Details regarding the Sites of Concern are provided in **Table 3-6**.

Table 3-6: Sites of Concern for Superior, Wisconsin Station

Site	Dist.	Dir.	Address	Database(s)	Details
Waste Management Division of Northern MN	Within CLs	N/A	1425 Oakes Ave.	WI SHWIMS, SWRCY, Spills, NPDES, UST (abandoned)	The facility accepted recycled cell phones, computers, data communication hardware, televisions and other electronics. A spill of 40 gallons of hydraulic oil from equipment malfunction was reported on asphalt in 2008. Absorbent was applied and no further cleanup action was required. The UST associated with this address was owned by LST & T Terminal. A 1,111- gallon UST was abandoned without product as of January 1, 1970.
BNSF Property	<1200 feet	W	1500 Elmira Ave.	WI ERP (closed), SHWIMS, LUST, LAST, AUL, Spills, NPDES, Tier 2, RCRA-CESQG, FINDS, Manifest, ECHO, UST	The BNSF Superior, Wisconsin Yard is adjacent to the Subject Property. The mailing address is used for reporting, but actual incidents may be closer. Open LUST/LAST (diesel and used oil) incidents near storage shop that was discovered in 1991. Semi-annual monitoring is still occurring. Closure has been requested several times throughout monitoring, and the requests have been denied by the DNR. Soil and groundwater contamination has been reported. Several spill incidents of PCBs, diesel, engine oil, and other petroleum products have been reported at the site.
Kwik Trip	348 feet	E	1419 Banks Ave.	Active UST, Closed LUST	Diesel and VOC soil contamination reported in 2014 during construction. A NFA letter was issued to the RP. Active USTs containing gasoline (20,000 gallons) and diesel (15,000 gallons) remain onsite.

3.1.9 Summary of Sites of Concern for Duluth Station and Duluth Maintenance and/or Layover Facility

Table 3-1 lists 781 records located within the search area that encompassed both the Duluth Station and the nearby Duluth Maintenance and/or Layover Facility. A review of the data provided in the EDR report found three Sites of Concern for the Duluth Station and 10 Sites of Concern for the Duluth Maintenance and/or Layover Facility. Four sites, with multiple database listings, were found within or immediately adjacent to the construction limits of the Duluth Station. St. Louis County Heritage & Arts Center, North Shore Scenic Railway, Duluth Art Institute and The Depot were listed in all or some of the following databases: FINDS, WIMN, ECHO, RCRA-CESQG and NPDES. These listings are not considered to be of concern for the Duluth Station. Details regarding the Sites of Concern are provided in **Table 3-7**.

Table 3-7: Sites of Concern for Depot in Duluth and Duluth Maintenance and/or Layover Facility

Site	Dist.	Dir.	Address	Database(s)	Details
Duluth Station					
Gateway Tower	111 feet	NW	600 W Superior St.	Spills, RCRA NonGen/NLR, FINDS, Financial Assurance, WIMN, ECHO	A Phase I and II ESAs were conducted at Gateway Tower (14-story apartment building) located upgradient and on the north side of Michigan Street. Groundwater was encountered at 15 feet below ground surface. Diesel Range Organics (DRO) at 314 ppm was detected in the soil onsite.
Lower Michigan Street Road Construction	164 feet	SW	Lower Michigan Street (13th Avenue to 22nd Avenue)	inactive VIC, MN SRS	300 cubic yards of excavated soil was thermally treated. PCB impacted soils were reported. Disposal and beneficial reuse of excavated soil was also requested, so contaminated soils may still be present.
Medical Arts Annex	220 feet	NE	314 Michigan St.	Closed LUST, Financial Assurance, WIMN	A release of gasoline was discovered in April 2010. Groundwater was impacted, soil vapor issues and contaminated soils remain.
Duluth Maintenance and/or Layover Facility					
Railroad Street Site	46 feet	SSW	N/A	MN LS, WIMN, VIC, MN SRS	The city was in the process of repaving Railroad Street, which was formerly a marsh that was filled in. Historically, numerous railroad tracks were present. According to the VIC file, the fill "contains creosote type wood waste, rubbish and can be heavily contaminated with PAHs." The city took contaminated soil to the old City of Duluth landfill. VIC participation dates were January 1998 to August 2000.
Georgia Pacific Wood Products	62 feet	SSW	1220 Railroad St. W	Active VIC, SRS, Spills, ENF, RCRA-SQG, Closed LUST, Closed LAST, AST (active), UST (removed), AIRS, Financial Assurance, Manifest, WIMN	Closed LUST and LAST site. LUST incident closed in 1990. The LAST involved the release of waste oil. Groundwater contamination with free product was indicated. A number of active ASTs are still present that contain petroleum and non-petroleum liquids. Contaminated soils remain from the 1990 release. Numerous spills have also been reported onsite over time. Several violations from the state were reported in 1992, 1994, and 2001. VIC listing indicates lead, mercury, and PAH contamination in the soil; lead and PAHs in the groundwater; and mercury in the surface water.
Bayfront Lot D/ Bayfront	98 feet	SSW	500 to 1000	Active VIC, Active	This lot is approximately 10 acres in size and was considered for redevelopment, but may be stalled due to

Site	Dist.	Dir.	Address	Database(s)	Details
Area/ Duluth Bayfront Property			Railroad St.	Brownfields, MN SRS, Financial Assurance, WIMN	approval from the City of Duluth. A Phase II investigation and Remedial Action Plan was submitted to the MPCA in 2010 and 2013, respectively. The site is currently unoccupied. Access is restricted by chain link fencing and gated entrances. It was historically used for commercial and industrial activities.
North American Salt	78 feet	SSW	1100 W Railroad St.	UST (removed), AST (active), Closed LUST, Spills, AIRS, Financial Assurance, WIMN	A 1,000-gallon gasoline UST and 1,000-gallon fuel oil UST were removed in 1986. A 12,000-gallon fuel oil AST (1996) and 265-gallon used oil AST (2001) were removed or abandoned in place. Active tanks include 550-gallon gasoline AST, 717-gallon hydraulic oil AST, 265-gallon hydraulic oil AST, 550-gallon diesel AST, 275-gallon mineral oil AST and 3,000-gallon unspecified contents AST. A LUST case involving gasoline with contaminated soil remaining was closed in 1991. No groundwater contamination was reported. An unresolved spill involving petroleum was reported in 1996 (likely related to the LUST incident).
Compass Minerals	89 feet	SSW	1120 W Railroad St.	Closed LAST, Closed Spills, WIMN, Financial Assurance	Closed LUST (1/31/2012) site with contaminated soil remaining. Groundwater contamination reported with potential soil vapor issues. Offsite contamination was not reported. A spill incident was reported September 2015. Ten gallons of mineral oil were released due to equipment failure. The incident response was considered complete.
Ziegler Inc.- Duluth	180 feet	SW	210 Garfield Ave.	Closed LUST, UST (removed), AST (removed), Spills, RCRA-Non Gen/NLR, FINDS, MN ENF, Financial Assurance, WIMN, ECHO	Leaking USTs were reported in 1989 following the removal of a 1,000-gallon gasoline UST and a 5,000-gallon fuel oil UST in July 1989. A 265-gallon used/waste oil AST and 265-gallon kerosene AST were removed in 2001. Four active ASTs (523-gallon used/waste oil, 1,000-gallon diesel, 550-gallon unknown, 550-gallon used/waste oil) are still considered active at the site. An unresolved petroleum spill was reported in March 1996. Three enforcement violations were reported in 1995.
Slip 2 (VIC)	193 feet	SSW	700 to 800 Railroad St.	MN SRS	Active SRS and VIC listing for a 2.4 acre lot. Pier B Holdings is the voluntary party, which enrolled in the VIC program in August 2014. A RAP was submitted and approved in October 2014.
M & H Gas	211 feet	SW	1230 W Michigan St.	Closed LUST, UST (removed), Spills, Financial Assurance,	A release of leaded gasoline, unleaded gasoline, and fuel oil was reported in September 1989 and later closed in December 1990. No contaminated soil remaining or groundwater contamination was listed. A 17,000-gallon fuel oil UST, two 17,000-gallon gasoline USTs, and a 10,000-gallon gasoline UST were removed in 1999. A

Site	Dist.	Dir.	Address	Database(s)	Details
				WIMN	15,000-gallon gasoline UST and two 12,000-gallon USTs (from 1989) are still in place and in need of repair or upgrade of piping. An unresolved petroleum spill incident of unknown quantity was reported in March 1996.
BNSF Glacier Park Roundhouse	Approx . 200 feet	SW	500 Garfield Ave.	SHWS, Active LAST, Financial Assurance, MN SRS, WIMN, SEMS (orphan), Inst. Control, VIC, SRS	An approximately 27-acre vacant lot that was formerly a railroad yard and maintenance facility with a roundhouse. The site is also in Petroleum Remediation Program (PRP) for petroleum releases and was formerly in the VIC program for redevelopment before becoming idle. It was referred to the superfund program in 2014. The site is contaminated with heavy petroleum oil, PAHs, lead, and arsenic.

