Western Archaeological Services, Inc.

Contract Archaeological and Historical Cultural Resource Consulting

August 14, 2023

Dave Kennington
Sunrise Engineering
47 East 4th Avenue
Afton, WY 83110

RE: Cross Roads Booster Pump and Pipeline, Class III cultural resource inventory (23-WAS-024)

Dear Dave:

Enclosed is the redacted (43 CFR 7.18) Class III cultural resource inventory report for the proposed Cross Roads Booster Pump and Pipeline in Sweetwater County. Our confidence is high that the objectives of the Class III inventory have been met. The results of the project are consistent with the expected results prior to fieldwork. No further work is required.

If you have any questions concerning this report or if we can be of further assistance, please call our office.

Sincerely,

Stacy Goodrick
Principal Investigator

SRG:djc

Enclosures

cc: Morgan Robins – BLM Rock Springs Field Office

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Class III Cultural Resource Inventory Report for the Sunrise Engineering Cross Roads Booster Pump and Pipeline Sweetwater County, Wyoming 23-WAS-024

By
Robert Ficenec

prepared for
Sunrise Engineering

submitted to the
Wyoming Bureau of Land Management
Rock Springs Field Office

by
Stacy Goodrick
Principal Investigator

under Federal Cultural Resource Use Permit No.
010-WY-SR21

Western Archaeological Services
Rock Springs, Wyoming

August 2, 2023

PROJECT DESCRIPTION

On July 7, 2023, Robert Ficenec (crew chief), Dave Johnson, Chay Ambrose, and Jonathon Ingles (crew) of Western Archaeological Services (WAS) conducted a Class III cultural resource inventory for the proposed Sunrise Engineering, Cross Roads Booster Pump and Pipeline. Fieldwork authorization was obtained from the Bureau of Land Management, Rock Springs Field Office (BLM RFO) on May 1, 2023. The proposed pipeline departs an existing pumping station in the NW¼ NW¼ NW¼ NE¼ SW¼ of Section 29, T19N, R105W, and proceeds southerly 14,685 ft (2.78 miles), where it ends in the NW¼ SE¼ SW¼ SE¼ SE¼ of Section 6, T18N, R105W (Figure 1). A booster station is located in the SW¼ NW¼ SW¼ SW¼ NW¼ of Section 5, T18N, R105W, along the northern margin of an existing substation and east of a KOP Campground (see Figure 1). Figure 2 shows an overview of the proposed pipeline facing southerly from the existing pumping station in the NW¼ NW¼ NW¼ NE¼ SW¼ of Section 29, T19N, R105W. Figure 3 shows an overview of the proposed pipeline facing northerly from the SE¼ SE¼ NE¼ SE¼ NE¼ of Section 6, T18N, R105W. Figure 4 shows an overview of the proposed booster pump and pipeline facing southerly from the SE¼ SE¼ NE¼ SE¼ NE¼ of Section 6, T18N, R105W. Figure 5 shows an overview of the proposed pipeline facing northerly from the NE¼ NE¼ NE¼ SE¼ SE¼ of Section 6, T18N, R105W.

The pad for the booster pump measures approximately 150 ft north/south x 215 ft east/west and will be constructed by clearing the topsoil and vegetation, cutting and leveling the pad for placement of the pumping facilities. The proposed pipeline will be constructed by removing the topsoil and placing it to one side of the right-of-way (ROW). After the ROW has been cleared and graded, a trench approximately 3 ft wide and 5 ft deep will be dug. After the pipe is placed, the trench will be backfilled, contoured, and vegetated. The proposed pipeline will be bored under Interstate 80. Prior to construction, test bore holes may be drilled along the proposed pipeline route.

