ANDERSON HALLAS ARCHITECTS: CLASS III CULTURAL RESOURCE INVENTORY FOR THE BIGHORN RANGER STATION/FALL RIVER ENTRANCE WASTEWATER AND WATER SYSTEMS AT ROCKY MOUNTAIN NATIONAL PARK, LARIMER COUNTY, COLORADO

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With contributions by
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Prepared for:
National Park Service, Rocky Mountain National Park

Under contract to Anderson Hallas Architects; Contract No. 140P2019D0016

Metcalf Project No. 2020.CO.076

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Est. 1980

ABSTRACT

Metcalf Archaeological Consultants, Inc. (Metcalf), under contract with Anderson Hallas Architects, has completed a Class III cultural resource inventory for the Big Horn Ranger Station and Fall River Entrance at Rocky Mountain National Park in Larimer County, Colorado. The survey area is located in the 6th PM, Township 5 North, Range 73 West, Sections 8 and 17 on federal land, covering a total of 16.31 acres. Rocky Mountain National Park (Park) of the National Park Service (NPS) is the lead agency for this survey.

The survey area encompasses the Fall River Entrance Historic District, including the Bighorn Ranger Station and the Fall River Entrance Station, a 160 foot wide corridor extending approximately 1,600 feet (ft) northwest from the historic district adjacent to the southwest of Bighorn Creek, and an amorphous area on the southwest side of US Highway 34 extending approximately 250 ft to 360 ft southwest of the highway. Metcalf inventoried the entire survey area and did not exclude any areas of previous survey or steep cross slopes.

The survey resulted in updating five Euro-American historic sites and structures. Rerecorded resources include an artifact scatter (5LR00651), a habitation (5LR04491), a segment of Old United States Highway 34 (5LR13378.8), an entire road (5LR14434), and the above ground manifestations of the Fall River Entrance Pipeline (5LR14440). 5LR00651 was recommended not eligible for inclusion to the National Register of Historic Places (NRHP) in 1982, 2003, and 2017, but in 2019, it was amended to **determined eligible.** 5LR04491 was recommended needs data in 1999, recommended eligible in 2017, and amended to **determined not eligible** in 2019. In 2019, 5LR13378.8 was **recommended eligible/supporting**, 5LR14434 was **determined NRHP not eligible**, and 5LR14440 was **determined NRHP eligible**. Metcalf agrees with the official determinations for 5LR00651, 5LR04491, 5LR14434, and 5LR14440 and the eligibility recommendation for 5LR13378.8.

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Colorado Office of Archaeology and Historic Preservation
CULTURAL RESOURCE SURVEY MANAGEMENT INFORMATION FORM

Federal acres of Potential Effect/Project:	16.31	Acres surveyed:	16.31
State acres of Potential Effect/Project:		Acres surveyed:	
Private acres of Potential Effect/Project:		Acres surveyed	
TOTAL	16.31	**TOTAL**	16.31

Legal Location of Project *(attach additional pages if necessary)*

Principal Meridian:	6th
County:	Larimer
USGS Quad Name:	Estes Park 1961 PR 1977

Township	5 N	Range	73 W	Section	8	SW 1/4		SE	1/4
Township	5 N	Range	73 W	Section	17	NW 1/4		NE	1/4
Township	5 N	Range	73 W	Section	17	NE 1/4		NE	1/4
Township	5 N	Range	73 W	Section	17	SE 1/4		NE	1/4

Site Number	Site Type				Eligibility							Effect			Treatment / Management Recommendations								Comments
	Prehistoric	Historic	Paleontological	Unknown	Eligible	Needs Data	Not Eligible	Contributing	Non-Contributing	Supporting	Non-Supporting	No Historic Properties Affected	No Adverse Effect	Adverse Effect	No Further Work	Avoid / Preserve	Monitor	Test	Excavate	Archival Research	Archival Documentation	Other	
SITES																							
5LR00651		X			X											X								5LR00651 was determined not eligible in 1982, 2003, and 2017. In 2019, it was amended to determined eligible. Metcalf agrees with this determination.

Site Number	Site Type				Eligibility							Effect			Treatment / Management Recommendations								Comments
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5LR04491		X					X								X								5LR04491 was recommended needs data in 1999 and recommended eligible in 2017. In 2019, it was amended to determined not eligible. Metcalf agrees with this determination.
5LR13378.8		X			X					X						X							5LR13378.8 was recommended eligible/supporting in 2019. Metcalf extended 5LR13378.8 and is recommending eligible/supporting.
5LR14434		X					X								X								5LR14434 was determined not eligible in 2019. Metcalf agrees with this determination.
5LR14440		X			X											X							5LR14440 was determined eligible in 2019. Metcalf agrees with this determination.
ISOLATED FINDS																							

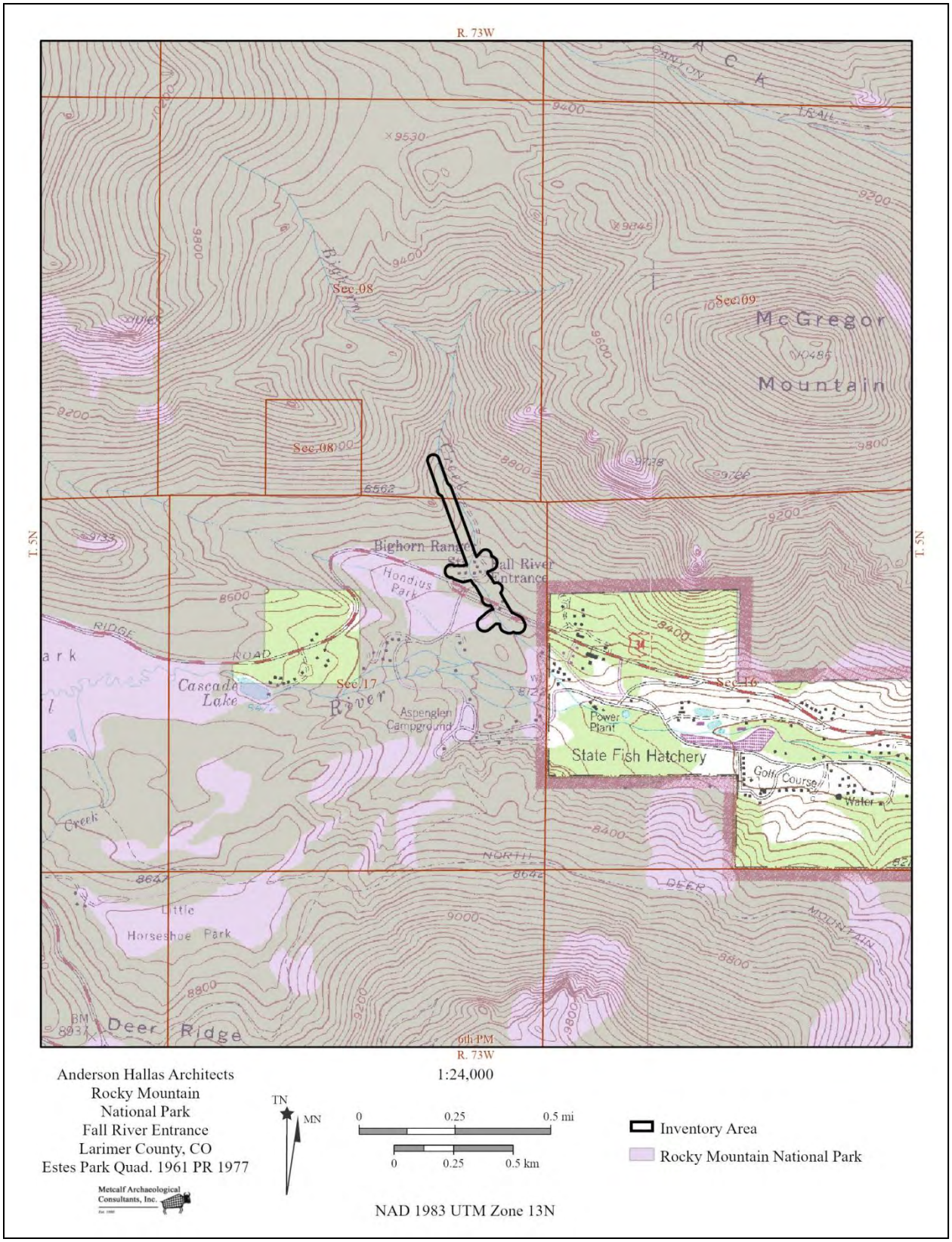

Figure 1. Survey location map.

INTRODUCTION

Metcalf Archaeological Consultants, Inc. (Metcalf), under contract with Anderson Hallas Architects, has completed a Class III cultural resource inventory for the Big Horn Ranger Station and Fall River Entrance at Rocky Mountain National Park in Larimer County, Colorado. The survey area (Figure 1) is located in the 6th PM, Township 5 North, Range 73 West, Sections 8 and 17 on federal land, covering a total of 16.31 acres. Rocky Mountain National Park (Park) of the National Park Service (NPS) is the lead agency for this survey.

The survey area encompasses the Fall River Entrance Historic District, including the Bighorn Ranger Station and the Fall River Entrance Station, a corridor measuring approximately 1,600 feet (ft) long by160 wide by extending northwest from the historic district adjacent to the southwest of Bighorn Creek, and an amorphous area on the southwest side of US Highway 34 extending approximately 250 ft to 360 ft southwest of the highway (Figure 1). Metcalf inventoried the entire survey area and did not exclude any areas of previous survey or steep cross slopes.

The cultural resource survey complies with Section 110 of the National Historic Preservation Act (NHPA) and may be used to facilitate compliance with 54 U.S.C. § 306108 (commonly known as Section 106 of the NHPA). The survey also complies with other applicable federal legislation and regulations by providing information on the presence of cultural resources, recommendations about resource eligibility to the National Register of Historic Places (NRHP), and information for Section 106 compliance pertaining to effect when historic properties are present.

Fieldwork for this survey was conducted August 31 and September 1, 2020 by Metcalf archaeologists Clive Briggs and Dante Knapp. Jesse Clark prepared field and report maps and created GIS data shapefiles for the survey. Kim Kintz served as the principal investigator. Metcalf conducted all work under the terms of survey scope of work and the company's research design for the survey (Briggs 2020). All field documentation, maps, and photographs for this survey are on file at Metcalf's office in Lakewood and in the Park's archives.

ENVIRONMENT

TOPOGRAPHY AND GEOLOGY

The Park is located within the Southern Rocky Mountains region (Fenneman 1946), which is characterized by high elevations centered along the Continental Divide (Divide) with mountains reaching over 14,000 ft in elevation and topography that drops drastically in elevation east and west of the Divide. The survey area is located on the east side of the Divide with the Fall River comprising the main drainage and watershed (Figure 2 and Figure 3). Prominent landmarks within or near the survey area include Bighorn Creek, Hondius Park, Deer Mountain, and McGregor Mountain. The elevation ranges from 8,215 ft (2,504 m) to 8,453 ft (2,576 m).

Figure 2. Survey overview at Bighorn Ranger Station. The view to the southwest.

Figure 3. Survey overview of the south portion of survey area. The view is to the north.

Park landforms include the glaciated highland zone, centered on the Divide above 9,000 ft (2,743 m); the upland zone to the east, between 7,500 ft (2,286 m) and 9,000 ft (2,743 m); and the Granby Lowlands on the western slope of the Park, where elevations from the highland zone quickly decline to 8,000 ft (2,438 m) to the Upper Colorado River valley. The survey area is characterized by the upland zone, where most drainages exhibit glacial processes of the Quaternary Period (Cole and Braddock 1990). The dominant geologic units that compose the mountains and ridges of the survey area consist of Middle Proterozoic igneous Silver Plume Granite and Early Proterozoic metamorphic biotite schist. Pleistocene and Holocene age deposits, including alluvium, colluvium, talus, glacial rock debris, glacial till, and landslide deposits, are found along major intermittent streams, alluvial fans along valley margins, mountain slopes, glacial moraines, and within knob-and-kettle topography (Cole and Braddock 1990). Raw material suitable for stone tool production is very limited within the Park; however, one source of ore-quality rhyolite is found at Specimen Mountain.

SOILS

During the survey, Metcalf observed granitic colluvium, residuum, and alluvium of varying depths. These sediments extend to 10 to 30 centimeters (cm) below surface and often overlay near-surface granite bedrock where pin flag probing was conducted at sites and observed in road cutbanks. As mapped by the United States Department of Agriculture, National Resource Conservation Service (USDA-NRCS 2020), different soil series are present in different quantities in the survey area. Soils series' include: Isolation gravelly sandy loam (70.8 percent) derived from granite, gneiss, and/or schist glacial till along 5 to 35 percent slopes that reach a maximum depth of more than 80 inches; Rock outcrop-Cathedral complex (16.9 percent) consisting of surface exposure of granite and/or gneiss and/or schist along 20 to 100 percent slopes; Rofork-Chasmfalls complex (12 percent) derived from gravelly alluvium, which is a derivative of granite, gneiss, and/or schist weathered residuum along 5 to 35 percent slopes that reach a maximum depth of 10 to 20 inches; and Nanita very gravelly sandy loam (0.2 percent) derived from Sandy and gravelly glacial till of schist and/or granite and/or gneiss along 10 to 60 percent slopes that reach a maximum depth of more than 80 inches.

FLORA AND FAUNA

The survey area is located in the montane ecological zone dominated by an overstory of mostly ponderosa pine (Pinus ponderosa), with some areas containing lodgepole pine (Pinus contorta), Douglas fir (Pseudostuga menzeiseii), Engelmann spruce (Picea engelmannii), and Rocky Mountain juniper (Juniperus scopulorum Sarg.). Understory plants include alderleaf mountain mahogany (Cercocarpus montanus Raf), serviceberry (Amelanchier Medik) common juniper (Juniperus communis L.), kinnikinnick (Arctostaphylos uva-ursi [L.] Spreng.), Oregon grape (Mahonia aquifolium), and various grasses (Poaceae) and wildflowers. Riparian areas contain aspen (Populus tremuloides) and various willows (Epilobium ssp.), mountain alder (Alnus viridis), water birch (Betula occidentalis), and blue spruce (Picea pungens) (NPS 2020, PLANTS Database 2020). Ground visibility throughout the survey area is generally poor because of thick grasses and pine duff and on average ranged from 10 to 40 percent. In isolated areas ground visibility is good (40 to 60 percent), or excellent (100 percent) along roads.

Fauna in the region includes coyotes, jackrabbits, foxes, raccoons, skunks, bobcats, rodents, golden and bald eagles, hawks, owls, turkeys, sage grouse, and other various bird and raptor species. Mule deer, black bear, and elk are abundant; moose occur occasionally. The field crew noted deer, elk, bear, and raptors.

LAND USE PATTERNS/BUILT ENVIRONMENT

The area is primarily used as Park facilities including the Bighorn Ranger Station and the Fall River Entrance. Although, within the south portion of the survey area, southwest of United States Highway 34 (US 34), the area is currently used for recreation with heavy equestrian and pedestrian trail use along an abandoned alignment of US 34 (5LR13378.8). The area now designated as the Park attracted pre-contact American Indians and Euro-American visitors since the late 1800s, prior to the formal establishment of the area as a national park in 1915, and a growing number of visitors explore the Park each year.

CULTURE HISTORY AND PREVIOUS WORK

CULTURE HISTORY

The survey area is situated within the Platte River Basin geographic region, which encompasses northeastern Colorado. An in-depth discussion of the culture history and research issues for the region regarding the Prehistoric and Protohistoric Periods can be found in Colorado Prehistory: A Context for the Platte River Basin (Gilmore et al. 1999). However, no prehistoric or Protohistoric resources were recorded during the survey and the culture history for the survey relates to the historic period.

HISTORIC PERIOD

Comprehensive historic contexts have been written for the general survey area. The most recent can be found in Colorado History: A Context for Historical Archeology (Church et al. 2007), The History of Rocky Mountain National Park (Butler 2005), and Colorado Mountains Historic Context (Mehls 1984). The following information is a synthesis of these resources.

The Historic Period covers the period from approximately A.D. 1840-1969. In 1803, the United States obtained the Louisiana Purchase, including the territory that is now Colorado, and sent expeditions westward to document this acquisition. It was during this timeframe that the "contact-traditional cultures" were building economic relationships with the Spanish and other European traders. The years between 1820 and 1860 were characterized by more intensive migrations of American settlers westward as a result of the Louisiana Purchase. These migrations led to heightened competition for resources and, in turn, more cross-cultural conflicts. By this time, the fur trade was dwindling in importance, and gold was discovered in Colorado in 1859, starting the Colorado Gold Rush (Smith 2009). Although the gold rush did not greatly affect the area now known as Rocky Mountain National Park, it did serve to move settlers closer to the area, prompting establishment by Congress of the Colorado Territory in 1861. Historic themes in the study area are related to Euro-American exploration and settlement, water conveyance, and transportation.

Euro-American Exploration, Settlement, and Tourism

A comprehensive account of exploration and settlement of the Park can be found in The History of Rocky Mountain National Park (Butler 2005). Early exploration of the Estes Park area was first described by Rufus B. Sage (Sage 1846) and later interpreted by historians (Black 1969; Carothers 1951; Hafen and Hafen 1965). Originally from Middletown, Connecticut, Sage traveled throughout the west from 1841 to 1844; in 1842 he explored North and Middle Parks and in 1843 explored the area now known as Rocky Mountain National Park. Although it is likely that early trappers were in the area when Sage explored the region, his accounts are the earliest written evidence of exploration, which described the Big Thompson River including Estes Park and Moraine Park, St. Vrain Creek, Wind River Pass, and Allenspark (Buchholtz 1983; Butler 2005). Following Sage's explorations, Joel Estes was the first to settle on the east side of the Divide in 1860 when he built a cabin for his family along Fish Creek and established a cattle ranch; the family occupied the ranch until 1866. In the 1870's other settlers came to the area and the town of Estes Park was established, but little is known about these other early settlers. The well-known settlers include Abner Sprague, (settled in Moraine Park in 1874), John Hupp (settled in Upper Beaver Meadows in 1875), and Guy Hollowell (settled in Hollowell Park in 1887). In 1898 the William Barns Ranch, later known as the Hondius Ranch, was established in Upper Beaver Meadows (Atkins 1964; Buchholtz 1983; Carothers 1951).

