Phase 1a Archaeological Investigation of the Freight Rail Relocation Corridor for the Southwest Corridor Transitway Project, Hennepin County, Minnesota

Prepared for

Metropolitan Council

Prepared by

SWCA Environmental Consultants

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FREIGHT RAIL RELOCATION CORRIDOR

This technical report supplements data presented in the *Phase Ia Archaeological Investigation for the Proposed Southwest Corridor Transitway Project, Hennepin County, Minnesota* (Harrison and Madson 2010). Since preparation of that document, potential future routes for freight rail traffic currently running along portions of proposed LRT segments 4 and A have been added to the scope of the DEIS and the Section 106 review. Relocation of this freight rail traffic to an existing freight rail corridor in St. Louis Park and Minneapolis and co-location of the freight rail with the proposed light rail are both being considered. This supplemental Phase 1a report addresses the Freight Rail Relocation Corridor (FRR). The co-location corridor was included in the analysis of Segments 4 and A in the 2010 Phase 1a report. Overlapping archaeological areas are included in Table 2 of this report.

The relocation of freight rail traffic would require track improvements to the existing Canadian Pacific Railway (CP) Bass Lake Spur, CP MN&S Spur, and the BNSF Railway (BNSF) Wayzata Subdivision in the Cities of St. Louis Park and Minneapolis (Attachment B: Figure 1). The freight rail traffic would be diverted from the current route necessitating upgrades and improvements to the FRR to accommodate increased loads and unit train frequency. A thorough analysis of the archaeological site potential along the FRR is warranted to understand any potential impacts (and ultimately adverse effects) to buried or near surface historic properties that may result from proposed upgrades and improvements.

The methodology for this Phase Ia archaeological investigation mimics that presented in Harrison and Madson (2010) for Task 1: an outline of the literature and map review supplemented by limited field review (2010: 2, see also Attachment A). This overview report summarizes the archaeological potential as identified through existing site and survey documents, historic maps, aerial photos analyzed in conjunction with visible indications of hydrological and topographic features. Background information, primarily in the form of historic and modern maps, was collected to characterize the archaeological potential along the FRR and to predict areas of archaeological sensitivity. On May 11, 2012 archaeologists from SWCA Environmental Consultants (SWCA), Archaeological Research Services (ARS), and Archaeo-Physics conducted a field review of the FRR to identify areas of archaeological potential.

METHODOLOGY

AREA OF POTENTIAL EFFECTS

The archaeological Area of Potential Effect (APE) for the FRR is based on the parameters established in the research design for cultural resource surveys for the project (Attachment A). The APE extends 100 feet on either side of current engineering alignments and includes the full width of the existing railroad right-of-way (ROW), which is generally 50 feet wide. The overall width of the APE is 250 feet.

On April 26 and 27, 2012 SWCA and ARS archaeologists reviewed files at the Minnesota Office of the State Archaeologist (OSA) and SHPO to identify information regarding

previously identified sites within the APE. No previously identified sites were identified during the review

A cartographic and aerial photo search was conducted to identify area of high precontact and contact-period archaeological potential as well as historical period sites from the 1850s to 1920. Maps also identified ground disturbing activities in the historic period that will have destroyed archaeological sites, eliminating areas from further study.

Map collections consulted were: the Minneapolis Collection of the Hennepin County Library, the collections of the Minnesota Historical Society, the Hennepin County Historical Society, and the Borchart Map Library at the University of Minnesota. In addition, digital maps from the U.S. Geological Survey (USGS) were consulted as well as General Land Office (GLO) maps and historic topographic maps.

The FRR alignment was overlain on historic maps dating from the 1850s to 1890s using geographic information systems (GIS) layers to identify specific high potential areas.

EXISTING CONDITIONS

The glacial moraine landscape of the FRR is underlain by clay soils and characterized by low-lying, poorly drained kettles that tend to form swamps and small ponds as well as small upland "knobs" and long upland ridges where better drainage favored human settlement (Borchart 1958). Archaeologically the most important existing condition of the corridor is that it falls along railroad ROWs that may have destroyed the integrity of any superficial archaeological features, while also protecting areas within the ROW from twentieth century development.

CONTEXTUAL BACKGROUND

The precontact and contact-period archaeological context has been previously prepared by Harrison and Madson (2010). Historic period contexts can be found in Goodson (2010, 2012), Roise et al. (2012), and Schmidt (2010).

The FRR has the highest potential to preserve precontact and contact-period materials near the margins of bodies of water. Historical archaeological materials representing rural subsistence farming from 1851-1870, diversified farming from 1870-1890, and exurban railroad and industrial development from 1890-1920, as well as the domestic elements related to these economies, are also expected within the FRR project area.