The objectives of a Class III cultural resource inventory are to provide a complete record of the cultural properties, identifiable from surface and natural exposures (profiles), occurring within the study area, and to determine the relationship of the cultural resources to proposed disturbance areas. To meet these objectives, a Class III cultural resource inventory was conducted along a 150 ft wide corridor along the entire 14,685 ft (2.78 miles) of pipeline ROW, other than the approximate 300 ft of the pipeline located within the Interstate 80 ROW. In addition, a 100 ft wide buffer was inventoried around the margins of the proposed booster pump. A total of 3.33 block acres and 50.56 linear acres was inventoried during the current project, of which 0.29 linear acres is located on public (BLM RFO) land and 3.33 block acres and 49.97 linear acres is located on private land. Table 1 lists the UTM points for the corners of the booster pump pad, and the take-off and tie-in points for the proposed pipeline.

Table 1. Project area UTM points.

Point Description	Zone	Map Datum	Easting Meters East	Northing Meters North
Booster Pump NW Corner	12	83	642464	4603372
Booster Pump NE Corner	12	83	642530	4603374
Booster Pump SE Corner	12	83	642531	4603327
Booster Pump SW Corner	12	83	642465	4603325
North End of Pipeline	12	83	642831	4606442
South End of Pipeline	12	83	642227	4602464

