**T- 13152**

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**DESRIPTIVE REPORT**

**Type of Survey**  
Shoreline

**Field No.** PH-6712  
**Office No.** T-13152  
**FINAL Field Edited Map** Edition 1

---

**LOCALITY**

**State**  
Washington

**General locality**  
Elliott Bay

**Locality**  
Duwamish Waterway

---

**1966-1970**

**CHIEF OF PARTY**  
V. Ralph Sobieralski  
Div. of Photogrammetry, Wash., D.C.

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**LIBRARY & ARCHIVES**

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*Refer to Memo, page 12.*
PROJECT NO. (iii):
PH-6712, Elliott Bay, Washington

FIELD OFFICE (ii):

CHIEF OF PARTY

PHOTOGRAMMETRIC OFFICE (iii):
Rockville, Maryland

OFFICER-IN-CHARGE
V. Ralph Sobiersalski

INSTRUCTIONS DATED (iii) (iii):

No written instructions

METHOD OF COMPILATION (iii):

Graphic

MANUSCRIPT SCALE (iii):
1:5,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (iii):

DATE RECEIVED IN WASHINGTON OFFICE (iv):

DATE REPORTED TO NAUTICAL CHART BRANCH (iv):

APPLIED TO CHART NO.

DATE:

DATE REGISTERED (iv):
SEPT 1974

GEOMETRIC DATUM (iii):

N.A. 1927

REFERENCES STATION (iii):

SEATTLE CITY MONUMENT, 1st AVE., SE & MARGINAL WAY, 1956 (Marginal)

LAT.:

LONG.:

ADJUSTED

UNADJUSTED

PLANE COORDINATES (iv):

Y = 203,603.44

X = 1,629,657.19

STATE

Washington

ZONE

North

**Notes:**
- Roman numerals indicate whether the item is to be entered by (ii) Field Party, (iii) Photogrammetric Office, or (iv) Washington Office.
- When entering names of personnel on this record give the surname and initials, not initials only.
# DESCRIPTIVE REPORT - DATA RECORD

## T-13/52

### FIELD INSPECTION BY (III):

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### MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

- **Photography Taken**
  - July 26, 1966
  - Office Interpretation
  - Sept. 11, 1970

### PROJECTION AND GRIDS RULED BY (IV):

- **A. E. Roundtree**
  - Date: 3/16/67

### PROJECTION AND GRIDS CHECKED BY (IV):

- **R. Glaser**
  - Date: 3/20/67

### CONTROL PLOTTED BY (III):

- **J. C. Richter**
  - Date: April 1967

### CONTROL CHECKED BY (III):

- **H. Lucas**
  - Date: April 1967

### RADIAL PLOT OR STEREOGRAPHIC CONTROL EXTENSION BY (III):

- See Photogrammetric Plot Report for T-12519 (Chart 6442) December 1963
  - **J. T. Gerlach**

### STEREOGRAPHIC INSTRUMENT COMPILED BY (III):

- **Inapplicable**

### MANUSCRIPT Delineated By (III):

- **M. Webber**
  - Date: May 1967

### SCRIBING BY (III):

- **J. C. Richter**

### PHOTOGRAHMETRIC OFFICE REVIEW BY (III):

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### REMARKS:

- Field edit by Allan F. Davis Sept. 8 October 1970
### Descriptive Report - Data Record

**T-13152**

#### Camera (Kind or Source) (III):

"S" 6" Focal Length

#### Photographs (III)

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<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<td>66-S-3188A thru 3191A</td>
<td>7/26/66</td>
<td>12:36</td>
<td>1:15,000</td>
<td>8.8 above MLW</td>
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<tr>
<td>C. of E, S-7026-49-5 thru S-7026-48-12</td>
<td>9-11-70</td>
<td>Unknown</td>
<td>1:12,000</td>
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#### Tide (III)

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<th>Seattle</th>
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<td>Ratio of Ranges</td>
<td>Mean</td>
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<tr>
<td>Diurnal</td>
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#### Subordinate Station:

- WASHINGTON OFFICE REVIEW BY (IV): J.B. Phillips
  - DATE: July 1976

#### Remarks:

- [Text box for remarks]

- [Text box for remarks]
Color photography; scale 1:15,000, dated July 26, 1966.
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>XXXXXXXXXXXXXXXXXX</td>
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<td></td>
</tr>
<tr>
<td>XXXXXXXXXXXXXXXXX!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* (See below)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field edit applied</td>
<td>May 1971</td>
<td>Superseded</td>
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<tr>
<td>Field edit, application revision</td>
<td>July 1975</td>
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* Field inspection and field edit completed in 1964 for T-12519 (chart 6442) scale 1:10,000. Cronaflex copies enlarged 2x were paneled on this manuscript and details revised with 1966 "S" photography in June 1967.
Summary (PH-6712)

T1362 is one of six 1:5,000 scale shoreline manuscripts prepared for photo-hydro support. These manuscripts originated with PH-21411 (T-12519) compiled in April 1964 and field edited in September 1964.