A quickly changing economy during the late 1800s and early 1900s lead to the development of recreation and tourism in the Estes Park area when early pioneer settlement transitioned from a subsistence and ranching-based economy to a tourism-based economy. The abundance of game and vast wilderness that first attracted settlers to the area was eagerly acknowledged by visitors, and early entrepreneurs saw an opportunity to provide visitor accommodations. Established and settled by the mid-1870s, the town of Estes Park had changed by the late 1880s from a remote ranching community to a publicized resort (Buchholtz 1983; Frank 2013). Early pioneer economic ventures (hunting, ranching, and mining) became supplemented by tourism and outdoor recreation, which soon dominated the economy (Frank 2013). The economic transition lead to the development of several guest ranches in the area and an economy to support the ranches.

While several of the first ranches transitioned into guest ranches, Hondius Ranch continued as a traditional ranching outfit raising cattle, but intensified hay farming operations to supply the new tourism economy. Hondius Ranch, originally known as Barns Ranch, was established in Upper Beaver Meadows in 1898 by the prominent early settler Pieter Hondius (Atkins 1964; Buchholtz 1983; Carothers 1951). In ca. 1900 Mr. Hondius built a ranch house, barn, and corral (5LR03913) at the west end of Upper Beaver Meadows. Mr. Hondius purchased approximately 2,000 acres of land in Beaver Meadows between 1898 and 1915, which was originally owned by William Barns, James J. Osborn, and John Hupp. The ranch raised cattle and farmed hay that was sold to other settlers and lodges in the area including the Elkhorn Lodge (5LR00476) located in Estes Park along the Fall River (Atkins 1964; Butler 2005).

Originally from Holland, Pieter Hondius was born on December 6, 1864 and immigrated to the United States in 1896. In 1904, Mr. Hondius married Eleanor Estes James and had a son named Peter Jr. His brother Jan Hondius lived in Bilthoven Holland and he had a cousin Justus Hondius who lived in Los Angeles. He was also a descendent from a long line of notable ancestors; some were old world map makers and navigators as early as the fifteenth century. On

February 17, 1934, Mr. Hondius died from pneumonia in Palm Springs where he was spending the winter with his wife and son (Estes Park Trail 1934).

In 1906 Mr. Hondius obtained 40 acres of land through a cash sale entry patent near Fall River (NE ¼, NE ¼ of Section 17, Township 5 North, Range 73 West), which includes the east portion of Hondius Park and the location of the Fall River Entrance Historic District (5LR01184). Land patents (GLO Document No. 17436) were issued to both Pieter Hondius (identified as Peter Hondius on the land patent) and Pelir Hondins (BLM 1906) for this area. This area encompasses the majority of the survey area and Mr. Hondius is associated with the first Euro-American ownership, but is not associated with the Fall River Entrance Historic District (5LR01184). Mr. Hondius also obtained additional land in Section 17 including Hondius Park and the area that would become Aspenglen Campground (SE ¼ of NE ¼ and N ½ of SE ¼, Section 17). All of Mr. Hondius land, including the 2,000 acres in Beaver Meadows, was sold to the NPS in 1931 (Atkins 1993; Musselman 1971: Chapter XII). However, land patent records for Hondius's additional land acquisitions in Section 17 are not represented in GLO records (BLM 2021).

Pieter Hondius was known for his development of water diversions and pipeline systems at Beaver Meadows and Fall River. In 1906, he constructed the Hondius-Beaver Water System, which provided irrigation to his fields and conveyed water from Beaver Meadows to the High Drive subdivision. In ca. 1908 Mr. Hondius and F.L. Clerc constructed the Hondius-Cascade Pipeline, situated slightly south and southwest of Hondius Park along Fall River (Atkins 1964; Butler 2005).

Mr. Hondius and F.L Clerc, made a significant contribution to water development in the Estes Park area by building the Hondius-Cascade Pipeline that initiates at a diversion structure at Cascade Lake at Fall River. The Hondius-Cascade Pipeline consists of a buried 30-inch-diameter steel pipeline designed to convey water to the Stanley Power Plant/Fall River Hydroelectric Plant (5LR478) located downstream near the edge of Fall River. In1908 water rights were sold to Freelan Oscar Stanley (Kilsdonk 1997). This pipeline is still extant and one previously recorded segment (5LR14436.1) is located 0.25 mile to the southwest of the survey area along the bank of Fall River. The pipeline segment is exposed in several areas along the northeast bank of Fall River between Cascade Lake and Aspenglen Campground Road (5LR14435.1) (Briggs 2019). The location of this buried pipeline between Aspenglen Campground Road and the power plant is unknown, but it is assumed to generally follow Fall River based on the recorded alignment of segment 5LR14435.1, location of the power plant downstream near the river edge, and the probable mapped location (but not labeled) on the 1928 dependent resurvey plat (SE ¼ of the NE¼, Section 17) (BLM 1928). The 1928 plat shows the Stanley Power Plant/Fall River Hydroelectric Plant pipeline paralleling Fall River outside the current survey area (Figure 4). An isolated structure is also mapped on the 1928 plat to the west of Mr. Hondius and Mr. Hondins land patent in the NW ¼ of the NE ¼ of Section 17. A land patent was issued for this area in 1881 to Lyman White for the W ½ of the NE ¼ of Section 17 (BLM 1881) (Figure 4). However, it is unlikely that this building is extant or any evidence remains because it was not found during EROs 2018 survey of the area (Briggs 2019). There are no other structures, buildings, or sites in Section 17 known to be associated with Mr. Hondius.

The Stanley Power Plant/Fall River Hydroelectric Plant and two associated cottages comprise a noncontiguous area of the Stanley Hotel Historic District (5LR478). The power plant was built between 1907 and 1909 to provide electricity for the Stanley Hotel, built in 1909, and housed a turbine and a 200-kilowatt generator (Buchholtz 1983; Kilsdonk 1997). This noncontiguous area of the district is 600 ft east of the Park boundary, about 3 miles northeast of Estes Park, and 3.5 miles from the Stanley Hotel complex, and situated along the northeast bank of Fall River. Mr. Stanley's goal was to build the first fully electrified hotel in the nation to "heat, light and cook meals exclusively with electricity" and he envisioned that water development was the essential building component for his hotel (Buchholtz 1983:122; Kilsdonk 1997). Because the plant could produce an abundance of electricity, well surpassing the hotel's needs, the plant also provided electric power for commercial and residential needs for the town of Estes Park. Power distribution was made possible by organizing the Estes Park Electric, Light and Power Company, incorporated in 1908 by Mr. Stanley and a group of investors. Sometime between 1908 and 1928, the Estes Park Electric, Light and Power Company became the Stanley Power Company (Buchholtz 1983; Kilsdonk 1997). The Stanley Power Company operated the hydroelectric plant until 1928, when water rights and all facilities, including the plant, Cascade diversion dam, and pipeline, were sold to the Public Service Company of Colorado. In 1945, the Public Service Company of Colorado sold all water rights and facilities to the town of Estes Park. However, the original dam and diversion structure were destroyed in 1982 during the Lawn Lake Flood and were rebuilt with concrete in 1988 (Kilsdonk 1997). The concrete diversion supplies water to the original steel pipeline. In 1997, the Park negotiated water rights with the town of Estes Park, and the pipeline is now used to supply water to the Estes Park water treatment plant (Butler 2005).

Figure 4. 1928 GLO dependent resurvey plat of T5N, 75W, 6th PM.

Transportation Development in Colorado: 1900-1920s

Road construction efforts in Colorado prior to the innovation and widespread use of the automobile were focused on wagon roads. Most wagon roads were financed and constructed by individuals with limited aid or oversight from governmental entities. When the Colorado Highway Commission was organized under a federal charter in 1909, which was the predecessor to the Colorado Highway Department (and later the Colorado Department of Transportation), automobile owners in Colorado became active in interstate auto clubs and advocated the construction of state highways and other recreation roads in Colorado. However, by 1920 roads in Colorado were still poorly marked and had rough surfaces. Poor road signage and maintenance was a result of limited funding from inadequate licensing revenues and minimal grants from the federal government, despite the 1916 Public Roads and Federal Highways Acts. During World War I the federal government provided funding for strategic road development across rural parts of the country, including Colorado. Technological advances in the automobile, improved road construction methods, and an increase in agricultural production in the 1920s resulted in the introduction of the numbered highway system and increased popularity of roadside motor inns, restaurants, and curio shops along newly founded Main Streets along major state and interstate highways (Associated Cultural Resource Experts [ACRE] 2002).

Fall River Road / State Highway 16 / US Highway 34

In Colorado, US 34 is 269 miles long and extends west from the Nebraska state border through Yuma, Weld, Washington, and Morgan Counties and enters the central mountains of Larimer and Grand Counties ending at Granby in Grand County at the junction of US 40. By 1913, the route in Larimer and Grand Counties was established as State Primary Road No. 51; by 1922, when Colorado entered the Federal Highway System, the route was designated State Primary Road No. 46 (5LR09533); and by 1924, the segment from Greeley to Estes Park to Granby was designated as State Highway (SH) 16 on state travel maps. In 1968, US 34 took over the entire length of SH 16 (Mead & Hunt 2016).

Fall River Road (5LR00885), built between 1913 and 1920, comprises a western portion of this route between Estes Park and Granby through the Park. The eastern portion of the road between Estes Park and Fall River Pass was complete by 1917 and a connection to Grand Lake from Fall River Pass (5GA01750) was complete by 1920. Fall River Road was the first automobile access route into the Park, had a 16 percent grade in places, and was the first route to cross the Divide in the Park until Trail Ridge Road (5LR00502) was complete in 1932. The western section of road, west of Fall River Pass, was incorporated into Trail Ridge Road in 1932 and later into US 34 (Colorado State Highway Department 1937; Mead & Hunt 2016; Quinn 1993).

Fall River Road follows the approximate route of a trail historically used for by native people and known by the Arapaho as their *ethebaw* ("Dog Trail") because dogs were often used to pull their travois over the pass. Early hunters and trappers improved this route to make it more accessible to horse travel. By the late 1800s access and communication between the two main centers in the area, Estes Park and Grand Lake, remained difficult and could be accomplished only by rough foot or pack trails. In 1910, the old trail over the pass was reconstructed by the United States Forest Service. Local residents first formally discussed the possibility of a road up Fall River to cross the Divide to connect Estes Park with Grand Lake in

1911. The appropriate route, governing jurisdiction, and funding were debated, and by 1913 the commissioners of Larimer County and the Colorado State Highway Department entered into an agreement to build a road over Fall River Pass to connect the two towns. The route would follow Fall River and the reconstructed old trail for seven miles, and then diverge from the trail to cross Chapin Pass before climbing Fall River Pass. From this point, the road would extend to Poudre Lake at Milner Pass and then south/southwest into the Kawuneeche Valley to follow the North Fork of the Colorado River to Grand Lake. During late summer of 1913, road work began with the labor of convicts from the Colorado State Penitentiary in Canon City. Convict workers were quartered in cabins and tents in upper Horseshoe Park. However, work progressed extremely slowly and only one mile of new road was constructed to reach Horseshoe Falls by the end of the 1914 season. Although not much new road was built, in 1914 convict workers completed grading of the first six miles of road extending west of the village of Estes Park, past the future location of the Sunnyside Checking Station, through Hondius Park, and through Horseshoe Park. After the 1914 season, the convicts were replaced by contractors hired by Larimer and Grand Counties (Musselman 1971:Chapter IV; Quinn 1993).

By 1915 at the time of the establishment of Rocky Mountain National Park, the road extended approximately two miles into the park on the east side of the Divide. From Grand Lake, a portion of the Lulu City wagon road was reconstructed reaching about the same distance north of Grand Lake. Park officials encouraged completing the connecting road, but by the end of 1915 the road on the east side of the Divide reached only to Chasm Falls. At this time the road was very narrow, with some reaches only eight or 10 ft wide, was very steep above Chasm Falls, and switchbacks above the falls were very narrow. The lower portion also needed culverts as none were installed during previous work. By 1916, 16.13 miles of road remained to be constructed, three miles of the road built in 1915 needed surface improvements, and in areas the roadbed and stone embankments were washed out from spring thaw. Over the next two years Park administrators had to decide on a route above tree line. A plan was made to cross Chapin Pass at the divide to avoid the high Fall River Pass, but by 1918 it was collectively decided that the higher, more scenic route over Fall River Pass would be the chosen route. However, the increasing cost to build the road delayed construction. Finally, in early September of 1920 the road over Fall River Pass was connected to the road extending from Grand Lake and in late September the road was open to public travel (Quinn 1993).

Although the road was open, it was crudely constructed, not surfaced, steep and narrow, and many motorists had difficulties navigating the steep grades and sharp switchbacks. Park administration soon realized a great need for improvements, which began in 1921 when the second, tenth, and eleventh switchbacks were widened and the road surface was improved. Between 1921 and 1925, the road required considerable maintenance including widening, repairing washouts at stream crossings, and managing snow removal. In reaction to managing these conditions, in 1925 the Park surveyed a possible reroute of the section of road between Fall River Pass and Milner Pass, and southward to Grand Lake. Following the completion of the survey, the Bureau of Public Roads (BPR) took over major road construction in the national parks and in 1927 the BPR conducted their own survey. The BPR survey recommended constructing a new road over Trail Ridge rather than reconstructing Fall River Road. The NPS accepted BPR's recommendation and funds were allocated from the 1927 road budget to start the project. Fall River Road was planned to be abandoned after the new road was constructed. This plan was heavily debated and a compromise was reached to retain the eastern section of road,

between Fall River Pass and Horseshoe Park, as a one-way, uphill route. The Kawuneeche Valley segment remained in use until the mid-1930s when it was realigned and the central section, from Fall River Pass to Phantom Valley Ranch was abandoned. The major portions of the new Trail Ridge Road were completed between 1929 and 1932 (Quinn 1993).

In 1934, the lower two miles of Fall River Road between the 1930 revised park boundary (USGS 1919c), and the river crossing at Horseshoe Park were reconstructed (Steely and Huey 2021). New construction followed the same approximate route, but avoided steep grades, eliminated sharp curves, and two miles of new road was built along Bighorn Ranger Station and the Fall River Entrance Station in Hondius Park. Currently, the road remains in the same alignment despite alterations made during Mission 66-era improvements (Higgins and Heavrin 2017; Quinn 1993). A segment of Fall River Road/US 34 recorded during the current survey (5LR13378.8) consists of an abandoned alignment of the original road located adjacent to the southwest of the current alignment of Fall River Road/US 34 at the Fall River Entrance Historic District. Segment 5LR13378.8 is a portion of the original alignment of the road before it was realigned in 1934. Furthermore, the alignment at segment 5LR13378.8 is mapped on historic United States Geological Survey (USGS) maps of the Estes Park area (USGS 1915a, 1915b, 1919a, 1919b, 1919c, 1919d, 1919e, 1919f) (Figure 5). The road is also mapped on the 1928 dependent resurvey of the area (BLM 1928).

Figure 5. Segment 5LR13378.8 depicted on the 1915 Longs Peak quadrangle (USGS 1915a).

Fall River Entrance Historic District

Several entrance station developments occurred along Fall River Road between 1917 and 1934 as a result of Park boundary revisions and reconstruction episodes (Figure 6). The Sunnyside checking station (1920-1926), once located just west of the Village of Estes Park, was the first entrance station established by the Park. A 1926 Park boundary revision resulted in a new location for the entrance station at Horseshoe Park (1927-1934). Following a 1930 boundary revision, the entrance station was moved to Hondius Park (1934-present) slightly east of the Bighorn Ranger Station, which was built between 1933 and 1936. A rustic-style timber gateway entrance structure extending between two cabins originally built at Sunnyside was relocated to each subsequent entrance station location (Steely and Huey 2021). Redevelopment of the Fall River Entrance Station at Hondius Park during the Mission 66 program (1960-1961) resulted in the current design of the entrance station and infrastructure for both the entrance station and the Bighorn Ranger Station. The Bighorn Ranger Station, changes made to the Fall River Entrance Station in 1948, and redevelopment of the entrance station during the Mission 66 Era, comprise the Fall River Entrance Historic District (5LR01184.1-5LR01184.3) (Higgins and Heavrin 2017).

Revisions of the eastern Park boundary also resulted in the development of other east entrance stations (Figure 6). Boundary revisions of 1930 resulted in moving the first High Drive Entrance Station at Deer Ridge (1926-1932) to a location near the current Beaver Meadows Entrance Station (1932-1960). The first entrance station located within the Big Thompson watershed was the Bear Lake Checking Station located near Glacier Basin Campground (1926-ca. 1932). Following the 1930 boundary revision, Bear Lake Checking Station was replaced by the Thompson River Entrance Station (1932-1960) established along SH 66 approximately 0.6 mile southeast of Moraine Park (Steely and Huey 2021). An in-depth discussion of other east entrance stations can be found in *Historic Context: Fall River Entrance, Rocky Mountain National Park, 1921–1960 and Review of Other East-Park Entrances, 1921–1960* (Steely and Huey 2021).

