

**PHASE I AND II ARCHAEOLOGICAL INVESTIGATIONS
FOR THE
TRUNK HIGHWAY 53 RELOCATION PROJECT,
VIRGINIA TO EVELETH, ST. LOUIS COUNTY,
MINNESOTA**

**Mn/DOT Contract No. 99180
S.P. 6918-80
Two Pines Resource Group No. 11-15
OSA License No. 11-34**

**Prepared for:
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**FINAL
July 2012**

Level K

C12 - 0022

Consultant's Report

MANAGEMENT SUMMARY

The Minnesota Department of Transportation (Mn/DOT) is proposing to relocate Trunk Highway (TH) 53 between Virginia and Eveleth due to a termination of their easement rights by Cliffs Natural Resources Inc. (United Taconite LLC) and RGS Land & Minerals (S.P. 6918-80). Because this project will receive funding from the Federal Highway Administration, it must comply with Section 106 of the National Historic Preservation Act, as amended. The Mn/DOT Cultural Resources Unit (CRU) therefore contracted with Two Pines Resource Group, LLC (Two Pines) to complete archaeological investigations within the project area of potential effect (APE). The purpose of the Phase I investigation was to identify any archaeological resources in the APE that are potentially eligible for listing in the National Register of Historic Places (NRHP). The purpose of the Phase II investigation was to evaluate 21SL1135 for its eligibility for listing in the NRHP. The investigation was conducted in accordance with the Minnesota Field Archaeology Act of 1963. Dr. Andrea Vermeer served as Principal Investigator for the investigations. A separate report was prepared for the architectural history study performed for this project (Zellie 2012).

The TH 53 Relocation project APE encompasses two project construction alternatives and associated buffers located within Sections 8, 9, 16, 17, 18, and 20, T 58N, R 17W, Virginia, St. Louis County. The archaeology APE determined by the Mn/DOT CRU comprises approximately 220 acres (89 hectares) within the Central Lakes Coniferous East archaeological sub-region.

The Phase I investigation included literature review and field survey components. The field survey included pedestrian survey and shovel testing within portions of the APE considered to have moderate to high potential for containing archaeological resources. One historical-archaeological site, 21SL1135 (Rouchleau Shops), was identified through the Phase I investigation. This site was assessed as being potentially eligible for listing in the NRHP, based on its age and excellent integrity.

Because 21SL1135 is a mid twentieth-century railroad shops site, it was not expected to contain substantial artifact deposits. For this reason, and because the site had already been determined during the Phase I survey to have excellent integrity, the Phase II investigation of 21SL1135 consisted of in-depth research to evaluate the historical significance of the site and thereby its eligibility for listing in the NRHP. Site 21SL1135 is not associated with the pattern of conversion in mining transportation resulting from pressures precipitated by World War II; rather, it represents a common outgrowth of that pattern after the war, and one that is not historically significant. It therefore does not meet NRHP Criterion A. No evidence could be found to associate the Rouchleau shops with a specific individual, much less one who is historically significant. For this reason, 21SL1135 does not satisfy NRHP Criterion B. The features present would not address historically important research questions, including those pertaining to shifts in railroad technology. Given, therefore, the low information potential of 21SL1135, the site does not meet NRHP Criterion D. Site 21SL1135 is therefore recommended as not eligible for listing in the NRHP.

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INTRODUCTION

The Minnesota Department of Transportation (Mn/DOT) is proposing to relocate Trunk Highway (TH) 53 between Virginia and Eveleth due to a termination of their easement rights by Cliffs Natural Resources Inc. (United Taconite LLC) and RGGS Land & Minerals (S.P. 6918-80). Because this project will receive funding from the Federal Highway Administration, it must comply with Section 106 of the National Historic Preservation Act, as amended. The Mn/DOT Cultural Resources Unit (CRU) therefore contracted with Two Pines Resource Group, LLC (Two Pines) to complete archaeological investigations within the project area of potential effect (APE). The purpose of the Phase I investigation was to identify any archaeological resources in the APE that are potentially eligible for listing in the National Register of Historic Places (NRHP). The purpose of the Phase II investigation was to evaluate 21SL1135 for its eligibility for listing in the NRHP. The investigation was conducted in accordance with the Minnesota Field Archaeology Act of 1963.

The TH 53 Relocation project will include the construction of a new TH 53 roadway and associated interchanges to accommodate the removal of the existing TH 53 from approximately TH 135 to 2nd Avenue in Virginia. The APE for archaeology includes two project alternatives, one called the Mine Corridor, and the other called the East Corridor, along with associated buffers (Figure 1). The Mine Corridor diverts to the southeast from existing TH 53 at a point approximately ½-block west of 12th Avenue, then trends southeast over the Auburn Mine before reconnecting with existing TH 53 just north of Vermillion Drive in Midway. The East Corridor diverts to the northeast from existing TH 53 at a point approximately one block west of 2nd Avenue, then makes an arc to the east over the former Rouchleau Mine and crossing Bourgin Road before heading southwesterly to the southern point of its current interchange with TH 135, where it will reconnect to existing TH 53. The archaeology APE comprises 220 acres (89 hectares) within the Central Lakes Coniferous East archaeological sub-region.

The UTM coordinates (Zone 15, NAD 83) for the Mine Corridor are north/west end: 533592E 5261942N, south/east end 535469E 5259849N. The UTM coordinates (Zone 15, NAD 83) for the East Corridor are north/west end: 534630E 5261938N, south end 535549E 5260379N. These coordinates were determined electronically using GoogleEarth. Legal locations for the APE are provided in Table 1.

The following report describes the objectives and methods of the investigations, as well as the cultural and environmental background of the project area. It provides relevant historic contexts, the results of the fieldwork, and cultural resource management recommendations for the TH 53 Relocation project.

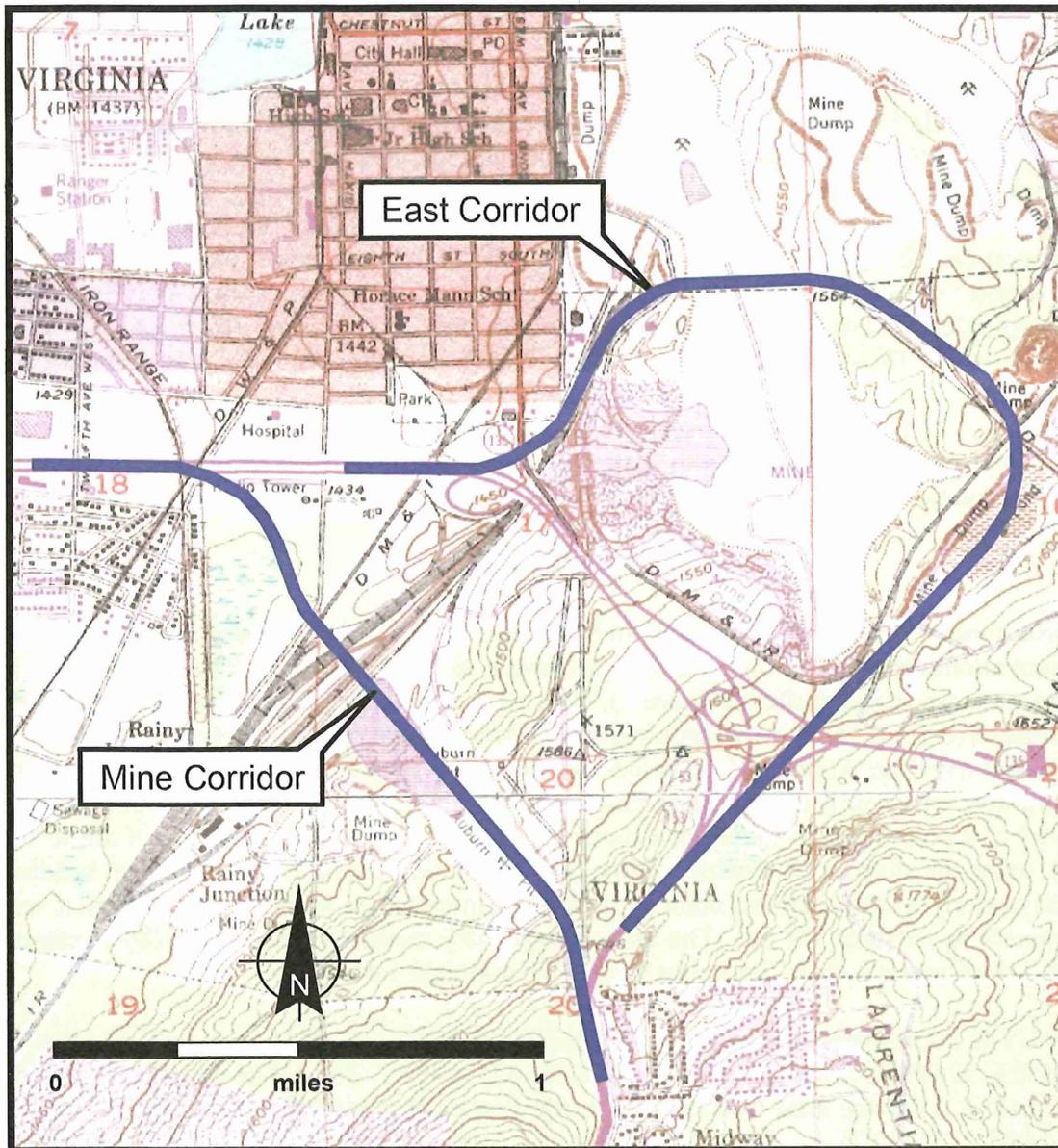


FIGURE 1. PROJECT LOCATION

TABLE 1. LEGAL LOCATIONS FOR THE TH 53 RELOCATION PROJECT APE (T58N, R17W)

Alternative	Section	Quarter-Sections
Mine Corridor	17	W-SW-SW, SE-SW-SW
	18	SE-SE-NW, S-S-NE, E-NE-SE
	20	NE-NW-NW, W-NE-NW, SE-NE-NW, NE-SE-NW, W-SW-NE, W-NW-SE
East Corridor	8	SE-SW-SE, S-SE-SE
	9	SW-SW-SW
	16	N-NW-NW, SE-NW-NW, S-NE-NW, N-SE-NW, SE-SE-NW, N-NE-SW, SW-NE-SW, SE-NW-SW, N-SW-SW, SW-SW-SW
	17	SE-SE-SE
	20	N-NE-NE, SW-NE-NE, SE-NW-NE, N-SW-NE

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RESEARCH DESIGN

All work was conducted in accordance with *Mn/DOT's Cultural Resources Unit Project Requirements* (Mn/DOT 2011), the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), and the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (National Park Service 1983).

OBJECTIVES

The purpose of the Phase I archaeological survey was to determine whether the project area contains any archaeological resources that are potentially eligible for listing in the NRHP. The purpose of the Phase II archaeological evaluation was to determine whether 21SL1135 is eligible for listing in the NRHP.

