

APPENDIX E
AGENCY COORDINATION RECORDS

	Page
Request for Scoping Comments, sent to multiple agencies, 11/10/16.....	1
SHPO Scoping Response Comment to DOT&PF, 11/25/16.....	14
NPS Scoping Response Comment to DOT&PF, 11/29/16.....	16
DNR Scoping Response Comment to DOT&PF, 12/12/16.....	19
USFWS Scoping Response Comment to DOT&PF, 12/12/16.....	21
USFWS, DOT&PF, Remote Solutions, Stantec Scoping Meeting, 12/19/16.....	28
ADF&G, DOT&PF, Remote Solutions, Stantec Scoping Meeting 12/19/16.....	31
NPS, SHPO, DOT&PF, Remote Solutions, Stantec Scoping Meeting, 12/20/16.....	34
NMFS, DOT&PF, Remote Solutions, Stantec Scoping Meeting, 12/21/16.....	37
USACE, DOT&PF, Remote Solutions, Stantec Scoping Meeting, 12/21/16.....	41
NMFS, DOT&PF, Remote Solutions, Stantec Lagoon Hydrology Meeting, 06/06/17.....	44
SHPO, NPS, NANA, DOT&PF, Remote Solutions, Stantec Section 106 Coordination Meeting, 07/10/17	46
USACE, DOT&PF, Remote Solutions, Stantec Wetland Delineation Presentation and Meeting, 07/25/17	47
DNR, DOT&PF, Remote Solutions, Stantec Project Update Meeting, 08/08/17.....	48
NMFS, DOT&PF, Remote Solutions, Stantec Marine Mammals Meeting, 08/09/17.....	50
USACE Site Visit Memo, 08/15/17.....	51
ADF&G Trip Report, 08/15/17.....	65
SHPO and NPS Trip Report, 08/16/17.....	72
NMFS Site Visit and Project Update Meeting 8/17/17.....	81

COMMENTS ON DRAFT EA

NMFS Meeting Notes, 12/12/17..... 85

USACE Meeting Notes, 12/12/17..... 90

EPA Comment, 12/13/17 92

ADF&G Meeting Notes, 12/14/17..... 96

ADF&G Comment Letter, 12/14/17 98

USFWS Meeting Notes, 12/14/17 101

USACE Comment Letter, Undated..... 105

DNR Meeting Notes, 12/15/17 106

EPA Meeting Notes, 12/18/17 107

USCG Call, 12/21/17 108



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Transportation and Public Facilities

NORTHERN REGION
Design and Engineering Services

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2273
TDD: 907-451-2363
Fax: 907-451-5126

November 10, 2016

Dear Agency Contact:

Re: Kivalina Evacuation and School Site Access Road
0002384/NFHwy00162
Request for Scoping Comments

The Alaska Department of Transportation and Public Facilities (DOT&PF) and the Federal Highway Administration (FHWA) in partnership with the Northwest Arctic Borough (NAB), Native Village of Kivalina, and the City of Kivalina, are proposing to improve community safety in Kivalina, Alaska by providing an evacuation road between Kivalina Island and a school to be constructed by the NAB that would also serve as a safe emergency evacuee assembly site on Kisimigiuqtuq Hill (K-Hill). Kivalina is located on the southeast tip of a 5.5-mile long barrier island, located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon approximately 80 miles northwest of Kotzebue.

DOT&PF is conducting formal scoping to support preparation of an environmental document for the proposed road project in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended. Please identify any environmental, cultural, historic, or subsistence resources you believe may potentially be impacted by the proposed project, and provide any other information you deem valuable to the environmental documentation process. Your responses will help provide us with the necessary inputs to develop and design a proposed final project that avoids and minimizes as many potential adverse environmental and human impacts as possible.

Background

The community of Kivalina has been working for decades with a variety of local, state, and federal agencies to address threats of coastal erosion and flooding. Numerous study, concept, and planning documents exist on potential solutions, which range from: erosion protection around the city; to relocation of the entire community; to a new mainland site. Options involving community relocation have been problematic, as they are neither culturally preferable nor fiscally practical in the foreseeable future. Accordingly, Kivalina has turned to a locally approved approach of facilitating a safe, reliable, and direct means of community evacuation to an acceptable mainland location on K-Hill.

"Keep Alaska Moving through service and infrastructure."

Project Location

The proposed road project origin would be at the City of Kivalina, which lies within the Kotzebue Recording District and is located in Section 21, Township 27 N, Range 26 W, of the Kateel River Meridian. The desired project terminus at K-Hill is located in Section 19, Township 28N, Range 25W, of the Kateel River Meridian. The feasibility of several potential route alignments is currently being evaluated within a project study area encompassing Kivalina Island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages in Townships 27N and 28N, Ranges 25W, 26W and 27W of the Kateel River Meridian (Figure 1).

Purpose and Need

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to mobilize to safe refuge at a site on K-Hill also dedicated by the NAB as the preferred new location for the community school. Upon its anticipated construction, the school will augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season, longer-term support capabilities.

Recent climate data has indicated that arctic sea ice is forming later in the season, increasing fall and winter storm duration and intensity along the Northwest Arctic coast. Consequently, residents of Kivalina face significant and increasing risks to safety, life and property by storm systems predicted to further intensify over time. The need for a concerted effort to mitigate these risks became more evident during an evacuation event in October 2007 when debris-laden storm waves overtopped the barrier island.

To facilitate community safety in the face of this increased threat, Kivalina needs a safe, stable, and reliable evacuation infrastructure (routing, transportation, shelter) in the event of impending catastrophe. To provide the routing component of this infrastructure will require construction of a road facility over a safe route that allows emergency response vehicles to access a secure location capable of supporting evacuees in times of need.

Proposed Action

Within the project study area, DOT&PF and FHWA are currently reviewing the feasibility of three existing, preliminary route options independently proposed by Kivalina and the NAB (Figure 2). While these routes may provide a useful basis for alternative development during NEPA documentation, additional draft alternatives are anticipated to be identified and considered as a consequence of agency and public scoping. Common to all anticipated alternatives will be the requirement to support the following actions:

- **Establishment of a safe, reliable, all-season Kivalina Lagoon crossing during evacuation mobilization.**
 - Concepts previously studied for their feasibility include construction of an earthen causeway across the lagoon that variously incorporates hydraulic and boat passage options including bridge(s), culvert(s), or both.

- **Construction of an all-season gravel access road between Kivalina Island and the desired K-Hill evacuation site.**
 - The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that include guard rails or other safety features as required.
 - Over the last decade, Kivalina and the NAB have evaluated the feasibility of numerous local road routings that could potentially provide for evacuation, school access, or material site development. Evacuation routes considered to date by Kivalina and the NAB have included:
 - An alignment referred to as a *Northern Route* approximately 9.1 miles in length that would originate at the south end of the Kivalina Airport runway, parallel the runway on its east side northward for approximately 1.5 miles, cross the lagoon eastward via a causeway and/or bridge, and follow high ground between the Wulik and Kivalina Rivers to its terminus at K-Hill.
 - An alignment considered a *Southern Route* approximately 6.9 miles in length that would begin at the south end of the Kivalina Airport runway, immediately cross the lagoon eastward via a causeway and/or bridge, and follow lowlands and relic channels of the Wulik River to K-Hill.
 - A *Combined Route* approximately 8.6 miles in length that would follow the Northern route before merging with the Southern route via a one-mile long connecting segment.
- **Identification of Material Sources:** Although project materials would be specified as contractor furnished and development of material sources would not be included in the Proposed Action, analyses of material locations proximate to potential routes would be conducted to determine their feasibility and evaluate environmental impacts of their development. Four locations in the project study area known to contain potentially viable project materials, and currently being evaluated by Kivalina and the NAB, include:
 - *K-Hill:* K- Hill geology is characterized by exposed limestone and rock rubble at the ground surface. It is anticipated that below the surface, larger frost-fractured rocks and boulders may also exist.
 - *Wulik River Deposition Zone:* The Wulik River Deposition Zone is characterized by visible gravel bars and beaches along the river banks that would contain suitable materials to construct the proposed project.
 - *Wulik River Relic Channel:* The Wulik River Relict Channel is characterized by visible gravel and sand at the ground surface. The fluvial material in these areas was likely deposited when the Wulik River was located north of its present location.

- o Kivalina River Deposition Zone: The Kivalina River is also being evaluated for potential material sources due to the areas visible on gravel bars and beaches that appear to contain suitable material.

Independent preliminary research and review on project study area resources was conducted by Kivalina and the NAB and is summarized in Appendix A. Additionally, a substantial document cache of previous studies and assessments on the project area, potential development projects at Kivalina, and various natural resources are available on the DOT&PF project website at:

<http://dot.alaska.gov/nreg/KivalinaEvacRd>.

Based on additional agency and public input, engineering and environmental analyses and evaluations, and the application of regional Traditional Knowledge, DOT&PF intends to identify issues of environmental, technical and cultural concern, refine the project scope as necessary, and through evaluation of qualified potential routes develop a preferred project alternative that minimizes human and environmental impacts while meeting project purpose and need.

We respectfully request your written comments no later than December 12, 2016. Please mail them to: DOT&PF Attn: Sarah E. Schacher, P.E., 2301 Peger Road Fairbanks, AK, 99709; or you may e-mail comments to me at sarah.schacher@alaska.gov.

Thank you for your attention to this request. If you have any questions regarding the proposed project, please contact me at (907) 451-5361.

Sincerely,



Sarah E. Schacher, P.E.
Preconstruction Engineer

Enclosures: Figure 1 – Location & Vicinity Map
Figure 2 – Study Area and Potential Routes
Appendix A

pk/lmc

Distribution by email:

Alan Bittner, Anchorage Field Manager, U.S. Bureau of Land Management
Judy Bittner, State Historic Preservation Officer, Alaska Dept. of Natural Resources
Audra Brase, Regional Supervisor, Alaska Dept. of Fish & Game
Alan Cavallo, Public Assistance Branch Chief, Alaska Dept. of Military & Veteran Affairs
Sally Cox, Alaska Dept. of Commerce, Community & Economic Development
Jennifer Curtis, Environmental Protection Specialist, U.S. Environmental Protection Agency
Lesley DeWilde, Real Estate Services Chief, Bureau of Indian Affairs
Matthew Eagleton, Regional EFH Coordinator, NOAA-NMFS
Sandra Garcia-Aline, Division Administrator, Federal Highway Administration

Susan Georgette, Refuge Manager, U.S. Fish & Wildlife Service
Jeanne Hanson, Asst. Regional Administrator, NOAA-NMFS
James Helfinstine, Commander, U.S. Coast Guard, JBER
Bob Henszey, Fish & Wildlife Biologist, U.S. Fish & Wildlife Service
Rhea Hood, Archaeologist, U.S. National Park Service
Pete Probasco, Assistant Regional Director, U.S. Fish & Wildlife Service
Jeanne Proulx, Natural Resource Manager, Alaska Dept. of Natural Resources
Mary Romero, Project Manager, U.S. Army Corps of Engineers
James Rypkema, Environmental Program Manager, Alaska Dept. of Environmental Conservation
Glen Stout, Wildlife Biologist, Alaska Dept. of Fish & Game
Ronald Wall, Captain, Alaska State Troopers 'D' Detachment
Kristi Warden, Deputy Division Manager, Federal Aviation Administration
Ryan Winn, Field Office Project Manager, U.S. Army Corps of Engineers

State Parks, Refuges, and Critical Habitat Areas

A review of the Alaska Department of Fish & Game (ADF&G) Conservation Areas website (<http://www.adfg.alaska.gov/index.cfm?adfg=protectedareas.locator>) on September 26, 2016 revealed no state refuges, sanctuaries, critical habitat areas, or wildlife ranges within the study area.

National Parks, Preserves, Monuments, and Wild and Scenic Rivers, and Private Properties

A review of the National Park Service's website (<https://www.nps.gov/hfc/carto/PDF/WEARmap1.pdf>) was conducted on September 26, 2016 to determine if any National Parks, Preserves, Monuments, or Wild and Scenic Rivers exist in the study area. Cape Krusenstern National Monument is located approximately 8.5 miles to the south but does extend into the project study area. Noatak National Preserve is located approximately 45 miles to the east. None of these designated sites are within the study area. Kivalina Lagoon includes a small portion of the Alaska Maritime National Wildlife Refuge (Chukchi-Sea Unit); two islands, totaling 75 acres are owned by the Kivalina Sinuakmeut Corporation located directly east of Kivalina at the mouth of the Wulik River (<http://fws.maps.arcgis.com/apps/webappviewer/index.html?id=3eed8d6b30ea443dafa4380d70d0fa5e1>). Another 116 acres of the Refuge, owned by the same Corporation, is located 4 miles south and effectively constitutes the land spit separating the Imikruk Lagoon from the Chukchi Sea.

Navigable Waters

All tidal and marine waters are considered navigable, which in this case would include Kivalina Lagoon. Building a causeway over the lagoon would require a U.S. Army Corps of Engineers (USACE) Section 10 permit, and potentially a U.S. Coast Guard (USCG) Bridge permit if applicable. Neither the Kivalina nor the Wulik River are listed as navigable waters (<http://www.poa.usace.army.mil/Portals/34/docs/regulatory/NavWat.pdf>). DOT&PF and FHWA will coordinate with the USCG on permit requirements, if any.

Floodplain Management

Two rivers flow into Kivalina Lagoon: the Kivalina River at the northern end of the lagoon and the Wulik River at the southern end. The floodplains of both rivers are broad and braided. The Northwest Arctic Borough (NAB) implements flood prevention in code in order for communities, including the City of Kivalina, to participate in the National Flood Insurance Program (NFIP). Although Kivalina does not have a 100-year floodplain identified or mapped by the Federal Emergency Management Agency (FEMA), Flood Hazard Data from the USACE indicates that the limits of the 100-year floodplain is the 30-foot contour on the 1976 ADCRA Community Map. The proposed project area is at or below the 25-foot contour and therefore in the floodplain of the Kivalina and Wulik Rivers. Consideration of floodplain impacts will be included as part of the NAB permitting process for this project.

Water Resources and Water Quality

The Alaska Department of Environmental Conservation (ADEC) has delineated a drinking water protection area (<http://www.arcgis.com/home/webmap/viewer.html?webmap=a1196dd615694cccb85fd9088212412e>) for the Kivalina Water System which encompasses the Wulik River adjacent areas, including a portion the southern study area (PWSID: AK2340117). Water for the community of Kivalina is obtained from the Wulik River using a seasonal three-mile long surface transmission line (*Evacuation and School Access Road Route Reconnaissance Study, Native Village of Kivalina, 2014*). A search of ADEC data on September 26th, 2016 revealed no impaired waterbodies nor any water quality monitoring locations within the study area (<http://www.arcgis.com/home/webmap/viewer.html?webmap=f7e8ca8c14fe4520b9e2e1498e3cdee3>).

Wetlands and Vegetation

A search of the U.S. Fish and Wildlife (UFWS) National Wetlands Inventory (NWI) mapper (<https://www.fws.gov/wetlands/Data/Mapper.html>) identifies most the study area as mapped wetlands. In addition, a previous desktop wetland delineation and functional assessment completed for the NAB in 2015 identifies 95% of the study area as comprised of wetlands and Waters of the United States (*Wetland Delineation and Functions and Values Assessment Kivalina Evacuation Route Wetlands Mapping Study, NAB 2015*). Necessary permitting will be conducted in accordance with Section 404 and 10 of the Clean Water Act for unavoidable wetland impacts.

Fish and Fish Habitat

A diversity of marine and anadromous fish may be found in lagoon and/or rivers within the study area. Both the Kivalina and Wulik Rivers, as well as Kivalina Lagoon and a small connector stream, are identified in the ADF&G Alaska Waters Catalog (AWC) Fish Resource Monitor as anadromous waterbodies within the study area (<http://www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=maps.interactive>). Species identified in these waterbodies are summarized in the table below:

Anadromous Stream Name	Anadromous Stream Number	Species Identified
Kivalina River	331-00-10044	Pink, chum, king, coho, sockeye, Dolly Varden (char)
Wulik River	331-00-10060	Pink, chum, king, coho, sockeye, Dolly Varden (char), whitefish
Kivalina Lagoon	331-00-10060-0010	Pink, chum, king, coho, sockeye, Dolly Varden (char), whitefish
Unnamed reach connecting Kivalina Lagoon and Kivalina River	331-00-10050	Pink, chum, coho, Dolly Varden (char)

Of the several species of anadromous whitefish found in the Wulik River and Kivalina Lagoon, sheefish (inconnu) are the largest. Arctic grayling are sometimes present in the Kivalina Lagoon. Rainbow smelt are indigenous to most all Chukchi Sea lagoons that are open to the sea. Several species of marine fish, some of which are relatively brackish-water tolerant, are found in Kivalina Lagoon and near-shore coastal waters. These include Bering flounder, yellowfin sole, starry flounder, saffron cod, Arctic cod, Pacific herring, sculpin, and capelin. Arctic cod and saffron are documented to appear in Kivalina Lagoon twice a year after freeze-up and in early July (*Subsistence Production in Kivalina, Alaska: A Twenty Year Perspective. Technical Report No. 128 prepared for the ADF&G Division of Subsistence. Juneau, Alaska. Burch, 1985*).

Kivalina residents rely heavily on fish as cultural and nutritional resources. In 2007, Kivalina harvested more than 54,000 fish. Of the estimated 79,000 edible pounds of fish and shellfish harvested, 86% were Dolly Varden. Saffron cod, locally known as tomcod, comprised 2%, and salmon species made up 1% of the total. All other species fell below 1% (*Alaska Subsistence Salmon Fisheries 2007 Annual Report Technical Paper No. 346 prepared for the ADF&G Division of Subsistence. Anchorage, Alaska. Fall et al. 2009*). In the Kotzebue area, subsistence salmon fishing has few restrictions other than the general statewide provision. Standard conditions include prohibition of fishing within 300ft of a dam, fish ladder, weir, culvert or other artificial obstructions (Fall et al. 2009).

Essential Fish Habitat

The Arctic Fisheries Management Plan includes the study area in Essential Fish Habitat (EFH) designations for late juvenile and adult saffron and arctic cod, potentially for late juvenile and adult snow crab and arctic cod, and has determined that there is insufficient information for determine EFH for eggs, larvae and early juveniles of arctic cod and saffron cod and for larvae and early juveniles of snow crab. (<http://www.npfmc.org/wp-content/PDFdocuments/fmp/Arctic/ArcticFMP.pdf#page=89>). A Preliminary EFH Assessment has been completed by WHPacific in 2012. Any outstanding work will be completed and DOT&PF will consult with the National Marine Fisheries Service (NMFS) on effects to EFH and implementation of any proposed conservation measures.

Aquatic Wildlife

The study area is strongly influenced by seasonal ice cover. Ice directly affects the distribution and migration patterns of birds and marine mammals. Ice freezes to the bottom in the fall in shallow nearshore areas and many species of birds and marine mammals migrate south along the coast as sea ice advances. In spring, nutrients and sea ice algae trapped in the ice nourish primary production, resulting in a highly productive estuarine-like nearshore corridor which anadromous and marine fish, shorebirds, waterfowl, and some species of marine mammals take advantage off, including during their migration back north to feed and breed.

Marine Mammals:

Marine mammals are an essential part of the culture and food security in Kivalina year-round with different species occurring at different times of the year (IEA Chapter 4: Important Areas for marine mammals and coastal species). In the coastal area off Kivalina, marine mammal species include beluga whale (*sisuaq*, *Delphinapterus leucas*), gray whale (*aġvigluaq*, *Eschrichtius robustus*), bowhead whale (*aġvik*, *Balaena mysticetus*), bearded seal (*ugruk*, *Erignathus barbatus*), ringed seal (*natchiq*, *Phoca hispida*), spotted seal (*qasigiaq*, *Phoca largha*), and polar bear (*nanuq*, *Ursus maritimus*). In Kivalina Lagoon, marine mammals most frequently observed are bearded, spotted and ringed seals. Marine mammals that are consistently important for subsistence harvest are beluga, bearded seal and ringed seal (OCS EIS, 2007: http://www.boem.gov/uploadedFiles/BOEM/About_BOEM/BOEM_Regions/Alaska_Region/Environment/Environmental_Analysis/2007-026-Vol%20I.pdf).

All marine mammals are protected under the Marine Mammal Protection Act, and, ringed seals and polar bear are also listed as Threatened under the Endangered Species Act (ESA).

Aquatic Birds:

The area around Kivalina is a staging area for migratory aquatic species in the spring and the fall and more than 100 species of birds, most of which are waterfowl and shorebirds have been identified in this region (*Red Dog Mine Extension Aqqaluk Project Final Supplemental EIS, 2009*), including Canada geese (*Branta canadensis*), greater white-fronted goose (*Anser albifrons*), tundra swan (*Cygnus columbianus*) and all four species of loon. Both Steller's Eider (*Polysticta stelleri*) and the Spectacled eider (*Somateria fischeri*) are also known to be in this area, both of which are listed as Threatened under ESA (*Environmental Assessment and Finding of No Significant Impact: Section 117 Expedited Erosion Control Project, Kivalina, USACE, Alaska District, 2007*). Specifically, the presence of open water and emergent vegetation in the sedge-grass marshes associated with ponds and the riparian low shrub areas along the Kivalina and Wulik river drainages provide suitable inland breeding and molting habitat for species such as the Canada goose. The near-shore areas and lagoon provide habitat for the yellow-billed loon (*Gavia adamsii*), which feeds on fish and invertebrates in the marine environment as well as in freshwater. Yellow-billed loons nest exclusively in coastal and inland low-lying tundra from 62° to 74° N latitude, in association with permanent, fish-bearing lakes. Waterfowl are important birds harvested for subsistence. Migratory aquatic birds are protected under Migratory Bird Treaty Act.

Terrestrial Wildlife

Terrestrial Birds:

More than 100 species of birds migrate from the lower 48 states and Central and South America, to nesting, breeding, and rearing grounds in the State of Alaska. Five species have been identified as species of concern for northern Alaska, including the gyrfalcon (*Falco rusticolus*), snowy owl (*Bubo scandiacus*), gray-cheeked thrush (*Catharus minimus*), Smith's longspur (*Calcarius pictus*), and hoary redpoll (*Acanthis hornemanni*) (BPIF 1999 cited in Red Dog Mine EA). Within the project area, riparian corridors of willow and alder shrubs likely contain the highest diversity of land birds. In addition to these long-distant migrants, the general area also has occurrences of raptors like golden eagles (*Aquila chrysaetos*), gyrfalcon and peregrine falcons (*Falco peregrinus*) (which are known to nest along in the rocky cliffs of the area close to Red Dog Mine (Red Dog Mine Supplemental EIS, 2009). In addition, willow (*Lagopus lagopus*) and rock ptarmigan (*Lagopus muta*) appear to occur in low shrub and tussock tundra in the region, and are considered the most important terrestrial birds for subsistence. Migratory birds are protected under the Migratory Bird Treaty Act. Golden eagles are further protected under the Bald and Golden Eagle Protection Act of 1940.

Terrestrial Mammals:

Five species of large terrestrial mammals are known to occur in the study area: caribou (*Rangifer tarandus*), moose (*Alces alces*), muskox (*Ovibos moschatus*), Dall sheep (*Ovis dalli*), and brown bear (*Ursus arctos*). Caribou, moose, and Dall sheep have historically been and continue to be important subsistence resources for Kivalina. Common furbearers in the project area include wolves (*Canis lupus*), wolverine (*Gulo gulo*), red fox (*Vulpes vulpes*), arctic fox (*Alopex lagopus*), lynx (*Felis lynx*), marten (*Martes americana*), and mink (*Mustela vison*). Many of these species are important to hunters and trappers in the region for their pelts, which are used to make traditional Alaska Native crafts and clothing (Red Dog Mine Supplemental EIS, 2009).

Caribou:

Caribou are the principal terrestrial subsistence animal in the region and are hunted in the tundra hills behind Kivalina. A 1992 ADF&G subsistence survey conducted in the community indicated a harvest of 351 caribou—18.2% of the total subsistence harvest (OCS EIS, 2007). Local caribou are part of the Western Arctic Herd the largest caribou herd in the State of Alaska and one of the largest in the world (Red Dog Mine Supplemental EIS) that migrates annually in large numbers through the region. Most caribou are harvested in the fall when the main migration reaches the Kivalina area, but they are also hunted throughout the winter, as available, and shot opportunistically year-round. Winter distributions, in both numbers and location, are highly variable and may be dependent on local weather conditions (*U.S. Environmental Protection Agency Draft Environmental Impact Statement Red Dog Mine Project Northwest Alaska, February 1984*). Most of the spring migration occurs well to the east of Kivalina (Red Dog Mine Supplemental EIS, 2009).

Other Species:

Moose: Moose in the Kivalina area are part of Game Management Unit 23. During winter, moose are found along the drainages of the Wulik and Kivalina rivers. Compared to other populations in Alaska, moose in this area are considered to be of low density (OCS EIS 2007, Red Dog Mine Supplemental EIS, 2009).

Muskoxen: Reintroduced in 1970, the Cape Thompson population, ranging from the Noatak River north to Cape Lisburne remains fairly small (around 300 animals), and is generally found within 15 miles of the coast (Red Dog Mine Supplemental EIS, 2009).

Dall Sheep: Dall sheep are prized for their meat, fat, sinew, skins, and horns and hunted in the upper Wulik and Kivalina River drainages (OCS EIS, 2007). Kivalina hunters reported taking about 25 Dall sheep in the 25 years prior to 1991.

Brown Bear: Brown bears occur in the area throughout the year, making use of a variety of habitats (Red Dog Mine Supplemental EIS, 2009). In spring, bears use alpine slopes, shifts to lowland or coastal areas during summer, and during fall in particular, can be found around salmon spawning streams.

Protected Species and Habitats

Threatened and endangered species are managed under the ESA, requiring federal agencies to ensure that all activities they “authorize, fund, or carry out” do not jeopardize the continued existence of any threatened or endangered species or designated critical habitat. Migratory birds are protected by the Migratory Bird Treaty Act of 1918. Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds), issued in 2001, requires the evaluation of the effects of federal actions on migratory birds, with an emphasis on species of concern. Although eagles are not considered rare in this part of Alaska, another potential regulatory mechanism that applies to wildlife in the study area is the Bald and Golden Eagle Protection Act of 1940. Marine mammals are further protected by the Marine Mammal Protection Act of 1972. Fish and fish habitat have further protection if federally designated under EFH in the Magnuson-Stevens Fishery Conservation and Management Act.

On a State level, water bodies listed in the AWC are considered important to anadromous fish species and are afforded protection under Alaska Statute 16.05.871. For other wildlife, it should be noted that as of August 15, 2011, the Alaska Department of Fish and Game (ADF&G) no longer maintains a Species of Special Concern list. The list has not been reviewed and revised since 1998 and is no longer considered valid. Instead ADF&G currently uses the Alaska Wildlife Action Plan to assess the needs of species with conservation concerns, and to prioritize conservation actions and research.

Species that fall under these formal protections and may occur in the study area include all species of Pacific salmon, ringed, bearded and spotted seals, beluga whales, spectacled and Steller’s eider, and all migratory birds (see specific sections above for details).

Historical, Architectural, Archeological, and Cultural Resources

Twenty-nine Alaska Heritage Resource Survey (AHRS) sites are currently located within or directly adjacent to the study area (see Table below). Twenty-four of these are archaeological resources and potential historic structures located within the community of Kivalina. Three sites, including the remains of a camp (NOA-301), meat caches and icehouses (NOA-298), and a reindeer corral and processing site (NOA-302), are located within the study area south of the mouth of the Wulik River. One site, the Uallik Trail (NOA-304) is mapped outside of the study area but historically followed the east bank of the Wulik River into the study area. Additionally, the boundaries of the Cape Krusenstern National Historic Landmark (NHL), which extends more than 10 miles northwest of the Cape Krusenstern National Monument boundary, encompasses a portion of the south half of the study area.

An archaeological predictive model prepared for this project in January 2016 and results of a reconnaissance investigation completed in September 2016 suggest that locally proposed route corridors and material source areas encompass landforms with increased potential for containing archaeological resources. FHWA and DOT&PF will consult with the State Historic Preservation Officer (SHPO), Tribal entities, and the National Park Service in accordance with Section 106 of the National Historic Preservation Act (NHPA) and Section 4(f) of the DOT Act of 1966 to identify resources that may be adversely affected by the proposed undertaking.

Alaska Heritage Resource Survey (AHRS) sites

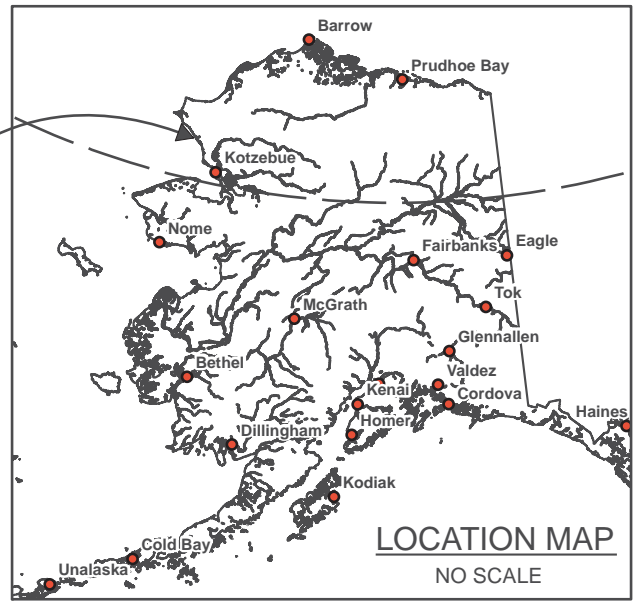
AHRS #	Approx. Location (relative to nearest Proposed Project Element)	Description	DOE Status
NOA-004	0.30 mile SE of Southern Route Causeway	Kivalina Village	Unevaluated
NOA-042	Encompasses southern portions of North/Combined and Southern Routes	Cape Krusenstern Archaeological District	National Historic Landmark
NOA-298	1.60 miles southeast of Southern Route	Meat Caches/Icehouses	NRHP Eligible
NOA-301	1.53 miles southeast of Southern Route	Camp	NRHP Eligible

AHRS #	Approx. Location (relative to nearest Proposed Project Element)	Description	DOE Status
NOA-302	1.55 miles southeast of Southern Route	Reindeer Corral and Processing Site	NRHP Eligible
NOA-304	1.80 miles southeast of Southern Route	Uallik Trail	Unevaluated
NOA-311	0.50 mile southeast of Southern Route Causeway	Single Story Wood Frame Structure	Unevaluated
NOA-312	0.50 mile southeast of Southern Route Causeway	Single Story Wood Frame Structure	Unevaluated
NOA-313	0.45 mile southeast of Southern Route Causeway	Single Story Wood Frame Structure	Unevaluated
NOA-314	0.20 mile southeast of Southern Route Causeway	Two Story Wood Frame Structure	Unevaluated
NOA-315	0.38 mile southeast of Southern Route Causeway	Kivalina Cemetery (used prior to the mid-1940s)	Unevaluated
NOA-316	0.38 mile southeast of Southern Route Causeway	Kivalina Cemetery #2	Unevaluated
NOA-317	0.40 mile southeast of Southern Route Causeway	Eroding Human Remains and Artifacts	Unevaluated
NOA-318	0.50 mile southeast of Southern Route Causeway	Eroding Human Remains and Artifacts	Unevaluated
NOA-319	0.55 mile southeast of Southern Route Causeway	Human Remains	Unevaluated
NOA-320	0.57 mile southeast of Southern Route Causeway	Eroding Human Remains	Unevaluated
NOA-321	0.50 mile southeast of Southern Route Causeway	Human Remains	Unevaluated
NOA-322	0.53 mile southeast of Southern Route Causeway	Possible House Pit Depressions	Unevaluated
NOA-323	0.42 mile southeast of Southern Route Causeway	Possible Gravesite and Historic Sod House	Unevaluated
NOA-324	0.41 mile southeast of Southern Route Causeway	Burial Structure	Unevaluated
NOA-325	0.15 mile southeast of Southern Route Causeway	Human Remains	Unevaluated
NOA-326	0.15 mile southeast of Southern Route Causeway	Human Remains and Burial Box	Unevaluated
NOA-327	0.15 mile southeast of Southern Route Causeway	Artifacts	Unevaluated
NOA-328	0.15 mile southeast of Southern Route Causeway	Historic Sod Houses	Unevaluated
NOA-339	0.48 mile southeast of Southern Route Causeway	Non-human Faunal Remains	Unevaluated
NOA-362	0.40 mile southeast of Southern Route Causeway	Buried Wood Structure; Human Remains	Unevaluated
NOA-587	0.35 mile southeast of Southern Route Causeway	Kivalina Federal Scout Readiness Center	Recommended Not Eligible
NOA-591	0.25 mile southeast of Southern Route Causeway	Artifact Scatter	Unevaluated
NOA-592	0.27 mile southeast of Southern Route Causeway	Possible Historic Sod House	Unevaluated

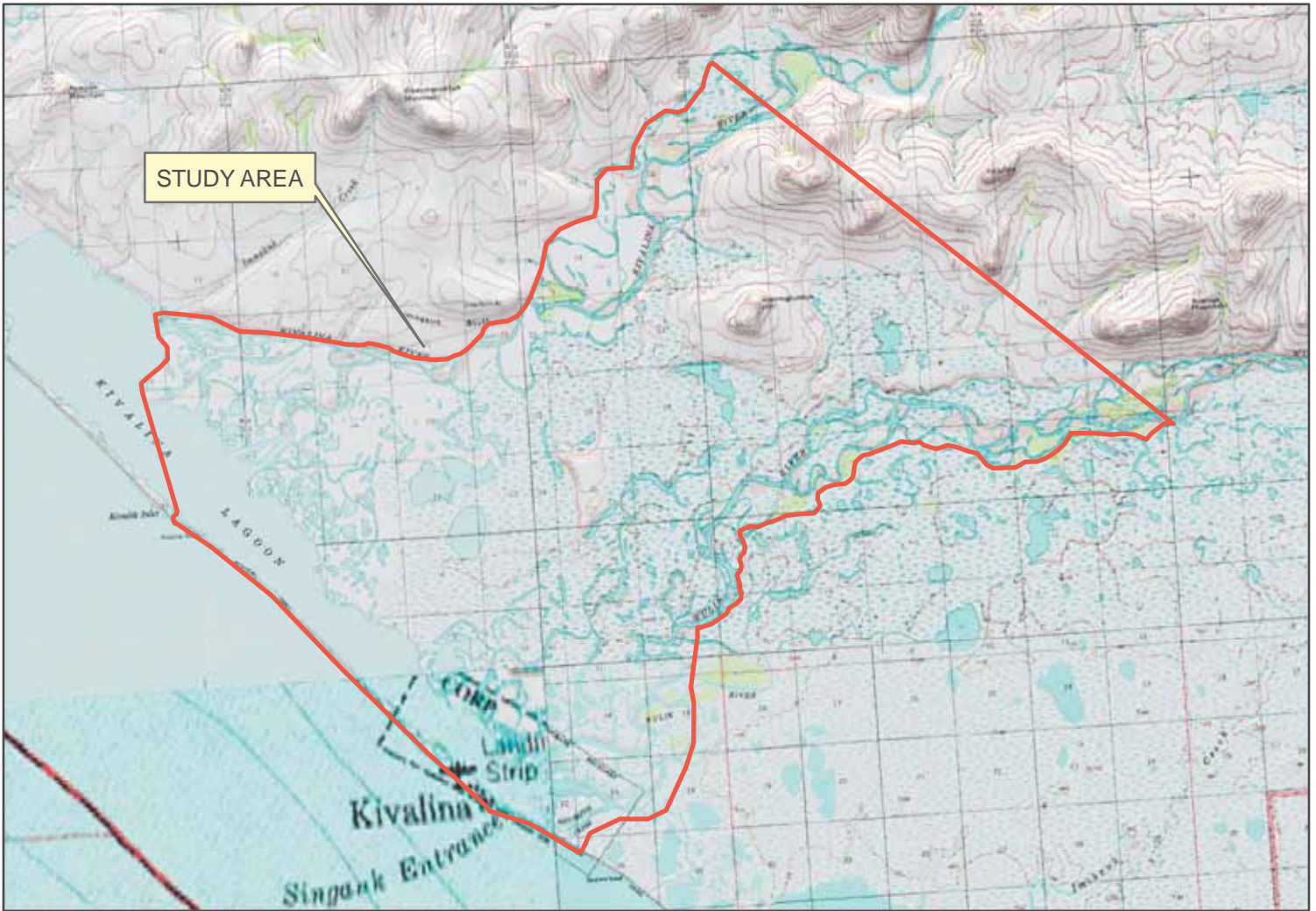
Hazardous Materials, Pollution Prevention, and Solid Waste

A search of the ADEC *Contaminated Sites Database* identified only one site in the study area. This site, ADEC# AKARNG Kivalina FSA, is recorded as having its cleanup complete. A 6.5- acre Class 3 unpermitted municipal landfill is located within the study area, approximately 0.3 miles north of the Kivalina Airport runway and surrounded by the Chukchi Sea to the west and the Kivalina Lagoon to the east. Possible contaminants at this site include construction and demolition waste, asbestos, and sewage. Honey bucket waste is comingled with solid waste at this site.

PROJECT
LOCATION



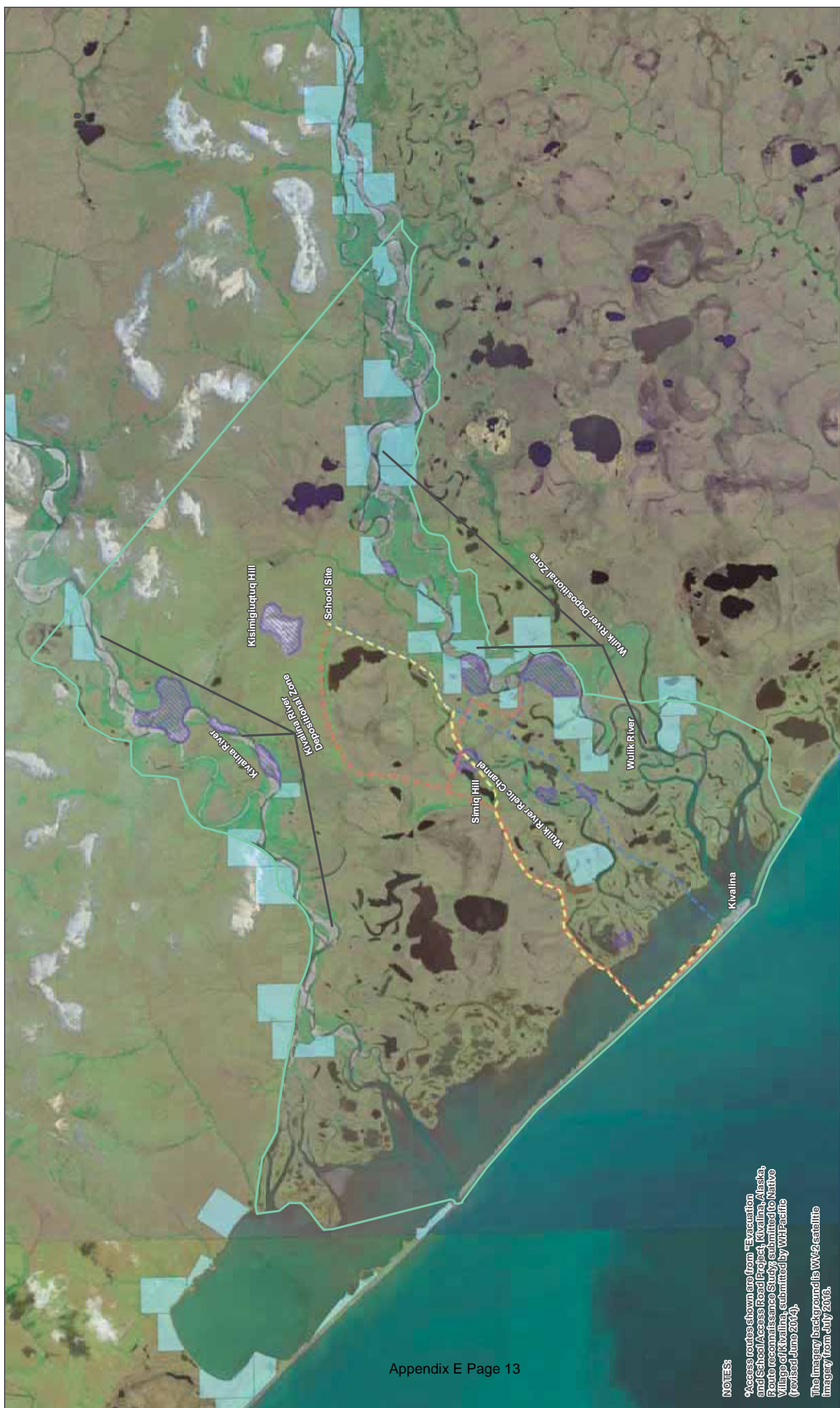
STUDY AREA



Northwest Arctic Borough
Alaska Department of Transportation
and Public Facilities - Northern Region

Location & Vicinity Map
Project Number: 0002384/NFHWHY00162





NOTES:
 *Access routes shown are from "Evacuation and School/Access Road Project, Kivalina, Alaska, Route Reconnaissance Study" submitted to Native Village of Kivalina, submitted by WHPacific (revised June 2014).
 The imagery background is WW2 satellite imagery from July 2003.

- Legend**
- North Access Route*
 - Combined Access Route*
 - South Access Route*
 - Native Allotments
 - Potential Material Sources
 - Project Study Area



DATE: November 2016

FIGURE 2
 STUDY AREA AND POTENTIAL SITES
 PROJECT NUMBER: 0002384/NFHWWY00162

AK SHPO, Scoping Response:

From: Rollins, Mark W (DNR)

Sent: Friday, November 25, 2016 3:10 PM

To: Schacher, Sarah E (DOT)

Cc: Gamza, Thomas A (DOT)

Subject: Kivalina Evacuation and School Site Access Road, Request for Scoping Comments

Hi Sarah,

The Alaska State Historic Preservation Office (AK SHPO) has no additional information regarding identified cultural resources (historic, prehistoric, and archaeological sites, locations, remains, or objects) at this time for the subject project. We look forward to future consultation on additional draft alternatives anticipated to be identified during the NEPA process and recommend DOT&PF include all potential material sources and route alternatives in the area of potential effects (APE). If you have any questions about developing the APE, once alternatives are identified, we are happy to assist you. As you noted in Appendix A of your letter, there are several cultural resources within the study area and potential for archaeological sites along the proposed route corridors, as such we look forward to reviewing the archaeological predictive model and report from the fieldwork completed in September, 2016. Please note that if additional alternatives are located outside of the fieldwork conducted in September, 2016 that additional archaeological investigations may be appropriate. Before further identification is considered, we recommend DOT&PF establish an APE.

As a reminder, The APE should encompass the geographic area within which an undertaking may directly or indirectly affect historic properties. Following the establishment of the APE, any potential historic properties within the APE must be evaluated for eligibility for inclusion to the National Register of Historic Places (*36 CFR § 800.4*). The nature of project effects on any historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places, will need to be assessed (*36 CFR § 800.5*). Adverse effects to eligible historic properties will need to be resolved through mitigation measures developed in consultation with our office (*36 CFR § 800.6*).

As more information becomes available, we will work with DOT&PF and consulting parties to avoid, minimize, and/or mitigate effects to historic properties. We look forward to further consultation with DOT&PF for this project in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska* and Section 106 of the National Historic Preservation Act.

Thank you for submitting the scoping materials for the subject project for our review and comment. If you have any questions about cultural resources please contact me or Northern region's Professionally Qualified Individual (PQI) Tom Gamza.

Mark W. Rollins

Archaeologist II

Alaska State Historic Preservation Office/ Office of History and Archaeology

550 West 7th Avenue, Suite 1310

Anchorage, AK 99501

(907) 269-8722

National Park Service, Scoping Comments:

From: Hood, Rhea [mailto:rhea_hood@nps.gov]

Sent: Tuesday, November 29, 2016 12:22 PM

To: Schacher, Sarah E (DOT)

Subject: Kivalina Evacuation and School Site Access Road 0002384/NFHWY000162

VIA ELECTRONIC MAIL: NO HARD COPY TO FOLLOW
IN REPLY REFER TO:
8.A.4 (AKRO-RCR)

National Park Service
240 W. 5th Ave.
Anchorage, AK 99501

Sarah E. Schacher, P.E.
2301 Peger Road
Fairbanks, AK 99709

Dear Ms. Schacher,

Thank you for your letter of November 11, 2016, requesting National Park Service preliminary review and comment of the proposed Kivalina Evacuation and School Site Access Road Project.

The NPS administers the National Historic Landmark program for the Secretary of the Interior. The NPS serves as an interested party throughout the Section 106 process to help ensure the integrity of the NHL, which includes consultation prior to an agency making a determination of effect.

Based on the project description you provided, the entire project study area is within the boundary of the Cape Krusenstern Archeological District National Historic Landmark (attachment). Kivalina is part of the NHL because of its evidence of precontact occupation, and because of the understanding that currently submerged lands and wetlands were dry during the Pleistocene and have potential for research on the history of that period. We are interested in the process of identification and evaluation of cultural resources in the study area, activities or construction that will involve ground disturbance in the study area, and mitigation actions during and after construction of the access road.

Please direct questions and correspondence to me at (907) 644-3460 or rhea_hood@nps.gov. We look forward to working with you to minimize harm to this important property.

Sincerely,

/s/ Rhea Hood

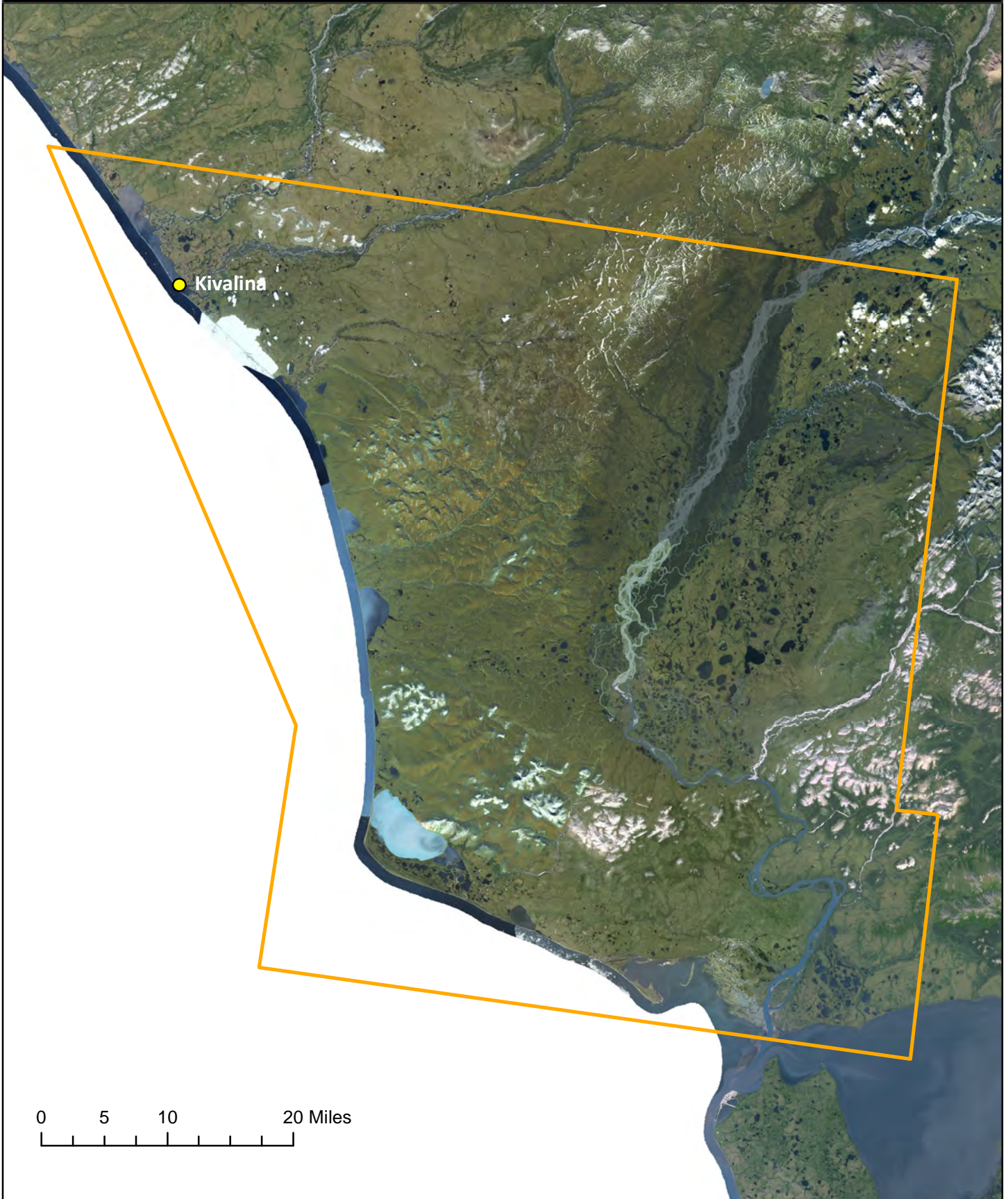
Rhea Hood

Archeologist, National Register of Historic Places Program



**Cape Krusenstern Archeological District
National Historic Landmark Boundary
NOA-00042**

National Park Service
Alaska Regional Office
Cultural Resources



0 5 10 20 Miles

Alaska Department of Natural Resources, Scoping Comments:

From: "Leinberger, Dianna L (DNR)" <dianna.leinberger@alaska.gov>
To: "Schacher, Sarah E (DOT)" <sarah.schacher@alaska.gov>
Cc: "Wait, Alexander J (DNR)" <aj.wait@alaska.gov>, "Smith, Julie A (DNR)" <julie.smith@alaska.gov>
Subject: **FW: Kivalina Evacuation and School Site Access Road 0002384/NFHWHY000162: Request for Agency Scoping Comments by 12/12/2016**

Hello,

Thank you for the opportunity to provide comment during scoping notice for the Kivalina Evacuation and School Site Access Road. The Department of Natural Resources (DNR), Division of Mining, Land and Water (DMLW), Northern Region Lands Office has reviewed the material and has the following comments.

1. The State received title to the affected lands beneath navigable waters under the Alaska Statehood Act (P. L. 85-508) and the Submerged Land Act of 1953 (P.L. 31, 83rd Congress, First Session; 67 Stat. 29) as well as the Equal Footing Doctrine, which declares that all new states enter the Union on an equal footing with the original states with respect to sovereign rights and powers to include ownership of the beds of navigable waters. The proposed alternatives all cross the Kivalina Lagoon and therefore will require an easement from DNR, DMLW. Easements are a type of disposal of interest and therefore require a public process that involves public notice and an appeal period; therefore project planners should consider this when developing timelines for permitting. Submitting an easement application a year in advance would be best. For any easement related questions, please contact AJ Wait, Natural Resource Manager, at aj.wait@alaska.gov or at 451-2777.
2. While USACE does not list the Kivalina or the Wulik Rivers as navigable, they are considered navigable by the State of Alaska. Any material mined from tidelands, shorelands or submerged lands, or from islands determined to have emerged from the bed of the navigable rivers which passed to the State are state land/resources and a material sale will be required. In order to issue material sale contracts, DMLW will need to designate the sites as material sites/sources which will require a full disposal of interest decision to determine if the action is in the best interests of the State; therefore project planners should consider this when developing timelines for permitting. Submitting applications a year in advance would be best. For any material site/sale questions, please contact Julie Smith, Natural Resource Manager, at julie.smith@alaska.gov or at 451-3010.
3. DNR, DMLW reviews all mining and reclamation plans for all material site mining within the State regardless of land ownership, so a mining and reclamation plan should be submitted for DNR, DMLW review/approval (AS 27.19). Any non-state land mining and reclamation plans may be submitted to Julie Smith.

DNR, DMLW understands this is an important project for the people of Kivalina and we look forward to working with the community, the Northwest Arctic Borough, and state and federal agencies on this

project. Thank you again for the opportunity to comment. If you have any questions or we can provide additional information, please let us know.

Sincerely,

Dianna

Dianna Leinberger
Natural Resource Manager
Northern Region Office
Division of Mining, Land & Water
Department of Natural Resources
(907) 451-2728



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
Planning and Consultation Branch
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
December 12, 2016



Sarah E. Schacher
Preconstruction Engineer
Department of Transportation and Public Facilities
Northern Region
2301 Peger Road
Fairbanks, Alaska, 99709-5316

Re: Kivalina Evacuation and School Site Access Road
0002384/NFHwy00162
Request for Scoping Comments

Dear Ms. Schacher:

The U.S. Fish and Wildlife Service (Service) has reviewed the Request for Scoping Comments by The Alaska Department of Transportation and Public Facilities (ADOT&PF) to construct an all-season evacuation road between Kivalina Island and Kisimigiuqtuq Hill (K-hill; Figure 1). We understand ADOT&PF and FHWA are reviewing three preliminary route options (Figure 2):

- A northern route of approximately 9.1 mi (14.6 km), originating at the south end of the Kivalina Airport runway. This route would run north on the east side of the barrier island for approximately 1.5 mi (2.4 km), cross the lagoon eastward via a causeway or bridge, and then proceed along higher (drier) ground between the Wulik and Kivalina rivers to the terminus at K-Hill;
- A southern route of approximately 6.9 mi (11.1 km), originating at the south end of the Kivalina Airport runway. This route would immediately cross the lagoon eastward via a causeway or bridge, and proceed through low-lying wetlands along relic channels of the Wulik River to K-Hill; and
- A combined route of approximately 8.6 mi (13.8) would follow the northern route before merging with the southern route via a 1-mi (1.6 km) connecting segment.

In addition, four potential material source locations have been identified in the project area. These include: K-Hill, the Wulik River deposition zone, Wulik River relic channels, and the Kivalina River deposition zone (Figure 2).

Recommendations: The Service recognizes the purpose and need for the proposed project and appreciates the opportunity to comment on these preliminary options. We offer the following recommendations to help reduce adverse impacts from the proposed project to fish, wildlife, and habitat.

Threatened and Endangered Species: The proposed project is within the range of three species listed as threatened under the Endangered Species Act of 1973 (ESA), as amended: spectacled eiders (*Somateria fischeri*), Alaska-breeding Steller's eiders (*Polysticta stelleri*), and polar bears (*Ursus maritimus*). Additionally, the project area occurs within Unit 3, barrier island habitat, of designated polar bear critical habitat (75 FR 76085).

Although low numbers of spectacled and Steller's eiders may migrate through the project area, neither species is currently known to nest in the region. Polar bears may occasionally pass through, or rarely den, in the area, although their density is very low and encounters are expected to be infrequent. The Service recommends the applicant develop a Polar Bear Interaction Plan for personnel to follow in the unlikely event that a polar bear enters the project area. Alternatively, if desired by the applicant, the Service can provide standard *Polar Bear Interaction Guidelines*.

When the project description is finalized and the permitting process begins, the Service will conduct section 7 consultation under the ESA for the proposed project. The lead Federal action agency (i.e., the federal funding or permitting agency) will be responsible for initiating section 7 consultation.

Migratory Birds: Migratory bird nests, eggs, or nestlings could be destroyed if work is conducted in nesting habitat during the spring and summer breeding season, which is generally May 20 through July 20 in the proposed project area. The Migratory Bird Treaty Act (MBTA) prohibits the willful killing or harassment of migratory birds. To minimize disturbance to nesting birds and help comply with the MBTA, we recommend land disturbing activities (e.g., clearing, excavation, fill, brush hogging, etc.) not occur from May 20 to July 20. For more information on timing guidelines for land disturbance activities, please refer to the following link: http://www.fws.gov/alaska/fisheries/fieldoffice/anchorage/pdf/vegetation_clearing.pdf (please also note these guidelines are currently under revision).

In addition, the scoping letter does not identify a source of electrical power for the evacuation site on K-Hill. The Service recommends avoidance of overhead powerlines by burying power cables in the roadbed, or by providing on-site power generation. If overhead powerlines would be proposed to connect the evacuation site on K-Hill to the existing power supply in Kivalina, migratory birds (including listed eiders) would be at risk of collision with the overhead lines. Birds in flight suffer considerable mortality from collisions with man-made objects (Manville 2004). Birds involved in collisions with man-made objects may also experience severe injuries including concussions, internal hemorrhaging, and broken bones. Birds in flight are particularly at risk of collision when visibility is impaired by darkness or inclement weather (Weir 1976); conditions which are common in northwest Alaska. Overhead power lines would also constitute a long-term, if not permanent, collision risk to all migratory birds.

Therefore, if overhead powerlines cannot be avoided, the Service recommends installation of fixed-tag bird flight diverters similar to the FireFly™ (Figure 3) to increase visibility of any overhead lines and reduce collision risk for migratory birds. Recent analysis suggest line marking devices placed at adequate spacing are likely to reduce collision rate by 50-80% (APLIC 2012).

Finally, if lighting would be proposed for the road corridor or evacuation site at K-Hill, the Service would recommend incorporation of design features (e.g., shielding to reduce outward-radiating light) to minimize the potential for attracting and disorienting migratory birds.

Evacuation Road Route: The Service considers wetlands, ponds, sloughs, watercourses, and riparian areas to be higher-value habitat types where impacts should be avoided or minimized. Although the Northern route is longer, 9.1 m (14.6 km), it avoids riverine and wetland habitats within the floodplain of the Wulik River (Figure 2). While the Southern and Combined routes take a more direct path, and may initially be more economical to develop, due to the dynamic nature of the Wulik River meander plain, both the Southern route and eastern portion of the Combined route would likely be more costly to maintain in the long-term. Additionally, the Northern route would largely avoid traversing important riverine and wetland habitats in the project area, and would therefore be the least impactful alternative. Therefore, because the Northern route would be the least impactful to wetland habitat, and represents the lowest-maintenance, long-term alternative, the Service recommends selection of the Northern route for the proposed Kivalina Evacuation Road.

Material Sources: The Service recommends avoiding development of the three potential material sources within the Wulik and Kivalina rivers (e.g., the Wulik River deposition zone, Wulik River relic channels, and the Kivalina River deposition zone). The Kivalina and Wulik rivers are important spawning, rearing, and migratory habitat for King (*Oncorhynchus tshawytscha*), Sockeye (*Onchorhynchus nerka*), Pink (*Onchorhynchus gorbuscha*), Coho (*Onchorhynchus kisutch*), and Chum salmon (*Onchorhynchus keta*), as well as Dolly varden (*Salvelinus malma*) (WHPacific 2012). Gravel mining within the Kivalina or Wulik river channels could be problematic because once material sources are depleted, they would likely fill with water and potentially become anoxic deepwater traps for overwintering fish. Due to the potential for disrupting important fish habitat from in-channel material extraction, and the importance of the local fisheries to subsistence, we recommend against development of any material source within the Kivalina or Wulik river channels.

Instead, the Service advocates for development of the K-Hill material source. Because the K-Hill source is located 1) in drier habitat outside the Wulik and Kivalina river channels, and 2) proximal to the evacuation road terminus at K-Hill, the Service believes development of this material source would be least impactful to important local fisheries and wetland habitat.

Kivalina Lagoon Causeway/Bridge: To avoid and minimize impacts to marine mammals and anadromous fish species, the Service recommends any crossing of Kivalina Lagoon should maintain normal physical and ecological processes within the lagoon by promoting natural sediment transport patterns, accommodating tidal shifts, and maintaining functional connectivity for wildlife passage and fish spawning.

Invasive Weeds: River corridors provide an easy pathway for spreading invasive species and the Service recommends implementing Best Management Practices (BMPs) for minimizing the introduction and proliferation of invasive species. BMPs can include establishing an equipment cleaning practice, invasive species education for staff and contractors, scheduling work at times when plants do not have viable seeds, using certified weed-free gravel and erosion control products, controlling invasive species at material sites, disposing of spoil and vegetation contaminated with invasive species appropriately, revegetating with local native plant species,

and developing a monitoring and treatment plan. For more assistance with managing for invasive species in the project area, please contact our office.

Mitigation: Service policy regarding impacts to fish and wildlife habitat includes first avoiding, then minimizing, and finally compensating for any remaining unavoidable impacts. These impacts include direct, indirect, and temporal impacts. If there are unavoidable project impacts, then the Service recommends compensatory mitigation for the unavoidable impacts by restoring or permanently protecting equal or higher-value wetlands as described in the 2008 Final Compensatory Mitigation Rule (33 CFR 325 and 332).

We appreciate this opportunity for early comment. If you need further assistance, please contact Kaithryn Ott at 907-456-0277 or kaithryn_ott@fws.gov.

Sincerely,



Robert J. Henszey
Branch Chief
Planning and Consultation

ecc: Susan Georgette, Refuge Manager, U.S. Fish and Wildlife Service
Mary Romero, U.S. Army Corps of Engineers

Literature Cited

- Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.
- Manville, A.M., II. 2004. Bird strikes and electrocutions at power lines, communication towers, and wind turbines; State of the art and state of the science – next steps towards mitigation. Proceedings 3rd International Partners in Flight Conference, March 20-24, 2002, Asilomar Conference Grounds, CA. USDA Forest Service General Technical Report PSW-GTR-191. 25 pp.
- Weir, R. 1976. Annotated bibliography of bird kills at man-made obstacles: a review of the state of the art and solutions. Unpublished report prepared for Department of Fisheries & Environment, Canadian Wildlife Service-Ontario Region.
- WHPacific. 2012. Native Village of Kivalina Evacuation route significant biological resources baseline report and preliminary essential fish habitat analysis. Prepared for Maniilaq Association on behalf of: Native Village of Kivalina. 41 pp.

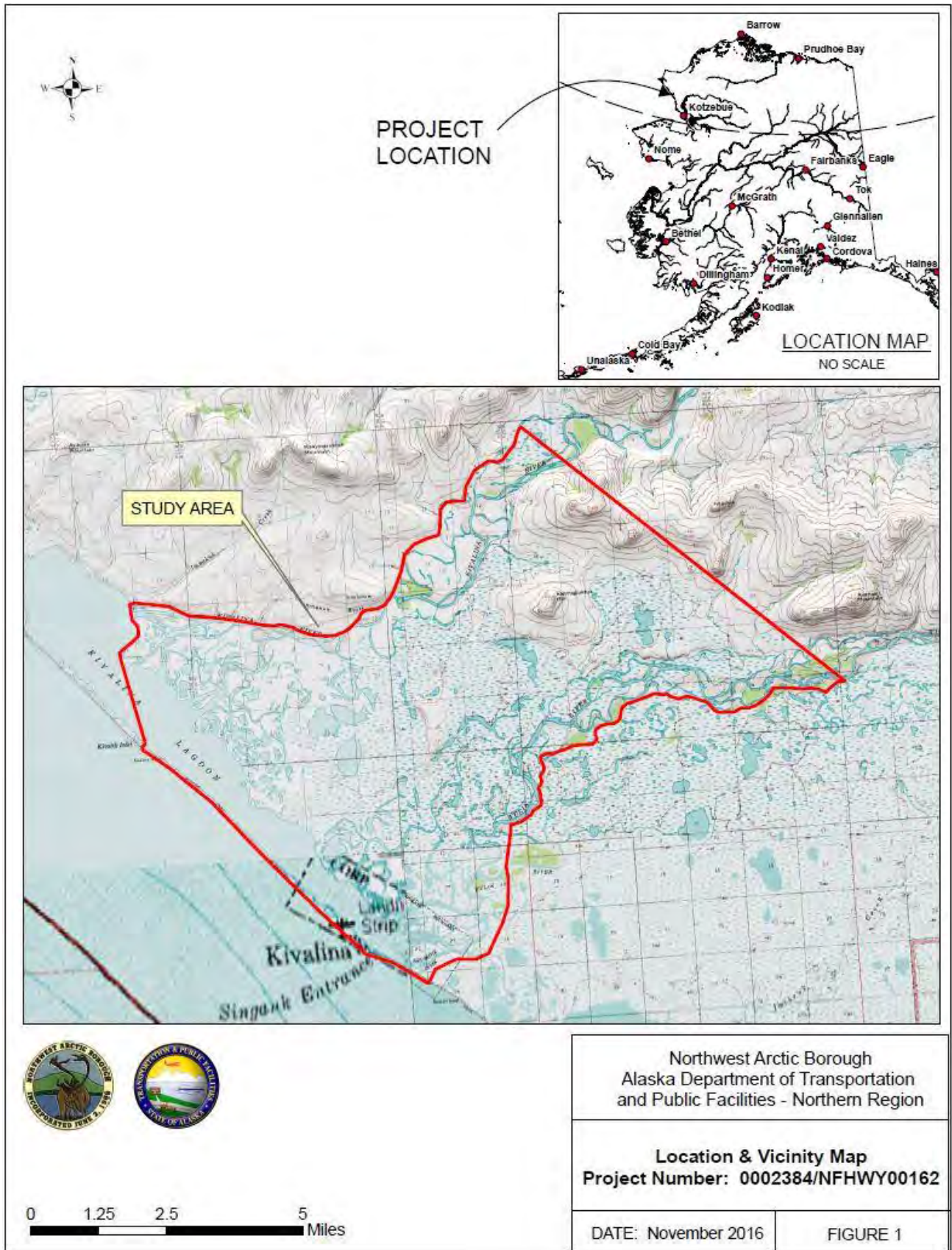


Figure 1. Location of the proposed evacuation road project east of the community of Kivalina, Alaska.

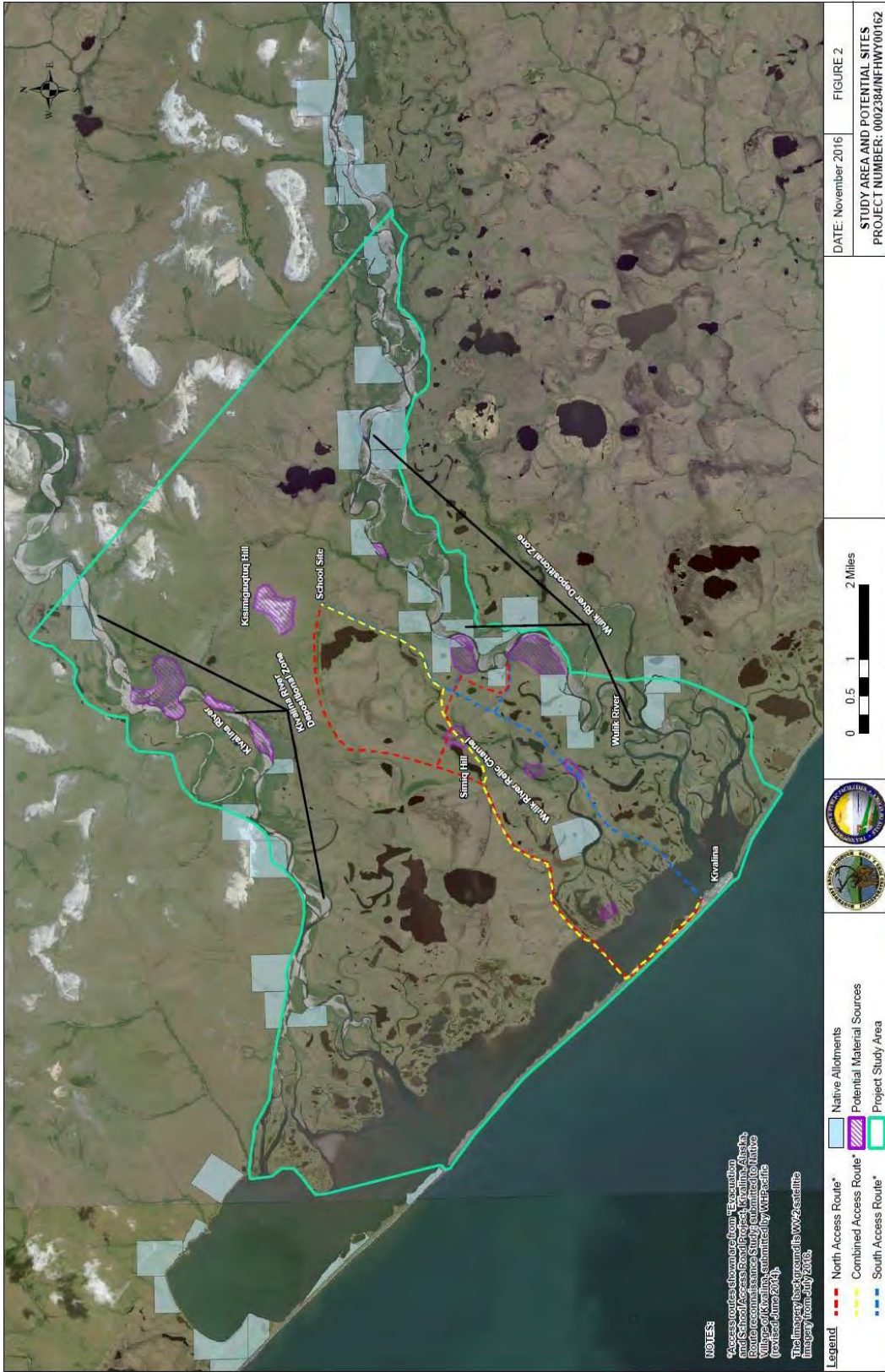


Figure 2. Detail of the proposed Kivalina Evacuation Road route alternatives and potential material sources within the Kivalina and Wulik rivers.



Figure 3. The Service recommends fixed-tag FireFly™ diverters (or similar) be installed at appropriate intervals on and overhead powerlines associated with the proposed Kivalina Evacuation Road Project.

Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHWHY00162
USFWS Agency Scoping Meeting
USFWS Office, Anchorage, AK
12/19/2016

Attendees:

USFWS:

Kaithryn Ott, USFWS Endangered Species Wildlife Biologist; Section 7 Consultation

Louise Smith, USFWS Wildlife Biologist

Robert Henszey, Fairbanks Branch Chief

DOT&PF:

Paul Karczmarczyk, AK DOT&PF

Sarah Schacher, AK DOT&PF

Jonathon Hutchinson, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions

John Baker, Remote Solutions

Sara Lindberg, Stantec

DOT&PF provided a brief project summary and opened the meeting up to discuss USFWS questions, comments, and concerns. The following summarizes the meeting discussion by topic.

Preferred Route

Question from Louise: Can you use the existing airport runway as part of an evacuation road? Why not?

Paul: The FHWA regulations have specific embankment standards and this activity would not be allowed by FAA.

Sarah S: The Purpose and Need for the project also dictate that having a direct route out of the community is critical to having a safe and reliable access route rather than running in parallel to the runway.

Question from Louise: How long before the community moves once the school moves?

Sarah S: The FHWA won't get involved in a school relocation project so that isn't within the scope of this meeting. The federal action for this meeting relates solely to the evacuation road.

Sara L: The community is not ready to determine where they are going to relocate.

Follow up from Louise: Regarding the Northern Route, building a road at the northern higher lands seem more ideal.

Sara L: The purpose and need of this project is to provide a safe and immediate evacuation route. Taking their elders north along the barrier island one mile may not be possible during a

storm surge event and would not be safe. Furthermore, people in public meetings speak about staying up all night in fear during storms and would like the lagoon crossing to be as close to town as possible.

Material Sites

Louise: The Wulik is pristine and is a beautiful river known for Dolly Varden. My opinion, regarding gravel, is that you will constantly need to dewater, which could be problematic in the winter. The concern is the excavation may not recharge naturally, resulting in permanent alteration in that part of the river. In other areas, excavations too deep may become anoxic from sedimentation and we would generally like to see avoidance of the river channels.

Sarah S: We know that's something to consider; and there is an example regionally of a material site on the Noatak River that remains dry during winter excavation, and we anticipate this site would be the same. On that issue, DOT is currently working with UAF on a Sag river sedimentation study to see how fast its river bars replenish after excavation, although that is a very different system than what we are looking at with this project.

Jonathon: There was a pond that was trapping fish during flooding events on the Dalton Highway, and we developed criteria with DNR and ADF&G for excavation in that area to avoid fish entrapment. Instead of creating shallow pits during excavation, we used deep trench pits with perpendicular access to the channel to allow fish escapement. The trenches were sloped so they would continue to drain and avoid both entrapment and concerns about anoxic conditions. We could agree to similar stipulations for this project.

Louise: That sounds like a great solution and may be workable in this scenario. The Wulik appears to act like a delta. If you do mine deep, you will need to include an egress.

Causeway

The current crossing options for the lagoon will include some form of bridge and/or culverts with a causeway of gravel with or without rock. Considerations for these options are sediment transport, hydraulic processes, boat passage, marine mammals, ice impacts, and other issues. A similar design, as an example for reference, but on a larger scale is the Safety Sound bridge in Nome.

Question from Louise: What is water flow like in the lagoon?

John: There are two inlets into the lagoon from the sea.

Sarah S: Most of the hydrologic movement in the lagoon occurs during storm surge events, but otherwise there is minimal lagoon circulation.

John: Breakup is not at all a big event in the lagoon. There's so little movement of the water, that rather than flowing out through the inlets, the ice just melts in place.

Questions from Louise: Was there modeling from USACE on closing the causeway?

Sarah S: The biggest challenge to closing the lagoon completely would be the ability of the community to navigate in or out of the enclosed portion of the lagoon;

Paul: ...and also we anticipate both adult and juvenile fish, and marine mammal, passage will be concerns from NOAA/NMFS too, so at this point I'm not thinking full closure will be acceptable, but we'll know more when we talk with the EFH and marine mammal folks in Anchorage.

Katherine: The USACE Causeway and Bridge Design Report June 2016 study modeling has completed multiple circulation studies and flow modeling that is available as a reference.

Question from Louise: What are your money constraints and schedule?

Sarah S: Our goal is to get through scoping and get to a Class of Action decision early in February, with the conclusion of the environmental documentation occurring before end of 2017. Design itself will be rather straightforward.

Katherine: We will be applying again for a TIGER grant application on behalf of the community this April (2017). We submitted a grant application in 2016 and have also completed significant lobbying in DC to help make legislators and federal agencies aware of the project.

Comment from Robert: What is your current data on the wetlands?

Sara L: ASRC completed a desktop wetlands study in 2016. As you can imagine, the majority of the area is considered high value wetlands. We wanted to characterize those values on a finer scale, so we took the high value wetlands and further divided them into both High and High+ values based on a number of criteria. The permanently flooded, emergent wetlands are the highest functioning according to the study.

Follow up from Robert: Interestingly, it may turn out that instead of emergent wetlands, the less common shrubby habitat in that area is actually of higher value locally for wildlife habitat. In that regard, we might actually prefer you avoid areas with taller willows and brush, as these would be higher value nesting habitat for migratory birds than the low scrub and emergent habitats.

Section 7 Consultation

Kaithryn: There really isn't a Section 7 concern in this area for either of the eiders or other species, except that reinstatement of Section 7 polar bear critical habitat could create a delay if we hadn't prepared properly for it. It should not be an issue for this project, but a polar bear interaction plan will be required. Otherwise, this project should meet requirements for an Informal Section 7 consultation.

Summary of USFWS Comments/Concerns

- Avoid Fish trapping within material sites
- Defer to NOAA/NMFS re: causeway openings on EFH and marine mammal passage/concerns
- Shrubby wetlands may be of higher value and more important for bird nesting than emergent, flooded areas. Parse those areas out if possible during design and seek avoidance/minimization
- Informal Section 7 consultation will be sufficient

ACTION ITEMS

Katherine to Share: Links to USACE Bridge Design and Wetlands Study

Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHWHY00162
ADF&G Agency Scoping Meeting
DOT&PF Building, Fairbanks, AK
12/19/16

Attendees:

ADF&G:

Audra Brase, Region 3 Supervisor, ADF&G Habitat Division

DOT&PF:

Ryan Anderson, AK DOT&PF

Paul Karczmarczyk, AK DOT&PF

Sara Schacher, AK DOT&PF

Jonathan Hutchinson, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions

John Baker, Remote Solutions

Sara Lindberg, Stantec

DOT&PF provided a brief project summary and opened the meeting up to discuss ADF&G questions, comments, and concerns. The following summarizes the meeting discussion by topic.

Fish Habitat

Audra: Ideally, it would be better to do more work in the Kivalina River drainage than in the Wulik River. However, the challenges with the Purpose and Need are understood. The Wulik is a much bigger system and more greater subsistence resource than the Kivalina, although on paper ADF&G does treat the two rivers the same. It appears the material sites you have selected in the Wulik River are below known spawning sites. For overwintering, the Dolly Varden go into the sound (lagoon) especially with the warming climate. When overwintering in the sound and the lower part of the Wulik, they don't just sit in a hole but they are a bit active and swim around. Knowing about the Dolly Varden and their overwintering activity in the lagoon would be helpful as we get closer to designing the lagoon crossing. ADF&G is trying to do a sonar count this spring in the Wulik River for the Red Dog Mine, and has data every year for three years. Sport fish division has done this. Juvenile fish outmigration happens in the spring, and spawning for Dolly Varden are farther up the river and takes place in the fall.

Lagoon Crossing

Paul: We would be interested in hearing about your concerns for the lagoon crossing and implications on both adult salmon and other fish passage, and also any potential effects on, for example, the lagoon's prey base or other resources used by juvenile fish during outmigration.

