

TP-00647

TP-00647

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-0647	Edition No. 1
Job No. CM-7711	
Map Classification FINAL MAP	
Type of Survey SHORELINE	
LOCALITY	
State WASHINGTON	
General Locality SHILSHOLE BAY TO SAND POINT	
Locality SALMON BAY	
1977 TO 1981	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division AMC, Norfolk, Virginia OFFICER-IN-CHARGE Jeffrey G. Carlen		SURVEY TP. <u>00647</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>RH-CM-7711</u> LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation October 26, 1977 Compilation November 17, 1977 Amendment I December 5, 1977		Premarking April 20, 1977 Photography May 10, 1977 Supplement October 3, 1977	
II. DATUMS			
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify)	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify) Lake Washington chart datum (Low Water of the Lake is Seattle MLLW plus 20.00 feet.)	
3. MAP PROJECTION <u>Lambert Conformal Conic</u>		4. GRID(S) STATE ZONE <u>Washington</u> <u>North</u> STATE ZONE	
5. SCALE <u>1:5,000</u>			
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY		S. Solbeck	Dec 1977
METHOD: <u>Analytic</u> LANDMARKS AND AIDS BY		J. Perrow	Dec 1977
2. CONTROL AND BRIDGE POINTS PLOTTED BY		S. Solbeck	Dec 1977
METHOD: <u>Coradomat</u> CHECKED BY		J. Perrow	Dec 1977
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY		R. Kravitz	Mar 1978
COMPILATION CHECKED BY		L. O. Neterer, Jr.	Mar 1978
INSTRUMENT: <u>Wild B-8</u> CONTOURS BY		N.A.	
SCALE: <u>1:5,000</u> CHECKED BY		N.A.	
4. MANUSCRIPT DELINEATION PLANIMETRY BY		R. Kravitz	Mar 1978
CHECKED BY		J. Byrd	Apr 1978
METHOD: <u>Smooth drafted</u> CONTOURS BY		N.A.	
CHECKED BY		N.A.	
SCALE: <u>1:5,000</u> HYDRO SUPPORT DATA BY		N.A.	
CHECKED BY		N.A.	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		J. Byrd	Apr 1978
6. APPLICATION OF FIELD EDIT DATA BY		C. W. Goff	Oct 1981
CHECKED BY		J. R. Minton	Nov 1981
7. COMPILATION SECTION REVIEW BY		D. Butler	Feb 1984
8. FINAL REVIEW BY		L. O. Neterer, Jr.	Apr 1985
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		L. O. Neterer, Jr.	Apr 1985
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		P. Dempsey	Aug 1985
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		E. DAUGHERTY	SEP 1985

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00647
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC - 10 "B"		(Focal length =152.74 mm)	TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE			(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
<input checked="" type="checkbox"/> PREDICTED TIDES <input checked="" type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY					Pacific	
					MERIDIAN	
					120° W	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE		
77(P)7825-7826	Aug 1, 1977	1430	1:15,000	3.4 ft above MLLW		
77(P)7823-7824	Aug 1, 1977	1430	1:15,000	Lake Washington chart datum +0.57 feet		

REMARKS

Lake Union and Lake Washington chart datum (low water of the lake is Seattle MLLW plus 20.00 feet).

2. SOURCE OF MEAN HIGH-WATER LINE:

The MHWL and lake shoreline were compiled from the above listed photography.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

Not Applicable.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00696	TP-00648 & TP-0696	No survey	TP-00696

REMARKS

This 1:5,000 scale map lies within the southern area of TP-00696, which is 1:10,000 scale.