FIELD REVIEW

After identifying the areas with the highest potential to contain archaeological resources based on map and document research, the May 11, 2012 site visit clarified which areas retain integrity to preserve archaeological materials. Archaeologists reviewed construction impacts related to rail development, utilities, street and highway construction as well as housing developments. Visual inspection consisted of a windshield survey of the entire FRR. High probability area were also visited on foot and photographed for reference.

ARCHAEOLOGICAL SITE POTENTIAL

FREIGHT RAIL RELOCATION CORRIDOR OVERVIEW

The FRR is 3 miles long and encompasses three discrete rail lines (Attachment B: Figure 1):

- The CP Bass Lake Spur running east-west on the southern section which overlaps the previously studied area surrounding the proposed Louisiana Station;
- The MN&S section running roughly north-south from south of the CP line to the Iron Triangle, and;
- the BNSF alignment overlapping Segment A of the proposed Southwest Transitway near Cedar Lake.

Identification of areas of high probability for archaeological sites was based on past archaeological survey near the project area, models of Native American land use, and European American settlement patterns aided by historic maps of the project area and previous studies in Minnesota. These factors guided identification of parcels with the highest potential to contain intact archaeological resources from significant time periods.

Five areas with potential to contain archaeological resources are located within the FRR alignment APE (Attachment B: Figure 2). Two of these areas (LRT Area 4:e in Segment 1 and LRT Area A:h in Segment 3) were identified in the previous study (Harrison and Madson 2010). Three unique locations were identified in the FRR. These areas, FRR:a, FRR:b, and FRR:c are summarized below.

Table 1: FRR Corridor: Archaeological Areas Identified in Current Study

Area	Archaeological Potential	Total Acres/Acres in APE	Comments	Task 2 Inventory Methods
FRR:a	Historic Period	0.15/0.03	Domestic, Block 67	Non-invasive testing, maps
FRR:b	Historic Period	1.60/0.32	Hutchinson line railroad	Pedestrian survey, aerial photos
FRR:c	Precontact, Contact-Period	4.34/1.77	Brownie Lake	Pedestrian survey, shovel testing,
Total		6.09/2.12		

FRR:a, Block 67

The back lots of the two large houses built ca. 1898 on block 67 on Oak Street (now Cambridge) fall within the APE at the far southern end of the Freight Rail Relocation Corridor (Attachment B: Figure 3). These two large houses have a clear connection with late nineteenth century industrial/village factory workers who lived in the boarding houses surrounding the St. Louis Park Industrial Village and have potential to contain back lot archaeological features outside of the rail bed and within the APE. Non-invasive testing of the

paved areas and shovel testing of backyards of the houses at *FRR:a* should be undertaken to determine whether they contain intact archaeological features.

FRR:b, Hutchinson Branch Railroad

The Hutchinson Branch of the St. Paul and Pacific passed through the Iron Triangle in the late nineteenth century before the Minnetonka Cutoff was constructed north of Cedar Lake in the current BNSF location (Schmidt 2010, Wright 1873, Westby 1913) (Attachment B: Figure 4). The route, which was abandoned in the 1880s, is visible on twentieth century aerial maps and during the visual survey (Mark Hurd Aerial Surveys Inc. 1937: WN-10-849). It is recommended that the location of this section of the Hutchinson Branch of the St. Paul and Pacific rail line be identified and evaluated.

FRR:c, Brownie Lake

North of the existing BNSF tracks and west, south, and east of Brownie Lake there are relatively level, undisturbed areas within 300' of the current shoreline that have potential for precontact and contact-period archaeological materials (Attachment B: Figure 5).

Eliminated Areas

The poorly drained area south of the CP line in the Skunk Hollow was developed in the twentieth century for a variety of smaller light industrial and storage facilities. Due to evidence of cutting, filling and the absence of significant historical use, no further study is recommended. North of the CP line, the project area falls within former and current wetlands and the southern edge of the capped and sealed Golden Auto Lead Superfund Clean Up Site.

From the CP line to Highway 7 (formerly Highland) and continuing north to the St. Louis Park High School at Wooddale, the MN&S corridor passes though commercial and residential city blocks developed in nineteenth century. The narrow undeveloped railroad ROW represents only slivers of potential sites in front and side yards. In addition, the visual survey found that the ROW has been heavily modified by highway construction, railroad grading, underground utility lines linked to crossing barriers, fiber optics lines, and the bases of electrical towers. Further archaeological investigation is not recommended for this section of the alignment.

No high probability areas were identified in the map or field review from Wooddale Avenue to the Iron Triangle.

The Iron Triangle Area is shown within a marsh on maps from the 1854 GLO to the present. In addition, no structures are shown within the Iron Triangle Area on any maps from that period through the twentieth century. Because the entire area has been historically in a wetland, and there is no evidence of shoreline, knolls or islands within the APE, no further study is recommended for precontact and contact-period archaeology.

