

November 23, 2011

EI - 18762

David Navecky
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423-0001

Subject: Port MacKenzie Rail Extension (PMRE) Project, Section 106 Programmatic Agreement (PA), Annual Employee/Contractor Cultural Resources Training materials for review and comment

Greetings David,

I am writing on behalf of the Alaska Railroad Corporation (ARRC) regarding the Port MacKenzie Rail Extension (PMRE) Project. The Section 106 Programmatic Agreement (PA) prepared for the PMRE Project stipulated that ARRC would conduct an annual training to ensure that: 1) on-site supervisory-level employees and contractors are trained in procedures for identifying and reporting cultural resources that may be inadvertently discovered during construction; and 2) employees and contractors are aware of applicable cultural resource laws and regulations and are advised against the illegal collection of cultural resources. These materials were drafted in consultation with the PMRE Working Group, comprised of the ARRC, Matanuska-Susitna Borough (MSB) and Knik Tribal Council.

Attached for your review and comment are a copy of the curriculum outline and training materials. These materials are also being sent by email. The ARRC requests that any comments be submitted to Special Projects Manager, Brian Lindamood (email at LindamoodB@akrr.com or telephone at 907-265-3095), by December 31, 2011. If comments are not received by December 31, or you have not notified us that you will need an extension for review, the ARRC will proceed with use of the training materials attached. To date, the training has not been scheduled; however, we anticipate holding the training in Late Winter/Spring 2012. We would also like to extend an invitation to your organization to attend the training when it is held. Please indicate your interest in attending the training by December 31, 2011 to Brian Lindamood at the contact information above.

I appreciate your attention to this transmittal. Again, please note that comments on the training curriculum outline and materials are requested by **December 31, 2011**.

Sincerely,

Elizabeth Grover
Cultural Resource Specialist
HDR Alaska, Inc.

Copy to:

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EMPLOYEE/CONTRACTOR CULTURAL RESOURCES TRAINING

OUTLINE

- I. Welcome and Introductions**
- II. Introduction**
 - (A) What is the purpose of the training?
 - (B) Who is this training for?
 - (C) What are the attendance requirements?
 - (D) What are the goals of the training?
- III. Terms and Definitions**
 - (A) Cultural Resource
 - (B) Archaeological sites/resources
 - (C) Historic sites/resources
 - (D) Traditional cultural sites/resources
 - (E) Graves/burials/cemeteries
 - (F) Historic Property
- IV. Applicable Laws and Regulations**
 - (A) Ordinances, laws, and regulations (local, state, and federal) that apply to cultural resources and human remains in the Project Area
 - 1) National Historic Preservation Act (NHPA)/Section 106
 - 2) Archaeological Resources Protection Act of 1979 [ARPA; 43 CFR 7]
 - 3) Native American Graves Protection and Repatriation Act [NAGPRA; 43 CFR 10])
 - 4) Alaska Historic Preservation Act (AS 41.35.010-41.35.240)
 - 5) Matanuska-Susitna Borough (MSB) ordinances/resolutions
 - 6) Knik Tribal Council (KTC) resolutions
 - (B) What are the consequences/penalties for violating these laws and regulations?
 - 1) AHPA
 - 2) ARPA
 - (C) Sources of additional information (e.g., websites, AHCP Citizen's Guide, etc.)
- V. Brief Overview of Archaeology and History in the PMRE Project Area**
 - (A) Prehistory
 - (B) History

- (C) Dena'ina connection to resources in the Project area (prehistory through present)
- VI. Cultural Resources Likely to be Found in the Project Area
 - (A) Overview of prehistoric and historic cultural resources (bones, artifacts, cache and house depressions, structural remains, buildings/cabins, modern debris, etc.)
- VII. Procedures for the Inadvertent Discovery/Disturbance of Cultural Resources or Human Remains during Construction Activities
 - (A) Procedures for identification of cultural resources and/or human remains
 - (B) Procedures for the protection of human remains should they be discovered during project activities
 - (C) Procedures for the protection of cultural resources should they be discovered during project activities
 - (D) Notification procedures for when archaeological materials, human remains, and historic period sites are discovered
- VIII. Conclusions/Wrap-up
 - (A) Training information may be conveyed by supervisory level employees and contractors to staff unable to attend the training as appropriate (e.g., Cultural Resources Training Binder)
 - (B) Documentation of annual Employee/Contractor Cultural Resources Training will be provide in the annual reporting requirement
- IX. Questions/comments

POSSIBLE FIELD TRIP

- 1. Field Trip/On-Site Experience – will occur weather permitting
 - (A) Examples of house and cache depressions
 - (B) Graves (marked, unmarked)
 - (C) Soil disturbance

CULTURAL RESOURCES TRAINING BINDER

- (A) Training Powerpoint
- (B) Summary of Laws and Regulations
- (C) Summary of Prehistory and History of the PMRE Project Area
- (D) Resources Likely to Be Found in PMRE Project Area
- (E) Representative Photographs of Resources Likely to Be Found in PMRE Project Area
- (F) Summary of Procedures for the Unanticipated Discovery of Human Remains, Grave, and Historic Properties
- (G) PA Attachment A - Plan of Action for the Unanticipated Discovery of Human Remains, Graves and Historic Properties



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ATTACHMENT A: TRAINING POWERPOINT

NOTE: POWERPOINT SLIDES TO BE INCLUDED IN BINDER AT TRAINING (SEE OUTLINE BELOW FOR REFERENCE)

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- VI. Cultural Resources Likely to be Found in the Project Area

Port MacKenzie Rail Extension Project, Cultural Resources Training Attachment

- (A) Overview of prehistoric and historic cultural resources (bones, artifacts, cache and house depressions, structural remains, buildings/cabins, modern debris, etc.)
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ATTACHMENT B: SUMMARY OF LAWS AND REGULATIONS

National Historic Preservation Act of 1966

PL 102-575 (16 U.S.C. 470 et seq); Section 106 implementing regulations at 36 CFR 800

The National Historic Preservation Act (NHPA) was passed due to public concern over the loss of archaeological sites and historic buildings caused by large publicly funded projects such as hydropower dams, urban renewal projects and the interstate highway system. NHPA requires federal agencies to consider the effects of their actions on historic properties¹ (Section 106) and establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP). The implementing regulations for Section 106 are found at 36 CFR 800.

To successfully complete the Section 106 review process, federal agencies, in consultation with Tribes, the State Historic Preservation Officer (SHPO) and interested consulting parties, must:

- 1) Gather information to identify historic properties within the area that may be affected by the project
- 2) Determine how those historic properties may be affected
- 3) Explore ways to avoid or reduce harm (adverse effects) to those historic properties
- 4) Reach agreement with the SHPO on ways to resolve adverse effects or obtain comments from the ACHP

The Surface Transportation Board (STB) is the lead federal agency responsible for ensuring compliance with Section 106 for the Port MacKenzie Rail Extension (PMRE) Project. In 2011, STB entered into an agreement with the AHCP, SHPO, Alaska Railroad Corporation (ARRC), Matanuska-Susitna Borough (MSB), Knik Tribal Council as well as other Tribes, and other interested parties to resolve any adverse effects the PMRE project would or could have on historic properties. Among other things, this agreement stipulated that ARRC provide cultural resources training to their supervisory level employees and contractors and that they have a plan in place for inadvertent discoveries (Attachments F and G).

Further discussion and copies of the NHPA are available on the Advisory Council on Historic Preservation website at: <http://www.achp.gov/nhpa.html>.

A copy of 36 CFR 800 can also be found on the Advisory Council on Historic Preservation website at: <http://www.achp.gov/regs-rev04.pdf>

¹ Historic properties are any prehistoric or historic districts, sites, buildings, structures, or objects included in, or eligible for inclusion in, the National Register of Historic Places (36 CFR 800.16(l)).

Archaeological Resources Protection Act of 1979

Public Law 96-95 (16 U.S.C. 470aa-470mm); Regulations at 43 CFR 7

The Archaeological Resources Protection Act (ARPA) provides for the protection of archaeological resources² on federal and Indian lands³ and requires federal land managers to issue permits for the excavation or removal of artifacts from lands under their jurisdiction. ARPA stipulates that the appropriate Tribes be notified prior to permit issuance to determine if significant religious or cultural sites will be affected.

ARPA stipulates information concerning the nature and location of any archaeological resource on federal or Indian lands may not be made available to the public unless it is determined that such disclosure would further the purposes of the act and not create a risk of harm to the resources or to the site where such resources are located.

Under ARPA, no person may:

- Excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on federal or Indian lands without a permit.
- Sell, purchase, exchange, transport, receive or offer to sell, purchase or exchange any archaeological resource if such resource was excavated or removed from federal or Indian lands in violation of this Act or in violation of any other federal rule, regulation, or provision.
- Sell, purchase, exchange, transport receive or offer to sell, purchase or exchange, in interstate or foreign commerce, any archaeological resource excavated, removed, sold, purchased, exchanged, transported, or received in violation of any state or local provision, rule, regulation, ordinance, or permit.

Penalties under ARPA, upon conviction, are as follows:

- Fine of not more than \$10,000 and/or imprisonment of not more than 1 year if the resource involved and the cost of the restoration and repair of such resources is less than \$500
- Fine of not more than \$20,000 and/or imprisonment of not more than 2 years if the resources involved and the cost of the restoration and repair of such resources exceeds \$500
- Fine of not more than \$100,000 and/or imprisonment of not more than 5 years in the case of a second or subsequent violation

Further discussion and a copy of ARPA statute and regulations can be found on the National Park Service website at: <http://www.nps.gov/archeology/tools/Laws/arpa.htm>

² Archaeological resources include any material remains of past human life or activities which are at least 100 years old and the physical site, location or context in which such material remains are found.

³ Indian lands means lands of Indian tribes, or Indian individuals, which are either held in trust by, or subject to a restriction against alienation imposed by, the United States, except for subsurface interests not owned or controlled by an Indian tribe or Indian individual.

Native American Graves Protection and Repatriation Act

Public Law 101-60 (25 U.S.C 3001); Regulations at 43 CFR 10

The Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies and museums receiving federal funds to inventory collections of human remains and associated funerary objects and consult with Indian Tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects. NAGPRA requires that Indian Tribes or Native Hawaiian organizations be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or Indian lands. The law also outlines the process for repatriation of human remains to lineal descendents.

NAGPRA contains provisions for the intentional and inadvertent discovery of Native American cultural items on Federal and Indian lands, and establishes the Secretary of Interior's authority to assess civil penalties on any museum that fails to comply with requirements of NAGPRA.

With respect to inadvertent discoveries on Federal or Indian lands, NAGPRA stipulates that:

- Any person who knows or has reason to know that he or she has inadvertently discovered human remains, funerary objects, sacred objects, or objects of cultural patrimony must provide immediate telephone notification of the discovery, with written confirmation, to the responsible Federal agency or Tribal official.
- If the inadvertent discovery occurred in connection with an on-going activity on Federal or Indian lands, the person, in addition to the telephone notification above, must stop the activity in the area of the inadvertent discovery and make a reasonable effort to protect the human remains, funerary objects, sacred objects, or objects of cultural patrimony discovered.
- In the case of Alaska Native Claims Settlement Act (ANCSA) lands, the Alaska Native Corporation is the appropriate organization to be notified. If lands are selected by, but not conveyed to, the Alaska Native Corporation, such land is still owned by the Federal government (i.e., "federal land").
- Work may continue 30 days after the date of the notice to the Federal agency or Tribe. The activity may also resume before 30 days if written agreement is signed by the Federal agency or Tribal official prior to the end of the 30 day period. The requirement that work be halted if a site is inadvertently discovered must be included in Federal leases and permits.

To comply with NAGPRA, STB has developed inadvertent discovery procedures for the PMRE Project, which ARRC and the contractor must implement (see Attachments F, G, and H).

Further discussion and a copy of NAGPRA and its implementing regulations can be found on the National Park Service website here: <http://www.nps.gov/nagpra/mandates/INDEX.HTM>

Alaska Historic Preservation Act

Alaska Statute 41.35.010-41.35.240

The Alaska Historic Preservation Act (AHPA) establishes that it is state policy to “preserve and protect the historic, prehistoric, and archeological resources of Alaska from loss, desecration, and destruction so that the scientific, historic, and cultural heritage embodied in these resources may pass undiminished to future generations.”