Audra: We wouldn't be at all comfortable with a solid causeway concept because of the impacts that would have on marine mammals, fish habitat, and overwintering Dolly Varden.

Material Sites

Sarah S: River material extraction is appealing because of the ability to have a winter haul, and using the K-hill site is more costly.

Jonathan: The summer and winter mining methods and hence costs will be very dependent on agency feedback and any specific measures implemented for mitigation.

Audra: Using the Wulik gravel is not off the table if appropriate reclamation is used and connectivity is maintained to avoid impacts to fish and habitat values.

John: What design elements can we incorporate now to make you more comfortable?

Ryan: For example, is it possible for us to look at the depths of the channels along the river, and then use that depth as a reference for the maximum extent of how deep you would be comfortable with us going when accessing gravel? The nearby ponds in the area could be used as reference when suggesting excavation depths.

Audra: Yes. You need to make sure any proposed gravel site next to the river is day-lighted to allow for channel connectivity, and you might also need to design what is left afterward to create appropriate fish habitat. As for extraction methods, ADF&G would rather see a shallow trench vs a deep hole. What constitutes "deep" will depend on the location.

John: Is there a way we can extract on the big gravel bar on the Wulik and make the habitat better?

Audra: You would not want a big pond, as that would divert flow and in effect "shallow up the river". Instead, you want to be sure any excavation is day-lighted, and make it narrow. You want to be sure you leave a slot to make sure the fish can get back out to the river. Also, you don't want to work near known spawning areas.

Ryan: We could include conceptual material site designs to show an acceptable typical version in the environmental document, but we'll need input from the agencies on criteria to consider and specifics we'll need to mandate in order to reach that acceptable design.

Mitigation

Paul: The best thing we can do is to incorporate both fish habitat and wetland impact mitigation into design as we go. We'd like to work up front with ADF&G and other agencies to come up with a mitigation proposal acceptable to the USACE and also serve to mitigate other resource impacts.

Audra: Reconnecting sloughs and oxbows may be valuable, as long as it is not impacting the local whitefish fishing areas. I would be interested in seeing which waterbodies flood and then determine logical locations to connect channels.

Audra: As for the lagoon and larger crossings, a bridge is always better than a culvert. Culverts have typically failed around the state. Once you nail down the route, we can work with you to see where bridges may be more appropriate.

Water Withdrawal

Ryan: What about water withdrawals? There will be water needs for this project to create ice roads, and also later on for dust control and compaction.

Audra: We would need to get a handle on whether there are fish in the various lakes along the routes.

Ryan: To simplify matters, could we just assume there are fish in all the lakes? That way, rather than going out and spending time and money sampling all the lakes, we could create parameters for the contractors based on that worst-case assumption, have them go get bathymetry of any lake they'd like to use for water withdrawal, and then put parameters on the depth of withdrawal based on a standard assumption of fish presence?

Audra: Yes, we can assume there are fish in all lakes, and then limit draw down of water accordingly, or limit draw down to just lakes where a certain depth could be maintained. This would avoid having to do a pre-survey.

Audra: Something else that may help is when you reclaim the material sites, you can make sure they are connected to the river and then you could still use them for maintenance water after construction. We do allow water withdrawals from fish bearing waters, but would need to implement fish screening requirements that would need to be followed.

Audra: As for permitting, we'd issue two different permits - one for construction and one for maintenance. Gravel pits could double as water storage for the winter haul road, and then also be used long-term for ongoing maintenance. You could also pump the water back into the river as long as the sedimentation wasn't a problem.

ACTION ITEMS

ADF&G to provide: The spawning and overwintering areas mapped, and the data collected can be provided to DOT&PF by Fred DeCicco.

Audra: I suggest you talk to Nikki Braem, ADF&G Subsistence, as she's got a lot of local use information.

The ADF&G point of contact for this project will be Parker Bradley.

Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHWHY00162
Combined NPS and ADNOR/OHA-SHPO Agency Scoping Meeting
NPS Building, Anchorage, AK
12/20/16

Attendees:

NPS:

Rhea Hood, Archaeologist, NPS National Register of Historic Places Program
Andrew Tremayne, NPS Alaska Regional Office Archaeologist

SHPO:

Mark Rollins, OHA Archaeologist
Alan Depew, OHA Archaeologist

DOT&PF:

Paul Karczmarczyk, AK DOT&PF
Sara Schacher, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions
John Baker, Remote Solutions
Sara Lindberg, Stantec
Ross Smith, Stantec

DOT&PF provided a brief project summary, review of work completed to date, and opened the meeting up to discuss NPS and SHPO questions, comments, and concerns. The following summarizes the meeting discussion by topic.

Section 106 Process and Impacts to Cultural Resources

Question from Rhea: What is the general approach to impacts to cultural resources? Has this been discussed with the community of Kivalina? What will you do if you find human remains? Has an inadvertent discovery plan been completed for Kivalina?

Sarah S: Our Standard Contract Provisions will be included in the construction contract documents. That is, if anything in the field is discovered, work would stop, and the contractor would need to contact SHPO, and then proceed as determined. This will be discussed with community of Kivalina during the Section 106 consultation process, and we'd also develop an inadvertent discovery plan.

Mark: It will be important for DOT&PF to identify an appropriate Area of Potential Effect (APE) for consideration by SHPO. While the study area boundary you show is good, an APE could stay the same size or get smaller. SHPO will defer to Tom Gamza (DOT&PF Environmental Analyst/Professionally Qualified Archeologist) to determine if enough work has been done within the resulting APE.

Paul: And we also assume we'll need inadvertent discovery plans in place and require monitoring during any ground disturbance. There is still a long way to go with the project before we get to that point, and there is still a lot of room for avoidance and minimization. And remember that no NEPA-qualified alternative has been proposed yet, so we have lots of flexibility with design...within engineering parameters of course.

Question from Andrew: What is your project timeline?

Sarah S: We need to start the 106 process with an initiation of consultation letter as soon as possible. We will approach FHWA next month for a Class of Action call, and expect to complete the environmental document next year.

Question from Andrew: Do you anticipate preparing a Memorandum of Agreement (MOA)?

Sarah S: If there is something to mitigate, then we would.

Paul: Any mitigation measures, including an MOA, if needed, would be captured in the construction contract specifications. For example, as Sarah mentioned the inadvertent discovery plan developed during consultation would likely result in an MOA with the Native Village of Kivalina regarding a process to follow should human remains be discovered.

Mark: The DOT Statewide programmatic agreement for handling cultural resources could meet the requirements for this project. This agreement has appendices with templates that help in the development of construction monitoring and inadvertent discovery plans. If a determination of adverse effect was completed for this project it would trigger a need for an MOA. Another option is, if you can't do sufficient identification beforehand, you could do a Programmatic Agreement (PA) with protocols on how to proceed with construction and what would be done if something was encountered. Also, if SHPO was not able to make a finding of effect but wanted to keep the process moving, you could do a PA.

National Historic Landmark (NHL) Boundary/4(f) concerns

DOT&PF provided a brief overview of Section 4(f) and its elements for NPS staff, and conveyed concerns on anticipated actual and potentially perceived impacts to the NHL by NPS and the public.

Question from Sarah S: One of our questions is about the NHL boundary, where it is and how it will affect Section 106 consultation. The SHPO and NPS have two different boundary maps. The AHRs website shows the study area partially within the NHL, but the NPS map shows a different coverage.

Andrew: Based on our map, the whole study area is within the landmark boundary. We can provide SHPO with the latest GIS files for the correct boundary mapping. However, no matter where the boundary is, the NPS position on the project would not change. The Park Service offers technical assistance to SHPO and DOT&PF to ensure any cultural sites within the boundary do not get damaged. It sounds like DOT&PF is doing everything right in your approach. One thing we would like to see is a description of how you will deal with mitigating sites during construction if they are encountered.

Alan: It will depend on if they are contributing sites that are encountered. There might not be any contributing sites within the landmark boundary. Because the entire project is within the

landmark boundary, there will not be a finding of no historic properties effected. Rather, we will be looking at either a finding of adverse effect, or no adverse effect. The question is whether there are resources within that boundary that are being affected.

Mark: The National Historic Landmark is considered a historic property, so you can never have a “no effect” determination, it is either a no adverse or adverse effect.

Section 4f Consultation

Question from Paul: Given the extent of the NHL, there would be no practicable alternative to going through the landmark as it encompasses the entire study area, the community of Kivalina, and the evacuation road terminus. Will the presence of a road necessarily have an adverse effect on the landmark by its own right? For example, in terms of setting, viewshed, historical context?

Mark: DOT&PF will need to do the analysis to determine that there is no alternative to going through the landmark to make sure you are minimizing going through it. There will be a public notice process and the Park Service has final jurisdiction on the Landmark. The NPS will receive consultations for a non-objection for both the 4(f) evaluation and the Section 106 process.

Question from Paul: Any ideas on mitigation?

Alan: Mitigation will be consulting party driven. The Park Service would also be involved in that process.

Andrew: We will bring in Janet Clemens in as a Section 106 reviewer for the Park Service.

Action Items:

- DOT&PF/Remote Solutions/Stantec complete the cultural resources survey report
- Depending on consultation &/or proposed routing differences, consider add'l 2017 field survey effort.

Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHXY00162
NMFS Agency Scoping Meeting
NMFS Office, Anchorage, AK
12/21/16

Attendees:

NMFS:

Greg Balogh, Protected Resources, Deputy Director, Marine Mammals
Matt Eagleton, Regional Essential Fish Habitat (EFH) Coordinator, Habitat Conservation Division
Sam Simpson, EFH Coordinator, Habitat Conservation Division

DOT&PF:

Paul Karczmarczyk, AK DOT&PF
Sarah Schacher, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions
John Baker, Remote Solutions
Sara Lindberg, Stantec

DOT&PF provided a brief project summary and opened the meeting up to discuss NMFS questions, comments, and concerns. The following summarizes the meeting discussion by topic.

Lagoon Crossing

Question from Greg Balogh: For the lagoon crossing, did the community indicate their preferred crossing method?

Paul: The community has independently selected the southern route as their preferred road. But for the lagoon crossing concept, we haven't made any decisions on configuration and are looking to NMFS and other agencies for what will minimize impacts to marine mammals and fish. We want to engineer the crossing around those concerns, not design something without knowing about problems then have to go back and revise it.

Matt: A causeway could potentially bottleneck fish, so we will be looking for fish passage accommodation. Also, you'll need to protect points along the active floodplain for erosion.

John: The area is pretty stable. The currents are very low.

Question from Paul: Regarding juvenile fish in the lagoon and rearing habitat. Would a causeway pose issues with salinity and water chemistry due to reduced hydrological exchange or flow rates? Would you for instance be concerned about some incremental decrease in salinity affecting fish survival or habitat elements due to a causeway reducing unimpeded salt water exchange?

Matt: I don't see an issue as long as you maintain natural sediment transport. You also need to consider ice scour. Dolly Varden are a consideration but NMFS doesn't manage Dollies.

John: Ice scour should not be an issue. Ice doesn't move through the lagoon it just melts. The lagoon is mostly shallow throughout the entire middle of the lagoon. The far ends have depth.

Paul: And we've talked to ADF&G about Dolly Varden recently, both about adult spawning and juvenile rearing habitats, and they've given us a lot of good information to incorporate into preliminary design considerations.

Question from Paul: What about marine mammal passage in the lagoon? What criteria will you be looking for? Do you know of any information available on passage concepts or limitations of different types of culverts, box structures, bridges with or without piers, etc.?

Greg: I can't think of any instances where there have been culverts for seals. I will have to look into that to see if there is any evidence of seals swimming through culverts.

Matt: The Endicott Causeway has 3 bridges that were installed as mitigation. Seals will go through those; they are 100 feet long each. I don't think seals would go through a culvert. We have found fish won't go through any culvert longer than 300 feet, regardless of if there is light showing at the end of, or even within the culvert or not. There was actually a long culvert they installed artificial lighting in, and fish wouldn't go through it. You'll need to consider migrating crabs too. In Nome there's the Port Causeway breach, and that is 3-5 meters wide and is specifically designed for crab migration.

Matt: Our hydrologist Sean Eagan could help you locate the best place for the bridge within the lagoon.

MMPA, EFH, and Section 7 consultation process

Question from Sarah S: Do you have any construction concerns about timing or method and how that might impact marine mammals?

Greg: From the marine mammal point of view, aerial surveys completed in the spring would help to identify the various densities of seals depending on timing. We should also assume both the ringed and bearded seal will be T&E listed species before this project is constructed. If densities of seals are low enough based on spring surveys that you have the ability to suspend construction when a seal comes close, then Informal Consultation will be sufficient. For example you would set up a protocol where you would have observers watching for seals and would only need to pause things such as 120-160 decibel pile driving while they're present within a pre-determined distance of the specific project area. If seal densities are too great, or you are not able to pause construction, then Formal Consultation and the issuance of an Incidental Harassment Authorization (IHA) will be required.

Question from Sara L: Can we assume presence and estimate densities of seals in the lagoon to keep the process moving without a spring survey?

Greg: Yes, we can assume presence, and numbers for densities, if we want to keep moving without a survey. Everyone uses assumptions. If you want to keep consultation informal, then

you will not be allowed to have any take. Harassment of a seal from construction noise would be considered a take. Acoustic harassment is the big concern for this project. We would apply threshold distances to the activity area, usually of 2km, which is standard. Marine mammal observers would have to be present during construction to monitor for any seals within this distance. If they see a seal entering the 2km threshold, the contractor would be required to stop work until the seal moved out of the area. I doubt seals are in the lagoon in the winter because it's so shallow, so winter construction is probably preferred. The north end of the lagoon would be out of the action area if the southern lagoon crossing was selected.

Question from Sara L: If DOT&PF moves forward with a IHA, could we make assumptions on presence and numbers for this as well?

Greg: Yes, estimates and assumptions are fine. You are to use the best available data. If you go forward with an IHA, consultation will take a minimum of 5 months. The IHA application consists of 14 questions that you can answer with best available data. Estimates and assumptions are fine. The take we would be worried about for this project would be through noise harassment. The application process includes a 60-day public notice period. Once the permit is issued, NMFS will then need an additional 45 days after that to process the information and complete its biological opinion. Alternatively, the informal consultation process consists of a filling out a template requesting informal consultation. The informal consultation process will take 30 days.

Question from Sarah S: Given the shallow lagoon depth and, from what we've heard, that it freezes to the bottom in most places or at the worst there is little water beneath the ice, we would likely be able to schedule placement of causeway fill during the winter. We could access the area on the ice, break and excavate ice, and place fill during the time there are no seals at all in the area. Would that be the best option?

Greg: Absolutely, as that would not pose the threat of a take given that no seals would be anticipated to be in the area during that time of year. That would be a good example of a specified method that could fit with an information consultation.

Material Sites

Matt: Make sure that for the relic channel material sources, you don't inadvertently cause erosion issues where they may come close to the road.

Mitigation

Question from Paul: Do you have any suggestions on fish habitat mitigation for gravel sources?

Matt: I am just glad you are not proposing to take sand from the beach. The publication *Impacts to Essential Fish Habitat From Non-Fishing Activities in Alaska, 2016* is a document located on our website that has a list of conservation recommendations. It also lists EFH issues by activity. Use that when completing your EFH Assessment.

Question from Paul: Do you have ideas for EFH mitigation projects that might also help satisfy USACE mitigation requirements? Something we could incorporate into design that would serve to mitigate impacts to several resources...wetlands and fish habitat...simultaneously? Or absent that something specific to EFH or marine mammals? For instance, were we to put in a causeway that had a bridge opening or two where passive sonar counters could be installed for marine mammal counts or to collect passage timing or other data, that would be easy to incorporate as we'd essentially be constructing the fixed pass-by points that could serve as survey stations for long term data collection. We're open to any ideas.

Greg: There is no data on if ringed seals swim under structures but I am not sure how valuable that information would be for the future.

Matt: There is a lack of tide information in the north. Maybe an avenue for mitigation is to look at collecting local tide information? The closest tide station is at Red Dog, which is a very different setting than in the lagoon. Often we model things based on stations such as Red Dog and as far south as Nome and then extrapolate, but as you know that's always a guess, particularly given the differences in the types of shorelines. The Non-Fishing Activities document also has ideas about how to mitigate for climate change. You might also talk to the community about what they expect will occur as a result of climate change, and think about accommodating those concerns in your design.

Action Items:

DOT&PF:

- Contact Sean Eagan to discuss hydraulics and placement of the bridge structure in the lagoon.
- Review the referenced document for potential design applications
- Discuss climate change impacts w/ the community to seek design input
- Get a more detailed bathymetry on potential lagoon crossing location(s) to qualify construction methodology that would not pose take hazard on seals (i.e., winter construction feasibility).

Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHWHY00162
USACE Agency Scoping Meeting
Stantec Office, Anchorage, AK
12/21/16

Attendees:

USACE:

Jeremy Grauf, Regulatory Specialist

Janet Post, Regulatory Specialist

DOT&PF:

Paul Karczmarczyk, AK DOT&PF

Sara Schacher, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions

John Baker, Remote Solutions

Sara Lindberg, Stantec

DOT&PF provided a brief project summary and opened the meeting up to discuss USACE questions, comments, and concerns. The following summarizes the meeting discussion by topic.

Potential Routes and Project Cost

Question from Janet: Why do you think the lagoon crossing will be less expensive than the USACE design?

Sarah S: We are looking at the assumptions that went into the Corps study so we can consider other options, such as material costs, along with the lagoon crossing opening needs. We are still in the preliminary phases of work on that. The biggest driver of cost is going to be material sources. We are hopeful that we can get good material on site.

Question from Janet: Where will the material come from?

Sarah S: We are looking at K-hill as a very logical site. The Wulik River also has great alluvial resources. Actual rock material might still need to be imported, but at least the other materials could be found locally.

Questions from Janet: Although there are three listed routes, is there one realistic route that would be most beneficial?

Paul: It's worth making the distinction now that the routes on the study area map are not by any means our NEPA alternatives. They are just several routes the community of Kivalina has proposed based on their local and traditional knowledge coupled with all the previous studies that have been conducted by the Corps, the Borough, the City, and others. We're just now in the

process of scoping to begin developing a range of alternatives for NEPA, and while those proposed routes will be a huge help in developing them, they are just a part of the data we'll be using. We'll need to incorporate recent surveys by the Borough that Remote Solutions has done, along with fitting the purpose and need, including all the past studies, as well as the agency and public input we're getting during scoping and consultation. So with that, your input on wetlands and what comes from our discussions here with you and other agencies will play a big part in determining what that most beneficial route would be.

Sarah S: That said, so far the community's proposed southern route or something in that vicinity seems the most beneficial and feasible. For evacuation purposes, the community needs to have a lagoon crossing as close to town as possible for safety. Also, a route going north along the spit is definitely more complex of a design because of how far out in the lagoon you would need to fill in order to avoid the airport.

School Site

Question from Janet: What is the school site footprint?

Paul: We don't know. The school construction is a parallel project being conducted by the Northwest Arctic Borough, but a completely separate action and not part of this project.

Wetlands

Question from Jeremy: What information do you have on wetlands for the study area?

Sara L: Development of an evacuation road has a long standing project concept investigated by a number of agencies and entities for decades. As a result there are reams of existing data that is being synthesized into our new environmental review document for this project. For example ASRC completed a desktop wetlands study in January of 2016 which lines up with the NWI mapping pretty well. The majority of the study area is wetlands, most of which are semi-permanently or permanently flooded and which were evaluated as high value as part of their study. Because there were so many high value wetlands across the entire study area and it didn't seem appropriate to lump them all as having one value measure, we further split them into high and high+ wetlands based on function. To augment the ASRC desktop information, this fall the NAB had Remote Solutions and Stantec do field work in multiple areas. We looked for connectivity between the numerous lake and sloughs, and looked for other data points to verify wetlands status. Also 2' resolution LiDAR was completed this fall which still needs to be evaluated.

Question from Sara L: The existing wetlands information we have is based on desktop studies, but after extensive field reconnaissance this fall, and with an extensive photo record throughout the study area coupled with soils data taken during archaeological survey work, we intend to strengthen the desktop mapping in hopes of being sufficient for permitting without additional field surveys. Do you think this will be sufficient?

Jeremy: It is difficult to say for sure without seeing the data. Most of the study area is clearly wetlands. Let's just see how far we can get utilizing the desktop supplemented approach.

Compensatory Mitigation

Question from Paul: For the Cape Blossom project near Kotzebue, we had a generally similar length project that calculated out to about 160 debits for 11 miles of road. Do you see something similar for this project or can you even predict that given the new compensatory mitigation calculation process?

Janet: Don't assume that you would need any compensatory mitigation. It may be that you will not need any at all given the project location in Western Alaska.

Question from Paul: What information would you need to make that determination?

Jeremy: We would need the acreage of the impacts and resource types in both Cowardin and HGM. Then we would compare that to the acreage of wetlands available within the watershed. A Hydrologic Unit Code (HUC) of 12 would be sufficient, unless the project spans two units, and then two HUC 10 units would be sufficient to determine watershed acreage.

Question from Paul: Because the majority of study area is wetlands, selecting a route that avoids wetlands is going to come down to qualitative avoidance. We can use LiDAR data to find the high spots, but it will likely still be mostly wetlands. How much detail do you need to see in our avoidance documentation?

Jeremy: We would like to see you avoid the High+ value wetlands. Documenting that will go a long way.

Paul: As a sidebar, when we were talking to the USFWS, they explained that in that region, they really valued the woody shrub habitat over the emergent marsh wetlands which the Corps has usually considered of higher value, so there is likely going to be some competing notions of "high value" between the two agencies. Do you see a way to address that difference?

Janet: We are open to protecting habitat resources that may be important to other agencies like the USFWS. Also, avoidance of salmon streams, adhering to the bird timing window...these are great avoidance and minimization measures as well. Your application should note all those considerations so they can be incorporated into our review.

Question from Paul: When we sent out scoping letters, I'd anticipated that we'd receive a response from the Corps that basically acknowledged jurisdiction, and provided a reference POA# for future use in correspondence and such. We haven't gotten one yet, and are wondering why?

Janet: This project would definitely need an individual permit, and we have a POA# already set up for this project that was used during the Corps study back a few years ago. We'll just use that same number as it covers the same project area, and we can send you confirmation of that.

Action Items:

Janet: The Corps will send a letter to DOT&PF with the POA# for the project.

Kivalina Evacuation and School Site Access Road
Project Number: 2047055102
NMFS Meeting
NMFS Office, Anchorage, AK
06/06/17

Attendees:

NMFS:

Matt Eagleton, Regional Essential Fish Habitat (EFH) Coordinator, Habitat Conservation Division
Sean Eagan, Hydrologist (via phone)

DOT&PF:

Paul Karczmarczyk, AK DOT&PF

OTHERS:

Katherine Keith, Remote Solutions (via Phone)
John Baker, Remote Solutions (via Phone)
Andrew Niemiec, Stantec
Francis Wiese, Stantec
Seifu Guangul, Stantec (via Phone)

Purpose: The purpose of the meeting was to brief Sean Eagan on the lagoon-specific hydrological aspects of this project, and to determine if he had any feedback, and would be interested and able to assist and collaborate.

NMFS and DOT&PF provided a brief project summary and opened the meeting to discuss lagoon and lagoon-crossing related hydrology questions, comments, and concerns. The following summarizes the main discussion.

DOT&PF noted that the main design considerations are to construct a lagoon crossing that is efficient, safe, cost effective, and balances biology, hydrology, sediment transport/erosion, and engineering. From a USACE perspective, the crossing could be a solid fill, but DOT&PF is looking for input from NMFS on specific design criteria to ensure the ultimate design is acceptable, cost effective, and balances all key considerations.

NMFS offered to help with the hydrology if needed, and noted that if the Southern entrance blocks naturally sometimes, then the design may also need to account for possible northward flow of the Wulik River outflow volume. Stantec and Remote Solutions (RS) replied that local observations support a water level rise more than it does water movement north or southward, and that some water flows through the sand, eventually weakening and then releasing the blockage.

NMFS asked whether the community will want to get boats to the North side of the lagoon, and that for this, and biological purposes, any design should help maintain water flow in the deeper channel located next to the barrier island. RS noted that the community would prefer to be able to pass, but that if not, a boat ramp on the north side would be needed.

NMFS asked about fish resources in the lagoon and rivers, noting that they get their fish information for this area from ADF&G. RS replied that the focus in the lagoon and rivers is on trout, whitefish, and some baitfish. Tomcod used to be present but they have not been seen for 7 years and people now go to Kotzebue to get it. Crab are not in the lagoon but a target further offshore. Offshore there is also a focus on bowheads, walrus, and seals (spotted and bearded).

NMFS replied that they also do not see crab movement inside the lagoon as an issue, as larval dispersal is along-shore on the outside of the barrier island are few or no crab are likely to settle in the lagoon if they were to be entrained.

To DOT&PF's question about the large sizes of the char in the lagoon and NMFS's inquiry on residence fish, RS answered that most fish appear to overwinter in the ocean, including trout and sheefish, and come back to the lagoon in the Spring.

Stantec inquired about the existence of any federal or state guidelines for minimum/maximum flow velocities that need to be considered in the lagoon crossing design from a biological or other perspective. NMFS noted that there are no guidelines to this effect but that a reasonable measure would be those that allow for continued fish passage. DOT&PF noted that there are some velocity requirements used for fish passage through culverts in rivers and we could ensure we meet at least those.

NMFS noted that, from a hydrological perspective, assuming fish and seals can pass, they would be most worried about sediment transport inside the lagoon that could clog up any culverts. The lagoon crossing will have to be built such that general water and sediment movement regimes are maintained. In the absence of guidelines, they also mentioned that in general, in terms of fish and seal movement, free spans are better, and that having bottom structures in culverts is better than not. They provided lessons learned from the ship creek crossings, where it became clear that depending on culverts for marine mammal passage is not a good idea (seals appear to avoid culverts), but that if some portion of the crossing is free span, marine mammals seem to do ok. On the topic of culvert size, NMFS further brought up the possibility of half pipe culverts, that, if needed, can be up to 30ft wide and elliptical in shape.

ACTION: NMFS noted that it would be good to examine the historical movement of the Wulik channel, i.e. is there an indication that the main channel location has changed over the last 50 years to the point where it may impact the location of the crossing or other main hydrological considerations?

Closure: NMFS thanked all attendees for their time and their effort to involve NMFS this early in the process. They closed by stating that they have their supervisors (Gretchen Harrington) support to keep engaging with us in the project and that the team should feel free to contact Sean directly if there are further questions regarding hydrological criteria.

Kivalina Evacuation and School Site Access Road Project Update

Project Number: 0002384/NFHwy00162

OHA/NPS Section 106 Meeting

Stantec Office, Anchorage, AK

July 10, 2017

ATTENDEES

State of Alaska Office of History and Archaeology: Shina Duvall, Mark Rollins; **National Park Service:** Rhea Hood; **NANA:** Jeff Nelson; **DOT&PF:** Paul Karczmarczyk, Jonathan Hutchinson, Tom Gamza, Amy Sumner; **Remote Solutions:** John Baker; **Stantec:** Sara Lindberg, Ross Smith.

DOT&PF provided a project overview and update on the preliminary design progress, project components, EA alternative being evaluated, and the plan for completing geotechnical drilling at material sites. Stantec provided a summary of the cultural resource survey work completed to date, and the level of coverage for the project components being evaluated in the EA. The team discussed an approach for completing a separate Section 106 process for the geotechnical drilling program for the Proposed project.

The team discussed potential findings of effects outcomes and the tradeoff between completing more cultural resource survey work now, or completing a phased approach Memorandum of Agreement (MOA) now, so the Section 106 process could be completed and the EA could move forward. OHA said that there is nothing precluding them from continuing to consult on Section 106 during or after the EA is complete, but DOT&PF expressed the anticipation that FHWA would likely require the Section 106 process be completed before the Draft EA was released for public comment.

The team agreed that if more field work was warranted, it would be better to complete that quickly now, rather than hold off and go through an MOA process. Tom Gamza will review the survey work completed to date with Ross Smith and make a determination whether additional field work is warranted prior to Findings, and follow up with OHA and NPS.

TAKE AWAY NEAR TERM TASKS

- **TASK:** DOT&PF, NPS, and OHA will meet to discuss the extent of field work needed, if any, and articulate a path forward before August 1st.
- **TASK:** Tom to send NPS and OHA the revised Cultural Resources report for review and comment.
- **TASK:** Jeff Nelson, NANA should be appraised of all helicopter work on NANA lands planned for the fall. Paul will coordinate locally in Kotzebue for any Title 9 permitting requirements for the survey efforts.
- **TASK:** Rhea will coordinate internally at the Park Service on the 4(f) call and possible *De Minimis* finding.

TAKE AWAY LONG TERM TASKS

- **TASK:** Agency site visits are schedule for mid-August. Team to check on availability and travel authorizations.

State of Alaska
DOT&PF
Kivalina Evacuation Road Project Meeting

July 25th, 2017

US Army Corps of Engineers: Jeremy Grauf

DOT: Paul Karczmarczyk, Jonathan Hutchinson (via phone)

Remote Solutions: John Baker (via phone)

Stantec: Sara Lindberg, Ryan Cooper

TAKE AWAY NEAR TERM TASKS

- **TASK:** Collect more information on K-Hill and surrounding area
- **TASK:** Provide USACE with wetland report and GIS shapefiles

General Notes:

- Presentation on methodology of wetland verification report. Objective is to update the Northwest Arctic Borough desktop wetlands mapping using a variety of field reports. These reports include LIDAR, geotechnical logs, cultural studies, and field reconnaissance. The Northwest Arctic Borough desktop study was updated with more accurate boundaries and classifications from the field data.
- 11 Full wetland datasheets were evaluated, and 31 photo points. Additional points are planned for fall 2017.
- Almost all of the study area is wetlands or Waters of the U.S.
- **Functions:** Most of the area is undisturbed and has naturally functioning wetlands. Following the Northwest Arctic Borough wetlands report, Saturated wetlands were evaluated as Class II, and all other wetter wetlands (seasonally flooded, permanently flooded, etc) were evaluated as Class I. Waters of the United States and ponds were evaluated as Class I+.
 - During consultation with agencies, the USFWS identified that high shrubs provided important bird habitat. Our method delineated these (identified in Viereck classification as 'Closed Low Scrub') and raised their functional value one class.
- During discussion, the methodology was found to be reasonable. There is little question most of the area is wetlands.
 - Most interest focused on the area surrounding K-Hill and the upland/wetlands status. Points to be taken in 2017 will help resolve this status.
- Discussion also included the proposed bridge with 12-15 ft structural plate pipes across the Kivalina Lagoon on the causeway.
- Bill Morris, an ex-Alaska Department of Fish and Game fisheries biologist for the Wulik River, is on the Stantec team. He would be a good person for Jeremy to meet.

State of Alaska
DOT&PF and DNR
Kivalina Evacuation and School Site Access Road Project Update

August 8th, 2017

Northern Region Division of Mining, Land and Water State: Jeanie Proulx, jeanne.proulx@alaska.gov;
Dianna Leinberger, dianna.leinberger@alaska.gov; Julie Smith, Julie.smith@alaska.gov; AJ Wait,
aj.wait@alaska.gov

DOT: Ryan Anderson, Paul Karczmarczyk, Brett Nelson, Sara Schacher, Addison Young, Scott Maybrier,
Jonathan Hutchinson

Remote Solutions: John Baker, Katherine Keith

Stantec: Sara Lindberg

TAKE AWAY NEAR TERM TASKS

- **TASK:** Send AJ maps from EA for project review
- **TASK:** Send all public information and meeting notes to Julie Smith so they can understand public concerns. Send the EA document alternatives chapter to both Julie and Dianna for review
- **TASK:** Get a surveyor out there and ask for an ordinary high-water level mark on the gravel bar. Do a preliminary rough estimate of the ordinary high-water using imagery.
- **TASK:** Jonathan, move the material site boundary over away from the unvegetated gravel bar and into the vegetative buffer.

TAKE AWAY LONG TERM TASKS

- **TASK:** Submit easement applications
- **TASK:** Material sales agreement
- **TASK:** Mining Reclamation Plan

General Notes:

- The State has ownership of the submerged lands within the study area, but changes in water courses over time can call ownership into question. However, review of historic aerial imagery shows the Wulik river and relic sloughs and ponds have remained stable over time. Team to send EA maps to AJ Wait for review.
- DNR considers the Wulik and the Kivalina river as navigable. NANA has asked for these determinations.
- Ownership considers length of tidal influence up the Wulik. US surveys shows split ownership lots about 10 miles up the river. So chances are the Wulik is navigable within the study area.
- For easement purposes, AJ can review existing documents and aerial imagery. DNR jurisdiction starts in the lagoon below the mean high tide line. Landowners will permit anything above high tide.
- DNR requests the team to coordinate actively before permit application is submitted so that issues can be resolved for ROW and material sale application (for areas below ordinary high on state land).

- What channels matter for DNR? Active channels, or Relic channels that were active at the time of statehood which were submerged at the time of statehood.
- Material Sites:
 - State submerged land with different uplands land owners can be problematic within the same material site.
 - Better if DOT gets the material site designated and material sales agreement going before the contractor gets on board because there won't be enough time for the contractor to do this on a contractor furnished site that has not already been designated.
 - DOT is considering an alternative procurement method (CMGC) during design which would allow a contractor to come on board early. This would help with material site sales agreement. Another benefit could be management and a better understanding environmental constraints by getting CMGC.
 - Material sites are driven by a best interest process.
- In the EA, discuss why other sites were not considered or dismissed from evaluation. Julie could help us by reviewing the draft EA, which would help them integrate the alternatives evaluation into their decision and can help expedite the process.
- Would be helpful to have the State DNR come to meetings with federal agencies. That will help DNR navigate the needs of the federal agencies and alleviate conflicting priorities and potential discord down the line.
- Mining and Rec Plans will need owner approval. The contractor typically submits the Plan to DNR and will need to show approval.
- Jonathan-what if we do need to go into the Wulik? Bill Morris has been working with us on the plan. DNR would defer to other agencies when you start connecting to submerged lands.
- Julie stated that there will be pit capture if you are digging a hole next to the river.
- AJ request: Show the existing ROW lines are on the scoping documents.
- Has the Coast Guard been approached? Jonathan stated they have been scoped as it is on tidal water, we are waiting for something more concrete. Do we know what Coast Guard wants for traffic? They might have odd height requirements despite not commenting. Jonathan stated that the current plan is for a single span steel bridge with 12-foot clearance over 110-ft wide channel from the mean high tide level.
- Regarding funding, the team is considering many sources, including TTP funds, DOT Call for Projects in the fall, IRT Program, and FLAP funds.
- After EA, then begin permitting process but having DNR be a part of the EA team will greatly expedite the permitting/designation process
- Advise for the KVL Team in the permitting effort: Julie prefers a coordinated permit approach to happen near simultaneously for more transparent dialogue. AJ would like to be coordinated on the requirements of the permit.
- Ryan suggested to try for a post-application meeting to help clear up any concerns.

State of Alaska
DOT&PF
Kivalina Evacuation Road Project Meeting

August 9th, 2017

National Marine Fisheries Service: Greg Balogh, Barbara Mahoney, Bonnie Eslay

DOT: Paul Karczmarczyk, Jonathan Hutchinson, Sarah Schacher

Stantec: Sara Lindberg, Francis Wiese, Rowenna Gryba (via phone)

TAKE AWAY NEAR TERM TASKS

- **TASK:** Coordinate with locals to get a rough estimated of the number of marine mammals which may occupy the area.
- **TASK:** Develop an estimate for appropriate marine mammal exclusion zone during construction.

TAKE AWAY LONG TERM TASKS

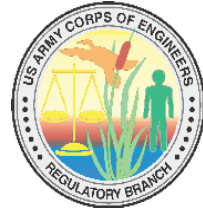
- **TASK:** DOT&PF needs to determine if takes may occur. If not, a Letter of Concurrence (LOC) is appropriate. If takes may occur, an Incidental Harassment Authorization (IHA) should be obtained.

General Notes:

- The project was presented, with a focus on the lagoon crossing components and potential impacts to marine mammals. Discussion focused on design elements of the lagoon crossing, and potential needs for pile driving. Sheetpile vs earthen abutments were compared.
- Material sources are being developed locally to reduce barging impacts.
- 500-year storm surge event is what is currently being used for design. Water depth of lagoon: 3.5-4 ft in channel with rest of lagoon very shallow (2 ft). Tide is 0.5 feet.
 - Mean High Water to bottom of girders is currently plan at 12 ft.
- Hunting from causeway could become an issue, but will assume no illegal hunting.
- Noise impacts can be mitigated by conducting activities in the fall/winter (January or February would be best). Getting pile driving activities completed as quickly as possible would be best for marine mammals (as opposed to pauses in between activities).
- Modeling of noise impacts is not required. Practical spreading loss model does not work. Noise would not be propagated outside the island, and shallow water noise attenuates faster. Recommend just to state a distance rather than go through the effort to model.
- If takes are expected, an IHA would take 8-10 months to process. This is likely the best course if the project believes marine mammals will be located near the project. Probably start the process in October prior to the next year's construction. Most of the information is likely to be in the EA, but additional information may be needed.
- If takes are not expected, a LOC would be much faster. This is likely the best course of action if it is believed that marine mammals will not be located near the project. A Section 7 informal consultation letter could serve to initiate this process.
- Activities would need to stop, and not restart, until a marine mammal present leaves or is not seen again for 30 minutes.
- Number estimates for marine mammal individuals would be difficult. A systematic survey is not needed, just a justified estimate. Recommend using local knowledge.



CEPOA-RD-NN Wetland Delineation Report



SUBJECT: Kivalina Evacuation Route Wetland Delineation

SUMMARY: A delineation was conducted on the Kisimigiqtuq Hill. Field work was conducted on August 15, 2017. Three sample points were taken. Two that were determined to be wetlands, and one determined to be upland. There was a visible vegetative shift from wetlands to uplands (see enclosure 1 figure 1 of 10), and the upland soil consisted of shallow (6 inch) organic layer with gravel and coble layer below. Standing water and flowing water was observed. There is no climate data for Kivalina, however, the climate data for Kotzebue indicates that July, August, and September are the wet months within the region. According to a Direct Antecedent Rainfall Evaluation Method analysis, rainfall during the field work was during a normal rainfall year (see enclosure 2 page 1).

LOCATION: Kisimigiqtuq Hill which is approximately 6.77 miles northeast of Kivalina, Alaska.

Latitude: 67.808282° N., Longitude: 164.385975° W.

SOURCE (S):

Aerial Photographs: Digital Globe (7-19-2016)

Soil Survey Maps: s9293

USGS Maps: NOATAK D-5

Other: See enclosure 1 (Wetland Delineation maps)

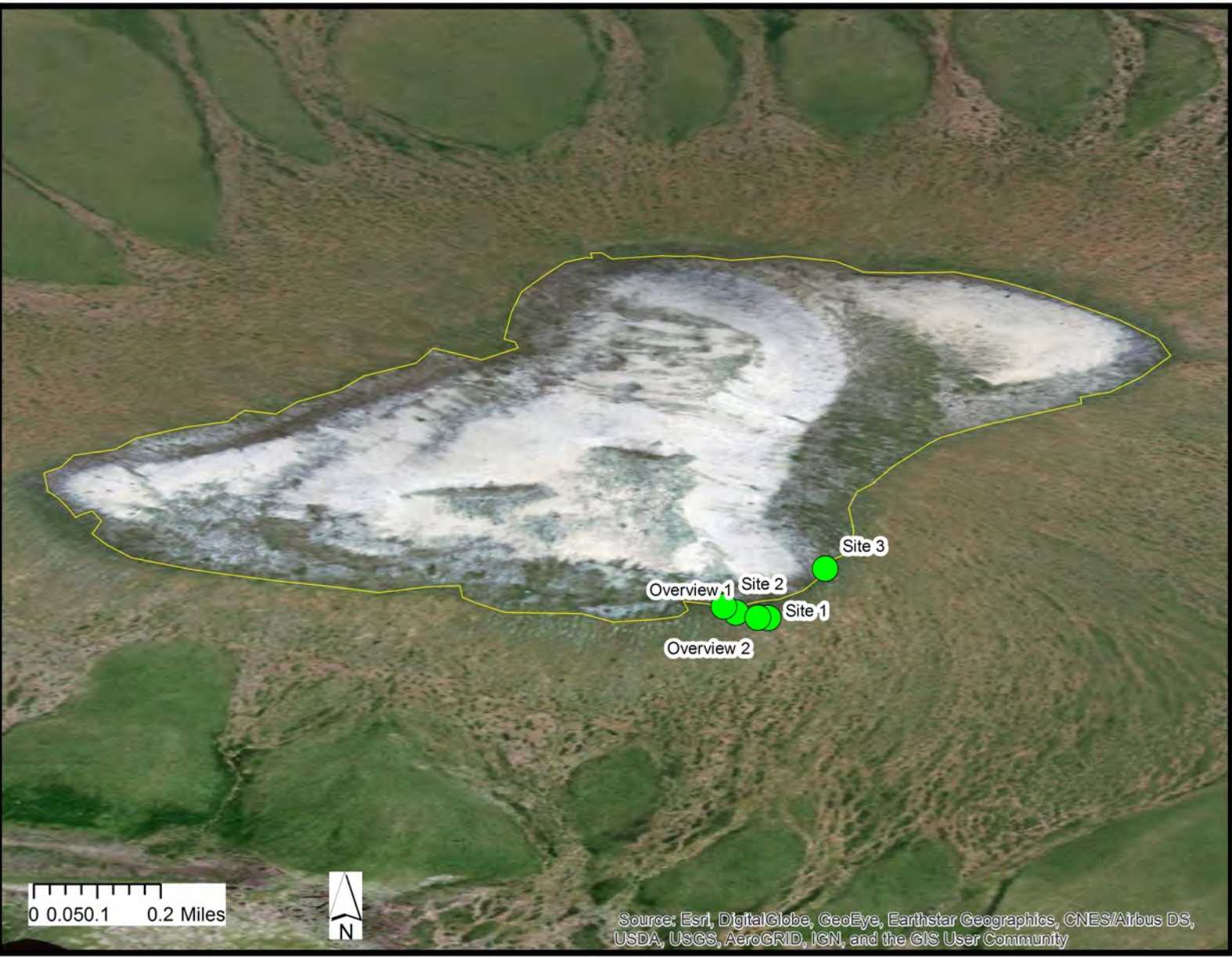
DATE: 8-31-2017

Jeremy Grauf
Project Manager



US Army Corps of Engineers

POA-2012-124 Wetland Delineation Overview Map



Legend

- Photo Points
- Upland Outline

POA-2012-124, Kivalina Lagoon, Kivalina Evacuation Route Project

Date: 8-30-2017

Notes: K-Hill upland delineation. Field data was collected 8-15-2017.
Imagery Date: 7-19-2016

For planning purposes only.

Figure: 1 of 10

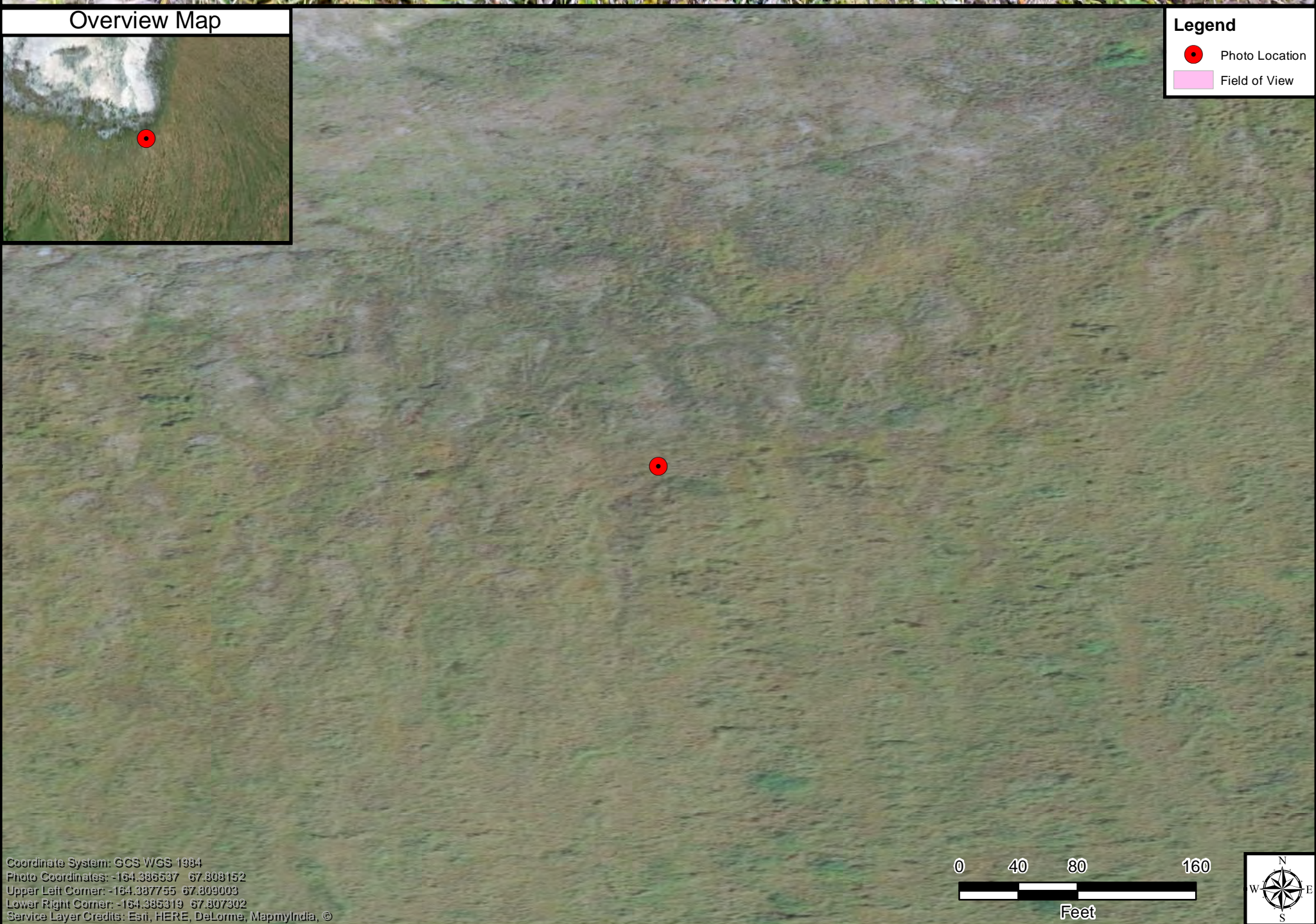


Overview Map



Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.386537 67.808152
 Upper Left Corner: -164.387755 67.809003
 Lower Right Corner: -164.385319 67.807302
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**

Page 1 of 9

Description:

Site 1

Appendix E Page 53



Photographed by Jeremy Grauf
 on 8/15/2017 at 3:49:13 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters



Overview Map



Legend

-  Photo Location
-  Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.386537 67.808152
 Upper Left Corner: -164.387755 67.809003
 Lower Right Corner: -164.385319 67.807302
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**
 Page 2 of 9

Description:
Site 1
 Appendix E Page 54

Photographed by Jeremy Grauf
 on 8/15/2017 at 3:49:13 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

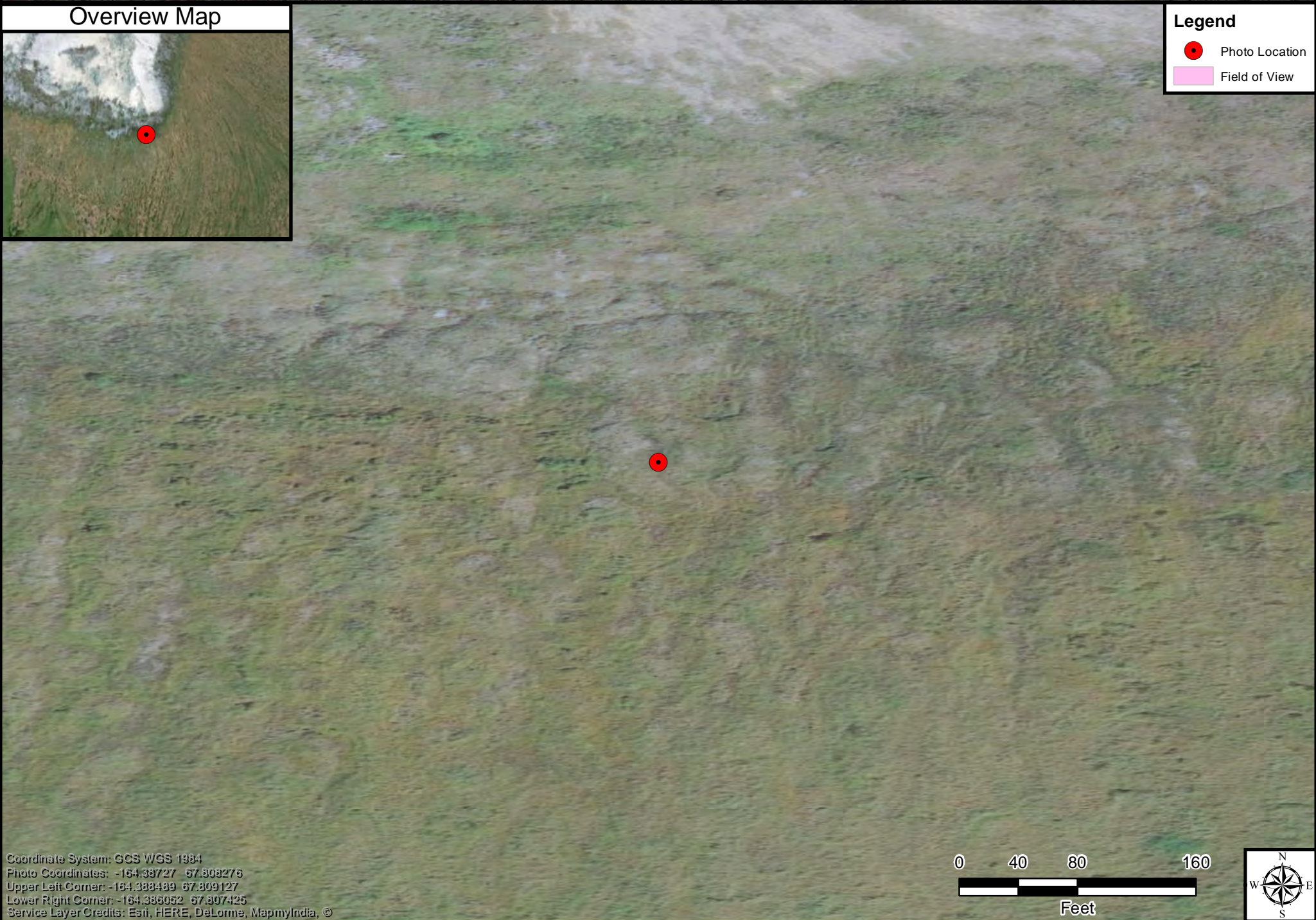


Overview Map

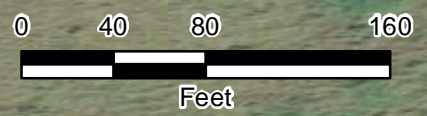


Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.38727 67.808276
 Upper Left Corner: -164.388489 67.809127
 Lower Right Corner: -164.386052 67.807425
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



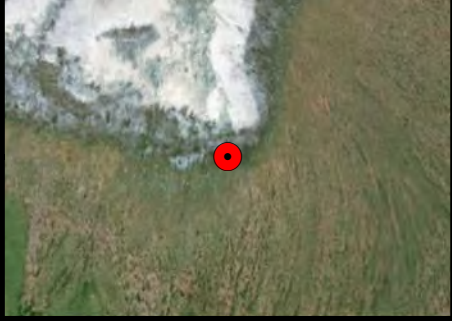
**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**
 Page 3 of 9

Description:
Overview 1
 Appendix E Page 55

Photographed by Jeremy Grauf
 on 8/15/2017 at 3:51:37 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

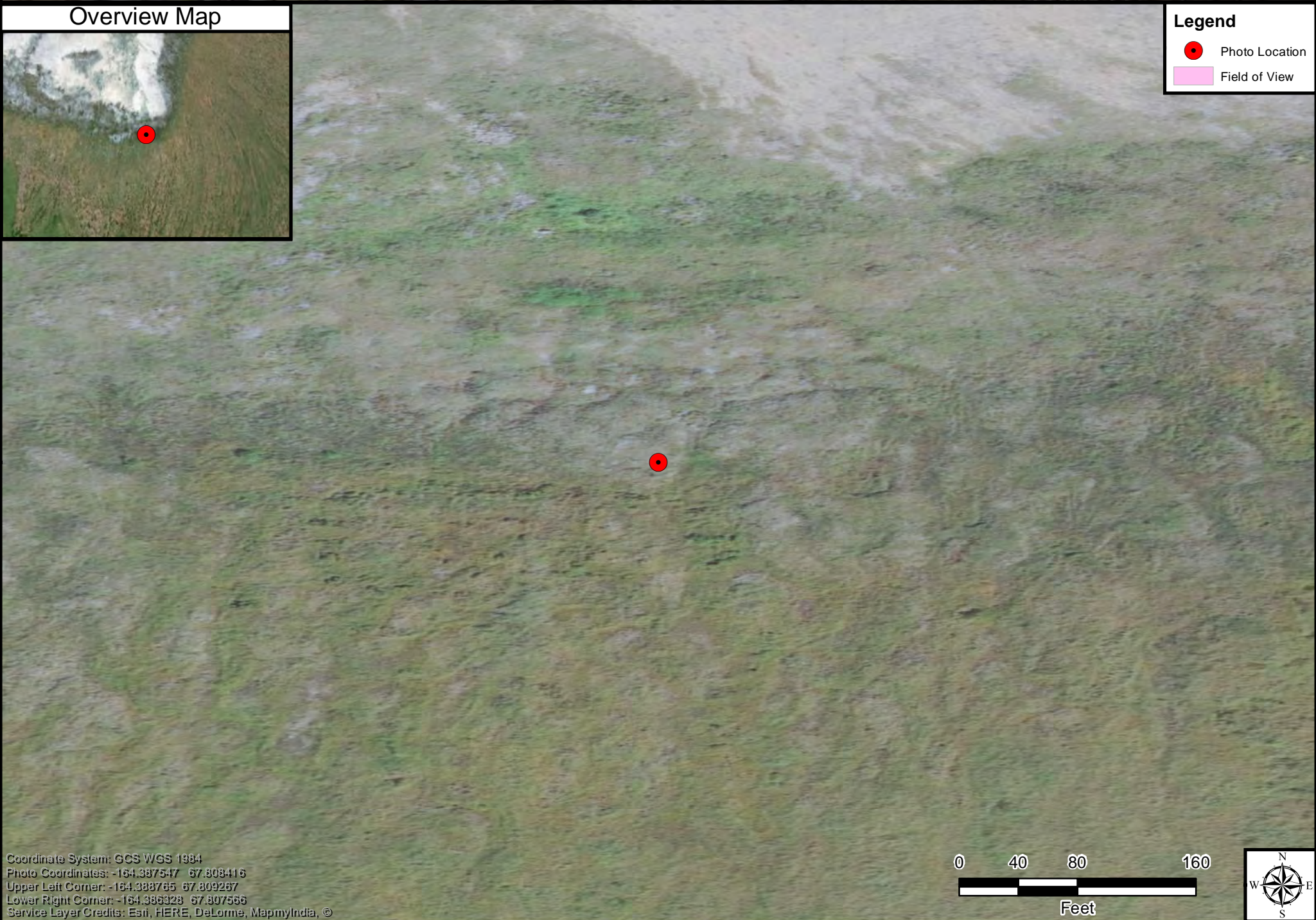


Overview Map

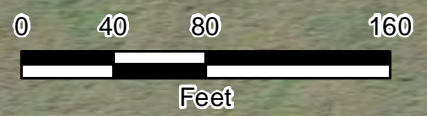


Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.387547 67.808416
 Upper Left Corner: -164.388765 67.809287
 Lower Right Corner: -164.386328 67.807566
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**
 Page 4 of 9

Description:
Site 2
 Appendix E Page 56

Photographed by Jeremy Grauf
 on 8/15/2017 at 3:56:20 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

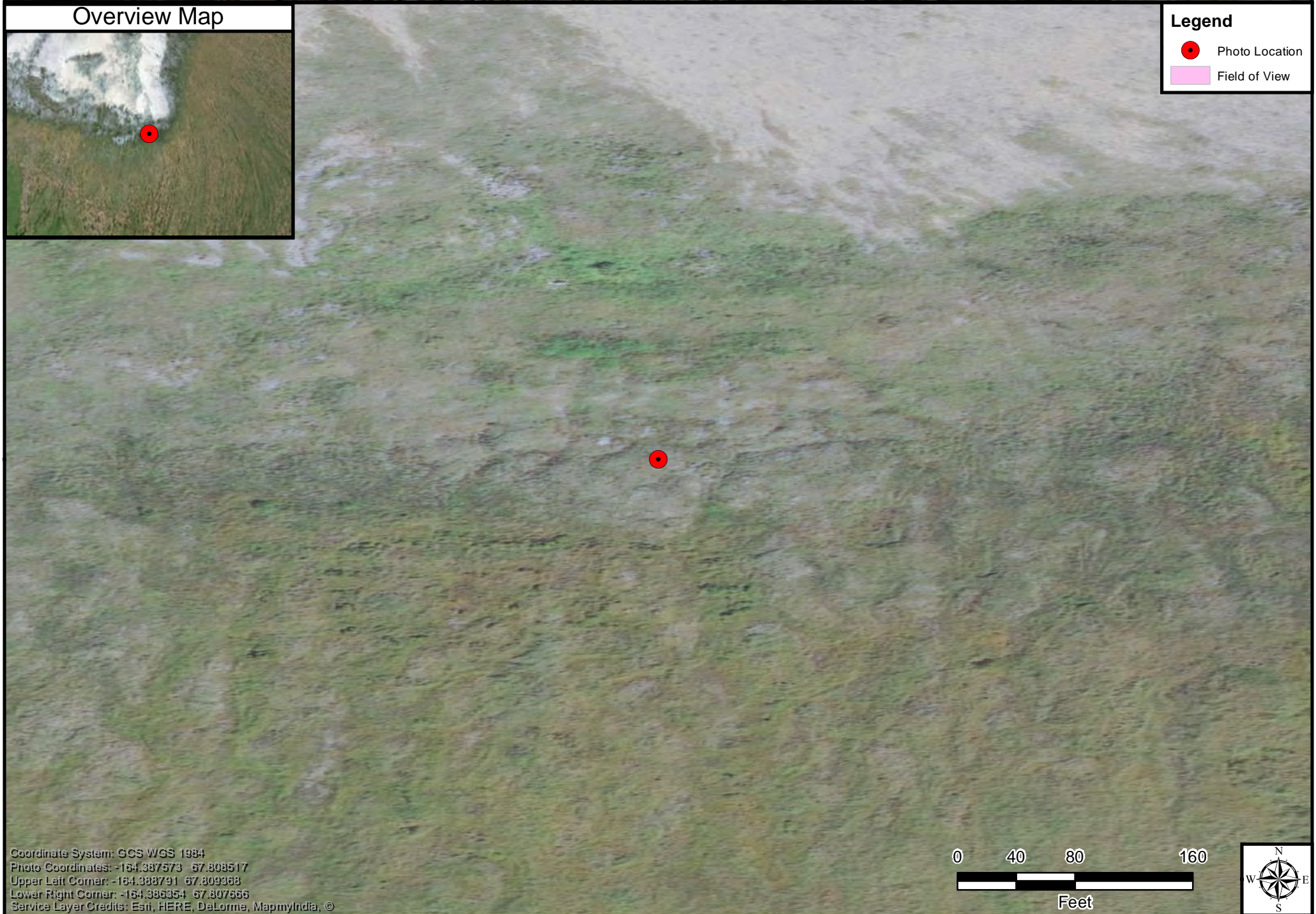


Overview Map



Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.387573 67.809517
 Upper Left Corner: -164.388791 67.809388
 Lower Right Corner: -164.386354 67.807556
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**

Page 5 of 9

Description:

Site 2

Appendix E Page 57

Photographed by Jeremy Grauf
 on 8/15/2017 at 3:56:23 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

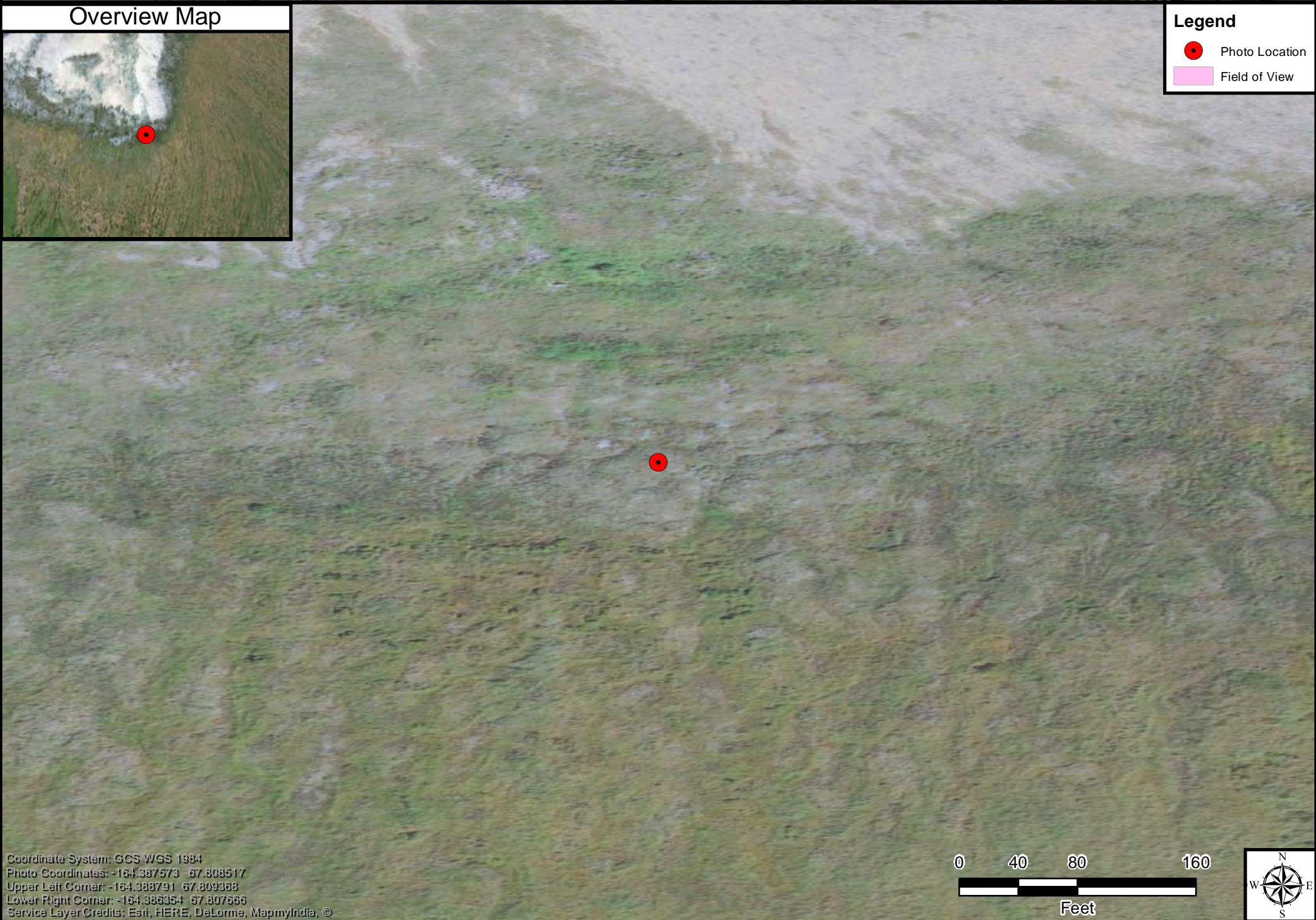


Overview Map



Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.387573 67.809517
 Upper Left Corner: -164.388791 67.809388
 Lower Right Corner: -164.386354 67.807556
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**

Page 6 of 9

Description:

Site 2

Appendix E Page 58

Photographed by Jeremy Grauf
 on 8/15/2017 at 3:56:23 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

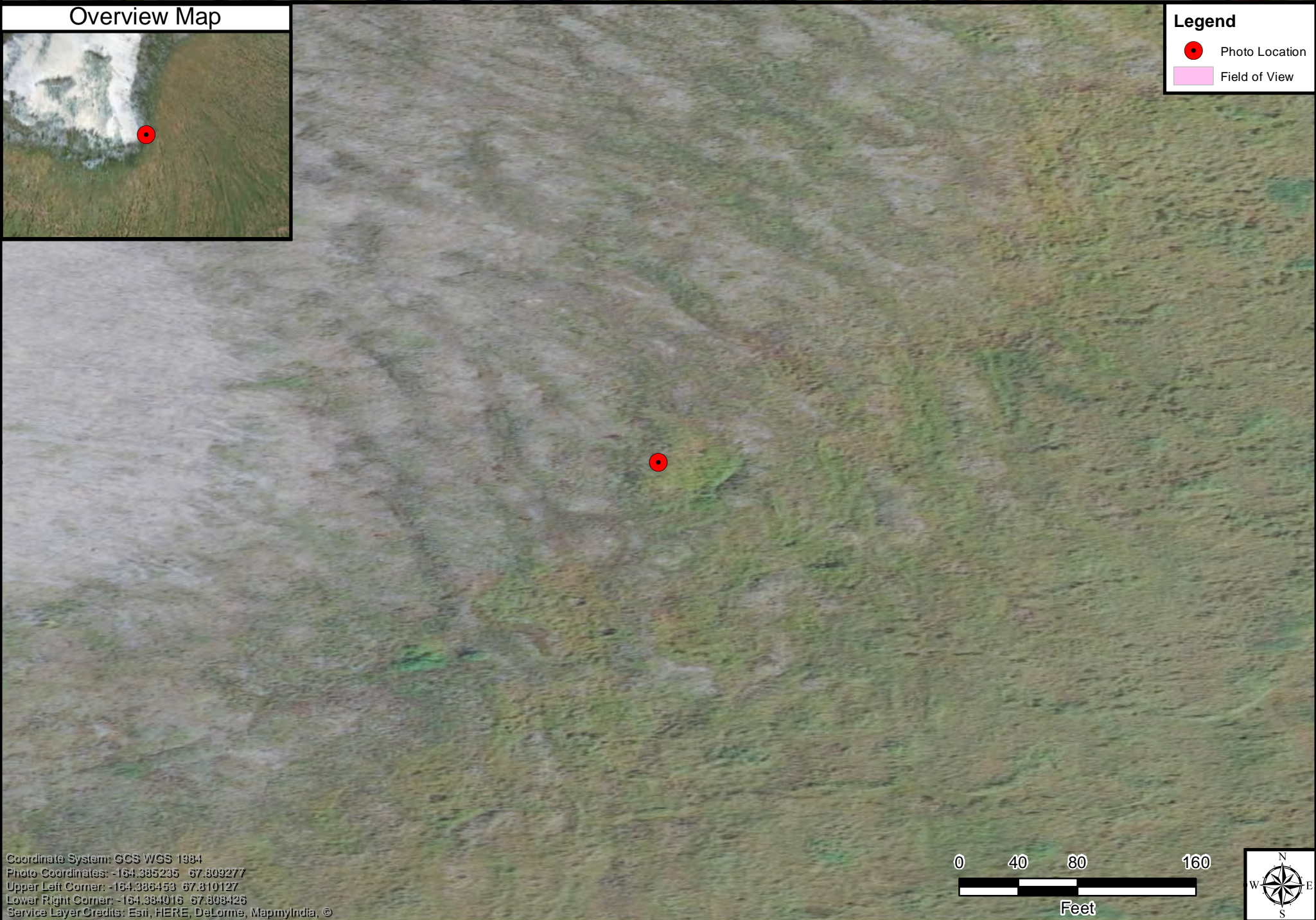


Overview Map



Legend

- Photo Location
- Field of View



Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.385235 67.809277
 Upper Left Corner: -164.386453 67.810127
 Lower Right Corner: -164.384016 67.808426
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**

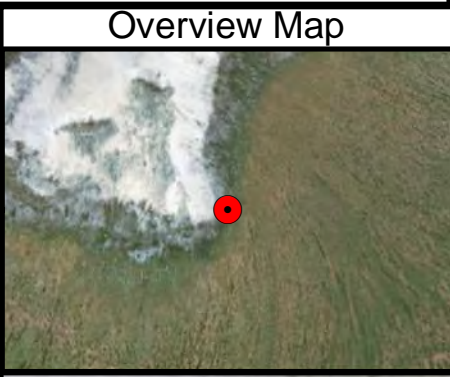
Page 7 of 9

Description:

Site 3

Appendix E Page 59

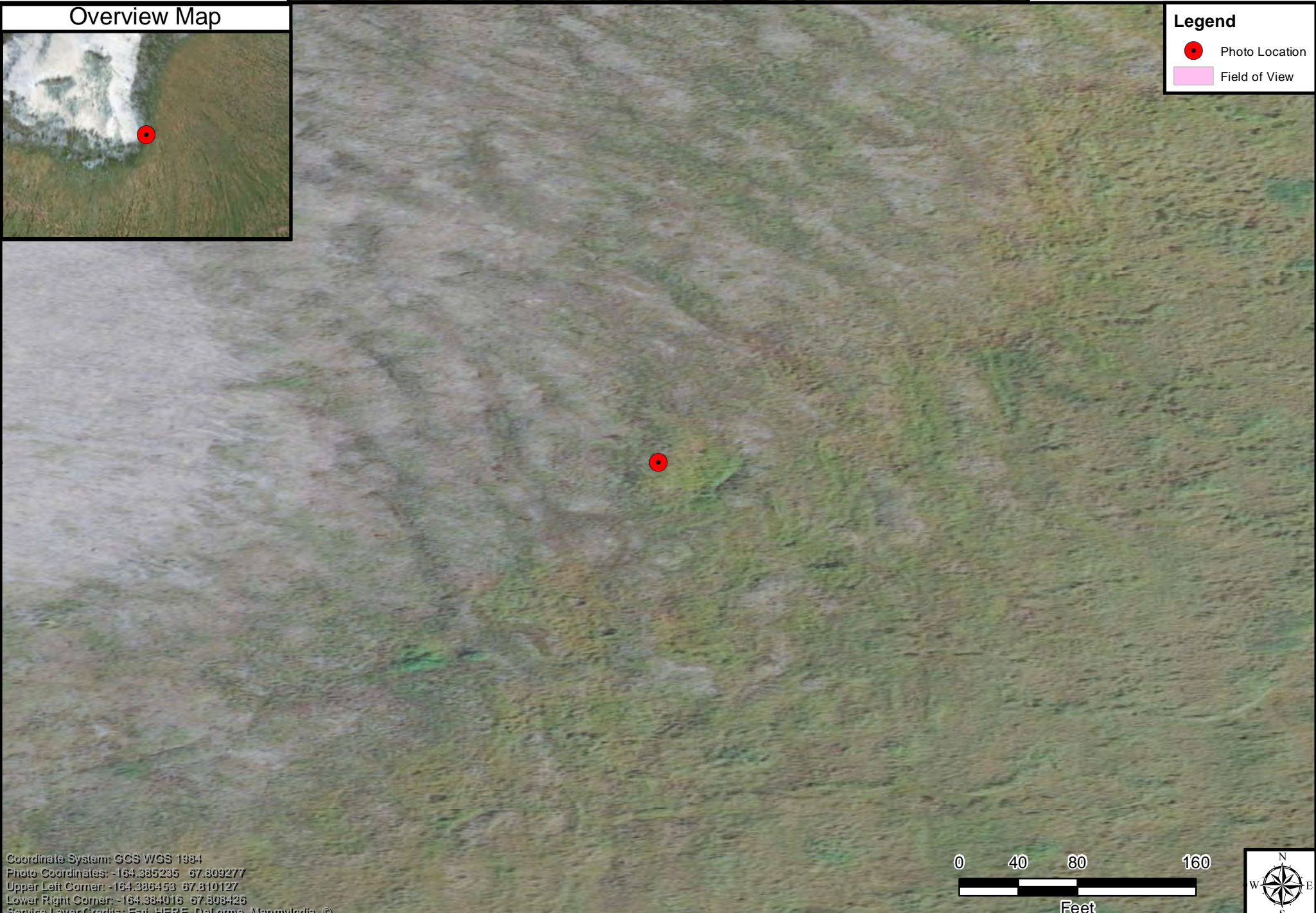
Photographed by Jeremy Grauf
 on 8/15/2017 at 4:21:55 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters



Overview Map

Legend

- Photo Location
- Field of View



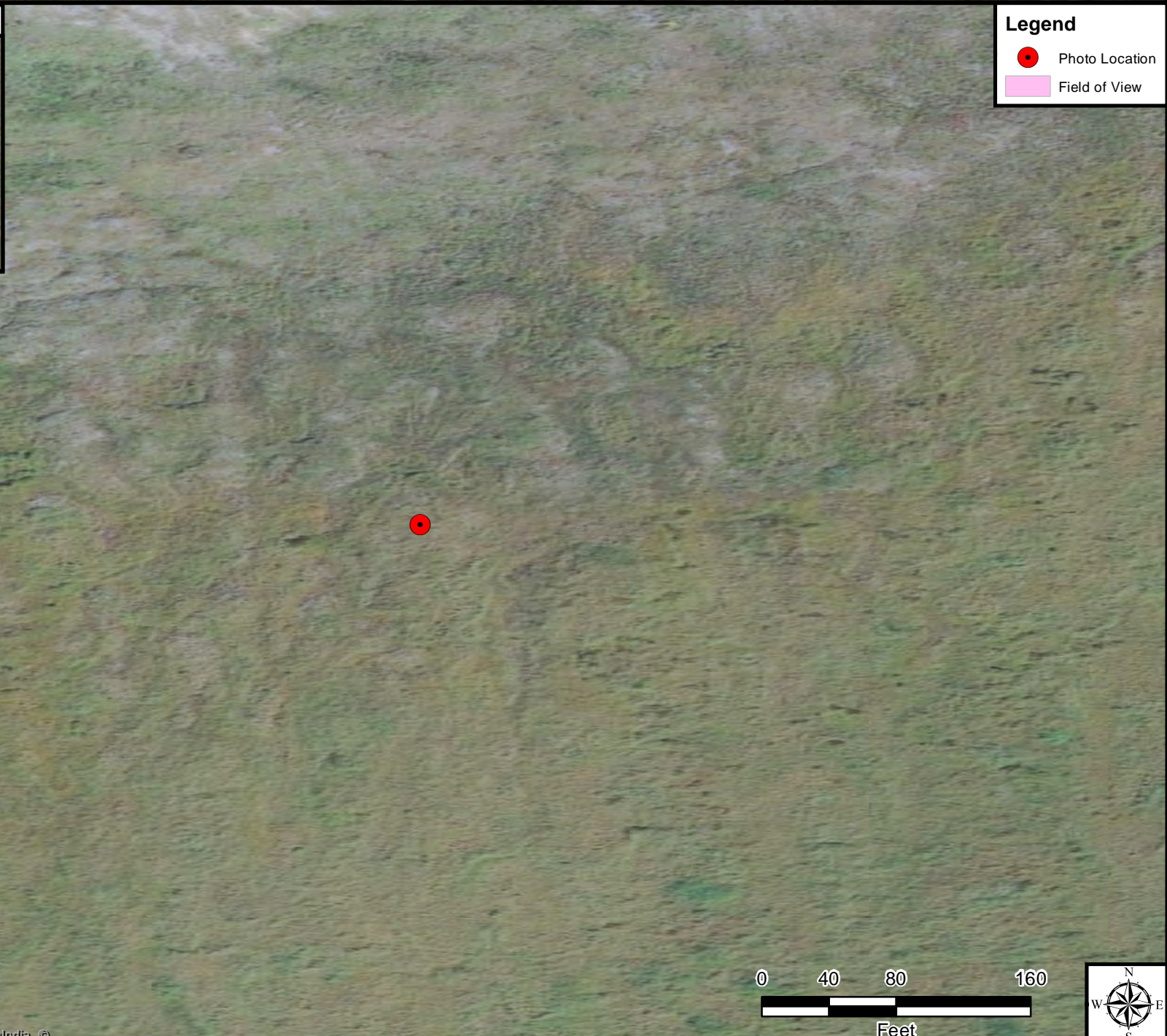
Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.385235 67.809277
 Upper Left Corner: -164.386453 67.810127
 Lower Right Corner: -164.384016 67.808426
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**
 Page 8 of 9

Description:
Site 3
 Appendix E Page 60

Photographed by Jeremy Grauf
 on 8/15/2017 at 4:21:55 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters



Legend

- Photo Location
- Field of View

Coordinate System: GCS WGS 1984
 Photo Coordinates: -164.386769 67.808163
 Upper Left Corner: -164.387987 67.809014
 Lower Right Corner: -164.385551 67.807312
 Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, ©



**Mapped Photo Log
 for Kivalina Evacuation Route
 Wetland Delineation
 POA-2012-124**
 Page 9 of 9

Description:
Overview 2
 Appendix E Page 61

Photographed by Jeremy Grauf
 on 8/15/2017 at 5:14:59 PM AKDT
 Camera: samsung SM-G950U
 Location Source: Camera's internal GPS
 Heading Source:
 Map generated on 8/30/2017 using the
 Photo Log Toolbar, written by Jason C. Deters

DAREM analysis demonstrating rainfall normality. The example examines rainfall normality in Kotzebue during August 2017 by evaluating rainfall amounts during the June, July, and August.

