

Historic American Buildings Survey Level II Report



LORSTA ST. PAUL St. Paul Island, Alaska



Final October 2011



Prepared by



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HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
240 West 5th Avenue, Suite 114
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Name: U.S. Coast Guard (USCG) LORAN-C Station Historic District,

St. Paul

Location: USCG LORSTA St. Paul, 900 Polovina Turnpike

St. Paul Island, Alaska 99660

Present Owner: National Oceanic and Atmospheric Association

Present Use: The station will be staffed during fishing/crabbing seasons by

the U.S. Fish and Wildlife Service.

Significance: Long Range Aid to Navigation (LORAN) was a government-

provided, terrestrial navigation system established for military

and civilian users throughout the United States, Canada,

Europe, Asia, and Russia. Since its inception in 1940, LORAN provided marine, air, and land positions to users during World War II (WWII), through the Cold War, and into the twenty-first century. LORAN-C, a later version of the long-range navigation series, operated as a low frequency hyperbolic navigation system using the time difference in pulses from three or more transmitting stations to obtain a position. It was highly accurate, all-weather, and available twenty-four hours a day. In 2010, the United States and Canada both ceased operation of the system.

The LORAN-C station at St. Paul was established in 1960 by the U.S. Coast Guard (USCG). Among other buildings, the station consisted of an Administration and Barracks Building, a Signal and Power Building with a generator, a Transmitter Building, and a 625' guyed tower. The LORAN-C station at St. Paul is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation representing the federal government's growing involvement and responsibility for safe navigation.

The navigation tower (demolished in August 2011) and all buildings associated with the operation of LORAN-C are

considered contributing elements to the district.

Historian: Terri Asendorf, Architectural Historian, MSHP, Jacobs

Engineering Group Inc. (Jacobs)

Project Information:

The USCG LORAN-C Station Historic District, St. Paul, Alaska recording project was performed under contract with the U.S. Army Corps of Engineers (USACE) for USCG under the direction of the Alaska State Historic Preservation Officer and the Advisory Council on Historic Preservation. The historical reports and photographs were prepared by Jacobs. Terri Asendorf served as architectural historian, and Casey Martin served as architect.

I. Historical Information

I.a. Physical History

I.a.i. Date of Erection

1960

I.a.ii. Architect

USCG

I.a.iii. Original and Subsequent Owners, Occupants, Uses

US Navy/USCG LORAN-A Station, 1943-50

USCG LORAN-C Station (2010 under agreement with the National Oceanic and Atmospheric Association), 1960-present

I.a.iv. Builder, Contractor, Suppliers

625' guyed antenna – Stainless, Inc., Model 1300

Construction - Raber-Kief & Constructors

Transmitters - AN/FPN-44B

Timers - AN/FPN-54

I.a.v. Original Plans and Construction

These are discussed individually below and on the attached architectural building inventory forms. Site plans and architectural drawings of the facilities are also provided.

I.a.vi. Alterations and Additions

These are discussed individually below and on the attached architectural building inventory forms. Site plans and architectural drawings of the facilities are also provided.

I.b. Historical Context

I.b.i. LORAN-A to C

Historically, maritime and aviation positioning was done using dead reckoning, celestial navigation, and later, radio beacon. With the approach of WWII, the development of a more accurate system was needed for defense operations, and in 1940, the Army Signal Corps issued a requirement for "Precision Navigational Equipment for Guiding Airplanes." The pulsed, hyperbolic, long-range radio navigation system that eventually became known as LORAN was proposed by physicist Alfred L. Loomis, working under the direction of the National Defense Research Committee (NDRC). In 1941, his proposal was accepted and trial stations were established at inactive USCG lifeboat stations at Montauk Point in Long Island, New York, and Fenwick Island, Delaware. Corporations such as RCA, Sperry, Bell Laboratories, Westinghouse, and General Electric filled equipment orders for the model stations (Pierce, McKenzie, and Woodward 1948).

LORAN was further developed by scientists at the Radiation Laboratory of the Massachusetts Institute of Technology. Generally derived from the British GEE (generalized estimating equation) system, the first iteration of LORAN operated at the 1,850 and 1,950 kilohertz (kHz) frequencies. Later called "LORAN-A," its use by naval and air convoys in defense missions quickly increased due to requirements by the Allied forces for a means of a tactical bombing system (Joint Aids to Navigation Panel 1957). Under the Lend-Lease program established in 1941, the United States used LORAN-A to guide planes and bombers to the former Soviet Union during the war (Thomas 2011).

Between 1942 and 1944, LORAN-A use rapidly increased, and by 1945, there were stations built all over the world providing some sixty million square miles of coverage (Pierce, McKenzie, and Woodward 1948). The stations were grouped into regional chains consisting of one "master" transmitting station and two or more "secondary" transmitting stations, each separated by several hundred miles. Station location and orientation were determined by coverage requirements. By 1944, approximately 75,000 receivers were distributed to military and civilian users with seventy-five U.S. and fifteen British and Canadian LORAN transmitters providing coverage over 30 percent of the earth's surface (Pierce, McKenzie, and Woodward 1948), including high-traffic water and air routes.

Originally a U.S. Army-driven effort, the LORAN-A program was later transferred to the U.S. Navy because of its mission to precisely and safely route convoys and guide and deliver defense material – tasks which could be achieved using LORAN. In November 1941, the U.S. Treasury Department transferred the USCG to the U.S. Navy to support war efforts. Given its official role as operator and administrator of U.S. Aids to Navigation, the USCG assumed management of the LORAN program for the Navy. After the war, in 1946, the USCG was transferred back to the Treasury Department and retained management of the LORAN program (Thomas 2011). Incidentally, USCG was transferred to the Department of Transportation in 1967, and then again to the Department of Homeland Security in 2002.

In 1947, the International Telecommunications Union Conference (ITU) allocated the frequency band 90–110 kHz for the development of a farther-reaching, long distance, radio navigation system on a worldwide basis (Dickinson 1959). This was partly in response to a need for less signal interference: the higher ranges were allocated solely for military use during wartime, but when they were returned to civilian use after the war, signal interference increased. Over the next decade, various military branches were attempting to improve LORAN including the U.S. Air Force (USAF), which developed the Cycle Matching Tactical Bombing and Navigation System (CYTAC). CYTAC was an experimental electronic strategic bombing system that used the same hyperbolic principles as LORAN-A, but at the lower frequencies allocated by the ITU. Since the tactical bombing application of CYTAC was classified, its use for civilian navigation was limited; therefore, USAF declassified the civilian application of CYTAC and named it "LORAN-C," while the tactical bombing application remained confidential (Joint Aids to Navigation Panel

1957). The first LORAN-C navigation system was installed on the U.S. East Coast in 1957 at stations in Carolina Beach, North Carolina, Martha's Vineyard, Massachusetts, and Jupiter Inlet, Florida.

In 1974, LORAN-C was authorized by the Secretary of Transportation to be the federally-provided radio navigation system for the U.S. Coastal Confluence Zone (CCZ), which is defined as the area seaward of a harbor entrance to fifty nautical miles offshore, or the edge of the Continental Shelf, whichever is greater. This mandate drove the expansion of LORAN-C service to all coasts of the United States – including Alaskan waters and the Gulf of Mexico – and to the Great Lakes by 1980. LORAN-C also aided early environmental initiatives. In the 1970s, the system was used to guide oil tankers along the Pacific Coast from Alaska to Canada and the contiguous United States to assure high precision navigation and minimize potential collision-related damage from growing tanker traffic.

I.b.ii. LORSTA St. Paul

The LORAN-A Station (LORSTA) was established at St. Paul in 1943 by the Navy on the westernmost point of the island called "Southwest Point" (USCG 1946). It was one of the first LORAN transmitters to be built in Alaska. The "A" signal was transmitted until 1950. Ten years later, LORAN-C operations were implemented on Telegraph Hill—the opposite end of the island—by USCG. The LORAN-C signal served first as part of the Bering Sea Chain from 1960–1969, and then as the designated master of the North Pacific Chain from 1961–1976 with Port Clarence, Attu, and Sitkinak (relocated to Narrow Cape/Kodiak in 1977) as secondary stations.

USCG Crew - Isolated Duty

Along with Attu and Port Clarence, St. Paul was one of only three isolated duty LORAN stations in the USCG, which meant that all crew members lived on the station in barracks for one-year tours of duty. Logistics services were provided every three weeks by C-130 from USCG Air Station Kodiak, and once every summer, fuel and bulk supplies were brought in by barge.

According to an interview with Electronic Technician (ET) Mike Hudson who spent 1974 on St. Paul, sixteen to twenty men were assigned duty on the island during a given year. Legislation allowing women to serve in the regular Coast Guard and on active duty in the USCG had just been written in 1973

[http://coastguard.dodlive.mil/index.php/2011/01/history-women-at-the-coast-guard-academy/]. Prior to that time, they were only allowed in the Women's Reserve. It was not until 1980 that the first woman served restricted/isolated duty, which happened to be at a LORAN station on Kure, Japan. According to the Loran History Information website (http://www.loran-history.info), at least two women served as Commanding Officers on St. Paul at the LORAN-C station in 1983-84 and 2000-2001.

During Hudson's time, crewmembers were required to stay the entire year on the island and take leave after their tour was completed; they received sixty days of leave before their next assignment. In fact, duty was so isolated and restricted that

members were often asked to have their wisdom teeth removed before their assignment as a precautionary measure. St. Paul did not allow dogs at the station because they posed a threat to the seals during breeding season.

As an ET, Hudson was one of the few men who were trained specifically to operate LORAN-C equipment and technology. ETs were required to continuously monitor every station, and therefore tended to work eight- to sixteen-hour shifts. The only form of communication the crewmembers on the island had with the outside world during the 1970s was high-frequency radio. Movies were flown in and shown on a projector, and there was also a bar for entertainment. Additional idle time was spent exploring the island, fishing, and caribou hunting. The crew also attended the local gym and played in adult-league sports including basketball, volleyball, and softball organized by the City of St. Paul. Later, the St. Paul station was outfitted with satellite dishes and internet capability, and members were allowed to take leave during their tour. St. Paul did not allow dogs at the station because they posed a threat to the seals during breeding season.