AHPA establishes state title to all historic, prehistoric and archaeological resources located on state owned or controlled land⁴. By definition, these resources include “deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other subjects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.”

AHPA prohibits the following on state owned or state-controlled lands without a state permit:

- Removal or destruction of the historic and archaeological resources
- Possession, selling, buying or transport of historic and archaeological resources

Under AHPA (AS 41.35.200), a person may not:

- Appropriate, excavate, remove, injure, or destroy, without a permit from the commissioner, any historic, prehistoric, or archeological resources of the state
- Possess, sell, buy, or transport within the state, or offer to sell, buy, or transport within the state, historic, prehistoric, or archeological resources taken or acquired in violation of AHPA or the American Antiquities Act (16 USC 433)

Violators of AHPA are subject to both criminal and civil penalties:

- Criminal penalties (AS 41.35.210)
 - Class A misdemeanor
 - Maximum 1 year in jail
 - Maximum \$10,000 fine if defendant is an individual
 - Maximum \$200,000 if defendant is an organization
- Civil penalties (AS 41.35.215)
 - Maximum \$100,000 for each violation
 - Fine is in addition to other penalties and remedies provided by law

Further discussion and a copy of AAHP can be found here:

<http://touchngo.com/iglcnt/akstats/STATUTES/Title41/Chapter35.htm>

⁴ This includes all state owned or state-controlled lands, including tidelands and submerged lands.

Matanuska-Susitna Borough (MSB) Ordinances/Resolutions

The Matanuska-Susitna Borough (MSB) has approved/passed a number of ordinances and resolutions pertaining to cultural resources located within the MSB. These are listed and summarized below.

- **MSB Ordinance 82-14 - An Ordinance of the Assembly of the MSB Establishing an Historical Preservation Commission**
 - Established the Historic Preservation Commission
 - Outlined functions of the Commission
- **MSB Resolution No. 84-154: Resolution of the Assembly of the MSB to put a Proposition on the Ballot Whether the Borough Should Acquire the Power to Preserve, Maintain and Protect Historic Sites, Buildings, and Monuments**
 - Established that the MSB has the ability to exercise historic preservation powers and that the exercise of these powers is in the interest of the general public to provide a means to preserve the architectural and cultural heritage of the MSB
- **MSB Ordinance 87-007 - An Ordinance of the Assembly of the MSB adding the Areawide Power of Historic Preservation to the Borough Code**
 - Established areawide power of historic preservation to the Borough code.
- **MSB Ordinance 87-019 - An Ordinance Adding the Historic Preservation Element to the Comprehensive Plan of the MSB**
 - Historic Preservation Implementation Plan adopted in 1987
 - Goal was to protect significant prehistoric and historic cultural resources as well as writings and oral histories within the MSB
 - Set forth four objectives: identification, evaluation, registration, and protection of cultural resources
 - MSB became a Certified Local Government in 1987, which means that it is certified to carry out the purposes of the NHPA

None of these ordinances/resolutions include prohibitions or penalties for disturbing cultural resources.

A copy of MSB's cultural resources related ordinances and resolutions can be found in Appendix 2 of the *Knik Arm Bridge and Toll Authority Historic Preservation Plan for Portions of the Matanuska-Susitna Borough* (2008) located here:

<http://www.knikarmbridge.com/documents/FinalHPPAssembled.pdf>

Knik Tribal Council Historic and Cultural Protection Ordinance (2006-2)

Knik Tribal Council approved the Knik Tribal Council Historic and Cultural Protection Ordinance (2006-2) in 2006. This ordinance is currently undergoing revisions.

The primary purpose of this ordinance is to preserve and protect archaeological resources within Tribe's jurisdiction⁵ and on Cook Inlet Region, Inc. (CIRI) and Knikatu, Inc. lands

The Knik Tribal Council Historic and Cultural Protection Ordinance outlines the Knik Tribe's role in ARPA, NHPA, and NAGPRA; outlines the process for issuance of permits; establishes a Historic and Cultural Preservation Committee; establishes a Historic and Cultural Resources Protection Program; and outlines prohibitions regarding cultural resources and human remains located within Knik Tribe's jurisdiction.

The Knik Tribal Council Historic and Cultural Protection Ordinance prohibits persons from entering the Tribe's jurisdiction for the purpose of buying, trading for, or soliciting the purchase of:

- Artifacts without the permission of the Tribal Council
- Human remains without the permission of the Tribal Council or the remains' descendants

⁵ Constitution of the Knik Tribe (Article II – Territory) establishes Knik Tribe's territory as including the Native Village of Knik and areas formerly known as Dena'ina possessions and settlements, customary and traditional use and access areas, and lands owned by CIRI and Knikatu, Inc.

ATTACHMENT C: SUMMARY OF PREHISTORY AND HISTORY OF THE PMRE PROJECT AREA

By Pat McClenahan with Fran Seager-Boss

Natural History

Modern Environment

The study area is situated on the north side of Cook Inlet in the Cook Inlet-Susitna Lowlands. The proposed rail spur is located some 10 miles west of Anchorage and approximately 40 miles north through a popular winter recreation area and Dena'ina cultural landscape.

Paleoenvironment

Today's landscape of the study region is a broad alluvial valley surrounded by majestic mountains. It was formed for the most part during the Pleistocene geological epoch of the Quaternary period. The late Pleistocene was dominated by glaciation beginning around 120,000 years ago.

The Wisconsin Glacial Stage (also known as the Wisconsinan Stage), named for rock deposits studied in the state of Wisconsin, was the fourth glacial stage of the Pleistocene Epoch in North America. The glacial maximum during the Wisconsin Glacial Stage began approximately 22,000 years ago and glaciation lasted until 10,000 years ago. Prior to 10,000 years ago the Project Area was covered by glaciers. Evidence of the earlier glacial advances and recessions in the form of moraines has been eroded and largely obscured in the Matanuska and Susitna River valleys by later episodes

Glaciers began slowly retracting after 14,000 years Before Present (BP). A Tundra-Steppe environment was created by 12,000 years ago as the land became free of ice. Between 12,000 and 10,000 years ago there was a warming trend that permitted the continued deglaciation of the smaller valleys, so that by 9,000 years ago deglaciation was complete and the valley featured a shrub-tundra environment (Dixon et al. 1985, V.1: 4-7). As the latest glacier receded from the Matanuska and Susitna River valleys and Knik Arm, it left the Elmendorf Moraine, the most prominent glacially-formed geological feature dominating the Point MacKenzie landscape.

At approximately 8,000 years ago, a climate change called the Hypsithermal Interval brought even warmer temperatures, and the Susitna River Valley was invaded by spruce (*Picea*). Between 8,000 years ago and the present the region has been covered by boreal forest, with a possible decline in spruce around 5,000 years ago. Beginning around 3,000 years ago and lasting until the recent past there was another climate shift called the Neoglacial Interval that brought cooler temperatures and minor oscillations of valley glaciers (Dixon et al. 1985, V.1: 4-7). Other major river drainages in the region may have undergone very similar glacial events.

The Cook Inlet-Susitna Lowland is a long narrow basin between the Kenai, Chugach, and Talkeetna Mountains to the east and the Aleutian and Alaskan Ranges to the west. The project area comprises a portion of the glacially carved Susitna River drainage. Glaciers remain poised at the headwaters, and the remnants of previous Pleistocene glaciations can be seen in the slightly to heavily modified terminal moraines that cover portions of the landscape in the project area. Most of the northern half of the Lowland is drained by the Susitna River and its tributaries (USDA 1979: 3).

The basin is underlain by Tertiary period sediments, but the surface is made up primarily of Quaternary period, particularly late Pleistocene age glacial deposits. The terrain is made up of low moraines, many lakes, bogs, and broad glacial outwash plains. Level terraces up to several miles wide are located on either side of the principal rivers (USDA 1979:3). Numerous drumlins paralleling Knik Arm dominate the west side.

Another prominent geological feature affecting the region is the Castle Mountain fault that is located north of the Matanuska River, and runs in a southwesterly to northeasterly transect between Houston and the Hatcher Pass Road. It is an ancient fault active since the Mesozoic Era, a geologic era dated approximately 251 million years ago to 65 million years ago (Clardy 1984: 7; Haeussler 1998; Detterman et al. 1976).

Regional Prehistory and Environment

Table 1 provides a brief chronology of prehistory for this region.

Table 1: Southcentral Alaska Regional Cultural Chronology

Period/Tradition	Years Before Present (BP)	Associated Sites	Geographic Area
Beringian Period	14,700-11,000 BP		
“East Beringian” Tradition	14, 400-12,800 BP	Broken Mammoth, Mead, Swan Point sites, Dry Creek, Moose Creek	Tanana Valley, Nenana Valley
American PaleoArctic Tradition Denali complex Chindadn complex	11,000-5,000 BP	Long Lake Site, Trapper Creek Overlook, Screaming Hawk Site Upper and Middle Susitna River drainage sites	Matanuska River Canyon, Trapper Creek, Susitna River, Talkeetna
Northern Archaic Tradition	5,000-2,500 BP	Trapper Creek Overlook, Screaming Hawk Site	Trapper Creek
Kodiak Tradition Kachemak stage	3,500-1,000 BP		Fish Creek on Knik Arm
Late Prehistoric and Historic Era Sugpiaq (Alutiiq People)	1,000 BP-present		Kodiak Island, Alaska Peninsula, Kenai Peninsula
Late prehistoric and historic era Athabascans: Dena’ina and Ahtna	1,000 BP-present		Kustatan Village Site, Cook Inlet

Source: Adapted from De Laguna 1934; Reger 1980; Dixon et al. 1985; Dumond 1987; Holmes 1996; Wygal 2009.

The Beringian Period in Alaska (14,400 to 11,000 BP)

The earliest known inhabitants of Alaska lived in an area called Beringia in a tundra-steppe environment at a time in the distant past when Alaska and Siberia were joined. During this glacial period sea levels were much lower than they are today, and the inhabitants of eastern and western Beringia shared a common culture⁶.

Non-perishable cultural remains left behind suggest people hunted and gathered a wide variety of large game, including wapiti, bison, and mammoth, small game, and other subsistence resources. The oldest commonly known archaeological sites in Alaska are located in the Tanana Valley. The first known location of human occupation in eastern Beringia dates between 14.4 and 13.6 thousand years ago. Traces of human presence at the Swan Point site suggest the use of horses and mammoths for food (Wygall 2009: 2; Holmes n.d.). No Beringian Period sites have yet been located in the project area. The first population expansion into southcentral Alaska took place during the late Pleistocene as glaciers receded.

The American PaleoArctic Tradition (11,000 to 8,500 BP)

As the climate warmed and the glaciers receded around 12,000 years ago, the Beringian land connection with Siberia disappeared under water. An American PaleoArctic tradition developed in Alaska. With the climate changes, some megafauna like the mammoth became extinct, and some like the bison became smaller in size. The tundra-steppe environment changed to one of shrub-tundra, and forests began to establish themselves.

The earliest archaeological resources in the region are known from this time period. Trapper Creek and the Susitna River in the middle Susitna River lowlands harbor the earliest known evidence of human occupation in the Susitna and Chulitna valleys. Excavations at the sites have yielded dates between 11,000 and 9,200 years ago (Wygall 2009: 92)⁷.

The Northern Archaic Tradition in the Project Area (8,500 to 2,500 BP)

Between 8,500 and 5,000 BP the boreal forest became fully established. Radiocarbon determinations on cultural remains from a site in the Talkeetna area provided a date of 8,000 years. It is located near what are today salmon bearing rivers. It is possible that by 8,000 BP conditions had warmed sufficiently that salmon runs had established themselves in this region.