Prior Month	Name	WETS 30th percent	WETS 70th percent	Rainfall Amount	Condition	Value	Weight	Score	Result
3 rd	Jun	0.27	0.7	0.2	Drier	1	1	1	
2 nd	Jul	0.72	1.74	2.63	Wetter	3	2	6	
Most recent	Aug	1.07	2.44	1.55	Normal	2	3	6	
Month examined	April						Total	13	Normal

WETS Station: KOTZEBUE RALPH WEIN MEM AP, AK

Requested years: 1971 - 2000

Month	Temperature (°F)			Precipitation (inches)				
	Avg daily max	Avg daily min	Avg daily mean	Avg	30% chance will have		Avg number of days with 0.10 inch or more	Average total snowfall
					less than	more than		
Jan	4.5	-8.7	-2.1	0.55	0.28	0.67	2	7.8
Feb	4.0	-9.9	-3.0	0.42	0.21	0.51	1	5.1
Mar	8.4	-7.8	0.3	0.39	0.17	0.46	1	5.2
Apr	20.6	3.3	12.0	0.44	0.18	0.53	1	4.9
May	38.2	25.3	31.8	0.33	0.14	0.38	1	1.3
Jun	50.7	38.8	44.7	0.57	0.27	0.70	2	0.0
Jul	59.6	49.4	54.5	1.43	0.72	1.74	4	0.0
Aug	56.5	47.4	51.9	2.00	1.07	2.44	6	0.0
Sep	46.5	37.2	41.9	1.70	1.16	2.03	5	1.0
Oct	27.8	18.8	23.3	0.95	0.54	1.15	3	6.9
Nov	13.6	3.2	8.4	0.71	0.34	0.87	3	8.7
Dec	6.4	-6.5	0.0	0.60	0.43	0.71	2	8.8
Annual:					8.70	11.19		
Average	28.1	15.9	22.0	-	-	-	-	-
Total	-	-	-	10.08			32	49.8

GROWING SEASON DATES

Requested years of data: 1971 - 2000
 Years with missing data: 24 deg = 0 28 deg = 0 32 deg = 0
 Years with no occurrence: 24 deg = 0 28 deg = 0 32 deg = 0
 Data years used: 24 deg = 30 28 deg = 30 32 deg = 30

Monthly Total Precipitation for KOTZEBUE RALPH WEIN MEM AP, AK

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2016	0.38	0.34	0.14	0.60	0.65	0.25	1.44	1.92	2.02	0.30	0.11	0.75	8.90
2017	0.55	1.04	0.03	0.05	0.41	0.20	2.63	1.55	M	M	M	M	M
Mean	0.47	0.69	0.09	0.33	0.53	0.23	2.04	1.74	2.02	0.30	0.11	0.75	8.90

TRIP REPORT

**State of Alaska
Department of Fish and Game**

Field Date(s): August 15, 2017

Location(s): **Kivalina**

Objective(s): Assess fish passage needs for the proposed Kivalina evacuation and school access road project.

Participant(s): Audra Brase

Weather: Cloudy, breezy, temps in low 60s

Access: R-44 helicopter

I flew from Fairbanks to Kotzebue on Monday August 14. In Kotzebue I met with contractors Sara Lindberg (StanTec) and Bill Morris (Owl Ridge). We had dinner at the hotel (Nullagvik Hotel, new and very nice) and discussed the plan for the next day's travel to Kivalina. We would catch the 11am flight to Kivalina and meet ADOT&PF and Army Corps of Engineers (USACE) staff at the noon public meeting. The R-44 Helicopter would be arriving from Fairbanks at approximately 1:30pm.

Tuesday morning Bill, Sara and I met John Baker and Katherine Keith (of Remote Solutions) at their office in Kotzebue, they helped us acquire bear spray and PFDs. We looked at maps of the project area (Appendix A) and discussed the causeway crossing. A bridge is being proposed on the side nearest the village, two large (12-15' diameter) culverts will be placed on the mainland side and multiple overflow culverts will be placed along the remainder of the causeway (all this detail will be in the EA). We also discussed the potential material sites, and it sounds like DOT would prefer if most of the material could come from K-Hill to avoid impacting active channels. DOT will need approximately 1 million cubic yards of gravel for this road and causeway.

We arrived in Kivalina about noon (Figure 1) and attended the public meeting for about 1.5 hours. Paul Karczmarczyk (DOT) and John Baker did the majority of the speaking about the project. I spoke with Jeremy Grauf (USACE) about their thoughts for mitigation. They are open to brushy areas (bird habitat) being used as mitigation as bird habitat is hard to come by in this part of Alaska. I talked to him about the larger overwintering lakes that could be developed if the material sites near the old relic channel are utilized (Relic Channel Source 1 and/or 2).

The helicopter arrived about 1:45pm and Bill Morris and I were able to go upriver soon afterwards. We flew both proposed road routes, walked around the proposed Wulik River Bar Source 1, and flew over the other proposed material sites (Figures 2-9, photo locations may be cross referenced on Appendix A). We paid particular attention to the road crossing sites that had been identified as water crossings and were thought may require fish passage. The majority of these crossings were just wet tundra, and will not require fish passage, but Figure 4 & 8 illustrate two locations which may seasonally contain fish.

Most of the lakes appeared to be very shallow and no fish were observed either rising or swimming. Survey conditions were fair with overcast skies & light wind.

The proposed Wulik River Bar material site has a low gradient and obviously floods during moderately high water (Figure 3). Additionally our local bear guard was familiar with the particular location and said it was a common place to fish through the ice in November and December before the ice is safe enough to go further upriver for the bigger fish (Dolly Varden).

After completing our helicopter survey Bill Morris and I flew back to Kotzebue and caught the evening flight back to Fairbanks via Anchorage.



Figure 1. Looking towards Kivalina from the Chukchi Sea side of the barrier island, August 15, 2017.



Figure 2. Spawned out pink salmon in Wulik River, near proposed material site: “Wulik River Bar Source 1”.



Figure 3. Slough/ overflow channel of the Wulik River near middle of proposed material site: “Wulik River Bar Source 1”.



Figure 4. Road crossing point on proposed “Southern Route” which may require allowance for fish passage.



Figure 5. Kisimigiqtuq Hill (K-Hill) – proposed material site, road terminus and location of school.



Figure 6. Upland point on proposed “Combined Route”.



Figure 7. Lakes near proposed material site: “Relic Channel Source 1”.

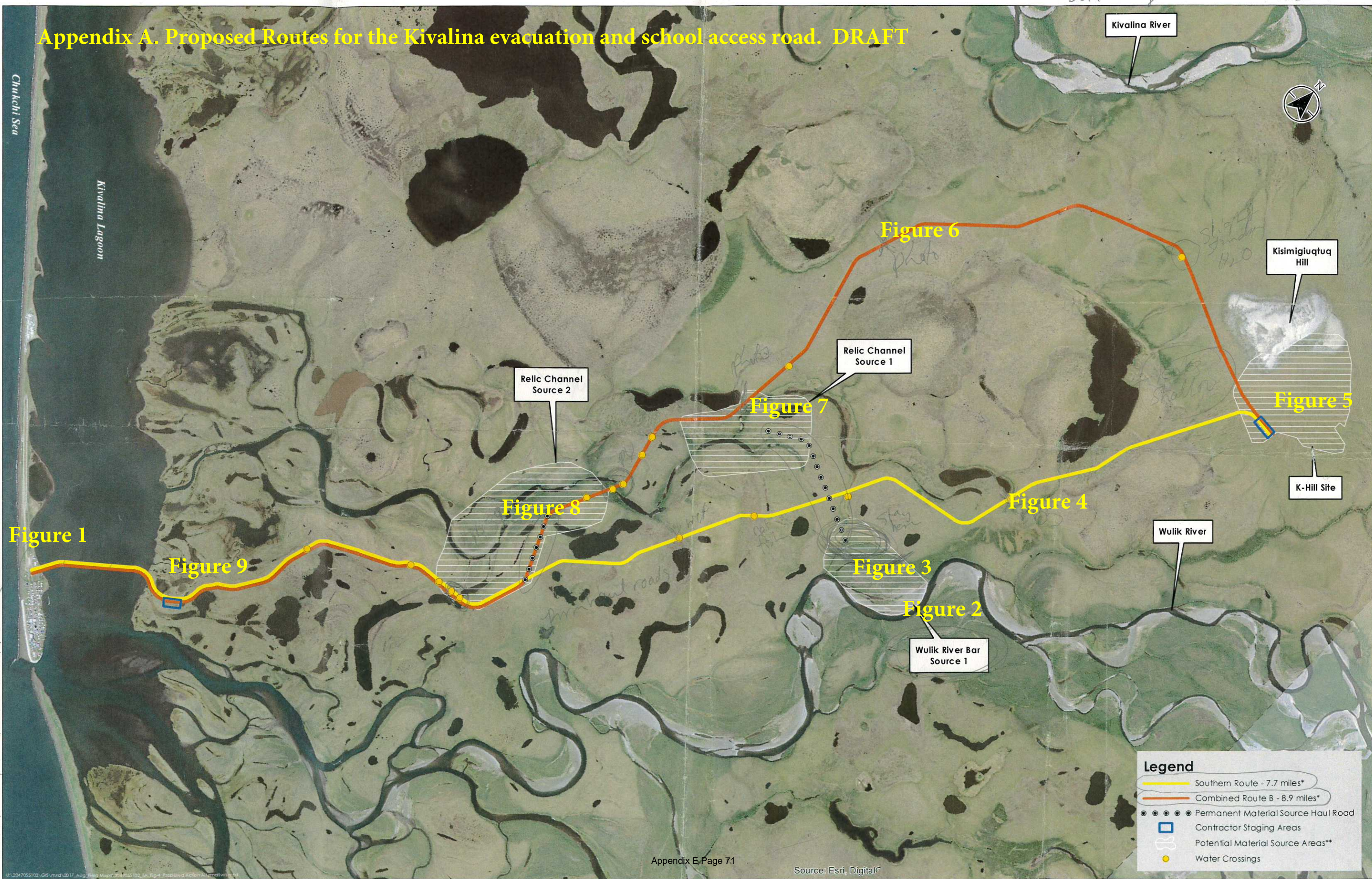


Figure 8. Relic channel/ lakes near proposed material site: “Relic Channel Source 2”, and near proposed road crossing of “Combined Route” that may require allowance for fish passage.



Figure 9. Looking from the mainland, across Kivalina Lagoon towards the barrier island where the proposed 3200' causeway/ bridge would be located.

Appendix A. Proposed Routes for the Kivalina evacuation and school access road. DRAFT



Legend

- Southern Route - 7.7 miles*
- Combined Route B - 8.9 miles*
- Permanent Material Source Haul Road
- Contractor Staging Areas
- ▨ Potential Material Source Areas**
- Water Crossings

DOT would like to avoid Wulik material site

U:\2047063102_GIS\mxd\2017_Aug\Area Maps\20170802_BA_Top4_2.mxd

Arrived in Kivalina by way of Kotzebue on Wednesday August, 16th on Bering Air flight 681 at 12:00PM with Rhea Hood, Archaeologist, National Register of Historic Places Program, National Park Service Alaska Region (NPS) and Mark Rollins, Archaeologist II, Review and Compliance Alaska State Historic Preservation Office/Office of History and Archaeology (OHA).



Rhea Hood (NPS) and Mark Rollins (OHA) arriving at Kivalina, Alaska.

Conditions were less than optimal. Temperatures were in the low 40's° F with steady light rainfall and winds of 10-20 mph out of the west and a low cloud ceiling. Everyone put on rain gear and boarded helicopter piloted by Quintin Slade of InFlight helicopters and preceded to Kisimigiuqtuq Hill. We flew the proposed southern route and along the way Quintin pointed out the related survey markers located on the tundra.



Rhea Hood (NPS) and Quintin Slade (InFlight) discussing potential landing areas along the southern route; survey marker along southern route.

We inspected the location ground conditions, including previous shovel test area and taking a GPS point of the cairn located during the 2016 cultural resource field investigation.



Rhea Hood (NPS) and Mark Rollins (OHA) inspecting the ground conditions around Kisimigiuqtuq Hill.



Cairn on Kisimigiuqtuq Hill. Note eroding bedrock surface with scrub vegetation.

After stopping at an elevated area identified on the project maps to look at the ground conditions within the route independently, we met up with Ross Smith and Perry Hawley at one of the testing locations at about 1:20PM. We discussed the ground conditions (permafrost levels) and lack of soil development within the project APE.



Rhea Hood (NPS), Mark Rollins (OHA), Ross Smith (Stantec) and Perry Hawley (Kivalina) discussing testing results and archaeological potential within the survey area.

At about 2:00PM we met up with Justin Junge and Oral Hawley at a location where they had just finished digging a test pit which had a negative result for archaeological remains. Justin's description of ground conditions and archaeological potential was in-step with those explained by Ross Smith previously. The areas that appeared on the maps as high ground and potentially dry were little more than slightly elevated and poorly drained versions of the general field conditions of the surrounding area. Earlier during our visit it was posited by Ross Smith that the LIDAR imagery is like picking up subsurface contours in the topography that is not evident on the surface due to a combination of vegetative cover and permafrost conditions.



Typical flora and fauna located within the project APE.



Justin Junge (Stantec), Rhea Hood (NPS), Oral Hawley (Kivalina), Mark Rollins (OHA) discussing field results and future testing locations within the project APE.



John Hemmeter (Stantec) conducting a soil probe test along the southern route APE.

We left Justin's field crew at about 2:30PM and flew back along the combined route APE. None of the locations appeared to be of any higher probability. We arrived back at Kivalina at about 2:50PM in expectation of returning to Kotzebue on the 3:15PM flight. While waiting for the flight to arrive we decided to walk along the lagoon shoreline to look for any survey markers for the proposed causeway location. About a minute into our walk along the shore line Rhea Hood almost stepped on a complete biface. It was a surface find and likely was deposited by the tidal actions of the lagoon. We were unable to collect the artifact as we could not properly record its location. We were also unable to confirm the proposed location of the causeway.



Biface found by Rhea Hood (NPS) on the lagoon shoreline surface just behind the Airport maintenance building (penny used for scale).



Standing at location of biface behind Maintenance building.

Bering Air flight 662 arrived over two hours late but we all boarded the flight at around 5:30PM and raced to meet our connecting flight in Kotzebue. Overall, it was a very educational trip. It is always difficult to get an appreciation for the real terrain without actually being there. The take home messages were that the area is mostly covered with low-lying poorly drained tussock swamp conditions and that the only high areas consist of poor to know soil formation with scrub vegetation over eroding bedrock. Abundant blueberries and seasonal game are evident in the area.

I believe that we all could agree that the likelihood of finding in situ buried cultural resources within the proposed project APE is low. Due to the location of the project within the Cape Krusenstern National Historic Landmark the extra testing measures conducted within the project APE were both necessary and sufficient to constitute an appropriate level of investigation to assess the project's potential effects on cultural resources. Additional monitoring efforts were not discussed indepth.

Kivalina Evacuation and School Site Road Project Agency Tour Trip Report
NMFS Recon of KVL Evac Road project study area EFH and lagoon hydrology
Paul Karczmarczyk DOT&PF EA II

National Marine Fisheries Service (NMFS) fisheries biologist Samantha Simpson and hydrologist Sean Eagan were accompanied by DOT&PF Environmental Analyst Paul Karczmarczyk on a helicopter flight/study area survey for the Kivalina Evacuation and School Site Road project on 08/17/17. Weather was good and the survey was conducted from a Robinson R-44 piloted by Quentin Slade of InFlight Helicopter (Photo 1).



Photo 1. Survey team on site at project study area (photo NMFS).

Essential Fish Habitat assessment: The proposed alignments were flown and areas where potential fish passage may be required were assessed. Two potential areas depicted on project figures as such were closely observed in-flight or landed at and reviewed for potential to pose obstructions to anadromous fishes. Water levels were visibly low, and both potential crossing areas were characterized by broad, shallow floodplain channels completely covered by emergent vegetation and with very little to no distinct flow channel. Rather, flow during the survey was negligible and primarily constituted of seepage through the vegetation. Relic channel crossing site 1 was landed at for close survey (Photos 2, 3, 4).



Photo 2. Broad, shallow channel at relic channel crossing 2.



Photo 3. Vegetation completely filling relic channel crossing 1.



Photo 4: Indistinct channel/seepage flow at crossing site 1.

Discussion among NMFS and DOT&PF staff yielded agreement that neither potential crossing location were remarkable in their ability to provide quality habitat/passage options for anadromous or other fish and, rather, were more likely to result in fish being trapped during periods of high water due to the channel morphology and high volume of persistent emergent vegetation.

Lagoon Crossing Hydrology: Hydrological review of the lagoon was conducted by overflight of the lower Wulik and Kivalina Rivers as well as the length of Kivalina Island from Kivalik Inlet to the community of Kivalina. The potential lagoon crossing location was surveyed by air in greater detail.



Photo 5. Potential lagoon crossing area from mainland shoreline.

Sediment deposition and patterning for the two river deltas, lagoon shoreline and both inlets were also observed from the air as were patterns of deposition within the lagoon both by helicopter and by drone flight video provided by InFlight pilot Quentin Slade.



A helicopter landing was made on the lagoon shoreline opposite the community and where the mainland terminus of the proposed lagoon crossing would be located. NMFS staff visually inspected sediment type and observed the land/water interface sediments and vegetation to estimate the typical extent of storm/high water event flooding and potential erosion (Photos 5-8). NMFS has indicated they will provide additional guidance and recommendations on lagoon crossing engineering and construction methodology.

Photo 6. Lagoon shoreline opposite Kivalina.



Photo 7. Observation of typical water elevations vs. vegetation types.

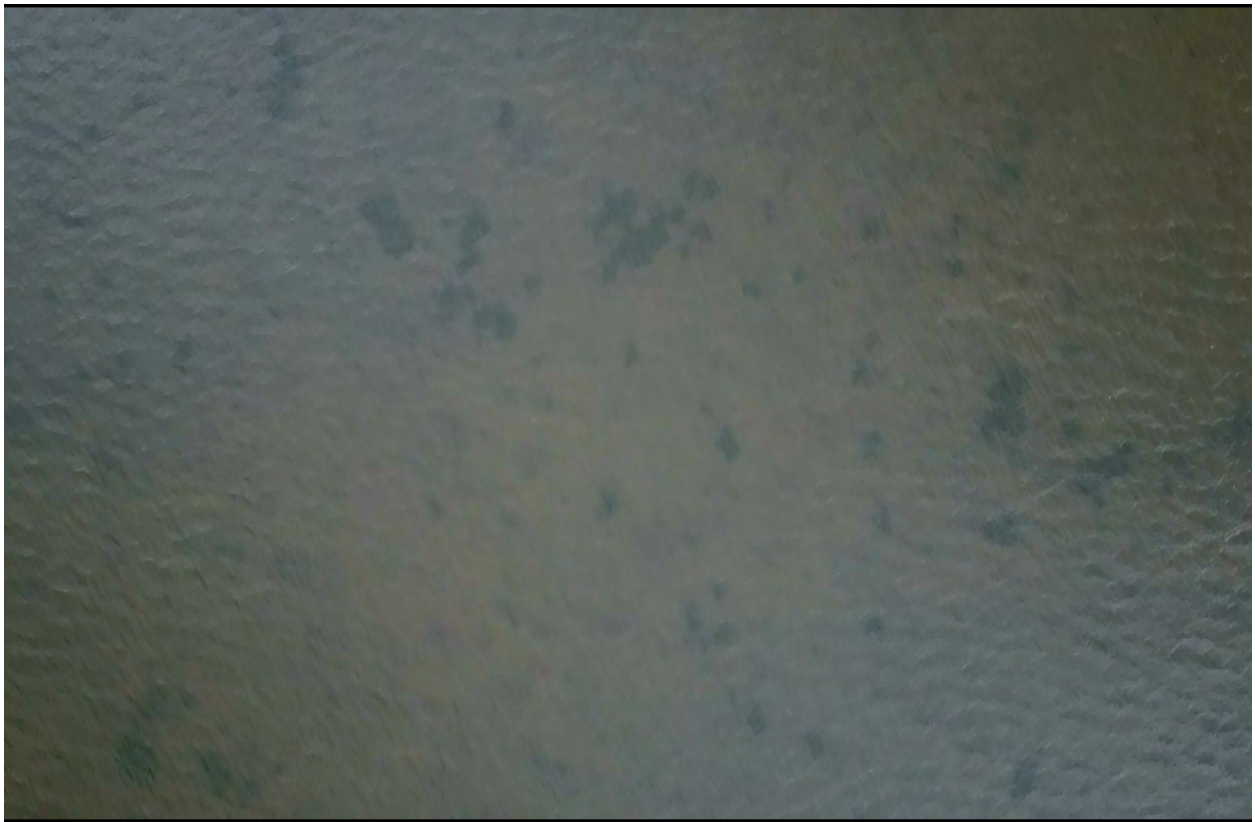


Photo 8. Still image of drone-flight video showing detailed in-lagoon sediment deposition and vegetation.

2017-12-12 Kivalina Road NMFS Meeting notes

Date: 12 Dec 2017

Purpose of Meeting:

The DOT&PF Kivalina team would like to meet with you to discuss the Kivalina Evacuation and School Site Access Road Draft Environmental Assessment, as well as discuss the EFH Assessment and MMPA compliance. We appreciate your collaboration on our team and we look forward to discussing further. As you saw recently the Draft EA is out for public and agency comment.

Attendees On the Phone:

Amy Sumner, DOT
Sarah Schacher, DOT [Sarah Schacher](#)
Brett Nelson, DOT brett.nelson@alaska.gov
Katherine Keith, Remote Solutions [Katherine Keith](#)
Samantha Simpson, NMFS
Sean Eagan, NMFS
Bonnie Easley-Appleyard, NMFS
Bill Morris, Owl Ridge

Attendees In Person:

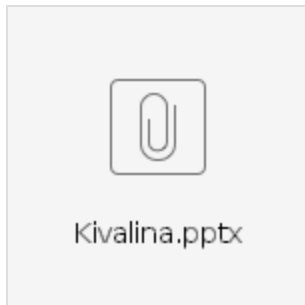
Paul Karczmarczyk, DOT paul.karczmarczyk@alaska.gov
John Baker, Remote Solutions [John Baker](#)
Steve Reidsma, Michael Baker [Steve Reidsma](#)
Sara Lindberg, Stantec [Sara Lindberg](#)
Sara Taylor, Senator Sullivans Office

Digital Items:

1. Powerpoint was emailed and screen shared.
2. EA <http://dot.alaska.gov/nreg/KivalinaEvacRd/>

Team Goals

FONSI by January 1st, 2018



Agenda:

Emailed Concerns on EFH:

1. Single span bridge over the channel is a requirement for concurrence with EFH.
2. Concerns about Wulik River source and connection to river after construction is complete.
3. Causeway culverts on inland side need to be made fish passable and maintained on a yearly basis, making sure it maintains a water connection at all tide levels.

Agenda:

Emailed Notes on Marine Mammals:

For the EA:

1. Need the EA to reference noise anticipated from a 36 inch pile since that is what we are proposing. EA currently only covers 40 and 60 inch piles.
2. Need to clarify if any equipment, boats or vessels will be used in the lagoon during construction. Right now the EA talks about winter construction but not what summer construction would look like, although this is left open as an option. Can briefly mention and then discount as not adding a significant amount of noise.

For ESA Consultation:

1. Need more detail about in water equipment (boats, vessels, other equipment) required to place fill in summer, build temporary work trestle. Need # of boats, vessels, barges, equipment with timing.
2. Need size of culverts on the inland side of lagoon crossing.
3. Need to calculate a sound source level for the 36 inch pile driving and development of an exclusion zone. Fine to

commit in EA, but for consultation will need that calculation to be completed. Need to look at exclusion zone for both filling and pile driving, summer vs winter.

4. The pile driving plan commitment is fine in the EA, but this will need to be developed before we can get to ESA concurrence.
5. Considerations should be made for sea ice travel for Red Dog Port haul route and avoidance of impacts to Ice Seal lairs.
6. Any project specific boats, barges, or vessels, if they are used for the project, will need to be included in consultation.

Parking Lot

Action items

- Bonnie will provide the team with sample informal consultation letters.
- Sean will send a letter Thursday or Friday and response with a letter stating you are amendable to the suggestions.
- [Sara Lindberg](#) send out distribution list for Sara Taylor

Discussion items

Blue text are comments/questions.

Item	Who/Topic	Notes
Senator Sullivan's Office	Sara Taylor	Sullivan visited Kivalina in July 2016 and this project has been a major priority for him since then. Mike Fleagle is the main contact but had a family emergency today. Mike Fleagle and Sullivan's Office will continue to track progress and be engaged as needed.
	Sara Lindberg	We recently went out to Kivalina for positive public meetings. ESA compliance is important to our team so we can resolve any concerns as quickly as possible.
Bridge and Road Overview of Preferred Alternative	Sara Lindberg and Sarah Schacher	Overview of bridge design. There is a defined lagoon channel and bridge is being strategically placed where deeper water is. 9 water crossings. Culverts.
Does the lagoon freeze all the way to the bottom? (Bonnie)	Lagoon Characteristics	John Baker: When tidal action occurs the ice can be lifted however the lagoon is other wise frozen to the bottom of the lagoon.

<p>NMFS is pleased with bridge and bridge design. Do they need to comment one way or the other? (Sean Eagan)</p>	<p>Bridge Design</p>	<p>Sarah Schacher: It would be helpful if there are positive comments for general support. You could make your comments with the preferred alternative presented. Unless there are strong public comments that steer us in another way we will put forward the preferred alternative.</p> <p>Sean: All three routes are acceptable to us so we will not comment on them.</p> <p>Paul: We understand that the routes come together before NMFS area of interest.</p> <p>Sean: OK we won't worry about commenting on the routes.</p>
<p>We are good with 3-4 material sources and the Wulik is the least desirable. (Sean Eagan).</p> <p>Our comments were not behind the Wulik River Source. Can you write a contract such that the contractor would need to exhaust the other three before using the Wulik River Source?(Sean Eagan).</p>	<p>Material Sites</p>	<p>Sarah S: It is possible to include a contract with preference to the preferred three material sites. How can we mitigate issues with Wulik River?</p> <p>Sean: The K-Hill site has no fish impacts. The Wulik relic channel sources do not effect EFH. The Wulik river source may effect spawning. Development of this source will create a deep pond in an area that could otherwise be spawning habitat. The Relic Channel sources on the NE side of the road aren't as much of a concern as the have a road between it and the Wulik River.</p> <p>Sean: Is there a way to develop the site in a way to keep river out of the pond during flooding?</p> <p>Bill M: There are definite high water channels throughout the site, in extreme events the bar is inundated. But the material site development would be a smaller overall footprint than what is shown. There is leeway within the gravel bar to stay away from high water channels. Hard to say if it will always stay completely isolated from Wulik. Sean is concerned Wulik will go right to pond in high event. Bill M: Considering the biggest fish use of this reach of the river, you'd end up creating a more consistent overwintering area for Dolly Varden. There should not be concerns about predatory whitefish, as that species does not occur in the Wulik. Dolly Varden spawning occurs many miles upstream from this location.</p>

<p>NMFS would like to see NE passage culvert size detail (squashed pipe versus full culvert) for maintenance purposes. Would like to see a maintenance plan for the final EA and FONSI that can guarantee regular flow. Our letter will request that a design be in place so we don't end up with islands of sediment. (Sean Eagan)</p>	<p>Culvert Maintenance</p>	<p>Sarah S: We do design culverts for debris and icing mitigation to prevent flow blockage.</p> <p>Sam Simpson: agrees with discussion and they can summarize what they've expressed in their letter as well as praise for aspects of project alternatives they support.</p>
<p>We won't be providing formal comments on the EA as our comments are specific towards the consultation and some content won't be always included in the EA. We need more project information on things that wouldn't be occurring without the project. Not that the determination would be altered but that it needs to be included. (Bonnie Easley-Appleyard)</p>	<p>ESA Consultation-Construction Impacts</p>	<p>Items include:</p> <ul style="list-style-type: none"> • barging; • potential for an ice road going over sea ice including type of equipment going over that sea ice road; • potential for recreation boats in the lagoon related to the project; • Placement of fill in the summer or winter (Need brief description of summer fill placement) • Trestle placement processed or any in water equipment used to build the bridge <p>Bonnie can type this up but won't be providing formal comments for the EA but needs these questions answered during consultation.</p>
	<p>ESA Consultation-Ringed Seal and Bearded Seal Observation</p>	<p>Please provide information on this data collection to date in a table perhaps.</p>
	<p>Pile Driving and Exclusion Zone Mitigation Measures</p>	<p>36" piles (We have 60" and 40") Bonnie did find a source for sound impact of 36" piles /exclusion zone for pile driving and fill placement.</p> <p>In our letter we could include two different exclusion zones for the 60" and for 36" piles.</p>
	<p>Mitigation for Hunting Seals</p>	<p>Topic of Hunting of Seals on the Causeway is missing from August 9th meeting notes or EA. Mitigation Measure would be to have signs mentioning that it is illegal to hunt seals from the causeway.</p>

<p>There is an expedited information process. If we provide NOAA a letter with all the project information, analysis, mitigation measures, etc. We would request an expedited informal consultation with that information and we might receive a shorter letter back approving the request for that. This typically takes two weeks. (Bonnie Easley-Appleyard)</p> <p>Online Resource for Expedited Informal Consultation:</p> <p>https://alaskafisheries.noaa.gov/pr/esa-section-7-expedited-informal-consultation</p>	<p>USACE Permit and ESA Consultation Overlapping</p>	<p>Brett continue with ESA Consultation but we need to have an agreement for completion before our Corps permit goes out.</p> <p>Bonnie will send a letter requesting further information before they can finalize the consultation.</p> <p>Sarah S: Trying to avoid duplicating agency reviews.</p> <p>Bonnie: Unless something has significantly changed in the project there won't be a need to reopen consultation and they can reissue the same letter.</p> <p>Sara L: We are going to have to do a lot of estimating. So we will only need to re-initiate consultation if we exceed the impacts correct? Certain things are unknowable until we have a contractor on the team.</p> <p>Sarah S. We can provide general assumptions but we have to keep things open ended because different contractors have different means and methods and we cant spec out equipment requirements which could impact the project and then have to rewrite the EA because of equipment changes. We want to answer your questions and concerns without having to commit to something that is simply unknowable right now.</p> <p>Bonnie: We understand that you will be putting forward your best guess of the worst case scenario so that you are covered. It helps to repeat information from the EA in the letter so that we don't have to go into the EA for constant reference.</p> <p>Paul: Is there a mechanism in which your consultation can accept a reasonable worst case scenario?</p>
	<p>Timeline for getting this done by 1/1/2018? (John Baker)</p>	<p>EFH: Sean will send a letter Thursday or Friday and response with a letter stating you are amendable to the suggestions.</p> <p>ESA: Bonnie will work as quickly as see can to complete the consultation but needs the requested information.</p>

2017-12-12 Kivalina USACE Draft EA Meeting notes

Date: 12 Dec 2017

Attendees On the Phone:

Attendees In Person:

Project Number: 0002384/NFHWHY00162

Stantec Office, Anchorage, AK

Meeting Request:

The DOT&PF Kivalina team would like to meet with you to discuss the Kivalina Evacuation and School Site Access Road Draft Environmental Assessment, as well as complete a pre-application meeting with you. We appreciate your collaboration on our team and we look forward to discussing further. As you saw recently the Draft EA is out for public and agency comment.

- Brett Nelson, DOT
brett.nelson@alaska.gov
- Katherine Keith, Remote Solutions
[Katherine Keith](#)

- Paul Karczmarczyk, DOT
paul.karczmarczyk@alaska.gov
- Janet Post, USACE
- Jason Berkner, USACE
- Sara Taylor, Senator Sullivan's Office
- John Baker, Remote Solutions
[John Baker](#)
- Steve Reidsma, Michael Baker
[Steve Reidsma](#)
- Sara Lindberg, Stantec
[Sara Lindberg](#)

Prior Meeting History on Kivalina Evacuation Road with USACE

8/24/2016 3:15 pm. Senator Sullivan, Mike Fleagle, Randy Bowker, Deputy Project and Program Management Division Chief; Bruce Sexauer the Branch Chief of Civil Works; NWAB Mayor Clement Richards, Katherine Keith, Remote Solutions; John Baker, Remote Solutions

12/21/2016: USACE: Jeremy Grauf, Regulatory Specialist; Janet Post, Regulatory Specialist. DOT&PF: Paul Karczmarczyk, ADOT&PF; Sara Schacher, ADOT&PF. OTHERS: Katherine Keith, Remote Solutions; John Baker, Remote Solutions; Sara Lindberg, Stantec

8/15/2017: Jeremy Grauf completed a two day site visit to Kivalina

Parking Lot

Discussion items

*Items in blue were questions/comments

Item	Who	Notes
Introductions of Team	John Baker and Sara Taylor	This project is a priority to the entire delegation and Senator Sullivan has watched its progress closely.
Team member update	Janet Post	Janet Post will be the project manager. Jeremy Grauf updated Janet on the project, site visits, and discussions to date. Jason Berkner will assist.
Project Purpose and Need; Project Description; Route Alternatives; Preferred Alternative	Sara Lindberg	Sara summarized the project's purpose and need, project background, and other project information.
327	Brett Nelson	FHWA doesn't have project level oversight because of the 327 transference of authority to DOT&PF.
Material Sites Permitted	Sara Lindberg	Sara reviewed the material sites already evaluated, relative benefits, and relative impacts.

Problem Statement/Meeting Topic

Please follow the link below to access the document: <http://dot.alaska.gov/nreg/KivalinaEvacRd/>

Kivalina Evacuation Road Summary Powerpoint

[2_Draft_EA_Figures_110617_rfs.pdf](#)

Short Term Goals

- Review Draft EA
- Pre-Application Meeting

Action items



Why is your preferred route the one selected? (Janet)		Sara walked the team through the methodology for the preferred alternative.
404 Application Presentation	Steve Reidsma	Provided an overview of project and impact stating that application impacts are less than was stated in the EA itself. Reviewed contents of the draft 404 permit.
USACE Jurisdiction	Jason Berkner	Bridge has joint jurisdiction: USACE has clean water act authority; Coast Guard has jurisdiction on Section 10 rivers and harbors.
Goals/Timeline	Sara Lindberg	We want a FONSI January 1, 2018. We will submit a draft application shortly after the FONSI to USACE.
What happened to the school? (Janet)		That is a separate project. Its identified as a potential future impact in the cumulative impact section.
Next Steps	Steve Reidsma	<p>Is there an advantage for another application meeting so we can ensure that we have everything included in the application?</p> <p>(Jason) After receipt the USACE completes a 15-20 day completeness determination. Our goal is to complete permit processing within 120 days of submission. About 20% of projects take longer than that.</p> <p>(Janet) I would be happy to have another meeting to go through the application prior to submittal.</p>
Mitigation Ideas. What is going on with the landfill as potential mitigation? (Janet)		Paul discussed the status of the Kivalina landfill and the options for potential cleanup as proposed mitigation.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

1200 Sixth Avenue
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

December 13, 2017

Jonathan Hutchinson, P.E., Project Manager
Alaska Department of Transportation and
Public Facilities, Northern Region
2301 Peger Road
Fairbanks, Alaska 99709

Dear Mr. Hutchinson:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Assessment prepared by the Alaska Department of Transportation and Public Facilities for the Kivalina Evacuation and School Site Access Road Project (EPA Project Number: 17-0049-FHW). Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR § 1500-1508), and Section 309 of the Clean Air Act.

The proposed action would construct an approximately eight-mile all-season evacuation road between the community of Kivalina and Kisimigiqtuq Hill, K-Hill, including construction of a causeway across the Kivalina Lagoon. This road would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge. The assembly site on K-Hill has also been identified as a preferred new location for the community school, which, if constructed, could serve as a community emergency shelter.

We support the need to ensure the safety of the residents of Kivalina, who are faced with increasing risk from storm surges. Overall, we find the Draft EA appropriately identifies environmental resources of concern. However, we are concerned the Draft EA, as currently written, lacks some of the detailed information for agency decision makers and the public to fully understand the potential impacts of future use of the proposed road. We, therefore, recommend the Final EA discuss the following topics in greater detail:

- Potential use of the proposed evacuation road;
- Fugitive dust generation and methods to reduce road dust;
- Impacts of fugitive dust on air quality; and,
- Impacts of fugitive dust on water quality and aquatic resources.

Use of the Proposed Evacuation Road

The construction of a new school on K-Hill is briefly discussed in the Draft EA as a potential future action for the purpose of conducting a cumulative effects analysis, though the document notes this project is still in its early planning stages and details are not yet known. Based on the information provided in the Draft EA, we recommend the future use of the road to access the proposed community school and emergency shelter, or other anticipated uses, be analyzed in the Final EA as reasonably foreseeable indirect effects of constructing the evacuation road.

Potential Fugitive Dust Generation and Recommendations to Reduce Road Dust

The EPA's primary concern, based on our review of the Draft EA, is the potential for fugitive dust blowing off the road surface to impact air quality and water resources throughout the use of the road. Dust from roadways can be a substantial source of particle pollution in rural communities. In addition to human health effects, dust blown from the road can settle onto vegetation or waterbodies, adversely affecting those resources as well.

The Draft EA states that in 2016, the existing McQueen School had 145 students and 16 teachers. In addition to the daily transport of students, we note community schools in rural Alaska typically serve as community gathering places, and hosting events would potentially generate additional traffic. It would make sense that transportation to and from the school for both school and community events would be typically be provided by private, all-terrain vehicles during the snow-free months. Because of the aggressive tires found on ATVs, they are particularly effective at generating airborne road dust. Therefore, the potential exists for this local road to generate sufficient road dust to result in human health or environmental impacts. We recommend the Final EA disclose these potential impacts from the road dust and discuss the appropriate mitigation measures to reduce the identified impacts.

We recommend consideration be given to ways to reduce road dust generated by the proposed evacuation road, throughout the design, maintenance, and use of the road, and these measures be discussed in the Final EA. We recognize DOT&PF has published information on road dust concerns in Alaska and is an expert on the topic. If helpful, we offer the following general recommendations:

- Proper road design and construction, including location, drainage and surfacing, can greatly reduce dust emissions from roads (see http://www7.nau.edu/itep/main/ntaa/docs/tribal-air-resources/FAQRuralDust_150226.pdf).
- Appropriate maintenance and use can also have a big impact. For example, slowing down from 40 miles per hour (mph) to 20 mph can reduce road dust by up to 20% (see https://dec.alaska.gov/air/anpms/Dust/Dust_docs/Road%20Design%20Resources.pdf).
- Dust palliatives can be applied to roadways, although these have varying costs and potential environmental impacts associated with their use. The primary mitigation measure to control road dust employed on the North Slope is road watering, by spraying water on the road surface from tanker trucks. The effectiveness of this measure, however, depends on frequent road watering runs (up to several times daily) during the summer season, which results in a long-term maintenance commitment and associated cost.

Air Quality

Although air quality was identified as an issue not warranting further analysis in the Draft EA, the potential for fugitive dust to impact air quality during construction is mentioned briefly with reference to the use of best management practices to reduce dust during construction. We recommend the potential for the ongoing release of particle pollution during the future use of the road also be discussed in the Final EA.

We know that particle pollution, especially fine particles, contains microscopic solid or liquid droplets that can get deep into the lungs and cause serious human health problems. Numerous scientific studies have linked particle pollution exposure to: premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, and coughing or difficulty breathing. People with heart or lung diseases, children and older adults are the most likely to be affected by particle pollution exposure. However, even if someone is relatively healthy, they may experience temporary symptoms from the exposure to elevated levels of particle pollution. (For more information see <https://www.epa.gov/pm-pollution>).

Water Quality

With respect to potential water quality impacts, the Draft EA notes that wind-generated dust from the future road could deposit in adjacent waterways along the route. We recommend this discussion be expanded to also disclose the potential impacts of daily traffic along the road, which could result in greater dust deposition in the adjacent waterways than that generated by wind alone. It is important for the Final EA to also disclose the impacts to human health and to water quality of having increased dust deposition in surface waters occur. For example, according to the Draft EA, the community of Kivalina obtains drinking water from the Wulik River during the summer months. In addition, the Kivalina and Wulik Rivers are used for subsistence harvest of fish, which may be impacted by changes to water quality due to dust deposition. We recommend the Final EA discuss whether dust deposition to the Kivalina and Wulik Rivers is a potential concern for water quality.

Wetlands

During our review of the Draft EA, we noted it does not seem to address the potential effects of fugitive road dust on wetland resources. Changes to soil, permafrost, and vegetation in the Arctic ecosystem have been documented as a result of fugitive road dust (Auerbach et. al. 1997, Walker and Everett 1987). Based on these studies of the Dalton Highway and the Spine Road subjected to years of chronic road dust disturbance, soils next to the gravel roads were observed to have lower nutrient levels, altered organic horizon depth, higher bulk density, and lower moisture. Permafrost thaw was also deeper next to the road. Increased drifting of snow in the lee of the road and earlier initiation of thaw near the road were both observed, due to dust-induced change in albedo, with the concomitant contribution to increased thermokarst in roadside areas. The vegetation biomass of most taxa was reduced and the community composition was altered, developing into decreased moss and lichen cover, increased barren ground, and colonization by many taxa that are common on mineral-rich soils. These effects have been measured out to 300 feet from gravel roads. We, therefore, recommend the Final EA include a discussion of the potential effects of fugitive road dust on the wetlands located along the proposed road.

The effects, which have been observed on the Dalton Highway and the Spine Road, may differ in magnitude from those that could occur along the proposed Kivalina evacuation road, due to differences in vehicle type and traffic load. However, we want to share the following resources, which may be helpful in discussing the potential effects of fugitive road dust on wetlands:

Auerbach, N. A., M. D. Walker, and D. A. Walker. 1997. Effects of roadside disturbance on substrate and vegetation properties in Arctic Tundra. *Ecological Applications* 7(1): 218-235.

Walker, D. A., and K. R. Everett. 1987. Road dust and its environmental impact on Alaska taiga and tundra. *Arctic and Alpine Research* 19(4): 479-489.

Subsistence

According to the Draft EA, construction of the proposed evacuation road is anticipated to expand access to berry picking resources near the road, including potential intensified berry harvest along the roadside. As noted above, impacts of dust to certain types of vegetation have been measured out to 300 feet from roadways. In addition to potentially impacting the growth of subsistence berry species, dust deposition could affect the ability of residents to consume the berries. We recommend the Final EA discuss the potential impacts of road construction and use on subsistence use of berries or other plants.

In conclusion, we appreciate the opportunity to review this Draft EA and hope our recommendations for additional information to be included in the Final EA will help to ensure decision-makers and community members are aware of the full range of potential impacts of the construction and use of the proposed road.

The EPA recognizes the importance of establishing a safe and reliable means of evacuation for the residents of Kivalina. We would be happy to have a meeting or phone call to follow up on any of the information included here. In addition, if you have questions about our comments, please contact Molly Vaughan of my staff at (907) 271-1215 or vaughan.molly@epa.gov, or contact me at (206) 553-1841 or nogi.jill@epa.gov.

Sincerely,



Jill A. Nogi, Manager
Environmental Review and Sediment Management Unit

2017-12-14 ADF&G Kivalina Meeting notes

Project Name & Number: Kivalina
Evacuation Road

Meeting Location: 11:00 am

Teleconference Info:

1-866-546-3377

453631#

Video-conference Info:

Date: 14 Dec 2017

Attendees - In Person

Sara Lindberg; Steve Reidsma (Michael Baker); paul.karczmarczyk@alaska.gov; Audra Brase (DFG), John Baker Sarah Schacher, brett.nelson@alaska.gov, Bill Morris (Owl Ridge)

Attendees - Virtual

Amy Sumner, SW Environmental

Problem

Statement/Meeting Topic:

INVITE: The DOT&PF Kivalina team would like to meet with you to discuss the Kivalina Evacuation and School Site Access Road Draft Environmental Assessment, as well as follow up with Title 16 permit details, specifically about how much detail will be needed for material site development at this stage. We appreciate your collaboration on our team and we look forward to discussing further. As you saw last week the Draft EA is out for public and agency comment. Please follow the link below to access the document. If you haven't already, you should be receiving a hardcopy of the Draft EA either today or early next week.

Previous Meeting Docs

12/18/16 Attendees: Audra Brase, USF&G; Ryan Anderson, AK DOT&PF; Paul Karczmarczyk, AK DOT&PF; Sara Schacher, AK DOT&PF; Jonathon Hutchinson, AK DOT&PF; Katherine Keith, Remote Solutions; John Baker, Remote Solutions; Sara Lindberg, Stantec

Digital Files

<http://dot.alaska.gov/nreg/KivalinaEvacRd/>

Standing Agenda:

1. Safety Minute
2. [Team Meeting Ground Rules](#)
3. Review short term goals
4. Review task lists from the previous check in (On main Meeting Note page)
5. Identify work tasks that have been accomplished since the last check in
6. Identify work tasks that will be completed before the next check in
7. Identify any obstacles preventing the team from accomplishing the goals
8. Adjourn

Action items

- Audra- trail easement info. She thinks this is non-issue but will follow up.
- Audra- info on spawn areas. It is further up than where we are proposing mining so thinks it's a non-issue but wants us to have the info.
- Audra- will discuss if the lagoon needs to be permitted or not.
-

Discussion items

Item	Who	Notes
------	-----	-------

		<ul style="list-style-type: none"> • Audra is good with EA language re: fish pass. • Audra has trail easement info? • Sara clarified we pulled off the gravel bar in the boundary. • Steve/Bill: geotech data will refine depths of mining in Wulik. Audra would like to see channel connected due to potential for flooding. NMFS was concerned with predatory white fish so did not want to see channel connected, but Bill thought that was addressed because there is no presence of she fish. Bill said the connection channel would be designed above Thalweg of the Wulik. • Sara: NMFS asked if material sources could be prioritized. DOT&PF agreed this could be done. Audra agreed K Hill, then relic channels, then Wulik would be preferred preference for order of mining. • Audra: wants to know more about work timing and time constraints. Timing windows may be placed. Audra said June and July is very sensitive for salmon. Also concerned with worst case scenario of a high water year, such as adult salmon getting washed into gravel pit. No concern about any upland mining, but just concern anything close to rivers. Bill: usually higher magnitude flood events are late fall/high rainfall events. There is a gage on the Wulik. Audra said likely to expect general statement on this as well as Dolly Varden in the fall. Paul: community expresses concern on char, not so much salmon. Audra said yes, char falls into anadromous category as well but they spawn in the fall, whereas salmon in summer. Does not believe char spawn near this proposed work location in the Wulik, and can provide this info. • Sara: would it be good to have a pre-application meeting for Title 16 permit? Need contractor on board to have details as to schedule, timing. Team discussed that DFG permits can be turned around quickly, but everyone needs to be on the same page about parameters/constraints. Steve: already anticipate reclamation will be required at all sites. We expect ponds based on other reclamations for material sites on the north slope, and this is similar. Audra said there is flexibility in their permits particularly with reclamation of gravel bars, so basically permit can have conceptual requirements, but specifics to be addressed in greater detail by DOT&PF and/or contractor. They also do not have public notice requirements. Steve said we can provide an application in, using material from USACE application. Anticipates later in January they could be seeing something from us. • Sarah & Sara stressed any supportive comments also welcome, as it helps communicate agency concerns or non-concerns on certain issues. • Wulik channel #1 - these channels are very shallow. Audra recalled Jeremy at USACE was talking about mitigation through limited riparian habitat–Bill suggested scrape edges in this country, it nearly immediately vegetates. Steve said USFWS liked that shrubby habitat. Steve says we want to do reclamation on everything we disturb, would be easier to do this type of reclamation than deeper excavations elsewhere. • Wulike Relic channel #2 - access roads avoid any types of water crossings as do Relic Channel #1. These roads are being permitted as permanent fill because of difficulty reclaiming and anticipated future use of these sites. Bill said these sites will be good long term water sources if they are kept accessible. (Future ice roads, roads watering, etc). • Steve & Audra: to summarize, items in permit application needs to include: discussion on each of the material sites as each are unique, the main road and culvert locations, which are fish pass, discuss those. Leave sizing based on Fish Pass MOA, and use enhanced fish pass design (upsized for aufeis/debris) for others. Enhanced fish pass location designs were ID'd by DFG, Steve has point files for these locations. The lagoon itself: bridges are great. DFG will not permit in the lagoon because salt water so defers to NMFS for jurisdiction. Bill mentioned somebody let the mouths of the river slide into the catalog, so then Audra questioned if we should permit or not. It was discussed in EFH. They would like to know about vibration for pile driving but agree anything required for marine mammals would easily cover concerns for fish. Bill inquired about NMFS request to have no shooting signs on bridge–group agreed community education would be more effective but a sign was not difficult mitigation • Audra–water withdrawals. Sara said we would use general info in EFH. DFG will need this info for the permit. Asked if we would harvest ice for ice roads. Bill said this cuts down water needs substantially, and this was a possible solution for using lake ice in the area to construct ice roads.

Parking Lot



MEMORANDUM
Department of Fish and Game

State of Alaska
Division of Habitat

TO: Jonathan Hutchinson, Project Manager
ADOT&PF
Northern Region
Fairbanks

DATE: 12/14/2017

TELEPHONE: 459-7282

FROM: Audra L.J. Brase, Regional Supervisor
Department of Fish and Game
Division of Habitat
Fairbanks

SUBJECT: ADF&G Comments
regarding DEA Kivalina
Evacuation and School
Site Access Road

The Alaska Department of Fish and Game (ADF&G) has reviewed the Draft Environmental Assessment (DEA) for the Kivalina Evacuation and School Site Access Road. The Alaska Department of Transportation and Public Facilities (ADOT&PF) is proposing to construct an all-season road from Kivalina to an evacuation/ school location near Kisimigiuqtuq Hill (K-Hill). Comments were solicited from the Wildlife, Sport Fish, Habitat, Commercial Fisheries and Subsistence divisions; and are summarized below.

Route - ADF&G appreciates that the route alternatives were developed in consultation with the local community, and we support the preferred alternative (Southern Route with Lagoon Crossing D) as it is approximately 1.2 miles shorter than the "Combined Route" and has three fewer water crossings which will help minimize the road's impact to the surrounding habitat.

There appear to be at least three 17(b) easements near the start of the proposed road, one of which appears to cross the proposed southern road route (Figure 1). This 25ft easement is described in patent 50-2015-0071. This legal access should be maintained & identified by ADOT&PF in describing effects from the road project.

Material Sites - ADF&G prefers that the material sites be considered in the following order: first the upland location (K-Hill), then the Relic Channel sites (Sources 1 & 2), and finally the Wulik River Source 1. These preferences are based on the potential impacts to the fish resources of the Wulik River. The Wulik River has been identified to be important to the spawning, migration and/or rearing of Chinook, coho, sockeye, chum and pink salmon; as well as anadromous Dolly Varden; additionally the river supports resident fish species including Arctic grayling and various whitefish. The ADF&G appreciates that the ADOT&PF has identified a 100ft buffer between the river & the edge of the material site. However, utilizing a material site immediately adjacent to the river, in a low gradient area prone to flooding may be problematic during open water periods as migrating fish could become entrapped and not successfully spawn.

If the Wulik River Source 1 site is utilized, the ADF&G will likely recommend that gravel be extracted only during low open water periods or during the winter when the potential impacts to spawning fish may be minimized. Additionally, to allow any entrapped fish to escape, the ADF&G will require that the material site be connected to the active Wulik River channel. Any development specifics of the Wulik River material site will be coordinated with the applicant, the ADF&G and the Alaska Department of Natural Resources (ADNR).

Material Site Reclamation – The ADF&G supports developing the material sites into ponds once gravel extraction is complete. We would recommend shallow littoral zones around the pond perimeters to provide diverse habitat for waterfowl, aquatic insects and rearing fish. Additionally, we would support efforts to develop the riparian areas into migratory bird habitat by encouraging the growth of native shrubs.

Kivalina Lagoon Crossing – The ADF&G appreciates that the ADOT&PF has designed a causeway which should allow for fish, boat and marine mammal passage; as well as sufficient water flow to maintain the existing estuarine habitat. We have no objection to this design.

Fish Passage – The ADF&G will be responsible for issuing permits for all culverts in fish bearing waters. Design specifications and stipulations for installation will be developed in coordination with the applicant utilizing best management practices and standards for fish passage.

Water Withdrawals – The specifics of water withdrawals for road construction/ maintenance activities do not appear to be identified in the EA. Once these sites are determined, the ADNR and ADF&G will be responsible for issuing water use permits. The ADF&G will place screening stipulations and maximum flow velocities upon any water withdrawals from fish bearing waterbodies.

The ADF&G appreciates the early consultation and coordination that the ADOT&PF has provided and we welcome the opportunity to provide feedback on this DEA. Any questions about these comments should be directed to Audra Brase at 907-459-7282 or emailed to audra.brase@alaska.gov.

ecc: Al Ott, ADF&G Habitat, Fairbanks
Brendan Scanlon, ADF&G Sport Fish, Fairbanks
Mark Fink, ADF&G Wildlife, Access Defense, Anchorage
James Menard, ADF&G Commercial Fish, Nome
Beth Mikow, ADF&G Subsistence, Fairbanks
Daniel Alex Hansen, ADF&G Wildlife, Kotzebue

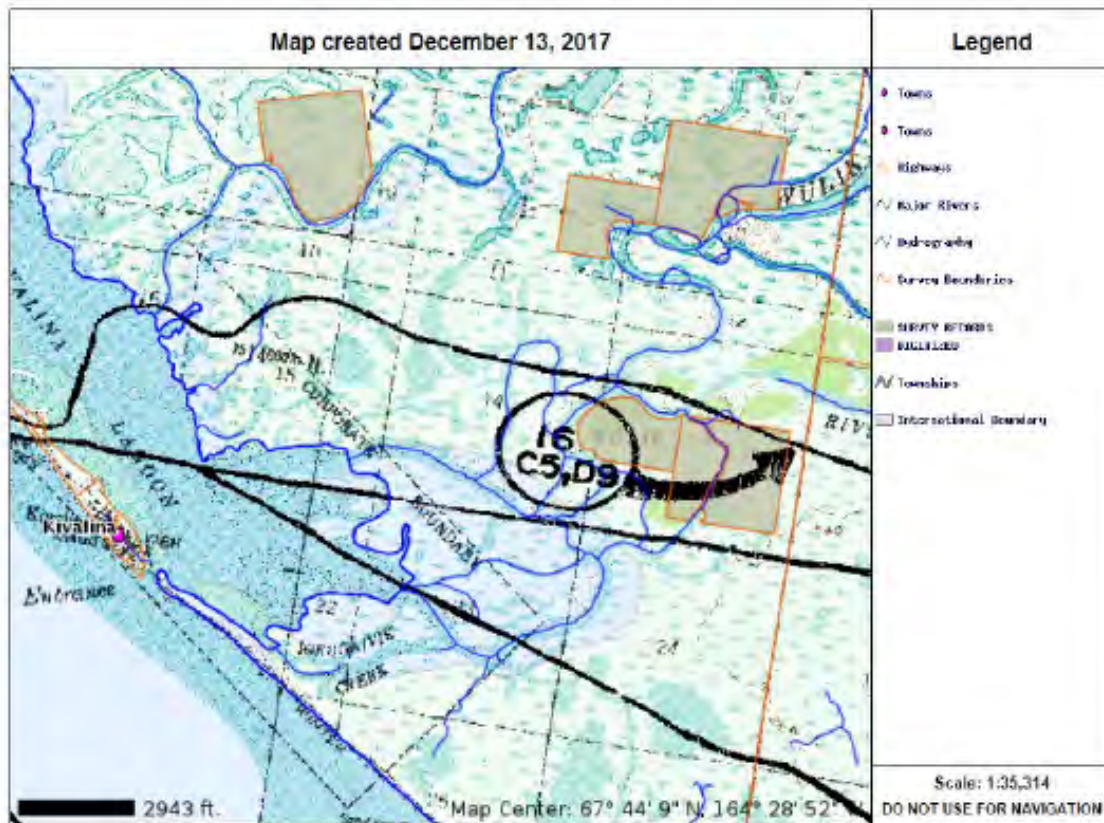


Figure 1. Map depicting 17(b) easements in vicinity of proposed Kivalina evacuation route. The map was created from BLM's SDMS site. <https://sdms.ak.blm.gov/isdms/imf.jsp?site=sdms>

2017-12-14 USF&WS Kivalina Meeting notes

Project Name & Number: Kivalina
Evacuation Road

Meeting Location: 1:30-3:00

Teleconference Info: 1-866-546-3377 453
631#

Video-conference Info:

Date: 14 Dec 2017

Attendees - In Person

Steve Reidsma; John Baker;
Sara Lindberg;
paul.karczmarczyk@alaska.gov,
Sarah Schacher; brett.nelson@alaska.gov
, Louise Smith, USFWS and Kaiti Ott,
USFWS

Attendees - Virtual

Amy Sumner, SW Environmental

Problem

Statement/Meeting Topic

Meeting Goals:

- Receive USFWS comments on Draft EA, learn if we can anticipate any comments that will require further analysis or evaluation prior to FONSI, or if any, can they be incorporated in as environmental commitments.
- Review Section 7 consultation letter, do they need any additional information?
- Summarize Draft 404 permit. Receive and preliminary comments they have now so we can revise the application if needed prior to submittal. Anticipated to be submitted to USACE in January 2018.

Previous Meeting

Documents

12/19/2016. 1st Draft Notes USFWS: Kaiti Ott, Wildlife Section 7 Consultation; Louise Smith, USFWS Wildlife Biologist; Robert Henzey, Branch Chief; Paul Karczmarczyk, ADOT&PF; Sarah Schacher, AK DOT&PF; Jonathon Hutchinson, ADOT&PF; Katherine Keith, RS; John Baker, RS; Sara Lindberg, Stantec

12/12/2016. Scoping Comments from USFWS

Digital Files

Standing Agenda:

1. Safety Minute
2. Team Meeting Ground Rules
3. Review short term goals
4. Review task lists from the previous check in (On main Meeting Note page)
5. Identify work tasks that have been accomplished since the last check in
6. Identify work tasks that will be completed before the next check in
7. Identify any obstacles preventing the team from accomplishing the goals
8. Adjourn

Action items

- Sara Lindberg to provide USFWS estimated number of barge increase associated with construction
- Louise to provide simple email (comment deadline 12/15) outlining prior discussions and that USFWS concern items have been addressed. Will send to jonathan.hutchinson
- Kaiti to follow up on how to move forward with Section 7 to conclude FONSI.
- Amy to find legal citation for need to complete NMFS and Section 7 consultation prior to concluding NEPA document.

Discussion items

Item	Who	Notes
		<ul style="list-style-type: none"> • Louise: questions on proposed gravel sites. Will they provide habitat for predatory fish of any nature? Understand they may create overwintering habitat for any species. Sara: NMFS asked the same question. Bill Morris did the EFH assessment. The species of white fish that is predatory does not exist in the project area. Even with regime changes with ice or reconfiguration of gravel sites, would this invite them? Bill does not believe so. It is too far from any other sources of these species to make it there. If an occasional one did make it there, they would be overwhelmed by volume of pinks and chums coming out. If She-fish did come up it would definitely become a subsistence resource. • Louise: clarify, southern route is preferred route? Yes. Team discussed how and why they came to this conclusion. John explained that for an evacuation route the shorter distance was preferred. The northern route is longer with more wetlands and more fish passage crossings. We therefore prefer the straightest route with less impacts that is closer to what the community had selected initially. • Louise: your proposed sources will provide enough for the gravel road? John explained K-Hill

will provide enough for whole project? Yes. Asked if school pad would be placed on in proximity to mining area. Team discussed school would be in vicinity, we designed for terminus near a proposed school site. Our intent is to not obviate a use a school site.

• **John:** the lagoon is 1-3 feet deep. There is a defined channel about 4' deep and it does not move in or out. A bridge will be constructed across it to provide for boat passage to get out to the ocean or the river. Bridge span will be approx. 160'. Along the causeway there will be overflow culverts to allow conveyance within the lagoon. **Louise:** what type of culverts? **Sarah:** to be determined, will be designed for fish passage. Not sure yet on exact sizing or type of bottom. **Sara:** aerial photos show historically this channel has not changed much at all. **Louise:** north slope rivers tend to flood and the areas are flat. John: ice from Wulik comes down and melts and ice melt stays within the channel. **Sara:** a Locations Hydraulic study has been completed to model worst case scenario, but road intended to be built above flood. Flooding historically tends to be widespread/flat, not a raging flows against road embankment. The mouth of Wulik has been stable. Louise: K-hill has elevation compared to Kivalina island? Yes. 10 identified water crossings but may include more equalization culverts. **Steve:** with material sites other than K-Hill, water table is within 12" of surface. So we will reclaim ponds after project. We will contour edges to have gradual slopes, creating a sedge marsh around it to encourage shrubby growth. Louise: is there shrub growth in the delta? **Steve:** yes. Appears to be good bird habitat. **Sara:** recall Bob Henzey suggested a year ago low scrub be higher value wetlands for the habitat reasons. Also we have more opportunities to create more with the reclamation.

• Randy, the USFWS fisheries expert told Louise earlier he was a little concerned about overwintering fish and predatory fish. But, **Louise** says if DFG says likelihood is slim, or would become a subsistence resource, and drainage all good with passage locations in the right place, does not see a lot of issue. **Sara:** does USFWS plan to write a comment letter for the EA? **Louise:** no. The overwintering/predatory was the largest concern. This is a different kind of project. Feels we have looked at several alternatives and considered all the relevant factors. **Louise:** do we see Kivalina eventually moving up to this area? **John:** we haven't discussed this, it is probably very divided in the community. **Paul:** it would be helpful to avoid the perception that we haven't avoided working with them. Even just an email saying we have discussed relevant factors and have no further concern. John also wants the community to see that there are not concerns. USACE permit application should go out first part of January so USFWS will be looking for that. Can USFWS join the team as we go through pre-application meeting with them line by line? **Sara:** who would comment on USACE app? **Kaiti** would be doing consultation with DOT&PF on Section 7, not sure if we would have other comments outside of Section 7. But may depend on what comes out in application. **Kaiti** says they could join in if we think it would help. Janet Post is leading at Corps, along with Jason Berkner.

• **Kaiti:** ESA. Very happy we will develop our own polar bear interaction plan. Not very concerned about polar bears denning near community. They den at very low density in the Chukchi. Probably can't measure impacts to denning polar bears associated with this project impact, and no appreciable impact to habitat. Already impacts by existing levels of human activity. This will be acknowledged in Section 7 but no adverse impacts. Listed eiders may pass through, but no adverse impacts. It's a little premature to initiate consultation as DOT&PF requested. When they do Section 7 consultation it's on final project design. They typically do this at same time application sent to USACE, and takes less than 30 days to process. **Brett:** unfortunately we need this consultation complete to complete a FONSI/sign our document. ESA can be challenged in court so FHWA likes these things to be lined out. We are the lead federal agency in this case. Did not want to get consultation done until USACE permit mod complete. USFWS was not aware this was our requirement. **Sara** said typically this has been informal consultation at agency scoping. **Steve:** clarify, does consultation start when USACE application goes in or USACE public notice? **Brett:** does a CE or EA trigger USFWS system differently? We mostly do CEs so not as experienced with EA. **Kaiti:** for Section 7 we just ask for BA when adverse impacts are anticipated, which we do not have here. With informal consultation, much quicker process. Sarah: is there a provisional way to move forward with some sort of provisional approval given basic parameters, or agreement USFWS will be involved as construction gets closer for more details/information?

• **Kaiti:** we don't want Section 7 to hold up our FONSI. Will discuss with Ted Swem. We don't want to have to do this twice either. But need to follow protocol and be aware of precedents. She needs a ballpark number of barges associated with construction impacts. **Brett:** NMFS has expedited consultation process, and had asked the same question. We are trying to be general enough to be flexible, but be specific enough. **Sarah:** is there a threshold number of barges that would trigger USFWS concern? **Kaiti:** Vessel traffic in open water season can pose a collision hazard for eiders/all birds, and probably marine mammals. So they need to have a way to try to estimate the probability of collisions with vessels. They can estimate potential take assessment and in BO. Just need this info to be consistent with how they evaluate every project.

• **John:** let's go back to Section 7 and FONSI. **Amy:** completion of consultation is required. She will look up actual legal reference for this. We need a concurrence from both NMFS and USFWS on not likely to be adverse effect finding. **Paul:** what does final really mean? Substantive changes in design? Grade changes? Because in big picture sense not a lot changes. **Brett:** this could also be addressed in re-eval process for more significant changes. **Paul:** short of a new material site, realignment, or major grade changes, does not see a lot of changes in the future. Not really a lot of options or other places to go. **Steve:** we have a

footprint (conservative) we are taking to USACE, so we are fairly solid on there. Giving ourselves some flexibility for possible areas needed for widening, etc. Feels USFWS could consult off of this because it is the worst case scenario. We will permit the whole material site even though we are not using the whole thing, permitting a road wider than we anticipate building. What we permit will probably even be less than EA, as design has continued to be fine tuned.

		<ul style="list-style-type: none">• Sara: sounds like we can work together to try to complete the Section 7 for the FONSI? Kaiti feels they can do this and meet Jan 1 date. Email is fine to clarify barging? Kaiti: yes. Would causeway and road be illuminated? Sarah: No, only possibly reflective roadway delineators.

Parking Lot



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, AK 99506-0898

Regulatory Division
POA-2012-124

Stantec
Attention: Ms. Sara Lindberg
725 East Fireweed Lane, Suite 200
Anchorage, Alaska 99503

Dear Ms. Lindberg:

Thank you for the opportunity to review the Draft Environmental Assessment for the proposed Kivalina evacuation road, and the productive pre-application meeting. Your comprehensive analysis will aid us in making a timely evaluation of your forthcoming application. We greatly appreciate the collaboration between the US Army Corps of Engineers (USACE) and the Alaska Department of Transportation, and look forward to the input from other agencies and the public.

I am available to answer any questions, as your team is working through the USACE application process, so please do not hesitate to contact me by phone at (907)753-2831 or arrange another pre-application meeting.

Sincerely,

A handwritten signature in cursive script that reads "Janet Post".

Janet Post
Project Manager

Lindberg, Sara

From: Leinberger, Dianna L (DNR) <dianna.leinberger@alaska.gov>
Sent: Friday, December 15, 2017 6:37 PM
To: Schacher, Sarah E (DOT); Lindberg, Sara
Cc: Anderson, Ryan (DOT); Nelson, Brett D (DOT); Karczmarczyk, Paul F (DOT); Reidsma, Steve; jkbaker.kotz@gmail.com; Pineault, Nanette C (DOT); Wait, Alexander J (DNR); Schick, Lesli J (DNR)
Subject: Kivalina Draft EA Comments

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

At today's Kivalina Draft Environmental Assessment (EA) meeting at DNR, it was asked if there were any concerns regarding water withdrawals. We touched base with our Water Section and they provided the following comments on the Draft EA.

1. The project will require Temporary Water Use Authorizations (which is not listed in the permitting section). There was an initial TWUA issued for the project (TWUA A2015-01), but it has expired and is closed.
2. The Wulik River has multiple water rights for public drinking water issued to the City of Kivalina (ADL 46323 and ADL 72129) and a reservation of water for the Wulik River issued to ADF&G (LAS 20067). None of these are mentioned in the report when discussing the river.

Also, in the meeting today I had mentioned that it would be best if the upland or terrestrial material sites did not include state owned submerged lands as it would be difficult to manage a site in which there were two land owners. For the Wulik River Relic Channel Source 2 as depicted in the Draft EA, figure 2, it appears to include some state submerged lands. In the handout that Steve provided, the "project components" page shows two distinct areas versus one larger area. The two smaller separate areas better reflect avoiding state submerged lands. It might be helpful to use that figure in the final EA to be clear that no state (DNR) material site authorizations would be required for the recommended potential material sources.

We would like thank the Department of Transportation and the Village of Kivalina for their early coordination on this important project. We appreciate the effort and all the hard work that has gone into a project that is so vital to the people of Kivalina. Thank you.

If you have any questions regarding our comments, please let us know.

Sincerely,
Dianna

Dianna Leinberger
Natural Resource Manager
Northern Region Office - Fairbanks
Division of Mining, Land & Water
Department of Natural Resources
(907) 451-2728

2017-12-18 Kivalina Road EPA Meeting notes

EPA Project Name & Number: Kivalina Evacuation Road

Attendees - In Person

Attendees - Virtual

Meeting Location: Teleconference

Teleconference Info: Zoom

Video-conference Info: Zoom

Date: 18 Dec 2017

- Katherine Keith
- paul.karczmarczyk@alaska.gov
- Sara Lindberg
- John Baker
- Molly Vaughn

Problem

Short Term Goals

Digital Files

Statement/Meeting Topic

[EPA_Draft EA comments_memo.pdf](#)

To Discuss the EPA Comments on the Draft EA.

Standing Agenda:

Action items

1.



Discussion items

Item	Who	Notes
EPA	Molly Vaughan	<p>Got on the phone call with Molly Vaughan, EPA Anchorage Office, to discuss the project. Molly is fairly new to the project as she has not been a part of the ongoing agency coordination efforts. She has only been involved with the Kivalina Project for reading the EA. They have not coordinated with other agencies. Sara L went over the schedule to have a FONSI by Jan. 1. 2017 and asked Molly what level of detail we need to provide.</p> <p>SL: The amount of dust generated is going to minimal. The intent is that dust impacts would be addressed during the APDES and USACE 404 permitting processes and through an M&O agreement with the community which would include long term dust abatement measures.</p> <p>MV: The intent of the comments was to request the Final EA address expected higher intensity of travel if the school was built. The way the EA is written it appears the purpose of the project was to ultimately build access for a school. EPA feels the community should be familiar with the possible impacts of higher intensity road use on air quality and dust. There are potential concerns to subsistence resources from berries being covered in dust along the road. If the school is not reasonably foreseeable then maybe the EA needs to be revised. The text along with the title indicate that the project does include an expected future school to be located at the terminus. The comments were not intended to address a substantial concern but the impact analysis seems to be missing. Various resource sections make mention of cumulative impacts associated with the school but others do not.</p> <p>The team explained the project history and discussion of the school project. This project is to address the immediate need of the community to have a safe and reliable means of evacuation during a storm event, and the school project is not a part of the scope of this work. Not much in detail about the school project is known at this time. In addition, the location of the school site is still not finalized.</p> <p>MV: If the school is not a reasonably foreseeable future project and evaluation of it would be more speculative and remote, then it does not need to be evaluated in detail. The EA needs to show the best mitigation has been considered, a lot of detail is not needed to cover it.</p> <p>The team summarized the ongoing community involvement and support for this project, as well as the input received during the alternatives evaluation process, including consideration of berry picking areas.</p> <p><u>Next Steps:</u></p> <ul style="list-style-type: none"> • If school is remote and speculative the comments are not relevant then the EA could be revised to reflect that. • Reasonably foreseeable impacts for the school will need to be included. • Make sure the intent for the long term M&O contract to address dust from potential future actions is clearly stated.

Lindberg, Sara

From: Lindberg, Sara
Sent: Thursday, December 21, 2017 11:50 AM
To: Lindberg, Sara
Subject: EXTERNAL: RE: Coast Guard Call

From: Reidsma, Steve [mailto:Steve.Reidsma@mbakerintl.com]
Sent: Thursday, December 21, 2017 11:48 AM
To: Lindberg, Sara <sara.lindberg@stantec.com>
Cc: Nelson, Brett D (DOT) <brett.nelson@alaska.gov>; jonathan <Jonathan.hutchinson@alaska.gov>; paul.karczmarczyk@alaska.gov; John Baker (jkbaker.kotz@gmail.com) <jkbaker.kotz@gmail.com>; Katherine Keith <katherine@akremotesolutions.com>
Subject: RE: EXTERNAL: RE: Coast Guard Call

Jim Helfinstine, called today to discuss the Kivalina Evacuation Road project, and to provide guidance on the material he would like to see for the US Coast Guard permitting process. He has read the previous material that was sent to him about the project, and would like additional information.

I told him I would send him a series of emails (based on size of content), starting today (Dec 21) to respond to his comments.

These include the following:

1. Purpose/Need of Project (send previously)
2. Description of the Bridge and Approaches, using material from recent Agency Meetings
3. Description of navigation; what type of boats use the lagoon (photos help), is all subsistence based, is there commercial traffic
4. How will the local boater community be informed of potential closures during construction.
5. What is the timeline of the project, what are the funding sources, permitting status, Project team members
6. Agencies Consulted; Topics
7. Recap the DOT&PF/Federal Hwys 327 NEPA Program

Steve Reidsma

APPENDIX F

SECTION 106 CONSULTATION

	Page
08/07/17 Initiation of Consultation Letters	1
8/7/17 DOT&PF Letter to SHPO.....	1
8/7/17 DOT&PF Letter to NPS.....	10
8/7/17 DOT&PF Letter to NPS (Kotzebue).....	14
8/7/17 DOT&PF Letter to NPS (Archeologist)	18
8/7/17 DOT&PF Letter to NANA	22
8/7/17 DOT&PF Letter to NANA (Lands).....	26
8/7/17 DOT&PF Letter to Native Village of Kivalina.....	30
8/7/17 DOT&PF Letter to Native Village of Noatak.....	35
8/7/17 DOT&PF Letter to Northwest Arctic Borough	40
8/7/17 DOT&PF Letter to City of Kivalina.....	44
8/7/17 DOT&PF Letter to Bureau of Indian Affairs.....	48
8/7/17 DOT&PF Letter to Bureau of Indian Affairs (Archeologist)	52
9/19/17 DOT&PF Letter to SHPO.....	56
9/19/17 Inadvertent Discovery Plan	68
9/22/17 SHPO Email to DOT&PF	75
9/19/17 DOT&PF Letter to Native Village of Kivalina.....	76
9/19/17 DOT&PF Letter to Native Village of Noatak.....	82
9/19/17 DOT&PF Letter to City of Kivalina	88
9/19/17 DOT&PF Letter to NANA	94
9/19/17 DOT&PF Letter to NANA (Lands).....	100
9/19/17 DOT&PF Letter to NPS.....	106

9/19/17 DOT&PF Letter to NPS (Archeologist)	112
9/19/17 DOT&PF Letter to NPS (Kotzebue).....	118
9/19/17 DOT&PF Letter to Northwest Arctic Borough	124
9/19/17 DOT&PF Letter to Bureau of Indian Affairs (Archeologist)	130
9/19/17 DOT&PF Letter to Bureau of Indian Affairs	136
10/06/17 NPS Finding of No Historic Properties Adversely Affected Concurrence.....	142
10/09/17 SHPO Finding of No Historic Properties Adversely Affected Concurrence.....	144
12/29/17 DOT&PF Consultation Update Letters to the Finding of No Historic Properties Adversely Affected, Including the Finalized Inadvertent Discovery Plan.....	146
12/29/17 DOT&PF Letter to SHPO.....	146
12/29/17 Archaeological Monitoring Procedures and Inadvertent Discovery Plan.....	162
12/29/17 DOT&PF Letter to Native Village of Kivalina.....	172
12/29/17 DOT&PF Letter to City of Kivalina	175
12/29/17 DOT&PF Letter to Native Village of Noatak.....	180
12/29/17 DOT&PF Letter to NPS.....	184
12/29/17 DOT&PF Letter to NPS (Archaeologist).....	188
12/29/17 DOT&PF Letter to NANA	192
12/29/17 DOT&PF Letter to NANA (Lands).....	196
12/29/17 DOT&PF Letter to NPS (Kotzebue).....	200
12/29/17 DOT&PF Letter to Northwest Arctic Borough	204
12/29/17 DOT&PF Letter to Bureau of Indian Affairs	206
12/29/17 DOT&PF Letter to Bureau of Indian Affairs (Archaeologist).....	212

Department of Transportation and
Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Ms. Judith Bittner
State Historic Preservation Officer
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565

Dear Ms. Bittner:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 1. The entire northern route is shown on Figure one of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

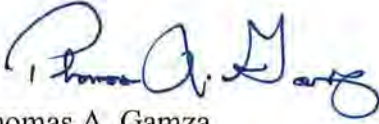
Consultation Efforts

The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-5 Proposed Material Site Investigation APE

Attachment 1: OHA Coversheet and Report: *Kivalina Evacuation and School Site Access Road*

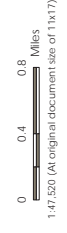
Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager



Legend

- Study Area
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



Notes

1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 IPS 5008 Feet
2. Orthoimagery: Contribution's Kodak Mapping Inc., 2011; CAI/Metric Inc., 2013; Digital Globe, 2016

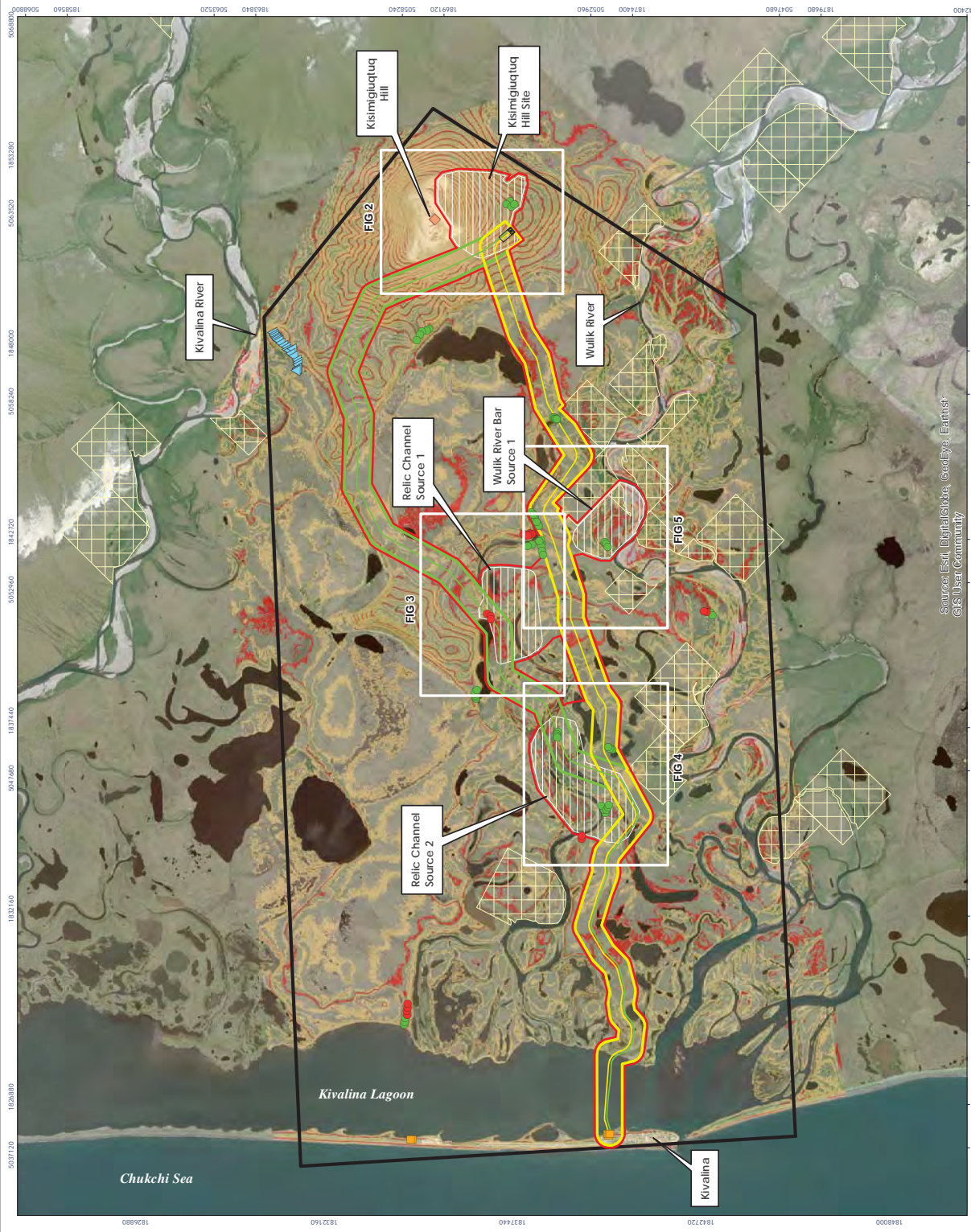


STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD

Area of Potential Effect - Overview

DATE: August, 2017 **FIGURE 1**



Source: Esri, DigitalGlobe, GeoEye, Earthstar
@JS User Community

Disclaimer: Spatial accuracy is not guaranteed. The data is provided as a service and is not intended to be used for any purpose other than the intended use of the data.