AREA OF POTENTIAL EFFECT (APE)

The APE for archaeology includes two project alternatives, one called the Mine Corridor, and the other called the East Corridor, along with associated buffers (see Figure 1). The Mine Corridor diverts to the southeast from existing TH 53 at a point approximately ½-block west of 12th Avenue, then trends southeast over the Auburn Mine before reconnecting with existing TH 53 just north of Vermillion Drive in Midway. The East Corridor diverts to the northeast from existing TH 53 at a point approximately one block west of 2nd Avenue, then makes an arc to the east over the former Rouchleau Mine and crossing Bourgin Road before heading southwesterly to the southern point of its current interchange with TH 135, where it will reconnect to existing TH 53. The Mine Corridor APE was determined by the Mn/DOT CRU to include the area extending 150 feet on either side of the proposed TH 53 centerline, and the East Corridor APE was determined by the Mn/DOT CRU to include the area extending 200 feet on either side of the proposed TH 53 centerline.

PHASE I SURVEY

Literature Search

On September 14, 2011, staff from Two Pines obtained the results of a SHPO database query for previously identified archaeological sites within one mile of the project area. Staff subsequently conducted research at the SHPO to obtain information on archaeological surveys previously conducted within the project area. In addition, historical maps, historical aerial photographs, and current topographic maps were reviewed. This research was conducted to gain an understanding of the environmental and cultural history of the APE in order to assess which portions had greater potential for containing intact archaeological sites.

The assessment of an area's potential to contain archaeological resources consists of an analysis of terrain, water sources, and other environmental and landscape conditions in and adjacent to that area as they were historically. Areas that were occupied by water, permanently or frequently inundated (e.g., wetlands, floodplains), poorly drained, or

exhibited slopes of greater than 20 percent would have been inhospitable to human occupation and are therefore considered to have low potential for containing archaeological resources.

Generally, areas in Minnesota with greater potential for containing precontact archaeological resources are in proximity, typically less than 500 feet, to a water source or wetland, though the applicability of this condition varies depending on the nature of the water source (perennial versus intermittent), the size of the body of water, the extent of the floodplain, and the availability of other water sources in the vicinity, i.e., proximity to a small pond may be less indicative of archaeological potential if a large lake is nearby. Topographic prominence is also frequently indicative of high precontact archaeological potential, though relative topographic prominence as a gauge of archaeological potential often is tied to other conditions, such as proximity to water. Proximity to previously recorded precontact archaeological sites often suggests high potential for precontact resources, inasmuch as previously recorded sites may not have been fully defined or as the areas around previously recorded sites are typically subject to similar environmental/landscape conditions. The absence, however, of precontact archaeological sites in an area does not necessarily point to low archaeological potential, given that that area may not have been subject to previous survey.

Areas proximate to former and/or existing historical-period buildings, structures, or other features are generally considered to have higher potential for containing historical-archaeological resources. These areas are not limited to the locations of buildings, as often the most important information comes from deposits within associated features, such as privies, cisterns, or middens, which were located away from primary buildings.

Fieldwork

The Phase I archaeological survey commenced with a walkover of those portions of the APE that had not been confirmed by the literature search to have been severely disturbed by mining activities, railroad construction, or urban development. The purpose of the inspection was to identify any surface features, such as extant foundations, to refine the assessment of archaeological potentials as determined by the literature review, and to identify existing levels of disturbance within the remainder of the APE. Areas demonstrably disturbed through mining activity, road or other construction activities, and other modern land uses were excluded from systematic survey.

The single location within the APE that was assessed as having the potential to contain intact precontact archaeological sites afforded less than 25 percent surface visibility. It therefore underwent systematic shovel testing, consisting of the manual excavation of holes 30 to 40 centimeters (12 to 15 inches) in diameter at regular intervals along evenly spaced transects to identify any subsurface archaeological resources. During this project, a 15-meter shovel-testing interval was used.

All soils removed from excavated shovel tests were screened through a ¼-inch mesh. Shovel tests were excavated through all post-glacial soils and sediments to culturally

sterile subsoil or to a maximum depth of one meter (three feet) below the surface, depending on which condition was first encountered.

The single location within the APE that was found during the walkover to contain historical-archaeological structural features was subject to a more intense walkover assisted by the consultation of historical maps and aerial photographs, through which more features were identified. Shovel skimming was used to clear these features in order to define their spatial limits.

Data gathered during the survey were recorded on shovel test forms and in the field notebook of the Principal Investigator. Items noted included: the location of survey areas; the location of individual shovel tests; the depth of each shovel test and its associated soil profile; the presence or absence of cultural materials within each test; and the excavated soil texture, inclusions, and Munsell® color. Intensive mapping of the historical-archaeological features was also performed, incorporating both to-scale hand drawings and the use of a sub-meter Trimble GeoXT® GPS unit.

Geographic Information System Data

A geographic information system (GIS) data layer was created during the course of the archaeological survey. The locations of all individual shovel tests and archaeological features were recorded using a Trimble GeoXT® GPS Unit. All the data were differentially corrected using a National Geodetic Survey (NGS) continuously operating reference station (CORS) data. Trimble Pathfinder Office 3.10 was used to correct the data and export it as ESRI shapefiles. ESRI ArcGIS was used to analyze and map the data.

PHASE II EVALUATION

Literature Search

Because 21SL1135 is a mid twentieth-century railroad shops site, it is not expected to contain substantial artifact deposits. For this reason, and because the site had already been determined during the Phase I survey to have excellent integrity, the Phase II investigation of 21SL1135 consisted of in-depth research to evaluate the historical significance of the site and thereby its eligibility for listing in the NRHP.

Subsequent to the field survey, an intensive literature search was conducted to develop detailed historic contexts relevant to 21SL1135 to assist in the evaluation of its historical significance. Post-field research additionally sought to identify the specific functions of the former buildings associated with the archaeological features identified during the Phase I survey and the historical owner(s) of the property. Sources consulted include but were not limited to the available records of the Oliver Iron Mining Company held at the Northeast Minnesota Historical Center, the available records of the Oliver Iron Mining Company and the Duluth Missabe and Iron Range Railroad (DM&IR) held at the Iron Range Research Center and the MHS; the company records of the DM&IR and the Duluth Missabe and Northern Railway (DM&N) held at the MHS; issues of *Skillsing*

Mining Review; secondary sources pertaining to the Oliver Iron Mining Company, the DM&IR, and Virginia; historical aerial and standard photographs, a 1975 Rouchleau Mine operations map provided by the Minnesota Department of Revenue office in Eveleth; and the NRHP Multiple Property Documentation Form (MPDF) *Railroads in Minnesota, 1862-1956*. The Virginia Area Historical Society was also contacted to assess whether this repository contained relevant information.

EVALUATION

Following the completion of the literature review, 21SL1135 was evaluated with reference to the four NRHP criteria for significance as established in the National Register Bulletin titled *How to Apply the National Register Criteria for Evaluation* (National Park Service 2002):

- Criterion A – association with events that have made a significant contribution in our past;
- Criterion B – association with the lives of persons significant in our past;
- Criterion C – embodiment of the distinctive characteristics of a type, period, or artistic values; or representation of the work of a master; possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D – potential to yield information important to prehistory or history (National Park Service 2002).

While all four criteria are considered, historical-archaeological sites are typically eligible for listing in the NRHP under Criterion A, B, or D (Anfinson 2005:18). Applicable historic contexts were used to frame the significance evaluation of 21SL1135.

Site 21SL1135 was additionally evaluated with reference to the NRHP aspects of integrity. While the National Park Service identifies seven such aspects, including location, design, setting, materials, workmanship, feeling, and association (National Park Service 2002), the SHPO guidelines for evaluating archaeological sites state, “With regard to archaeological sites significant under Criterion D, the most critical aspects are location, materials, and association. For Criterion A, setting and feeling are also important” (Anfinson 2005:40). Anfinson (2005:40) notes, “In general, eligible archaeological sites need diagnostic artifacts, features, and intact cultural horizons where artifacts and features retain some vertical and horizontal integrity.”

PHASE I LITERATURE SEARCH RESULTS

PREVIOUS INVESTIGATIONS

Background research conducted at the SHPO revealed that no archaeological surveys have previously occurred within the TH 53 Relocation project APE.

PRECONTACT ARCHAEOLOGY

No precontact archaeological sites have been previously recorded within the project APE. One precontact site, 21SL457 (Jackson site), has been previously recorded within a one-mile radius of the APE. This site, a probable precontact lithic scatter, is located approximately 1,200 feet southwest of the south end of the East Corridor, on top of a ridge.

The original General Land Office (GLO) survey map of the project area, which dates to 1879, depicts a stream running proximate to portions of the project area in Sections 16, 17, 18, and 20 (GLO 1879). Based on their proximity to the stream, these locations would be considered to have high potential for containing precontact archaeological resources. The majority, however, were destroyed through mining operations and urban development associated with the city of Virginia, as confirmed through aerial photographs dating between 1940 and the present. For the most part, no vestiges of the stream remain. An exception occurs in the southern portion of the East Corridor APE in Section 20, near a wetland that roughly corresponds to the location of the former stream, and where no apparent disturbance was evident in historical documentation. This location, situated approximately 1,200 feet northeast of 21SL457, was therefore considered to have moderate to high potential for containing precontact archaeological resources.

The remainder of the APE, whether or not it once held high potential for precontact archaeological resources, has been so severely disturbed that no potential resources would remain intact.

HISTORICAL ARCHAEOLOGY

No historical-archaeological sites have been previously recorded in or within one mile of the APE.

The review of historical maps and aerial photographs indicated the potential for resources associated with a railroad spur to be present within the East Corridor APE in Section 17. In 1928, multiple northwest-southeast railroad tracks ran through the NE ¼ of Section 17, as indicated in an Oliver Iron Mining Company map book dating to that year. By 1948, two buildings constructed sometime after 1940 were present on spurs leading from the main tracks, offset from which were six tanks and two other structures not identifiable on the aerial photograph taken that year. Between 1948 and 1959, at least three other buildings, including a locomotive house, were built in the vicinity of the first two buildings (Great Northern Ore Properties 1959). One of these buildings was built

adjacent to the track, south of the locomotive house, while the other was built off the track, northeast of one of the original shop buildings.

ENVIRONMENTAL HISTORY

The TH 53 Relocation project is located within the Central Lakes Coniferous East archaeological sub-region. The following environmental history of this sub-region is based largely on information contained in Borchert and Gustafson's *Atlas of Minnesota Resources and Settlement* (1980) and an overview entitled "Minnesota's Environment and Native American Culture History" by Gibbon et al. (2002).

The Central Lakes Coniferous East archaeological sub-region includes parts of central and northeast Minnesota in portions of St. Louis, Carlton, Itasca, Aitkin, and Lake counties. The western portion of the Great Lakes Basin is encompassed by this sub-region.

The climate within this sub-region has an average annual precipitation of 25 inches. January highs average 16 degrees Fahrenheit (F), while July highs average 77 degrees F. The frost-free season lasts between 100-120 days, typically from late May until early to mid- September.

In this region, soil types are generally medium to coarse-textured forest soils. Exposures of bedrock are rare, but Precambrian outcrops can be found to the northeast within this region, along with fine-textured soils and peat deposits. High-quality flaking materials can be found in the region, including chert, jasper, and taconite.