I.b.iii. State of LORAN

In 1993, as a response to the advent of Global Navigation Satellite Systems (GNSS), the Department of Defense advised that there was no longer a requirement for LORAN. As a result, USCG attempted to close U.S. LORAN stations and returned operation of all international stations to the host countries. However, the Russian-American Chain that included LORSTA Attu remained in operation as a gesture made by both countries to promote peace after the Cold War, and Congress did not allow for closure of U.S. stations based on the protests of civilian users. Therefore, the program continued in operation for another fourteen years (Thomas 2011).

In October 2009, in an overall effort to eliminate unnecessary federal programs, the U.S. Department of Homeland Security signed into law an act terminating the LORAN-C system. The USCG began a phased decommissioning of LORAN-C stations throughout the United States in February 2010 including demolishing transmission towers, which were an obstruction to air traffic, and placing all associated buildings in layaway. LORAN-C remains in use in several countries including the United Kingdom, France, Germany, Norway, Saudi Arabia, India, Korea, Japan, China, and Russia.

The LORAN-C signal at St. Paul was terminated and the station decommissioned on February 8, 2010. The tower was demolished in August 2011. By October 1, 2010, all LORAN systems had ceased operation.

Future of LORAN

The termination of LORAN-C in the United States and Canada has incited speculation on the need for a backup navigation system should disruptions occur with GNSS. Enhanced LORAN, or eLORAN, is the latest iteration of LORAN technology, providing navigation services completely independent of GNSS. The eLORAN system has enhanced the LORAN-C signal by providing: (1) better control and tolerance of timing and pulse shape; (2) time-of-transmission

synchronization to universal coordinated time (UTC) at each transmitter site independent of any changes in signal propagation; and (3) the addition of a digital data broadcast capability called the LORAN data channel which can be used to send time-synchronization and text messages.

Several European countries, including the United Kingdom, Saudi Arabia, and South Korea are converting former LORAN stations to eLORAN technology, while other countries including Ireland and Sweden, are building new stations (Schue 2011). In North America, debate over which system should serve as backup for GNSS has prevented a transition from LORAN-C to eLORAN.

II. Architectural Information

II.a. Physical History of Buildings

II.a.i. Administration and Barracks Building

Original Plans: The Administration and Barracks Building includes the galley, administrative offices, barracks, exchange, and recreation decks. This large, one-story building was built in 1960 and comprises approximately 12,114 square feet. The building foundation, walls, and roof are all poured-in-place concrete. The building features vinyl casement windows and steel doors. The interior walls are either 2" x 4" wood stud or 4" concrete masonry unit (CMU). The interior doors are solid core wood veneer. The roof is a low-sloped three-ply built-up system with a polyvinyl chloride (PVC) cap sheet.

Alterations and Additions: In 1986, two Arctic entrances were added to the building. In 2005, a 1,050-square-foot addition was made with pre-cast concrete wall and roof panels, and the original building was re-roofed.

II.a.ii. Signal and Power Building, Generator Building

Original Plans: The Signal and Power Building contains three garage bays, maintenance offices and shops, backup generators, a transformer room, a workout facility, limited housing, and hazardous materials storage. This one-story building was constructed in 1960 and is approximately 7,586 square feet. The roof is a low-sloped three-ply built-up system with a PVC cap sheet. The foundation is poured-in-place concrete slab-on-grade. The walls and roof structure are also poured-in-place concrete. The windows are set in vinyl casements and the exterior doors are insulated core steel. The interior walls are either poured-in-place concrete or 4" CMU. The interior doors are solid core wood veneer.

Alterations and Additions: The Generator Building was added in 1992, and the entire structure was re-roofed in 2005.

II.a.iii. Transmitter Facility

The Transmitter Facility consists of a coupler room, air-handling room, transmitter room with two transmitters, a transformer room, a service room, a storage area and other hallways This building was built in 1992 to replace the original transmitter building, which was constructed in 1960 and demolished in 2010. The building is one story and approximately 3,887 square feet. The foundation is poured-in-place concrete slab-on-grade. The walls are pre-cast concrete panels, and the roof structure is steel bar joist. The exterior walls feature a textured finish and a ceramic tile decorative band. The roof consists of metal decking with 8" rigid insulation on ½" water-resistant gypsum board covered with 30" x 30" rubber protection mats. There are no windows; the doors and louvers are steel. The interior walls are either poured-in-place concrete or 4" CMU. The interior doors are solid core wood veneer.

II.a.iv. New Transmitter Building

The New Transmitter Building consists of an operations room, electrical room, generator room, mechanical room, and transmitter room. This one-story building was constructed between 2005 and 2008 and is approximately 2,500 square feet. The exterior consists of exposed aggregate concrete wall panels. The foundation appears to be concrete slab-on-grade. The roof is flat concrete with metal ducting surrounding around the plenum. There are no windows.

II.a.v. Tower System

The transmission tower was built in 1960 and was 625' tall with a base anchor and guy wires. The tower was demolished August 2011.

II.a.vi. Remote Site Hut

A small, 7' x 12' fiberglass hut contains the electronics for one of the LORAN-C station's antenna systems. It was built in 1985 and is manufactured by the Grasis Corporation. The door is also fiberglass.

II.a.vii. CONEX Storage Units

There are four Sea-Land storage CONEXes on the property for storing food, beverages, and cleaning supplies. These are steel containers that comprise 160 square feet located at the north end of the Administration and Barracks Building.

III. Site Description

St. Paul Island is one of the Pribilof Islands in the Bering Sea, about 770 miles southwest of Anchorage and 240 miles north of the Aleutian Island chain. The island is about 40 square miles in area. The LORAN-C station is located three miles northeast of the city of St. Paul; the airport is about one mile northeast of the station. USCG leases hangar space at the St. Paul airport and uses the airport for its air transportation needs. St. Paul has approximately 650 residents and is the largest Aleut community in the U.S. The Pribilof Islands Aleuts of St. Paul and St. George Islands, Alaska, are a federally recognized Native American tribe.

The island is listed on the National Register of Historic Places (NRHP) as part of the *Seal Island Historic District* (USCG 2009a), which encompasses portions of both St. Paul and neighboring St. George Islands Discovered in the 1780s as the home of the world's largest concentration of northern fur seals, the islands of St. Paul and St. George have long attracted fur hunters. An international conservation agreement made between the United States, the United Kingdom, Russia, and Japan in 1911 insured the preservation of the herds on the islands in an important example of the principle of international arbitration. The LORAN-C station is on the southeast coast of St. Paul Island, outside of the boundaries of the historic district (NRHP 1986).

The LORAN-C station consists of four major buildings; fuel tanks occupied the westernmost point of the property. Approximately 200' northeast of the fuel tanks is the Signal and Power Building, and approximately 100' farther northeast is the Administration and Barracks Building. The New Transmitter Building and Transmitter Facility are located approximately 800' northwest of the main station area, along with the former tower. The old transmitter building was demolished in 2010 (USCG 2009b).

Two access roads on the grounds were built in 1960. The station access road runs from the road that accesses the city of St. Paul in front of the Administration and Barracks Building to the back of the Signal and Power Building. It is approximately 15' wide x 180' long. The transmitter access road runs from the end of the station access road to the beginning of the parking area by the transmitter buildings. It is approximately 15' wide x 727' long. Both are gravel. There is also a paved walkway from the Signal and Power Building to the Administration and Barracks Building.

The station was designed to be self-sufficient by generating its own power; operating and maintaining its own water supply, septic system, and living quarters; and housing a staff capable of performing all auxiliary maintenance and support activities.

The facility is currently powered by the City of St. Paul but has maintained its own septic system. St. Paul is powered by 500 kilowatt hybrid wind-diesel power plant operated by the Tanadgusix (TDX) Corporation, an Alaskan Native Village Corporation created under the Alaska Native Claims Settlement Act of 1971 (Philemonoff 2003).

The current drinking water source on the island is the City of St. Paul's wellfield, which draws on a freshwater aquifer located on the southeastern portion of the island; it is the only known private or public drinking water source on St. Paul. Gasoline for LORAN station vehicles is obtained from a 250-gallon aboveground storage tank (USCG 2009a).

IV. Reference List

IV.a.Primary Sources

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IV.b. Secondary Sources

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Phyllys Callina, Photographer, under the supervision of Terri Asendorf, February/March 2011

Photographic documentation was conducted according to the National Register of Historic Places (NRHP) standards, per the stipulations in the Programmatic Agreement.

