N.A.D 1983 FEET COORDINATES		
CHANNEL ∠	EAST	NORTH
01	6010314.45	2162197.63
02	6009479.89	2161610.01
03	6010702.46	2161282.52
04	6013280.69	2158029.15
05	6013071.04	2159051.01
07	6013946.57	2158590.79

NOTES:

SURVEYED BY THE CORPS OF ENGINEERS.

DRAWINGS NOT TO BE USED AS NAVIGATION CHARTS. 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 LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.

SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST FOOT AND HUNDREDTHS OF A FOOT. ELEVATIONS ARE BASED ON MLLW DATUM.

1:00 INDICATES THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.

PLANE GRID AND NAD83 COORDINATES WERE DERIVED FROM PUBLISHED NAD27 CALIFORNIA ZONE III STATE PLANE COORDINATES, USING USGS NADCON CONVERSION METHODS.

BASE MAPS WERE COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY FLOWN 10 AUGUST 1996.

PROJECT DEPTHS ARE AS FOLLOWS:
SOUTHAMPTON SHOALS CHANNEL – 45 FEET.
LONG WHARF MANEUVERING AREA – 45 FEET.
INNER HARBOR CHANNEL – 38 FEET.

VERTICAL CONTROL
(SOUTHAMPTON SHOALS & LONG WHARF MANEUVERING) BENCHMARK "10" 1937 ELEV 15.86 FT. MLLW.
AND BENCHMARK "11" 1946 ELEV 15.47 FT. MLLW.
TIDE GAUGE LOCATED AT TIBURON NET DEPOT.

(INNER HARBOR CHANNEL) BENCHMARK A–558 ELEV 15.81 FT. MLLW.
BENCHMARK #1 (1932) ELEV 16.77 FT. MLLW. AND BENCHMARK #2 (1932) ELEV 16.25 FT. MLLW.
TIDE GAUGE LOCATED AT PARR 1 AND MON. B–1

HORIZONTAL GPS CONTROL
COAST GUARD D–BEACON

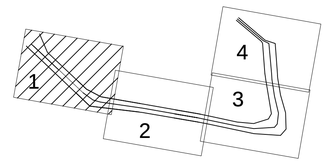
SAN FRANCISCO BAY

FLOOD
EBB

GRAPHICS SCALE 1" = 200'

200' 0 100' 200' 400' 800'

MATCHLINE – SHEET 2



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

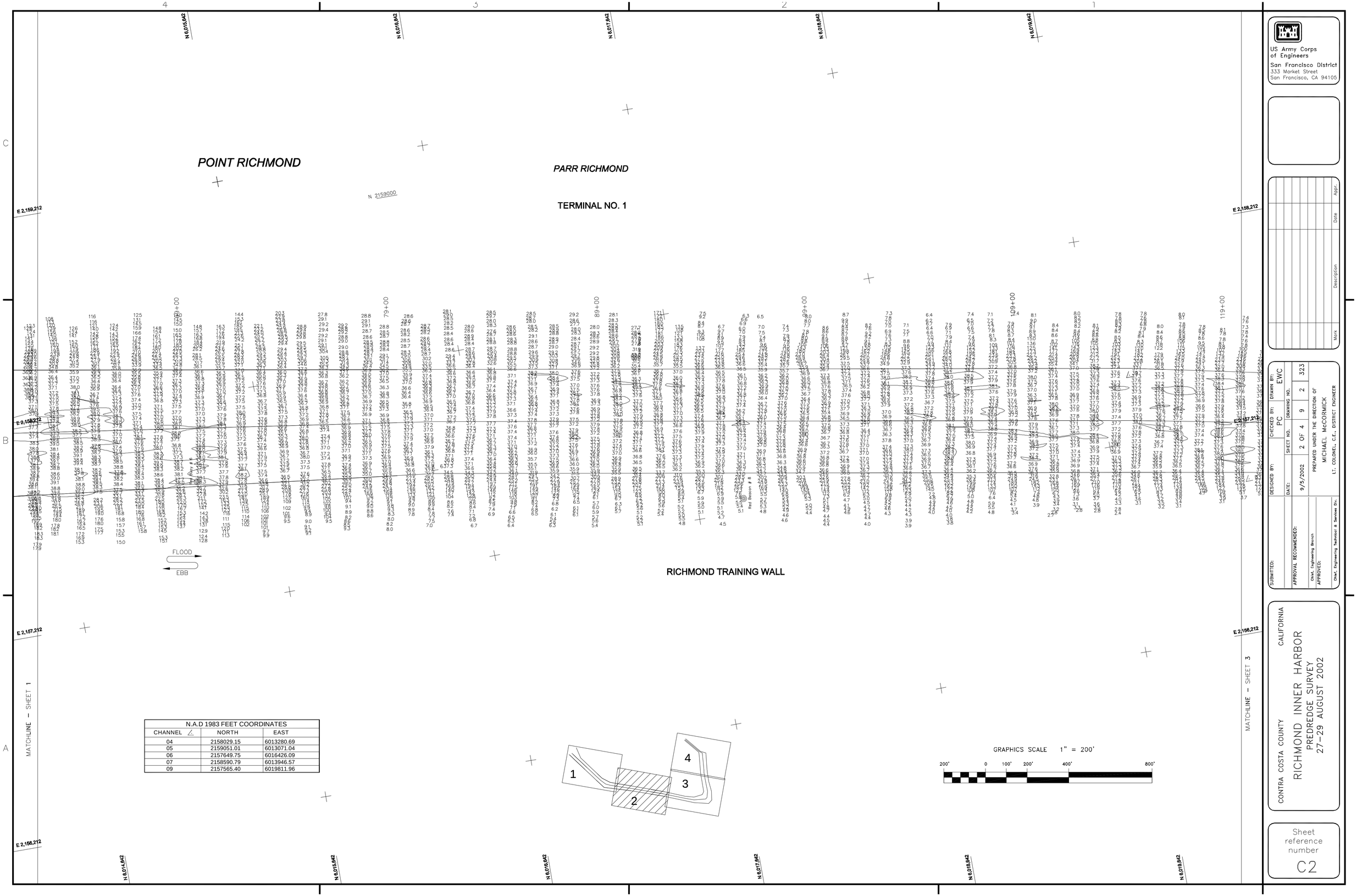
Mark	Description	Date	Appr.

