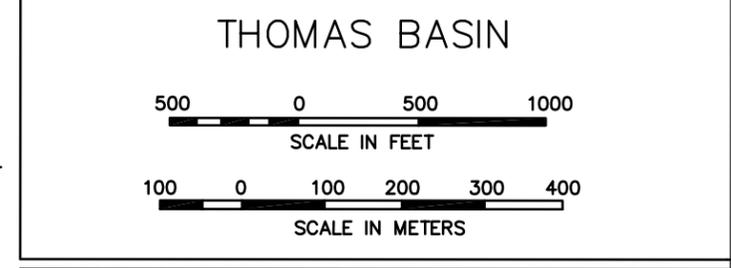
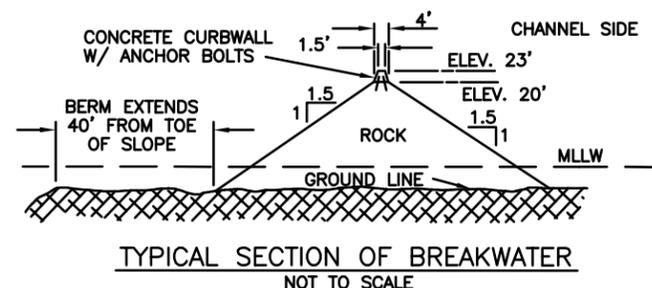