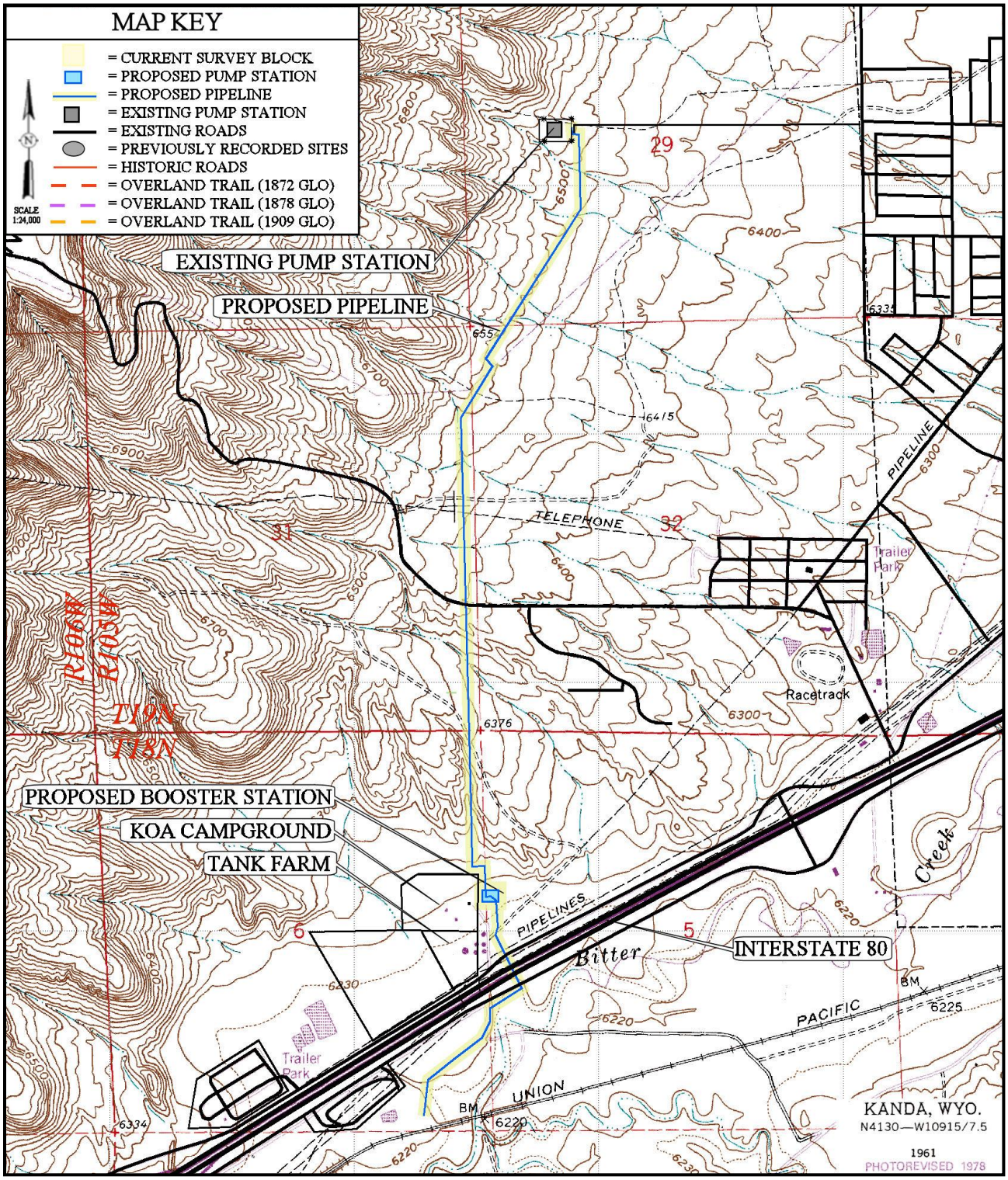

Figure 1. USGS topographic map showing the proposed Sunrise Engineering, Cross Roads Booster Pump and Pipeline in Sections 5 and 6, T18N, R105W, and Sections 29, 31, and 32, T19N, R105W, Sweetwater County, Wyoming (Kanda, Wyoming 1961/Photo Revised 1978).

Figure 2. Overview photo of the proposed pipeline facing southerly from the existing pumping station. Photograph taken July 7, 2023 by Robert Ficenec. Image has not been altered.

Figure 3. Overview photo of the proposed pipeline facing northerly from the SE¼ SE¼ NE¼ SE¼ NE¼ of Section 6, T18N, R105W. Photograph taken July 7, 2023 by Robert Ficenec. Image has not been altered.

Figure 4. Overview photo of the proposed booster pump and pipeline facing southerly from the SE¼ SE¼ NE¼ SE¼ NE¼ of Section 6, T18N, R105W. Photograph taken July 7, 2023 by Robert Ficenec. Image has not been altered.

Figure 5. Overview photo of the proposed pipeline facing northerly from the NE¼ NE¼ NE¼ SE¼ SE¼ of Section 6, T18N, R105W. Photograph taken July 7, 2023 by Robert Ficenec. Image has not been altered.

The direct area of potential effect (APE) provided by the BLM is at least two times the width of the proposed ROW. A 150-ft-wide APE was inventoried along the proposed pipeline route, with a 100 ft buffer inventoried around the 150 ft north/south x 215 ft east/west booster pump pad. The 150 ft linear corridor (50.56 linear acres) and 3.33 block acres adequately covers the direct APE of the proposed booster pump and pipeline route.

The BLM RFO indicated that the indirect APE for non-physical effects was 1 mile outside of the linear inventory and block. Sites identified within 1 mile of the direct APE that could be of Historic of Native American cultural significance (for example: cairns, petroglyphs, stone circles, historic trails, buildings, ranches) need to be thoroughly discussed within the report along with potential effects to the sites. This is discussed in the Background Research section of the report.

The project will have minimal auditory and atmospheric effect to the area. Potential atmospheric effects to the study area during construction will be limited to the construction equipment exhaust and the dust raised by construction of the proposed pipeline and booster station. Potential auditory effects during construction will be limited to the noise generated by the heavy, earth-moving machines used to excavate and bury the pipeline, drill under Interstate 80, and during construction of the booster station pad. However, these are temporary affects, and will cease upon completion of construction. After completion of construction, auditory effects will be limited to operation of the booster station.

Properties inventoried in the SE¼ SE¼ of Section 6, T18N, R105W, and the NW¼ NW¼ of Section 32, T19N, R105W, are public (BLM RFO) land. Properties inventoried in the Section 5, T18N, R105W, the E½ NE¼ of Section 6, T18N, R105W, and Sections 29 and 31, T19N, R105W, are private land. Federal involvement in the undertaking includes the review of all permits and administrative responsibility for all affected cultural resources.