During the Late Holocene period, conifers such as white, jack, and red pine dominated the region, though deciduous trees such as elm, maple, basswood, ash, oak, aspen, and birch were interspersed in areas. Subsistence resources in this sub-region would have consisted of deer, beaver, moose, and black bear. Fish and waterfowl would also have been plentiful due to the many lakes and rivers in the area. Wild rice was extensive in the area, and was an important part of regional lifeways during the Terminal Woodland period.

PHASE I SURVEY RESULTS

The Phase I archaeological fieldwork for the TH 53 Relocation project was conducted on October 3-6, 2011. Dr. Andrea Vermeer served as Principal Investigator and conducted the fieldwork with Marie Kerwin, Michelle Terrell, and Alexis Thorpe. Systematically surveyed areas, i.e., those with moderate to high potential for containing intact archaeological resources, were given letter designations for ease of reference in the field. The results for each area are provided below and in Figure 2.

The remaining portions of the APE consist of areas severely disturbed by mining, railroad construction, and urban development, as well as wetlands, which are considered to have low archaeological potential. These areas were therefore excluded from systematic survey. It is noted that the areas disturbed by mining, including excavations and tailings piles, could constitute part of a mining landscape; however, the presence of a mining landscape has not been determined.

AREA A

Area A is located at the southern end of the East Corridor, east of existing TH 53 (see Figure 2). It is situated on a higher and dry landform between two apparently natural wetlands, one to the north and one to the south. Based on its relative topographic position and proximity to the wetlands, this location was considered to have moderate to high potential for containing precontact archaeological resources.

At the time of the survey, Area A was in a wooded area, with vegetation and downed leaves eliminating surface visibility; therefore, shovel testing at 15-meter (49-foot) intervals was used to survey this location. Area A is bound on the west by an area disturbed by underground utility installation and the ditch associated with TH 53, and on the east by the edge of the APE. It accommodated two transects of four shovel tests, with transects paralleling existing TH 53. These shovel tests exhibited a generally consistent profile, consisting of a dark gray to very dark grayish brown (7.5YR 4/1 to 10YR 3/2) sandy silt topsoil, 7 to 24 centimeters deep, typically over a strong brown (7.5YR 4/6) sandy silt glacial till, although occasionally a compact light gray (7.5YR 7/1), slightly sandy silt horizon with large cobbles and rocks and averaging 14 centimeters in thickness occurred between the topsoil and till. All shovel tests were negative for cultural materials.

Recommendations

Due to the absence of cultural materials in this location, no further archaeological work is recommended prior to or during construction for the TH 53 Relocation project in Area A.

AREA B

Area B is located on the proposed East Corridor, east of the eastern end of 9th and 10th Streets South in Virginia (see Figure 2). Historical maps and aerial photographs

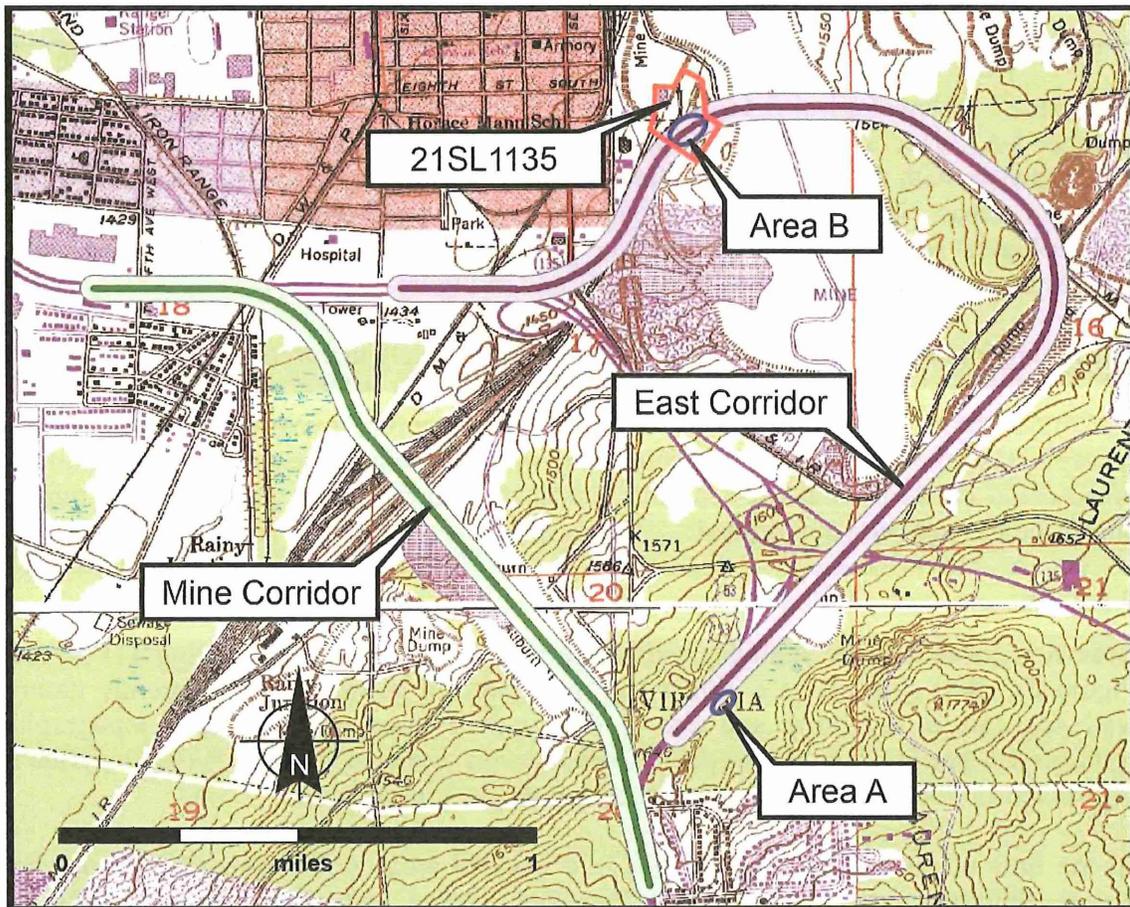


FIGURE 2. SURVEY RESULTS

indicated that railroad shops were present in this location at least as early as 1948, but sometime after 1940. Area B was therefore considered to have high potential for containing historical-archaeological resources.

The initial walkover in Area B located a foundation for one of the railroad shops (Feature 1), leading to the designation of 21SL1135. Based on the presence of this foundation, it was surmised that other features associated with the railroad shops would remain intact; therefore, more intensive walkover assisted by the layout depicted on historical maps and aerial photographs was conducted to locate other features. In this way, nine additional features (Features 2 through 10) were identified. Although some of these were found outside of the APE, it was deemed appropriate to record them as they constitute part of 21SL1135 and would therefore need to be considered in the assessment of the potential significance and integrity of the site. These features are described in detail in the following chapter.

Recommendations

Because 21SL1135 is older than 50 years in age and has excellent integrity as indicated by the presence of several intact features, the site was recommended as potentially eligible for listing in the NRHP. The results of the Phase II investigation of this site are presented in the following chapter.

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21SL1135 (ROUCHLEAU SHOPS)

The Phase I survey identified intact archaeological resources associated with former railroad shops dating to the mid twentieth century. These resources, designated as 21SL1135 (Rouchleau Shops) (Figure 3), are located within and just outside of the APE for the proposed East Corridor, east of the eastern end of 9th and 10th Streets South in Virginia. Intensive research conducted during the Phase II investigation found that the shops, located on a spur off a DM&IR line, were owned by the Oliver Iron Mining Company for maintaining its motive power, rolling stock, and, later, trucks associated with the operations of the Rouchleau open pit mine. Given that the U.S. Steel Corporation was the parent corporation for both the Oliver Iron Mining Company and the DM&IR, it is likely that the shops were also used by the DM&IR, though no evidence could be found to confirm that they were.

This chapter begins with a detailed description of the results of the work conducted at 21SL1135 during the Phase I survey. Next, it provides the historic contexts resulting from the intensive research conducted during the Phase II investigation, followed by an evaluation of and recommendations for the site.

PHASE I ARCHAEOLOGICAL SURVEY

The Phase I literature search indicated that railroad shops were present in and near a portion of the East Corridor APE designated as Area B at least as early as 1948 but sometime after 1940. The initial walkover in Area B located a foundation for one of the shops (Feature 1), leading to the designation of 21SL1135. Based on the presence of this foundation, it was surmised that other features associated with the shops would remain intact; therefore, a more intensive walkover assisted by the layout depicted on historical maps and aerial photographs was conducted to locate other features. In this way, nine additional features (Features 2 through 10) were identified. Although some of these were found outside of the APE, it was deemed appropriate to record them as they constitute part of 21SL1135 and therefore needed to be considered in the assessment of the potential significance and integrity of the site. Phase II research identified the functions of some of the former buildings associated with these features, as noted in the descriptions below.

Feature 1

Feature 1 consists of a large, rectangular, poured-concrete foundation and a small auxiliary poured-concrete foundation on its southwest, both located entirely within the APE (Figures 4-6). The historical counterpart of this feature could not be identified through intensive research, but historical visual media indicate that it was relatively short-lived, having been built between 1949 and 1959, and removed between 1968 and 1972. The main foundation measures 80 feet northeast-southwest by 50 feet northwest-southeast. Twelve-foot door openings in the north and south walls of the building suggest it may have served as a garage/repair shop. The auxiliary foundation measures approximately 9.5 feet northwest-southeast by 5 feet northeast-southwest on its exterior