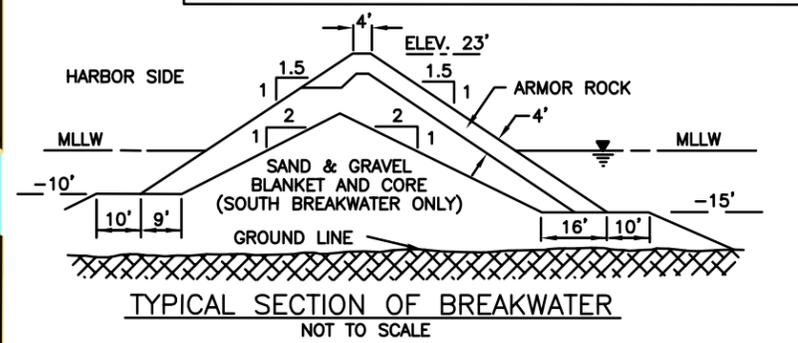
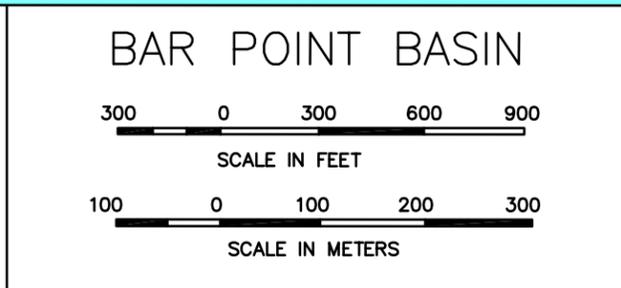
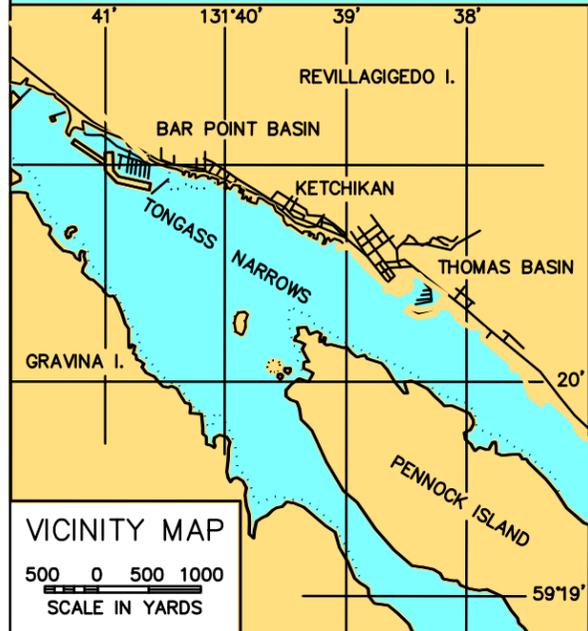