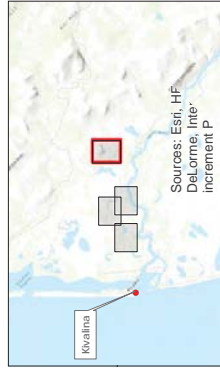
Legend

- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Potential Material Source
- Native Allotments
- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit

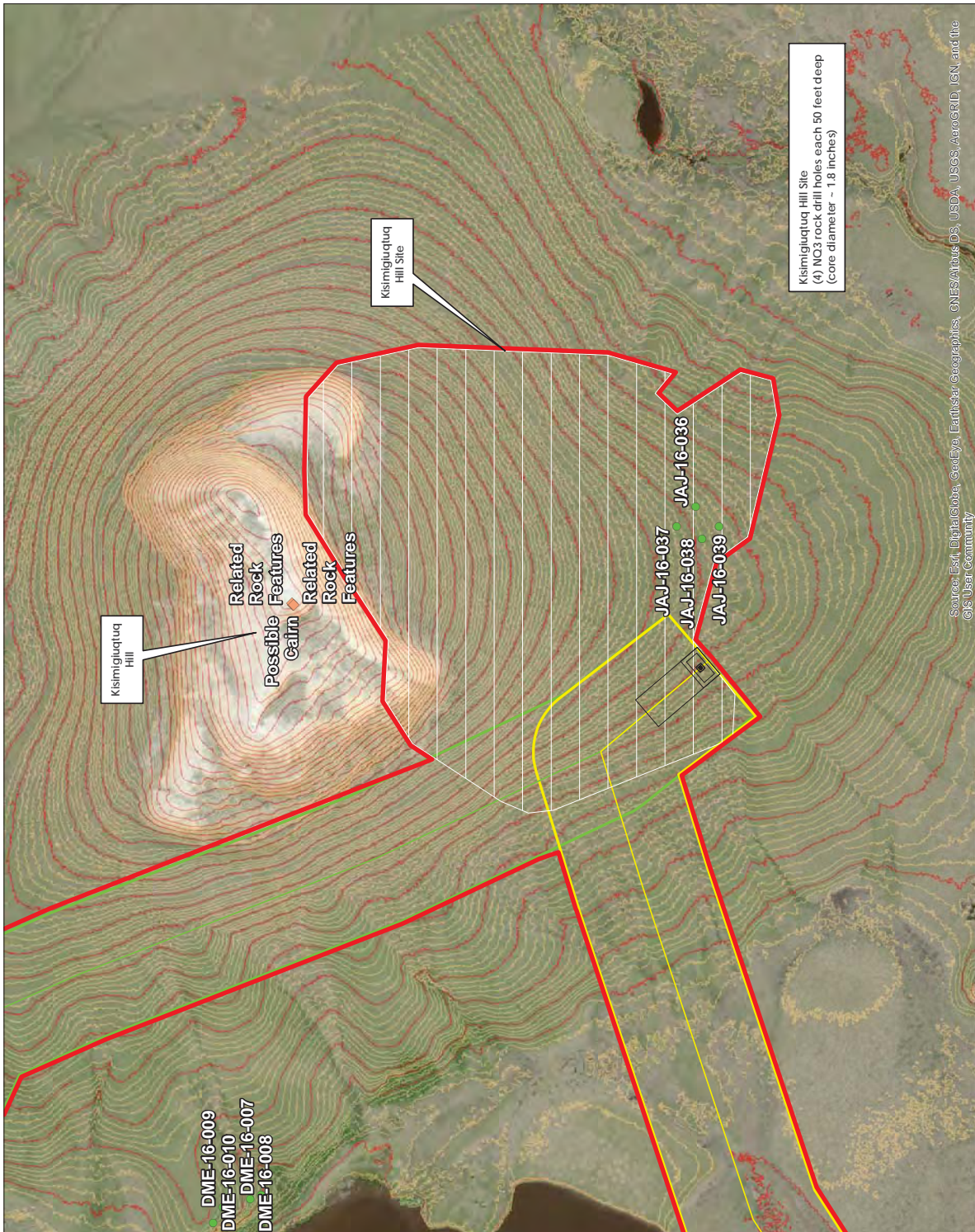


Notes

1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
2. Orthomosaic: Combustion eSodak Mapping Inc., 2011; GeoMetric Inc., 2013; Digital Globe, 2016



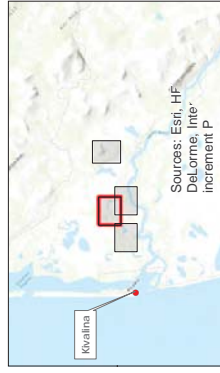
STATE OF ALASKA Department of Transportation and Public Facilities 2301 Peger Road Fairbanks, AK 99709	
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD	
Area of Potential Effect	
DATE: August, 2017	FIGURE 2



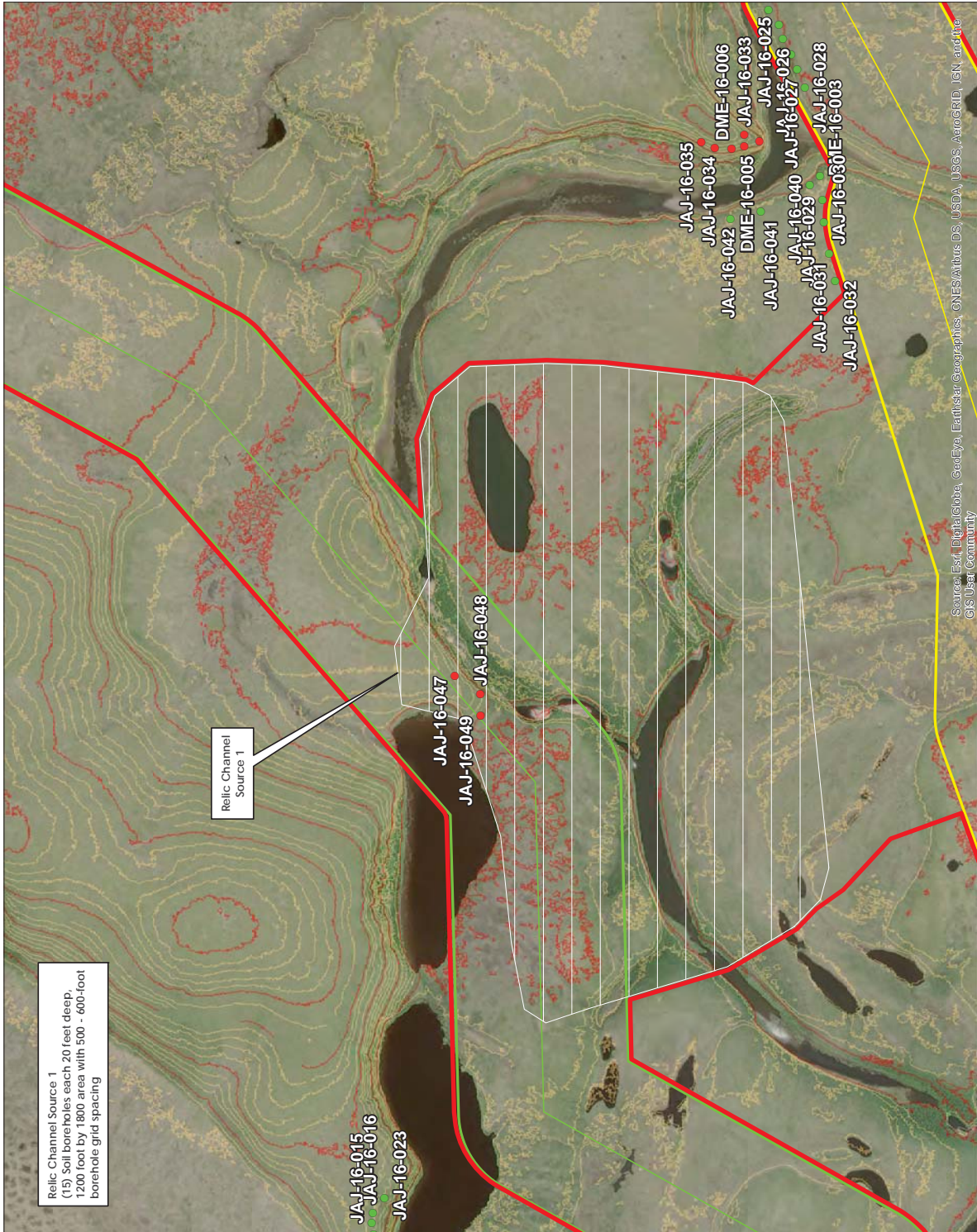


Notes

1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
2. Orthomosaic: Combustion eSotdak Mapping Inc., 2011; s-AeroMetric Inc., 2013; Digital Globe, 2016



STATE OF ALASKA Department of Transportation and Public Facilities 2301 Peger Road Fairbanks, AK 99709	
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD	
Area of Potential Effect	
DATE: August, 2017	FIGURE 3



Relic Channel Source 1
(15) Soil boreholes each 20 feet deep,
1200 foot by 1800 area with 500 - 600-foot
borehole grid spacing



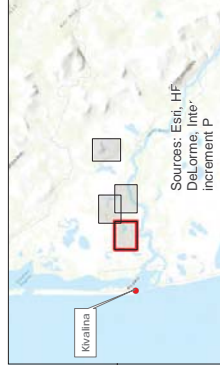
Legend

- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



Notes

1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
2. Orthomosaic: Combination: Esri/arc, 2011; 6-AeroMetric, Inc., 2013; Digital Globe, 2016



STATE OF ALASKA Department of Transportation and Public Facilities 2301 Peger Road Fairbanks, AK 99709	
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD	
Area of Potential Effect	
DATE: August, 2017	FIGURE 4



Relic Channel Source 2
 (8) Soil boreholes each 20 feet deep, 900 foot by 1290 foot area with 500 - 600-foot borehole grid spacing
 (9) Soil boreholes each 20 feet deep, 600 foot by 1700 foot area with 500 - 600-foot borehole grid spacing

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Disclaimer: This map is for informational purposes only. It is not intended to be used as a basis for any legal or regulatory action. The State of Alaska and its agencies do not warrant the accuracy or completeness of the data. The user assumes all responsibility for data reliability for any use of the data.



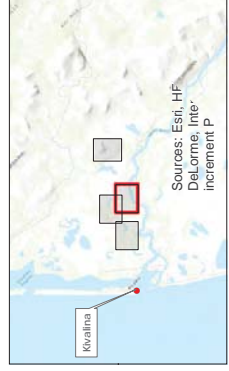
Legend

- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit

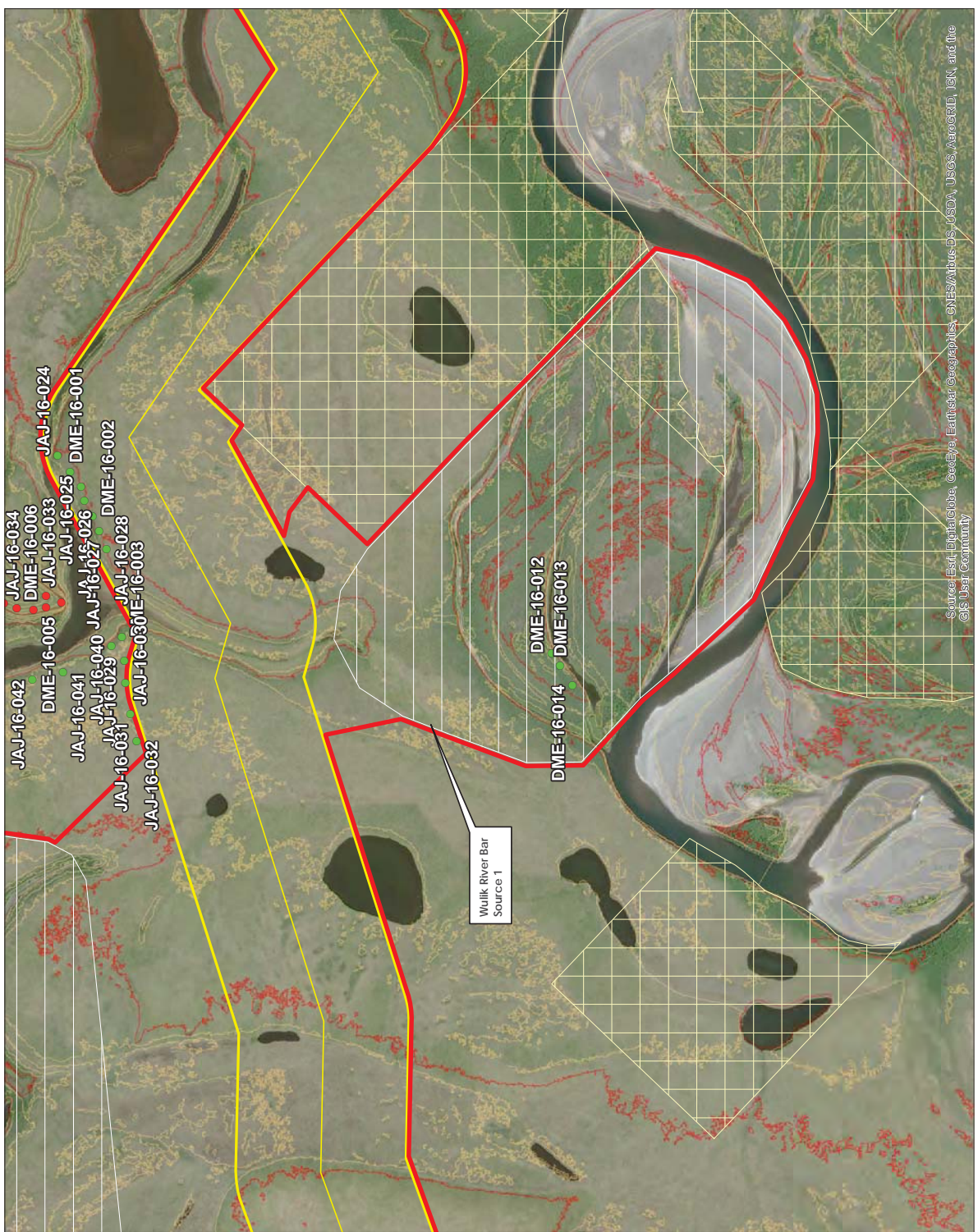


Notes

1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
2. Orthomosaic: Combustion eSodak Mapping Inc., 2011; sAeroMetric Inc., 2013; Digital Globe, 2016



STATE OF ALASKA Department of Transportation and Public Facilities 2301 Peger Road Fairbanks, AK 99709	
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD	
Area of Potential Effect	
DATE: August, 2017	FIGURE 5



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Disclaimer: The contractor is not responsible for the accuracy or completeness of the data. The contractor is not responsible for the accuracy or completeness of the data. The contractor is not responsible for the accuracy or completeness of the data.

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHUY00162
Consultation Initiation

August 7, 2017

Bert Frost
Regional Director
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Mr. Frost:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiutquq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRS Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as	National Register Listed 05/03/1974

		"important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	---	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

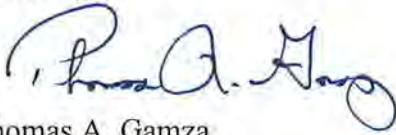
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Maija Lukin
Superintendent
NPS-Western Arctic National Parklands
PO Box 1029
Kotzebue, AK 99752

Dear Ms. Lukin:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiutquq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRS Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

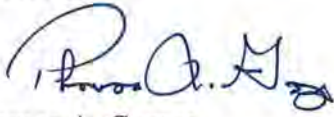
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

**Department of Transportation and
Public Facilities**



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Rhea Hood
Archeologist
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Ms. Hood:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiutquq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRS Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as	National Register Listed 05/03/1974

		<p>"important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.</p>	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 1. The entire northern route is shown on Figure one of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

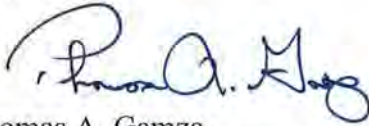
If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the

August 7, 2017

preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-5 Proposed Material Site Investigation APE

Attachment 1: Report: *Kivalina Evacuation and School Site Access Road*

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and
Public Facilities



THE STATE
of ALASKA
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Wayne Westlake
President & CEO
NANA Regional Corporation, Inc.
909 West 9th Avenue
Anchorage, AK 99501

Dear Mr. Westlake:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiutquq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

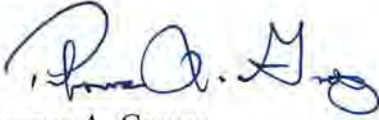
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

John Lincoln
Vice President of Lands
NANA Regional Corporation, Inc.
909 West 9th Avenue
Anchorage, AK 99501

Dear Mr. Lincoln:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Millie Hawley
President
Native Village of Kivalina
PO Box 50051
Kivalina, AK 99750

Dear Ms. Hawley:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

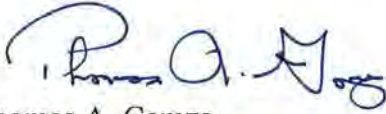
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Should you prefer to conduct government-to-government consultation with the Federal Highway Administration (FHWA) on this project, please advise me of your request.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Project Consultation Options

Native Village of Kivalina

Project Name: **Kivalina Evacuation and School Site Access Road**

State/Federal Project Numbers: **0002384/NFHwy00162**

I. Please check the appropriate response(s) from the list below and use the back of this form or additional sheets if you wish to make comments:

_____ There are no known places of traditional religious or cultural importance present or within the vicinity of the proposed project and further consultation is not requested.

_____ There are or may be places of traditional religious or cultural importance present or within the vicinity of the proposed project and further consultation is requested (*select one*):

_____ We will continue consultations for this proposed project directly with **Tom Gamza Cultural Resource Specialist-Archaeologist**, with the understanding that we may at our discretion request consultations directly with the Federal Highway Administration.

_____ We prefer to consult directly with the Federal Highway Administration on this project.

_____ We have no interest associated with this proposed project and further consultation is not required.

II. If you have chosen to consult, please indicate the manner(s) in which you wish to continue consultation, and your preferred contact person for this project:

Name of our designated contact person for this proposed project:

(Please print)

We would like to continue consultation via:

Phone Fax Mail E-mail Other: (please describe) _____

If you prefer consultation by phone, fax, email, or a different mailing address than was used on this letter, please provide that contact information here:

III. Signed: _____
[Name and title of formal Tribal representative]

Date: _____

Please mail (or email) to:

Thomas A. Gamza Cultural Resource Specialist-Archaeologist (907)452-5293

thomas.gamza@alaska.gov of DOT&PF Professionally Qualified Individual

Or, fax to: **Tom Gamza, Archaeologist 907-451-5126**

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Vernon Adams, Sr.
President
Native Village of Noatak
PO Box 89
Noatak, AK 99761

Dear Mr. Adams:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts


The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Should you prefer to conduct government-to-government consultation with the Federal Highway Administration (FHWA) on this project, please advise me of your request.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Project Consultation Options

Native Village of Noatak

Project Name: **Kivalina Evacuation and School Site Access Road**

State/Federal Project Numbers: **0002384/NFHwy00162**

I. Please check the appropriate response(s) from the list below and use the back of this form or additional sheets if you wish to make comments:

There are no known places of traditional religious or cultural importance present or within the vicinity of the proposed project and further consultation is not requested.

There are or may be places of traditional religious or cultural importance present or within the vicinity of the proposed project and further consultation is requested (*select one*):

We will continue consultations for this proposed project directly with **Tom Gamza Cultural Resource Specialist-Archaeologist**, with the understanding that we may at our discretion request consultations directly with the Federal Highway Administration.

We prefer to consult directly with the Federal Highway Administration on this project.

We have no interest associated with this proposed project and further consultation is not required.

II. If you have chosen to consult, please indicate the manner(s) in which you wish to continue consultation, and your preferred contact person for this project:

Name of our designated contact person for this proposed project:

(Please print)

We would like to continue consultation via:

Phone Fax Mail E-mail Other: (please describe) _____

If you prefer consultation by phone, fax, email, or a different mailing address than was used on this letter, please provide that contact information here:

III. Signed: _____ Date: _____
[Name and title of formal Tribal representative]

Please mail (or email) to:

Thomas A. Gamza Cultural Resource Specialist-Archaeologist (907)452-5293
thomas.gamza@alaska.gov of DOT&PF Professionally Qualified Individual

Or, fax to: **Tom Gamza, Archaeologist 907-451-5126**



Department of Transportation and
Public Facilities



THE STATE
of ALASKA
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Honorable Clement Richards, Sr.
Borough Mayor
Northwest Arctic Borough
P.O. Box 1110
Kotzebue, AK 99752

Dear Mayor Richards:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

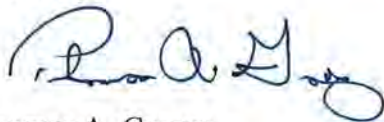
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Honorable Austin Swan Sr.
Mayor
City of Kivalina
PO Box 50079
Kivalina, AK 99752

Dear Mr. Swan:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

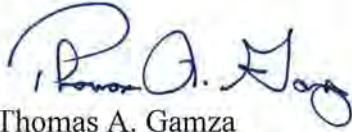
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Consultation Initiation

August 7, 2017

Bruce Loudermilk
Regional Director
Bureau of Indian Affairs
3601C Street
Anchorage, AK 99503-5947

Dear Mr. Loudermilk:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRs Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 1. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

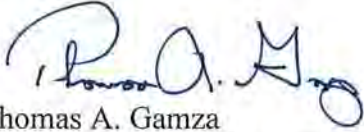
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figures 2-5 Proposed Material Site Investigation APE

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and
Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Consultation Initiation

August 7, 2017

Sean Mack
Acting Regional Archeologist
Bureau of Indian Affairs
3601C Street, Suite 1100
Anchorage, AK 99503-5947

Dear Mr. Mack:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to construct an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The project location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation is being conducted in accordance with the 2014 *Programmatic Agreement...for the Federal-Aid Highway Program in Alaska*. For purposes of the National Historic Preservation Act, we are initiating this consultation with you to assist us in identifying historic properties that may be affected by the proposed project.

Project Description

The proposed project origin would be at the City of Kivalina and the project terminus would be at K-Hill which is the evacuation site selected by the community. Originally three routes were

under consideration for the evacuation road location within the initial project Study Area. This has now been reduced to two potential route alignments which are currently being evaluated within the Preliminary Area of Potential Effect shown on Figure 1. Common to all route alternatives are the following actions:

- Construction of a causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season gravel access road between Kivalina Island and the K-Hill evacuation site. The road would be designed to accommodate both general purpose and emergency evacuation vehicles over a two-way road with shoulders, multiple turnouts, and safe side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the Preliminary APE to determine their feasibility and evaluate environmental impacts of their development (Figures 1-5).

Preliminary Area of Potential Effect (APE)

The Preliminary APE encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sources that are variously located on NANA Regional Corporation, City of Kivalina, and DOT&PF-managed lands. The final APE will be defined after comments are received from your agency and other consulting parties.

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the Preliminary APE which is described in table 2 below:

Table 2. AHRS Site Located within the Study Area

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the Study Area; however, no resources have been identified inland of Kivalina Lagoon within the Preliminary APE. The Preliminary APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 1. The entire northern route is shown on Figure one of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF intends to send a cultural resource survey team in the summer of 2017 to conduct addition fieldwork within the preliminary APE. The results of this work will be provided to the State Historic Preservation Officer and National Park Service for review upon its completion.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Consultation Efforts

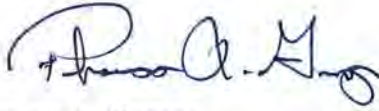
The following consulting parties are being contacted regarding this project: the Alaska State Historic Preservation Officer (SHPO); the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

If you have questions or comments related to this proposed project, or corrections and/or additions to the contact list, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

We request your input on our proposal so that we can incorporate your concerns into project development. Your timely response will greatly assist our compliance efforts and the preparation of any required environmental documentation. For that purpose, we request that you respond within thirty days of your receipt of this correspondence.

August 7, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-5 Proposed Material Site Investigation APE

Attachment 1: Report: *Kivalina Evacuation and School Site Access Road*

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**

GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Ms. Judith E. Bittner
State Historic Preservation Officer
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565

Dear Ms. Bittner:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiutq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road* (Attachment 2).

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 3). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 4). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

Please direct your concurrence or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figure 2: Area of Potential Effect-Overview

Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Report: *Kivalina Evacuation and School Site Access Road*

Attachment 2: OHA Coversheet and Report: *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*

Attachment 3: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road

Attachment 4: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

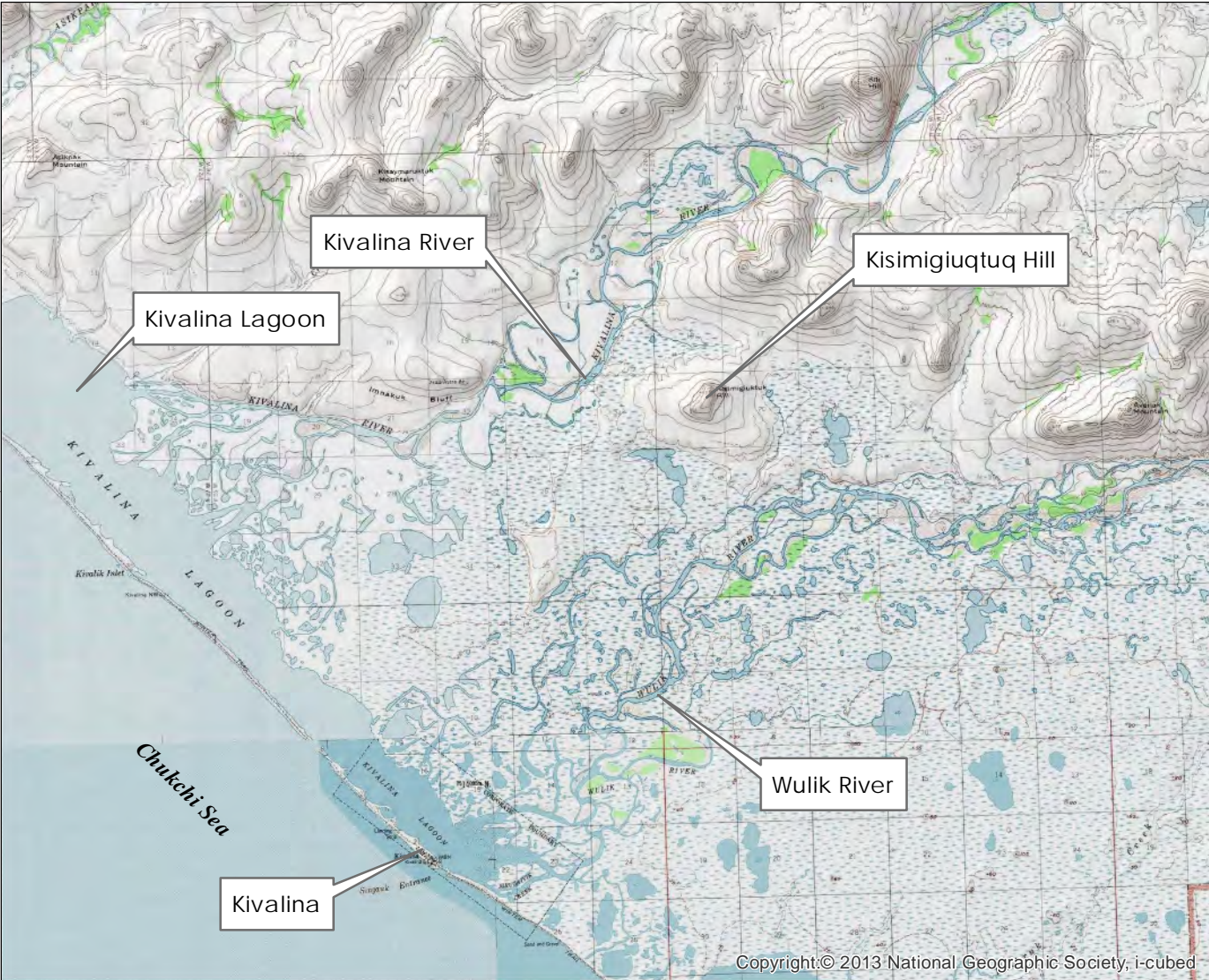
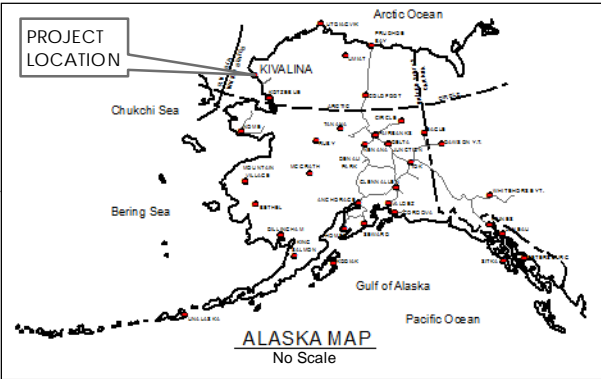
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

U:\2017\05\103\GIS\mxd\Section_106\2017\05\102_Sec_106_Fig_1_Loc_Vic_Map.mxd Revised: 2017-09-26 By: cpannons

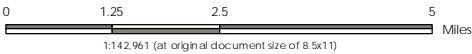


Graphics developed by Stantec Consulting Services, Inc.

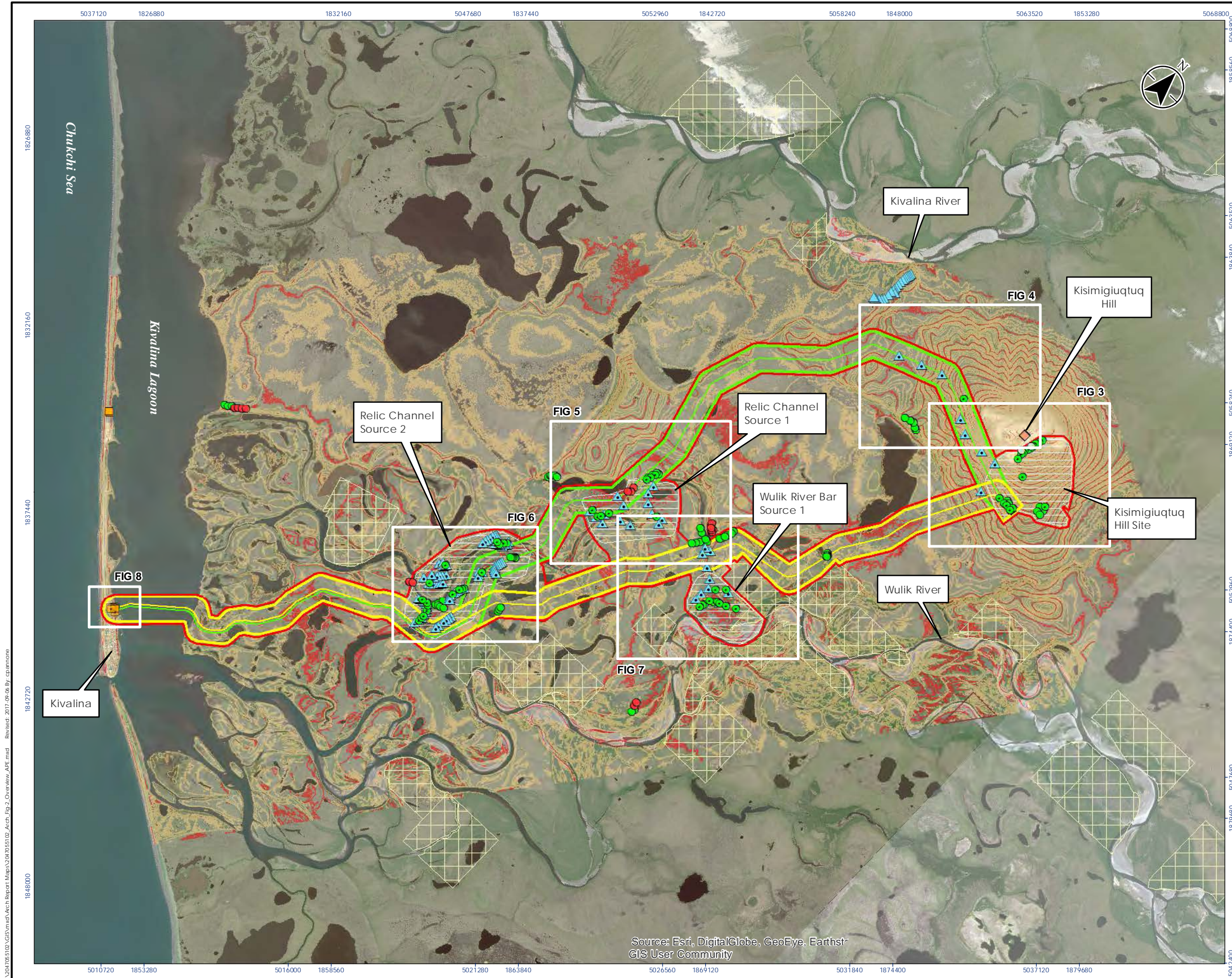


Project Origin: City of Kivalina,
Kotzebue Recording District,
Section 21, Township 27N, Range 26W,
Kateel River Meridian

Project Terminus: Kisimigiqtuq Hill,
Section 19, Township 28N, Range 25W
Kateel River Meridian



STATE OF ALASKA Department of Transportation and Public Facilities 2301 Peger Road Fairbanks, AK 99709	
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD Location & Vicinity Map	
DATE: September, 2017	FIGURE 1



Legend

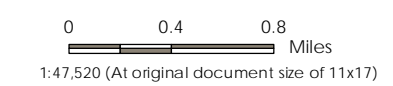
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments

Data Points (2017)

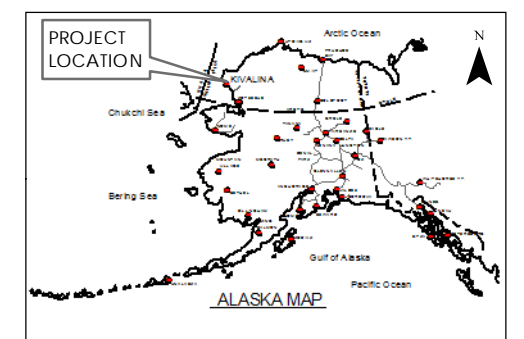
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

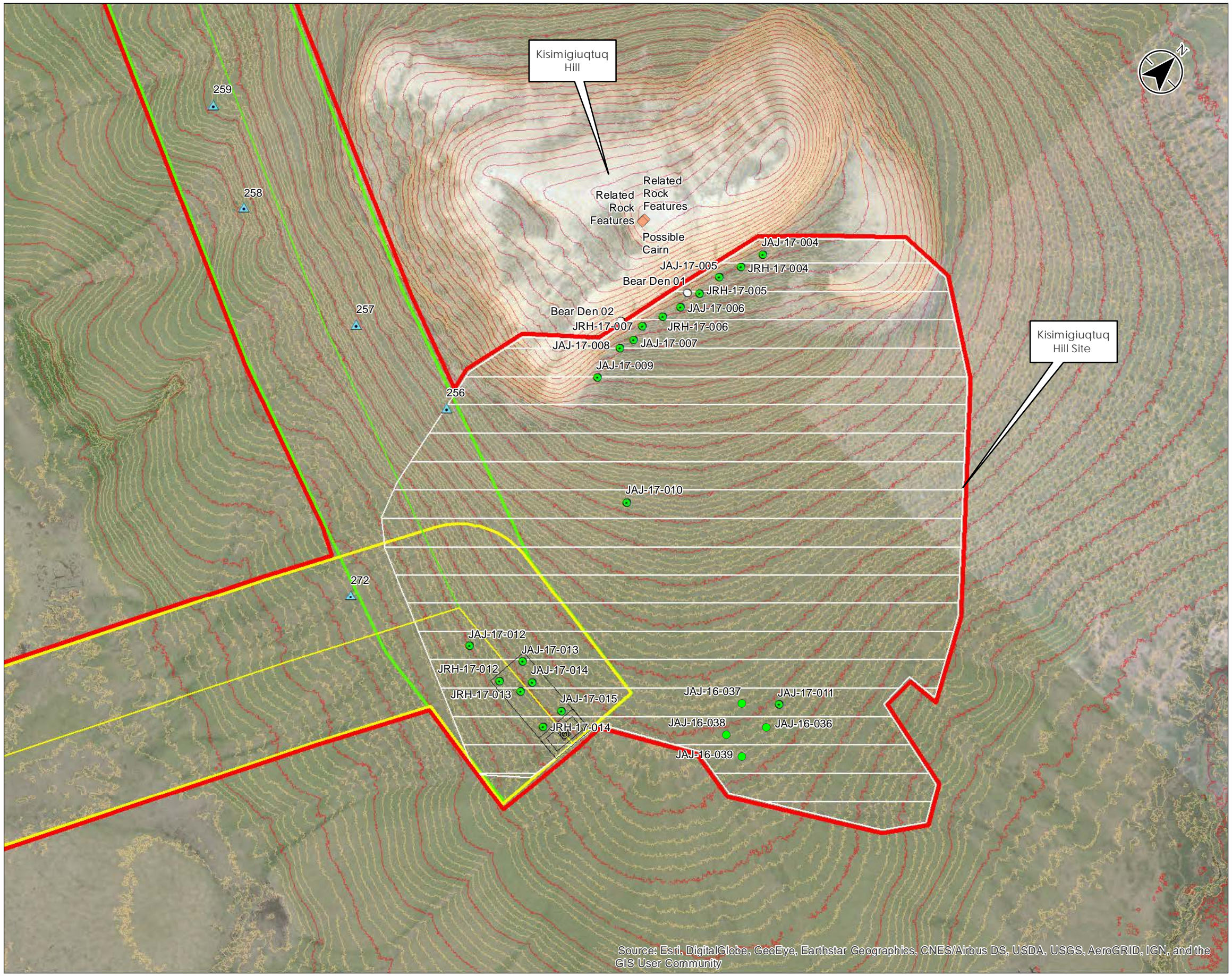
KIVALINA EVACUATION AND SCHOOL SITE
 ACCESS ROAD
Area of Potential Effect - Overview

DATE: September, 2017

FIGURE 2

U:\2017\05-102\GIS\mxd\Arch Report Maps\201705102_Arch_02_Overview_APE.mxd Revised: 2017-09-06 By: cpantone

Source: Esri, DigitalGlobe, GeoEye, Earthstar
 GIS User Community



Legend

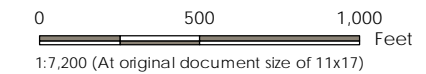
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

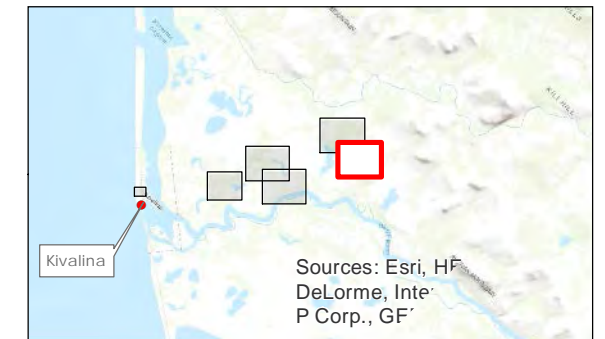
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

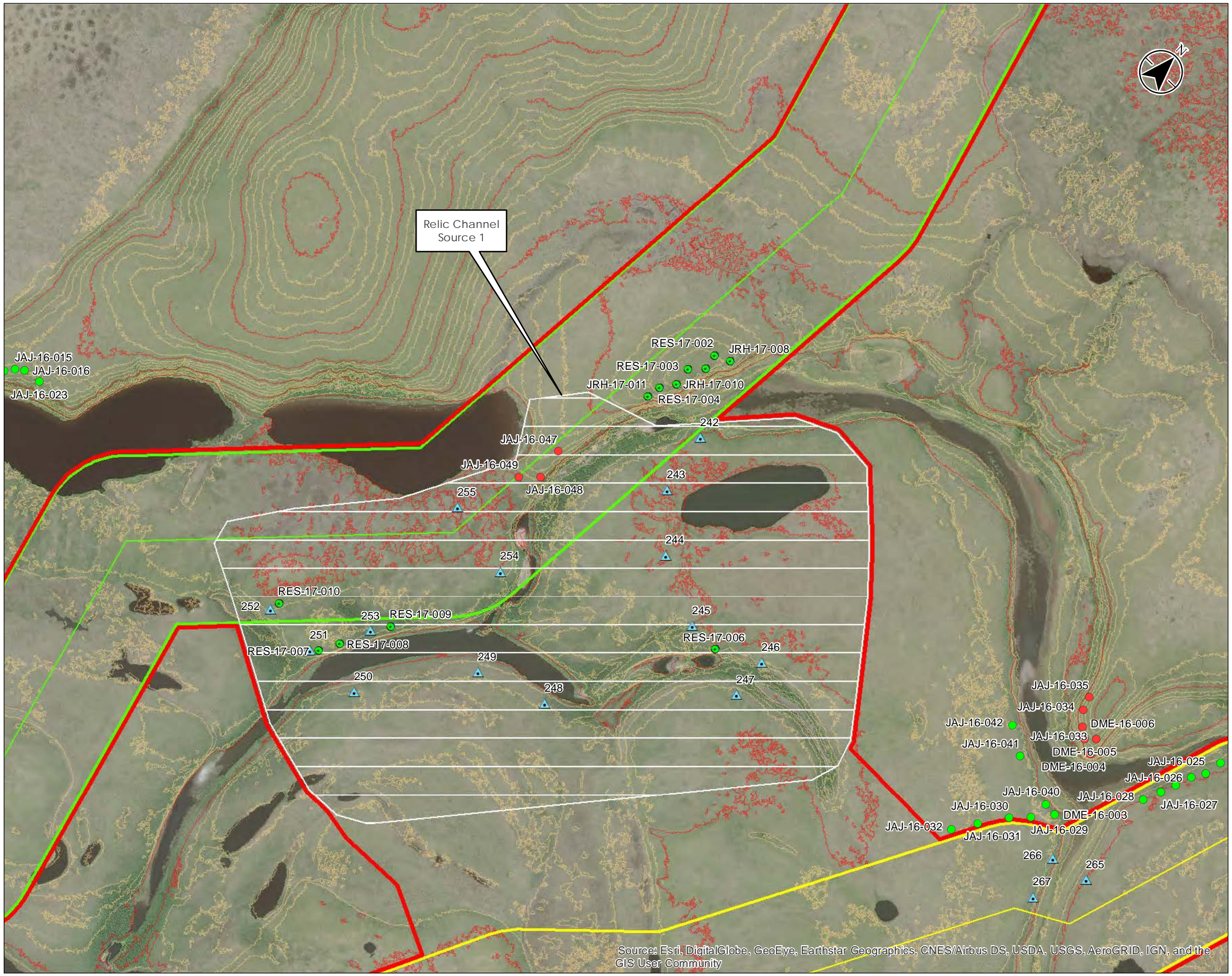
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Kisimigiqtuq Hill

DATE: September, 2017 FIGURE 3

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_03_3_fig_3_Detail.mxd Revised: 2017-09-06 by: cpammon

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Legend

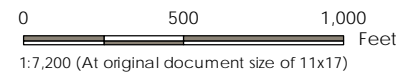
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

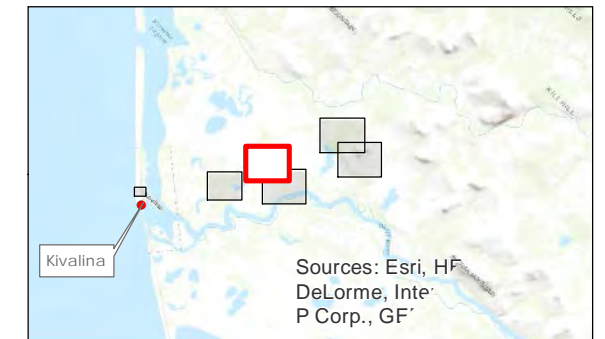
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

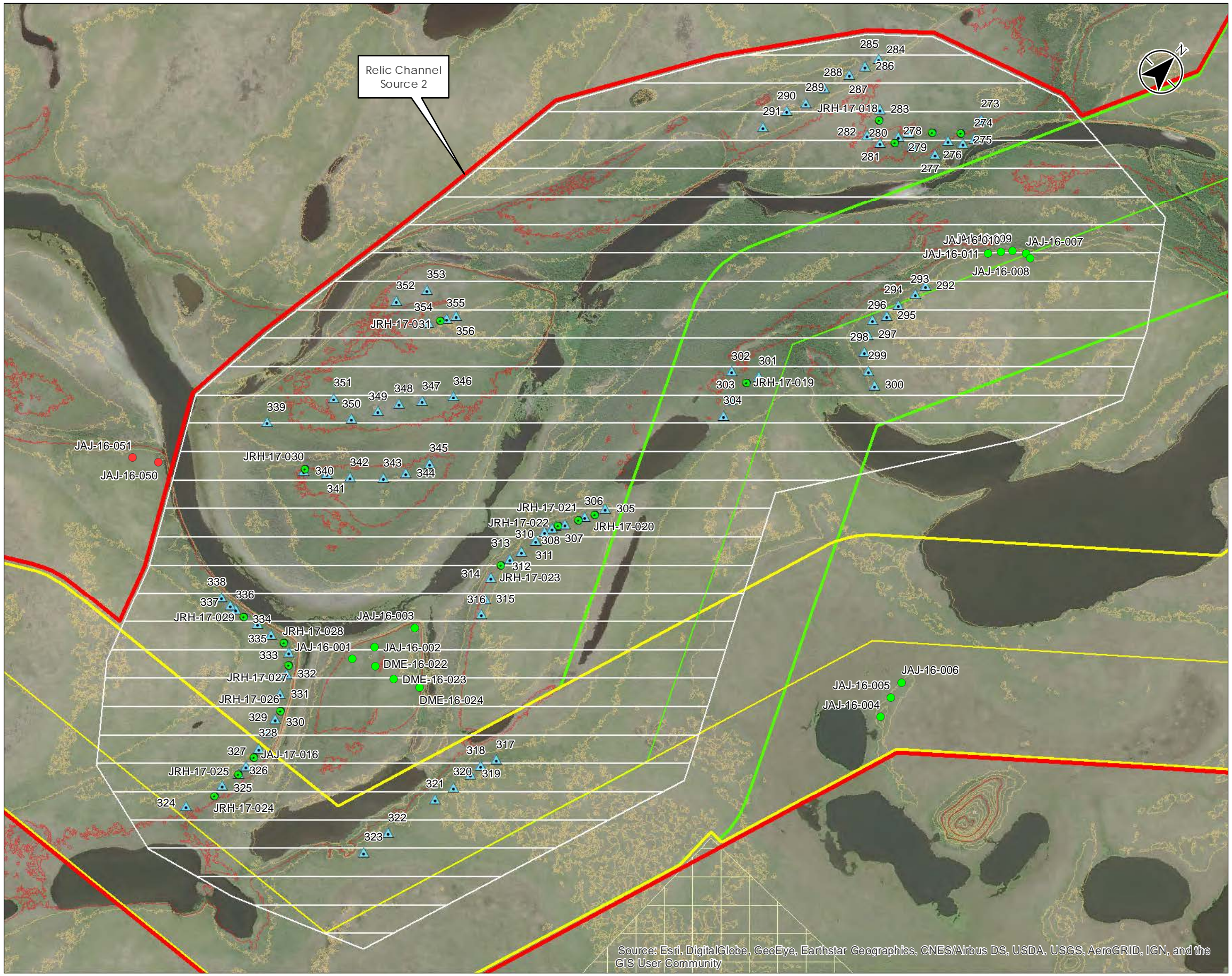
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Relic Channel Source 1

DATE: September, 2017 FIGURE 4

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05102\GIS\mxd\Arch Report Maps\201705102_Arch_Rep_3_Fig_8_Detail.mxd Reviewed: 2017-09-06 By: cpammone



Legend

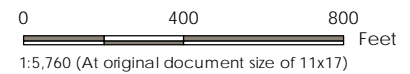
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

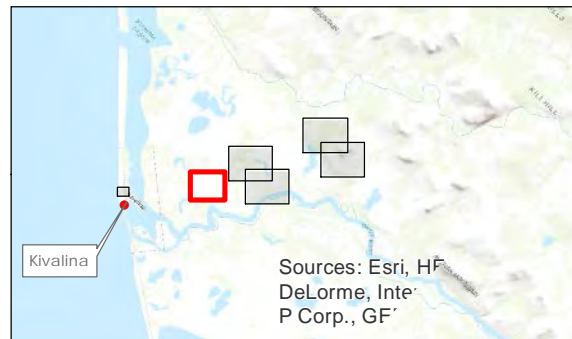
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagey: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

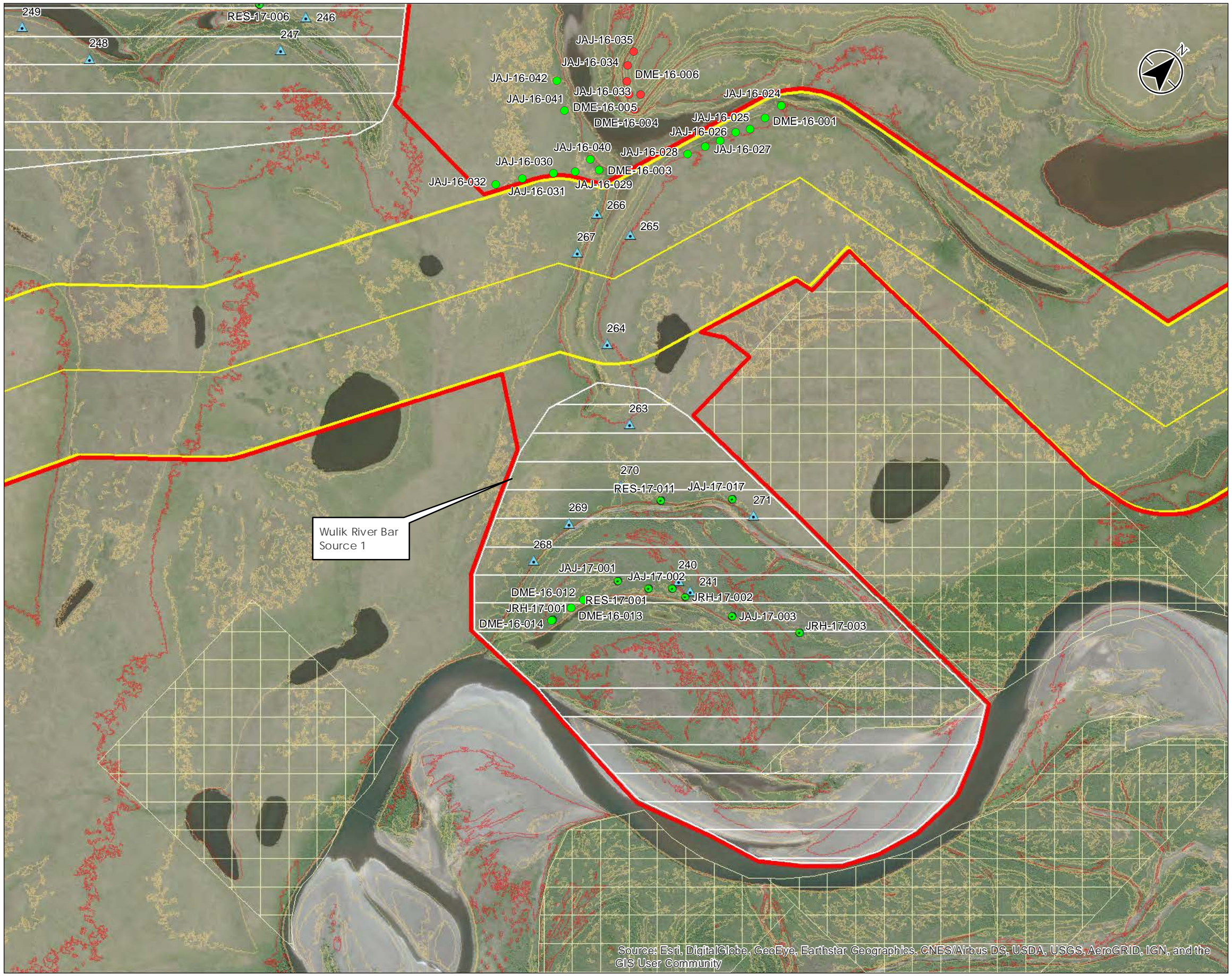
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Relic Channel Source 2

DATE: September, 2017 FIGURE 5

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_03_3_Fig 8_Detail.mxd Revised: 2017-09-06 By: cpammon



Legend

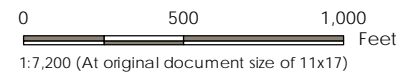
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

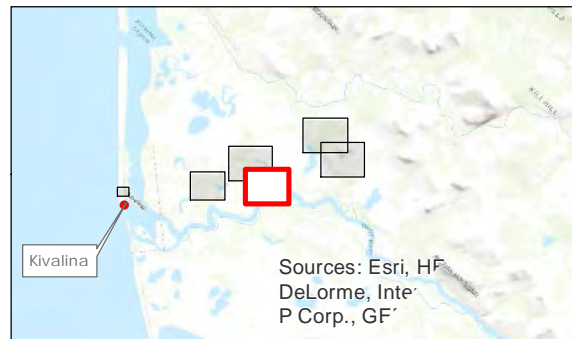
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagey: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Wulik River Bar Source 1

DATE: September, 2017 FIGURE 6

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_Rep_3_Fig_8_Detail.mxd Revised: 2017-09-06 by: cpammone

To: Thomas A. Gamza
Archaeologist (PQI)
Environmental Impact Analyst III
Cultural Resource Specialist
State of Alaska DOT&PF
Northern Region

From: Ross Smith, MA, RPA
Stantec Consulting
Services Inc.

File: Kivalina Evacuation and School
Site Access Road

Date: September 19, 2017

**REFERENCE: Inadvertent Discovery Plan – Kivalina Evacuation and
School Site Access Road**

INTRODUCTION

This Inadvertent Discovery Plan (IDP) will be followed if cultural resources, including human remains, are encountered during ground disturbing activities at the Kivalina Evacuation and School Site Access Road in Kivalina, Alaska.

Project Location:

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina lagoon approximately six miles northeast at a community selected evacuation site on Kisimigiutuq Hill (K-Hill). The proposed project includes part of the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages.

The Proposed Action would construct a safe, reliable, all-season evacuation road between the community of Kivalina and K-Hill. A range of route alternatives are being considered (Figure 2), but common to all are the following actions:

- **Establishment of a safe, reliable, all-season Kivalina Lagoon crossing.** All alternatives include construction of a causeway across the lagoon that variously incorporate different configurations of hydrological openings including bridge(s), culvert(s), or both.
- **Construction of an all-season access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.** The road would be designed to accommodate a wide variety of motorized vehicles over a two-way road with shoulders, multiple turnouts, and side slopes that may include guard rails and other safety features where determined to be necessary and prudent.
- **Development of up to four material sites including the K-Hill Site, Wulik River Source 1, Relic Channel Source 1, and Relic Channel Source 2.** These material sites are anticipated to be suitable local sources of select material to supply the project. Selection and development of viable material sources and haul routes are considered as part of the Proposed Action.

Causeway Design:

Design with community in mind

Potential construction methodology may vary across such elements as timing of construction, contractor methods, locations of staging areas, camps, haul routes, and sequencing of activities.

Construction of the lagoon crossing may include in-water placement of fill, bridge support pile driving, and placement of culvert(s). Placement of fill is generally done during ice-free conditions, but several construction components associated with the lagoon crossing could be completed in the winter. Grounded ice in shallow depths of the lagoon could be removed allowing placement of the base causeway embankment layer and rock protection with no, or minimal water present, thereby minimizing disturbance of fine sediments. Pile driving would take place on both sides of the bridge opening, and consist of driving piles at each abutment. The final design of the bridge foundation would establish the specific number, size, and depth of the pilings.

Areas to be Monitored:

No archaeological or historical resources were identified during pedestrian survey and subsurface testing within any of the potential material sites.

Archaeological monitoring is planned for the evacuation road terminus at K-Hill, and the proposed of the material site (MS) locations. In the event that geotechnical investigations are conducted DOT&PF will insure a Secretary of the Interior (SOI) qualified professional archaeologist will be present to monitor for potential cultural resources encountered.

PROTOCOL FOR INADVERTENT DISCOVERY OF CULTURAL RESOURCES

In the unlikely event that archaeological materials, features, and other potentially sensitive cultural resources are encountered during construction activities or the material site development in association with the Project, all work must cease within 100 feet of the area of the discovery until a qualified archaeologist can evaluate the discovery, the Alaska State Historic Preservation Officer (SHPO) is notified, and the lead agency Federal Highway Administration (FHWA), the Alaska Department of Transportation and Public Facilities (DOT&PF), NANA Regional Corporation, the Native Village of Kivalina, the National Park Service and the Native Village of Noatak have agreed that ground-disturbing activities may resume.

Cultural resources may include evidence of pre-contact or historic activities, artifacts such as formed stone or bone tools, tool-making debris, fire-modified rock, organic materials such as charcoal, and faunal remains, historic debris scatters, and features such as hearths, pits, privies, post-holes or post-molds, foundations, and other evidence of structural remains.

If cultural resources are discovered during work, the construction foreman will immediately halt work at that location and notify each of the contacts listed in Table 1 below. The discovery area and a surrounding buffer zone shall be delineated with flags tied to stakes that will be driven into the ground. These stakes shall not be removed. The buffer zone established around the discovery zone shall be large enough to allow ground disturbance activities to resume outside the buffer. Work will not restart at the discovery location(s) until clearance is received from the Alaska State Historic Preservation Officer (SHPO).

If any pre-contact or historic archaeological materials are recovered from lands managed by the State of Alaska, these materials and any associated documentation will be curated at the University of Alaska Museum of the North (UAMN) in accordance with the provisions of an existing

Design with community in mind

Memorandum of Understanding between the DOT&PF and UAMN. Archaeological resources recovered from NANA Regional Corporation, Incorporated lands will be transferred to the Assistant Director of Lands, who will coordinate with the Native Village of Kivalina and the Native Village of Noatak regarding the final disposition of the recovered materials.

PROTOCOL FOR INADVERTENT DISCOVERY OF HUMAN REMAINS

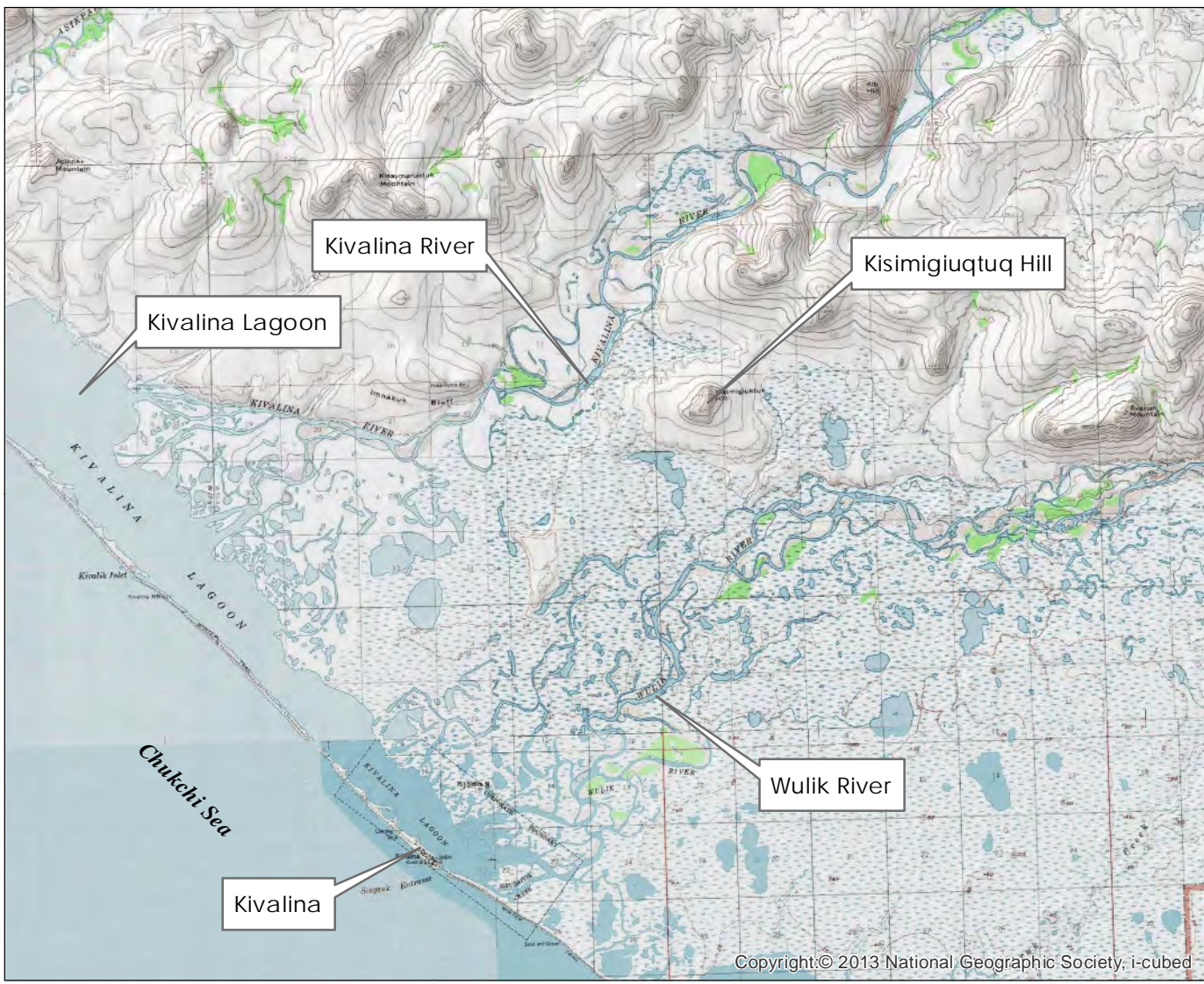
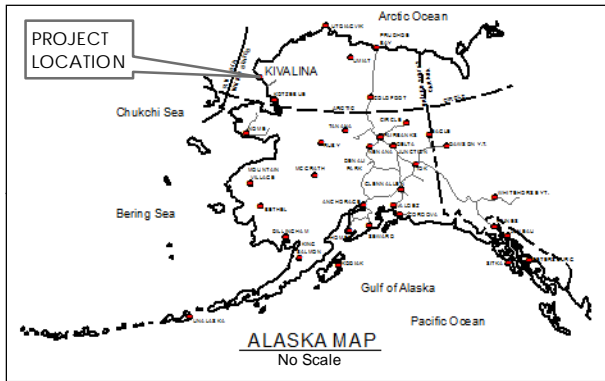
If human remains are identified at any time during this project, any excavation or other project activities in the area of the discovery will cease and the location will be secured, and protected from further disturbance. The Construction Coordinator will immediately initiate the notification process established by the OHA (see Attached Guidelines Laws and Protocols Pertaining to the Discovery of Human Remains in Alaska), and notify designated representatives of the FHWA, DOT&PF, NPS, and NANA Regional Corporation, Incorporated, the Native Village of Kivalina, and the Native Village of Noatak (see Table 1).

Table 1 - Notification of Cultural Resource Discovery

Organization	Contact*	Telephone/Fax/Email
USDOT - Federal Highway Administration (FHWA)	Michael Cain, (Northern Area Region Engineer)	Telephone: 907-586-7429 michael.cain@dot.gov
Alaska Department of Transportation and Public Facilities	Kathy Price (Statewide Cultural Resources Manager); Thomas Gamza (Cultural Resource Specialist Northern Region-Archaeologist)	Telephone: 907-451-5439 kathy.price@alaska.gov Telephone: 907-451-5293 thomas.gamza@alaska.gov
National Park Service	Rhea Hood (Archaeologist)	Telephone: (907) 644-3460 rhea_hood@nps.gov
NANA Regional Corporation, Incorporated	Jeffrey Nelson (Assistant Director of Lands)	Telephone: (907) 442-3301 Jeffrey.Nelson@nana.com
Alaska State Historic Preservation Officer (SHPO)	Judith E. Bittner, SHPO	Telephone: (907) 269-8715 judy.bittner@alaska.gov
Alaska State Archaeologist	Dr. Richard VanderHoek	Telephone: (907) 269-8728 richard.vanderhoek@alaska.gov
Native Village of Kivalina	Millie Hawley (President); Stanley Hawley (Tribal Administrator)	Telephone: (907) 645-2153 tribeadmin@kivaliniq.org
Native Village of Noatak	Vernon Adams (President); Herbert Walton Sr (Tribal Administrator)	Telephone: (907) 485-2173 tribeadmin@nautaaq.org

*Agency representatives identified in Table 1 may be changed, and additional contacts can be added at the request of the reviewing and consulting parties.

U:\2017\05102\GIS\mxd\Section_19\201705102_Sec_19a_1_Loc_Vic_Map.mxd Revised: 2017-09-18 By: cpanions

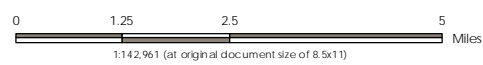


Graphics developed by Stantec Consulting Services, Inc.



Project Origin: City of Kivalina,
Kotzebue Recording District,
Section 21, Township 27N, Range 26W,
Kateel River Meridian

Project Terminus: Kisimigiqtuq Hill,
Section 19, Township 28N, Range 25W
Kateel River Meridian

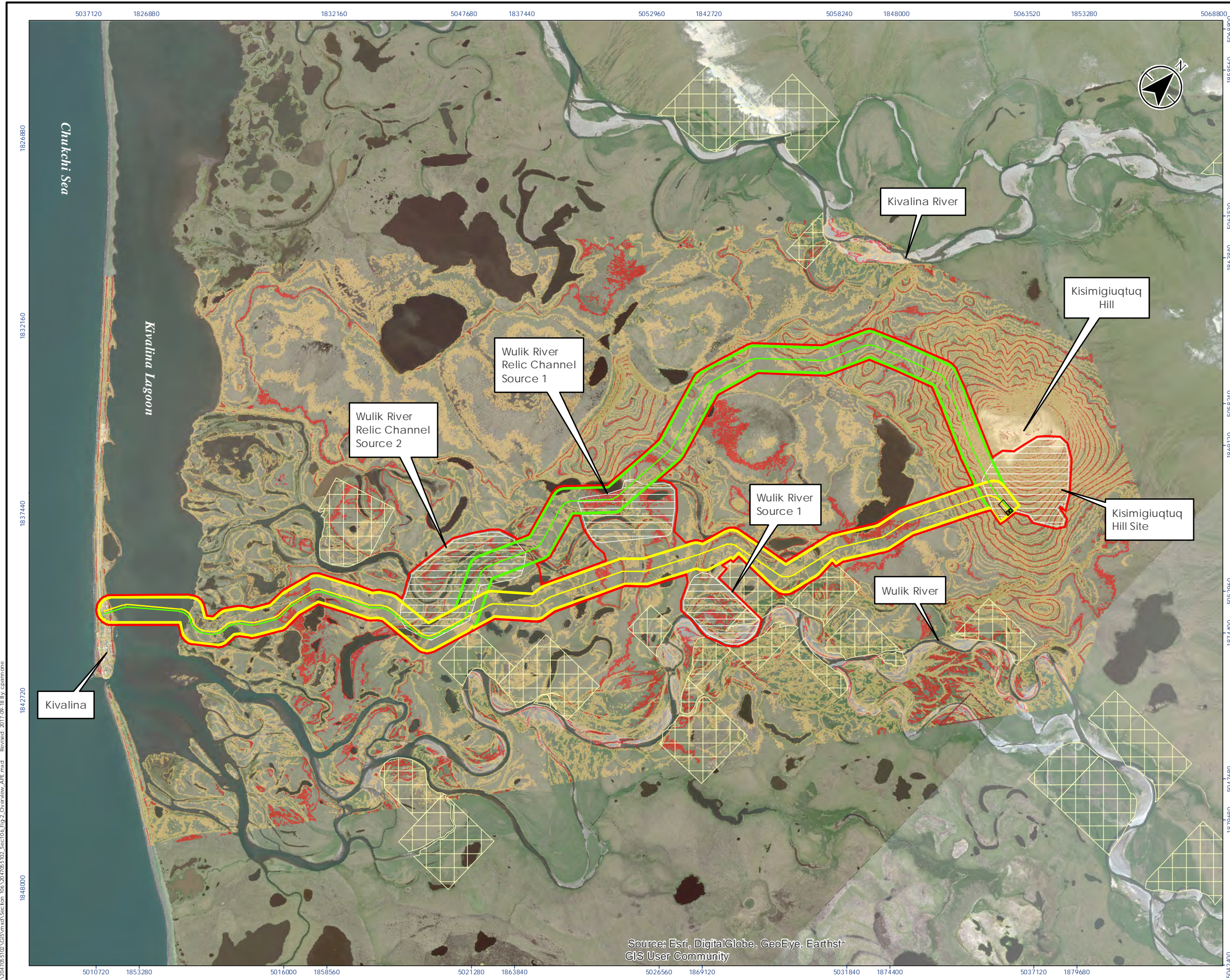


STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Location & Vicinity Map

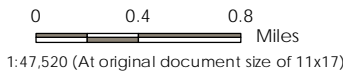
DATE: September, 2017

FIGURE 1

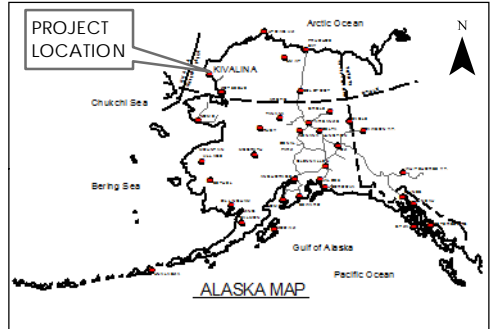


Legend

- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments



- Notes**
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
 ACCESS ROAD
Area of Potential Effect - Overview

DATE: September, 2017 FIGURE 2

U:\2017\05\102\GIS\mxd\Section_106\1014785\102_Sect106_Fig2_Overview_APE.mxd Revised: 2017.09.18 By: Cpannone

Source: Esri, DigitalGlobe, GeoEye, Earthstar
 GIS User Community

GUIDELINES

Laws and Protocols Pertaining to the Discovery of Human Remains in Alaska

The treatment of human remains following inadvertent discovery is governed by state and federal laws, land status, postmortem interval (time since death), and biological/cultural affiliation. First and foremost, the site of discovered remains should be regarded a potential “crime scene” until a person with appropriate expertise and authority determines otherwise.

State Laws:

Several State laws are applicable to the discovery of human remains in Alaska. The State Medical Examiner (SME) has jurisdiction over all human remains in the state (with rare exceptions, such as military aircraft deaths), regardless of age.

AS 12.65.5 requires immediate notification of a peace officer of the state (police, Village Public Safety Officer, or Alaska State Trooper [AST]) and the State Medical Examiner when death has “been caused by unknown or criminal means, during the commission of a crime, or by suicide, accident, or poisoning.”

In this regard, contact the Alaska State Trooper/Missing Persons Bureau first. (See list of contacts on following page.) The AST has interpreted notification procedures as applicable to all remains, including ancient remains.

AS 11.46.482(a)(3), which applies to all lands in Alaska, makes the “intentional and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave” a class C felony.

AS 41.35.200, which applies only to State lands, makes the disturbance of "historic, prehistoric and archeological resources" (including graves, per definition) a class A misdemeanor.

AS 18.50.250, which applies to all lands in Alaska, requires permits for the disinterment, transport, and reinterment of human remains. Guidance and permits are available from the Bureau of Vital Statistics (see attached list of contacts).

Federal Laws:

On Federal lands and Federal trust lands, the unauthorized destruction or removal of archaeological human remains (i.e., more than 100 years old) is a violation of **16 USC 470ee** (Archeological Resources Protection Act). If human remains on federal or federal trust lands are determined to be Native American, their treatment and disposition are also governed by the Native American Graves and Repatriation Act (NAGPRA) of 1990 (**PL 101-601; 25 USC 3001-30013**; 104 Stat. 3048-3058; 43 CFR 10). NAGPRA also applies to Native American human remains from any lands if the remains are curated in any institution that receives federal funds.

General Guidance:

Your first contacts should be the AST/Missing Persons Bureau, the Alaska State Medical Examiner’s Office, local law enforcement, the Alaska Office of History and Archaeology, and the landowner.

In many instances, the field archaeologist must make a judgement call regarding the age of the remains, his/her level of confidence in the evaluation, and whether further investigation by a specialist is warranted. While notification under State Law is required, peace officers and the SME generally regard archaeologists competent to make these type determinations and welcome input that may assist with the investigation. With regard to ancient remains (> 100 years old), the SME and AST will generally defer to the opinion of the field archaeologist and require no further criminal investigation. However, the remains and a surrounding buffer area should not be disturbed until appropriate reporting and consultation have occurred.

Dr. Richard VanderHoek, State Archaeologist
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501
(907) 269-8728 or richard.vanderhoek@alaska.gov
Appendix F Page 73

CONTACT INFORMATION FOR STATE OFFICIALS INVOLVED WITH HUMAN REMAINS ISSUES IN ALASKA

**Denotes suggested contact person in list below.*

1.) Alaska State Troopers, Missing Persons Bureau:

Phone: (907) 269-5477

Fax: (907) 338-7243

Sgt. Kid Chan

Phone: (907) 269-5058

e-mail: choong.chan@alaska.gov

*Stephanie Johnson

Phone: (907) 269-5497

e-mail: steph.johnson@alaska.gov

*After contact by phone, send e-mail with relevant information and photos to Sgt. Chan and Stephanie Johnson.