Another archaeological site south of Trapper Creek on the Susitna yielded a radiocarbon date of 5,000 BP. The Hydro-electric Dam project surveyed in the early 1980s following the Susitna River east of Talkeetna, revealed dates attributable to the Northern Archaic Tradition (Dixon et al. 1985, V.1: 4-7). The same Tradition has been found in sites on bluffs above the Matanuska River. Sites located on all three waterways suggest they served as conduits for early migrations

⁶ Based on similarities observed in the archaeological remains they left behind

⁷ Thermo-luminescence dates were obtained from the lowest levels of occupation by Wygall (2009) for the same occupation level MSB obtained ¹⁴C dates that ranged 8,000 yrs BP $\pm$ 150yrs.

into the Matanuska and Susitna valleys. Migrations of people into the valley at those early dates may have the precursors of historic Athabascan people and the modern Dena'ina and Ahtna people who live in the project area today.

The Kodiak Tradition, Kachemak Stage in the Project Area (3,500 to 1,000 BP)

Until approximately 500 years ago, Cook Inlet was inhabited by the ancestors of the Alutiiq people who reside on Kodiak Island, portions of the Alaska Peninsula, the Kenai Peninsula and Prince William Sound today.

Alutiiq speaking people occupy much of the north Pacific maritime region, which has cool summers, relatively warm winters, and generally open, unfrozen coastlines. Kachemak stage subsistence was based on a wide variety of large and small sea mammals, land mammals, anadromous and freshwater fish, and other resources. However, salmon and sea mammals were the staples of their economy (Dumond 1987). Archaeological assemblages dating to that period have been referred to as the Kachemak stage of the Kodiak tradition (De Laguna 1934; Dumond 1987).

One site in the region that yielded remains belonging to the Kachemak Stage tradition is the Fish Creek site, located on the northern shore of Knik Arm. This site was first reported by De Laguna in 1934, and was later investigated by Don E. Dumond and Albert C. Spaulding (Dumond and Mace 1968). The gravel-tempered pottery located at the site was described as being identical to that found on the Alaska Peninsula and Kodiak Island, dating to about 1,000 years ago (Dumond and Mace 1968; Reger 1980). Sites related to this cultural tradition are known as far inland as the Red Shirt Lake area.

Late Prehistoric and Historic Era Athabascans in the Project Area, the Dena'ina and Ahtna, (500 BP to Modern Times)

From 2,000 – 500 BP there was a shift in populations whereby the Dena'ina people displaced the Alutiiq people in the Cook Inlet region. They adopted many of the lifeways and subsistence practices of the Alutiiq speakers, including hunting sea mammals on the coast. However, they maintained a broad subsistence base (Reger 1980; Seager-Boss 2003).

The annual round of seasonal subsistence activities of all the regional Dena'ina bands, inhabitants of the project area, centered on salmon fishing in the spring and summer from camps near their villages. The Dena'ina harvested all five species of salmon, which provided the basis of Dena'ina subsistence. During the summer harbor seals and beluga whales were taken historically from Cook Inlet by those living nearest the water, and were traded for by those living inland.

In the traditional seasonal round of subsistence activities, land animals were hunted throughout the year, and in the fall special trips inland were made for caribou, sheep, and bear (Skoog 1968;

Townsend 1981; Kari, Fall and Pete 2003). Moose, bear, mountain goats, and Dall sheep were subsistence resources hunted near winter villages. Silver salmon were harvested in late August and September during fall hunts. The meat of terrestrial mammals was also likely obtained through trade (Kari et al. 2003:23).

Upland birds including ptarmigan and grouse, and migratory waterfowl, sea gulls and bird eggs were also part of the subsistence routine (Osgood 1966; Reger 1981; Townsend 1981). The region was and still is rich in a variety of subsistence resources, and a portion of it was shared by the Upper Cook Inlet Dena'ina and their neighbors to the northeast, the Ahtna (Townsend 1981).

In early winter, from November to January, people usually stayed in their winter villages, visited other communities, traded, told stories, and held potlatches. Hunting partners made short trips to obtain winter game and fur bearing animals. In April, the subsistence year ended with anticipation of the arrival of waterfowl, hooligan, marine mammals, and salmon once again (Kari et al. 2003:23). The project area harbors numerous winter villages' subsistence gathering and storage locations.

Interviews of Dena'ina Elders have provided insight into historic and modern subsistence practices and settlement patterns in the region. For the study area, the most prominent Dena'ina tradition bearer was Shem Pete. His generosity in sharing his cultural knowledge resulted in the important publication, *Shem Pete's Alaska: The Territory of the Upper Cook Inlet Dena'ina* (Kari et al. 2003). His son, Billy Pete, and other Elders were also important contributors to the work. For further information see Addendum: Dena'ina Elders.

Regional Euro-American History

European Explorers, Trade, and Missions

Early Contact with Europeans until 1794

Captain Cook's arrival in Cook Inlet in 1778 marked the beginning of European exploration and settlement in southcentral and southwestern Alaska. Dena'ina Athabascan people greeted Captain Cook's ship offering furs and fish in trade for kettles and iron items. The Dena'ina already owned a few European items, acquired through their extensive trade networks already in existence prior to European contact (Townsend 1981; Fitzhugh and Crowell 1988). Alarmed that the British had entered what the Russians considered their territorial waters it was not long before the Russians established a Colony in 1784 on Kodiak Island.

In 1785 a Russian party from Kodiak explored Cook Inlet and the following year the first mainland Russian trading post was established in Dena'ina territory on the Kenai Peninsula (Bancroft 1886; Townsend 1981).

The Russian Era 1785 – 1867

In their preliminary visit to Cook Inlet, the 1785 Russian expedition took 20 Native hostages. The Shelikhov-Golikov Company achieved control over the Russian posts in Cook Inlet. The inland Dena'ina resisted Russian settlement until around 1818 (Townsend 1981).

The Shelikhov-Golikov Company was in competition with the Lebedev-Lastochkin Company. This created extremely chaotic conditions among the different Alaska Native groups of Cook Inlet. Certain Native groups allied themselves with a company, while other Native groups opposed both companies. Shifting trade and military alliances characterized the 1780s and 1790s era in Southcentral Alaska.

Gregori Shelikhov died in 1795. The Russian-American Company (RAC) was created on August 11, 1799 by *oukaz* (decree), by Czar (Tzar) Paul I. Shelikhov's son-in-law, Rezanov, was instrumental in persuading Czar Paul I to decree consolidation of several companies as the Russian-American Company (Seager-Boss 1998; Tikhmenev 1978). It was an economic and administrative monopoly in Alaska under the auspices of the Russian government. Its first chief manager in Alaska was Alexander Baranov (Tikhmenev 1978).

European Trade and Missions 1785 – 1867

Russian activity increased in southeast Alaska and the Bering Sea area, as well as in interior Alaska. Russian settlement colonies were composed mostly of Russian-American Company employees who were of Alaska Native descent, or of Native-Russian descent; only a small minority were ethnic Russians (Hirschmann 2007, Pers. Comm.).

Dena'ina people became more actively involved in the fur trade with the Russians during the first half of the nineteenth century (Townsend 1981). Trading on their own terms, Upper Cook Inlet Dena'ina acted as middle men in the fur trade between the Russians and interior groups (Fall 1981; Davydov 1810; Townsend 1981). Between 1835 and 1845 the Russians, hoping to create a strong presence in Alaska, attempted to set up a series of settlement colonies at Ninilchik, Kachemak Bay, Kasilof, Kenai, Tyonek, Matanuska, and Knik. The latter two were apparently abandoned soon after they were established (Federova 1973; Fall 1987; Seager-Boss 2003).

With the fur trade came epidemic diseases to which Athabascan people had no immunity. The smallpox epidemic from 1836 to 1840 decimated the Dena'ina population by 50% infecting some 4,000 Native people (Bancroft 1886; Townsend 1981). The Russian Orthodox Church made inroads into Upper Cook Inlet following the smallpox epidemic.

Intensive establishment of missions began after the epidemic. Hieromonk Nikolai became the first priest to serve Cook Inlet at Nikolaevskiy Redoubt in 1845 (Townsend 1965, 1974, 1981).

By the 1840s Dena'ina near the Cook Inlet mission became more involved in the Russian Orthodox Church (Townsend 1981).

The American Period from 1867 to 1960

Native and Euro-American Subsistence Lifestyle, Fur Trapping and Trading from 1867 to 1960

Soon after the U.S. acquired Alaska from Russia in December, 1867 Hayward Hutchinson and Abraham Hirsch, businessmen from Baltimore and San Francisco, traveled to Sitka where they purchased the assets of the Russian American Company (Lee 1996:24-27). Following several additional partners and reorganization by October 1868, a number of commercial entities merged to form the powerful Alaska Commercial Company (Lee 1996:24-27). Subsequent competition among fur companies caused fur prices to rise and prices of some trade goods to lower. All fur prices dropped in 1897 and continued to decline for a number of years, never recovering prices of the early 1890s (Townsend 1981).

Upper Cook Inlet Dena'ina, residents of the project area, have traditionally carried out an annual round of seasonal subsistence activities that covers the Skwentna, Yentna, Chulitna, Susitna, Talkeetna, and Matanuska river drainages, as far north as Denali. This round included a broad base of both inland and coastal resources, but its primary focus was on the annual runs of anadromous fish that included all five species of salmon. As Euro-Americans arrived in the Matanuska-Susitna region to participate in fur trapping and trading, many of them adopted features of the Dena'ina subsistence lifestyle, even as they homesteaded and carried out other activities such as mining (refer to Addendum - Homestead).

Mining and Mineral Exploration from 1896 to 1960

Gold Mining in the Project Vicinity

Soon after Alaska became a U.S. territory trappers and gold seekers came into the Upper Susitna River Valley. Gold was reported around 1896 in the Miller and Canyon Creek area of the Susitna River drainage (Potter 1959; Seager-Boss 2003). This was followed in 1897 by an influx of several hundred gold miners who landed at Tyonek and traveled the Susitna River and its tributaries, including Willow Creek, to stake claims (Seager-Boss 2003). In the late nineteenth century, economic endeavors shifted from exclusively trapping, selling and buying furs to prospecting for gold, in addition to carrying out other economic pursuits in support of mining activities.

The Willow Creek Gold Mining district lies some 15 miles northeast of the City of Houston, which became an important pass-through point for mining equipment and supplies. Most commercial companies in existence at the turn of the century outfitted, supplied and freighted supplies to gold claims (Seager-Boss 2003). Knik, established on the west side of Knik Arm in the late nineteenth century, served as the hub for supplies being taken up the Susitna River to northern mines and by trail to the Willow Creek mines (Seager-Boss 2003). A sawmill, located

on the east side of Big Lake, supplied the Willow Creek Mining District with much needed wood for placer mining sluice tunnels and later timbers for underground mining.

Coal Extraction in the Project Vicinity

As early as 1894, Natives informed prospectors of the presence of coal in the Matanuska River Valley. Mendenhall, a geologist attached to Captain Glenn's expedition into the interior, reported the presence of coal in the Matanuska Valley (Mendenhall 1900) which triggered an interest in the region's coal possibilities.

The Navy showed an interest in the coal as a potential resource for a north Pacific Navy refueling base. During the winter of 1913-1914, 800 tons of Matanuska coal from Watson's camp in Chickaloon was sledged down the Matanuska River to Seward where it was tested and found suitable for use in the Navy's steam powered ships (Merritt 1986; Guilmartin 1994). In 1914 the Alaska Coal Leasing Act and the Alaska Railroad Act were both passed. The first coal train in 1916 brought coal from the Matanuska Doherty mine on Moose Creek to Anchorage (Seager-Boss and Roberts 1991). The following year the tracks reached the Navy's anthracite mine at Chickaloon. Just prior to World War II, the military converted from coal power to bunker oil for its ships as the critical determinant of military power. Naval and Merchant marine ships both replaced steam driven engines with cleaner, faster oil engines (Guilmartin 1994:16-17).

While Chickaloon never produced much coal, bituminous coal from the Eska and Jonesville mines created a solid economic base for the region from the 1920s to the late 1960s. Jonesville mine flourished until 1968 when the military bases outside Anchorage changed from coal to fuel oil. Smaller mines in the region operated sporadically from 1921 through 1982 (Seager-Boss 1989).