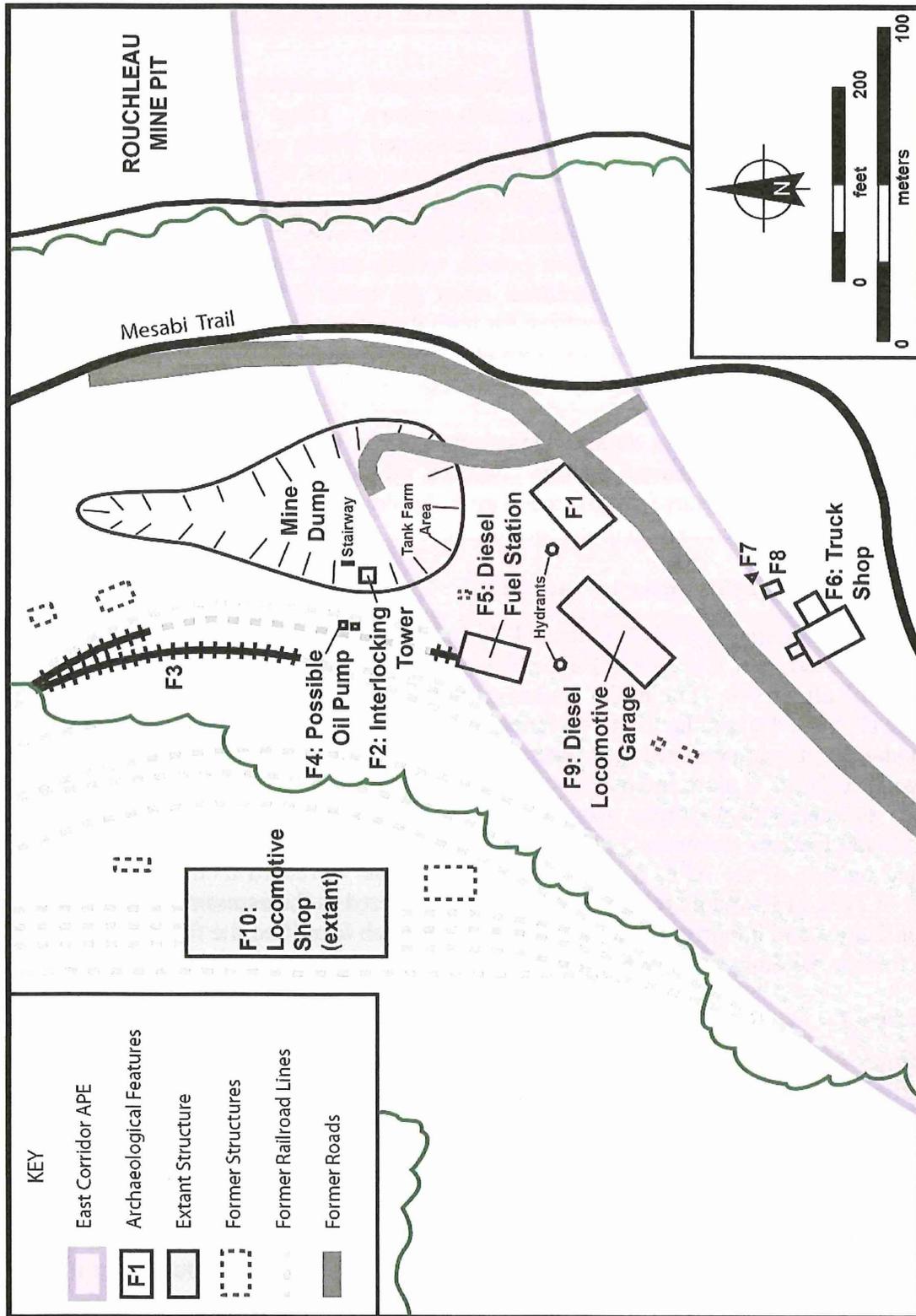


FIGURE 3. SITE MAP, 21SL1135

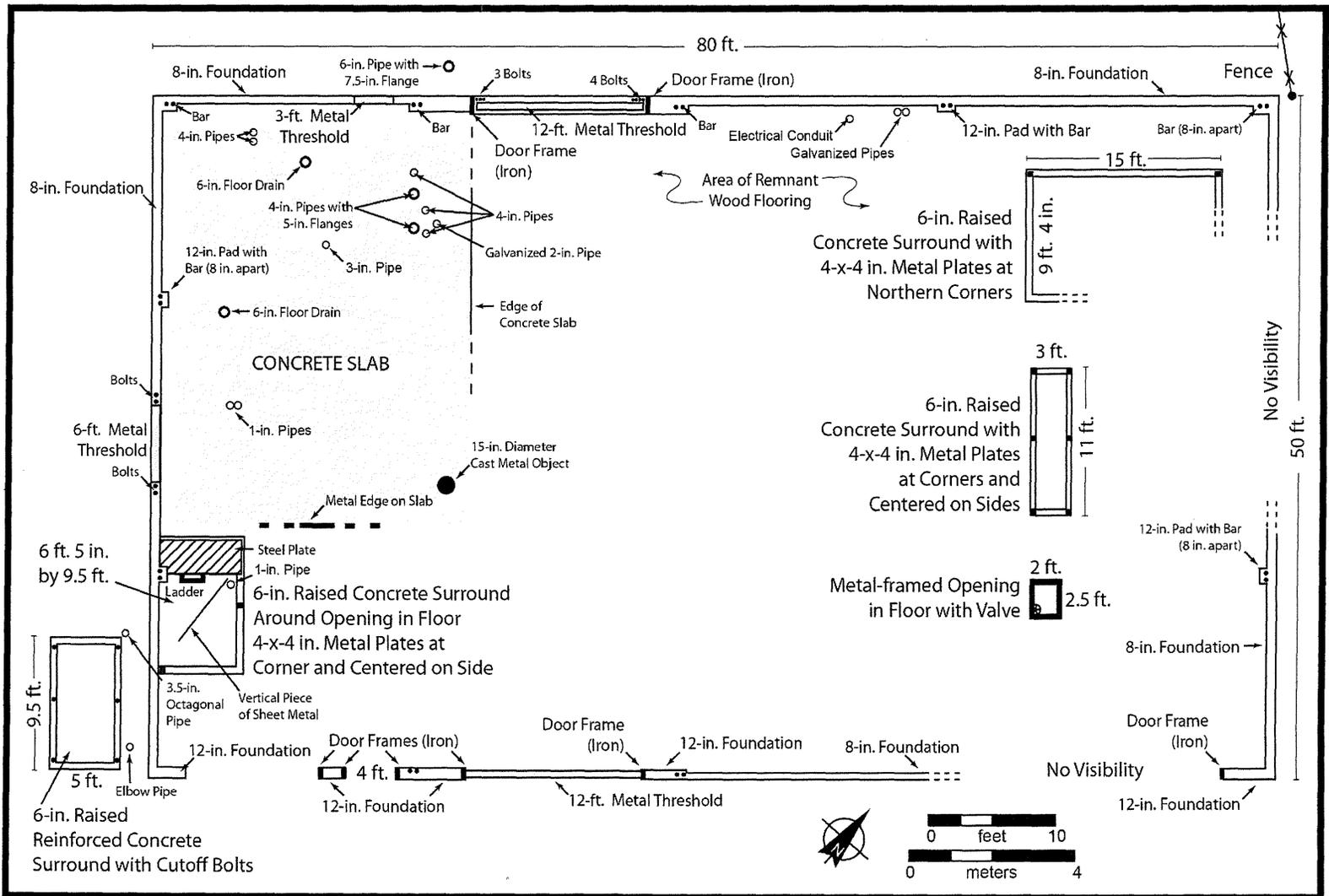


FIGURE 4. PLAN OF FEATURE 1



FIGURE 5. FEATURE 1, OVERVIEW, FACING EAST



FIGURE 6. FEATURE 1, OVERVIEW SHOWING PORTIONS OF MAIN AND AUXILIARY FOUNDATIONS, FACING SOUTH

and is located 2 ft. off the south corner of the main foundation. Its location exterior to the building and the presence of threaded bolts on all sides suggest a fuel tank support.

The west-northwest portion of main foundation is occupied by a poured-concrete floor measuring approximately 31.2 feet northwest-southeast by 20.3 feet northeast-southwest. This floor encompasses several vertical pipes with diameters ranging from one to four inches, as well as two floor drains that are 6 inches in diameter. The poured-concrete-floor portion of the main foundation is separated from the north-northeast portion by a 4-inch-wide poured-concrete divider. This divider disappears under overburden approximately 16 feet southeast of the northwest foundation wall. A small amount of remnant wood flooring is present in the north-northeast part of the main foundation, but otherwise, no floor is visible in the remainder of the feature due to overgrowth. The north-northeast portion of the large foundation contains remnant electrical conduit, as well as two galvanized pipes that hold wires.

Three interior features on a northwest to southeast line are present in the north-northeast part of the large foundation. The two northernmost features consist of 6-inch-wide surrounds of poured concrete. The visible portion of the northwestern-most feature measures approximately 9.4 feet northwest-southeast by 15 feet northeast-southwest (Figure 7). Its walls are parallel to the exterior walls, the northwest wall approximately 4.6 feet southeast of the northwest exterior wall, and the northeast wall approximately 3.3 feet southwest of the northeast exterior wall. Four-by-four-inch metal plates are present atop the poured concrete at the northern corners of the opening.



FIGURE 7. FEATURE 1, INTERIOR FEATURE 1, FACING SOUTH

Similar metal plates are present atop the poured concrete at the four corners and centers of the northeast and southwest walls around the second feature, the exterior of which measures approximately 3 feet northeast-southwest by 10.8 feet northwest-southeast (Figure 8). The northwest edge of this feature is 5 feet southeast of the southeast edge of the first.

The northwest edge of the third feature is approximately 4.9 feet southeast of the southeast edge of the second. Measuring 2.5 feet northwest-southeast by 2 feet northeast-southwest, this feature consists of a relatively deep, concrete-lined shaft containing a pump (Figure 9).

A fourth interior feature is present in the south part of the main foundation (Figure 10). It is surrounded on the southwest by the exterior foundation wall, on the northeast and southeast by 6-inch poured-concrete walls, and on the northwest by a thick steel plate measuring approximately 2.3 feet northwest-southeast by 5.7 feet northeast-southwest. The top of an apparent pipe ladder protrudes from the fill suggesting that the feature may have some depth. Four-by-four-inch plates similar to those observed on the features in the north-northeast part of the large foundation are present atop the concrete at the south corner and center of the northeast wall. The opening itself measures approximately 7.2 feet northwest-southeast by 5.2 feet northeast-southwest. A large piece of metal, possibly displaced, sits vertically and cuts across the opening from north to south.



FIGURE 8. FEATURE 1, INTERIOR FEATURE 2, FACING SOUTHEAST



FIGURE 9. FEATURE 1, INTERIOR FEATURE 3



FIGURE 10. FEATURE 1, INTERIOR FEATURE 4, FACING NORTHWEST

Feature 2

Feature 2 consists of six concrete supports and a stairway, all of which fall outside of the project APE (Figures 11-13). These elements are associated with an interlocking tower that was built between rail lines east of the locomotive house (Feature 10) sometime between 1948 and 1961, and removed sometime between 1981 and 1989 (Figure 14). The supports are situated on a high ridge formed by a mine dump, with the stairway leading up to them from below. Four of the supports are arranged as four corners of a square oriented toward the cardinal directions, each measuring 16 by 16 inches and bearing two bolts that are eight inches on center and oriented on an east-west line. Approximately 8.9 feet separate one support from the next. The remaining two supports are trapezoidal supports measuring 2.2 feet north-south by 10 inches east-west at the top. These are centered between the southern square supports, which are located approximately 1.5 feet to the north and 1 foot to the east and west.

The stairway comprises eight concrete stairs between concrete stringers and metal railings, located approximately 8.2 feet north and slightly east of the northeastern square support.