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4/19/2008	69	Transmitter Facility - Transmitter Room				
4/19/2008	70	Transmitter Facility - Transformer Room				
4/19/2008	71	Transmitter Facility - Condenser 'Shed'				
4/19/2008	72	Transmitter Facility - Entry				
4/19/2008	73	New Transmitter Building - Electrical Room				
4/19/2008	74	New Transmitter Building - Transmitter Room				
4/19/2008	75	New Transmitter Building - Workroom				

4/19/2008	76	New Transmitter Building - Transmitter Room
4/19/2008	77	New Transmitter Building - Transmitter Room
4/19/2008	78	New Transmitter Building - Transmitter Room



AK_StPaul_LORANStation_001.tif



AK_StPaul_LORANStation_002.tif



AK_StPaul_LORANStation_003.tif



AK_StPaul_LORANStation_004.tif



AK_StPaul_LORANStation_005.tif



AK_StPaul_LORANStation_006.tif



AK_StPaul_LORANStation_007.tif



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AK_StPaul_LORANStation_010.tif



AK_StPaul_LORANStation_011.tif



AK_StPaul_LORANStation_012.tif



AK_StPaul_LORANStation_013.tif



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AK_StPaul_LORANStation_015.tif



AK_StPaul_LORANStation_016.tif



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AK_StPaul_LORANStation_076.tif



AK_StPaul_LORANStation_077.tif



AK_StPaul_LORANStation_078.tif



Alaska Building Inventory Form

Alaska Building	Inventor	y Form			AHRS: XPI	I-227 Ass	ociated District:	
Historic Name:				Other Name:				
Administration and Barracks Building				N/A				
Building Address:				City:				
900 Polovina Turnpike, St. Paul Island, Alaska 99660								
Current Owner's Name and Address: United States Coast Guard, Civil Engineeri	ng Unit, PO Box 21	747, Juneau, AK	, 99802-1747					
USGS Quad Name and Map Sheet:	Section:			Township:			Range:	
Pribilof Islands Quadrangle, AK 28	18			35 S			181 W	
GPS Coordinate (NAD-27 Alaska):				UTM:				
57° 9' 13", -170° 15' 6"				Zone 2V		sting 5269.37		Northing 6334742.88
Historic Associations								
Historic Function and Sub-function:								
1. Defense	2. Coast Guard			3.			4.	
	Facility							
Current Function and Sub-function:								
1. Defense	2. Coast Guard			3.			4.	
Significant Person(s):	Facility			Significant Dates				
1. N/A	2.			1.1965			2.	
Architect, Builder, Contractor, Designer				Original Owner:			۷.	-
USCG	•			USCG				
Architectural Information:				•				
Date of Construction:	Date Moved:			Destruction Date:			Reconstr	ruction Date:
1965	N/A			N/A			N/A	
Alteration Dates								
1. 1986	2.			3.			4.	
Resource Type				Stories				
[x] Building [] Site	[] Structure	[]0	bject	1.	one		2.	
Architectural Style:				Building Type:				
Modern						1=		
Number of Ancillary Structures:		Plan: Irregular					ural Affiliation: Sovernment	
Foundation Materials:	Roof Materials:	mogulai		Exterior Wall Mate	rials:	100 0	Other Ma	terials:
Concrete		3-ply built-up		1.	Concrete Pane	els	1.	Vinyl Casement Windows
2.	2.	PVC		2.	Concrete	_	2.	Steel Doors
	•	-						

Architectural Desc	ription (Include setti	ng & outbuildi	ngs):			Statement of Sign	nificance:						
The Administration a	and Barracks Building	includes admin	istrative offic	es, housing	, and the	The LORAN-C Sta	tion at St. P	aul is eligib	ole as an histor	c district unde	er Criterion A,	at the nationa	al level of
mess and recreation	decks. This large, or	ne-story building	g was built in	1965 and s	pans	significance, for its role as a historic aid to navigation within the Gulf of Alaska. Long Range Aid to						٥	
approximately 12,11	4 square feet. In 198	it was substa	antially renova	ated during	which with two	Navigation (LORA	N) was the fe	ederally-pr	ovided radio na	vigation syste	em for maritim	e and some a	viation
arctic entrances were added. It was re-roofed and received another addition in 2005. The				05. The	activity from appro	ximately 194	0 to 2010.	The station is	also eligible u	nder Criterion	Consideratio	n G as a	
foundation, walls, ar	d roof are all poured-	in-place concre	te. The 2005	addition ha	s a pre-cast	property of excepti	onal importa	nce that h	as achieved si	gnificance with	nin the past 50	years.	
concrete wall and roof panels. The building features vinyl casement windows and steel doors. Either 2 x 4 wood studs or 4" CMU comprise interior walls. Interior doors are solid-core wood													
					At the beginning of	f \M\M/II noei	ionina wa	e done usina d	and reckoning	colectial nav	igation, and Is	ator	
veneer. The low-slop	be roof is covered with	3-ply, built-up	bitumen and	a PVC cap	sheet.	radio beacon. As s		•	•			•	itei,
						development of a r							
					program of the fed								
						C provided a highly							
						operated as a low-	,			,	,		,
						two pairs of transm		, i		,	,		
						was transferred to							
											0	,	,
						Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage.							
						The St. Paul LORA				,			
						station consisted of							
						Administration and	Barracks B	uilding is a	contributing fe	ature to the S	t. Paul LORAI	N-C Station H	istoric
						District.							
Eligibility:						Criteria Considerat							
[x] Yes [] No	If yes:	[x] A	[]B	[]C	[]D		[]B	[]C	[]D	[]E	[]F	[x] G	
Prepared by:						g Professional Qual						Date:	
Terri Asendorf		[] Architect	t	[x] Arch	nitectural Histo	orian	[] Histor	ian	[] Historic	Architect	[] None		
SHPO Response:													
[] Eligible (Concur)	[] Eligible (Do Not		[] Not	Eligible (Co	ncur)	[] Not Eligible (Do	Not Concur						
	tions and Comments												
[] Need more inform		[] Historic (Context	[] Integ	grity [] Archite	ectural Description		[] Perio	d of Significan	ce			
Authorized Signature	e:										Date:		

Alaska Building	Inventor	y Form			AHRS:	XPI-023	Associated I	District:		
Historic Name:				Other Name:						
Storage CONEX Units				N/A						
Building Address:				City:						
900 Polovina Turnpike, St. Paul Island, Alaska 99660										
Current Owner's Name and Address:	II-4 DO D 04	747 June ALC 000	200 4747							
United States Coast Guard, Civil Engineering USGS Quad Name and Map Sheet:	Section:	747, Juneau, AK, 998		Tarrestation				In		
	Section:			Township: 35 S				Range: 181 W		
Pribilof Islands Quadrangle, AK 28 GPS Coordinate (NAD-27 Alaska):	18			১১ ১ UTM:				181 W		
` ,				Zone		F4:		No orthion		
57° 9' 13", -170° 15' 6"				2011e 2V		Easting 545269.37		Northing 6334742.88		
Historic Associations										
Historic Function and Sub-function:										
1. Defense	Coast Guard Facility			3.				4.		
Current Function and Sub-function:	•									
1. Defense	Coast Guard Facility			3.				4.		
Significant Person(s):				Significant Dates						
1. N/A	2.			1.1991				2.		
Architect, Builder, Contractor, Designer: USCG				Original Owner: USCG						
Architectural Information:										
Date of Construction:	Date Moved:			Destruction Date:				Reconstruction Date:		
1991	N/A			N/A				N/A		
Alteration Dates										
1.	2.			3.				4.		
Resource Type				Stories						
[x] Building [] Site	[] Structure	[] Objec		1.	one			2.		
Architectural Style: N/A				Building Type:						
Number of Ancillary Structures:		Plan: Rectangular					Cultural Affiliat US Government			
Foundation Materials:	Roof Materials:			Exterior Wall Mater	rials:			Other Materials:		
1.	1.			1.	Fiberglass			1.		
2.	2.			2.				2.		

Architectural Description (Include setting & outbuildings):	Statement of Significance:						
There are four steel storage CONEX units at the station for storing food, beer, wine, etc.	The LORAN-C Station at St. Paul is eligible as a historic district under Criterion A, at the national level of significance, for its role as a historic aid to navigation within the Gulf of Alaska. Long Range Aid to Navigation (LORAN) was the federally-provided radio navigation system for maritime and some aviation activity from approximately 1940 to 2010. The station is also eligible under Criterion Consideration G as a property of exceptional importance that has achieved significance within the past 50 years.						
	At the beginning of WWII, positioning was done using dead reckoning, celestial navigation, and later, radio beacon. As state and federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at MIT, and modeled after the British Gee system. LORAN-C provided a highly accurate, all-weather navigational system, that was available twenty-four hours per day. It operated as a low-frequency, hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. Operation and maintenance of LORAN stations was transferred to USCG in 1943. Stations were built throughout the U.S., Russia, Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage. The St. Paul LORAN-C Station was constructed in 1965 by USCG and decommissioned in 2010. The station consisted of one 625-foot guyed tower, and was the master station for the North Pacific Chain. The four storage CONEX units are contributing features to the St. Paul Loran-C Station Historic District.						
Eligibility:	Criteria Considerations:						
[x] Yes [] No	[]B []C []D []E []F [x]G						
Prepared by: Reviewed by Professional that meets the followi	ng Professional Qualifications: Date:						
Terri Asendorf [] Architect [x] Architectural His	torian [] Historian [] Historic Architect [] None						
SHPO Response:							
[] Eligible (Concur) [] Eligible (Do Not Concur) [] Not Eligible (Concur)	[] Not Eligible (Do Not Concur)						
Minor Recommendations and Comments Include:							
[] Need more information related to: [] Historic Context [] Integrity [] Archit	tectural Description [] Period of Significance						
Authorized Signature:	Date:						

