**Type of Survey**  
Shoreline

**Field No.** Ph-76(51)  
**Office No.** T-9914

**Locality**

**State**  
Texas

**General locality**  
Houston Ship Channel

**Locality**  
Houston

**1951-52**

**CHIEF OF PARTY**

P. L. Bernstein, Chief of Field Party  
J. E. Waugh, Tampa Photo. Office

**LIBRARY & ARCHIVES**

**DATE**  
May 12, 1953
DATA RECORD

T-9914

Project No. (II): Ph-76(51) Quadrangle Name (IV):

Field Office (II): Houston, Texas Chief of Party: P. L. Bernstein

Photogrammetric Office (III): Officer-in-Charge:

Instructions dated (II) (III): 21 November 1951 and letter of 22 May 1952. Copy filed in Division of Photogrammetry (IV)


Method of Compilation (III): Graphic

Manuscript Scale (III): 1:10,000 Stereoscopic Plotting Instrument Scale (III): Inapplicable

Scale Factor (III): None Date received in Washington Office (IV): 1-15-54 Date reported to Nautical Chart Branch (IV): 2-11-54

Applied to Chart No. Date: Date registered (IV): 19 Sept. 1954

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N. A. 1927 Vertical Datum (III): M.H.W.

Reference Station (III): HOUSTON, TRINITY PORTLAND CEMENT CO., STACK, 1942

Lat.: 29° 45' 27.353" (842.2m) Long.: 95° 19' 59.512" (1598.9m) Adjusted

Plane Coordinates (IV):

State: Zone:

Y= X=

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.
DATA RECORD

Field Inspection by (II): W. M. Reynolds & W. H. Shearouse  Date: June 1952

Planetable contouring by (II): Not applicable.  Date:

Completion Surveys by (II): L. F. Woolcock  Date: 26 April 1955
(See completion report)

Mean High Water Location (III) (State date and method of location): 6 June 1952
Air Photo Compilation

Projection and Grids ruled by (IV): Jack Allen (W.O.)  Date: 25 Nov. 1952
Projection and Grids checked by (IV): H. D. Wolfe (W.O.)  Date: 25 Nov. 1952
Control plotted by (III): R. J. Pate  Date: 23 Dec. 1952

Control checked by (III): I. I. Saperstein  Date: 19 Jan. 1953

Radial Plot or Stereoscopic Radio-Extension by (III): M. M. Slavney  Date: 14 Jul. 1953

Stereoscopic Instrument compilation (III): Inapplicable  Date:
Planimetry  Date:
Contours  Date:

Manuscript delineated by (III): W. H. Shearouse  Date: 3 Dec. 1953

Photogrammetric Office Review by (III): J. A. Giles  Date: 21 Dec. 1953

Elevations on Manuscript checked by (III): Inapplicable  Date:
Camera (kind or source) (III): Fairchild Cartographic Camera "0" 6" focal length

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<th>Number</th>
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<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<td>51-0-5642</td>
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<td>0842</td>
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<td>51-0-5643</td>
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<td>51-0-5644</td>
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Camera "W"

54-W-3167 to 3170 ind. 19 Oct. 1954 1:30 eto
54-W-3150 and 3151

Tide (III)

Inapplicable

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<th>Ratio of Range</th>
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<th>Spring Range</th>
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</table>

Reference Station:
Subordinate Station:
Subordinate Station:

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 6
Shoreline (More than 500 meters to opposite shore) (III): 3
Shoreline (Less than 200 meters to opposite shore) (III): Not applicable.
Control Leveling - Miles (II): 18
Number of Triangulation Stations searched for (II): 18
Number of BMs searched for (II): 0
Number of Recoverable Photo Stations established (III): 1
Number of Temporary Photo Hydro Stations established (III): 0

Remarks:

Date: 10 Feb. 1954
Date: 15 Apr. 1957
Compiled at scale 1:10,000 from 1:24,000 scale single-lens photographs taken May 1951
(Refer to Air-Photo Indexes 99-E and 99-F)
Summary to Accompany T-9914

Project Ph-76(51) consists of seven map manuscripts, 1:10,000 scale, which delineate the shoreline and the inland area for one-half mile each side of the Houston Ship Canal from Galveston Bay to the city of Houston.

T-9914 includes that part of Houston along Buffalo Bayou from the Turning Basin at the west end of the Ship Canal to the vicinity of Sam Houston Park.

After smooth drafting and printing a cloth-backed copy of the map and the descriptive report will be registered and filed in the Bureau Archives.

