3784 to 3788

C&G
APR 20 1920
Acc. No.

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: Wash.

11—5613

DESCRIPTIVE REPORT.

Topc Sheets No. 3784 to 3788

LOCALITY:

Lake Washington, Union Bay, Portage Bay and Lake Union

1919-20

CHIEF OF PARTY:

N. H. Heck

3784 to 3788

DEPARTMENT OF COMMERCE

U.S.COAST AND GEODETIC SURVEY

E.Lester Jones, Superintendent.

3784 to 3788

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC

SHEETS 1 to 4 incl. Scale 1-10000
SHEET 5 Scale 1- 5000

COVERING LAKE WASHINGTON, UNION BAY, PORTAGE BAY, AND LAKE UNION, SEATTLE, WASHINGTON.

By

Wire Drag and Revision Party,
Executed by Augustus P.Patti, Jr.H.& G.E.,
Under direction of N.H.Heck, Chief of Party.

Season Aug.26,1919. to March 6,1920.
Date of instructions June 5,1919.

LIMITS AND EXTENT

Sheets 1 to 4 incl. cover the shoreline and revised details o of the entire lake- Lake Washington.

Sheet 5 covers the shoreline and revised details of Union Bay, Portage Bay and Lake Union.

SYSTEM OF CONTROL

As the old scheme of triangulation was found inadequate a new scheme of ~~secondary~~ tertiary triangulation was used.

The main scheme stations on the mainland are as follows:

Clear2	Bare	May	Fair
Lake	Seward	Castle	Brush ecc.
Sand2	Park	Coal	Brick2
Wolf	Rain	Slough	Cot
Bay	Taylor	Dog	Kane
Madison	Dryn	Ruin ecc	
(lettered Son)	Rush	Groat	
Ron	Boom	Pipe	
Bake	Rail	Med	

The main scheme stations on Mercer Island are:

Ash	Edge	Dry ecc.	Alder	Cal
Pick ecc.	South	Clay	Gilt	Mud2
Slope	Drift ecc.	Creek 2	Briar	

The supplementary stations are:

Sunk
Bail2
Corner
Bell

METHODS

The usual Coast Survey planetable methods were used.

The elaborate scheme of triangulation afforded frequent use of the three point fix.

Traversing along the shore from Juanita Pt. to Clandwr was necessary. This traverse was checked by a three point fix in the latter vicinity and the error was well within the allowable. Traversing was also done at the extreme north and south ends of the lake where a three point fix was very weak.

The sextant was used in locating the mud shoreline and the numerous islands in Union Bay.

Respectfully submitted
Augustus P. Rotte
Jr. H & G Eng.

METHODS Cont.

Data received from the County and City Engineers was very ver verified and transferred to the sheets in red ink.

Miscellaneous Remarks

The grpwth in the shoreline shown is due to the fact that the lake has been lowered 8½'.

The shoreline north of Union Bay and to the East and West of the Channel Lt. in Union Bay as well as the small islands is changeable due to the fluctuation of water level of 8 to 10 inches.

Very few changes have been made on Lake Washington. Details and vegetation inland on Lake Washington Union Bay, Portage Bay, and Lake Union are as per pld chart except were indicated.

The ferry traffic on Lake Washington is shown by the following schedule.

Streets of Laurelhurst appear on chart 6447.

No contours were run, as for most of the lake the immediate shores have been left wooded to prevent slides and new contours unless run at great expense would be useless. Accurate contours could have been compiled for Seattle, but time was not available.

Data from County and City engineers was tied in by determined street ends.

The City engineers had no reliable data on the section around MtBaker Park and south of Baileys Peninsula and time was not available to run in these streets.

Revision in Lake Union is incomplete . There are many details at the south end of the lake that need revision.

Planetable positions to accompany topographic sheet no.1.

Object and description	Lat. ° '	D.M. Meters	Long. ° '	D.P. Meters	Height Feet	Remarks.
Flagstaff at Kenmore	47 45	1038	122 15	286		Top
Smoke stack at Mill	47 45	945	122 15	277		Center
Tank, red, water	47 45	897	122 15	880		Center
Bridge, center of truss	47 45	579	122 14	1188		Top
Gable, north, of white Ho.	47 45	301	122 15	345		
Flagpole, white	47 45	650	122 16	469		Top
Chymney, Cement, white Ho.	47 45	555	122 16	593		Center
Dog , Hydrographic Sta.	47 43	1673	122 16	1060		Regulation disc, in ground
Dock, So. corner	47 41	1821	122 16	362		App. $\frac{1}{2}$ mi. no. of Ire.
Ire, Iron stack at lumber mill at Pntiac	47 41	1038	122 16	98.8		Center
Dock, w.cor. East of Pontiac Bay	47 41	573	122 15	655		

Planetable positions to accompany Topographic sheet no. 2.