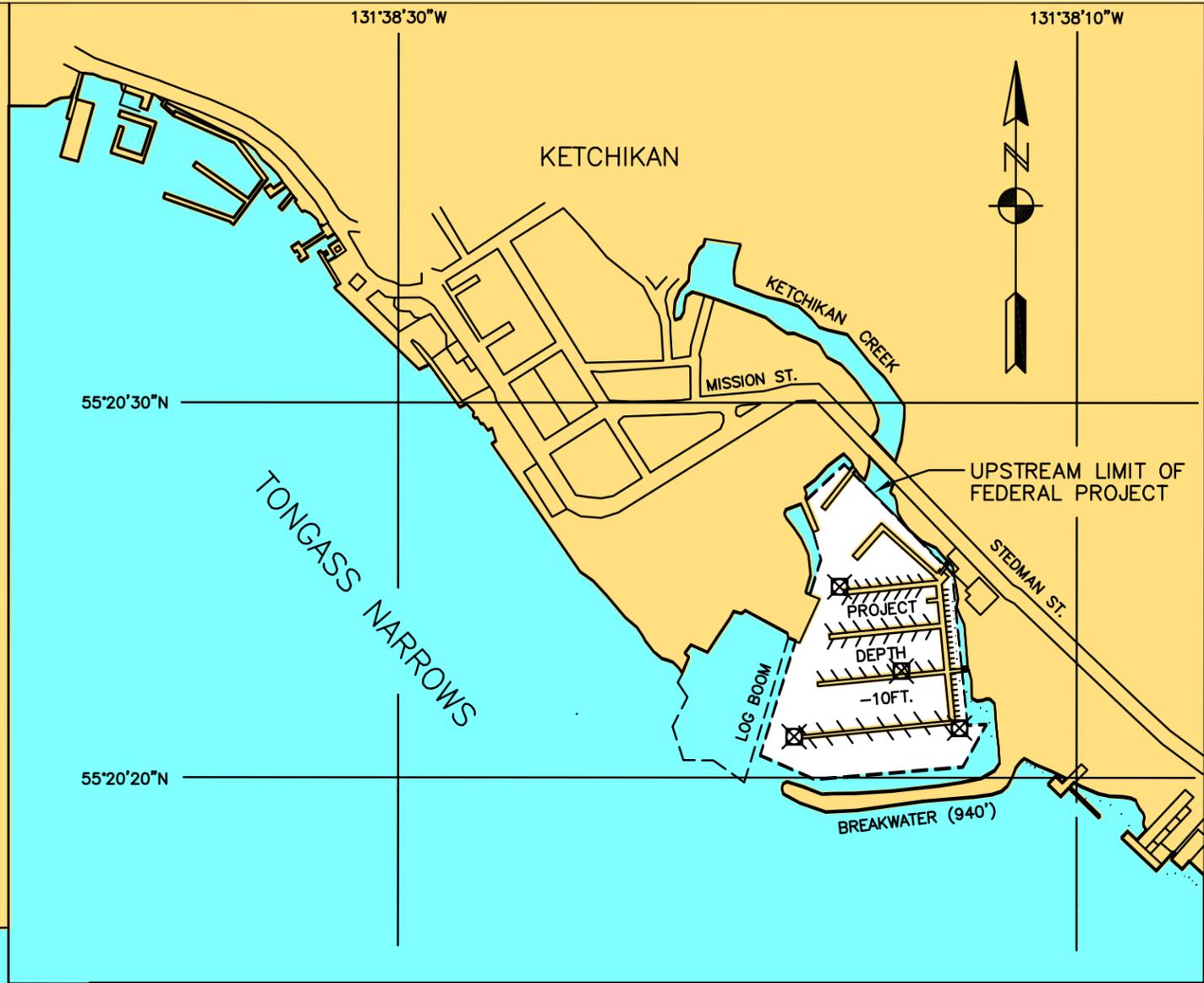
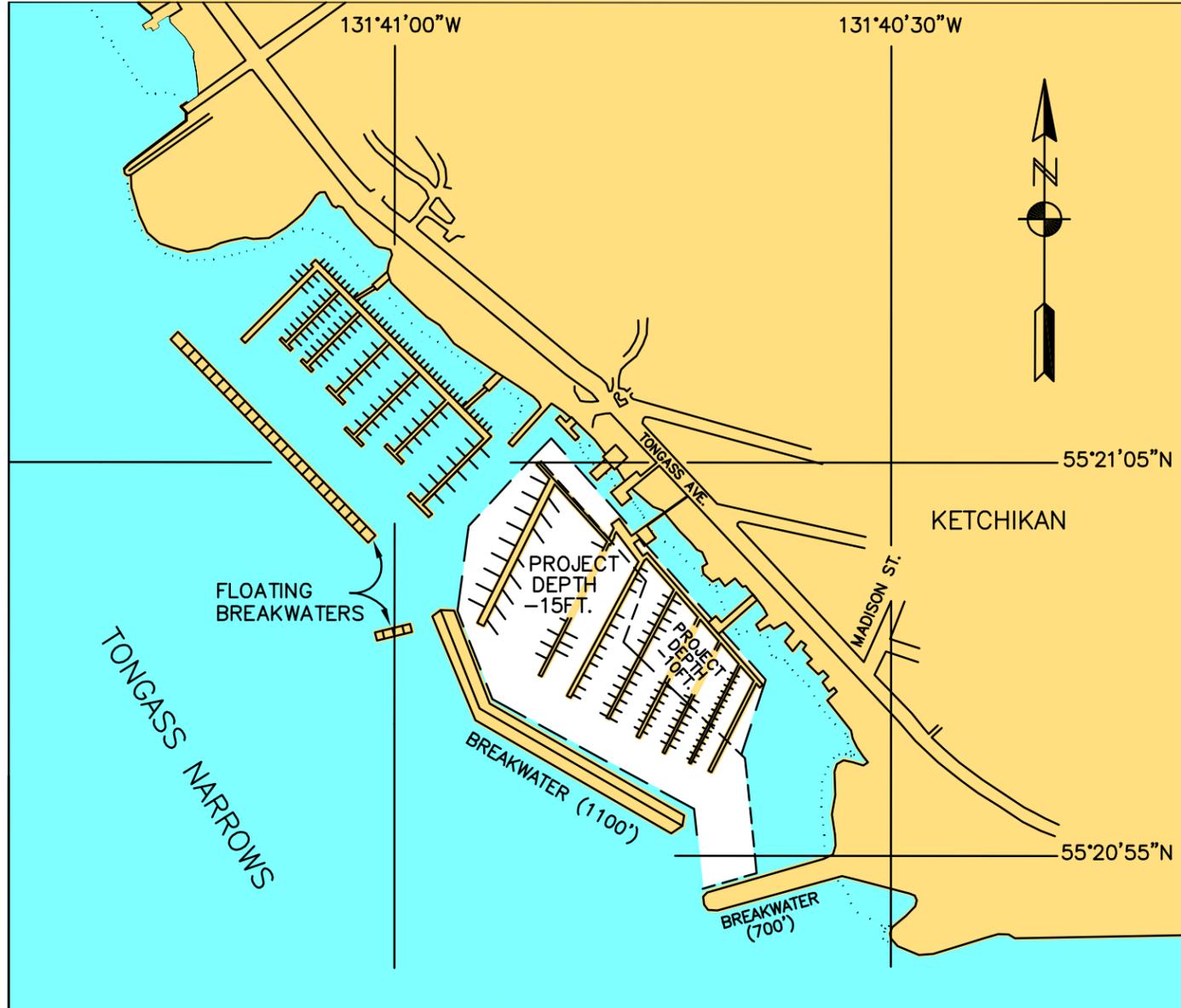