From the Iron Triangle Area east to Cedar Lake, historic maps from the 1850s to the present show two large marshes. Within St. Louis Park, no structures are visible on any of the early twentieth century maps and no roads intersect with the alignment of the Freight Rail Relocation Corridor. In addition to not being located in a high probability area, the current

topographic maps show that there has been extensive grading surrounding the existing BNSF track. High potential upland areas in this segment have been graded down to fill in wetlands and destroying their potential to preserve intact archaeological resources.

Map and historical research provides evidence of massive earthmoving immediately north of (and within) Cedar Lake from at least the 1880s to the 1920s to fill in former shoreline and level the area to make room for the rails. This location is a heavily modified industrial landscape; thus the area from the northern shore of Cedar Lake to the northern edge of the existing railroad roadway does not have the potential to contain non-railroad cultural materials.

AREAS PREVIOUSLY IDENTIFIED

Areas 4e-north and 4e-south

The section of the FRR on either side of Minnehaha Creek contains uplands overlooking the creek. It is well drained and, because of its proximity to fresh water, has the potential to have been used by settlers prior to railroad construction in the precontact, contact and early historic periods. The GLO map shows a squatter's home just north of the FRR in a similar location of uplands next to the creek; squatter's fields are drawn south of FRR (GLO 1853). This area was identified in the previous study as *Areas 4e-north* and *4e-south* and can be seen in Figure 2 (Harrison and Madson 2010).

Area A:h

The Cedar Lake Yard, consisting of a round house, machine shop, blacksmithing shop, car shop, store house, as well as some smaller unidentified frame structures, was built at the eastern terminus of the FRR (Benneche 1914: 58 Hopkins 1885: 31). This area was previously identified in Segment A as *Area A:h* and recommended for further study (Harrison and Madson 2010).

SUMMARY

This document provides an overview of the archaeological potentials within the FRR as currently defined. Additions or expansions to the project area should be subject to similar investigations.

Background information, primarily in the form of historic and modern maps, was collected to characterize the archaeological potential of the corridor and to predict areas of archaeological sensitivity. A one-day field review was conducted to visually check the identified areas for archaeological potential.

Three unique areas with potential to contain archaeological resources were identified in the FRR (Attachment B: Figure 2). Two areas within the study area (*Area 4:e* and *Area A:h*) were identified in a previous study (Harrison and Madson 2010). Results of both studies are summarized below.

Table 2: FRR with LRT survey co-locations: All Areas with Archaeological Potential

Area	Archaeological Potential	Total Acres/Acres in APE	Comments	Task 2 Inventory Methods
LRT *Area 4:e*	Precontact, Contact, Historic Periods	5/3	Upland surrounding Minnehaha Creek	Pedestrian survey, shovel testing
FRR:a	Historic Period	0.15/0.03	Domestic, Block 67	Non-invasive testing, maps
FRR:b	Historic Period	1.60/0.32	Hutchinson railroad	Pedestrian survey, aerial photos
FRR:c	Precontact, Contact-Period	4.34/1.77	Brownie Lake	Pedestrian survey, shovel testing,
LRT *Area A:h*	Historic Period	38/21	Railroad	Pedestrian survey, shovel testing
Total		49.09/26.12		

LRT survey areas from the previous study are shaded in this table.

AREAS RECOMMENDED FOR ARCHAEOLOGICAL SURVEY

Three unique locations within the FRR are recommended for further study.

- Attachment B: Figure 3 illustrates *FRR:a*, the backyard of two lots in Block 67 (.15 acres). In order to complete the site identification, pedestrian survey and non-invasive testing in this partially paved area is recommended to determine whether intact archaeological features such as sealed privy vaults are located within the two lots in the APE. The site boundaries can be defined using map data. Should further work be needed to fully evaluate the site for NRHP eligibility, subsurface testing should be utilized in conjunction with an in-depth literature search.

- Attachment B: Figure 4 shows *FRR:b*, a remnant of the Hutchinson Rail line in the Iron Triangle area (1.60 acres) should be documented. Pedestrian survey in conjunction with aerial photography to define boundaries is recommended for subsequent study. Should further work be required to fully evaluate the rail segment for NRHP eligibility, additional map and archival research should be combined with non-invasive testing.

- Finally, Attachment B: Figure 5 shows *FRR:c* (4.34 acres), north of the BNSF line and on the margins of Brownie Lake, which is also recommended for more intensive study. It is unclear how the landscape has been altered by railroad filling and park development. Additionally, drastic changes are known to have been made

to the lake level. A two-step approach is advised. In the first step, archival research should be undertaken to better understand historic-period alterations to the lake and its shoreline, especially within the APE. If this research suggests the area has precontact archaeological potential, a subsequent investigation should consist of shovel testing and pedestrian survey from the pre-industrial western lakeshore 300 feet to the west and from the eastern shore to the beginning of the road embankment to the east.

