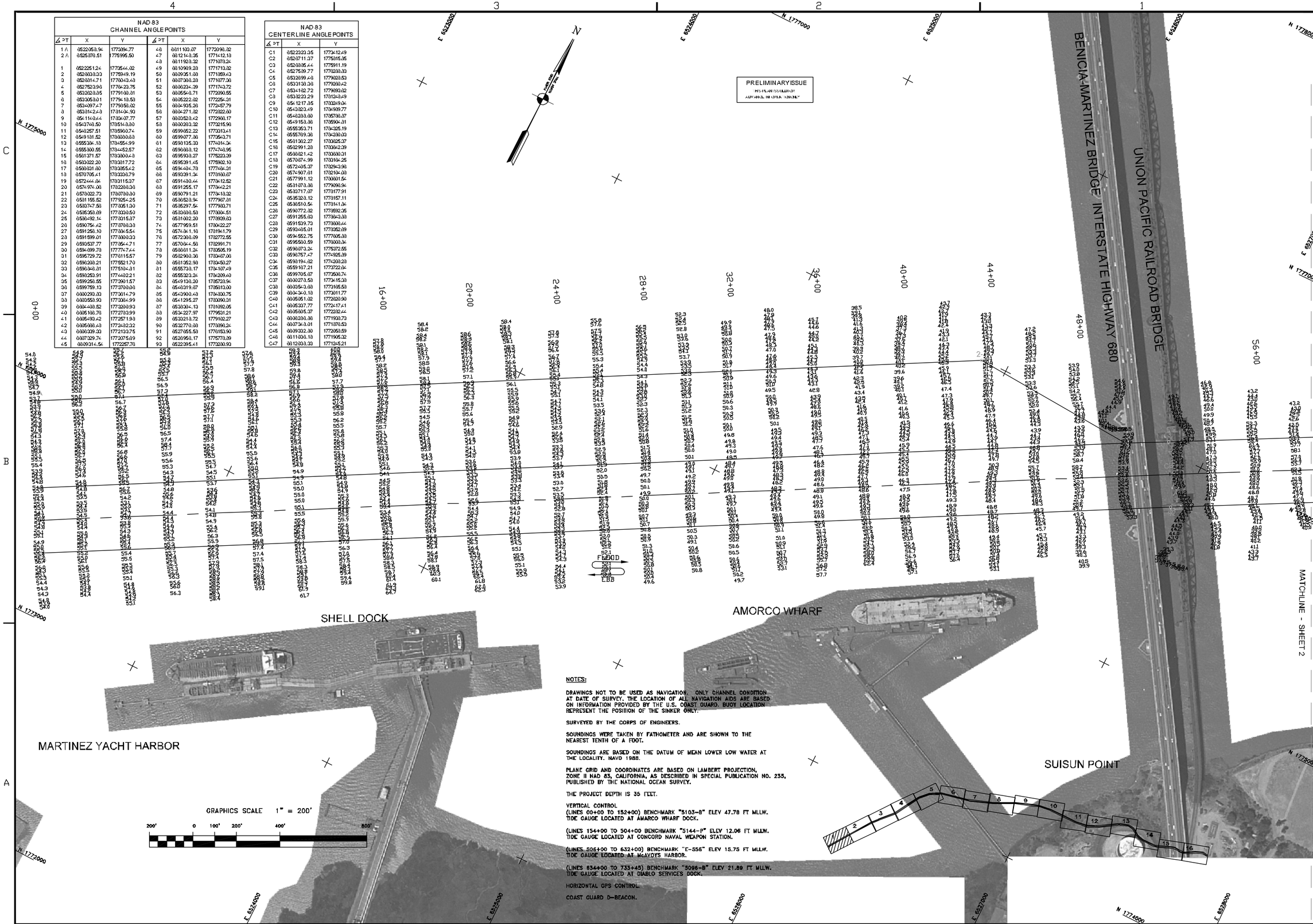
NAD 83 CHANNEL ANGLE POINTS					
∠ PT	X	Y	∠ PT	X	Y
1 A	6522053.94	1773394.37	48	6511100.07	1772398.62
2 A	6525370.51	1775995.50	47	6510143.95	1771412.19
			46	6511923.32	1771070.24
1	6522251.24	1773544.02	49	6510909.28	1771710.82
2	6520933.03	1775949.19	50	6509351.03	1771359.43
3	6520311.71	1773043.43	51	6507303.28	1771077.36
4	6527523.98	1770423.75	52	6506234.39	1771743.72
5	6532023.85	1779160.81	53	6505541.71	1772090.55
6	6533053.01	1779418.53	54	6505222.02	1772254.31
7	6534097.47	1779853.02	55	6504935.28	1772457.79
8	6535142.43	1781434.90	56	6504271.82	1772832.90
9	6541140.44	1783407.77	57	6503523.42	1772993.17
10	6543740.50	1785143.80	58	6502283.32	1773215.98
11	6543257.51	1785960.74	59	6599952.22	1773313.41
12	6549181.52	1786000.60	60	6599077.38	1773542.71
13	6555304.18	1784554.99	61	6598135.33	1774014.34
14	6555300.55	1784452.57	62	6596883.12	1774740.95
15	6561371.57	1783000.43	63	6595933.27	1775223.99
16	6563022.20	1783017.72	64	6595391.45	1775902.10
17	6569331.00	1783055.42	65	6594404.79	1777436.31
18	6570705.41	1783003.79	66	6593391.34	1778160.67
19	6572444.84	1783115.37	67	6591480.44	1778412.52
20	6576976.06	1782288.38	68	6591255.17	1778442.21
21	6578022.73	1780780.80	69	6590791.21	1778418.22
22	6581155.52	1779254.25	70	6589523.94	1777987.31
23	6583747.50	1778051.30	71	6585297.54	1777983.71
24	6585353.89	1778000.50	72	6583686.53	1778004.51
25	6590492.14	1778015.87	73	6581002.20	1778609.63
26	6590754.42	1778783.03	74	6577969.51	1779422.27
27	6591251.10	1778954.54	75	6574341.16	1781941.79
28	6591599.01	1778000.03	76	6572306.09	1782772.55
29	6593537.77	1785447.71	77	6570844.53	1782991.71
30	6594699.73	1777747.44	78	6568811.24	1783595.19
31	6595729.72	1773115.57	79	6562903.38	1783407.38
32	6591208.21	1775521.70	80	6561352.93	1783450.27
33	6598348.31	1775104.31	81	6555733.17	1784107.49
34	6593253.91	1774402.21	82	6555323.24	1784209.40
35	6592251.55	1773901.57	83	6549131.00	1785239.34
36	6599759.13	1772700.08	84	6543319.07	1786913.00
37	6600292.20	1773014.79	85	6543900.43	1784300.75
38	6600553.90	1773064.99	86	6541295.27	1783090.31
39	6604403.52	1772260.93	87	6530304.13	1781692.05
40	6605163.70	1772733.99	88	6524227.97	1779591.21
41	6605493.42	1772571.98	89	6523213.72	1779102.27
42	6605993.43	1772432.32	90	6522770.03	1778398.24
43	6607339.20	1772133.75	91	6527655.53	1778153.90
44	6607329.74	1772075.69	92	6528956.17	1775778.89
45	6609314.54	1772257.70	93	6532395.41	1772830.93