Object and description	Lat.	D.M.	Long.	D.P.	Height	Remarks
		Meters		Meters	Feet	
Hut on dock of Sacred Heart Grounds	47° 39'	1630	122° 15'	1191		East cable
No. cor. dock in Wolf Bay	47 39	254	122 16	644		
Dolphin at ferry landing at the foot of Madison St.	47 38	486	122 16	620		Center
No. cor. dock app. ½ mi. south of Fair	47 38	414	122 14	585		
Flagstaff at Yarrow on No. on dock	47 39	273	122 13	67		Top
So. cor. of Standard Oil dock at Houghton	47 39	1203	122 12	516		
Dolphin at Kirkland ferry landing in Moss Bay	47 40	934	122 12	584		Center

Planetable positions to accompany Topographic sheet no. 3.

Object and description	Lat.	D.M.	Long.	D.P.	Height	Remarks
		Meters		Meters	Feet	
Flagstaff , on small pavilion	47° 35'	671	122° 15'	270	25	Top
Tank, green	47 36	1577	122 12	1190		Top
Hut on shore	47 36	906	122 12	702		No. gable
White staff	47 36	717	122 12	642		Cupola
Light , on shore opposite Groat Pt.	47 36	1037	122 12	1050		Center

Planetable positions to accompany topographic sheet no.4.

Object and description.	Lat.	D.M.	Long.	D.P.	Height	Remarks
	° ′	Meters	° ′	Meters.	Feet.	
Staff, on small pavilion	47 33	1531	122 15	1189	30	Top
Chymney, small red house	47 30	143	122 13	245	50	Top
New, Shed of lumber mill at end of dock	47 31	280	122 12	871		West Gable.

Planetable positions to accompany topographic sheet 5.

Object and description	Lat.	D.N.	Long.	D.P.	Height	Remarks
	° ′	Meters	° ′	Meters	Feet	
West Dolphin	47 38	1697	122 19	669		app. 1/3 mi. no. of aero plant.
West Dolphin	47 38	1697	122 19	629		"
West Incinerator	47 39	453	122 19	501		120' West of Life boat Factory
East Incinerator	47 39	440	122 19	470		100' east of West Incinerator.
Dolphin	47 39	359	122 19	405	App.	490' west of Fremont Bridge
Cur. Flagstaff on University Boat No.	47 38	1717	122 18	668		Top
Tree, prominent at west entrance of Lake Washington canal	47 38	1743	122 18	563		Top
Gable University dormitory bldg.	47 38	1846	122 18	326		White
Vent. on Aero hanger at east entrance of Lake Washington canal	47 38	1646	122 17	1188		North end top
Gable of white ho. app. 1450' west of Bay	47 38	948	122 17	43		
Smoke, smoke stack at lumber mill in Union Bay	47 39	866	122 17	330		Center
Flag, flagstaff, white on dock no. of mill	47 39	632	122 17	00		Top

Form 567

DIVISION OF CHARTS, FILE NO. _____

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Seattle, Washington

Mar12, 1920

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

Description.	Position.				Datum.	Method of determination.	Charts affected.
	Latitude.		Longitude.				
	° ′	D. M. meters.	° ′	D. P. meters.			
Tallest Black stack	47 30	1406	122 14	1012	N.A.	Tri.	6446
Black stack	47 31	1803	122 11	1200	do	do	
Range Beacon	47 40	1206	122 14	1179	do	do	
Range Beacon	47 39	1709	122 15	1212	do	do	
Range Beacon	47 38	694	122 16	717	do	do	
Channel Light	47 38	1571	122 17	461	do	do	
Webster Pt. Light	47 38	1591	122 16	728	do	do	
Tall yellow tank	47 37	207	122 14	456	do	do	
~~White Cupola~~	~~47 36~~	~~1078~~	~~122 12~~	~~1015~~	~~do~~	~~do~~	Rejected See Field [illegible]
Red stack	47 35	364	122 17	173	do	do	
Tall spire	47 35	1698	122 17	713	do	do	
Yellow tower	47 35	1019	122 13	644	do	do	
Brown tower	47 37	440	122 13	264	do	do	
Tall tank	47 30	382	122 16	128	do	do	
Gold cross	47 36	836	122 18	667	do	do	
Yellow tank	47 30	1453	122 14	1016	do	do	
White silo	47 37	706	122 12	938	do	do	

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. *The selection, determination, and description of these points are of primary importance.*

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

11—5048

Form 567

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

DIVISION OF CHARTS, FILE NO. _____

LANDMARKS FOR CHARTS

_____

_____, 19

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

_____

Chief of Party.