Grading crews working on the railroad in 1917 uncovered a coal seam in Houston. First approaches consisted of opening several short tunnels in the low bluffs between Houston Station and the Little Susitna River. In 1937 a longer tunnel was opened approximately ½ mile northwest of the section house (U.S. Geological Survey [USGS] 1952). By the mid-1940s, surface mining replaced underground methods of extraction. Houston Coal Company began to develop a strip mine in 1948 that followed two thin, flat-lying coal beds. A small tonnage of coal was produced in 1949 enabling the company to acquire a lucrative military contract. In 1951 the company reorganized, and became Duck Flat Coal Company (USGS 1956:4; Stuart 2009, Pers. Comm.). Between 1949 and 1952, when operations at the mine ceased due to lack of a market, over 65,000 tons of coal were reportedly extracted from Houston; however, these reports are considered overly optimistic (Territory of Alaska Department of Mines 1952:28; State of Alaska Oil and Gas Conservation Commission 1995; Stuart 2009, Pers. Comm.).

Oil and Gas Exploration in the Project Vicinity

In the middle to late 1950s, exploratory drilling activity in the Houston area took place and consisted of five petroleum exploratory wells and three coal coreholes. The wells were called the Rosetta Numbers One, Two, Three Four and Four-A. None of them encountered more than trace amounts of oil (State of Alaska Oil and Gas Conservation Commission 1995; Stuart 2009, Pers. Comm.). One well, still standing, can be seen adjacent to the highway just north of Houston's commercial district (Stuart 2009, Pers. Comm.).

Homesteading, Farming and Agriculture from the 1900s to 1960

The Homestead Act was passed on December 2, 1861. It provided for conveyance of 160 acres of undeveloped land to private parties. Applicants had to file on a piece of property, improve the land, plant crops, and file for a deed of title. With the 1867 purchase of Alaska the Homestead Act was extended to include the new Territory.

Farms existed in the Knik area as early as 1887. The first agricultural efforts in the region were made by miners supplementing their diets and income. Starting in the 1890s, roadhouses were generally constructed 20 miles apart along trails between gold towns. Owners and managers often raised vegetables and hay to feed travelers and horses. A number of roadhouses opened in Knik whose owners raised vegetables for miners and grains for horses (Alaska Department of Natural Resources, Office of History and Archaeology [OHA] n.d.). Fur farming also became a lucrative industry in the region and elsewhere in the state.

Congress authorized establishment in 1898 of several agricultural experiment stations in various Alaskan locations. During the early 1900s, the U.S. government began promoting the Matanuska and Susitna River valleys for farming. As a result there was an influx of homesteaders beginning in 1914 that prompted additional construction of the Matanuska Experiment Farm in 1917 (Seager-Boss 2003).

By 1917, gold mining in the Willow Creek District, mining in the Matanuska Coal Field and construction of the Alaska Railroad were a few of the catalysts for 400 homestead entries, 175 of which were patented. Men leaving the state to participate in World War I caused a decline in the population and consequently agriculture also declined. In the whole state of Alaska by the 1920s there were a total of 364 farms with 5,736 improved acres (OHA n.d.).

Palmer became the site of an agricultural experiment in 1935, called the Matanuska Valley Colony Project. The Federal Emergency Relief Administration, created by President F.D. Roosevelt, was established to relocate families during the 1935 Depression. That year, 204 families, from Michigan, Wisconsin and Minnesota, moved to Alaska as part of the project.

Colonists formed the Matanuska Valley Farmer's Co-operative in 1936 and began selling under the Matanuska Maid trademark (Wilson n.d.). Matanuska Maid continued to do business until

2007. With the assistance of the Experiment Farm agriculture increased in the Valley between the 1940s and 1950s. In Alaska, the number of dairy farms increased from nine in 1940 to more than 38 in 1959. The new army bases constructed near Anchorage helped provide a ready market for produce and milk.

Palmer Research Center opened in 1948 to assist the Colonists with their farms (Rozell 1998). Agricultural experiment Farms tested crops and livestock seeking to develop techniques to make agriculture in Alaska practical (OHA n.d.). Agricultural prosperity in Alaska peaked in the early 1960s, after which it sharply declined. The number of farms in Alaska decreased from 420 to 320. Farmers in the Matanuska River Valley accounted for 70% of all commercial agricultural production.

Homesteading ended in the 1960s. The Department of the Interior closed all remaining unreserved public lands to entry (OHA n.d.). Houston was one of the last areas to be closed.

Local Homesteaders

In the City of Houston area, sixty-four homesteads and five homesites were patented between 1925 and 1972 (Bureau of Land Management [BLM] n.d.). Many other homestead applications were never patented. Additionally, not everyone who lived in the Houston area applied for homesteads.

Transportation and Communication 1900s - 1960: Trails, Roads, Railroads, Air Travel, Telegraph, and U.S. Mail Service

Some Historic-Era Trails in the Region

In 1898 there were three U.S. Army geological expeditions, commanded by Captain Edwin F. Glenn. Many trails in the area existed prior to that time, established by the Dena'ina and Ahtna. The expeditions used existing human and animal trails, and in some cases broke new trail (Seager-Boss and Roberts 1991)

In 1905, Congress created the Alaska Road Commission (ARC). Brigadier General Wilds P. Richardson was named head of the Commission. The Board of Road Commissioners for Alaska took over responsibility for construction of passable roads and bridges, and their maintenance and repair. A number of local trails already existed in the Houston area. The ARC took over responsibility for general repairs as well as some construction.

The year Hatcher first staked a lode gold claim in 1906 supplies were landed by boat and hauled from the busy port town of Knik. Horse-drawn wagons travelled over narrow trails radiating from Knik into the Willow mining district. The Houston Willow Creek Trail and the Herning Trail by 1908 became two important transportation routes from Knik. The following year the Carle Wagon Road was constructed to reach lode gold mines on the east side of the mining district.

Since the 1960s, the project district has supported numerous trails for recreational purposes. The area sustains heavy use from residents living in the surrounding areas and Anchorage. Owners of quad tracks use the trails in fair weather to access remote cabins or for recreational purposes. In some instances local trails experience greater use in winter by snow machine enthusiasts and dog sled mushers. The Big Lake–Houston–Willow district is one of the largest regions in Alaska that supports dog mushers, their dogs and kennels.

Development of the Railroad

The Alaska Railroad, established by Congress in 1914, is one of only three railroads built by the U.S. Government and the only one that was operated by the Federal government until 1983 at which time the State of Alaska took over its operation. Up until that time Knik had been the local hub of activity, it was the port where machinery, equipment and supplies were unloaded, and it was the central location from which primary trails diverged for freight delivery by horse-drawn wagons. However, the railroad bypassed Knik in favor of a more northern route. Wasilla townsite and Pittman were established in 1917 on the newly-constructed Alaska Railroad. Pittman became one of the construction hubs to which materials were transported over 11 miles of rough trail. Following completion of the rail line to Houston Siding in 1917 it became a new distribution hub for equipment and supplies going to the Willow Creek Mining District. It also opened the area to local homesteaders and miners.

Development of Roads in the Region

During the 1917 construction season, the ARC carried out several projects on the 34-mile long Knik–Willow Creek Road (Route 35). Other roads in the region were improved to sustain transportation of heavy stamping machines necessary for the quartz gold mines. It was not until the 1950s and 1960s that a road was built connecting Wasilla with Big Lake, Houston Willow, and Talkeetna. Prior to that people had to either use the railroad to reach outlying communities or depend on poorly kept trails.

The U.S. Postal Service

Mail service arrived in Alaska as early as the early 1890s. It was brought to Alaska by ship and then dispersed to numerous mining towns. Distribution of mail included dogsleds in winter or in fair weather delivery to coastal river towns via steam vessels or overland by horse-drawn carts to various destinations. A series of shelter cabins were built for the use of those delivering mail by mules or dogsleds (ARC 1929; United States Department of the Interior 1930). In the 1920s it was sometimes delivered by small aircraft⁸. The Alaska Railroad carried mail to regular stops, where it was picked up and delivered by other means to numerous localities (Heaven 2009, Pers. Comm.). As aviation came into its own in Alaska, the mail was delivered by air. Mail delivery

⁸ Small aircrafts were often not reliable—since whole sack loads of mail were on occasion ejected from aircraft when pilots encountered difficult weather situations.

that had taken 17 days in winter by dogsled in 1929 was delivered by air in two hours (ARC 1929:31).

With the development of better roads and highways mail carriers used the road system for deliveries to outlying areas (refer to Addendum - Transportation).

Development of Air Travel and Air Facilities

A portion of the territorial road funds went to developing airfields in Alaska. By 1931 there were airfields at Willow Creek, Cache Creek, and Susitna Station. A year later there were approximately 70 airfields in Alaska (Naske 1986: 146). During the 1930s, construction and maintenance of roads, bridges, trails, ferries, aviation fields and shelter cabins were supported by the Territorial Board of Road Commissioners (United States Department of the Interior 1930: 36).

Also in the 1930s navigational aids were introduced, resulting in a number of well-equipped landing fields. By 1935 the Alaska Airways Weather Service had established 35 weather observers throughout Alaska. The expansion of air service in Alaska required the Bureau of Air Commerce to assign a supervising aeronautical inspector, headquartered in Anchorage, to cover the Territory of Alaska (United States Department of the Interior 1935:29-32).

Aviation in the 1930s quickly became the principal method of transportation in Alaska. Given the difficulties of ground travel over rough, uneven terrain dotted with wetlands, lakes, small streams and rivers, in life-threateningly low temperatures in winter, a plane could safely and quickly accomplish necessary transport. By 1937 there were 40 aircraft operators and 101 aircraft. That year the Alaska Legislature enacted a law creating the Alaska Aeronautics and Communications Commission (Department of the Interior 1937:33).

Military 1867 – 1960: Exploration, World War II, and the Cold War

Shortly after the United States acquired Alaska a number of military expeditions were launched to determine the nature and extent of resources in the new territory. From 1867 until 1920, the U.S. Army administered the territory, carried out exploration, and sponsored a variety of projects. One such project in 1942 was construction of Fort Richardson Army base at the onset of World War II. The project beginning in 1941 created employment for Native and non-Native residents of Cook Inlet. With the development came at a price for the Dena'ina people by ending subsistence or habitation uses within the bases (Fall et al. 2003). New construction took place at the Willow Airstrip, one of several identified by the military for use as a satellite station in the event of war. Troops manned the station, and revetments were constructed to protect the airplanes and fuel supply in the event of strafing. Closure of a number of areas to subsistence no doubt had an effect on all Upper Cook Inlet Dena'ina.

In the 1950s, the U.S. Army carried out Cold War exercises in areas to the east of Houston and Willow. The Army held maneuvers in the area between 1955 and 1959. At that time the Houston Willow trail was developed all the way to Willow. The army had a radar station above what is today Newman's Hilltop Services. Army personnel manning the station had a camp on one of the airstrip revetments until the late 1950s.

During the yearly Army maneuvers, the troops made many bulldozer trails and brought with them men, equipment, and trucks. A profusion of trails and roads were bulldozed from Willow Creek north to Talkeetna. They stripped out roads two blades wide, or 20 to 30 feet wide. Many of the roads and trails used today follow the old Army trails. Numerous pieces of military equipment and supplies remain in the area (Stancec 2009, Pers. Comm.).

The Modern Period from 1960 - Present: Community Development in the City of Houston

Houston has been chosen as the terminus of the railroad spur to Port MacKenzie. Houston was incorporated in 1966 as a Second Class City. The city was named for William Cannon Houston, a Congressman from Tennessee. Modern Houston has developed as a service community, providing hospitality services to summer and winter visitors and outdoor recreation enthusiasts. It is also attractive to retirees and to those who want to own a weekend cabin or a second home. For example, it was home to Medal of Honor recipient James Bondsteel, a Vietnam War veteran who moved to Houston as a retiree, and who lived there until his death in 1987.

Completion of the Parks Highway, originally known as the Anchorage-Fairbanks Highway, in 1971 provided visitors a scenic alternative to air or rail travel from Anchorage to Houston, Denali National Park and beyond. As of 2011 the City of Houston has become a bedroom community with 1,755 residents. The majority of residents commute to the Wasilla-Palmer area or to Anchorage (Alaska Division of Community and Regional Affairs [ADCRA] 2011).

