

9185

Diag. Cht. No. 5530-5.

FORM C&GS-504	
U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC
Field No.	PMC/SP-2-71
Office No.	H-9185
LOCALITY	
State	CALIFORNIA
General locality	SANFRANCISCO
Locality	GOLDEN GATE
1971	
CHIEF OF PARTY	
Howard W. Herz Lt(jg) NOAA	
LIBRARY & ARCHIVES	
DATE	OCT 11 1972

9185

*Charts 1655C A+B
5532 applied
5078
5535*

H-9185

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

PMC/SP-2-71

State CALIFORNIA

General locality SAN FRANCISCO

Locality GOLDEN GATE

Scale 1:5,000

Date of survey 1 Mar - 20 Mar 1971

Instructions dated 10 Feb 1971

Project No. Special Project

Vessel Launch 1262

Chief of party Howard Herz, LTjg, NOAA, OIC

Surveyed by LTjg Howard W. Herz, LTjg Gerald Retzlaff

Soundings taken by echo sounder, ~~and lead line~~ Raytheon 723/D #37010

Graphic record scaled by Launch Personnel

Graphic record checked by Launch Officers

Positions verified

~~positions~~ by Virginia L. Davis

Automated plot by PMC

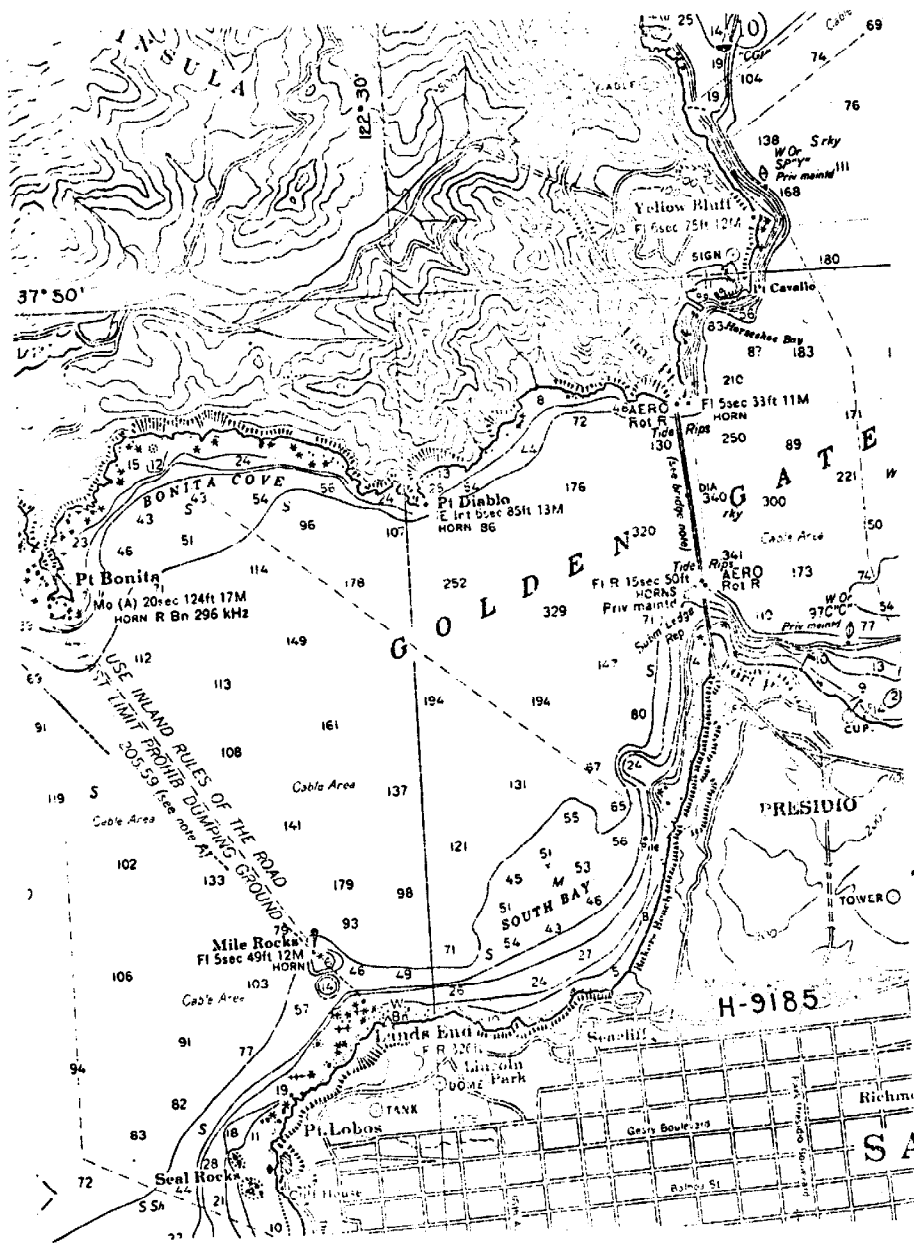
verified

Soundings ~~provided~~ by Virginia L. Davis

Soundings in fathoms & feet at ~~KLW~~ MLLW

REMARKS:

Applied to data 11/2/72
CSB



VICINITY MAP

A. PROJECT

This survey was accomplished according to Project Instructions: PMC/SP-2-71, Golden Gate, San Francisco, California, dated 10 February 1971.

B. AREA SURVEYED

The survey covered the area in the Golden Gate bounded to the East by Longitude $122^{\circ}28'15''\text{W}$ and to the West by Longitude $122^{\circ}30'00''\text{W}$.

Work was accomplished between 1 March and 20 March 1971. There are no contemporary surveys being made in the area.

C. SOUNDING VESSEL

All work on the survey was accomplished using PMC launch 1262. Position numbers are shown on the boatsheet in red.

D. SOUNDING EQUIPMENT

A Raytheon 723-D fathometer, number 37010, was used for the entire survey. Echo sounder corrections were determined from bar checks taken at least once daily by the launch. The fathometer was initialed at O.O. Soundings were initially taken in feet and were later taken in fathoms at the request of the consulting engineer for the Golden Gate Bridge.

E. SMOOTH SHEET

The smooth sheet will be constructed and plotted by the Processing Division, Pacific Marine Center, Seattle, Wash.

F. CONTROL

Visual three-point fixes were used for control in this survey. There were two types of signals used for the survey: triangulation and hydrographic. The triangulation signals were machine plotted on the boatsheet and checked by the survey party officers. Hydrographic signals were located by sextant cuts taken from the survey launch and were plotted on the boatsheet by the launch officers.

G. SHORELINE

No shoreline investigations were made on this survey. The shoreline used on the boatsheet was traced from T-5922 and T-5926.

H. CROSSLINES

The percentage of crosslines run is 10% (14.0 NM compared to 140.5 NM). There is good agreement at crossings.

I. JUNCTIONS

No junctions were made with any other survey.

J. COMPARISON WITH PRIOR SURVEYS

Comparisons with prior surveys will be made by the consulting engineer of the Golden Gate Bridge and Transportation District.

K. COMPARISON WITH THE CHART

Comparisons with chart No. 5532 will be made by the Processing Division, Pacific Marine Center, Seattle, Washington.

L. ADEQUACY OF SURVEY

This survey is considered adequate and complete to supersede prior surveys of the area.