PH-21411 was compiled at 1:10,000 scale and served as the base for Nautical Chart 6442. Photographic enlargements on film were made of the chart manuscript and these were applied to base sheets ruled for the new 1:5,000 scale shoreline mapping project. In July 1966, 1:5,000 scale photography was flown over the area for photo revision and for preparation of ratio prints for photo-hydro support. The photography was ratioed and prepared for hydrography in May 1967.

Field edit and hydrographic operations were delayed until September and October 1970. The Corps of Engineers supplied 1:12,000 scale panchromatic photography taken in September 1970 for field edit use. The field editor visually verified the adequacy of the 1970 photography for use in revising map details. Edit information, including the 1970 photography, was applied in 1971. In 1975 the hydrographic survey reviewer requested the photogrammetric map for use in his review. Upon examination of the map the reviewer found errors in the application of field edit. The errors resulted, primarily, from the poor quality of the photographic prints used in 1971. Better quality prints were obtained and applied in 1975.

Refer to page 12 of this Descriptive Report concerning the disposition of inadequacies in PH-6712 maps.

Final review was accomplished at the Rockville Office in July 1976.

Several changes were made to the shoreline and foreshore features during review. No attempt was made to update the buildings or other cultural features.

A stable base positive copy of the map and a Descriptive Report will be registered in the NOS Archives.
COMPILATION REPORT
T-12152

This manuscript was compiled from a 2X enlargement of T-12519 (chart 6442) which was compiled in April 1964 and field edited in September 1964.

The enlargement on cronaflex was brought up to date graphically with 1:5,000 scale black and white cronaflex ratios of color photographs taken in July 1966.

After corrections the cronaflex enlargement was paneled on 1:5,000 scale manuscripts and photographs were prepared for hydro support.

Refer to Descriptive Report for Chart Compilation of T-12519 (Chart 6442) of June 1963-September 1964.

31. Compilation

Graphic methods were used.

32. Control

There is an abundance of triangulation stations in the area of this manuscript.

33. Supplemental Data

None

34. Contours and Drainage

None

35. Shoreline and Alongshore Detail

There was no field inspection of the 1966 photography. No low water or shoal lines were visible on the photographs.

36. Offshore Detail

No comment
37. **Landmarks and Aids**

Four landmarks were abstracted from Form 567 of T-12519 (chart 6442) and listed on Form 567 for this manuscript.

38. **Control for Future Surveys**

None

39. **Junctions**

To the north with T-13151 in agreement. To the south with T-13153 in agreement. To the east and west with T-12519 (1:10,000) in agreement.

40. **Horizontal and Vertical Accuracy**

No comment

41. thru 45.

Inapplicable

46. **Comparison with Existing Maps**

Comparison was made with USGS quadrangle Seattle, South, 1949 scale 1:24,000.

47. **Comparison with Nautical Charts**

A comparison was made with nautical chart No. 6442, scale 1:10,000, 2nd edition, August 8, 1966, corrected to January 14, 1967.

Items to be applied to nautical charts immediately:

None

Items to be carried forward:

None

Submitted by:

Approved by: J. C. Richter

K. N. Maki, Chief
Compilation Section
FIELD EDIT REPORT
MAP T-13152
Duwamish Waterway

Field edit of map T-13152 was accomplished during September and October 1970 from a skiff in conjunction with photogrammetric signal location and from a launch during hydrography.

METHOD

Field photographs and a paper ozalid copy of the manuscripts were employed in the field in place of Field Edit ozalids which were not provided. The mean high water line and shoreline detail were verified by visual comparison of the shore area to field photographs and ozalid manuscripts. Army Corps of Engineers 1:12,000 scale photographs of September 1970 were also used during field edit. Notes have been made in violet ink on the field edit ozalid and cross referenced where necessary to Army Corps of Engineers contact prints S 7026-48-8 and S 7026-48-9. Unless otherwise indicated, all shoreline features are verified correct as interpreted.

ADEQUACY OF COMPILATION

Compilation of the map is inadequate. Considerable changes have been made in the area covered by the map as noted on the field edit ozalid and referenced photographs. Field Inspection of the map is complete.

RECOMMENDATIONS

It is recommended that the map be revised in accordance with the field edit notes and be recompiled from Army Corps of Engineers photographs where significant changes in shoreline detail have occurred. It is recommended that the revised map be accepted as an advance manuscript.

Respectfully submitted,

Allan F. Divis
Allan F. Divis
LTJG, NOAA
62. Comparison with Registered Topographic Surveys

T-12519  1:10,000  1964

Refer to memorandum page 12.

63. Comparison with Maps of Other Agencies

Refer to the Compilation Report, item 46.