Alaska Building	Inventor	y Form		AHRS: Associated District:						
Historic Name:			Other Name:							
New Transmitter Building			N/A							
Building Address: 900 Polovina Turnpike, St. Paul Island, Alaska 99660			City:							
Current Owner's Name and Address:										
United States Coast Guard, Civil Engineering		747, Juneau, AK, 998								
USGS Quad Name and Map Sheet: Pribilof Islands Quadrangle, AK 28	Section: 18		Township: 35 S			Range: 181 W				
GPS Coordinate (NAD-27 Alaska):	-		UTM:			1 -				
57° 9' 13", -170° 15' 6"			Zone 2V	Easting 545269.		Northing 6334742.88				
Historic Associations										
Historic Function and Sub-function:										
1. Defense	Coast Guard Facility		3.			4.				
Current Function and Sub-function:	,									
1. Defense	Coast Guard Facility		3.			4.				
Significant Person(s):	,		Significant Date	es						
1. N/A	2.		1.			2.				
Architect, Builder, Contractor, Designer: USCG			Original Owner: USCG	:						
Architectural Information:										
Date of Construction:	Date Moved:		Destruction Dat	e:		Reconstruction Date:				
ca. 2005	N/A		N/A			N/A				
Alteration Dates										
1.	2.		3.			4.				
Resource Type			Stories							
[x] Building [] Site	[] Structure	[] Object		one		2.				
Architectural Style: Modern			Building Type:							
Number of Ancillary Structures:		Plan: Irregular			Cultural Affilia US Governmen					
Foundation Materials:	Roof Materials:		Exterior Wall Ma			Other Materials:				
 Concrete 	1. 2.	Concrete Panels	1. 2.	Textured concrete p	panel	 Fixed Aluminum W 	lindows			
			•				•			

mechanical room, and transmitter room. This one-story building was constructed between 2005 and 2008. The building spans approximately 2,500 square feet. The exterior consists of exposed aggregate concrete wall panels. The foundation appears to be concrete slab-on-grade. The flat roof is concrete with metal ducting surrounding around the plenum. There are no windows.				significance, for its role at Navigation (LORAN) wat activity from approximate property of exceptiona At the beginning of Wiradio beacon. As state development of a more program of the federal LORAN-C provided a line hours per day. It opera difference in pulses from maintenance of LORA U.S., Russia, Canada, The St. Paul LORAN-C station consisted of on	The LORAN-C Station at St. Paul is eligible as an historic district under Criterion A, at the national level of is significance, for its role as an historic aid to navigation within the Gulf of Alaska. Long Range Aid to Navigation (LORAN) was the federally-provided radio navigation system for maritime and some aviation activity from approximately 1940 to 2010. The station is also eligible under Criterion Consideration G as a property of exceptional importance that has achieved significance within the past 50 years. At the beginning of WWII, positioning was done using dead reckoning, celestial navigation, and later, radio beacon. As state and federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at MIT, and modeled after the British Gee system. LORAN-C provided a highly accurate, all-weather navigational system that was available twenty-four hours per day. It operated as a low-frequency, hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. Operation and maintenance of LORAN stations was transferred to USCG in 1943. Stations were built throughout the U.S., Russia, Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage. The St. Paul LORAN-C Station was constructed in 1965 by USCG and decommissioned in 2010. The station consisted of one 625-foot guyed tower, and was the master station for the North Pacific Chain. The New Transmitter Building is a contributing feature to the St. Paul LORAN-C Station Historic District.					
				New Transmitter Build	ing is a c	contributing	reature to the	St. Paul LOR	AN-C Station	HISTORIC DISTRICT.
Eligibility:				Criteria Considerations	3:					
[x] Yes [] No If yes:	[x] A	[]B []	C []D		[]B	[]C	[]D	ſΊΕ	[]F	[x] G
Prepared by:	Reviewed by Pro	fessional that	meets the followi	ng Professional Qualificati	ons:		••		• •	Date:
Terri Asendorf	[] Architect	[x]	Architectural His	storian	[] Histor	ian	[] Historic A	Architect	[] None	
SHPO Response:										
[] Eligible (Concur) [] Eligible (Do Not Co	ncur)	[] Not Eligible	(Concur)	[] Not Eligible (Do Not	Concur)					
Minor Recommendations and Comments Inc										
[] Need more information related to:	[] Historic Conte	xt []	Integrity [] Archi	tectural Description		[] Perio	d of Significand	e		
Authorized Signature:									Date:	

AHRS: XPI-023 Associated District:

Historic Name:			Other Name:							
Remote Site Hut			N/A							
Building Address:			City:							
900 Polovina Turnpike, St. Paul Island, Alasl	ka 99660		-							
, , , , , , , , , , , , , , , , , , , ,										
Current Owner's Name and Address:			•							
United States Coast Guard, Civil Engineering	unit, PO Box 21747, J	uneau, AK, 99802-1747								
USGS Quad Name and Map Sheet:	Section:	, ,	Township:			Range:				
Pribilof Islands Quadrangle, AK 28	18		35 S			181 W				
GPS Coordinate (NAD-27 Alaska):	•		UTM:							
57° 9' 13", -170° 15' 6"			Zone	Easting		Northing				
			2V	545269.37	7	6334742.88				
-			1							
Historic Associations										
Historic Function and Sub-function:										
1. Defense	2. Coast Guard		2			4				
1. Delense			3.			4.				
Owner Constitution and Oak for the	Facility									
Current Function and Sub-function:			•							
1. Defense	2. Coast Guard		3.			4.				
0. 10. 15. ()	Facility		lo. 10. 15.							
Significant Person(s):			Significant Dates							
1. N/A	2.		1.1985			2.				
Architect, Builder, Contractor, Designer:			Original Owner:							
USCG			USCG							
Architectural Information:										
Date of Construction:	Date Moved:		Destruction Date:			Reconstruction Date:				
1985	N/A		N/A			N/A				
Alteration Dates										
1.	2.		3.			4.				
Resource Type			Stories							
[x] Building [] Site	[] Structure	[] Object	1.	one		2.				
Architectural Style:			Building Type:							
Modern										
Number of Ancillary Structures:	Plan:		•		Cultural Affiliat	tion:				
		angular			US Governmen					
Foundation Materials:	Roof Materials:	· ·	Exterior Wall Materi	als:		Other Materials:				
1.	1.		1.	Fiberglass		1.				
2.	2		2.	1. 9.000		2				
	1		1			! -				

Architectural Description (Include setting & outbuildings): The Remote Site Hut was a small, 7'- x 12'-fiberglass hut which stored the electronics for the antenna systems. Built in 1985, it was approximately 84 square feetf with a 2'- x 5.5'-fiberglass access door.	Statement of Significance: The LORAN-C Station at St. Paul is eligible as an historic district under Criterion A, at the national level of significance, for its role as an historic aid to navigation within the Gulf of Alaska. Long Range Aid to Navigation (LORAN) was the federally-provided radio navigation system for maritime and some aviation activity from approximately 1940 to 2010. The station is also eligible under Criterion Consideration G as a property of exceptional importance that has achieved significance within the past 50 years.
	At the beginning of WWII, positioning was done using dead reckoning, celestial navigation, and later, radio beacon. As state and federal responsibility for providing navigational aids increased, the development of a more accurate system was needed. The LORAN system was developed under a program of the federal government by scientists at MIT, and modeled after the British Gee system. LORAN-C provided a highly accurate, all-weather navigational system that was available twenty-four hours per day. It operated as a low-frequency, hyperbolic radio navigation system using the time difference in pulses from two pairs of transmitting stations to obtain a navigation fix. Operation and maintenance of LORAN stations was transferred to USCG in 1943. Stations were built throughout the U.S., Russia, Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage. The St. Paul LORAN-C Station was constructed in 1965 by USCG and decommissioned in 2010. The station consisted of one 625-foot guyed tower, and was the master station for the North Pacific Chain. The Remote Site Hut is a contributing feature to the St. Paul LORAN-C Station Historic District.
Eligibility:	Criteria Considerations:
Prepared by: Reviewed by Professional that meets the following	lowing Professional Qualifications: Date:
Terri Asendorf [] Architect [x] Architectura	
SHPO Response:	
[] Eligible (Concur) [] Eligible (Do Not Concur) [] Not Eligible (Concur)	[] Not Eligible (Do Not Concur)
Minor Recommendations and Comments Include:	
[] Need more information related to: [] Historic Context [] Integrity [] A	rchitectural Description [] Period of Significance
Authorized Signature:	Date:

AHRS: XPI-230 Associated District: Historic Name: Other Name: Signal and Power Building & Generator Building N/A **Building Address:** City: 900 Polovina Turnpike, St. Paul Island, Alaska 99660 Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747 **USGS Quad Name and Map Sheet:** Section: Township: Range: Pribilof Islands Quadrangle, AK 28 181 W 18 35 S GPS Coordinate (NAD-27 Alaska): UTM: 57° 9' 13", -170° 15' 6" Zone Easting Northing 2V 545269.37 6334742.88 Historic Associations Historic Function and Sub-function: 3. 2. Coast Guard 4. 1. Defense Facility Current Function and Sub-function: 1. Defense 2. Coast Guard 3. 4. Facility Significant Person(s): Significant Dates 1.1960 2. Architect, Builder, Contractor, Designer: Original Owner: USCG Architectural Information: Date of Construction: Date Moved: **Destruction Date:** Reconstruction Date: 1960 N/A N/A N/A Alteration Dates 2005 3. Resource Type Stories [x] Building [] Site [] Structure [] Object one 2. Architectural Style: **Building Type:** Modern Number of Ancillary Structures: Plan: **Cultural Affiliation: US Government** Irregular Foundation Materials: Roof Materials: Exterior Wall Materials: Other Materials: Concrete 3-ply built-up Concrete Vinyl Casement Windows PVC Insulated Core Steel Doors

Architectural Description (Include setting & outbuildings):	Statement of Significance:					
The Signal and Power Building contains three garage bays, maintenance offices and shops,	The LORAN-C Station at St. Paul is eligible as an historic district under Criterion A, at the national level					
backup generators, a transformer room, a workout facility, limited housing, and hazardous	of significance, for its role as an historic aid to navigation within the Gulf of Alaska. Long Range Radio					
materials storage. This one-story building was constructed in 1960 and spans approximately	Navigation (LORAN) was the federally-provided radio navigation system for maritime and some aviation					
7,586 square feet. It was re-roofed in 2005. The generator building was added to the building in	activity from approximately 1940 to 2010. The station is also eligible under Criterion Consideration G as a					
1992. The low-slope roof is covered with 3-ply, built-up bitumen and a PVC cap sheet. The	property of exceptional importance that has achieved significance within the past 50 years.					
foundation is poured-in-place concrete slab-on-grade. Walls and the roof structure are also						
poured-in-place concrete. Windows are vinyl casements and exterior doors are insulated core	At the hearing of MAMIL positioning use done using dood valuation collection and later					
steel. Either poured-in-place concrete or 4" CMU comprise the interior walls; interior doors are	At the beginning of WWII, positioning was done using dead reckoning, celestial navigation, and later,					
solid-core wood veneer.	radio beacon. As state and federal responsibility for providing navigational aids increased, the					
	development of a more accurate system was needed. The LORAN system was developed under a					
	program of the federal government by scientists at MIT, and modeled after the British Gee system.					
	LORAN-C provided a highly accurate, all-weather navigational system that was available twenty-four					
	hours per day. It operated as a low-frequency, hyperbolic radio navigation system using the time					
	difference in pulses from two pairs of transmitting stations to obtain a navigation fix. Operation and					
	maintenance of LORAN stations was transferred to USCG in 1943. Stations were built throughout the					
	U.S., Russia, Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage.					
	The St. Paul LORAN-C Station was constructed in 1965 by USCG and decommissioned in 2010. The					
	station consisted of one 625-foot guyed tower, and was the master station for the North Pacific Chain. Th					
	Signal and Power Building and the Generator Building are contributing features to the St. Paul LORAN-C					
	Station Historic District.					
Eligibility:	Criteria Considerations:					
[x] Yes [] No If yes: [x] A [] B [] C [] D	[]B []C []D []E []F [x]G					
Prepared by: Reviewed by Professional that meets the following	Professional Qualifications: Date:					
Terri Asendorf [] Architect [x] Architectural Histor	ian [] Historian [] Historic Architect [] None					
SHPO Response:						
[] Eligible (Concur) [] Eligible (Do Not Concur) [] Not Eligible (Concur)	[] Not Eligible (Do Not Concur)					
Minor Recommendations and Comments Include:						
[] Need more information related to: [] Historic Context [] Integrity [] Architec	tural Description [] Period of Significance					
Authorized Signature:	Date:					