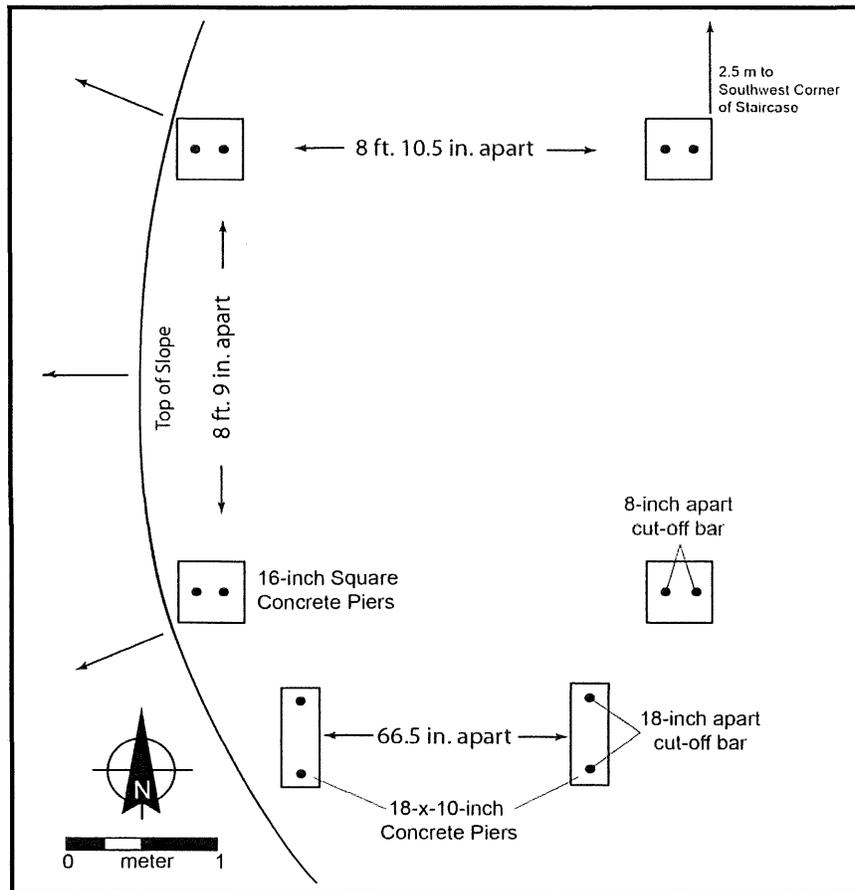


FIGURE 11. PLAN OF FEATURE 2



FIGURE 12. FEATURE 2, PARTIAL OVERVIEW, FACING WEST

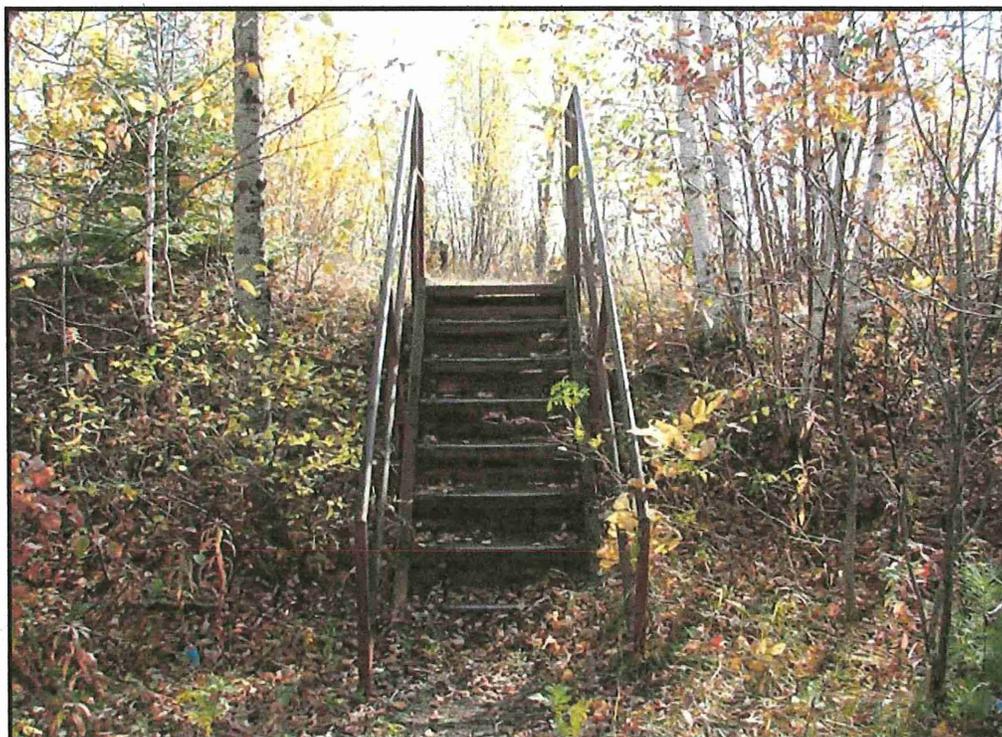


FIGURE 13. FEATURE 2, STAIRWAY, FACING SOUTH



Photo by Greg Smith, <http://www.rrpicturearchives.net/showPicture.aspx?id=642592>

FIGURE 14. VIEW DEPICTING INTERLOCKING TOWER (FEATURE 2), 1975

Feature 3

Feature 3 consists of generally *in situ* railroad ties located outside of the APE, with the south end of Feature 3 located approximately 50 feet northwest of Feature 4 (Figure 15). These ties were part of a generally north-south running track and an associated switch track that diverted to a diesel fuel station (Feature 5).

Feature 4

Feature 4 comprises a square poured-concrete support and a rectangular poured-concrete pad, both of which are oriented toward the cardinal directions and located outside of the APE, near the base of the ridge upon which Feature 2 is located (Figures 16 and 17). An oil pump is noted, though not depicted, in the general location of Feature 4 on a 1975 Rouchleau Mine operations map, thus this feature may constitute associated supports.

Whatever the identity of the feature, aerial photographs and a 1949 Rouchleau Mine operations map suggest that it was constructed sometime between 1949 and 1961 and removed sometime between 1981 and 1989. The pad measures 2.5 feet north-south by 3 feet east-west. Rebar remnants are present near each of the four corners. The support, located 2.4 feet south of the pad, measures 2 feet long by 2 feet wide by 1.6 feet high, and a 3-inch-diameter cast iron pipe is present near its center. On the west side of the support is a bolted-on, vertical metal beam that has been cut off, likely with an acetylene torch, to the existing height of the support.



FIGURE 15. FEATURE 3, OVERVIEW, FACING NORTH

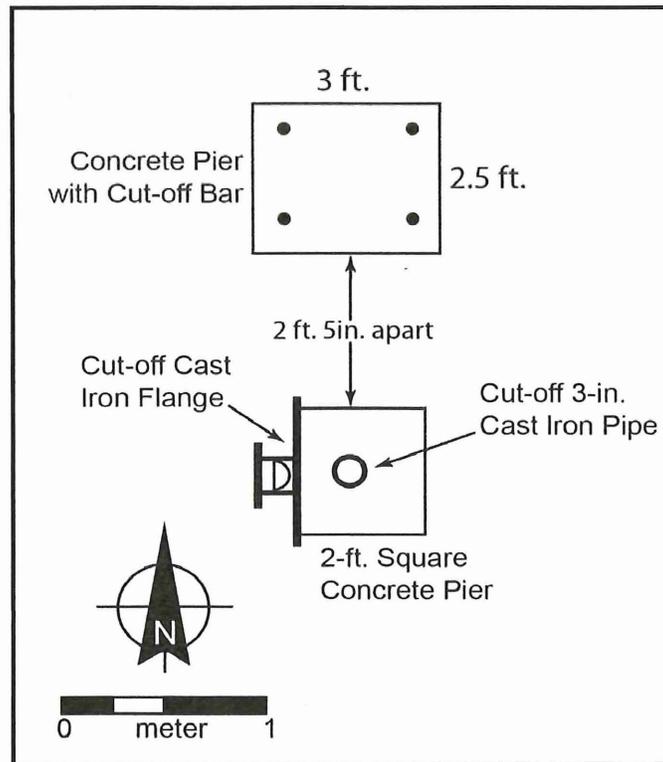


FIGURE 16. PLAN OF FEATURE 4



FIGURE 17. FEATURE 4, OVERVIEW, FACING SOUTHWEST

Feature 5

Feature 5 consists of the remnants of a former building and associated railroad tracks. The building is identified on Rouchelau Mine operations maps dating to 1949 and 1975 as a diesel fuel station. The northern majority of the tracks are located outside of the APE, but the remainder of the feature falls within it. Aerial and standard photographs, along with Oliver Iron Mining Company maps demonstrate that the building was constructed sometime between 1944 and 1948 (Oliver Iron Mining Company 1944), and likely during the latter part of that period, as a 1947 article in the *Skillings Mining Review* notes the Rouchleau Mine to be “a rail haulage operation involving the use of steam locomotives” (*Skillings Mining Review* 1947a) (see Historic Contexts, below). The building was abandoned sometime prior to 1985, and removed between 1985 and 1989 (Figure 18). At first glance, the tracks appear to run up to a disturbed pile of earth (Figure 19) but upon further inspection, part of a poured-concrete foundation is visible, and within the pile are voids in which can be seen in situ rail and other, currently indeterminate, metal structures (Figures 20 and 21).

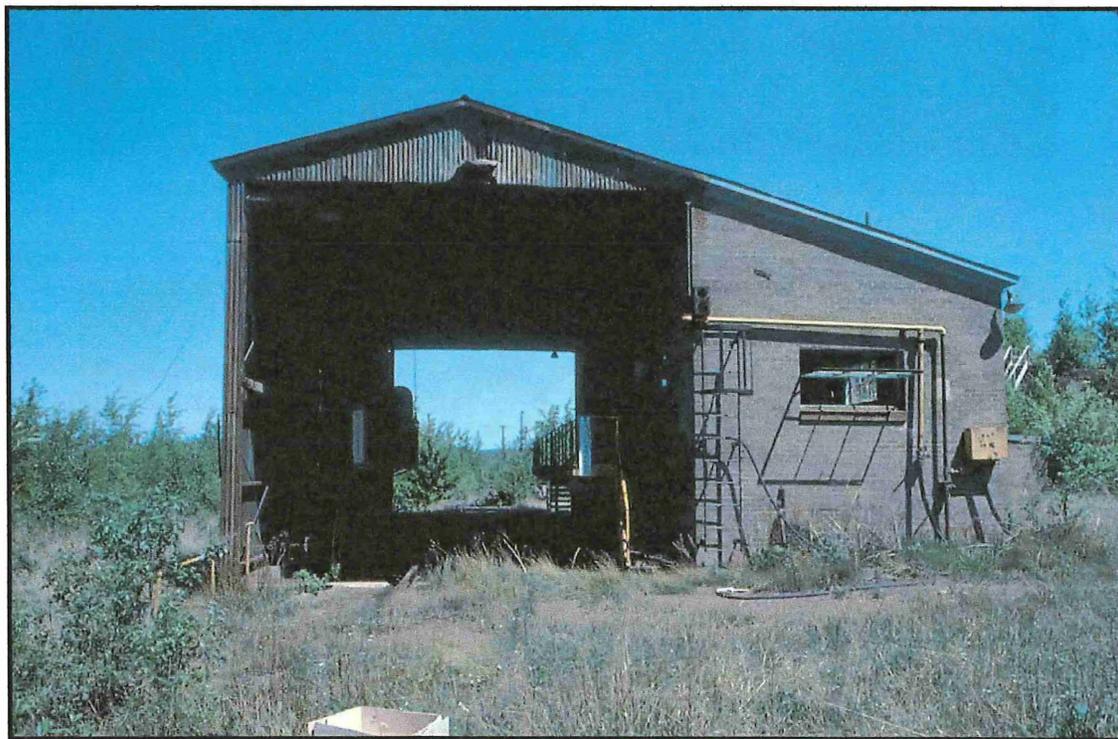


Photo by John Hill, <http://www.rpicturearchives.net/showPicture.aspx?id=1170261>

FIGURE 18. VIEW OF DIESEL FUEL STATION (FEATURE 5), 1985



FIGURE 19. FEATURE 5, OVERVIEW OF TRACKS LEADING TOWARD BUILDING LOCATION, FACING SOUTH



FIGURE 20. FEATURE 5, VIEW OF FOUNDATION WALL



FIGURE 21. FEATURE 5, VIEW THROUGH VOID OF UNDERGROUND ELEMENTS

Feature 6

Feature 6 is a foundation, only the northwestern-most part of which is located in the APE (Figures 22 and 23). A 1975 Rouchleau Mine operations map labels the former building “trucks,” indicating a truck maintenance shop, a function supported by the fact that the building had three bays, but no tracks leading up to it (Figure 24). Rouchleau Mine operations maps, along with standard and aerial photographs, show that it was constructed between 1961 and 1968, abandoned between 1975 and 1985, and removed between 1985 and 1989. Although the foundation was not exposed in its entirety, those portions that are visible suggest that it was entirely a poured-concrete-slab foundation.