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1935 Report to the Office of the Interior: by the Territorial governor, Juneau Alaska

1937 Report to the Office of the Interior: by the Territorial governor, Juneau Alaska

United States Geological Survey (USGS)

1952 *Coal Prospects and Coal Exploration and Development in the Lower Matanuska Valley, Alaska 1950*. Written by F. F. Barnes and D.M. Ford. Geological Survey Circular 154. Washington, D.C.

United States Geological Survey (USGS)

1956 The Wishbone Hill District, Matanuska Coal Field, Alaska by F.F. Barnes and T.G. Payne. The Geology and Coal Resources of the only Producing Bituminous Coal District in Alaska. USGS Bulletin 1016. United States Government Printing Office. Washington, D.C.

Wilson, J.W.

n.d. *The Matanuska-Maid Story 1936-1937*. Matanuska Maid Inc. Anchorage.

Wygall, Brian T.

2009 Prehistoric Colonization of Southcentral Alaska: Human Adaptations in a Post Glacial World. Ph.D. dissertation. University of Nevada. Reno.

Addendum

Dena'ina Elders

Shem Pete (ca.1898-1989) was born at Susitna Station, and spent his life in the Susitna region. During his lifetime Shem was the recognized leader of the Susitna Dena'ina people. His main area of residence was the country between Susitna Station and Nancy Lake. He and Billy had three cabins in the Nancy Lake area, as well as a number of temporary subsistence camps (Kari et al. 2003:2-5).

For about ten years after he was born, his mother raised him at Red Shirt Lake from July until November, where subsistence fish were plentiful. His father, a chief, died when Shem was two years old (Kari et al. 2003:2-5).

From the time Shem was eight years old until he was 11, he worked in a restaurant in Susitna Station, where he did general work for pay and for food (Kari et al. 2003:2-5).

Shem went to school at Susitna Station, where he learned English. His mother and his brother, the last village chief, died at Susitna Station in 1918 during the world wide flu epidemic (Kari et al. 2003:2-5).

He married in Talkeetna in 1920, and his son Billy was born. They stayed at Susitna Station for several years, then moved to Tyonek where they stayed until 1944, when they moved to Nancy Lake. During his lifetime of living a subsistence lifestyle, he was also telling stories, singing songs, and teaching the Dena'ina language and dance to the next generation. He traveled to different areas, visiting people. Particularly, when a family was in crisis, he paid them a visit (Kari et al. 2003:2-5).

Billy Pete (1920-1995), Shem Pete's son, was also born at Susitna Station, which was his primary residence during his early years. After his mother's death when he was about five years old, he spent summers in Anchorage with his maternal grandmother, Annie. From her he learned the Dena'ina language, traditions, history and stories of the Upper Cook Inlet people (Kari et al. 2003:6-7).

He moved to Tyonek from Susitna Station in 1934 along with most of the Susitna Station Dena'ina, where he attended school for three months. He trapped in the Susitna Station area in winter during his early teen years. He was an avid reader (Kari et al. 2003:6-7).

He moved to Anchorage around 1935, where he worked in the Emard cannery. He was also foreman in canneries in Bristol Bay. Other employment included work for the Alaska Railroad, on the airstrip for Elmendorf Air Force Base, on the Whittier tunnel, and on boats in Seward. Around 1944, Billy and Shem moved to Nancy Lake. Between the 1940s and 1960s Billy and

Shem ran a trapline on cross country skis, trapping lynx, mink, beaver, marten and coyote around Red Shirt Lake, in the area that is the Nancy Lake Recreation Area today. He and Shem gill netted fish at the outlet of Red Shirt Lake for use over the winter. They also fished commercially for salmon from the 1940s until the mid 1970s. Other subsistence resources taken yearly at Nancy Lake included moose, beaver and black bears. In late fall they prospected for gold in the region of the Talkeetna Mountains, also hunting spruce grouse, ground squirrels, and porcupines, and fishing for trout (Kari et al. 2003:6-7).

Billy and Shem moved back to Tyonek in 1979, where Billy subsistence fished for salmon and hooligan. Due to Shem's failing health, they moved to Anchorage in 1987. After his father's death he moved back to Tyonek (Kari et al. 2003:6-7).

Billy was a key bilingual expert of Dena'ina culture and oral traditions, which he helped to pass to younger generations as well as to those of other cultures. He assisted in reestablishing the Tyonek Singers and Dancers (Kari et al. 2003:6-7).

Homestead

Emil Stancec, is a homesteader who came to Alaska in 1948 to hunt and fish. Receiving a Homestead Patent he exemplifies how many homesteaders lived in the mid-1900s when homesteading this region. After receiving patent on his homestead in 1957, he spent his life hunting, fishing, trapping for furs, and raising crops (Stancec 2009, Pers. Comm.). He is one of the last remaining persons in the region who still lives on his homestead.

Arthur Heaven, a Houston pioneer, made the first homestead application in 1925. He went into mink farming right away. Arthur was in the region before 1924, when his brother came to work with him from 1924 until 1928. They sold their homestead to Evan Jones Coal Company for a strip mine. The mink pens were still on the property in 1969 (Heaven 2009, Pers. Comm.).

Transportation (U.S. Postal Service)

LeRoi Heaven, the nephew of homesteader Arthur Heaven, delivered the mail in the study area by automobile between 1963 and 1972 on a contracted route. Mail came by truck; previously it had come by rail. Marlene Cottle had the contract to haul mail from the railroad (Heaven 2009, Pers. Comm.).

On Mondays, Wednesdays, and Fridays LeRoi's mail route went from Wasilla to Big Lake, the Willow Post Office and boxes in between, Pittman-Schrock, Wasilla-Fishhook, part of Lakeview, Reed Lake Road, and back to Wasilla. He also delivered mail for Fairview Loop and Knik-Goose Bay as far as the Nike site, a 300-mile trip six days a week. He drove all of it. What was to become the Parks Highway at that time was called the Big Lake Road.

On Tuesdays, Thursdays, and Saturdays he delivered mail to Big Lake, Houston, Willow, north to Sunshine and Talkeetna, as far as the Big Susitna Bridge, where the road stopped. Then he went back to Willow, Pittman-Schrock, Wasilla-Fishhook Road, and Fairview Loop Road, the end of the route on those days. In 1953, there were only 75 people in Wasilla.

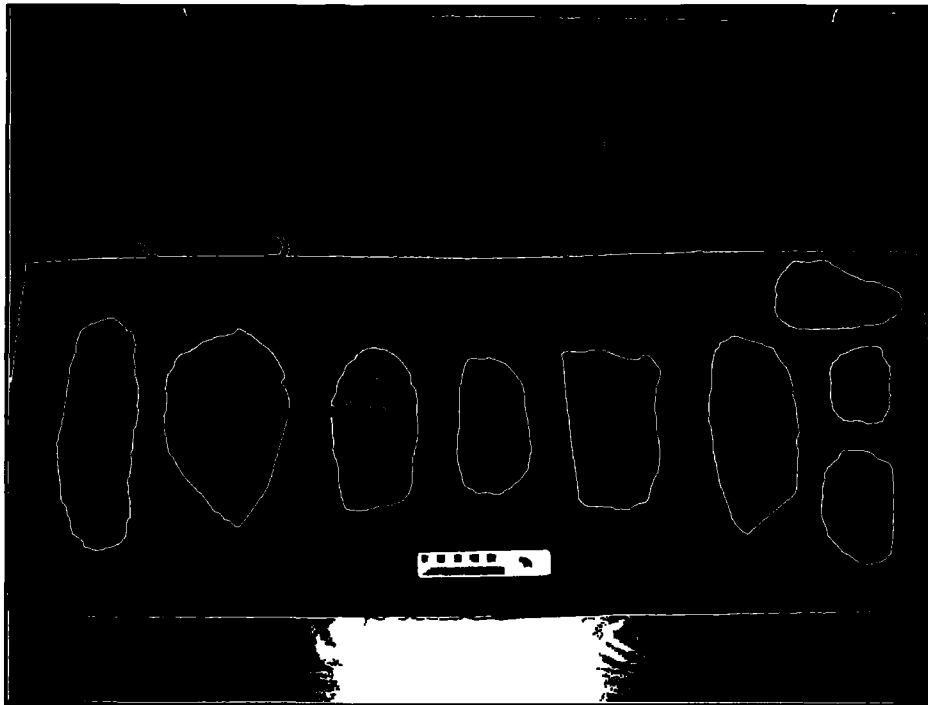
LeRoi's was a contracted position called a Star Route, then a Rural Route. It later became an HC, a Highway Contract. The homesteaders really appreciated the mail. When the bridge was completed, the mail route went all the way to Trapper Creek and Peters Creek. People met him there with sled dogs, snow machines and private planes that landed on the highway (Heaven 2009, Pers. Comm.).

ATTACHMENT D: RESOURCES LIKELY TO BE FOUND IN PMRE PROJECT AREA

Typical cultural resources (alone or in combination), likely to be discovered during construction in the Project area could include, but are not limited to (see Attachment E for representative photographs):

- A. House pits/depressions
- B. Cache pits/depressions
- C. Artifacts
 - 1) Stone tools (lithics)
 - 2) Surface lithic scatters
 - 3) Debitage (remains from stone tool manufacture)
 - 4) Animal bone (tools, food remains)
 - 5) Beads and other household items (dishes, cutlery, cups/glasses, etc.)
- D. Structures
 - 1) Bridges
 - 2) Hunting stands, blinds, camps
 - 3) Outhouses
 - 4) Sheds
 - 5) Building ruins
- E. Buildings
 - 1) Cabins
 - 2) Houses
 - 3) Roadhouses
- F. Hearth features
- G. Trails, roads, ditches
- H. Culturally Modified Trees (CMTs) and/or Trees of Interest (TOI)
- I. Debris
 - 1) Trash/refuse dumps and scatters
 - 2) Cans
 - 3) Bottles
 - 4) Concrete fragments
 - 5) 50-gallon drums
 - 6) Vehicle remains
- J. Human remains
 - 1) Any human remains (e.g., isolated teeth and/or bones, skeletal remains)
 - 2) Marked or unmarked graves/burials
 - 3) Associated funerary objects

**ATTACHMENT E: REPRESENTATIVE PHOTOGRAPHS OF RESOURCES
LIKELY TO BE FOUND IN PMRE PROJECT AREA**



Large blades from Susitna (approximately 5,000 years old)



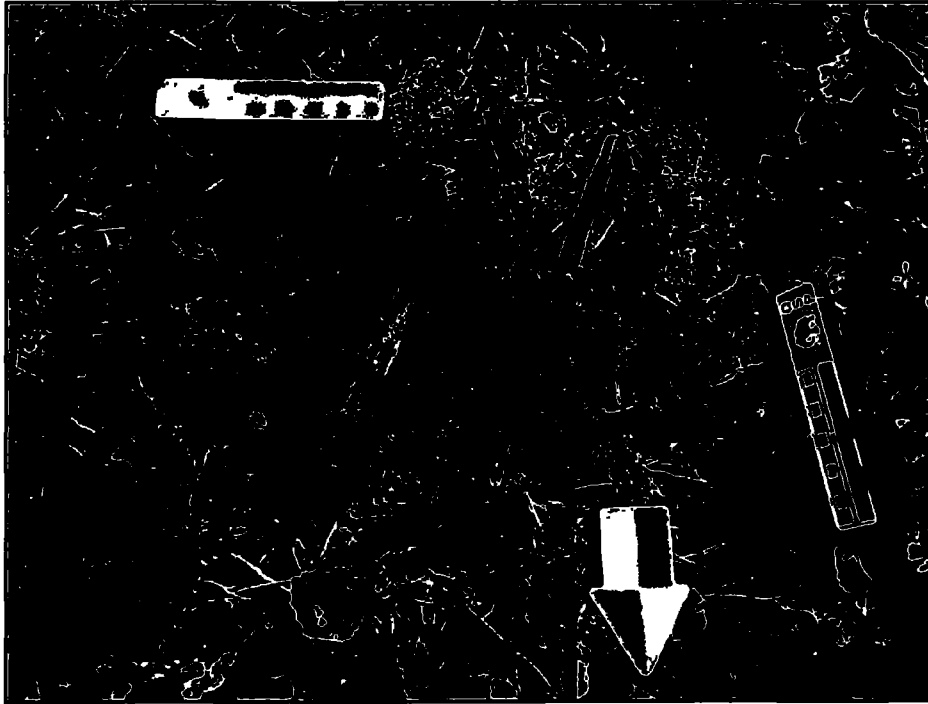
Multi-use blades from Susitna (a Swiss Army Knife of sorts)