When all the maps of the project have been thus registered, a Completion Report for the whole project will be written. It will describe the whole project as to purpose, reports, and records turned in and filed.
FIELD INSPECTION REPORT IS BOUND WITH T-9916

Field edit report is bound with Completion Report.
PHOTOGRAMMETRIC PLOT REPORT.

This report was submitted with T-9915.

31. **DELINEATION.**

The graphic method was used.

Field inspection notes plus plans of railroad yards and other clarifying supplemental data proved adequate.

Coverage was by a single flight of photographs and in some areas only two-cut intersections could be obtained for detail points. These were shown by green circles. West of longitude 95° 21' delineation was entirely from two-cut intersections.

The scale of the photographs was fair to good.

The limits of Sam Houston Park at latitude 29° 45' 6", longitude 95° 22' 3", were not obtained by the field inspector, therefore are not shown on the map manuscript.

32. **CONTROL.**

Horizontal control proved adequate with reference to identification, density and placement.

33. **SUPPLEMENTAL DATA.**

Plans for the machine contract building and adjacent wharf of Brown and Root, Inc., submitted as Map Nos. 8 and 9, were reduced to mapping scale by pantograph.

Other maps, such as railroad yard detail plans, were used for clarification of photographs. They are listed under Item 14, Field Inspection Report bound with T-9916.
34. CONTOURS AND DRAINAGE.

Contouring inapplicable.

The drainage — short intermittent streams feeding into the White Oak River and Buffalo Bayou — has been delineated as interpreted from the photographs.

35. SHORELINE AND ALONGSHORE DETAILS.

The field note "shoreline is bank of stream", bulkhead labels, etc., proved adequate for shoreline delineation.

Tides were negligible and no low-water or shoal lines were shown.

36. OFFSHORE DETAILS.

None

37. LANDMARKS AND AIDS.

There are no aids to navigation. The only landmark — TANK, 1952 — was located by two-cut intersection.

38. CONTROL FOR FUTURE SURVEYS.

Form 524 has been submitted for one recoverable topographic station. It is listed under Item 49.
39. **JUNCTIONS.**

A satisfactory junction has been made with T-9916 on the south. There is no contemporaneous survey to the west, north or east.

40. **HORIZONTAL AND VERTICAL ACCURACY.**

Vertical accuracy inapplicable.

See Item 31 regarding two-cut detail points.

41. **BRIDGES AND CABLE CLEARANCES.**

Bridge clearances west of the mouth of White Oak River have not been shown as the water is not navigable. Overhead cable clearances are listed under Item 12.

46. **COMPARISON WITH EXISTING MAPS.**

Comparison was made with Army Map Service 1:25,000 scale topographic quadrangle SETTEGAST, TEXAS, edition of 1947. Agreement is excellent, only man-made changes being noted. Where new streets have been constructed they are shown as isolated developments, if outside the half-mile limit.

Comparison was also made with USGS Topographic Survey No. 4621. Some differences were noted in the shoreline along the northwest side of the Houston Ship Channel Turning Basin.

47. **COMPARISON WITH NAUTICAL CHARTS.**

Comparison was made with USCGS Nautical Chart No. 590. It is a 1:10,000 scale harbor chart, published in 1952 and corrected to 21 March 1952. The only part of the map manuscript covered by the nautical chart is the northern half of the Turning Basin and approximately a thousand feet of Buffalo Bayou.

It was noted that shoreline and shoreline structure changes have occurred along the west and northwest side of the Turning Basin. Also, Buffalo Bayou is approximately one hundred feet wider than shown on the chart.
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY.

Correction of shoreline and shoreline structure along west and northwest side of Turning Basin.

ITEMS TO BE CARRIED FORWARD.

None.

William H. Shearouse
William H. Shearouse
Cartographer

APPROVED AND FORWARDED

J.E. Waugh
J. E. Waugh, Chief of Party
48. GEOGRAPHIC NAME LIST.

