

11651

Diag. Cht. No. 5101-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey SHORELINE (PHOTOGRAMMETRIC)

Field No. Office No. T-11651

LOCALITY

State CALIFORNIA

General locality ORANGE COUNTY

Locality SANTA ANA RIVER

1959-1960

CHIEF OF PARTY

FRED NATELLA

LIBRARY & ARCHIVES

DATE **AUG 1-1963**

USCOMM-DC 5087

11651

DESCRIPTIVE REPORT - DATA RECORD

T - 11651

Project No. (II): Ph-5908

Quadrangle Name (IV):

Field Office (II): Santa Ana, California

Chief of Party: Fred Natella

Unit Chief: Charles H. Bishop

Photogrammetric Office (III): Portland, Oregon

Officer-in-Charge: Fred Natella

Instructions dated (II) (III): II III 6 January 1960

13 April 1960 Amend. 1

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): KELSH INSTRUMENT

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:6000

PANTOGRAPH SCALE

1:10,000

Scale Factor (III): NONE

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):

Mean sea level except as follows: X
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): THERE ARE NO TRIANGULATION STATIONS WITHIN THE LIMITS
OF THIS MANUSCRIPT. REFER TO ADJACENT MANUSCRIPT T-11652.

Lat.:

Long.:

Adjusted
Unadjusted

Plane Coordinates (IV):

State:

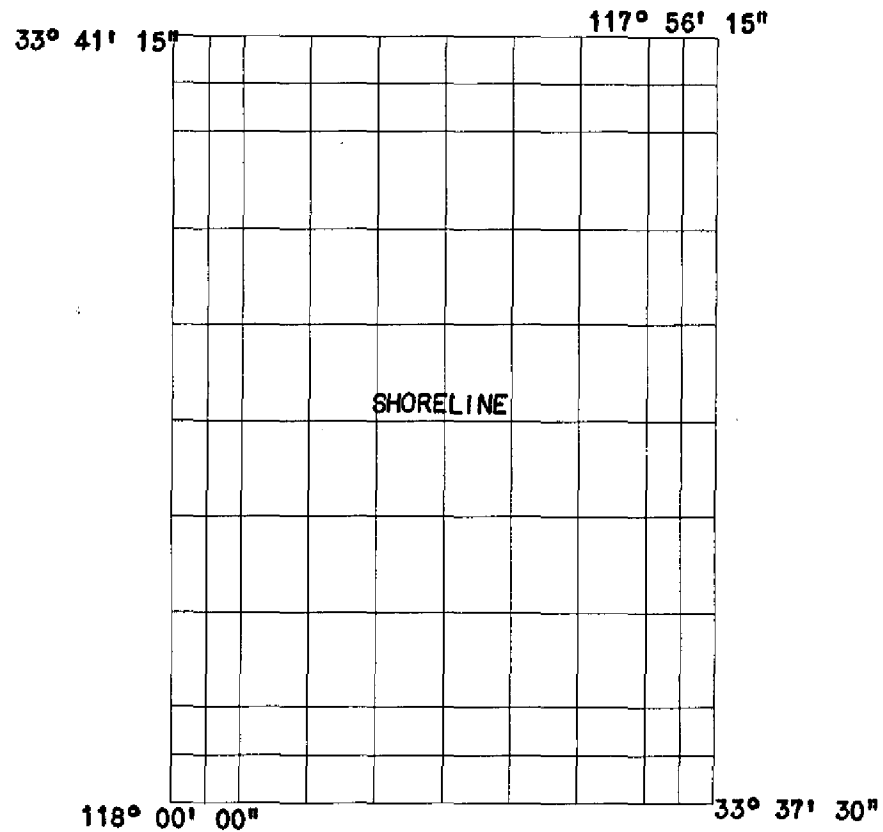
Zone:

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.