3.1.10 Summary of Sites of Concern for New Bridge Construction

Table 3-1 lists 43 records located within the search area for the new bridge construction in Fridley. A review of the data provided in the EDR report found two Sites of Concern for the Mississippi Street Bridge and two Sites of Concern for the Rice Creek Bridge. One site, with multiple database listings, was found within the construction limits of the Mississippi Street Bridge location. The listing was actually for the church located adjacent to the west of the proposed Mississippi Street Bridge. The listing was not considered a concern for the new bridge construction locations. Details regarding the Sites of Concern are provided in Table 3-8.

Table 3-8: Sites of Concern for New Bridge Construction

Site	Dist.	Dir.	Address	Database(s)	Details
Stylmark Inc.	Mississippi Street – 180 feet Rice Creek – 900 feet	NE S	6536 Main St. NE	AST (active), UST (removed), AST(removed), Spill (open), Financial Assurance, Tier 2, VIC, RCRA-CESQG, SRS, AIRS, ERNS, TRIS, ICIS, MN LS	The company is a manufacturer of commercial/retail fixtures. The building is located adjacent to the Mississippi Street bridge and 900 feet south of Rice Creek. The site is listed as an active facility in the Tier 2 database. Fuel oil, phosphoric acid, sodium hydroxide, sulfuric acid, and nitric acid are stored at the site. The site was enrolled in the VIC program from 05/1995 to 11/1996. A limited no action letter was sent in 08/1996. The SRS listing indicated that groundwater contamination was present at the site. A release of 250 gallons from an AST containing acid was reported in 06/1995. No closure date was listed. Another spill incident was reported in 03/2008, when an unknown product being delivered by Hawkins Chemical leaked and may have been released to the drainage ditch on the west side of the property. Active
Fridley Bus Co	Rice Creek – 400 feet	SE	6750 Main St.	UST, LUST (closed), Spills, RGA LUST, Financial Assurance, WIMN	A 6,000-gallon diesel UST was removed and a 500-gallon waste oil UST was closed in-place in 05/1986. A release of diesel was reported at the time. The closure date was listed as 09/24/1998 with contaminated soils remaining. A spill of approximately 20 gallons of diesel occurred due to equipment failure in 03/1996. A closure date for this incident was not reported.
RAO Manufacturing	Mississippi Street – 250 feet	E	200 Mississippi St.	RCRA-SQG, FINDS, Manifest, WIMN, ECHO, AST, Tier 2	Nine active ASTs are registered to the site. They include two 260-gallon hydraulic oil ASTs, two 250-gallon used oil ASTs, four 345-gallon petroleum (other) ASTs, and a 300-gallon chemical (other) AST. The facility is listed in the Tier 2 database and is considered a RCRA-SQG that generates F001 spent halogenated waste. Disposal of waste printing ink was listed in the manifest database.

3.2 Historical Source Research Results

This Limited Phase I ESA includes a review of a variety of historical data sources. The objective of reviewing historical use information is to develop a history of previous land uses in the vicinity of the NLX Project and to assess these uses for potential hazardous materials impacts that may affect the NLX Project. Historical sources that were readily available and reviewable, and likely to provide useful information, were reviewed for this Limited Phase I ESA.

3.2.1 Fire Insurance Maps

Fire insurance maps were produced for decades by private fire insurance companies to indicate site development features relative to fire risk. Fire insurance maps prepared before World War II provide excellent information regarding site use and potential hazardous materials issues, and are often the only such source of this kind of information for that time period. Archives of fire insurance maps were searched (by EDR) for each of the Subject Properties. Considering that fire insurance maps were primarily prepared for urban areas, only the sites in Minneapolis (Target Field Station), Sandstone, and Duluth had coverage available in select years. A review of the readily available fire insurance maps was conducted and cross-referenced with the other historical sources. A summary of the historical land use based on this review is provided in **Table 3-9**, located at the end of Section 3.

3.2.2 City Directory Information

City directories are a useful source of historical land use information. They provide names of businesses and their associated addresses at a given point in time. Changes in land use may be documented based on the business and the type of activities typically associated with it. City directory coverage was available for all the Subject Properties. A review of the readily available city directories for street(s) adjacent to each Key Location was conducted and cross-referenced with the other historical sources. A summary of the historical land use based on this review is provided in **Table 3-9**, located at the end of Section 3.

3.2.3 Historical Topographic Maps

Historical topographic maps provide a large-scale overview of an area. Elevations, natural features, roadways, structures and other improvements that may not be discernable in other sources can aid in the determination of potential previous land uses. The Environmental Professional reviewed readily available historical topographic maps from multiple years for each Key Location. A summary of the historical land use based on this review is provided in **Table 3-9**, located at the end of Section 3.

3.2.4 *Historical Aerial Photographs*

Historical aerial photographs are valuable for the environmental assessor to review features of each Key Location and the surrounding properties over a long period of time. The range of coverage and scale varied for each of the Subject Properties. Readily available historical aerial photographs for each Key Location were provided by EDR. The historical images were cross-referenced with the other historical sources to help reconstruct the former land uses. A summary of the historical land use based on this review is provided in **Table 3-9**, located at the end of Section 3.

3.3 Environmental Liens and Additional Information

No information regarding the chain-of-title ownership history or environmental liens for each of the Key Locations was provided for review. Environmental lien searches were not part of the scope of work for this study, and were not conducted. Environmental lien reviews should be included as part of the scope of work for any future site-specific Phase I investigations.

Table 3-9: Historical Summary

Site	Fire Insurance Maps	City Directories	Historical Topographic Maps	Historical Aerials	Historical Summary	
Target Field	1885, 1890, 1904, 1912, 1923, 1950, 1952, 1963, 1966, 1969	5th Avenue North, 4th Avenue North, 3rd Avenue North, 5th Street North, 4th Street North, 3rd Street North: 1920, 1925, 1930, 1935, 1940, 1946, 1950, 1955, 1957, 1960, 1962, 1966, 1970, 1971, 1975, 1976, 1979, 1985, 1988, 1989, 1993, 1999, 2005, 2008, 2013	1896, 1901, 1951/1952, 1958, 1967, 1972, 1977, 1993, 2013	1937, 1940, 1947, 1953, 1966, 1969, 1972, 1978, 1984, 1987, 1991, 1997, 2005, 2008, 2009, 2010	Key Location	This Key location has been a railroad corridor since at least 1885 (fire insurance). The Key Location was a portion of a larger northeast-southwest oriented rail center that was approximately one city block wide. A large freight depot occupying several buildings abutted the station footprint to the southeast along with warehouses for lumber, plumbing, electrical, cold storage, farm implements, etc. Viaducts/bridges ran perpendicular (northwest-southeast) over the rail corridor. Rail activity and the number of tracks decreased substantially in the late 1970s based on aerial and topographic map review. The rail platform was constructed at the southwestern end of the station footprint between 2005 and 2008.
					Adjacent	Rail activity and commercial/industrial businesses that relied on freight rail were prevalent throughout the area during the late 1800s until the 1970s. Large rail yards were present less than 1 mile to the southwest of the station footprint and 0.25 mile northeast along the Mississippi River. A freight depot with numerous rail sidings was once adjacent to the southeast of the station footprint and was removed during late 1970s. The area that was once occupied by the freight depot and sidings was later developed into parking lots. The surrounding land has remained commercial and industrial with large warehouses and high-rise buildings. The adjacent Target Field was under construction in 2008 and 2009. It is situated at an elevated position above the station footprint.
					A review of the city directory indicated the following businesses (or types of businesses) were located adjacent to the station footprint at one time: Progressive Chemical Co and Brecke Press (401 3rd St. N), paper companies (420 3rd St. N), freight depot/office (304/319/409 4th St. N), plumbing and heating (315 5th), Papers Asbestos Products (312 N 3rd), plumbing manufacturing (400 N 3rd Ave.), Soo Line building service shop/electric works (410 N 3rd Ave), printer/photographic products (311 N 5th Ave.), machine shop (313 N 5th Ave.), Hennepin Co. recycling/printing services (417 N 5th Ave.), service station (419 N 5th Ave.), and photo studios/photo printing (420 N 5th St.).	
Coon Rapids	No Coverage	Foley Boulevard NW: 1964, 1970, 1975, 1980, 1985, 1992, 1995, 1999, 2003, 2008, 2013	1902, 1952/1955, 1958, 1967, 1972, 1980, 1993/1996, 2013	1937, 1940, 1947, 1953, 1957, 1969, 1972, 1978, 1984, 1987, 1991, 1997, 2005, 2008, 2009, 2010	Key Location	This Key Location was mainly an undeveloped field with a gravel driveway along the east side, which extended from Foley Boulevard (south) to a farmstead located off the northeast corner. One or two outbuildings associated with the farmstead were located within the station footprint. In 1953, a house was built in the southeast corner of the station footprint. By 1969, another house was built approximately 100 feet southwest of the first house. Between 1997 and 2005, the first house was removed, while the other still remains. The farmstead was also removed sometime between 1972 and 1978. The substation located in the northern portion of the station footprint has been present since at least 1972. The small communication building and tower south of the substation was constructed sometime between 1991 and 1997.
					Adjacent	The railroad tracks and Foley Boulevard have been adjacent to the west and south of the station footprint, respectively, since at least 1937. Surrounding land use was primarily agricultural until the 1970s and 1980s, when businesses began developing to the northeast and southwest. A large building (currently A-1 Engineering) was built between 1972 and 1978 adjacent to the northeast of the station footprint. The current Berry Plastics Corp. site started with a smaller building in 1957 and was replaced or expanded into a much larger facility by 1969. A large warehouse and other commercial businesses developed on the west side of the railroad tracks during the 1980s. The Park n' Ride facility to the south was built between 1991 and 1997.