M. AIDS TO NAVIGATION

No investigations of Aids to Navigation were made.

N. STATISTICS

Area of survey 1 square NM

Number of Positions 2,672

Nautical Miles of Sounding Lines 140.5 NM

No bottom samples were taken for this survey.

There are 8 volumes of soundings with this survey.

NOTE: One overlay accompanies the boatsheet.

Howard W. King

TIDE NOTE

The Tide Stations used for this survey was the
Standard Tide Gage , San Francisco (Golden Gate), California.

Location

*U.S. COAST GUARD, FORT POINT WHARF,
PRESIDIO OF SAN FRANCISCO
LAT. 37° 43.4' LONG. 122° 27.3'*

Plane of Reference

MLLW

Time Meridian

120°W

Type of Gage

Standard

*Remove tide printout
and file in Cahier*

INITIAL JULIAN DAY NUMBER IS 60 *March 7*
ACCURACY OF APPROXIMATION CYCLE IS .0010
TIME CORR-HIGHS= 0
TIME CORR-LOWS= 0
CORR(FT) TO HIGHS= .0
CORR(FT) TO LOWS= .0
RANGE RATIO APPLIED TO HIGHS 1.1000
RANGE RATIO APPLIED TO LOWS 1.1000

CORRECTORS ARE IN FEET

DAY NUMBER 60
TIME ZONE IS 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)	
		HIGH TIDE OF 6.5 AT 200
-6.5	307	
-6.0	339	
-5.5	404	
-5.0	426	
-4.5	446	
-4.0	505	
-3.5	525	
-3.0	544	
-2.5	603	
-2.0	624	
-1.5	647	
-1.0	714	
-.5	752	
		LOW TIDE OF -.0 AT 842
.0	940	
-.5	1025	
-1.0	1058	
-1.5	1126	
-2.0	1153	
-2.5	1220	
-3.0	1248	
-3.5	1318	
-4.0	1356	
		HIGH TIDE OF 4.5 AT 1518
-4.5	1642	
-4.0	1723	
-3.5	1801	
-3.0	1841	
-2.5	1945	
		LOW TIDE OF 2.0 AT 2012
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-2.0	2038
-2.5	2143
-3.0	2220
-3.5	2252
-4.0	2321
-4.5	2350

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DAY NUMBER 61 *22-62*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-5.0 20
-5.5 53
-6.0 136

HIGH TIDE OF 6.5 AT 248

-6.5 349
-6.0 425
-5.5 452
-5.0 515
-4.5 537
-4.0 557
-3.5 617
-3.0 637
-2.5 658
-2.0 719
-1.5 743
-1.0 810
-.5 845

LOW TIDE OF -.0 AT 948

.0 1102
-.5 1145
-1.0 1218
-1.5 1249
-2.0 1318
-2.5 1347
-3.0 1418
-3.5 1454
-4.0 1548

HIGH TIDE OF 4.5 AT 1636

-4.5 1729
-4.0 1834
-3.5 1931

LOW TIDE OF 3.0 AT 2100

-3.0 2225
-3.5 2312
-4.0 2351

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DAY NUMBER 62 *Missouri*
TIME ZONE IS 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)		
-4.5	27		
-5.0	104		
-5.5	145		
-6.0	247		
		HIGH TIDE OF	6.5 AT 336
-6.5	416		
-6.0	506		
-5.5	539		
-5.0	606		
-4.5	630		
-4.0	653		
-3.5	715		
-3.0	738		
-2.5	800		
-2.0	824		
-1.5	849		
-1.0	919		
-.5	957		
		LOW TIDE OF	-.0 AT 1106
.0	1224		
-.5	1310		
-1.0	1345		
-1.5	1418		
-2.0	1449		
-2.5	1521		
-3.0	1556		
-3.5	1639		
		HIGH TIDE OF	4.0 AT 1806
-4.0	2004		
		LOW TIDE OF	3.5 AT 2206
-3.5	2348		

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DAY NUMBER 63 *March 9*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-4.0 40
-4.5 125
-5.0 210
-5.5 304

HIGH TIDE OF 6.0 AT 442

-6.0 556
-5.5 635
-5.0 705
-4.5 731
-4.0 756
-3.5 819
-3.0 842
-2.5 906
-2.0 930
-1.5 957
-1.0 1027
-.5 1107

LOW TIDE OF -.0 AT 1218

.0 1337
-.5 1424
-1.0 1500
-1.5 1532
-2.0 1603
-2.5 1634
-3.0 1708
-3.5 1747
-4.0 1844

HIGH TIDE OF 4.5 AT 1936

-4.5 2041
-4.0 2214

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DAY NUMBER 64 *21/11/5*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

LOW TIDE OF 3.5 AT 2336

-3.5 51
-4.0 155
-4.5 246
-5.0 338
-5.5 445

HIGH TIDE OF 6.0 AT 554

-6.0 645
-5.5 733
-5.0 806
-4.5 834
-4.0 859
-3.5 923
-3.0 947
-2.5 1010
-2.0 1035
-1.5 1101
-1.0 1131
-.5 1208

LOW TIDE OF -.0 AT 1330

.0 1457
-.5 1537
-1.0 1610
-1.5 1640
-2.0 1708
-2.5 1737
-3.0 1807
-3.5 1841
-4.0 1924

HIGH TIDE OF 4.5 AT 2042

-4.5 2223
-4.0 2342

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DAY NUMBER 65 *March 6*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

LOW TIDE OF 3.5 AT 100

-3.5 212
-4.0 315
-4.5 404
-5.0 454
-5.5 559

HIGH TIDE OF 6.0 AT 706

-6.0 754
-5.5 840
-5.0 911
-4.5 938
-4.0 1002
-3.5 1025
-3.0 1047
-2.5 1109
-2.0 1132
-1.5 1157
-1.0 1224
-.5 1257
.0 1352

LOW TIDE OF -.5 AT 1424

.5 1456
.0 1554
-.5 1629
-1.0 1658
-1.5 1725
-2.0 1750
-2.5 1816
-3.0 1842
-3.5 1911
-4.0 1944
-4.5 2031

HIGH TIDE OF 5.0 AT 2124

-5.0 2225
-4.5 2326

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DAY NUMBER 66 *March 7*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-4.0 18
-3.5 132

LOW TIDE OF 3.0 AT 206

-3.0 240
-3.5 355
-4.0 442
-4.5 524
-5.0 609
-5.5 710

HIGH TIDE OF 6.0 AT 812

-6.0 858
-5.5 942
-5.0 1012
-4.5 1037
-4.0 1101
-3.5 1122
-3.0 1144
-2.5 1205
-2.0 1227
-1.5 1251
-1.0 1317
-.5 1349
.0 1441

LOW TIDE OF -.5 AT 1512

.5 1543
.0 1639
-.5 1712
-1.0 1741
-1.5 1806
-2.0 1830
-2.5 1854
-3.0 1919
-3.5 1945
-4.0 2014
-4.5 2052

HIGH TIDE OF 5.0 AT 2206

-5.0 2328

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DAY NUMBER 67 *March 8*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-4.5 13
-4.0 54
-3.5 140