RECOMMENDED FUTURE INVESTIGATIONS OF IDENTIFIED AREAS

Archaeological investigations in the completion of the Phase I site identification phase of this segment should begin with of the creation of a refined APE developed in consultation with the MnDOT CRU to reflect any engineering changes. An updated literature review should be undertaken to identify results of new survey within the project area. Archaeological survey should consist of:

- Pedestrian survey of the areas with ground visibility;
- Shovel testing of the identified precontact and contact-period archaeological areas to a maximum of one meter in depth;
- Non-invasive sampling of those areas with potential to contain historical archaeological materials beneath pavement;
- Identification of industrial archaeological railroad features through visual survey, and;
- Digital photography, mapping and recordation of existing conditions.

Should any areas contain archaeological deposits potentially eligible to the NRHP, more formal archaeological testing should be conducted to determine archaeological integrity and information potential. More detailed contexts will be developed within which specific sites may be evaluated for their historical and cultural significance.

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ATTACHMENT A:

Southwest Transitway:
A Research Design for Cultural Resources

12 February 2010, updated 16 March 2010, 2 April 2010

Prepared by:
Charlene Roise (Hess, Roise and Company)
Christina Harrison (Archaeological Research Services)
Mike Justin, Mike Madson, and Joe Trnka (HDR Engineering, Inc.)

Southwest Transitway:
A Research Design for Cultural Resources
12 February 2010, updated 16 March 2010, 2 April 2010

Prepared by
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INTRODUCTION

The Hennepin County Regional Rail Authority is proposing to construct the Southwest Light Rail Transit (SWLRT) facility, linking the Intermodal Station in downtown Minneapolis with the central business area in suburban Eden Prairie. The line is located within the cities of Minneapolis, St. Louis Park, Hopkins, Minnetonka, and Eden Prairie.

The Federal Transit Administration (FTA) has determined that the proposed project is an undertaking as defined by the National Historic Preservation Act (NHPA) and is subject to the provisions of Section 106 of the NHPA. Section 106 requires that federal agencies take historic properties into account as part of project planning. The Cultural Resources Unit (CRU) of the Minnesota Department of Transportation (MnDOT) is acting on behalf of FTA for many aspects of the Section 106 review process for SWLRT. The FTA has also determined that the SWLRT is subject to the National Environmental Policy Act (NEPA) and a Draft Environmental Impact Statement (DEIS) is being prepared by Hennepin County under the direction of the FTA.

Through the NEPA scoping process, four build alternatives were identified. To streamline subsequent analysis, these alternatives were divided into five segments. The following table, which was included in the draft "Southwest LRT Technical Memorandum No. 9: Environmental Evaluation" (September 9, 2009), outlines the segments that are associated with each of the alternatives:

Alternative	*Segments*
LRT 1A	1, 4, A
LRT 3A	3, 4, A
LRT 3C-1 (Nicollet Mall)	3, 4, C-1 (Nicollet Mall)
LRT 3C-2 (11^{th}/12^{th} Street)	3,4, C-2 (11^{th}-12^{th} Streets), C-2A (Blaisdell Avenue), C-2B (1^{st} Avenue)

Segment 1 extends northeast from a station in Eden Prairie at TH 5 along a former rail corridor owned by the Hennepin County Railroad Authority (HCRRA) to a station at Shady Oak Road, on the border between Minnetonka and Hopkins.

Segment 3 creates a new corridor, running east from a station at Mitchell Road in Eden Prairie and turning northerly to terminate at the Shady Oak Station.

Segment 4 follows an existing rail corridor east-northeasterly from the Shady Oak Station through Hopkins and Saint Louis Park to the West Lake Station in Minneapolis, near that city's western border.

Segment A continues northeast from the West Lake Station, mostly using an existing rail corridor, to the Intermodal Station on the western edge of downtown Minneapolis.

Segment C also begins at the West Lake Station, traveling east along a former rail corridor (now the Midtown Greenway), north along one of several alternative courses under and on city streets, to and through downtown Minneapolis, and ultimately ending at the Intermodal Station or South Fourth Street. (For the purpose of this cultural resources assessment, all of the "C" variations will be considered as a single group.)

It should be noted that the above segments overlap at three points: the Shady Oak Station, the West Lake Station, and the Royalston/Intermodal Stations. When the results of the cultural resource surveys are sorted by segment, there will be redundancy in the findings at these three points. This redundancy is inevitable if the effects of each segment are to be analyzed. When a single alternative is selected, it will be necessary to eliminate duplicated properties to obtain an accurate representation of the effects of that alternative.