Site	Fire Insurance Maps	City Directories	Historical Topographic Maps	Historical Aerials	Historical Summary	
Cambridge	No Coverage	3rd Avenue Northeast: 1999, 2003, 2008, 2013 2nd Avenue Northeast: 1992, 1995, 1999, 2003, 2008, 2013	1961, 1983, 2013	1953, 1978, 1984, 1991, 2005, 2006, 2008, 2009, 2010	Key Location	This Key Location was once an undeveloped field adjacent to the west of railroad tracks until 1978. By 1984, two interconnected buildings (government building and retail stores) were added on to an existing building located to the south. The remainder of the site had been disturbed ground, which was then almost completely paved and converted into a parking lot by 1991. The land use had remained unchanged until the present. The City of Cambridge was the listed tenant at 300 3rd Ave. NE in the 2008 and 2013 city directories.
					Adjacent	Adjacent property consisted of a vacant field/residential homes (north), railroad tracks (east), baseball field (south), and commercial businesses (west) in 1953. By 1978, a single building (currently a food co-op) and surrounding parking lot was constructed directly south of the station footprint. Commercial, retail, and government buildings began to develop to the south and southwest of the station footprint over time. Warehouses and agri-businesses were mainly located on the east side of the railroad tracks. Businesses listed in the city directory only included retail, office, and other commercial businesses.
Hinckley	No Coverage	2nd Street Northeast: 1995, 1999, 2003, 2008, 2013 1st Street Northeast: 1992, 1995, 2003, 2008, 2013	1961, 1982/1983, 1995, 2013	1939, 1957, 1965, 1977, 1986, 1991, 2005, 2006, 2008, 2009, 2010, 2015 (Google Earth)	Key Location	This Key Location was an undeveloped field located along the northeastern edge of town (adjacent to the railroad corridor). In 1977, a portion of the current building onsite was constructed in the northwest corner of the station footprint. By 1991, the building footprint nearly doubled in size when an addition was added off the back of the building (east). No other structures have been located onsite based on historical review. The remaining lot included a gravel parking lot and vegetated areas (grass and trees). An April 2015 aerial photograph showed a large stain on the concrete pad off the northeast corner of the building.
					Adjacent	The surrounding property has included a mix of residential, commercial, and public land uses. The high school and school bus parking lot has been located adjacent to the southwest and northwest of the station footprint, respectively, since at least 1977. Residential homes adjacent to the west were removed and replaced with a parking lot some time between 1991 and 2005. The substation and business located adjacent to the north of station footprint have been present since at least 1977.
Sandstone Maintenance Facility	1914, 1928, 1941* *mislabelled, actually 1928	Main Street/Main Avenue: 1992, 1995, 1999, 2008, 2013 Angle Avenue: 1992, 1995, 1999, 2003, 2008, 2013	1961, 1981, 2013	1939, 1957, 1965, 1977, 1981, 1991, 2005, 2006, 2008, 2009, 2010	Key Location	This Key Location has been a railroad corridor since at least 1914. Up to 11 tracks were shown across the widest portion of the site. A roundhouse was located partially inside and just outside the maintenance facility footprint, near the present day fire station (Main Street & 1st Street). The roundhouse was removed some time between 1977 and 1981. Standard Oil Company had a building and three above ground tanks (13,000 gallons each) shown in the northeast quadrant of the intersection of Oak Street with the railroad tracks from 1928 (fire insurance) to at least 1981 (aerial). Only the building was shown in 1991 and was completely cleared and vacant by 2005 (aerial). A stockyard, potato warehouse, Northwestern Oil Co. (with several 14,000 gallon tanks) was shown between the current alignment of TH 23 and the railroad tracks, approximately 200 feet south of Oak Street.
					Adjacent	Businesses (lumber, farm implements, feed, beer, etc.) lined the lots between Main Avenue and the maintenance facility footprint since at least 1914. Several coal sheds were shown in this area. A large quarry operation was shown at the bottom of the bluff, adjacent to the Kettle River near the northeastern end of the site until at least 1928 (fire insurance). Aerial photographs indicate that several buildings associated with the quarry are still present, but the quarry is no longer active and is a picnic area/public access point for the Kettle River (topographic). A large creosote plant (Kettle River Co.) was only shown in the 1914 fire insurance map, but its location could not be determined based on the information shown. The creosoting plant was also owned by the same company as the quarry.

Site	Fire Insurance Maps	City Directories	Historical Topographic Maps	Historical Aerials	Historical Summary	
Superior, Wisconsin Station	No Coverage	Oakes Avenue/Belknap Street: 1957, 1964, 1967, 1972, 1977, 1982, 1987, 1992, 1995, 1999, 2003, 2008, 2013 U.S. Highway 2: 1992, 1995	1915, 1917, 1954, 1969, 1975, 1983, 1993, 2013	1938, 1952, 1958, 1966, 1975, 1980, 1986, 1992, 1998, 2005, 2006, 2008, 2009, 2010	Key Location	This Key Location was a part of a smaller yard or multi-track spur that ran parallel to a larger north-south oriented rail yard. Numerous tracks were present in the station footprint. A small portion of the tracks tied into a roundhouse that was located adjacent to the east. During the 1970s, many of the tracks were decommissioned and eventually removed from the station footprint (based on aerial photography with conflicting topographic data). No development has occurred in the station footprint since the tracks were removed.
					Adjacent	Adjacent land use historically consisted of a rail infrastructure to the north, south, west, and some to the east. Commercial businesses and homes were generally located to the east. A roundhouse was located adjacent to the southeast of the station footprint. It was in-use until some time during the late 1960s to early 1970s. The tracks to the roundhouse were removed by 1975, but the roundhouse structure was present until at least 2015. The roundhouse was redeveloped into a business into a commercial business. During the 1990s, the tracks along the smaller yard were all removed and warehouses and other large buildings were developed in their place. A larger roundhouse was present nearly 0.25 mile to the east of the station footprint. This roundhouse was eventually removed and two large-capacity ASTs in secondary containment units are now present. A large bulk oil facility was also present the same distance to the north.
Duluth Station and Duluth Maintenance and/or Layover Facility	1884, 1885, 1888, 1906, 1908, 1909, 1949, 1955, 1963, 1969	West Michigan Street/West Railroad Street: 1940, 1946, 1964, 1969, 1974, 1979, 1984, 1988, 1992, 1995, 1999, 2003	1895, 1953, 1969, 1975, 1993, 2013	1948, 1953, 1961, 1970, 1975, 1981, 1991, 1992, 2005, 2008, 2009, 2010	Duluth Station	The Depot was shown in its current location next to the Duluth Station footprint on the 1884 map. It only occupied a fraction of the current Depot footprint (approximately 10%) at the time. No other structures were shown on block 17 (Depot in Duluth). Additional lines from the southwest into the Depot were added by 1888. By 1906, the current Depot footprint was similar to the present (passenger area and train shed). Passenger rail services and rail related offices were then listed at the Depot until the late 1960s. The number of tracks leading to the Depot and in the layover area was substantially reduced by 1969 (topographic map). By 1974, cultural arts related businesses began taking over the facility. The North Shore Scenic Railway is the only listed rail service that operates from the Depot.
					Duluth Maintenance and/or Layover Facility	The maintenance and/or layover facility footprint was occupied by numerous, parallel tracks extending from the depot area, southwest toward a large rail yard (topographic map). A roundhouse owned by Northern Pacific RR was indicated at the very southwest end (on the northeast side of Garfield Avenue) in the 1885, 1884, and 1888 fire insurance maps. The roundhouse was removed by 1906 and a larger roundhouse (about double the size) then replaced it on adjacent land (southwest side of Garfield Avenue by 1908) until at least 1969.
					Adjacent to Duluth Station	The surrounding land use included rail (freight, passenger, rail yard, etc.), commercial, and industrial businesses. The land located on the southeast side of Railroad Street consists of a number of piers with dredged channels that were eventually filled in over time and replaced with businesses beginning in the 1970s. According to the city directories, businesses along Railroad Street have included cold storage facilities (702/824), freight depot/trucking (1002), salt storage (1100/1120), sewage pump house (1102), grain mills (1212), gas station (1224), paper/timber companies (1220/1320/1400), steel fabricators (1500/1550), and bulk oil (1551).