No new cultural resources were identified within the direct APE of the project. Two previously documented segments of the Lincoln Highway (48SW1834) are located within the APE. The proposed pipeline parallels, and then crosses a contributing segment of the 1913 and 1920s variant of the Lincoln Highway in the NE¼ SE¼ SE¼ of Section 5, T18N, R105W, and will be bored under a non-contributing segment of the 1930s variant of Lincoln Highway previously subsumed by a paved frontage road south of Interstate 80. In addition, based on the GLO maps, the proposed pipeline also crosses the Overland Trail (48SW1226). However, no evidence of this historic trail was identified within the direct APE of the project.

ENVIRONMENTAL SETTING

The project is located along the western margin of the Rock Springs Uplift of southwestern Wyoming, approximately 1 mile west of the city of Rock Springs. Specifically, the project is staked along the lower southeastern margin of White Mountain, with the southern end terminating on the T-1 terrace bordering the northern margin of Bitter Creek. The study area is drained to the southeast into Bitter Creek by several unnamed ephemeral washes. Bitter Creek drains the surrounding region to the west/southwest into the Green River. No permanent sources of water are located withing the direct APE of the project. The project is located at elevations ranging from 6210 to 6520 ft above mean sea level, with variable slopes generally to the southeast.

Soils in the APE consist primarily of residual silty, sandy clay with a variable veneer of gravel, cobbles, and decomposing bedrock fragments. These soils have formed from the underlying drab sandstone, drab to variegated claystone and siltstone, and locally derived conglomerate of the main body of the Wasatch Formation (Love and Christiansen 1985). Soils within the southern portion of the APE located within the Bitter Creek drainage valley consist of alluvial sandy clays. The National Resources Conservation Service, Web Soil Survey (NRCS 2023) was consulted to determine soil types present within the APE. Soils along the flank of White Mountain consist of the Huguston- Subson complex, Huguston-Haterton complex, Kanda-Sandbranch complex, and Kanda-Sandbranch-Haterton complex, grading to the Thayer channery

sandy loam, Quelman fine sandy loam, and Cowestglen family-Schute-Thenipol family complex within the Bitter Creek drainage valley.

The residual soils located throughout the majority of the APE offer a very low to no potential to contain intact, buried cultural deposits. The alluvial deposits located within the Bitter Creek drainage valley offer a low potential to contain intact, buried cultural deposits. No areas of depositional potential, such as eolian sand deposits, were observed within the direct APE, and no subsurface cultural deposits were noted within the existing disturbance areas and/or drainage cutbanks.

Vegetation within the study area consists of a sparse to moderate cover (estimated at 10 to 60%) with an average cover of 25%. Vegetation is dominated by low sage brush, greasewood, shadscale, saltbush, rabbit brush, western wheat grass, Indian rice grass, prickly pear cactus, and various unidentified weeds and forbs. Scattered juniper/cedar trees are present along the northern portion of the study area.

Modern disturbances have impacted approximately 40 to 50% of the APE; with disturbances including Interstate 80, two paved frontage roads, several bladed roads, several two-track roads, numerous buried pipelines, a buried fiber optic line, a campground, several overhead powerlines, and a pumping station. Other disturbances include wildlife/livestock grazing, erosion, deflation, and various activities associated with ranching and recreation. Factors affecting the preservation of cultural resources in the general project area include bioturbation, cryoturbation, water erosion, and wind deflation.

PRESENT BUILT ENVIRONMENTAL SETTING

The proposed project is staked within a moderately developed area along the western margin of the city of Rock Springs. Modern developments within the study area include Interstate 80, two paved frontage roads, an abandoned highway grade, several bladed roads, numerous two-track roads, several buried pipelines, a buried fiber optic line, several powerlines, a KOA camp ground, and two pumping stations. Other modern developments visible from the study area include the city of Rock Springs and numerous associated housing developments, businesses, roads, and other developments. Figure 6 is the Google Earth satellite photo of the APE showing the existing developments in relation to the proposed pipeline and booster station. The modern developments, especially the city of Rock Springs and Interstate 80 dominate the modern built environment.