In 1920, the Sunnyside Checking Station was the first Park entrance station located along Fall River Road at the 1917 revised Park boundary. The station was located below Castle Mountain, approximately 1.75 miles west/northwest of the village of Estes Park, and situated at a narrow point in the road. Built between a rocky mountainside to the north and a steep slope above Fall River on the south, the station was strategically positioned to be unavoidable to allow the Park to control access. Designed by Park Ranger Dean Babcock, the entrance station consisted of two log cabins connected by a gabled log portal over the road and was known as the "Fall River Gateway." The south cabin was the "Keepers Lodge" with connected public toilet stalls along the west side and the north cabin was an office to serve visitors. Each cabin was 16 ft square and had Dutch-gable roofs extending below the portal roof to function as shelters. In 1921, staffing needs required the addition of one log room on the north side of the north cabin, which expanded its footprint to approximately 16 ft by 20 ft (Musselman 1971:Chapter XII; ROMO Archives; Steely and Huey 2021; USGS 1919a).

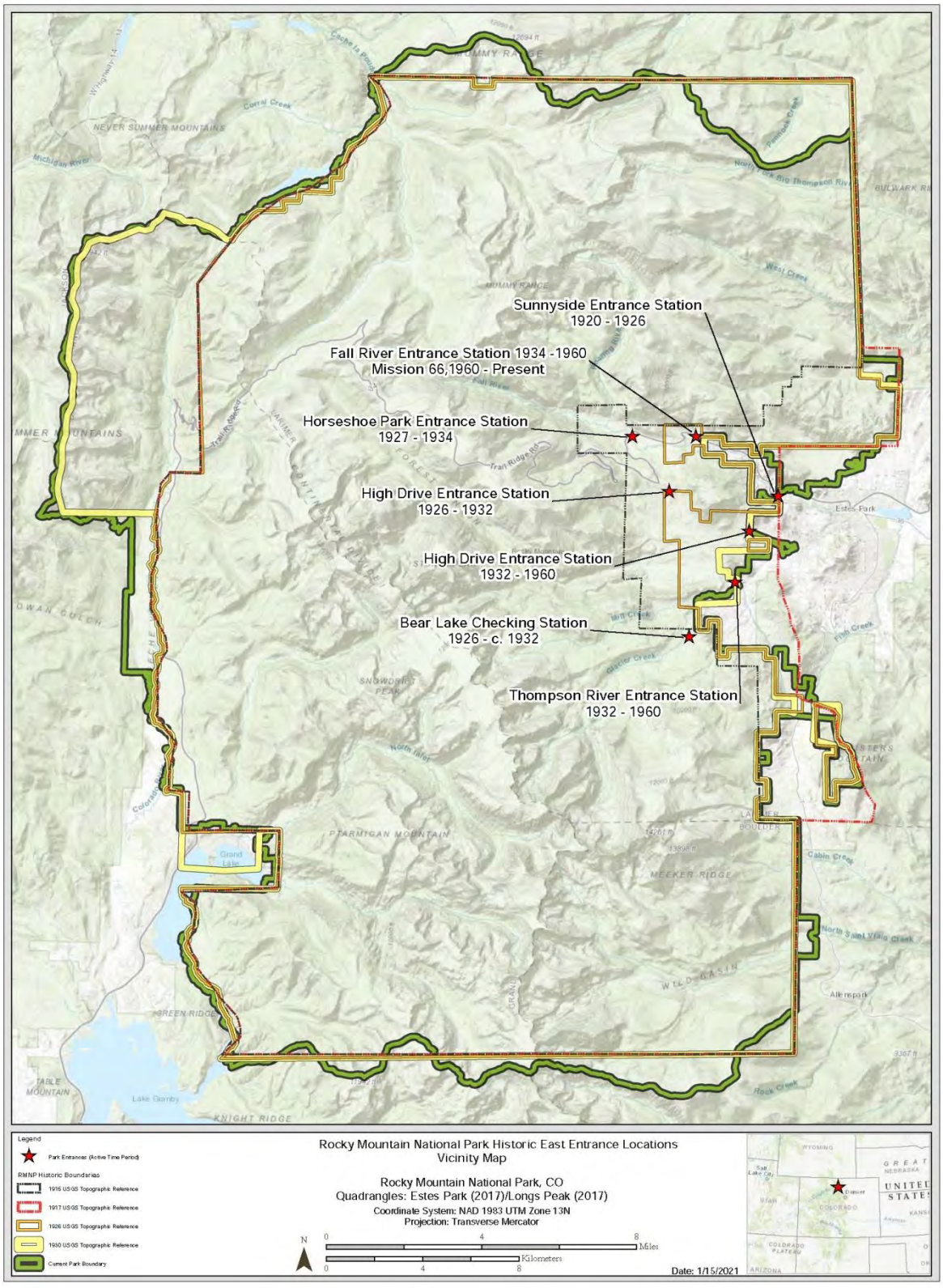

Figure 6. Historic east entrance stations (adapted from Steely and Huey 2021).

In 1926 the Park boundary was moved west four miles along Fall River to allow for commercial development along the river corridor to accommodate visitors prior to their entry into the Park, thus requiring the 1920 Sunnyside Checking Station to be moved. Along Fall River, the new boundary was designated at the west section line of Section 17, T5N, R73W in Horseshoe Park (USGS 1919b). Sunnyside Checking Station was dismantled in September 1926. Cabins were separated from the log portal and all structural elements were relocated to a strategic traffic control point, chosen by Superintendent Roger W. Toll. The new location was a small barren hill with panoramic views located one mile west of the new boundary in Horseshoe Park near the intersection of Fall River Road and High Drive, and just west of Sheep Lakes (Figure 6, above). According to Toll's 1927 Annual Report, the 1920 entrance structure was reconstructed at Horseshoe Park, but Toll did not provide details of reconstruction efforts or exact dates in either his annual report or any of his 1927 monthly reports (SMR 1926, 1927; SAR 1927; Steely and Huey 2021).

In 1930, the Park boundary was revised and moved east along Fall River to the east section line of Section 17, T5N, R73W (USGS 1919c) (Figure 6, above). The new boundary at Fall River Road was designated at the east end of Hondius Park on land owned by Pieter Hondius, who sold the land to the Park in 1931 (Atkins 1993; Higgins and Heavrin 2017; Musselman 1971: Chapter XII). It was necessary to move the 1920 entrance station reconstructed at Horseshoe Park to the new boundary, but financial constraints of the Great Depression delayed this effort. Finally, in 1934 the Park used the Civil Works Administration (CWA) program to hire local workers to disassemble the 1920 entrance structure and reassemble it at the east end of Hondius Park, slightly west of the new boundary and slightly east of the Bighorn Ranger Station, and created the Fall River Entrance at Hondius Park just before the CWA program ended in March 1934 (SMR 1934).

The Bighorn Ranger Station area includes the ranger station (Building 44), garage and woodshed (Building 169), and barn and stable (Building 168). Bighorn Ranger Station was designed in NPS Rustic Style under the supervision of Architect Edward A. Nickel of the Branch of Plans and Design, Western Division and was built by the Civilian Conservation Corps (CCC). The CCC also built the infrastructure for the Bighorn Ranger Station and Fall River Entrance including water and wastewater systems, power lines, and a 0.25 mile long access road for the Bighorn Ranger Station area. Additional CCC improvements at the entrance included two miles of realigned roadway for Fall River Road, a turnout lane lined with a stone curb, planting of shrubs and trees around the structure, and a small parking area with pedestrian trails. Civilian Conservation Corps workers also helped operate the station until the program ended in 1942 (Higgins and Heavrin 2017).

Following New Deal Era improvements, the Fall River Entrance remained stable through the late 1940s. In reaction to increased visitation after World War II, NPS landscape architects designed changes to the road and station to accommodate this increase. Plans were made in March 1948 to revise the station by widening the road and removing the south cabin and log portal (Higgins and Heavrin 2017). In April 1948 the Park moved the south cabin approximately 10 miles to the Thompson River Entrance Station and the log portal was discarded. Without being confined by the narrow log portal between the cabins, a third lane was added on the south. The north cabin was not moved or altered and remained a shelter for the entrance station (Steely and Huey 2021).

All buildings at the Bighorn Ranger Station and the entrance station were fully serviced by a water and wastewater system. The original water system was built in 1935 for domestic and recreational use and fire prevention. The head of the pipeline is located in Bighorn Creek in the northeast quarter of Section 17, T5N, R73W (Boulder County District Court 1939; DWR 2020; Higgins and Heavrin 2017). The pipeline trends south-southeast along the northeast bank of Bighorn Creek. Starting at a diversion dam on Bighorn Creek, water was pumped approximately 3,000 ft to the Bighorn Ranger Station and the entrance station. To equalize the supply and to provide storage for fire fighting, a 6,000-gallon storage reservoir was built to the north of the Bighorn Ranger Station complex. Wastewater from the Bighorn Ranger Station and the checking station was piped to a temporary cesspool; a septic tank was proposed at the time to replace the cesspool (Higgins and Heavrin 2017). During the Mission 66 Era redevelopment of the Fall River Entrance Historic District, the water system was replaced by a system of greater capacity.

Visitation at the Park accelerated exponentially following World War II, and by 1956 the NPS Landscape Architectural Branch proposed plans for a new entrance to accommodate this increase of visitors. These plans became the first priority of changes to be initiated under the Mission 66 program at the Park (Higgins and Heavrin 2017). In the 1950s NPS facilities across the nation became outdated and Congress implemented the Mission 66 program. The program's goal was to make national parks accessible and more comfortable to the ever-increasing number of visitors and largely involved updating worn out facilities. Four historic contexts of Mission 66 cultural resources include pre–Mission 66 Era (1945-1955), Mission 66 Program (1956-1966), Parkscape USA Program (1967-1972), and National Park Service Nation-wide (Carr et al. 2015).

The design of the new entrance included three entrance lanes separated by a median to form one exit lane; the entrance station was to be moved approximately 300 ft to the southeast; additional parking was proposed near the old entrance station location; and additional residences and dormitories were proposed for the Bighorn Ranger Station area. By 1960, the roadwork was complete, which avoided the 1920 north cabin and the 1934 CCC pullout lane with stone curbing. Design plans implemented during Fiscal Year (FY) 1961 under the Mission 66 Program included razing the north cabin and box kiosk and the construction of a new checking station (Building 353) on the northeast side of the road, two portable kiosks (Buildings 670 and 671) for the incoming lanes, and one permanent kiosk built in the median to service the outgoing lane (Building 669). After construction of the new entrance station buildings, the 1920 north log cabin was left in place temporarily and used for an information station for visitors. However, the 1920 cabin was eliminated form Park plans and razed in March of 1961, but the CCC curbing and pullout are still extant. Proposed new housing would have required razing the CCC Era barn (Building 168) and expansion of the garage and woodshed (Building 169); however, this proposed work was never accomplished and dropped from the FY 1963 budget. Upgrading the Fall River Entrance water and wastewater system occurred concurrently with the redevelopment of the entrance station. The upgrade included an infiltration gallery that replaced the original diversion dam, a 60,000 gallon buried concrete storage reservoir, a chlorinator house, water supply lines, sewer lines, a septic tank, a buried sand filter, and a sewage chlorinator house. (Higgins and Heavrin 2017).

The current survey documented the aboveground manifestations of the Mission 66 Era redevelopment of the Fall River Entrance water and wastewater system (5LR14440). The infiltration gallery at Bighorn Creek replaced the original diversion dam and was recorded as Feature (F) 1. The 60,000 gallon underground water tank was documented as F2, which also includes a chlorinator house built adjacent to the water tank. The water supply lines and sewer lines are represented by several water valve access points and/or manholes documented during the survey. Three ceramic pipes representing the sand filter were exposed during the monitoring of geotechnical excavations (Appendix B) in the vicinity of a septic tank (F18). A documented road (5LR14434) consists of an extension of the Bighorn Ranger Station access road that continues northwest to access the water system. The sewage chlorinator house was not identified.

PREVIOUS WORK

Prior to fieldwork, Metcalf requested a formal files search from the Colorado Office of Archaeology and Historic Preservation (OAHP) consisting of the survey area plus a one-mile buffer and included previously recorded cultural resources and previous cultural resource inventories. In addition, an in-house files search at the Park was conducted July 7, 2020. The files search included a one-mile buffer surrounding the survey area to account for all previously recorded sites, of which many are mapped by only a single point rather than a polygon site boundary and the buffer was necessary to verify site locations with respect to the survey area. Previous cultural resource inventories and documented resources are tabulated in Tables 1 and 2.

Five previous inventories overlap the proposed survey area (Table 1). Of these, two were conducted within the last two years including the FY 2019 New Housing Area project conducted in 2019 by ERO Resources Corporation (ERO) (Engleman et al. 2020) and the Exotic Plant Treatment Areas (Option Units) conducted in 2018 by ERO (Briggs 2019). The remaining inventories, conducted in 2003 for the Wildland –Urban Interface Fuels Management Projects (Hanson 2003), in 1999 by the University of Northern Colorado (UNC) (Brunswig 2000), and in 1996 for the Fall River Entrance (Butler 1996), exceed the 10-year threshold of being reliable surveys per OAHP and Park requirements.

Table 1. Previous surveys overlapping the survey area.

ID	TITLE	AUTHOR	DATA SOURCE
Briggs 2018	Exotic Plant Treatment Areas (Option Units)	Briggs 2019	National Park Service
Engleman, Mayo, Larmore 2019	FY19 New Housing	Engleman et al. 2020	National Park Service
LR.NP.R47	Deer Mtn WUI Survey North	Hanson 2003	National Park Service
MC.NP.R34	Horseshoe Park Area 1999	Brunswig 2000	National Park Service
LR.NP.R14	Fall River Entrance	Butler 1996	National Park Service

A total of 107 cultural resources are within one mile of the survey area, and of these, 11 overlap the survey area or are within 100 ft (Table 2). Two structures that overlap and/or are within 100 ft of the survey area are associated with the reconstructed Fall River Entrance Pipeline (NPS 1962) and possibly with the original Fall River Entrance Pipeline built in 1925 for the original Fall River Entrance built in 1920 (Higgins and Heavrin 2017; Boulder County District Court 1939; USGS 1957), which include a buried water tank (5LR14440.1) and a segment of an access road (5LR14434.1). Nine other cultural resources not associated with the

water system also overlap or are within 100 ft of the survey area and include: a historic trash dump recorded as an isolated find (IF) (5LR00651); Fall River Road (5LR00885); a segment of Fall River Road (5LR00885.3); the Fall River Entrance Historic District (Fall River Entrance/Bighorn Ranger Station 5LR01184.1-5LR01184.3); a historic trash scatter (5LR03877); two homesteads (5LR04491 and 5LR04492); a historic foundation (5LR10461); and a segment of old US Highway 34 (5LR13378.8).

Table 2. Overlapping previously recorded cultural resources or mapped within 100 ft.

Site #	Period	Description	NRHP Eligibility (Date)	Data Source
5LR00651	Historic	Artifact scatter (listed as an isolated feature in OAHP database)	Recommended not eligible (1982) Recommended not eligible (2003) Recommended not eligible (2017) Amended to determined Eligible (2019)	Colorado OAHP and National Park Service
5LR00885	Historic	Fall River Road	Listed (1987)	Colorado OAHP
5LR00885.3	Historic	Fall River Road segment	Listed/Contributing (2018)	National Park Service
5LR01184.1 - 5LR01184.3	Historic	Bighorn Ranger Station	Listed (1988)	Colorado OAHP and National Park Service
5LR01184.1 - 5LR01184.3	Historic district	Fall River Entrance Historic District	Listed (2017)	Colorado OAHP and National Park Service
5LR03877	Historic	Trash scatter	Field needs data (1999)	Colorado OAHP
5LR04491	Historic	Homestead	Recommended needs data (1999) Recommended eligible(2017) Amended to determined not eligible (2019)	National Park Service
5LR04492	Historic	Homestead	Field needs data (1999)	Colorado OAHP
5LR10461	Historic	Foundation	Determined not eligible (2003) Determined not eligible (2019)	National Park Service
5LR13378.8	Historic	Old US Highway 34 segment	Recommended Eligible/supporting (2019)	National Park Service
5LR14434.1	Historic	Road segment	Determined not eligible/non-supporting (2019)	National Park Service
5LR14440.1	Historic	Buried water tank	Determined Eligible/supporting (2019)	National Park Service

An online search of General Land Office (GLO) plats for the area (T5N, R73W, Sections 8, and 17) did not reveal any potential sites within the survey area on the original plat (1874), but the 1928 dependent resurvey plat shows the original entrance station buildings and US Highway 34 in the survey area (BLM 1874, 1928). Additional resources mapped on the 1928 plat and located south of the survey area include the probable location of the Stanley Power Plant/Fall River Hydroelectric Plant Pipeline (5LR14436) (SW ¼ and SE ¼ of Section 16; NE1/4 of Section 17) and Aspenglen Campground (SW ¼ Section 17). The GLO records search also identified land patents issued in 1906 to both Pieter Hondius (identified as Peter Hondius on the land patent) and Pelir Hondins for the NE ¼, NE ¼ of Section 17, which encompasses the majority of the survey area (BLM 1906). No land patents were field for the rest of the survey area that extends northwest into the SE ¼ of Section 8. A land patent was issued to Lyman White in 1881 adjacent to the survey area (W ½ of NE ¼ and SE ¼ of NE 1/4 , and NE ¼ of SE1/4, Section 17) (BLM 1881).