Site	Fire Insurance Maps	City Directories	Historical Topographic Maps	Historical Aerials	Historical Summary
					Adjacent to Duluth Maintenance and/or Layover Facility The surrounding land use included rail (freight, passenger, rail yard, etc.), commercial, and industrial businesses. An oil depot was noted approximately 185 feet to the north to northwest at the intersection of Michigan Street and 9th Avenue West from 1949 to at least 1969 (fire insurance). According to the city directories, businesses along Michigan Street included Depot (506), grain elevator (409), city maintenance (1532), automotive/auto parts (1701/1726/1730), appliance recycling (1832).
New Bridge Construction (Fridley)	No Coverage	Mississippi Street Northeast: 1964, 1969, 1975, 1980, 1986, 1992, 1995, 1999, 2003, 2008, 2013 Main Street Northeast: 1964, 1969, 1975, 1980, 1986, 1992, 1995, 1999, 2003, 2008, 2013	1902, 1952, 1958, 1967, 1972, 1980, 1993, 2013	1937, 1940, 1947, 1953, 1957, 1966, 1969, 1972, 1978, 1984, 1987, 1991, 1997, 2005, 2008, 2009, 2010	Key Location The railroad corridor and bridge at Rice Creek has been present since at least 1937 (aerials). The bridge at Mississippi Street Northeast was constructed some time around 1978. Prior to that, it appeared to be an at-grade crossing. Potential encroachment into the corridor from activities associated with the adjacent bus facility throughout the aerial photographs was noted. Adjacent The surrounding land use was agricultural with residential development increasing over time and mostly occurring during the 1960s. Large warehouses and garages are located adjacent to the NLX Project. Development of the adjacent businesses began with the warehouse (Stylmark Inc.) located in the northeast quadrant of Mississippi Street Northeast and the NLX Project, during the early to mid-1960s (topographic maps and aerials). The facility construction limits increased between 1972 and 1978; again between 1984 and 1987; and lastly between 1987 and 1991. A bus service company with a garage and numerous buses parked outside (6750 Main St. NE -adjacent to the Rice Creek Bridge) has been present since at least 1978. The warehouse (RAO Manufacturing) located in the southeast quadrant of Mississippi Street Northeast and the NLX Project was developed in the same time frame. A land bridge (Rice Creek West Regional Trail) was constructed adjacent to the east of the Rice Creek Bridge by 1966.

February 14, 2017

4. Site Reconnaissance Summary

A site reconnaissance provides assessors with site-specific, current information that would not be available through a records review or historical review alone. Interviews were not conducted during the site reconnaissance at this stage of NLX Project development.

4.1 Site Reconnaissance Results

The site reconnaissance of the NLX Project was limited to the Key Locations detailed further in this section. A review of the entire NLX Project was not feasible because site access from BNSF was not granted. However, the Key Locations were all readily viewable from public rights of way. The site reconnaissance was performed either by car or on foot, and was conducted on July 6 and Oct. 20, 2016. Photographs taken during the site reconnaissance are provided in Attachment C. Areas not readily viewable from a vehicle were conducted on foot, and/or viewed from higher vantage points (for example, pedestrian walkway on a bridge) whenever possible. The NLX Project was crossed a number of times, via public crossings, to review properties on both sides of the NLX Project. The interior of buildings and structures located at Key Locations were not reviewed during the site reconnaissance since site access was not granted.

The NLX Project included a variety of land uses, from farmland to residential to urban developments. Each type of property or land use or site had certain characteristics and potential contamination associated with it. The following sections present observations made during the site reconnaissance at each of the Key Locations.

4.1.1 Target Field Station

The review of the proposed Target Field Station was conducted on foot. Direct access to the site was limited by adjacent private businesses and a chain-linked security fence, but this location was readily viewable from adjacent parking lots and from an elevated position on the 5th Street North viaduct. An elevated passenger platform for the Northstar Commuter Rail was located at the southwest end of the proposed site location. Tracks were present on either side of the platform. The southwest end extended into a restricted area underneath 5th Street North and Target Field. The northeast end extended toward a switch located just before the Washington Avenue overpass.

Surrounding land use was a combination of parking lots, parking ramps, warehouses, converted warehouses (office buildings/apartments), restaurants, breweries, and Target Field. An unmarked 100 gallon plastic tote was present next to a storage container in the parking lot of the Ford office building, located at 420 5th Ave. N. No other bulk hazardous materials or petroleum storage was noted in the area.

4.1.2 Coon Rapids Station

The proposed Coon Rapids Station is a developed lot located in the northeast quadrant of the intersection of Foley Boulevard and the NLX Project. A boxing gym (Lyke's) operated out of a small single-story building situated at the southern end of the site. A dirt driveway extended north from the east side of the building and intersected with another dirt road that paralleled (but remained outside of) the railroad right of way. The dirt road led north to a communication tower and electrical substation. The remaining portion of the site was lightly wooded, with a mixture of trees and tall grass. An overhead electrical line traversed the length of the site along the western side.

Several businesses and warehouses were located nearby to the east and west. A park and ride facility was located to the south of the site, across Foley Boulevard. No bulk hazardous materials or petroleum storage was noted in the area.

4.1.3 Cambridge Station

The proposed Cambridge Station is located in a commercial district of Cambridge. The proposed station construction limits included an asphalt parking lot for a strip mall that housed a government center (with police and fire) located on the north end, and retail shops anchored by a grocery co-op located on the south end. The proposed station platform will be situated on the east side (rear) of the strip mall, where deliveries are made and additional parking was present.

Surrounding land use consisted of fast food restaurants, retail shops, banks, and other small businesses to the west. Manufacturing businesses and other industrial land uses were noted on the east side of the tracks from the station construction limits. Schlager Inc. (manufacturer of material handling equipment) and Cortec Advance Film (plastics and film) were both located adjacent to the NLX Project on the east side. A substantial amount of outdoor storage of parts and other materials was noted at Schlager Inc., and nearly a dozen ASTs were present at the Cortec site. Bulk storage of hazardous materials or petroleum products was not noted within the proposed station construction limits.

4.1.4 Hinckley Station

The proposed Hinckley Station is situated along the northeastern edge of the town of Hinckley. A single-story warehouse, with two garage bays in the front was present at this location. One of the doors was marked Pine Medical Ambulance Service. A trailer for a heating and air conditioning business was parked in front of the other bay, next to a large pile of scrap metal and old water heaters. In the rear of the building were two

loading docks and a large open bay. City vehicles were parked in the back lot of the building. Piles of dirt and compost were present along the back edge of the lot (closest to the rail line).

Adjacent land use consisted of Sylvester & Sons Auto and an electrical substation to the north, a school bus parking lot to the northwest, an apartment building and parking lot to the west, a high school to the southwest, a church and residential homes to the south and the railroad corridor to the east. Residential homes and agricultural fields were located further east, beyond the railroad tracks. Bulk storage of hazardous materials or petroleum products was not noted within the proposed station construction limits.

4.1.5 Sandstone Maintenance Facility

The proposed Sandstone Maintenance Facility is located along nearly the entire west side of the town of Sandstone. The site was reviewed from public roadways that were present along each side of the proposed construction limits. The area within the construction limits was mainly undeveloped, with the exception of two railroad tracks and a crossing on the north end at Oak Street. Portions of property on the west side of the tracks were wooded or otherwise free of buildings and structures. Piles of scrap metal, concrete plates, railroad ties and wood pallets were staged next to the railroad tracks during the October site reconnaissance. Crews conducting repairs and other construction activity were noted along this segment during the July site reconnaissance.

Adjacent businesses included an active gas station (Clark) located to the northwest (across U.S. Highway 23); automobile sales lots to the northwest, east, and south; a lumber yard to the east and junk/scrap yards to the southwest. A large amount of scattered debris, vehicles, scrap metal and equipment was noted from the roadway near the junk yard that abuts the southeast side of the site. An old automotive garage, house, and additional fenced area were also present onsite. Bulk storage of hazardous materials or petroleum products was not noted within the proposed construction limits, but was observed on the adjacent properties.