64. Comparison with Contemporary Hydrographic Surveys

H-9168  1:5,000  1970

During review shoreline revisions were made on the photogrammetric manuscript. The areas are indicated in pencil on the hydrographic smooth sheet. Other features are in agreement with the hydro survey.

65. Comparison with Nautical Charts

6442  1:10,000  1964

Refer to memorandum page 12.

66. Adequacy of Results and Future Surveys

This map meets horizontal accuracy standards but does not meet NOS requirements for use in nautical chart maintenance. Refer to page 12 of this Descriptive Report concerning the inadequacies of this map.

Submitted by:

J. B. Phillips

Approved and Forwarded:

Chief, Photogrammetric Branch

Chief, Coastal Mapping Division
July 22, 1976

TO: Chief, Coastal Mapping Division

FROM: Quality Control Group

SUBJECT: Recommendation for New Mapping, Elliott Bay, Washington

1. Purpose

The memo outlines the need for a 2nd Edition of Map T-12519 (PH-21411), date 1964.

2. Background

Map T-12519, scale 1:10,000, was used in hydro operations in 1970. Six 1:5,000 scale maps (PH-6712), 2x enlargements of portions of the 1:10,000 scale map, were processed and revised with 1966 photography. Hydrography and field edit were accomplished in 1970.

3. Map Adequacy

For reasons outlined under Section 4, the six 1:5,000 scale maps do not meet NOS requirements for use in nautical chart maintenance. The inadequacies do not affect the basic hydrographic (sounding) information on the contemporary hydrographic surveys.

4. Map Deficiencies

Field edit of the 1:5,000 scale maps was inadequate. The field edit reports state that after revision of the maps with 1970 Corps of Engineers photography in areas indicated (by the editor) they will meet requirements. Many changes in shoreline and alongshore features, apparent on the photographs, were not noted by the editor. The photographs were generally poor for interpreting details and little clarification was done by the editor. Although the hydrographer corrected some photogrammetric survey details on the boat sheet, many changes, apparent on the 1970 photographs, were accepted as compiled from the 1966 photographs.
5. Disposition of 1:5,000 Scale Maps

The six 1:5,000 scale maps were reviewed in July 1976. Changes required in hydrographic survey details were called to the attention of the hydro survey reviewer by notes on the reviewed smooth sheet or by memo, as applicable.

6. Recommended Procedures

New bridging and basic compilation is recommended for the 2nd map edition.

*Note: the last complete investigation of landmarks and aids was done in 1963.*
48. Geographic Names List

Duwamish Waterway
Georgetown
# NonFloating Aids To Navigation

## Landmarks for Charts

**Seattle, Washington**

July 1967

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the indicated charts.

The positions given have been checked after listing by **Robert B. Melby**.

October 11, 1963

**Fred Natella, Capt. C&GS**

### Washington

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<tr>
<th>Charting Name</th>
<th>Description</th>
<th>Signal Name</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Datum</th>
<th>Method of Location and Survey No.</th>
<th>Date of Location</th>
<th>Chants Affected</th>
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<tbody>
<tr>
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<td></td>
<td>47 33</td>
<td>27 218</td>
<td>20 005 N.A.</td>
<td>Triang 10/7/63X</td>
<td>6449 6442</td>
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<tr>
<td>TANK</td>
<td>Ford tank, 1934</td>
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<td>47 33</td>
<td>24 958</td>
<td>17 673</td>
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<tr>
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<td>47 33</td>
<td>32 204</td>
<td>19 572</td>
<td></td>
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<tr>
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<td>Tank, steel, elevated</td>
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<td>47 32</td>
<td>19 021</td>
<td>24 772</td>
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<tr>
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<td>25 772</td>
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<td>19 539</td>
<td>25 772</td>
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</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

*Tabulate Seconds and Meters*
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<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>LONGITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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1 FT = 0.3048006 METER

COMPUTED BY: J. Richter  DATE: April 1967
CHECKED BY: H. Lucas  DATE: April 1967
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<tr>
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<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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1 FT = 0.3048006 METER

J. Richter

DATE April 1967

CHECKED BY H. Lucas

DATE April 1967
### TIDE COMPUTATION

**PROJECT NO. Ph6712 T-13152**

**Time and date of exposure:** 12:36 7/26/66

**Reference station:** Seattle, Washington

**Date of field inspection:**

**Subordinate station:**

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<th>Height x Ratio of ranges</th>
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<td></td>
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<table>
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<tbody>
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<td>8.8</td>
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<thead>
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<th>Time</th>
<th>Height</th>
<th>Height x Ratio of ranges</th>
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<tbody>
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<td>9.0</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
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<th>Time</th>
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<td>Time difference</td>
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<tr>
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<th>Time</th>
<th>Height</th>
<th>Height x Ratio of ranges</th>
</tr>
</thead>
<tbody>
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**Photo. No.:** 66-S-3188A