2.) Alaska State Medical Examiner's Office:

* Reporting Hotline (Death Hotline) to speak with on-duty investigator.

Phone: (907) 334-2356

1-888-332-3273 (Outside Anchorage)

Stephen Hoage, Operations Administrator

Phone: (907) 334-2202

Fax: (907) 334-2216

e-mail: stephen.hoage@alaska.gov

Dr. Gary Zientek, Chief Medical Examiner

Phone: (907) 334-2200

Fax: (907) 334-2216

e-mail: gary.zientek@alaska.gov

3.) Alaska Office of History and Archaeology (State Historic Preservation Office):

Judith E. Bittner, Chief / State Historic Preservation Officer (SHPO)

Phone: (907) 269-8721

Fax: (907) 269-8908

E-mail: judy.bittner@alaska.gov

*Dr. Richard VanderHoek, State Archaeologist / Deputy SHPO

Phone: (907) 269-8728

Fax: (907) 269-8908

E-mail: richard.vanderhoek@alaska.gov

Alaska Bureau of Vital Statistics

Heidi Lengdorfer, Chief

Phone: (907) 465-8643

e-mail: heidi.lengdorfer@alaska.gov

For questions regarding disinterment permits or burial transit permits:

Margo Meyer

Phone: (907) 465-8610

e-mail: margo.meyer@alaska.gov

From: [Rollins, Mark W \(DNR\)](#)
To: [Gamza, Thomas A \(DOT\)](#)
Cc: [Hood, Rhea](#)
Subject: FW: Kivalina Evacuation and School Site Access Road, Consultation Initiation
Date: Tuesday, August 22, 2017 4:16:03 PM

3130-1R FHWA
RevComp ID # 2016-01460

Hi Tom,

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated August 7, 2017) on August 10, 2017. Following our review of the documentation provided in the initiation letter, we have no objections to the preliminary APE or level of effort being conducted for identification at this time. We look forward to receiving the results of the additional fieldwork conducted during the 2017 field season and evaluation of the project area as well as DOT&PF's findings for this undertaking and will respond with our concurrence and/or comments at that time. As we discussed previously, one of the remaining issues is if the National Park Service feels that the presence of a road within the Cape Krusenstern Archaeological District National Monument (NHL) would be an adverse effect to the district. We look forward to further discussion on this matter, and if necessary we will assist you in developing minimization and mitigation measures to offset impacts to the district.

Thank you for sending a Section 106 consultation initiation letter to our office. Please let me know if we can be of further assistance.

Mark W. Rollins
Archaeologist II
Alaska State Historic Preservation Office/ Office of History and Archaeology
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501

(907) 269-8722

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**

GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Millie Hawley, President
Native Village of Kivalina
PO Box 50051
Kivalina, AK 99750

Dear Ms. Hawley:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Should you prefer to conduct government-to-government consultation with the Federal Highway Administration (FHWA) on this project, please advise me of your request.

Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figure 2: Area of Potential Effect-Overview

Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road

Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Vernon Adams, Sr., President
Native Village of Noatak
PO Box 89
Noatak, AK 99761

Dear Mr. Adams:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

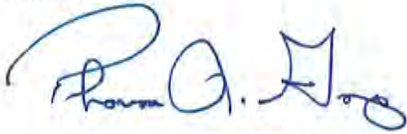
In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.ganza@alaska.gov. Should you prefer to conduct government-to-government consultation with the Federal Highway Administration (FHWA) on this project, please advise me of your request.

Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and
Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Honorable Austin Swan Sr., Mayor
City of Kivalina
PO Box 50079
Kivalina, AK 99750

Dear Mayor Swan:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and
Public Facilities



THE STATE
of ALASKA
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Wayne Westlake
President & CEO
NANA Regional Corporation, Inc.
909 West 9th Avenue
Anchorage, AK 99501

Dear Mr. Westlake:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the APE which is described in table 2 below:

Table 2. AHRS Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

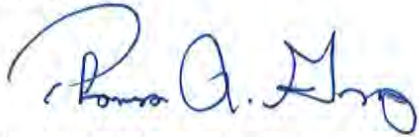
A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**

GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

John Lincoln
Vice President of Lands
NANA Regional Corporation, Inc.
PO Box 49
Kotzebue, AK 99752

Dear Mr. Lincoln:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**

GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Bert Frost, Regional Director
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Mr. Frost:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:
Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**

GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Rhea Hood, Archeologist
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Ms. Hood:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct additional fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road* (Attachment 2).

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding of the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 3). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 4). No other responses to the Section 106 Initiation of Consultation letters were received.

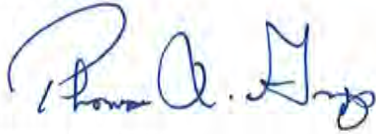
A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figure 2: Area of Potential Effect-Overview

Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Report: *Kivalina Evacuation and School Site Access Road*

Attachment 2: OHA Coversheet and Report: *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*

Attachment 3: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road

Attachment 4: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Maija Lukin, Superintendent
NPS-Western Arctic National Parklands
PO Box 1029
Kotzebue, AK 99752

Dear Ms. Lukin:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct additional fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:
Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Honorable Clement Richards, Sr., Borough Mayor
Northwest Arctic Borough
P.O. Box 1110
Kotzebue, AK 99752

Dear Mayor Richards:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRS) database identified one site within the APE which is described in table 2 below:

Table 2. AHRS Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct additional fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Sean Mack
Acting Regional Archeologist
Bureau of Indian Affairs
3601C Street, Suite 1100
Anchorage, AK 99503-5947

Dear Mr. Mack:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation

Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control

feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes	National Register of Historic Places Listed 05/03/1974

		NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	
--	--	--	--

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF (Attachment 1). Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road* (Attachment 2).

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 3). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQI, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 4). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figure 2: Area of Potential Effect-Overview

Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Report: *Kivalina Evacuation and School Site Access Road*

Attachment 2: OHA Coversheet and Report: *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*

Attachment 3: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road

Attachment 4: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
No Historic Properties Adversely Affected
ATTENTION: This finding contains no DOE's

September 19, 2017

Bruce Loudermilk, Regional Director
Bureau of Indian Affairs
3601C Street
Anchorage, AK 99503-5947

Dear Mr. Loudermilk:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. § 326, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

Consultation for this project is being conducted in accordance with the 2014 *Programmatic Agreement... for the Federal-Aid Highway Program in Alaska*. The DOT&PF, acting as a Federal agency, finds no adverse effect on historic properties by the proposed project pursuant to 36 CFR 800.5(b), implementing regulations of Section 106 of the National Historic Preservation Act. This submission provides documentation in support of this finding, as required at 36 CFR 800.11(e).

Project Description

The proposed Project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill. A range of route alternatives were considered within the project Study Area. This has now been reduced to two potential route alignments, the Combined Route B and the Southern Route, which are currently being considered as the Area of Potential Effect shown on Figure 2. Common to both route alternatives are the following actions:

- Construction of a 3,200-foot long causeway across the lagoon that may incorporate different hydrological openings including bridge(s), culvert(s), or both.
- Construction of an all-season two-way 24-foot wide gravel access road, either 7.7 miles or 8.9 miles long depending on the route selected, between Kivalina Island and the desired K-Hill evacuation site. Road construction would be within a 300-foot right-of-way (ROW) and include shoulders, multiple turnouts and 3:1 side slopes that may include guard rails and other safety features.
- Testing, analysis and development of material locations proximate to potential routes within the APE to determine their feasibility and evaluate environmental impacts of their development (Figures 2-6).

Area of Potential Effect (APE)

Potential direct and indirect effects were considered prior to the creation of the proposed APE. The APE, as presented, is a 2000-foot corridor encompasses the direct footprint of the project, including two alternative route alignments, staging areas, and potential material sites that are located on variously managed lands and allows for in-field construction adjustments. One final route APE will be defined with the completion of the environmental assessment.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the Northwest Arctic Borough School District, and approved by the community, as a preferred new location for the community school. If constructed in the future, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. No other viable potential future actions are identified at this time. While community relocation has been discussed for some time, it is not considered reasonably foreseeable. At present, the community supports construction of an evacuation road due to the immediate threat of storm events.

Kivalina relies on the currently existing airstrip adjacent to the city for a majority of its transportation and outside goods. Currently, DOT&PF has a project, Kivalina Airport Erosion Control (Z638720000), which is planning to construct a runway embankment erosion control feature. Initiation of Consultation letters were sent in February of 2017 for the Kivalina Airport Erosion Control project and a cultural resource investigation was conducted in August of 2017.

Several Alaska Native allotments lie adjacent to the APE and development of these and other private lands may occur consequent to road development. However, the DOT&PF believes that if this were to occur it will be limited to increased access to currently used traditional subsistence locations by people in the community. In addition, material sites developed in support of this project may be further developed or expanded for community use but this expansion will likely occur within the boundary of the current APE.

The potential viewshed effects of the creation of the road were also considered. The DOT&PF believes the minimal elevation and the limited width and method of construction of the road will not have an effect on the current viewshed of open tundra.

In order for the community of Kivalina to consider a future relocation move to a location along the evacuation road, near or at the evacuation road terminus or any place else, extensive planning, land transfers and the securing of significant funding would have to be in place. At this time those actions are neither reasonably foreseeable nor considered a cumulative impact of the proposed project. The DOT&PF does not believe that this action would be directly caused by the Project

Identification Efforts

A search of the Alaska Heritage Resources Survey (AHRs) database identified one site within the APE which is described in table 2 below:

Table 2. AHRs Site Located within the APE

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00042	Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)	This district covers over 2 million acres, extending along the beach 8 miles and varying in width from 1-3 miles. 114 parallel marine beach ridges, formed at an average of 60 years each, are the main features. These former coastal margins contain houses, burials, cache pits, and other remains of the peoples who have occupied these beaches progressively for at least 5,000 years. This horizontal stratigraphy includes virtually the entire range of known cultural history in NW Alaska. Near the beach ridges, on unglaciated uplands, are two older sites dated from BP 11,000-6,000. The lower Noatak Valley, an important avenue between the coast and the interior for millennia, contains a number of archaeological sites. The villages of Noatak and Kivalina are within the district. The number of sites listed here includes only those cited as "important sites" in the Final Environmental Statement on Cape Krusenstern National Monument published in 1974. Other reports break down these major sites into many others. Includes NOA-00002, NOA-00078, NOA-00138, and NOA-00139.	National Register of Historic Places Listed 05/03/1974

A literature review identified sixteen reports describing the results of cultural resource surveys conducted from the 1970s through 2016 within the initial Study Area. There are known archaeological and historical resources within the community of Kivalina south of the project origin, and south of the Wulik River mouth outside of the APE Area; however, no resources have been identified inland of Kivalina Lagoon within the APE. The APE is located within the boundaries of the Cape Krusenstern Archaeological District National Historic Landmark (NOA-00042). In January 2016, an archaeological predictive model was developed for the Study Area, and an archaeological survey of alternative route alignments and proposed material sites was conducted in September-October 2016. This field investigation involved pedestrian survey and subsurface testing at potentially sensitive locations identified in the predictive model and during the pedestrian survey along the three routes originally under consideration. The results of the field investigation are included in the *Kivalina Evacuation and School Site Access Road* report produced by Stantec for DOT&PF. Testing locations along the abandoned northern route are shown on Figure 2. The entire northern route is shown on Figure 1 of Appendix D of the report. No archaeological sites or historic properties were identified along the three alternative routes, or within the material sites that were defined at that time.

DOT&PF sent a cultural resource survey team in the August of 2017 to conduct addition fieldwork within the APE which now includes potential material site locations. The results of the field investigation are provided in a memo from Stantec entitled *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*.

Under the Alaska Historic Roads Programmatic Agreement Interim Guidance, a group of Alaska roads has been identified which are being treated as eligible for the National Register of Historic Places (NRHP). This project does not affect any of these roads.

Finding of Effect

NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL)

Cape Krusenstern Archaeological District National Historic Landmark (NHL) was designated November 7, 1973 prior to the establishment of the National Monument which was designated on December 1, 1978. Properties designated as National Historic Landmarks are automatically listed in the NRHP CFR36§65.2(b). The primary reason for the designation of both the Archaeological District and National Monument was the overall significance of the region to the understanding the prehistory of the Arctic based on the positive results of archaeological investigations that took place between the late 1940's and early 1970's and continue today. At first, the boundary of the National Monument, which is restricted to the archaeologically rich beach ridge complex, was used for the boundaries for the NHL under National Landmark Criteria 36CFR§64.4(a)(6). It was later expanded to include areas, such as the Project location, which had not had any archaeological investigation conducted at the time.

The archaeological investigations conducted over the 2016 and 2017 field seasons did not result in the identification any elements which contribute to our continuing understanding of the prehistory or history of the Arctic within the Project's APE which is located within the boundaries of NHL. As such, the proposed construction of the Evacuation and School Site

Access Road will not have an adverse effect on the integrity of the NHL or its continuing eligibility for the NRHP as no contributing elements have been identified. Due to the Project being located within the NHL boundary the DOT&PF is submitting monitoring and inadvertent discovery plan to be implemented during the continued planning and execution of the Project (Attachment 1). In the event that cultural resources are encountered this plan will be implemented and all identified parties will be contacted. As the proposed routes, the Project terminus and the potential material site locations have only one historic property located within their boundaries the potential effect for all were addressed in one evaluation.

Overall, the DOT&PF has determined that the activities proposed for the Kivalina Evacuation and School Site Access Road Project will result in **no historic properties adversely affected** and seeks the Alaska SHPO's concurrence with this finding of effect.

Section 4(f)

It is the DOT&PF's intent to make a Section 4(f) de minimis impact finding premised on your written concurrence that the project **will not adversely affect** NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL).

Consultation Efforts

On July 10, 2017 a meeting was among Agency cultural resource staff. The DOT&PF Northern Region PQL, staff from the Office of History and Archaeology and the Alaska State Historic Preservation Officer (SHPO) and the National Park Service Archaeologist for the National Register of Historic Places Program, Alaska Region. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification at this time (Attachment 2). No other responses to the Section 106 Initiation of Consultation letters were received.

A copy of this letter has been submitted to the National Park Service for their evaluation and recommendation regarding activities within a NHL.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted regarding the findings for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; the Bureau of Indian Affairs (BIA); and the Advisory Council on Historic Preservation.

If you wish to comment on this finding, I can be reached at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov. Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you respond within thirty days of your receipt of this correspondence.

September 19, 2017

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map
Figure 2: Area of Potential Effect-Overview
Figures 3-6 Proposed Material Site Investigation APE

Attachment 1: Draft Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road
Attachment 2: August 22, 2017 response from the SHPO to August 7, 2017 Initiation of Consultation Letter

Electronic cc w/ enclosures:

Michael Cain, FHWA Alaska Division, Northern Region Area Engineer
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager



United States Department of the Interior

NATIONAL PARK SERVICE
Alaska Region
240 West 5th Avenue, Room 114
Anchorage, Alaska 99501

IN REPLY REFER TO
8.A.4 (AKRO-CR)20171002

OCT 06 2017

Thomas A. Gamza
State of Alaska DOT&PF, Northern Region
2301 Peger Road
Fairbanks, AK 99709-5316

Subject: Kivalina Evacuation and School Site Access Road. Federal/State Project No. 0002384/NFHwy00162, Section 106 Determination

Dear Mr. Gamza:

Thank you for providing project information for the proposed Kivalina Evacuation and School Site Access Road, Federal/State Project No. 0002384/NFHwy00162. The National Park Service has served as a consulting party for this project under Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108) to help ensure the integrity of Cape Krusenstern Archeological District National Historic Landmark (NHL).

We appreciate the Alaska Department of Transportation and Public Facilities (DOT&PF) providing NPS with the results of the cultural resource assessment survey, accommodating a site visit by NPS archeologist Rhea Hood on August 16, 2017, answering follow-up questions, as well as consulting with other interested parties including the Native Village of Kivalina.

As described, the project consists of building a causeway spanning approximately 0.6 miles across Kivalina Lagoon, constructing a 7.7 to 8.9 mile evacuation road east of Kivalina, and development of up to four different material sites in the same project area. The causeway construction will include pile driving at each abutment and the final bridge design and construction could cause additional ground disturbance near previously recorded sites that are within the Area of Potential Effect (APE). We understand that the two AHRS sites, NOA-00325 and NOA-00327, are documented for human burials and archaeological artifacts respectively and that these sites are within the APE but are over 100 meters away from the western end of the causeway abutment, and therefore the proposed project activity will not harm these sites.

Based on the *Kivalina Evacuation and School Site Access Road Cultural Resources Assessment Report* and the following September 2017 update, and the August 2017 project site visit, we understand that the cultural resources investigations did not reveal any new significant

archeological resources. Since Kivalina was included in the NHL for encompassing "sites evidencing prehistoric occupation," we recognize that there is still the potential for discovery as the project is implemented.

We concur with DOT&PF's finding of "no historic properties adversely affected" (36 CFR 800.5 (b)(1)) conditional to include archaeological monitoring and an Inadvertent Discovery Plan that allows for "reasonable efforts to avoid, minimize or mitigate adverse effects" and that covers post-Section 106 review discoveries of cultural resources.

Given that there is some potential for finding cultural resources and human remains within the NHL, we would appreciate receiving a copy of the Inadvertent Discovery Plan with the specific archaeological monitoring plan, as well as any information that arises as a result of inadvertent discoveries.

We appreciate DOT&PF's inclusion of NPS throughout this Section 106 process. If you have questions about our comments or concerns, please contact Rhea Hood at 907-644-3460 or rhea_hood@nps.gov.

Sincerely,



Herbert C. Frost, Ph.D.
Regional Director

cc: Rhea Hood, Archeologist, NPS Alaska Region
Jennifer Pederson Weinberger, Cultural Resources Program Manager, NPS Alaska Region
Maija Lukin, Superintendent, Western Arctic Parklands
Mark Rollins, Review and Compliance, Alaska State Historic Preservation Office



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

DIVISION OF PARKS & OUTDOOR RECREATION
Office of History & Archaeology

550 West 7th Ave., Suite 1310
Anchorage, Alaska 99501-3565
Main: 907 269.8721
<http://dnr.alaska.gov/parks/oha>

October 9, 2017

SENT BY E-MAIL
DATE 10/9/17

File No.: 3130-1R FHWA/ 2016-01460

Subject: Kivalina Evacuation and School Site Access Road, 0002384/ NFHWY00162

Thomas Gamza
Department of Transportation & Public Facilities
2301 Peger Road
Fairbanks, AK 99709-5316

Dear Mr. Gamza,

The Alaska State Historic Preservation Office (AK SHPO) received your letter (dated September 19, 2017) and reports, titled *Kivalina Evacuation and School Site Access Road Cultural Resources Assessment Report* and the *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*, on September 24, 2017. Following our review of the documentation provided, pursuant to Section 106 of the National Historic Preservation Act, we concur with your finding of **no historic properties adversely affected** for the subject project. Furthermore, we concur that the project will not adversely affect NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL). This concurrence is conditional to include archaeological monitoring and an Inadvertent Discovery Plan for the subject project. We look forward to receiving the final draft of the Inadvertent Discovery Plan for our records.

Please note that as stipulated in 36 CFR § 800.3, other consulting parties such as the local government and Tribes are required to be notified of the undertaking. Additional information provided by the local government, Tribes or other consulting parties may cause our office to re-evaluate our comments and recommendations. Please note that our comment letter does not end the 30-day review period provided to other consulting parties. Should unidentified cultural resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR § 60.4) in consultation with our office.

The AK SHPO appreciates your consultation efforts for the subject project and for including a staff member in a site visit on August 16, 2017. Please contact Mark Rollins at 269-8722 or mark.rollins@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,



Deputy
Judith E. Bittner
State Historic Preservation Officer

JEB:mwr

Cc: Rhea Hood, National Park Service, rhea_hood@nps.gov

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Ms. Judith E. Bittner
State Historic Preservation Officer
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565

Dear Ms. Bittner:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

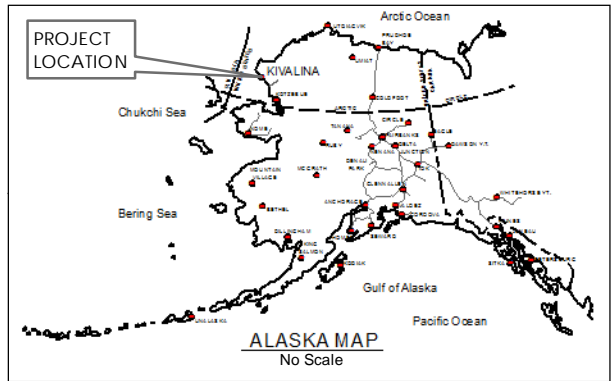
Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager



Copyright © 2013 National Geographic Society, i-cubed

Graphics developed by Stantec Consulting Services, Inc.



Project Origin: City of Kivalina,
Kotzebue Recording District,
Section 21, Township 27N, Range 26W,
Kateel River Meridian

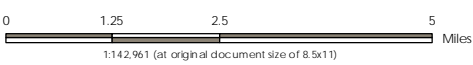
Project Terminus: Kisimigiqtuq Hill,
Section 19, Township 28N, Range 25W
Kateel River Meridian

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

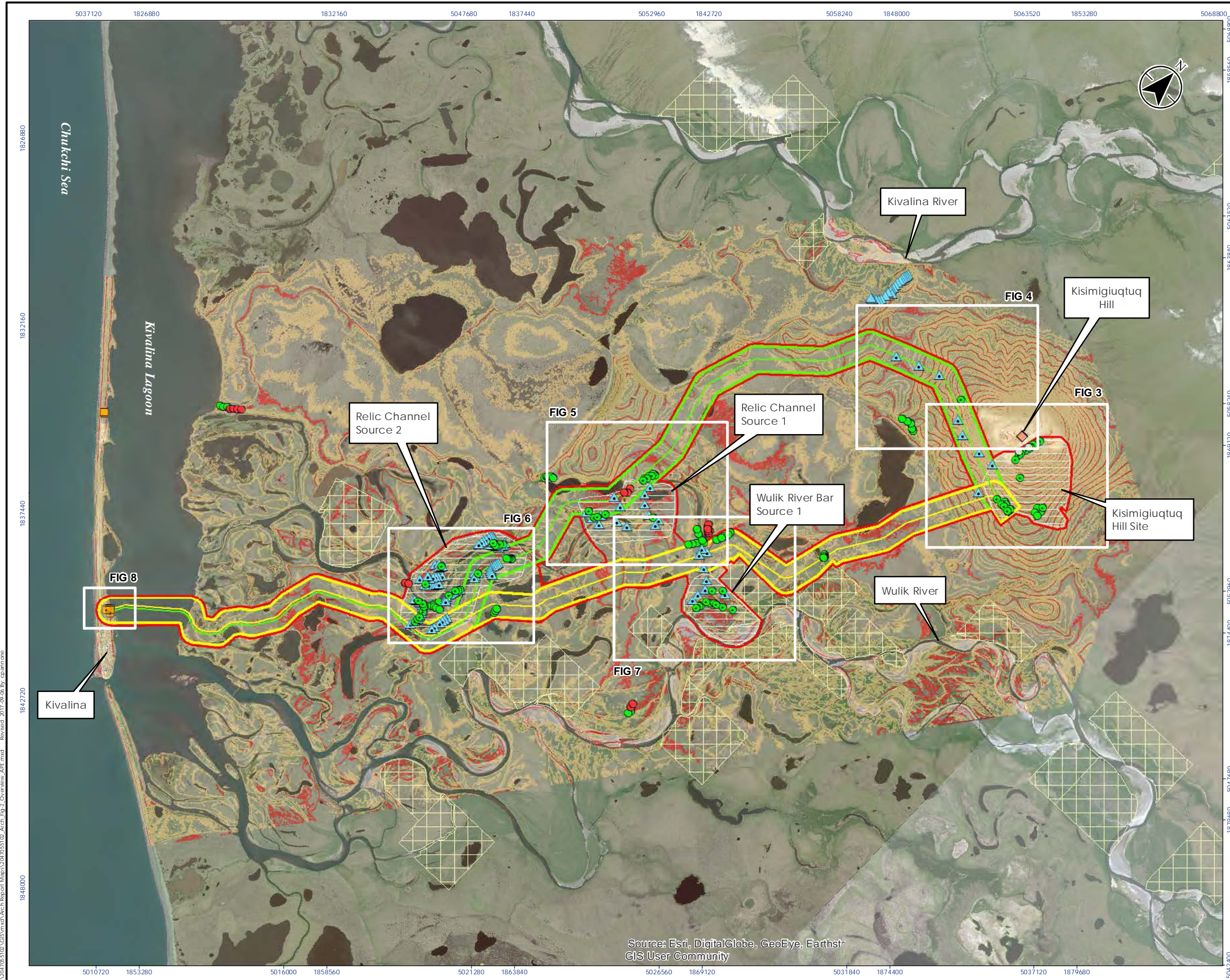
KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Location & Vicinity Map

DATE: September, 2017

FIGURE 1



I:\2010\0510\GIS\mxd\Arch-Report-Maps\3047055-02_Arch_Fig_1_Loc_Vic_Map.mxd Revised: 2017-09-26 By: cpannone



Legend

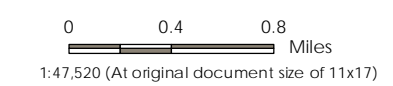
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments

Data Points (2017)

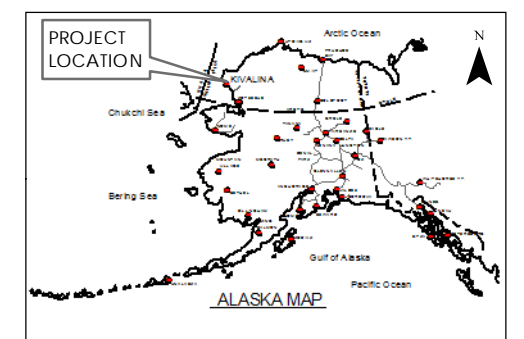
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

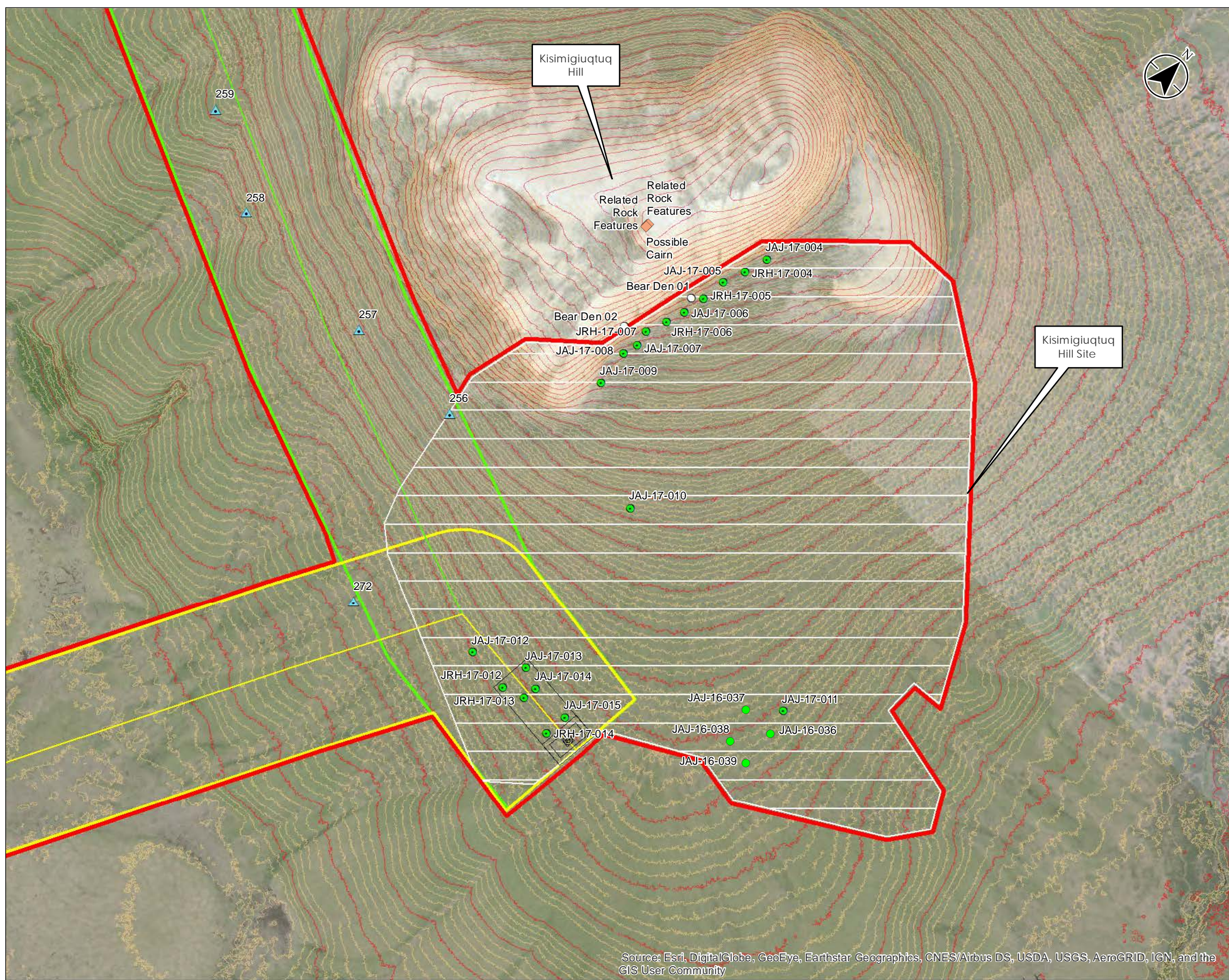
STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
 ACCESS ROAD
Area of Potential Effect - Overview

DATE: September, 2017 FIGURE 2

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_Rep_2_Overview_APE.mxd Revised: 2017-09-06 By: cpammone

Source: Esri, DigitalGlobe, GeoEye, Earthstar
 GIS User Community



Legend

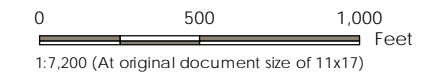
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

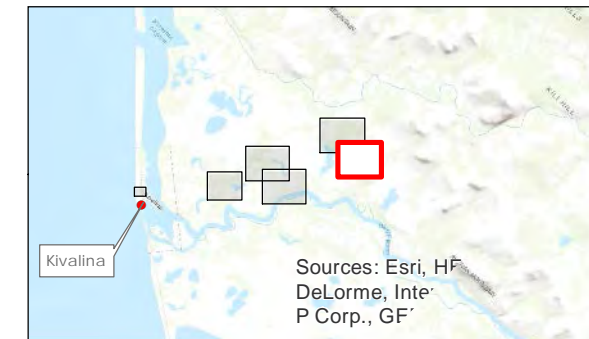
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

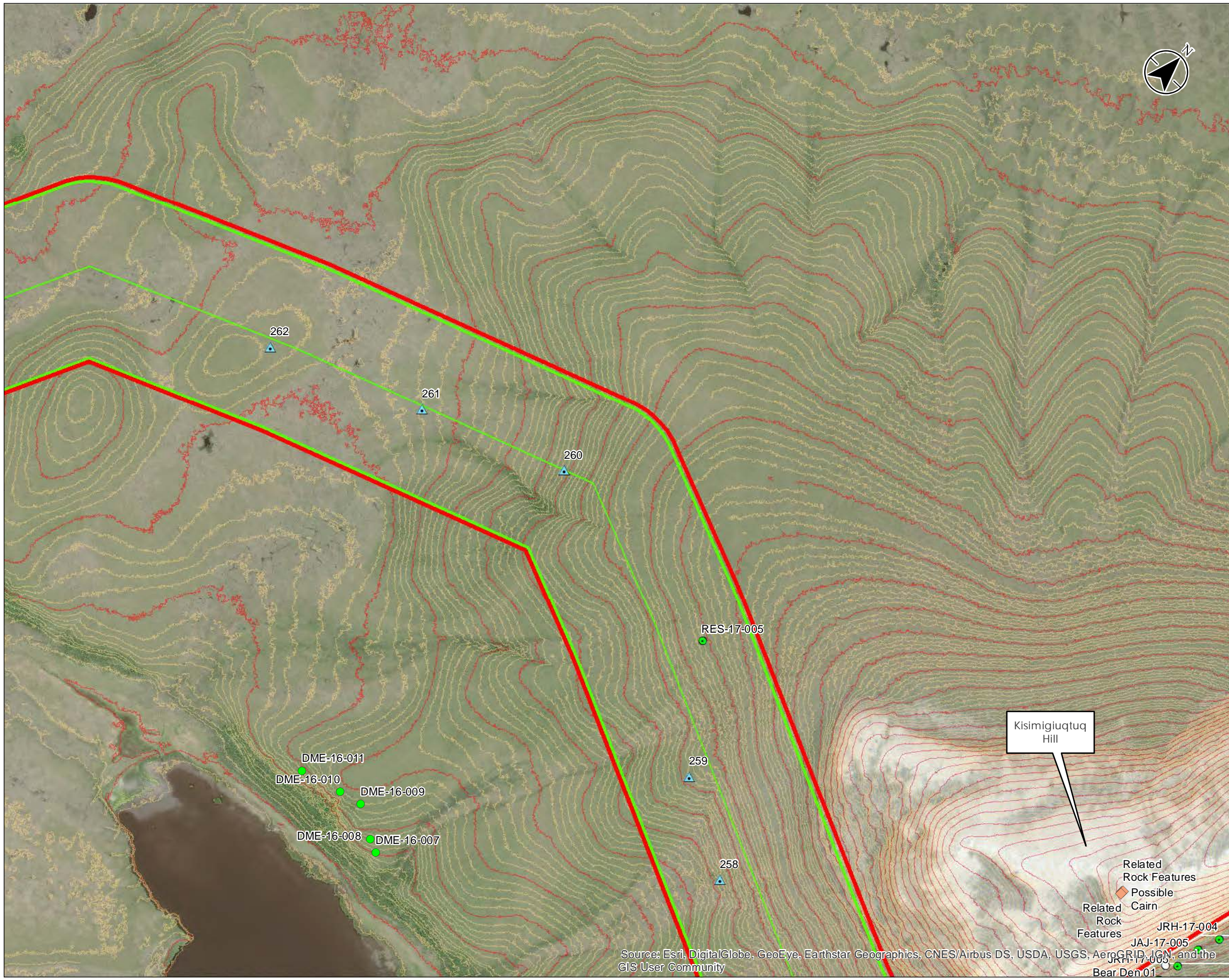
KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Kisimigiqtuq Hill

DATE: September, 2017

FIGURE 3

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_Fig_3_Fig_8_Detail.mxd Reviewed: 2017-09-06 By: cpammon



Legend

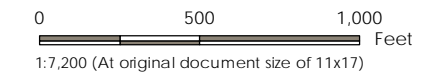
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B- 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

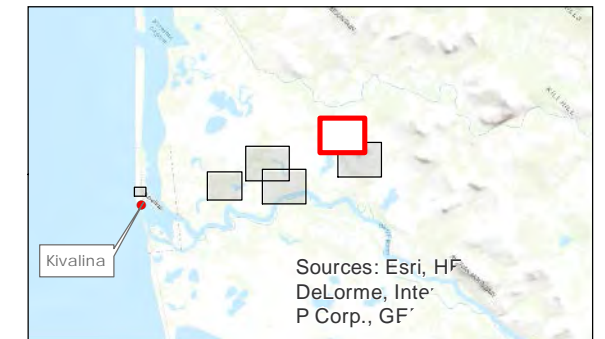
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



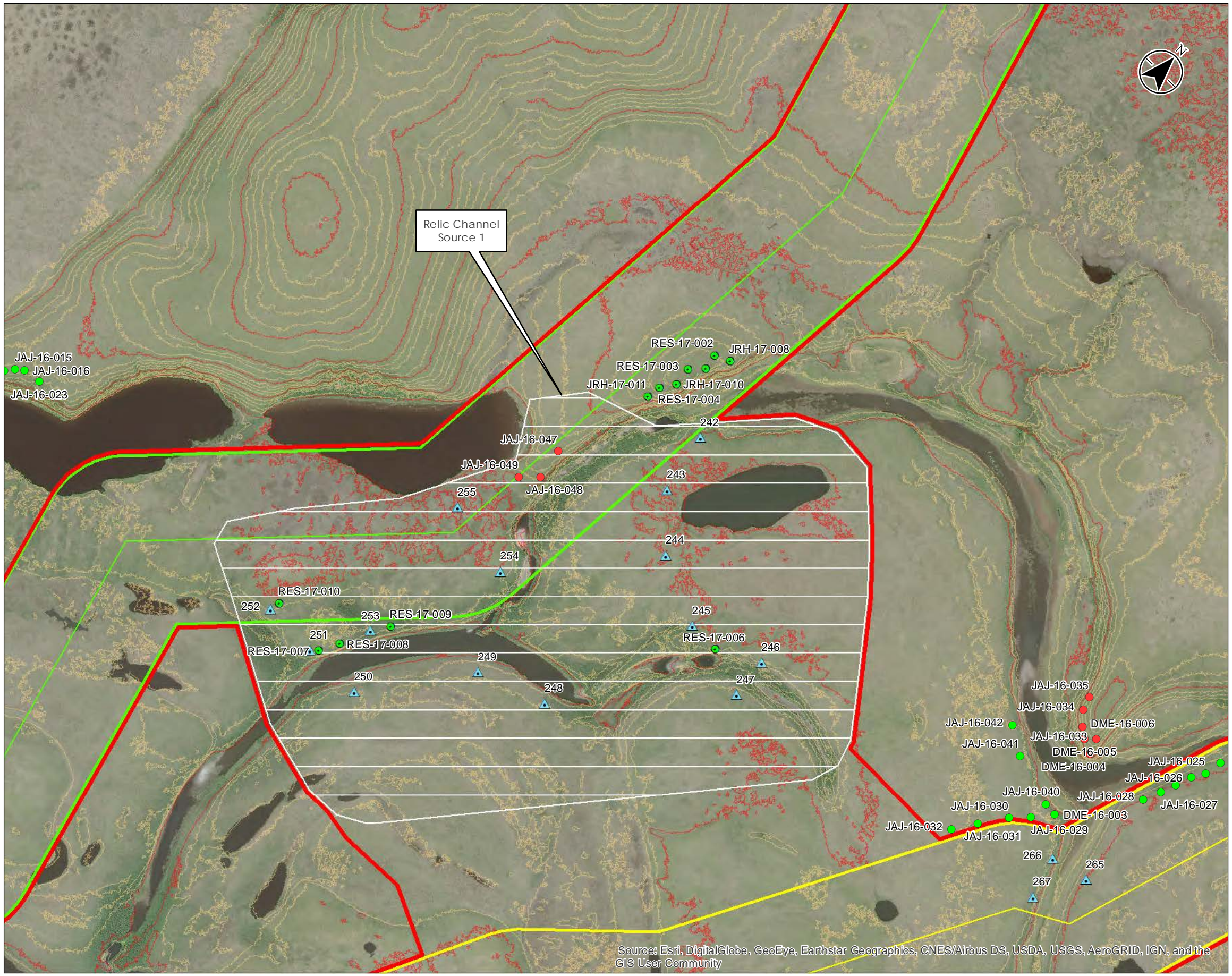
Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Revised Combined Route Alignment

DATE: September, 2017 FIGURE 4

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_Rep_Fig_4_Detail.mxd Revised: 2017-09-06 by: cpammone



Legend

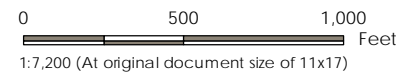
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

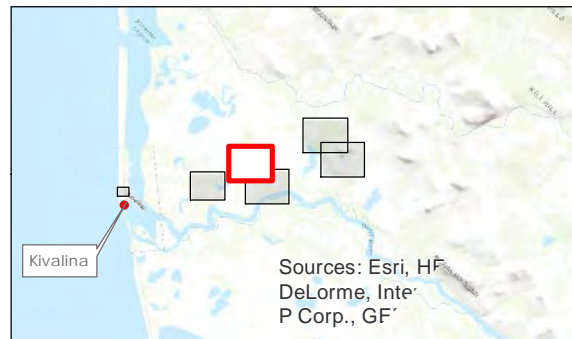
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

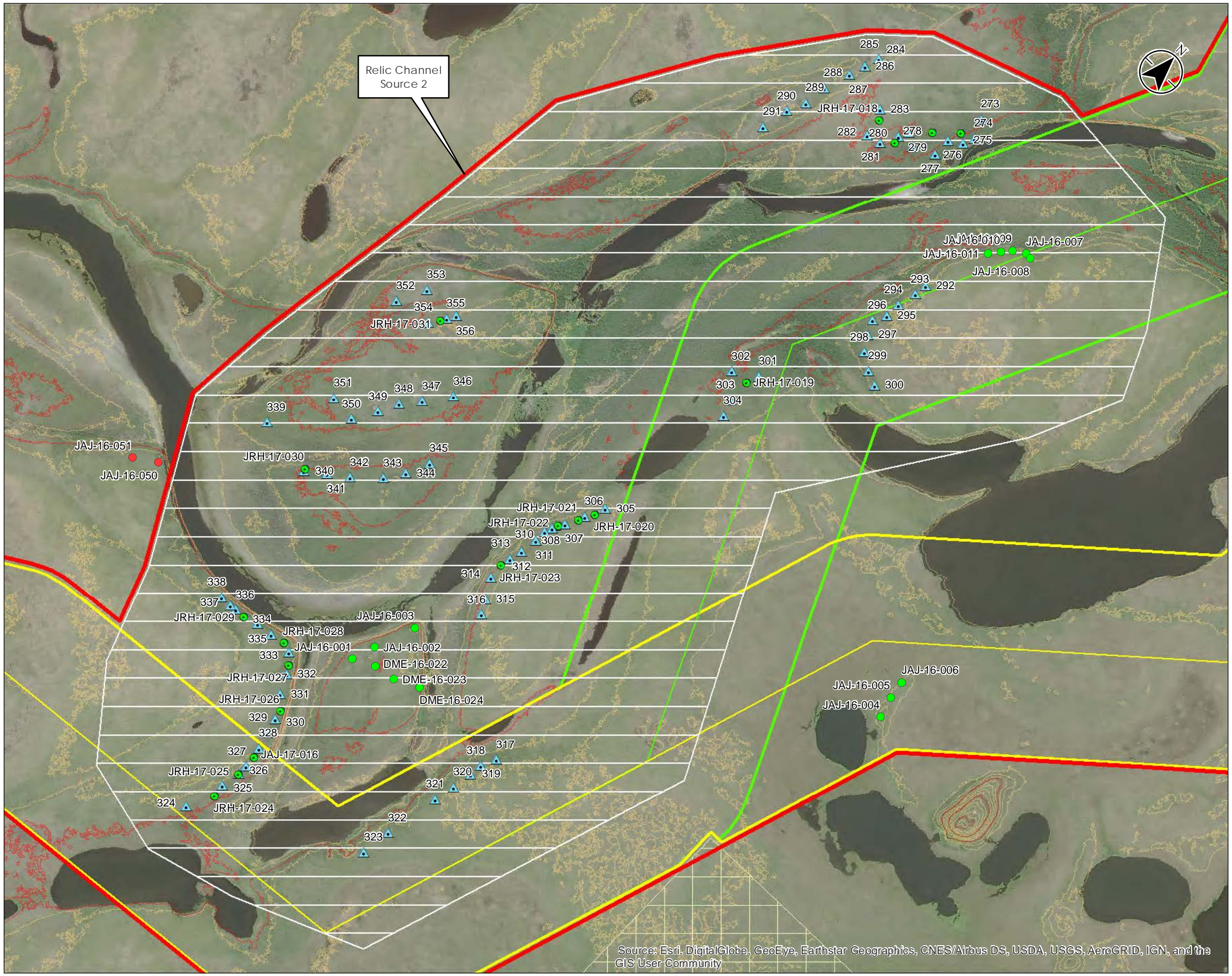
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Relic Channel Source 1

DATE: September, 2017 FIGURE 5

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05102\GIS\mxd\Arch Report Maps\201705102_Arch_03_3_Fig 5_Detail.mxd Revised: 2017-09-06 By: cpammone



Legend

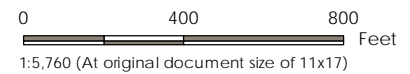
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

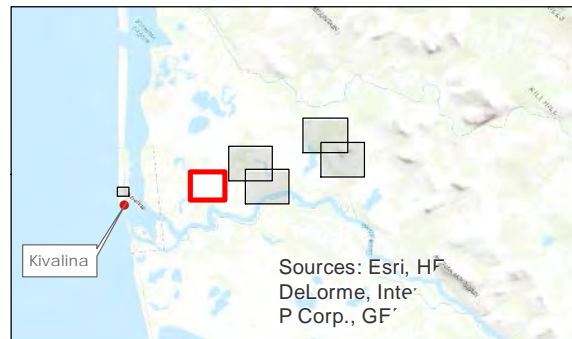
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

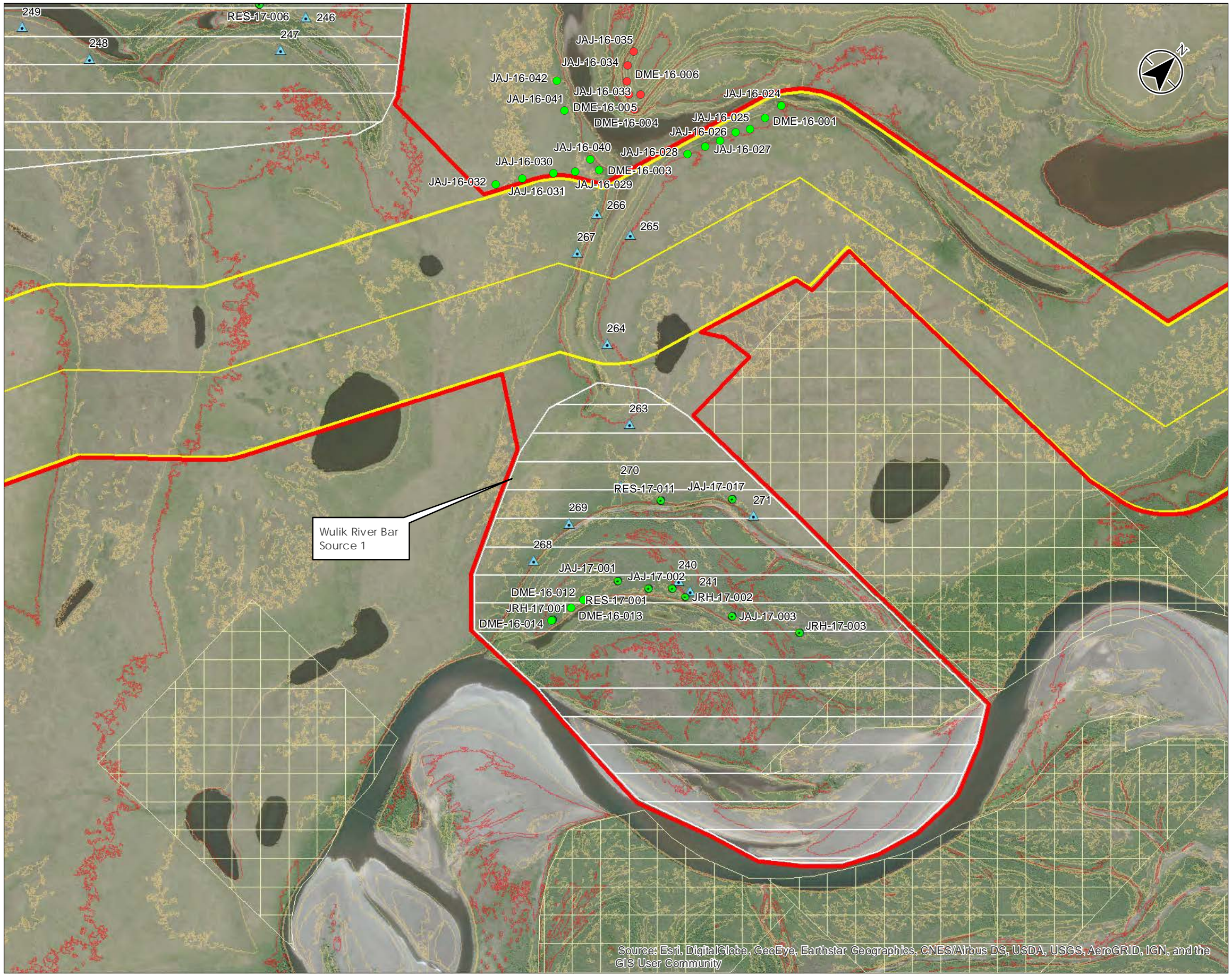
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Relic Channel Source 2

DATE: September, 2017 FIGURE 6

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_03_3_Fig 6_Detail.mxd Revised: 2017-09-06 By: cpammon



Legend

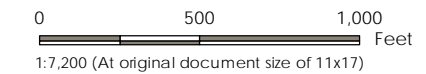
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B - 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

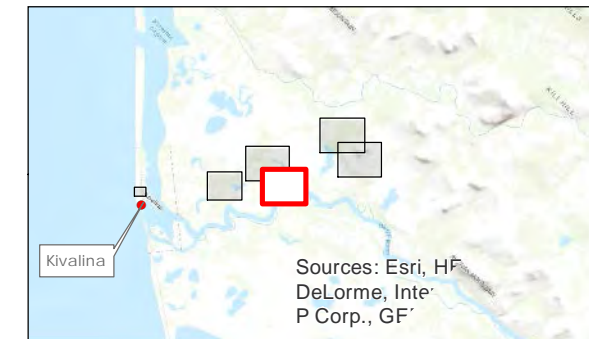
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagey: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Wulik River Bar Source 1

DATE: September, 2017 FIGURE 7

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\5102\GIS\mxd\Arch Report Maps\20170515102_Arch_Rep_3_Fig_8_Detail.mxd Revised: 2017-09-06 by: cpammone



Legend

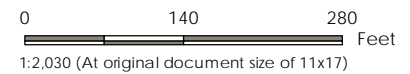
- Area of Potential Effect (APE)
- Southern Route - 7.7 miles
- Combined Route B- 8.9 Miles
- Potential Material Source
- Native Allotments
- Gravel Mounds

Data Points (2017)

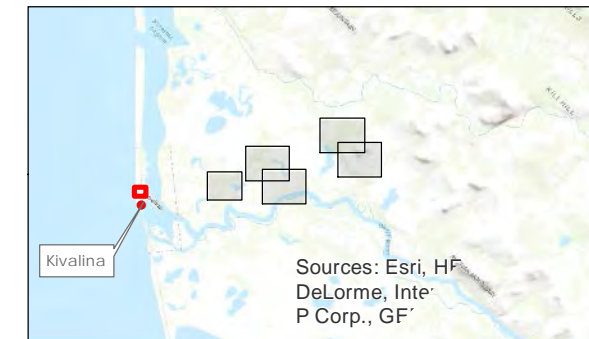
- Bear Den
- Shovel Test Probe
- Soil Probes
- Test Unit

Data Points (2016)

- Shovel Test Probe - Local
- Shovel Test Probe - Probability
- Assessed Feature
- Soil Probe
- Test Unit



- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
ACCESS ROAD
Western Causeway Terminus

DATE: September, 2017 FIGURE 8

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Arch Report Maps\201705102_Arch_Fig_8_Detail.mxd Reviewed: 2017-09-06 By: cp.annone

Attachment 1



United States Department of the Interior

NATIONAL PARK SERVICE
Alaska Region
240 West 5th Avenue, Room 114
Anchorage, Alaska 99501

IN REPLY REFER TO:
8.A.4 (AKRO-CR)20171002

OCT 06 2017

Thomas A. Gamza
State of Alaska DOT&PF, Northern Region
2301 Peger Road
Fairbanks, AK 99709-5316

Subject: Kivalina Evacuation and School Site Access Road. Federal/State Project No. 0002384/NFHwy00162, Section 106 Determination

Dear Mr. Gamza:

Thank you for providing project information for the proposed Kivalina Evacuation and School Site Access Road, Federal/State Project No. 0002384/NFHwy00162. The National Park Service has served as a consulting party for this project under Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108) to help ensure the integrity of Cape Krusenstern Archeological District National Historic Landmark (NHL).

We appreciate the Alaska Department of Transportation and Public Facilities (DOT&PF) providing NPS with the results of the cultural resource assessment survey, accommodating a site visit by NPS archeologist Rhea Hood on August 16, 2017, answering follow-up questions, as well as consulting with other interested parties including the Native Village of Kivalina.

As described, the project consists of building a causeway spanning approximately 0.6 miles across Kivalina Lagoon, constructing a 7.7 to 8.9 mile evacuation road east of Kivalina, and development of up to four different material sites in the same project area. The causeway construction will include pile driving at each abutment and the final bridge design and construction could cause additional ground disturbance near previously recorded sites that are within the Area of Potential Effect (APE). We understand that the two AHRS sites, NOA-00325 and NOA-00327, are documented for human burials and archaeological artifacts respectively and that these sites are within the APE but are over 100 meters away from the western end of the causeway abutment, and therefore the proposed project activity will not harm these sites.

Based on the *Kivalina Evacuation and School Site Access Road Cultural Resources Assessment Report* and the following September 2017 update, and the August 2017 project site visit, we understand that the cultural resources investigations did not reveal any new significant

archeological resources. Since Kivalina was included in the NHL for encompassing "sites evidencing prehistoric occupation," we recognize that there is still the potential for discovery as the project is implemented.

We concur with DOT&PF's finding of "no historic properties adversely affected" (36 CFR 800.5 (b)(1)) conditional to include archaeological monitoring and an Inadvertent Discovery Plan that allows for "reasonable efforts to avoid, minimize or mitigate adverse effects" and that covers post-Section 106 review discoveries of cultural resources.

Given that there is some potential for finding cultural resources and human remains within the NHL, we would appreciate receiving a copy of the Inadvertent Discovery Plan with the specific archaeological monitoring plan, as well as any information that arises as a result of inadvertent discoveries.

We appreciate DOT&PF's inclusion of NPS throughout this Section 106 process. If you have questions about our comments or concerns, please contact Rhea Hood at 907-644-3460 or rhea_hood@nps.gov.

Sincerely,



Herbert C. Frost, Ph.D.
Regional Director

cc: Rhea Hood, Archeologist, NPS Alaska Region
Jennifer Pederson Weinberger, Cultural Resources Program Manager, NPS Alaska Region
Maija Lukin, Superintendent, Western Arctic Parklands
Mark Rollins, Review and Compliance, Alaska State Historic Preservation Office



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

DIVISION OF PARKS & OUTDOOR RECREATION
Office of History & Archaeology

550 West 7th Ave., Suite 1310
Anchorage, Alaska 99501-3565
Main: 907 269.8721
<http://dnr.alaska.gov/parks/oha>

October 9, 2017

SENT BY E-MAIL
DATE 10/9/17

File No.: 3130-1R FHWA/ 2016-01460

Subject: Kivalina Evacuation and School Site Access Road, 0002384/ NFHWY00162

Thomas Gamza
Department of Transportation & Public Facilities
2301 Peger Road
Fairbanks, AK 99709-5316

Dear Mr. Gamza,

The Alaska State Historic Preservation Office (AK SHPO) received your letter (dated September 19, 2017) and reports, titled *Kivalina Evacuation and School Site Access Road Cultural Resources Assessment Report* and the *Archaeological Assessment Update for the Kivalina Evacuation and School Site Access Road*, on September 24, 2017. Following our review of the documentation provided, pursuant to Section 106 of the National Historic Preservation Act, we concur with your finding of **no historic properties adversely affected** for the subject project. Furthermore, we concur that the project will not adversely affect NOA-00042 Cape Krusenstern Archaeological District National Monument National Historic Landmark (NHL). This concurrence is conditional to include archaeological monitoring and an Inadvertent Discovery Plan for the subject project. We look forward to receiving the final draft of the Inadvertent Discovery Plan for our records.

Please note that as stipulated in 36 CFR § 800.3, other consulting parties such as the local government and Tribes are required to be notified of the undertaking. Additional information provided by the local government, Tribes or other consulting parties may cause our office to re-evaluate our comments and recommendations. Please note that our comment letter does not end the 30-day review period provided to other consulting parties. Should unidentified cultural resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR § 60.4) in consultation with our office.

The AK SHPO appreciates your consultation efforts for the subject project and for including a staff member in a site visit on August 16, 2017. Please contact Mark Rollins at 269-8722 or mark.rollins@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,



Deputy
Judith E. Bittner
State Historic Preservation Officer

JEB:mwr

Cc: Rhea Hood, National Park Service, rhea_hood@nps.gov

Archaeological Monitoring Procedures and Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access Road

I. Introduction

These procedures will be followed if cultural resources, including human remains, are encountered during ground disturbing activities at the Kivalina Evacuation and School Site Access Road in Kivalina, Alaska. This plan also includes procedures for archaeological monitoring at selected locations within the project area. Monitoring and discovery protocols contained herein are derived from Appendix F, “Archaeological Monitoring and Discovery Plan,” of the *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the Alaska State Historic Preservation Officer, and the Alaska Department of Transportation and Public Facilities Regarding Implementation of Section 106 of the National Historic Preservation Act for the Federal-Aid Highway Program in Alaska*.

Project Background

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast of the city at a community selected evacuation site on Kisimigiuqtuq Hill (K-Hill). The proposed project includes part of the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages.

The Proposed Action would construct a safe, reliable, all-season evacuation road between the community of Kivalina and K-Hill. A range of route alternatives are being considered (Figure 2), but common to all are the following actions:

- **Establishment of a safe, reliable, all-season Kivalina Lagoon crossing.** All alternatives include construction of a causeway across the lagoon that variously incorporate different configurations of hydrological openings including bridge(s), culvert(s), or both.
- **Construction of an all-season access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.** The road would be designed to accommodate a wide variety of motorized vehicles over a two-way road with shoulders, multiple turnouts, and side slopes that may include guard rails and other safety features where determined to be necessary and prudent.
- **Development of up to four material sites including the K-Hill Site, Wulik River Source 1, Relic Channel Source 1, and Relic Channel Source 2.** These material sites are anticipated to be suitable local sources of select material to supply the project. Selection and development of viable material sources and haul routes are considered as part of the Proposed Action.

Potential construction methodology may vary depending on timing of construction, contractor methods, locations of staging areas, camps, haul routes, and sequencing of activities.

Construction of the lagoon crossing may include in-water placement of fill, bridge support pile driving, and placement of culvert(s). Placement of fill is generally done during ice-free conditions, but several construction components associated with the lagoon crossing could be completed in the winter.

Grounded ice in shallow depths of the lagoon could be removed allowing placement of the base causeway embankment layer and rock protection with no, or minimal water present, thereby minimizing disturbance of fine sediments. Pile driving would take place on both sides of the bridge opening, and consist of driving piles at each abutment. The final design of the bridge foundation would establish the specific number, size, and depth of the pilings.

II. Archaeological Monitoring

Background

Archaeological monitoring is the stationing of an archaeologist on a construction site to watch for evidence of archaeological remains as the construction proceeds. Archaeological monitoring for the Kivalina project is planned for select activities in defined geographic areas. Monitoring requirements will be implemented during subsurface, ground disturbing activities. Archaeological monitoring was a condition of the SHPO's concurrence with DOT&PF's Finding of No Adverse Effect (SHPO Concurrence Letter, October 9, 2017).

Archaeological monitoring is to be carried out by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualifications Standards for Archaeologists* (48 FR 44738-44739). The Archaeological Monitor(s) will conduct on-site monitoring of ground-disturbing activities that extend into cultural resource sensitive areas identified through Section 106 consultation for the project.

Areas Planned for Monitoring

Archaeological monitoring is planned for the west side of the Lagoon Crossing/Causeway construction area (in the city of Kivalina), the evacuation road terminus at K-Hill, and the proposed material site locations DOT&PF will ensure a Secretary of the Interior (SOI) qualified professional archaeologist will be present to monitor for potential cultural resources during all ground disturbing activities in the above monitoring locations.

Monitoring Procedures

Before work begins on the project, the DOT&PF Project Engineer, the DOT&PF Professionally Qualified Individual (PQI), and the Archaeological Monitor(s) will conduct a pre-construction meeting with the Construction Contractor to explain any Section 106 terms or conditions for the project and the procedures to follow if archaeological materials or human remains are found, as well as the role of the Archaeological Monitor. The PQI will provide copies of the contact list contained in this document (Appendix 1) to be used in the event of a cultural resource discovery.

The on-site supervising Archaeological Monitor is authorized to halt construction in a specific location if any previously unidentified cultural resources are encountered during earth-moving activities.

Monitoring Reporting

The Archaeological Monitor will provide a summary construction monitoring memo on a weekly basis to the DOT&PF Project Engineer and the PQI. When the construction monitoring is complete, the Archaeological Monitor will provide to the Project Engineer and PQI draft and final summary reports detailing the construction monitoring activities. The report is to meet contemporary professional standards and the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (FR Vol. 48, No. 190, pp. 44734-44737). The PQI will provide the summary report to SHPO and other consulting parties

III. Protocols for Discovery of Cultural Resources

Cultural resources may include evidence of pre-contact or historic activities, artifacts such as formed stone or bone tools, tool-making debris, fire-modified rock, organic materials such as charcoal and faunal remains, historic debris scatters, and features such as hearths, pits, privies, post-holes or post- molds, foundations, and other evidence of structural remains. The following procedures must be adhered to in the event of a discovery of cultural resources during any project activities.

These procedures will be followed for a discovery during archaeological monitoring at the required monitoring locations *and* must also be followed if an unexpected discovery is made during project activities which were not required to have a monitor.

On-Site Procedures at the Time of Discovery

In the unlikely event that archaeological materials, features, and other potentially sensitive cultural resources are encountered during construction activities or the material site development in association with the project, all work at and adjacent to the discovery must stop. If an Archaeological Monitor is present, they will examine the discovery to determine if it is a cultural resource. If it is determined to not be a cultural resource, work may proceed with no further delay. If it is determined to be a cultural resource, the discovery site is to be secured by the Contractor. If no Archaeological Monitor is present, the discovery site is to be secured by the Contractor until such time as a qualified professional archaeologist can examine the discovery. The discovery area and a surrounding buffer zone shall be delineated with flags tied to stakes that will be driven into the ground. These stakes shall not be removed except by the PQI or Archaeological Monitor(s) at the conclusion of the cultural resource work. The buffer zone established around the discovery zone shall be large enough to allow ground disturbance activities to resume outside the buffer. If human remains are encountered, treat them with dignity and respect, and follow the protocols outlined below in Protocol for Discovery of Human Remains.

The Project Engineer may direct construction away from cultural resources to work in other areas prior to contacting the discovery notification consulting parties. The Project Engineer will coordinate with the Archaeological Monitor (if one is present) to contact the PQI or Regional Environmental Manager (REM).

The PQI or REM will notify the DOT&PF Statewide Environmental Office NEPA Program Manager, the SHPO, the National Park Service (NPS), the Native Village of Kivalina, City of Kivalina, NANA Regional Corporation, and the Native Village of Noatak; contact information for these parties is listed in Appendix 1. The PQI (or REM) must contact these parties within 48 hours of the discovery in accordance with 36 CFR 800.13.

Evaluation of Cultural Resource Materials

The PQI will be the DOT&PF point of contact for consultation with the FHWA, the SHPO, Tribes, and other consulting parties as appropriate to ensure that the previously unidentified resource or unanticipated effect is evaluated, and an appropriate treatment plan is developed.

For evaluating the resource: If the discovery occurs during archaeological monitoring the monitor will perform the following steps in collaboration with the PQI. If the discovery occurs during project activities not subject to monitoring, the Project Engineer, the PQI, and the Contractor will coordinate to procure archaeological services.

- As a streamlining measure, after a qualified archaeologist confirms that the find is cultural and establishes the boundaries of the discovery site, the PQI may assume an archaeological resource

is eligible for inclusion in the National Register of Historic Places (National Register) under Criterion D.

- Alternatively, if the find is confirmed as cultural, the PQI may opt to have the cultural resource formally assessed for eligibility to the National Register using established National Register criteria (36 CFR 800.4(c)) and will provide the National Register evaluation report to the SHPO, Tribes, and other consulting parties as appropriate. The PQI will determine National Register eligibility in consultation with the SHPO and Tribes.

For properties deemed to be eligible for the National Register, the PQI will apply the criteria of adverse effect (36 CFR 800.5) in consultation with the SHPO and the Tribes.

Any treatment plan resulting from the discovery will be developed in consultation with the PQI, SHPO, NPS, and other consulting parties. The PQI will coordinate with the Project Engineer and the Construction Contractor to ensure that the treatment plan is implemented.

Curation and Documentation

If any pre-contact or historic archaeological materials are recovered from lands managed by the State of Alaska, these materials and any associated documentation will be curated at the University of Alaska Museum of the North (UAMN) in accordance with the provisions of an existing Memorandum of Understanding between the DOT&PF and UAMN (Appendix 2). Archaeological resources recovered from City of Kivalina lands will be remanded to the City of Kivalina. Archaeological resources recovered from NANA Regional Corporation, Inc. lands will be transferred to the Assistant Director of Lands, who will coordinate with the Native Village of Kivalina and the Native Village of Noatak regarding the final disposition of the recovered materials.

All documentation, testing and treatment plan, evaluation, data recovery, and reporting of cultural resource materials as described for these procedures will follow and meet the contemporary professional standards and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716).

Proceeding with Construction

Project construction outside the discovery site may continue as directed by the Project Engineer and the Construction Contractor while documentation and assessment of the cultural resources at the discovery site proceeds. When the PQI ensures that recovery of cultural resource materials as outlined above is satisfied and complete, and the PQI determines that compliance with State and federal laws is complete, the Project Engineer may allow construction at the discovery site to resume.

IV. Protocol for Discovery of Human Remains

If human remains are identified at any time during this project, any excavation or other project activities in the area of the discovery will cease and the location will be secured, and protected from further disturbance. The Project Engineer on Site will immediately initiate the notification process established by the OHA (see Appendix 1: Guidelines Laws and Protocols Pertaining to the Discovery of Human Remains in Alaska), and notify the designated representatives of the DOT&PF, the SHPO, the NPS, and NANA Regional Corporation, Inc., the City of Kivalina, the Native Village of Kivalina, and the Native Village of Noatak.

GUIDELINES

Laws and Protocols Pertaining to the Discovery of Human Remains in Alaska

The treatment of human remains following inadvertent discovery is governed by state and federal laws, land status, postmortem interval (time since death), and biological/cultural affiliation. First and foremost, the site of discovered remains should be regarded a potential “crime scene” until a person with appropriate expertise and authority determines otherwise.

State Laws:

Several State laws are applicable to the discovery of human remains in Alaska. The State Medical Examiner (SME) has jurisdiction over all human remains in the state (with rare exceptions, such as military aircraft deaths), regardless of age.

AS 12.65.5 requires immediate notification of a peace officer of the state (police, Village Public Safety Officer, or Alaska State Trooper [AST]) and the State Medical Examiner when death has “been caused by unknown or criminal means, during the commission of a crime, or by suicide, accident, or poisoning.”

In this regard, contact the Alaska State Trooper/Missing Persons Bureau first. (See list of contacts on following page.) The AST has interpreted notification procedures as applicable to all remains, including ancient remains.

AS 11.46.482(a)(3), which applies to all lands in Alaska, makes the “intentional and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave” a class C felony.

AS 41.35.200, which applies only to State lands, makes the disturbance of "historic, prehistoric and archeological resources" (including graves, per definition) a class A misdemeanor.

AS 18.50.250, which applies to all lands in Alaska, requires permits for the disinterment, transport, and reinterment of human remains. Guidance and permits are available from the Bureau of Vital Statistics (see attached list of contacts).

Federal Laws:

On Federal lands and Federal trust lands, the unauthorized destruction or removal of archaeological human remains (i.e., more than 100 years old) is a violation of **16 USC 470ee** (Archeological Resources Protection Act). If human remains on federal or federal trust lands are determined to be Native American, their treatment and disposition are also governed by the Native American Graves and Repatriation Act (NAGPRA) of 1990 (**PL 101-601; 25 USC 3001-30013**; 104 Stat. 3048-3058; 43 CFR 10). NAGPRA also applies to Native American human remains from any lands if the remains are curated in any institution that receives federal funds.

General Guidance:

Your first contacts should be the AST/Missing Persons Bureau, the Alaska State Medical Examiner’s Office, local law enforcement, the Alaska Office of History and Archaeology, and the landowner.

In many instances, the field archaeologist must make a judgement call regarding the age of the remains, his/her level of confidence in the evaluation, and whether further investigation by a specialist is warranted. While notification under State Law is required, peace officers and the SME generally regard archaeologists competent to make these type determinations and welcome input that may assist with the investigation. With regard to ancient remains (> 100 years old), the SME and AST will generally defer to the opinion of the field archaeologist and require no further criminal investigation. However, the remains and a surrounding buffer area should not be disturbed until appropriate reporting and consultation have occurred.

Dr. Richard VanderHoek, State Archaeologist
Alaska Office of History and Archaeology
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501
(907) 269-8728 or richard.vanderhoek@alaska.gov
Appendix F Page 166

Department of Transportation & Public Facilities**Brett Nelson**

DOT&PF Environmental Coordinator
2301 Peger Road
Fairbanks, AK 99701
Phone: (907) 451-2238
Email: brett.nelson@alaska.gov

State Medical Examiner's Office

5455 Dr. Martin Luther King Jr. Ave Q
Anchorage, AK 99507
Reporting Hotline (Death Hotline):
Phone: (907) 334-2356
1-888-332-3273 (Outside Anchorage)
Stephen Hoage, Operations Administrator Phone:
(907) 334-2202
Fax: (907) 334-2216
Email: stephen.hoage@alaska.gov
Dr. Gary Zientek, Chief Medical Examiner Phone:
(907) 334-2200
Fax: (907) 334-2216
Email: gary.zientek@alaska.gov

State Bureau of Vital Statistics

Heidi Lengdorfer, Chief
5441 Commercial Blvd.
P.O. Box 110675
Juneau, AK 99801
Phone: (907) 465-8643
Email: heidi.lengdorfer@alaska.gov
For questions regarding burial transit permits
Margo Meyer:
Phone: (907) 465-8610
Email: margo.meyer@alaska.gov

State Troopers

Missing Persons Bureau
Phone: (909) 269-5477
Fax: (907) 338-7243

Sgt. Kid Chan

Phone: (907) 269-5058
Email: choong.chan@alaska.gov
Stephanie Johnson
Phone: (907) 269-5497
Email: stephanie.johnson2@alaska.gov
(Please send email to Sgt. Chan w/cc to Stephanie,
with relevant information and photos)

DNR Office of History and Archaeology**Judith E. Bittner**

State Historic Preservation Officer (SHPO) Phone:
(907) 269-8721
Fax: (907) 269-8908
Email: judy.bittner@alaska.gov

Dr. Richard VanderHoek

State Archaeologist/Deputy SHPO
Phone: (907) 329-8728
Fax: (907) 269-8908
Email: richard.vanderhoek@alaska.gov

Native Village of Kivalina

Millie Hawley, President
PO Box 50051
Kivalina, AK 99750
Phone: (907) 645-2153
Email: tribeadmin@kivaliniq.org

City of Kivalina

Austin Swan Sr., Mayor
PO Box 50079
Kivalina, AK 99750
Phone: (907) 645-2137
Email: atchugunnag@gmail.com

NANA Regional Corporation, Inc.

Jeffrey Nelson, Assistant Director of Lands
909 West 9th Avenue
Anchorage, AK 99501
Phone: (907) 442-3301
Email: Jeffrey.Nelson@nana.com

National Park Service- Alaska Regional Office

Rhea Hood, Archeologist
240 West 5th Avenue
Anchorage, AK 99501
Phone: (907) 644-3460
Email: rhea_hood@nps.gov

Native Village of Noatak

Vernon Adams, Sr., President
PO Box 89
Noatak, AK 99761
Phone: (907) 485-2173
Email: tribaladmin@nautaaq.org

Appendix 2

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
AND
THE UNIVERSITY OF ALASKA MUSEUM OF THE NORTH
FAIRBANKS, ALASKA**

THIS MEMORANDUM OF UNDERSTANDING (Agreement) is hereby entered into by and between the Alaska Department of Transportation and Public Facilities (DOT&PF) Statewide Environmental Office, representing the three DOT&PF regions (i.e., Central, Northern, and Southeast), and the University of Alaska Museum of the North, Fairbanks, Alaska, herein referred to as the Museum.

WHEREAS, the purpose of this Agreement is to provide the framework for the effective museum curation and storage of cultural material collected or excavated during the development of DOT&PF sponsored projects in accordance with the stipulations outlined below.

WHEREAS, the DOT&PF administers federally funded projects that are subject to Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800 Protection of Historic Properties) and State funded projects subject to the Alaska Historic Preservation Act of 1970 (specifically AS 41.35.070 Preservation of Historic, Prehistoric, and Archaeological Resources Threatened by Public Construction); and

WHEREAS, the development of said projects can result in certain cultural material recovered during archaeological survey, excavation, and data recovery, and the creation of associated field records (herein called Collections); and

WHEREAS, DOT&PF as the sponsor for federal and State funded projects has the responsibility under federal and State law to ensure proper care of Collections; and

WHEREAS, the Museum is an accredited institution that has requisite facilities that meet and operate in accordance with the federal standards published in 36 CFR 79 to provide physical security and a controlled environment for Collections, has an established Collection Management Policy that provides procedures and requirements to curate archaeological collections for future research, exhibit, and instruction, and has qualified Museum professionals with the expertise for the curation of Collections; and

WHEREAS, the Parties hereto recognize the mutual benefits to be derived by having Collections from DOT&PF suitably housed and maintained by the Museum; and

WHEREAS, the Parties hereto recognize the continued State legal title to Collections from lands owned or controlled by the State (pursuant to AS 41.35.020 and 11 AAC 16.020) and the responsibility to ensure that the Collections are suitably managed and preserved for the public good; and

WHEREAS, the Parties hereto recognize that DOT&PF sponsored surveys and archaeological excavations on properties not owned or controlled by the State require a separate Right-of-Entry agreement with the land owner or managing entity; and

WHEREAS, Right-of Entry agreements will identify the party holding legal title to the cultural materials, and contain terms and conditions to ensure proper care and curation of any recovered Collections; and

NOW THEREFORE, the DOT&PF and the Museum as signatories to this Agreement mutually agree to promote a unified approach to preservation and protection of cultural materials in accordance with the following stipulations until this Agreement expires or is terminated.

STIPULATIONS

I. RESPONSIBILITIES

A. The Museum

1. In accordance with the Museum's Collections Management Policy, the Museum agrees to act as repository for appropriately accessioned and cataloged cultural material, and to provide proper space, facilities and personnel for curation, storage and maintenance of the materials.
2. Collections made on State lands remain the property of the State, while the Right-of-Entry agreements will contain the terms and conditions of Collections from properties not owned or controlled by the State. The Museum shall not transfer or discard a State Collection without written permission of the State. The Museum may not sell any State Collection.
3. The Museum assumes no responsibility for cultural specimens from DOT&PF sponsored projects that have not been accessioned and cataloged according to the Museum's Curation Guidelines accession system and that have not been physically deposited in the Museum. The Museum reserves the right to refuse to accept a Collection.

B. The DOT&PF

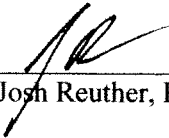
1. In accordance with the Museum's Curation Guidelines, the DOT&PF will be responsible to coordinate with the Museum for the proper accessioning and cataloging and processing for long-term museum storage of Collections from DOT&PF sponsored projects that are to be deposited with the Museum. This will be accomplished by a qualified consultant(s) under contract to the DOT&PF.
2. All associated records will be deposited at the Museum at the same time as the Collection(s). These records will include (but not necessarily be limited to) catalog ledgers and copies of all reports, papers, field notes, photographs, profiles, etc. In accordance with applicable federal and State laws, the Museum will restrict access to information about the location of heritage resource sites from which DOT&PF Collections are obtained.

II. ADMINISTRATION

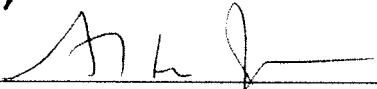
- A. Duration of Agreement: The Agreement shall remain in effect for a period of ten (10) years after the date it takes effect. The Museum and the DOT&PF will review this Agreement in five (5) years and make any necessary adjustments unless it is terminated prior to that time. If there are no objections from the parties, the term of the Agreement will automatically be extended for an additional ten (10) years. The procedures, terms and conditions of this Agreement may be modified at any time by joint written consent of the parties.
- B. Fees: The DOT&PF and the Museum recognize that fees will be required for the DOT&PF sponsored Collections when they are transferred for deposition and organization at the Museum. The fees for these services will be in accordance with the Museum's Curation Guidelines.
- C. Amendment: Parties to this Agreement may at any time propose amendments, whereupon the parties will consult to consider such amendment. This Agreement may be amended only upon written concurrence of the signatory parties. Amendments go into effect on the date of the last signature.
- D. Termination: This Agreement becomes effective when final signature is received. A party may terminate this Agreement at any time by giving written notice to the other parties not less than one hundred twenty (120) days in advance of the effective date of termination. If any party proposes termination of this Agreement, the party proposing termination will consult with the other parties to seek alternatives to termination. Should such consultation result in an agreement on an alternative to termination, the parties will proceed in accordance with that agreement.

