

DATE: 10/3/83

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 941-4458 San Mateo Bridge, CA

Period: May 16 - July 27, 1983

HYDROGRAPHIC SHEET: H-10070

OPR: L123

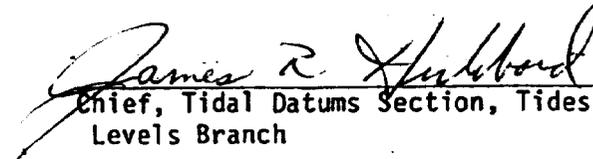
Locality: South San Francisco Bay, California

Plane of reference (mean lower low water): 14.67 feet

Height of Mean High Water above Plane of Reference is 7.0 feet

REMARKS: Recommended Zoning:

1. North of latitude $37^{\circ}35.0'$ zone direct.
2. South of $37^{\circ}35.0'$ to $37^{\circ}34.0'$.
 - a) West of longitude $122^{\circ}13.0'$ zone direct.
 - b) East of $122^{\circ}13.0'$ to $122^{\circ}10.0'$ apply x 1.03 range ratio.
 - c) East of $122^{\circ}10.0'$ apply +15 minute time correction and x 1.07 range ratio.
3. South of $37^{\circ}34.0'$.
 - a) West of $122^{\circ}13.0'$ zone direct.
 - b) East of $122^{\circ}13.0'$ to $122^{\circ}10.0'$ apply x 1.07 range ratio.
 - c) East of $122^{\circ}10.0'$ apply +15 minute time correction and x 1.07 range ratio.


Chief, Tidal Datums Section, Tides & Water
Levels Branch

Field Tide Note

Soundings on the field sheet were reduced on the basis of either telemetered tides from San Francisco (Golden Gate) California or real tides from San Mateo, California. Real tides from San Mateo were applied to soundings taken before JD 161/83. Telemetered tides from San Francisco were applied to soundings taken from JD 161/83 through to the end of the survey (JD 214/83).

Tides were adjusted with correctors supplied by the Tides and Water Levels Branch, Rockville, Maryland as follows:

Real tides from San Mateo, California (941-4458):

Time of high water	0 minutes
Time of low water	0 minutes
Height ratio	1.0

Telemetered tides for San Francisco, California (941-4290):

Time of high water	+43 minutes
Time of low water	+1 hour 10 minutes
Height ratio	1.41

Tidal reducers were computed at 0.2 foot intervals using a PDP 8/e computer system and program AM 500, "Predicted Tide Generator".

Only one tide gage (ADR type) was in operation in the survey area besides the three permanent gages maintained by the NOAA, Pacific Tide Party at San Francisco, Alameda and San Mateo, California. Location and period of operation of this single gage are as follows:

<u>Site</u>	<u>Position</u>	<u>Period</u>
Dumbarton Railroad Bridge 941-4510	37°29'57"N 122°06'23"W	May 11, 1983 - still in operation.

Dumbarton Railroad Bridge.

Fischer Porter ADR gage, S/N 7404A0407M17, was installed and levelled on May 11, 1983 and was in place for the entire survey. Excellent records were obtained with no interruptions in data. The analog record reads 40.3 feet greater than the staff.

Levels.

Levels were run to 7 marks (2 new and 5 historical) on May 11, 1983. No other levels have been run since installation on the Dumbarton Railroad Bridge Station. The gage is to remain in operation for further survey sheets. The next levels will be run in September 1983, and every six months after that. No noticeable divergence has been observed in the gage to tide staff difference since the Dumbarton Railroad Bridge Tide Station was established.

Time Meridian.

The time meridian used for Dumbarton Railroad Bridge Tide Station is 120° west (Pacific Standard Time).

Pacific Tide Party Tide Stations.

The Pacific Tide Party has maintained tide gages at Fort Point, Alameda and San Mateo, California during the entire survey period of H-10070. There have been no breaks in the data for Alameda and San Mateo gages during H-10070. The ADR gage at Fort Point was out of operation from the start of survey H-10070 until June 10, 1983. During this time, the backup bubbler gage was operating at Fort Point.