**Ketchikan Harbors
Thomas Basin and
Bar Point Harbor**



NOTES

- ELEVATIONS AND DEPTHS ARE IN FEET AND REFER TO MEAN LOWER LOW WATER (MLLW = 0.0').
- THIS LOCALITY IS SHOWN ON USC & GS CHART NOS. 17430, 17420, & 16013.

LEGEND

☒ BOTTOM SAMPLE LOCATION

**KETCHIKAN HARBOR
ALASKA**

BAR POINT AND THOMAS BASINS

Revised 1996

SCALES AS SHOWN

Condition of Improvements
 30 December 2014
Thomas Basin & Bar Point Harbors
 Ketchikan, Alaska
 (CWIS No. 000631 & 087071)

Authorization (1) Rivers and Harbors Act, 3 July 1930 (House Doc. 113, 70th Congress, 1st Session) as adopted, provides for construction of a stone breakwater with concrete cap, 940 feet in length, to protect the harbor in the vicinity of Ketchikan Creek, and dredging the protected area (11.35 acres) to a depth of -10 feet MLLW; (2) Rivers and Harbors Act, 2 September 1954 (House Doc. 501, 82nd Congress, 2nd Session) provides for the dredging of an additional small boat basin at Bar Point, 17.91 acres in area, to depths of -10 and -15 feet MLLW, and construction of three rock breakwaters 700, 1,100 and 450 feet in length, topped by concrete gravity walls. (3) Under Section 107 of the River and Harbor Act, 14 July 1960, as approved on 29 June 1978, Bar Point Harbor expansion is authorized for the construction and placement of 2 concrete floating breakwaters of 963 and 120 feet to enclose a basin of about 25 acres.

Table 1

Existing Project	Length ft.	Width ft.	Depth ft.
Thomas Basin Harbor			
Basin	11.35 acres		-10
Breakwater	940		
Bar Point Harbor			
Basin	17.91 acres		-10, -15
Southeast Breakwater	700		
West Breakwater	1100		
Floating Breakwater	963		
Floating Breakwater	120		

Project Usage Thomas Basin and Bar Point Harbors are used as a base of operations for commercial fishing and are capable of accommodating 300 and 520 vessels respectively. In addition, the harbors are used by more than 100 transient fishing boats as a seasonal base of operations.

Progress of Work

Thomas Basin Harbor

- 1933 The small boat basin at Ketchikan Creek, Thomas Basin, is completed.
- 1950 Maintenance dredging in Thomas Basin is begun in June and finished in FY 1951.
- 1960 Thomas Basin is dredged by contract over the summer.
- 1964 Maintenance dredging in Thomas Basin begins in July and is completed in August with the removal of 24,316 cubic yards. A controlling depth of -14 feet MLLW is reported.
- 1974 A contract for maintenance dredging in Thomas Basin is awarded in June and completed in October with 2,530 cubic yards of material removed.
- 1976 Repair of the rock breakwater at Thomas Basin begins in October and is completed in November.
- 1994 A condition survey of the harbor is performed in January and February. Sampling and testing is carried out for Thomas Basin.
- 1996 Maintenance dredging is completed at Thomas Basin in February with the removal of 8,678 cubic yards.
- 2001 A condition survey of the harbor is conducted with multi-beam techniques in April.
- 2004 A condition survey of the harbor is conducted in July.
- 2005 Aerial photography is taken of the harbor in April.
- 2007 A condition survey of the harbor is conducted in May.
- 2012 A condition survey of the harbor is conducted in July.
- 2013 "Comprehensive Evaluation of Project Datums" Compliance report completed and recorded in February.

Bar Point Harbor

- 1957 Construction of Bar Point Basin begins in November with work on the Southeast Breakwater. The concrete gravity walls have been deleted during design and compensated for by increased breakwater elevation.
- 1958 Bar Point Basin is successfully completed in November.
- 1979 Work begins on the Bar Point Harbor expansion in April. The 450 foot breakwater is subsequently de-authorized in November.
- 1980 After repair of wind damage, the floating breakwaters are completed in place in April.
- 1994 A condition survey of the harbor is performed in January and February. The U.S. Navy is hired under contract to inspect the floating breakwaters at Bar Point Harbor.
- 1996 The Navy is contracted to rehabilitate the floating breakwaters at Bar Point.
- 2001 A condition survey of the harbor is conducted with multi-beam techniques in April.