A review of historic USGS quadrangles of the area (USGS 1915a, 1915b, 1919a, 1919b, 1919c) show US Highway 34 bisecting the survey area, which is part of the Fall River Entrance Historic District (Higgins and Heavrin 2017). Quadrangles indicate that the Park boundary at Fall River has changed locations several times since formal designation of the Park as a national park in 1915. The 1915 Longs Peak quadrangle (USGS 1915a) shows the boundary along the west side of Horseshoe Park, and by 1919, the boundary expanded far east to the east section line of Sections 22 near the east end of Deer Mountain (USGS 1919b). In 1926 the boundary was moved to the west section line of Section 17 in Horseshoe Park (USGS 1919b), and in 1930 the boundary was revised to its current location at the east section line of Section 17 (USGS 1919c), which has remained unchanged on all subsequent quadrangles (Steely and Huey 2021).

STATEMENT OF OBJECTIVES AND RESEARCH DESIGN

Following state and federal policies and regulations implementing the NHPA (Public Law 89-665) as amended, the survey area was inventoried to identify any cultural resources within the survey area. Any discovered cultural resources were to be evaluated for eligibility to the NRHP under the Criteria for Eligibility (36 CFR 60.4). Register eligibility is evaluated in terms of the integrity of the resource in relation to four specific criteria: (A) are associated with events that have made a significant contribution to the broad patterns of our history; or (B) are associated with the lives of persons significant in our past; or (C) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (D) have yielded, or may be likely to yield information important in prehistory or history.

Prehistoric resources are most often evaluated under Criterion D, for their potential to yield information important to studies of prehistory. Information from a potentially significant prehistoric site often stems from data recovered from intact surface components and subsurface cultural deposits or discrete activity areas that can be securely associated with a temporal period or named cultural group. The potential for intact deposits or cultural/temporal associations may be inferred from surface evidence of cultural features or undisturbed deposits, and the presence of temporally or culturally diagnostic artifacts. Historic resources may be evaluated under any of the criteria. However, in the absence of structural features or documented association with significant historic events or important contributions of persons significant in history, historical resources are evaluated under essentially the same criteria as prehistoric resources.

Anticipated results of the survey were based on file search data, Metcalf's previous work in the region, historic documentation, and topographical and environmental characteristics. These factors suggest that historic and Protohistoric sites would be located in the survey area. Anticipated historic site types include trails, buildings, camps, habitations, water conveyance structures, and roads. Expected Protohistoric site types include open camps, wickiups or other brush shelters, pole caches, and utility racks. Metcalf expected minimal to no representation of prehistoric sites because they were not identified in the file search results, and based on previous work in the area, prehistoric site density within the montane ecological zone of the Park is generally low. Furthermore, given the limited size of the survey area and the historic development and use of much of the survey area, earlier occupations may have been destroyed.

FIELD AND LABORATORY METHODS

Metcalf conducted all survey and site recording in accordance with the terms of the company's State permit and the Park's standards and procedures for survey and resource documentation, which fulfills Colorado OAHP requirements.

SURVEY METHODOLOGY

The survey area was inventoried using standard pedestrian transects spaced at no more than 15 meters (m) across the survey area. Survey was conducted using straight transects when effective over moderate terrain, or by surveying individual landforms along contours and prominent landmarks. In-field navigation of the survey area was via GIS data on a handheld Trimble GeoXT 6000 GPS unit with real-time WAAS correction of approximately 2-5 m and post-processed correction to sub-meter. Careful attention was given to areas of high surface exposure, such as anthills, rodent back-dirt piles, and animal trails and areas of subsurface exposure, such as drainage cuts, existing trails, and two-track road cuts. Additionally, representative photographs of the survey area were taken and recorded on a photograph log noting the view and direction.

Upon discovery of cultural materials, the surrounding area was intensively examined to determine the nature and extent of the resource, define a boundary, and determine whether the resource should be considered a site or isolated find. For this survey, Metcalf followed the Park's Cultural Resource Documentation Form Instructions to define sites, which included documenting all trails even if they could not be identified through archival research. This protocol follows the rationale that most trails have been in use during the historic period, and some predate and the formal establishment of the Park as a National Park in 1915. Park protocols for isolated finds included documenting modern or historic brush shelters and fire rings of Euro-American origin in order to identify and evaluate all cultural phenomena identified during survey. The protocols followed for site and IF documentation fulfills Colorado OAHP requirements.

Sites are defined as:

- the locus of previous (50-year age minimum) human activity at which the preponderance of evidence suggests repeated and patterned use over time or multiple classes of activities. Certain cultural resources that represent single activity may also be defined as sites.
    a) Isolated thermal features evaluated as prehistoric in origin such as hearths are to be designated as sites, even though they may represent a single event, due to the interpretable function of such utilization and the potential for chronometric and economic data recovery;
    b) Single element rock art panels are to be designated as sites due to the interpretable nature of such an event and the potential diagnostic value of the motif;
    c) Isolated human burials;
    d) Loci exhibiting ground stone and flaked stone in association;
    e) Single or several culturally modified trees with or without associated features and artifacts;
    f) Mines;

g) Prospecting complexes representing substantial prospecting activity with a few or more associated artifacts;
h) Protohistoric and historic trails; or
i) Roads and highways.

Isolated finds are defined as:

- The location of previous (50-year age minimum) human activity at which are found one or more culturally modified and transportable objects representing a single activity and not found in the context of a site as defined above, or isolated features without associated artifacts that are at least 50 years old and not found in the context of a site as defined above, or isolated features that may be less than 50 years old including historic to modern fire rings and brush structures. Other historic isolated finds may include one to three prospect pits without evidence of substantial prospecting activity that do not contain more than a few associated artifacts or small historic artifact scatters that represent a single activity and usually do not include more than two artifact classes. *Note that this definition makes no reference to an absolute quantitative standard for the site/isolate distinction.*

Once defined, resources were recorded using the Rocky Mountain National Park Cultural Resource Documentation Form (version 19.2) (Park Form), which is inclusive for any resource types defined as sites and structures but excludes buildings. Metcalf implemented a proprietary digital platform for resource documentation using iPads, which involved creating a digital template of the Park Form that is integrated through a Web application (www.factorearth.com) that exports the forms as Microsoft Word documents. Sites were mapped with a handheld Trimble GeoXT 6000 GPS unit and photographed from various areas along the site boundary. The use of a customized data dictionary matching the Park's geodatabase schema allowed Metcalf to produce GIS data, starting at the field collection stage, to be integrated into the Park's geodatabase. The combined use of the digital platform and customized data dictionary allows for a seamless transition from field documentation and data collection to report production increasing survey deliverable efficiencies. All GPS readings were georeferenced to UTM zone 13, NAD 83 (post-processed to sub-meter accuracy). Lithic tools, diagnostic or unique artifacts, and features were photographed as well. All resources were plotted on the relevant 7.5' USGS quadrangle while in the field to help establish possible patterns to site and/or isolate location. All field notes, maps, and digital photograph files are on file at the Metcalf office in Lakewood and at the Park's Museum Storage Facility.

SURVEY RESULTS

Field conditions at the time of survey were conducive to the discovery and recording of cultural resources. Inventory resulted in updating two sites and documenting one new linear resource segment and two entire linear resources (Table 3); no isolated finds were recorded. All resources are historic and include: an artifact scatter (5LR00651); a habitation (5LR04491), a segment of Old US Highway 34 (5LR13378.8); a bladed road (5LR14434); and the Fall River Entrance Pipeline (5LR14440).

Table 3. Newly recorded and updated resources during survey.

Site #	Temp #	Period	Age/Date	Description	NRHP Recommendation
5LR00651	N/A	Historic	1890s-1920s	Artifact scatter	Officially eligible
5LR04491	N/A	Historic	1910-1931	Habitation	Officially not eligible
5LR13378.8	5LR13378.X	Historic	1874-1915	Old US Highway 34 segment	Eligible/supporting
5LR14434	5LR14434.X	Historic	1925-1962	Road	Officially not eligible
5LR14440	5LR14440.X	Historic	1962	Fall River Entrance Pipeline	Officially eligible

SITES

5LR00651

Previously recorded site 5LR00651 is a historic artifact scatter located on the northeast terrace/bench of Bighorn Creek 95 ft northwest of the Fall River Entrance Kiosk; Bighorn Creek bisects the site along the southwest boundary. All historic material is confined to the northeast edge of the creek channel with a few artifacts in the channel that washed downstream. The site is situated on a west/southeast facing 3 to 5 degree slope; a small meadow southwest of the creek separates the site from US 34, which is 75 ft to the southwest. Vegetation in and around the site includes ponderosa pine, willow, Douglas fir, blue spruce, aspen, mountain brome, kinnikinnick, and various grasses, which allows for 10 to 15 percent ground visibility. Sediments are mixed colluvium and alluvium in the site and general vicinity. The surficial deposits consist of a black to light grayish brown silty loam with varying quantities (2-15%) of granitic gravels depending on position within the site area. These surficial deposits reflect shallow (5 to 20 cm) sediments along and immediately adjacent to Bighorn Creek that overlie granite residuum and/or glacial till. Granite bedrock and eroded glacial till with large erratic granite boulders, are exposed with the surrounding area. The site is in good condition with minor erosion that has exposed partially buried artifacts.

The site was originally recorded in 1982 by Midwest Archaeological Center and described as a light scatter of historic artifacts including various fragments of metal, china, and amethyst glass exposed along a small clearing next to Bighorn Creek (Midwest Archaeological Center 1985). In 2003, the site was rerecorded by the Park and described to be similar in composition (Hanson 2003). In 2017, the site was again rerecorded by SWCA Environmental Consultants (SWCA) who found it to be in similar condition as 1982 and 2003. SWCA updated the site forms, remapped the site, and included additional details of the artifacts. Artifacts described by SWCA include 16 glass fragments, six refined earthenware fragments, one aqua glass bottle, a solarized bottle base, one enamelware vessel, two tobacco tins, four leather shoe fragments, and one Log Cabin Syrup tin (Kennedy 2017a). Remapping the site in 2017 placed it approximately 100 ft southeast of the previous mapped site location, which likely occurred during the 2003 rerecording.

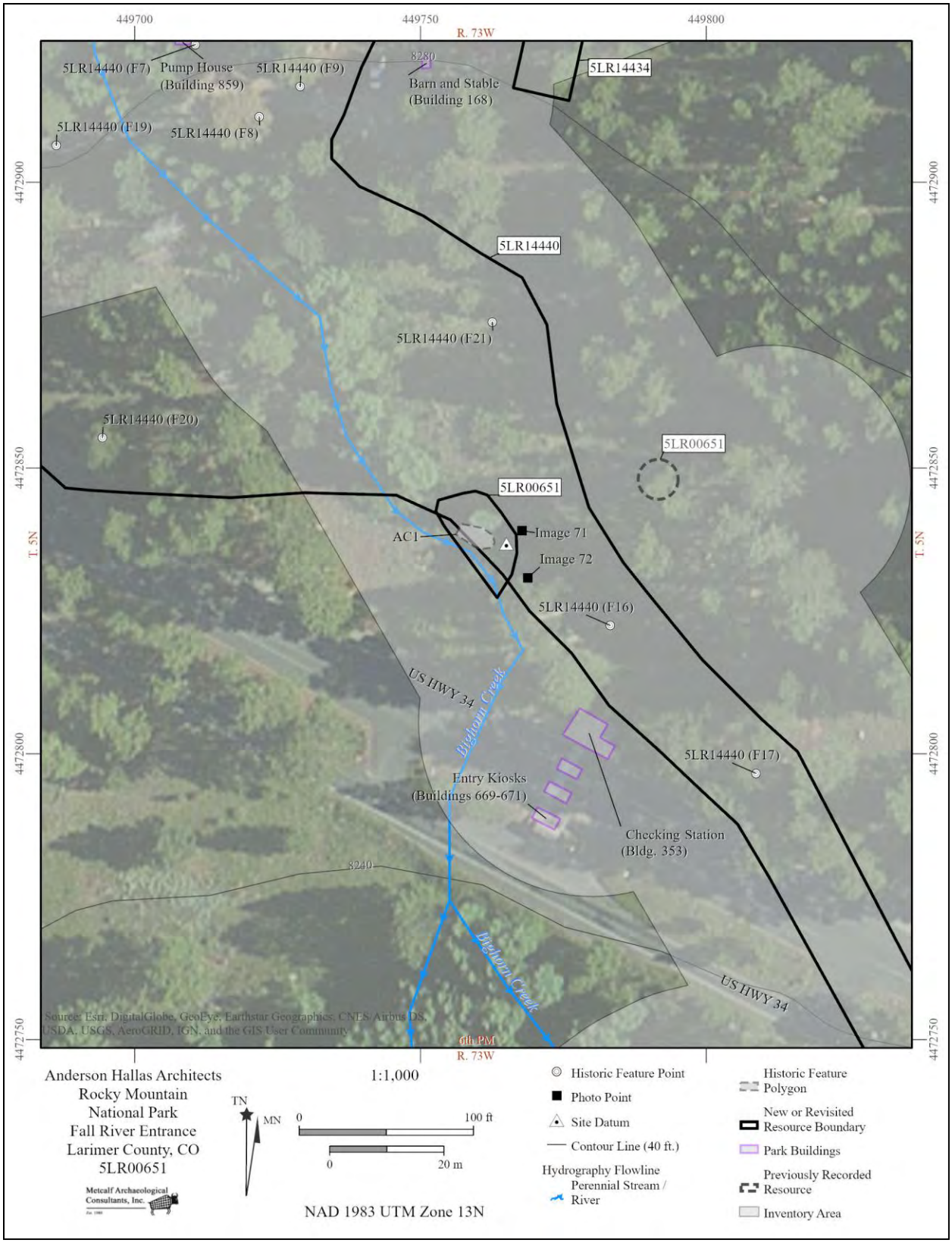

Figure 7. 5LR00651 sketch map.

Metcalf rerecorded the site and found it to be in a similar condition as previously described by SWCA, but the site boundary was expanded to account for additional artifacts. The site consists of a low density scatter of historic debris exposed along the eroded west/southwest facing slope of Bighorn Creek (Figure 7, above). The main area of exposed historic debris comprises Artifact Concentration (AC) 1, which measures 23 ft long by 13 ft wide. AC1 includes three amethyst glass vessel fragments, three aqua window glass fragments, three leather shoe fragments, two pin-hinged tobacco tins, one log cabin maple syrup tin, two refined white earthenware plate fragments, one galvanized bucket, one galvanized metal pipe fragment, and one partially buried iron pipe. In AC1, artifacts are exposed along the eroded portions of the gentle west/southwest facing slope, suggesting potential for additional buried cultural deposits. A few scattered historic artifacts are located outside of AC1 including a sanitary can lid, three aqua window glass fragments, and a refined white earthenware plate fragment located south of AC1 in the Bighorn Creek channel. Diagnostic artifacts (amethyst and aqua glass, pin-hinged tobacco cans, the syrup tin, and galvanized pipe) indicate that the site could date from the late 1800s to the 1920s, and given the presence of artifacts actively eroding from buried contexts within AC1, there is potential for additional buried cultural material that could further inform our understanding of the site. The presence of both domestic and structural artifacts suggest that the site could represent either dumped material that originated at some other location or the remains of a building and associated domestic refuse.

A GLO records search for the area (Township 5 North, Range 73 West, NE ¼, SE ¼, NE ¼ of Section 17) identified land patents issued in 1906 to both Pieter Hondius (identified as Peter Hondius on the land patent) and Pelir Hondins for the NE ¼, NE ¼ of Section 17. However, there is no physical evidence or other available archival information to link Mr. Hondius or Mr. Hondins to the site. The site is also not mapped on any GLO plats of the area.

NRHP Recommendation and Integrity Assessment

The site was recommended not eligible in 1982 (Midwest Archaeological Center), in 2003 by the park (Hanson 2003), and in 2017 by SWCA (Kennedy 2017). However, SWCAs form was subsequently amended in 2019 as determined NRHP **eligible** and Metcalf agrees with this official determination. Five to 20 cm of mixed alluvial/colluvial sediments have partially buried several artifacts and the site retains potential to contain significant buried cultural deposits that may provide additional information important to the understanding of early use of the area (late 1880s-1920s) prior to the development of the Big Horn Ranger Station and the Fall River Entrance (Criterion D). However, the site retains no known significant associations with any events or people in history (Criteria A and B) and there are no elements that represent a significant type, period, or method of construction (Criterion C).

The site retains integrity of materials, location, and setting. Materials, of which functions and methods of manufacturing are still discernible, are located in their original location of deposition within a montane setting similar to historic conditions. Diagnostic artifacts indicate that 5LR00651 is not associated the Fall River Entrance Historic District and there are no know associations with any other historic properties. The site lacks elements that would convey the aspects of design and workmanship and this historic debris scatter is common and does not evoke a sense of feeling.

5LR04491

Previously recorded site 5LR04491 is a historic habitation located on a southwest-facing slope of a channel of Bighorn Creek 100 ft southwest of US 34; the creek bisects the southwest site boundary (Figure 8). The slope ranges from 5 to 20 degrees and the landform consists of glacial till and granite residuum with several large erratic boulders. A septic tank associated with the Fall River Entrance Pipeline system (5LR14440) is 18 ft north of the site boundary at a foundation (F1) of 5LR04491. Vegetation in and around the site includes ponderosa pine, mountain mahogany, aspen, common juniper, kinnikinnick, and various grasses growing in granite residuum and shallow redeposited residuum by colluvial processes. Ground visibility is 20 to 40 percent. The site is in fair condition; a building has been removed from F1 and there are minor erosional disturbances.