LOW TIDE OF 3.0 AT 300

-3.0 421
-3.5 507
-4.0 545
-4.5 621
-5.0 659
-5.5 748

HIGH TIDE OF 6.0 AT 900

-6.0 957
-5.5 1034
-5.0 1102
-4.5 1126
-4.0 1148
-3.5 1210
-3.0 1230
-2.5 1251
-2.0 1313
-1.5 1336
-1.0 1403
-.5 1435

LOW TIDE OF -.0 AT 1548

.0 1704
-.5 1740
-1.0 1809
-1.5 1834
-2.0 1858
-2.5 1922
-3.0 1946
-3.5 2011
-4.0 2039
-4.5 2114
-5.0 2217

HIGH TIDE OF 5.5 AT 2236

-5.5 2256

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DAY NUMBER 68 *Mm. 1.9*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-5.0 4
-4.5 44
-4.0 120
-3.5 157
-3.0 246

LOW TIDE OF 2.5 AT 342

-2.5 441
-3.0 533
-3.5 611
-4.0 646
-4.5 720
-5.0 759
-5.5 852

HIGH TIDE OF 6.0 AT 948

-6.0 1032
-5.5 1114
-5.0 1143
-4.5 1208
-4.0 1230
-3.5 1251
-3.0 1312
-2.5 1333
-2.0 1355
-1.5 1419
-1.0 1446
-.5 1521

LOW TIDE OF -1.0 AT 1624

.0 1730
-.5 1808
-1.0 1837
-1.5 1902
-2.0 1925
-2.5 1950
-3.0 2013
-3.5 2038
-4.0 2104
-4.5 2136
-5.0 2225

HIGH TIDE OF 5.5 AT 2306

-5.5 2347

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DAY NUMBER 69 *March 10*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-5.0 38
-4.5 113
-4.0 144
-3.5 216
-3.0 252
-2.5 353

LOW TIDE OF 2.0 AT 418

-2.0 445
-2.5 552
-3.0 632
-3.5 706
-4.0 739
-4.5 813
-5.0 852
-5.5 954

HIGH TIDE OF 6.0 AT 1030

-6.0 1058
-5.5 1148
-5.0 1219
-4.5 1244
-4.0 1307
-3.5 1329
-3.0 1350
-2.5 1412
-2.0 1435
-1.5 1501
-1.0 1532
-.5 1630

LOW TIDE OF -.0 AT 1648

.0 1707
-.5 1810
-1.0 1845
-1.5 1913
-2.0 1939
-2.5 2003
-3.0 2028
-3.5 2053
-4.0 2119
-4.5 2151
-5.0 2232

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DAY NUMBER 70 *March 11*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 2330

-5.5 24
-5.0 107
-4.5 139
-4.0 208
-3.5 236
-3.0 306
-2.5 342

LOW TIDE OF 2.0 AT 500

-2.0 625
-2.5 703
-3.0 736
-3.5 806
-4.0 836
-4.5 909
-5.0 948

HIGH TIDE OF 5.5 AT 1112

-5.5 1222
-5.0 1254
-4.5 1320
-4.0 1344
-3.5 1406
-3.0 1429
-2.5 1452
-2.0 1516
-1.5 1545
-1.0 1626

LOW TIDE OF .5 AT 1712

-1.0 1803
-1.0 1849
-1.5 1922
-2.0 1950
-2.5 2016
-3.0 2041
-3.5 2107
-4.0 2134
-4.5 2205
-5.0 2244

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DAY NUMBER 71 *March 12*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 2354

-5.5 57
-5.0 134
-4.5 203
-4.0 230
-3.5 255
-3.0 322
-2.5 351
-2.0 430

LOW TIDE OF 1.5 AT 530

-1.5 639
-2.0 723
-2.5 758
-3.0 829
-3.5 859
-4.0 931
-4.5 1008
-5.0 1102

HIGH TIDE OF 5.5 AT 1148

-5.5 1227
-5.0 1315
-4.5 1346
-4.0 1413
-3.5 1439
-3.0 1504
-2.5 1530
-2.0 1559
-1.5 1636

LOW TIDE OF 1.0 AT 1742

-1.0 1853
-1.5 1933
-2.0 2005
-2.5 2033
-3.0 2100
-3.5 2127
-4.0 2155
-4.5 2226
-5.0 2307

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DAY NUMBER 72 *March 13*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 18

-5.5 121

-5.0 158

-4.5 226

-4.0 252

-3.5 317

-3.0 342

-2.5 408

-2.0 439

-1.5 525

LOW TIDE OF 1.0 AT 606

-1.0 653

-1.5 746

-2.0 823

-2.5 854

-3.0 924

-3.5 955

-4.0 1028

-4.5 1110

HIGH TIDE OF 5.0 AT 1230

-5.0 1341

-4.5 1419

-4.0 1449

-3.5 1517

-3.0 1545

-2.5 1616

-2.0 1653

LOW TIDE OF 1.5 AT 1806

-1.5 1925

-2.0 2006

-2.5 2038

-3.0 2108

-3.5 2137

-4.0 2207

-4.5 2240

-5.0 2323

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DAY NUMBER 73 *March 14*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 36

-5.5 141
-5.0 218
-4.5 247
-4.0 313
-3.5 338
-3.0 403
-2.5 429
-2.0 458
-1.5 536

LOW TIDE OF 1.0 AT 642

-1.0 759
-1.5 843
-2.0 918
-2.5 950
-3.0 1021
-3.5 1054
-4.0 1133
-4.5 1234

HIGH TIDE OF 5.0 AT 1312

-5.0 1346
-4.5 1443
-4.0 1520
-3.5 1554
-3.0 1627
-2.5 1706

LOW TIDE OF 2.0 AT 1830

-2.0 2000
-2.5 2042
-3.0 2116
-3.5 2149
-4.0 2221
-4.5 2257
-5.0 2342

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STATION NUMBER 74 *March 15*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 100

-5.5 206

-5.0 245

-4.5 314

-4.0 341

-3.5 406

-3.0 431

-2.5 456

-2.0 524

-1.5 557

-1.0 651

LOW TIDE OF .5 AT 724

-.5 802

-1.0 905

-1.5 945

-2.0 1019

-2.5 1052

-3.0 1126

-3.5 1203

-4.0 1253

HIGH TIDE OF 4.5 AT 1400

-4.5 1505

-4.0 1556

-3.5 1638

-3.0 1722

-2.5 1831

LOW TIDE OF 2.0 AT 1900

-2.0 1928

-2.5 2037

-3.0 2119

-3.5 2154

-4.0 2228

-4.5 2305

-5.0 2348

DAY NUMBER 75 *March 16*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

HIGH TIDE OF 5.5 AT 118

-5.5 237
-5.0 314
-4.5 344
-4.0 410
-3.5 436
-3.0 501
-2.5 527
-2.0 555
-1.5 628
-1.0 714

LOW TIDE OF .5 AT 806

-.5 908
-1.0 1005
-1.5 1047
-2.0 1124
-2.5 1201
-3.0 1240
-3.5 1327

HIGH TIDE OF 4.0 AT 1500

-4.0 1635
-3.5 1733
-3.0 1843

LOW TIDE OF 2.5 AT 1930

-2.5 2015
-3.0 2120
-3.5 2204
-4.0 2244
-4.5 2324

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DAY NUMBER 76 *March 17*

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-5.0 11

HIGH TIDE OF 5.5 AT 148

-5.5 312

-5.0 351

-4.5 422

-4.0 451

-3.5 518

-3.0 544

-2.5 611

-2.0 640

-1.5 713

-1.0 757

LOW TIDE OF .5 AT 906

-.5 1027

-1.0 1121

-1.5 1203

-2.0 1242

-2.5 1322

-3.0 1405

-3.5 1505

HIGH TIDE OF 4.0 AT 1612

-4.0 1729

-3.5 1902

LOW TIDE OF 3.0 AT 2012

-3.0 2113

-3.5 2219

-4.0 2307

-4.5 2353

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DAY NUMBER 77 *March 13*
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-5.0 45