TP-00647
HISTORY OF FIELD OPERATIONS

I. <input checked="" type="checkbox"/> FIELD INSPECTION OPERATION (Premarking) <input type="checkbox"/> FIELD EDIT OPERATION			
OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		R. Melby	Aug 1977
2. HORIZONTAL CONTROL	RECOVERED BY	R. Melby	Aug 1977
	ESTABLISHED BY	None	
	PRE-MARKED OR IDENTIFIED BY	R. Melby	Aug 1977
3. VERTICAL CONTROL	RECOVERED BY	None	
	ESTABLISHED BY	None	
	PRE-MARKED OR IDENTIFIED BY	None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (<i>Triangulation Stations</i>) BY	None	
	LOCATED (<i>Field Methods</i>) BY	None	
	IDENTIFIED BY	None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION		
	<input type="checkbox"/> COMPLETE BY		
	<input type="checkbox"/> SPECIFIC NAMES ONLY		
	<input checked="" type="checkbox"/> NO INVESTIGATION		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	N.A.	
II. SOURCE DATA			
1. HORIZONTAL CONTROL IDENTIFIED AND paneled		2. VERTICAL CONTROL IDENTIFIED	
		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77B 7939	Lawton 2, 1958		
77B 7939	Entrance 3, 1973		
3. PHOTO NUMBERS (<i>Clarification of details</i>)			
None			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED			
None			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS			
None			
8. OTHER FIELD RECORDS (<i>Sketch books, etc. DO NOT list data submitted to the Geodesy Division</i>)			
Two Forms 76-53, one Form 76-67, and one Form 155.			

TP-00647
HISTORY OF FIELD OPERATIONS1. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Aug 1977
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	Aug 1978
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY R. Melby	Aug 1978
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY R. Melby	Aug 1978
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	<input type="checkbox"/> COMPLETE BY	
	<input type="checkbox"/> SPECIFIC NAMES ONLY	
	<input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY R. Melby	Aug 1978
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY N.A.	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

77B (P) 7824-7825

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77B(P)7825	Traffic Lights Large Locks and Saltwater Barrier Lt. No. 1		
77B(P)7825	Stop Signal Small Lock		
77B(P)7825	Traffic Signal Small Lock		
77B(P)7825	Stop Signal Large Lock and Saltwater Barrier		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Field Edit Report
 One film ozalid with field notes
 One field book of fixed positions

HISTORY OF FIELD OPERATIONS

1. ☐ FIELD INSPECTION OPERATION

☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	James Massey	Sept 1980
2. HORIZONTAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
3. VERTICAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY	
	LOCATED (Field Methods) BY	
	IDENTIFIED BY	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	<input type="checkbox"/> COMPLETE	
	<input type="checkbox"/> SPECIFIC NAMES ONLY BY	
	<input type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	J. R. Minton
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☐ NONE

6. BOUNDARY AND LIMITS: ☐ REPORT ☐ NONE

7. SUPPLEMENTAL MAPS AND PLANS

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

film field edit Ozalid
field edit report (only 5 of 6 included with report)

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	Richard Minton	April 1981
2. HORIZONTAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
3. VERTICAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY	
	LOCATED (Field Methods) BY	
	IDENTIFIED BY	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	<input type="checkbox"/> COMPLETE	
	<input type="checkbox"/> SPECIFIC NAMES ONLY	
	<input type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☐ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☐ NONE

7. SUPPLEMENTAL MAPS AND PLANS

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 supplement field edit report

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00647
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete.	April 1978	Class III Manuscript		
1978 Field edit applied. Compilation complete.	Nov. 1978	Class I Manuscript	May 15, 1979	
1980 and 1981 field edit applied compilation complete.	Nov. 1981	Class I Manuscript	Aug. 29, 1985	
Final Review	April 1985	Final Map		

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER (pages)	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		May 15, 1979	Landmarks to be charted
1		May 15, 1979	Aids to be charted

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM 76-49 SUBMITTED BY FIELD PARTIES.
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00647

This 1:5,000 scale shoreline map is one of six maps that comprise project CM-7711, Shilshole Bay to Sand Point, Washington.

This project encompasses Sand Point, Washington on Lake Washington longitude 122°14'00" west including Lake Washington Ship Canal to Shilshole Bay longitude 122°27'00".

Photographic coverage was provided in August 1977 using the "B" camera (focal length 152.74 mm) with black and white panchromatic film at 1:30,000 scale for bridging and 1:15,000 for compilation.

Field work done prior to compilation was accomplished in two parts: first the premarking of horizontal control in August 1977; second, the photoidentification of horizontal control in October 1977. This was done to meet the requirements for aerotriangulation.

Analytic aerotriangulation was performed at the Washington Science Center in December, 1977.