PROPOSED METHODOLOGY FOR ARCHAEOLOGICAL RESOURCES SURVEY

Christina Harrison, Archaeological Research Services
Mike Justin and Mike Madsen, HDR Engineering

This work plan outlines a program to identify archaeological properties which meet the criteria of the National Register of Historic Places in the project's area of potential effect (APE), to be used in assessing potential effects to those properties. Three primary tasks comprise the work plan. First, in order to provide a uniform assessment of available data across the five project segments discussed in the DEIS, the project team will prepare a report (by project segment within a broad APE) to include: results of the literature search, an archaeological probability assessment, and a field survey strategy (Task 1). It is expected that a limited amount of field investigation/sampling may occur as part of this task depending upon the weather. Second, an archaeological inventory/evaluation of the selected alternative will be completed, using a refined APE based on proposed construction (Task 2). Finally, a report of the field investigations of the selected alternative and an assessment of effects will be prepared (Task 3).

Task 1 will involve archaeologists from both HDR and ARS. Support will be provided, as needed, by Hess Roise research staff as well as by geomorphologists and other paleoenvironmental experts provided by HDR. Division of responsibilities will partly depend on what survey needs are identified by the background research, but primary responsibility for precontact and contact period archaeology will rest with Christina Harrison (ARS) and Michael Justin (HDR), and for historic archaeology with Michael Madson (HDR). The personnel for Tasks 2 and 3 are pending.

The survey will be conducted in accordance with all federal, state, and local requirements, including the Minnesota Field Archaeology Act and the Minnesota Private Cemeteries Act.

Area of Potential Effect (APE)

The APE for archaeological resources is generally defined as the anticipated limits of construction activities. At this stage in the project development, factors influencing those limits have not yet been fully identified. The APE, starting with a broad area at first, will be refined as the engineering design advances.

For Task 1, the APE for the literature search and probability assessment will be based, as appropriate, on the project limits as defined in the project engineering drawings used to prepare the DEIS. This will include the full width of existing railroad right-of-way corridors as well as the area within 100 feet on either side of the current engineering alignments. The APE near station areas also includes any undeveloped and/or vacant property within 500 feet that could potentially be utilized for construction/development activities. Depending on the station location, these may include open, green spaces (particularly in suburban areas) and paved parking lots (particularly in urban areas).

If the literature search/probability assessment identifies potentially significant historic features or high probability areas immediately adjacent to the above-referenced APE parameters, and if the significance of potential sites in these areas is expected to relate to National Register criteria A, B, and/or C, the APE for the field strategy for the Phase I-II survey may be adjusted to include these locations.

During Task 2, the APE will be reviewed in light of more detailed engineering plans. Throughout the design phase of the project, the adequacy of the APE will be periodically evaluated and expanded or retracted as necessary as project elements are added or modified. The survey report specified in Task 3 will provide a clear delineation of the surveyed APE, including all additions, so that the adequacy of survey efforts can be readily determined when project changes are proposed.

It should be noted that, generally, the APE for archaeological resources is a smaller area located within the APE for history/architecture resources.

Task 1. Report of Archival Review/Site Probability/Field Strategy

This task will uniformly represent the readily available information across the five project segments discussed in the DEIS. In general the report will be a desktop analysis of existing archaeological research data supplemented by a discussion of probability for previously unidentified archaeological properties. Field inspections may be utilized to confirm existing conditions, particularly to inform the discussion on field survey strategies.

The desktop analysis will utilize documents on file at the State Historic Preservation Office (SHPO) and the Office of the State Archaeologist (OSA). Historic maps and aerial photographs, local histories, and other archival information on file at the Minnesota Historical Society, the Borchert Map Library (at the University of Minnesota), and local libraries and historical societies may also be reviewed.

The task will review:

- archaeological survey reports on file at SHPO, OSA and other repositories in order to establish what segments of the project routes have already been inventoried according to current standards;
- known archaeological sites and/or (if applicable) recommendations/confirmations of NRHP eligibility;
- relevant USGS topographic maps and soil surveys as well as any Mn/Model information and other environmental and paleoenvironmental data pertinent to the assessment of pre-contact archaeological site probability, including land use histories;
- Historic maps and aerial photographs to identify localities with historic-period archaeological site potential.

A preliminary field review will be conducted. The survey team will document visible indications of topographic and hydrological features as well as past and current land use with concomitant loss of soil integrity. The information from field observations will be combined with the data gathered during the archival review to propose archaeological site probability along the five segments.

Pre-contact and historic-period contexts will be briefly reviewed, with a focus to inform the discussion of site types and assessment of probability. The probability assessment will be organized by the five project segments (1, 3, 4, A, and C). For each of the five segments the report will include:

- a general description of the APE;
- a discussion of previous surveys and previously identified sites;
- a discussion of historic site types and the associated conditions that may indicate a historic property;
- a discussion of archaeological probability (for pre-contact/contact period and historic-period), and;
- a survey strategy and methods, including specific places targeted for field investigation.

The survey strategy for precontact and contact period evidence will be guided by Native American and early Euro-American settlement and land use patterns identified by previous archaeological investigations in the vicinity including, for example, the 1992-1994 city-wide cultural resource survey of Eden Prairie, the corridor surveys conducted for Trunk Highway 212 and Trunk Highway 12, and a number of smaller scale compliance surveys conducted within the Nine Mile, Minnehaha and Purgatory Creek watersheds.