HIGH TIDE OF 5.5 AT 230

-5.5 357

-5.0 438

-4.5 511

-4.0 540

-3.5 608

-3.0 636

-2.5 704

-2.0 734

-1.5 809

-1.0 854

LOW TIDE OF .5 AT 1006

-.5 1132

-1.0 1229

-1.5 1313

-2.0 1355

-2.5 1436

-3.0 1522

-3.5 1625

HIGH TIDE OF 4.0 AT 1736

-4.0 1902

LOW TIDE OF 3.5 AT 2100

-3.5 2237

-4.0 2340

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DAY NUMBER 78

March 19

TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-4.5 35
-5.0 137

HIGH TIDE OF 5.5 AT 318

-5.5 436

-5.0 521

-4.5 556

-4.0 627

-3.5 656

-3.0 724

-2.5 752

-2.0 822

-1.5 855

-1.0 935

-.5 1049

LOW TIDE OF -.0 AT 1112

.0 1137

-.5 1305

-1.0 1353

-1.5 1435

-2.0 1514

-2.5 1553

-3.0 1637

-3.5 1732

HIGH TIDE OF 4.0 AT 1900

-4.0 2108

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INITIAL JULIAN DAY NUMBER IS 71
 ACCURACY OF APPROXIMATION CYCLE IS .0010
 TIME CORR-HIGHS= 0
 TIME CORR-LOWS= 0
 CORR(FT) TO HIGHS= .0
 CORR(FT) TO LOWS= .0
 RANGE RATIO APPLIED TO HIGHS 1.0000
 RANGE RATIO APPLIED TO LOWS 1.0000

CORRECTORS ARE IN FATHOMS

↗ 3/12/71
 ↖ DAY NUMBER 71

TIME ZONE IS 120 W
 CORRECTOR

TIME (AT WHICH CORRECTOR ENDS)

		LOW TIDE OF	.2 AT	530
-.2	632			
-.3	731			
-.4	814			
-.5	855			
-.6	937			
-.7	1031			
		HIGH TIDE OF	.8 AT	1148
-.8	1255			
-.7	1341			
-.6	1418			
-.5	1451			
-.4	1525			
-.3	1604			
-.2	1703			
		LOW TIDE OF	.1 AT	1742
-.1	1823			
-.2	1928			
-.3	2009			
-.4	2045			
-.5	2121			
-.6	2158			
-.7	2241			

DAY NUMBER 72
TIME ZONE IS 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)			
		HIGH TIDE OF	.8 AT	18
-.8	144			
-.7	223			
-.6	257			
-.5	329			
-.4	403			
-.3	444			
		LOW TIDE OF	.2 AT	606
-.2	741			
-.3	829			
-.4	910			
-.5	950			
-.6	1033			
-.7	1136			
		HIGH TIDE OF	.8 AT	1230
-.8	1318			
-.7	1415			
-.6	1455			
-.5	1532			
-.4	1612			
-.3	1702			
		LOW TIDE OF	.2 AT	1806
-.2	1915			
-.3	2010			
-.4	2051			
-.5	2130			
-.6	2210			
-.7	2256			

MAR 14 7/
DAY NUMBER 73
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

		HIGH TIDE OF	.8 AT	36
-.8	204			
-.7	245			
-.6	319			
-.5	351			
-.4	425			
-.3	503			
-.2	603			
		LOW TIDE OF	.1 AT	642
-.1	726			
-.2	837			
-.3	923			
-.4	1005			
-.5	1048			
-.6	1139			
		HIGH TIDE OF	.7 AT	1312
-.7	1438			
-.6	1527			
-.5	1610			
-.4	1658			
		LOW TIDE OF	.3 AT	1830
-.3	2009			
-.4	2059			
-.5	2142			
-.6	2225			
-.7	2314			

MAR 15

DAY NUMBER 74
TIME ZONE 15 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)			
		HIGH TIDE OF	.8 AT	100
-.8	235			
-.7	318			
-.6	355			
-.5	429			
-.4	504			
-.3	543			
-.2	635			
		LOW TIDE OF	.1 AT	742
-.1	853			
-.2	950			
-.3	1034			
-.4	1116			
-.5	1201			
-.6	1305			
		HIGH TIDE OF	.7 AT	1400
-.7	1455			
-.6	1605			
-.5	1700			
-.4	1814			
		LOW TIDE OF	.3 AT	1900
-.3	1946			
-.4	2059			
-.5	2148			
-.6	2234			
-.7	2324			

M. D. 11/11/71

DAY NUMBER 75
TIME ZONE IS 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)			
-.8	46			
		HIGH TIDE OF	.9 AT	118
-.9	146			
-.8	257			
-.7	339			
-.6	415			
-.5	448			
-.4	522			
-.3	559			
-.2	647			
		LOW TIDE OF	.1 AT	806
-.1	942			
-.2	1041			
-.3	1130			
-.4	1219			
-.5	1317			
		HIGH TIDE OF	.6 AT	1500
-.6	1648			
-.5	1806			
		LOW TIDE OF	.4 AT	1930
-.4	2050			
-.5	2156			
-.6	2249			
-.7	2345			

DAY NUMBER 76
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-.8	113			
		HIGH TIDE OF	.9 AT	148
-.9	217			
-.8	333			
-.7	417			
-.6	455			
-.5	530			
-.4	606			
-.3	644			
-.2	730			
		LOW TIDE OF	.1 AT	906
-.1	1100			
-.2	1158			
-.3	1249			
-.4	1341			
-.5	1449			
		HIGH TIDE OF	.6 AT	1612
-.6	1749			
		LOW TIDE OF	.5 AT	2012
-.5	2210			
-.6	2314			

DAY NUMBER 77
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-.7 17
-.8 153

HIGH TIDE OF .9 AT 230

-.9 301
-.8 420
-.7 505
-.6 544
-.5 621
-.4 658
-.3 738
-.2 827

LOW TIDE OF .1 AT 1006

-.1 1206
-.2 1307
-.3 1401
-.4 1457
-.5 1608

HIGH TIDE OF .6 AT 1736

-.6 1925

LOW TIDE OF .5 AT 2100

-.5 2224
-.6 2347

DAY NUMBER 79
TIME ZONE IS 120 W

CORRECTOR TIME (AT WHICH CORRECTOR ENDS)