BOOKER T. WASHINGTON HIGH SCHOOL
BUFFALO BAYOU

CANAL STREET
CLINTON DRIVE (add Drive on map)

FANIN STREET
FRANKLIN AVENUE

GALVESTON HOUSTON AND HENDERSON, RAILROAD
GRAND CENTRAL STATION

HOUSTON
HOUSTON AVENUE
HOUSTON BELT AND TERMINAL RAILROAD

JENSEN DRIVE

LOCKWOOD DRIVE

M K T RAILROAD
MAIN STREET
MC CARTY AVENUE
MISSOURI PACIFIC RAILROAD

NAVIGATION BOULEVARD
NORTH MAIN STREET

OLD SPANISH TRAIL

WAYSIDE DRIVE

PRESTON AVENUE

SAM HOUSTON COLISEUM
SAM HOUSTON HIGH SCHOOL
SAM HOUSTON PARK
SETTEGAST PARK
ST. VINCENT CEMETERY
STATE 225
STATE 119

TEXAS
TEXAS & NEW ORLEANS (SOUTHERN PACIFIC RAILROAD)

TURNING BASIN
48. GEOGRAPHIC NAME LIST (CONTINUED)

UNION STATION
U.S. 59
U.S. 90
U.S. 290

WHITE OAK BAYOU

Harrisburg Boulevard
Congress Avenue
McKee Street
San Jacinto Street
Milam Street

Names approved
2-10-54.
L. Heck
49. **NOTES FOR THE HYDROGRAPHER.**

The following topographic station will be of value to the hydrographic party:

TANK, 1952 (form 5-24 A 529)
<table>
<thead>
<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>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tbody>
<tr>
<td>HOUSTON, MERCHANTS &amp; MANUFACTURING</td>
<td></td>
<td>G, P, 8</td>
<td>29</td>
<td>45</td>
<td>56.282</td>
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<td>1732.9 (114.5)</td>
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<td>COMPANY, SOUTH WATER TANK, 1942</td>
<td>Pg 280</td>
<td>N.A. 1927</td>
<td>95</td>
<td>21</td>
<td>32.138</td>
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<td>863.4 (74.8)</td>
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<tr>
<td>HOUSTON, MERCHANTS &amp; MANUFACTURING</td>
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<td>29</td>
<td>45</td>
<td>57.054</td>
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<td>1756.7 (90.7)</td>
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<td>COMPANY, NORTH WATER TANK, 1942</td>
<td>Pg 280</td>
<td></td>
<td>95</td>
<td>21</td>
<td>31.911</td>
<td></td>
<td>857.3 (754.6)</td>
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<tr>
<td>HOUSTON, JEFFERSON DAVIS HOSPITAL CHIMNEY, 1942</td>
<td>Pg 281</td>
<td></td>
<td>29</td>
<td>45</td>
<td>36.478</td>
<td>West of project</td>
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<td></td>
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<td></td>
<td>95</td>
<td>23</td>
<td>02.062</td>
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<td>HOUSTON, ESPERSON BUILDING, DOME, 1931</td>
<td>Pg 281</td>
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<td>30.978</td>
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<td>953.8 (893.6)</td>
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<td>95</td>
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<td>53.312</td>
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<td>HOUSTON, TRINITY PORTLAND CEMENT CO., STACK, 1941</td>
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<td>29</td>
<td>45</td>
<td>27.353</td>
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<td>95</td>
<td>19</td>
<td>59.512</td>
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<td>1598.9 (13.1)</td>
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<td>HOUSTON, GULF BLDG., FLAGPOLE, 1931</td>
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<td>29</td>
<td>45</td>
<td>31.120</td>
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<td>958.2 (889.2)</td>
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<td>95</td>
<td>21</td>
<td>48.917</td>
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<td>1314.2 (297.8)</td>
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1 FT. = 0.304800 METER

COMPUTED BY: I.I. Saperstein  DATE: 5 Nov. 1952

CHECKED BY: R.J. Pate  DATE: 5 Nov. 1952
<table>
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<tr>
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<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tr>
<td>WHEATLEY (H.L. &amp; P.CO.), 1939</td>
<td>G.P.'s Pg 458</td>
<td>N.A. 1927</td>
<td>29 46 33.175</td>
<td>Sta. destroyed - but used 1021.5 (825.9)</td>
<td></td>
<td>189.7 (1422.0)</td>
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<td>HOGG (H.L. &amp; P.CO.), 1938</td>
<td>&quot; Pg 458</td>
<td>&quot;</td>
<td>728,893.3 3,146,146.6</td>
<td>3,893.3 (1106.7)</td>
<td>West of 1,146.6 (3853.4)</td>
<td>project</td>
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<td>COMPRESS (H.L. &amp; P.CO.), 1938</td>
<td>&quot; Pg 457</td>
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<td>29 47 24.670</td>
<td>759.6 (1087.8)</td>
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<td>1306.0 (305.5)</td>
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<td>GULF (H.L.&amp; P. CO.), 1942</td>
<td>&quot; Pg 271</td>
<td>&quot;</td>
<td>29 45 30.973 48.843</td>
<td>3 meters from Houston Gulf Building Flagpole 953.7 (893.7)</td>
<td>NOT PLOTTED</td>
<td>1312.3 (299.8)</td>
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<td>&quot;</td>
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<td>project 631.9 (980.0)</td>
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I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by