This site was originally recorded in 1999 by UNC and was rerecorded on an OAHP Revisitation Form in 2017 by SWCA. UNC recorded a foundation/cellar depression and a small concrete foundation with minimal milled lumber fragments, a large hinge, and a pipe segment assumed to be modern (Brunswig 2000). SWCA relocated the previously described features and artifacts and remapped the site using GPS (Kennedy 2017b). The 2017 mapping places the site approximately 120 ft northwest of the site boundary as mapped in 1999. Metcalf found the site in similar condition and layout as described in 2017, but expanded the site boundary. Current investigations involved rerecording the foundation/cellar depression (F1) and the remains of a cistern and pump house (F2 and AC1), which were previously described in 1999 and in 2017, and recording a newly identified artifact concentration (AC2) that expanded the site boundary to the south.

F1 consists of a rectangular depression/foundation defined by a berm built against a southwest-facing slope and a large glacial erratic boulder was incorporated into the foundation along the northwest margin. The berm served as a building foundation and the depression is the remains of a cellar built below the building. Besides the earthen materials of the berm and cellar, no other structural remains are present and there are no associated artifacts. The feature is oriented southeast/northwest; the foundation is 44.5 ft long by 26.3 ft wide and the depression is 30 ft long by 15 ft wide and ranges in depth from 3 ft on the southeast end to 4.5 ft on the northwest end. Twenty to 30 small, loose granite rocks are scattered in the northwest end of the depression and four small rocks are loosely stacked against the west corner suggesting that the cellar used to be rock-lined. An additional 10 to 20 small rocks are imbedded in the northeast wall of the depression providing additional evidence of a rock-lined cellar. Small ponderosa pine saplings are growing in the depression. The berm foundation is relatively level, ranges in width from 3 ft to 5 ft, and three large rocks along the south corner are probable building supports.

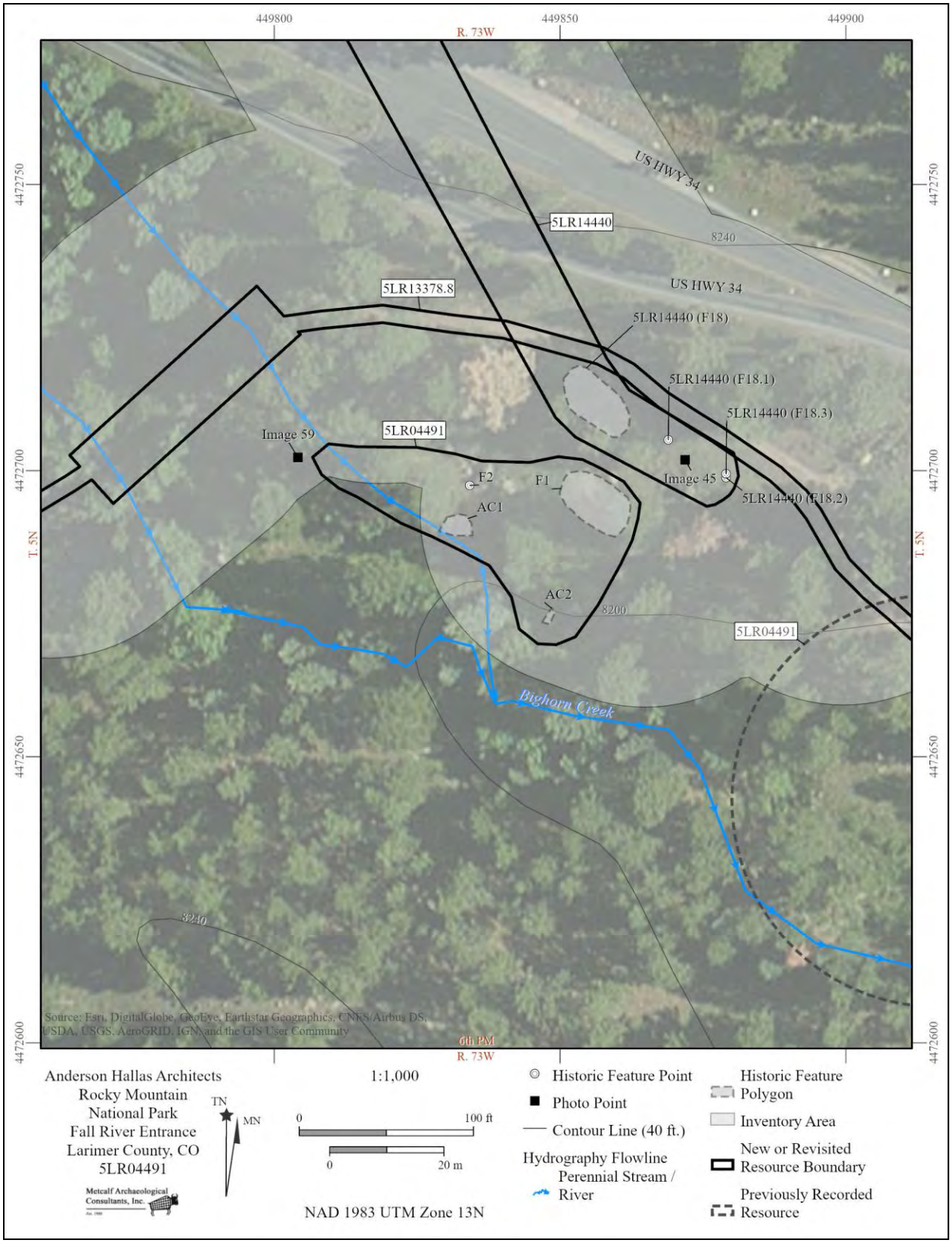

Figure 8. 5LR04491 sketch map.

F2 is a poured Portland concrete foundation (4.5 ft by 4.25 ft) for a combined cistern and pump house that is oriented southeast/northwest and built against the southeast side of a large glacial erratic granite boulder. The form-impressed walls range from 16 inches to 8 inches and are the highest at the south corner; the north corner is at ground level. The foundation is 3 ft deep, it extends at least 2.5 ft below ground surface, and has accumulated sediment of unknown depth. The deteriorated remains of one milled lumber plank rests in situ along the top of the northeast wall, which was connected, but is now loose, to one bolt with a square nut and washer embedded in the concrete at the north corner. Two bolts and nuts of the same composition are embedded in concrete; one bolt is near the south corner along the southeast wall and one bolt is near the west corner along the northwest wall. The foundation is situated on a slope comprised of glacial till with abundant erratic boulders indicating that the foundation must not extend deep enough to reach the water table at Bighorn Creek, which is approximately 25 ft lower in elevation. Therefore, feature morphology combined with the landform indicates that the feature is a cistern, rather than a well, with a pump house represented by structural remains located 20 ft downslope (AC1). AC1 consists of 25 to 30 fragments of milled lumber planks with wire nails and one large iron hinge encompassing a 15 ft by 10 ft area. One wooden plank fragment exhibits a gable cut for a roof support.

AC2 consists of a small concentration of cans and bottles situated against the west side of a large boulder within a 5 ft diameter area. Artifacts include: one small amber glass bottle with a makers mark of a diamond with 3322 inside; a colorless glass bottle with "ROOT" on the bottom, one other colorless glass bottle without any markings; three hole in-top cans (2 8/16" x 2 8/16"), four small sanitary cans, and five can fragments.

Diagnostic artifacts from AC2 and the concrete of F2 provide a date range for the site from 1910 to 1931. The bottle with a "ROOT" makers mark was produced by the Root Glass Company between 1906 and 1931 (SHA 2020), the hole-in-top cans were produced between 1915 and 1925 (Simonis 1997), and the Portland concrete of F2 post-dates 1910.

The general artifact assemblage includes a crushed galvanized wash basin, an approximate 15 ft length of 1 inch galvanized pipe (Artifact[A] 1) located between F1 and F2, a can lid, three porcelain shards, and a sanitary can. Feature morphology and the artifact assemble indicates that the site was a habitation with one building, now removed from F1, and a cistern with a pump house to convey water to the building. The galvanized pipe (A1) between the foundation (F1) and the cistern/pump house (F2) provides evidence that water was pumped to the building. However, the Park's water supervisor interprets F1 as a long-abandoned settling pond associated with the sewer system of the Fall River Entrance Pipeline (5LR14440).

A GLO records search for the area (Township 5 North, Range 73 West, NE ¼, SE ¼, NE ¼ of Section 17) identified land patents issued in 1906 to both Pieter Hondius (identified as Peter Hondius on the land patent) and Pelir Hondins for the NE ¼, NE ¼ of Section 17. However, there is no physical evidence or other available archival information to link Mr. Hondius or Mr. Hondins to the site. The site is also not mapped on any GLO plats of the area.

NRHP Recommendation and Integrity Assessment

In 1999 the site was recommended needs data under Criterion D by the University of Northern Colorado (UNC) based on the potential of F1 to contain buried cultural deposits

(Brunswig 2000). SWCA Environmental Consultants revisited the site in 2017 and recommended the site eligible based on the same rationale as in 1999. Subsequent to SWCA's revisitation, the site was amended to be determined **not eligible**. Metcalf found rocky glacial till in F1 that did not allow for pin flag probing and agrees with this official determination because the site has no potential for buried cultural deposits and will not provide additional information important to the history of the area (Criterion D). The site has no associations with any events or people significant in history (Criteria A and B) and there are no site elements that represent a significant type, period, or method of construction (Criterion C).

The site retains integrity of materials, location, setting, and design. Earthen and concrete features and minimal artifacts are located in their original location. The setting has been impacted by the ca.1960's construction of a septic tank located 18 ft north, but otherwise it is similar to historic conditions. Design is not retained in the depression/foundation (F1) because foundation elements are missing that would have supported a building, but the design of the cistern/pump house (F2) is evident. Workmanship is not retained because the building that F1 used to support has been removed and the wooden elements that use to comprise the pump house (F2) have collapsed and are out of place. The removal and collapse of the buildings at F1 and F2 eliminated the aspect of feeling and the site has no significant associations.

5LR13378.8

Metcalf rerecorded this entire previously recorded segment of abandoned Fall River Road/US 34, originally recorded in 2019 by ERO (Englemen et al. 2020), and expanded the length 660 ft to the east/southeast to the Park boundary and recorded two new features (F1 and F2) along the newly recorded section (Figure 9). Current investigations also corrected the mapping of the segment at the west end. ERO defined the east terminus where the road extends close to the current alignment of US 34 and mapped the site continuing west of Aspenglen Campground Road (5LR14435) paralleling Fall River. Metcalf identified the alignment continuing beyond EROs east terminus and found it paralleling US 34 and turning southeast to reach the Park boundary at National Park Village North (5LR02112). Metcalf found no evidence of the road continuing west of Aspenglen Campground Road and the west terminus of 5LR13378.8 is now at the east edge of the Aspenglen Campground Road. Investigations reported here are for only a segment of the entire linear resource and additional segments could be extant in the Park to the west of 5LR13378.8 and/or outside of the Park to the southeast.

From the east terminus at the Park boundary, the segment extends west contouring the southeast edge of Hondius Park bisecting Bighorn Creek and an unnamed ephemeral drainage. Aspect ranges from southwest, south, and southeast and the road was built along 5 to 10 degree slopes. Ponderosa pine, Douglas fir, mountain mahogany, aspen, willow, common juniper, kinnikinnick, and various grasses are growing along the margins of the road segment in colluvium and alluvium of unknown depth. Ground visibility ranges from 20 percent along the road margins to 95 percent in the road grade. The site is in good condition with intact and self-stabilized retaining walls (F1 and F2), but has been impacted by erosion and equestrian use of the road; deeply incised horse trails extend along the segment within a visitor created trail. An additional disturbance is a ca. 1962 septic tank buried in the side of the road directly southwest of US 34, which is F18 of the Fall River Entrance Pipeline (5LR14440).

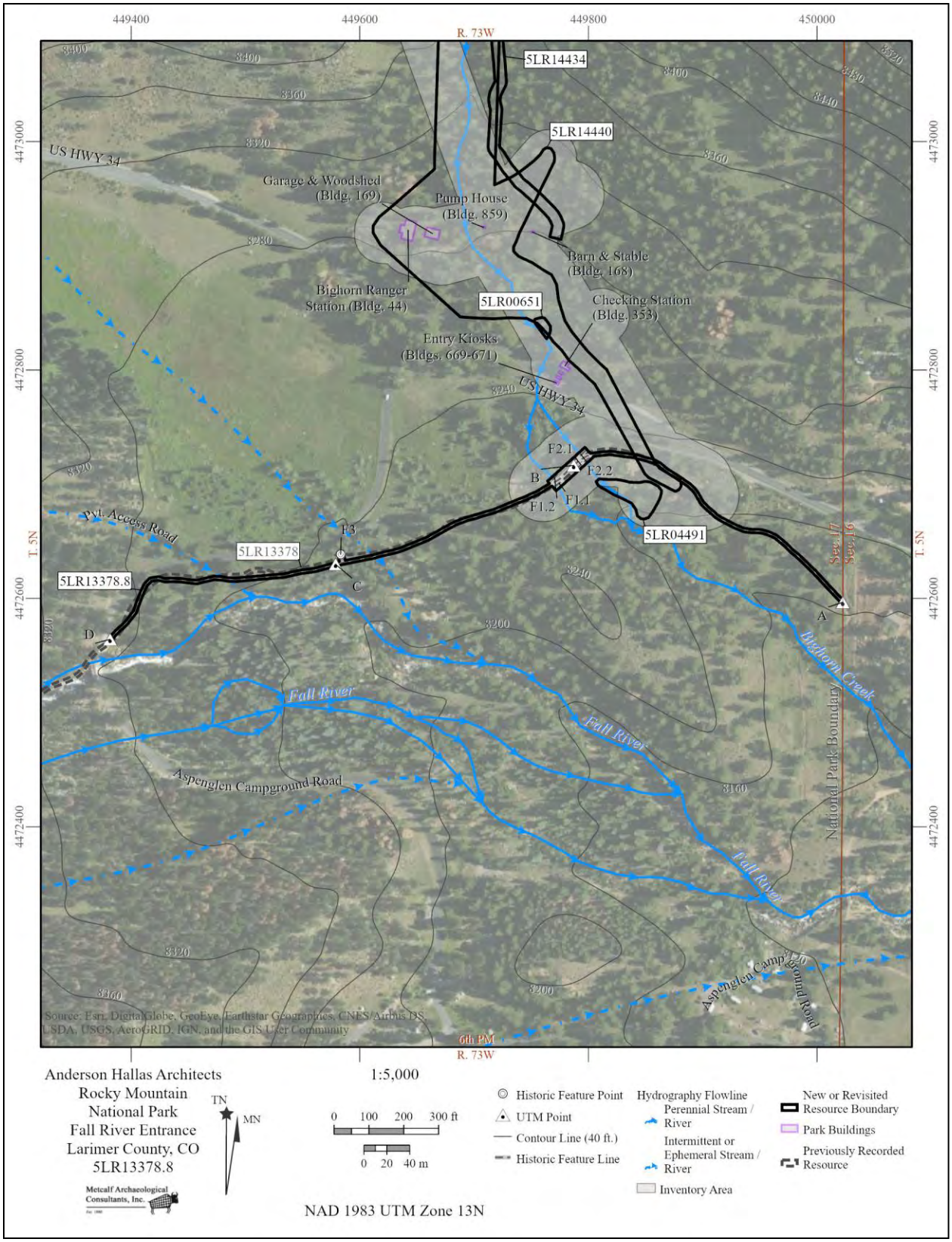

Figure 9. Fall River Road/US Highway 34 segment (5LR13378.8) sketch map.

This abandoned segment of US 34 is generally oriented east/west, it is 0.43 mile long, ranges in width from 8 ft to 12 ft, and includes two newly recorded retaining wall features (F1 and F2) and a culvert (F3) previously recorded by ERO as F1. Features are reordered because the rock retaining walls (F1 and F2) are much more substantial then EROs culvert and EROs feature number was changed from F1 to F3. Road width at F1 and F2 extends to 20 ft to provide a more substantial structure at the stream crossings. The section of the road expanded by Metcalf is defined by a 12 ft wide heavily eroded visitor created trail where remnants of asphalt are present. Approximately 100 ft of the west portion of the segment is heavily eroded and incised by equestrian use along the visitor created trail, which exposed a buried pipeline (5LR14677.1) recorded in 2019 by ERO (Engleman et al. 2020); 5LR14677.1 is located outside the current survey area. F1 and F2 were built over channels of Bighorn Creek and retaining walls are extant along the upslope and downslope margins of both features; thus, feature descriptions are subdivided by F1.1 and F1.2 and F2.1 and F2.2 accordingly. F2 is located approximately 43 ft northeast of F1 and both features are in excellent condition. F3 allows for drainage of an unnamed ephemeral drainage trending southeast out of Hondius Park.

F1 consists of two dry-laid rock retaining walls (F1.1 and F1.2) crossing the main channel of Bighorn Creek. The F1.1 wall is on the southeast side and downslope margin of the road and is approximately 33 ft long with a maximum height of 7 ft; the wall grades to the modern ground surface at the ends. The wall slopes slightly northwest and is constructed of numerous locally available granite boulders and cobbles that are tightly stacked and partially covered with various lichen species. A 32 inch diameter galvanized corrugated culvert is present at the base of the wall allowing the main channel of Bighorn Creek to flow below the road. F1.2 dry-laid rock retaining wall is on the northwest and upslope side of the road segment. The wall is approximately 40 ft long with a maximum height of 5 ft; the wall grades to the modern ground surface at the ends. The wall slopes slightly to the southeast and is constructed of numerous locally available granite boulders and cobbles that are tightly stacked and partially covered with various lichen species.