-.7 100

HIGH TIDE OF .8 AT 318

-.8 505

-.7 553

-.6 633

-.5 711

-.4 748

-.3 828

-.2 914

-.1 1025

LOW TIDE OF -.0 AT 1112

.0 1206

-.1 1332

-.2 1429

-.3 1521

-.4 1615

-.5 1722

DAY NUMBER 79
TIME ZONE IS 120 W

CORRECTOR	TIME (AT WHICH CORRECTOR ENDS)		
		LOW TIDE OF	.6 AT 2218
-.6	41		
-.7	200		
		HIGH TIDE OF	.8 AT 424
-.8	610		
-.7	657		
-.6	736		
-.5	813		
-.4	849		
-.3	926		
-.2	1007		
-.1	1102		
		LOW TIDE OF	-.0 AT 1224
.0	1353		
-.1	1453		
-.2	1541		
-.3	1625		
-.4	1711		
-.5	1803		
-.6	1931		
		HIGH TIDE OF	.7 AT 2006
-.7	2047		

000000

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 27, 1971

~~Nautical Chart Division~~ Pacific Marine Center

Plane of reference approved in ~~volume xxx of xxxxxxxxxx records~~ for
~~xxxxxx sounding records~~ Tide Tape Printout

HYDROGRAPHIC SHEET 9185

Locality: California coast

Year
~~Chief of Party~~: 1971

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681):

San Francisco (Presidio)

Height of Mean High Water above Plane of Reference is as follows:

5.1 feet

Remarks

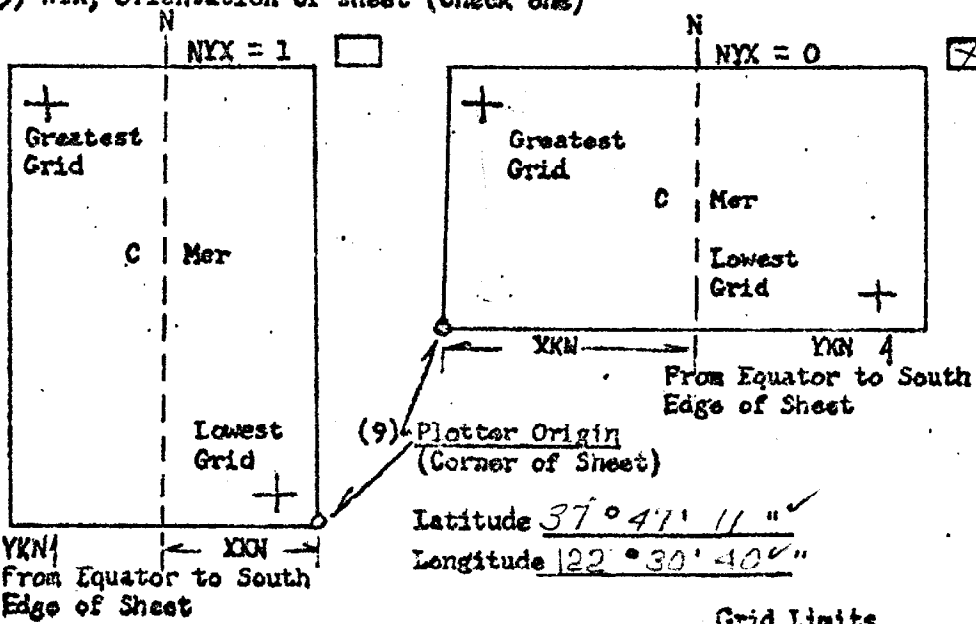

Chief, Tides and Currents Branch

70021

PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION

70021

- (1) Project No. PYC-SP-2-71
- (2) H No. _____
- (3) Field No. PYC-SP-2-71
- (4) Requested by H. H. ...
- (5) Ship or Office ...
- (6) Date Required 3/15/51
- (7) Visual Ft. (0) or Fathoms (1) (8) Electronic (fill out form)
- (10) XKN (SP 5) Distance from CMER to East Edge (NYX = 1) or West Edge (NYX = 0). (Origin) 3915.1 Meter
- (11) YKN (SP 241) Distance from Equator to South Edge of Sheet. (Origin) 4,193,583.124 Meter
- (12) Central Meridian 122° 28' 00"
- (13) Survey Scale 1: 5000
- (14) Size of Sheet (Check one) 36x60 42x60
- (15) NYX, Orientation of sheet (Check one)



(9) Plotter Origin (Corner of Sheet)
 Latitude 37° 47' 11"
 Longitude 122° 30' 40"

FriscO

- Grid Limits**
- (16) Greatest Latitude 37° 50' 00" (Projection Limit)
 - (17) Lowest Latitude 37° 47' 15" Interval Page 4
 - (18) Difference 2' 45" Hydro Manual)
 - (19) _____
 - (20) _____
 - (21) Greatest Longitude 122° 30' 30"
 - (22) Lowest Longitude 122° 25' 30" (24) _____
 - (23) Difference 5' 00" (25) _____

721

SIGNAL PLOTTER CARDS H-9185

H-NO. 1 LATITUDE LONGITUDE X Y

H-NO.	LATITUDE	LONGITUDE	X	Y	DESCRIPTION
70011	001	37482918	122253358	15741	04998
70011	002	37482745	122263392	12642	04951
70011	003	37483022	122270882	10849	05130
70011	004	37483123	122281137	07637	05194
70011	005	37483817	122283429	06460	05643
70011	006	37485059	122283820	05259	06447
70011	007	37483852	122283501	06423	05666
70011	008	37485075	122283466	06441	06458
70011	009	37485068	122283643	06350	06453
70011	010	37473415	122303334	00343	01500
70011	011	37491268	122295397	02368	07879
70011	012	37492634	122292538	03323	08763
70011	013	37493663	122290700	04780	09430
70011	014	37493486	122284797	05757	09574
70011	015	37493178	122284159	06085	09114
70011	016	37493468	122284157	06086	09301
70011	017	37500297	122282915	06724	11133
70011	018	37500648	122281714	07341	11360
70011	019	37493188	122283791	06274	09120
70011	020	37493202	122284127	06101	09129
70011	021	37482197	122271014	10782	04596
70011	022	37482672	122264323	12164	04904
70011	023	37482639	122262532	06069	04981
70011	024	37485139	122283651	06346	06499
70011	025	37471188	122300719	01686	00059

37 49 39.41 122 25 21.84 226 ALCATRAZ WATER TANK, 1940
 37 49 34.67 122 25 15.76 227 ALCATRAZ LIGHTHOUSE, 1910
 37 49 31.80 122 28 43.82 228 HYDRO Vol. 1 pg. 3
 37 48 11.50 122 28 41.40 229 HYDRO Vol. 1 pg. 5
 37 47 21.40 122 29 12.80 230 HYDRO Vol. 1 pg. 4

ANITA ROCKS LIGHT, 1965
 CLARK, 1948
 FORT POINT LIGHTHOUSE, 1916
 GOLD, 1948
 GATE, 1948
 MILE ROCK LIGHTHOUSE, 1916
 PT. DIABLO LIGHT, 1928
 KITE, 1948
 BUZZARD, 1948
 OKE, 1948
 LIME POINT LT., 1964
 GOLDEN GATE SO. PIER LT., 1964
 BONITA CHANNEL REAR RANGE LT., 1964

09185

H-9185

Velocity Tape

000105 00 0001 0001 000 0 000000 000000
000190 00 0002
000265 00 0003
000340 00 0004
000410 00 0005
000495 00 0006
000565 00 0007
000640 00 0008
000715 00 0009
000790 00 0010
000870 00 0011
000960 00 0012
001095 00 0013
001770 00 0014
001890 00 0015
001980 00 0016
002060 00 0017
002120 00 0018
002175 00 0019
002235 00 0020
002300 00 0021
002355 00 0022
002440 00 0023
002525 00 0024

H-9185

Velocity Tape

Page 2 of 2

7 002615 00 0025 ✓

6 002705 00 0026 ✓

5 002805 00 0027 ✓

4 002920 00 0028 ✓

3 003050 00 0029 ✓

2 003200 00 0030 ✓

003340 00 0031 ✓

003485 00 0032 ✓

003630 00 0033 ✓

003790 00 0034 ✓

63.1 fath.