NAD 83 CENTERLINE ANGLE POINTS		
∠ PT	X	Y
C1	6522323.35	1773412.69
C2	6526711.37	1775315.35
C3	6528335.44	1775911.19
C4	6527539.77	1776233.33
C5	6532199.48	1779023.53
C6	6533133.36	1779260.42
C7	6534162.72	1779689.02
C8	6538223.29	1781243.69
C9	6541217.35	1782329.04
C10	6543323.49	1783989.77
C11	6540238.80	1785730.37
C12	6549153.36	1785904.31
C13	6555363.71	1784325.19
C14	6555709.36	1784230.03
C15	6561362.27	1783325.37
C16	6562991.23	1783042.29
C17	6568621.42	1783060.31
C18	6570874.99	1783104.25
C19	6572405.37	1782943.98
C20	6574907.61	1782104.03
C21	6577991.12	1780801.54
C22	6581073.38	1779090.94
C23	6583717.07	1778177.91
C24	6585323.12	1778157.11
C25	6590510.54	1778141.24
C26	6590772.32	1778592.25
C27	6591255.03	1778943.03
C28	6591539.73	1778803.44
C29	6593405.01	1778352.09
C30	6594552.75	1777805.83
C31	6595560.59	1778003.34
C32	6598073.24	1775372.55
C33	6598757.47	1774925.09
C34	6598194.62	1774203.23
C35	6559167.21	1773722.84
C36	6599705.87	1773503.74
C37	6600273.53	1773239.34
C38	6600543.68	1773165.53
C39	6604343.18	1773011.77
C40	6605051.02	1772620.90
C41	6605327.77	1772417.41
C42	6605605.37	1772232.44
C43	6606238.38	1771933.73
C44	6607343.01	1771676.53
C45	6609332.30	1771259.59
C46	6611030.13	1771905.32
C47	6612033.33	1771245.21

PRELIMINARY ISSUE
HIS PLAN ISSUED FOR
ADVANCE INFORMATION



NOTES:

DRAWINGS NOT TO BE USED AS NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY. THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATION REPRESENT THE POSITION OF THE SINKER ONLY.

SURVEYED BY THE CORPS OF ENGINEERS.

SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT.

SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY. NAVD 1988.

PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, ZONE II NAD 83, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL
(LINES 00+00 TO 152+00) BENCHMARK "5103-B" ELEV 47.78 FT MLLW.
TIDE GAUGE LOCATED AT AMARCO WHARF DOCK.

(LINES 154+00 TO 504+00 BENCHMARK "5144-P" ELEV 12.06 FT MLLW.
TIDE GAUGE LOCATED AT CONCORD NAVAL WEAPON STATION.

(LINES 506+00 TO 632+00) BENCHMARK "E-556" ELEV 15.75 FT MLLW.
TIDE GAUGE LOCATED AT McAVOYS HARBOR.

(LINES 634+00 TO 733+45) BENCHMARK "5096-B" ELEV 21.89 FT MLLW.
TIDE GAUGE LOCATED AT DIABLO SERVICES DOCK.

HORIZONTAL GPS CONTROL.

COAST GUARD D-BEACON.

US Army Corps of Engineers
San Francisco District
333 Market Street
San Francisco, CA 94105

Mark	Description	Date	Appr.

DESIGNED BY: TVW
CHECKED BY: PC
DRAWN BY: EWC
SUBMITTED: Hydro Survey Section
DATE: 3/4/2004
SHEET NO. 1 OF 16
DRAWING NO. 4 2 216
APPROVAL RECOMMENDED: Chief, Engineering Branch
APPROVED: Chief, Engineering & Technical Services Div.
PREPARED UNDER THE DIRECTION OF MICHAEL McCORMICK LT. COLONEL, C.E., DISTRICT ENGINEER

CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
27-28 FEBRUARY & 1-2 MARCH 2004

Sheet reference number
C1