Compilation was performed and hydrographic support photographs were prepared at the Atlantic Marine Center in April 1978.

Field edit was accomplished twice. The first was from May through August 1978. The second field edit was done as a training operation at the Pacific Marine Center. This was accomplished in April 1980.

The entire project was sent to the Pacific Marine Center in May 1978 and field edit application was done in two parts: the first was applied in November 1978, the second in April 1980.

Final Review was performed at the Atlantic Marine Center in April 1985.

This Descriptive Report contains all pertinent information used to compile this final map.

The original base map and all pertinent data were forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

TP- 00647

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project.

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PHOTOGRAMMETRIC PLOT REPORT
SHILSHOLE BAY TO SAND POINT
WASHINGTON

CM-7711

DECEMBER 1977

AREA COVERED

The area covered by this report is the shoreline surrounding the Washington Ship Canal, which bisects Seattle and links Puget Sound (Shilshole Bay) to Lake Washington (Sand Point).

Five 1:5,000 scale manuscripts are submitted: TP-00646 to TP-00650. TP-00696 was previously submitted.

METHOD

Four strips of 1:30,000 black-and-white panchromatic photography were bridged by analytic aerotriangulation methods. Field identified control was provided.

Common points were located on the bridging photography and the 1:15,000 scale compilation photography for ratio purposes. Additional common points were located on the same photography to allow for B-8 stereo compilation. Tie points were used to insure adequate junctioning of the bridging photography during the strip adjustments.

Ratio prints have been ordered. Manuscripts were ruled on the Coradomat.

Strips 77-B-7916-7921 (1:30,000) and 77-B-7905-7909 (1:20,000) were previously submitted upon their completion of the photogrammetric procedures described above.

ADEQUACY OF CONTROL

All control checked well within map Accuracy Standards.

SUPPLEMENTAL DATA

USGS quadrangles were used to provide vertical control for the strip adjustments.

PHOTOGRAPHY

The coverage, overlap, and quality of the photography proved adequate for the job.

Approved and Forwarded:

John D. Perrow, Jr.

Chief, Aerotriangulation Section

Respectfully Submitted:

Stephen H. Solbeck

ADEQUACY OF CONTROL
CM-7711

X

Y

STRIP 1

916100	+ .420	-1.195
916101	- .164	+ .044
918101	+ .584	- .314
919101	- .227	+ .511
920101	- .540	- .578
921101	+ .393	+ .337

STRIP 2

935101	+ .027	- .835
935102	- .293	+ .226
936101	+1.496	+ .730
937101	-1.341	-1.665
937102	+ .046	+1.151
921101	- .194	+ .623
919101	- .099	+ .279
920101	+ .358	- .510
921101	+ .062	+ .956