THE PARTIES HERETO have executed this Memorandum of Understanding.

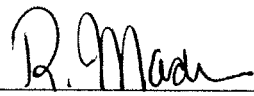
UNIVERSITY OF ALASKA MUSEUM, FAIRBANKS

By: 
Josh Reuther, Ph.D., Curator of Archaeology

Date: 1/27/14

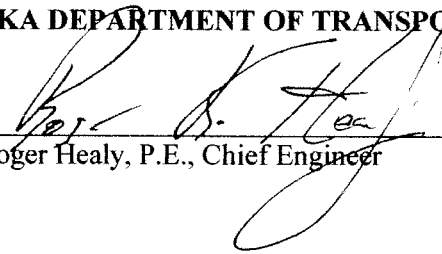
By: 
Aldona Jonaitis, Ph.D., Museum Director

Date: 1/27/14

By: 
Rosemary Madnick, Grant and Contract Services Director

Date: 1/31/14

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

By: 
Roger Healy, P.E., Chief Engineer

Date: 12/12/13

Department of Transportation and
Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Millie Hawley, President
Native Village of Kivalina
PO Box 50051
Kivalina, AK 99750

Dear Ms. Hawley:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project's Area of Potential Effect (APE) but that they would not be affected by the project's activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF's original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Austin Swan Sr., Mayor
City of Kivalina
PO Box 50079
Kivalina, AK 99750

Dear Mayor Swan:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Vernon Adams, Sr., President
Native Village of Noatak
PO Box 89
Noatak, AK 99761

Dear Mr. Adams:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

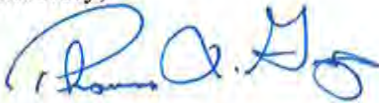
Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHXY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Bert Frost, Regional Director
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Mr. Frost:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

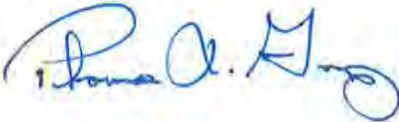
Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Rhea Hood, Archeologist
Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501

Dear Ms. Hood:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Wayne Westlake, President & CEO
NANA Regional Corporation, Inc.
909 West 9th Avenue
Anchorage, AK 99501

Dear Mr. Westlake:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

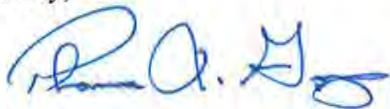
Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

John Lincoln
Vice President of Lands
NANA Regional Corporation, Inc.
909 West 9th Avenue
Anchorage, AK 99501

Dear Mr. Lincoln:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

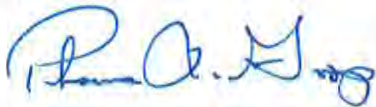
Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Maija Lukin, Superintendent
NPS-Western Arctic National Parklands
PO Box 1029
Kotzebue, AK 99752

Dear Ms. Lukin:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRS) sites, NOA-00325 and NOA-00327, appear to be within the proposed project's Area of Potential Effect (APE) but that they would not be affected by the project's activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF's original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRS numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRS Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRS numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRS-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRS-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Clement Richards, Sr., Borough Mayor
Northwest Arctic Borough
P.O. Box 1110
Kotzebue, AK 99752

Dear Mayor Richards:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project's Area of Potential Effect (APE) but that they would not be affected by the project's activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF's original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:
Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Lynn Polacca, Regional Director
Bureau of Indian Affairs
3601C Street
Anchorage, AK 99503-5947

Dear Ms. Polacca:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiutquq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

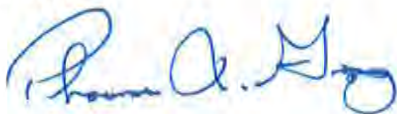
Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

- Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017
- Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017
- Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager
Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst
Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager
Kathy Price, DOT&PF, Statewide Cultural Resources Manager
Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services
Preliminary Design and Environmental
Section

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

In Reply Refer To:

Kivalina Evacuation and School Site Access Road
Federal/State Project No. 0002384/NFHWHY00162
Addendum: NOA-00325 & NOA-00327

December 29, 2017

Sean Mack
Acting Regional Archeologist
Bureau of Indian Affairs
3601C Street, Suite 1100
Anchorage, AK 99503-5947

Dear Mr. Mack:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration (FHWA) under 23 U.S.C. 327, and is proposing to construct a safe, reliable, all-season evacuation road between the community of Kivalina and a site on Kisimigiuqtuq Hill (K-Hill) (Figure 1). The Kivalina Evacuation and School Site Access Road (the Project) location is legally described in Table 1 below:

Table 1: Project Location

Section(s)	Township	Range	Meridian	USGS Quad
1, 2, 10, 11, 15, 16, 21	027N	026W	Kateel River	Noatak C-5
19, 20, 29, 30, 31	028N	026W	Kateel River	Noatak C-5
25, 26, 35, 36	029N	025W	Kateel River	Noatak C-5

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on K-Hill.

Background

On September 19, 2017 DOT&PF made a finding of No Historic Properties Adversely Affected (Findings Letter) for the proposed project. The National Park Service (NPS) responded on October 6, 2017 (Attachment 1); their response included the detail that two Alaska Heritage Resources Survey (AHRs) sites, NOA-00325 and NOA-00327, appear to be within the proposed project’s Area of Potential Effect (APE) but that they would not be affected by the project’s activities. These two sites did not appear in the Findings Letter or in the SHPO concurrence to those Findings on October 9, 2017 (Attachment 2). This informational update addresses those two sites. DOT&PF’s original finding of effect has not changed.

NOA-00325 and NOA-00327

Both NOA-00325 and NOA-00327 were assigned AHRs numbers in the 2005 *Cultural Resources Survey of Proposed Sewage and Water Systems Improvements in Kivalina, Alaska* report by Northern Land Use Research, Inc.

Table 2. Site Details from AHRs Database

Site Number	Site Name	Site Description	Determination of Eligibility?
NOA-00325	KIV-HR-05	Informant reported to cultural resource investigators in 2005 that human remains discovered during construction of house in 1990s. No information regarding their handling.	No Determination of Eligibility
NOA-00327	NOA-00327	Local informant reported to other cultural resource investigators in 2004 that artifacts had been found near location when they were a child.	No Determination of Eligibility

The site numbers were assigned based on information from local residents who recalled that in one location (NOA-00325) human remains had been found during the construction of a house foundation in the 1970s. It was not determined at the time of the 2005 interview if the remains were left in place or re-interred in the current cemetery. Another local resident noted that at the other location (NOA-00327) artifacts had been found and he played with them when he was a child. Based on these interviews, AHRs numbers were assigned for the general locations. As of 2017, no extant physical materials have been identified in relation to either of these two sites.

This letter is being sent to acknowledge that the AHRs-reported locations for NOA-00325 and NOA-00327 are within the APE for this project. Their omission from the Findings Letter (September 19, 2017) was a clerical error and DOT&PF does not anticipate ground disturbing activities in the reported site locations that would require a re-evaluation of the finding of effect for this project. The APE for the project was drawn broadly to evaluate potential visual effects as well as any ground disturbing effects the project may have on the surrounding land and community. The AHRs-reported locations for these two sites are on the periphery of the APE where visual effects were the greatest concern due to the presence of standing structures. No ground-disturbing activity is planned for the portions of the APE containing these sites.

Section 4(f)

As stated in in September 19, 2017 Findings Letter it is the DOT&PF's intent to make a Section 4(f) *de minimis* impact finding for this project and NOA-00042, the Cape Krusenstern National Historic Landmark. Section 4(f) findings have not changed with the inclusion of NOA-00325 and NOA-00327 within the project APE as there will be no use of these sites.

Inadvertent Discovery Plan

Additionally, please find attached the finalized Inadvertent Discovery Plan (Attachment 3), as stipulated and required, for this project as presented in the DOT&PF Findings Letters of September 19, 2017 and a full set of the figures for the entire project APE (Figures 1-8).

Consultation Summary

On July 10, 2017 a meeting among Agency cultural resource staff was held in Anchorage. The DOT&PF Northern Region Cultural Resource Specialist-Archaeologist PQI, Office of History and Archaeology staff, the Alaska SHPO, and the NPS Archaeologist for the NRHP Program, Alaska Region were in attendance. Initiation of Consultation letters were sent out to the identified consulting parties on August 7, 2017. A response was received from the SHPO office on August 22, 2017 stating there was no objection to the proposed Study Area or level of identification. No other responses to the Section 106 Initiation of Consultation letters were received. A response to the September 19, 2017 Findings Letter was received from the NPS on October 6, 2017 and SHPO concurrence with the DOT&PF findings was received on October 9, 2017. No responses were received from the other consulting parties.

In addition to the Alaska State Historic Preservation Officer (SHPO), other parties being contacted with this informational update and Inadvertent Discovery Plan for this project are: the National Park Service (NPS); the Native Village of Kivalina; the City of Kivalina; the Native Village of Noatak; NANA Regional Corporation; the Northwest Arctic Borough; NPS-Western Arctic National Parklands; and the Bureau of Indian Affairs (BIA).

Please direct your questions or comments to me at the address above, by telephone at 907-451-5293, or by e-mail at thomas.gamza@alaska.gov.

Sincerely,



Thomas A. Gamza
Cultural Resource Specialist-Archaeologist (PQI)
State of Alaska DOT&PF, Northern Region

Figure 1: Location and Vicinity Map

Figures 2-7: Project APE Enlarged Sections

Figure 8: Locations of NOA-00325 and NOA-00327 in Western Terminus Enlarged Section

Attachment 1: National Park Service response to the DOT&PF Findings October 6, 2017

Attachment 2: SHPO concurrence with No Historic Properties Adversely Affected
Determination October 9, 2017

Attachment 3: Final Inadvertent Discovery Plan – Kivalina Evacuation and School Site Access
Road

Electronic cc w/ enclosures:

Jonathan Hutchinson, P.E., DOT&PF Northern Region, Project Manager

Paul Karczmarczyk, DOT&PF Northern Region, Environmental Impact Analyst

Brett Nelson, DOT&PF Northern Region, Regional Environmental Manager

Kathy Price, DOT&PF, Statewide Cultural Resources Manager

Amy Sumner, DOT&PF Statewide Environmental NEPA Manager

APPENDIX G

SECTION 7 CONSULTATION

	Page
USFWS Section 7 Consultation – Endangered Species Act, 09/18/17	1
NMFS Section 7 Consultation – Endangered Species Act, 09/18/17	9
NMFS Section 7 Consultation and Marine Mammal Protection Act, 12/19/17	16
USFWS Section 7 Consultation – Endangered Species Act, 12/19/17.....	36
USFWS Section 7 Consultation – Endangered Species Act, Concurrence, 12/21/17	38
NMFS Section 7 Consultation – Endangered Species Act, 01/05/18	48
NMFS Section 7 Consultation and Marine Mammal Protection Act, Concurrence, 01/09/18.....	82

Department of Transportation and Public Facilities



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Northern Region
Design and Engineering Services

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

September 18, 2017

Re: Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHwy00162
Subject: Section 7 Consultation – ESA

Dear Kaithryn Ott,

The Alaska Department of Transportation and Public Facilities (DOT&PF) and the Federal Highway Administration (FHWA), in partnership with the Northwest Arctic Borough (NAB), Native Village of Kivalina, and the City of Kivalina, are proposing to improve community safety in Kivalina, Alaska by constructing an evacuation road between Kivalina Island and a site on Kisimigiqtuq Hill (K-Hill).

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina lagoon, approximately six-miles northeast at a community selected evacuation site on K-Hill. The Study Area encompasses the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the NAB School District, and approved by the community, as a preferred new location for the community school. If constructed, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. The Proposed Action would construct a safe, reliable, all-season evacuation road between the community of Kivalina and K-Hill. One lagoon crossing and two different route alternatives on the mainland are being considered, but common to all, are the following actions:

- **Establishment of a safe, reliable, all-season Kivalina Lagoon crossing.** All alternatives include construction of a causeway across the lagoon that variously

incorporate different configurations of hydrological openings including bridge(s), culvert(s), or both.

- **Construction of an all-season gravel access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.** The road would be designed to accommodate a wide variety of motorized vehicles over a two-way road with shoulders, multiple turnouts, and side slopes that may include guard rails and other safety features where determined to be necessary and prudent.
- **Development of up to four material sources** including the K-Hill Site, Wulik River Source 1, Relic Channel Source 1, and Relic Channel Source 2. These material sources are anticipated to be suitable local sources of select construction material to supply the project. Selection and development of viable material sources and haul routes are considered as part of the Proposed Action.

An overview of the proposed project components and overlapping critical habitat is provided in Figure 1. To identify any potential residual project effects and not jeopardize the continued existence of a federally listed species or destruction or adverse modification of designated critical habitat, we are consulting with the U.S. Fish and Wildlife Service to comply with requirements mandated in Section 7 of the *Endangered Species Act* (ESA). Given the location of the project, project activities, and review of the species information available, it is anticipated that no adverse effects on any ESA-listed species or designated critical habitat would occur.

The proposed Study Area overlaps with critical habitat for polar bear (*Ursus maritimus*; 75 FR 76086 76137) and with migratory ranges for Spectacled Eider (*Somateria fischeri*) and Steller's Eider (*Polysticta stelleri*); however, it does not overlap with designated critical habitat for either eider species (USFWS, 2002, 2010). A description of occurrence and potential project effects to polar bear, Spectacled Eider, and Steller's Eider is provided below.

Polar Bear

Occurrence of Polar Bear and its Critical Habitat

Polar bear distribution is circumpolar, varying with sea-ice extents and prey availability (Schliebe et al., 2006). Two polar bear populations occur in Alaska: the Beaufort Sea population and the Chukchi Sea population (Schliebe et al., 2006). The Chukchi Sea population typically moves into the southern Chukchi Sea with the pack ice in fall and winter and migrates north with the pack ice in spring and summer (Garner et al. 1990). Traditional knowledge indicates that polar bear tracks are found along the coast and on barrier islands in late fall and winter in the south-eastern Chukchi Sea, when bears first arrive in the region (Voorhees et al. 2014). Tagging and movement data have shown polar bears utilize the sea ice west of Kivalina in spring (Garner et al., 1990; Rode et al., 2014). Although polar bears in the Chukchi Sea are typically closely associated with sea ice, recent increases in terrestrial land use (primarily on Wrangle Island rather than the Alaskan mainland coast) have been detected (Rode et al., 2015). Habitat selection modeling predicts a lower probability for habitat selection by polar bears along the coast near Kivalina, compared to offshore regions in the Chukchi Sea in winter and spring (Wilson et al., 2016). Polar

bears have been observed near Kivalina in winter; during interviews on seals, walrus, and whales a community member mentioned possible polar bear dens in the hills behind Kivalina, although the specific locations were not provided (Huntington et al., 2016). Region-wide subsistence interviews and data collection highlight the existence of polar bear dens north of Kivalina near Cape Thompson (Satterthwaite-Phillips et al., 2016).

Polar bear feeding and barrier island critical habitats overlap with the Study Area, with barrier island critical habitat identified for Kivalina and feeding critical habitat in the Kivalina area (Figure 1; 75 FR 76086 76137).

Project Effects on Polar Bear and its Critical Habitat

Project effects are not anticipated to negatively impact polar bears or their barrier island or feeding critical habitat. Construction and operation of the lagoon crossing has overlap with barrier island and feeding critical habitat, but this is already within a disturbed area. Current disturbance in the region include community presence and associated traffic, hunting activities, and presence of low flying aircraft. Construction of the lagoon crossing and evacuation road would create noise that may disturb polar bears if present, although existing noise disturbances are currently present within the Study Area. Neither route alternative of the terrestrial component of the evacuation road overlaps with the critical habitat located on the coast in the Kivalina or Wulik River deltas. Relic Channel Source 2 overlaps with an up-river section of the feeding critical habitat. A polar bear interaction plan would be developed to avoid, minimize or mitigate disturbance to polar bear and their critical habitat (see Actions to Reduce or Remove Project Effects, below).

Spectacled Eider

Occurrence of Spectacled Eider and its Critical Habitat

Spectacled Eider occur throughout marine habitats in Alaska, and are typically found within coastal waters 1 to 28 miles from shore. Molting eiders are found in eastern Norton Sound and Ledyard Bay mid-July through December and wintering birds congregate in small groups near St. Lawrence Island. In western Alaska, core breeding habitat extends from Nelson Island to the Askinuk Mountains (Petersen et al., 2000). They are recorded infrequently in the Study Area during their migration to breeding habitats in northern latitudes (WHPacific, 2012). Coastal lagoons in Cape Krusenstern National Monument, 8 miles south of the Study Area, provide breeding habitat for Spectacled Eider (NPS, 2016).

The Spectacled Eider is listed under the ESA as Threatened. Population declines are primarily attributed to alteration or destruction of habitat, contaminant exposure, and predation (USFWS, 2010). Critical habitat for Spectacled Eider has been designated for molting sites in Norton Sound and Ledyard Bay, for breeding on the Yukon-Kuskokwim Delta, and for wintering south of St. Lawrence Island (USFWS, 2010). The closest tract of designated critical habitat represents critical habitat to the Study Area in Ledyard Bay, approximately 143 miles from the Study Area (USFWS,

2010). The Study Area does not overlap with any designated critical habitat for this species.

Project Effects on Spectacled Eider and its Critical Habitat

Spectacled Eider breed along peninsulas, pond shorelines, or wet meadows dominated by sedges (Petersen et al., 2000). Construction of the Proposed Action would result in some loss or alteration of shoreline or wetland habitats potentially suitable for Spectacled Eider breeding. Although some areas of aquatic and shoreline habitats would be removed or altered by construction of a lagoon crossing structure, aquatic habitats in the Study Area are ubiquitous. Remaining suitable aquatic and shoreline habitats are expected to be sufficiently abundant for aquatic bird species to not be disrupted in staging, foraging, or breeding activities.

The duration of noise associated with pile driving for the lagoon crossing structure is assumed to be 30 days (not continuous). As a result, in-air or underwater noise levels in the lagoon would increase for only a relatively short period of time, resulting in only temporary, localized displacement of aquatic birds. The project would implement several avoidance, minimization, or mitigation measures to limit potential residual adverse effects of the project (see Actions to Reduce or Remove Project Effects, below).

Steller's Eider

Occurrence of Steller's Eider and its Critical Habitat

The Steller's Eider is listed under the ESA as Threatened. Reasons for population declines are poorly understood but potential threats include oil or contaminant exposure, predation, and hunting pressures (USFWS, 2002). Critical habitat for Steller's Eider has been designated for breeding habitat on the Yukon-Kuskokwim Delta, and molting sites in Kuskokwim Bay, Izembek Lagoon, Nelson Lagoon, and Seal Islands (USFWS, 2002).

Steller's Eider breed primarily along the Arctic Coastal Plain, but also have a small population that nests on the Yukon-Kuskokwim Delta. Eiders molt throughout southwest Alaska mid-July through December, primarily along the north side of the Alaska Peninsula, Izembek Lagoon, Nelson Lagoon, Port Heiden, and Seal Islands (Frederickson, L.H., 2001; USFWS, 2002). Wintering birds congregate in shallow, sheltered waters along the south side of the Alaska Peninsula.

There are no records of Steller's Eider occurring within the Study Area. The National Park Service indicates that coastal lagoons in Cape Krusenstern National Monument, 8 miles south of the Study Area, provide breeding habitat for Steller's Eider (NPS, 2016). The closest tract of designated critical habitat represents critical molting habitat in Hooper Bay, approximately 429 miles from the Study Area (USFWS, 2002). The Study Area does not overlap with any designated critical habitat for this species.

Project Effects on Steller's Eider and its Critical Habitat

Steller's Eider breed in open tundra or within shrubby willow or birch stands in close proximity to coastal areas (Frederickson, L.H., 2001; USFWS, 2002). Construction of the project would result in some loss or alteration of tundra or shrub habitats adjacent to the Kivalina Lagoon or wetlands along the evacuation road, as described above for Spectacled Eider. Noise impacts, as also described above for Spectacled Eider, could also potentially impact Steller's Eider. The project would implement several avoidance, minimization, or mitigation measures to limit residual adverse effects of the project (see Actions to Reduce or Remove Project Effects, below).

Actions to Reduce or Remove Project Effects

Proposed mitigation measures to avoid, minimize, or mitigate potential residual adverse effects of the project on polar bear, Spectacled Eider and Steller's Eider are recommended based on state or federal regulations and policies, management practices and guidelines, and relevant peer-reviewed literature. Measures include:

- A pile driving plan would be developed during design that would establish a marine mammal exclusion zone, and implement a marine mammal construction monitoring program to reduce the potential for marine mammals to be exposed to harmful levels of underwater noise.
- Pile driving activity would be completed in as short a time period as possible, to reduce the amount of time the lagoon would be ensonified by the activity.
- A polar bear interaction plan would be developed as required by USFWS.
- Where possible, vegetation clearing, site preparation, and construction activities will adhere to the recommended periods to avoid vegetation clearing from June 1st-July 31st for Northern Alaska (USFWS, 2017b). If vegetation clearing, site preparation, and construction occurs within these periods, pre-construction nest surveys would be conducted by qualified personnel and appropriate mitigation developed in consultation with the USFWS.
- High-disturbance project-related activities (e.g., blasting, pile driving) would be avoided where practicable during the nesting and peak migration window.

We request your review of the project and concurrence that the proposed project is not likely to adversely affect any Federally listed species, proposed species, candidate species, nor their critical habitat.

Thank you for your attention to this request, if you have any questions regarding the proposed project, you may contact me at (907) 451-2238 or brett.nelson@alaska.gov.

Sincerely,



Brett Nelson
Northern Region Environmental Manager

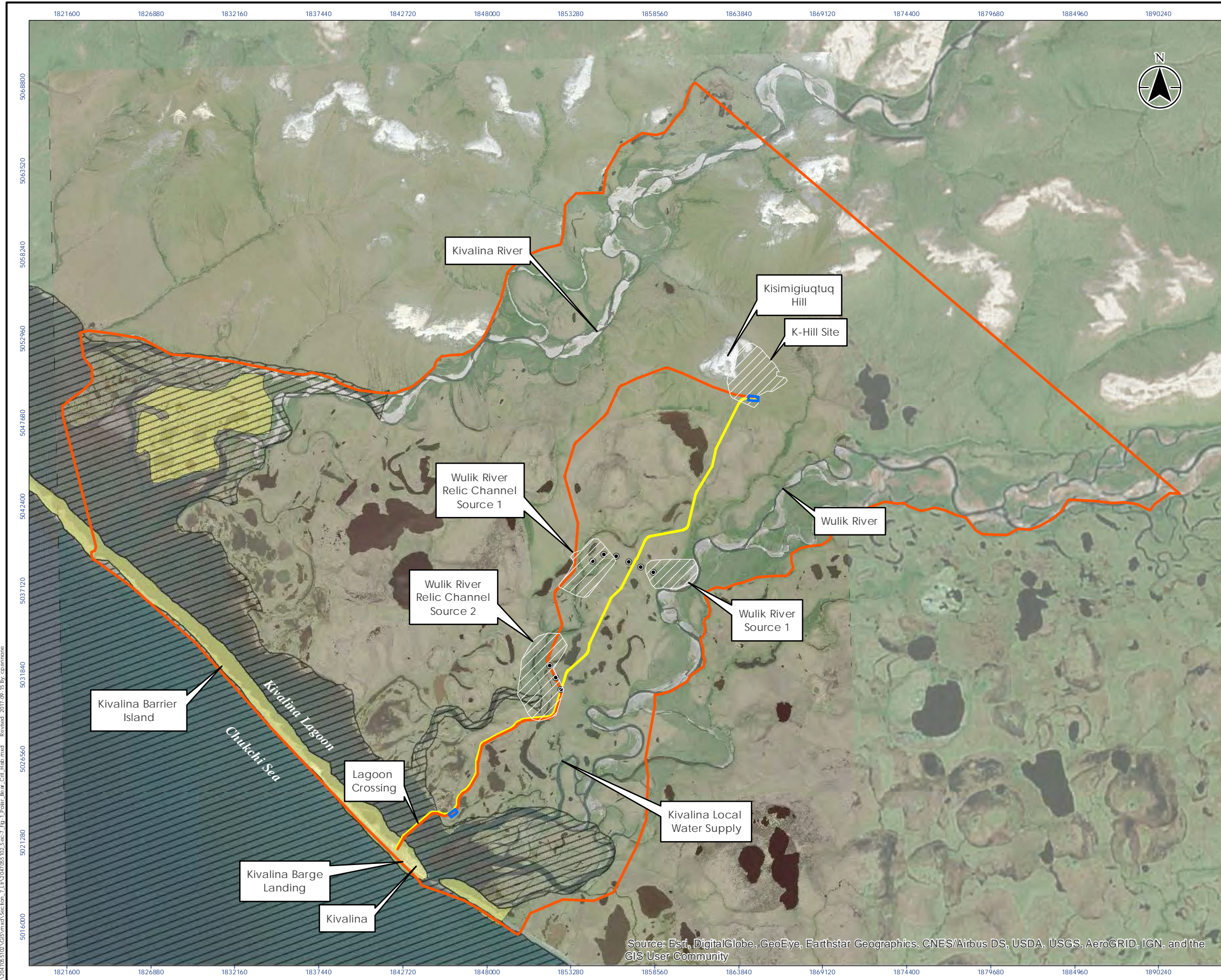
Enclosures: Figure 1 – Study Area and Polar Bear Critical Habitat

cc: Jonathan Hutchinson , P.E., Project Manager
Paul Karczmarczyk , Environmental Analyst

References

- Frederickson, L.H. 2001. Steller's Eider (*Polysticta stelleri*), The Birds of North America (P. G. Rodewald, Ed.). Available: <https://birdsna.org/Species-Account/bna/species/steeid>. Accessed: August 2017.
- Garner, G.W., S.T. Knick, and D.C. Douglas. 1990. Seasonal movements of adult female polar bears in the Bering and Chukchi Seas. *International Conference on Bear Research and Management* 8: 219-226.
- Huntington, H.P., M. Nelson, and L.T. Quakenbush. 2016. *Traditional knowledge regarding ringed seals, bearded seals, walrus, and bowhead whales near Kivalina, Alaska*. Final report to the Eskimo Walrus Commission, the Ice Seal Committee, and the Bureau of Ocean Energy Management for contract #M13PC00015. 8 pp.
- National Park Service (NPS). 2016. Cape Krusenstern – Birds. Available at: <https://www.nps.gov/cakr/learn/nature/birds.htm>. Accessed: December 2016.
- Petersen, M.R., J.B. Grand, and C.P. Dau. 2000. Spectacled Eider (*Somateria fischeri*), The Birds of North America (P. G. Rodewald, Ed.). Available at: <https://birdsna.org/Species-Account/bna/species/speeid>. Accessed: August 2017.
- Rode, K.D., E.V. Regehr, D.C. Douglas, G. Durner, A.E. Derocher, G.W. Thiemann, and S.M. Budge. 2014. Variation in the response of an Arctic top predator experiencing habitat loss: feeding and reproductive ecology of two polar bear populations. *Global Change Biology* 20: 76-88.
- Rode, K.D., R.R. Wilson, E.V. Regehr, M. St. Martin, D.C. Douglas, and J. Olson. 2015. Increased land use by Chukchi Sea polar bears in relation to changing sea ice conditions. *PLoS One* 10(11): e0142213. doi:10.1371/journal.pone.0142213.
- Satterthwaite-Phillips, D., C. Krenz, G. Gray, and L. Dodd. 2016. *Iñuuniaḷiqput ililugu nunanḡuanun (Documenting our way of life with maps): Northwest Arctic Borough subsistence mapping project*. Vol. 1. Kotzebue, AK: Northwest Arctic Borough.
- Schliebe S., T. Evans, K. Johnson, M. Roy, S. Miller, C. Hamilton, R. Meehan, and S. Jahrsdoerfer. 2006. *Range-wide status review of the polar bear (Ursus maritimus)*. U.S. Fish and Wildlife Service, Anchorage, Alaska.

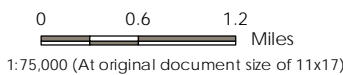
- U.S. Fish and Wildlife Service (USFWS). 2002. Steller's Eider Recovery Plan. Available at: https://ecos.fws.gov/docs/recovery_plan/020930b.pdf Accessed: August 2017.
- U.S. Fish and Wildlife Service (USFWS). 2010. 5-Year Review for Spectacled Eider (*Somateria fischeri*). Available at: https://ecos.fws.gov/docs/five_year_review/doc3281.pdf Accessed: August 2017.
- Voorhees, H., R. Sparks, H.P. Huntington, and K.D. Rode. 2014. Traditional knowledge about polar bears (*Ursus maritimus*) in Northwestern Alaska. *Arctic* 67(4): 523-536.
- WHPacific. 2012. Native Village of Kivalina - Evacuation Route Significant Biotic Resources Baseline Report and Preliminary Essential Fish Habitat Analysis. Consultant's report prepared for the Maniilaq Association on behalf of the Native Village of Kivalina. 28 pp plus appendices.
- Wilson, R.R., E.V. Regehr, K.D. Rode, and M. St Martin. 2016. Invariant polar bear habitat selection during a period of sea ice loss. *Proceedings of the Royal Society B* 283: 20160380. DOI: 10.1098/rspb.2016.0380.



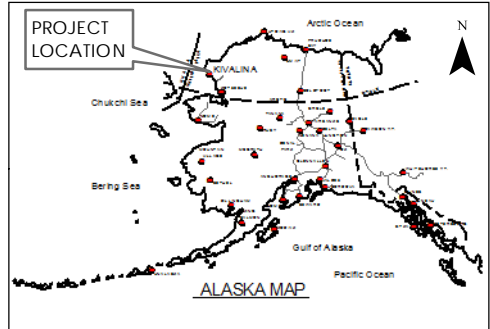
Legend

- Southern Route - 7.7 miles*
- Combined Route B - 8.9 miles*
- Material Source Spur Road
- Contractor Staging Areas
- Study Area
- ⋯ Potential Material Source Areas**
- Polar Bear Critical Habitat Barrier Islands V2
- ▨ Polar Bear Feeding Critical Habitat V2

* Proposed Routes are centered within ~1000 ft corridor.
 ** Material sources would be developed within identified areas. See EA Section 3.1 Table 1.



- #### Notes
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016
 - Polar Bear Final Critical Habitat, Federal Register (75 FR 76086 76137), December 7, 2010. Data has been shifted to align with aerial imagery using coastline and landmark signatures.



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
 ACCESS ROAD
Polar Bear Critical Habitat

DATE: September, 2017 FIGURE 1



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Transportation and Public Facilities

Northern Region
Design and Engineering Services

2301 Peger Road
Fairbanks, Alaska 99709-5316
Main: 907-451-2237
Toll free: 800-451-2363
Fax: 907-451-5126

September 18, 2017

Re: Kivalina Evacuation and School Site Access Road
Project Number: 0002384/NFHwy00162
Subject: Section 7 Consultation – MMPA

Dear Greg Balogh,

The Alaska Department of Transportation and Public Facilities (DOT&PF) and the Federal Highway Administration (FHWA), in partnership with the Northwest Arctic Borough (NAB), Native Village of Kivalina, and the City of Kivalina, are proposing to improve community safety in Kivalina, Alaska by constructing an evacuation road between Kivalina Island and a site on Kisimigiuqtuq Hill (K-Hill).

The proposed project origin is at the City of Kivalina, located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon (Figure 1). The project terminus is located on the mainland across the Kivalina lagoon approximately six-miles northeast at a community selected evacuation site on K-Hill. The Study Area encompasses the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages.

The Kivalina Evacuation and School Site Access Road project would provide Kivalina residents a safe and reliable evacuation route in the event of a catastrophic storm or ocean surge, allowing evacuees to temporarily mobilize to safe refuge at an assembly site on K-Hill. This site is also identified by the NAB School District, and approved by the community, as a preferred new location for the community school. If constructed, the school could augment the undeveloped evacuation site by serving as a full-service community emergency shelter with all-season support capabilities. The Proposed Action would construct a safe, reliable, all-season evacuation road between the community of Kivalina and K-Hill.

One lagoon crossing and two different route alternatives on the mainland are being considered, but common to all, are the following actions:

- **Establishment of a safe, reliable, all-season Kivalina Lagoon crossing.** All alternatives include construction of a causeway across the lagoon that variously incorporate different configurations of hydrological openings including bridge(s), culvert(s), or both.
- **Construction of an all-season gravel access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.** The road would be designed to accommodate a wide variety of motorized vehicles over a two-way road with shoulders, multiple turnouts, and side slopes that may include guard rails and other safety features where determined to be necessary and prudent.
- **Development of up to four material sources** including the K-Hill Site, Wulik River Source 1, Relic Channel Source 1, and Relic Channel Source 2. These material sources are anticipated to be suitable local sources of select construction material to supply the project. Selection and development of viable material sources and haul routes are considered as part of the Proposed Action.

To ensure that any potential residual project effects are identified and do not jeopardize the continued existence of a federally listed species or result in the destruction or adverse modification of designated critical habitat, we are consulting with the National Marine Fisheries Service to comply with requirements mandated in Section 7 of the *Endangered Species Act* (ESA).

The proposed Study Area overlaps with ranges for bearded seals (*Erignathus barbatus*), listed as Threatened under the ESA and Depleted under the MMPA, and ringed seals (*Phoca hispida*), currently not listed but previously listed as Threatened under the ESA with its listing being appealed in the U.S. District Court. Due to the currently unresolved status of a legal appeal of ringed seal ESA listing and critical habitat designation (79 FR 71714, Figure 1), ringed seals have been included. No critical habitat has been designated for bearded seal (77 FR 76740).

The Study Area overlaps with the proposed ringed seal listing and critical habitat designation (79 FR 71714) (Figure 1). No critical habitat has been designated for bearded seal (77 FR 76740). Given the location of the action and project activities, and upon review of the species information available, it is anticipated that no adverse effects on any ESA-listed species or designated critical habitat will occur. A description of occurrence and potential project effects to bearded seal and ringed seal is provided below.

Occurrence of Bearded Seal

Bearded seal range in Alaska waters includes the Beaufort, Chukchi and Bering Seas (Cameron et al., 2010). Aerial surveys in the eastern Chukchi Sea, conducted in May and June 1999 and 2000, estimated highest densities of bearded seals (0.401 – 0.7 seals/km²; unadjusted for survey timing and haulout behavior) south of Kivalina and west of Kivalina in the offshore area, and moderate densities in coastal waters by Kivalina (0.051 – 0.2 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Movement data shows bearded seals have a wide range in the Chukchi Sea including the coastal waters near Kivalina in fall and summer

(Boveng and Cameron, 2013; Wiese et al., 2017). Bearded seals are seen foraging in Kivalina Lagoon in the summer foraging (Huntington et al., 2016), have been sighted near the north entrance to the lagoon (Stantec, 2016), and at the south entrance to the lagoon (P. Hawley, personal communication, June 30, 2017). Juvenile bearded seals have also been observed foraging up the Wulik River channels in the fall (Huntington et al., 2016; Stantec, 2016).

Occurrence of Ringed Seal and its Proposed Critical Habitat

Ringed seal activity in the Chukchi Sea is strongly influenced by sea ice (Kelly et al., 2010). Movement data suggests that ringed seals use the Chukchi Sea, and marine coastal waters near Kivalina, year-round (ADF&G, 2015; Crawford et al., 2012; Von Duyke et al., 2017). Density estimates, based on aerial surveys conducted in May and June, are higher along the coast south of Kivalina (10.001-20 seals/km²; unadjusted for survey timing and haulout behavior) as compared to the coastal region immediately around Kivalina (2.001-5 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Ringed seals occur year-round in the Kivalina area (Huntington et al., 2016), use both entrances into the lagoon, and have also been observed foraging in the lagoon (Stantec, 2016).

Proposed critical habitat for ringed seal (79 FR 71714) overlaps with Kivalina Lagoon, the lagoon crossing, and Relic Channel Source 2 (Figure 1).

Project Effects on Bearded seal, Ringed Seal and Ringed Seal Proposed Critical Habitat

Potential project effects on bearded seals and ringed seals include risk of injury and disturbance from underwater noise during construction, and unanticipated changes to existing habitat parameters due to the presence of the lagoon crossing. Measures to avoid and minimize underwater noise during construction would reduce the potential for injury and minimize disturbance to bearded seals and ringed seals present in the lagoon. Scheduling construction during late fall and winter would minimize the effects on bearded seals as they are unlikely to be present in the lagoon at that time. Ringed seals, while present year-round, are likely found in lower numbers in late fall and winter due to fewer fish within the lagoon at that time.

The location and presence of the proposed lagoon crossing is not anticipated to negatively affect bearded seal or ringed seal habitat accessibility and foraging as its design will facilitate movement of seals and their prey through the crossing. Seal prey densities are not anticipated to be adversely affected. While the lagoon crossing lies within proposed ringed seal habitat, this proposed designation has not been finalized. The project would implement several avoidance, minimization, or mitigation measures to limit potential residual adverse effects of the project (see Actions to Reduce or Remove Project Effects, below).

Actions to Reduce or Avoid Project Effects

Proposed mitigation measures to avoid, minimize, or mitigate potential residual adverse effects of the project on bearded seals and ringed seals are recommended

based on state or federal regulations and policies, best management practices and guidelines, and relevant peer-reviewed literature.

Measures include:

- A pile driving plan would be developed during design that would establish a marine mammal exclusion zone and implement a marine mammal construction monitoring program to reduce the potential exposure of marine mammals to harmful levels of underwater noise. Components of the plan would include but are not be limited to:
 - Pile driving activity would be completed in as short a time period as possible to reduce the amount of time the lagoon will be ensonified by the activity.
 - Trained marine mammal observers would maintain watch for marine mammals during pile driving and water filling activities. Activities would cease if marine mammals are observed within a predetermined distance from the activity, and would recommence when the marine mammal has left the area or has not been observed for 30 min.
- Boat speed would be reduced when marine mammals are present in the lagoon to reduce extents of underwater noise.

We request your review of the project and concurrence that the proposed project is not likely to adversely affect any Federally listed species, proposed species, candidate species, nor designated or proposed critical habitat.

Thank you for your attention to this request, if you have any questions regarding the proposed project, you may contact me at (907) 451-2238 or brett.nelson@alaska.gov.

Sincerely,



Brett Nelson
Northern Region Environmental Manager

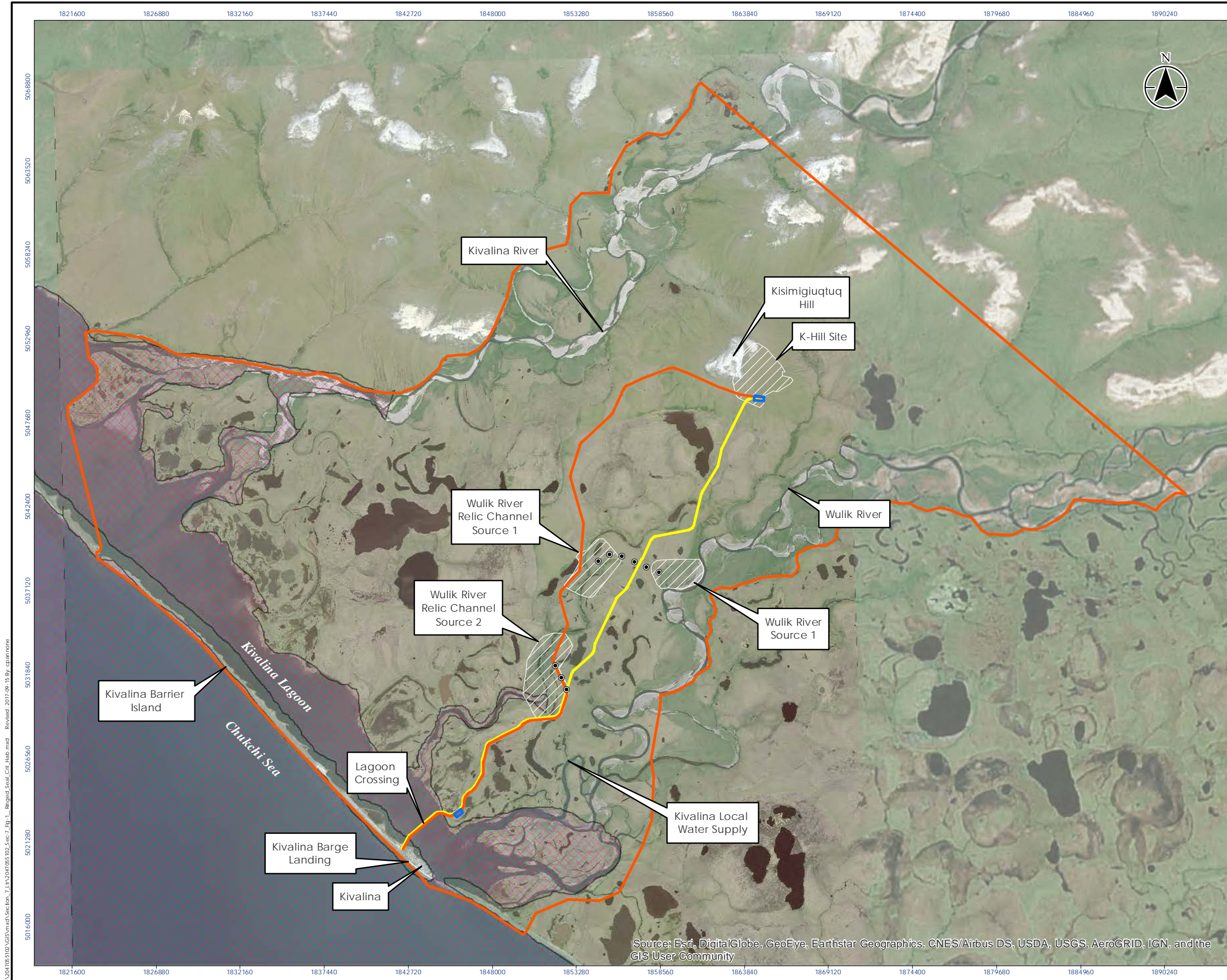
Enclosures: Figure 1 –Study Area and Proposed Ringed Seal Critical Habitat

cc: Jonathan Hutchinson, P.E., Project Manager
Paul Karczmarczyk, Environmental Analyst

References

- Alaska Department of Fish & Game (ADF&G). 2015. Movements of Ice Seals: Animated locations of ice seals tagged with satellite transmitters and seasonal changes in sea ice in the Bering, Chukchi and Beaufort seas for 2014. Available at: <https://vimeo.com/116608370>.
- Bengtson, J.L., L.M. Hiruki-Raring, M.A. Simpkins, and P.L. Boveng. 2005. Ringed and bearded seal densities in the eastern Chukchi Sea, 1999-2000. *Polar Biology* 28: 833-845.
- Boveng, P.L. and M.F. Cameron. 2013. Pinniped movements and foraging: seasonal movements, habitat selection, foraging and haul-out behavior of adult bearded seals in the Chukchi Sea. Final Report, BOEM Report 2013-01150. Bureau of Ocean Energy Management, Alaska Outer Continental Shelf Region, Anchorage, Alaska, USA. 91 Pp + Appendix.
- Cameron, M.F., J.L. Bengtson, P.L. Boveng, J.K. Jansen, B.P. Kelly, S.P. Dahle, E.A. Logerwell, J.E. Overland, C.L. Sabine, G.T. Waring, and J.M. Wilder. 2010. Status review of the bearded seal (*Erignathus barbatus*). U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-211, 246 p.
- Crawford, J.A., K.J. Frost, L.T. Quakenbush, and A. Whiting. 2012. Different habitat use strategies by subadult and adult ringed seals (*Phoca hispida*) in the Bering and Chukchi Sea. *Polar Biology* 35: 241-255.
- Huntington, H. P., M. Nelson, and L. T. Quakenbush. 2016. Traditional knowledge regarding ringed seals, bearded seals, walrus, and bowhead whales near Kivalina, Alaska. Final report to the Eskimo Walrus Commission, the Ice Seal Committee, and the Bureau of Ocean Energy Management for contract #M13PC00015. 8 pp
- Kelly, B.P., J.L. Bengtson, P.L. Boveng, M.F. Cameron, S.P. Dahle, J.K. Jansen, E.A. Logerwell, J.E. Overland, C.L. Sabine, G.T. Waring, and J.M. Wilder. 2010. Status review of the ringed seal (*Phoca hispida*). U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-212, 250 p.
- Stantec. 2016. Kivalina Evacuation and School Access Road Marine Mammal Observations Oct. 4-6, 2016. Stantec Consulting Inc. contract report submitted to Remote Solutions, October 25, 2016.
- Von Duyke, A.L., D.C. Douglas, J. Herreman, and A.W. Morris. 2017. Ringed seal (*Pusa hispida*) spatial use, dives, and haul-out behavior in the Beaufort, Chukchi, and Bering Seas (2011-2016). Presented at the Alaska Marine Science Symposium, Anchorage, Alaska, January 2017.

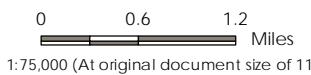
Wiese, F.K., R. Gryba, and B.P. Kelly. 2017. Marine Arctic Ecosystem Study - Pilot Program: Marine Mammals Tagging and Tracking. US Dept. of the Interior, Bureau of Ocean Energy Management, Alaska Region, Anchorage, AK. OCS Study BOEM 2017-017. 78 pp.



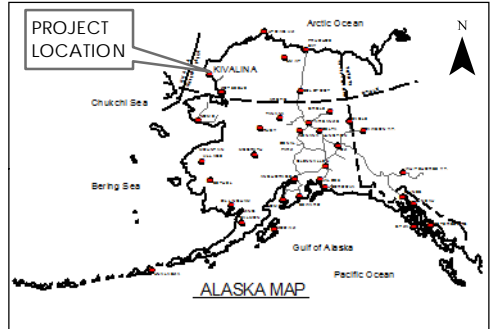
Legend

- Southern Route - 7.7 miles*
- Combined Route B - 8.9 miles*
- ● ● ● ● Material Source Spur Road
- Contractor Staging Areas
- Potential Material Source Areas**
- ▨ Ringed Seal Proposed Critical Habitat

* Proposed Routes are centered within ~1000 ft corridor.
 ** Material sources would be developed within identified areas. See EA Section 3.1 Table 1.



- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016
 - Ringed Seal Proposed Critical Habitat, Federal Register (79 FR 71714), December 3, 2014. Data has been shifted to align with aerial imagery using coastline and landmark signatures.



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE
 ACCESS ROAD
**Proposed Ringed Seal
 Critical Habitat**

DATE: September, 2017

FIGURE 1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05\102\GIS\mxd\Section_7\1\201705102_Sec7_Fig_1_Ringed_Seal_Crit_Hab.mxd Revised: 2017-09-15 By: cpantone



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Transportation and Public Facilities

NORTHERN REGION
Design and Engineering Services
Preliminary Design and Environmental

2301 Peger Road
Fairbanks, AK 99709-5316
Main: 907-451-2237
TDD: 907-451-2363
FAX: 907-451-5126

December 19, 2017

Jon Kurland
Assistant Regional Administrator for Protected Resources
NMFS, Alaska Region
PO Box 21668
Juneau, AK 99802

RE: Request for Initiation of Informal Consultation under Marine Mammal Protection Act (MMPA) and Section 7(a)(2) of the Endangered Species Act (ESA) for Kivalina Evacuation and School Site Access Road

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. 327, and is proposing to carry out the proposed project as described below. We request initiation of informal consultation under the Marine Mammal Protection Act (MMPA) and Section 7(a)(2) of the Endangered Species Act for the Kivalina Evacuation and School Site Access Road. We have determined that the proposed activity may affect, but is not likely to adversely affect beluga whale, bowhead whale, gray whale, bearded seal, ringed seal, and spotted seal. Our supporting assessment is provided below. We request your written concurrence if you agree with our determinations.

Project Description

This proposed project is intended to construct a safe, reliable, all-season evacuation road between the community of Kivalina and Kisimigiuqtuq (K-Hill). We expect work to commence in August 2019 and continue over a three-year period.

DOT&PF has selected the Southern Route (Figure 1, 2) as the preferred alternative for this project (discussed further in the Environmental Assessment), which includes the following actions:

- Establishment of a safe, reliable, all-season Kivalina Lagoon crossing, consisting of a causeway and a bridge.
- Construction of an all-season access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.

"Keep Alaska Moving through service and infrastructure."

- Development of up to four material sources including the K-Hill Site, Wulik River Source 1, Wulik River Relic Channel Source 1, and Wulik River Relic Channel Source 2.

The selected contractor is likely to conduct the following Project associated activities, which may results in residual effects on marine mammals:

- Use barges to bring construction material to the project location, and
- Construct in-water/over-water structures through:
 - Delong Mountain Transportation System (DMTS) Haul Route, and
 - Material being placed in water

Land based pile driving is also proposed for this Project. As this activity is not occurring in water, effects to marine mammal are not anticipated.

Barges:

The proposed activity may require contracting up to 10 barges per year for 4 years that will transport construction equipment and material to Kivalina or DMTS during the open water months (June-November). Barges will arrive in the Action Area (Figure 1, and Page 5 for 'Description of Action Area') when they reach within 3 miles of Kivalina or DMTS. There the barges will transition into project control, and may proceed directly, or wait offshore, until the project is ready for them to offload.

Barges will vary in dimensions, capacity, and draft. Examples may include Crowley 455 Series, Labroy Ballastable Barge, or smaller. The barges will use the existing community barge landing zone, or similar, adjacent to the town of Kivalina and/or the dock at the DMTS. If the barges use the dock at DMTS, goods and materials maybe moved to the construction area by a winter haul route (Figure 1 and 2). Barges will be pulled into position by up to two accompanying tug boats, which are of similar type to the current models used during the annual Kivalina resupply.

In addition to barges, during the open water months (June-November), small skiffs (or similar) present in Kivalina/owned by community members may be used to transport personnel and gear across the lagoon to the inland portions of the project. This activity may include up to 5 small boats (skiffs or similar), being used three times a day to transport goods and personnel across the lagoon. Total travel time across the lagoon would average 20 minutes per trip. This type of traffic is a current activity which the community engages in to access the surrounding region.

Vessel sound levels vary depending on the vessel and on operational speeds. For example, skiffs in Alaska have been measured to operate at sound levels between 160-170 dB_{rms} at 1 yard (Kipple and Gabriele 2003, no speed specified). Tugs with barges have been measured in Anchorage at sound levels between 145-160 dB_{rms} at 68-265 m (URS 2007, no speed specified).

In-water or Over-water Structures:

- DMTS Haul Route

The contractor may barge material and/or equipment to either the DMTS port site or the Kivalina barge landing. If material is deposited at the DMTS, it will need to be hauled along the beach or over sea ice from the DMTS port site to Kivalina. Specific details regarding those activities would be under the control of the selected contractor. In general, if a haul route is needed, it would be built along the traditionally used 17(b) easement between Kivalina and DMTS. No fill would be placed, but ice may be used to create an ice road, if necessary. Equipment along the route may include: up to 5 tracked excavators (or similar), 10 30-ton dump trucks (or similar), 5 bulldozers, 2 200-ton cranes (or similar), 4 180-HP Front End Loaders (or similar), 4 2-ton flatbed trucks (or similar), 6 ATVs, and/or similar equipment. Approximately 3 convoy roundtrips may take place each year.

- Material being placed in water

The Kivalina Lagoon crossing would require an approximately 3,020 ft solid, armored, earthen causeway. A single span bridge would cross the existing 110 ft lagoon channel located approximately 160 ft northeast from the barrier island (Figure 3). Large culvert(s), designed to accommodate passage of all life stages of fish, would be constructed at the northeast end of the causeway. A series of overflow pipes would be placed incrementally over the length of the solid portions of the causeway to provide additional conveyance during high water events.

The causeway and bridge will be installed using the following methods:

Fill activities to construct the causeway will likely occur in both the summer and winter. During the summer the lagoon is open water, generally being 1-3 feet deep except for deeper areas near the mouth of the Wulik River and the channel paralleling Kivalina Island (Figure 3). During the winter, the shallow areas of lagoon are primarily filled with grounded ice, with the mouth of the Wulik and the channel near Kivalina holding water. During high high-tides, water may lift the ice in the shallower portions of the lagoon for short periods.

Fill material would be obtained from permitted material sources proposed for this project, or from an imported commercial source outside the project area, such as Nome. Approximately 195,000 cy of gravel, rock, and rip rap will be required to construct the solid portion of the causeway. The substrate to be covered consists of fine grained sand and silt at the bottom of the lagoon.

The causeway embankment layer and rock protection may require up to 2 tracked excavators (or similar), 10 30-ton dump trucks (or similar), 2 bulldozers, 2 200-ton cranes (or similar), 4 180-HP Front End Loaders (or similar), 4 2-ton flatbed trucks (or similar), 6 ATVs, 2 40-horsepower work skiffs (or similar), and similar heavy construction equipment at any one time.

The base causeway embankment layer and rock protection may be constructed in the winter by removing the grounded ice in shallow depths of the lagoon; with no, or minimal water present.

Conventional winter excavation, using extended reach excavators, is the preferred method of removing the ice. Material will then be placed following project design to build the causeway.

Summer construction of the base causeway embankment layer and rock protection would involve extending the causeway from the mainland and/or barrier island side of the lagoon. Material could be placed by excavators and dump trucks off the pioneer earth portion of the causeway as it extends into the lagoon. Sediment containment would be constructed around the project to limit the off-site migration of silt and fine particles.

Winter travel on the ice within the lagoon will be used to transport equipment and material between Kivalina Island and the mainland during construction of the causeway.

Final embankment and rock protection will be added onto the solid portion of the causeway to meet engineered specifications for final grade and ensure structural integrity. This is likely to occur during the summer, with equipment operating from the causeway.

- Pile driving

A single span bridge is proposed to provide fishery, subsistence use, biological (fish, marine wildlife, aquatic organism), and hydrologic connectivity through the causeway. The bridge would be a pile supported structure with sloped, rock protected earthen abutments or vertical sheet pile walls, and be designed to span the lagoon channel width to minimize potential impact to natural channel dimensions and function.

No in-water pile driving is proposed for this project. The causeway embankment will be placed first. Then the piles and/or sheet pile walls would be driven through the causeway embankment. Finally, the rip rap would be placed on top to armor the entire structure. This will prevent in-water pile driving, and the associated potential impacts to marine mammals.

An impact hammer and/or vibratory hammer are expected to be used for driving pile through the constructed embankment. Pile driving would take place in either winter or summer, on both sides of the bridge opening, and consist of driving piles on each abutment. Eight 36" diameter piles would be driven on either side of the bridge opening (four on each side) using an APE Model 200 Vibratory Driver (with 170 ton drive force) or Delmag D36 (160,000 max ft lb rated) impact hammer, or similar, operating from the shoreline or constructed embankment.

The geotechnical investigation of substrate under the bridge has been found to largely be mixtures of silt and sand (Golder Associates 2015).

Pile driving would occur intermittently over 30-60 day period. Piles would be driven approximately 100-180 feet deep.

No equipment would be needed for in water work, as no in-water pile driving is proposed for the project. All construction will take place on the constructed embankment.

- Pile Driving Sound Pressure

No in-water pile driving is proposed for the project and thus no marine mammal exclusion zones are being suggested for this activity. The contractor may designate a safety area to ensure increased level of safety for marine mammals during operations.

Mitigation Measures

To minimize the risk of harm to listed marine species, the DOT&PF agrees to implement the following mitigation measures:

Barges

1. Project related commercial barge operators would be required to follow best practices and safety regulations of local commercial barge operators which regularly service the communities.
2. Safety permitting, barges, and tug boats will move at less than 10 knots when in the NMFS Action Area (Figure 1 and 2) to reduce noise and for safe vessel maneuverability to avoid obstacles and marine mammals in the water.
3. Small project related boats will move at less than 10 knots when in the Kivalina Lagoon (Figure 1 and 2) to reduce noise impacts and for safe vessel maneuverability to avoid of obstacles and marine mammals in the water.
4. Vessels will adjust speed and direction as needed, considering vessel safety and marine mammal avoidance. Efforts will be made to avoid transiting between whales traveling as a group, transiting in close proximity.

DMTS Haul Route

1. If a haul route is used from DMTS to Kivalina, the routing will be during the winter (freeze up to March 1), sited primarily on barrier islands and on land-fast ice. When the haul route is on land-fast ice vehicles will stay 150 m (500 ft) away from pressure ridges, ice ridges, and ice deformation areas where seal lairs are more likely to be present.
2. If the haul route is used after March 1, NMFS may require the use of trained dogs to determine that no seal lairs are present within 150 m (500 ft) of the haul route or, alternatively, another suitable approach will be taken in consultation with NMFS.

Material being placed in water

1. If material is being placed in summer during ice-free conditions, qualified observers will monitor for marine mammal presence within 50 m of construction activity to avoid physical harm/direct takes by construction equipment. If a marine mammal is identified approaching within 50 m of immediate fill area, work will stop until the marine mammal is farther than 50 m from activities or is not seen for 15 minutes.
2. No exclusion zone is proposed for winter fill placement.

Subsistence Activities

1. Construction of the project has the potential to affect subsistence activities, including fishing. To avoid and minimize impacts on subsistence activities, the project will coordinate with local subsistence users daily during in-water marine work and while hauling material over

the ice over an established VHF radio frequency at a designated morning check in time to implement appropriate mitigation measures to avoid, minimize, and mitigate project impacts to subsistence activities.

Description of the Action Area

The Action Area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The Action Area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The Action Area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

For this project, the Action Area (Figure 1, 2) surrounds the City of Kivalina (67.72°N, -164.54°W), located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon. The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on Kisimigiuqtuq Hill (K-Hill, 67.80°N, -164.39°W). The area encompasses the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages. For marine mammal consultation, the Action Area also includes the DMTS dock (67.58°N, -164.06°W), and a winter nearshore barrier island/on sea ice haul route between the DMTS dock and City of Kivalina. Barges will arrive in the Action Area when they arrive within 3 miles of Kivalina or DMTS where they transition to project control.

NMFS Listed Species and Critical Habitat in the Action Area
Table 1: NMFS Listed Species and Critical Habitat expected in the Action Area

Species	Stock	Seasonality	Duration of species presence	Primary expected activity in the Action Area	Habitat typically used by the species in the Action Area	ESA listing	Critical Habitat	MMPA listing
Beluga whale	Beaufort Sea	Spring ^a	Occasional	Migrating	Waters outside of Lagoon	not listed	-	not listed
	Eastern Chukchi Sea	Summer ^a	Occasional	Migrating	Waters outside of Lagoon	not listed	-	not listed
Bowhead whale	Western Arctic	Spring, Fall ^b	Occasional	Migrating	Waters outside of Lagoon	endangered	None Designated	depleted
	Eastern North Pacific	Summer ^c	Occasional	Migrating	Waters outside of Lagoon	not listed	-	not listed
Bearded seal	Alaska (Beringia Distinct Population Segment)	Spring-Fall ^b	Frequent	Foraging, resident	Kivalina Lagoon, Wulik River, waters outside of Lagoon	threatened	None Designated	depleted
Ringed seal	Alaska	Year Round ^d	Frequent	Foraging, resident, pupping	Kivalina Lagoon, Wulik River, waters/ice outside of Lagoon	not listed*	-	not listed
Spotted seal	Alaska	Spring-Fall ^a	Frequent	Foraging, residence	Kivalina Lagoon, Wulik River, waters outside of Lagoon	not listed	-	not listed

NOTE: Species occurrence and activities can change and other species not listed by be observed in the area.
 * ESA listing is currently being appealed in the U.S. District Court, National Oceanic and Atmospheric Administration (NOAA) Fisheries published a final rule listing the Arctic subspecies as threatened.

SOURCES: ^a Allen and Angliss (2014), ^b Wuto et al. (2016), ^c Carretta et al. (2015), ^d Huntington et al. (2016)

Species summaries of seals present within the Action Area

No systematic information on seal sighting locations in Kivalina Lagoon have been collected. The below summaries are based on sightings, literature review and interviews with community members.

Bearded Seals

Bearded seals are seen coming into Kivalina Lagoon in the summer following fish (Huntington et al., 2016, Stantec, 2016a) and have been sighted at the north (Kivalik) (Stantec, 2016a) and south (Singuak) entrance to the lagoon (P. Hawley, personal communication, June 30, 2017). Juvenile bearded seals have been observed foraging up river channels in the fall (Huntington et al., 2016; Stantec, 2016a).

Aerial surveys in the eastern Chukchi Sea, conducted in May and June, estimated highest densities of bearded seals (0.401 – 0.7 seals/km²; unadjusted for survey timing and haulout behavior) south of Kivalina and west of Kivalina in the offshore area, and moderate densities in coastal waters by Kivalina (0.051 – 0.2 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Movement data shows they have a wide range in the Chukchi Sea including the coastal waters near Kivalina in fall and summer (Boveng and Cameron, 2013; Wiese et al., 2017).

Ringed Seals

Ringed seal activity in the Chukchi Sea is strongly influenced by sea ice (Kelly et al., 2010). Movement data suggests that ringed seals use the Chukchi Sea, and coastal waters near Kivalina, year-round (ADF&G, 2015; Crawford et al., 2012; Von Duyke et al., 2017). Density estimates, based on aerial surveys conducted in May and June, are higher along the coast south of Kivalina (10.001-20 seals/km²; unadjusted for survey timing and haulout behavior) compared to the coastal region around Kivalina (2.001-5 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Ringed seals occur year-round in the Kivalina area (Huntington et al., 2016).

Recent field observations (Stantec, 2016b) confirmed seal presence within Kivalina Lagoon near the Kivalik and Singuak Inlets. Personal interviews conducted with local subsistence hunters concurrent to the Stantec survey effort also yielded generalizations that seals occasionally access shallower portions of the lagoon. However, follow up interviews with those and other local subsistence hunters in 2017 clarified that the majority of seal foraging in the lagoon occurs directly south and east of Singuak Inlet proximate to deeper water near and within the Wulik River outlet, and in like fashion within deeper waters between the mouth of the Kivalina River and its outlet to the Chukchi Sea at Kivalik Inlet. Comparatively, seal use of the shallow Lagoon Channel lying parallel to Kivalina Island is substantially less common, and generally limited to infrequent occasions of combined high water and thin ice in the lagoon (personal communications O. Hawley, September 15, 2017; R. Sage, September 15, 2017 and October 5, 2016; D. Foster October 5, 2016; P. Hawley September 15, 2017).

Spotted Seals

Spotted seals are seasonally present in the lagoon, arriving after the ice melts (Huntington et al., 2016), and using both the north and south entrances (Stantec, 2016a; P. Hawley, personal communication, June 30, 2017).

Effects Determination

- Construction-related vessels and barges:

Beluga whale, bowhead whale, gray whale, bearded seal, ringed seal, and spotted seal may be exposed to project vessel noise.

Construction-related vessels in the lagoon would create underwater noise, which may result in the disturbance or communication masking of seals. The effects of boat noise on ringed, spotted, and bearded seal behavior are not well known. Studies on other seal species have shown displacement due to the presence of high levels of vessel traffic in the case of grey seals (Anderwald et al. 2013). Harbor seals are more likely to be disturbed and enter water from a haulout if vessels are within 150 m than when vessels are farther away (Mathews et al. 2016). Currently, all boat traffic in the lagoon is related to community activities. Reductions in boat speeds have been shown to reduce the extent of underwater noise (e.g., Houghton et al. 2015).

Recreational boats currently use the lagoon and are active when seals are present. The possibility of vessel strikes of seals in the Kivalina Lagoon is minimal per the data analyzed in Alaska waters which documented no ship strikes of spotted, bearded, or ringed seals over a five-year period (Helker et al. 2016, 2017).

Barge traffic would create underwater noise that may result in disturbance or communication masking for beluga whale, bowhead whale, gray whale, bearded seal, ringed seal, and spotted seal. Impacts to seals from boat noise within the lagoon are discussed above, and are expected to be similar for barge traffic. It is expected that vessel noise from barges are the only project related activity that may result in potential impacts to whales, due to the rest of the work being located inside of Kivalina Lagoon. Individual whale's past experiences with vessels appear to be important for individual whale response (Shell 2012). Vessels moving at slow speeds and avoiding rapid changes in direction may be tolerated by some species. Other individuals may deflect around vessels and continue on their migratory path.

The effects of underwater noise as a result of project vessels and barges on whales and seals are not anticipated to result in harm, although disturbance and communication masking may occur.

The increase in vessel traffic as a result of the proposed project will cause a small, localized, temporary increase in vessel traffic. As a result, this would generally increase the risk of interactions between marine mammals and vessels in the Action Area, in addition to baseline conditions. With proposed mitigations (i.e., limit of maximum vessel speeds in the Action Area), the likelihood of a lethal vessel strike is anticipated to be low. When this project is completed, it will not result in an increased number of vessels in the Action Area, and thus, there is no increased risk of vessel strike in the future as a result of the project.

- In-water or over-water structures

Bearded seal, ringed seal, and spotted seal may be exposed to impacts due to in-water or over-water activities. Adults or juveniles are likely to be exposed during foraging trips near the Wulik River.

- DMTS Haul Route

If constructed, the bridge, haul route between DMTS to Kivalina, and crossing the Kivalina Lagoon may expose seals of all life stages to vehicular noise. Spotted seals and ringed seals have acute in-air hearing (Sills et al. 2014; Sills et al. 2015). In-air hearing of bearded seals has not been studied, but due to the wide frequency range of their vocalizations (Risch et al. 2007), similar in-air hearing capabilities to spotted and ringed seals may be assumed. Vehicular noise would be audible to species present and may result in changes in behavior, although behavioral responses can vary widely depending on context and novelty of the noise source (Ellison et al. 2012; Richardson et al. 1995; Southall et al. 2007). Densities of basking ringed seals present in spring during active use of a proximate ice road did not vary between years (Moulton et al. 2005). Harwood et al. (2007) also report no avoidance of an ice road by ringed seals in the south-eastern Beaufort Sea, suggesting they were not displaced by in-air noise from the vehicular traffic. A contrasting study concluded that in-air noise from snow machines, when within 2.8 km, resulted in most ringed seals leaving their lairs (Kelly et al. 1988). Given the current presence of boat traffic within the lagoon in the open water season and the presence of snow machines during the winter, seals in the Action Area would have been previously exposed to noise. Seals would be expected to habituate to this new noise regime (Moulton et al. 2005), and no long-term changes of seal presence and behavior due to vehicle noise is expected.

The haul route may expose seal lairs to the threat of being disturbed by vehicular traffic. Seal lairs may occur in land-fast and floating ice. They can also be difficult to identify as they may be located on ice ridges, or in flat featureless areas. Ringed seals can maintain breathing holes and lairs in almost any thickness of ice (Smith and Stirling 1975), while bearded seals prefer pack ice (Bengston et al. 2000), and both are found in habitat south of Kivalina (Bengston et al. 2000). Spotted seals prefer habitat close to the pack ice front. Offshore and nearshore haul routes have the potential to encounter seals, ringed seal lairs, and breathing holes. This is expected to be minimized by maintaining the haul route on barrier islands and as close to shore as possible. If the route must transit sea ice, implementation of the haul route mitigation measures is expected to minimize impacts to seal lairs, and result in no significant harm.

- Material being placed in water

Bearded seal, ringed seal, and spotted seal may be exposed to the effect of material being placed on the shoreline or bottom of the lagoon. Adults or juveniles are likely to be exposed during foraging trips near the Wulik River.

The presence of the lagoon-crossing structure may result in an ecological and physical alteration of marine mammal habitat in the lagoon as it may change distribution of prey species, and movement of seals. It is not known if seals would swim through culverts, but the presence of a

bridge with water flowing freely beneath it would likely not impede passage of marine mammals (e.g., Sheldon et al. 2013). Marine mammal use of habitat on either side of in-water structures, and their swimming beneath such structures, has been observed for other projects (e.g., Twentymile River Bridge, Cook Inlet, Alaska; HDR Alaska Inc. 2010). The proposed design of the lagoon crossing is not anticipated to negatively affect bearded, spotted, or ringed seal habitat use and foraging as it would accommodate the passage of seals and their prey. Prey densities are not anticipated to be adversely affected.

Ringed and spotted seals are visual hunters and increases in turbidity from fill or culvert placement may temporarily modify visibility within preferred feeding habitats. However, pinnipeds (including ringed seals and bearded seals) have highly developed sensory organs (i.e., vibrissae) which likely assist with foraging in dark or turbid conditions (e.g., Hyvärinen 1989; Marshall et al. 2006). As such, any changes in behavior caused by increased turbidity in the lagoon are unlikely to translate into harmful effects on seals. Further, if this activity occurs in winter, effects would be limited to ringed seals as the only species likely to be present. The location and presence of the proposed lagoon crossing is not anticipated to negatively affect bearded seal or ringed seal habitat accessibility and foraging as its design would facilitate movement of seals and their prey through the crossing. Seal prey densities are not anticipated to be adversely affected. While the lagoon crossing lies within proposed ringed seal habitat, this proposed designation has not been finalized.

Placement of fill in water would also create underwater noise, but is anticipated to be at levels below that of boat noise. The anticipated specific levels of these noises are not known for this project, but it is unlikely that their levels would result in injury to seals within the lagoon. Levels of underwater noise may result in disturbance of marine mammals, although ringed seals were not displaced by slope preparations and deposition of gravel during construction of an artificial island in the Beaufort Sea (Blackwell et al. 2004). Ice associated species are naturally exposed to underwater noise from ice movement and cracking, with varying intensities, depending on conditions and scenario (Richardson et al. 1995). For example, an active pressure ridge produced source levels of 124–137 dB re 1 μ Pa m in the 4 and 8 Hz tones (Buck and Greene 1979).

Given the causeway's design, and incorporation of design elements to ensure passage between the North and South side of Kivalina Lagoon, there will be no harm to marine mammal habitat.

- Pile driving

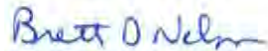
No impacts to marine mammals from pile driving are expected since no in-water pile driving is proposed.

Conclusions

Based on the above, it is expected that potential effects of the proposed action will be insignificant and/or discountable once mitigation measures are in place. As a result, we have determined that Kivalina Evacuation and School Site Access Road is not likely to adversely affect any listed species or critical habitat under NMFS's jurisdiction. We have used the best

scientific and commercial data available to complete this assessment. We request your concurrence with this determination.

Sincerely,



Brett Nelson
Northern Region Environmental Manager

cc: Paul Karczmarczyk, DOT&PF
Jonathan Hutchinson, P.E., DOT&PF
Bonnie Easley-Appleyard, NMFS
Greg Balogh, NMFS

Literature Cited

- ADF&G. 2015. *Movements of ice seals: Animated locations of ice seals tagged with satellite transmitters and seasonal changes in sea ice in the Bering, Chukchi and Beaufort Seas for 2014*. <https://vimeo.com/116608370>. Accessed on August 19, 2107.
- Allen, B.M., and R.P. Angliss. 2014. *Alaska marine mammal stock assessments, 2014*. U.S. Dep. Commer., NOAA Tech. Memo. NMFSAFSC-301, 304 p. doi:10.7289/V5NS0RTS.
- Anderwald, P., A. Brandecker, M. Coleman, C. Collins, H. Denniston, M. Damien Haberlin, M. O'Donovan, R. Pinfield, F. Visser, and L. Walshe. 2013. Displacement response of a mysticete, an odontocete, and a phocid seal to construction related vessel traffic. *Endangered Species Research*, 21: 231-240.
- Bengston, J. L., Boveng, P. L., Hiruki-Raring, L. M., Laidre, K. L., C., P., & Simpkins, M. A. 2000. *Abundance and distribution of ringed seals (Phoca hispida) in the coastal Chukchi Sea*. (AFSC Processed Rep. 2000-11). 7600 Sand Point Way NE, Seattle, WA 98115: Alaska Fisheries Science Center. pp. 149-160.
- Bengtson, J.L., L.M. Hiruki-Raring, M.A. Simpkins, and P.L. Boveng. 2005. *Ringed and bearded seal densities in the eastern Chukchi Sea, 1999-2000*. *Polar Biology* 28: 833-845.
- Blackwell, S.B., J.W. Lawson, and M.T. Williams. 2004. *Tolerance by ringed seals (Phoca hispida) to impact pipe-driving sounds at an oil production island*. *Journal of the Acoustical Society of America*, 115(5): 2346-2357.
- Boveng, P.L. and M.F. Cameron. 2013. *Pinniped movements and foraging: seasonal movements, habitat selection, foraging and haul-out behavior of adult bearded seals in the Chukchi Sea*. Final Report, BOEM Report 2013-01150. Bureau of Ocean Energy Management, Alaska Outer Continental Shelf Region, Anchorage, Alaska, USA. 91 Pp + Appendix.
- Buck, B.M. and C.R. Greene. 1979. *Source level measurements of an arctic sea ice pressure ridge*. *The Journal of the Acoustical Society of America*, 66(S1): S25-S26.
- Carretta, J.V., E.M. Oleson, D.W. Weller, A.R. Lang, K.A. Forney, J. Baker, M.M. Muto, B. Hanson, A.J. Orr, H. Huber, M.S. Lowry, J. Barlow, J.E. Moore, D. Lynch, L. Carswell, and R.L. Brownell Jr. 2015. *U.S. Pacific marine mammal stock assessments: 2014*. U.S. Department of Commerce, NOAA Technical Memo. NOAA-TM-NMFS-SWFSC-549, 414 pp.
- Crawford, J.A., K.J. Frost, L.T. Quakenbush, and A. Whiting. 2012. *Different habitat use strategies by subadult and adult ringed seals (Phoca hispida) in the Bering and Chukchi Sea*. *Polar Biology* 35: 241-255.
- Ellison, W.T., B.L. Southall, C.W. Clark and A.S. Frankel. 2012. *A new context-based approach to assess marine mammal behavioural responses to anthropogenic sounds*. *Conservation Biology* 26: 21-28.
- Golder Associates. 2015. *Kivalina Causeway Geotechnical Report, Kivalina, Alaska*. Submitted To: US Army Corps of Engineers, Alaska District

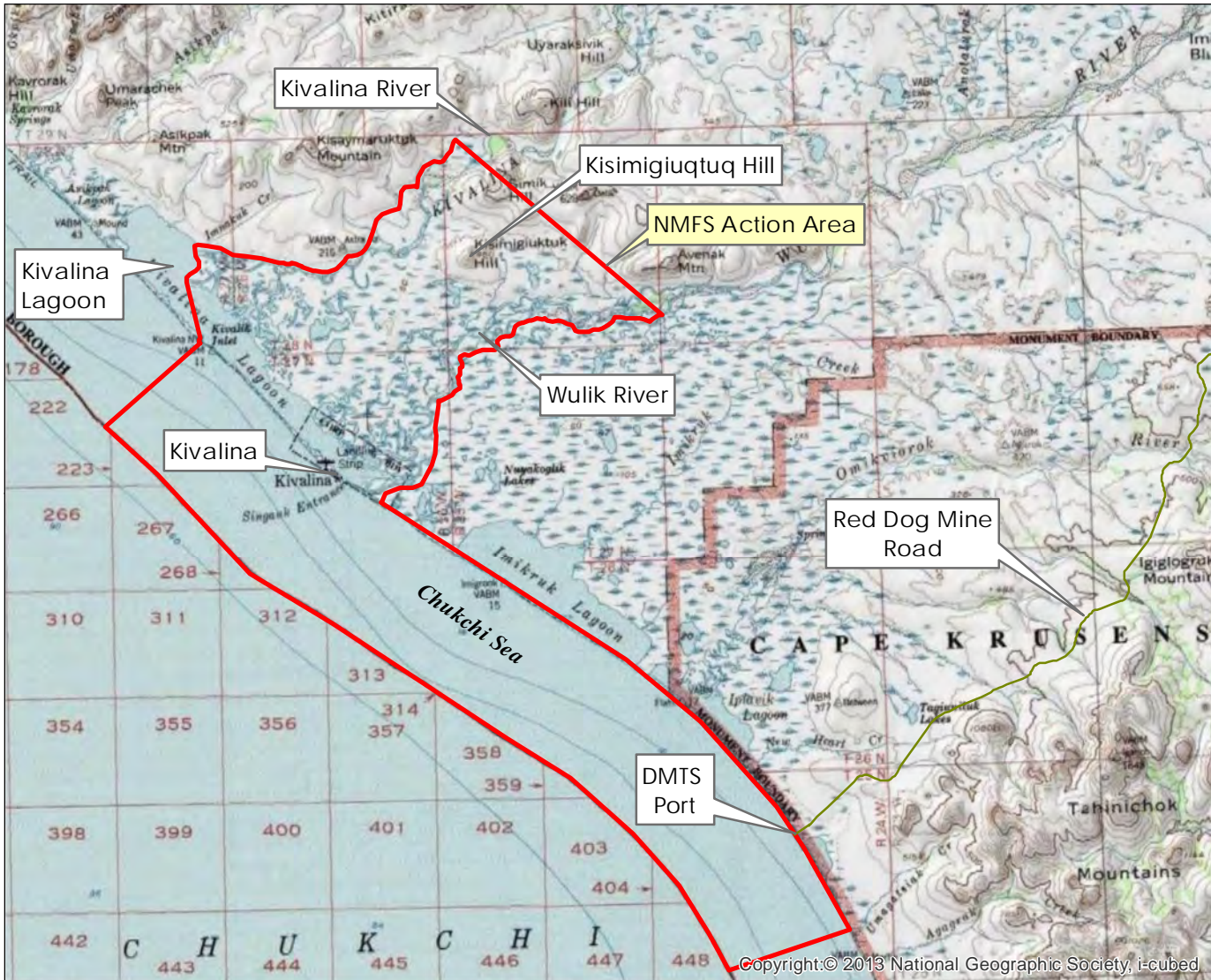
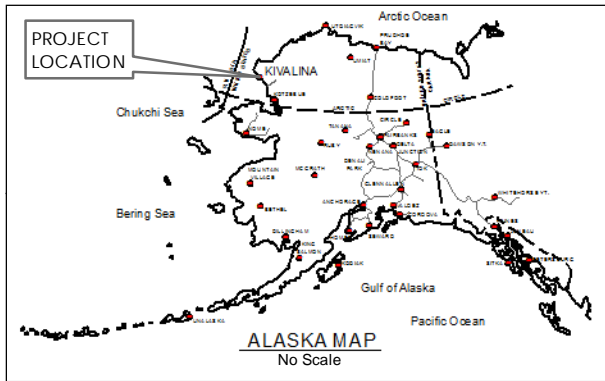
- Harwood, L., T.G. Smith and H. Melling. 2007. *Assessing the potential effects of near shore hydrocarbon exploration on Ringed Seals in the Beaufort Sea Region 2003-2006*. Environmental Studies Research Funds Report No. 162. 103 pp.
- HDR Alaska, Inc. 2010. *Request for letter of authorization under Section 101(a)(5) of the Marine Mammal Protection Act incidental to construction of the Knik, Arm crossing project in Upper Cook Inlet, Alaska*. Submitted to Office of Projected Resources, National Marine Fisheries Service (NMFS).
- Helker, V.T., M.M. Muto, and L.A. Jemison. 2016. *Human-caused injury and mortality of NMFS-managed Alaska marine mammal stocks, 2010-2014*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-315, 89 p. doi:10.7289/V5/TM-AFSC-315.
- Houghton, J., M.M. Holt, D.A. Giles, M.B. Hanson, C.K. Emmons, J.T. Horgan, T.A. Branch and G.R. Van Blaricom. 2015. *The relationship between vessel traffic and noise levels received by killer whales (Orcinus orca)*. PLoS ONE 10(12): e0140119. doi:10.1371/journal.pone.0140119.
- Huntington, H.P., M. Nelson and L.T. Quakenbush. 2016. *Traditional knowledge regarding ringed seals, bearded seals, walrus, and bowhead whales near Kivalina, Alaska*. Final report to the Eskimo Walrus Commission, the Ice Seal Committee, and the Bureau of Ocean Energy Management for contract #M13PC00015. 8 pp.
- Hyvärinen, H. 1989. *Diving in darkness: whiskers as sense organs of the ringed seal (Phoca hispida saimensis)*. Journal of Zoology 218.4: 663-678.
- Kelly, B.P., J.L. Bengtson, P.L. Boveng, M.F. Cameron, S.P. Dahle, J.K. Jansen, E.A. Logerwell, J.E. Overland, C.L. Sabine, G.T. Waring, and J.M. Wilder. 2010. *Status review of the ringed seal (Phoca hispida)*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-212, 250 pp.
- Kelly, B.P., J.J. Burns and L.T. Quakenbush. 1988. *Responses of ringed seals (Phoca hispida) to noise disturbance*. Port and ocean engineering under arctic conditions, 2: 27-38.
- Kipple, B, and C. Gabriele. 2003. *Glacier Bay Watercraft Noise*. Prepared for Glacier Bay National Park and Preserve <https://www.nps.gov/glba/learn/nature/upload/GBWatercraftNoiseRpt.pdf>
- Marshall, C.D., H. Amin, K.M. Kovacs and C. Lydersen. 2006. *Microstructure and innervation of the mystacial vibrissal follicle sinus complex in bearded seals, Erignathus barbatus (Pinnipedia: Phocidae)*. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology. 288(1): 13–25.
- Mathews, E.A., L.A. Jemison, G.W. Pendleton, K.M. Blejwas, K.E. Hood and K.L. Raum-Suryan. 2016. *Haul-out patterns and effects of vessel disturbance on harbor seals (Phoca vitulina) on glacial ice in Tracy Arm, Alaska*. Fishery Bulletin, 114: 186-202.
- Moulton, V.D., W.J. Richardson, R.E. Elliott, T.L. McDonald, C. Nations, M.T. Williams. 2005. *Effects of an offshore oil development on local abundance and distribution of ringed seals (Phoca hispida) of the Alaskan Beaufort Sea*. Marine Mammal Science 21: 217-242.

- Muto, M.M., V.T. Helker, R.P. Angliss, B.A. Allen, P.L. Boveng, J.M. Breiwick, M.F. Cameron, P.J. Clapham, S.P. Dahle, M.E. Dahlheim, B.S. Fadely, M.C. Ferguson, L.W. Fritz, R.C. Hobbs, Y.V. Ivashchenko, A.S. Kennedy, J.M. London, S.A. Mizroch, R.R. Ream, E.L. Richmond, K.E.W. Shelden, R.G. Towell, P.R. Wade, J.M. Waite, and A.N. Zerbini. 2016. *Alaska marine mammal stock assessments, 2015*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-323, 300 p. doi:10.7289/V5/TM-AFSC-323.
- Richardson, J., C.R. Greene Jr, C. Malme and D. Thomson. 1995. *Marine mammals and noise*. Academic Press. San Diego, California.
- Risch, D., C.W. Clark. P.J. Corkeron, A. Elepfandt, K.M. Kovacs, C. Lydersen, I. Stirling, and S.M. Van Parijs. 2007. *Vocalizations of male bearded seals, Erignathus barbatus: classification and geographical variation*. *Animal Behaviour* 73: 747–762.
- Shelden, K.E.W., D.J. Rugh, K.T. Goetz, C.L. Sims, L. Vate Brattström, J.A. Mocklin, B.A. Mahoney, B.K. Smith, and R.C. Hobbs. 2013. *Aerial surveys of beluga whales, Delphinapterus leucas, in Cook Inlet, Alaska, June 2005 to 2012*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-263, 122 pp.
- Shell. 2012. Environmental Impact Analysis. Appendix F of 2012 Shell Chukchi Exploration Plan. Bureau of Ocean Energy Management.
https://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Plans/Regional_Plans/Alaska_Exploration_Plans/2012_Shell_Chukchi_EP/AppendixF-EIA.pdf
- Sills, J.M., B.L. Southall and C. Reichmuth. 2014. *Amphibious hearing in spotted seals (Phoca largha)*. *Journal of Experimental Biology* 217: 726-734.
- Sills, J.M., B.L. Southall and C. Reichmuth. 2015. *Amphibious hearing in ringed seals (Pusa hispida): underwater audiograms, aerial audiograms and critical ratio measurements*. *Journal of Experimental Biology* 218: 2250-2259.
- Sills, J.M., B.L. Southall and C. Reichmuth. 2016. *Psychoacoustic studies of spotted (Phoca largha) and ringed (Pusa hispida) seals*. *The Effects of Noise on Aquatic Life II*. Springer New York, 2016. 1025-1030.
- Smith, T. G., & Stirling, I. 1975. *The Breeding Habitat of the Ringed Seal (Phoca hispida)*. The Birth Lair and Associated Structures. *Canadian Journal of Zoology*, 53, 1297-1305.
- Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas and P.L. Tyack. 2007. *Special Issue: Marine mammal noise exposure criteria*. *Aquatic Mammals* 33.
- Stantec (Stantec Consulting Ltd.). 2016a. *Kivalina evacuation and school access road marine mammal observations* Oct. 4-6, 2016. Stantec Consulting Inc. contract report submitted to Remote Solutions, October 25, 2016.
- Stantec. 2016b. *Kivalina evacuation and school access road*. September 2016 Stantec site reconnaissance. Unpublished Data.

- URS. 2007. *Final Underwater Noise Report*. Port of Anchorage Marine Terminal Development Project Underwater Noise Survey Test Pile Driving Program Anchorage, Alaska. Prepared for United States Department of Transportation. <https://alaskafisheries.noaa.gov/sites/default/files/2007underwaternoise.pdf>
- Von Duyke, A.L., D.C. Douglas, J. Herreman, and A.W. Morris. 2017. *Ringed seal (Pusa hispida) spatial use, dives, and haul-out behavior in the Beaufort, Chukchi, and Bering Seas (2011-2016)*. Presented at the Alaska Marine Science Symposium, Anchorage, Alaska, January 2017.
- Wiese, F.K., R. Gryba, and B.P. Kelly. 2017. *Marine arctic ecosystem study - pilot program: Marine mammals tagging and tracking*. US Dept. of the Interior, Bureau of Ocean Energy Management, Alaska Region, Anchorage, AK. OCS Study BOEM 2017-017. 78 pp. <https://www.boem.gov/BOEM-2017-017/>

Figures

US:201705102\GIS\mxd\NMF5_informal\Consultation\040705102_NMF5_Fig_1_Loc_Vic_Map.mxd Reviewed: 2017-12-14 By: cpannone



Graphics developed by Stantec Consulting Services, Inc.



Project Origin: City of Kivalina,
 Kotzebue Recording District,
 Section 21, Township 27N, Range 26W,
 Kateel River Meridian

Project Terminus: Kisimigiuqtuq Hill,
 Section 19, Township 28N, Range 25W
 Kateel River Meridian

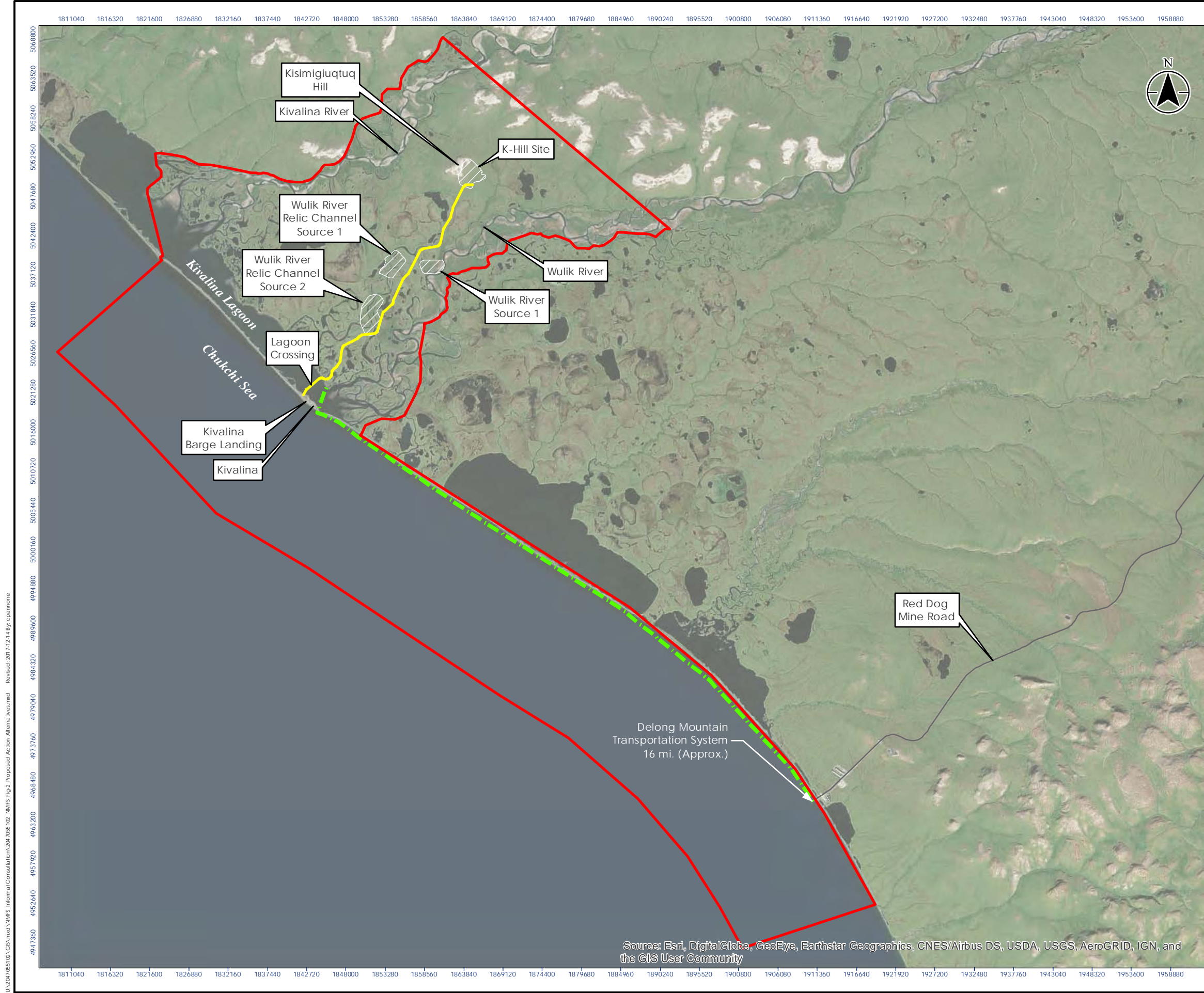
STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
 Request for Initiation of Informal Consultation
 National Marine Fisheries Service
Location and Vicinity Map



DATE: December, 2017

FIGURE 1

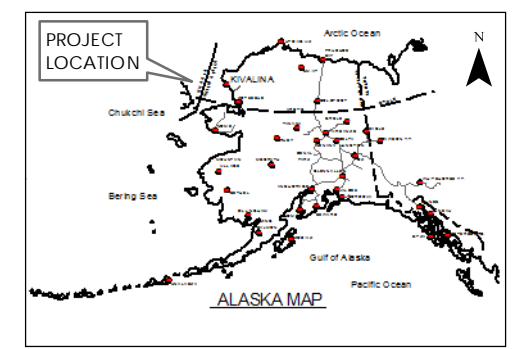


Legend

- Southern Route - 7.7 miles
- - - Winter Access via DMTS Port
- Potential Material Source Areas
- + NMFS Action Area

0 1 2 Miles
1:160,000 (At original document size of 11x17)

- Notes
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

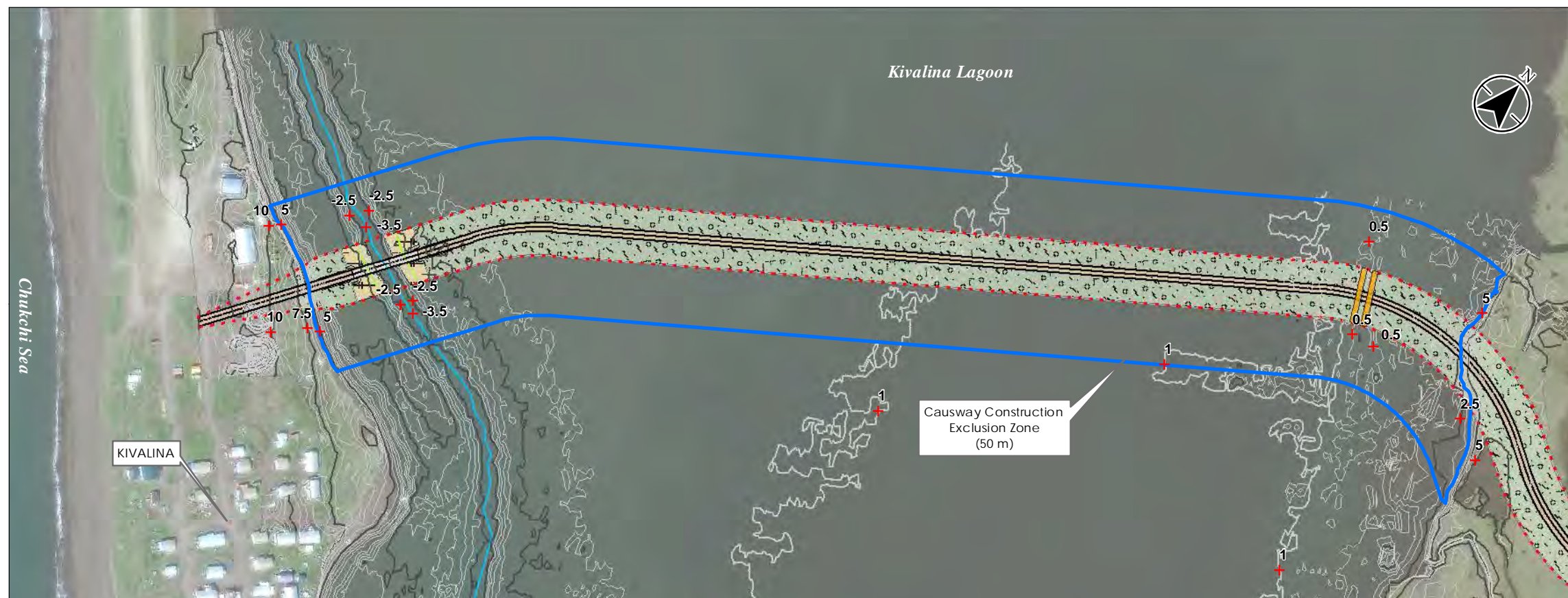
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
Request for Initiation of Informal Consultation
National Marine Fisheries Service

Proposed Action

DATE: December, 2017	FIGURE 2
----------------------	----------

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

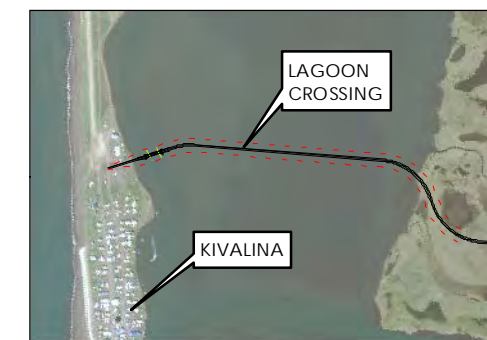
U:\2017\05103_GIS\mxd\NMFS_InitialConsideration\201705103_NMFS_Fig_2_Proposed Action Alternatives.mxd Revised: 2017-12-14 By: cpanone



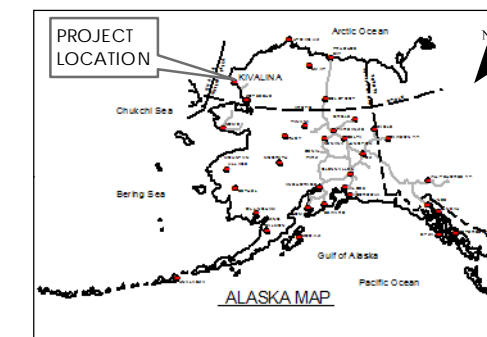
LAGOON CROSSING OVERVIEW

Legend

- Bridge
- Bridge Abutment Rip Rap
- Causway Armor
- Causway Culvert(s)
- Proposed Road
- Causway Construction Exclusion Zone (50 m)
- Elevation (ft)



- Notes
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthomagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



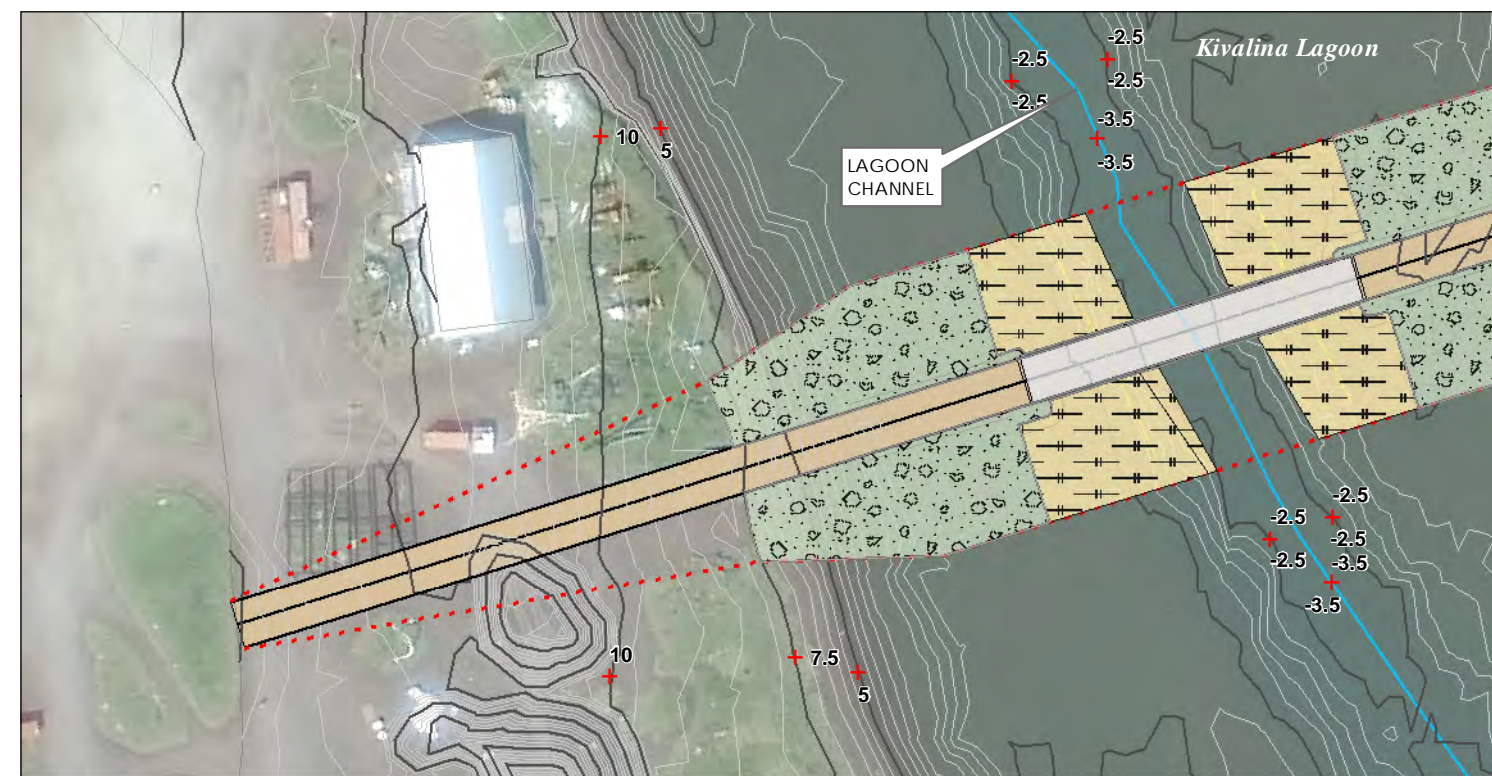
Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
 Department of Transportation and Public Facilities
 2301 Peger Road Fairbanks, AK 99709

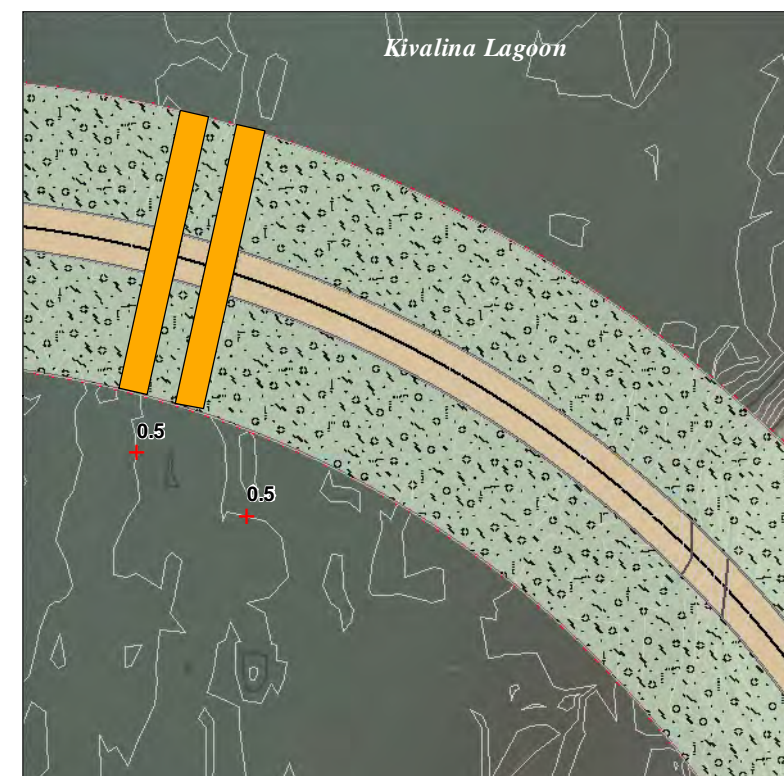
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
 Request for Initiation of Informal Consultation
 National Marine Fisheries Service
Lagoon Crossing D Alternative

DATE: December, 2017

FIGURE 3



BRIDGE DETAIL



CAUSEWAY CULVERT(S) DETAIL

0 50 100 Feet
 1:25,000 (At original document size of 11x17)

I:\2017\05103_GSV\mca\NMFIS_Initial\Consideration\201705103_NMFIS_Fig_3_Lagoon_Crossing\Alternatives.mxd Revised: 2017-12-13 10:34:00 AM

Lindberg, Sara

From: Karczmarczyk, Paul F (DOT) <paul.karczmarczyk@alaska.gov>
Sent: Tuesday, December 19, 2017 10:39 AM
To: Kaiti Ott
Cc: Nelson, Brett D (DOT); Lindberg, Sara; Schacher, Sarah E (DOT); Anderson, Ryan (DOT); John Baker (jkbaker.kotz@gmail.com); Katherine Keith (katherine@akremotesolutions.com); Hutchinson, Jonathan J (DOT)
Subject: Additional Section 7 information as requested

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Kaiti:

Here is the barge-related language included in our draft NMFS Section 7 consultation response and which you asked to review during our meeting last week. When we have our formal NMFS response letter signed, I'll send that along to you as well.

Barges:

The proposed activity may require contracting up to 10 barges per year for 4 years that will transport construction equipment and material to Kivalina or DeLong Mountain Transportation System (DMTS) during the open water months (June-November).

Barges will vary in dimensions, capacity, and draft. Examples may include Crowley 455 Series, Labroy Ballastable Barge, or smaller. The barges will use the existing community barge landing zone, or similar, adjacent to the town of Kivalina and/or the dock at the DMTS. Barges will be pulled into position by up to two accompanying tug boats, which are of similar type to the current models used during the annual Kivalina resupply.

If you have any other comments or questions, please don't hesitate to be in touch by phone or email. Thanks again for your and Louise's participation in the meeting, and we'll keep you posted on our next anticipated trip to KVL in the hope that you can go along as well,

Paul

Paul Karczmarczyk, CWB®
Environmental Impact Analyst
DOT&PF
2301 Peger Road
Fairbanks, AK 99709
(907) 451-2288

"Keep Alaska Moving through service and infrastructure."

"A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects."

-Robert A. Heinlein



United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
December 21, 2017



Brett Nelson
Northern Region Environmental Manager
Alaska Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, Alaska 99709-5316

Re: Kivalina Evacuation and School
Site Access Road

Dear Mr. Nelson:

This letter is in response to your request for consultation pursuant to section 7 of the Endangered Species Act of 1973 (ESA), as amended. The U.S. Fish & Wildlife Service (Service) has reviewed the proposed action to determine if it would adversely affect listed species under our jurisdiction. Three species listed as threatened under the ESA may occur in the project area: spectacled eiders (*Somateria fischeri*), Alaska-breeding Steller's eiders (*Polysticta stelleri*), and polar bears (*Ursus maritimus*), as well as designated polar bear critical habitat.

THE PROPOSED ACTION

We understand the Alaska Department of Transportation and Public Facilities (ADOT) with funding from the Federal Highway Administration (FHWA) proposes to construct an all-season evacuation road between the community of Kivalina, Alaska and an assembly site at Kisimigiuqtuq Hill (K-hill; Figure 1). The ADOT has been designated as the non-federal representative for the proposed project, and the Service is conducting section 7 consultation based on the preferred alternative (southern route with lagoon crossing D) presented in ADOT's draft Environmental Assessment (EA). Should the final project description differ from the preferred alternative, ADOT should contact the Service to determine if re-initiation is necessary.

Based on information provided by ADOT, an approximately 7.7-mi (12.4-km) long 24-ft (7.3-m) wide gravel road, with turnouts, would be constructed from the southern terminus of the Kivalina Airport, cross the lagoon via a causeway, then follow lowlands and relic channels of the Wulik River to a 5-acre (0.02-km²) gravel staging pad near K-hill (Figure 2). The causeway crossing would be about 3,200-ft (0.98-km), with a 110-ft (33.5-m) bridge spanning the west lagoon channel and large-diameter culverts installed at the northeast end of the causeway (Figure 3).

Up to four material sources may be developed to support construction of the proposed project. These include, the K-Hill Site, Wulik River Source 1, Relic Channel Source 1, and Relic Channel Source 2 (Figure 2). Additionally, up to 10 barges may be used to transport heavy

equipment and construction supplies to the project area. Both winter and summer construction activities are planned and the proposed project is expected to require two or more work seasons, with activities beginning as early as the first quarter of 2018. Finally, we understand overhead powerlines are not planned, and the causeway and evacuation road would be unlighted.

THE ACTION AREA

The action area includes the vicinity of Kivalina, Alaska, the proposed material sources, and the evacuation route to K-hill (Figure 1). Additionally, the action area includes the routes of marine transit through the Bering and Chukchi seas during barging operations.

EFFECTS OF THE ACTION ON LISTED SPECIES

Listed eiders

The Service listed the spectacled eider on May 10, 1993 (58 FR 27474) and the Alaska-breeding population of the Steller's eider as threatened on June 11, 1997 (62 FR 31748). Although neither species currently nests in the region, low numbers of listed eiders may migrate through the project area. While migrating listed eiders may rest and feed in terrestrial or marine habitat within the action area, we expect disturbance to migrating listed eiders from construction activities or barging operations would be minor because these individuals can respond to human presence or disturbance by moving to a safe distance. Because listed eider density in the action area is extremely low and disturbance to migrating listed eiders would be so minor that injury or death is not expected, we anticipate effects of disturbance to these birds would be insignificant.

Effects from barging operations

In addition to disturbance, migratory listed eiders would also be at risk of collision with vessels during the proposed barging operations. Migratory birds suffer considerable mortality from collisions with man-made objects (Manville 2004). Birds involved in collisions with man-made objects may also experience severe injuries including concussions, internal hemorrhaging, and broken bones. Birds are particularly at risk of collision when visibility is impaired by darkness or inclement weather (Weir 1976). In a study of avian interactions with offshore oil platforms in the Gulf of Mexico, collision events were more common, and more severe (i.e., the number of collision incidents increased) during poor weather (Russell 2005). There is also evidence that lights on structures, particularly red steady-state lights, result in disorientation which increases collision risk (Reed et al. 1985, Russell 2005, Manville 2000). Strike rate may also be related to flight behavior, in particular, altitude (Anderson and Murphy 1988). Johnson and Richardson (1982) in their study of migratory behavior along the Beaufort Sea coast, reported that 88% of eiders flew below an estimated altitude of 10 m (32 ft) and well over half flew below 5 m (16 ft). Day et al. (2004 and 2005) also noted eider species may be particularly susceptible to collisions with offshore objects as they fly low (mean flight altitude 12.1 ± 0.8 m) and at relatively high speeds (approximately 45 mph) over water.

Although limited, the best available information with which to estimate collision risk between marine vessels and migratory birds are observations recorded during Royal Dutch Shell's (Shell) exploratory oil and gas activities in 2012. Ten vessels operating in the Chukchi Sea for 108 days recorded 131 total bird-vessel encounters, 17 of which were fatal collisions between eiders (13 king and 4 common eiders) and vessels. Of these 17 collisions, 2 involved mobile offshore drilling units, while the other 15 involved support vessels, which are reasonably similar to the

barges currently planned for use in the proposed action. Considering that 10 vessels were involved in 15 fatal eider collisions, we estimate average collision rate per vessel to be 1.5 (i.e., $15 \div 10 = 1.5$ collisions/vessel) over a 108-day season.

These rates are based on reported collisions for king and common eiders during a single shortened industry season in the Chukchi Sea. Listed eider species were not among the seaduck collisions recorded in 2012, however spectacled and Steller's eiders moving through the Chukchi and Bering seas during the proposed project would also be at risk of colliding with barges, presumably in proportion to their relative abundance in seaduck populations.

Assuming spectacled and Steller's eiders are equally as vulnerable to collisions as king and common eiders, and because there is no basis to assume otherwise, we would expect collisions to occur in proportion to species abundance. Based on a total of 705,380 eiders (529,271 king and 176,109 common eiders) recorded during migration counts near Utqiagvik in late summer and fall of 2002 (Quakenbush et al. 2004¹), we very roughly estimate the risk of collision, per individual eider passing through the Chukchi Sea, for each vessel operating offshore to be:

$$1.5 \text{ collisions per vessel per season} \div 705,380 \text{ eiders} = 0.0000021 \text{ collisions per vessel per season}$$

We can then roughly estimate the risk of collision for listed eiders migrating through the Bering and Chukchi seas, by multiplying the individual eider collision rate (described above), by the estimated abundance of spectacled and Steller's eiders from pre-nesting aerial survey data for the North Slope (Stehn et al. 2013²). These surveys estimate spectacled and Steller's eiders number approximately 14,814 (90% CI = 13,501-16,128) and 680, respectively (Stehn et al. 2013). Therefore, we estimate listed eider collision rates would be:

$$14,800 \text{ spectacled eiders} \times 0.0000021 \text{ collisions per vessel per season} = 0.031 \text{ spectacled eiders per vessel per season}$$

$$680 \text{ Steller's eiders} \times 0.0000021 \text{ collisions per vessel per season} = 0.0014 \text{ Steller's eiders per vessel per season}$$

If these figures represent the number of collisions expected per listed eider moving through the Chukchi Sea, we can then approximate the number of collisions expected for 10 barges in the Bering and Chukchi seas:

$$0.031 \text{ spectacled eiders per vessel} \times 10 \text{ barges} = 0.31 \text{ spectacled eiders}$$

$$0.0014 \text{ Steller's eiders per vessel} \times 10 \text{ barges} = 0.014 \text{ Steller's eiders}$$

¹This survey was based on observed counts from a fixed location. It employed a subset of time intervals and extrapolated the data to account for intervals during which no observations were made. Because the majority of king and common eiders nest in Northern Canada, we believe these counts reasonably estimate the number of king and common eiders passing through Arctic Alaska. Listed eiders were not detected during these migration counts, presumably due to the comparative scarcity and identification challenges for spectacled and Steller's eiders.

² These surveys were based on aerial observations of a subset of available nesting habitat on the North Slope. The data were then extrapolated to account for available nesting habitat that was not surveyed.

Because the figures above are based on an approximately 108-day season during Shell's 2012 campaign, we have adjusted the calculations to estimate collisions over approximately 150-days³ of a typical open-water season as follows:

For spectacled eiders:

0.31 spectacled eider collisions ÷ 108 days = 0.0028 collisions per day; therefore,
0.0028 collisions per day × 150 days = 0.43 spectacled eider collisions

For Steller's eiders:

0.0014 Steller's eider collisions ÷ 108 days = 0.000012 collisions per day; therefore,
0.000012 collisions per day × 150 days = 0.0019 Steller's eider collisions

The reliability of these estimates may be limited by several biases. For example, 1) collisions are often episodic, and those resulting from light attraction in inclement weather may be particularly so, such that observations collected on a few vessels in a single year may not be representative of collisions in general, 2) monitoring for collisions is difficult and an unknown number of collisions may go undetected, even by trained bird observers, and 3) low visibility often coincides with increased collisions (Ronconi et al. 2015), which may increase the number of undetected collisions. However, these estimates are based on the best information available, and appreciable impacts to spectacled and Alaska-breeding Steller's eiders from the proposed barging operations are not expected.

Summary

In summary, because 1) listed eider density throughout the action area is low, 2) effects to breeding eiders are not expected, 3) effects of disturbance to non-breeding, brood rearing, or migrating eiders would be minor and temporary, and 4) appreciable impacts from disturbance or collisions due to the proposed barging operations are not anticipated; we expect cumulative effects the proposed project on listed eiders would be insignificant

Polar Bears

The Service listed the polar bear as a threatened species under the ESA on May 15, 2008 (73 FR 28212). Polar bears may occasionally pass through the area, although their density is low and encounters are expected to be infrequent. Transient (non-denning) bears entering the action area could be disturbed by the presence of humans or equipment noise. However, we expect disturbances would be minor and temporary because transient bears would be able to respond to human presence or disturbance by departing the area. Furthermore, we understand the applicant would develop a *Polar Bear Interaction Plan* to minimize potential impacts in the event a polar bear is encountered.

³ We expect the proposed barging operations would be of shorter duration (likely much shorter) than the length of a typical open-water season. We also acknowledge the timing of barge operations would be difficult to estimate with precision due to a number of factors including seasonal variation in sea ice conditions and marine forecasts. Therefore, lacking greater certainty in project timing, we have conservatively extrapolated our estimate to cover a full open-water season. We believe this represents an overestimation of collision risk to listed eiders. Furthermore, because appreciable collision risk to listed eiders is not expected despite this acknowledged overestimation, we expect actual collision risk to listed eiders may be considerably less than the level predicted.

In addition to transient animals, female polar bears may very rarely den in the project area. However, because topographic relief throughout the action area is minor and preferred denning habitat is characterized by steep, stable slopes that accumulate snow, we would expect polar bear denning within the project area to be very rare. Accordingly, we anticipate the probability of encountering denning polar bears would be extremely low.

Given 1) the density of polar bears in the action area is low, 2) encounters with polar bears are expected to be rare, 3) behavioral effects to transient bears would be minor and temporary, 4) mitigation measures would be included in the applicant's *Polar Bear Interaction Plan* to minimize potential impacts in the event transient or denning polar bears are encountered, and 5) the very low probability of polar bears denning in the action area; we expect cumulative effects of the proposed action on polar bears would be insignificant.

Polar bear critical habitat

On October 29, 2009, the Service proposed critical habitat for polar bears (74 FR 56058) and a final rule designating critical habitat was issued on December 7, 2010 (75 FR 76086). However, the U.S. District Court for the District of Alaska issued a decision to the Service on January 11, 2013 which vacated and remanded the final rule on polar bear critical habitat in *Alaska Oil and Gas Association et al. v. Salazar et al.* (D. Alaska)(3:11-cv-00025-RRB). On February 29, 2016 the Ninth Circuit Court of Appeals upheld the final polar bear critical habitat rule on all points.

The proposed action would occur within Unit 3, barrier island habitat, of designated polar bear critical habitat (Figure 4). However, because the proposed construction would take place within a developed community, subsumed by existing levels of human activity and disturbance, the Service does not expect impacts from the proposed project would appreciably diminish the value of barrier island critical habitat for the survival and recovery of polar bears.

CONCLUSION

The proposed action could temporarily disturb listed eiders and polar bears in the project area. However, due to low densities of these species, and minimization measures included in the interaction guidelines, we expect the effects of disturbance to be insignificant. Therefore, the Service concludes the proposed action is not likely to adversely affect listed eiders or polar bears. Additionally, the proposed project would not adversely affect designated polar bear critical habitat. Preparation of a Biological Assessment or further consultation under section 7 of the ESA is not necessary at this time. Thank you for the opportunity to comment on this project. If you need further assistance, please contact Kaithryn Ott at (907) 456-0277.

Sincerely,



For

Ted Swem
Endangered Species Coordinator

Literature Cited

- Anderson B.A. and S.M. Murphy 1988. Lisburn terrestrial monitoring program 1986 and 1987: The effects of the Lisburn powerline on birds. Final report by ABR Inc. for ARCO Alaska. 60pp.
- Day, R.H., J.R. Rose, A.K. Prichard, R.J. Blaha, and B.A. Cooper. 2004. Environmental Effects on the Fall Migration of Eiders at Barrow, Alaska. *Marine Ornithology* 32:13–24.
- Day, R.H., A.K. Pritchard, and J.R. Rose and A.A. Stickney. 2005. Migration and collision avoidance of eiders and other birds at Northstar Island, Alaska, 2001-2004: Final Report for BP Alaska Inc., Anchorage, Alaska prepared by ABR Inc., Fairbanks, Alaska. 156 pp.
- Johnson, R. and W. Richardson. 1982. Waterbird migration near the Yukon and Alaska coast of the Beaufort Sea: II. Molt migration of seaducks in summer. *Arctic* 35(2): 291-301.
- Manville, A.M., II. 2000. The ABCs of avoiding bird collisions at communication towers: the next steps. Proceedings of the Avian Interactions Workshop, December 2, 1999, Charleston, SC. Electric Power Research Institute. 15 pp.
- Manville, A.M., II. 2004. Bird Strikes and electrocutions at power lines, communication towers, and wind turbines: State of the art and state of the science – next steps towards mitigation. Proceedings 3rd International Partners in Flight Conference, March 20-24, 2002, Asilomar Conference Grounds, CA. USDA Forest Service General Technical Report PSW-GTR-191. 25 pp.
- Reed, J.R., J.L. Sincock, and J.P. Hailman. 1985. Light attraction in endangered procellariiform birds: reduction by shielding upward radiation. *Auk* 102: 377-383.
- Ronconi, R.A., K.A. Allard, and P.D. Taylor. 2015. Bird interactions with offshore oil and gas platforms: review of impacts and monitoring techniques. *Journal of Environmental Management* 147: 34–45.
- Russell, R.W. 2005. Interactions between migrating birds and offshore oil and gas platforms in the northern Gulf of Mexico: Final report. U.S. Department of Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2005-009. 348 pp.
- Stehn, R. A., W.W. Larned, and R.M. Platte. 2013. Analysis of aerial survey indices monitoring waterbird populations of the Arctic Coastal Plain, Alaska, 1986-2012. Unpublished report. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Anchorage, AK. 56 pp.
- Weir, R. 1976. Annotated bibliography of bird kills at man-made obstacles: A review of the state of the art and solutions. Unpublished report prepared for Department of Fisheries and Environment, Canadian Wildlife Service-Ontario Region. 29 pp.

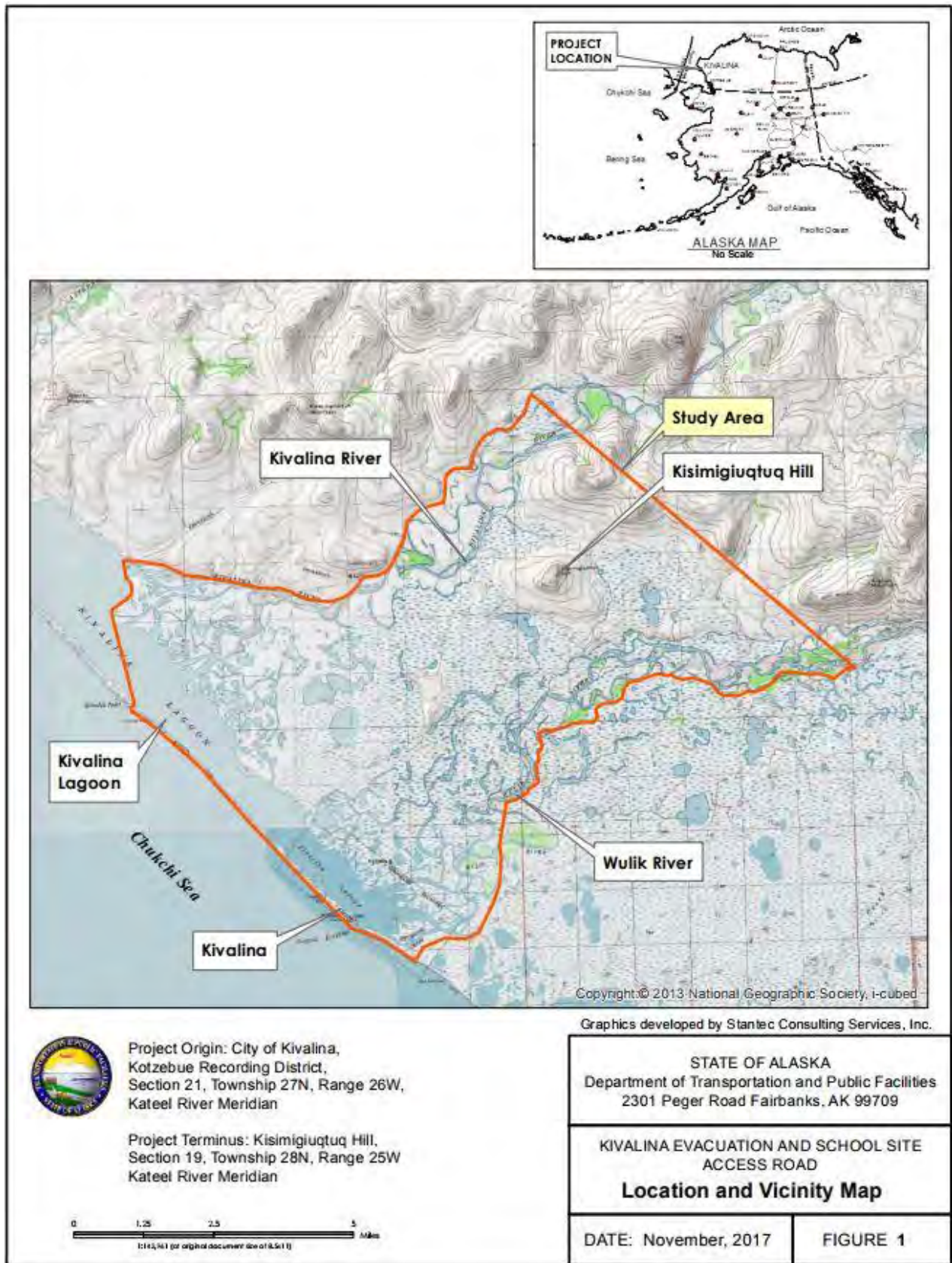


Figure 1. Location of the proposed project in the vicinity of Kivalina, Alaska.

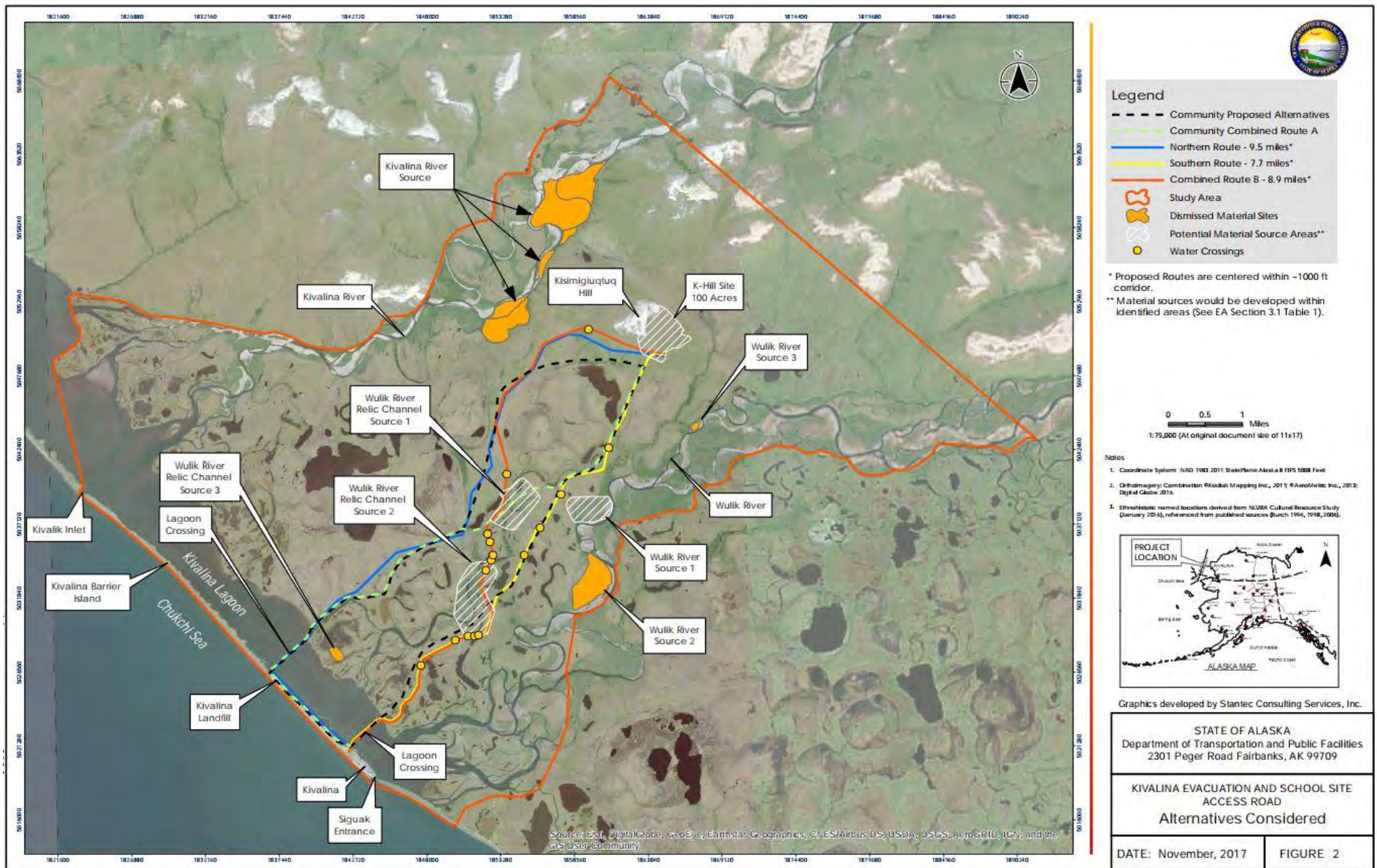


Figure 2. Detail of the proposed Kivalina Evacuation Road, including the preferred road alignment (yellow) to K-hill, and potential material sites (hatched polygons).

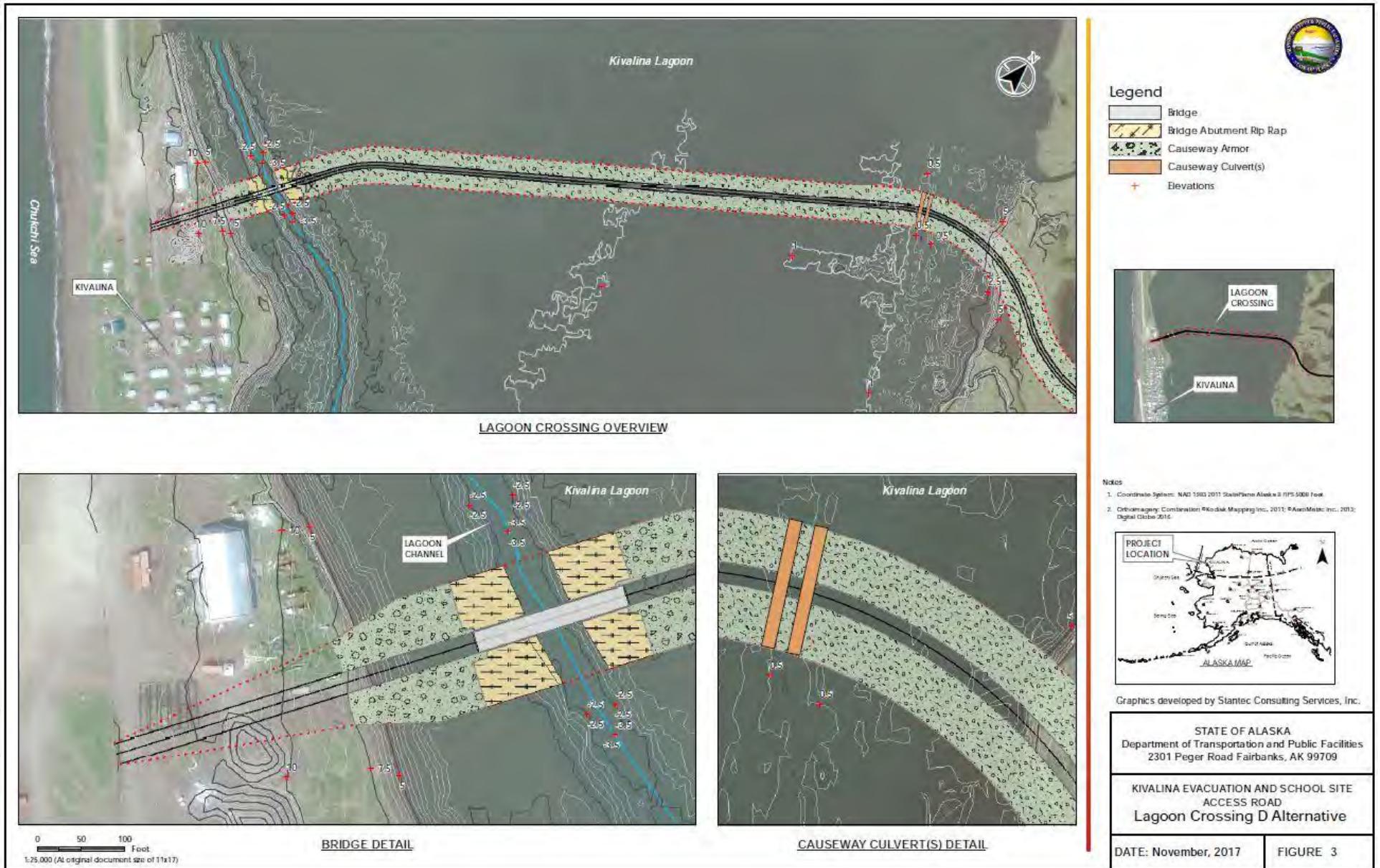


Figure 3. Detail of the proposed 0.98-km Kivalina Lagoon Causeway, including the lagoon channel bridge (bottom left) and northeastern culvert configuration (bottom right).



Figure 3. Designated barrier island critical habitat for polar bears within the Kivalina Evacuation Road action area.



January 5, 2018

Jon Kurland
Assistant Regional Administrator for Protected Resources
NMFS, Alaska Region
PO Box 21668
Juneau, AK 99802

RE: Request for Initiation of Informal Consultation under Section 7(a)(2) of the Endangered Species Act (ESA) for Kivalina Evacuation and School Site Access Road

The Alaska Department of Transportation and Public Facilities (DOT&PF) has assumed the responsibilities of the Federal Highway Administration under 23 U.S.C. 327, and is proposing to carry out the proposed project as described below. We request initiation of expedited informal consultation under Section 7(a)(2) of the Endangered Species Act for the Kivalina Evacuation and School Site Access Road. We have determined that the proposed activity may affect, but is not likely to adversely affect bearded seal (*Erignathus barbatus*), ringed seal (*Phoca hispida*), western distinct population segment (DPS) Steller sea lion (*Eumetopias jubatus*), North Pacific right whale (*Eubalaena japonica*), Mexico DPS humpback whale (*Megaptera novaeangliae*), western North Pacific DPS humpback whale, fin whale (*Balaenoptera physalus*), sperm whale (*Physeter macrocephalus*), bowhead whale (*Balaena mysticetus*), or designated Steller sea lion or North Pacific right whale critical habitat. Our supporting assessment is provided below. We request your written concurrence if you agree with our determinations.

Project Description

This proposed project is intended to construct a safe, reliable, all-season evacuation road between the community of Kivalina and Kisimigiuqtuq (K-Hill). We expect work to commence in August 2019 and continue over a three-year period.

DOT&PF has selected the Southern Route (Figure 1, 2) as the preferred alternative for this project (discussed further in the Environmental Assessment), which includes the following actions:

- Establishment of a safe, reliable, all-season Kivalina Lagoon crossing, consisting of a causeway and a bridge.

- Construction of an all-season access road connecting the Kivalina Lagoon crossing to the K-Hill evacuation site.
- Development of up to four material sources including the K-Hill Site, Wulik River Source 1, Wulik River Relic Channel Source 1, and Wulik River Relic Channel Source 2.

The selected contractor is likely to conduct the following project associated activities, which may result in residual effects on marine mammals:

- Use of small skiffs to transport personnel and gear across the lagoon to the inland portions of the project, and
- Construct in-water/over-water structures through placement of material in water.

Land based pile driving is also proposed for this project. As this activity is not occurring in water, effects to marine mammal are not anticipated. In addition, hauling activities along a Delong Mountain Transportation System (DMTS) Haul Route (ice road) is anticipated to occur along the beach, or on bottom fast ice (i.e. ice in waters less than 3 m (9.8 ft. deep). As this activity is not occurring in water, effects to marine mammals are not anticipated.

Project specific vessels and Barges:

Due to the availability of local material for this project, use of project specific barges that would transport material and equipment solely to and from the project area is not anticipated. It is anticipated that the contractor will utilize barges that regularly service communities in the region to deliver equipment or other materials needed to construct the project. We do not anticipate that barge activity specific to the project will occur in addition to traffic normally servicing the area. Barges that are contractually under project control would be considered *project specific*, and the operator would be required to follow specific mitigation measures as described throughout this assessment.

Although project specific barging is not anticipated, should it be required, examples may include such vessels as Crowley 455 Series, Labroy Ballastable Barges, or smaller.

The barges could use the existing community barge landing zone, at Kivalina and/or the dock at the DMTS. If barges dock at DMTS, goods and materials may be moved to the project construction area by a winter haul route (Figure 1 and 2). Barges will be pulled into position by up to two accompanying tug boats, which are of similar type to the current models used during the annual Kivalina resupply. Smaller vessels like the tugs associated with the proposed action have higher engine and propeller speeds than larger vessels or barges. The smaller vessel noise spectra peak around 300 Hz with a source level ranging from 145-170 dB re 1 μ Pa depending on if the tug is pulling an empty or loaded barge (Richardson 1995). Shipping sounds are often at source levels of 150-190 dB re 1 μ Pa at 1m (BOEM 2011).

During the open water months (June-November), small outboard-powered skiffs (or similar) present in Kivalina/owned by community members may be used to transport personnel and gear across the lagoon to the inland portions of the project. This activity may include up to 5 small boats (skiffs or similar), each being used three times a day, to transport goods and personnel

across the lagoon. Total travel time across the lagoon would average 20 minutes per trip. This is similar in type and volume to existing local community boat traffic.

Vessel sound levels vary depending on the vessel and on operational speeds. For example, skiffs in Alaska have been measured to operate at sound levels between 160-170 dB_{rms} at 1 meter (Kipple and Gabriele 2003, no speed specified).

In-water or Over-water Structures:

Fill Placement

The Kivalina Lagoon crossing would require an approximately 3,020 ft solid, armored, earthen causeway to be placed in waters 1 to 3 feet deep. A single span bridge would cross the existing 110 ft lagoon channel that is approximately 4 feet deep, located approximately 160 ft northeast from the barrier island (Figure 3). The single span bridge is proposed to provide fishery, subsistence use, biological (fish, marine wildlife, aquatic organism), and hydrologic connectivity through the causeway. The bridge would be a pile-supported structure with sloped, rock-protected earthen abutments or vertical sheet pile walls, and be designed to span the lagoon channel width to minimize potential impact to natural channel dimensions and function.

Large culvert(s), designed to accommodate passage of all life stages of fish, would be constructed at the northeast end of the causeway. A series of overflow pipes would be placed incrementally over the length of the solid portions of the causeway to provide additional conveyance during high water events.

The causeway and bridge will be installed using the following methods:

Fill activities to construct the causeway will likely occur in both the summer and winter. During the summer, the lagoon is open water, generally being 1-3 feet deep except for deeper areas near the mouth of the Wulik River and the channel paralleling Kivalina Island (Figure 3). During the winter, the shallow areas of the lagoon are primarily filled with grounded ice, with the mouth of the Wulik and the channel near Kivalina holding water. During high high-tides, water may lift the ice in the shallower portions of the lagoon for short periods.

Fill material would be obtained from permitted material sources proposed for this project, however the contractor may choose to import material from a commercial source outside the project area, such as Nome. Approximately 195,000 cy of gravel, rock, and rip rap will be required to construct the solid portion of the causeway. The substrate to be covered consists of fine grained sand and silt at the bottom of the lagoon.

The causeway embankment layer and rock protection may require up to 2 tracked excavators (or similar), 10 30-ton dump trucks (or similar), 2 bulldozers, 2 200-ton cranes (or similar), 4 180-HP Front End Loaders (or similar), 4 2-ton flatbed trucks (or similar), 6 ATVs, 2 40-horsepower work skiffs (or similar), and similar heavy construction equipment at any one time.

The base causeway embankment layer and rock protection may be constructed in the winter by removing the grounded ice in shallow depths of the lagoon; with no, or minimal water present.

Conventional winter excavation, using extended reach excavators, is the preferred method of removing the ice. Material will then be placed following project design to build the causeway.

Summer construction of the base causeway embankment layer and rock protection would involve extending the causeway from the mainland and/or barrier island side of the lagoon. Material could be placed by excavators and dump trucks off the pioneer earth portion of the causeway as it extends into the lagoon. Sediment containment would be constructed around the project to limit the off-site migration of silt and fine particles.

Winter travel on the ice within the lagoon will be used to transport equipment and material between Kivalina Island and the mainland during construction of the causeway.

Final embankment and rock protection will be added onto the solid portion of the causeway to meet engineered specifications for final grade and ensure structural integrity. This is likely to occur during the summer, with equipment operating from the causeway.

Pile driving

No in-water pile driving is proposed for this project. The causeway embankment will be placed first. Then the piles and/or sheet pile walls would be driven through the causeway embankment. Finally, the rip rap would be placed on top to armor the entire structure. This will prevent in-water pile driving, and the associated potential impacts to marine mammals. No equipment would be needed for in-water work, as no in-water pile driving is proposed for the project.

Since no in-water pile driving is proposed for the project and thus no marine mammal exclusion zones are being suggested for this activity. The contractor may designate a safety area to ensure increased level of safety for marine mammals during operations. No impacts to marine mammals from pile driving are expected since no in-water pile driving is proposed therefore pile driving will not be discussed further

Mitigation Measures

To minimize the risk of harm to marine species, the DOT&PF agrees to implement the following mitigation measures:

Project Specific Barges and Small Boats

1. If project specific barges are required, operators would be required to follow the best practices and safety regulations required of barge operators which regularly service the communities. In addition, barges that may provide some incremental project support but are not strictly under project control will be encouraged to avoid designated (73 FR 19000) North Pacific right whale critical habitat or maintain vigilant watch while under way in order to avoid vessel strikes to individuals of the Critically Endangered population frequenting the Bering Sea.
2. If project specific barges are required, during vessel transit, the project will follow 50 CFR 224.103 regulations and NMFS marine mammal viewing guidelines. The vessel operator will not purposely approach:
 - a. Within 874 yd (800 m) of a North Pacific right whale;

- b. Within 100 yd (91.4 m) of other marine mammals; and
 - c. Within 3 nm (5.5 km) of a major Steller sea lion rookeries or haulouts where vessel safety requirements allow and/or where practicable.
3. Small project-specific boats will move at less than 10 knots (kn; 18.52 km/h) when in the Kivalina Lagoon (Figure 1 and 2) to reduce noise impacts and for safe vessel maneuverability to avoid obstacles and marine mammals in the water.
 4. If project specific barges are required and practicable vessel operation requires purposely approaching within 1.6 km (1 mi) of observed whales, except in emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the whales by taking one or more of the following actions, as appropriate:
 - a. Reducing vessel speed to less than 5 kn (9.26 km/h) within 300 yards (274 m) of whales and within 874 yd (800 m) of North Pacific right whales;
 - b. Operating the vessel(s) in a manner that avoids direct approach of whales;
 - c. Operating the vessel(s) in a manner that avoids separating members of any group of whales from other members of that group;
 - d. Operating the vessel(s) to avoid causing a whale of any species to make multiple changes in direction
 - e. If the vessel is taken out of gear, vessel crew will check the waters immediately adjacent to the vessel(s) to ensure that no whales of any species will be injured when the propellers are re-engaged; and
 - f. Avoiding sudden vessel speed changes or operating the vessel in a way that increases noise emitted unless necessary to avoid an imminent threat to vessel or crew safety.
 5. Reducing vessel speed to less than 5 kn (9.26 km/h) within 300 yards (274 m) of pinnipeds
 6. If project specific barges are required, they will avoid transiting through identified (73 FR 19000) North Pacific right whale critical habitat. Protected Species Observers (PSOs) are not required if barges do not enter designated North Pacific right whale critical habitat. If transit through North Pacific right whale critical habitat occurs, the following will be implemented:
 - a. Vessels will not make way in excess of 10 kn (18.52 km/h) while travelling within the boundaries of designated North Pacific right whale critical habitat.
 - b. Dedicated PSOs will be on board all motorized vessels travelling through designated North Pacific right whale critical habitat. PSO's are not required if barges transit around North Pacific right whale critical habitat. PSOs will maintain a constant watch for all marine mammals from the bridge or other similar vantage point. PSO's will maintain direct contact with the vessel pilot, advising the pilot/operator of the position of all observed marine mammals as soon as they are observed.
 - c. The vessel pilot/operator will maneuver vessels to the extent practicable to:
 - i. Remain further than 874 yds (800 m) from North Pacific right whales,
 - ii. Remain further than 100 yds from other marine mammal species, and
 - iii. Avoid approaching any species of whale head-on.
 7. Vessels will adjust speed and heading as needed to avoid disturbance of all marine mammals, provided vessel speed and heading adjustments are consistent with maintaining vessel safety.

Fill Placement

8. If material is being placed in summer during ice-free conditions, a qualified PSO will monitor for marine mammal presence and implement a 50 m (164 ft) exclusion zone around the material placement site to avoid physical harm, direct, and indirect takes by construction equipment.

9. If material is being placed in the winter, a PSO is only needed if there are areas of naturally-occurring open water within 50 m (164 ft) of construction activities. If there is no naturally-occurring open water within 50 m (164 ft) of construction activities, no PSO is required and no exclusion zone is necessary.
10. If an observed marine mammal is likely to approach within 50 m (164 ft) of the fill placement site, fill placement will stop until the marine mammal is farther than 50 m (164 ft) from the fill placement site, or is not seen for 15 minutes. The PSO will continuously scan the activity-specific monitoring zone for the presence of species for 30 min before any fill placement activities take place.
 - a. If any species are present within the exclusion zone, fill placement activities will not begin until such animal(s) has left the exclusion zone or no species have been observed in the exclusion zone for 15 min (for pinnipeds) or 30 min (for cetaceans).
 - b. If any species enter, or appear likely to enter, the exclusion zone during fill placement, all in-water activities will cease immediately. Fill placement activities may resume when the animal(s) has been observed leaving the area on its own accord. If the animal(s) is not observed leaving the area, fill placement activities may begin 15 min (for pinnipeds) or 30 min (for cetaceans) after the animal is last observed in the area.

Subsistence Activities

11. Signs will be installed reminding the public that State of Alaska Fish and Game regulations prohibit shooting from, on, or across a highway (5AAC 92.080; ADF&G 2006).

PSO Requirements

12. A PSO must be able to accurately field identify and distinguish between species of Alaska marine mammals.
13. PSOs will be positioned such that the entire activity-specific monitoring zone is visible to them (e.g., they must be stationed on a platform, elevated promontory, vessel bridge, or similar vantage point).
14. PSOs will have the following to aid in determining the location of observed listed species, to take action if listed species enter the exclusion zone, and to record these events:
 - a. Binoculars
 - b. Range finder
 - c. GPS
 - d. Compass
 - e. Two-way radio communication with construction foreman/superintendent or vessel pilot/operator. A log book of all activities which will be made available to Federal Highway Administration, DOT&PF, and NMFS upon request.
17. The PSO will have no other primary duty other than to watch for and report on events related to marine mammals.
18. The PSO will work in shifts lasting no longer than 4 hrs with at least a 1-hr break between shifts, and will not perform duties as a PSO for more than 12 hrs in a 24-hr period (to reduce PSO fatigue).

Monitoring Report

19. During months in which PSOs are used on either barges or during fill placement, a monitoring report will be submitted at the end of the month to NMFS. The reporting period for each monthly PSO report will be the entire calendar month, and reports will be submitted

by close of business on the 15th day of the month following the end of the reporting period (e.g., the monthly report covering April 1 to 30, 2018, will be submitted to the NMFS by close of business on May 15, 2018).

- a. PSO report data will also include the following for each listed marine mammal observation (or “sighting event” if repeated sightings are made of the same animal[s]):
 - i. Species, date, and time for each sighting event.
 - ii. Number of animals per sighting event; and number of adults/juveniles/calves per sighting event (if determinable).
 - iii. Primary, and, if observed, secondary behaviors of the marine mammals in each sighting event.
 - iv. Geographic coordinates for the observed animals, with the position recorded by using the most precise coordinates practicable (coordinates must be recorded in decimal degrees, or similar standard (and defined) coordinate system).
 - v. Time of the most recent project activity prior to marine mammal observation (for observations made during vessel transit, this value would be the same as the time of the marine mammal observation).
 - vi. Environmental conditions as they existed during each sighting event, including Beaufort Sea state, weather conditions, visibility (km/mi), lighting conditions, and percent ice cover.
20. A final technical report will be submitted to NMFS within 90 days after the final day PSOs are required on the project. The report will summarize all activities associated with the proposed action in which a PSO was required, and results of marine mammal monitoring conducted during the in-water project activities. The final technical report will include items from the list above as well as the following:
 - a. Summaries of monitoring efforts including total hours, coordinates of routes or locations observed each day (or other spatio-temporal representation of observer effort), and marine mammal locations.
 - b. Summaries of various factors that may have influenced detectability of marine mammals (e.g., sea state, number of observers, fog, glare, percent ice cover, and other factors as determined by the PSOs).
 - c. Species composition, occurrence, and locations of marine mammal sightings, including date, water depth, numbers, age/size/gender categories (if determinable), and group sizes.
 - d. Number of marine mammals observed (by species) during periods with and without project activities (and other variables that could affect detectability), such as:
 - i. Initial marine mammal sighting distances versus project activity at time of sighting.
 - ii. Observed marine mammal behaviors and movement types versus project activity at time of sighting.
 - iii. Numbers of marine mammal sightings/individuals seen versus project activity that was ongoing at time of sighting.
 - iv. Distribution of marine mammals around the action area versus project activity at time of sighting.

If Take Occurs

Though take is not authorized, if a listed marine mammal is taken (i.e., a listed marine mammal(s) is observed entering the 50m exclusion zone before fill placement operations can be shut down, if a listed species is struck by a vessel), it must be reported to NMFS within one business day. PSO records for listed marine mammals taken by project activities must include:

- a. All the information that must be listed in the PSO report.
- b. Number of listed animals taken.
- c. The date and time of each take.
- d. The cause of the take (e.g., vessel strike, animal entered 50m exclusion zone).
- e. The time the animal(s) was first observed and last seen.
- f. If applicable, the time the animal(s) entered the exclusion zone, and, if known, the time it exited the zone.
- g. Mitigation measures implemented prior to and after the animal was taken.

Description of the Action Area

The Action Area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The Action Area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The Action Area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

For this project, the Action Area (Figure 1, 2) surrounds the City of Kivalina (67.72°N, -164.54°W), located on the southeast tip of the barrier island located between the Chukchi Sea (Arctic Ocean) and Kivalina Lagoon. The project terminus is located on the mainland across the Kivalina Lagoon approximately six miles northeast at a community selected evacuation site on Kisimigiutq Hill (K-Hill, 67.80°N, -164.39°W). The area encompasses the Kivalina barrier island, the southern portion of Kivalina Lagoon, and the lower Wulik and Kivalina River drainages. For marine mammal consultation, the Action Area also includes the DMTS dock (67.58°N, -164.06°W), a winter nearshore barrier island/on sea ice haul route between the DMTS dock and City of Kivalina and, if project specific barges are required, a barging route from Unimak Pass.

NMFS Listed Species and Critical Habitat in the Action Area

Ringed and bearded seals maybe encountered during construction activities within the Kivalina Lagoon. No published systematic survey results for seal observation locations in Kivalina Lagoon have been collected. In the species descriptions below, summaries of seal presence within the Kivalina Lagoon are based on sightings, literature review and interviews with community members.

In addition to ringed and bearded seals, other listed species that could be encountered during barging activities include western DPS Steller sea lions, western North Pacific DPS humpback whales, Mexico DPS humpback whales, fin whales, sperm whales, North Pacific right whales, and bowhead whales. In addition, if project specific barges are required, vessel traffic may occur within Steller sea lion or North Pacific right whale designated critical habitats. Table 1 provides a list of the listed species and critical habitats that maybe encountered as part of the project.

Table 1: NMFS Listed Species and Critical Habitat expected in the Action Area

Species	Stock	Habitat typically used by the species in the Action Area	ESA listing	Critical Habitat	MMPA listing
Bearded seal	Alaska (Beringia DPS)	Kivalina Lagoon, Wulik River, waters outside of Lagoon	threatened	None Designated	depleted
Ringed seal	Alaska	Kivalina Lagoon, Wulik River, waters/ice outside of Lagoon	not listed*	-	not listed
Steller Sea Lions	Western DPS	Barging Route	threatened	Designated	depleted
North Pacific Right Whale	Eastern North Pacific	Barging Route	endangered	Designated	depleted
Humpback Whale	Western North Pacific DPS	Barging Route	endangered	None Designated	depleted
Humpback Whale	Mexico DPS	Barging Route	threatened	None Designated	depleted
Fin Whale	Northeast Pacific Stock	Barging Route	endangered	None Designated	depleted
Sperm Whale	North Pacific Stock	Barging Route	endangered	None Designated	depleted
Bowhead whale	Western Arctic	Barging Route	endangered	None Designated	depleted

NOTE: Species occurrence and activities can change and other species not listed by be observed in the area.

* ESA listing is currently being appealed in the U.S. District Court; National Oceanic and Atmospheric Administration (NOAA) Fisheries published a final rule listing the Arctic subspecies as threatened.

SOURCES: ^a Allen and Angliss (2014), ^b Muto et al. (2016), ^d Huntington et al. (2016)

Bearded Seals

Bearded seals are closely associated with sea ice – particularly during the critical life history periods related to reproduction and molting – and can be found in a broad range of ice types. They generally prefer ice habitat that is in constant motion and produces natural openings and areas of open water such as leads, fractures, and polynyas for breathing, hauling out on the ice, and access to water for foraging (Heptner et al. 1976a, Fedoseev 1984, Nelson et al. 1984). The bearded seal’s effective range is generally restricted to areas where seasonal sea ice occurs over relatively shallow waters. Cameron et al. (2010) defined the core distribution of bearded seals as those areas over waters less than 500 m deep.

Bearded seals are seen coming into Kivalina Lagoon in the summer following fish (Huntington et al., 2016, Stantec, 2016a) and have been sighted at the north (Kivalik) (Stantec, 2016a) and south (Singuak) entrance to the lagoon (P. Hawley, personal communication, June 30, 2017). Juvenile bearded seals have been observed foraging up river channels in the fall (Huntington et al., 2016; Stantec, 2016a). Bearded seals are not expected to occur within the Kivalina Lagoon during the winter months.

Aerial surveys in the eastern Chukchi Sea, conducted in May and June, estimated highest densities of bearded seals (0.401 – 0.7 seals/km²; unadjusted for survey timing and haulout behavior) south of Kivalina and west of Kivalina in the offshore area, and moderate densities in coastal waters by Kivalina (0.051 – 0.2 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Movement data shows they have a wide range in the Chukchi Sea including the coastal waters near Kivalina in fall and summer (Boveng and Cameron, 2013; Wiese et al., 2017). Additional information on bearded seals is available at: <https://alaskafisheries.noaa.gov/pr/ice-seals>.

Ringed Seals

Ringed seal activity in the Chukchi Sea is strongly influenced by sea ice (Kelly et al., 2010). Movement data suggests that ringed seals use the Chukchi Sea, and coastal waters near Kivalina, year-round (ADF&G, 2015; Crawford et al., 2012; Von Duyke et al., 2017). Density estimates, based on aerial surveys conducted in May and June, are higher along the coast south of Kivalina (10.001-20 seals/km²; unadjusted for survey timing and haulout behavior) compared to the coastal region around Kivalina (2.001-5 seals/km²; unadjusted for survey timing and haulout behavior) (Bengtson et al., 2005). Ringed seals occur year-round in the Kivalina area (Huntington et al., 2016).

Recent field observations (Stantec, 2016b) confirmed seal presence within Kivalina Lagoon near the Kivalik and Singuak Inlets. Personal interviews conducted with local subsistence hunters concurrent to the Stantec survey effort also yielded generalizations that seals occasionally access shallower portions of the lagoon. However, follow up interviews with those and other local subsistence hunters in 2017 clarified that the majority of seal foraging in the lagoon occurs directly south and east of Singuak Inlet proximate to deeper water near and within the Wulik River outlet, and in like fashion within deeper waters between the mouth of the Kivalina River and its outlet to the Chukchi Sea at Kivalik Inlet. Comparatively, seal use of the shallow Lagoon Channel lying parallel to Kivalina Island is substantially less common, and generally limited to infrequent occasions of combined high water and thin ice in the lagoon (personal

communications O. Hawley, September 15, 2017; R. Sage, September 15, 2017 and October 5, 2016; D. Foster October 5, 2016; P. Hawley September 15, 2017).