F2 consists of two dry-laid rock retaining walls (F1.1 and F1.2) where the road crosses a secondary channel of Bighorn Creek. The F2.1 wall is on the southeast and downslope side of the road segment, approximately 43 ft northeast of the main channel. The wall is approximately 45 ft long with a maximum height of 5 ft; the wall grades to the modern ground surface at the ends. The wall slopes slightly to the northwest and is constructed of numerous locally available granite boulders and cobbles that are tightly stacked and partially covered with various lichen species. A 12 inch diameter galvanized corrugated culvert is present at the base of the wall allowing flow below the road bed. The culvert is partially filled with sediment and pine duff and is exposed in the F2.2 wall where it is also partially filled with sediment and pine duff. F2.2 dry-laid rock retaining wall is on the northwest and upslope side of the road segment. The wall is approximately 45 ft long with a maximum height of 4 ft; the wall grades to the modern ground surface at the ends. The wall slopes slightly to the southeast and is constructed of numerous locally available granite boulders and cobbles that are tightly stacked and partially covered with various lichen species.

F3, originally recorded as F1 by ERO, consists of a galvanized corrugated culvert with minimal stacked rock for the headwall along the upslope side; the culvert is only visible on the downslope side. The culvert is 32 inches in diameter and six medium to large granite rocks are stacked above the culvert to form a low headwall.

NRHP Recommendation and Integrity Assessment

Segment 5LR13378.8 includes the entire segment as previously recorded in 2019 (Engleman et al. 2020) and Metcalf extended the segment an additional 660 ft in length and documented two new rock retaining walls (F1 and F2). In 2019, ERO recommended the entire resource as NRHP eligible under Criterion A and Metcalf agrees with this recommendation. The original alignment of US 34 is associated with transportation development and early-20th century recreation at Rocky Mountain National Park (Criterion A). Although the dry-laid retaining walls (F1 and F2) retain integrity of workmanship, they are common in design and do not represent a significant type and/or method of construction (Criterion C). The road has no known associations with any people significant in history (Criterion B) and this structural resource precludes potential to contain buried cultural deposits (Criterion D). 5LR13378.8 supports the eligibility of the entire resource because it conveys a high level of integrity.

Segment 5LR13378.8 retains integrity of association, location, setting, materials, workmanship, and feeling. The road is associated with early 20th century transportation development and recreation at the Park and the segment extends along its original alignment. Despite visual intrusions of US 34 along approximately 250 ft of the segment and Aspenglen Campground Road at it west terminus, the setting is similar to historic conditions consisting of a natural montane environment. The dry-laid masonry retaining walls at F1 and F2 are in good condition and convey materials and workmanship. The aforementioned aspects evoke a sense of feeling, but the aspect of design is not present because the road is not in use, the original width is unknown, a ca. 1962 buried septic tank was built in the side of the road segment, and almost all of the original road tread has been removed.

5LR14434

A segment of this road was partially recorded (5LR14434.1) in 2018 by ERO (Briggs 2019) and during the current survey, Metcalf expanded 5LR14434.1 northwest and southeast to document the entire resource (Figure 10). This road extends northwest from the Big Horn Ranger Station along the northeast bank of Bighorn Creek. The southeast terminus is at the llama corral at the Bighorn Ranger Station and the northwest terminus is adjacent and northeast of Bighorn Creek, 125 ft northwest of a prominent rocky butte. The aspect is primarily southwest with slopes ranging from 3 to 10 degrees as the road crosses benches along the creek. Ponderosa pine, Douglas fir, blue spruce, mountain mahogany, aspen, willow, common juniper, kinnikinnick, and various grasses and wildflowers are growing along the road in granitic residuum and grus of unknown depth.

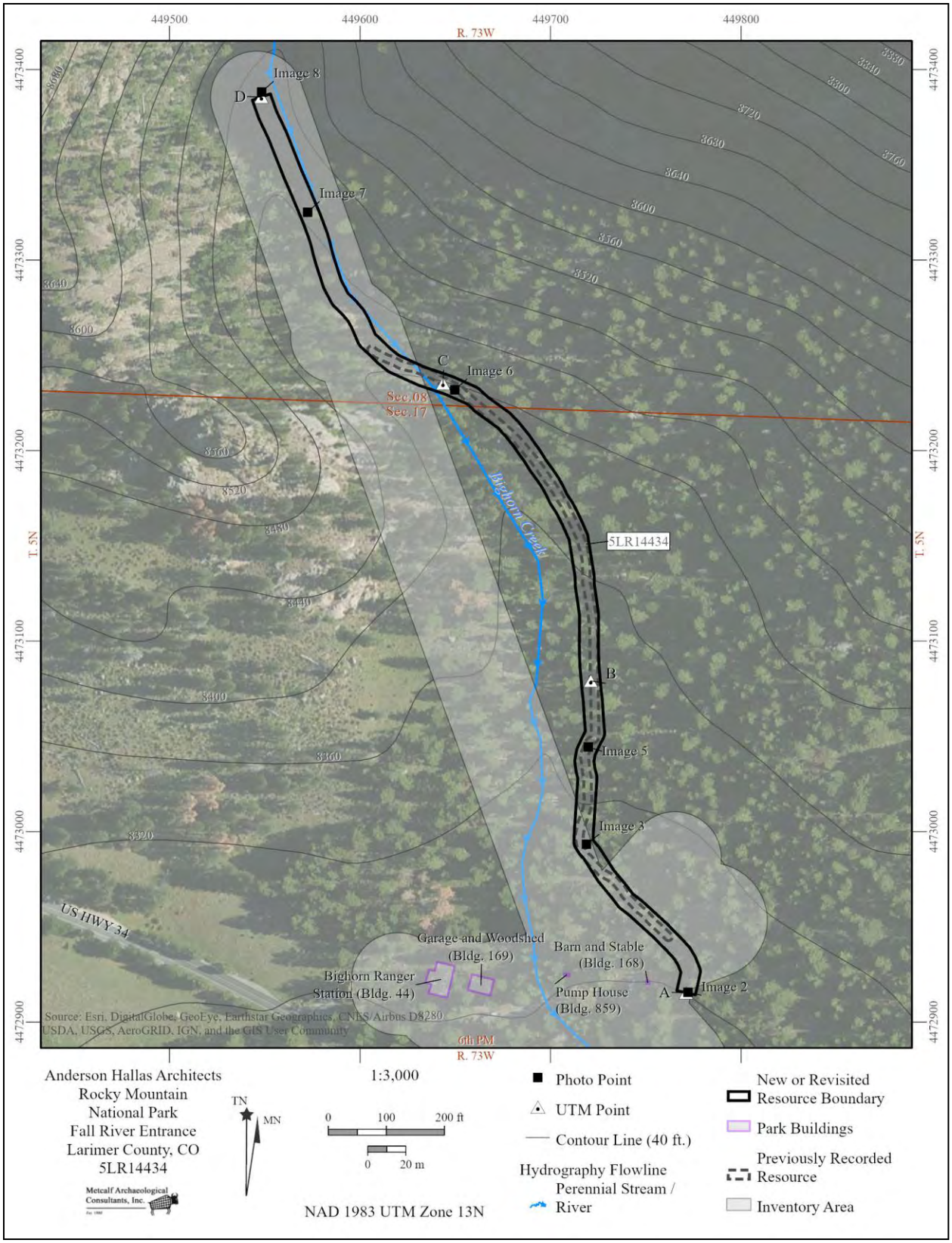

Figure 10. 5LR14434 sketch map.

The road provides access to the reconstructed Fall River Entrance Pipeline (5LR14440) facilities built in 1962 and is possibly associated with the original Fall River Entrance Pipeline built in 1925 (Higgins and Heavrin 2017). Consisting of a two-track road extending along a mechanically-built shallow road cut, the road is 0.35 mile long and ranges in width from 8 ft to 12 ft. There are no ditches or associated features or artifacts. The road is in fair condition because it is eroded in places and obscured by tree growth along 200 ft at the northwest end where it is no longer in use by vehicular traffic. Otherwise, the road appears to be still in use, but shows minimal signs of recent use. A major impact to the road located slightly north of the Bighorn Ranger Station is a landslide associated with the 2013 flood event that deposited flood debris across the road. Flood debris was removed from the road sometime after the flood event and the road was rerouted slightly to avoid a large boulder.

NRHP Recommendation and Integrity Assessment

The resource was recommended needs data in 2019 by ERO Resources Corp. (ERO) (Briggs 2019) and was subsequently determined NRHP **not eligible** in its entirety in 2019; Metcalf agrees with this official determination. Although the road is associated with Mission 66-era redevelopment at the Fall River Entrance Historic District, it was not evaluated as an associated resource during district nomination and does not convey sufficient association and integrity to qualify under Criterion A (Higgins and Heavrin 2017). This road is not known to be associated with any people significant in history (Criterion B) and the mechanically-built road contains no elements that represent a significant type, period, or method of construction (Criterion C). Road morphology precludes potential for buried cultural deposits and the road will not provide additional information important to the history of Rocky Mountain National Park (Criterion D).

The road retains integrity of design, location, setting, and association. The bladed design of the road is evident, which is located in its original location within a natural montane setting similar to historic conditions. The road is associated with the reconstructed Fall River Entrance Pipeline and possibly the original pipeline. Earthen materials have been compromised by erosion and a landslide that occurred in 2013, this mechanically built road does not convey workmanship, and based on compromised materials and a lack of workmanship, the aspect of feeling is not present.

5LR14440

This resource consists of the above-ground elements representing the water and wastewater system of the Fall River Entrance Historic District (5LR01184), and is collectively known as the Fall River Entrance Pipeline; the water and wastewater system includes 22 features (Figure 11). The resource extends southeast from a cistern in Bighorn Creek along southwest-facing benches on the northeast side of the creek to reach the historic district. One element of the resource consisting of a buried water tank (5LR14440.1) was partially recorded in 2018 by ERO (Briggs 2019); Metcalf rerecorded the feature as F4. All above-ground manifestations of the pipeline were recorded during the current survey, which documents the entire resource. Pipeline elements are distributed along Bighorn Creek and around the Bighorn Ranger Station and the Fall River Entrance Kiosk. The aspect is southwest and slopes range from 3 to 10 degrees. Vegetation growing throughout resource area includes ponderosa pine, lodgepole pine, Douglas fir, blue spruce, mountain mahogany, aspen, willow, common juniper, kinnikinnick, and

various grasses and wildflowers. Sediments consist of alluvium near the creek and granite residuum and redeposited residuum by colluvial processes.

Most features are associated with the water system (F1-F8, F10, F11, F13-F16, and F22), two features are associated with the wastewater system (possibly F12 and F18), and the association of some features is unknown because they are closed manholes accessing unknown utilities (F9, F17, and F19-F21), but likely access the wastewater system.

F1 is an infiltration gallery at Bighorn Creek that replaced the original diversion dam (Higgins and Heavrin 2017), which is located immediately adjacent and east of the Bighorn Creek channel at the head of the reconstructed Fall River Entrance Pipeline. The infiltration gallery consists of a large upright corrugated galvanized pipe with a removable steel top and a square access door in the north edge of the steel top. The galvanized pipe is 37.5 inches in diameter and protrudes out of the ground a maximum of 18 inches. The square access box is 11.5 inches square by 4 inches tall and is locked with a NPS lock. An upright PVC pipe is about 15 ft north in the creek channel that appears to be a way to monitor groundwater in the creek; the PVC pipe is a later addition because a manufacture date of 2009 is printed on the pipe.

F2 consists of a large earthen platform containing a 60,000 gallon underground concrete water tank with a probable chlorinator house (F2.1) built adjacent to the water tank (Higgins and Heavrin 2017). The platform is 20 ft to 30 ft tall relative to the slope downhill from the platform encompassing an area measuring 60 ft by 42 ft. F2.1 is situated at the north end of the platform and the buildings footprint measures 6 ft 3 inch by 6 ft 2 inches and is built on a slab foundation. Stem walls comprised of cinder block are at least 16 inches tall and the remaining portions of the walls are sided with play wood. The roof is single gabled and slopes to the north with shake shingles and a vent chimney. One door on the south elevation is 2 ft 3.5 inches by 7 ft with a small rectangular vent at the base, which measures 16.5 inches by 12.5 inches. The door is mounted with three triangular hinges on the west side and locked with a hinged latch on the east side. A solar panel (52” x 26“) is mounted on the south face and immediately below the panel is a rectangular vent that measures 1 ft by 6 in. A small metal storage locker for an oil or propane tank is on the west side of the building with two panel doors and a simple lock, which measures 3 ft wide by 4 ft 10 inches tall by 1 ft 6 inches thick. There is also a small ladder built onto the west elevation. Another rectangular vent measuring 1 ft by 6 inches is just above the ladder. A 3 inch diameter metal pole is on the north side of the building that is approximately 25 ft tall with two solar panels and antenna at the top, with wiring extending down the exterior into a plastic conduit box. Additional elements of F2 include a square manhole in a square foundation (F2.2) situated at the west edge of the platform; the foundation is 3 ft square and the manhole is 2.5 ft square. A large iron bent pipe functioning as a vent (F2.3) is adjacent to the access road (5LR14434) and another vent (F2.4) is situated on the south edge of the platform. F2.3 consists of 6.5 inch diameter pipes bolted together with screening attached to the downward-facing opening and is 3.25 ft tall. F2.4 consists of an upright galvanized pipe (8 inches diameter by 1 ft tall) with an inserted cast iron pipe (4 inch diameter by 3.25 ft tall). A water outlet release pipe is located on the lower end of west side of the platform directly above the creek consisting of a 5 inch diameter iron pipe situated under a small boulder.

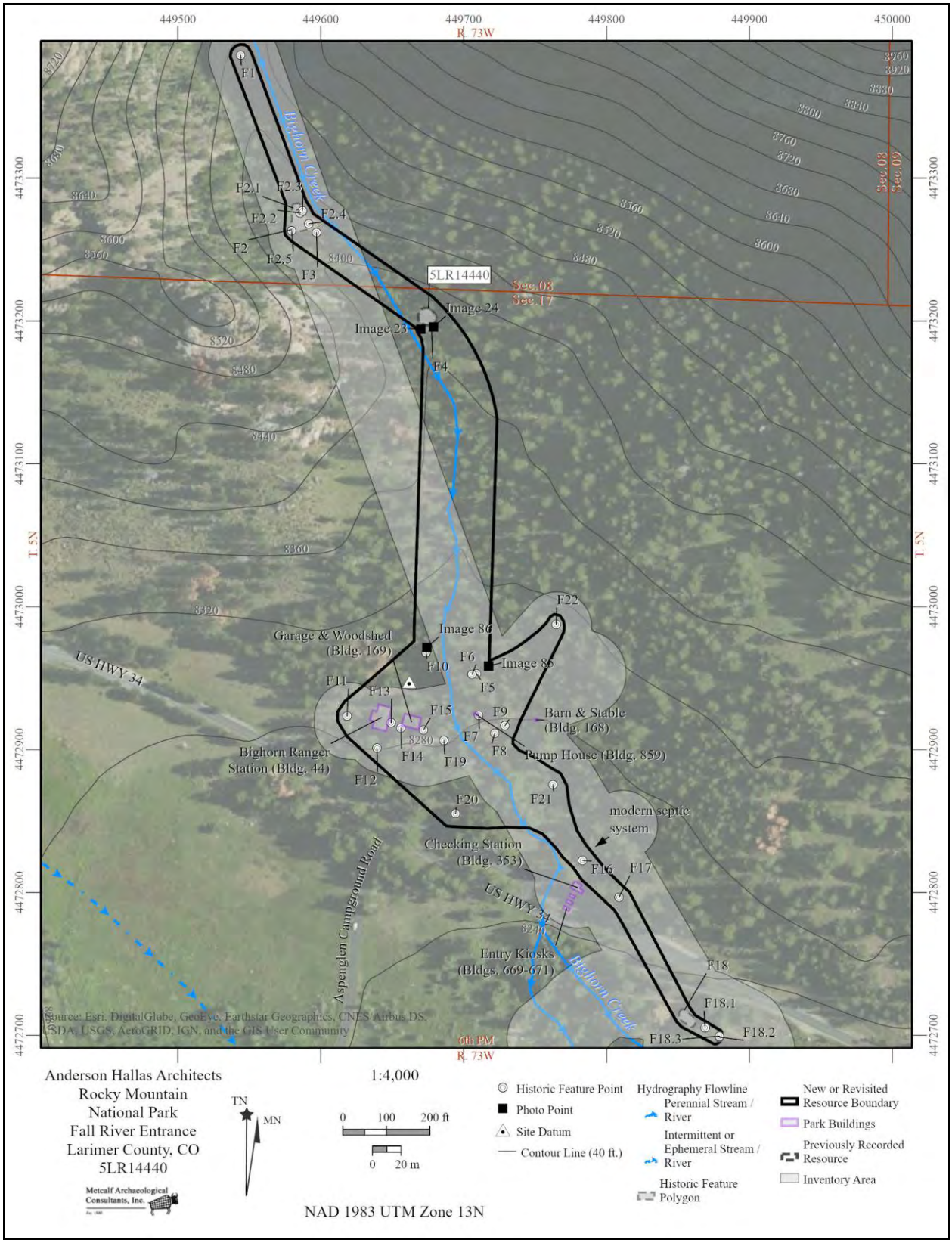

Figure 11. Fall River Entrance Pipeline (5LR14440) sketch map.

F3 is a valve access pipe consisting of a buried upright pipe exposed at ground level and embossed with "water" on the cap. The pipe is 8.5 inches in diameter and painted blue.