Areas contoured by various personnel

(Show name within area)

(II) (III)

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): **Robert B. Melby, Charles H. Bishop
Lyle L. Riggers**

Date: **December 1960**

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location): **By FIELD INSPECTION DECEMBER
1960 AND COMPILED BY KELSH INSTRUMENT.**

Projection and Grids ruled by (IV): **R.A.C.**

Date: **9-30-60**

Projection and Grids checked by (IV): **J.D.C.**

Date: **9-30-60**

Control plotted by (III): **C. H. BISHOP**

Date: **10-13-61**

Control checked by (III): **L. L. GRAVES**

Date: **10-27-61**

Radial Plot or Stereoscopic
Control extension by (III):

R. E. FUESCHEL

Date: **OCT. 1961**

Stereoscopic Instrument compilation (III):
Planimetry **D. N. WILLIAMS**
Contours

Date: **12-19-61**

Date:

Manuscript delineated by (III): **C. H. BISHOP, SCRIBING
C. C. HARRIS, STICK-UP**

Date: **6-18-62
11-2-62**

Photogrammetric Office Review by (III): **J. L. HARRIS, ROUGH DRAFT
J. L. HARRIS, ADVANCE**

Date: **1-18-62
11-8-62**

Elevations on Manuscript
checked by (II) (III):

Date:

DESCRIPTIVE REPORT - DATA RECORD

5. U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Camera (kind or source) (III): C&GS SINGLE LENS "S"

Number	Date	Time	Scale	Stage of Tide
59 S 8217 THRU 8219	10-3-59	11:33	1:30,000	4.3 FT. ABOVE M.L.L.W.

Tide (III)

Reference Station: LOS ANGELES, CALIFORNIA
Subordinate Station: BALBOA (OCEAN PIER), CALIFORNIA
Subordinate Station:

COMPUTED FROM PREDICTED TIDE TABLES

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Ratio of Ranges	Mean Range	Spring Range
	3.8	5.4
	3.7	5.3

Date:

Date:

Date:

Date:

Land Area (Sq. Statute Miles) (III): 19

Shoreline (More than 200 meters to opposite shore) (III): 11

Shoreline (Less than 200 meters to opposite shore) (III): NONE

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 16 Recovered: 0

Number of BMs searched for (II): 2 Recovered: 2

Number of Recoverable Photo Stations established (III): 3

Number of Temporary Photo Hydro Stations established (III): NONE

Identified: 0

Identified: 1

Remarks:

FIELD INSPECTION REPORT

Project Ph-5908

Sheets 11651, 11652, 11653 and 11654

Vicinity of Newport Beach, California

February 1961

2. Areal Field Inspection:

Field inspection was done in accordance with Instructions - Project PH-5908, Shoreline Mapping, Long Beach to Laguna Beach, California, Field and Office, dated 6 January 1960 and Amendment I, dated 13 April 1960.

The major portion of the developed area is occupied by residential housing.

Newport Bay, a sheltered bay, abounds with numerous small boat moorings and anchorages. Its entrance is protected by two boulder jetties. The area surrounding the bay is highly developed with residences, tourist and marine facilities.

Upper Newport Bay is a shallow narrow body of water with salt evaporating ponds at its upper end.

Southeastward from the mouth of Newport Bay the coastline is marked by irregular bluffs with submerged rocky ledges extending to seaward, and offshore rocks.

The quality of the photographs furnished the field unit was satisfactory.

Field inspection and identification is inked on the following photographs:

59 S 8219, 59 S 8220, 59 S 8221, 59 S 8222, 59 S 8223,
59 S 8261 and 59 S 8264.

3. Horizontal Control:

(a) No supplemental control was established

(b) No datum adjustments were made by the field party.

(c) Only control established by the Coast and Geodetic Survey was searched for.

(d) All stations required by project instructions for control of compilation were recovered and positively identified.

(e) The following Coast and Geodetic Survey stations have been reported on Form 526 as lost, probably lost or destroyed:

Sheet 11651

BITTER LAKE 1874	HUNTINGTON 1932
BITTER POINT 1875	Laguna Beach, Pumping Station 1932
BLACK KNOB 1874	Newport Beach, Nucil Co., Derrick 1933
CACTUS KNOLL 1874	Pacific Gun Club, Apex of Roof 1911
CLAM POINT 1874	SAND CONE 1875
CLAM POINT 2, 1956	SCALLOP POINT 1874
Clam Point Standpipe 1933	SCALLOP POINT 2, 1946
Hol 1933	Small House on Beach, West Gable 1911