The results of Task 1 will be summarized in the DEIS.

Task 2. Inventory/Evaluation (Phase I-II) Survey

For the Inventory/Evaluation survey, the APE will be refined to reflect the updated engineering design. That refined APE will be surveyed in a manner consistent with the recommendations presented in the Task 1 report. Field methods outlined in the Minnesota SHPO and MnDOT CRU guidelines will be generally followed; any exception, as well as more detail specific to the existing conditions along each segment, will have been documented in the Task 1 report.

In the case of precontact/contact period Native American evidence, the field sampling will involve standard methods for identification and the preliminary assessment of horizontal and vertical site dimensions, integrity, and National Register potential. In addition, the survey may utilize targeted geomorphological testing and analysis in areas likely to feature deeply buried archaeological evidence.

Artifacts will be collected and analyzed in a manner consistent with contemporary standards. Artifacts from private property will be collected with written permission of the landowner. Historic period artifacts will only be collected if they appear to represent a potentially significant archaeological property.

Archaeological sites determined to have National Register potential will then require more comprehensive Phase II formal testing. As the Phase I review more than likely will have identified a wide range of site types associated with highly varied environmental settings and precontact to historic period contexts, the scope, research questions, field and analytic needs will be more appropriately defined at that stage of the investigation.

Task 3. Analysis and Reporting

A technical report of the Phase I and Phase II investigations, including the methodology, field work results, and recommendations, will be prepared in accordance with the guidelines of MnDOT's CRU, the Secretary of the Interior's Standards for Identification and Evaluation, and other applicable state and federal guidelines. This includes submittal of Geographic Information Systems (GIS) data per the CRU guidelines. All sites documented during the survey will be recorded on new or updated Minnesota Archaeological Site Forms.

Collected artifacts will be processed and analyzed in compliance with the survey guidelines of the SHPO and the Mn/DOT CRU. Artifacts will be curated at an approved facility as stipulated in the consultant's archaeology license.

PROPOSED METHODOLOGY FOR HISTORY/ARCHITECURE RESOURCES SURVEY

Charlene Roise, Hess, Roise and Company

Area of Potential Effect (APE)

Generally, the APE for history/architecture resources extends 300 feet on either side of the centerline of the alignment of each corridor. Around each station, the APE includes property within a quarter-mile radius. This area addresses anticipated project-related infrastructure work and reasonably foreseeable development.

The APE is illustrated in maps of the five project segments. Exceptions to the parameters outlined above include the following:

- The APE for the Intermodal Station (in segments A and C) includes all property within the boundaries adopted for the "Downtown Minneapolis Transit Hub" Environmental Screening Report (October 28, 2009 review draft) prepared for Hennepin County by Kimley-Horn and Associates. The area shown in the report is extended northeast of Washington Avenue to and across the Mississippi River to include the first tier of properties on Nicollet Island, to provide adequate APE coverage for the three-block potential station area and related developments such as rail storage yards. This area addresses infrastructure work associated with the SWLRT project as well as cumulative effects related to the development of the Intermodal station. (See below for discussion about splitting responsibility for survey of this area between the SWLRT project and the Intermodal Station project.)

- The APE for the 4th Street, 8th Street, 12th Street, Harmon Place, Hawthorne Avenue, Lyndale, and Uptown Stations (in segment C) includes the adjacent blocks in all directions from the station. This area is proposed for the stations in the more densely-built urban area, in comparison to the larger quarter-mile radius for other stations in outlying areas.

- The APE for the proposed tunnel area under Blaisdell, Nicollet, or First Avenues, including the 28th Street and Franklin Stations (in segment C), extends from one-half block west of Blaisdell Avenue to one-half block east of First Avenue. If this alternative is selected, the APE may need to be expanded in light of the design and construction methods for the tunnel.

- Along some portions of the corridor, the 300 foot APE may be extended to take into account visual effects. For example, if the 300 foot area comprises open space, and a row of buildings is located beyond, these buildings may be included in the APE.

- In some station areas, there are known areas of project related work and/or anticipated development outside of the quarter-mile radius, and these areas are included in the APE. This includes areas in downtown Hopkins.

The APE may also be adjusted if a field surveyor recommends that the project may affect a property or properties not included in the established APE boundaries.

As project planning proceeds, additional factors will be assessed to determine if there are other effects (direct, visual, auditory, atmospheric, and/or changes in use) which could require an expansion of the above APE. These factors include:

- Noise analysis, including areas where the use of bells and whistles is anticipated.
- Vibration analysis, including vibration related to project construction and operations.
- The specific locations of project elements, including operations/maintenance facilities, park-and-ride facilities, traction power substations, signal bungalows, and other infrastructure.