William H. Shearouse, Cartographer

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<th>TEXAS</th>
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<td>CHARTING NAME</td>
<td>DESCRIPTION</td>
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<tr>
<td>TANK</td>
<td>steel, aluminum-colored. (142 ft. high, 172 ft above MLLW)</td>
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<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>HARBOUR CHART</th>
<th>MUSEUM CHART</th>
<th>CHARTS AFFECTED</th>
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<td>DATUM</td>
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<td>D. M. S.</td>
<td>D. M. S.</td>
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<tr>
<td>TANK</td>
<td>29°45'</td>
<td>95°17'</td>
<td>N. A. Plot</td>
<td>1927</td>
<td>1952</td>
<td>X</td>
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</tbody>
</table>
PHOTOGRAMMETRIC OFFICE REVIEW

1. Projection and grids. 2. Title. 3. Manuscript numbers. 4. Manuscript size.

CONTROL STATIONS


ALONGSHORE AREAS


PHYSICAL FEATURES


CULTURAL FEATURES


BOUNDARIES

31. Boundary lines. 32. Public land lines.

MISCELLANEOUS

33. Geographic names. 34. Junctions. 35. Legibility of the manuscript. 36. Discrepancy overlay. 27. Descriptive Report. 38. Field inspection photographs. 39. Forms.

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item.

Compiler

Supervisor

43. Remarks:
62. **Comparison with Registered Topographic Surveys.**

   T-4621 1:5,000, 1931, Clarion to Turning Basin, shoreline and a 20-foot contour.

   Except for the contour T-9914 supersedes the older survey for charting purposes.

63. **Comparison with Maps of Other Agencies.**

   AMS Quad. Settegast 1:25,000, 1947
   USGS Quad. Settegast, 1:31,600, ed. 1922, rep. 1942

   The present survey supersedes the quadrangles for shoreline and those cultural features noted by the field inspector.

64. **Comparison with Contemporary Hydrographic Surveys.**

   No hydrographic surveys were made since the 1931 series H-5121 to 5128, incl., 1:5,000.

65. **Comparison with Nautical Charts.**

   590 1:10,000 1st combined ed. 1952, Houston Ship Canal, Carpenter Bayou to Houston.

   Only the north end of the Turning Basin falls on T-9914. This part of the Basin shoreline and wharf structures have changed since the chart was constructed.

66. **Accuracy.** This map conforms to the project instructions and meets the National Standards of Map Accuracy.

Reviewed by:

Lena T. Stevens

APPROVED:

[Signatures]

Chief, Review Branch
Div. of Photogrammetry

Chief, Div. of Photogrammetry

Chief, Nautical Chart Branch
Division of Charts

Chief, Div. of Coastal Surveys
Supplemental Review Report
of Shoreline Surveys T-9914 to T-9920 inclusive
after revision based on single-lens photography of October, 1954
and shoreline inspection of 1955
15 April 1957

Items 62 to 65 inclusive were covered in this review of subject manuscripts after extensive changes and additions of aids to navigation, shoreline, foreshore and offshore features and planimetry. Revisions were applied as per supplemental instructions and extend approximately two miles west of limit of Nautical Chart No. 590.

Nautical charts of identical areas:

- 588 1:10000 corrected to 55 10/31
- 589 1:10000 corrected to 57 2/11
- 590 1:10000 corrected to 57 2/11
- 1282 1:80000 corrected to 56 4/30

have not been revised to incorporate all changes shown on these shoreline surveys in red ink (result of 1954 photography and 1955 shoreline inspection) and should be given consideration as early as appropriate. The revised shoreline manuscripts have been found to be adequate and no deficiencies in accuracy were indicated.

Reviewed by:

[Signature]

Josef J. Streifler

APPROVED:

[Signature]

La Ravo
Chief, Review and Drafting Section, Photogrammetry Division

Chief, Nautical Chart Branch
Charts Division

[Signature]

Chief, Coastal Surveys

[Signature]

Chief, Photogrammetry Division
<table>
<thead>
<tr>
<th>DATE</th>
<th>CHART</th>
<th>CARTOGRAPHER</th>
<th>REMARKS</th>
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<td>590</td>
<td>E. Leich</td>
<td>Before After Verification and Review</td>
</tr>
<tr>
<td></td>
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A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under “Comparison with Charts” in the Review.