Sheet 11652

Barn, South Gable 1932	LA MESA 1873
BOWEN 1928	Meyer's House, South Gable 1911
CHALK ROCK 1875	Newport Beach, Black Tank (near AERATOR) 1933
DERBY 1932	Newport Boulevard, Standpipe 1933
DERRICK NO. 1, 1911	Northerly Derrick 1911

Sheet 11653

None

Sheet 11654

BALBOA 1911	Newport Pavilion, Main Flag, 1911
BEACH 1911	Newport Pier, Flagstaff, 1933
Brown House on Mesa, Flagstaff 1911	Newport Pier, Lamp Post 1932
Corona Del Mar Hotel, Flagstaff 1911	Newport School, Cupola 1911
DERRICK NO. 2, 1911	Powerhouse, Red Tower 1911
DERRICK NO. 3, 1911	PRICKLY POINT 1875
DUNE 1875	PRICKLY POINT 2, 1932
Flagpole Near Newport School 1911	ROCK 1875
FIRST BEND 1875	SAND POINT 1875
Newport Bay, Breakwater Light 1933	TURNING POINT 1875
Newport Beach, Beacon No. 7A, 1933	
East Newport Pier, Southeast Corner Pile 1911	
East Newport, Northwest Corner of Boathouse 1911	
Flagstaff, South End of High Green Roof with White Ridgeboard 1911	
Island, Cement House, Southwest Corner Tile Cornice 1911	
Last Cottage on Mesa, Southwest Gable of Roof 1911	
Newport Bay, Weather Bureau Tower 1933	
Newport Beach, Lido Isle, Clubhouse Spire 1933	
White Pavilion on Bluff, Southwest Corner 1911	

Station CAMP 1875, an old intersection station with a no-check position, was recovered, remarked and intersected from Stations AIRWAY 1928, FRENCH 1928, BARANCA 1928 and SAND HILL 1932. As SAND HILL is in a different arc adjustment, its position was re-determined from the line FRENCH - BARANCA. The line AIRWAY - CAMP was observed through a tree and the results are doubtful.

There is now a tie between Station SAND HILL and Stations BARANCA and FRENCH. Previously, lines to these stations had not been observed from SAND HILL.

4. Vertical Control:

The project instructions require the recovery and identification of tidal bench marks only. Fifteen tidal bench marks were searched for and all were recovered. One or two tidal benchmarks representative of each group were identified on the field photographs.

Form 685A, Recovery Note, Bench Mark is submitted for all bench marks searched for.

5. Contours and Drainage:

Countours are not applicable.

There are no streams in the area except the Santa Ana River, which is an intermittent stream. There are several flood control canals in the area to carry off the surplus drainage during torrential downpours that happen occasionally.

The courses of intermittent drainage have been indicated on the field photographs.

6. Woodland Cover:

The area is devoid of woodland cover except for shade or ornamental trees planted in residential sections, and an occasional row of eucalyptus trees serving as wind breaks. Some scrub brush is found along the courses of the intermittent drainage. None of the cover was considered of sufficient importance to delineate on the field photographs.

7. Shoreline and Alongshore Features:

(a) The mean high water line has been indicated on the field photographs. The majority of the mean high water line on the coastline is somewhat unstable, due to the accretion and erosion of the sand beaches by sea action. In these areas the mean high water line was determined by measurements from identifiable points on the photographs.

In Newport Bay the mean high water line in some areas is fixed by piers or seawalls, while in other areas it is on narrow sand beaches. Three changes in the shoreline since the time of photography were mapped directly on Photographs 59 S 8220 and 59 S 8223 by planetable methods.

(b) The low water line was not indicated.

(c) The character of the foreshore has been indicated on the field photographs.

(d) Bluffs and cliffs are found southeastward along the coastline from the mouth of Newport Bay and along portions of Upper Newport Bay. The heights of the bluffs were estimated and noted on the respective field photographs.

(e) Newport Bay has numerous piers, floating piers, landings, etc. Due to the large number of small piers and their proximity to each other, individual piers were not noted on the field photographs. The images of these small piers are apparent on the photography and can probably be compiled without additional annotation. A typical construction of these small piers is as follows: From the inshore end, the pier projects seaward, supported by piling. The outer end is hinged to a ramp which is access to a rectangular or horseshoe-shaped float. These floats are secured to piling and are left in the water the year around.