Survey Approach

Survey Zones

The project cuts through a number of distinct communities, each with a unique history. As a result, these communities, which share similar physical and historical characteristics, can serve as a framework for conducting the survey. The survey will be organized around the following zones (related project segments and stations are listed in parenthesis):

- Eden Prairie (Segments 1 and 3; Highway 5, Highway 62, Mitchell Road, Southwest Station, Eden Prairie Town Center, Golden Triangle, City West Stations)
- Minnetonka (Segments 1 and 3; Rowland, Opus, Shady Oak Stations)
- Hopkins (Segment 4; Shady Oak, Hopkins, Blake Stations)
- Saint Louis Park (Segment 4; Louisiana, Wooddale, Beltline Stations)
- Minneapolis west residential, including parts of Bryn Mawr, Lowry Hill, East Isles, Kenwood, Cedar-Isles-Dean, and West Calhoun neighborhoods (Segments A and C; West Lake, 21st Street, Penn Stations)
- Minneapolis south residential/commercial, including parts of the Stevens Square/Loring Heights, Whittier, Lowry Hill East, East Isles, and Cedar-Isles-Dean neighborhoods and the Midtown Greenway (Segment C; Uptown, Lyndale, 28th Street, Franklin Stations)
- Minneapolis downtown north of I-94 (Segment C; 12th Street, 8th Street, 4th Street, Harmon Place, Hawthorne Avenue Stations)
- Minneapolis industrial (Segments A and C; Van White, Royalston Stations)
- Minneapolis warehouse (Segments A and C; Intermodal Station)

In addition, there are four railroad corridors that traverse these community boundaries. These corridors will be considered as four individual zones. The corridors (by historic names) are:

- Minneapolis and Saint Louis Railway (Chicago and North Western Railway). Part of the main line is in the APE (Segments 1, 4, A and C). A segment of this line between downtown Minneapolis and Merriam Junction has recently been evaluated by the Surface Transportation Board as not eligible to the National Register; however, the SHPO did not concur with this finding. The line will be further evaluated, focusing on the section within the APE.
- Chicago, Milwaukee and Saint Paul Railway (Milwaukee Road), Benton Cutoff. Part of the CM&SP Benton Cutoff is in the APE (Segments 4, A, and C). Except for the Chicago, Milwaukee and Saint Paul Railroad Grade Separation Historic District, which is listed in the National Register, the Benton Cutoff has previously been determined as not eligible to the National Register by the Federal Highway Administration, with concurrence by the SHPO.
- Saint Paul and Pacific Railway (Great Northern Railway). Part of the main line is in the APE (Segment A). This line will be evaluated.
- Minneapolis, Northfield and Southern Railway. Part of the Auto Club-Luce Line Extension of the MN&S is in the APE (Segment 4). This line has been previously evaluated by Mn/DOT CRU, and the Auto Club-Luce Line Extension has been recommended as not eligible to the National Register. This determination has not been submitted to SHPO for concurrence. The Mn/DOT CRU evaluation will be summarized and incorporated into this survey by reference.

All of the above lines, including those which have been evaluated as not eligible, will be inventoried and evaluated to identify any railroad related features in the APE that are potentially significant in their own right. The statewide railroad context developed by Mn/DOT CRU will serve as a basis for evaluation of railroad resources.

The survey of the above thirteen zones will be completed by three consultants. Hess Roise will complete the surveys for the five zones in Minneapolis, Mead & Hunt will complete the surveys for St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, and Summit Envirosolutions will complete the surveys for the four railroad zones. Each consultant will prepare a report for the Phase I-II survey of the zones completed. An overall summary, integrating the survey results from all thirteen zones, will be prepared for the analysis of effects, within the framework of the five project segments.

The survey will include properties built in 1965 and earlier. Although National Register guidelines use a 50-year cut-off for eligibility (except for properties of exceptional importance), adopting a 45-year cut-off for this survey provides 5 years for project planning before the survey becomes outdated.

NOTE ON RESPONSBILITY FOR SURVEYS IN THE INTERMODAL STATION AREA: There is an overlap of the APEs for the SWLRT project and the Intermodal Station project (currently in the planning stage). The SWLRT survey effort will complete survey work for only

a portion of the SWLRT APE in the vicinity of the Intermodal Station, including where SWLRT construction is anticipated. The remainder of this area will be surveyed as part of the planning for the Intermodal Station project. The survey results from the Intermodal Station survey will be included in the consideration of cumulative effects as part of the SWLRT Section 106 review. (See map for the division of survey responsibilities in this portion of the SWLRT APE.)

Phase I Survey (Reconnaissance Survey)

The primary goal of Phase I is to identify properties that appear to have the potential to qualify for the National Register and merit further analysis. This will eliminate from further consideration any properties that have little or no potential to meet National Register criteria. The Phase I survey will also verify that properties already listed or officially determined eligible for listing in the National Register still retain integrity.