AHRS: XPI-023 Associated District:

Historic Name:				Other Name:						
LORAN-C Tower				N/A						
Building Address:				City:						
900 Polovina Turnpike, St. Paul Island, Alas	ka 99660									
Current Owner's Name and Address:										
United States Coast Guard, Civil Engineerin	a Unit PO Box 217	747 luneau AK	99802-1747							
USGS Quad Name and Map Sheet:	Section:	47, Julieau, Ait,	33002-1747	Township: Range:						
Pribilof Islands Quadrangle, AK 28	18			35 S				181 W		
GPS Coordinate (NAD-27 Alaska):	1.0			UTM:						
57° 9' 13", -170° 15' 6"				Zone			Northing			
01 0 10 , 110 10 0				2V		Easting 545269.37		6334742.88		
				1 <u>~</u> v		0.10200.07		0001112.00		
Historic Associations										
Historic Function and Sub-function:										
1. Defense	2. Coast Guard			3.				4.		
	Facility			-				•		
Current Function and Sub-function:										
1. Defense	2. Coast Guard			3.				4.		
	Facility									
Significant Person(s):	· · · · · ·			Significant Dates						
1. N/A	2.			1.1967; 2011				2.		
Architect, Builder, Contractor, Designer:				Original Owner:						
USCG				USCG						
Architectural Information:										
Date of Construction:	Date Moved:			Destruction Date:				Reconstruction Date:		
1967	N/A			2011 (TBD)				N/A		
Alteration Dates										
1.	2.			3.				4.		
Resource Type				Stories						
[] Building [] Site	[x] Structure	[] 01	oject	1.	N/A			2.		
Architectural Style:				Building Type:						
Number of Ancillary Structures:		Plan:					Cultural Affiliat			
Foundation Materials:	Roof Materials:			Exterior Wall Mater	iale		US Government	Other Materials:		
		NI/A								
1. Concrete		N/A		1.	N/A			1. Steel		
2.	2.			2.				۷.		

, , , , , , , , , , , , , , , , , , , ,	Statement of Significance:					
, , ,	The LORAN-C Station at St. Paul is eligible as an historic district under Criterion A, at the national level of					
demolition in spring 2011.	significance, for its role as an historic aid to navigation within the Gulf of Alaska. Long Range Aid to					
	Navigation (LORAN) was the federally-provided radio navigation system for maritime and some aviation					
	activity from approximately 1940 to 2010. The station is also eligible under Criterion Consideration G as a					
	property of exceptional importance that has achieved significance within the past 50 years.					
	At the beginning of WWII, positioning was done using dead reckoning, celestial navigation, and later,					
	radio beacon. As state and federal responsibility for providing navigational aids increased, the					
	development of a more accurate system was needed. The LORAN system was developed under a					
	program of the federal government by scientists at MIT, and modeled after the British Gee system.					
	LORAN-C provided a highly accurate, all-weather navigational system that was available twenty-four					
	hours per day. It operated as a low-frequency, hyperbolic radio navigation system using the time					
	difference in pulses from two pairs of transmitting stations to obtain a navigation fix. Operation and					
	maintenance of LORAN stations was transferred to USCG in 1943. Stations were built throughout the					
	U.S., Russia, Canada, Asia, and Europe eventually to provide some 70 million square miles of coverage.					
	The St. Paul LORAN-C Station was constructed in 1965 by USCG and decommissioned in 2010. The					
	station consisted of one 625-foot guyed tower, and was the master station for the North Pacific Chain. Th					
	tower is a contributing feature to the St. Paul LORAN-C Station Historic District.					
Eligibility:	Criteria Considerations:					
[x] Yes [] No If yes: [x] A [] B [] C [] D	[]B []C []D []E []F [x]G					
Prepared by: Reviewed by Professional that meets the following						
Terri Asendorf [] Architect [x] Architectural Histor	ian [] Historian [] Historic Architect [] None					
SHPO Response:						
[] Eligible (Concur) [] Eligible (Do Not Concur) [] Not Eligible (Concur)	[] Not Eligible (Do Not Concur)					
Minor Recommendations and Comments Include:						
[] Need more information related to: [] Historic Context [] Integrity [] Architec						
Authorized Signature:	Date:					

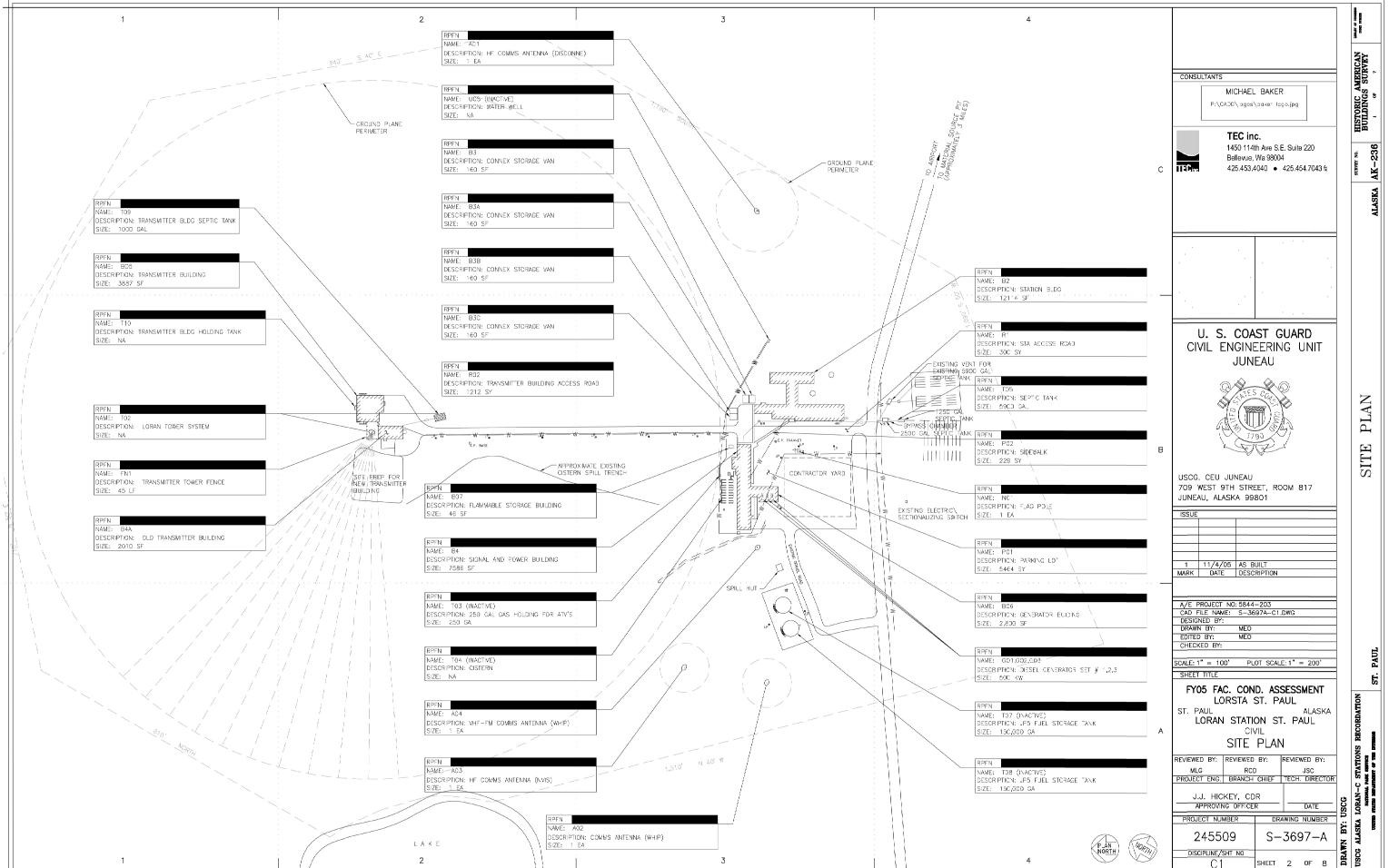
AHRS: XPI-232 Associated District: Historic Name: Other Name: Transmitter Facility N/A **Building Address:** City: 900 Polovina Turnpike, St. Paul Island, Alaska 99660 Current Owner's Name and Address: United States Coast Guard, Civil Engineering Unit, PO Box 21747, Juneau, AK, 99802-1747 USGS Quad Name and Map Sheet: Section: Township: Range: Pribilof Islands Quadrangle, AK 28 18 35 S 181 W GPS Coordinate (NAD-27 Alaska): UTM: 57° 9' 13", -170° 15' 6" Zone Easting Northing 2V 545269.37 6334742.88 **Historic Associations** Historic Function and Sub-function: 2. Coast Guard 3. 4. 1. Defense Facility Current Function and Sub-function: 1. Defense 2. Coast Guard 3. 4. Facility Significant Person(s): Significant Dates 1.1992 2. Architect, Builder, Contractor, Designer: Original Owner: USCG **Architectural Information:** Date of Construction: Date Moved: **Destruction Date:** Reconstruction Date: 1992 N/A N/A N/A Alteration Dates 2005 3. Resource Type Stories [x] Building [] Site [] Structure [] Object one 2. Architectural Style: **Building Type:** Number of Ancillary Structures: Plan: Cultural Affiliation: Irregular **US** Government Foundation Materials: Roof Materials: Exterior Wall Materials: Other Materials: Concrete Steel Textured concrete panel Steel doors