Progress of Work

Bar Point Harbor

- 2003 Anchor blocks for the floating breakwaters at Bar Point Harbor are located by survey.
- 2004 A condition survey of the harbor is conducted in July.
- 2005 Aerial photography is taken of the harbor in April.
- 2008 The floating breakwaters at Bar Point Harbor were inspected by the U.S. Army dive team.
- 2009 Repair to the floating breakwater by the Army dive team includes realignment/replacing the wire tension ropes, replaced missing and badly corroded anchor chains, repositioned anchor blocks, adjusted slack in anchor chains, replaced wooden fender system, and repaired concrete damage.
- 2012 The large floating breakwater located at Bar Point Basin was damaged following a storm in early March. Corps personnel and the 544th Army Dive Team found that several of the wire tension cables failed. The Army Dive Team replaced the tension cables, interconnecting hardware, and neoprene bumpers for all modules on the large floating breakwater in July and August. The Dive Team also removed marine growth from both floating breakwaters and conducted an inspection of the anchor chains. The inspection revealed that two anchor chains were broken while 18 additional chains were in need of replacement. A Condition survey of the harbor was conducted in July.
- 2013 For the Bar Point Harbor, a Value Engineering Study was conducted in February to evaluate alternatives for replacing the floating breakwaters. The 544th Army Dive Team conducted an inspection of the anchor chains and prepared new connection points for the anchor blocks in August and September. The Dive Team also inspected the tension cables and interconnecting hardware for all modules on the large floating breakwater. Several of the cables were re-tensioned during the inspection. "Comprehensive Evaluation of Project Datums" Compliance report completed and recorded in February.
- 2014 The 7th Army Dive Team conducted an inspection and repairs of the floating breakwaters beginning in mid-August. A total of 24 anchor chains were replaced, 2 on the small breakwater and 22 on the large breakwater. The Dive Team also finished repairs of the anchor chain connection points to the anchor blocks. A contract was awarded to Pool Engineering to provide a crane for lift support and barge for staging dive equipment and construction materials. Repairs were completed in early November when the Dive Team inspected the tension cables and interconnecting hardware for all modules on the large floating breakwater.

Table 2 Cost to Date

Project	Description	Cost \$
000631	CG Appropriation	640,967
(Thomas Basin)	CG Costs	640,967
	O&M Appropriation	967,982
	O&M Costs	967,982
087071	CG Appropriation	2,829,865
(Bar Point)	CG Costs	2,829,865
	CG Contributed Appropriation	1,318,421
	CG Contributed Costs	1,318,421
	O&M Appropriation	2,338,754
	O&M Costs	1,616,565

Table 3 Range of Tides in feet

Tide Station	Mean Range	Diurnal Range	Extreme Range
945 0460 Ketchikan AK	12.97	15.45	26.57

Controlling Depth Thomas Basin (July 2012): A depth of +6.7 feet MLLW controls near the boat grid in the southeast corner of the basin. A depth of -5.6 feet MLLW controls near the transient float in the northern area near Ketchikan Creek. The shoal at the mouth of Ketchikan Creek continues to build compared to the 2007 condition survey, otherwise project depth is effectively available throughout the basin. Bar Point Harbor (July 2012): A depth of -7.0 feet MLLW controls near the toe of the west breakwater in the -15 foot basin. A depth of -1.0 feet MLLW controls near the boat grid and launch ramp for the -10 foot basin. Some minor areas above project depth are present in both portions of the basin, primarily along the side slopes. The condition of the project has not significantly changed compared to the 2007 condition survey.

Ketchikan Harbors, Ketchikan, Alaska



Oblique of Bar Point Harbor, 2013.



Bar Point Harbor, 2013.

Ketchikan Harbors, Ketchikan, Alaska



Oblique of Thomas Harbor, 2013.



Thomas Harbor, 2013.

Ketchikan Harbors, Ketchikan, Alaska



Equipment is mobilized to repair anchor chains for the floating breakwaters, August 2014.



The Dive Team begins work to repair the floating breakwaters, August 2014.