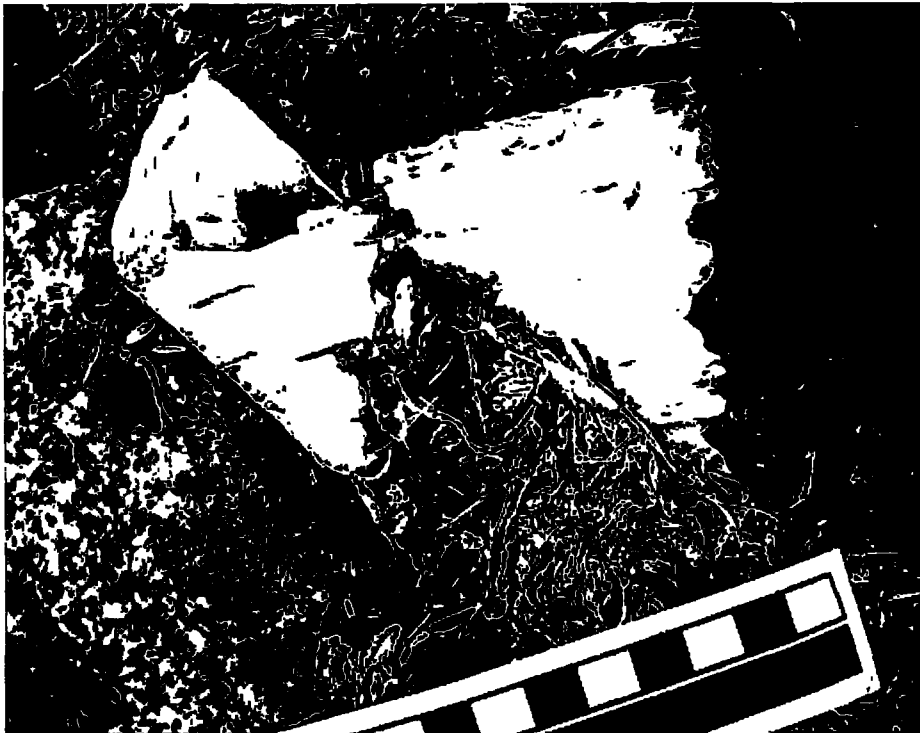
Obsidian (volcanic glass) thumbnail scraper



Alutiiq oil lamp



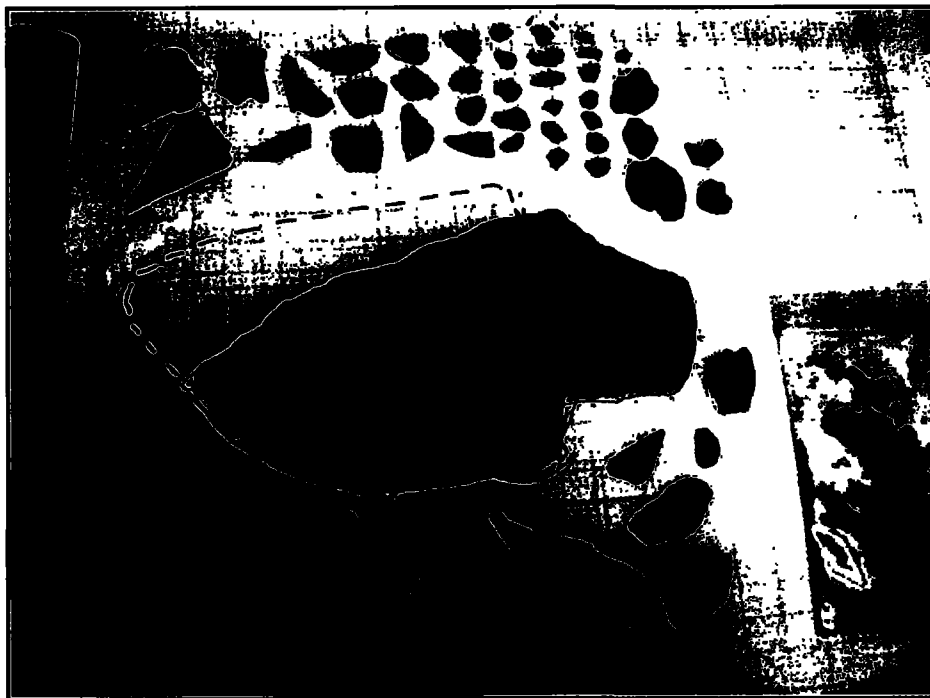
Layers of birch bark (q'ey) recovered on the floor of a house depression



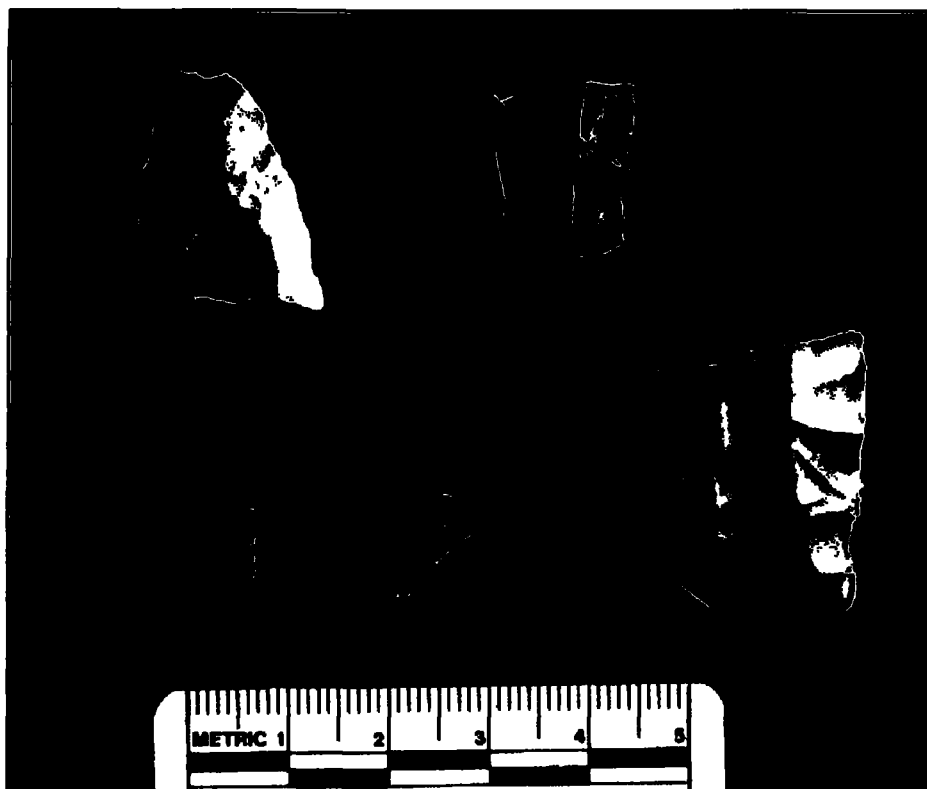
Remains of a birch bark container



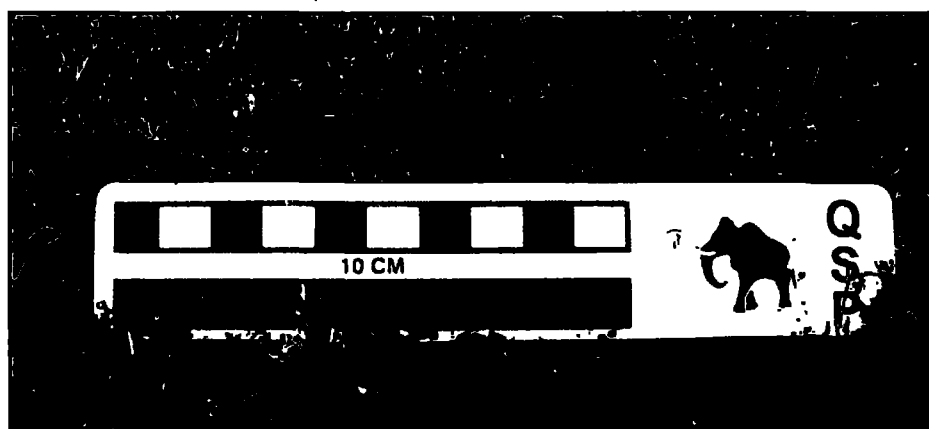
Marbled redish pink chert (chaq' ech') scraper note pot lids from heat.



Lithic (stone) artifacts



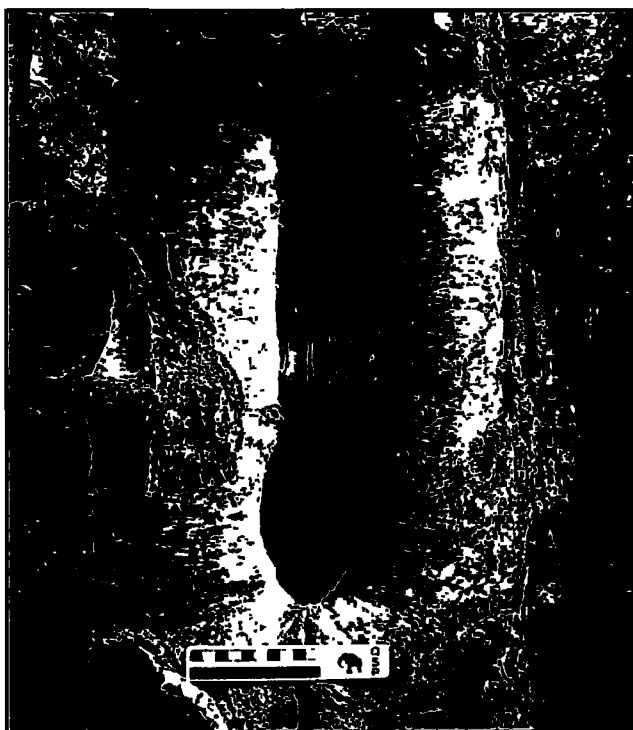
Stone tools/projectile point fragments



Bone awl/scraper



Animal bone fragments



Culturally Modified Trees (CMT) showing blaze- ax marks



Possible CMT (*k'ghehda*)



Possible CMT



Possible CMT



Possible cache pits



Possible cache pits



Investigating cache pit



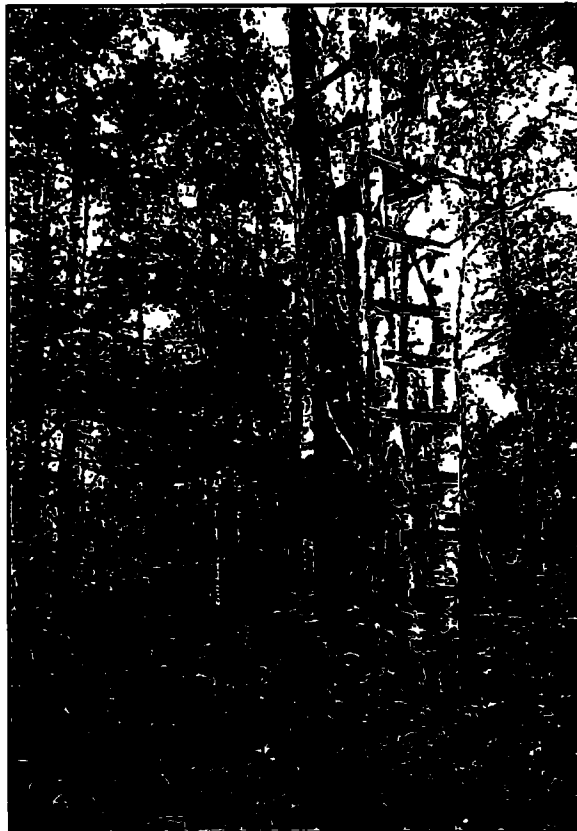
Large house berm



House depression



Hunting blind



Tree stand



Homestead remnant



Collapsed cabin



Standing cabin and cache



Cabin remains – sill logs (Photo by Rolfe Buzzell, OHA report #110)