In winter, ringed seals excavate lairs in the snow above breathing holes for resting, pupping, and nursing young in both shorefast ice and pack ice. Snowdrifts of sufficient depth for birth lair formation and maintenance typically occur in deformed ice along pressure ridges or ice hummocks (Smith and Stirling 1975, Lydersen and Gjertz 1986, Kelly 1988, Furgal et al. 1996, Lydersen 1998). NMFS identified 54 cm as the minimum snowdrift depth because this was the average minimum depth reported in several studies of ringed seal lairs. Additional information on ringed seals is available at: <https://alaskafisheries.noaa.gov/pr/ice-seals>.

Western DPS Steller Sea Lions

The Steller sea lion was listed as a threatened species under the ESA on November 26, 1990 (55 FR 49204). In 1997, NMFS reclassified Steller sea lions into two distinct population segments (DPS) based on genetic studies and other information (62 FR 24345); at that time the eastern DPS was listed as threatened and the western DPS was listed as endangered. On November 4, 2013, the eastern DPS was removed from the endangered species list (78 FR 66139). Information on Steller sea lion biology and habitat (including critical habitat) is available at: <http://alaskafisheries.noaa.gov/pr/steller-sea-lions>

The ability to detect sound and communicate underwater is important for a variety of Steller sea lion life functions, including reproduction and predator avoidance. NMFS categorizes Steller sea lions in the otariid pinniped functional hearing group, with an applied frequency range between 60 Hz and 39 kHz in water (NMFS 2016b).

If project specific barges are utilized, Steller sea lions maybe encountered along the barging route but are not expected to occur within Kivalina Lagoon or adjacent lands and waters where construction activities will take place.

Steller Sea Lion Critical Habitat

NMFS designated critical habitat for Steller sea lions on August 27, 1993 (58 FR 45269). In Alaska, designated critical habitat includes the following areas as described at 50 CFR §226.202.

1. Terrestrial zones that extend 3,000 feet (0.9 km) landward from each major haulout and major rookery.
2. Air zones that extend 3,000 feet (0.9 km) above the terrestrial zone of each major haulout and major rookery in Alaska.
3. Aquatic zones that extend 3,000 feet (0.9 km) seaward of each major haulout and major rookery in Alaska that is east of 144° W longitude.
4. Aquatic zones that extend 20 nm (37 km) seaward of each major haulout and major rookery in Alaska that is west of 144° W longitude.
5. Three special aquatic foraging areas: the Shelikof Strait area, the Bogoslof area, and the Segum Pass area, as specified at 50 CFR §226.202(c).

If project specific barges are required and depending on the barging route, vessels may travel through Steller sea lion critical habitat, however vessels will not approach within 3 nm (5.5 km) of major Steller sea lion rookeries or haulouts.

North Pacific Right Whales

The North Pacific right whale was listed as an endangered species under the ESCA on June 2, 1970 (35 FR 8491). Congress replaced the ESCA with the ESA in 1973, and North Pacific right whales continued to be listed as endangered.. NMFS later divided the listing into two separate endangered species: North Pacific right whales and North Atlantic right whales (73 FR 120424; March 6, 2008). Only the North Pacific right whale occurs in Alaska. Information on biology and habitat of the North Pacific right whale is available at:

<https://alaskafisheries.noaa.gov/pr/npr-whale> and
<http://www.adfg.alaska.gov/index.cfm?adfg=rightwhale.main>

The North Pacific right whale is distributed from Baja California to the Bering Sea with the highest concentrations in the Bering Sea, Gulf of Alaska, Okhotsk Sea, Kuril Islands, and Kamchatka area. They are primarily found in coastal or shelf waters, but sometimes travel into deeper waters. In the spring through the fall their distribution is dictated by the distribution of their prey. In the winter, pregnant females move to shallow waters in low latitudes to calve; the winter habitat of the rest of the population is unknown.

Right whales have been consistently detected in the southeastern Bering Sea around the localized area of designated critical habitat during spring and summer feeding seasons (Goddard and Rugh. 1998, Moore 2000, Moore et al. 2002, Zerbini et al. 2009, Rone et al. 2010, Rone et al. 2012). Of the 184 recent right whale sightings reported north of the Aleutian Islands, 182 occurred within the area designated as critical habitat in the Bering Sea.

Analysis of the data from bottom-mounted acoustic recorders deployed in October 2000, January 2006, May 2006, and April 2007 indicates that right whales remain in the southeastern Bering Sea from May through December with peak call detection in September (Munger and Hildebrand 2004, Stafford and Mellinger 2009). Recorders deployed from 2007 to 2013 have not yet been fully analyzed, but indicate the presence of right whales in the southeastern Bering Sea almost year-round, with a peak in August and a sharp decline in detections in early January (Bonnie Easley-Appleyard, NMFS Pers. Comm. Catherine Berchok, AFSC-NMML, 7600 Sand Point Way NE, Seattle, WA; unpublished data).

A study of right whale ear anatomy indicates a total possible hearing range of 10 Hz to 22 kHz (Parks et al. 2007). NMFS categorizes right whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz and 35 kHz (NMFS 2016b).

Additional information on North Pacific right whales can be found at:

<https://alaskafisheries.noaa.gov/pr/npr-whale>.

North Pacific Right Whale Critical Habitat

Critical habitat for the North Pacific right whale was designated in the eastern Bering Sea and in the Gulf of Alaska on April 8, 2008 (73 FR 19000). The physical or biological features (PBFs) deemed necessary for the conservation of North Pacific right whales include the presence of specific copepods (*Calanus marshallae*, *Neocalanus cristatus*, and *N. plumchris*), and euphausiids (*Thysanoessa Raschii*) which are primary prey items for the species, and physical

and oceanographic forcing that promote high productivity and aggregation of large copepod patches.

If project specific barges are required and depending on the barging route, barges may either travel through, or alternatively around, North Pacific right whale critical habitat. Additional information on North Pacific right whale critical habitat can be found at:

<https://alaskafisheries.noaa.gov/pr/npr-whale>.



Figure 1. North Pacific right whale critical habitat in the Bering Sea and Gulf of Alaska.

Western North Pacific And Mexico DPS Humpback Whales

The humpback whale was listed as endangered under the Endangered Species Conservation Act (ESCA) on December 2, 1970 (35 FR 18319). Congress replaced the ESCA with the ESA in 1973, and humpback whales continued to be listed as endangered. NMFS recently conducted a global status review and changed the status of humpback whales under the ESA. The Western North Pacific DPS (which includes a small proportion of humpback whales found in the Aleutian Islands, Bering Sea, and Gulf of Alaska) is listed as endangered; the Mexico DPS (which includes a small proportion of humpback whales found in the Aleutian Islands, Bering Sea, Gulf of Alaska, and Southeast Alaska) is listed as threatened, and the Hawaii DPS (which includes most humpback whales found in the Aleutian Islands, Bering Sea, Gulf of Alaska, and Southeast Alaska) is not listed (81 FR 62260; September 8, 2016). Critical habitat has not been designated for the Western North Pacific or Mexico DPSs.

The abundance estimate for humpback whales in the Bering Sea Aleutian Islands is estimated at 2,427 (CV= 0.2) animals, which includes whales from the Hawaii DPS (86.5%), Mexico DPS (11.3%), and Western North Pacific DPS (4.4%¹) (NMFS 2016a, Wade et al. 2016).

Unalaska Island is situated between Unimak and Umnak Passes, important humpback whale migration routes and feeding areas. Humpback whales tagged from August to September in Unalaska Bay, the waterbody adjacent to Captains Bay, were detected in Captains Bay (Kennedy et al. 2014). Given the documented abundance of humpback whales in and near Captains Bay, we assume humpback whales may be present during barging activities.

Additional information on humpback whale biology and natural history is available at:
<http://www.nmfs.noaa.gov/pr/species/mammals/whales/humpback-whale.html>
<http://alaskafisheries.noaa.gov/pr/humpback>
http://www.fisheries.noaa.gov/pr/sars/pdf/stocks/alaska/2015/ak2015_humpback-cnp.pdf

Fin Whales

The fin whale was listed as an endangered species under the ESCA on December 2, 1970 (35 FR 18319), and continued to be listed as endangered following passage of the ESA.

Coastal and pelagic catch data from the first half of the twentieth century indicate that fin whales were not uncommon near Unalaska Bay and around Unalaska Island (Nishiwaki 1966, Reeves et al. 1985); however, fin whales have been documented infrequently around Unalaska Island since whaling ended (Stewart et al. 1987, Zerbini et al. 2006). Summer aerial surveys of arctic marine mammals (ASAMM) indicate the presence of fin whales west of Kivalina; survey effort in this region does not extend south of 67° N, west of 169° W or east of 166° W (Figure 2). It therefore seems likely that barges may observe fin whales while in transit.

¹ For endangered Western North Pacific DPS we chose the upper limit of the 95% confidence interval from the Wade et al. (2016) estimate in order to be conservative due to their status.

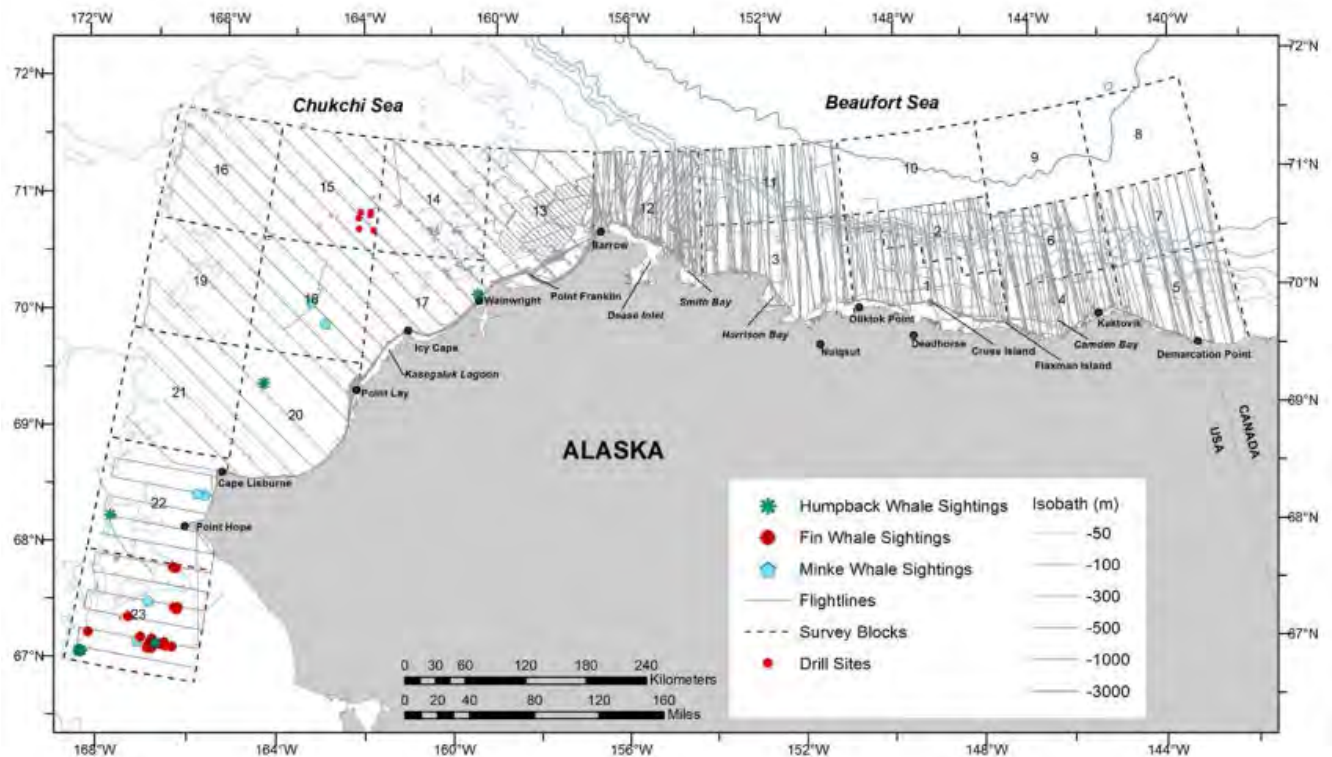


Figure 2 ASAMM 2015 humpback, fin, and minke whale sightings, with transect, search, and circling effort. Source: BOEM 2017

Fin whales produce a variety of low-frequency sounds in the 10 Hz to 0.2 kHz range. While there is no direct data on hearing in low-frequency cetaceans, the applied frequency range is anticipated to be between 7 Hz and 35 kHz (NMFS 2016b). Synthetic audiograms produced by applying models to X-ray computed tomography scans of a fin whale calf skull indicate the range of best hearing for fin whale calves to range from approximately 20 Hz to 10 kHz, with maximum sensitivities between 1 to 2 kHz (Cranford and Krysl 2015). Additional information on fin whale biology and habitat is available at:

- <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/finwhale.htm>
- http://www.fisheries.noaa.gov/pr/sars/pdf/stocks/alaska/2014/ak2014_finwhale.pdf

Sperm Whales

The sperm whale was listed as an endangered species under the ESCA on December 2, 1970 (35 FR 18319), and continued to be listed as endangered following passage of the ESA.

Sperm whales are primarily found in deep waters and sightings of sperm whales in water less than 300 m (984 ft) are uncommon. If project specific barges are required, sperm whales may be encountered along the barging route of the proposed action.

Four of the most common threats cited for Southeast Alaska sperm whales are interactions with commercial fishing, whale watching, acoustic disturbance and ship strikes (NMFS 2010). Neilson et al. (2012) found that out of the 89 defined whale strikes documented from 1978-2011 only one of those was a sperm whale and the fate of that whale is unknown. The level of effects on sperm whales from ship noise is not fully understood, but effects are expected to be similar to those described for humpback whales (NMFS 2010). From 2006-2010, there were 11 sperm whales mortalities reported in the Alaska Region Stranding Program (Allen and Angliss 2015). However the cause of death could not be determined for any of these whales.

Sperm whales produce a variety of vocalizations ranging from 0.1 to 20 kHz (Weilgart and Whitehead 1993, Goold and Jones 1995, Møhl et al. 2003, Weir et al. 2007). Sperm whales are odontocetes (tooth whales) and are considered mid-frequency cetaceans with an applied frequency range of 150 Hz to 160 kHz (NMFS 2016b). The only direct measurement of hearing was from a young stranded individual from which auditory evoked potentials were recorded and indicated a hearing range of 2.5 to 60 kHz (Carder and Ridgway 1990). Additional information on sperm whale biology and habitat is available at:

<http://www.fisheries.noaa.gov/pr/species/mammals/whales/sperm-whale.html>

http://www.fisheries.noaa.gov/pr/sars/pdf/stocks/alaska/2014/ak2014_spermwhale.pdf

Bowhead Whale

The bowhead whale was listed as endangered under the ESCA on December 2, 1970 (35 FR 18319), and continued to be listed as endangered following passage of the ESA. Bowhead whales in Alaskan waters comprise the Western Arctic stock. Western Arctic bowhead whales are distributed in seasonally ice-covered waters of the Arctic and near-Arctic, generally north of 60°N and south of 75°N. Critical habitat has not been designated for the bowhead whale.

The 2011 ice-based abundance estimate was 16,892 (CV = 0.2442) indicating a minimum population estimate for the Western Arctic stock of bowhead whales of 13,796 (Allen and Angliss 2015). The population may be approaching carrying capacity despite showing no sign of a slowing in the population growth rate (Brandon and Wade 2006). The current estimate for the annual rate of increase for this stock of bowhead whales is 3.2-3.4% (George et al. 2004, Schweder et al. 2010).

In Alaska, the majority of bowhead whales migrate annually from northern Bering Sea wintering areas (December to March), through the Chukchi Sea in spring (April to May), to the Beaufort Sea in waters off Alaska and Canada, where they spend much of the summer (June through early to mid-October) before returning to Bering Sea wintering areas in fall (September through December).

Bowhead whales have an extensive and varied acoustic repertoire that includes simple calls, call sequences, and complex songs. NMFS categorizes bowhead whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz and 35 kHz (NMFS 2016b). Inferring from their vocalizations, bowhead whales should be most sensitive to frequencies between 20 Hz-5 kHz, with maximum sensitivity between 100-500 Hz (Erbe 2002b). Additional information on bowhead whale biology and habitat is available at:

<http://www.fisheries.noaa.gov/pr/species/mammals/whales/bowhead-whale.html>
http://www.nmfs.noaa.gov/pr/sars/pdf/stocks/alaska/2014/ak2014_bowhead.pdf

Effects of the Action

For purposes of the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is “not likely to adversely affect” listed species or critical habitat is that all of the effects of the action are expected to be insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate, and should never reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. Beneficial effects are contemporaneous positive effects without any adverse effects to the species.

Physical Presence

Temporary disturbance could occur during project specific barging (if project specific barging is required), small vessel transit within the Kivalina Lagoon, and fill placement activities. An animal is disturbed when human activities alter an animal’s natural behavior. A listed species could react to project activities by either investigating the vessel or project equipment or by being startled from project activities. Disturbance from project activities could temporarily increase stress levels or displace an animal from its habitat.

If project specific barges are required, they will travel along transit routes that are frequently used by many ocean-going vessels, and small vessels used within Kivalina Lagoon will travel slowly (< 10kn). Neither barges nor small construction related vessels purposely will approach marine mammals, and will implement the previously detailed mitigation measures in an effort to avoid marine mammals or minimize the impact of the physical presence of humans, vessels and equipment on marine mammals. In-work work (i.e. fill placement activities) will be delayed or stopped if a marine mammal approaches the 50 m (164 ft) fill placement exclusion zone. Taken together, we have determined that the physical presence of humans, vessels and equipment associated with this project will be very small, and is therefore insignificant.

Acoustic Disturbance

Project specific barging and small vessels

Underwater noise from barges may temporarily disturb or mask communication of bearded seal, and ringed seal, western distinct population segment (DPS) Steller sea lion, North Pacific right whale, Mexico DPS humpback whale, western North Pacific DPS humpback whale, fin whale, sperm whale, and bowhead whale. Construction-specific vessels in the lagoon would create underwater noise, which may result in the disturbance or communication masking of ringed or bearded seals. Other listed pinniped and whale species are not expected to occur within the lagoon.

Behavioral reactions from vessels can vary depending on the type and speed of the vessel, the spatial relationship between the animal and the vessel, the species, and the behavior of the animal prior to the disturbance from the vessel. The effects of boat noise on ringed, and bearded

seal behavior are not well known. During the open water season in the Chukchi Sea, bearded and ringed seals are commonly observed close to vessels where received sound levels are low (e.g., (Harris et al. 2001, Moulton and Lawson 2002, Brees et al. 2010, Funk et al. 2010b). Funk et al. (2010a) noted among vessels operating in the Chukchi Sea where received sound levels were <120 dB, 40% of observed seals showed no response to a vessel's presence, slightly more than 40% swam away from the vessel, 5% swam towards the vessel, and the movements of 13% of the seals were unidentifiable. Bisson et al. (2013) reported a total of 938 seals observed during vessel-based monitoring of exploratory drilling activities by Shell in the Chukchi Sea during the 2012 open water season. The majority of seals (42%) responded to moving vessels by looking at the vessel, while the second most noted behavior was no observable reaction (38%). The majority of seals (58%) showed no reaction to stationary vessels, while looking at the vessel was the second most common behavioral response (38%). Other common reactions to both moving and stationary vessels included splashing and changing direction.

Studies on other seal species have shown displacement due to the presence of high levels of vessel traffic in the case of grey seals (Anderwald et al. 2013). Harbor seals are more likely to be disturbed and enter water from a haulout if vessels are within 150 m than when vessels are farther away (Mathews et al. 2016). Currently, all boat traffic in the lagoon is related to community activities. Reductions in boat speeds have been shown to reduce the extent of underwater noise (e.g., Houghton et al. 2015).

It is expected that vessel noise from barges if project specific barges are required, are the only project specific activity that may result in potential impacts to whales and Steller sea lions, due to the rest of the work being located inside of Kivalina Lagoon. If animals are exposed to vessel noise they may exhibit slight deflection from the noise source, engage in lowlevel avoidance behavior, short-term vigilance behavior, or short-term masking behavior, but these behaviors are not likely to result in adverse consequences for the animals. Individual whale's past experiences with vessels appear to be important for individual whale response (Shell 2012). Vessels moving at slow speeds and avoiding rapid changes in direction may be tolerated by some species. Other individuals may deflect around vessels and continue on their migratory path. Humpback whale reactions to approaching boats are variable, ranging from approach to avoidance (Payne 1978, Salden 1993). Whales have been known to tolerate slow-moving vessels within several hundred meters, especially when the vessel is not directed toward the animal and when there are no sudden changes in direction or engine speed (Wartzok et al. 1989, Richardson et al. 1995a, Heide-Jorgensen et al. 2003).

Recreational boats currently use the lagoon and are active when seals are present. We have also considered the likelihood that an increase in vessel traffic related to the activities associated with the proposed project would generally increase the risk of interactions between marine mammals and vessels in the action area, in addition to baseline conditions. The use of a barge will cause a small, localized, temporary increase in vessel traffic. When this project is completed, it will not result in an increased number of vessels in the Action Area.

If project specific barges are required, barging activities associated with the proposed action would be transitory and temporary. Barges will either avoid North Pacific right whale critical habitat or travel through critical habitat at speeds less than 10 kn (18.52 km/h) and with

designated PSOs. Small vessels within the lagoon will be traveling at speeds of less than 10 kn (18.52 km/h). Barges and vessels will not purposely approach a marine mammal within 100 yd (91.4m) or a North Pacific right whale within 874 yd (800 m). The vessel operator will follow 50 CFR 224.103 regulations and NMFS marine mammal viewing guidelines. Therefore, we conclude that acoustic disturbance from project specific barges and small vessels is insignificant.

Vehicle and Equipment Noise

Bearded and ringed seals may be exposed to noise from construction vehicles and out of water equipment. If constructed, the bridge, haul route (ice road) between DMTS to Kivalina, and crossing the Kivalina Lagoon may expose ringed and bearded seals of all life stages to vehicular noise. Ringed seals have acute in-air hearing (Sills et al. 2014; Sills et al. 2015). In-air hearing of bearded seals has not been studied, but due to the wide frequency range of their vocalizations (Risch et al. 2007), similar in-air hearing capabilities to ringed seals may be assumed. Vehicular noise would be audible to species present and may result in changes in behavior, although behavioral responses can vary widely depending on context and novelty of the noise source (Ellison et al. 2012; Richardson et al. 1995; Southall et al. 2007). Densities of basking ringed seals present in spring during active use of a proximate ice road did not vary between years (Moulton et al. 2005). Harwood et al. (2007) also report no avoidance of an ice road by ringed seals in the south-eastern Beaufort Sea, suggesting they were not displaced by in-air noise from the vehicular traffic. A contrasting study concluded that in-air noise from snow machines, when within 2.8 km, resulted in most ringed seals leaving their lairs (Kelly et al. 1988). Given the current presence of boat traffic within the lagoon in the open water season and the presence of snow machines during the winter, seals in the Action Area would have been previously exposed to noise. Seals would be expected to habituate to this new noise regime (Moulton et al. 2005), and no long-term changes of seal presence and behavior due to vehicle noise is expected.

Effects on ringed and bearded seals from in-air vehicle and out of water equipment noise within the lagoon are expected to be minimal given the current human presence near and around the lagoon. Effects from the haulout route are expected to be minimized by maintaining the haul route on barrier islands and on bottom fast sea ice. Therefore, we conclude that acoustic disturbance from project specific vehicles and equipment is insignificant.

Fill Placement

Placement of fill in water would also create underwater noise, but is anticipated to be at levels below that of boat noise. The anticipated specific levels of these noises are not known for this project, but it is unlikely that their levels would result in injury to seals within the lagoon. Levels of underwater noise may result in disturbance of marine mammals, although ringed seals were not displaced by slope preparations and deposition of gravel during construction of an artificial island in the Beaufort Sea (Blackwell et al. 2004). Ice associated species are naturally exposed to underwater noise from ice movement and cracking, with varying intensities, depending on conditions and scenario (Richardson et al. 1995). For example, an active pressure ridge produced source levels of 124–137 dB re 1 μ Pa m in the 4 and 8 Hz tones (Buck and Greene 1979).

The project will implement a 50 m (164 ft) fill placement exclusion zone, therefore we conclude that acoustic disturbance from fill placement is insignificant.

Physical Effects

Vessel Strike

Barges and small vessels transiting the marine environment have the potential to collide with, or strike, marine mammals (Laist et al. 2001, Jensen and Silber 2003). From 1978-2012, there were at least 108 recorded whale-vessel collisions in Alaska, with the majority occurring in Southeast Alaska (Neilson et al. 2012). Among larger whales, humpback whales are the most frequent victims of ship strikes in Alaska, accounting for 86% of all reported collisions. Fin whales accounted for 2.8% of reported collisions, gray whales 0.9%, and sperm whale 0.9%. Six of the whales (5.6%) were unidentifiable and the remaining are of non-listed species. The probability of strike events depends on the frequency, speed, and route of the marine vessels, as well as distribution of marine mammals in the area. Vanderlaan and Taggart (2007) used observations to develop a model of the probability of lethal injury based upon vessel speed. They projected that the chance of lethal injury to a whale struck by a vessel is approximately 80 percent at vessel speeds over 15 kn (27.78 km/hr) and approximately 20 percent at 8.6 kt (15.92 km/hr).

Although risk of ship strike has not been identified as a significant concern for Steller sea lions (Loughlin and York 2000), the recovery plan for this species states that Steller sea lions may be more susceptible to ship strike mortality or injury in harbors or in areas where animals are concentrated [e.g., near rookeries or haulouts; (NMFS 2008)]. To minimize this risk, project vessels will not travel within 3 nm (5.5 km) of major Steller sea lion haulouts or rookeries.

Recreational boats currently use the lagoon and are active when seals are present. The possibility of vessel strikes of seals in the Kivalina Lagoon is minimal given that vessels will travel at speeds of less than 10 kn (18.52 km/h) and per the data analyzed in Alaska waters which documented no ship strikes of bearded, or ringed seals over a five-year period (Helker et al. 2016, 2017).

Project specific barges and vessels will not approach any species of whales or pinnipeds within 100 yd (91.4m) or a North Pacific right whale within 874 yd (800 m). Project specific barges will either avoid North Pacific right whale designated critical habitat or alternatively travel through designated critical habitat at speeds less than 10 kn (18.52 km/h) and with designated PSOs. Small vessels within Kivalina lagoon will be traveling at speeds of less than 10 kn (18.52 km/h). The vessel operator will follow 50 CFR 224.103 regulations and NMFS marine mammal viewing guidelines. Therefore, we have determined that this action is extremely unlikely to result in a vessel strike of listed marine mammals and we conclude that these effects are discountable.

Habitat Alteration

Bearded seal, and ringed seal may be exposed to the effect of material being placed on the shoreline or bottom of the lagoon, but whales will not. Adults or juvenile seals may be exposed to effects of habitat alteration during foraging trips near the Wulik River.

The presence of the lagoon-crossing structure may result in an ecological and physical alteration of marine mammal habitat in the lagoon as it may change distribution of prey species, and movement of seals. It is not known if seals would swim through culverts, but the presence of a bridge over the deepest lagoon channel with water flowing freely beneath it is not expected to

impede their passage (e.g., Sheldon et al. 2013). Marine mammal use of habitat on either side of in-water structures, and their swimming beneath such structures, has been observed for other projects (e.g., Twentymile River Bridge, Cook Inlet, Alaska; HDR Alaska Inc. 2010). The proposed design of the lagoon crossing is not anticipated to negatively affect bearded, or ringed seal habitat use and foraging as it would accommodate the passage of both seals and their prey. Prey densities are not anticipated to be adversely affected to a measurable degree by this project.

Ringed seals are visual hunters and increases in turbidity from fill or culvert placement may temporarily impede visibility within very small areas within their preferred feeding habitats. However, pinnipeds (including ringed seals and bearded seals) have highly developed sensory organs (i.e., vibrissae) which likely assist with foraging in dark or turbid conditions (e.g., Hyvärinen 1989; Marshall et al. 2006). As such, any changes in behavior caused by increased turbidity in the lagoon are unlikely to result in measurable harmful effects on seals. Further, if this activity occurs in winter, effects would be limited to ringed seals as they are the only marine mammal species likely to be present.

The location and presence of the proposed causeway and lagoon crossing is not anticipated to measurably affect bearded or ringed seals or their habitat because the project is designed to facilitate movement of seals and their prey within the lagoon beneath the open-span channel crossing, and seal prey densities within the lagoon and in surrounding waters are not anticipated to be adversely affected to a measurable degree.

Given the causeway's design, and incorporation of design elements to ensure passage between the North and South side of Kivalina Lagoon, the shallow waters in which fill will be placed and the implementation of a 50 m (164 ft) exclusion zone during fill placement activities, we conclude that effects of the causeway and bridge on ringed and bearded seals and their habitat (including prey abundance) will be very small, and is therefore insignificant.

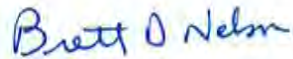
Hunting Pressure

A permanent structure across the lagoon would increase lagoon accessibility. The location of the crossing would span an area of the lagoon that is currently accessible via boat during the open water period. However, State of Alaska Fish and Game regulations state that shooting from, on, or across a highway is illegal (5AAC 92.080; ADF&G 2006). Installation of signs along the road are an easy method of reminding the public of the regulations. As a result, legal hunting pressure would remain unchanged as a result of this project, and effects from changes in hunting of listed species is therefore insignificant and discountable.

Conclusions

Based on the above, it is expected that potential effects of the proposed action will be insignificant and/or discountable once mitigation measures are in place. As a result, we have determined that the Kivalina Evacuation and School Site Access Road project may affect, but is not likely to adversely affect, any listed species or critical habitat under NMFS's jurisdiction. We have used the best scientific and commercial data available to complete this assessment. We request your concurrence with this determination.

Sincerely,



Brett Nelson
Northern Region Environmental Manager

cc: Paul Karczmarczyk, DOT&PF
Jonathan Hutchinson, P.E., DOT&PF
Bonnie Easley-Appleyard, NMFS
Greg Balogh, NMFS

Literature Cited

- ADF&G. 2015. *Movements of ice seals: Animated locations of ice seals tagged with satellite transmitters and seasonal changes in sea ice in the Bering, Chukchi and Beaufort Seas for 2014*. <https://vimeo.com/116608370>. Accessed on August 19, 2107.
- Allen, B.M., and R.P. Angliss. 2015. *Alaska marine mammal stock assessments, 2014*. U.S. Dep. Commer., NOAA Tech. Memo. NMFSAFSC-301, 304 p. doi:10.7289/V5NS0RTS.
- Anderwald, P., A. Brandecker, M. Coleman, C. Collins, H. Denniston, M. Damien Haberlin, M. O'Donovan, R. Pinfield, F. Visser, and L. Walshe. 2013. Displacement response of a mysticete, an odontocete, and a phocid seal to construction related vessel traffic. *Endangered Species Research*, 21: 231-240.
- Au, W. W. L. 2000. Hearing in whales and dolphins: An overview. Pages 1-42 in W. W. L. Au, A. N. Popper, and R. R. Fay, editors. *Hearing by Whales and Dolphins*. Springer-Verlag, New York.
- Au, W. W. L., A. A. Pack, M. O. Lammers, L. M. Herman, M. H. Deakos, and K. Andrews. 2006. Acoustic properties of humpback whale songs. *Journal of the Acoustical Society of America* 120:1103-1110.
- Bengston, J. L., Boveng, P. L., Hiruki-Raring, L. M., Laidre, K. L., C., P., & Simpkins, M. A. 2000. *Abundance and distribution of ringed seals (Phoca hispida) in the coastal Chukchi Sea*. (AFSC Processed Rep. 2000-11). 7600 Sand Point Way NE, Seattle, WA 98115: Alaska Fisheries Science Center. pp. 149-160.
- Bengtson, J.L., L.M. Hiruki-Raring, M.A. Simpkins, and P.L. Boveng. 2005. *Ringed and bearded seal densities in the eastern Chukchi Sea, 1999-2000*. *Polar Biology* 28: 833-845.
- Bisson, L. N., H.J. Reider, H.M. Patterson, M. Austin, J.R. Brandon, T. Thomas, and M. L. Bourdon. 2013. *Marine mammal monitoring and mitigation during exploratory drilling by Shell in the Alaskan Chukchi and Beaufort seas, July–November 2012: Draft 90-Day Report*. Editors: D.W. Funk, C.M. Reiser, and W.R. Koski. LGL Rep. P1272D–1. Rep. from LGL Alaska Research Associates Inc., Anchorage, AK, USA, and JASCO Applied Sciences, Victoria, BC, Canada, for Shell Offshore Inc, Houston, TX, USA, Nat. Mar. Fish. Serv., Silver Spring, MD, USA, and U.S. Fish and Wild. Serv., Anchorage, AK, USA. 266 pp, plus appendices.
- Blackwell, S.B., J.W. Lawson, and M.T. Williams. 2004. *Tolerance by ringed seals (Phoca hispida) to impact pipe-driving sounds at an oil production island*. *Journal of the Acoustical Society of America*, 115(5): 2346-2357.
- Blees, M. K., K. G. Hartin, D. S. Ireland, and D. Hannay. 2010. *Marine mammal monitoring and mitigation during open water seismic exploration by Statoil USA E&P Inc. in the Chukchi Sea, August–October 2010: 90-day report*. Rep. from LGL Alaska Research Associates Inc., LGL Ltd., and JASCO Research Ltd. for Statoil USA E&P Inc., Nat. Mar. Fish. Serv., and U.S. Fish and Wild. Serv.
- BOEM. 2011. *Biological Evaluation for Oil and Gas Activities on the Beaufort and Chukchi Sea Planning Areas*. OCS EIS/EA BOEMRE 2011. Alaska Outer Continental Shelf.

- Boveng, P.L. and M.F. Cameron. 2013. *Pinniped movements and foraging: seasonal movements, habitat selection, foraging and haul-out behavior of adult bearded seals in the Chukchi Sea*. Final Report, BOEM Report 2013-01150. Bureau of Ocean Energy Management, Alaska Outer Continental Shelf Region, Anchorage, Alaska, USA. 91 Pp + Appendix.
- Brandon, J., and P. Wade. 2006. Assessment of the Bering-Chukchi-Beaufort Seas stock of bowhead whales using Bayesian model averaging. *Journal of cetacean research and management* 8:225.
- Buck, B.M. and C.R. Greene. 1979. *Source level measurements of an arctic sea ice pressure ridge*. The Journal of the Acoustical Society of America, 66(S1): S25-S26.
- Cameron, M. F., J. L. Bengtson, P. L. Boveng, J. K. Jansen, B. P. Kelly, S. P. Dahle, E. A. Logerwell, J. E. Overland, C. L. Sabine, G. T. Waring, and J. M. Wilder. 2010. Status review of the bearded seal (*Erignathus barbatus*). U.S. Department of Commerce, Seattle, WA.
- Carder, D. A., and S. H. Ridgway. 1990. Auditory brainstem response in a neonatal sperm whale, *Physeter* spp. *Journal of the Acoustical Society of America* 88:S4.
- Cranford, T. W., and P. Krysl. 2015. Fin whale sound reception mechanisms: skull vibration enables low-frequency hearing. *PLoS ONE* 10:e0116222.
- Crawford, J.A., K.J. Frost, L.T. Quakenbush, and A. Whiting. 2012. *Different habitat use strategies by subadult and adult ringed seals (Phoca hispida) in the Bering and Chukchi Sea*. *Polar Biology* 35: 241-255.
- Ellison, W.T., B.L. Southall, C.W. Clark and A.S. Frankel. 2012. *A new context-based approach to assess marine mammal behavioural responses to anthropogenic sounds*. *Conservation Biology* 26: 21-28.
- Erbe, C. 2002a. Hearing abilities of baleen whales. Defense Research and Development Canada.
- Fedoseev, G. A. 1984. Population structure, current status, and perspective for utilization of the ice-inhabiting forms of pinnipeds in the northern part of the Pacific Ocean. Pages 130-146 in A. V. Yablokov, editor. *Marine mammals*. Nauka, Moscow.
- Frazer, L. N., and E. Mercado III. 2000. A sonar model for humpback whale song. *IEEE Journal of Oceanic Engineering* 25:160-182.
- Funk, D. W., D. S. Ireland, R. Rodrigues, and W. R. Koski. 2010a. Joint monitoring program in the Chukchi and Beaufort Seas, open water seasons, 2006-2008: Draft Final Report.
- Funk, D. W., R. Rodrigues, D. S. Ireland, and W. R. Koski. 2010b. Summary and assessment of potential effects on marine mammals. Pages 11-11 - 11-59 in I. D. Funk DW, Rodrigue R, and Koski WR, editor. *Joint Monitoring Program in the Chukchi and Beaufort seas, open water seasons, 2006–2008*.
- Furgal, C. M., S. Innes, and K. M. Kovacs. 1996. Characteristics of ringed seal, *Phoca hispida*, subnivean structures and breeding habitat and their effects on predation. *Canadian Journal of Zoology* 74:858-874.
- George, J., J. Zeh, R. Suydam, and C. Clark. 2004. Abundance and population trend (1978-2001) of western arctic bowhead whales surveyed near Barrow, Alaska. *Marine Mammal Science* 20:755-773.

- Givens, G., S. Edmondson, J. George, R. Suydam, R. Charif, A. Rahaman, D. Hawthorne, B. Tudor, R. DeLong, and C. Clark. 2013. Estimate of 2011 abundance of the Bering-Chukchi-Beaufort Seas bowhead whale population. Paper SC/65a/BRG01 (Scientific Committee of the International Whaling Commission 65a, Jeju Island, Korea).
- Golder Associates. 2015. *Kivalina Causeway Geotechnical Report, Kivalina, Alaska*. Submitted To: US Army Corps of Engineers, Alaska District
- Goddard, P. D., and D. J. Rugh. 1998. A group of right whales seen in the Bering Sea in July 1996. *Marine Mammal Science* 14:344-349.
- Goold, J. C., and S. E. Jones. 1995. Time and frequency domain characteristics of sperm whale clicks. *Journal of the Acoustical Society of America* 98:1279-1291.
- Harris, R. E., G. W. Miller, and W. J. Richardson. 2001. Seal responses to airgun sounds during summer seismic surveys in the Alaskan Beaufort Sea. *Marine Mammal Science* 17:795- 812.
- Harwood, L., T.G. Smith and H. Melling. 2007. *Assessing the potential effects of near shore hydrocarbon exploration on Ringed Seals in the Beaufort Sea Region 2003-2006*. Environmental Studies Research Funds Report No. 162. 103 pp.
- HDR Alaska, Inc. 2010. *Request for letter of authorization under Section 101(a)(5) of the Marine Mammal Protection Act incidental to construction of the Knik, Arm crossing project in Upper Cook Inlet, Alaska*. Submitted to Office of Projected Resources, National Marine Fisheries Service (NMFS).
- Helker, V.T., M.M. Muto, and L.A. Jemison. 2016. *Human-caused injury and mortality of NMFS-managed Alaska marine mammal stocks, 2010-2014*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-315, 89 p. doi:10.7289/V5/TM-AFSC-315.
- Heptner, L. V. G., K. K. Chapskii, V. A. Arsenev, and V. T. Sokolov. 1976a. Bearded seal. *Erignathus barbatus* (Erxleben, 1777). Pages 166-217 in L. V. G. Heptner, N. P. Naumov, and J. Mead, editors. *Mammals of the Soviet Union. Volume II, Part 3-- Pinnipeds and Toothed Whales, Pinnipedia and Odontoceti*. Vysshaya Shkola Publishers, Moscow, Russia.
- Houghton, J., M.M. Holt, D.A. Giles, M.B. Hanson, C.K. Emmons, J.T. Horgan, T.A. Branch and G.R. Van Blaricom. 2015. *The relationship between vessel traffic and noise levels received by killer whales (Orcinus orca)*. PLoS ONE 10(12): e0140119. doi:10.1371/journal.pone.0140119.
- Huntington, H.P., M. Nelson and L.T. Quakenbush. 2016. *Traditional knowledge regarding ringed seals, bearded seals, walrus, and bowhead whales near Kivalina, Alaska*. Final report to the Eskimo Walrus Commission, the Ice Seal Committee, and the Bureau of Ocean Energy Management for contract #M13PC00015. 8 pp.
- Hyvärinen, H. 1989. *Diving in darkness: whiskers as sense organs of the ringed seal (Phoca hispida saimensis)*. *Journal of Zoology* 218.4: 663-678.

- Jensen, A. S., and G. K. Silber. 2003. Large whale ship strike database. NOAA Technical Memorandum NMFS-OPR:39
- Kelly, B. P. 1988. Ringed seal, *Phoca hispida*. Pages 57-75 in J. W. Lentifer, editor. Selected Marine Mammals of Alaska: Species Accounts with Research and Management Recommendations. Marine Mammal Commission, Washington, D. C.
- Kelly, B.P., J.L. Bengtson, P.L. Boveng, M.F. Cameron, S.P. Dahle, J.K. Jansen, E.A. Logerwell, J.E. Overland, C.L. Sabine, G.T. Waring, and J.M. Wilder. 2010. *Status review of the ringed seal (Phoca hispida)*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-212, 250 pp.
- Kelly, B.P., J.J. Burns and L.T. Quakenbush. 1988. *Responses of ringed seals (Phoca hispida) to noise disturbance*. Port and ocean engineering under arctic conditions, 2: 27-38.
- Kennedy, A. S., A. N. Zerbini, B. K. Rone, and P. J. Clapham. 2014. Individual variation in movements of satellite-tracked humpback whales *Megaptera novaeangliae* in the eastern Aleutian Islands and Bering Sea. *Endangered Species Research* 23:187-195.
- Kipple, B, and C. Gabriele. 2003. *Glacier Bay Watercraft Noise*. Prepared for Glacier Bay National Park and Preserve <https://www.nps.gov/glba/learn/nature/upload/GBWatercraftNoiseRpt.pdf>
- Laist, D. W., A. R. Knowlton, J. G. Mead, A. S. Collet, and M. Podesta. 2001. Collisions between ships and whales. *Marine Mammal Science* 17:35-75.
- Loughlin, T. R., and A. E. York. 2000. An accounting of the sources of Steller sea lion, *Eumetopias jubatus*, mortality. *Marine Fisheries Review* 62:40-45.
- Lydersen, C. 1998. Status and biology of ringed seals (*Phoca hispida*) in Svalbard. Pages 46-62 in M. P. Heide-Jørgensen and C. Lydersen, editors. *Ringed Seals in the North Atlantic*. NAMMCO, Tromsø, Norway.
- Lydersen, C. and I. Gjertz. 1986. Studies of the ringed seal (*Phoca hispida* Schreber 1775) in its breeding habitat in Kongsfjorden, Svalbard. *Polar Research* 4:57-63.
- Marshall, C.D., H. Amin, K.M. Kovacs and C. Lydersen. 2006. *Microstructure and innervation of the mystacial vibrissal follicle sinus complex in bearded seals, Erignathus barbatus (Pinnipedia: Phocidae)*. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology. 288(1): 13–25.
- Mathews, E.A., L.A. Jemison, G.W. Pendleton, K.M. Blejwas, K.E. Hood and K.L. Raum-Suryan. 2016. *Haul-out patterns and effects of vessel disturbance on harbor seals (Phoca vitulina) on glacial ice in Tracy Arm, Alaska*. *Fishery Bulletin*, 114: 186-202.
- Møhl, B., M. Wahlberg, P. T. Madsen, A. Heerfordt, and A. Lund. 2003. The monopulsed nature of sperm whale clicks. *Journal of the Acoustical Society of America* 114:1143-1154.
- Moore, S. 2000. Detecting right whales using passive acoustics in SE Bering Sea.

- Moore, S. E., J. M. Waite, N. A. Friday, and T. Honkalehto. 2002. Cetacean distribution and relative abundance on the central-eastern and the southeastern Bering Sea shelf with reference to oceanographic domains. *Progress in Oceanography* 55:249-261.
- Moulton, V.D., W.J. Richardson, R.E. Elliott, T.L. McDonald, C. Nations, M.T. Williams. 2005. *Effects of an offshore oil development on local abundance and distribution of ringed seals (Phoca hispida) of the Alaskan Beaufort Sea*. *Marine Mammal Science* 21: 217-242.
- Moulton, V. D. and J. W. Lawson. 2002. Seals, 2001. in W. J. Richardson, editor. *Marine mammal and acoustical monitoring of Western Geco's open water seismic program in the Alaskan Beaufort Sea, 2001*. LGL, Inc.
- Munger, L., and J. Hildebrand. 2004. Final Report: Bering Sea Right Whales: Acoustic recordings and public outreach. NPRB Grant T-2100.
- Muto, M.M., V.T. Helker, R.P. Angliss, B.A. Allen, P.L. Boveng, J.M. Breiwick, M.F. Cameron, P.J. Clapham, S.P. Dahle, M.E. Dahlheim, B.S. Fadely, M.C. Ferguson, L.W. Fritz, R.C. Hobbs, Y.V. Ivashchenko, A.S. Kennedy, J.M. London, S.A. Mizroch, R.R. Ream, E.L. Richmond, K.E.W. Sheldon, R.G. Towell, P.R. Wade, J.M. Waite, and A.N. Zerbini. 2016. *Alaska marine mammal stock assessments, 2015*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS AFSC-323, 300 p. doi:10.7289/V5/TM-AFSC-323.
- Neilson, J. L., C. M. Gabriele, A. S. Jensen, K. Jackson, and J. M. Straley. 2012. Summary of reported whale-vessel collisions in Alaskan waters. *Journal of Marine Biology*:106282.
- Nelson, R. R., J. J. Burns, and K. J. Frost. 1984. The bearded seal (*Erignathus barbatus*). Pages 1-6 in J. J. Burns, editor. *Marine Mammal Species Accounts, Wildlife Technical Bulletin*. Alaska Department of Fish and Game, Juneau, AK.
- Nishiwaki, M. 1966. Distribution and migration of the larger cetaceans in the North Pacific as shown by Japanese whaling results. Pages 171-191 *Whales, Dolphins and Porpoises*. University of California Press, Berkeley.
- NMFS. 2008. Recovery Plan for Steller sea lion, Eastern and Western Distinct Population Segments (*Eimetiopias jubatus*). National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2010. Final recovery plan for the sperm whale (*Physeter macrocephalus*). National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Protected Resources, Silver Spring, Maryland.
- NMFS. 2016a. Occurrence of Distinct Population Segments (DPSs) of Humpback Whales off Alaska. National Marine Fisheries Service, Alaska Region. Revised December 12, 2016.
- NMFS 2016b. Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing: Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-55, 178 p.

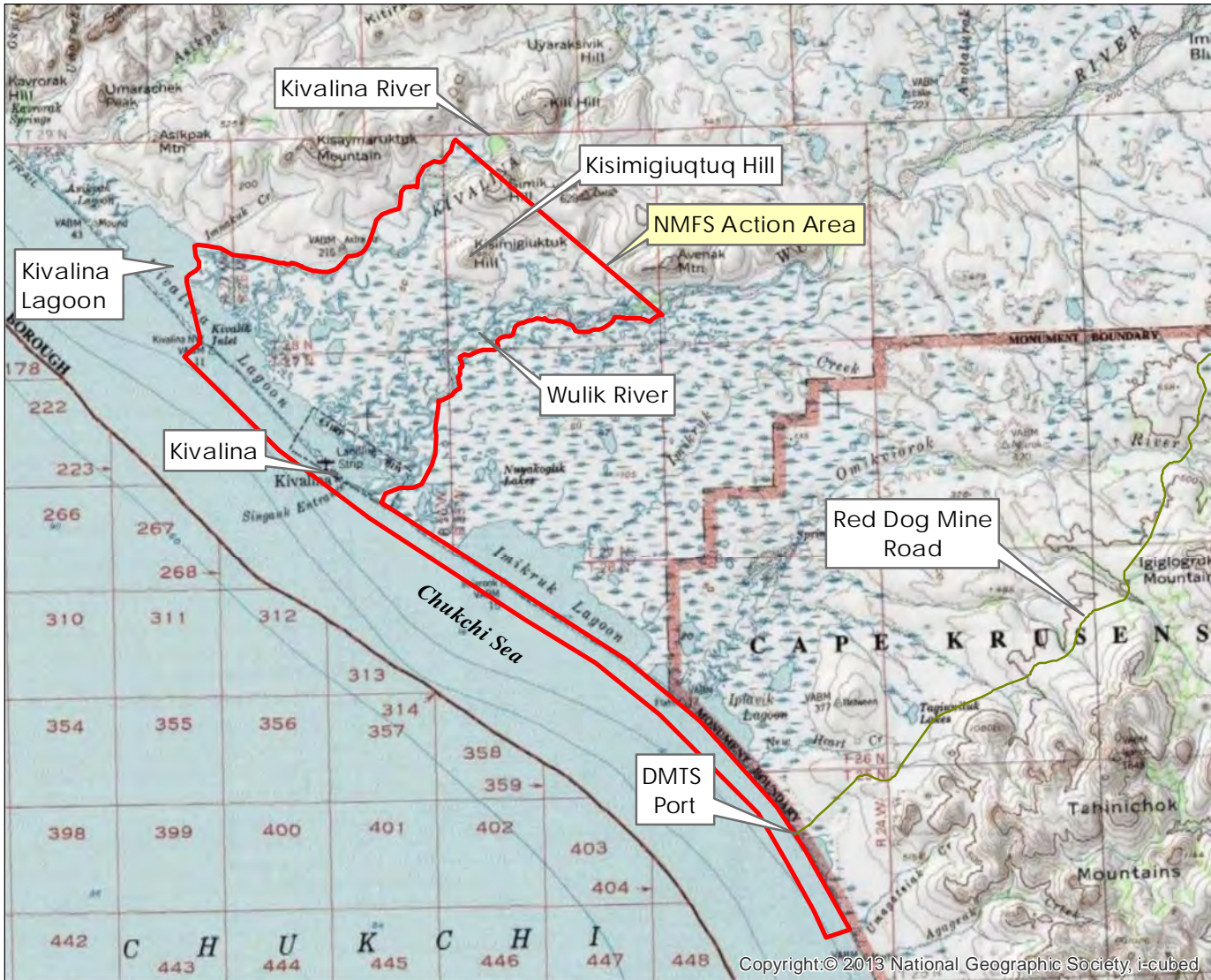
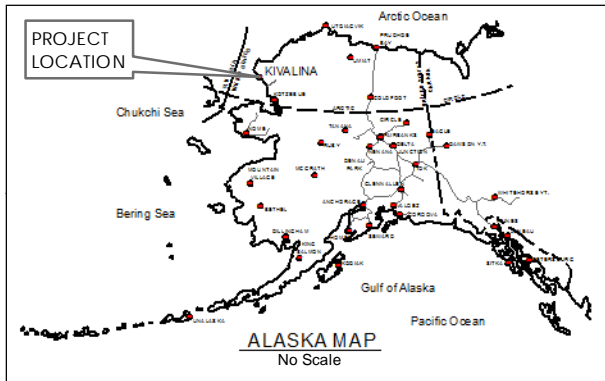
- Payne, K., and R. Payne. 1985. Large scale changes over 19 years in songs of humpback whales in Bermuda. *Zeitschrift fur Tierpsychologie* 68:89-114.
- Reeves, R. R., S. Leatherwood, S. A. Karl, and E. R. Yohe. 1985. Whaling results at Akutan (1912-39) and Port Hobron (1926-37), Alaska. *Report of the International Whaling Commission* 35:441-457.
- Richardson, J., C.R. Greene Jr, C. Malme and D. Thomson. 1995. *Marine mammals and noise*. Academic Press. San Diego, California.
- Risch, D., C.W. Clark. P.J. Corkeron, A. Elepfandt, K.M. Kovacs, C. Lydersen, I. Stirling, and S.M. Van Parijs. 2007. *Vocalizations of male bearded seals, Erignathus barbatus: classification and geographical variation*. *Animal Behaviour* 73: 747–762.
- Rone, B. K., A. Zerbin, A. S. Kennedy, and P. J. Clapham. 2010. Aerial surveys in the southeastern Bering Sea: Occurrence of the endangered North Pacific right whale (*Eubalaena japonica*) and other marine mammals during the summers of 2008 and 2009. Page 149 *Alaska Marine Science Symposium*, Anchorage, Alaska.
- Rone, B. K., C. L. Berchok, J. L. Crance, and P. J. Clapham. 2012. Using air-deployed passive sonobuoys to detect and locate critically endangered North Pacific right whales. *Marine Mammal Science* 28:E528-E538.
- Schweder, T., D. Sadykova, D. Rugh, and W. Koski. 2010. Population Estimates From Aerial Photographic Surveys of Naturally and Variably Marked Bowhead Whales. *Journal of Agricultural Biological and Environmental Statistics* 15:1-19.
- Shelden, K.E.W., D.J. Rugh, K.T. Goetz, C.L. Sims, L. Vate Brattström, J.A. Mocklin, B.A. Mahoney, B.K. Smith, and R.C. Hobbs. 2013. *Aerial surveys of beluga whales, Delphinapterus leucas, in Cook Inlet, Alaska, June 2005 to 2012*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-263, 122 pp.
- Shell. 2012. Environmental Impact Analysis. Appendix F of 2012 Shell Chukchi Exploration Plan. Bureau of Ocean Energy Management. https://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Plans/Regional_Plans/Alaska_Exploration_Plans/2012_Shell_Chukchi_EP/AppendixF-EIA.pdf
- Silber, G. K. 1986. The relationship of social vocalizations to surface behavior and aggression in the Hawaiian humpback whales (*Megaptera novaeangliae*). *Canadian Journal of Zoology* 64:2075-2080.
- Sills, J.M., B.L. Southall and C. Reichmuth. 2014. *Amphibious hearing in spotted seals (Phoca largha)*. *Journal of Experimental Biology* 217: 726-734.
- Sills, J.M., B.L. Southall and C. Reichmuth. 2015. *Amphibious hearing in ringed seals (Pusa hispida): underwater audiograms, aerial audiograms and critical ratio measurements*. *Journal of Experimental Biology* 218: 2250-2259.
- Sills, J.M., B.L. Southall and C. Reichmuth. 2016. *Psychoacoustic studies of spotted (Phoca largha) and ringed (Pusa hispida) seals*. *The Effects of Noise on Aquatic Life II*. Springer New York, 2016. 1025-1030.

- Smith, T. G., & Stirling, I. 1975. *The Breeding Habitat of the Ringed Seal (Phoca hispida)*. The Birth Lair and Associated Structures. Canadian Journal of Zoology, 53, 1297-1305.
- Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas and P.L. Tyack. 2007. *Special Issue: Marine mammal noise exposure criteria*. Aquatic Mammals 33.
- Stafford, K. M., and D. K. Mellinger. 2009. Analysis of acoustic and oceanographic data from the Bering Sea, May 2006 – April 2007. North Pacific Research Board Final Report, NPRB Project #719, 24 pp.
- Stantec (Stantec Consulting Ltd.). 2016a. *Kivalina evacuation and school access road marine mammal observations* Oct. 4-6, 2016. Stantec Consulting Inc. contract report submitted to Remote Solutions, October 25, 2016.
- Stantec. 2016b. *Kivalina evacuation and school access road*. September 2016 Stantec site reconnaissance. Unpublished Data.
- Stewart, B. S., S. A. Karl, P. K. Yochem, S. Leatherwood, and J. L. Laake. 1987. Aerial surveys for cetaceans in the former Akutan, Alaska, whaling grounds. Arctic 40:33-42.
- Thompson, P. O., W. C. Cummings, and S. J. Ha. 1986. Sounds, source levels, and associated behavior of humpback whales, Southeast Alaska. Journal of the Acoustical Society of America 80:735-740.
- Tyack, P., and H. Whitehead. 1983. Male competition in large groups of wintering humpback whales. Behaviour 83:132-154.
- URS. 2007. *Final Underwater Noise Report*. Port of Anchorage Marine Terminal Development Project Underwater Noise Survey Test Pile Driving Program Anchorage, Alaska. Prepared for United States Department of Transportation. <https://alaskafisheries.noaa.gov/sites/default/files/2007underwaternoise.pdf>
- Vanderlaan, A. S., and C. T. Taggart. 2007. Vessel collisions with whales: The probability of lethal injury based on vessel speed. Marine Mammal Science 23:144-156
- Von Duyke, A.L., D.C. Douglas, J. Herreman, and A.W. Morris. 2017. *Ringed seal (Pusa hispida) spatial use, dives, and haul-out behavior in the Beaufort, Chukchi, and Bering Seas (2011-2016)*. Presented at the Alaska Marine Science Symposium, Anchorage, Alaska, January 2017.
- Vu, E. T., D. Risch, C. W. Clark, S. Gaylord, L. T. Hatch, M. A. Thompson, D. N. Wiley, and S. M. Van Parijs. 2012. Humpback whale song occurs extensively on feeding grounds in the western North Atlantic Ocean. Aquatic Biology 14:175-183.
- Wade, P. R., T. J. Quinn II, J. Barlow, C. S. Baker, A. M. Burdin, J. Calambokidis, P. J. Clapham, E. Falcone, J. K. B. Ford, C. M. Gabriele, R. Leduc, D. K. Mattila, L. Rojas-Bracho, J. Straley, B. L. Taylor, J. Urbán R., D. Weller, B. H. Witteveen, and M. Yamaguchi. 2016. Estimates of abundance and migratory destination for North Pacific humpback whales in both summer feeding areas and winter mating and calving areas. Paper SC/66b/IA21 submitted to the Scientific Committee of the International Whaling Commission, June 2016, Bled, Slovenia.

- Weilgart, L. S., and H. Whitehead. 1993. Coda communication by sperm whales (*Physeter macrocephalus*) off the Galápagos Islands. *Canadian Journal of Zoology* 71:744-752.
- Weir, C. R., A. Frantzis, P. Alexiadou, and J. C. Goold. 2007. The burst-pulse nature of 'squeal' sounds emitted by sperm whales (*Physeter macrocephalus*). *Journal of the Marine Biological Association of the United Kingdom* 87:39-46.
- Wiese, F.K., R. Gryba, and B.P. Kelly. 2017. *Marine arctic ecosystem study - pilot program: Marine mammals tagging and tracking*. US Dept. of the Interior, Bureau of Ocean Energy Management, Alaska Region, Anchorage, AK. OCS Study BOEM 2017-017. 78 pp. <https://www.boem.gov/BOEM-2017-017/>
- Winn, H. E., P. J. Perkins, and T. C. Poulter. 1970. Sounds of the humpback whale. Pages 39-52 *Seventh Annual Conference on Biological Sonar and Diving Mammals*, Stanford Research Institute, Menlo Park, California.
- Zerbini, A. N., J. M. Waite, J. L. Laake, and P. R. Wade. 2006. Abundance, trends and distribution of baleen whales off Western Alaska and the central Aleutian Islands. *Deep Sea Research Part I: Oceanographic Research Papers* 53:1772-1790.
- Zerbini, A. N., A. S. Kennedy, B. K. Rone, C. Berchok, P. J. Clapham, and S. E. Moore. 2009. Occurrence of the critically endangered North Pacific right whale (*Eubalaena japonica*) in the Bering Sea (Abstract). Pages 285-286 *18th Bienn. Conf. Biol. Mar. Mamm*, Québec, Canada.

Figures

U:\2010\5102\GIS\mxd\NMF5_informal\Consultation\040705102_NMF5_Fig_1_Loc_Vic_Map.mxd Reviewed: 2010-01-02 By: cpannone



Copyright:© 2013 National Geographic Society, i-cubed

Graphics developed by Stantec Consulting Services, Inc.

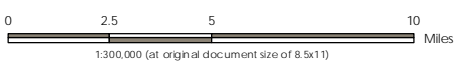


Project Origin: City of Kivalina,
Kotzebue Recording District,
Section 21, Township 27N, Range 26W,
Kateel River Meridian

Project Terminus: Kisimigiqtuq Hill,
Section 19, Township 28N, Range 25W
Kateel River Meridian

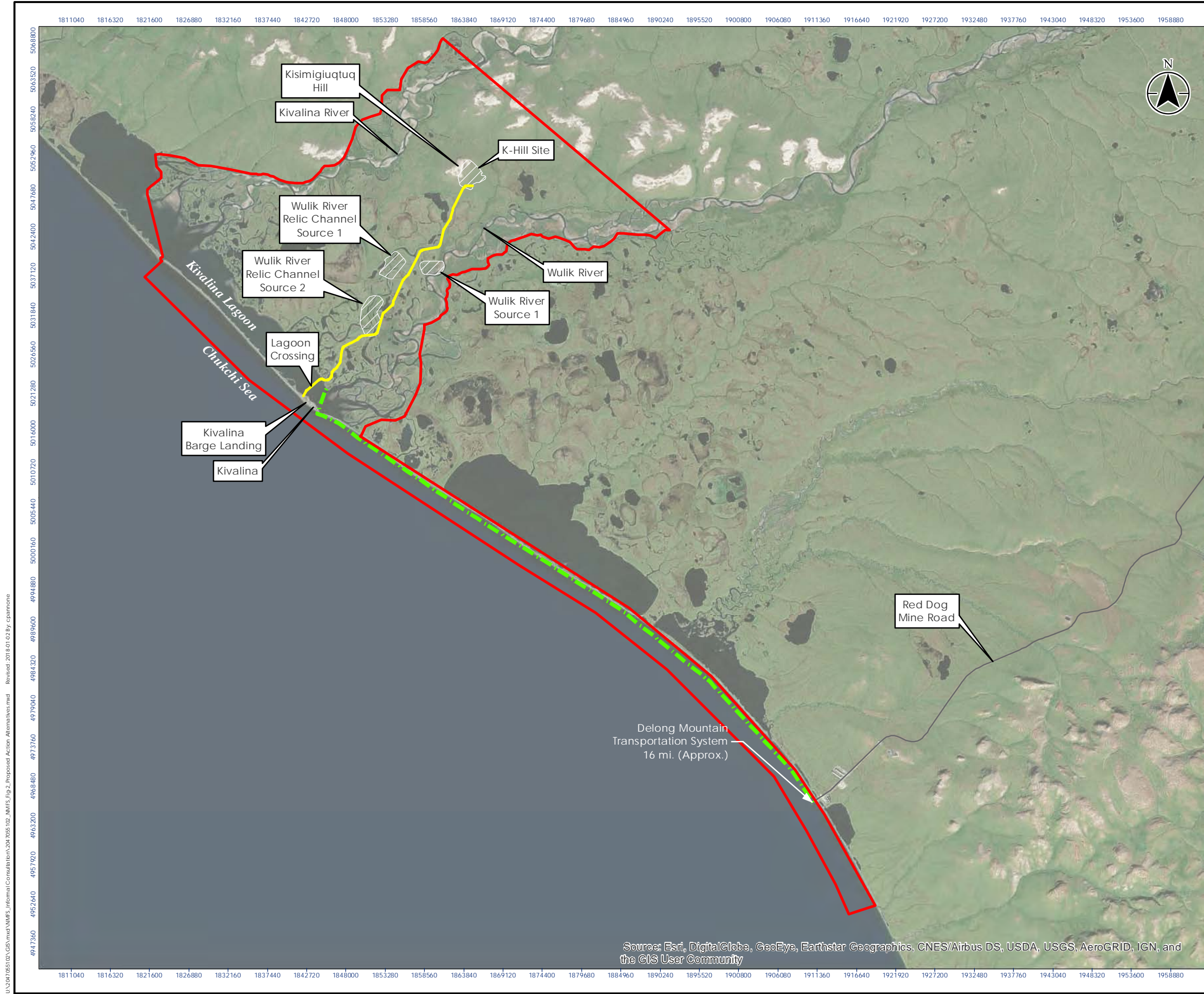
STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
Request for Initiation of Informal Consultation
National Marine Fisheries Service
Location and Vicinity Map



DATE: January, 2018

FIGURE 1

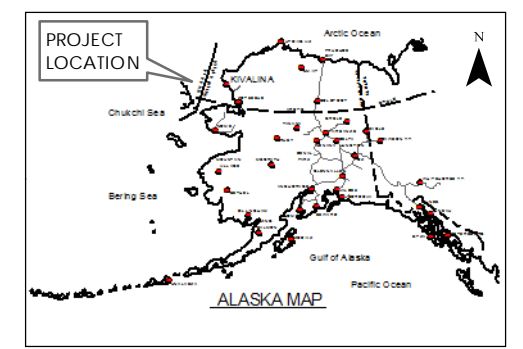


Legend

- Southern Route - 7.7 miles
- - - Winter Access via DMTS Port
- Potential Material Source Areas
- + NMFS Action Area

0 1 2 Miles
1:160,000 (At original document size of 11x17)

- Notes
1. Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 2. Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

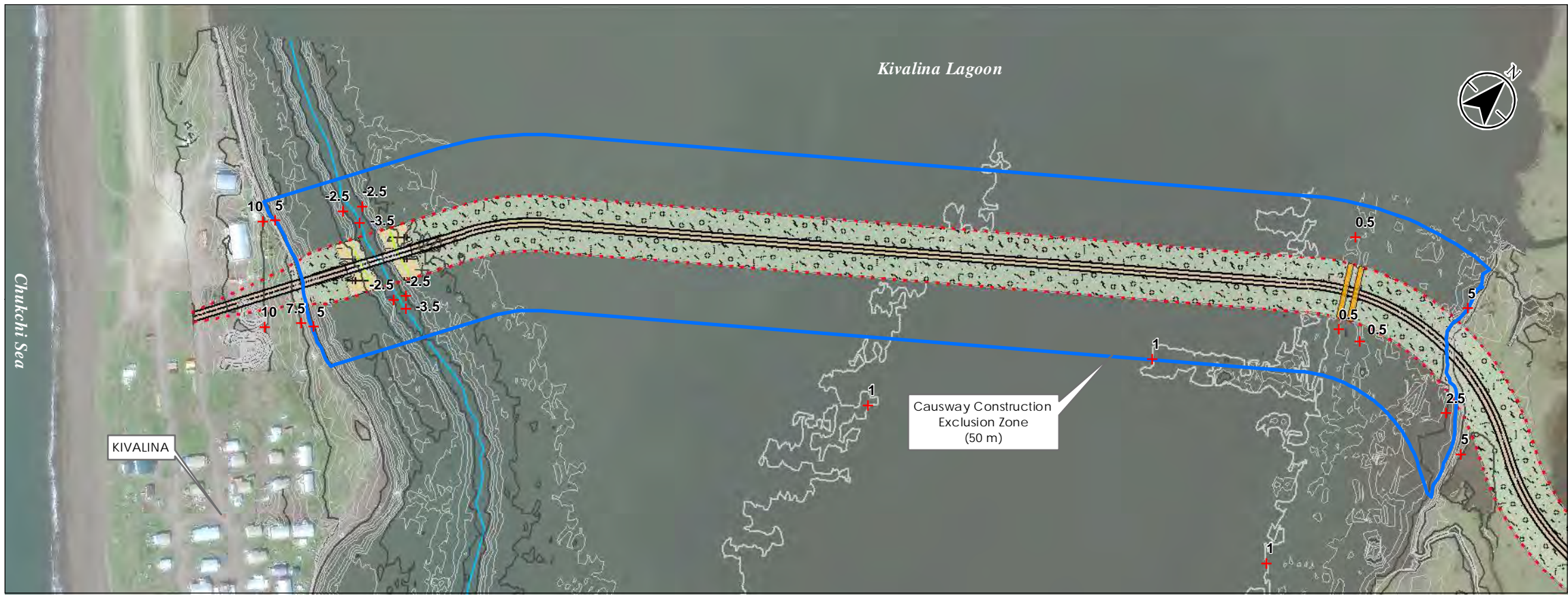
KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
Request for Initiation of Informal Consultation
National Marine Fisheries Service

Proposed Action

DATE: January, 2018	FIGURE 2
---------------------	----------

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

U:\2017\05103_GIS\mxd\NMFS_InitialConsideration\201705103_NMFS_Fig_2_ProposedAction_Alternatives.mxd Revised: 2018-01-02 By: cparsons

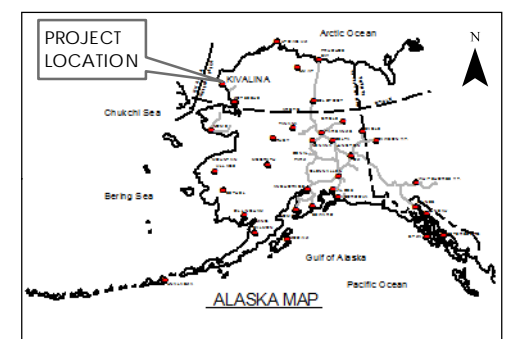


LAGOON CROSSING OVERVIEW

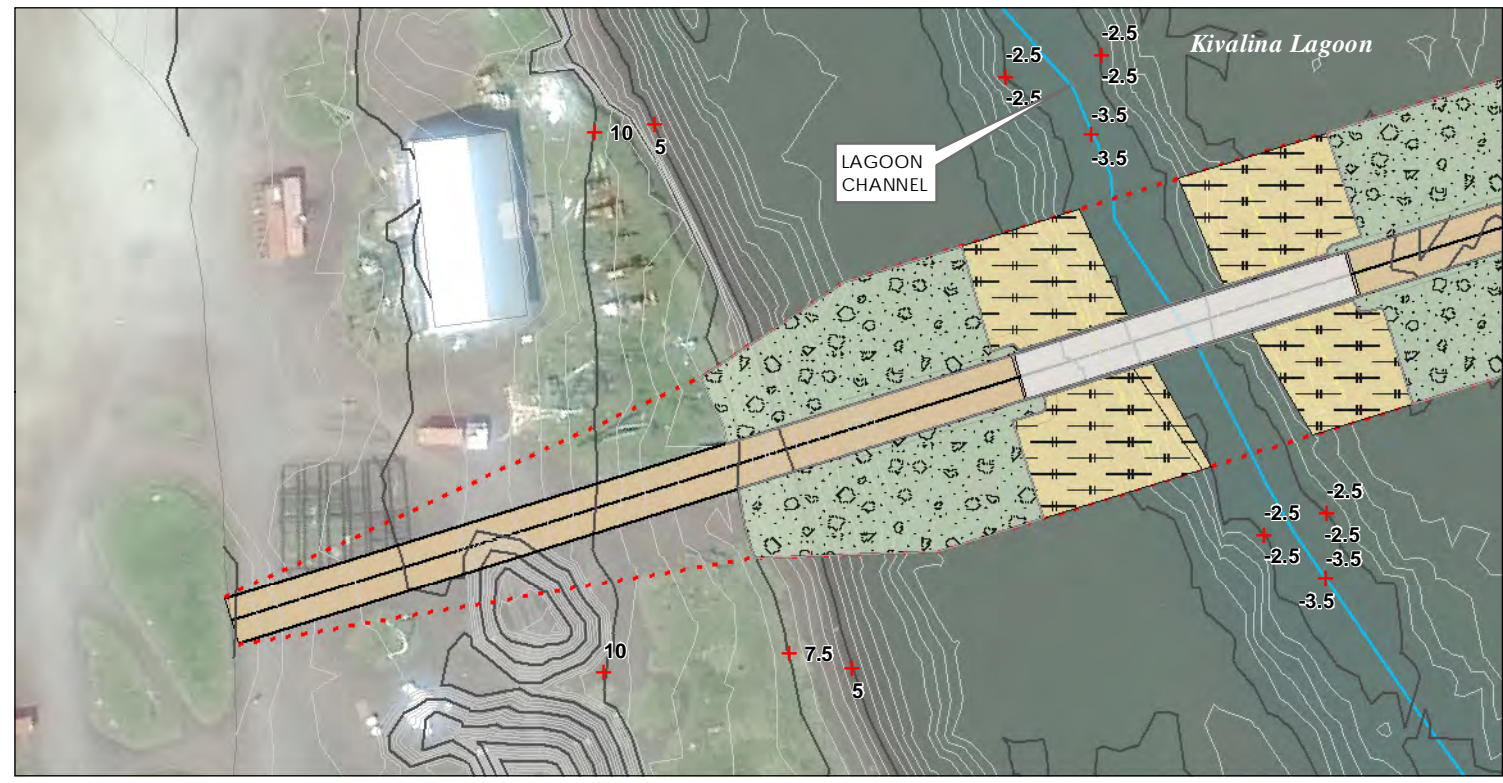
- Legend**
- Bridge
 - Bridge Abutment Rip Rap
 - Causway Armor
 - Causway Culvert(s)
 - Proposed Road
 - Causway Construction Exclusion Zone (50 m)
 - Elevation (ft)



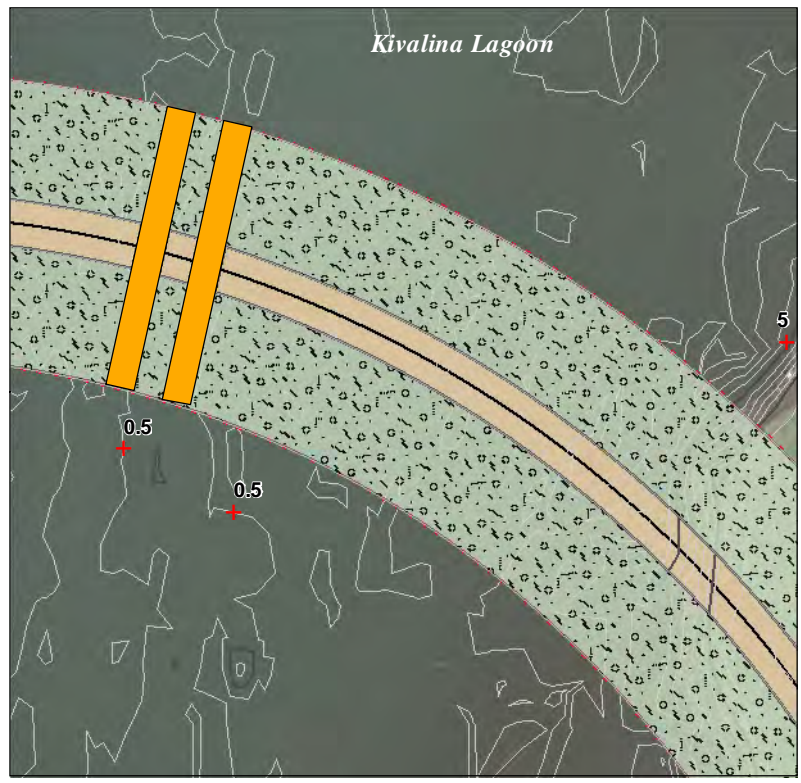
- Notes**
- Coordinate System: NAD 1983 2011 StatePlane Alaska 8 FIPS 5008 Feet
 - Orthimagery: Combination ©Kodiak Mapping Inc., 2011; ©AeroMetric Inc., 2013; Digital Globe 2016



Graphics developed by Stantec Consulting Services, Inc.



BRIDGE DETAIL



CAUSEWAY CULVERT(S) DETAIL

0 50 100 Feet
1:25,000 (At original document size of 11x17)

STATE OF ALASKA
Department of Transportation and Public Facilities
2301 Peger Road Fairbanks, AK 99709

KIVALINA EVACUATION AND SCHOOL SITE ACCESS ROAD
Request for Initiation of Informal Consultation
National Marine Fisheries Service

Lagoon Crossing D Alternative

DATE: January, 2018	FIGURE 3
---------------------	----------

U:\2017\05103_GSV\mca\NMFS_Initial\Consideration\201705103_NMFS_Fig_3_Lagoon_Crossing\Alternatives.mxd Revised: 2018/01/02 By: cparsons



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

January 9, 2018

Brett Nelson
Alaska Department of Transportation and Public Facilities
Northern Region
2301 Peger Road
Fairbanks, AK 99709

Re: Kivalina Evacuation and School Site Access Road Letter of Concurrence, NMFS #AKR-2018-9717

Dear Mr. Nelson:

This letter responds to your request for concurrence from the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the development of the Kivalina Evacuation and School Site Access Road. NMFS received an initial request for an expedited informal consultation on November 30, 2017. NMFS requested additional information via email and phone December 8 through December 18, 2017. On December 19, 2017, the Alaska Department of Transportation and Public Facilities (DOT&PF) submitted a revised request for expedited informal consultation. NMFS requested additional information December 21 through January 4, 2017. DOT&PF submitted a revised request on January 5, 2018 for concurrence that this project is not likely to adversely affect threatened or endangered species or their critical habitat. This request met our criteria for expedited review and contained all required information on the proposed action and its potential effects to listed species and designated critical habitat.

We reviewed your consultation request document and related materials. Based on our knowledge, expertise, and the materials you provided, we concur with your conclusion that the proposed action is not likely to adversely affect bearded seal, ringed seal, western distinct population segment (DPS) Steller sea lion, North Pacific right whale, Mexico DPS humpback whale, western North Pacific DPS humpback whale, fin whale, sperm whale, bowhead whale, or designated Steller sea lion or North Pacific right whale critical habitat. A complete administrative record of this consultation is on file at the Anchorage NMFS office.

Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).



Please direct any questions regarding this letter to Bonnie Easley-Appleyard at Bonnie.Easley-Appleyard@noaa.gov or (907) 271-5172.

Sincerely,

James W. Balsiger, Ph.D.
Administrator, Alaska Region

cc: Paul Karczmarczyk, DOT&PF (paul.karczmarczyk@alaska.gov)
Jonathan Hutchinson, P.E., DOT&PF (jonathan.hutchinson@alaska.gov)