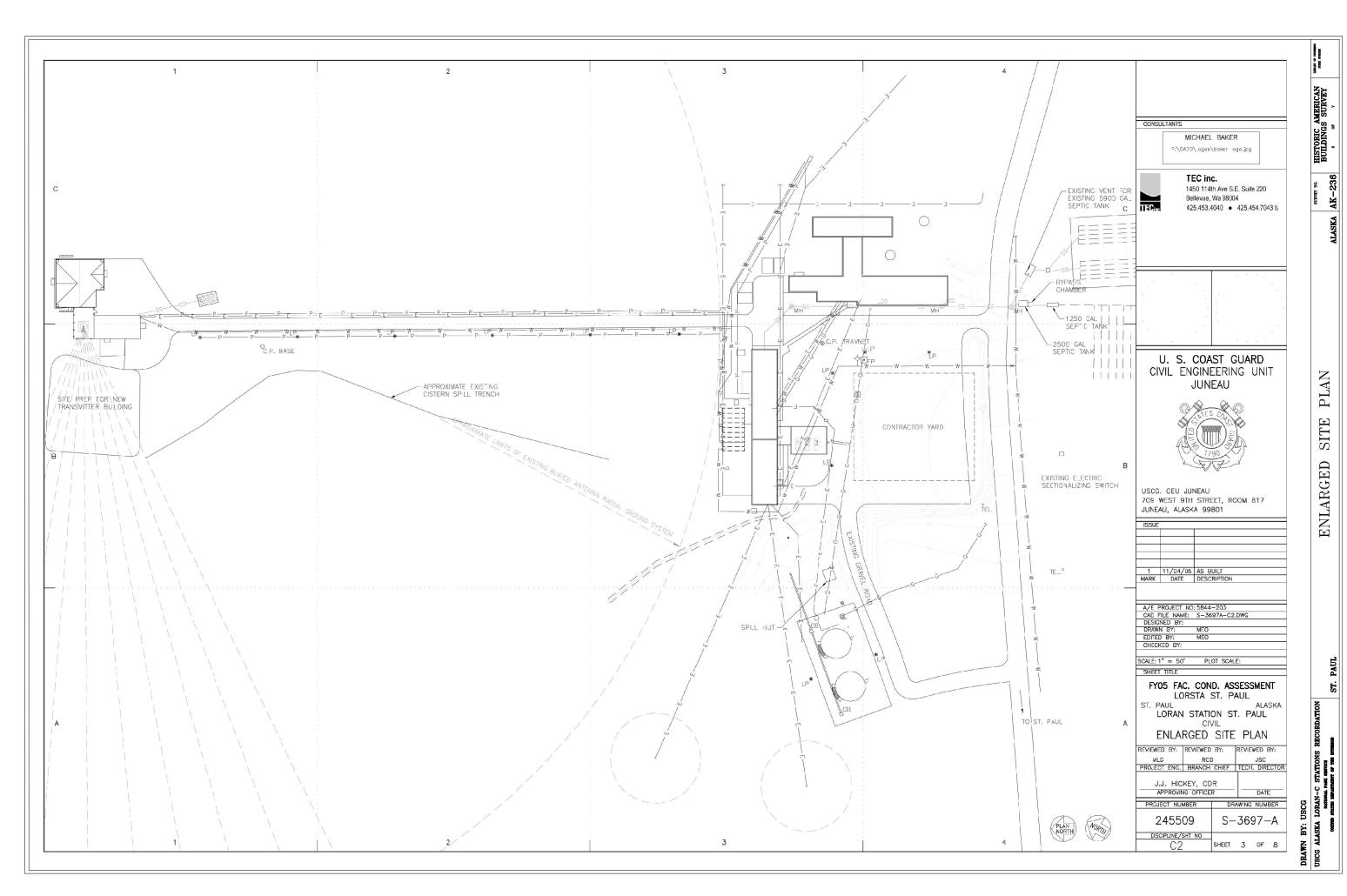
Ceramic tile

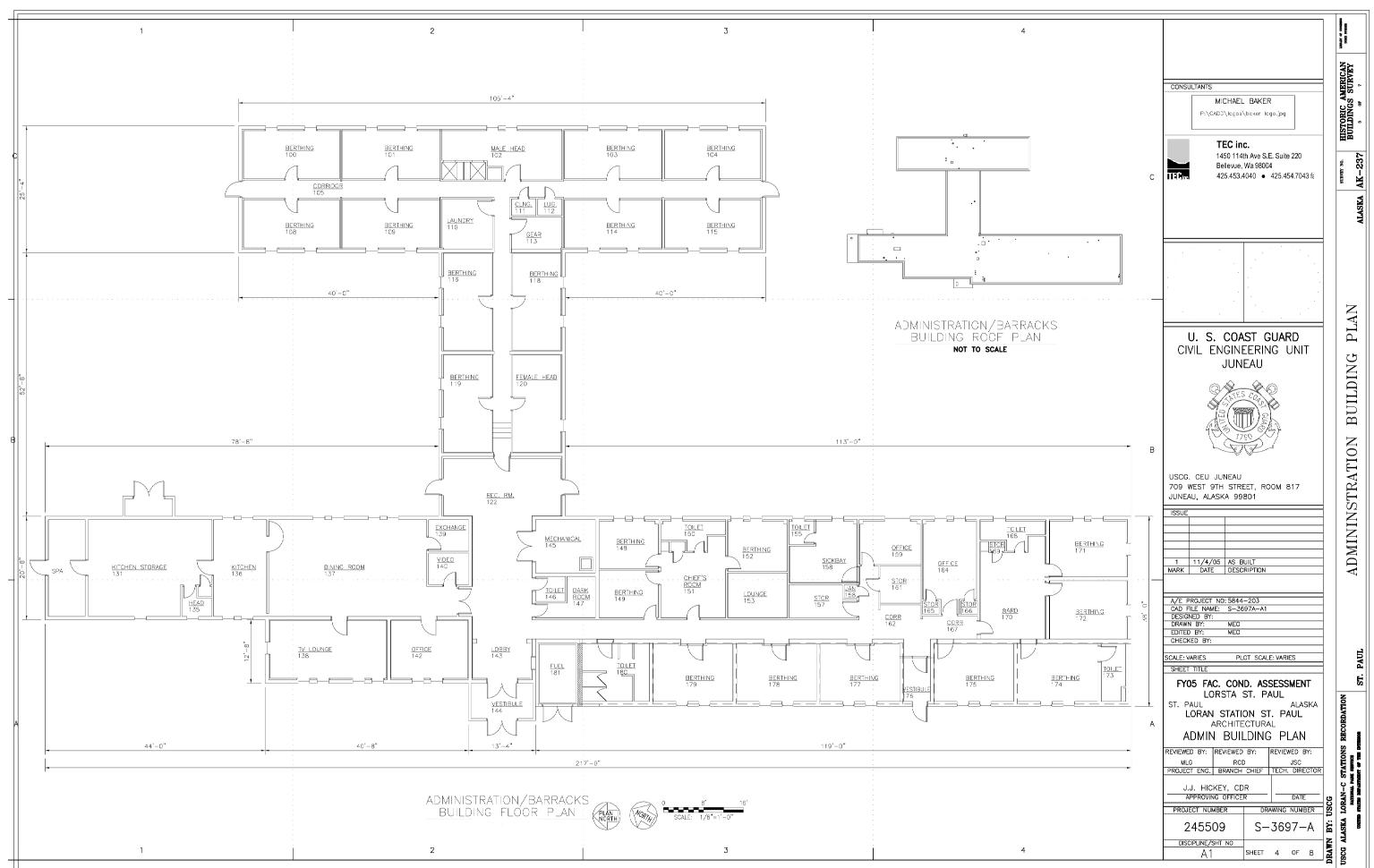
PVC

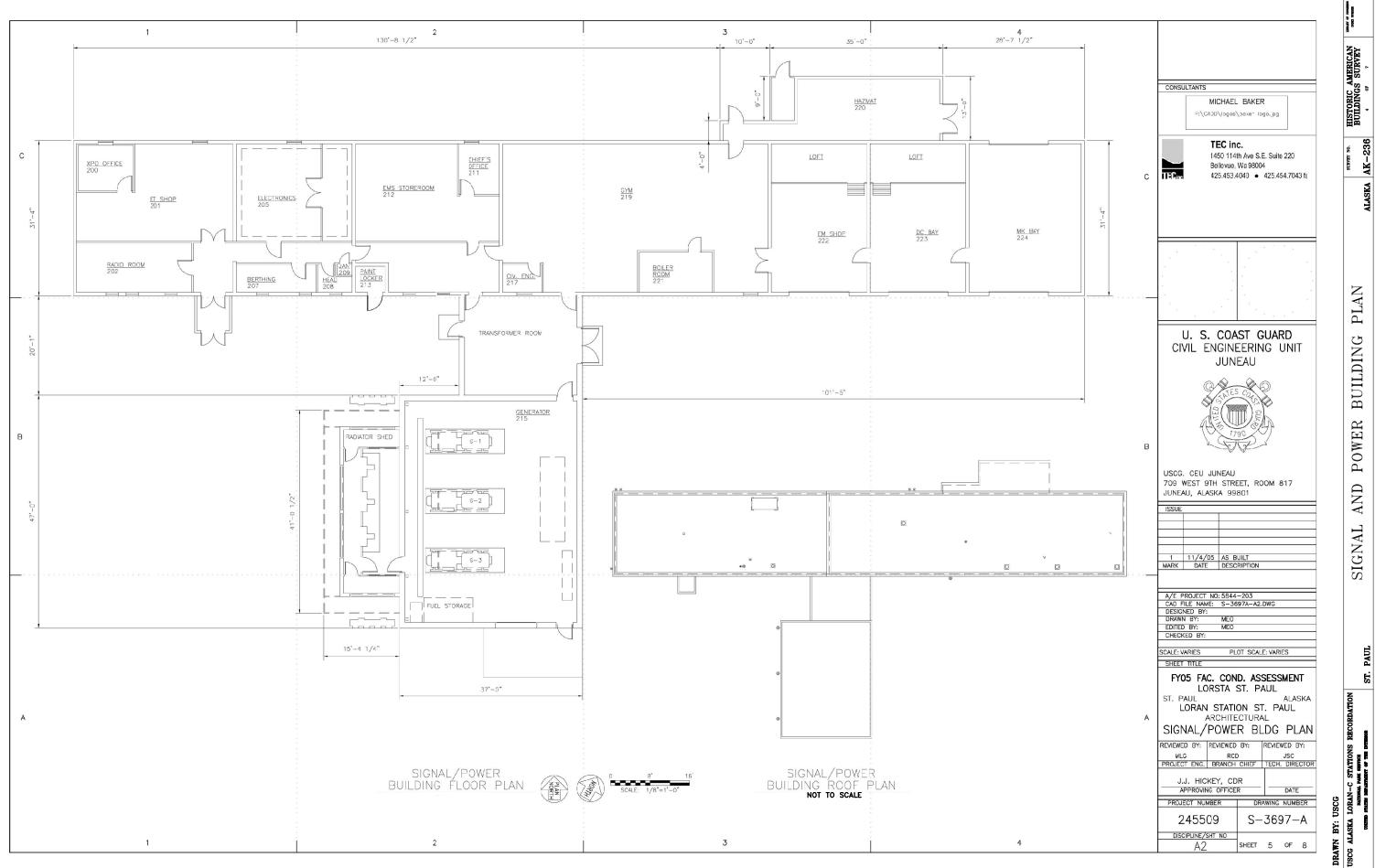
rooms. This building was built in 1992 to replace the original Transmitter Building which was constructed in 1960 and demolished in 2010. The one-story building spans approximately 3,887 square feet. The foundation is poured-in-place concrete slab-on-grade. Walls are pre-cast concrete panels and the roof structure is steel bar joist. Exterior walls feature a textured finish and a ceramic tile decorative band. The roof consists of metal decking with 8" rigid insulation on ½" water-resistant gypsum board covered with 30" x 30" rubber protection mats. There are no windows; doors and louvers are steel. Either poured-in-place concrete or 4" CMU comprise the interior walls; interior doors are solid-core wood veneer.					Statement of Sign The LORAN-C Sta significance, for its Navigation (LORAN activity from approx property of exception At the beginning of radio beacon. As s development of a r program of the fed- LORAN-C provided hours per day. It op difference in pulses maintenance of LO U.S., Russia, Cana The St. Paul LORA station consisted o Transmitter Facility Criteria Considerat	ion at St. Prole as an I) was the f kimately 19- ponal importa WWII, posi- ate and fec- nore accura- eral governi I a highly ac- perated as a from two p RAN station da, Asia, an N-C Station one 625-fc is a contrib	nistoric aid ederally-produced that he considered responsibilities and the considered responsibilities	to navigation wi ovided