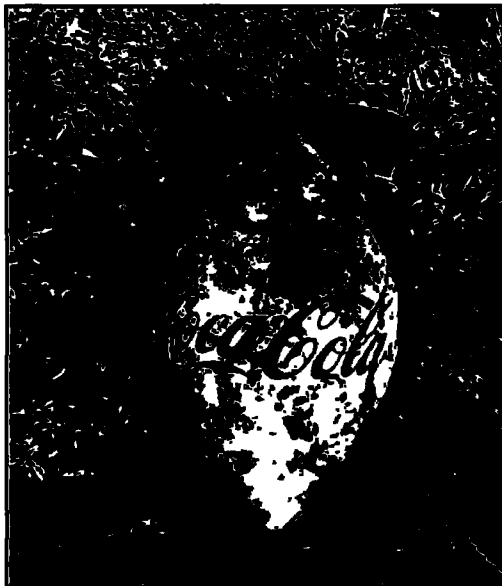
Cabin remains – sill logs (Photo by Rolfe Buzzell, OHA report #110)



Structural debris



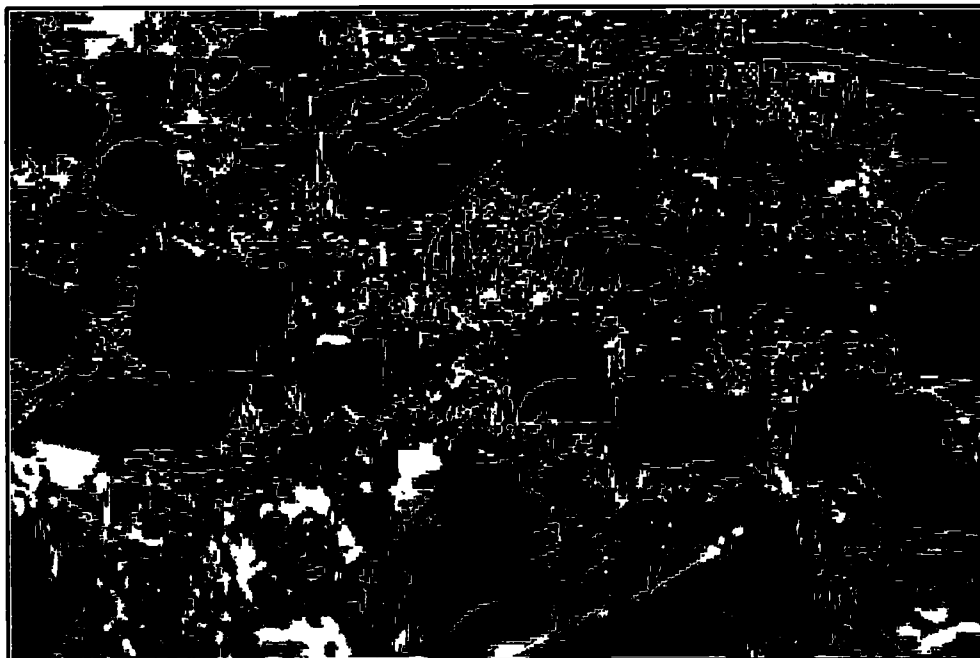
Homestead debris



Homestead debris



Homestead debris



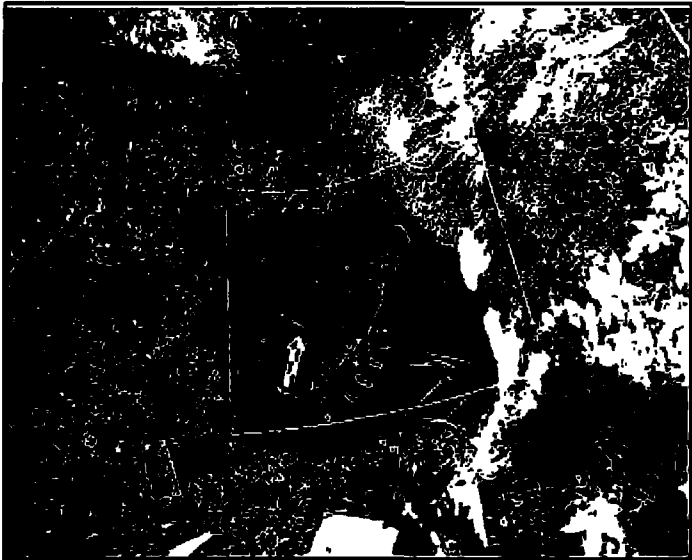
Trash scatter



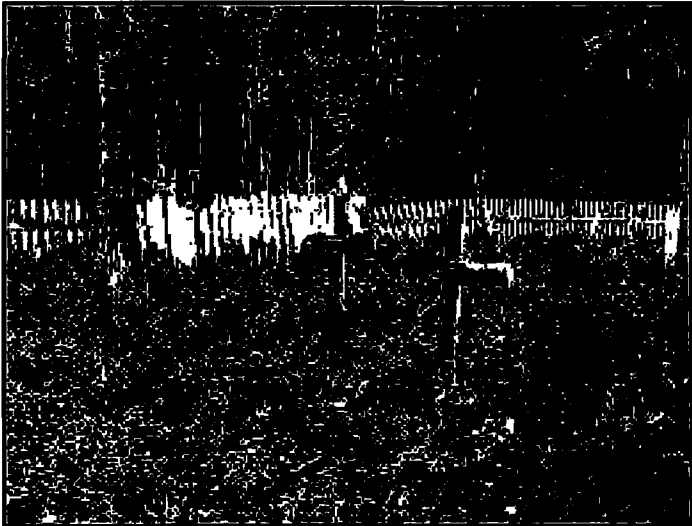
Debris - 55 gallon drums



Old trap from an abandoned trapline



Moose remains



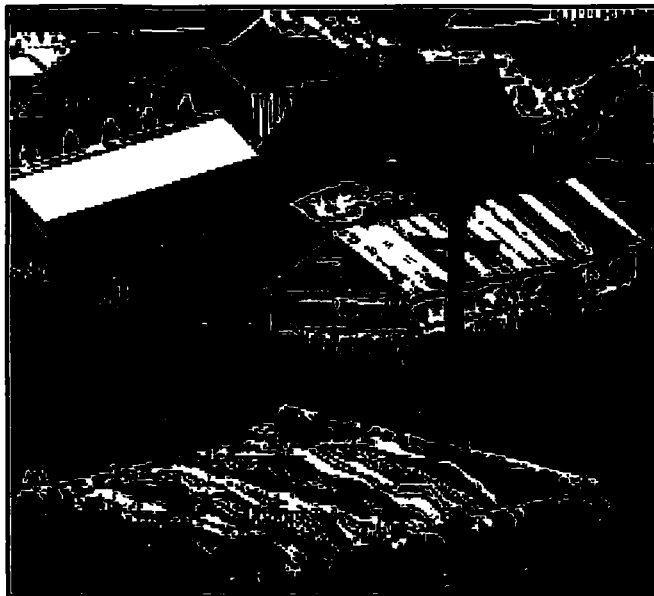
Cemetery



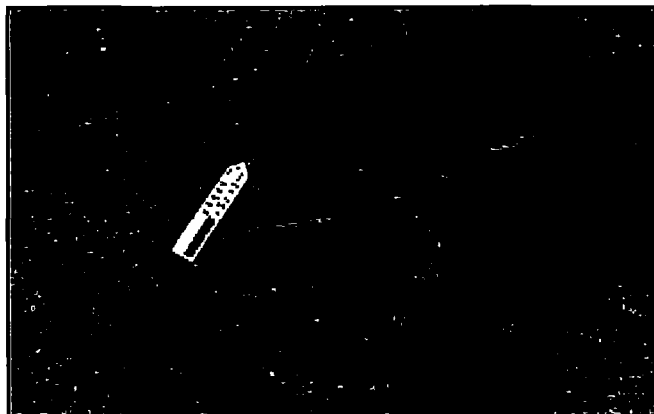
Cemetery



Cemetery



Cemetery



Skeletal remains

ATTACHMENT F: SUMMARY OF PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF HUMAN REMAINS, GRAVES, AND HISTORIC PROPERTIES

General Information Regarding Identification of Human Remains and/or Cultural Resources

- If you find skeletal remains (bones, teeth, etc.) or cultural resources (i.e., anything that looks like it could have been made or altered by people), immediately stop work in that area and contact the ARRC Project Manager
- Leave calls about importance/significance of the resource to the professionals
- Contact information is included in Table F-1

Protection of Human Remains

- If human remains are encountered, immediately stop work in the area and notify ARRC Project Manager
- Treat potential human remains discoveries with respect at all times
- The ARRC Project Manager will ensure implementation of protection measures and record nature/location of remains
- The ARRC Project Manager will mark off area of the discovery, including a buffer area, in consultation with a Secretary of Interior qualified archaeologist
 - If suspect discovery extends over a larger area, mark off with a larger buffer as appropriate
 - If work on cut banks or slopes may impact discovery, mark off with a larger buffer as appropriate
- Within 24 hours of discovery, ARRC Project Manager will contact (see Table F-1):
 - a. SHPO
 - b. STB
 - c. Alaska State Troopers
 - d. Appropriate land managing agency/owner
 - e. Responsible Native representative as appropriate (Knik Tribal Council, Native Village of Eklutna, Native Village of Tyonek, Chickaloon Village Traditional Council)
 - f. Matanuska-Susitna Borough Cultural Resource Director
- ARRC Project Manager will also contact the following (see Table F-1), although contact does not need to occur within 24 hours:
 - a. Alaska State Medical Examiner's Office
 - b. Alaska Bureau of Vital Statistics
 - c. Other contacts as appropriate (Eklutna, Inc.; Knikatu, Inc.; Tyonek Native Corporation; Chickaloon-Moose Creek Native Association, Inc.; Cook Inlet Tribal Council; Cook Inlet Region, Inc.)

- STB shall defer to the Alaska State Troopers and State Medical Examiner to determine if the remains are forensic in nature and/or subject to criminal investigation
- STB will follow NAGPRA regulations and procedures if human remains are on Federal/Indian lands and determined to be of Native American origin (see Attachments B and G)
- STB will coordinate with the State Medical Examiner to identify and locate descendants of the deceased and will acquire any permits to reinter the remains in a designated area if the humans are not Native American in origin or forensic in nature

Protection of Cultural Resources/Historic Properties

- If cultural resources are encountered, immediately stop work and notify ARRC Project Manager
- The ARRC Project Manager will mark off area of the discovery, including a buffer area, in consultation with a Secretary of Interior qualified archaeologist
 - If suspect discovery extends over a larger area, mark off with a larger buffer as appropriate
 - If work on cut banks or slopes may impact discovery, mark off with a larger buffer as appropriate
- Protect cultural resource from further damage while initiating notification process:
 - Cover cultural resources with a tarp
 - Shore up cut banks or trenches to ensure no further exposure occurs
 - Make sure no water will collect on or around the discovery site
- Within 72 hours of discovery, ARRC Project Manager will arrange for archaeologist to investigate the discovery
- STB, SHPO, ARRC, and the land managing agency (as appropriate) will consult regarding the discovery and determine if additional investigation is warranted
- STB will contact the appropriate Tribal representative as needed
- Decision regarding significance of the discovery will be provided to ARRC within 5 working days of consultation
 - If not significant, SHPO may give ARRC verbal authorization to proceed
 - If STB, SHPO, ARRC, and the land managing agency (as appropriate) determine that additional investigation is needed, evaluation and reporting procedures will be determined in consultation

Port MacKenzie Rail Extension Project, Cultural Resources Training Attachment

Table F-1: Contact Information for Unanticipated Discovery of Human Remains, Graves, and Historic Properties⁹