The main section of the former building measured 60 feet northwest-southeast by 40 feet northeast-southwest. This section once contained three evenly spaced, 20-foot-wide repair bays oriented on the 40-foot axis. The two northwestern bays each contained a pit constituting the underground component of the bay. These pits paralleled the 40-foot length of the building and measured 31.5 feet long and 4.5 feet wide (Figure 25).

Off of the main section of the building were two other sections, represented by concrete slabs on the northwest and northeast sides of the main section. The northwest section measures 12 feet northeast-southwest by 15 feet northwest-southeast. The one on the northeast side measures 26.6 feet northeast-southwest by roughly 20 feet northwest-southeast; the part nearest the main section of the building juts out another 1.6 feet to the southeast (Figure 26).

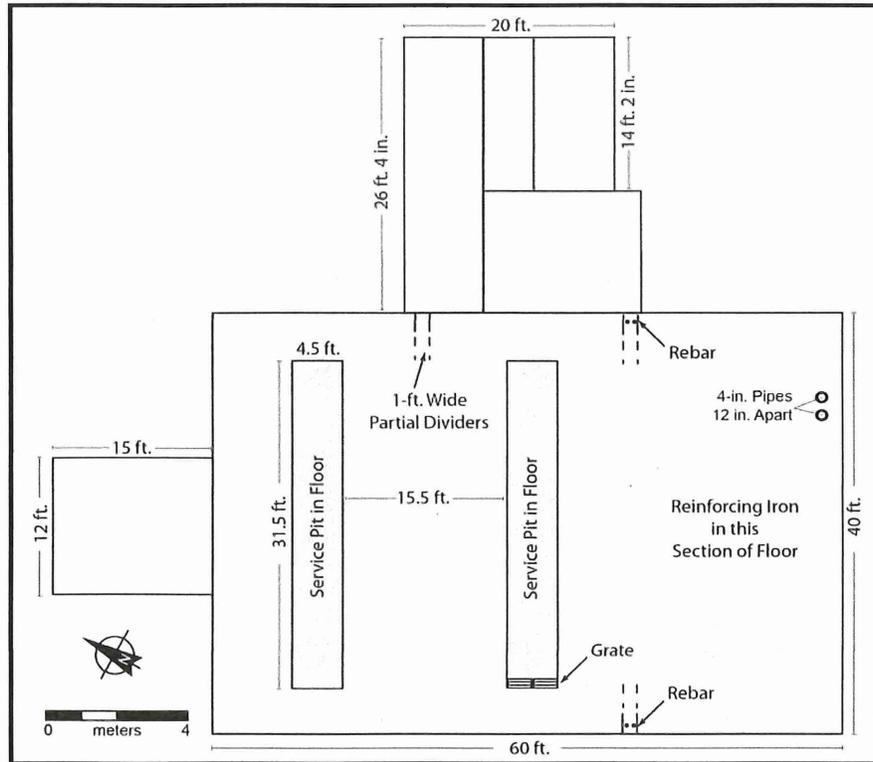


FIGURE 22. PLAN OF FEATURE 6



FIGURE 23. FEATURE 6, OVERVIEW, FACING NORTH-NORTHWEST

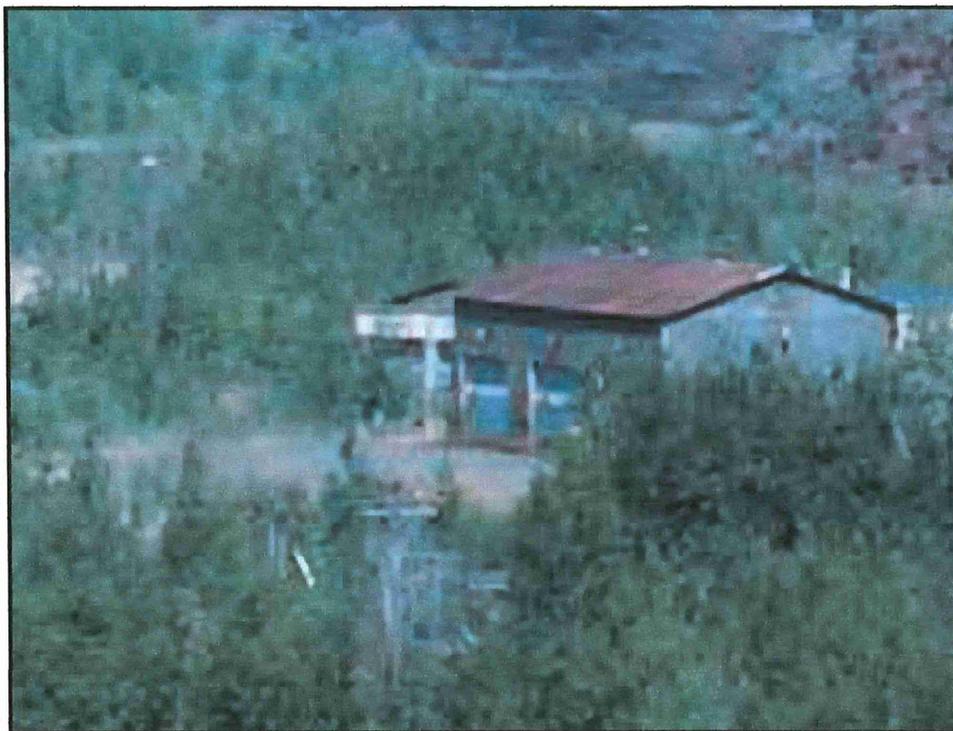


Photo by John Hill, <http://www.rrpicturearchives.net/showPicture.aspx?id=1170279>

FIGURE 24. VIEW OF TRUCK SHOP (FEATURE 6), 1985



FIGURE 25. FEATURE 6, SOUTHWEST END OF SOUTHEAST PIT, FACING NORTHEAST



FIGURE 26. FEATURE 6, NORTHEAST SECTION, FACING NORTHEAST

Feature 7

Feature 7 is a small, poured-concrete foundation located at the edge of the APE, and approximately 50 feet northeast of the north corner of the northeast section of Feature 6. Its historical counterpart, which could not be identified through additional research, is not depicted on historical maps, nor is it visible in historical aerial photographs. The top part of the foundation was moved or pushed at some point so that it is at a different orientation than the bottom part, which appears to be intact but could not be confirmed as such (Figure 27). The foundation is largely covered by overburden, but it appears to be roughly square, with the north face measuring approximately 4 feet in length.

Feature 8

Feature 8 is a poured-concrete-slab foundation situated outside of the APE approximately 10 feet southwest of Feature 7 and 23 feet northeast of the north corner of the northeast section of Feature 6 (Figures 28 and 29). A 1968 Rouchleau Mine operations map and aerial photographs show the former building was constructed between 1961 and 1968 and removed between 1981 and 1989. Feature 8 is nearly square, measuring 12 feet northwest-southeast by 12.4 feet northeast-southwest. A metal plate measuring 2.2 by 3.3 feet is fastened down by screw-attached metal tabs in the center of the northwest side. Approximately 8 inches southeast of the plate is a 1-inch-diameter pipe support inserted into a 4-inch-diameter base. The proximity of Feature 8 to Feature 6, the similarity in their construction dates, and the previous separation of these two features from the others by a railroad track indicate that Feature 8 was related to truck maintenance operations.



FIGURE 27. FEATURE 7, OVERVIEW, FACING SOUTHWEST

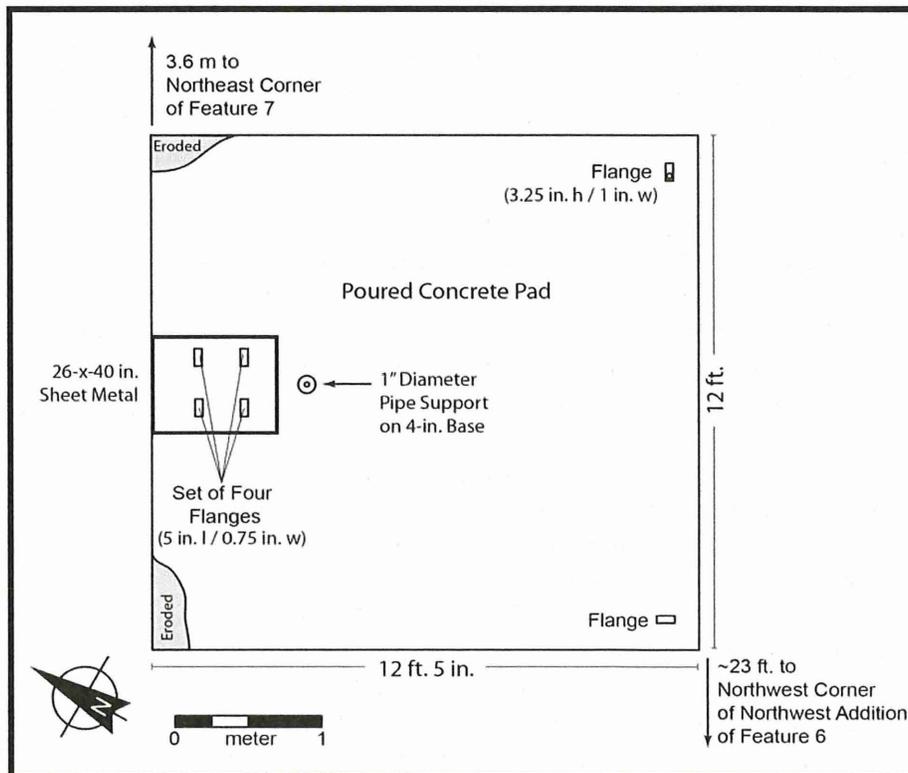


FIGURE 28. PLAN OF FEATURE 8



FIGURE 29. FEATURE 8, OVERVIEW, FACING SOUTHEAST

Feature 9

Feature 9 is a poured-concrete, rectangular foundation and associated rail, both located within the APE (Figure 30). A 1949 Rouchleau Mine operations map, a 1944 Oliver Iron Mining Company map, and aerial and standard photographs indicate that the former building was a diesel locomotive garage built between 1944 and 1948 and, as with Feature 5, likely near the end of that period (Figure 31). The garage was abandoned by 1985, and razed between 1985 and 1989. The foundation is approximately 48 feet northwest-southeast by 120 feet northeast-southwest. The partial exposure of the feature found the location of two sets of tracks, one with both rails intact, and the other with only one rail intact. The 3-inch rails run through the foundation on the northeast, with 4.75 feet between rails, and approximately 10.5 feet of foundation between tracks. The exposure also encountered evidence of a wood floor, subflooring, and joists (Figure 32).