Figures 7-9 are overviews of the built environment facing north, east, south, and west from the NE¼ SW¼ NW¼ NW¼ NW¼ of Section 32, T19N, R105W. Developments visible to the north include a cell tower, a two-track road, and a pipeline. Developments visible to the east include the town of Rock Springs, several upgraded roads, two-track roads, powerlines, and a buried pipeline. Developments visible to the south include the western portion of Rock Springs, Interstate 80, the Union Pacific Railroad, several upgraded roads and two-track roads, a buried pipeline, and a powerline. Developments visible to the west include an upgraded road and a two-track road.

Figures 11-14 are overviews of the built environment facing north, east, south, and west from the proposed booster station. Developments visible to the north include the KOP camp ground, a buried pipeline, and a two-track road. Developments visible to the east include the city of Rock Springs, Interstate 80, a paved frontage road, several buried pipelines, powerlines, and upgraded roads. Developments visible to the south include Interstate 80, the Union Pacific Railroad, a paved frontage road, an upgraded road, a two-track road, several buried pipelines, a booster station, a tank battery, and several powerlines. Developments visible to the west include Interstate 80, a paved frontage road, a KOP campground and other businesses, a tank battery, several two-track roads, and several powerlines.

Figure 6. Google Earth satellite photo showing the existing developments in relation to the proposed pipeline and booster station.

Figure 7. Overview photo of the built environment facing north from the NE¼ SW¼ NW¼ NW¼ NW¼ of Section 32, T19N, R105W. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 8. Overview photo of the built environment facing east from the NE¼ SW¼ NW¼ NW¼ NW¼ of Section 32, T19N, R105W. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 9. Overview photo of the built environment facing south from the NE¼ SW¼ NW¼ NW¼ NW¼ of Section 32, T19N, R105W. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 10. Overview photo of the built environment facing west from the NE¼ SW¼ NW¼ NW¼ NW¼ of Section 32, T19N, R105W. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 11. Overview photo of the built environment facing north from the booster station. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 12. Overview photo of the built environment facing east from the booster station. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 13. Overview photo of the built environment facing south from the booster station. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

Figure 14. Overview photo of the built environment facing west from the booster station. The picture was taken by Robert Ficenec on July 7, 2022 and has not been modified.

BACKGROUND RESEARCH

A file search (#4763) was received on May 1, 2023 from the Cultural Records Division of the State Historic Preservation Office (SHPO). Records at WAS were also consulted. General Land Office (GLO) maps on the BLM archives website were also consulted to determine if any previously documented historic resources were present in the vicinity of the APE . . . (Omitted text as per BLM Regulations)

Historic Built Environment

The proposed project is located along the western margin of the city of Rock Springs and along the lower southeastern margin of White Mountain. The southern end of the pipeline ends on the T-1 terrace bordering the northern margin of Bitter Creek. Based on the ground survey, GLOs, and aerial photographs, the single most obvious historic land alteration in the direct APE is transportation.

The 1876 GLO for T18N, R105W, shows the Overland Trail passing from northeast to southwest through Sections 5 and 6, with the Union Pacific Railroad passing from east to west/southwest through Sections 3, 4, 5, 6, and 7. Other unnamed roads are depicted going southeasterly from a road paralleling the southern margin of the Union Pacific Railroad. Based on this, the proposed pipeline crosses the Overland Trail in the NW¼ of Section 5, T18N, R105W (see Figure 1). No other historic developments are depicted on the GLO in the direct APE of the project in T18N, R105W.