Marine railways and paved boat launching ramps have been indicated on the field photographs.

Two recreation piers are on the seaward side of the Balboa District of Newport Beach.

(f) The shore ends of submarine cables have been indicated on the field photographs.

(g) The slips of an auto ferry crossing between the Balboa District of Newport Beach and Balboa Island have been indicated on Photograph 59 S 8222.

Four targets marking the two ranges of a measured nautical mile were identified on Photograph 59 S 8222. A copy of Form 567, Nonfloating Aids or Landmarks for Charts, prepared by the Los Angeles District Office and submitted with the field data for the area covered by this report lists geographic positions for these targets. The positions were determined from observations made by personnel of the Los Angeles District Office.

8. Offshore Features:

The mouth of the Santa Ana River and two adjacent flood control canals are protected by boulder jetties. At the northwest side of the mouth of the Santa Ana River is a short boulder groin which protects the inshore end of a sewer outfall pipeline.

The entrance to Newport Bay is protected by two boulder jetties that bare at all stages of the tide. In Newport Bay are several small groins to aid in resisting the erosion of sand beaches. Piles and dolphins were denoted on the field photographs. Several new piles in Upper Newport Bay were located by sextant fixes, which are recorded on the backs of the respective photographs, and by planetable methods.

Southeast of the entrance to Newport Bay the coastline is marked by rocks and rocky ledges. The rocks and their respective heights above mean high water and the rocky ledges have been indicated on the field photographs.

9. Landmarks and Aids:

(a) All charted landmarks were investigated. Those still in existence were identified on the field photographs and listed on Form 567 as LANDMARKS TO BE CHARTED. Chartist landmarks that no longer exist have been listed on Form 567 as LANDMARKS TO BE DELETED. Two new landmarks were selected and listed on Form 567 as LANDMARKS TO BE CHARTED.

(b) Large buildings of landmark value and public buildings within the limits of interior field inspection were indicated on the field photographs.

(c) One aeronautical aid, a fan marker, was identified on Field Photograph 59 S 8264.

(d) All fixed aids to navigation were identified on the field photographs and listed on Form 567 as NONFLOATING AIDS TO NAVIGATION TO BE CHARTED. Newport Bay West Jetty Light was previously located by triangulation in 1937. This fulfills the requirements of Amendment I to the project instructions.

(e) Floating aids are not applicable.

10. Boundaries, Monuments and Lines:

Boundaries and monuments are not applicable.

Limit lines of the following parks have been indicated on the field photographs:

<u>Park</u>	<u>Photo</u>
Huntington Beach State Park	59 S 8219
Channel Rock	59 S 8221
Newport Isle Park	59 S 8221
38th Street Park	59 S 8221
Balboa Pier Park	59 S 8222
L Street Park	59 S 8222
M. Street Park	59 S 8222
Corona Del Mar State-City Beach Park	59 S 8223

The limits of Corona Del Mar State-City Beach Park are somewhat indefinite and no limit lines are shown.

11. Other Control:

No other control was established.

12. Other Interior Features:

Roads and buildings were classified on the field photographs.

Bridges, overhead cables and pipeline crossings were indicated on the field photographs. Clearances for bridge and overhead cables that already appear on charts were not redetermined. Two previously uncharted cable crossings over Grand Canal at Balboa Island were determined in the field and noted on Photograph 59 S 8222.

The general area of the oil fields have been indicated on the field photographs.

There is an abandoned airfield on the east side of Upper Newport Bay. This airfield is closed and at the present time the asphalt surfacing of the runway has been removed.

A steam-electric generating plant southeast of Huntington Beach has been indicated on Photograph 59 S 8219.

13. Geographic Names:

Geographic names will be the subject of a special report.

14. Special Reports and Supplemental Data:

- a. Coast Pilot Report, Pacific Coast, Dana Point to Point Vicente, California, Project Ph-5908, dated January 1961. This report was submitted January 1961.

- b. GEOGRAPHIC NAMES REPORT, PART II, Pacific Coast, Terminal Island to Dana Point, California, Project Ph-5908, dated February 1961.
- c. Three Orange County Road Maps numbered 37E, 37W and 42W for street names in Newport Beach.