DESCRIPTION.	POSITION.						Method of determination.	Charts affected.
	Latitude.			Longitude.		Datum.		
	°	′	D. M. meters.	°	′	D. P. meters.		
Brick tank	47	32	471	122	11	852	N. A.	Tri.	6446
South tower, church	47	36	1167	122	18	583	do	do	
north tower, church	47	36	1186	122	18	583	do	do	
spire	47	40	1562	122	12	550	do	do	
spire	47	40	1419	122	12	498	do	do	
Black stack	47	40	1689	122	12	1021	do	do	
Black stack	47	41	1042	122	16	100	do	P.T.	
Black Stack	47	45	942	122	15	272	do	P.T.	
Black Stack	47	39	866	122	17	330	do	do	6447
Ford Tank	47	37	1055	122	19	1313	do	Tri.	6446, 6447

For remainder of city the objects now appearing on Charts 6446 and 6447 should appear, especially tank on Capitol Hill (Tower chart 6447) Smith Bldg. As my revision does not include Elliote Bay I am unable to make further recommendations.

(The last two points in the above list, together with the foot note, are copied from a duplicate list of landmarks submitted by Mr. Heck with the descriptive report. E. P. Eccles)

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

11—6948

DIRECTOR
ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-MFG

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Topographic Sheets 3784 to 3787 Surveyed in 1919.

Chief of Party: N. H. Heck. Surveyed by A. P. Ratti.

Inked by field party.

1. The records conform to the General Instructions.

2. The character and extent of the work fulfills the requirements of the General Instructions except that the magnetic meridian was shown on only one of the four sheets.

3. The work satisfies the specific instructions.

4. The marsh and other symbols were left in pencil in some cases. These should have been inked in if time permitted. The projections and triangulation points should have been verified before proceeding with the surveying.

5. Details from city engineers' surveys should not have been added to the sheets by the field surveyor. The better plan is to place on the blue prints points which will permit them to be tied into our surveys. Better facilities exist in the office for making the necessary reductions and adjustments. The details of the blue prints should also be checked up on the ground.

6. No further surveying is required within the limits of the sheets.

7. Rating of the work: Character and scope of the surveying: Good.
Field drafting: Good.

8. Reviewed by: E. P. Ellis, October 2, 1920.

9. Two copies of this report to be sent to Division of Hydrography and Topography.

10. Triangulation points Rush, Fly Pole and May on sheet 3787 were checked in the office and found to be erroneously plotted. Consequently the shore line is probably somewhat in error.

11. Also triangulation point Pick on sheet 3786.

The errors noted in par. 10 have since been corrected in the field.
E.P.E.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
E. Lester Jones, Superintendent.

3784

LOCALITY: LAKE WASHINGTON, ~~SEATTLE~~ Northern End, WASH.
~~KENMORE~~ TO ~~JUANITA BAY~~ Sand Pt.

PLANE TABLE SURVEY BY: Augustus P. Ratti,
Jr. H& G E.

Chief of Party: N.H.Heck, H.& G.E.
Scale: 1-10000
Year: 1919.

DEPARTMENT OF COMMERCE

U.S.COAST AND GEODETIC SURVEY

E.Lester Jones, Superintendent.

Sheet No 2

3785

LAKE WASHINGTON, ~~SEATTLE~~, WASH.

Sand Pt.
~~JUANITA BAY~~ TO MEDINA

PLANE TABLE SURVEY BY: Augustus P.Ratti,
Jr.H.&G.E.

Chief of Party: N.H.Heck, H.&G.E.

Scale: 1-10000

Year: 1919.

DEPARTMENT OF COMMERCE
U.S.COAST AND GEODETIC SURVEY
E.Lester Jones, Superintendent.

Sheet No. 3

3786

LAKE WASHINGTON, ~~SEATTLE~~, WASH.

MEDINA TO LAKEWOOD And Barnabie Pt.

PLANE TABLE SURVEY BY: Augustus P.Ratti,
Jr.H.&G.E.

Chief of Party: N.H.Heck, H.& G.E.

Scale: 1-10000

Year: 1919.

DEPARTMENT OF COMMERCE

U.S.COAST AND GEODETIC SURVEY
E.Lester Jones, Superintendent.

Sheet No 4
3787

3787

Southern End

LAKE WASHINGTON, ~~SEATTLE~~, WASH.
and Barnabie Pt
LAKEWOOD TO RENTON

PLANE TABLE SURVEY BY: Augustus P.Ratti,
Jr.H.&G.E.

Chief of Party: N.H.Heck, H.&G.E.

Scale: 1-10000

Year: 1919.

DEPARTMENT OF COMMERCE

U.S. COAST AND GEODETIC SURVEY

E. Lester Jones, Superintendent.

Sheet No 5

3788

UNION BAY, PORTAGE BAY, AND LAKE UNION,

SEATTLE, WASHINGTON.

PLANE TABLE SURVEY BY: Augustus P. Ratti, Jr. H.&G.E.

Chief of Party: N.H. Heck, H.&G.E.

Scale: 1-5000'

Year: 1929.