H-9185

TC/TI TAPE

000000 00 0020 0001 060 0 000000 000000

~~000000 00 0020 0001 061 0 000000 000000~~

~~000000 00 0020 0001 063 0 000000 000000~~

~~000000 00 0020 0001 064 0 000000 000000~~

~~000000 00 0020 0001 067 0 000000 000000~~

~~000000 00 0020 0001 068 0 000000 000000~~

~~101030 00 0019~~

~~102130 00 0020~~

~~000000 00 0020 0001 069 0 000000 000000~~

~~000010 00 0020 0001 070 0 000000 000000~~

000000 00 0020 0001 070 0 000000 000000

000000 00 0020 0001 072 0 000000 000000

000000 00 0020 0001 073 0 000000 000000

162730 00 0014 0001 074 0 000000 000000

173800 00 0020

091130 00 0026 0001 075 0 000000 000000

135645 00 0020

125900 00 0026 0001 076 0 000000 000000

132215 00 0020

7

161445 00 0026

6

161900 00 0032

5

162200 00 0026

4

163730 00 0020

3

165445 00 0026

2

165700 00 0032

15-0125

TC/TI TAPE

Page 2 of 2

170600 00 0026

173315 00 0020

165345 00 0026 0001 078 0 000000 000000

165645 00 0020

173000 00 0026

173400 00 0032

121700 00 0020 0001 079 0 000000 000000

123715 00 0014

LIST OF STATIONS

H-9185

- 203 ANITA ROCK LIGHT, 1965
 - 204 CLARK, 1948
 - 205 FORT POINT LIGHTHOUSE, 1916
 - 206 GOLD, 1948
 - 208 GATE, 1948
 - 210 MILE ROCK LIGHTHOUSE, 1916
 - 211 POINT DIABLE LIGHT, 1928
 - 213 BUZZARD, 1948
 - 217 OKE, 1948
 - 219 LIME POINT LIGHT, 1964
 - 224 GOLDEN GATE BRIDGE SOUTH PIER LIGHT, 1964
 - ~~225~~ BONITA CHAN. RANGE REAR LIGHT, 1964
 - 226 ALCATRAZ WATER TANK, 1940
 - 227 ALCATRAZ LIGHTHOUSE, 1910
 - 228 Sounding Volume 1, page 3
 - 229 Sounding Volume 1, page 5
 - 230 Sounding Volume 1, page 4
-

LIST OF GEOGRAPHIC NAMES

H-9185

BAKER BEACH

FORT POINT

GOLDEN GATE

GOLDEN GATE BRIDGE

HORSESHOE BAY

LIME POINT

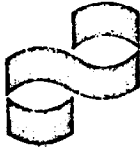
MILE ROCKS

NEEDLES

PT. CAVALLO

POINT DIABLO

SOUTH BAY



GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT

August 6, 1971

RECEIVED

AUG 9 1971

PACIFIC MARINE CENTER

Rear Admiral Norman E. Taylor
Director, Pacific Marine Center
National Ocean Survey
1801 Fairview Avenue East
Seattle, Washington 98102

Dear Admiral Taylor:

It was our understanding that the tagline surveys around the bridge piers was to be accomplished by the field party last March, as a part of the Golden Gate hydrographic survey. It is requested that a review of the previous planning be made to determine if the cost of tagline surveys was included in the February 4, 1971 Agreement.

The hydrographic survey was delayed by successive periods of illness among your field party, but they did make an unsuccessful attempt to get the tagline depths. The lack of success was mostly due to the unsuitable size of their launch (for that purpose).

We would prefer the soundings plotted on a scale of 1 inch = 50 feet but no great pains in plotting would be required as all soundings are relative to the piers. The need for accurate reduced soundings only at the tagline points is paramount. An accurate plotting of the piers and control points at that scale will be provided the field party along with the taglines and some bridge personnel for handling the lines. Copies of the previous surveys are attached for illustrating the methods used.

Your plan for accomplishing the work in October or at such time as the MAC ARTHUR is here on other work is satisfactory and a signed agreement will be sent if the results of your review so indicate.

Sincerely yours,

William M. Gibson

William M. Gibson
Hydrographic and Geodetic Engineer

101 Wildwood Avenue
Piedmont, Calif. 94610

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

National Ocean Survey
 Pacific Marine Center
 1801 Fairview Avenue East
 Seattle, Washington 98102

11 August 1971

In Reply Refer to:
 CEH12 4060/02

William M. Gibson
 Hydrographic and Geodetic Engineer
 101 Wildwood Avenue
 Piedmont, California 94610

Dear Admiral Gibson:

This is in reply to your letter of 6 August regarding hydrographic surveys in the vicinity of the Golden Gate Bridge.

The field survey accomplished last March under our agreement dated February 4, 1971, covered field work, office processing and review necessary to provide a 1:5,000 scale smooth plot of soundings reduced to MLLW of the Golden Gate area as shown on the enclosed chart. Our attempt to acquire tagline soundings around the piers was in response to your verbal request to CDR Jeffers and not a part of our formal agreement. For reasons stated in my letter of 29 July we are unable to undertake additional large scale surveys around the piers without executing a reimbursable agreement.

With regard to the scale of the survey, we can accommodate your needs for a 1 inch = 50 foot scale and will plan accordingly. Please note also that we will be furnishing you unprocessed field records of the tagline survey. This would include boat sheet, fathograms, a copy of the manigram and any other records and notes necessary for reducing the field data.

Sincerely,

Norman E. Taylor
 RADN, NOAA
 Director, Pacific Marine Center

CODE	SURNAME	DATE	CODE	SURNAME	DATE
PEB	Hopkin	8/12		Taylor	
MP	Jeffers	8/12			
	Kittleson	8/12			

LE COPY

ESSA FORM 61-2 (FORMERLY ESSA FORM 7)

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 149185

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		/	BOAT SHEETS		/	
DESCRIPTIVE REPORT		/	OVERLAYS		3 PRELIMINARY 1- SMOOTH	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES						
BOXES			1			
T-SHEET PRINTS (List)						
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				2672 (FIELD)
POSITIONS CHECKED		2668		
POSITIONS REVISED		88		
DEPTH SOUNDINGS REVISED		157		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		16		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		#219 = "LIME" (NOT LINE.)		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		N.A.		
JUNCTIONS		N.A.		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		PNO = 162 PSC = 298		
SPECIAL ADJUSTMENTS TIDE & TRANS.		4		
ALL OTHER WORK <i>SMOOTH COPY PNO (1 HR. PA/W) (MR DAVIS) = 18</i> <i>SMOOTH SAT. = 24</i> <i>REPORT & TRANSFER OF CHANGES TO ADVANCED ORNIFLEX COPIES = 18</i> <i>SHORELINE ADDED TO 3 COPIES =</i>				
TOTALS <i>REVIEW OF CHANGES =</i>			8 TOTAL 8 540	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Virginia L. Davis</i>	5-20-71		10-15-71	
REVIEW BY	BEGINNING DATE		ENDING DATE	

VERIFIER'S REPORT

H-9185

This special survey was made at the request of the California State Highway Dept. and was needed to support court litigation regarding the insurability of the Golden Gate Bridge. There was a time limitation set for PMC which was difficult to meet.