The 1873 GLO for T19N, R105W, shows the Overland Trail passing from northeast to south through Sections 28, 29, and 32, with an unnamed road departing the Overland Trail to the west into Section 31. The town of Rock Springs is depicted on the GLO in Section 35, with additional roads proceeding to the north, east, southeast, and south out of Rock Springs. The proposed pipeline parallels the Overland Trail to the west through Sections 29, 31, and 32, T19N, R105W (see Figure 1). No other historic developments are depicted on the GLO in the direct APE of the project in T19N, R105W.

SURVEY METHODS

Extent of Survey Coverage

Vegetation cover throughout the APE consisted of a sparse to moderate cover (estimated at 10 to 60%) with an average cover of 25%. Standard 30-meter wide transects were employed for coverage of the block and the 150 ft linear APE. Where present, subsurface deposition exposed in road borrow ditches, bladed roads, two-track roads, pipeline disturbances, eroded areas, animal burrows, or animal trails were examined. Ant hills were examined for the presence of micro-artifacts including pressure flakes or small beads. A total of 3.3 block acres and 50.56 linear acres was inventoried during the current project, of which 0.29 linear acres is located on public (BLM RFO) land and 3.33 block acres and 49.97 linear acres is located on private land.

Collection Policies

Collection policies employed by WAS are in line with policies established by the Wyoming State BLM Office and BLM Field Office. No collections were made during the current project.

WEATHER AND GROUND CONDITIONS

Weather conditions during the fieldwork phase of the project consisted of mild to warm conditions (60 to 70°), a light wind from the west at less than 5 mph, and partly cloudy skies. Ground conditions were dry. The field conditions prevalent during the fieldwork phase of this project had no effect on the results of this project.

INVENTORY RESULTS

Based on the GLO plats for T18N, R105W, and T19N, R105W, the proposed pipeline crosses the Overland Trail (48SW1226) in Section 5, T18N, R105W, then roughly parallels Segment 48SW1226_81 approximately 0.25 to 0.5 miles to the west through Sections 29, 31, and 32, T19N, R105W (see Figure 1). No intact evidence of the Overland Trail was identified within the direct APE of the project. The proposed pipeline will also be bored under the 1930s variant of the Lincoln Highway (48SW1834) previously subsumed by a paved frontage road south of Interstate 80 and crosses an intact segment of the 1913-1920s variant of the Lincoln Highway (48SW1834) located south of the interstate (see Figure 1). In addition, the proposed pipeline also crosses the Overland Trail (48SW1226) in an area impacted by previous construction. However, no intact evidence of the Overland Trail was identified within the study area.

48SW1226: Overland Trail

Description

Site 48SW1226 is the Overland Trail . . . (Omitted text as per BLM Regulations)

Based on the GLO plats, the proposed pipeline crosses the Overland Trail in the SW¼ NW¼ of Section 5, T18N, R105W (see Figure 1). This area has been heavily impacted by modern developments, and no intact evidence of the historic trail was relocated in the direct APE of the project. The proposed pipeline also roughly parallels the historic trail approximately 0.25 to 0.5 miles to the west through Sections 29, 31, and 32, T19N, R105W (see Figure 1). This portion of the Overland Trail will not be physically impacted by the proposed construction. The proposed pipeline is located in an area that will be intermittently visible from Segment 48SW1226_81 of the Overland Trail in an area where the proposed pipeline parallels an existing pipeline and associated two-track road. The setting in this area does not contribute to the eligibility of the trail. Multiple pipelines, bladed roads, and two-track roads are visible to the west of Segment 48SW1226_81, with extensive developments associated with the City of Rock Springs visible to the east. No portions of the proposed booster pump will be visible from Segment 48SW1226_81. Construction of the proposed Cross Roads Booster Pump and Pipeline will result in no adverse effect. No further work is recommended at Segment 48SW1226_81 of the Overland Trail for the current project.