Name and Organization	Phone #	Address	Email	When to Contact	Discovery of Skeletal Remains	Discovery of Cultural Resources
Primary Contacts:						
Judith Bittner State Historic Preservation Officer Alaska Department of Natural Resources, Office of History and Archaeology	(907)269-8721	550 W 7th Ave., Ste. 1310 Anchorage, AK 99501-3565	judy.bittner@alaska.gov	Within 24 hours	X	X
Victoria Rutson Director, Office of Environmental Analysis Surface Transportation Board	(202)245-0295	395 E Street SW Washington, DC 20423		Within 24 hours	X	X
Alaska State Troopers	(907)451-5100			Within 24 hours	X	
Angie Wade Cultural Coordinator Knik Tribal Council	(907)373-3170	951 E. Bogard Rd., Ste 101 Wasilla, Alaska 99654	awade@kniktribe.org	Within 24 hours	X	X
Fran Seager-Boss Cultural Resources Specialist Matanuska Susitna Borough Historic Preservation Commission	(907)745-9859	350 East Dahlia Ave Palmer, AK 99645	fseagerboss@matsugov.us	Within 24 hours	X	X
Dr. Katherine Raven Chief Medical Examiner Alaska State Medical Examiner's Office	(907)334-2200	5455 Dr. Martin Luther King Jr Ave Anchorage, AK 99507	katherine.raven@alaska.gov	Can be more than 24 hours	X	
Philip Mitchell Chief Alaska Bureau of Vital Statistics	(907)465-8643		Philip.Mitchell@alaska.gov	Can be more than 24 hours	X	
Other Contacts as Determined Appropriate in Consultation:						
Debra Call President Knik Tribal Council	(907)373-7991		dcall@kniktribe.org	Within 24 hours	X	X
Dorothy Cook President Native Village of Eklutna	(907)688-6020	26339 Eklutna Village Rd. Chugiak, AK 99567	president@eklutna-nsn.gov	Within 24 hours	X	X

⁹ Contact information is current as of October 2011 and should be updated regularly

Port MacKenzie Rail Extension Project, Cultural Resources Training Attachment

Name and Organization	Phone #	Address	Email	When to Contact	Discovery of Skeletal Remains	Discovery of Cultural Resources
Frank Standifer President Native Village of Tyonek	(907)583-2201	PO Box 82009 Tyonek, AK 99682-0009		Within 24 hours	X	X
Gary Harrison Chief Chickaloon Village Traditional Council	(907)745-0707	PO Box 1105 Chickaloon, AK 99674-1105		Within 24 hours	X	X
Curtis McQueen Chief Executive Officer Eklutna, Inc.	(907)696-2828	16515 Centerfield Dr., Ste 201 Eagle River, AK 99577		Can be more than 24 hours	X	X
Raymond Theodore President Knikatu, Inc.	(907)376-2845	PO Box 872130 Wasilla, AK 99687		Can be more than 24 hours	X	X
Michaelene Stephan President Tyonek Native Corporation	(907)272-0707	1689 C St., Ste. 219 Anchorage, AK 99501		Can be more than 24 hours	X	X
Edith Baller President Chickaloon-Moose Creek Native Association, Inc.	(907)373-1145	PO Box 875046 Wasilla AK 99687		Can be more than 24 hours	X	X
Gloria O'Neill President and Chief Executive Officer Cook Inlet Tribal Council	(907)793-3600	3600 San Jeronimo Dr Anchorage, AK 99508		Can be more than 24 hours	X	X
Margaret L. Brown President and Chief Executive Officer Cook Inlet Region, Inc.	(907)274-8638	2525 C St., Ste. 500 Anchorage, AK 99509		Can be more than 24 hours	X	X
Aaron Leggett Dena'ina Cultural Historian	(907)330-8029		Aleggett2000@gmail.com	Can be more than 24 hours	X	X

**ATTACHMENT G: PROGRAMMATIC AGREEMENT ATTACHMENT A – PLAN
OF ACTION FOR THE UNANTICIPATED DISCOVERY OF HUMAN REMAINS,
GRAVE, AND HISTORIC PROPERTIES**

The following includes relevant portions of Attachment A (*Plan of Action for the Treatment of Unanticipated Discovery of Human Remains, Graves, and Historic Properties*) of the Section 106 Programmatic Agreement Among Surface Transportation Board, Advisory Council on Historic Preservation, and Alaska State Historic Preservation Officer Regarding the Alaska Railroad Corporation Construction and Operation of a Rail Line Extension to Port MacKenzie, Alaska (executed on June 15, 2011). Attachment A of the Programmatic Agreement has been included here for informational purposes and has been summarized for ease of use in Attachment F of this binder. Please refer to Attachment F for procedures/contacts.

FINAL, May 25, 2011

ATTACHMENT A

PLAN OF ACTION FOR THE TREATMENT OF UNANTICIPATED DISCOVERY OF HUMAN REMAINS, GRAVES AND HISTORIC PROPERTIES

Human Remains and Graves

- A. The Native American Graves Protection and Repatriation Act (NAGPRA) regulations (43 C.F.R. Part 10), do not apply to the Undertaking because it would not occur on Federal lands. The following steps must be taken if human remains, or suspected human remains, are discovered:
1. Should human burials be encountered, work will be stopped at once in the locality and the STB, SIPO and Alaska State Troopers (AST) shall be contacted immediately. See below for contact numbers.
 2. If the human remains appear recent in the judgment of the archaeologists, the STB shall defer to the opinion of the AST and Alaska State Medical Examiner (Alaska SME) for a determination of whether the remains are of a forensic nature and /or subject to criminal investigation.
 3. If the racial identity of the human remains is in question, a physical anthropologist experienced in the analysis of human remains shall examine them. The physical anthropologist shall document, analyze, and photograph the remains so that an independent assessment of racial identity can be made. The physical anthropologist shall be afforded no more than 30 days time to conduct his or her analysis.
 4. If the human remains are on Federal land and determined to be of Native American origin, the STB will follow NAGPRA regulations and procedures set forth in 43 C.F.R. Part 10. If the human remains are not Native American, and a determination has been made by the AST and Alaska SME that a death investigation is not warranted, then the STB in consultation with the Alaska SME, will attempt to identify, locate and inform descendants of the deceased. If the human remains are to be moved, then the STB shall obtain any required permits from the Alaska State Bureau of Vital Statistics, and reinter the remains in a designated area.
 5. The ARRC Project Manager should contact the following people or agencies within 24 hours of uncovering the remains (notification should include available information regarding the nature and extent of the remains and an accurate and precise location including Global Positioning System coordinates):

FINAL, May 25, 2011

State Historic Preservation Officer (SHPO)

Judith Biltner
State Historic Preservation Officer
Alaska Department of Natural Resources
550 W. 7th Ave., Suite 1310
Anchorage, AK 99501-3565
Phone: (907) 269-8721
Fax: (907) 269-8908

Federal Agency Official in Charge

Victoria Rutson
Director, Office of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423
Phone: (202) 245-0295
Fax: (202) 245-0454

Appropriate Land Managing Agency Contact for the Relevant Parcel

Responsible Native Representative for the Area of Discovery

Primary Point of Contact

Debra Call
President
Knik Tribal Council
PO Box 871565
Wasilla, Alaska 99687-1565
Phone: 907-373-7991
Fax: 907-373-2161

Dorothy Cook
President
Native Village of Eklutna
26339 Eklutna Village Road
Chugiak, Alaska 99567
Phone: 907-688-6020
Fax: 907-688-6021

Frank Standifer
President
Native Village of Tyonek
PO Box 82009
Tyonek, Alaska 99682-0009
Phone: 907-583-2201
Fax: 907-583-2442

FINAL, May 25, 2011

Gary Harrison
Chief
Chickaloon Village Traditional Council
P.O. Box 1105
Chickaloon, AK 99674-1105
Phone: 907-745-0707
Fax: 907-745-0709

The Alaska State Troopers

Communications Center Manager
Phone: (907) 451-5100
Fax: (907) 451-5165

Matanuska-Susitna Borough

Fran Seager-Boss
Matanuska Susitna Borough Historic Commission
Matanuska Susitna Borough
Cultural Resources Specialist
350 East Dahlia Avenue
Palmer, Alaska 99645
Phone: (907) 745-9859
fseagerboss@matsugov.us

The ARRC Project Manager should contact the following people, though not necessarily within the first 24 hours:

i. Alaska State Medical Examiner's Office
Dr. Katherine Raven, Chief Medical Examiner
Phone: (907) 334-2200
Fax: (907) 334-2216
Email: Stanton.kessler@alaska.gov

Kenneth Cramer, Death Investigator
Phone: (907) 334-2200
Fax: (907) 334-2216
Email: Kenneth.Cramer@alaska.gov

ii. Alaska Bureau of Vital Statistics
Phillip Mitchell, Chief
Phone: (907) 465-8643
Fax: (907) 465-3618
Email: Phillip.Mitchell@alaska.gov

FINAL, May 25, 2011

c. Other Contacts

1. **Curtis McQueen**
Chief Executive Officer
Eklutna, Incorporated
16515 Centerfield Dr., Suite 201
Eagle River, AK 99577
Phone: 907-696-2828
Fax: 907-696-2845
2. **Raymond Theodore**
President
Knikatu, Incorporated
P.O. Box 872130
Wasilla, Alaska 99687-2130
Phone: 907-376-2845
Fax: 907-376-2847
3. **Michaelene Stephan**
President
Tyonek Native Corporation
1689 C St., Suite 219
Anchorage, AK 99501-5131
Phone: 907-272-0707
Fax: 907-274-7125
4. **Edith Baller**
President
Chickaloon-Moose Creek Native Association, Inc.
P.O. Box 875046
Wasilla, AK 99687
Phone: 907-373-1145
Fax: 907-373-1004
5. **Gloria O'Neill**
President and Chief Executive Officer
Cook Inlet Tribal Council
3600 San Jeronimo Dr
Anchorage, AK 99508
Phone: 907-793-3600
Fax: 907-793-3602
6. **Aaron Leggett**
Dena'ina Cultural Historian
Phone: (907) 330-8029
Fax: (907) 330-8039
Aleggett2000@gmail.com

FINAL, May 25, 2011

7. Margaret L. Brown
President and Chief Executive Officer
Cook Inlet Region, Inc. (CIRI)
2525 C Street, Suite 500
P.O. Box 93330
Anchorage, Alaska 99509-3330
Phone: 907-274-8638
Fax: 907-263-5183

A.1. Plan for Unanticipated Discoveries

In the event that cultural materials are discovered, this plan shall be followed, and implemented in compliance with the National Historic Preservation Act (NHIPA) of 1966, as amended (16 U.S.C. § 470) as well as implementing regulations (36 C.F.R. Part 800).

If archaeological or historic materials are encountered the following series of steps must be followed:

- A. Stop all work in the immediate vicinity of any historic properties or suspected cultural resources.**
- B. Mark the area in which the resources are located, as well as a buffer area appropriate to the find and the terrain. This buffer area may be larger if there is the possibility of more resources in the area or in the case of slopes or cut banks where ongoing work may impact the site. Make sure that all cultural materials are protected from possible impacts while contacting the appropriate parties².**
- C. ARRC's Project Manager should contact the people or agencies in the previous list at A.1(6)(a) through (e) within 24 hours of discovering the resources.**

Notification of unanticipated discoveries should include available information regarding the nature and extent of the historic properties and an accurate and precise location including GPS coordinates.

The discovery shall be investigated by a professional meeting the appropriate qualification standards, such as a consulting archaeologist, no longer than seventy-two (72) hours from discovery. The STB, SHPO, ARRC and land managing agency (as appropriate) shall consult, by telephone or other means, on the nature of the discovery and whether any additional investigation is warranted. The STB shall contact the appropriate Tribal representative if necessary. A decision shall be provided to ARRC within five (5) working days of consultation. If the parties agree that the discovery is not significant, verbal authorization to proceed may be given by the SHPO. If additional investigation is agreed to, the provisions of Stipulation IV.B shall be followed, unless modified evaluation and reporting are agreed to.

² Options for protecting the cultural resources include: covering with a tarp or other protection from the elements; shoring up cut banks or trench walls so that no further exposure occurs; making sure that no water will collect on or around the site.