PART II

5. As noted in the field party's report under G. Shoreline, "The shoreline used on the boatsheet was traced from T-5922 and T-5926." These T sheets were not available at PMC and to meet the deadline set we departed from standard practice. The source of the smooth sheet shoreline was the boatsheet shoreline from the preliminary advance prints issued to the California State Highway Dept. When PMC finally received the T sheets 5922 and 5926 they were at a scale of 1:10,000. The smooth sheet is on a 1:5,000 scale. The smooth sheet shorelines were updated using Saltzman Projection enlargements to 1:5,000 scale. The reviewer should check the shorelines for accuracy.

Verification of H-9185 was difficult and time consuming. Strong eddy-currents caused the erratic and congested pattern of hydro lines (launch courses difficult to control). Steep irregular slopes and rapidly changing bottom configuration necessitated frequent scale changes on the fathograms. (Fathograms are difficult to interpret and tedious to read) Soundings taken in both feet and fathoms required conversions to feet for comparison at crosslines. Breakdowns of the automated plotter caused six weeks delay.

Respectfully submitted,



Virginia L. Davis
Cartographic Technician

H-9185

Added to the report for H-9185 (PMC copy only) are the following:

One letter dated 8 January 1965

Subject: Methods of conducting detailed erosion control survey
in the vicinity of the South Pier of the Golden Gate Bridge

Signed by: Paul W. Larson
LTjg USESSA

One special report - Tagline Survey (no date)

Signed by: Charles A. Schanck
CDR, USESSA
C.O. Ship BOWIE

One print of drawing showing soundings 1953 survey

One print of drawing showing soundings 1964 survey

One drawing of the General Plans and Sections (Plate II), California
State Highway Dept.

One Descriptive Report - Special Survey (19 August 1953)

One Descriptive Report - Special Survey (12 October 1964)

The above reports are considered extraneous to this project and presently
are on file with the project report at PMC.

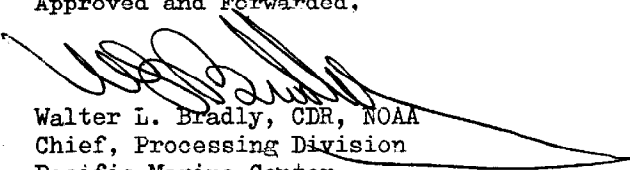
APPROVAL SHEET

The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report.)

Examined and approved,

Cornelius A. J. Pauw
for: William M. Martin
Supervisory Carto. Tech.

Approved and Forwarded,


Walter L. Bradley, CDR, NOAA
Chief, Processing Division
Pacific Marine Center

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H 9185

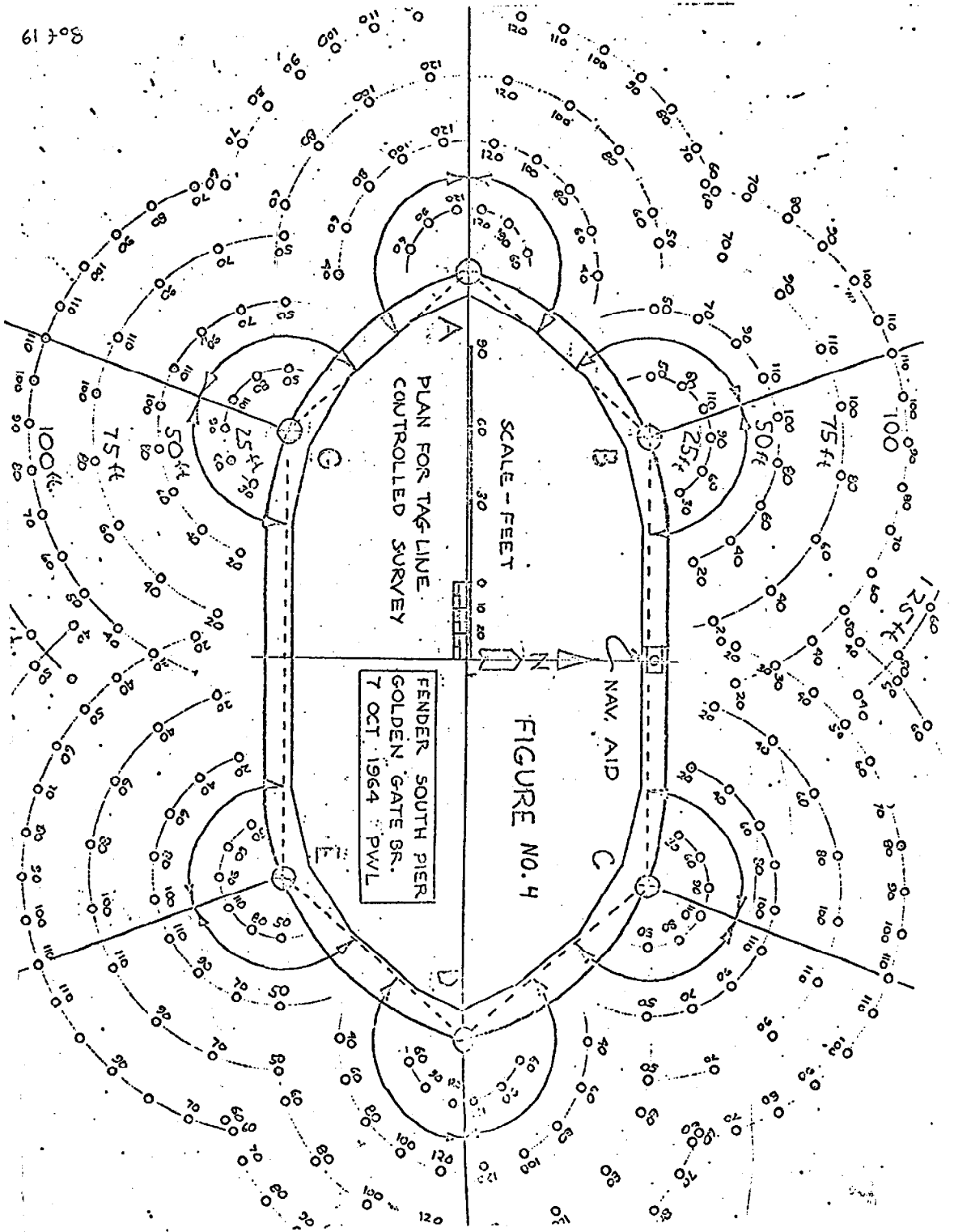
INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT	CL	R	Part III - JUNCTIONS (Continued)	CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None</p>	✓		<p>10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED.</p>	N.A.	
<p>2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None</p>	✓		<p>Part IV - VOLUMES</p> <p>11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None</p>	✓	
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>	✓				
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. Give earliest and latest dates of photographs N.A.</p> <p>b. Field inspection date N.A.</p> <p>c. Field Edit date</p> <p>d. Reviewed-Unreviewed</p>			<p>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:</p> <p>(a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features</p>		✓
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>		✓			
<p>6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None</p>	✓				
<p>7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.</p>	✓		<p>Part V - PROTRACTING</p> <p>13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>	✓	
<p>Part III - JUNCTIONS</p> <p>Note: Make a cursory comparison preliminary to inking soundings in area of overlap.</p> <p>8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>	N.A.		<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>	✓	
<p>9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None</p>	N.A.		<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>	N.A.	