48SW1834_: Lincoln Highway

Description

Site 48SW1834 is the Lincoln Highway . . . (Omitted text as per BLM Regulations)

The proposed pipeline crosses Segment 48SW1834_469 in the approximate center of the NE¼ SE¼ SE¼ of Section 6, T18N, R105W (see Figure 1). At this point, the pipeline continues to the southwest, while the historic road continues to the west outside of the proposed pipeline APE. As currently proposed, Sunrise Engineering indicated that they would not be able to bore under the Lincoln Highway due to the extensive modern developments present in the area, including several pipelines and a fiber optic line. As a result, Sunrise Engineering will need to excavated a trench across Segment 48SW1834_469 of the Lincoln Highway and will physically impact the historic road and will result in an adverse effect. WAS recommends that potential

mitigation for the adverse effect to the Lincoln Highway include a monitor of construction to document any potential stratigraphic layers representing multiple construction periods; and reclamation/recontouring of the highway grade to its original appearance. Since the Integrity of Setting and Feeling do not contribute to the overall eligibility of the highway segment, the proposed construction will result in no adverse effect to the visual setting.

CONCLUSIONS/SUMMARY

A Class III cultural resource inventory was conducted for the Sunrise Cross Roads Booster Pump and Pipeline. No new cultural resources were documented during the project.

Based on the GLO plats for T18N, R105W, and T19N, R105W, the proposed pipeline crosses the Overland Trail (48SW122) in Section 5, T18N, R105W, and roughly parallels the trail approximately 0.25 to 0.5 miles to the west through Sections 29, 31, and 32, T19N, R105W (see Figure 1). No intact evidence of the Overland Trail was identified within the direct APE of the project. The proposed pipeline is located in an area that will be intermittently visible from Segment 48SW1226_81 of the Overland Trail in an area where the proposed pipeline parallels an existing pipeline and associated two-track road. The setting does not contribute to the eligibility of the trail. Construction of the proposed Cross Roads Booster Pump and Pipeline will result in no adverse effect to the Overland Trail.

The proposed pipeline will also be bored under the 1930s variant of the Lincoln Highway (48SW1834) previously subsumed by a paved frontage road south of Interstate 80 and crosses an intact segment of the 1913-1920s variant of the Lincoln Highway (48SW1834) located south of the interstate (see Figure 1). The proposed pipeline also crosses Segment 48SW1834_469 in the approximate center of the NE¼ SE¼ SE¼ of Section 6, T18N, R105W (see Figure 1). Segment 48SW1834_469 was previously recommended as a contributing segment of the Lincoln Highway. As designed, a trench will be excavated across the historic road, which will result in an adverse effect. To mitigate the adverse effect to the Lincoln Highway, WAS recommends that a monitor of construction be conducted and the that highway grade be reclaimed/recontoured to its original appearance.

Soils in the APE consist primarily of residual silty, sandy clay with a variable veneer of gravel, cobbles, and decomposing bedrock fragments. Alluvial sandy clays are present within the Bitter Creek drainage valley in the southern portion of the APE. The residual soils offer a very low to no potential to contain intact, buried cultural deposits, while the alluvial soils offer a low potential. No evidence of subsurface cultural deposits was noted in the existing disturbance areas present in the APE. Our confidence is high that the objectives of the Class III inventory have been met. The results of the project are consistent with the expected results prior to fieldwork.

REFERENCES CITED

Johnson, Dave

2001 City of Rock Springs, Stormwater Drain, Overland Trail Reconnaissance and Recordation. Report submitted to the Wyoming BLM, Rock Springs Field Office. Western Archaeological Services, Rock Springs, Wyoming.

2012 A Historical Assessment of and Visual Analysis of Historic Resources for the enXco Quaking Aspen Wind Energy Project Powerline, Sweetwater County, Wyoming. Report submitted to the Wyoming BLM, Rock Springs Field Office. Western Archaeological Services, Rock Springs, Wyoming.

Love, J. D., and A. C. Christiansen

1985 Geological Map of Wyoming. Department of Interior, U.S. Geological Survey, Reston, Virginia.

National Resources Conservation Service, Web Soil Survey

2023 Electronic document, http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm,