Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Old Harbor **Federal Tax ID:** 92-0046827

Project Title: **Project Type:** New Construction and Land Acquisition

Old Harbor - Airport Improvements

State Funding Requested: $6,649,023 **House District:** 35 / R

Future Funding May Be Requested

Brief Project Description:

Project funding is requested to complete the constuction of the Old Harbor airport extension project.

Funding Plan:

Total Project Cost:	$13,463,523
Funding Already Secured:	($4,500,000)
FY2014 State Funding Request:	($6,649,023)
Project Deficit:	$2,314,500

Funding Details:

2013 - State of Alaska - $4,500,000

Old Harbor is currently listed in - After FFY'12 Rural Airports AIP Spending Plan for improvements in the total amount of $10,115,000

Detailed Project Description and Justification:

We are requesting support for the continued construction of the Old Harbor Airport Expansion project in the amount of $6,649,023. As you will see in the attached documents we have made extensive progress on the airport safety improvements and expansion project that was supported by Governor Parnell and the legislature last year in the amount of $4,500,000.

Old Harbor faces many challenges such as high cost of living, high unemployment and a low economic base. Nevertheless, we are a community of survivors, and by working together in unity with our visions and goals we are determined to survive and prosper into the future. To provide meaningful, long term change, there is a strong conviction that services must be community based and motivated.

With this conviction in mind, Old Harbor developed a Community Plan that has guided us over the past 5 years towards improving its economy and well-being. The proposed airport expansion is directly related to the Community Plan as part of a multi-pronged economic development effort.

The City of Old Harbor, Old Harbor Native Corporation and the Old Harbor Tribal Council has been working diligently to build the infrastructure in our village to support economic expansion. Old Harbor is highly dependent on the fishing industry and currently has the strongest fishing fleet amongst all villages on Kodiak Island. There are cannery operators who are highly interested in developing a fish processing plant in our community. However, in order to operate efficiently they need infrastructure requirements including a safe dock facility, electric and water facilities that meet their demands and an expanded airstrip. We have been successful in building a new harbor facility and a new dock facility. In addition, we are

Contact Name: Astrid Rose
Contact Number: 465-3271

For use by Co-chair Staff Only:

$4,470,000 Approved

2:00 PM 5/9/2013

working in collaboration with Alaska Village Electric Cooperate on the completion of engineering and design for a hydroelectric project and expect to complete licensing and permitting by 2013 and begin construction in 2014-2015.

The interested cannery operators have notified us that in order to develop a frozen fish processing plant they require an airstrip that can accommodate larger airplanes, approximately 4,700 feet long, for the export of fresh fish products.

According to the National Marine Fisheries Service Community Profiles, 72 commercial fishing permits were issued to Old Harbor Residents and 63 licensed crew members resided in Old Harbor. There are now more than 10 charter boats operating out of Old Harbor and the charter industry employs, directly and indirectly, about 25 people. Approximately 110 of the 120 people employed in the community have fishing related jobs. Job expansion, community growth and population retention are direct benefits of an expanded airstrip.

Many families would like to return to Old Harbor; however, without job opportunities they are reluctant to do so. With the establishment of a frozen fish processing plant operating year-round, many jobs will be available and families will be able to return to Old Harbor and be closer to their family and cultural roots.

The City of Old Harbor has secured the support from the Innovative Readiness Training (IRT) Program for military assistance with the airport improvement project. The Innovative Readiness Training (IRT) program provides real world training opportunities for our military service members and units to prepare them for their wartime missions while supporting the needs of America's underserved communities. The purpose of the Civil-Military Programs is to improve military readiness while simultaneously providing quality services to communities throughout America. These programs are in keeping with a long military tradition, leveraging training to benefit both units and their home communities. They are strongly supported by The Department of Defense (DoD), Congress, the states and communities.

The IRT Team (Marine Corps and Air force Red Horse) will mobilize to Old Harbor in May 2013 to begin working alongside our contractor on the project. This in-kind contribution will allow for the cost to be reduced significantly as they will provide their own equipment, fuel, and manpower. IRT's support is a huge benefit for not only our community but also the State of Alaska, Department of Transportation who will have an improved facility.

We intend to complete the project in collaboration with the State of Alaska and hope to maintain the funds allocated on the Rural Airport AIP Spending Plan for the final resurface and lighting installation.

This project is critical in our economic efforts and with military assistance we will be able to make this project a reality. The Old Harbor Airport Safety Improvements and Expansion Project will directly assist in our economic development efforts and provide a safer facility for our residents and visitors. With the expansion of the airport project we will not only have a safer facility but we will have the opportunity to develop a fish processing plant, the City of Old Harbor's revenue will increase, people will be able to return home with increased job opportunities, and there will be an overall improvement in community well-being.

Project Timeline:

Present - 9/2013 - Continue permitting process and engineering/design
5/2012-9/2012 - Construction of cutting back hills to reduce dangerous vortex winds
5/2013 - 9/2013 Construction of Extension (Blasting, Stream Re-allingments, and extension)

For use by Co-chair Staff Only:

2:00 PM 5/9/2013

Contact Name: Astrid Rose
Contact Number: 465-3271

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

State of Alaska

Grant Recipient Contact Information:

Name:	Rick Berns
Title:	Mayor
Address:	PO Box 44
	Old Harbor, Alaska 99643
Phone Number:	(907)257-1823
Email:	cberns@oldharbor.org

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

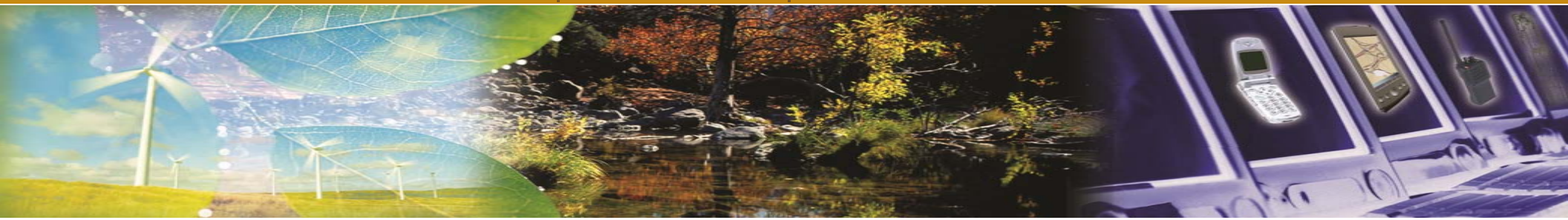
Contact Name: Astrid Rose
Contact Number: 465-3271

For use by Co-chair Staff Only:

2:00 PM 5/9/2013

SHEARWATER SYSTEMS LLC
AN OLD HARBOR COMPANY

Strategic Solutions for Energy | Environment | Business

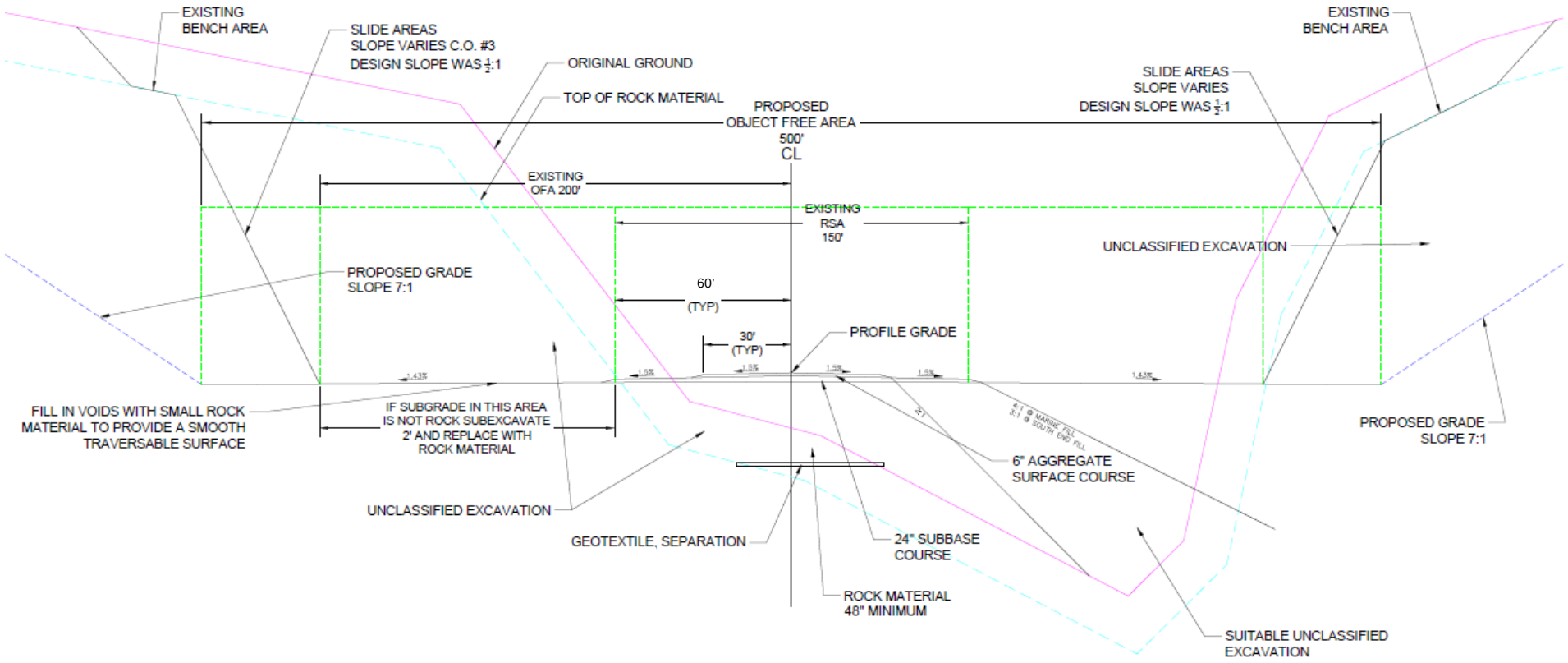


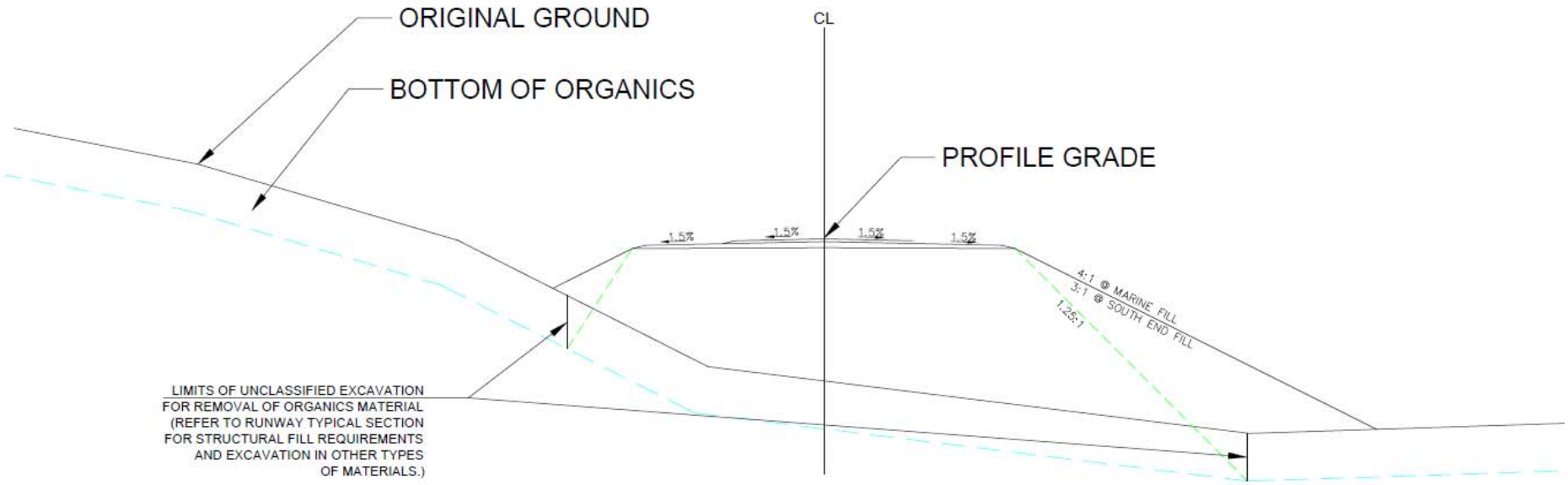
Old Harbor

Airport Improvements

January 2013

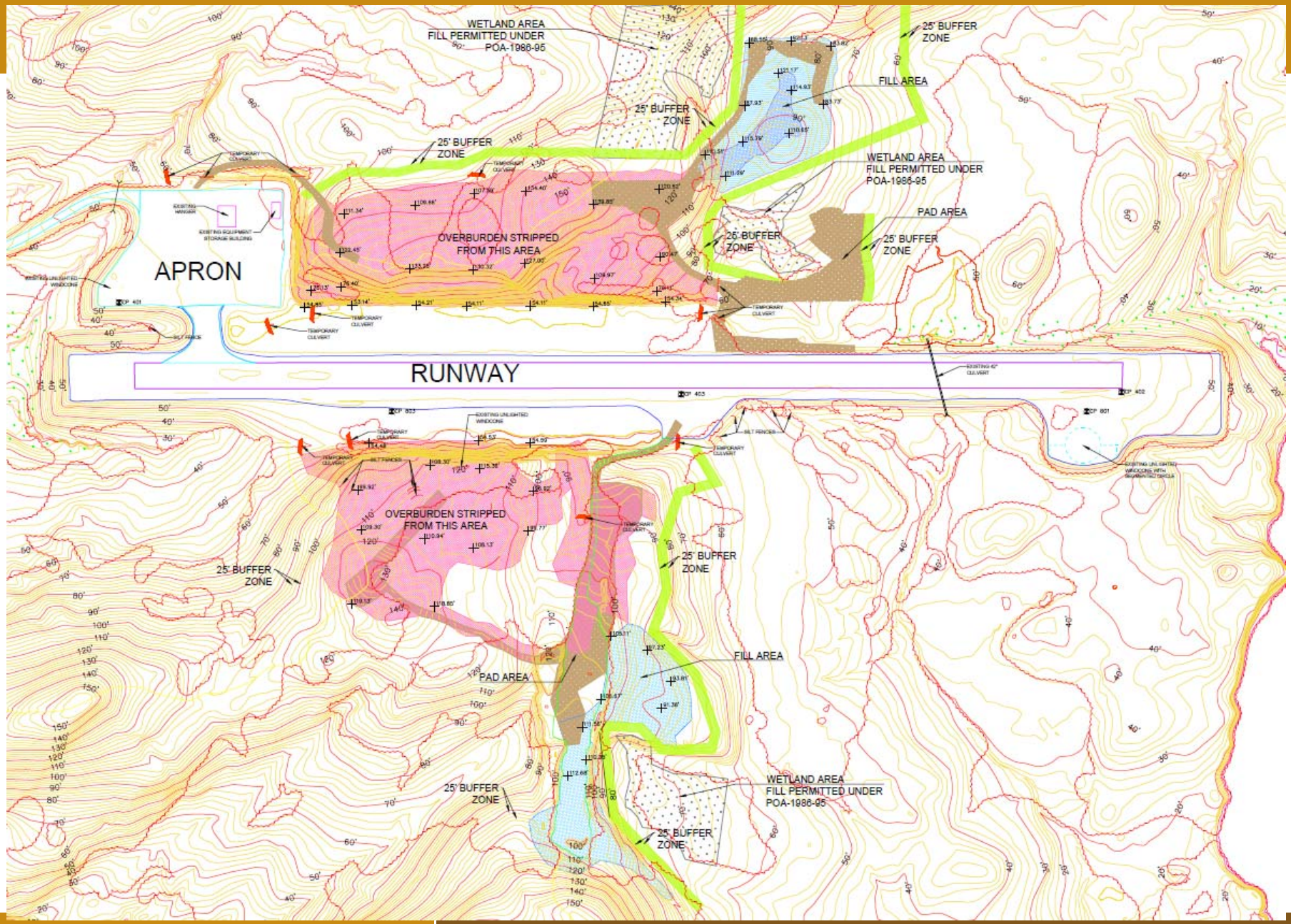
www.shearwaterllc.com


EXISTING BENCH AREA
SLIDE AREAS SLOPE VARIES C.O. #3 DESIGN SLOPE WAS 1/2:1
ORIGINAL GROUND
TOP OF ROCK MATERIAL
PROPOSED OBJECT FREE AREA 500'
CL
EXISTING OFA 200'
EXISTING RSA 150'
EXISTING BENCH AREA
SLIDE AREAS SLOPE VARIES DESIGN SLOPE WAS 1/2:1
UNCLASSIFIED EXCAVATION
PROPOSED GRADE SLOPE 7:1
60' (TYP)
30' (TYP)
PROFILE GRADE
FILL IN VOIDS WITH SMALL ROCK MATERIAL TO PROVIDE A SMOOTH TRAVERSABLE SURFACE
IF SUBGRADE IN THIS AREA IS NOT ROCK SUBEXCAVATE 2' AND REPLACE WITH ROCK MATERIAL
PROPOSED GRADE SLOPE 7:1
6" AGGREGATE SURFACE COURSE
UNCLASSIFIED EXCAVATION
GEOTEXTILE, SEPARATION
24" SUBBASE COURSE
ROCK MATERIAL 48" MINIMUM
SUITABLE UNCLASSIFIED EXCAVATION



RUNWAY ORGANIC MATERIAL EXCAVATION LIMITS TYPICAL SECTION

NO SCALE


WETLAND AREA
FILL PERMITTED UNDER
POA-1986-95
25' BUFFER
ZONE
FILL AREA
25' BUFFER
ZONE
25' BUFFER
ZONE
WETLAND AREA
FILL PERMITTED UNDER
POA-1986-95
PAD AREA
APRON
OVERBURDEN STRIPPED
FROM THIS AREA
25' BUFFER
ZONE
25' BUFFER
ZONE
RUNWAY
OVERBURDEN STRIPPED
FROM THIS AREA
25' BUFFER
ZONE
25' BUFFER
ZONE
FILL AREA
PAD AREA
25' BUFFER
ZONE
WETLAND AREA
FILL PERMITTED UNDER
POA-1986-95
25' BUFFER
ZONE

SHEARWATER SYSTEMS LLC
AN OLD HARBOR COMPANY

Cut Volumes

	West			East			North (peninsula)			Total		
	Cubic Yards Range (from/to)			Cubic Yards Range (from/to)			Cubic Yard Range (from/to)			Cubic Yards Range (from/to)		
Over Burden	112,717	to	124,221	122,685	to	146,847	154,255	to	200,532	389,657	to	471,600
Rock	780,594	to	792,098	497,778	to	595,813	277,778	to	361,111	1,556,149	to	1,749,021
Total	**893,311**	**to**	**916,319**	**620,462**	**to**	**742,659**	**432,033**	**to**	**561,643**	**1,945,807**	**to**	**2,220,621**

Fill Volumes

	North	South	Total
Fill	619,996	138,389	758,385

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Cut—FILL VOLUMES BY LOCATION AND MOVMENT

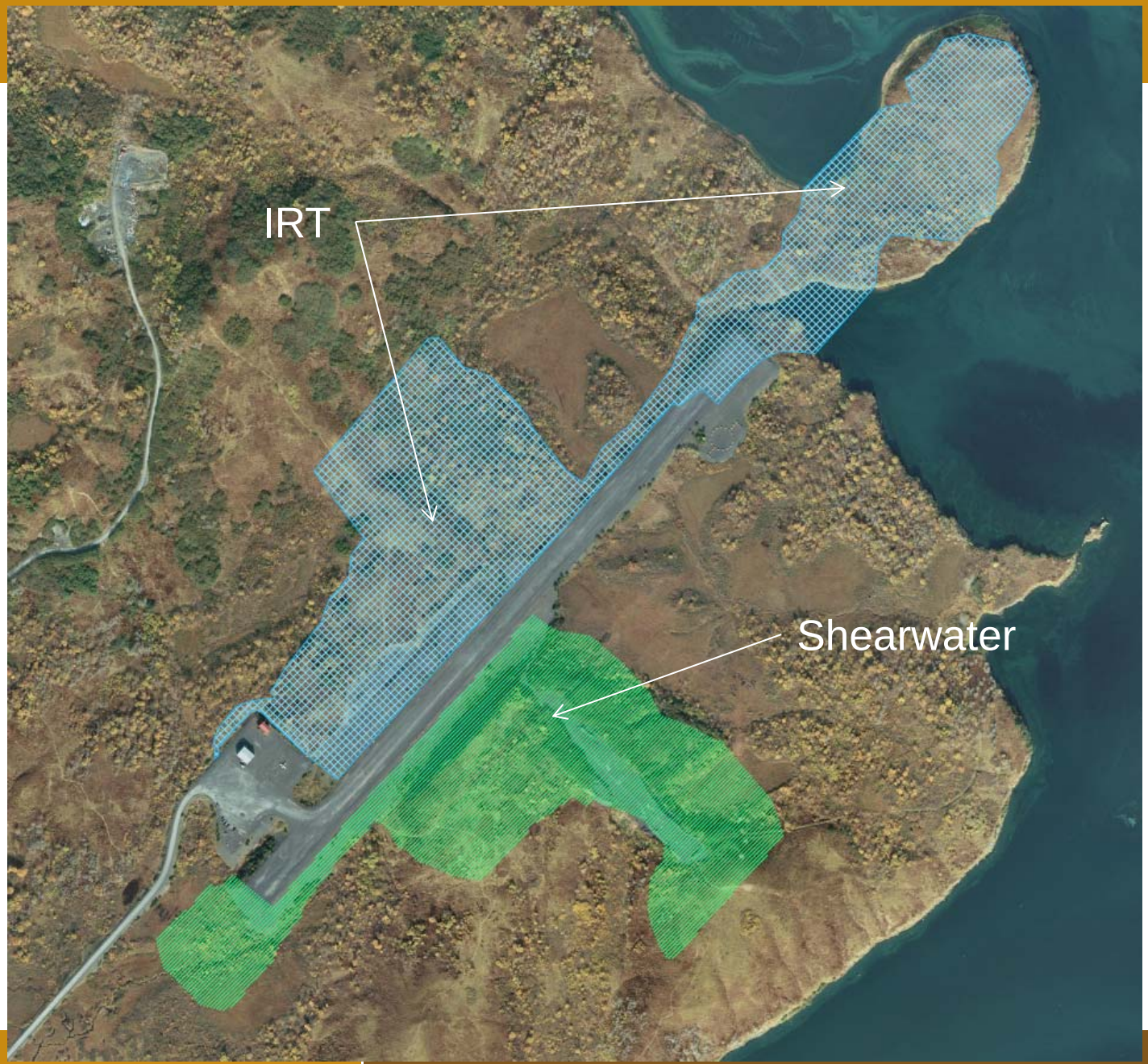
		Ave												
	area	Depth	end area Vol	Movement	CY moved	from/to	Vol	Balance	from/to	Vol	Balance		Overburden	Rock Waste
Fill at south end	97,610	29.35	106,111	1	106,111									
Cut at South	184,671	4	27,359	1	27,359						27,359	waste on east	27,359	
K-cut in fill South	97,610	6	32,278	2	64,556						64,556	waste on east	64,556	
total fill south			138,389			from East cut	138,389							
Fill west side	546,606	24.11		1	-									
Cut west side	418,044		646,667	1	646,667	to North end fill	380,738	265,929	To west fill		265,929	waste on west	222,188.31	265,929
K west side	-	-	-	2	-									
total fill west														
Fill east side	463,526	18.15		1	-									
Cut east side	455,012		355,556	1	355,556	to South end fill	138,389	217,167	To east fill		217,167	waste on east	94,373	217,167
K east side	-	-	-	2	-									
total fill east														
Fill Stream NW	-		-	1	-									
Cut stream NW	87,982	15	48,879	1	48,879	to overburden fill	48,879	-			-	waste in overburden area		
K stream NW	-		-	2	-									
total fill stream			-											
Fill at north end	694,149	18.12	465,741	1	465,741									
Cut at north end	173,339		277,778	1	277,778	less OB							38,520	
K at north end	694,149	6	154,255	2	308,511	all OB						waste in overburden area	308,511	
total fill north			619,996			From North end cut	239,258	380,738	from West Cut	380,738	-			
Overburden fill north	199,716	30.00	221,907	0	-	Stream NW	48,879							
						K at north	308,511	(135,483)	To West fill					
													755,506	483,095
Total F+K			980,292											
Total C+K			1,542,771											
			2,523,062		2,301,156									

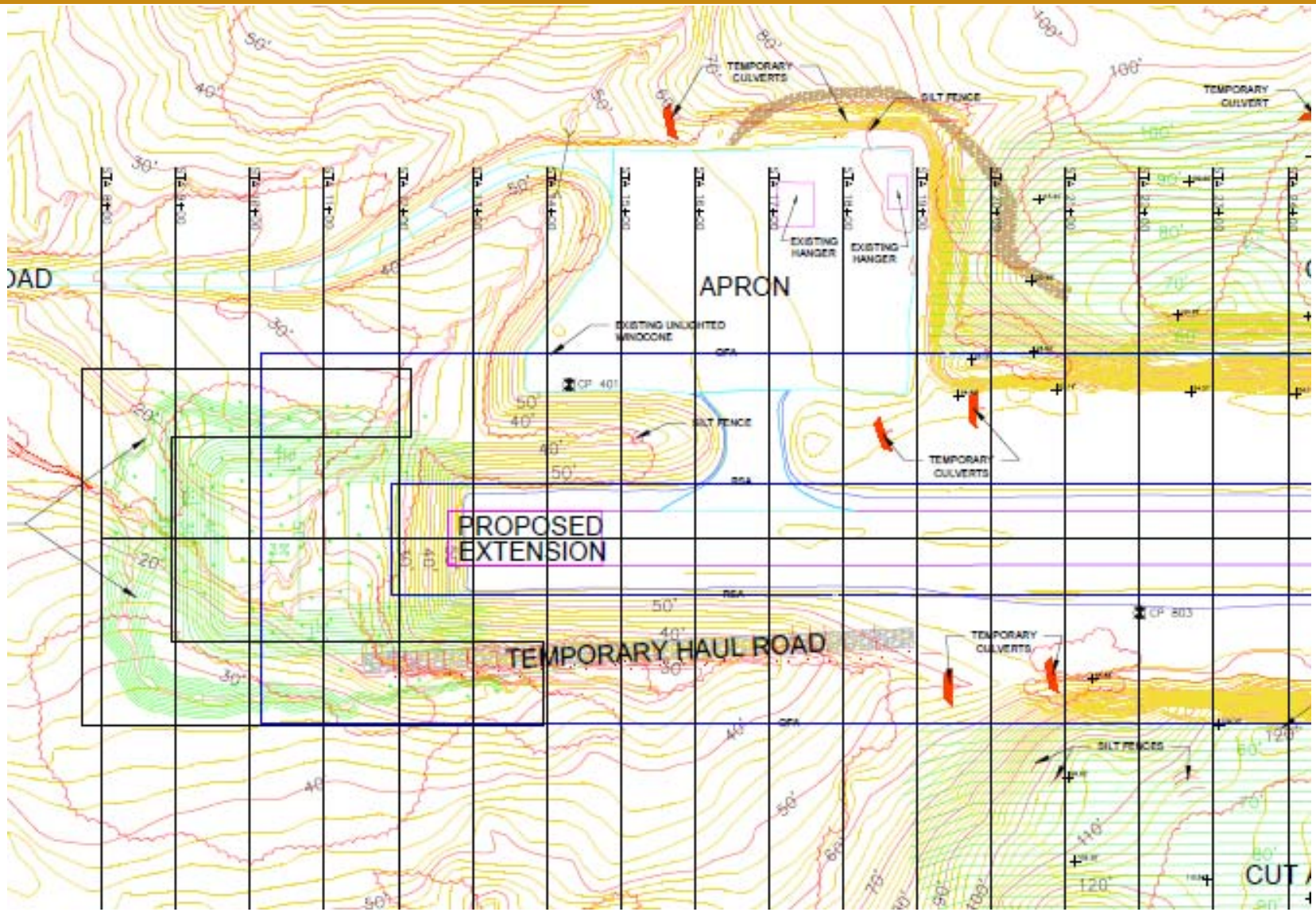
2013, March-June Work Area

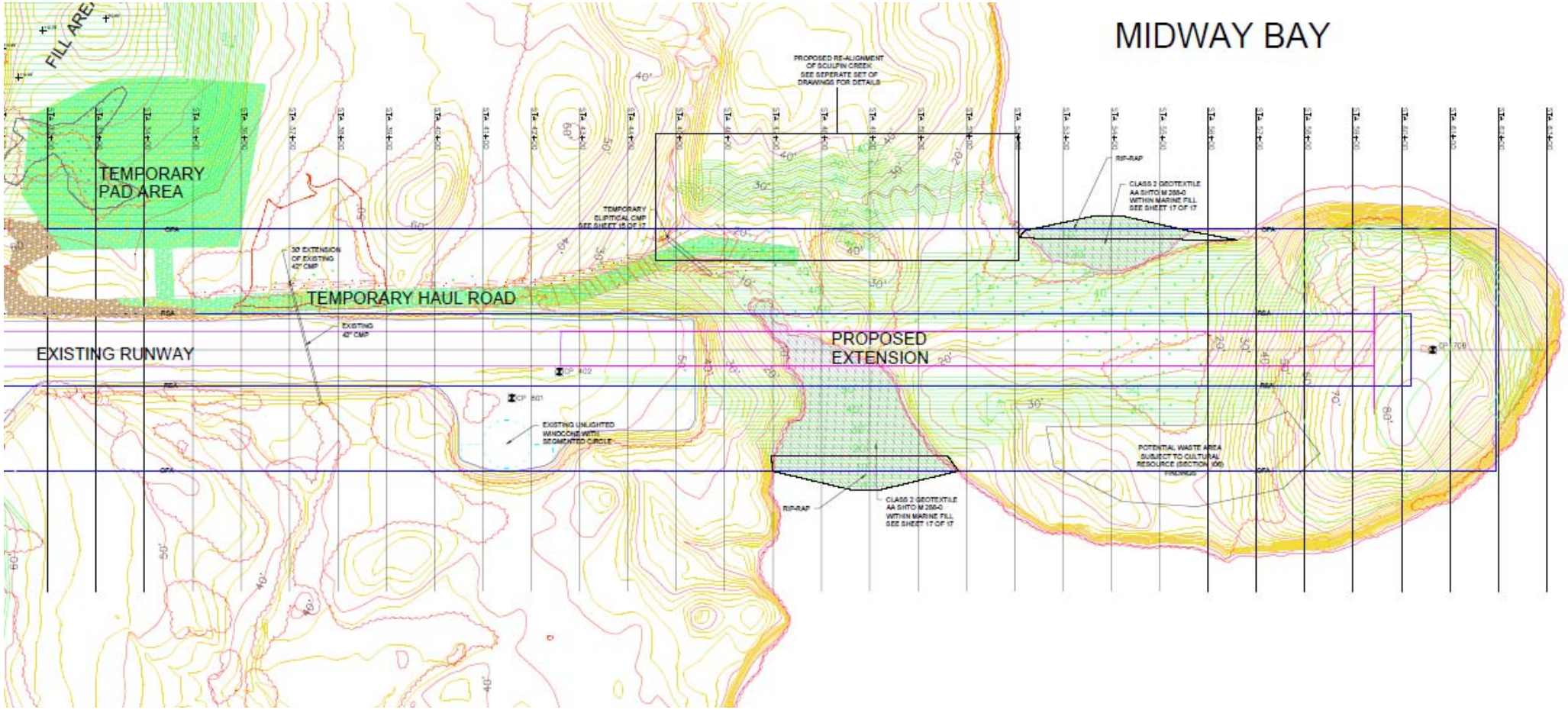
SHEARWATER SYSTEMS LLC
AN OLD HARBOR COMPANY

2013, June-August Work Area

SHEARWATER SYSTEMS LLC
AN OLD HARBOR COMPANY




TEMPORARY CULVERTS
SILT FENCE
TEMPORARY CULVERT
EXISTING HANGER
EXISTING HANGER
APRON
EXISTING UNLIGHTED WINDCONE
SILT FENCE
TEMPORARY CULVERTS
PROPOSED EXTENSION
TEMPORARY HAUL ROAD
TEMPORARY CULVERTS
SILT FENCES
CUT

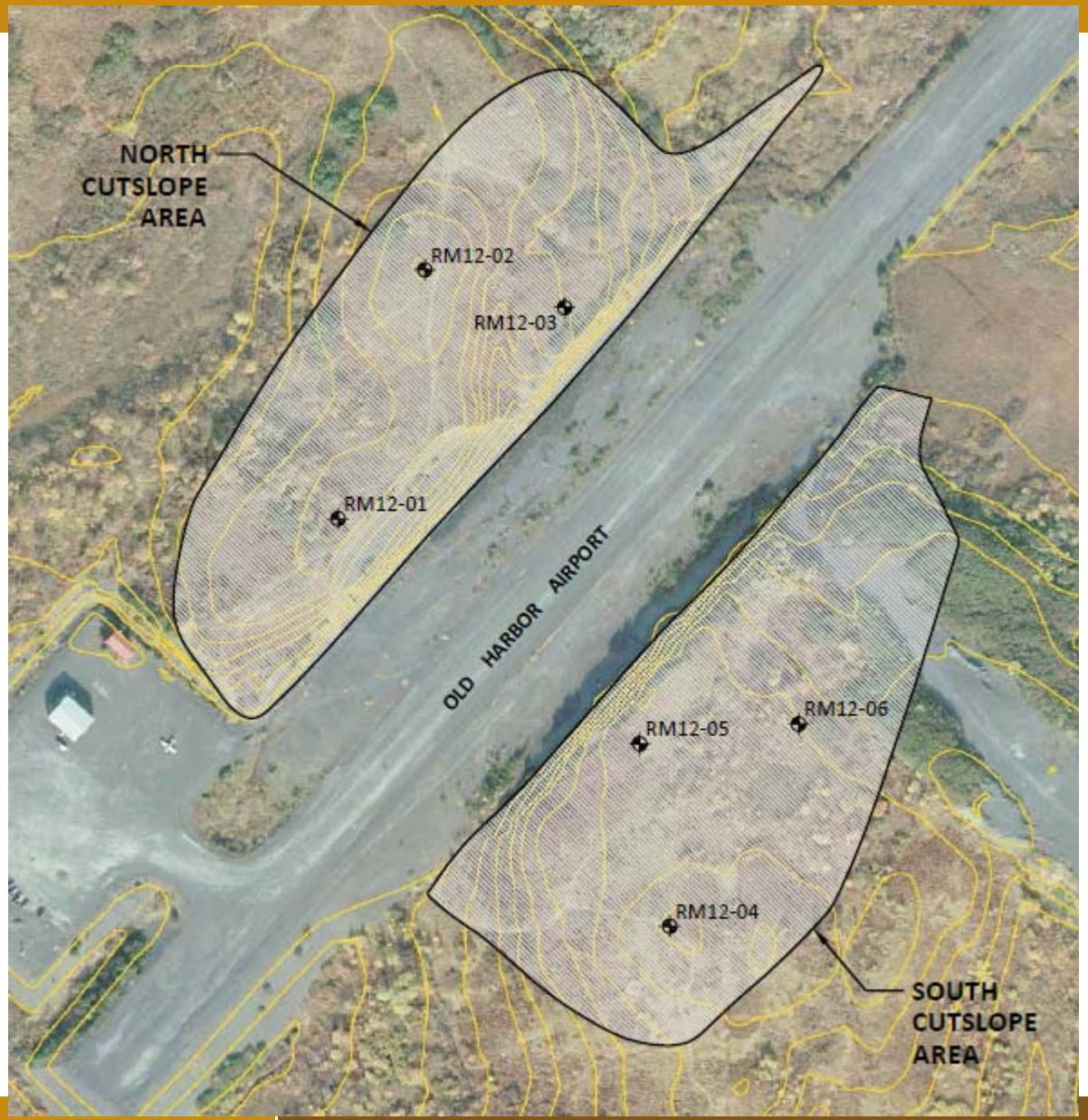

MIDWAY BAY
TEMPORARY PAD AREA
TEMPORARY HAUL ROAD
EXISTING RUNWAY
PROPOSED EXTENSION
PROPOSED RE-ALIGNMENT OF SCULPIN CREEK SEE SEPERATE SET OF DRAWINGS FOR DETAILS
RIP-RAP
CLASS 2 GEOTEXTILE AA SHTO M 288-0 WITHIN MARINE FILL SEE SHEET 17 OF 17
TEMPORARY ELIPTICAL CMP SEE SHEET 16 OF 17
30' EXTENSION OF EXISTING 42" CMP
EXISTING 42" CMP
EXISTING UNLIGHTED WINDCONE WITH SEGMENTED CIRCLE
POTENTIAL WASTE AREA SUBJECT TO CULTURAL RESOURCE (SECTION 106) FINDINGS
RSA
OFA

SHEARWATER SYSTEMS LLC
AN OLD HARBOR COMPANY

Project Schedule

- 404 Permit Public Notice week of January 20, 2013
- 404 Comment period closes 30 days after notice
- EA issued concurrently
- Grading Plans 65% complete
- Submit Stream Permits (3) After Public Notice of EA
- Submit Temporary Culvert Permit End of January- independent of EA and 404
- Prepare Safety and Blasting Plans by End of February

- First Shipments by March 1: fuel tanks, culvert, additional equipment, blasting agents
- Install Fuel Tanks March-May
- Commence Westside Blasting Mid-March
- Extend Haul Road and Temporary Culvert upon receipt of 404 permit Mod
- Cut/blast Sculpin Creek Re-alignment immediately after culvert install
- Cease operations on west by May 30, including blasting
- Re-align south streams June-July
- Commence blasting east June 1


NORTH CUTSLOPE AREA
RM12-02
RM12-03
RM12-01
OLD HARBOR AIRPORT
RM12-05
RM12-06
RM12-04
SOUTH CUTSLOPE AREA

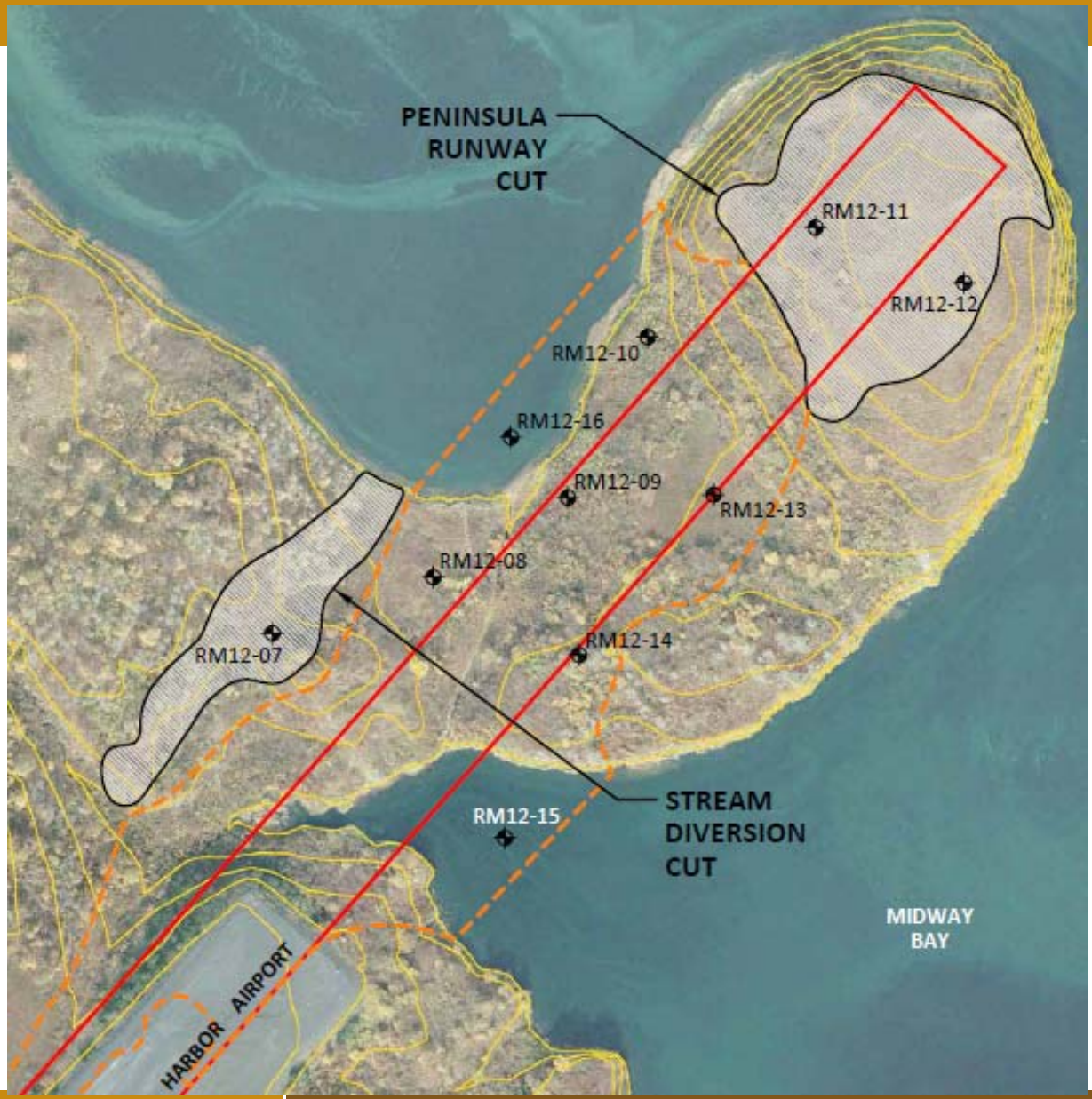

PENINSULA RUNWAY CUT
RM12-11
RM12-12
RM12-10
RM12-16
RM12-09
RM12-13
RM12-08
RM12-07
RM12-14
STREAM DIVERSION CUT
RM12-15
MIDWAY BAY
HARBOR AIRPORT

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Table 3 - Observed Groundwater Conditions, Onshore Investigation Area

ID	Surface Elevation (ft.)	Total Depth (ft.)	Groundwater Depth* (ft.)	Groundwater Elevation** (ft.)	Latitude***	Longitude***
RM12-07	~ 35	30.3	18	~ 17	57.22288	-153.26435
RM12-08	~ 12	13.0	6	~ 6	57.22319	-153.26268
RM12-09	~ 14	26.3	11	~ 3	57.22336	-153.26156
RM12-10	~ 16	25.4	17	~ -1	57.22403	-153.26122
RM12-11	~ 65	23.0	Not Observed	Not Observed	57.22457	-153.25942
RM12-12	~ 80	37.0	Not Observed	Not Observed	57.22453	-153.25879
RM12-13	~ 20	20.5	1	~ 19	57.22344	-153.26055
RM12-14	~ 20	20.1	Not Observed	Not Observed	57.22284	-153.26193

*Groundwater depths were observed while drilling and are approximate
**Elevations shown were extrapolated from provided contour maps and are approximate
***Coordinates are presented in WGS 84, in survey feet

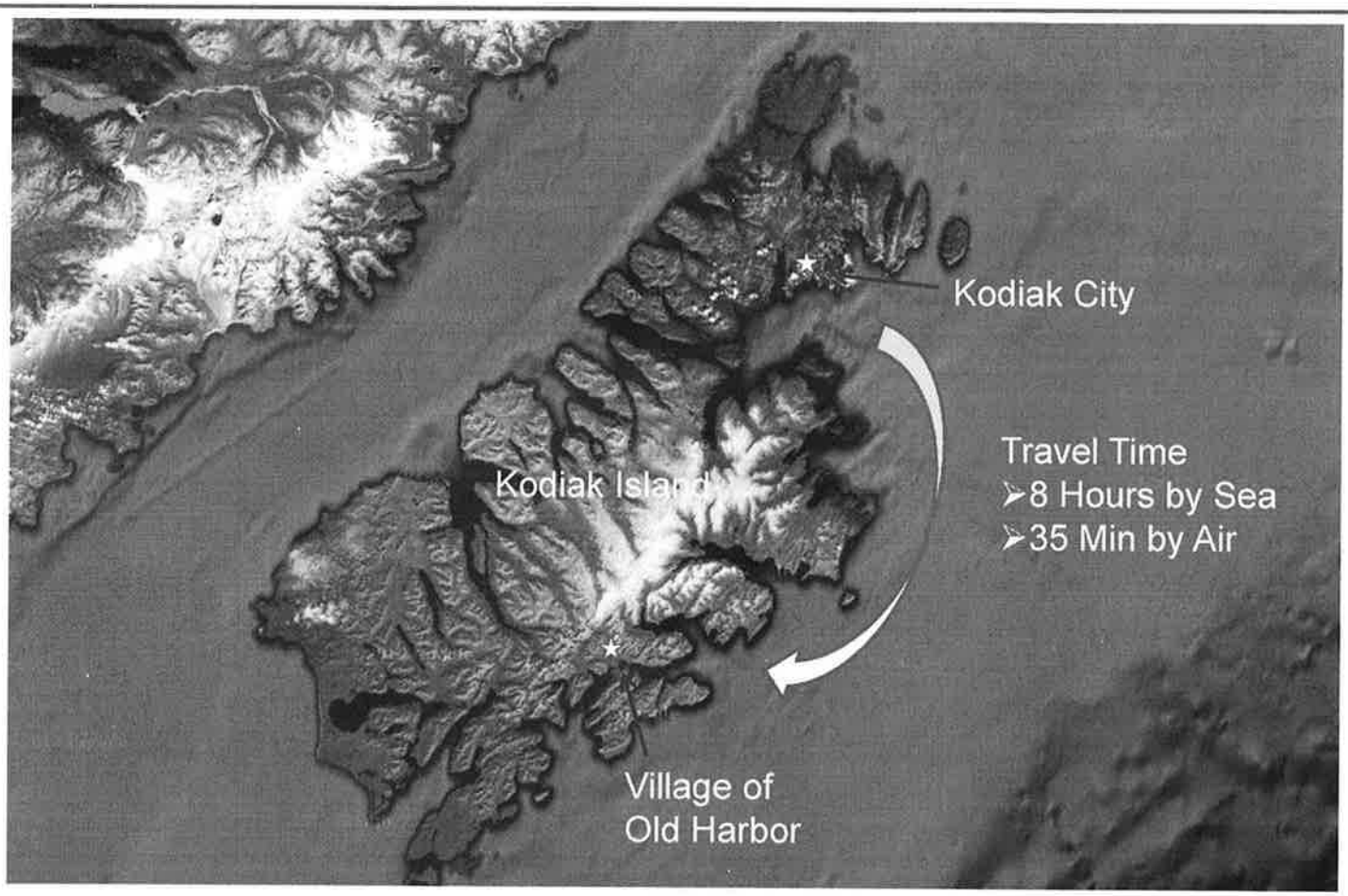

CAT

The overall classification of this brief is : UNCLASSIFIED

OLD HARBOR AIRSTRIP EXPANSION PROJECT

Innovative Readiness Training (IRT)

Project Location



Existing 2750’ Airstrip


2750'
Old Harbor Airport
4750'
Old Harbor

Mission

Extend existing airstrip in order to accommodate larger aircraft, enabling growth of the Old Harbor fishing industry and the stabilization of the local economy and population.

FY-13 Horizontal Construction

Priorities of work

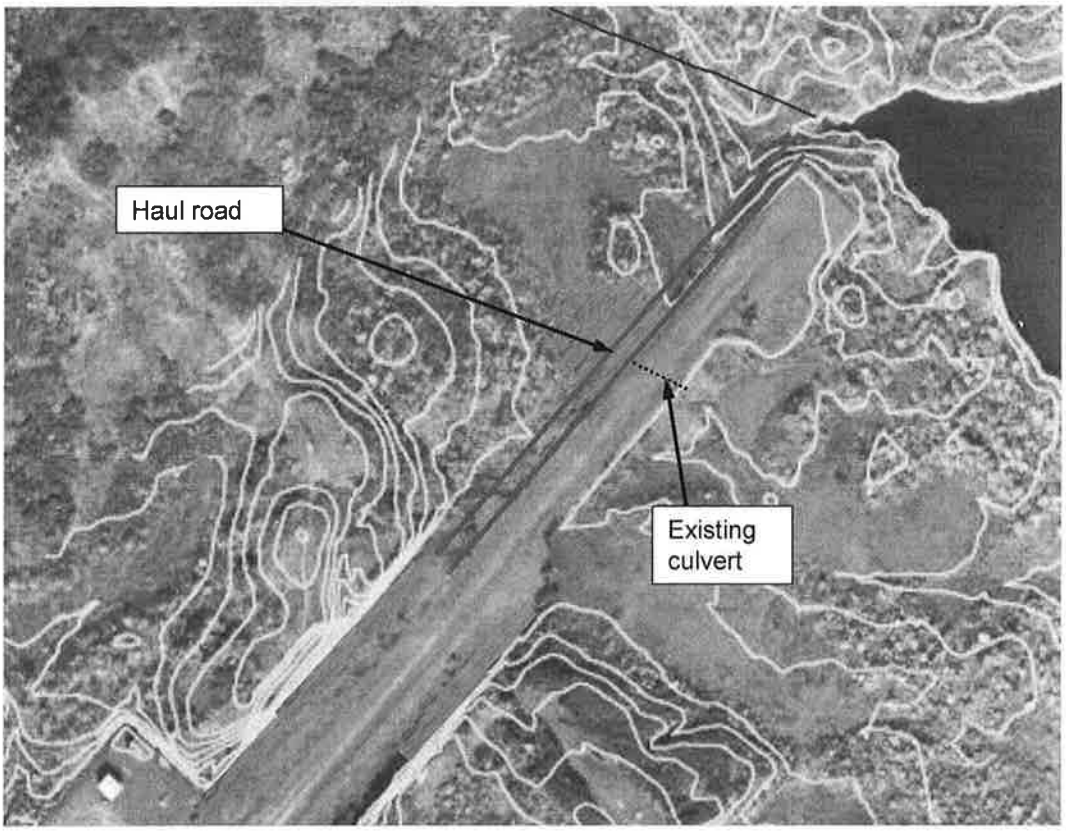
- Establish Haul Road
  - Extend Culvert
- Stream Diversion
- Containment Barriers

Establish Haul Road

A haul road will be required in order to haul material from the East side hill into the fill area on the North end of runway.

- The haul road will need to be wide enough to safely support two-way traffic.

- An existing culvert will need to be extended under the haul road.

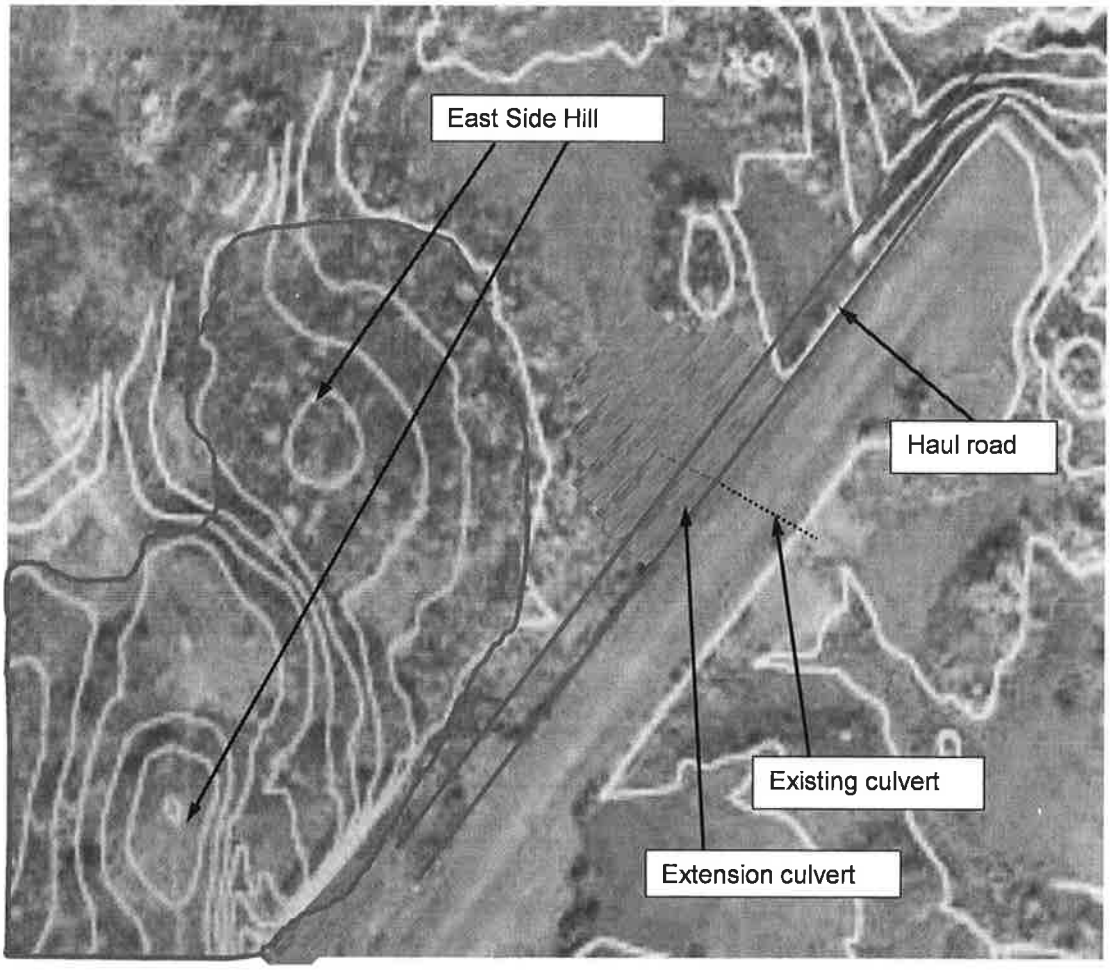


Establish Haul Road

Equipment Required

- Dozers
- Articulating Dump Truck
- Loaders
- Excavators
- Graders
- Rollers
- Water truck
- Fuel Truck

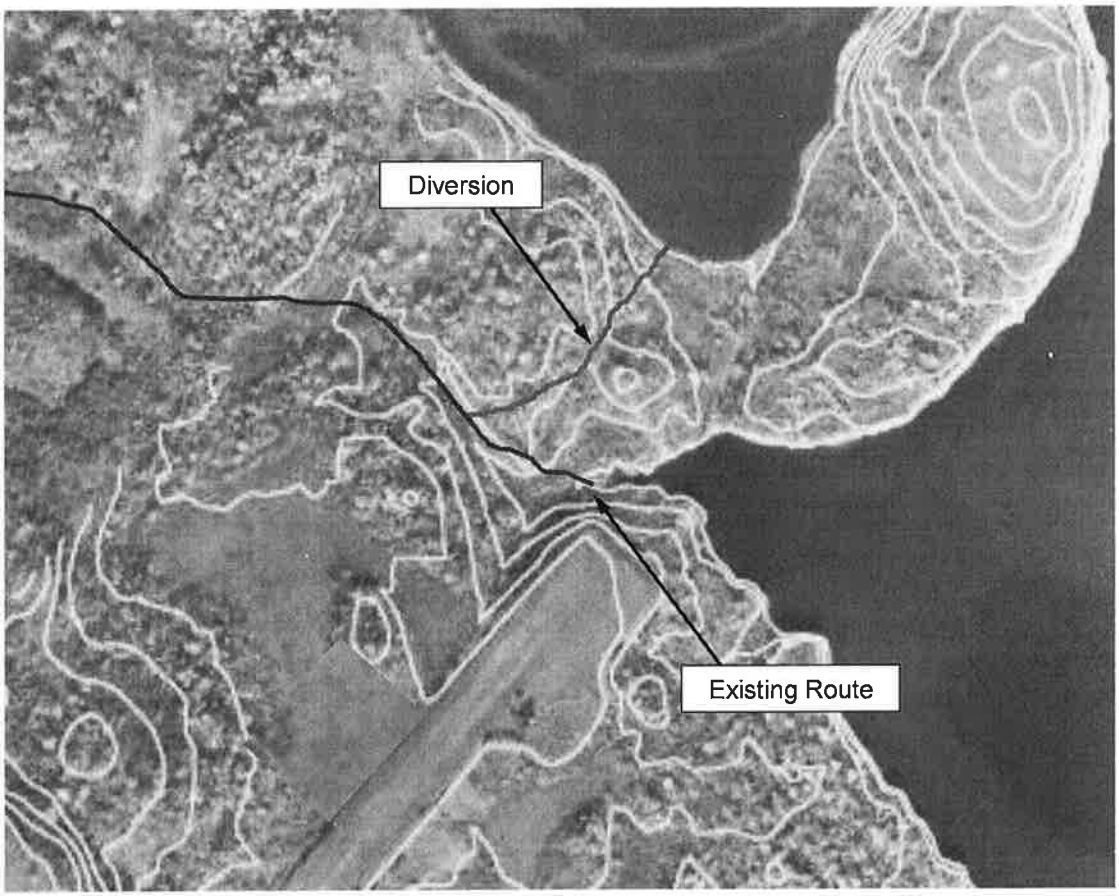
- Material from the East hill will be excavated IOT to build the Haul Road



Stream Diversion

- Stream on North end of runway will have be diverted to facilitate the extension and access to the fill area.

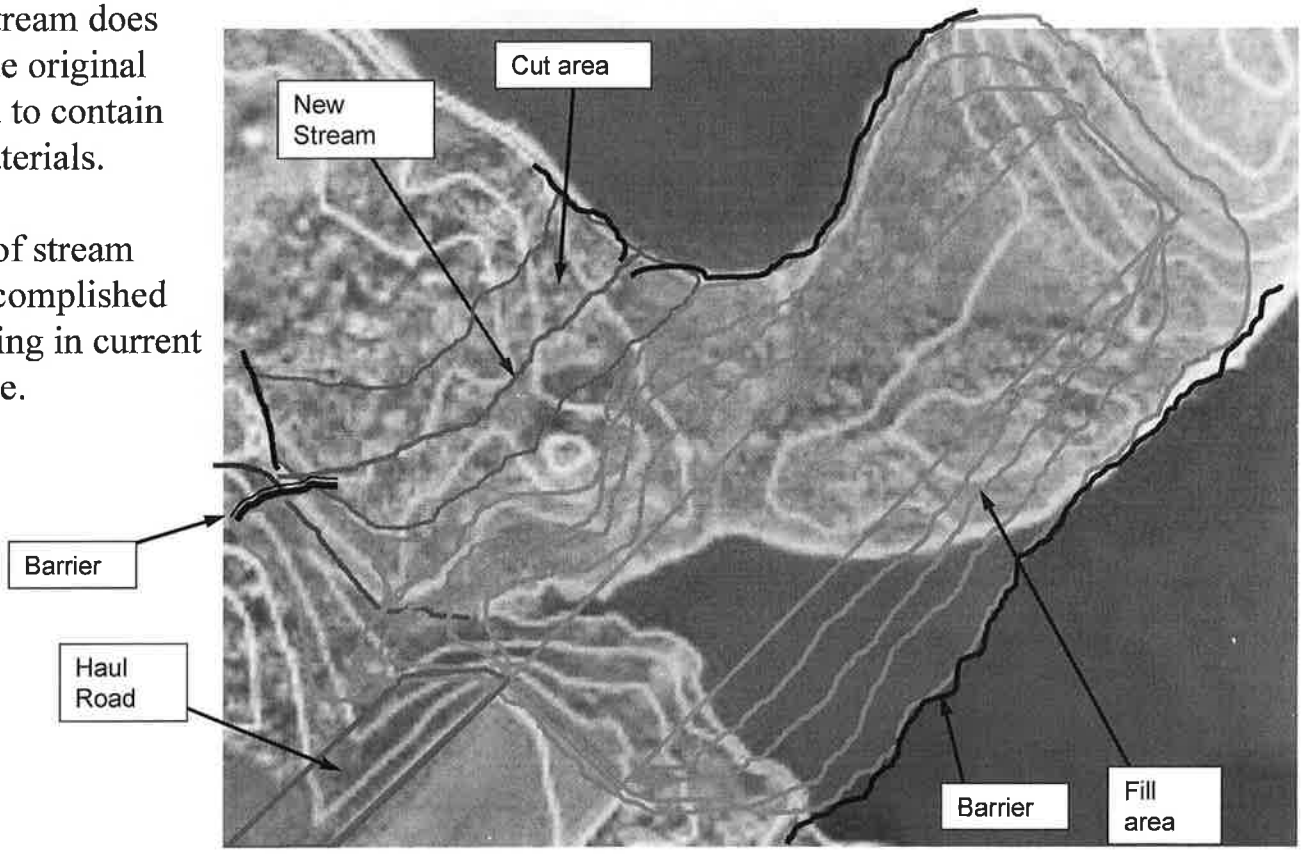
-Required Equipment same as haul road.



Containment Barriers

- Barriers must be placed to ensure stream does not continue original course, and to contain new fill materials.

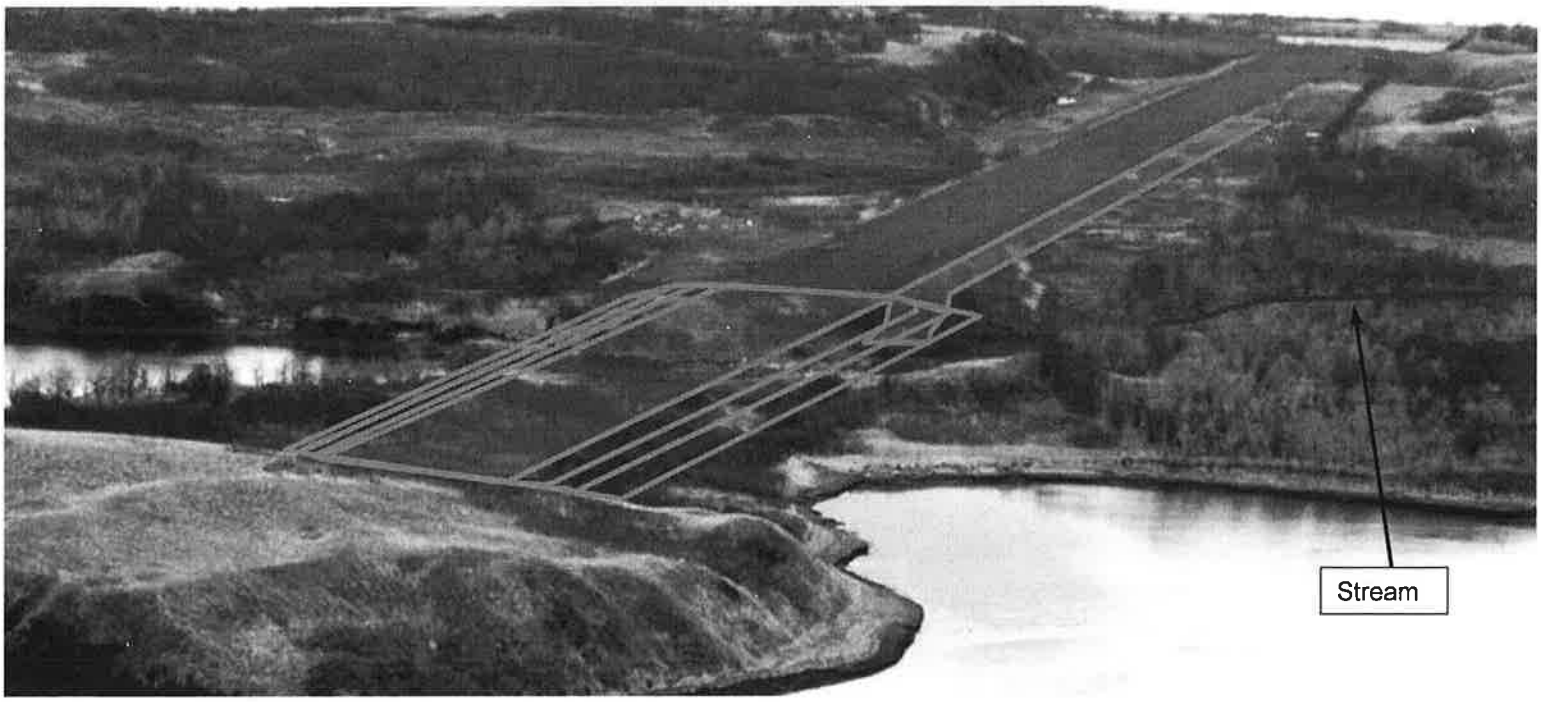
- Diversion of stream must be accomplished prior to filling in current stream route.



Future Work

Fill North End for Runway Extension

- Utilize haul road to move material from East hill to North end of runway.



Future Work

Excavate North Hill

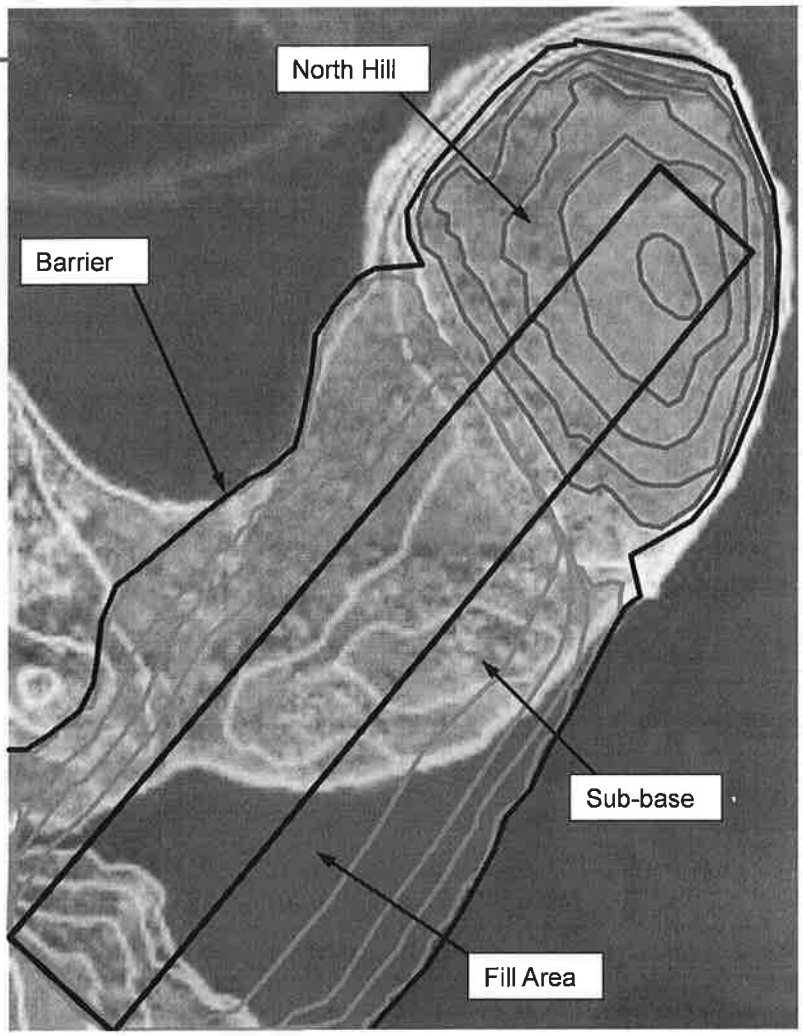
-The north hill will need to be cut to grade and used to fill the end of the runway.

-Blasting may be required to facilitate material movement.

- The material removed will be used to fill the void between the north hill and the existing runway.

- Compacting this fill area of a sub-base is critical for proper stability.

-The sub-base material from the east hill and the north hill should be suitable to form the base for the runway.



Additional FY-13 Work

- Receive and stage IRT owned equipment being transferred from Mertarvik project (Date TBD) for use in FY-14

Organic Heavy Equipment

TAMCN	NOMENCLATURE	QTY
B0024	WATER DISTRIBUTOR	1
B0060	MEDIUM CRAWLER TRACTOR W/ WINCH AND RIPPER ATTACHMENTS	3
B0063	TRAM, LOADER W/ FORKS AND BUCKET	2
B0078	MOTORIZED GRADER	2
B0395	AIR COMP WITH PNEUMATIC TOOLS	1
B1785	ROLLER, COMPACTOR, VIBRATORY	2
B1922	WHEELED TRACTOR-SCRAPER (WTS) 621G	1
B2685	TACTICAL WELDING SHOP	1
B0025	HYDRO SEEDER TRAILER (WATER DISTRIBUTION FOR COMPACTION)	1
C7913	SHOP EQUIPMENT, GENERAL PURPOSE COMMON 34 (MT)	1
C7911	SHOP EQUIPMENT, GENERAL PURPOSE COMMON 24 (HE)	1
D0880	TRAILER, TANK, WATER	2
D1062	7 TON TRUCK (MTVR)	2
D0881	LVSR - MK18 MOD 0	1
D0209	MK48/48A1 Power Unit	1
D1158	M1123 TRUCK, UTILITY, CARGO/TROOP	4

Contracted Earthmoving Equipment

TAMCN	NOMENCLATURE	QTY
725	TRUCK, DUMP - ARTICULATING (CAT)	4
350D	HYDRAULIC EXCAVATOR (JD)	2
350D	ATTACHMENTS, ROCK HAMMER	
744K	LOADER, 5 CUYD BUCKET (JD)	2

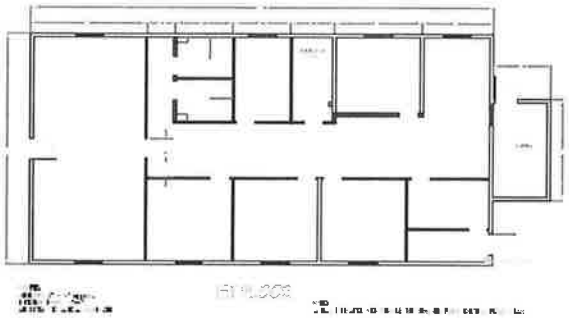
FY-13 Vertical Construction

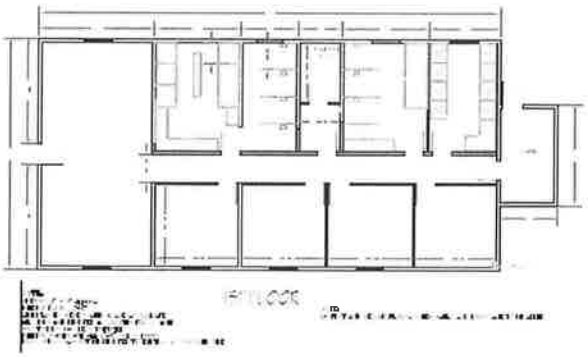
Priorities of work

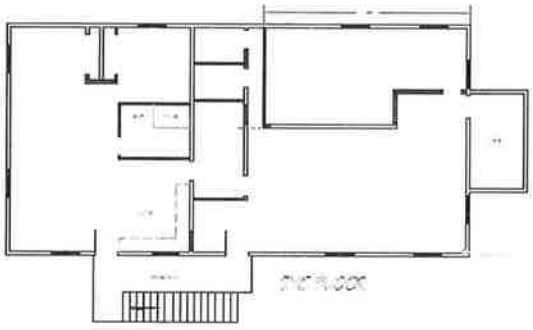
- Renovate Old Medical Clinic
  - Billeting Use
- Renovate Old Guard Building
  - Command Post / Duration Billeting

Medical Clinic Renovation

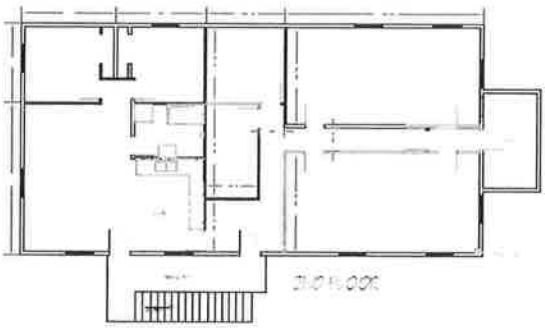
Proposed Renovation





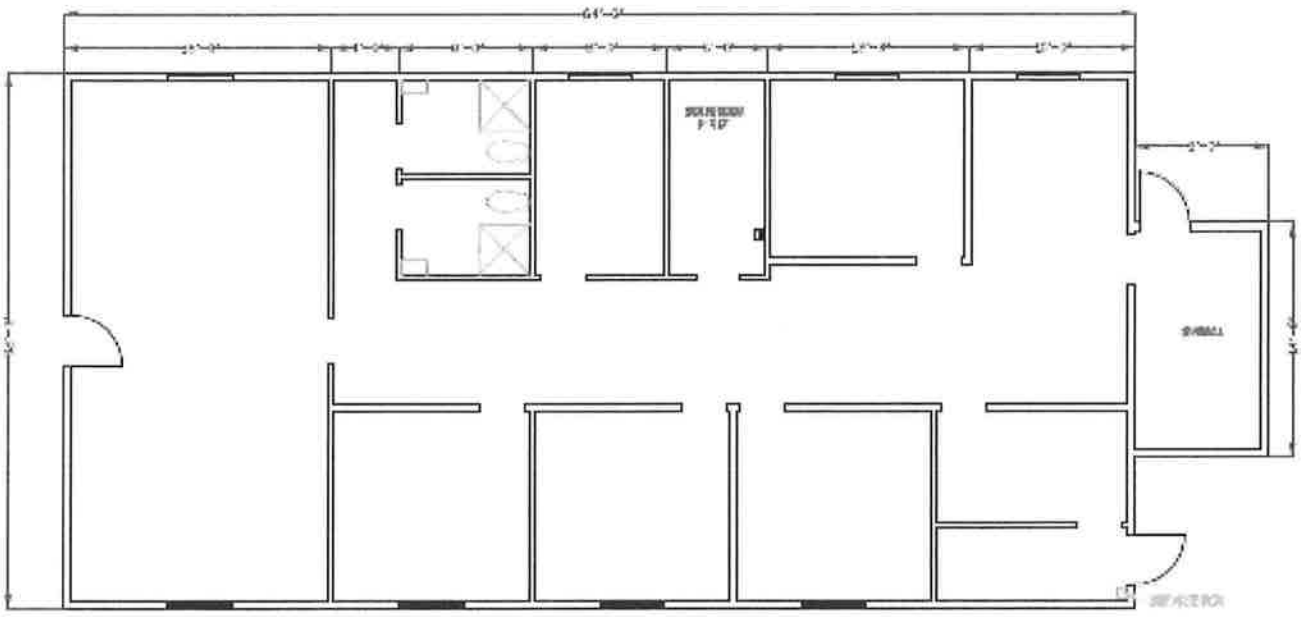


EXISTING



RENOVATED

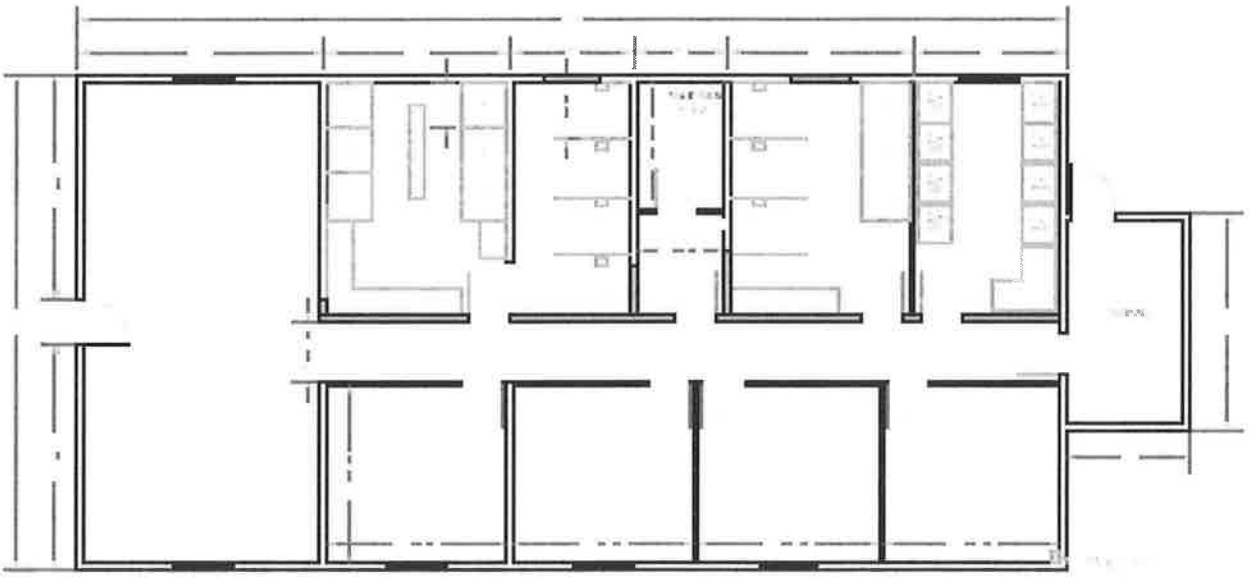
1st Floor Existing



NOTE:
WINDOWS 8' X 4' Approx.
INTERIOR DOORS 2'-8"
ALL DISTANCES ARE APPROXIMATE

1ST FLOOR

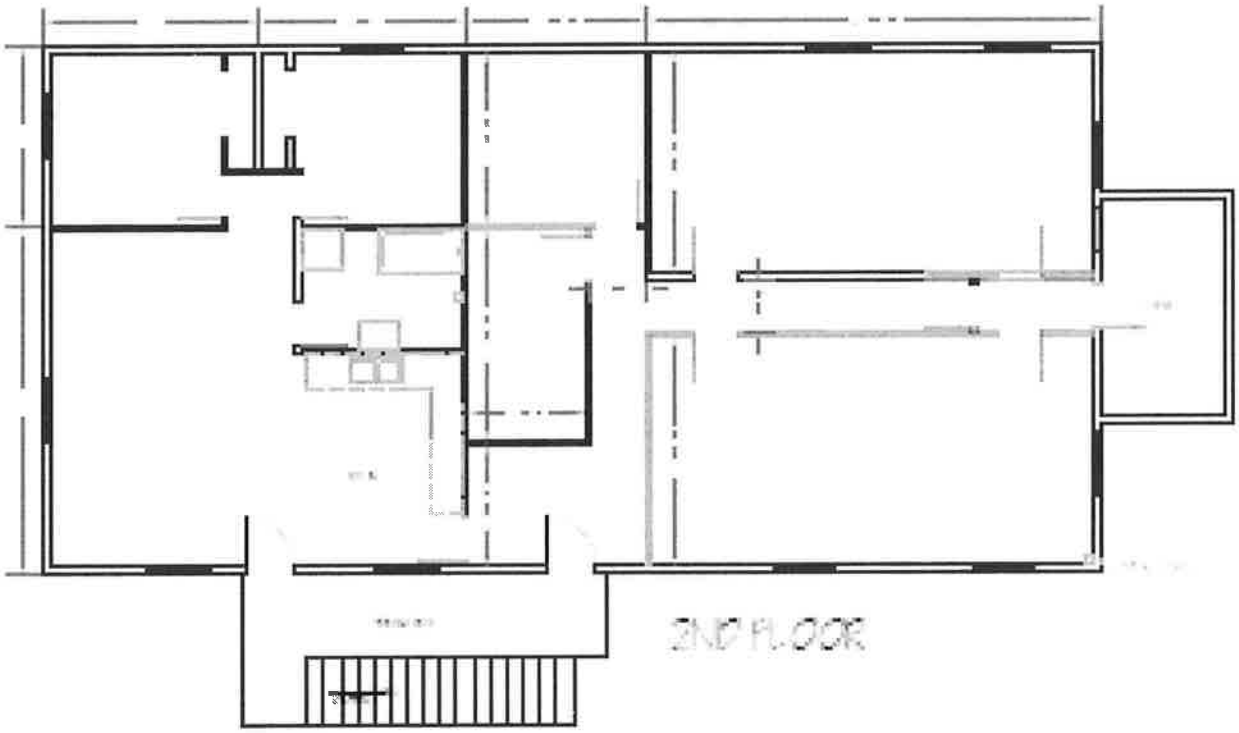
1st Floor Renovation



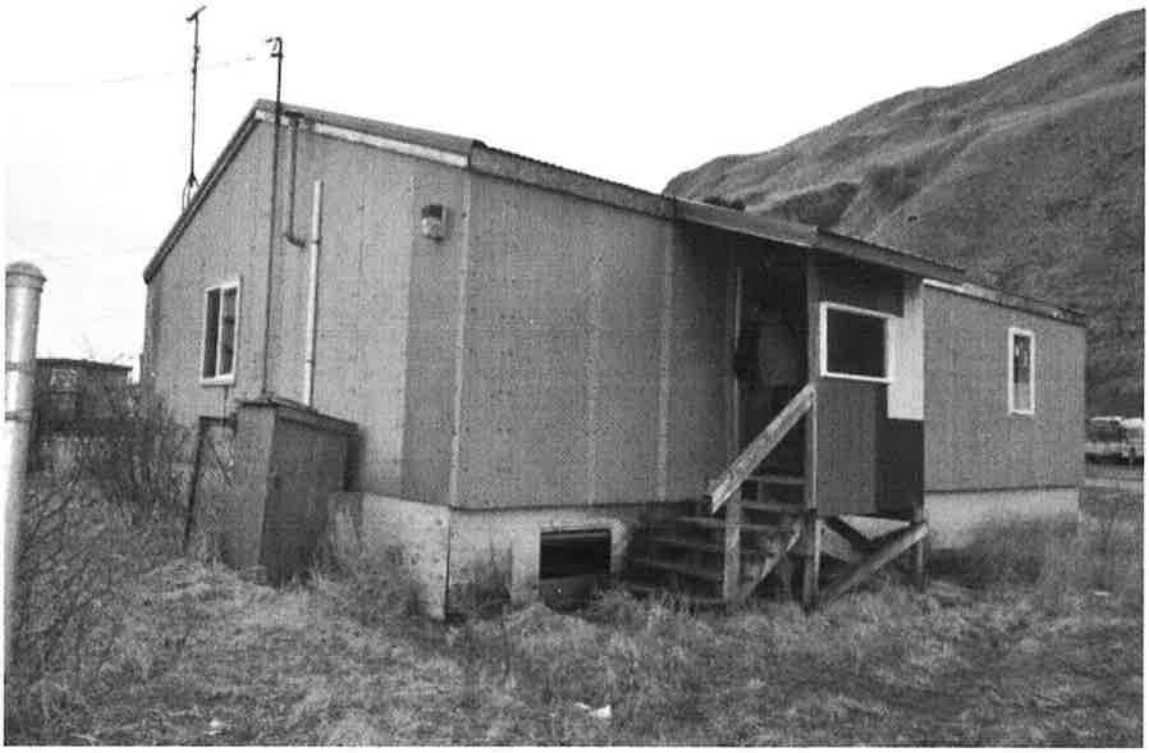
1ST FLOOR

2nd Floor Existing

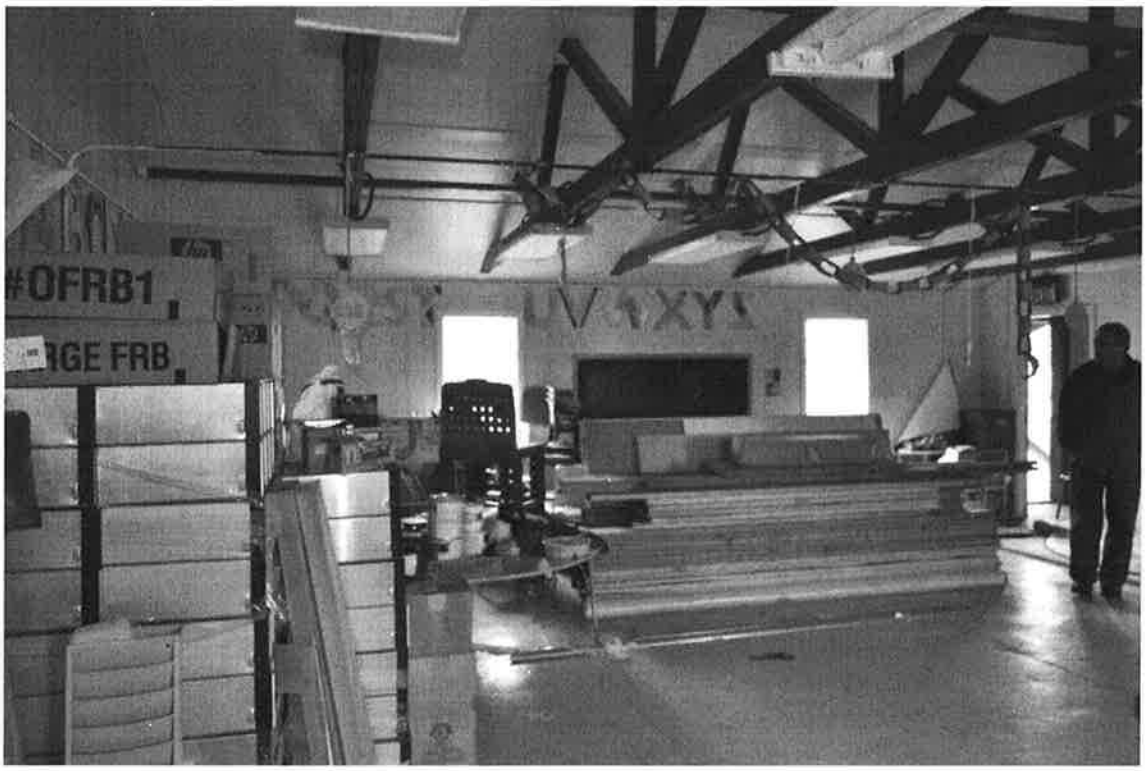
2nd Floor Renovated



Duration Staff Billeting / Office



Duration Staff Billeting / Office



Memorandums of Understanding and Agreement

- Fuel Storage and use
- MEDEVAC with US Coast Guard
- Use of Clinic & Guard Buildings with Old Harbor
- Communication Assets (Land Lines/Internet Service)
- LCU Support with USAR
- Air Support with ANG
- Village Protection Safety Officer

Participating Joint Services

USAF 201 Red Horse
Renovation of Abandoned Medical Clinic –
For billeting use – Approved IRT application

311th ESC (USA)
LCU support / movement of equipment –
SUPPORT REQUEST IN PROGRESS

AIR NATIONAL GUARD
Movement of troops

Others TBD

Fuel Support Plan

COA 1

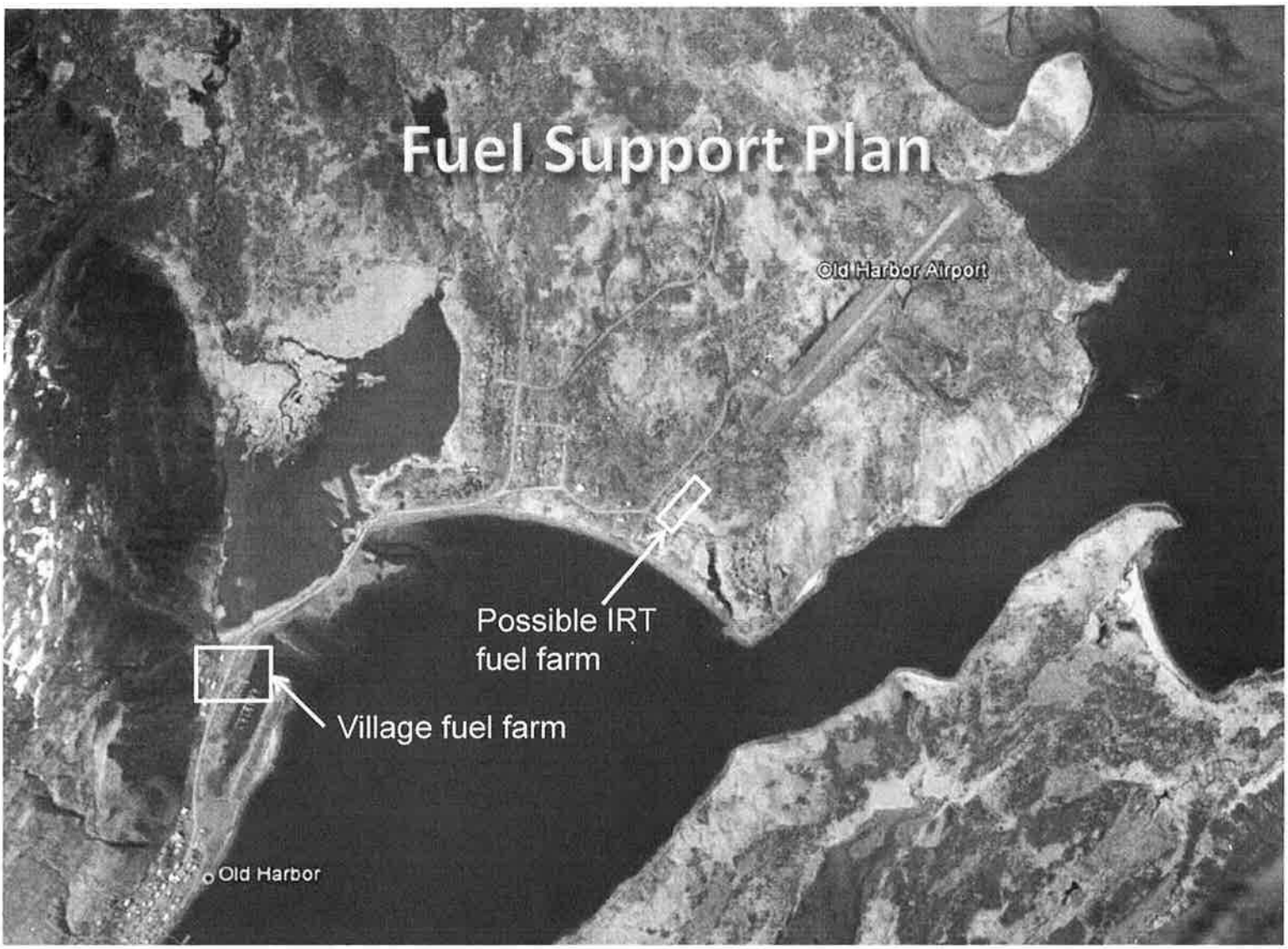
New Old Harbor Village 27k tanks

COA 2

Setup Organic Fuel Farm

Fuel Support Plan

- Contracting Officer
- Barge Delivery
- Storage & Distribution


Fuel Support Plan
Old Harbor Airport
Possible IRT
fuel farm
Village fuel farm
Old Harbor

Fuel Support Plan

20,000 GALLON COLLAPSIBLE, COATED-FABRIC, FUEL TANK ASSEMBLY
TAMCN: B0574

TD-025

National Stock Number/ID Number	
5430-01-058-6293	08106A

DESCRIPTION AND FUNCTION

The 20,000 Gallon Collapsible Tank is constructed of impregnated fabric and equipped with 4-inch elbow hose connections for storage of bulk petroleum products. The 20,000 Gallon Collapsible Tank assembly includes an aluminum tank chest, a ground cloth, emergency repair kit, and required components for venting and draining. This assembly is designed for use with the Tactical Airfield Fuel Dispensing System (TAFDS) (TAMCN B0675, pg. 2-80) and the Amphibious Assault Fuel System (AAFS) (TAMCN B0685, pg. 2-82).

OPERATING AND SHIPPING DATA

Operating Mode		Shipping Mode	
Weight:	Varies	Weight:	1,100 lb (499 kg)
Width:	Varies	Width:	31 in. (79 cm)
Length:	Varies	Length:	138 in. (351 cm)
Height:	Varies	Height:	18 in. (46 cm)
Cube:	Varies	Cube:	45 ft^3 (1.27 m^3)
Square Stowage:	Varies	Square Stowage:	30 ft^2 (2.70 m^2)

Replaced Item(s) N/A

Transportability N/A

Associated TAMCN(s) B0685, B0675

Fuel Support Plan

50,000 GALLON COLLAPSIBLE, COATED-FABRIC, FUEL TANK ASSEMBLY
TAMCN: B0572

National Stock Number/ID Number	
5430-01-479-5116	10761A

DESCRIPTION AND FUNCTION

The 50,000 Gallon Collapsible Tank is constructed of impregnated fabric and equipped with 4-inch elbow hose connections for storage of bulk petroleum products. The 50,000 Gallon Collapsible Coated-Fabric, Fuel Tank assembly includes an aluminum tank chest, ground cloth, emergency repair kit, and required components for venting and draining. This assembly is designed for use with the Tactical Airfield Fuel Dispensing System (TAFDS) B0675, pg. 2-80) and the Amphibious Assault Fuel System (AAFS) (TAMCN B0685, pg. 2-82).

OPERATING AND SHIPPING DATA

Operating Mode		Shipping Mode	
Weight:	Varies	Weight:	1,640 lb (743 kg)
Width:	24.83 ft (7.57 m)	Width:	45 in. (114 cm)
Length:	64.5 ft (19.66 m)	Length:	94 in. (239 cm)
Height:	4.83 ft (1.47 m)	Height:	45 in. (114 cm)
Cube:	Varies	Cube:	113 ft^3 (3.20 m^3)
Square Stowage:	Varies	Square Stowage:	30 ft^2 (2.79 m^2)

Replaced Item(s) N/A
Transportability N/A
Associated TAMCN(s) B0685, B0675

Environmental & Cultural Impact

- Use of Village Buildings
  - Store
  - Church
  - Post Office
- Village Protection Safety Officer – MP Augments
- Bears (Contracted)
- Religious / Cultural Holidays
- Economic impact on tourism
- Distinguished Visitors

Spill Containment & Cleanup Plan

- Environmental Services Division (ESD)
  - Recommendations & Support
    - Subject Matter Experts (SME)
    - Equipment
- Grey water handling (if required)
- Reporting procedures
  - Shearwater
  - NEPA

Cantonment Plan

- Troop Billeting
  - ADVON
  - Duration Staff
  - Work Rotations
  - Overflow / VIP's
  - Retrograde rotation
    - Billeting /Mess
- Mess Tent
  - Sanitation & food storage
- Multi-purpose Tent
  - Meetings/Overflow/MWR

Cantonment Plan

- Hygiene Plan
  - Showers
    - During ADVON
    - Permanent
  - Toilets
    - On work site
  - Laundry
  - Trash removal
  - Power Distribution (Mess/Laundry etc)
  - Water Purification (compaction)
- Internal Transportation
  - HMMWV
  - ATV's

Cantonment Equipment

TAMCN	NOMENCLATURE	QTY
B0008	AIR CONDITIONER,5 TON	2
B0027	PANEL, POWER DISTRIBUTION 5KW INDOOR	4
B0028	PANEL, POWER DISTRIBUTION 5KW OUTDOOR	1
B0029	PANEL, POWER DISTRIBUTION 15KW	2
B0030	PANEL, POWER DISTRIBUTION 30KW	2
B0031	PANEL, POWER DISTRIBUTION 100KW	1
B0055	BATH UNIT, PORTABLE (OR BASE-X 8-STALL SHOWER SYSTEM)	1
B0061	TOOL KIT, REFRIGERATION	1
B0062	TOOL KIT, LINEMAN'S	1
B0066	CONTAINERIZED BATCHED LAUNDRY (CBL)	1
B0071	LIGHTWEIGHT WATER PURIFICATION SYSTEM (LWPS)	1
B0075	SMALL FIELD REFRIGERATION SYSTEM (SFRS)	1
B0572	50k FUEL TANK ASSY	1
B0573	3k FUEL TANK ASSY	2
B0891	GENERATOR SET, MEP-803A 10kW	2
B1021	GENERATOR SET, MEP-806B 60kW	3
B1570	EXPEDIENT REFUELING SYSTEM (ERS)	1
B1580	PUMP MODULE, FUEL SIX CONTAINER	1
B1581	PUMP MODULE, WATER SIX CONTAINER	1
B1620	PUMP UNIT SET, WATER	1
B2085	STORAGE TANK MODULE, FUEL (SIXCON)	2
B2086	TANK,WATER,MODULE (SIXCON)	2
B2130	TANK, WATER 3000 GAL	3
B2150	TEST SET, SOIL	1
B2210	CARPENTER KIT	1
C0035	ENHANCED - TRAY RATION HEATING SYSTEM (E-TRHS)	1
C3409	EMI HARDENED, STRINGABLE 2 LIGHT KIT (FOR ALASKA SHELTERS)	6
C6415	LIGHTWEIGHT MAINTENANCE ENCLOSURE (LME)	1
C7036	GENERAL MECHANICS TOOL BOX	4
UNK	HYGIENE UNIT (1-20' ISO's WITH SHOWER & SINK)	1
UNK	HYGIENE UNIT (1-20' ISO's WITH SINK & TOILETS)	1
TBD	TANK INTERCONNECTION KITS, FUEL	
	ALASKA SMALL SHELTER SYSTEM	2
	ALASKA ENVIRONMENTAL CONTROL UNIT (ECU)	4

Feeding Plan

Enhanced Tray Ration Heating System (E-TRHS)

Field Kitchen located near billeting

- Fresh rations delivered with each rotation
- Fish and game available from local villagers

- Two hot meals per day / MRE for Lunch
- Plus supplementals as available

Feeding Plan

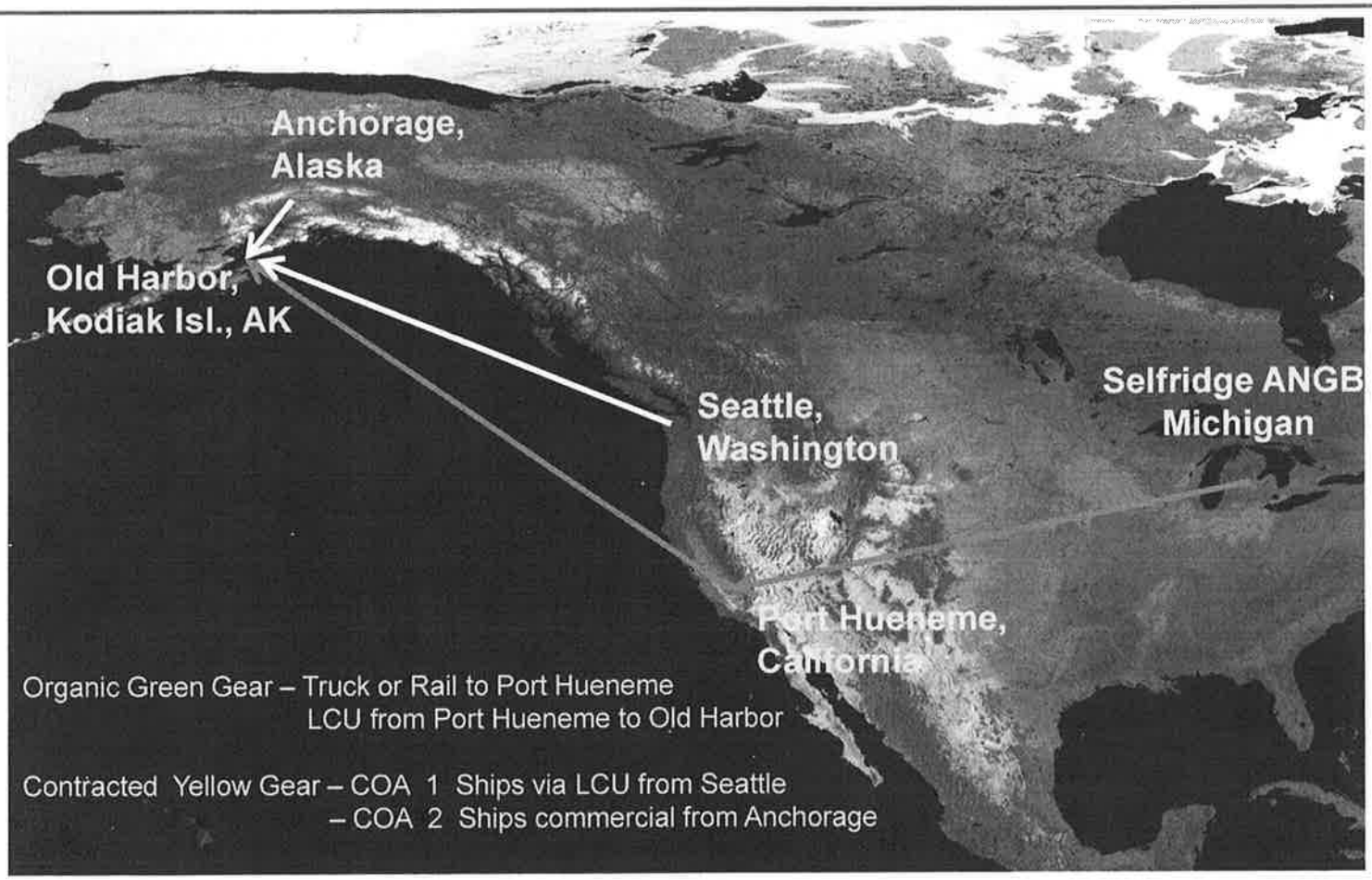
Enhanced – Tray Ration Heating System (E-TRHS)

Transportation of Things

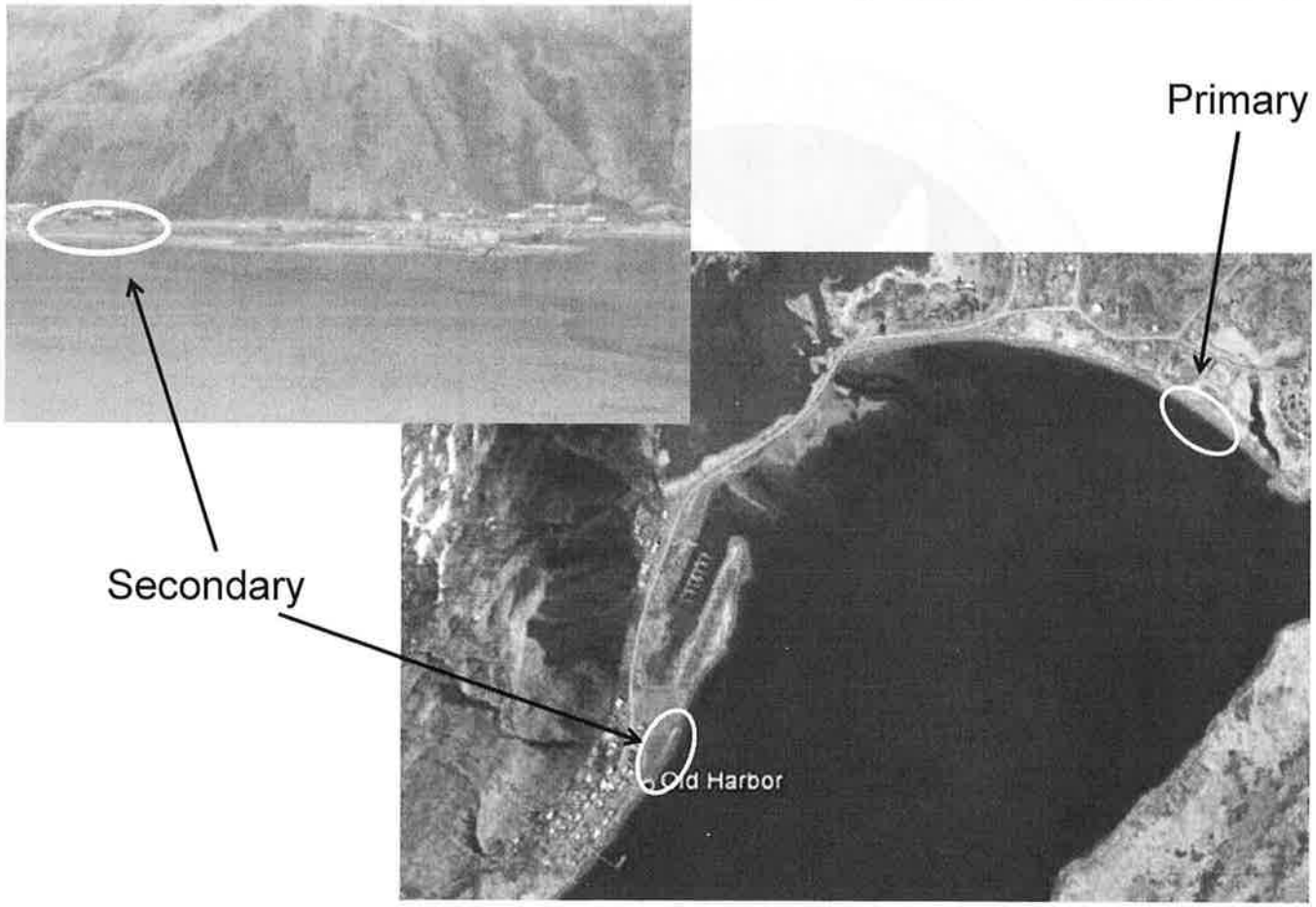
TOT COA DEVELOPMENT -
(AIR, COMMERCIAL TOT, RAIL, BARGE)
COMPLETE JANUARY 31, 2013

EDL DUE TO MFR BY APRIL 5, 2013

Transportation of Things



Equipment Offload Points



Transportation of Personnel (TOP)

TOP COA Development - (Air and Sea Options)
Completed by March 1, 2013

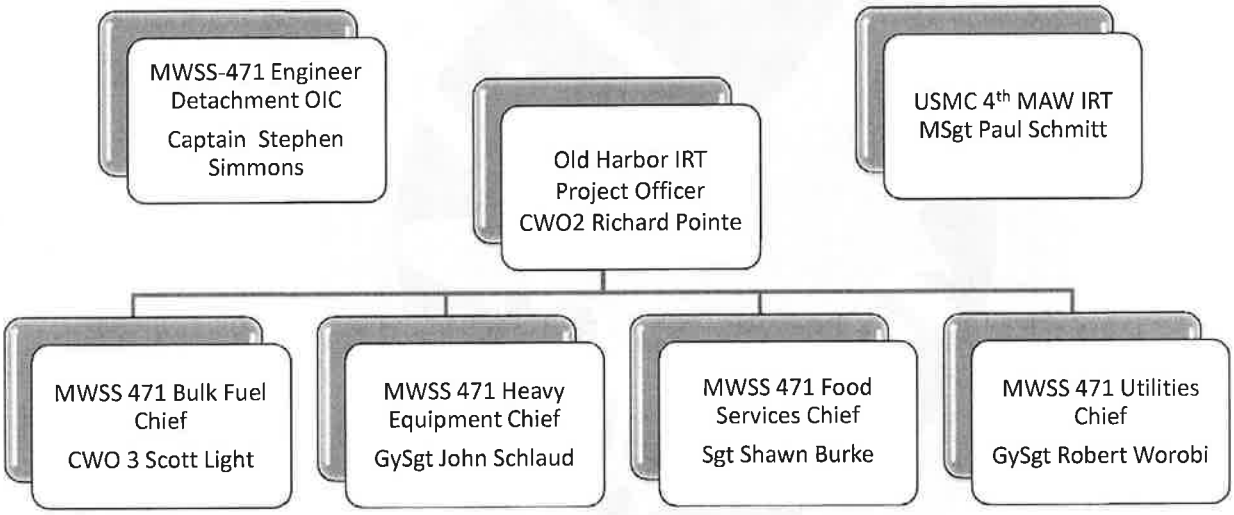
Training Dates & Branches (Tentative)

PERIODS	DATES		BRANCH OF SERVICE			Comments	TOTAL
		USMC DURATION	USMC ROTATING	USN	ANG		
DURATION	20 APR - 31 AUG	10					10
ADVON	18 MAY 13 - 08 JUN 13	10	39	4	27	ADVON	70
1	08 JUN 13 - 29 JUN 13	10	54	4		FULL FORCE	58
2	29 JUN 13 - 20 JUL 13	10	54	4		FULL FORCE	58
3	20 JUL 13 - 10 AUG 13	10	54	4		FULL FORCE	58
RETRO	10 AUG 13 - 31 AUG 13	10	32	2		RETROGRADE	34
		10	233	18	27	TOTAL SUPPORT	288

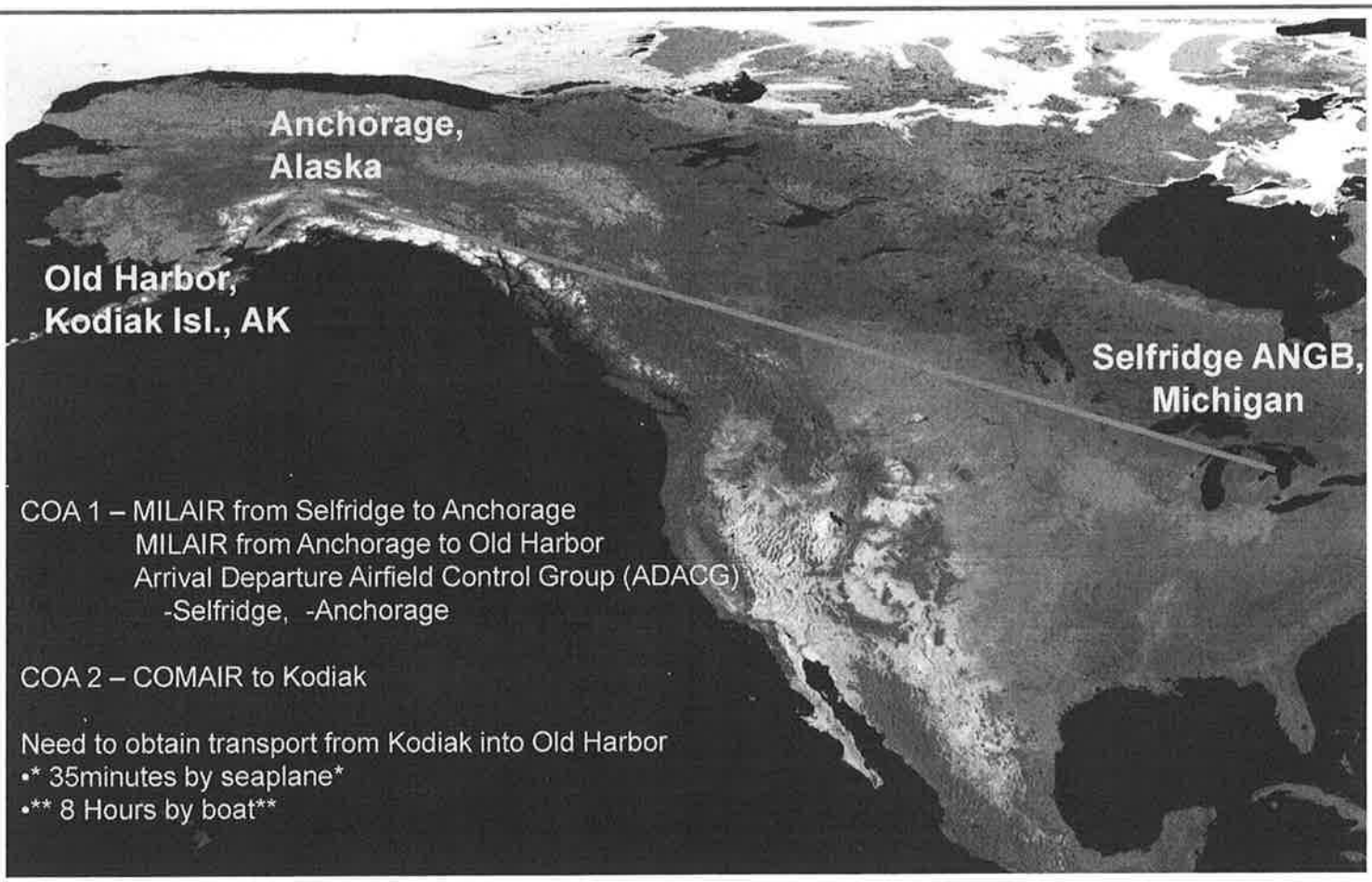
USMC Work Rotation Manning (Typ)

ENDURING	PROJECT OFFICER	1
ENDURING	SNCOIC	1
ENDURING	HEAVY EQUIPMENT CHIEF	1
ENDURING	UTILITIES CHIEF	1
ENDURING	MESS CHIEF	1
ENDURING	MOTOR TRANSPORT CHIEF	1
ENDURING	SUPPLY ADMIN LOGISTICS CHIEF	1
ENDURING	EMBARKATION SPECIALIST	1
ENDURING	(MIMMS) GCSS-MC USER	1
ROTATING FORCE	FOOD SERVICE SPECIALIST	4
ROTATING FORCE	HE MECHANIC	2
ROTATING FORCE	MOTOR TRANSPORT MECHANIC	2
ROTATING FORCE	BULK FUEL SPECIALIST	4
ROTATING FORCE	MILITARY POLICE	2
ROTATING FORCE	ELECTRICIAN	1
ROTATING FORCE	ELECT EQUIP MECH	1
ROTATING FORCE	WATER SUPPORT TECHNICIAN	2
ROTATING FORCE	CORPSMAN	4
ROTATING FORCE	HE OPERATOR - PLT SGT	1
ROTATING FORCE	HE OPERATOR	20
ROTATING FORCE	MOTOR VEHICLE OPERATOR	14
ROTATING FORCE	HAZMAT/ENVIRONMENTAL	1
	TOTAL ON DECK	70

MWSS-471 Old Harbor Staff



Transportation of Personnel (TOP)



COA 1 – MILAIR from Selfridge to Anchorage
MILAIR from Anchorage to Old Harbor
Arrival Departure Airfield Control Group (ADACG)
-Selfridge, -Anchorage

COA 2 – COMAIR to Kodiak

Need to obtain transport from Kodiak into Old Harbor
- * 35minutes by seaplane*
- ** 8 Hours by boat**

Communications

- Internal Radio Communications (AN/PRC-153)
  - Frequencies requested on 20130109
- Satellite internet and landline phone service available now FOUO
- Cell towers being constructed now
- Fiber loop being installed now
- Iridium Phones most reliable

Medical Support / MEDEVAC Plan

- Triage center located in Old Harbor
- Four on-site Corpsman for each rotation
- EVAC available via Coast Guard (30 min response)
- Major Hospitals located both in Kodiak and Anchorage
- Red Cross message plan

Other Mission Considerations

- Morale, Welfare and Recreation (MWR)
  - Internet Connectivity for Marines
  - Recreation Activities

Operational Risk Assessment

Step 1: Identify Hazards			Step 2: Assess Hazards	Step 3: Make Risk Decision		Step 4: Implement Controls	Step 5: Supervise
Operation Phases	Hazards	Causes	Initial RAC	Develop Controls	Residual RAC	How to Implement	How to Supervise
Driving/Operating Vehicles and Equipment	-Vehicle Accidents/fall edges in mountainous terrain -crushed by vehicle -ear injury -Collision with objects or personnel -Load shifts and or falls off -personnel struck by vehicle -vehicle rollover DRIVER FATIGUE SPEEDING	-wet slippery roads -poor visibility/fog/rain -improper driving -improper distances between vehicles -driver falls asleep -driver ejected during accident -driving under the influence of alcohol -loud engine noise -no ground guide -load not secured or placed properly -driving too fast for weather and/or terrain conditions -exceeding vehicle lift, hauling, and/or towing capacity -unlicensed/inexperienced operators -mechanical failure	I/B 1	-allow proper stopping distances -lower speed during poor visibility and conditions -drivers and "a" drivers maintain high level of alert -monitor weather reports -get proper sleep and rest -use designated drivers -license operators -properly brief and train operators prior to operation commencing -limit job site speed to 5mph (1-2 gear) -perform ops check daily and as required -clearly mark limit areas -wear proper PPE	I/C 2	-Conduct refresher training -ensure vehicles have safety equipment on board -pay attention to safety brief -DO NOT DRINK AND DRIVE -ensure drivers and a-drivers wear seat belts -Use ground guide in designated area -Secure all loads and review TM for placement and limitations -suspend operations during poor weather conditions -enforce load limits, jobsite speed limits and ground guide policies	-Ops Chief -SNCO'S -NCO'S -Corpsman -A-driver

Operational Risk Assessment

Training outdoors	-exposure to weather -lightning strikes -heat stress/stroke -dehydration -sunburn/sun poisoning -insects and wildlife bites	-inclimate weather -exposure to direct sunlight -not enough water drinking -agitating wildlife which may be present in the forested/mountain environment TAKING SHELTER IN AN INAPPROPRIATE AREA	II/B 2	-wear proper clothing and PPE -apply sunblock -drink proper amounts of water -use insect repellent -leave wildlife alone DESIGNATE SHELTER AREAS AWAY FROM CRESTS OF HILLS AND TALL TREES	IV/D 5	-inspect personnel -provide training on proper protective measures -ensure personnel have access to potable water and are drinking enough water -monitor personnel for signs of sunburn/heat stress -provide immediate action training for treatment of possible medical issues -provide training on indigenous insects and animals -suspend work during severe weather	-OIC -SNCO's -NCO's -Corpsman
Vehicle and Equipment Maintenance and Refueling	-exposure to hazmat -scrapes, burns -crushed by vehicle	-vehicles and equipment contain hazmat -rough metal and other materials; hot engines, fluids and parts -working under vehicles and equipment -vehicle breakdown -Improper tools or methods	I/B 1	-wear proper clothing and PPE -use proper support systems rated for the vehicle and equipment -chock wheels in accordance with established safety requirements	III/C 4	-inspect personnel -give daily safety brief -ensure vehicles are in good working order, ensure tools and tow bars are available -ensure TM procedures are followed when performing maintenance tasks	-Maint Chief -SNCO's -NCO's

MCT's

OPNAVINST 3500.38B/MCO3500.26A/USCG COMDTINST 3500.1B

MCT 4.1.2	Conduct Ground Supply Operations
MCT 4.1.2.1	Determine Requirements
MCT 4.1.2.2	Conduct Procurement
MCT 4.2	Conduct Maintenance Operations
MCT 4.2.2	Conduct Ground Equipment Maintenance
MCT 4.2.2.1	Conduct Inspection and Classification
MCT 4.2.2.2	Conduct Service, Adjustment and Tuning
MCT 4.2.2.4	Conduct Repair
MCT 4.3	Conduct Transportation Operations
MCT 4.3.1	Conduct Embark Support
MCT 4.3.2	Conduct Port and Terminal Support
MCT 4.3.3	Conduct Motor Transport Operations
MCT 4.3.6	Conduct Material Handling Operations
MCT 4.4	Conduct General Engineering Operations
MCT 4.4.1	Conduct Engineer Reconnaissance
MCT 4.4.2	Conduct Horizontal/Vertical Construction
MCT 4.4.2.1	Construct/Maintain Expeditionary Airfields and Landing Zones (LZs)
MCT 4.4.2.2	Conduct Rapid Runway Repair
MCT 4.4.3	Conduct Facilities Maintenance
MCT 4.4.4	Conduct Demolition and Obstacle Removal
MCT 4.4.7	Conduct Tactical Water and/or Hygiene Service
MCT 4.4.8	Conduct Tactical Bulk Fuel Storage
MCT 4.4.9	Conduct Tactical Electrical Supply

MCT's

OPNAVINST 3500.38B/MCO3500.26A/USCG COMDTINST 3500.1B

MCT 4.6.1.1	Provide Messing
MCT 4.6.1.5	Provide Security Support
MCT 4.6.2	Provide Command Services
MCT 4.6.2.1	Conduct Personnel Administration
MCT 4.6.2.5	Provide Billeting
MCT 5.3	Direct, Lead, Coordinate Forces/Operations
MCT 5.3.1	Direct Operations
MCT 5.3.1.1	Issue Orders
MCT 5.3.1.2	Exercise Tactical Command and Control
MCT 5.3.1.3	Lead Forces
MCT 5.3.1.4	Maintain Command Presence
MCT 5.3.1.5	Maintain Unit Discipline
MCT 5.3.1.8	Conduct Operational Risk Management (ORM)
MCT 5.3.3.3	Establish Forward Operating Locations (FOB, FOS, FARP)
MCT 6.1	Provide Security
MCT 6.1.1	Conduct Active Security
MCT 6.1.1.10.3	Provide Base/Airfield Security Operations

Questions ?

Existing 2750' Airstrip

Old Harbor Stream Re-Alignment Report

September 26, 2012

Team: Richard Wiebe, Will Frost, Andy Dickerson

Background:

The City of Old Harbor with Funding support from the State of Alaska and construction support from the U.S. Military's Innovative Redieness Training (IRT) is seeking to undertake a runway extension project in Old Harbor, Alaska. The project will extend the runway approximately 2,000 feet to a full length of 4,750 feet. The project will also cut back steep side slopes on both sides of the runway to better meet FAA safety standards. A significant portion of the materials to be cut from the slopes will be used as fill for the runway extension.

The City of Old Harbor has begun the safety project in 2012. It is anticipated (subject to environmental reviews and approvals) that the extension project would begin in the spring of 2013 and run through the construction season of 2014, with possible carry over into 2015. Due to the limited options for extending the runway, a number of creeks will need to be re-aligned around fill extensions on the north and south end of the existing runway.

Shearwater Systems, LLC is providing project management services to the City of Old Harbor. Throughout the spring and summer of 2012 Shearwater with advice from the Alaska Fish and Game Department conducted stream inventories and evaluated various options for the stream re-alignments. This report summarizes a site walk over on September 9, 2012 and illustrates the generally preferred options for re-alignments.

The stream re-alignments are a critical early step in the project in that they will require special techniques for excavation, require stabilization to be functional, and are needed to re-route drainage from major construction areas. An illustration follows that locates the streams of concern. In the case of what has been named Sculpin Creek, at the completion of construction, it will be cut off from its present outlet by approximately 60 feet (vertical) of fill. In order to construct the new channel, a temporary crossing that can support heavy equipment will need to be constructed. Additionally, there is a significant amount of work that can occur on the north side of Sculpin Creek prior to cutting it off. There should be ample time (with the temporary crossing) to construct and establish the new alignment.

The impacted streams on the south end of the runway will also need to be re-aligned early in the construction to allow for excavation of organic and wet materials prior to placing fill. Concurrent with the construction of the stream re-alignments, additional work will occur on the east side of the existing runway. Currently the construction is being managed to minimize crossing the runway.

Sculpin Creek Alternatives

A temporary culvert needs to be placed in Sculpin Creek for approximately 24 months to accommodate an access/haul road for removing material from the northernmost area of the project and to provide equipment access to construct the new creek alignment. The culvert will be 120% (currently estimated that an eight foot elliptical culvert will accommodate) of the channel width, 30% embedded and installed at the existing gradient.

A geotechnical study to be conducted in October 2012 will provide additional data in the area of the preferred stream re-alignment. A temporary crossing is needed to get the drilling equipment across for the geotechnical study and then remove the temporary crossing.. The process will be repeated when the equipment brought back across. A permit is needed from AK-F&G and USACE to perform this work.

The following three alternatives were considered for the permanent re-alignment of Sculpin Creek:

Alternative 1.

The first alternative involves making a cut through the existing ridge approximately 1,000 feet northwest of the north end of the runway. This alternative will remove more existing linear footage of stream and habitat. It will increase costs in building a longer haul road (to get to the cut). This location would connect at a higher elevation within the existing creek and have a significant increase in design and construction due to the increased need for step pools over a steeper decline into the bay 9which is not representative of the existing creek profile. It will also require developing a “reverse flow” by raising a portion of the existing creek to flow to the new alignment.

Alternative 2.

The second alternative is to cut a wide channel approximately 500 feet northwest of the northern tip of the runway. Then excavate a smaller meandering channel through the cut. The geotechnical study will provide data on the type of material to be encountered and aid in determining construction methods. Organic material, rocks and gravel boulders will be salvaged from the construction operations and then strategically added to the channel to more closely match the character of the existing channel. This material will most likely come from the adjacent construction area.

Alternative 3.

The third alternative is to bury the stream in oversized culverts and construct the runway over top. This represents a significant cost, could add as much as a year to the construction and would not replicate the existing stream character. A culvert also has the potential to fail over time. At

this location the runway will require approximately 60 vertical feet of fill. A failure could be catastrophic in that it could “pond” runoff some 30-40 feet deep before spilling over the land to the north. A culvert failure would certainly curtail use and function of the runway.

Figure 1. Sculpin Creek Alternatives

The photo above was taken on the northwest corner of the runway looking west above Sculpin Creek near where it empties into Midway Bay to the right and out of the view.

Figure 2. Sculpin Creek Alternatives

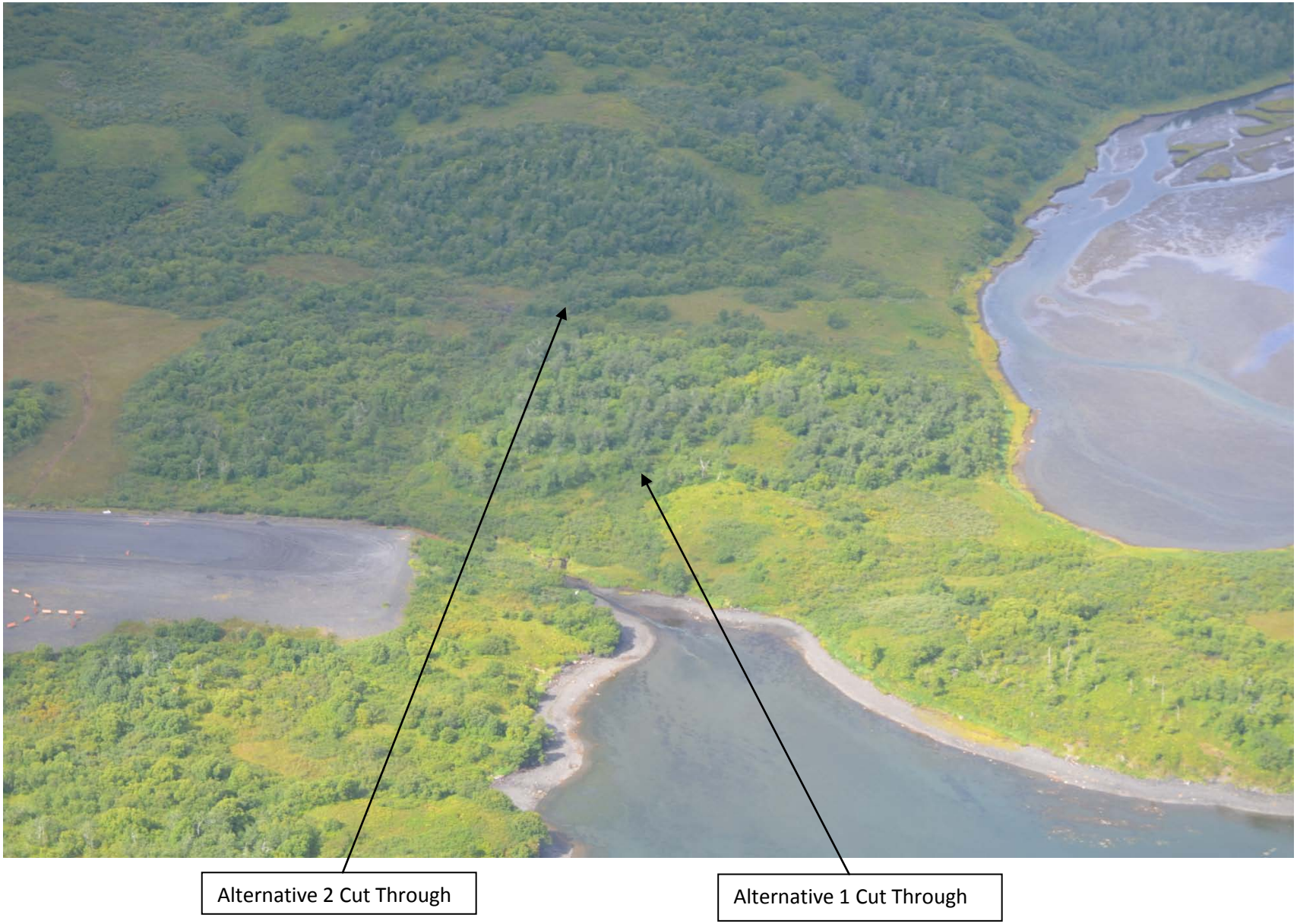
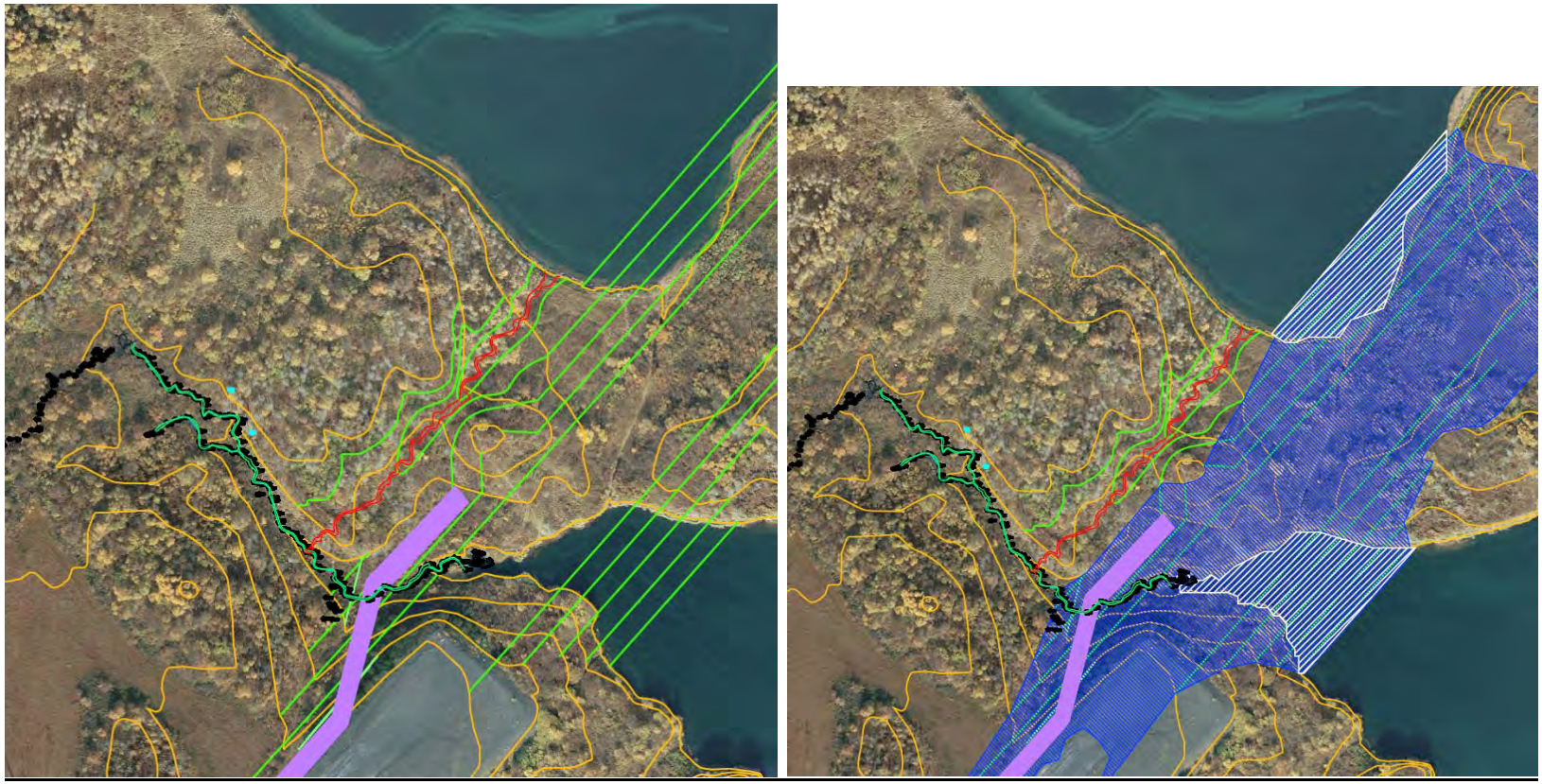


Figure 3. Proposed Re-Alignment of Sculpin Creek (in red) with Impacted Areas (shaded blue) and New Contours (green)



Streams 2 & 3 Alternatives (located on the south end of runway)

In past site visits, the scenario of moving stream 3 into stream 2 on the west side of the access road to the airport was discussed. On the September 2012 site visit and upon further review of maps, an apparent better alternative would be to keep stream 3 on the east side of the airport access road and guide it around the future southern runway extension. This slight re-alignment of the stream would meander through shrub and tree vegetation to take advantage of the best available and appropriate habitat.

Alternative 1.

The primary alternative is to slightly re-align Stream 3 on the east side of the airport access road to meander through tree and shrub habitat beyond where the southern end of the runway will be extended. This will impact less linear footage of stream and provide the best option for retaining higher quality habitat for the new channel. (See Figure 8)

Alternative 2.

The secondary alternative is to route Stream 3 after it comes through the culvert on the east side of the airport access road south along the edge of the road until it is past where the southern runway extension will exist. This alternative will increase the impacted linear footage of stream and decrease immediately available higher quality habitat.

Alternative 3.

A tertiary alternative is to connect Stream 3 with Stream 2 on the west side of the airport access road. This alternative would impact an even greater number of stream footage and could involve more costly construction and geomorphological calculations.

Alternative 4.

Sacrifice the stream and mitigate or add habitat nearby.

Figure 4. Streams 2 & 3 Alternatives

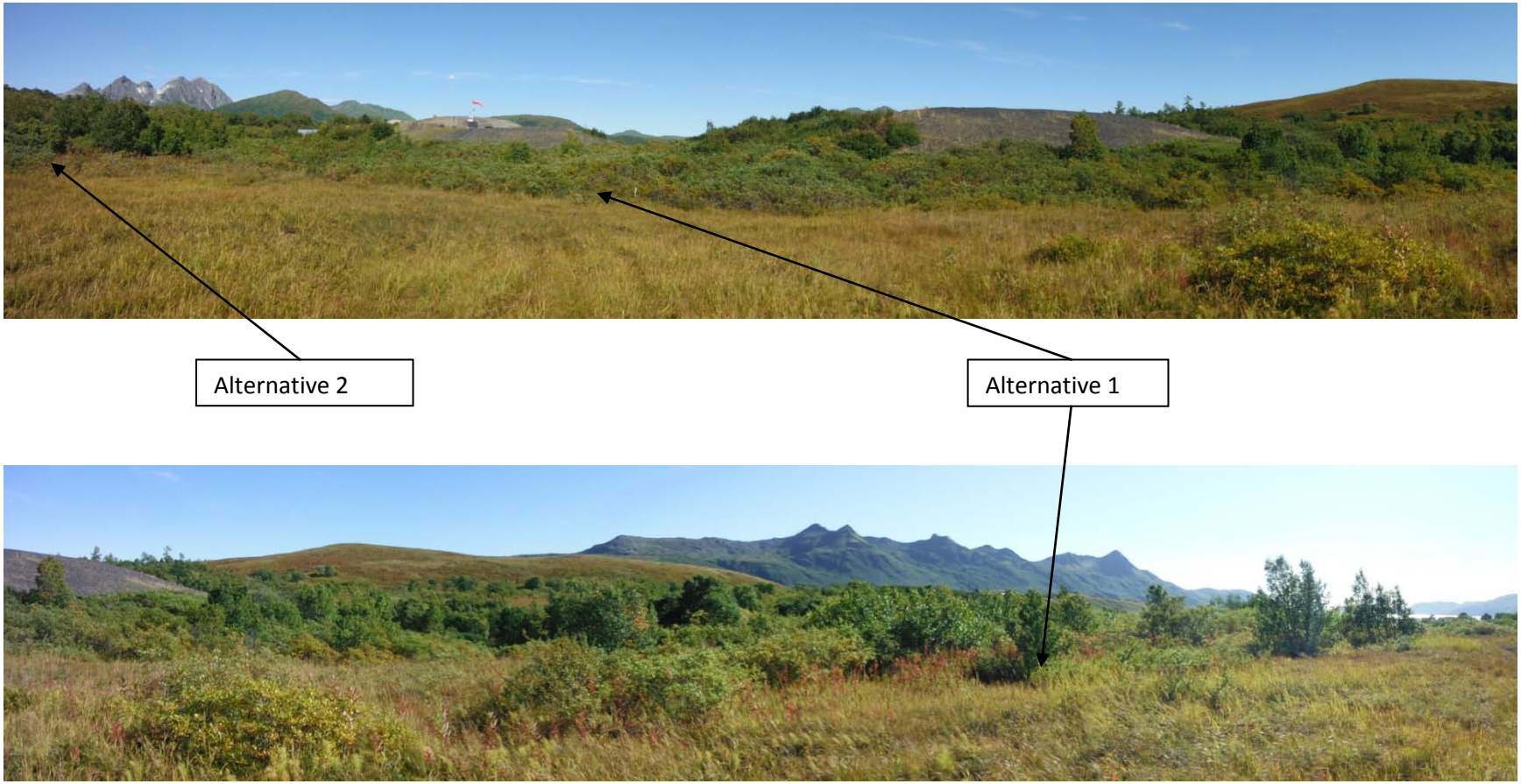
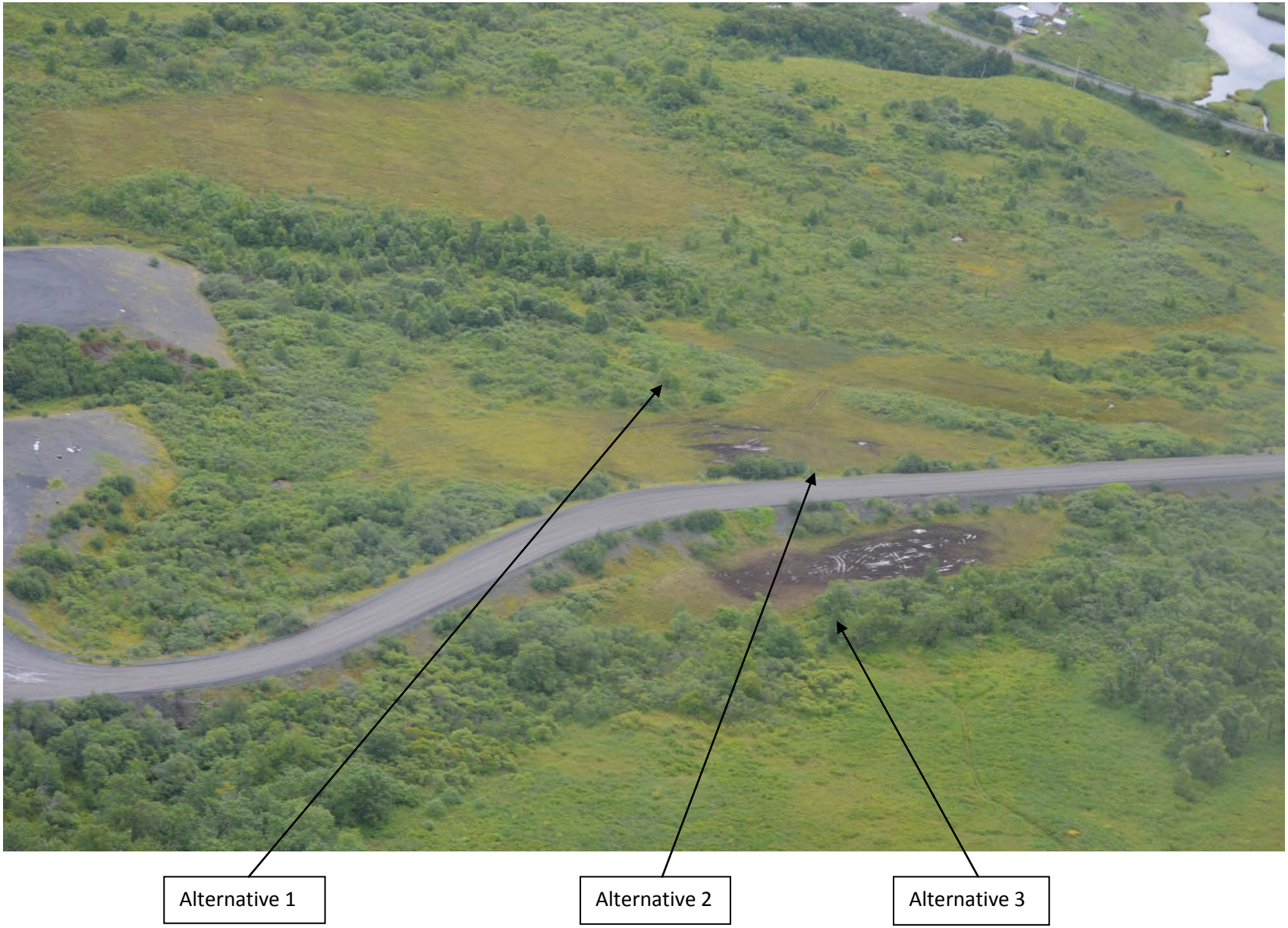


Figure 5. Streams 2 & 3 Alternatives



Southeast Stream #4 Alternatives

Alternative 1.

The primary alternative for Stream #4 is to slightly move the stream to an adjacent and mostly parallel stream bed to the existing and apparently man-made channel. This re-alignment will take advantage of an existing channel with quality habitat and can be meandered around the future southern expansion of the runway. (See Figure 8).

Alternative 2.

The second alternative is to start at the highest point possible and run the stream along the wetland plateau until dropping over to join the current stream beyond the southern expansion of the runway. This alternative will not provide immediate quality habitat and would be cost prohibitive for blasting through the underlying rock to join back into the main stream channel.

Alternative 3.

Alternative three is to raise the existing channel to match the future elevation keeping the stream along the toe of the slope of the runway expansion. While this would be less costly than alternative two, the lack of availability of quality habitat makes this alternative less attractive.

Alternative 4.

The final alternative is to sacrifice the stream by placing it in culverts and mitigate or add habitat nearby. This alternative is cost prohibitive and does the least to take advantage of existing quality habitat.

Figure 6. Stream 4 Alternatives

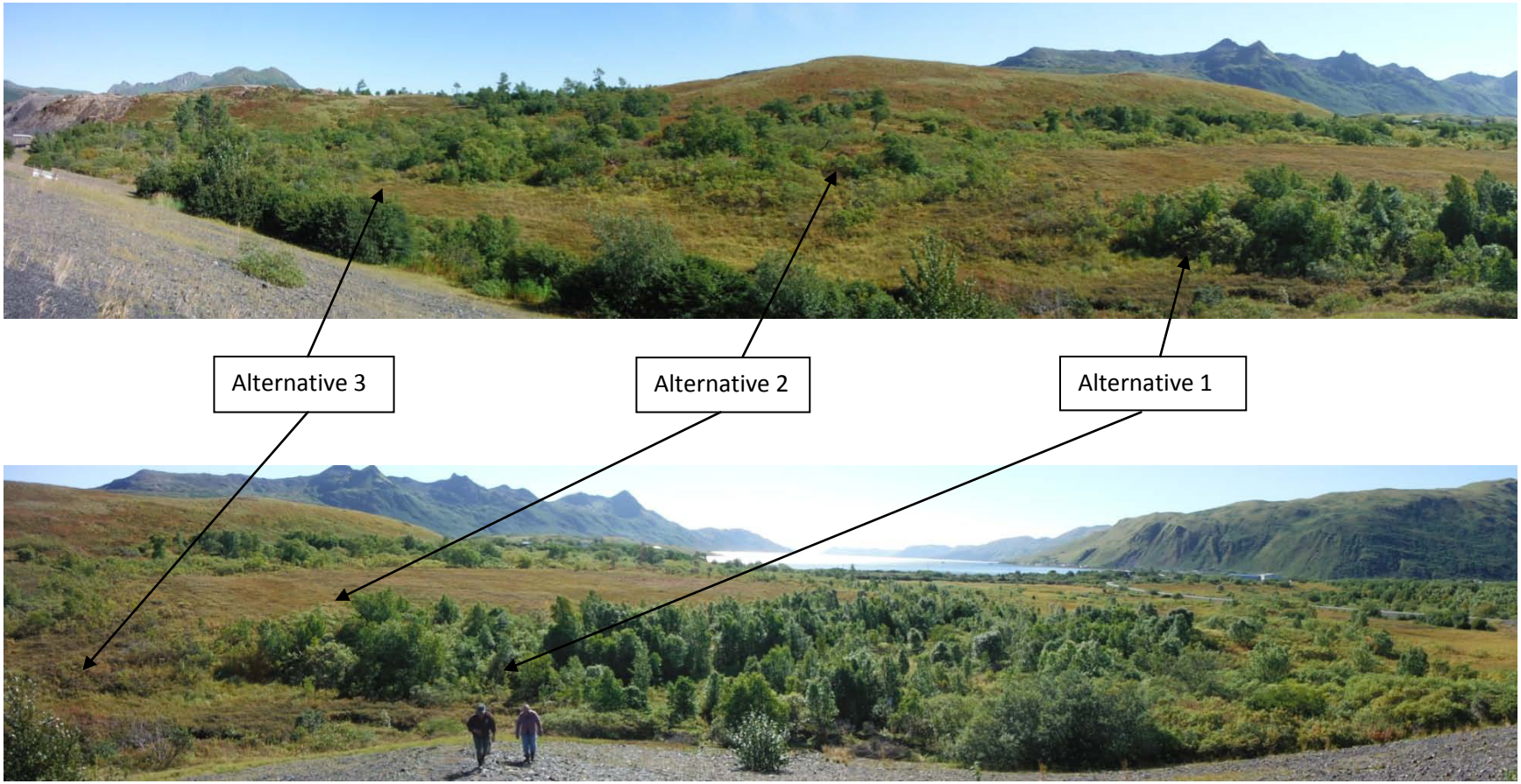


Figure 7. Streams 4 Alternatives