F4 is a buried water tank that was originally recorded in 2018 by ERO as 5LR14440.1 (Briggs 2019) and Metcalf found the feature to be in the same condition. The water tank is buried in an earthen mound that measures 34 ft in diameter by approximately 3 ft to 4 ft high; several saplings (ponderosa pine and Douglas fir) are growing on the mound. A buried concrete box measuring 4 ft square by 1 ft 3 inches deep with 4.5 inch thick walls is located near the center of the mound with a manhole at the bottom for entry into the water tank. The manhole cover is embossed with "HENDRIE & BOLTHOFF" and "DENVER" and the box is covered with a modern steel plate. Several pipes protrude from the earthen mound including: a 2 inch diameter galvanized pipe with threaded fittings adjacent to the south of the concrete box; a ceramic 7 inch diameter pipe on the south side of the earthen mound; and a broken 7 inch diameter ceramic pipe on the southwest side of the mound. There are two iron lids for capping the ceramic pipes; the southern pipe is covered while the southwestern pipe cover is nearby on the ground.

F5 is a buried upright cast iron pipe measuring 12 inches in diameter and exposed 6 inches above the ground surface. The pipe extends approximately 50 inches below ground surface and a 1 inch diameter vertical galvanized pipe extends out of the fill at the bottom to 18 inches below ground surface where it makes a right angle turn to the south toward the buried water tank (F7) at the Bighorn Ranger Station (5LR01184). A threaded hole for a 1 inch diameter pipe is located at ground level on the east side of the pipe. The top of a cut barrel is positioned over the pipe protecting the interior.

F6 is a concrete slab foundation with two cast iron vertical brackets embedded in the concrete near the ends of the long axis with a single hole in each. The foundation measures 50 inches by 54 inches and the brackets are 3 inches tall by 2 inches wide. One medium-sized granite rock is incorporated into the concrete at the southwest corner, which is visible due to damage at the corner. Ten ft north is a smaller foundation measuring 20 inches square with one 1/4 inch bolt protruding and another bolt was likely in a damaged area where a 1/4 inch diameter hole is located 3.5 inches away from the bolt. Between the two slabs are two concrete fragments with one attached to a granite rock. Concrete of both slabs is heavily coated in at least three species of lichen indicating relative antiquity and that the slabs are likely older than the reconstructed pipeline. The deterioration of the concrete and incorporation of local rock also suggests they are older than the reconstructed pipeline and are likely associated with the original pipeline or another, now removed, structure associated with the Bighorn Ranger Station. A single red common brick fragment is located near the slabs.

F7 consists of a buried water tank with a pump house situated above the tank (Building 869), which was documented during the amendment nomination of the Fall River Historic District (Higgins and Heavrin 2017).

Several fire hydrants (F8, F10, F11, and F16) are located near the Bighorn Ranger Station and Fall River Entrance Kiosk. Three fire hydrants embossed with "1960" are situated around the Bighorn Ranger Station including F8, F10, and F11. F16 is located near the Fall River Entrance Kiosk and embossed with "1959" and is attached to a 4 inch diameter cast iron pipe.

Another 4 inch diameter cast iron pipe is adjacent and east of F16 and one other 2.5 inch diameter cast iron pipe is cut off at ground surface 4 ft southeast. All fire hydrants were determined as contributing elements to the Fall River Entrance Historic District (Higgins and Heavrin 2017).

Five manholes measuring 26 inches in diameter (F9, F17, and F19-F21) are situated around the Bighorn Ranger Station and the Fall River Entrance Kiosk and are embossed with MACLEAH MFG CO" and "DENVER". F9 is located at the Bighorn Ranger Station, F17 is located near the Kiosk, F19 is south and adjacent to the driveway of the Bighorn Ranger Station, F20 is located adjacent and northeast of US 34, and F21 is located between the Bighorn Ranger Station and the Kiosk. The manholes likely access the wastewater system, but function is unknown.

F12 is a clay sewer pipe exposed in front of the Bighorn Ranger Station. The pipe is immediately north of the driveway and is either a part of the wastewater system or functioned as drainage control along the road ditch adjacent to the building.

F13 is a buried water tank represented by an earthen platform located between the Bighorn Ranger Station and the garage with a concrete top and manhole. The platform is 14 ft square by 2 ft to 3 ft tall and is lined with large granite rocks.

F14 is a water valve at the entry into the garage and wood shed (Building 169) at the Big Horn Ranger Station.

F15 is a water valve in a large upright and buried galvanized corrugated pipe located east of the garage and wood shed.

F18 is a buried septic tank located on the southwest side of US 34 in an earthen mound oriented southeast/northwest that measures 45 ft long by 23 ft wide and ranges from 2 ft to 5 ft tall. The tank has three manholes that extend in line along the mound and two water meter access pipes at the northwest end with valve covers measuring 8.5 inches in diameter. Each manhole has a concrete base, and from southeast to northwest, the bases measure 41 inches by 36 inches, 41 inches by 36 inches, and 51 inches by 36 inches.

Below ground sub-features of F18 consisting of buried sewer pipes (F18.1-F18.3) representing a sand filter (Higgins and Heavrin 2017) were identified and recorded during archeological monitoring of the excavation of a geologic test pit in the survey area (Appendix B). F18.1 was identified during the excavation of Test Pit (TP) 1 and consists of a buried sewer pipe that was exposed near the top of SU2 at approximately 3 ft below the modern ground surface. Excavation of TP1 ceased while consultation with NPS staff was made to determine how to proceed and to allow documentation of the discovery. Given the damage to the feature during discovery, NPS staff agreed that further excavation of TP1 could resume, if needed, following documentation of the feature, however, TP1 was ultimately abandoned. F18.1 is a buried 4 inch diameter red clay sewer pipe exposed in the eastern and western side walls of TP1. The pipe runs southeast/northwest, heading toward the adjacent buried septic tank (F18). F18.2 and F18.3 were both identified during the excavation of TP2 and also consist of buried sewer pipes exposed near the top and bottom of SU2. Again, excavations ceased while consultation with NPS staff

was made to determine how to proceed and to allow documentation of the two discoveries. Given the damage to the features during discovery, NPS staff agreed that further excavation of TP2 could resume and it was ultimately excavated to a depth of approximately 8 ft below the modern ground surface. F18.2 is a buried 4 inch diameter red clay sewer pipe exposed in the southwest corner of TP2 at approximately 2.5 ft below the modern ground surface. The pipe runs southeast/northwest, heading towards the adjacent buried septic tank (F18), and based on the orientation and depth of the F18.2, it appears to connect with F18.1. F18.3 is another segment of buried 4 inch diameter red clay sewer pipe exposed in the eastern side wall of TP2 at approximately 6 ft below the modern ground surface. This pipe segment appears to run east/west, heading towards the adjacent buried septic tank (F18).

F22 is an isolated wellhead in upright cast iron pipe located in a small clearing. The wellhead is embossed with "WISCONSIN" "WHITEWATER MFG CO" AND LALLED 115" on the top. The wellhead extends 26 inches from the ground surface and the top is 12.5 inches by 9 inches. Plastic electrical conduit is attached to the east side. This wellhead appears to be a relatively recent addition to the water system.

NRHP Recommendation and Integrity Assessment

The resource was recommended eligible in its entirety in 2019 by ERO Resources Corp. (ERO) (Briggs 2019) and was subsequently determined NRHP eligible in its entirety under Criterion A; Metcalf agrees with this determination. The site is associated with development of the original Fall River Entrance Station and the rebuilt pipeline system is a component of the Fall River Entrance Historic District (5LR01184) and is significant for its association with the Mission 66 redevelopment of the Entrance Station and enhancement of recreation and tourism at the Park (Criterion A). Furthermore, small scale site features consisting of the documented fire hydrants (F8, F10, F11, and F16) were determined as contributing to the historic district, but the additional elements of the water and wastewater system were not evaluated during district nomination (Higgins and Heavrin 2017). There are no known associations with any significant people in history (Criterion B) and the resource does not represent a significant type, period, or method of construction (Criterion C). There is no potential for additional information to be present subsurface that is not known from archival drawings and current documentation. The resource will not provide additional information regarding the use or functionality of the pipeline system (Criterion D).

Integrity of materials, location, design, setting, association, and feeling are retained. Materials comprising the site features retain their original location and design, are situated in a montane environment that retains its historic character, and the resource is associated with the Fall River Entrance Historic District. Combined, the aspects of materials, location, design, setting, and association evoke a sense of feeling. Workmanship is not represented.

SUMMARY AND CONCLUSIONS

The results of the files search indicate that historic resources are fairly common in the area and prehistoric sites are uncommon. Furthermore, given the limited size of the survey area and the historic development and use of much of the survey area, earlier occupations may have been destroyed. Inventory results demonstrated this expectation, which include the updating five Euro-American historic sites and structures.

Rerecorded resources include an artifact scatter (5LR00651), a habitation (5LR04491), a segment of Old United States Highway 34 (5LR13378.8), an entire road (5LR14434), and the above ground manifestations of the Fall River Entrance Pipeline (5LR14440). 5LR00651 was recommended not eligible for inclusion to the National Register of Historic Places (NRHP) in 1982, 2003, and 2017, but in 2019, it was amended to **determined eligible.** 5LR04491 was recommended needs data in 1999, recommended eligible in 2017, and amended to **determined not eligible** in 2019. In 2019, 5LR13378.8 was **recommended eligible/supporting**, 5LR14434 was **determined NRHP not eligible**, and 5LR14440 was **determined NRHP not eligible**. Metcalf agrees with the official determinations for 5LR00651, 5LR04491, 5LR14434, and 5LR14440 and the eligibility recommendation for 5LR13378.8.

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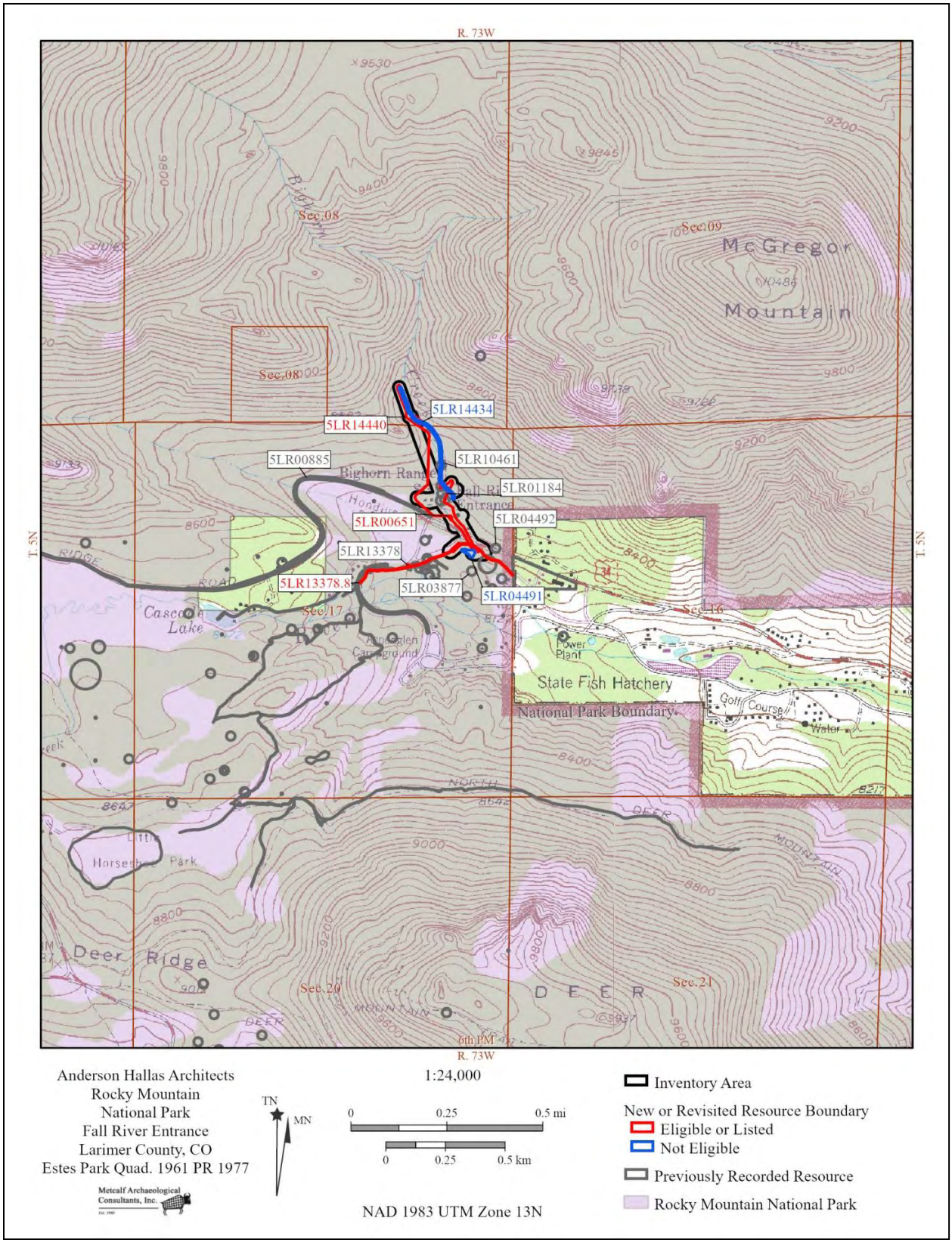
APPENDIX A

Resource Location Map
(agency copies only; not for public distribution)



Map 1. Survey area location showing cultural resources.

APPENDIX B

Geotech Archaeological Monitoring Report

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ANDERSON HALLAS ARCHITECTS: BIGHORN RANGER STATION/FALL RIVER ENTRANCE GEOTECH ARCHAEOLOGICAL MONITORING RESULTS AT ROCKY MOUNTAIN NATIONAL PARK, LARIMER COUNTY, COLORADO

By:
Dante Knapp

Prepared for:
National Park Service, Rocky Mountain National Park

Under contract to Anderson Hallas Architects; NPS IDIQ Contract No. 140P2019D0016, Task Order 140P2020F203

Metcalf Project No. 2020.CO.076

Metcalf Archaeological Consultants, Inc.
11495 West 8th Ave., Suite 104
Lakewood, Colorado 80215
Office (303) 425-4507

Principal Investigator:
Kimberly Kintz

January 2021

Metcalf Archaeological Consultants, Inc.

Est. 1980

INTRODUCTION

Under National Park Service IDIQ contract no. 140P2019D0016, Anderson Hallas Architects (Anderson) contracted Metcalf Archaeological Consultants, Inc. (Metcalf) to conduct archaeological monitoring of the geotechnical investigations in the vicinity of the Rocky Mountain National Park (Park) Fall River Entrance Station in Larimer County, Colorado on December 22, 2020. The project area is located in Section 17 of Township 5 North, Range 73 West on lands administered by the National Park Service (NPS) (Figures 1-2).

Per NPS stipulations, Metcalf provided an archaeologist meeting the Secretary of the Interior's (SOI) qualifications standards in archaeology to be present during ground disturbing activities within the project area due to the proximity of the testing locations to the known cultural resources as well as for the potential to encounter intact buried cultural deposits. If cultural materials, beyond an isolated find, were found during construction, work would cease in the immediate area to allow assessment of the discovery and coordination with Park staff to discuss a logical plan of action and recovery.

Project Background and Monitoring Protocols

The NPS is proposing to rehabilitate the Bighorn Ranger Station/Fall River Entrance Station wastewater and water systems at the Park. As part of the proposed undertaking, geotechnical investigations were conducted for engineering and construction planning purposes. Prior to the geotechnical investigations, Metcalf conducted a Class III inventory of the project area (Briggs and Knapp 2021). Three historic resources (5LR04491, 5LR13378.8, and 5LR14440) were identified and documented in close proximity or potentially within the proposed geotechnical investigation area. These resources include: site 5LR04491, a historic habitation site that is officially determined not eligible for listing on the National Register of Historic Places (NRHP); site 5LR13378.8, a historic segment of old US Highway 34 recommended eligible for listing on the NRHP; and site 5LR14440, the historic Fall River Entrance Pipeline system that is officially determined eligible for listing on the NRHP.

Per NPS stipulations, Metcalf archaeologist and SOI-qualified archaeologist Dante Knapp was on-site at the project area on December 22, 2020 to monitor equipment access to the project area and all ground-disturbing activities associated with the geotechnical excavations within the Park boundaries due to the proximity of three previously recorded historic resources (5LR04491, 5LR13378.8, and 5LR14440). The surficial and subsurface sedimentary deposits were visually observed as they were removed from the excavation locales, with the archaeologist looking for any prehistoric and historical-period artifacts, building materials, and possible features that might be concealed below surface. Kimberly Kintz acted as the project's Principal Investigator.

In total, Mr. Knapp monitored the excavations of three tests pits (TP1-TP3) and three percolation tests (PT1-PT3) in the project area (Figure 3). The three test pits were excavated with a small trackhoe; each measured approximately 5-6 feet (ft) long by 3 ft wide and excavated to depths of 4.5-8 ft below the modern ground surface. Of the three percolation tests, two (PT1 and PT3) were excavated using a gas powered auger unit with an 8 inch diameter flight auger and were excavated to a depth of approximately 3-4 ft below the modern ground surface; PT2 was abandoned.