Approved:

Fred Natella
by JHD

Fred Natella,
CAPT, C&GS
Portland District Officer

Respectfully submitted:

Charles H. Bishop

Charles H. Bishop
Cartographer, C&GS

Robert B. Melby
Robert B. Melby
Surveying Technician

PHOTOGRAMMETRIC PLOT REPORT

MAP MANUSCRIPT T-11651

PROJECT PH-5908

REFER TO THE PHOTOGRAMMETRIC PLOT REPORT FOR THE ENTIRE
PROJECT PH-5908 BY ROBERT E. FUESCHEL, OCTOBER 1960.

Filed with Desc. Report T-11640

COMPILATION REPORT
MAP MANUSCRIPT T-11651
PROJECT PH-5908

31. DELINEATION:

COMPILATION WAS BY KELSH INSTRUMENT.

32. CONTROL:

THE SUPPLEMENTARY CONTROL ESTABLISHED BY STEREOPLANIGRAPH INSTRUMENT BRIDGING WAS ADEQUATE.

NO HORIZONTAL CONTROL STATIONS ARE LOCATED WITHIN THE LIMITS OF THIS MAP MANUSCRIPT.

33. SUPPLEMENTAL DATA:

SHEET NO. 37W. MAP OF ORANGE COUNTY
SCALE 1 INCH = 600 FT.

34. CONTOURS AND DRAINAGE:

CONTOURS ARE NOT APPLICABLE.

DRAINAGE WAS COMPILED AS INDICATED BY THE FIELD INSPECTION. COMPARISON WITH THE U.S.G.S. QUADRANGLE AND OTHER AVAILABLE MAPS OF THE AREA INDICATES THAT THE COMPILED DRAINAGE IS COMPLETE.

35. SHORELINE AND ALONGSHORE DETAILS:

SHORELINE INSPECTION FOR THE HIGH-WATER LINE WAS ADEQUATE. AS NO PHOTOGRAPHY TAKEN AT THE LOW-WATER STAGE WAS AVAILABLE, THE LOW-WATER LINE WAS NOT SHOWN.

36. OFFSHORE DETAILS:

NONE.

37. LANDMARKS AND AIDS:

TWO LANDMARKS AND ONE AERONAUTICAL AID WERE IDENTIFIED ON THE FIELD PHOTOGRAPHS AND LOCATED BY KELSH INSTRUMENT.

FORMS 567 ARE SUBMITTED.

38. CONTROL FOR FUTURE SURVEYS:

NO RECOVERABLE TOPOGRAPHIC STATIONS AND NO PHOTO-HYDRO STATIONS WERE ESTABLISHED.

39. JUNCTIONS:

SATISFACTORY JUNCTIONS WERE MADE WITH T-11650 ON THE WEST, T-11653 ON THE SOUTH AND T-11652 ON THE EAST. THERE IS NO CONTEMPORARY SURVEY TO THE NORTH.

40. HORIZONTAL AND VERTICAL ACCURACY:

46. COMPARISON WITH EXISTING MAPS:

COMPARISON WAS MADE WITH THE U.S.G.S. $7\frac{1}{2}$ BY 10 MINUTE NEWPORT BEACH, CALIFORNIA, QUADRANGLE, SCALE 1:24,000, EDITION 1949.

47. COMPARISON WITH NAUTICAL CHARTS:

COMPARISON WAS MADE WITH THE FOLLOWING NAUTICAL CHARTS:

NAUTICAL CHART No. 5101, SCALE 1:234,270 AT LAT. $33^{\circ} 20'$
5TH ED. JAN. 6, 1947, REVISED MAY 18, 1959.

NAUTICAL CHART No. 5142, SCALE 1:80,000 AT LAT. $33^{\circ} 31'$
1ST ED. MAR. 5, 1951, REVISED NOV. 9, 1959.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

NONE

ITEMS TO BE CARRIED FORWARD:

NONE.

APPROVED:

Fred Natella
FRED NATELLA, CAPT, C&GS
PORTLAND DISTRICT OFFICER

RESPECTFULLY SUBMITTED:

James L. Harris
JAMES L. HARRIS
CARTOGRAPHER

49. NOTES FOR THE HYDROGRAPHER:

NONE.