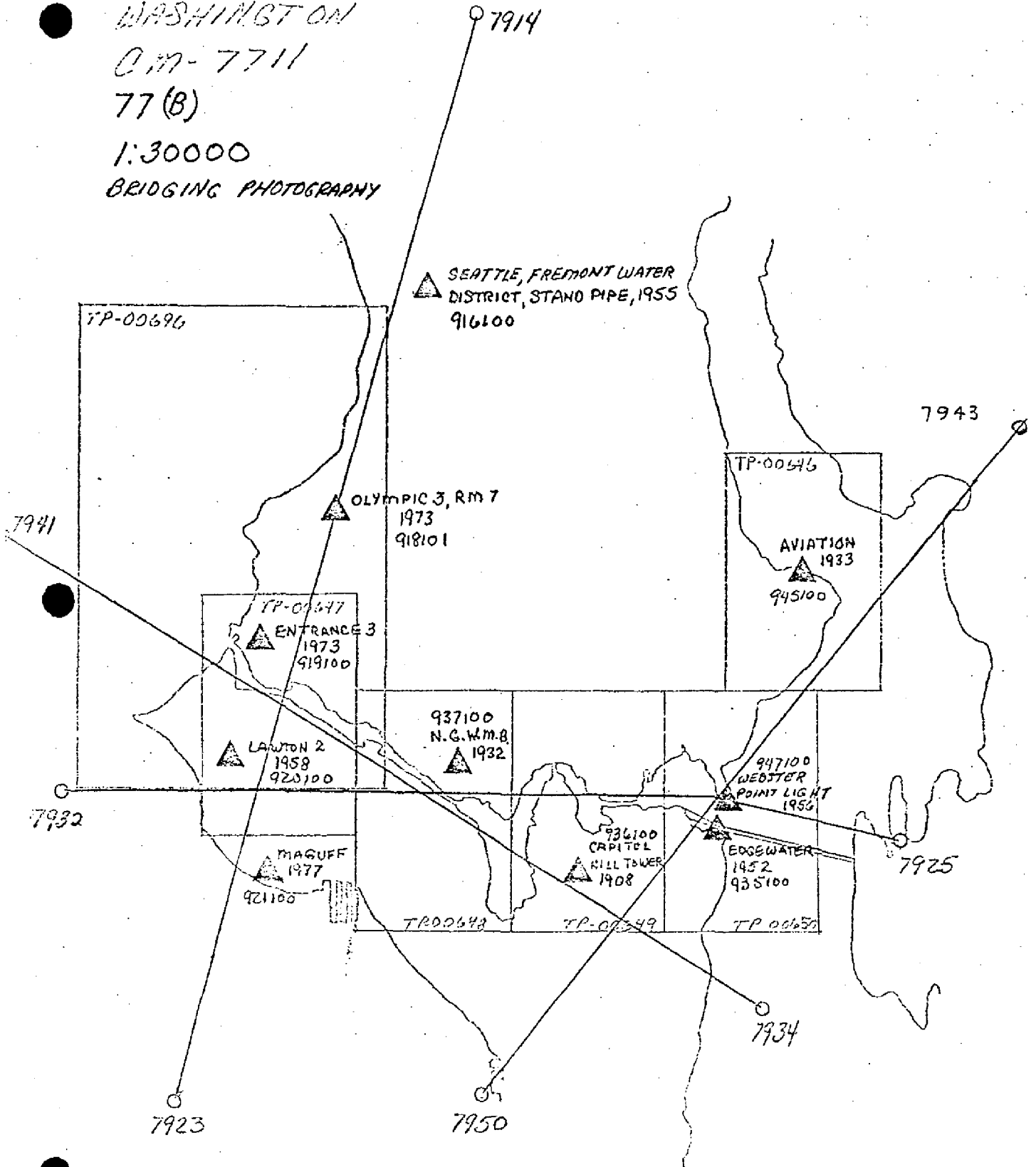
STRIP 3

947100	- .071	+ .991
935101	- .352	+ .678
935102	+ .170	-1.920
936100	-2.826	-1.731
936101	+ .440	+ .151
937101	-1.173	-1.082
937102	+ .988	+1.181

STRIP 4

945101	- .000	- .001
945102	-2.819	-1.164
935101	- .000	- .000
935102	+1.301	+1.072
947100	+1.030	+2.062
936100	+ .001	+ .002
936101	+ .237	+ .746