radio nav The station is a as achieved sign as done using de- nsibility for provi- was needed. The entists at MIT, a weather naviga ency, hyperbolic smitting stations sferred to USC to eventually pro- tructed in 1965 lower, and was the	thin the Gulf vigation syste ulso eligible u inificance with and reckoning ding navigati e LORAN sy und modeled tional system radio naviga s to obtain a G in 1943. Si ovide some 7	of Alaska. Lorem for maritim inder Criterion nin the past 50 , celestial navional aids incressem was devafter the British that was avaition system unavigation fix. iations were bit of million squad decommission for the Ne	ng Range Aid e and some a Consideration years. gation, and la based, the eleoped under the Gee system lable twenty-fising the time Operation an uilt throughout re miles of content and 2010. Onth Pacific CI	to viation n G as a ater, a n. four d t the everage.	
Eligibility: [x] Yes [] No	If yes:	[x] A	ſΊΒ	110	ΠD	Ciliena Considerat	IB	110	[]D	ſΊΕ	[]F	[x] G	
Prepared by:	<u> </u>	Reviewed by	Profession	al that mee	ts the following	Professional Qualifi	cations:			.,		Date:	
Terri Asendorf		[] Architect		[x] Arch	hitectural Histor	rian	[] Histo	ian	[] Historic A	rchitect	[] None		
SHPO Response:													
[] Eligible (Concur)	[] Eligible (Do Not C	Concur)	[] Not	Eligible (Co	ncur)	[] Not Eligible (Do	Not Concur)					
Minor Recommenda	tions and Comments I	nclude:											
[] Need more inform		[] Historic Co	ontext	[] Integ	grity [] Archited	tural Description		[] Perio	d of Significanc	е			
Authorized Signature	e:										Date:		