PHOTOGRAMMETRIC OFFICE REVIEW

T-10000 11651

1. PROJECTION AND GRIDS X	2. TITLE X	3. MANUSCRIPT NUMBERS X	4. MANUSCRIPT SIZE X
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY None	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) None		7. PHOTO HYDRO STATIONS None
8. BENCH MARKS ✓	9. PLOTTING OF SEXTANT FIXES None	10. PHOTOGRAMMETRIC PLOT REPORT X	11. DETAIL POINTS None
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE X	13. LOW-WATER LINE X	14. ROCKS, SHOALS, ETC. X	15. BRIDGES X
16. AIDS TO NAVIGATION X	17. LANDMARKS X	18. OTHER ALONGSHORE PHYSICAL FEATURES X	19. OTHER ALONGSHORE CULTURAL FEATURES X
PHYSICAL FEATURES			
20. WATER FEATURES X	21. NATURAL GROUND COVER X		22. PLANETABLE CONTOURS None
23. STEREOSCOPIC INSTRUMENT CONTOURS None	24. CONTOURS IN GENERAL None	25. SPOT ELEVATIONS None	26. OTHER PHYSICAL FEATURES X
CULTURAL FEATURES			
27. ROADS X	28. BUILDINGS X	29. RAILROADS X	30. OTHER CULTURAL FEATURES X
BOUNDARIES			
31. BOUNDARY LINES X		32. PUBLIC LAND LINES None	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES X	34. JUNCTIONS X		35. LEGIBILITY OF THE MANUSCRIPT X
36. DISCREPANCY OVERLAY None	37. DESCRIPTIVE REPORT X	38. FIELD INSPECTION PHOTOGRAPHS X	39. FORMS X
40. REVIEWER James L. Harris		SUPERVISOR, REVIEW SECTION OR UNIT	
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 43.			
COMPILER		SUPERVISOR	
43. REMARKS			

T-11651

48. Geographic Names List

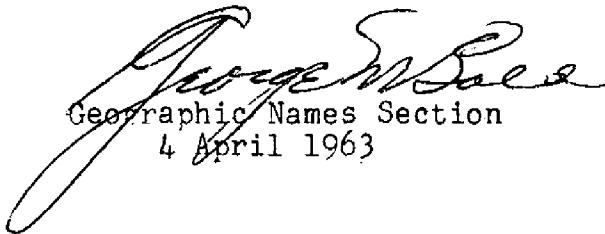
Gulf of Santa Catalina

Huntington Beach

Huntington Beach State Park

Newport Beach

Santa Ana River


Geographic Names Section
4 April 1963

Review Report
Shoreline Maps
T-11649 thru T-11654

June 1963'

61. General Statement

These are six (6) shoreline maps of project PH-5908, Long Beach to Laguna Beach, California. These maps were prepared primarily for the location of all non-floating aids and landmarks for use in the revision of our Nautical Charts.

62. Comparison with Registered Topographic Surveys

T-5030A	1:10,000	1934
T-5031	1:10,000	1933
T-5032	1:10,000	1933

There are numerous cultural and shoreline differences due to time interval. These maps are to supersede the above surveys for common area for nautical charting.

63. Comparison with Maps of Other Agencies

Newport Beach, Calif.	1:24,000	U.S.G.S.	1949
Seal Beach, Calif.	1:24,000	U.S.G.S.	1949

There are cultural and shoreline changes due to the difference in survey dates.

64. Comparison with Contemporary Hydrographic Surveys

None

65. Comparison with Nautical Charts

5188	1:10,000	Aug. 1940	revised to Mar. 1961
5142	1:80,000	Nov. 1960	revised to Dec. 1962

There are no differences of importance between the above charts and the subject manuscripts.

66. Adequacy of Results and Future Surveys

These surveys were prepared according to project instructions and are within the required accuracy for Nautical Charting.

Reviewed by:

L. C. Lande
L. C. Lande

Approved by:

Charles Lauer
Chief, Cartographic Br.

John A. Smith 8/1/63
Chief, Photogrammetry Div.

Sam L. Taylor
Chief, Nautical Charts Division

Harold S. Connelley
Chief, Operations Division