4.1.6 Superior, Wisconsin Station

The proposed Superior, Wisconsin Station is located at the northern end of an approximately 2.5-mile-long rail terminal in Superior, Wisconsin. The area within the construction limits was a mostly vacant (unused) portion of the rail yard that was covered with tall vegetation. Railroad tracks were only present along the very western edge of the proposed station construction limits. No direct access to the site was available without entering restricted BNSF right of way. Therefore, the property was surveyed from an elevated position along the pedestrian portion of the U.S. Highway 2 Bridge, which transects not only the site, but the entire width of the rail yard (east-west).

Adjacent land use included a former Waste Management facility and an active gas station (Kwik Trip) to the east. The Waste Management property was undergoing redevelopment at the time of the October site reconnaissance. The former roundhouse and other structures had been removed from the site, and construction equipment and trailers were present. A bulk oil terminal (AMS Oil), lumber company, aggregate company, and ice skating facility were located to the north. A BNSF administrative building and numerous related support structures were present on the west side of the rail terminal, directly across from the proposed Superior, Wisconsin Station. No indications of contamination or bulk storage of hazardous materials or petroleum products was noted within the proposed station construction limits.

4.1.7 Duluth Station and Duluth Maintenance and/or Layover Facility

The Duluth Station is proposed adjacent to The Depot in downtown Duluth. The Depot was used as a cultural arts center and a rail station for the North Shore Scenic Railway. The existing railroad tracks lie at a lower elevation than the surrounding roadways (I-35, South 5th Avenue West and Michigan Street). Parking lots and commercial development (retail businesses, restaurants, and hotels) surround the proposed station construction limits. The proposed maintenance and/or layover facility will be situated southwest of The Depot. The proposed maintenance and/or layover facility construction limits consisted of an elongated, vacant parcel of land between the I-35 corridor and industrial businesses located along the southeast side of Railroad Street on the Duluth Harbor.

Adjacent businesses to the maintenance and/or layover facility included Georgia Pacific, Duluth Timber Company, Ziegler Cat, Compass Minerals, and Bendtec (pipe fabrication). No indications of contamination or bulk storage of hazardous materials or petroleum products were noted within either the station or maintenance and/or layover facility construction limits.

4.1.8 New Bridge Construction in Fridley

The proposed new bridge construction adjacent to existing bridges at Mississippi Street (MP 16.5) and at Rice Creek (MP 16.9) is located in a highly developed area in Fridley. Much of the surrounding properties were developed during the 1970s, with minimal updates to the building exteriors. Residential development is prevalent in the area in all directions. The exceptions were the properties directly adjacent to the railroad corridor. The Rice Creek Regional Trail runs parallel along the west side of the railroad corridor and the Mississippi Street Bridge and then under the Rice Creek Bridge.

The existing Mississippi Street Bridge spanned a four-lane road with sidewalks on either side. The roadway drops roughly 25 to 30 feet below the bridge. Two large manufacturing buildings/ warehouses were located adjacent to the east of the Mississippi Street Bridge, one on the north side and one on the south side. Large

bays for semi-truck trailers were present at both sites, but no outdoor storage of chemicals or petroleum products was noted.

The existing Rice Creek Bridge spanned a section of Rice Creek and the Rice Creek Regional Trail. A school bus company/garage was located adjacent to the southeast of the Rice Creek Bridge. A fenced area with storage was noted on the back side (east end) of the building. No outdoor storage of chemicals or petroleum products was noted outside this facility. The height of the bridge over the stream/creek was approximately 25 to 30 feet.

4.1.9 New Bridge Construction in Isanti County

The proposed new bridges in Isanti County are located at MP 111.20 and MP 112.31 (Isanti Parkway Northeast). The new bridge construction in Isanti County was identified after the site reconnaissance had already been conducted for other Key Locations. Due to the smaller anticipated construction limits and less developed area surrounding the Isanti County bridges, the evaluation of these bridge locations was limited to an aerial desktop review.

The proposed bridge at MP 111.20 would be constructed adjacent to the east of an existing bridge over Isanti Brook. The surrounding land use is an agricultural field and wetland area. The proposed bridge at MP 112.31 (Isanti Parkway Northeast) would be located east of an existing bridge over a drainage ditch. Adjacent land use includes an indoor BMX facility, auto machine shop (Cylinder Head Express), wastewater treatment plant, and biodiesel plant (Ever Cat Fuels).

Schematics of the new bridge locations are shown in **Attachment D**.

4.1.10 Crossing Signal Upgrade Areas

There are a total of 126 public grade crossings on the NLX Project. Preliminary engineering identified needed upgrades to gates and signals that would require subsurface disturbance at 68 of the crossing signals. In consultation with MnDOT, 18 locations were targeted for additional review during the site reconnaissance based on a higher potential for contamination following initial aerial review to determine land use and a search of the MPCA's WIMN database for nearby listed sites. Crossings 11, 28, 49, 51, 53, 56, 57, 65, 67, 70, 80, 85, 115, 118, 124, 159, 161 and 168 (see Attachment E of the NLX Project Tier 2 Environmental Assessment for additional information about specific crossing locations) were all reviewed, and adjacent property land use was noted.

Schematics of the crossing signal locations reviewed during the site reconnaissance are shown in **Attachment D**.

The crossings were all located in commercially or industrial developed areas. Adjacent and nearby businesses such as gas stations, electrical substations, motor repair facilities, tank sites and manufacturers were noted during the site reconnaissance. No areas of obvious contamination or storage of hazardous materials or petroleum products were noted in association with each crossing. The following table summarizes the conditions noted at each of the crossing signal locations reviewed during the site reconnaissance.

Table 4-1: Summary of Site Reconnaissance of Crossing Signal Upgrades

Crossing Signal	Cross Street	City	Current Site Conditions
CS-11	Foley Blvd	Coon Rapids	The proposed Coon Rapids Station is located adjacent to the northeast.
CS-28	191 st Ave	Cedar	Main St. was located approximately 150 ft. to the east. Small businesses located on the east side of Main St. A county recycling center with an outdoor used oil disposal AST inside a shallow containment basin was located approximately 300 feet southeast.
CS-49	11 th Ave SW	Cambridge	A former gas station and automotive sales lots were located adjacent to the north.
CS-51	Emerson Ave N	Cambridge	A tank manufacturing and engineering facility with a laydown yard was located adjacent to the east of the crossing.
CS-53	39 th Ave NE	Cambridge	A Great River Energy substation and peaking plant was located adjacent to the southeast of the crossing. A MnDOT materials yard was located 250 ft. to the southwest.
CS-56	CSAH 6	Cambridge	A large lumber/mulch company was located approximately 200 ft. to the southwest.
CS-57	369 th Ave NE	Cambridge	Two former gas stations (massage and boat storage sites) and bulk anhydrous ammonia site were located within 200 feet of the crossing.
CS-65	CSAH 4	Braham	A natural gas lift station was located adjacent to the southeast of the crossing.
CS-67	Central Dr.	Braham	Adjacent commercial businesses included restaurants and retail shops. A Sinclair gas station was located approximately 500 feet to the north.
CS-70	115 th Ave	Braham	A concrete vault manufacturer was located over 500 feet to the east. No other businesses or development was present near the intersection.
CS-80	1 st St SE	Henriette	Houses with poorly maintained yards, including items such as wood pallets, trailers, tires, etc., were located nearby and adjacent to the crossing. A former/vacant gas station was noted approximately 600 feet north on Main St. Overgrown vegetation covered the entire site.
CS-85	3 rd St.	Brook Park	House with several vehicles and outdoor storage of items was noted adjacent to west of the crossing. An active Tesoro Gas Station was located approximately 400 feet to the southwest.
CS-115	Deerfield Rd	Kerrick	A vacant automotive service building was located adjacent to the west of the crossing. The condition of the building indicated that it likely has been out of use for decades.
CS-118	Range Line Rd	Duquette	An active Gas Station (Duquette General Store) was located approximately 250 feet to the west of the crossing. Other nearby businesses included a former post office, tavern, and event hall.

Crossing Signal	Cross Street	City	Current Site Conditions
CS-124	Main St.	Nickerson	A single building with a communication tower was located adjacent to the north of the crossing and parallel to the railroad tracks. Piles of used ballast, rail, railroad ties, and concrete pipes were noted at this site. No storage of chemicals was present outside the building.
CS-159	N 58 th St.	Superior	A mix of residential and commercial properties was located nearby. Storage garages and Viant Crane were located adjacent to the southeast and northwest, respectively.
CS-161	N 28 th St.	Superior	Undeveloped areas were located to the west of the crossing. An apartment building, residential homes, restaurant, and a plumbing and heating business were located to the east.
CS-168	S 37 th Ave W	Duluth	This crossing was located in a heavily developed area with industrial properties in all directions. The crossing was located at the entrance to Dock 5. Multiple tenants, one of which included a roll off and disposal company, was located in the building adjacent to the west.