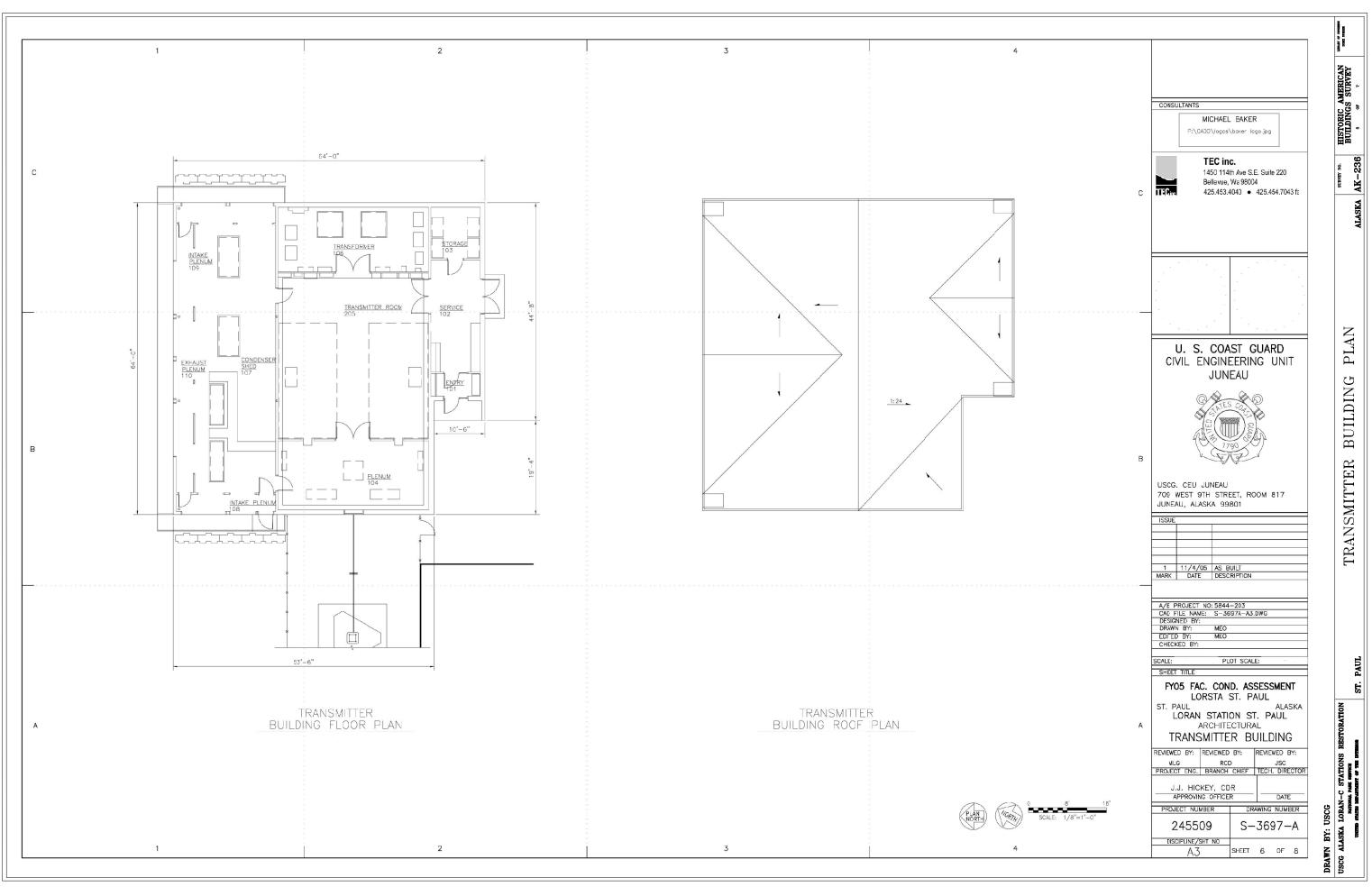




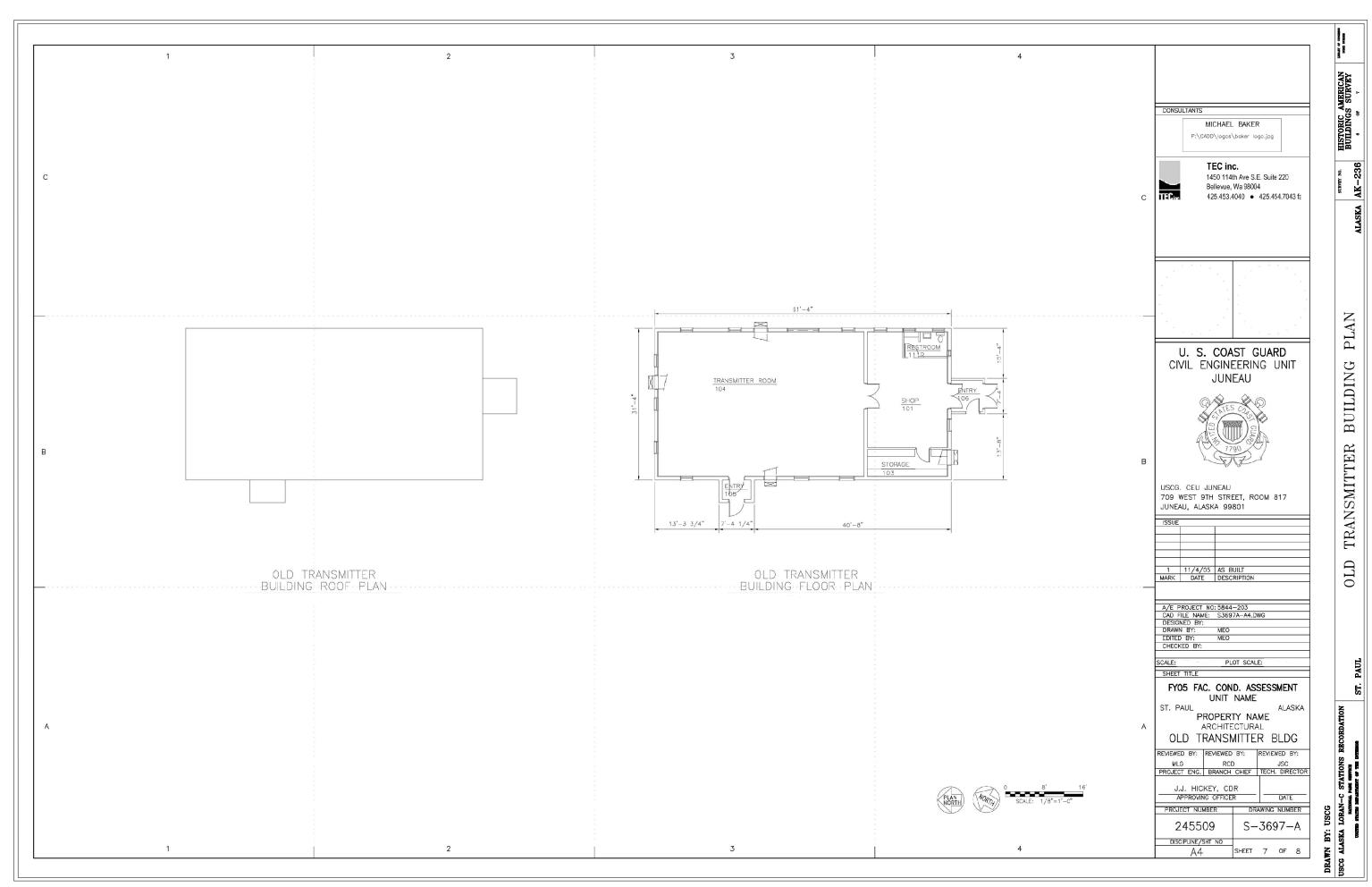


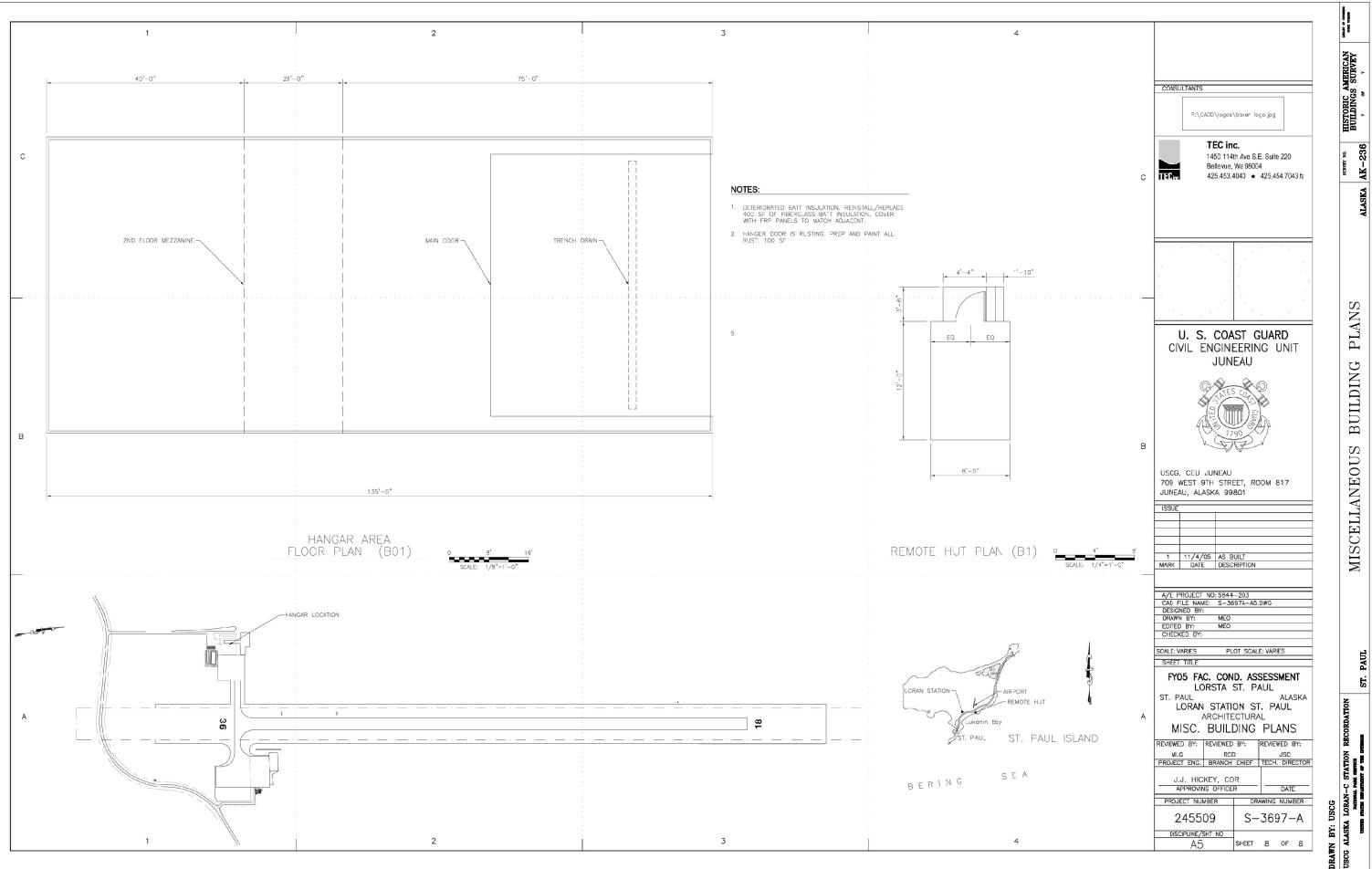


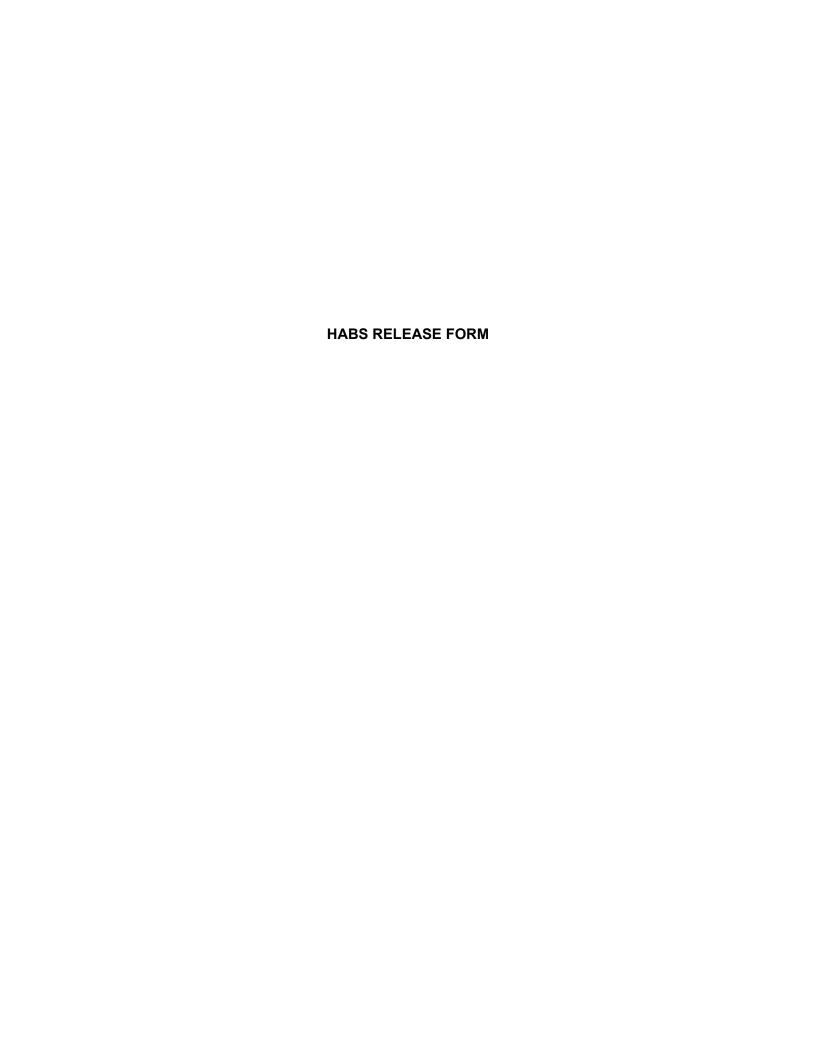
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