SHILSHOLE BAY TO SAND POINT
 WASHINGTON
 OM-7711
 77(B)
 1:30000
 BRIDGING PHOTOGRAPHY



SHILSHOLE BAY TO SAND POINT WASHINGTON

CM-7711

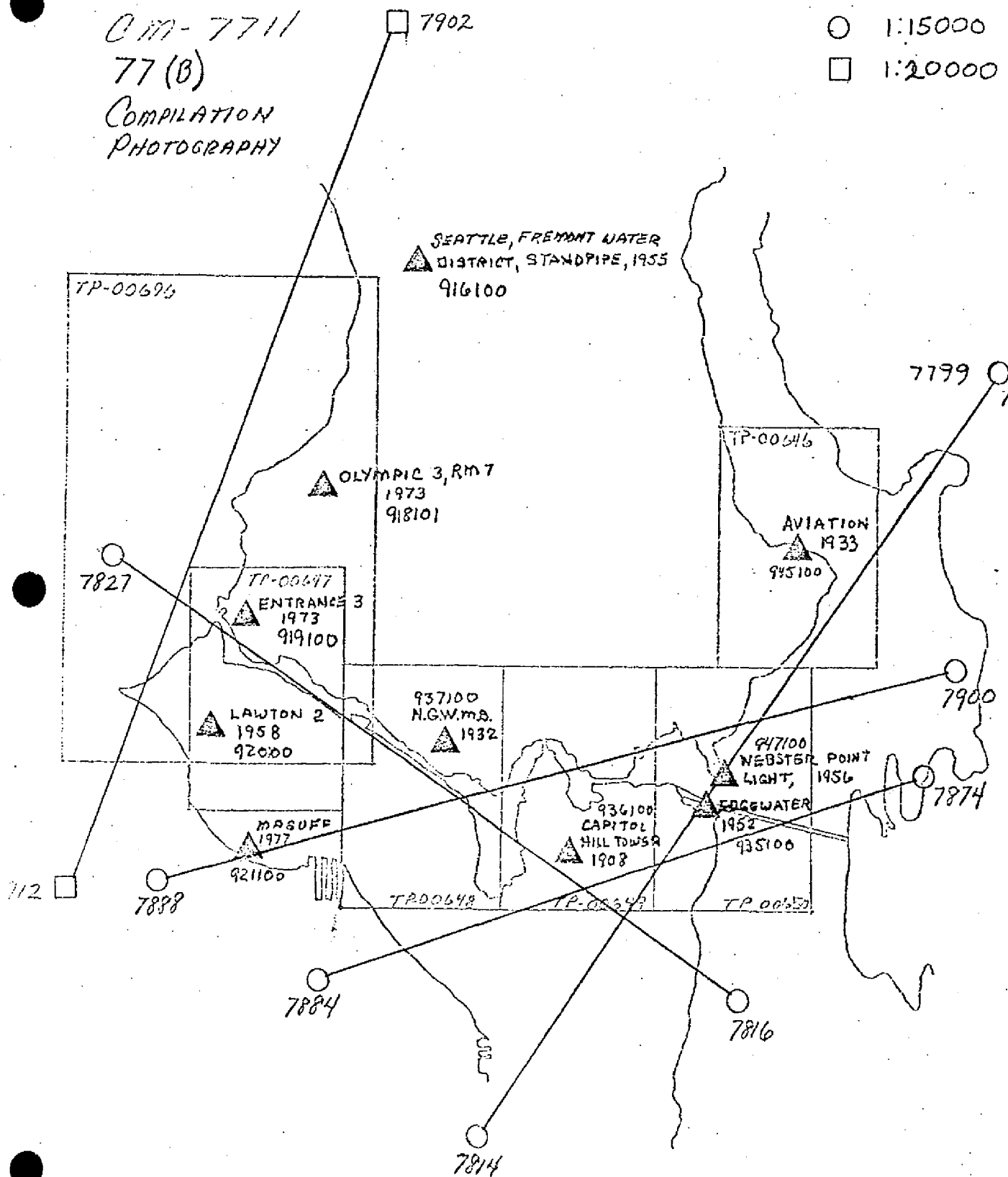
77(B)

COMPILATION
PHOTOGRAPHY

11

○ 1:15000

□ 1:20000



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-00647	STATION NAME	JOB NO. CM-7711	GEODETIC DATUM N.A. 1927		ORIGINATING ACTIVITY Photogrammetric Branch, P.M.C.	
			COORDINATES IN FEET STATE <u>Washington</u> ZONE <u>North</u>	AEROTRI- ANGULATION POINT NUMBER	GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE	REMARKS
Seattle, Canal Locks Admin. Bldg., Flagpole, 1953		Washington King County	146	X= Y=	ϕ 47°39'57.771" λ 122°23'44.116"	✓ ✓
Lawton 2, 1958		Washington King County	14	X= Y=	ϕ 47°39'31.031" λ 122°24'40.555"	✓ ✓
Seattle, Halibut Oil Co., Brick Stack, 1953		Washington King County	920402	X= Y=	ϕ 47°39'40.476" λ 122°22'31.363"	✓ ✓
Seattle, Leif Erikson Statue, 1965		Washington King County	919402	X= Y=	ϕ 47°40'44.959" λ 122°24'18.674"	✓ ✓
Seattle USCG Capt. of the Port House, (Rotating) Light, 1965		Washington King County		X= Y=	ϕ 47°40'40.147" λ 122°24'32.829"	✓ ✓
Shilshole Bay, Breakwater Light, 1965		Washington King County	919502	X= Y=	ϕ 47°40'38.526" λ 122°24'38.867"	✓ ✓
Entrance 3, 1973		Field Form 76-45	919100	X= Y=	ϕ 47°40'17.398" λ 122°24'33.078"	✓ ✓
Fort Lawton, CAA Air Route Surveillance Radar Tower, 1958		Washington King County	920404	X= Y=	ϕ 47°39'28.2202" λ 122°24'42.5163"	✓ ✓
				X= Y=	ϕ λ	
				X= Y=	ϕ λ	
COMPUTED BY				COMPUTATION CHECKED BY		DATE
						DATE
LISTED BY J. Moller			02/09/78	LISTING CHECKED BY I. Perkinson		DATE 02/09/78
HAND PLOTTING BY				HAND PLOTTING CHECKED BY		DATE