4.2 Interviews

For this study, no site-specific interviews were performed. Interviews should be conducted during parcel-specific Phase I investigations for property acquisition.

5. Data Gaps and Data Failures

The ASTM E1527-13 guidance requires a list of data gaps encountered during the investigative process that may affect the validity of the conclusions drawn by the environmental professional. The ASTM E1527-13 guidance also requires that the environmental professional assess the relative importance of the data gaps. Generally, gaps are related to the availability of historical data sources for specific sites of concern. The environmental professional uses multiple historical data sources as a method to provide coverage for data gaps. Historical information is collected on a recurring basis, and the passage of time between data sets may or may not constitute a significant gap in data coverage. For this study, the following items may constitute a data gap as defined by ASTM:

- Review of additional records or historical information from BNSF specific to releases and clean-up along the NLX Project
- Detailed agency file reviews of nearby listings identified in the database records search
- Site access to the entire NLX Project
- Lack of interviews during this stage of investigation
- Lack of environmental liens and AUL information

These data gaps are not considered to be significant for the planning-level information provided in this corridor-level Limited Phase I ESA. The lack of historical BNSF records and direct access to the proposed NLX Project would be considered a significant data gap if this investigation was intended to be a fully conforming Phase I ESA. However, other sources of information (for example, database search and aerial photos) discussed in this report were sufficient to highlight areas of potential contamination that could impact the NLX Project. The absence of site-specific interviews is not significant for this corridor-level Limited Phase I ESA. However, interviews with site representatives will be required at a later date for site-specific Phase I ESAs (to be completed prior to acquisition and construction).

6. Findings, Conclusions and Recommendations

6.1 Findings

A Limited Phase I ESA was conducted in support of the Tier 2 EA evaluating the NLX Project from Minneapolis to Duluth. The findings made following the investigative process outlined in the body of this report are presented below.

6.1.1 Geologic Setting

The geology of the NLX Project is characterized by unconsolidated glacial deposits from both the Des Moines and Superior Lobes overlying Precambrian to Paleozoic Age bedrock. The thickness of the glacial cover generally ranges from 50 to 350 feet, with decreasing thicknesses and extensive bedrock exposures to the north and along major rivers. Groundwater is mainly encountered in Quaternary sand and gravel deposits throughout the NLX Project. The unconfined surficial aquifer commonly occurs within 10 to 30 feet of the land surface, and generally follows the topographic gradient toward nearby surface water features. Near-surface groundwater may also be more than 120 feet deep near the bluffs of deeply incised river valleys, such as the Mississippi, Kettle and St. Croix Rivers.

6.1.2 Regulatory Database Results

EDR was subcontracted to conduct an environmental records search of federal, state and local files for the proposed stations, maintenance and layover facilities and new bridges (Fridley only). The Environmental Professional assessed all the listings in the search radius for each Key Location and determined Sites of Concern based on the type of listing (whether it could indicate subsurface contamination), location of the listing, and consideration of multiple listings for one location/business. The Sites of Concern for each Key Location are detailed in Table 3-2 through Table 3-8 in the body of the report. The following table summarizes the number of database listings within the search radius of each Key Location, as well as how many of those listings were considered Sites of Concern:

Table 6-1: Summary of Results within ASTM Search Distances

Key Location	Total Listings in the Search Radius	Listings within the construction limits of the Key Location	Sites of Concern in the Search Radius
Target Field	988	1	8
Coon Rapids	85	1	1
Cambridge	180	0	2
Hinckley	73	0	0
Sandstone	99	0	7
Superior	205	1	3
Duluth	781	4	13
New Bridge Construction (Fridley)	43	0	3

A limited review of database listings adjacent to sixty-eight crossing signal upgrades requiring subsurface excavation and the two new bridges in Isanti County was conducted using the MPCA WIMN database. Of the sixty-eight crossing signal upgrades, eighteen locations had Sites of Concern that indicated a higher potential for contamination, which warranted further field review during the site reconnaissance. Sites of Concern were also identified at both the Isanti County new bridges. Further details regarding the Sites of Concern for the Isanti County new bridges and crossing signal upgrades are provided in Sections 4.1.8 and 4.1.9, respectively. The locations of potential Sites of Concern for crossing signals and the Isanti bridges are shown in **Attachment D**.

6.1.3 Historical Data Review

Historical use information was reviewed to develop an understanding of previous land uses near the NLX Project and to assess these uses for potential hazardous materials impacts that may affect the NLX Project. Historical sources that were readily available and reviewable, and likely to provide useful information, were reviewed for this Limited Phase I ESA. Given the large and primarily rural nature of the NLX Project, historical review was limited to the Key Locations (with the exception of crossing signal upgrades and Isanti County New Bridges). A more detailed discussion of historical land use by Key Location is provided in Table 3-9 in the body of the report. The following table summarizes historical land use of each Key Location:

Table 6-2: Summary of Historical Review

Key Location	Historical Land Use
Target Field Station	This location has been a railroad corridor since at least 1885. It was once a freight depot with numerous businesses nearby. The amount of railroad activity (and tracks) decreased during the 1970s. The surrounding area has been a highly developed urban area for at least 100 years.
Coon Rapids Station	This location was formerly an undeveloped field with a farmstead and residential houses located adjacent to the east of existing railroad tracks. The farmstead and one of the houses were removed in the 1970s and late 1990s to early 2000s, respectively. Surrounding land use was mainly agricultural until the 1970s and 1980s, when development of businesses to the northeast and southwest began.
Cambridge Station	This location was once an undeveloped field adjacent to the west of the railroad tracks until 1978. Development of the area into a government building and commercial strip mall began in the mid-1980s. The surrounding area was developed with similar commercial land uses in the same timeframe.
Hinckley Station	This location was an undeveloped field adjacent to the west of the railroad corridor since at least 1939. Development of this area into a mix of residential, commercial, and public land use began in the late 1970s.
Sandstone Layover and Maintenance	This location has been a railroad corridor since at least 1914. Up to 11 tracks and a roundhouse were once present here. A mix of industrial and commercial businesses has been continually present on adjacent properties to the railroad corridor since at least the early 1900s.
Superior Station	This location is located along a very large railroad yard that extends several miles from north to south. It sits in a portion of the yard that had been vacant since the 1970s. Prior to that, a siding of several tracks leading into a former roundhouse (adjacent to the east) was present. This location had been a part of the railroad yard since at least 1915. The active portion of the yard is located adjacent to the west, along with BNSF administrative and maintenance buildings. A commercial district has been located to the east since approximately the 1980s.
Duluth Station and Layover	The station and the layover construction limits had been developed and continually used for railroad-related activity since at least the late 1800s. The layover area was once covered with multiple tracks that extended between the Depot to the east and a large railroad yard to the west. Both the layover and station construction limits have been located adjacent to industrial and commercial businesses throughout the historical coverage period. Recent developments near the station include entertainment (Bayfront), arts, hospitality, and retail businesses. Industrial businesses remain near the layover construction limit.
New Bridge Construction (Fridley)	The new bridges are located along an existing railroad corridor that had been present since at least 1902. The bridges are located less than ½ mile apart in an area of Fridley that was once agricultural with residential development increasing until the 1960s and adjacent commercial/manufacturing businesses during the 1970s and 1980s.

6.1.4 Site Reconnaissance

The Environmental Professional reviewed Key Locations located along the NLX Project on foot and by car on July 6 and Oct. 20, 2016. The site reconnaissance was conducted by accessing public roadways and public areas

located adjacent to the NLX Project. Access to BNSF properties and right of way was not permitted during the site reconnaissance. However, the majority of the Key Locations were readily observable from adjacent public areas and crossings. All of the proposed stations, maintenance and layover facilities and new bridges in Fridley were located in developed, urban to small urban areas. The following table summarizes the current conditions noted at each Key Location reviewed:

Table 6-3: Summary of Site Reconnaissance

Key Location	Current Site Conditions
Target Field Station	This location was occupied by a Northstar Commuter Rail station and railroad tracks. The surrounding properties included Target Field, parking lots and ramps, warehouses, converted warehouses, and retail businesses. An unmarked 100-gallon plastic tote was noted in the adjacent Ford Office Building parking lot.
Coon Rapids Station	This location consisted of a long lot located adjacent to the east of the railroad corridor. The land was covered with a mix of trees and tall grass. A small single story building (boxing gym) was located on the south side off Foley Blvd. The north end of the construction limit abutted a communication tower and electrical substation. No storage of hazardous materials or petroleum products was noted. Surrounding properties included a park and ride and several warehouse-type buildings for various businesses.
Cambridge Station	This location included portions of an existing strip mall currently occupied by the city government center. The remainder of the construction limit covered portions of the shared asphalt parking lot for the strip mall on the west side and a narrow strip of land located on the back side of the strip mall used for additional parking and deliveries. No storage of hazardous materials or petroleum products was noted. Surrounding properties were commercial and retail development to the west and agri-businesses and manufacturing on the east side of the railroad corridor.
Hinckley Station	This location included land mainly occupied by the City of Hinckley maintenance building. The southern portion of the construction limit included a lawn and trees associated with a church situated directly to the south. A pile of scrap metal and appliances, compost piles, and city vehicles were noted at this location. No outdoor storage of chemicals or indications of storage tanks were noted. Surrounding properties included the high school, bus parking lot, apartment building, electrical substation, and church.
Sandstone Layover and Maintenance	This location consisted of a vacant strip of land nearly one mile long and located along the railroad corridor. This location was developed with railroad tracks and signals. No buildings or large structures were present on site. Piles of scrap metal, concrete plates, railroad ties, and wood pallets associated with railroad maintenance/construction activity were noted within the construction limit. No storage of hazardous materials or petroleum products was noted. Surrounding land use included gas stations, lumberyard, and other commercial and retail businesses.
Superior Station	This location consisted of a vacant portion of a large rail yard that was overgrown with vegetation. Worn trails used for vehicle access to the railroad property were present. No storage of hazardous materials or petroleum products was noted. Surrounding properties included a former waste management facility, gas station, bulk oil terminal, aggregate company, and lumber company.

Key Location	Current Site Conditions
Duluth Station and Layover	This location included construction limits for the station (northeast end) and layover facility (southwest end). The station construction limits surrounds the existing Depot building. The construction limit for the station included portions of an existing parking ramp and railroad corridor that was used for the North Shore Scenic Railway. No storage of hazardous materials or petroleum products was noted. Surrounding properties included arts, hospitality, and retail businesses to the north and the I-35 corridor and Bayfront Entertainment District to the south. The construction limit for the layover facility consisted of a vacant strip of land between the I-35 corridor and Railroad St. No structures or tracks were present. Surrounding properties included industrial businesses and shipping piers located along the length of Railroad St. An active railroad yard was located to the west.
New Bridge Construction (Fridley)	This location consisted of land located along an active railroad corridor and next to existing railroad bridges over Mississippi St. and Rice Creek (located approximately ½ mile apart). The surrounding area was mainly a mix of residential properties, public park, and a place of worship. The Rice Creek Regional Trail runs under the bridges at Rice Creek and parallels the bridge at Mississippi St. Manufacturing businesses and a bus garage were located adjacent to the railroad corridor.

The new bridges in Isanti County were not included in the site reconnaissance, since the bridges were identified after the site reconnaissance was conducted.

Eighteen crossing signals with identified Sites of Concern following the database review were visited along the NLX Project on July 6, 2016. The crossing signals reviewed included:

Table 6-4: Summary of Site Reconnaissance of Crossing Signal Upgrades

Crossing Signal	Cross Street	City	Current Site Conditions
CS-11	Foley Blvd	Coon Rapids	The proposed Coon Rapids Station is located adjacent to the northeast.
CS-28	191 st Ave	Cedar	Main St. was located approximately 150 ft. to the east. Small businesses located on the east side of Main St. A county recycling center with an outdoor used oil disposal AST inside a shallow containment basin was located approximately 300 feet southeast.
CS-49	11 th Ave SW	Cambridge	A former gas station and automotive sales lots were located adjacent to the north.
CS-51	Emerson Ave N	Cambridge	A tank manufacturing and engineering facility with a laydown yard was located adjacent to the east of the crossing.
CS-53	39 th Ave NE	Cambridge	A Great River Energy substation and peaking plant was located adjacent to the southeast of the crossing. A MnDOT materials yard was located 250 ft. to the southwest.
CS-56	CSAH 6	Cambridge	A large lumber/mulch company was located approximately 200 ft. to the southwest.
CS-57	369 th Ave NE	Cambridge	Two former gas stations (massage and boat storage sites) and bulk anhydrous ammonia site were located within 200 feet of the crossing.
CS-65	CSAH 4	Braham	A natural gas lift station was located adjacent to the southeast of the crossing.

Crossing Signal	Cross Street	City	Current Site Conditions
CS-67	Central Dr.	Braham	Adjacent commercial businesses included restaurants and retail shops. A Sinclair gas station was located approximately 500 feet to the north.
CS-70	115 th Ave	Braham	A concrete vault manufacturer was located over 500 feet to the east. No other businesses or development was present near the intersection.
CS-80	1 st St SE	Henriette	Houses with poorly maintained yards, including items such as wood pallets, trailers, tires, etc., were located nearby and adjacent to the crossing. A former/vacant gas station was noted approximately 600 feet north on Main St. Overgrown vegetation covered the entire site.
CS-85	3 rd St.	Brook Park	House with several vehicles and outdoor storage of items was noted adjacent to west of the crossing. An active Tesoro Gas Station was located approximately 400 feet to the southwest.
CS-115	Deerfield Rd	Kerrick	A vacant automotive service building was located adjacent to the west of the crossing. The condition of the building indicated that it likely has been out of use for decades.
CS-118	Range Line Rd	Duquette	An active Gas Station (Duquette General Store) was located approximately 250 feet to the west of the crossing. Other nearby businesses included a former post office, tavern, and event hall.
CS-124	Main St.	Nickerson	A single building with a communication tower was located adjacent to the north of the crossing and parallel to the railroad tracks. Piles of used ballast, rail, railroad ties, and concrete pipes were noted at this site. No storage of chemicals was present outside the building.
CS-159	N 58 th St.	Superior	A mix of residential and commercial properties was located nearby. Storage garages and Viant Crane were located adjacent to the southeast and northwest, respectively.
CS-161	N 28 th St.	Superior	Undeveloped areas were located to the west of the crossing. An apartment building, residential homes, restaurant, and a plumbing and heating business were located to the east.
CS-168	S 37 th Ave W	Duluth	This crossing was located in a heavily developed area with industrial properties in all directions. The crossing was located at the entrance to Dock 5. Multiple tenants, one of which included a roll off and disposal company, was located in the building adjacent to the west.

6.2 Conclusions

The data gathered for this Limited Phase I ESA support the following general conclusions regarding potential for contamination at Key Locations within the NLX Project:

- The entire NLX Project has been used as a railroad corridor since at least the late 1800s according to the historical review. The amount of rail activity has diminished over time, with the height of use and amount of infrastructure occurring during the mid-1900s. Areas of residual contamination due to historical spills and releases along the entire length of the track and right of way are likely, based on the corridor's consistent use as a rail corridor for decades.
- The likelihood of substantial amounts of contamination that could impact the NLX Project (both during construction and property acquisition) was evaluated and Key Locations were ranked based on factors such as historical land use and surrounding land use, the number and type of database listings, documented contamination, and observations made during the site reconnaissance. Based on these factors, the following rankings were assigned to Key Locations, which includes proposed NLX Project infrastructure:
 - High Risk Locations – All or portions of these locations are within railroad right-of-way and have a history of known contamination associated with them or with directly adjacent properties. Numerous listings indicating contamination and multiple contaminants of concern (VOCs, PAHs, metals, PCBs, petroleum, etc.) have been documented in these areas. High risk locations for the NLX Project include the following:
 - **Target Field Station.** This proposed station is located in a highly developed, urban area. Historical review indicates that substantial amounts of railroad activity were present from the late 1800s through the 1970s. This location is still a railroad corridor (Northstar Commuter Rail Station) and surrounding industrial and commercial businesses remain. A total of 988 listings were identified in the database search radius; evaluation of these listings indicated that there are nine Sites of Concern located on or near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
 - **Sandstone Maintenance Facility.** This proposed maintenance and/or layover facility is mostly vacant land adjacent to an active railroad. It was once a rail yard/large siding with a roundhouse and adjacent industrial businesses (i.e. creosote plant) from the early 1900s through the 1970s. A total of 99 listings were identified in the search radius; evaluation of these listings indicated that there are seven Sites of Concern near the maintenance facility construction limits. Continuous railroad activity dates back to at least the early 1900s. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
 - **Superior, Wisconsin Station.** This proposed station is a vacant railroad corridor that was once an active portion of the overall rail yard in Superior. Numerous tracks and a roundhouse were present from the early 1900s through the 1970s, when rail activity at this location was ceased.

A total of 205 listings were identified in the database search radius; evaluation of these listings indicated there are four Sites of Concern located on or near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.