Two fire hydrants are located in proximity to Feature 9, one 60 feet to the east, and one 60 feet to the west of the north corner (Figure 33). The hydrant to the east is marked with a raised insignia with a circular center reading “EDDY VALVE CO.” at the top, “WATERFORD, N.Y.” at the bottom, and “B/5/78” in the center. The “5” is indicative of the valve opening size, while the “78” indicates the bury depth. This hydrant dates to the later period of the Eddy Valve Company’s existence before it was purchased by the Clow Valve Company during the 1940s (Firehydrant.org 2012). The hydrant to the west is also marked with a raised insignia that has a circular center reading “EDDY VALVE CO.” at the top and “WATERFORD, N.Y.” at the bottom, but the center contains “E V” overlapped in a large script, indicating that it is slightly earlier than the first hydrant. Both hydrants appear on a Rouchleau Mine operations map dating to 1949.

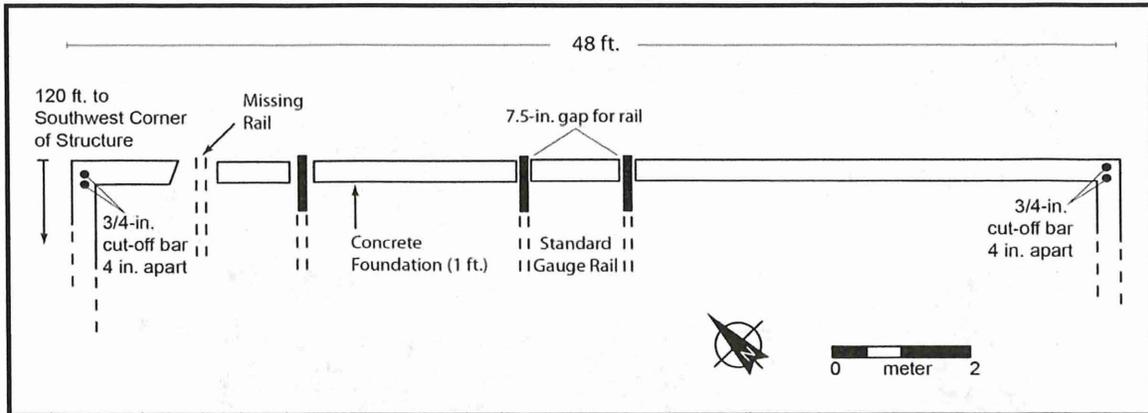


FIGURE 30. PLAN OF FEATURE 9

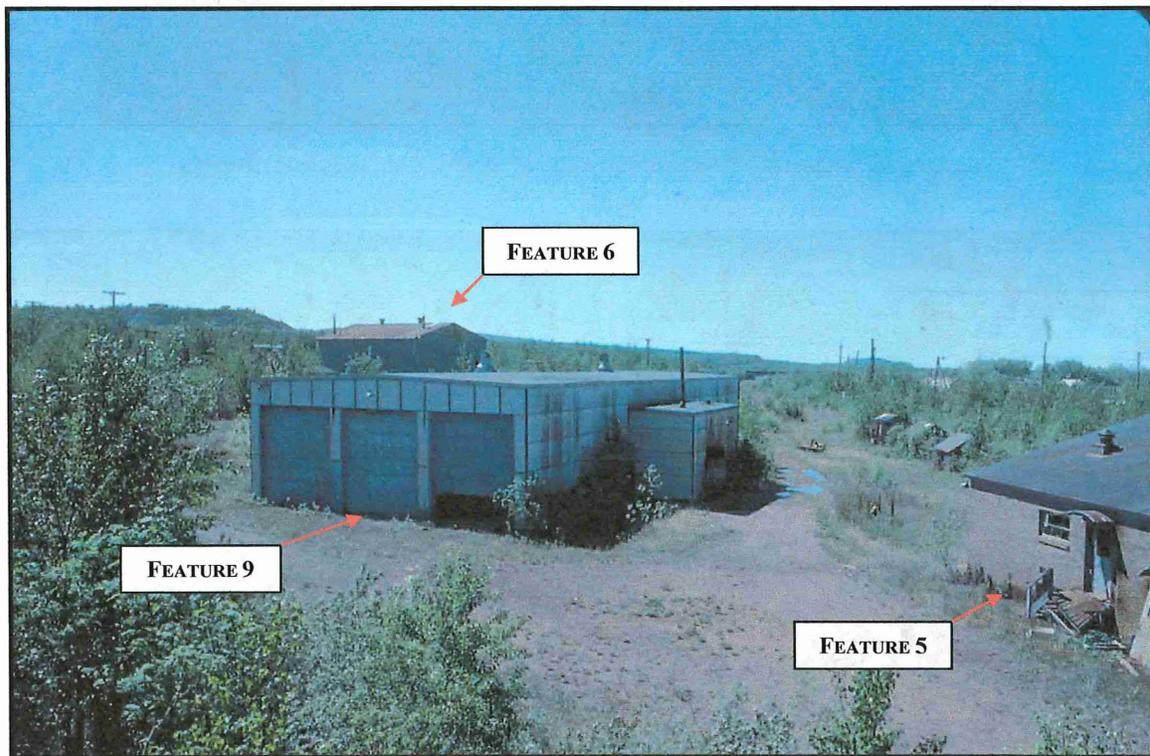


Photo by John Hill, <http://www.rpicturearchives.net/showPicture.aspx?id=1170258>

FIGURE 31. VIEW OF DIESEL LOCOMOTIVE GARAGE (FEATURE 9), 1985



FIGURE 32. FEATURE 9, WOOD FLOORING, SUBFLOOR, AND JOIST DETAIL



FIGURE 33. DETAIL OF FIRE HYDRANTS DIRECTION (A) AND NORTHWEST (B) OF FEATURE 9

Feature 10

Feature 10 is a former locomotive house, located outside of the APE. Constructed circa 1953 (Parden 1987:7), it was abandoned sometime prior to 1985 (Figure 34). The building is extant but now houses TriTec, a company that fabricates steel (Figure 35).



Photo by John Hill, <http://www.rpicturearchives.net/showPicture.aspx?id=1170257>

FIGURE 34. VIEW OF LOCOMOTIVE HOUSE (FEATURE 10), 1985, FACING NORTHWEST



FIGURE 35. CURRENT VIEW OF LOCOMOTIVE HOUSE (FEATURE 10), FACING SOUTHEAST

HISTORIC CONTEXTS

The following sections provide historic contexts for 21SL1135 and are a culmination of the information gathered during the Phase II literature search. These contexts constitute research themes under which the site identified in the TH 53 Relocation project APE, 21SL1135, can be evaluated for its NRHP significance. They are based in the Statewide historic context *Minnesota's Iron Ore Industry, 1880s-1945*, as well as contexts provided in the NRHP MPDF *Railroads in Minnesota, 1862-1956* (Schmidt et al. 2006).

The DM&IR and Oliver Iron Mining Company Ground Transportation – World War II and the Post-War Era

At the dawn of Europe's entry into World War II, the Great Depression had reached a decade in age and therefore been given sufficient time to inflict significant financial damage on the already challenged U.S. railroad industry (Stover 1978:178, 1997:200, 202). Iron mining railroads were not excepted, and in Minnesota were particularly affected, as a substantially decreased call for steel led to a drop in ore tonnage of "over 50 % between 1929 and 1935" (Prosser 1966:59). Conveniently, the DM&N had applied for the leasing of the Duluth and Iron Range Railroad properties three months prior to Black Tuesday; the timing of the application meant that the lease, which marked the first step in consolidating the railroads into the DM&IR, could begin its role in alleviating cost pressures in early 1930 (King 2003:115). As the U.S. economy plummeted, the cost savings generated by the "joint use of equipment, elimination of some duplicate facilities and services, and . . . common use of the ore docks" (King 2003:115) under the lease provided a vital measure of assistance in the years leading up to the consolidation, which was accomplished in March of 1938, just days after Germany invaded Austria.

Relief from the Depression came not long thereafter, as war preparations were begun by various European nations that needed America's steel, and the reversal in economic fortunes for the iron mining industry was completed once the United States became embroiled in combat. With steel needed to build new ships and tanks, and to produce everything from air raid sirens, barbed wire fencing, and field ovens to weaponry, not to mention to fulfill civilian needs, wartime requirements exceeded the capacity of iron mines in operation at the start of the war. In response, the Oliver Iron Mining Company, which was associated with the DM&IR through their parent corporation, United States Steel Corporation, prepared and opened several additional mines on the Mesabi Range, some of which had been partially worked in the past and held in reserve. In the winter of 1940, for example, the Oliver Iron Mining Company stripped "six iron ore properties on the Mesabi range to make available additional ore for mining during the season of 1941" (*Skilling's Mining Review* 1940a). Others followed in 1941, including the Alpena, which had been inactive since 1920, and in the summer of 1942, the Oliver Iron Mining Company began the process of dewatering billions of gallons of water from Mountain Iron Mine, idle since 1908, in anticipation of the level of demand for iron ore expected for 1943 (*Skilling's Mining Review* 1941a, 1942a, 1942b, 1943a).

As escalating demands were made of the iron mining industry, so too railroads were subject to the exigencies of war; for example, because coastal tankers were deterred by

German submarines in the Atlantic Ocean, railroads were inundated with shipments of oil. Likewise, gasoline rationing resulted from oil and rubber shortages, the latter because it was expected that reductions in vehicle mileage through rationing would effect a reduction in the demand for tires, the U.S. rubber supply having substantially diminished due to the Japanese occupation of Indonesia (Marcotte 2012). Gasoline rationing forced numerous businesses and passengers to turn to the rails for freight and personal transportation, and from 1941 to 1944, “railroads handled 77 per cent of the new intercity passenger traffic and 83 per cent of the new commercial freight business” (Stover 1997:187). In addition to diverting traffic to the railroads, the war also created new traffic: “Between Pearl Harbor and the end of the war, American railroads furnished 97 per cent of all domestic troop movements and about 90 per cent of all domestic movements of Army and Navy equipment and supplies” (Stover 1997:186-187).