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

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DESCRIPTIVE REPORT CONTROL RECORD

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MAP NO.	STATION NAME	JOB NO.	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETIC DATUM N.A. 1927		COORDINATES IN FEET		GEOGRAPHIC POSITION		ORIGINATING ACTIVITY	REMARKS
					STATE	ZONE	Washington	North	φ	λ		
TP-00647	Lower Guide Wall Light, 1977	CM-7711	Field Form 76-45		x=				φ	47°40'07.281"	Photogrammetric Branch, P.M.C.	
					y=				λ	122°24'10.555"		
	Seattle BN RR Tank, 1977		Field Form 76-45		x=				φ	47°39'08.792"		
					y=				λ	122°22'45.122"		
	Shilshole Bay Entrance Range Front Light, 1977		Field Form 76-45		x=				φ	47°40'00.249"		
					y=				λ	122°24'06.447"		
	Shilshole Bay Entrance Range Rear Light, 1977		Field Form 76-45		x=				φ	47°39'54.198"		
					y=				λ	122°24'00.457"		
	Shilshole Bay Inner Light, 1977		Field Form 76-45		x=				φ	47°40'17.857"		
					y=				λ	122°24'26.768"		
	Upper Guide Wall Light, 1977		Field Form 76-45		x=				φ	47°39'53.420"		
					y=				λ	122°23'23.539"		
	Trinity M.E. Church, 1934		Washington King County		x=				φ	47°40'35.682"		
					y=				λ	122°23'02.103"		
					x=				φ			
					y=				λ			
					x=				φ			
					y=				λ			
					x=				φ			
					y=				λ			
					x=				φ			
					y=				λ			
COMPUTED BY	C. Goff				DATE	11/01/78	COMPUTATION CHECKED BY	J. R. Minton	DATE	11/01/78		
LISTED BY	C. Goff				DATE	11/01/78	LISTING CHECKED BY	J. R. Minton	DATE	11/01/78		
HAND PLOTTING BY	C. Goff				DATE	11/01/78	HAND PLOTTING CHECKED BY	J. R. Minton	DATE	11/01/78		

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT
CM-7711
TP-00647

31. DELINEATION

Delineation was by instrument method using the Wild B-8 stereoplotter and 1:15,000 scale panchromatic photographs. Coverage and quality of the photographs was adequate for compilation.

32. CONTROL

The placement, identification, and accuracy of the aerotriangulated control, that was furnished for the express purpose of controlling the stereo-models, was adequate. Refer to the Photogrammetric Plot Report dated December 1977.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are not applicable to the project. Drainage was delineated by the Wild B-8 stereoplotter.

35. SHORELINE AND ALONGSHORE DETAILS

Refer to Form 76-36B, item 2 for delineation of the shoreline.

Alongshore details were delineated by the Wild B-8 stereoplotter, and supplemented by office stereoscopic interpretation of the ratio photographs which were controlled with pass points that were selected and dropped during the stereo-instrument compilation of the shoreline and interior detail.

36. OFFSHORE DETAILS

None.

37. LANDMARKS AND AIDS

There are seven landmarks and six nonfloating aids to navigation within the mapping limits of this manuscript. All were located photogrammetrically.