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.	N.A.		26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.	N.A.	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	N.A.		27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None	N.A.	
Part VI - SOUNDINGS			Part IX - BOATSHEET		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	N.A.		28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None	✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	✓		29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	N.A.	
The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	✓		Part X - GENERAL		
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	✓		30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None	✓	
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.	✓		31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	✓	
Part VII - CURVES			32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None	✓	
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. <i>N. MARTIN</i>	✓		33. The bottom characteristics are adequately shown. Remarks Required: -- None	N.A.	
24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange ← c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None	✓		Part XI - NOTES TO THE REVIEWER		
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.	✓		34. Unresolved discrepancies and questionable soundings. <i>None</i>		
			35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy. <i>N.A.</i>		
			36. Supplemental information. <i>None</i>		
Verified by <i>Virginia Davis</i>			Date <i>10-14-71</i>		



FENDER SOUTH PIER
 GOLDEN GATE BR.
 7 OCT 1964 PWL

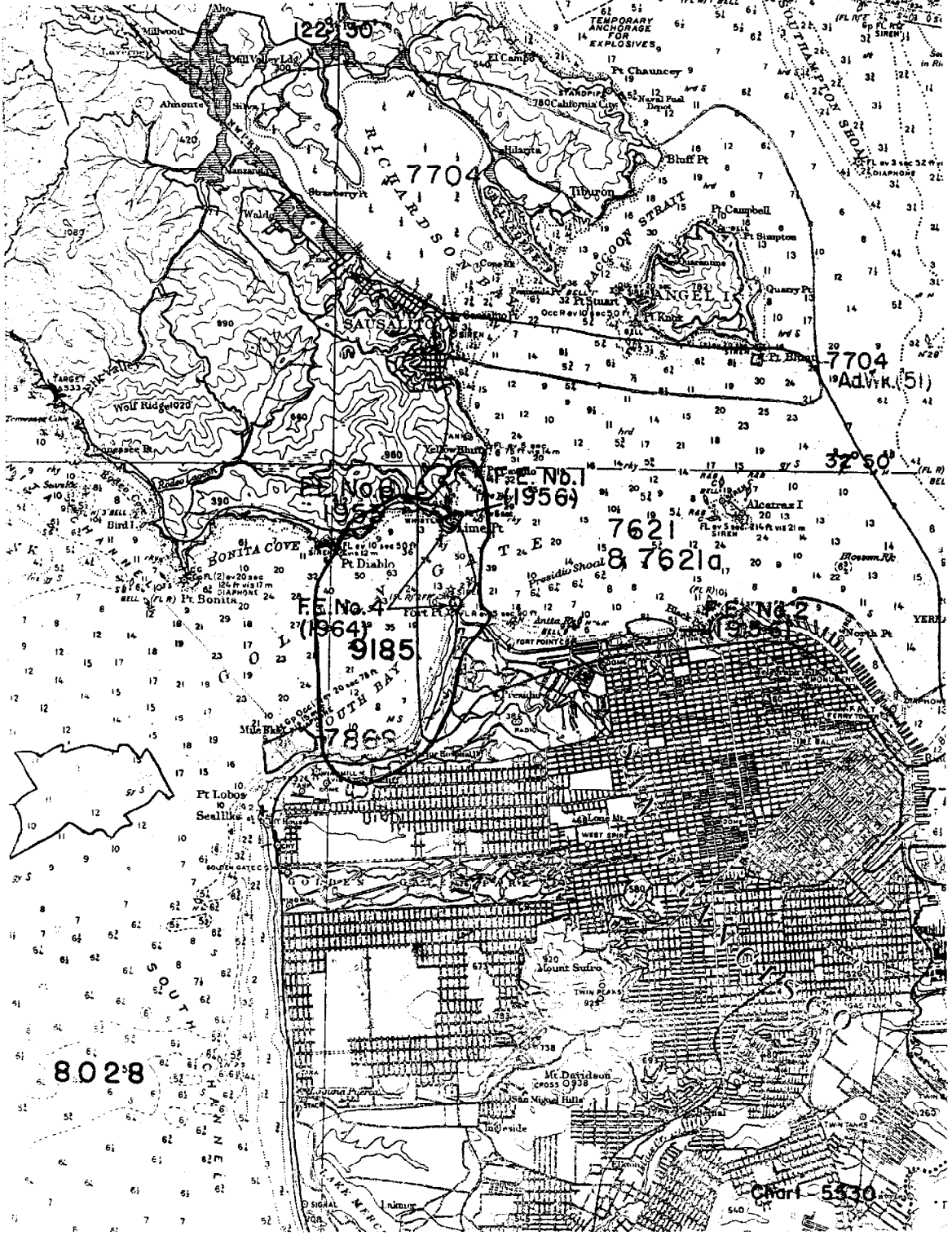
FIGURE NO. 4

PLAN FOR TAG LINE
 CONTROLLED SURVEY

SCALE - FEET

NAV. AID

8 of 19



22° 30'

7704

7704
Advk (51)

32° 50'

F.E. No. 1
(1956)

7621

87621d

F.E. No. 4
(1964)

9185

8028

Chart 5430

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9185

INSTRUCTIONS

- 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 Review.

CHART	DATE	CARTOGRAPHER	REMARKS
5335	11/8/72	Jeffery Dwyer	Full Part ^{before} After Verification Review Inspection Signed Via Drawing No.
5532	11/8/72	Jeffery Dwyer	Full Part ^{before} After Verification Review Inspection Signed Via Drawing No. Thru Dra # 45 Chart 5535 (part thru H sheet).
165-SC	11-22-72	William B. Chandle	Full Part ^{before} After Verification Review Inspection Signed Via Drawing No. Revised several edges & depth curves thru chart 5532.
5072	5/3/76	Don Cortis	Full Part Before After Verification Review Inspection Signed Via Drawing No. Adequately Appd / No Further CORR. Category 1 survey
5532	5/3/76	Don Cortis	Full Part Before After Verification Review Inspection Signed Via Drawing No. Adequately Appd / No Further CORR. Category 1 survey
5535	2/10/78	Robt Schuman PS	Full Part Before After Verification Review Inspection Signed Via Drawing No. CATEGORY 1 SURVEY / NO FURTHER CORR. Adequately appd
165-SC	2-12-78	Gregory B. Nono ^{WHW}	Full Part Before After Verification Review Inspection Signed Via Drawing No. CATEGORY 1 SURVEY / NO FURTHER CORR. Adequately appd.
(5532) 18649	See above DC.		Full Part Before After Verification Review Inspection Signed Via Drawing No. 68
18649	12/5/91	J. Sherman	Full Part Before After Verification Review Inspection Signed Via Drawing No. Adequately Appd - Category 1
			Full Part Before After Verification Review Inspection Signed Via Drawing No.