On the Iron Range, exponentially increased mining activity combined with the demands put on railroads nationwide made necessary the augmenting of the motive power, rolling stock, and associated facilities of both the DM&IR and Oliver Iron Mining Company. As ore traffic doubled twice between 1938 and 1941, the DM&IR contracted in 1940 for the building of eight new, massive steam locomotives that could shoulder substantially larger loads for extended distances without stoppages for fuel and water, and it subsequently ordered ten more, as well as 1,500 new ore cars of 70-ton capacity, the previous standard having been of 50-ton capacity (DM&IR 1992:7; King 2003:39, 122-123). The Oliver Iron Mining Company purchased ten diesel-electric locomotives, the first to be used on the Mesabi Range, as well as 33 stripping cars, in 1940, followed by another 40 stripping cars and another six diesel-electric locomotives in 1941, another ten diesel-electric locomotives in 1942, and 50 dump cars in 1943, these orders constituting just the ones reported on by *Skillings Mining Review* (*Skillings Mining Review* 1940b, 1941b, 1941c, 1941d, 1942c, 1943b), which may not be inclusive. Associated shops were built at mine sites and offsite centralized complexes such as the Oliver Iron Mining Company’s Virginia, Minnesota, headquarters during the war (*Skillings Mining Review* 1943c, 1944a; Parden 1987).

While boosting its rail-related infrastructure during the war, the Oliver Iron Mining Company was also increasingly integrating trucks into its mining operations as a means of speeding production. Though the company used trucks on the Mesabi Range at least as early as 1937, at the Spruce Mine in Eveleth (*Skillings Mining Review* 1937a, 1937b), it was during the war era that trucks began to move from unusual to conventional in the Oliver Iron Mining Company’s operations on the Mesabi, not to mention in the operations of companies overall on the Iron Range, as their use spread to multiple mines (Lindberg 1946). In 1941 alone, 48 trucks were ordered for use by the Oliver Iron Mining Company: 20 for its Eveleth-Virginia District, 8 for its Hibbing-Chisholm District, 6 for its Coleraine District, one of which was to be used also in its Canisteo District, and 14 for unidentified locations on the Mesabi (*Skillings Mining Review* 1941e, 1941f, 1941g, 1941h). The Oliver Iron Mining Company’s increased and combined modes of mining transportation achieved new heights in production, and the DM&IR realized a concomitant escalation in shipments.

The amount of iron ore shipped over the DM&IR reached its World War II peak with an unprecedented tonnage in 1942, when the railroad moved nearly 45 million tons, and it continued to transport impressively high levels, over 40 million tons per year, until the close of the war (King 2003:39, 122-123), the majority of it supplied by the Oliver operations. Although tonnage dropped to just under 33 million in 1946, this amount was by no means miniscule, and the post-war demand for iron ore remained high, as industries that had been deprived of steel strove to meet revived civilian demands. Between this occurrence and U.S. participation in the Korean War from 1950 to 1953, annual iron ore tonnage shipped by the DM&IR averaged over 40 million between 1946 and 1953, reaching an all-time high of 49,317,625 long tons in the latter year (King 2003:153, 199).

While the events occurring between 1938 and 1953 infused new life into the nation's railroads, forces that had challenged their dominance in transportation prior to this period continued to work against them during these 15 years, making strong advances particularly after World War II. The end of gasoline rationing meant that pleasure travelers could return to the accessibility and privacy of their automobiles, the flexibility and affordability of buses, or the speed of air travel (Stover 1997:196, 218). Freight, likewise, could be sent via truck, affording its shippers the "extensibility, adaptability, and convenience" (Stover 1997:195) provided by the country's millions of miles of roadway for long hauls, as well as flexible scheduling and door-to-door service for short-haul deliveries (Stover 1997:195-196).

In response to wartime pressures and subsequently increasing competition, U.S. railroads began the process of phasing out steam in favor of diesel. Although diesel had been introduced well before the war, pressure for quicker, more efficient railroad transportation resulted in a 217 percent increase in diesel locomotives during the war. Some of these, as noted above, were purchased by the Oliver Iron Mining Company. Even with such orders, however, diesel locomotives constituted only nine percent of the U.S. locomotive roster when the war ended in 1945. After the war, the cost benefits and customer satisfaction to be gained by the fuel efficiency, low maintenance, and quick startup of diesel engines caused railroads to retire their steam locomotives at a rapid rate. Just over a decade later, only four percent of the locomotives owned by railroads nationwide were steam powered, many of which were inactive, and in Minnesota, the majority of the railroads were dieselized by 1955 (Prosser 1966:71; Stover 1997:213-214). In 1967, the total number of steam locomotives owned nationally was only 21 (Stover 1978:252).

The DM&IR was somewhat later to convert to diesel than most Minnesota railroads because it had paid for and obtained its large steam locomotives beginning in 1940, because it was able to obtain additional quality steam locomotives from those roads whose conversion came more quickly, and likely because being primarily an ore road, and one highly successful through 1953, it did not feel the competition from automobiles, buses, trucks, and airplanes as keenly as did other railroads at that time. It in fact held its peak number of steam locomotives in 1951 (King 2003:153, 165). The following year, however, the DM&IR received 15 diesel switchers, inaugurating the diesel era for the

road (DM&IR 1992:18). The locomotives would not follow suit until 1956, but dieselization was fully achieved by the DM&IR in 1960 (King 2003:160, 173).

The Development and Operations of the Rouchleau Mine, 1942-1977

Preparations to activate the Rouchleau Mine for open pit mining were begun by the Oliver Iron Mining Company in the fall of 1942, in response to high wartime demand for iron ore (*Skillings Mining Review* 1942d). One of several mines that were developed, redeveloped, or expanded during World War II, the Rouchleau Mine was the Oliver Iron Mining Company's second largest producer of iron ore shipments on the Mesabi Range annually from its first year back in operation through 1956, with the exception of 1950, when it was a close third and still heavily outranked the mines behind it (*Skillings' Mining Review* 1943d, 1944b, 1945-1947b, 1948-1950a, 1951-1957). These statistics include the shipments from adjacent mines, which came to be known as the Rouchleau Group when the Rouchleau Mine pit was expanded beyond the original 80 acres to other previously named mine properties, beginning with a move toward the Moose Mine in 1947 (*Skillings Mining Review* 1947c). Despite the Oliver Iron Mining Company's foray into truck haulage in the late 1930s and early 1940s, the Rouchleau Mine was operated using rail transportation with steam locomotives until at least the summer of 1947 (*Skillings Mining Review* 1947a). By the fall of 1948, however, steam locomotives used in the mine's operations were replaced or augmented by diesel locomotives, and a diesel locomotive garage and diesel fuel station were constructed at the mine.

After 1956, the Rouchleau Group, which also encompassed the Auburn, Great Western, Shaw, Ohio, and Lone Jack mines (*Skillings Mining Review* 1950b), expanded to the Sauntry Mine and became the leading producer of the Oliver Iron Mining Company on the Mesabi Range annually until 1962 (*Skillings Mining Review* 1958-1963). During the 1960s, rail transportation for the mine's operations was subsequently replaced or augmented by the use of trucks, and a truck maintenance complex was built near the earlier diesel shops. The Rouchleau Group maintained an average annual shipment of nearly three million tons from 1963 through 1974, after which it was largely depleted. It shipped only 144,713 tons in 1978, its last year of production (*Skillings Mining Review* 1964-1979).

EVALUATION AND RECOMMENDATIONS

Significance

Site 21SL1135 consists of features associated with shops and supporting structures constructed during the conversion of the Rouchleau Mine operations transportation from steam-powered rail to diesel-powered rail and from rail to trucks, trajectories that were followed throughout the Oliver Iron Mining Company's operations on the Mesabi Iron Range beginning in 1940. The diesel-related shops and structures, however, were built during the late 1940s, and the truck-related shops and structures built during the 1960s. None of these, therefore, are associated with the pattern of conversion in mining transportation resulting from pressures precipitated by World War II; rather, they

represent a common outgrowth of that pattern after the war, and one that is not historically significant. The site therefore does not meet NRHP Criterion A.

No evidence could be found to associate the Rouchleau shops with a specific individual, much less one who is historically significant. For this reason, 21SL1135 does not satisfy NRHP Criterion B.

The features at 21SL1135 are largely concrete slab foundations, small supports, and railroad tracks, most of which would not typically include substantial subsurface components and therefore are not likely to generate any information beyond that obtained during the Phase I survey. Only minor subsurface components are present within Feature 1, and these appear to have been for the accommodation of utilities, such as the pump. While the remnants of the diesel fuel station which constitute Feature 5 are buried, the components of a post-World War II diesel fueling station are unlikely to shed light on historically important research questions, including those pertaining to shifts in railroad technology. Feature 10, the extant former locomotive shop, has been heavily modified to accommodate a modern steel fabrication company. As a mid twentieth-century railroad shops site, 21SL1135 is not expected to contain substantial artifact deposits. Given, therefore, the low information potential of 21SL1135, the site does not meet NRHP Criterion D.

Eligibility

Based on its lack of significance, 21SL1135 is recommended as not eligible for listing in the NRHP.

SUMMARY AND RECOMMENDATIONS

One archaeological site, 21SL1135 (Rouchleau Shops), was identified during the Phase I archaeological survey for the TH 53 Relocation Project. Beyond this site, the remaining portions of the APE consist of areas that are either negative for cultural materials; severely disturbed by mining, railroad construction, and urban development; or are wetlands, which are considered to have low archaeological potential. No further archaeological work is therefore recommended for that portion of the APE outside of 21SL1135 prior to or during construction for the TH 53 Relocation Project.

It is noted that the areas disturbed by mining, including excavations and tailings piles, could constitute part of a mining landscape; however, the presence of a mining landscape has not been determined.

21SL1135 (ROUCHLEAU SHOPS)

Site 21SL1135 (Rouchleau Shops) consists of features associated with shops and supporting structures constructed during the conversion of the Rouchleau Mine operations transportation from steam-powered rail to diesel-powered rail and from rail to trucks. The features, however, postdate the pattern of conversion in mining transportation resulting from pressures precipitated by World War II, instead representing a common outgrowth of that pattern after the war, and one that is not historically significant. The site therefore does not meet NRHP Criterion A.

No evidence could be found to associate the Rouchleau shops with a specific individual, much less one who is historically significant. For this reason, 21SL1135 does not satisfy NRHP Criterion B.

The features do not include substantial subsurface components and are unlikely to shed light on historically important research questions, including those pertaining to shifts in railroad technology. As a mid twentieth-century railroad shops site, 21SL1135 is not expected to contain substantial artifact deposits. Based on its low information potential, 21SL1135 does not meet NRHP Criterion D.

Based on its lack of significance, 21SL1135 is recommended as not eligible for listing in the NRHP. No further archaeological work is therefore recommended for the site prior to or during construction for the TH 53 Relocation Project.

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