38. CONTROL FOR FUTURE SURVEYS

None.

COMPILATION REPORT (Cont'd.)
CM-7711
TP-00647

39. JUNCTIONS

Refer to the Compilation Sources, Form 76-36B, item 5.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated December 1977.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with U.S. Geological Survey Quadrangle Shilshole Bay, Washington, scale 1:24,000, dated 1949, photorevised 1968.

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with National Ocean Survey Chart 18446, 8th edition, scale 1:25,000, dated November 29, 1975; 18447, 15th edition, scale 1:10,000, dated February 19, 1977; 18449, 8th edition, scale 1:25,000, dated March 13, 1976.

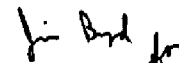
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

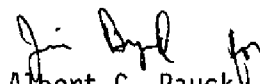
None.

Submitted by,



Robert R. Kravitz
Cartographic Technician
March 1978

Approved:



Albert C. Rauck, Jr.
Coastal Mapping Section

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7711 (Puget Sound, Washington)

TP-00647

Ballard

Ballard Bridge (cultural)

Burlington Northern (RR)

Hiram M. Chittenden Locks (cultural)

Lake Washington Ship Canal

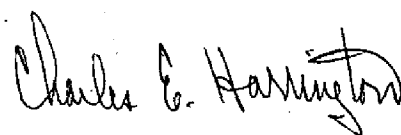
Salmon Bay

Seattle

Shilshole Bay

Sunset Hill (locality)

Approved by:

Charles E. Harrington
Chief Geographer
Nautical Charting Division

Field Edit Report

TP-00647

Shilshole Bay to Sand Point

CM 7711

(1) 3 0

The new additional field edit was accomplished by the PMC Photogrammetric Branch during Aug. 26-28 and Sept. 18th 1980.

The entire shoreline was inspected by using a small boat. Both a copy of the field edit sheet and the photographs were used. If a discrepancy was noted it was compared with the photographs to see if it could be resolved by photo identification. Several cases dealing with piles, dolphins, shoreline and pier configuration were corrected in this manner. Additional features were noted on six sketches attached to this report.

All inquiries on the Master Field Edit Ozalid were answered. Subm piles and ruins were not visible and need to be further investigated by future field parties.

The manuscript appears to be reasonably complete and accurate, and the scale is adequate to show the complexity of the shoreline.

Several new rock positions in Shilshole Bay and the position of a large building were determined using a sextant, see the fix book for this information and attached sketches that are submitted with the field edit sheet.

No fixed aids to navigation or landmarks were addressed during the field edit.

Additional photography was obtained from the Corps of Engineers covering the waterway east of the Chittenden Locks. New pier facilities were added to the manuscript from this photography.

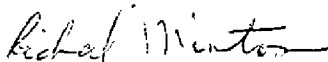
Respectfully submitted,



William A. Richter
Cartographer

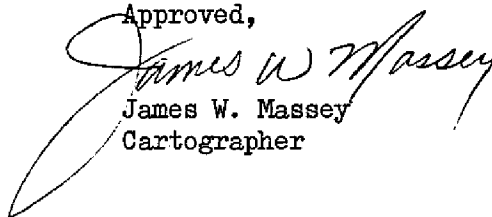
and

Respectfully submitted,



Richard Minton
Cartographic Technician

Approved,



James W. Massey
Cartographer

Note, FLOATS ARE PERMANENT

Report of Supplemental Field Edit

TP-~~00~~647

CM-7711

Previous efforts to locate rocks in the foreshore area of the southwest side of Shilshole Bay were not productive because the sextant fixes and check fixes failed to agree. Consequently, a planetable survey was executed on April 7 and 8, 1981 during low tides predicted to be lower than Mean Lower Low Water. The planetable was positioned by resection of the control listed on the attached abstracts and all work was accomplished on the field edit ozalid. Rock elevations were determined with a hand level stationed at the water line while the stadia was being observed. All times were Pacific Standard Time. The personnel involved walked and waded the foreshore in hip boots and used an aluminum skiff to occupy the rocks located. The planetable orientation was rechecked prior to takedown on both setups and the bull's-eye bubble remained centered thru the period of observation. No vertical angles were recorded, but the telescope was releveled frequently and no significant inclination of the instrument occurred. A request for approved tides data for these two days will be submitted to the Chief of the Datums and Information Branch in Rockville.