- **Duluth Station and Maintenance and/or Layover Facility.** This proposed station and layover facility is located in a highly developed, urban area with a history of industrial land uses. Historical review indicates that substantial amounts of railroad activity have been present since the late 1800s. The station construction limits consists of parking areas and portions of a rail corridor surround the Depot in downtown Duluth. The layover facility construction limits is a vacant strip of land that lies adjacent to industrial businesses along Railroad St. near Duluth's Bayfront area. A total of 781 listings were identified in the database search radius; evaluation of these listings indicated there are seventeen Sites of Concern located on or near the station and layover facility construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is considered high.
- **Medium Risk Locations –** These properties are located mostly outside the railroad right-of-way, but have a history of contamination associated with them or with adjacent properties. Non-agricultural or residential development of these properties has occurred only within the last 50 years. The contaminants of concern identified for each location is typically petroleum based. Medium risk properties for the NLX Project include the following:
 - **Coon Rapids Station.** This station location lies in a Twin Cities suburb and is currently a vacant parcel adjacent to the railroad corridor with several commercial businesses nearby. Historical review indicates that it was a farmstead and commercial development in the area occurred during the 1970s to 1980s. A total of 85 listings were identified in the database search radius; evaluation of these listings indicated there are two Sites of Concern located on or near the station construction limits. An active SRS and VIC site with soil and groundwater contamination was identified nearby. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.
 - **Cambridge Station.** This station location is within a commercial district of the City of Cambridge and lies adjacent to the railroad corridor. A strip mall with a government center is located here. Historical review indicated that commercial development did not begin until the 1980s. A total of 180 listings were identified in the database search radius; evaluation of these listings indicated there are two Sites of Concern located near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.
 - **New bridge construction in Fridley (at Mississippi Street and Rice Creek).** These new bridges are located along a narrow railroad corridor that traverses a mostly residential area in Fridley. Several manufacturing businesses and a bus garage are located nearby both bridge locations. Historical review indicates adjacent commercial/manufacturing businesses were developed during the 1970s and 1980s. A total of 43 listings were identified in the database search radius; evaluation of these listings indicated there are three Sites of Concern located near the new

bridge construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is moderate.

- Low Risk Locations – These areas are located outside the railroad right of way and have been developed with only residential or light commercial land uses. Documented releases or potential offsite contamination from adjacent sources is not associated with the property. Minor releases may have occurred onsite, but are likely *de minimis* or highly localized. Low risk properties for the NLX Project include the following:
 - Hinckley Station. This station location is sited on portions of a city maintenance property and church property. It does not have a history of rail use. A school bus parking lot, substation, and residential properties are located on adjacent lots. No storage and/or use of hazardous materials or petroleum products were noted during the site reconnaissance. A total of 73 listings were identified in the database search radius; evaluation of these listings indicated there are no Sites of Concern located near the station construction limits. Based on these factors, the likelihood of encountering contaminated materials during construction is low.
- The proposed new bridges in Isanti County are located in a less developed area than the new bridge construction in Fridley (at Mississippi Street and Rice Creek). Proposed soil disturbance and overall bridge construction limits would be considerably less because these two areas span a drainage ditch and small stream. Adjacent land use includes agricultural fields, a recreational facility, a waste water treatment plant and a biodiesel plant. The likelihood of encountering contamination during construction that would require offsite disposal is uncertain, but can be addressed in a Contaminated Materials Management Plan that would guide small-volume excavation protocols.
- Crossing signal upgrades would require a minimal amount of soil disturbance. Proposed depths of disturbance are not likely to exceed 5 feet below ground surface. Adjacent and nearby commercial businesses such as gas stations, electrical substations, motor repair facilities, tank sites, and manufacturers were identified in the limited database review, aerial review and site reconnaissance. The likelihood of encountering contamination during construction that would require offsite disposal is uncertain, but can be addressed in a Contaminated Materials Management Plan that would guide small-volume excavation protocols.

6.3 Limited Phase I ESA Recommendations

The findings included in this report are the result of investigative procedures outlined in the Limited Phase I ESA methodology in Section 1.2. These findings should be reviewed in the context of the limitations outlined in Section 1.3, Assessment Limitations. Further investigation should be performed in the form of targeted Phase I ESAs (once funding is secured) in areas of substantial soil disturbance (that is, stations, maintenance and layover facilities and new bridge construction) and at properties slated for acquisition (in accordance with MnDOT right of way policies and procedures).

Further, additional studies following the Phase I ESA could include Phase II drilling and sampling projects to verify or refute the actual concentrations and locations of subsurface impacts prior to construction. If the Phase I/II ESA efforts verify that contamination is present in actionable concentrations, an identified process known as environmental construction monitoring and a Contaminated Materials Management Plan may be implemented during construction as a proper method of handling waste material and providing protection for construction workers.

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7. Signatures and Qualifications

HDR makes the following statement regarding qualifications of its personnel, as required by the ASTM E1527 - 13 guidance, parts 12.13.1 and 12.13.2. We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in 40 CFR 312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

The preceding report has been prepared in general conformance with standard industry practice for performance of environmental site assessments and includes the applicable portions of the investigation procedures codified in ASTM E1527 - 13, *Standard Practice for Environmental Site Assessments: Environmental Site Assessment Process*. The end user of this report (MnDOT) may rely on the contents, findings, and conclusions to be accurate within the limitations stated in this report and in the ASTM standard.



Hong T Spores, CPG
Senior Hydrogeologist



Kelly W. Kading, CPG
Senior Hazardous Waste Specialist

7.1.1 Qualifications of Environmental Professional of Record

This Phase I ESA was performed by the following HDR personnel:

Ms. Hong T. Spores, CPG, is a qualified environmental professional, as defined by ASTM Practice E 1527-13, and has more than 16 years of experience in the assessment and remediation of impacted properties and compliance with environmental regulations. She has a BS in Geology from the University of Minnesota and an MBA from the University of St. Thomas. Ms. Spores specializes in investigations of hazardous materials-impacted properties for public and private sector clients. She is highly knowledgeable of federal, state, and local environmental regulations and standards, along with environmental due diligence relating to real estate transactions. Her experience covers assessments ranging from agricultural properties to industrial facilities located in more than 15 states. Ms. Spores is also the upper-central region Phase I ESA lead for HDR.

Quality Assurance / Quality Control was performed by the following HDR Personnel:

Mr. Kelly W. Kading, CPG, HDR's environmental professional for this study as defined by ASTM and AAI, has more than 28 years of experience in assessment and remediation of adversely affected properties and compliance with environmental regulations. He has a BS in geology from Colorado State University and is a Certified Professional Geologist (#9173). He specializes in forensic investigation of hazardous materials-affected properties for municipal and state agencies as well as for commercial clients. His experience covers assessment of more than 4,000 properties, ranging from agricultural land to multigenerational industrial properties in 34 states and two foreign countries. He is highly knowledgeable of federal, state and local environmental regulations and standards, and has served on the National Board of Directors of the Academy of Certified Hazardous Materials Managers.

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8. References

- ASTM Practice E 1527-13, 2013, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. New Bridge Construction, 61 Mississippi St. NE, Minneapolis, MN 55432. Inquiry Number 4787283.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Cambridge Station 300 3rd Ave NE Cambridge, MN 55008. Inquiry Number 4731926.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Coon Rapids Station 9418 Foley Blvd NW Minneapolis, MN 55433. Inquiry Number 4731926.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Duluth Station/Layover 506 W Michigan St Duluth, MN 55802. Inquiry Number 4736406.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Hinckley Station 2nd St NE Hinckley, MN 55037. Inquiry Number 4731926.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Sandstone Layover/Maintenance 206 Main Street Sandstone, MN 55072. Inquiry Number 4736406.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Superior Station 1425 Oakes Ave Superior, WI 54880. Inquiry Number 4731926.
- Environmental Data Resources, Inc. 2016. Radius Map, Historical Aerial Photographs, Historical Topographic Maps, City Directories, and Fire Insurance Maps. Target Field Station N 4th Street Minneapolis, MN 55401. Inquiry Number 4731926.
- Minnesota Department of Natural Resources. 2016. Methods for Estimating Water-Table Elevation and Depth to Water Table, GW-04. Prepared by the Minnesota Department of Natural Resources, Ecological and Water Resources Division, County Geologic Atlas Program. April. Available online at http://files.dnr.state.mn.us/waters/groundwater_section/mapping/gw/gw04_wt.pdf.

Minnesota Geological Survey. 2013. Minnesota Geology Topics. Accessed June 23, 2016.
<http://www.mngeo.umn.edu/mngeology.htm>.

Minnesota Pollution Control Agency. 2016. What's in my neighborhood? Database.
<https://www.pca.state.mn.us/data/whats-my-neighborhood> . Accessed June 22-28, 2016.

National Park Service. 2015. Earth Science Concepts: Geology by Region. Accessed Aug. 23, 2016.
http://www.nature.nps.gov/geology/education/concepts/concepts_regional_geology.cfm.

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