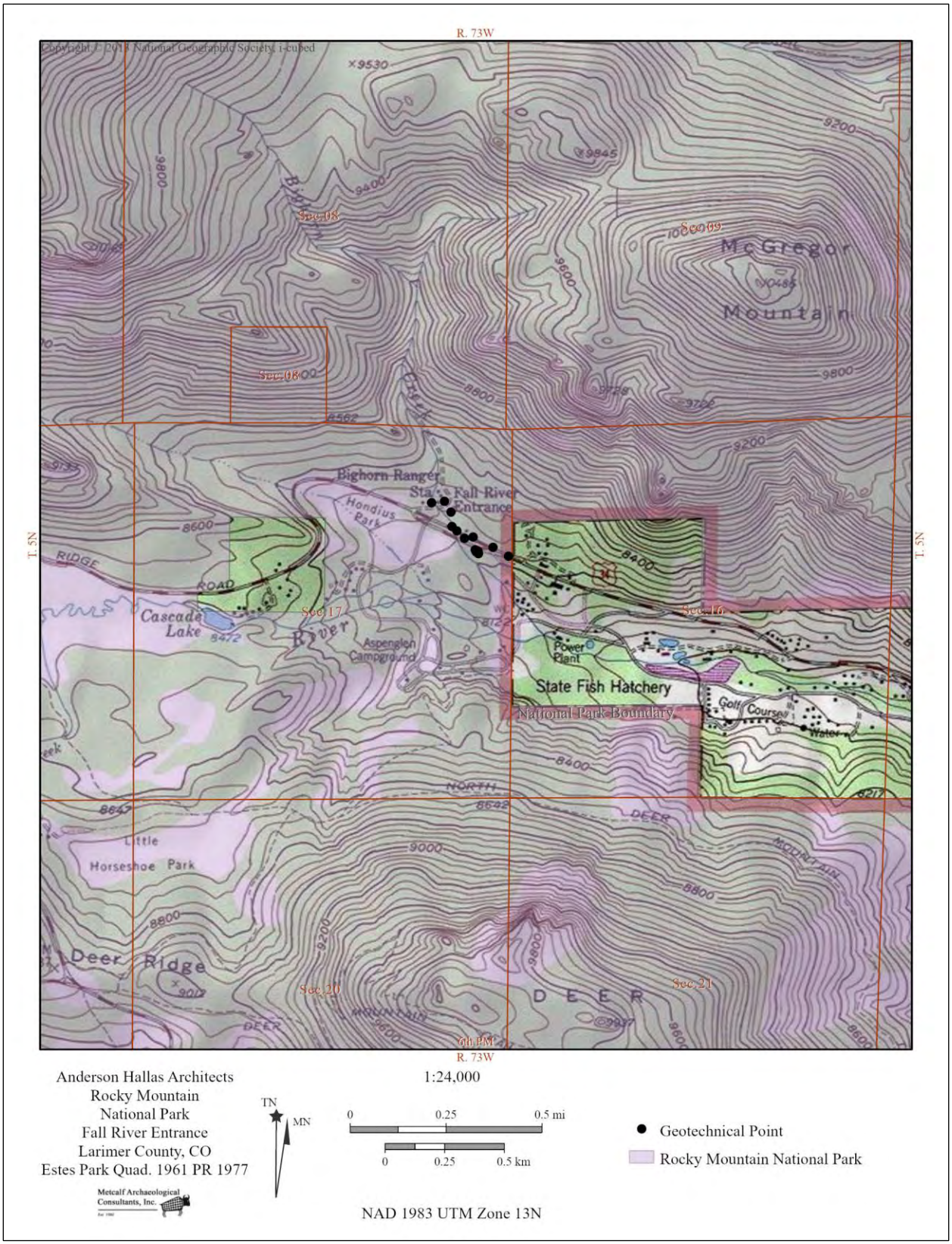

Figure 1. Overview of geotechnical monitoring project area.

Figure 2. Overview of monitoring area, view to the west. (Photo roll 20-866, image 15)

RESULTS

Metcalf archaeologist Dante Knapp was on-site to monitor equipment access to the project area and all subsequent ground disturbing activities associated with the geotechnical investigations. The following section provides a summary of archaeological monitoring activities and discoveries encountered during the course of the project.

Work began at 9:00 am on December 22, 2020, following a brief on-site meeting with the larger project team and Park staff. Following the meeting, the trackhoe was driven into the project area along a segment of the old US Highway 34 (5LR13378.8). Access along this segment of 5LR13378.8 was monitored to ensure that no damage was made to the historic linear resource or the two associated retaining wall features (F1 and F2); no damage to the features occurred. Once the equipment was on-site the geotechnical investigations were conducted with the excavations of the three test pits (TP1-TP3) and three percolation tests (PT1-PT3).

The three test pits measured approximately 5-6 ft long by 3 ft wide and were excavated to depths of 4.5-8 ft below the modern ground surface. Of the three percolation tests, two (PT1 and PT3) were excavated using a gas powered auger unit with an 8 inch diameter flight auger and the tests were excavated to a depth of approximately 3-4 ft below the modern ground surface. Excavation of the second percolation test (PT2) was initially started with the trackhoe to remove the upper 2-3 ft of historic construction fill and attempts were made to auger from the floor of the opened excavation area; however, the historic construction fill kept collapsing within the auger

hole and PT2 was eventually abandoned. During the course of the monitoring

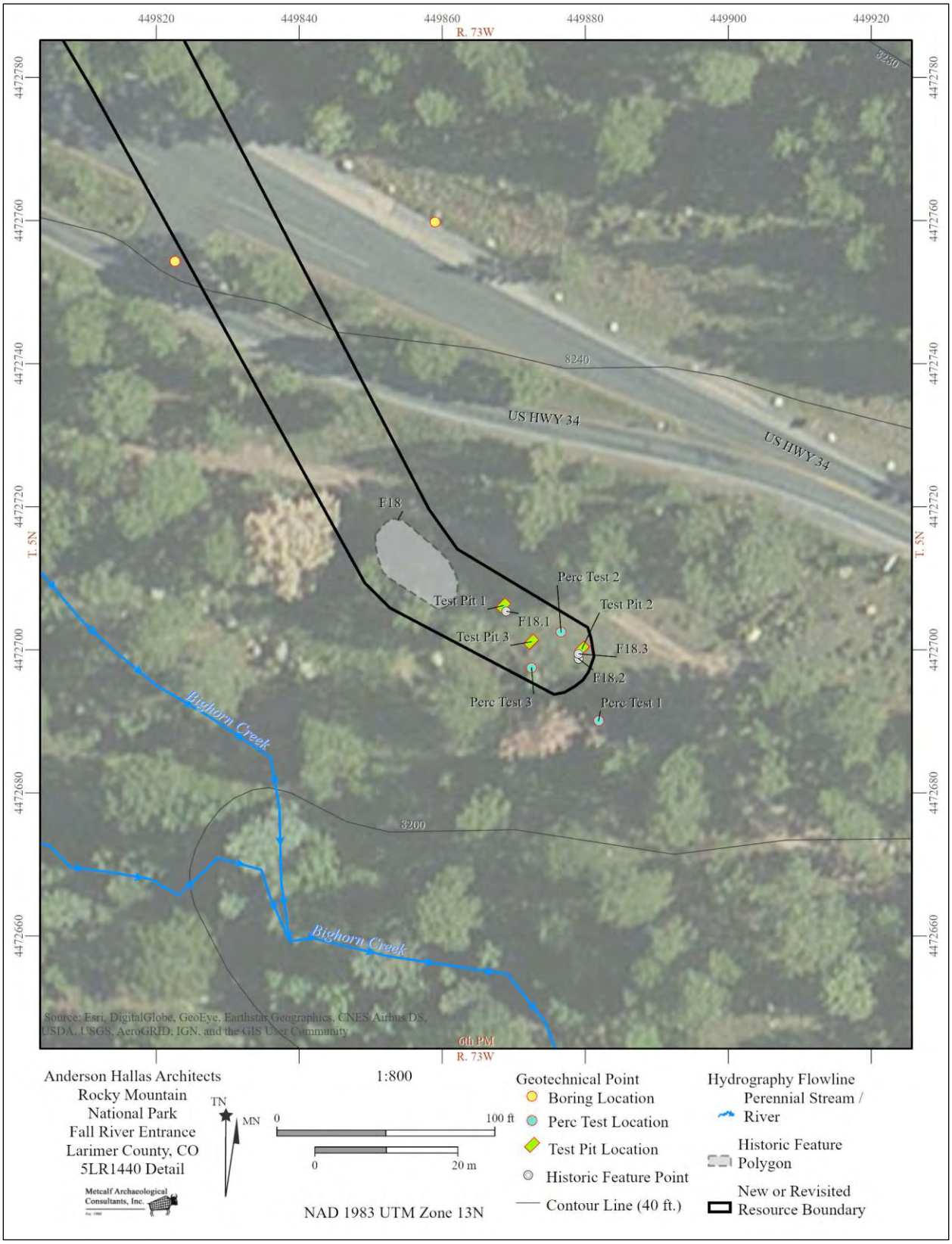

Figure 3. Overview of geotechnical monitoring locations and discoveries.

excavations at TP1 and TP2, three historic sewer pipe features (F18.1, F18.2, and F18.3) associated with a previously recorded septic tank feature (F18) at site 5LR.14440 were discovered; discovery of these features resulted in expansion of the site boundary (Figures 3 and 4).

Collectively, the geotechnical excavations in the project area exposed three primary stratigraphic units (SU1-SU3) consisting of two historic construction fills overlying glacial till. Unit 1 is the upper most deposit of historic construction fill that forms the modern ground surface in the project area. SU1 consists of approximately 2.5-3 ft of light brown to light grayish brown gravelly sandy loam construction fill. SU2 abruptly underlies SU1 and consists of approximately 3-4 ft of coarse gravel and light gray coarse sand historic construction fill. SU3 is the deepest deposit observed during monitoring; it abruptly underlies SU2 and consists of a light yellowish brown to yellowish brown, gravelly sandy clay loam glacial till with larger granite cobble and boulder sized clasts observed. SU1 and SU2 are both historic fill deposits associated with improvements of the Fall River Entrance Pipeline system (5LR14440) during the Mission 66 redevelopment of the Fall River Entrance Station.

During the course of the monitoring, three buried historic features consisting of sewer pipes were discovered within SU2 during the excavations of TP1 and TP2. These features are associated with the previously recorded buried septic tank feature (F18) at 5LR14440 and, thus, are identified as sub-features using the following designations: F18.1, F18.2, and F18.3. These sub-features are likely part of a sand filter system associated with the buried septic tank (F18).

Feature F18.1, was identified during the excavation of TP1 and consists of a buried sewer pipe that was exposed near the top of SU2 (Figures 5-6) at approximately 3 ft below the modern ground surface. Excavation of TP1 ceased while consultation with NPS staff was made to determine how to proceed and to allow documentation of the discovery. Given the damage to the feature during discovery, NPS staff agreed that further excavation of TP1 could resume, if needed, following documentation of the feature, however, TP1 was ultimately abandoned. F18.1 is a buried 4 inch diameter red clay sewer pipe exposed in the eastern and western side walls of TP1. The pipe runs southeast/northwest, heading toward the adjacent buried septic tank (F18).

Features F18.2 and F18.3 were both identified during the excavation of TP2 and also consist of buried sewer pipes exposed near the top and bottom of SU2 (Figures 7-9). Again, excavations ceased while consultation with NPS staff was made to determine how to proceed and to allow documentation of the two discoveries. Given the damage to the features during discovery, NPS staff agreed that further excavation of TP2 could resume and it was ultimately excavated to a depth of approximately 8 ft below the modern ground surface. F18.2 is a buried 4 inch diameter red clay sewer pipe exposed in the southwest corner of TP2 at approximately 2.5 ft below the modern ground surface. The pipe runs southeast/northwest, heading towards the adjacent buried septic tank (F18), and based on the orientation and depth of the F18.2, it appears to connect with F18.1. F18.3 is another segment of buried 4 inch diameter red clay sewer pipe exposed in the eastern side wall of TP2 at approximately 6 ft below the modern ground surface. This pipe

segment appears to run east/west, heading towards the adjacent buried septic tank (F18).

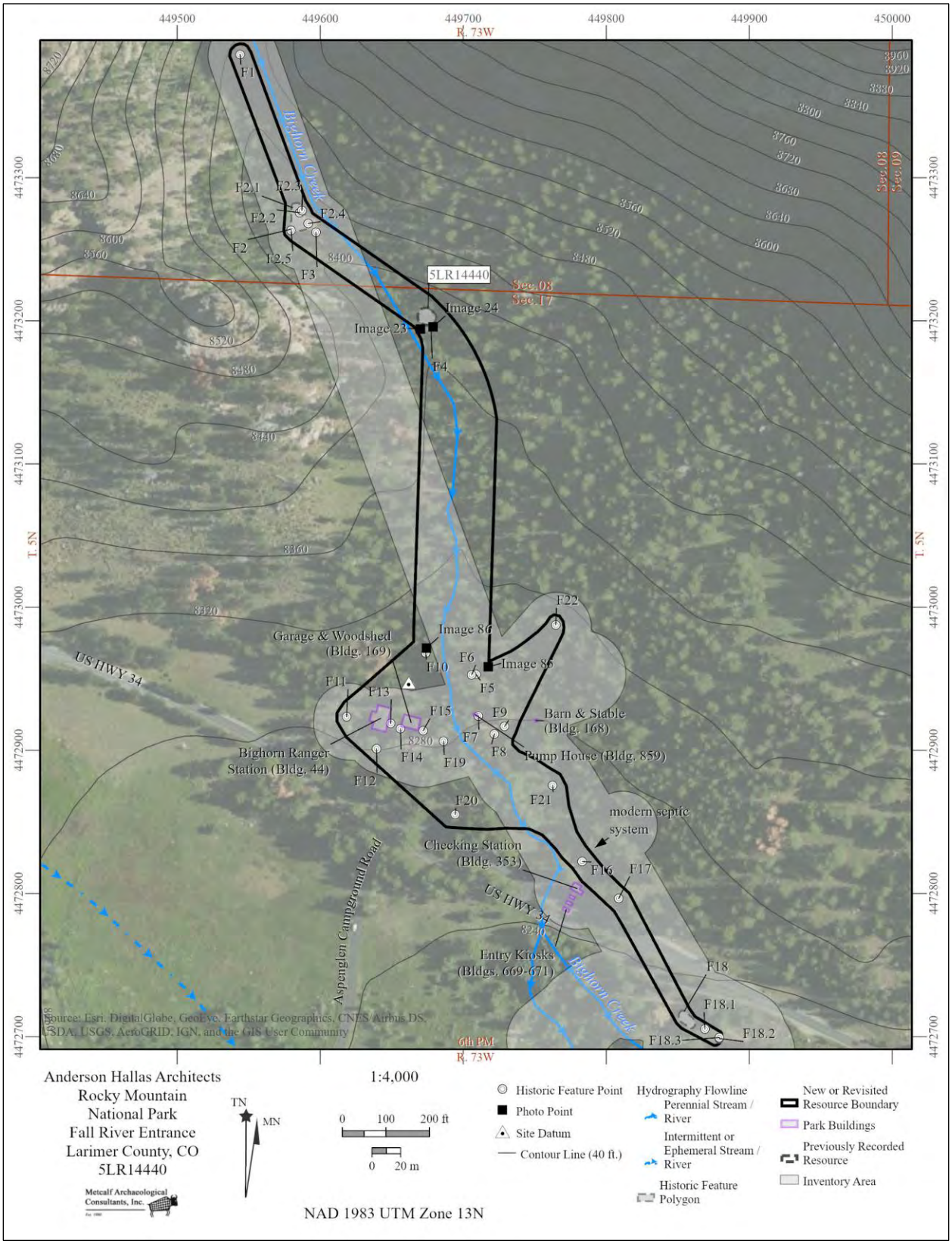

Figure 4. Updated site boundary for 5LR14440, reflecting newly recorded features F18.1, F18.2, and F18.3.

Figure 5. Overview of F18.1 exposed in side wall of TP1. Note the pipe segment is buried with the upper portion of SU2. (Photo roll 20-866, image 3)

Figure 6. Overview of TP1 and TP3 locations from site 5LR14440, F18, view to the east. Note that TP1 is in foreground and excavation of TP3 is in progress. (Photo roll 20-866, image 6)

Figure 7. Overview of F18.2 exposed in southwest corner of TP2. Note the pipe segment is buried with the upper portion of SU2. (Photo roll 20-866, image 4)

Figure 8. Overview of F18.3 exposed in east wall of TP2. Note the pipe segment is buried with the bottom portion of SU2. (Photo roll 20-866, image 8)

Figure 9. Overview of TP2 and TP3 locations, view to the west. Note that TP2 is in foreground and excavation of TP3 is in progress. (Photo roll 20-866, image 7)

CONCLUSION

Metcalf completed archaeological monitoring of the geotechnical investigations adjacent to the Rocky Mountain National Park Fall River Entrance Station in Larimer County, Colorado on December 22, 2020. The project area is located in Section 17 of Township 5 North, Range 73 West on lands administered by the NPS (Figure 1).

As noted above, Mr. Knapp monitored the equipment access and the excavations of three tests pits (TP1-TP3) and three percolation tests (PT1-PT3) within the project area. All tests were completed with the exception of PT2 which was abandoned during the excavation. Over the course of the monitoring, three historic sewer pipe features (F18.1, F18.2, and F18.3) associated with a previously recorded septic tank feature (F18) at site 5LR14440 were discovered during the excavations of TP1 and TP2; the discoveries resulted in the expansion of the site boundary (Figures 3-4).

As previously discussed, consultation with Park staff occurred at the time of the feature discoveries. The newly discovered features, while damaged by the geotechnical investigations, were documented and reburied, providing protection from any additional impacts. The features were documented and mapped and are detailed within the site form provided in Appendix C of the 2021 survey report (Briggs and Knapp 2021).

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APPENDIX C

OAHP Cultural Resource Forms

(under separate cover; agency copies only; not for public distribution)