

Appendix C
Section 404 Permit Application

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-0003
Expires 28 FEBRUARY 2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME Brett Nelson Alaska Department of Transportation and Public Facilities	8. AUTHORIZED AGENT'S NAME AND TITLE <i>(an agent is not required)</i>
6. APPLICANT'S ADDRESS 2301 Peger Road Fairbanks, Alaska 99709	7. AGENT'S ADDRESS
7. APPLICANT'S PHONE NOS. W/AREA CODE a. Business (907) 451-2238 b. Fax (907) 451-5126	10. AGENT'S PHONE NOS. W/AREA CODE a. b.

STATEMENT OF AUTHORIZATION

11. I hereby authorize _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE

DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE <i>(see instructions)</i> Ambler Airport Improvements Project	
13. NAME OF WATERBODY, IF KNOWN <i>(if applicable)</i> Kobuk River, Ambler River, Grizzly Creek	14. PROJECT STREET ADDRESS <i>(if applicable)</i> N/A
15. LOCATION OF PROJECT Northwest Arctic Borough Latitude: 67°06'04.41" N Longitude: 157°51'33.60" W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN *(see instructions)*
Ambler is located on the north bank of the Kobuk River, near its confluence with the Ambler River, 45 miles north of the Arctic Circle (Sheet 1, Attachment A). It is 138 miles northeast of Kotzebue, 30 miles northwest of Kobuk, and 24 miles northwest of Shungnak. Section, Township, and Range for the project is: Range 5 East, Township 20 North, Sections 19, 20, 21, 29, 30, and 31, Kateel Meridian.

17. DIRECTIONS TO THE SITE

The airport is approximately 1 mile north of the town of Ambler at the end of Waring Street.

18. Nature of Activity (Description of project, include all features)

Please see Section 2 of Attachment A for the project description and construction methods.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Please see Section 1 of Attachment A for the description of the Project Purpose.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

To make the safety and efficiency improvements at the Ambler Airport as described in Section 1 of Attachment A.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

See Attachment B for typical design drawings for the airport improvements and material site access road design.

Project Component	EXCAVATION VOLUME TOTAL (CY)	TOTAL FILL VOLUME (CY)	EMBANKMENT FILL VOLUME (CY)	SOURCE CASC (CY)	SOURCE SUBBASE (CY)	ASPHALT (IF USED) @ 4" DEPTH (CY)	RIPRAP ROCK (CY)
Ambler Airport and Waring Street Improvements	342,000	307,000	51,000	1,000	3,000	1,000	0
Material Site	200,000 to 300,000	0	0	0	0	0	0
Material Site Road	1,500	51,000	22,000	3,000	12,000	1,700	100
Total	543,500 to 643,500	358,000	73,000	4,000	15,000	2,700	100

22. Surface Area in Acres of Wetlands or Other Waters Filled (*see instructions*)

Please refer to the Permit Figures (Attachment B) for location of wetland impacts and typical design drawings. The Jurisdictional Determination Report contains detailed information on the wetlands and other waters filled by the project. This report is available on the project website <http://dot.alaska.gov/nreg/amblerairport/documents.shtml>

Project Component	Permanent Wetland and Waterbody Impacts (acres)	Temporary Wetland and Waterbody Impacts (acres)
Ambler Airport and Waring Street Improvements	3.81	0.81
Material Site	17.88	0.00
Material Site Road	8.82	4.56
Total	30.52	5.37

23. Description of Avoidance, Minimization, and Compensation (*see instructions*)

Please see Attachment C, the Applicant Proposed Mitigation Statement.

24. Is Any Portion of the Work Already Complete? Yes _____ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

	Property Owner	Address
1	NANA Regional Corporation	PO Box 49 Kotzebue, AK 99752
2	City of Ambler	PO Box 9 Ambler, AK 99786

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application
Please see Section 2.2 of Attachment A for other project permits and authorizations required.

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Attachment A

Ambler Airport Improvements Project

1 Purpose and Need for Proposed Action

The CEQ regulations implementing NEPA require that an EA specify the underlying Purpose and Need to which an agency is responding in proposing actions and alternatives (40 CFR 1502.13).

The purpose of this project is to meet FAA standards, as well as improve safety, reliability, and operational efficiency of the airport. The following paragraphs document the need to improve those facilities.

1.1 Deficient Main Runway and Runway Safety Area Lengths

The Ambler Airport does not meet current FAA Safety standards for aircraft currently using and forecasted to use the runway. Runway 18-36, the main runway, was designed and constructed to meet A-I standards. Aircraft currently utilizing the runway meet a runway design code of B-II which reflects the need for a longer and wider runway, and longer and wider safety areas.

The primary need for lengthening the runway to 4,000 ft is to accommodate fuel and cargo deliveries that are only available by air, as well as Beech 1900 aircraft that currently serving nearby communities and larger aircraft, such as the DC-6 or C-130 Hercules, in order to more efficiently fly fuel and equipment into the community. Problems delivering fuel by barge on the shallow Kobuk River are substantial, and the community has a critical dependence on air transport as the only reliable transportation mode for bringing fuel, cargo, and building supplies into the community. Currently these large aircraft fly 2-5 times per month into Ambler at reduced loads to accommodate the shorter runway length. A 4,000-ft runway would allow these aircraft to be loaded more heavily, and could decrease the cost of shipping fuel and supplies to the community by as much as 75%.

Additionally, the Northwest Arctic Transportation Plan (NWATP) identifies four main routes serving eleven communities from the Kotzebue Airport in the Northwest Arctic subregion. Kotzebue–Ambler–Kobuk–Shungnak is identified as the longest routes at 315 miles roundtrip. The NWATP identifies the Beech 1900 as the design aircraft for future planning purposes, and recommends a 4,000 ft runway design objective for all three upper Kobuk communities. Since both Kobuk and Shungnak have 4,000 ft runway

lengths and documented Beech 1900 utilization, it is anticipated that Beech 1900 aircraft would utilize the Ambler runway if it was lengthened to 4000 ft.

Medevac, cargo, and passenger planes servicing Ambler include FAA Design Group II aircraft, including Shorts 330, CASA 212, Cessna 406 Caravan, Beechcraft King Air 200, and Piper Navajo. **Error! Reference source not found.** compares existing Runway 18/36 conditions at Ambler Airport with FAA B-II design standards, assuming a Beech 1900 design aircraft.

Table 1-1: Existing and Proposed Runway 18/36 Facilities

	Existing	B-II Standard*
Runway 18/36 Length	3,000 ft	4,000 ft
Runway 18/36 Width	60 ft	75 ft
RSA length beyond Runway 18/36 end	240 ft	300 ft
RSA width	120 ft	150 ft
RPZ dimensions	1,000 ft x 700 ft x 500 ft	1,700 ft x 1,510 ft x 1,000 ft**

*Assumes Beech 1900 design aircraft.

** To meet visibility minimum not lower than $\frac{3}{4}$ mile

RSA = Runway Safety Area; RPZ = Runway Protection Zone

DOT&PF proposes a 4,000 ft runway length to accommodate the DC-6 as a critical design airplane. The DC-6 would remain an occasional use aircraft for the purposes of designating the Airport Reference Code, and the B-II reference code would be used for all other components of the runway design.

The new Runway Protection Zone (RPZ) that would be designated for the extended runway would extend 1,700 ft beyond each runway end to meet visibility minimums not lower than $\frac{3}{4}$ mile, per Table 3-8 in Advisory Circular 150/5300-13A. The new RPZs would extend beyond the existing airport property boundary. DOT&PF would need to acquire additional property in order to ensure these lands are not developed in ways incompatible to the proposed airport improvements. Selecting the larger dimension does not limit the airport's ability to upgrade approach visibility minimums in the future.

1.2 Reduce Terrain Obstructions

Runway 18/36 exhibits a vertical rise midway in its length, resulting in a line-of-sight obstruction between the runway ends. Meeting an unimpeded line of sight requirement is an Airport Design Standard

as outlined in Advisory Circular 150/5300-13A, Chapter 3 Runway Design, Section 3.05. For optimal safety, pilots in aircraft operating at opposite ends of the same runway should be able to maintain visual contact to avoid conflicts. The existing vertical rise in the main runway also blocks incoming and departing pilots from seeing the full extent of the runway lighting, and thus creates a condition that provides an inaccurate representation of the full runway length to pilots.

In addition, terrain obstructions adjacent to the main runway, and proximate to its intersection with the crosswind runway, block the line-of-sight between these two runways. Achieving this Runway Visibility Zone (RVZ) is an Airport Design Standard, and is outlined in Advisory Circular 150/5300-13A, Chapter 3 Runway Design, Section 3.05. Removing vision-obstructing vegetation and terrain would improve safety for pilots and aircraft and prepare the airport for implementation of future instrument approach flight procedures.

1.3 Reduce Drainage issues

Poor surface structure and drainage commonly contribute to seasonal runway closures due to muddy conditions that are unsafe for landings and take-offs. There is typically a two-week window during spring thaw when Runway 18/36 must be closed 3–10 different days. During rainy seasons, Runway 18/36 often closes to low-wing, twin engine aircraft, depending on surface conditions. Runway 9/27, the crosswind runway, is closed from spring to fall freeze-up due to soft spots.

1.4 Failing Lighting System and Navigational Aids

The airport lighting system is more than 20 years old and has surpassed its useful life. Any one of the proposed runway improvements—widening, extending, regarding, and resurfacing—would require the medium intensity runway lighting (MIRL) system to be removed and replaced in a new location. The runway end indicator lights (REILs) would also need to be relocated. In addition, the Vertical Approach Slope Indicator (VASI) may need to be relocated or replaced, depending on future FAA siting studies or availability of equipment.

2 Proposed Action

To address existing deficiencies, DOT&PF proposes the following improvements (Figure 3):

1. Lengthen main runway 18/36 to 4,000 ft and widen it to 75 ft
2. Lengthen the main runway safety area (RSA) to 4,600 ft and widen it to 150 ft
3. Improve site visibility by leveling uneven terrain and clearing vegetation
4. Grade and overlay operational surfaces and embankments
5. Install airport lighting and navigational aids (NAVAIDS)
6. Realign 1,240 ft of airport access road (Waring Street) to accommodate the new, extended RSA
7. Rehabilitate and resurface 2,750 ft of Waring Street
8. Acquire approximately 160 acres of land for airport expansion
9. Expand the existing apron and construct a new Snow Removal Equipment Building (SREB)
10. Construct a material site access road and develop a material site

2.1 Project Details

2.1.1 Lengthen and widen runway 18/36

The proposed action includes extending the main runway by 500 ft on each end, for a resulting total length of 4,000 ft; and widening the entire runway to a width of 75 ft. Much of the sub-base materials for the new runway ends would be obtained from surface materials cut from the existing runways and adjacent area during runway site obstruction removal (see Section **Error! Reference source not found.**). Extending runway length at each end rather than just one end optimizes the amount of fill material needed and minimizes impacts to wetlands.

2.1.2 Lengthen and widen the main runway safety area (RSA)

To meet B-II Design Standards, the main runway requires an RSA that extends 300 ft beyond each runway end and 75 ft from its centerline. The proposed RSA would be 4,600 ft long and 150 ft wide. The embankments would be no steeper than a 4H:1V ratio.

2.1.3 Improve site visibility

Both Main Runway 18/36 and Crosswind Runway 9/27 would be re-graded to remove the vertical obstructions to line-of-sight as required to maintain a RVZ. The work would be staged to ensure the runways remain operational, although at reduced length during construction.

Figure 3 shows the area identified for terrain and vegetation clearing. Vegetation at the runway intersections and the new Runway Protection Zone (RPZ) areas would be sheared to within 1–2 ft of ground surface. Terrain obstruction removal will lower the existing ground by approximately 5 ft at its maximum in between the runways and is anticipated to remove 330,000 cubic yards (cy) of material. This material, along with material excavated from the runways, would be either used for sub-base material in the proposed runway and RSA extensions, or placed along the embankments.

2.1.4 Overlay surfaces and embankments

Cover material free of NOA would be placed on the top of all operational surfaces and embankments. This would improve the structure of the surfaces, as well as cap existing soils that have been shown to contain NOA. The cover material type is undetermined at present, but would consist of either asphalt pavement or clean gravel.

2.1.5 Improve airport lighting and navigational aids

A new MIRL system and REILs would be installed along the extended and widened main runway. Pilots could activate the lighting system using radio controls.

Navigational aids would be improved. The existing lighted wind cone would be replaced with a new lighted wind cone with a segmented circle to meet current standards. The Visual Approach Slope Indicator (VASI) system may be replaced with a Precision Approach Path Indicator (PAPI) system and relocated to be appropriately spaced from the new runway ends.

2.1.6 Realign airport access road

About 1,240 ft of Waring Street, the airport access road, would be realigned to the southeast around the expanded RSA, beginning approximately at the existing airport property boundary and extending to the apron. The new road section would remain within the RPZ, which is not recommended by FAA standards. However, relocating the access road outside of the new RPZ would require both a longer road and a new crossing of Grizzly Creek, and would also impact a Native Allotment. The existing above-ground fuel pipeline to the east of the existing apron would not need to be relocated; however, overhead power lines would require relocation.

2.1.7 Rehabilitate and resurface airport access road

In addition to the 1,240 ft of realigned access road, DOT&PF would rehabilitate and resurface 2,750 ft of Waring Street. This section starts at the existing airport property boundary and extends to the intersection of the City Landfill road. The road would be re-graded, widened where it has eroded to under its 20-ft design width, and resurfaced. The new surfacing, which would consist of either asphalt pavement or clean gravel, would cap existing materials that contain NOA.

2.1.8 Acquire right-of-way

DOT&PF would acquire about 160 acres of land from the City of Ambler, NANA Regional Corporation (NANA), and a private property owner to add to the existing airport property. Acquiring this interest would ensure that property needed for the ultimate build-out of the Ambler Airport, as identified in the ALP, is secured for the future, and that no buildings or activities could be constructed within the expanded and RPZ areas.

2.1.9 Expand apron and construct new SREB

The existing 200-ft by 400-ft apron would be expanded northward to provide sufficient space for a new SREB. The existing SREB and storage shed would be removed. The new building is anticipated to offer about double the existing storage space sized in order to house additional equipment and stockpile materials to maintain airport operational surfaces.

2.1.10 Construct access road and develop material site

A two-lane, 20-ft-wide, 2.8-mile-long road would be constructed between the existing (although closed) airport material site and the proposed material site known as “Area B.” The road would provide year-round access to the material site by the construction contractor. The material site would be developed to obtain borrow fill and surface course for the project. After construction, access and use of the road would be controlled by NANA.

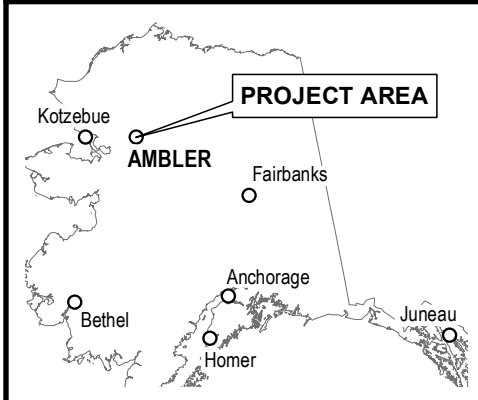
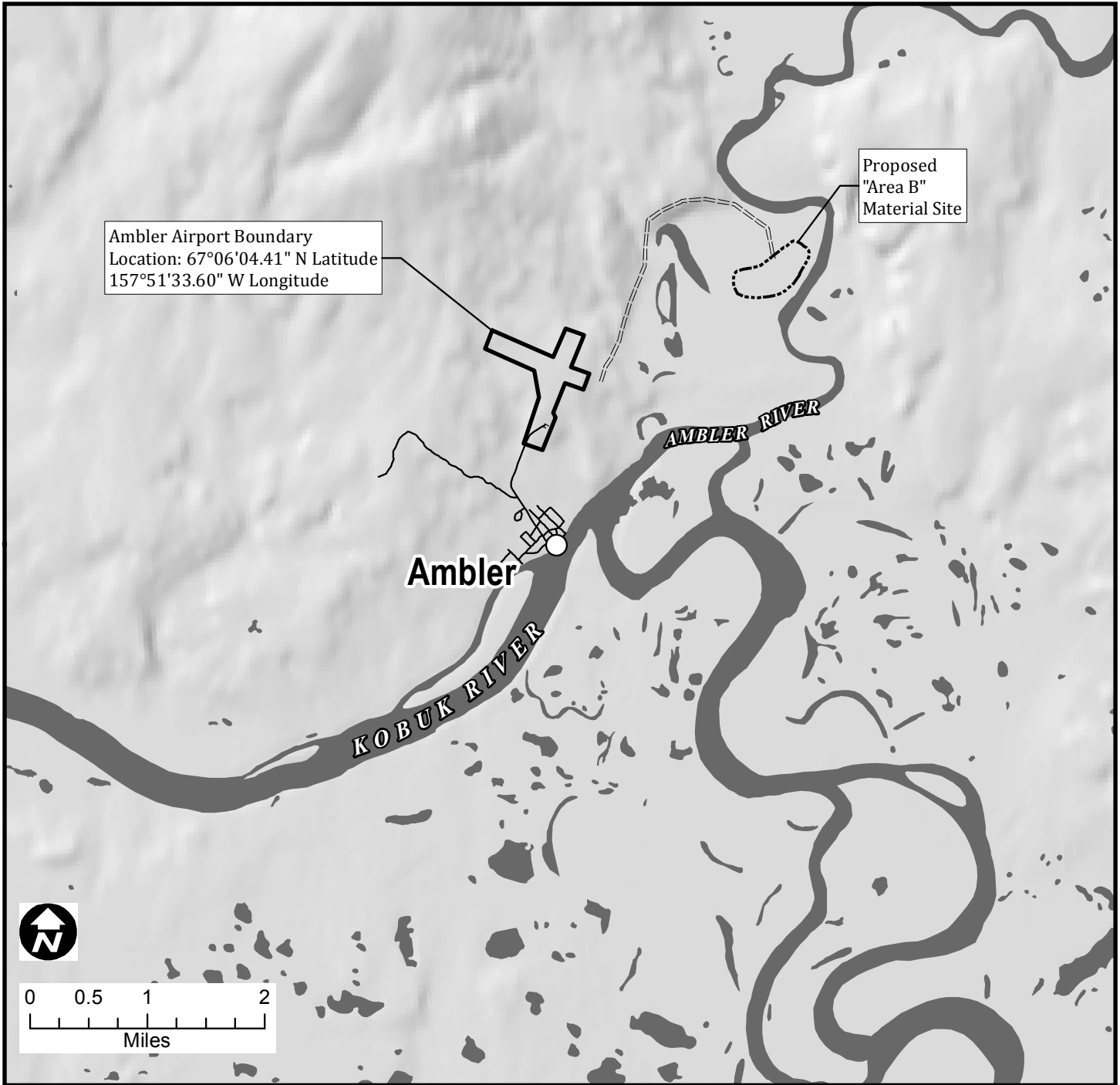
2.2 Project Permits and Approvals

The following section summarizes applicable permits and authorization required for the Ambler Airport Improvements Project, the agency responsible for issuing permit approvals, and the agencies’ pertinent regulatory authority (see Table 2).

Table 2: Summary of project permits and authorizations*

Permits and Authorizations	Agency	Description
Clean Water Act (CWA) Section 404 Permit, Rivers and Harbors Act Section 10	United States Army Corps of Engineers (USACE)	Requires approval prior to discharging dredged or fill material into the waters of the United States. Waters of the United States include surface waters, including all navigable waters and their tributaries, all interstate waters and their tributaries, all impoundments of these waters, all wetlands adjacent to these waters, and certain isolated wetlands.
CWA Section 401 Certification	Alaska Department of Environmental Conservation (ADEC)	A state-issued 401 Certificate of Reasonable Assurance, which must accompany the Sections 10 and 401 permits.
CWA Section 402, Alaska Pollutant Discharge Elimination System (APDES) General Permit	ADEC	APDES is the state regulation that supersedes the National Pollutant Discharge Elimination System issued by the Environmental Protection Agency (EPA). ADEC must authorize any activity or wastewater system that would discharge waste from one or more points into a waterway.
Section 106 of the National Historic Preservation Act (NHPA) consultation	Alaska State Historic Preservation Office (SHPO)	Section 106 of the National Historic Preservation Act requires review of any project funded, licensed, permitted, or assisted by the federal government for impact on significant historic properties. The agencies must allow the State Historic Preservation Officer and the Advisory Council on Historic Preservation, a federal agency, to comment on a project. The SHPO provides information on the location of sites and on cultural resources surveys previously done in an area. If the potential to discover unknown sites is high, a survey may be recommended.
Title 9 Land Use Permit	Northwest Arctic Borough (NAB)	Title 9 provides the NAB with the authority to guide, control, regulate and/or preclude future development of land within the borough in accordance with the land use policies stated in Title 9 and the NAB Comprehensive Plan.

*Table 2 does not include construction-specific permitting requirements (e.g. temporary water use permits, air permits) or permits required for later phases of construction (e.g. flood hazard permit). Construction permits would be the responsibility of the contractors selected by DOT&PF to complete the final design and to construct the project.



**LOCATION AND VICINITY MAP
SHEET 1 OF 8**

LEGEND

- ==== Material Site Access Road
- ⊕ Airport Boundary
- ⋯ Material Site
- Existing Road
- Water Body

USACE PERMIT # POA-2012-549,
AMBLER RIVER
NAME: AMBLER AIRPORT
IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
Kateel River Meridian;
T20N, R5E;
Sections 19, 20, 21, 29, 30, and 31

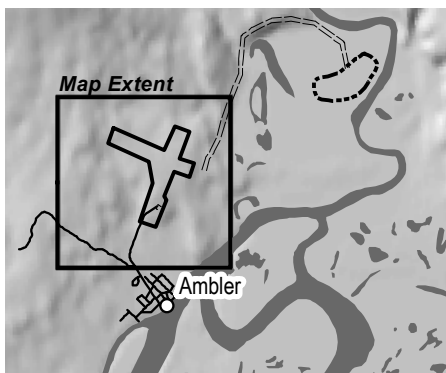
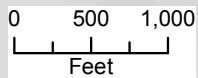
WATER BODY: Grizzly Creek,
Ambler River, Kobuk River
DATE: May 9, 2013

PERMANENT IMPACTS			
	NWI CODE	HABITAT TYPE	ACRES
AIRPORT/WARING ST	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.28
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	2.97
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.14
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.35
	PSS1C	Willow Thicket Wetland	0.03
	R3UBH	Stream	0.05
TOTAL			3.81
MATERIAL SITE ROAD	PFO4/SS4B	Black Spruce Forest Scrub/Shrub Wetland	4.73
	PFO4	Black Spruce Forest Scrub/Shrub Wetland	0.58
	PSS4B	Black Spruce Scrub/Shrub Wetland	2.78
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.07
	PSS4/EM1B	Low Shrub/Sedge Wetland	0.19
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.12
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.27
	PEM1C	Graminoid Meadow Wetland	0.08
TOTAL			8.82
MATERIAL SITE	PSS1/4B	Black Spruce Scrub/Shrub Wetland	3.48
	PSS4/EM1B	Black Spruce Scrub/Shrub Wetland	0.14
	PSS1/EM1B	Low Shrub/Sedge Wetland	10.17
	PSS1C	Willow Thicket Wetland	3.86
	PEM1C	Graminoid Meadow Wetland	0.24
TOTAL			17.88
TOTAL PERMANENT WETLAND IMPACTS =			30.52

TEMPORARY IMPACTS			
	NWI CODE	HABITAT TYPE	ACRES
AIRPORT/WARING ST	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.34
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.22
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.08
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.12
	PSS1C	Willow Thicket Wetland	0.02
	PEM1C	Graminoid Meadow Wetland	0.02
R3UBH	Stream	0.01	
TOTAL			0.81
MATERIAL SITE ROAD	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.20
	PFO4/SS4B	Black Spruce Forest Scrub/Shrub Wetland	2.19
	PFO4B	Black Spruce Forest Scrub/Shrub Wetland	0.30
	PSS4B	Black Spruce Scrub/Shrub Wetland	1.48
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.07
	PSS4/EM1B	Black Spruce Scrub/Shrub Wetland	0.11
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.06
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.09
	PEM1C	Graminoid Meadow Wetland	0.05
	PEM1F	Sedge Marsh Wetland	0.01
	TOTAL		
TOTAL TEMPORARY WETLAND IMPACTS =			5.37

* The area of temporary impact extends 15 feet from the cut/fill construction limit. Temporary impacts are reported for permitting purposes, but are not displayed on the map.

Stream crossing, see Sheet 6 for detail.



WETLAND IMPACTS: AIRPORT SHEET 2 OF 8

- LEGEND**
- Wetland Impacts
 - Mapped Wetlands
 - Wetland Mapping Area
 - Cut/Fill Limits
 - Airport Boundary
 - Existing Road
 - Water Body
 - Stream

USACE PERMIT # POA-2012-549, AMBLER RIVER
 NAME: AMBLER AIRPORT IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4; Kateel River Meridian; T20N, R5E; Sections 19, 20, 21, 29, 30, and 31

WATER BODY: Grizzly Creek, Ambler River, Kobuk River
 DATE: May 9, 2013

TEMPORARY IMPACTS			
	NWI CODE	HABITAT TYPE	ACRES
AIRPORT/WARING ST	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.34
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.22
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.08
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.12
	PSS1C	Willow Thicket Wetland	0.02
	PEM1C	Graminoid Meadow Wetland	0.02
R3UBH	Stream	0.01	
	TOTAL		0.81
MATERIAL SITE ROAD	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.20
	PFO4/SS4B	Black Spruce Forest Scrub/Shrub Wetland	2.19
	PFO4B	Black Spruce Forest Scrub/Shrub Wetland	0.30
	PSS4B	Black Spruce Scrub/Shrub Wetland	1.48
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.07
	PSS4/EM1B	Black Spruce Scrub/Shrub Wetland	0.11
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.06
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.09
PEM1C	Graminoid Meadow Wetland	0.05	
PEM1F	Sedge Marsh Wetland	0.01	
	TOTAL		4.56
TOTAL TEMPORARY WETLAND IMPACTS =			5.37

* The area of temporary impact extends 15 feet from the cut/fill construction limit. Temporary impacts are reported for permitting purposes, but are not displayed on the map.

Stream crossing, see Sheets 6-8 for detail.

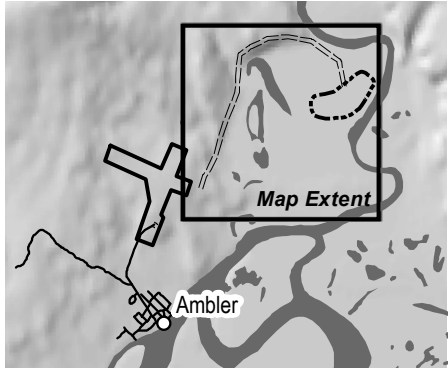
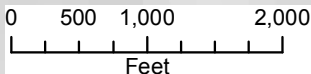
MATERIAL SITE

MATERIAL SITE ROAD

Stream crossing, see Sheets 6-8 for detail.

AMBLER RIVER

PERMANENT IMPACTS			
	NWI CODE	HABITAT TYPE	ACRES
AIRPORT/WARING ST	PFO4/SS1B	Black Spruce Forest Scrub/Shrub Wetland	0.28
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	2.97
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.14
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.35
	PSS1C	Willow Thicket Wetland	0.03
	R3UBH	Stream	0.05
	TOTAL		3.81
MATERIAL SITE ROAD	PFO4/SS4B	Black Spruce Forest Scrub/Shrub Wetland	4.73
	PFO4	Black Spruce Forest Scrub/Shrub Wetland	0.58
	PSS4B	Black Spruce Scrub/Shrub Wetland	2.78
	PSS4/1B	Black Spruce Scrub/Shrub Wetland	0.07
	PSS4/EM1B	Low Shrub/Sedge Wetland	0.19
	PSS1/4B	Black Spruce Scrub/Shrub Wetland	0.12
	PSS1/EM1C	Low Shrub/Sedge Wetland	0.27
PEM1C	Graminoid Meadow Wetland	0.08	
	TOTAL		8.82
MATERIAL SITE	PSS1/4B	Black Spruce Scrub/Shrub Wetland	3.48
	PSS4/EM1B	Black Spruce Scrub/Shrub Wetland	0.14
	PSS1/EM1B	Low Shrub/Sedge Wetland	10.17
	PSS1C	Willow Thicket Wetland	3.86
PEM1C	Graminoid Meadow Wetland	0.24	
	TOTAL		17.88
TOTAL PERMANENT WETLAND IMPACTS =			30.52



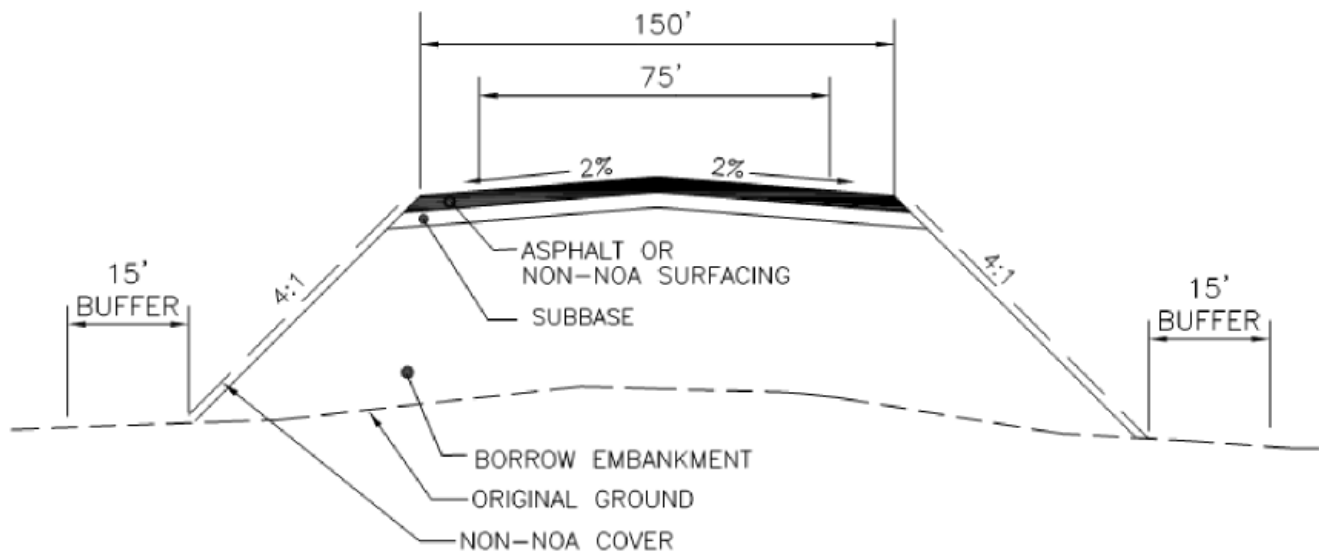
WETLAND IMPACTS: MATERIAL SITE & ACCESS ROAD SHEET 3 OF 8

- LEGEND**
- Wetland Impacts
 - Mapped Wetlands
 - Wetland Mapping Area
 - Cut/Fill Limits
 - Airport Boundary
 - Water Body
 - Stream

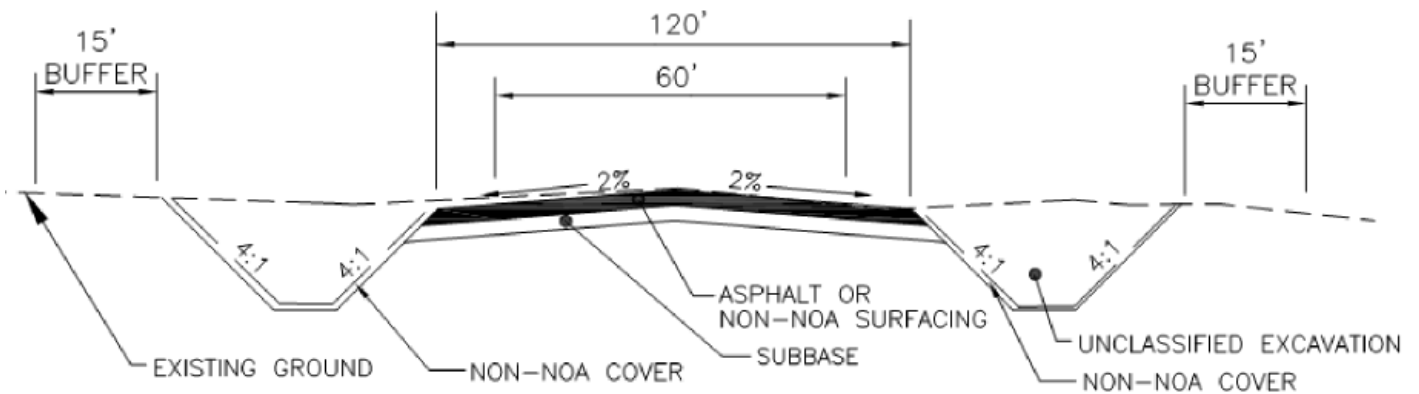
USACE PERMIT # POA-2012-549, AMBLER RIVER
 NAME: AMBLER AIRPORT IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4; Kateel River Meridian; T20N, R5E; Sections 19, 20, 21, 29, 30, and 31

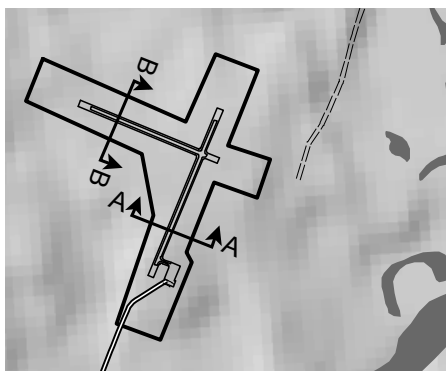
WATER BODY: Grizzly Creek, Ambler River, Kobuk River
 DATE: May 9, 2013



RUNWAY 18/36 TYPICAL FILL SECTION A



RUNWAY 9/27 TYPICAL FILL SECTION B



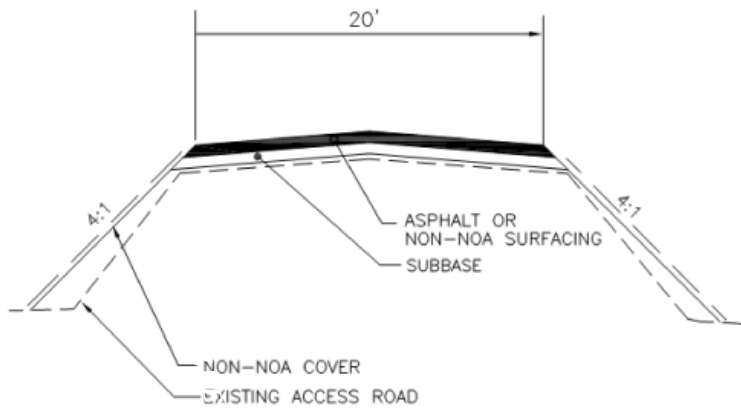
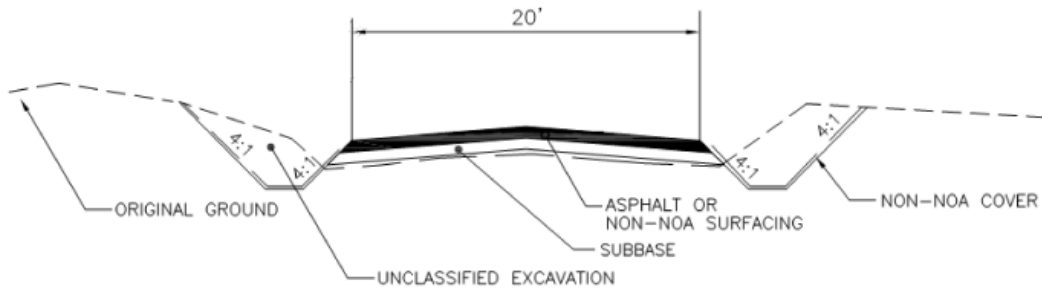
**TYPICAL SECTIONS:
RUNWAY TYPICAL SECTIONS
SHEET 4 OF 8**

*** Non-NOA Cover = Material that does not contain Naturally Occurring Asbestos above 0.25% by weight**
*** Drawing Not to Scale**

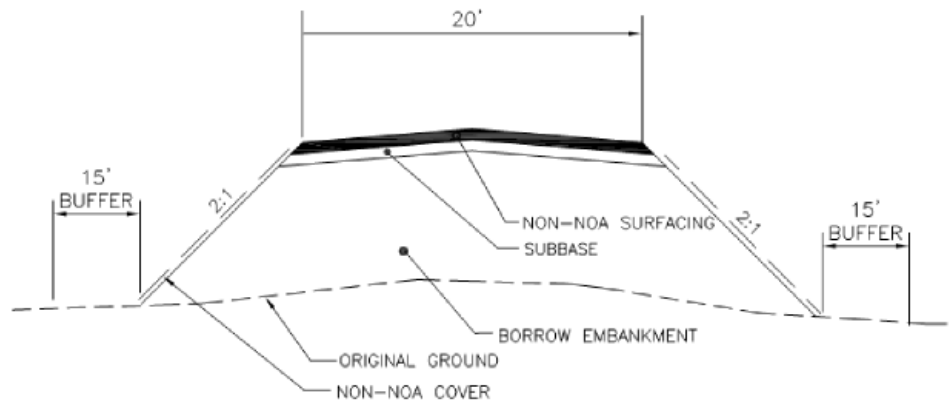
USACE PERMIT # POA-2012-549,
 AMBLER RIVER
 NAME: AMBLER AIRPORT
 IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
 Kateel River Meridian;
 T20N, R5E;
 Sections 19, 20, 21, 29, 30, and 31

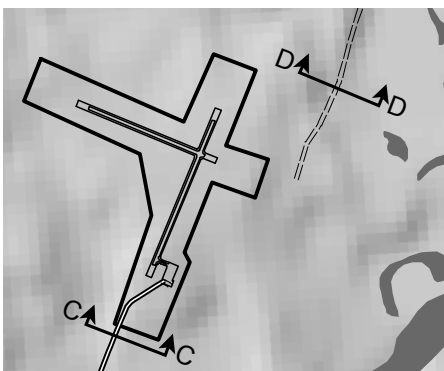
WATER BODY: Grizzly Creek,
 Ambler River, Kobuk River
 DATE: May 9, 2013



WARING STREET TYPICAL FILL SECTION C



MATERIAL SITE ROAD TYPICAL FILL SECTION D



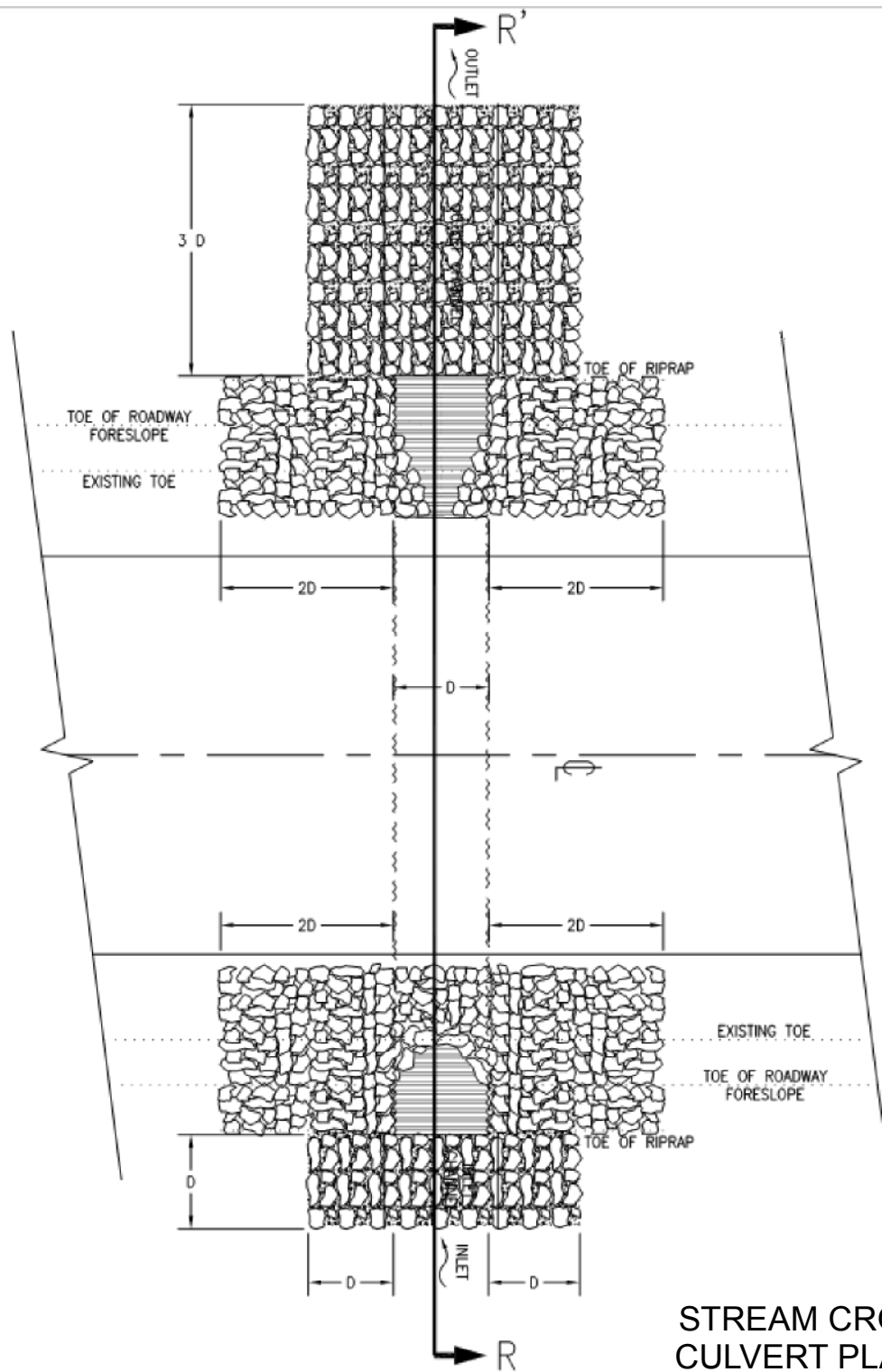
**TYPICAL SECTIONS:
WARING ST. AND MATERIAL
SITE ROAD TYPICAL SECTIONS
SHEET 5 OF 8**

*** Non-NOA Cover = Material that
does not contain Naturally
Occurring Asbestos above 0.25%
by weight**
*** Drawing Not to Scale**

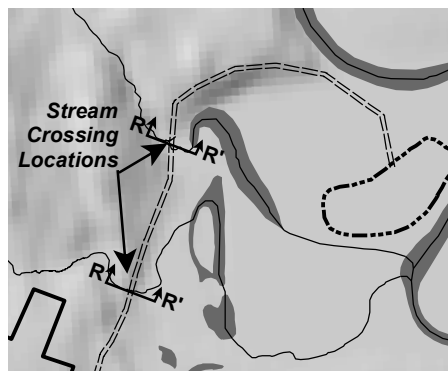
USACE PERMIT # POA-2012-549,
AMBLER RIVER
NAME: AMBLER AIRPORT
IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
Kateel River Meridian;
T20N, R5E;
Sections 19, 20, 21, 29, 30, and 31

WATER BODY: Grizzly Creek,
Ambler River, Kobuk River
DATE: May 9, 2013



**STREAM CROSSING
CULVERT PLAN VIEW**



**STREAM CROSSING STRUCTURE
DETAILS: PLAN VIEW
SHEET 6 OF 8**

*** D = Diameter of culvert**

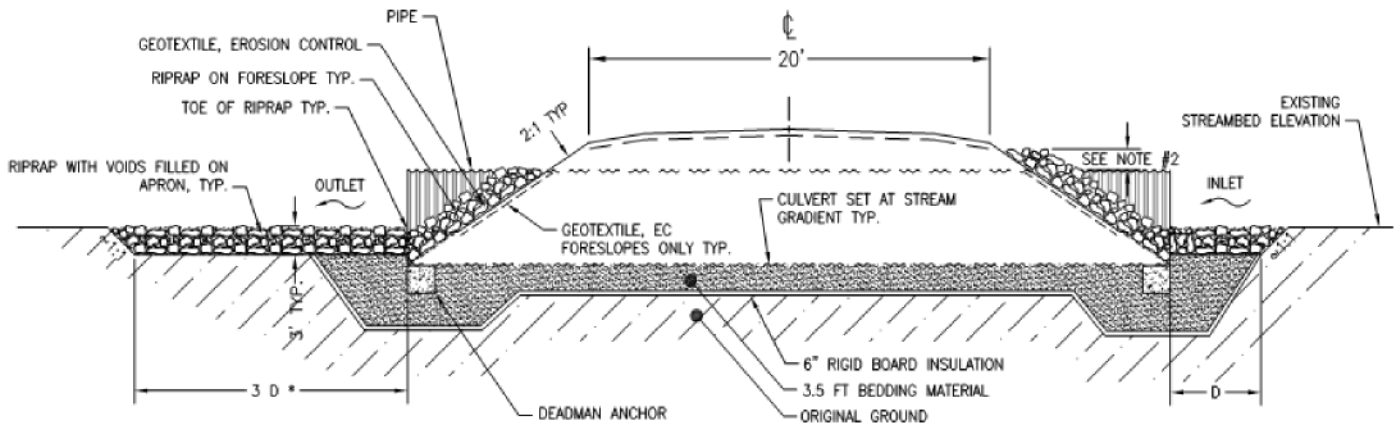
**(D = 7.5' & 9' for two culverts
on Material Site Access Road)**

*** Drawing Not to Scale**

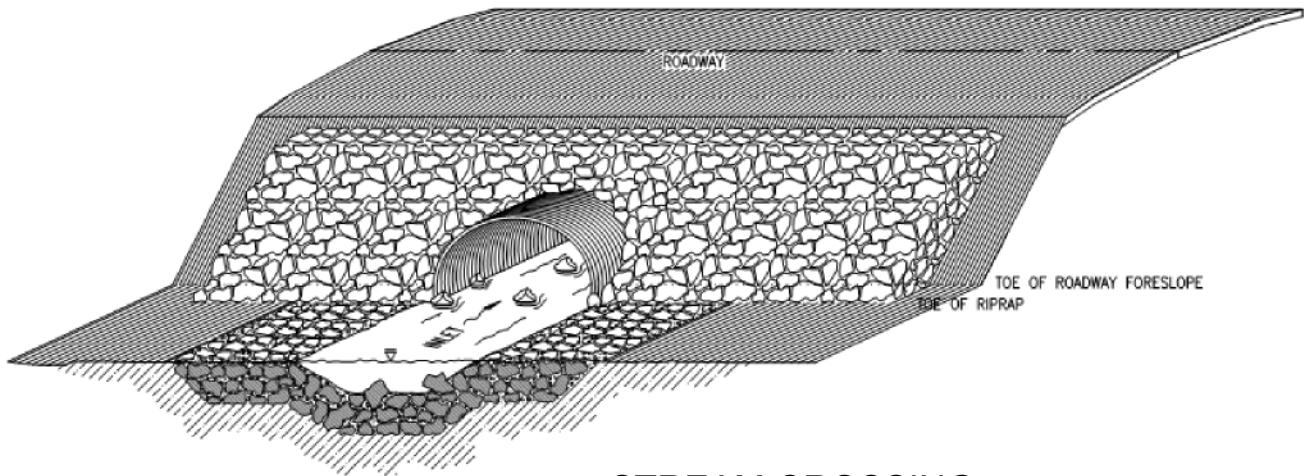
USACE PERMIT # POA-2012-549,
AMBLER RIVER
NAME: AMBLER AIRPORT
IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
Kateel River Meridian;
T20N, R5E;
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WATER BODY: Grizzly Creek,
Ambler River, Kobuk River
DATE: May 9, 2013



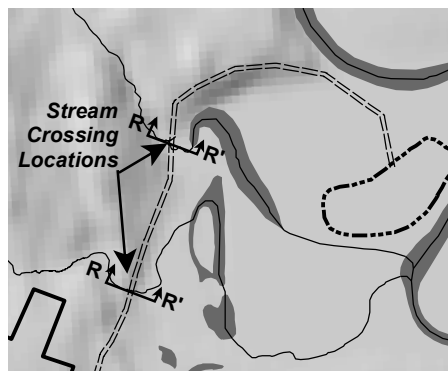
**STREAM CROSSING
CULVERT TYPICAL SECTION R-R'**



**STREAM CROSSING
CULVERT OBLIQUE VIEW**

NOTES:

1. Erosion control structures are approximate and may be field adjusted by the engineer to take advantage of existing channel features.
2. Extend riprap 3 feet above the pipe on the inlet side or to edge of shoulder, whichever is less. On the outlet side, the riprap shall extend to the top of the pipe.
3. Fill voids in the inlet and outlet channel bottom riprap aprons with gravel.



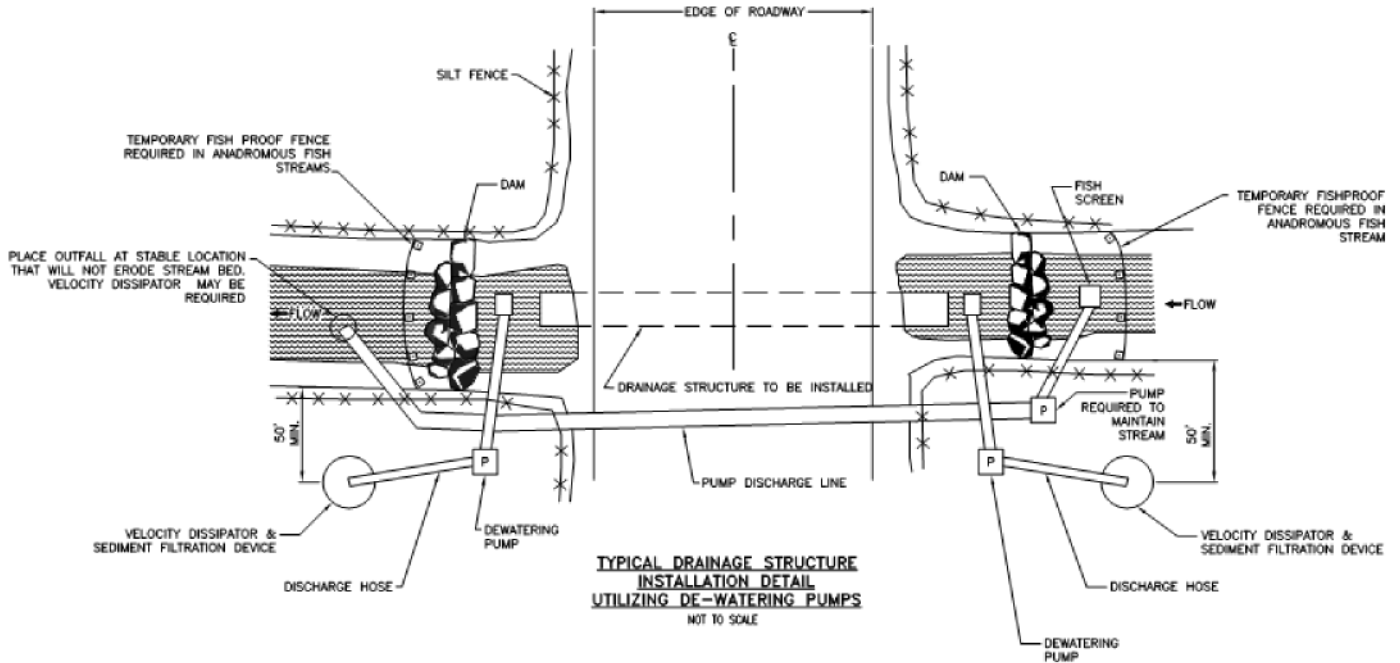
**STREAM CROSSING STRUCTURE
DETAILS: TYPICAL SECTION
SHEET 7 OF 8**

- * D = Diameter of Culvert Pipe
- * Drawing Not to Scale

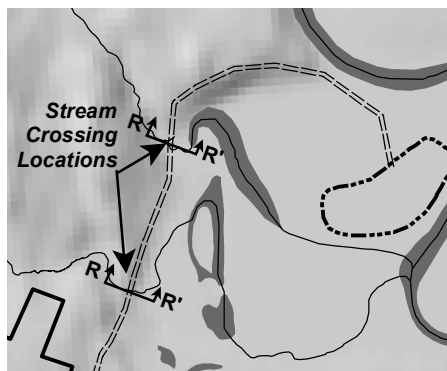
USACE PERMIT # POA-2012-549,
AMBLER RIVER
NAME: AMBLER AIRPORT
IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
Kateel River Meridian;
T20N, R5E;
Sections 19, 20, 21, 29, 30, and 31

WATER BODY: Grizzly Creek,
Ambler River, Kobuk River
DATE: May 9, 2013



TYPICAL DRAINAGE STRUCTURE
INSTALLATION DETAIL
UTILIZING DE-WATERING PUMPS



**STREAM CROSSING STRUCTURE
DETAILS: CONSTRUCTION DETAILS
SHEET 8 OF 8**

*** Drawing Not to Scale**

USACE PERMIT # POA-2012-549,
AMBLER RIVER
NAME: AMBLER AIRPORT
IMPROVEMENTS, Project # 61303

LOCATION: USGS Ambler River A-4;
Kateel River Meridian;
T20N, R5E;
Sections 19, 20, 21, 29, 30, and 31

WATER BODY: Grizzly Creek,
Ambler River, Kobuk River
DATE: May 9, 2013

Attachment C

Applicant Proposed Mitigation Statement Alaska Department of Transportation and Public Facilities – Northern Region Ambler Airport Improvements Project May 2013

Background:

The U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency issued regulations that govern national compensatory mitigation policy for activities in waters of the U.S., including wetlands, authorized by Corps permits. The final mitigation rule was published in the federal register on April 10, 2008, and became effective on June 9, 2008. The final rule establishes standards and criteria for the use of appropriate and practicable compensatory mitigation for unavoidable functional losses of aquatic resources authorized by Corps permits (33 CFR Part 332). Additionally, the rule requires new information to be included in Corps permit applications and public notices to enable meaningful comments on applicant proposed mitigation. In accordance with 33 CFR Part 325.1(d)(7), “For activities involving discharges of dredged or fill material into waters of the U.S., the application must include a statement describing how impacts to waters of the United States are to be avoided and minimized. The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.” For additional information, the final mitigation rule can be viewed at: http://www.usace.army.mil/cw/cecwo/reg/news/final_mitig_rule.pdf

Mitigation is a sequential process of avoidance, minimization, and compensation. Compensatory mitigation is not considered until after all appropriate and practicable steps have been taken to first avoid and then minimize adverse impacts to the aquatic ecosystem. Please provide your proposed avoidance, minimization, and compensatory mitigation below:

Applicant’s Proposed Mitigation:

1. Avoidance of impacts to waters of the U.S., including wetlands:

Please describe how, in your project planning process, you avoided impacts to waters of the U.S., including wetlands, to the maximum extent practicable. Examples of avoidance measures include site selection, routes, design configurations, etc...

The project has been planned and designed to avoid impacts to wetlands and other waters wherever practicable through measures such as material site placement, access route selection, and planning of construction methods. A suitable upland-only route for the access road to the material site is not available due to the surrounding landscape. The material site identified by the Alaska Department of Transportation and Public Facilities (DOT&PF) for use was selected because it is predominantly upland and has the potential to yield non-NOA material for the project and future use by the community. The material site is set back 300 feet from the Ambler River to avoid potential impacts from overburden storage. The limits of the material site will be staked and sediment control measures will be implemented to ensure that impacts do not extend beyond the permitted area.

About 1,240 feet of Waring Street, the airport access road, would be realigned to the southeast around the expanded Runway Safety Area (RSA), beginning approximately at the existing airport property boundary

and extending to the apron. The new road section would remain within the Runway Protection Zone (RPZ), which is not recommended by Federal Aviation Administration (FAA) standards, but would avoid impacts to high value riverine wetlands. Relocating the access road outside of the new RPZ would require a longer road and a new crossing of Grizzly Creek.

The alternative southern material site corridor, while more direct than the proposed northern route, would impact 2.3 more acres of wetland than the northern access route. The DOT&PF also coordinated with the Alaska Department of Fish and Game to discuss the impacts of potential access corridors. This resulted in the removal of the southern access corridor from selection due to its crossing of an uncatalogued fish stream that likely provides rearing habitat for Ambler River and Kobuk River stock juvenile salmonids. The southern route would also impact a greater area of wetlands with high functions and values associated with this stream. Figures 10-15 in the *Jurisdictional Determination Report* (Attachment D) show that fewer Category I and II wetlands are found in the northern material site access route compared to the southern route.

2. Minimization of unavoidable impacts to waters of the U.S., including wetlands:

Please describe how your project design incorporates measures that minimize the unavoidable impacts to waters of the U.S., including wetlands, by limiting fill discharges to the minimum amount/size necessary to achieve the project purpose.

Regulations and guidelines associated with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act call for project proponents to take measures that minimize adverse impacts to wetlands and other waters of the U.S. The following minimization measures have been incorporated into the planning and design of the Ambler Airport Improvements Project:

- The material site access road has been designed to cover the minimum footprint necessary to provide a stable road base for industrial vehicles and projected use.
- Temporary construction impact areas will be limited to 15 feet on each side of the access road and runway improvements.
- Drainage culverts will be installed through the embankment at appropriate sites to maintain the natural flow of surface water.
- Stream crossing culverts will be properly sized to maintain hydrology
- On-site, non-NOA material will be used as source material for embankments and runway improvements.
- Materials would be stockpiled within the project fill footprint, or developed/upland areas, to avoid impacting additional ground.
- Cut slopes would be seeded or otherwise stabilized to prevent erosion.
- Erosion and sedimentation control measures will be used during construction and permanent stabilization will be implemented as early as possible in construction.
- Staking will be done to delineate the planned outside limits of disturbance prior to construction to ensure that impacts will be limited to that area.
- Sedimentation basins will be use as necessary during construction.
- Setbacks from water channels and standing water will be maintained for refueling and vehicle maintenance activities to avoid impacts to the water bodies from an accidental spill.
- Spill response equipment will be readily available and construction personnel should be trained in spill response to contain any accidental leaks of oil or fuel from construction equipment.

3. Compensation for unavoidable impacts to waters of the U.S., including wetlands:

Please describe your proposed compensatory mitigation to offset unavoidable impacts to waters of the U.S., or, alternatively, why compensatory mitigation is not appropriate or practicable for your project.

Compensatory mitigation involves actions taken to offset unavoidable adverse impacts to waters of the U.S., including wetlands, streams and other aquatic resources (aquatic sites) authorized by Corps permits. Compensatory mitigation may involve the restoration, enhancement, establishment (creation), and/or the preservation of aquatic sites. The three mechanisms for providing compensatory mitigation are mitigation banks, in-lieu fee of mitigation, and permittee-responsible mitigation. Please see the attached definitions for additional information.

The project will permanently impact a total of 30.52 acres of wetlands and other waters of the U.S. through the construction of the various project components. Temporary impacts will be limited to 15 feet around all cut and fill limits, and total 5.37 acres. Areas of temporary impact will be restored to their previous condition. In accordance with the Alaska District Regulatory Guidance Letter(RGL) No. 09-01, the DOT&PF proposes to provide compensatory mitigation for unavoidable impacts to the wetlands and other waters of the U.S. Applying ratios described in RGL No. 09-01 (see Table 1), DOT&PF proposes to provide The Conservation Fund (TCF), a Corps of Engineers approved in-lieu fee program provider for the Northwest Arctic Borough area, with sufficient funds to permanently preserve 48.5 acres of wetlands.

Table 1. Compensatory Mitigation Credits Needed.

Wetland Functional Category	Acreage of Impact	RGL 09-01 Ratio for Preservation	Credits Needed from TCF
Category I	0.05	3:1	0.14
Category II	5.24	2:1	10.49
Category III	25.23	1.5:1	37.84
Total	30.52		48.46

A final compensatory mitigation plan will be prepared and submitted to the Corps of Engineers during the permit application review period.