Literature Search

The literature search will focus on areas within the APE, with broader contextual information procured as needed. The literature search will begin by collecting existing reports and research for each zone. Maps, atlases, and other information that can provide specific information about property within the APE for archaeology will be a high priority. Additional research will be conducted for specific areas, and occasionally on specific properties, as appropriate. The literature search will produce:

- A working set of research files, including maps and related materials, for each zone. A copy of these files will be provided to the archaeological team.
- For each zone, a brief context (perhaps with subcontexts) will be developed that is approximately two to five pages in length and comprises a brief narrative, an annotated list of relevant property types, and a preliminary period of significance. (This assumes that extensive narrative contexts will not be developed during this phase.) A similar context will also be prepared for each railway, focusing specifically on segments in the APE. These contexts will also be provided to the archaeological team.

Fieldwork

A project-specific inventory form will be developed. Prior to the onset of fieldwork, a draft inventory form will be submitted to the client for review and approval.

The Hennepin County property database provides building construction dates for tax parcels. These dates will be assumed to be generally reliable for properties erected in the last half of the twentieth century, and will therefore be used to eliminate properties built after 1965 from the survey. During fieldwork, however, surveyors will be observant of properties eliminated from the inventory to identify:

- Inaccuracies: Properties not included in the survey that appear to date from 1965 and earlier (in other words, instances where the county date appears to be incorrect);
- Incomplete data: Properties not included in the survey that contain multiple buildings or other features, where the county date may refer to a newer feature—but older features are also present;
- Exceptional properties: Properties dating from 1966 or later that might be of exceptional importance.

Fieldwork will be conducted by zones. The methodology for each zone is as follows:

- Using information from the Hennepin County database, surveyors will be provided with a spreadsheet listing all properties in the zone built in 1965 or earlier. In addition to the address and year built, the spreadsheet will include the property's use and the name of the owner and taxpayer. The survey will include properties listed or officially determined eligible for listing in the National Register (including those in historic districts) to verify that they retain integrity. Map books will be prepared for reference in the field.
- Surveyors will conduct site visits for each property, recording observations from public rights-of-way with field notes and digital photographs. At a minimum, surveyors will record information on noteworthy features and the property's integrity. Using the data categories for functions and uses outlined in the National Register bulletin *How to Complete the National Register Registration Form*, and with reference to the context information for each zone, the surveyor will suggest data categories that seem the most appropriate for evaluating the property's National Register potential. The surveyor will also provide a preliminary recommendation—and a justification for that recommendation—stating that 1) the property does not appear to be eligible for the National Register, or 2) the property should be evaluated in Phase II.
- All field surveyors will meet the Secretary of the Interior's Professional Qualifications Standards.

Deliverables for Phase I survey

- For each zone:
    - Synopsis for each zone, including the context and property type information.
    - Table of surveyed properties including recommendations for intensive level survey, with justification.
    - Inventory form (2 copies) for each property in the APE built in 1965 or earlier. In addition to the data collected in the field, the inventory forms will incorporate information on the property's location (UTM reference, township/range/section) from the county database. At least one color digital photograph of the property will be included on each form. (NOTE: For properties which go to a Phase II evaluation, the same survey form should incorporate the evaluation information.)
    - Map of zone with properties recommended for intensive-level survey identified.

Phase II Survey (Intensive)

The goal of Phase II is to evaluate properties, as recommended in Phase I, to determine which meet the criteria of the National Register of Historic Places. As with Phase I, the work will be organized by zones.

Literature Search

The literature search will focus on individual properties and districts that have potential to meet National Register criteria. To provide a framework for evaluating some properties, it may be necessary to expand the context synopses developed in Phase I to address specific physical areas, eras, and/or property types.

Fieldwork

Additional field work may be needed to evaluate the physical characteristics of individual properties and districts. It might be necessary to obtain permission to enter some properties for this evaluation—if, for example, there is the potential for a significant interior space, or if a parcel is large and contains a number of buildings and these buildings cannot be adequately evaluated from the public right-of-way, aerial photographs, or other means.

Deliverables for Phase II survey

- For each zone:
    - Table of Phase II properties, including recommendations on eligibility.
    - More detailed inventory form, including the narrative evaluation of eligibility, for each property included in this phase.
    - Map of zone, showing properties that appear to qualify for the National Register identified, along with listed and previously determined eligible properties.
- A Phase I-II survey report (for all zones completed by the same consultant) conforming to Mn/DOT CRU Architecture/History Report requirements and other applicable federal and state guidelines.

At the conclusion of all Phase II history/architecture survey work, a consolidated summary/table incorporating the work from all thirteen zones will be prepared for the analysis of effect. This summary will be organized by the five project segments.

ATTACHMENT B:

Figures

Due to the sensitive nature of the information that they contain, these maps will not be provided except by request to the Metropolitan Council.