Submitted by;

James R. Minton
James R. Minton
Cartographic Technician
April 10, 1981

REVIEW REPORT
SHORELINE

TP-00647

61 - GENERAL STATEMENT

See Summary included with this report.

62 - COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63 - COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with U.S.G.S. Quadrangles:
Seattle North, Washington, dated 1949 photorevised 1968 and
Kirkland Washington, 1950 photorevised 1968 and 1973;
both are 1:24,000 scale.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

There is no contemporary hydrographic survey within the limits
of this map.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Chart:
18447, 21st edition, dated April 1984, scale 1:10,000 and 1:25,000.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

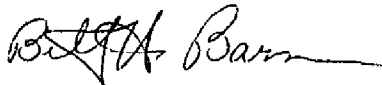
This map complies with Project Instructions and meets the
requirements for National Standards of Map Accuracy.

Submitted by



Lowell O. Neterer, Jr.
Final Reviewer
March 14, 1985

Approved for forwarding

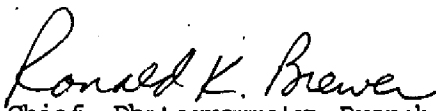


Billy H. Barnes
Chief, Photogrammetric Section

Approved



Chief, Photogrammetric Section,
Rockville



Chief, Photogrammetry Branch
Rockville

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION									
NONFLOATING AIDS OR LANDMARKS FOR CHARTS										ORIGINATING ACTIVITY									
										<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)									
CHARTING -NAME		REPORTING UNIT (If field party, ship or office) Photogrammetric Branch PMC, Seattle, WA		STATE Washington		LOCALITY Shilshole Bay to Sand Point		DATE 10/15/78		METHOD AND DATE OF LOCATION (See instructions on reverse side)									
OPR PROJECT NO. S-N 303		JOB NUMBER CM-7711		SURVEY NUMBER TP-00647		DATUM N.A. 1927		POSITION		OFFICE		FIELD		CHARTS AFFECTED					
		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LATITUDE ° / ' / D.M. Meters		LONGITUDE ° / ' / D.P. Meters													
			LAKE WASHINGTON SHIP CANAL																
LIGHT		(Shilshole Bay Entrance Range Front Light, 1977)	47 40	00.25 8	122 24	06.45 134					F-1-6-L 1977			18447					
LIGHT		(Shilshole Bay Entrance Range Rear Light, 1977)	47 39	54.20 1673	122 24	00.46 10					F-1-6-L 1977			18447					
LIGHT		(Shilshole Bay, Breakwater Light, 1965)	47 40	38.526	122 24	38.867					Triang. Rec. 16 Aug. 1978			18441 18447					
LIGHT		(Shilshole Bay Inner Light, 1977)	47 40	17.86 552	122 24	26.77 558					F-1-6-L 1977			18447					
LIGHT		(Lower Guide Wall Light, 1977)	47 40	07.281	122 24	10.555					Triang. Rec. 16 Aug. 1978			18447					
LIGHT		(Upper Guide Wall Light, 1977)	47 39	53.420	122 23	23.539					Triang. Rec. 16 Aug. 1978			18447					

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. B. Melby
POSITIONS DETERMINED AND/OR VERIFIED	R. B. Melby
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	C. W. Goff
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. B. Melby
POSITIONS DETERMINED AND/OR VERIFIED	R. B. Melby
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	C. W. Goff
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
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FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field Identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.
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[illegible]

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TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. B. Melby
POSITIONS DETERMINED AND/OR VERIFIED	R. B. Melby
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW	C. W. Goff
ACTIVITIES	
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FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	C. W. Goff
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) 8. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
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*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

NON-FLOATING AID-OR LANDMARKS FOR CHARTS

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. B. Melby
POSITIONS DETERMINED AND/OR VERIFIED	R. B. Melby
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	C. W. Goff
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FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Rev

FORM C&GS-8382 SUPERSEDES ALL EDITIONS OF FORM C&GS-876. USCOMM-DC 8886-PB