DESIGNED BY:		CHECKED BY: PC	DRAWN BY: EWC
DATE: 9/5/2002	SHEET NO. 1 OF 4	DRAWING NO. 9	2 323
APPROVAL RECOMMENDED: Chief, Engineering Branch	PREPARED UNDER THE DIRECTION OF MICHAEL McCORMICK LT. COLONEL, C.E., DISTRICT ENGINEER		
APPROVED: Chief, Engineering Technical & Services Div.			

CONTRA COSTA COUNTY CALIFORNIA

RICHMOND INNER HARBOR
PREDREDGE SURVEY
27–29 AUGUST 2002

Sheet reference number
C1



N.A.D 1983 FEET COORDINATES		
CHANNEL ∠	NORTH	EAST
04	2158029.15	6013280.69
05	2159051.01	6013071.04
06	2157649.75	6016426.09
07	2158590.79	6013946.57
09	2157565.40	6019811.96

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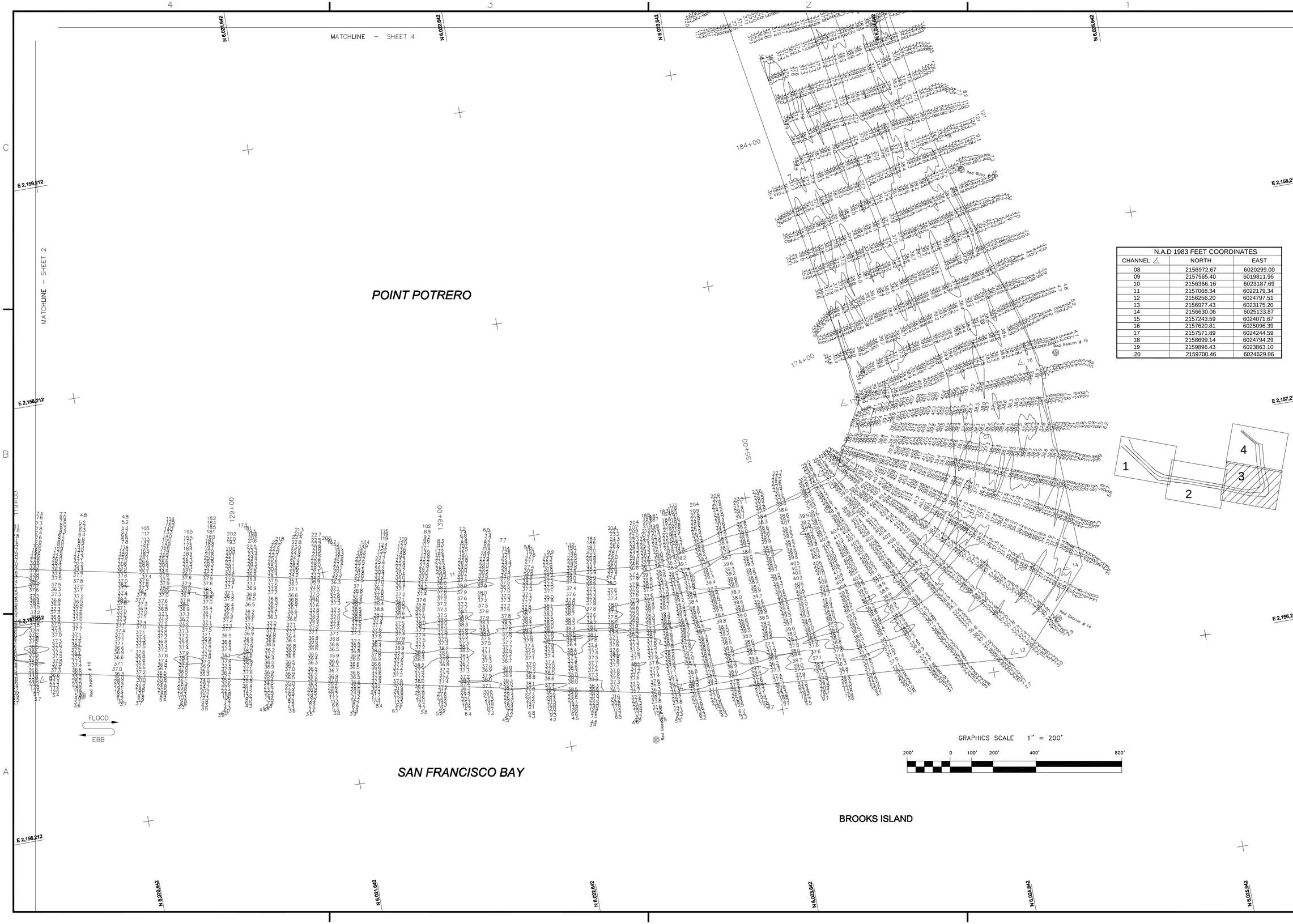
PREPARED UNDER THE DIRECTION OF
MICHAEL McCORMICK
LT. COLONEL, C.E., DISTRICT ENGINEER

SUBMITTED:
APPROVAL RECOMMENDED:
Chief, Engineering Branch
APPROVED:
Chief, Engineering Technical & Services Div.

CONTRA COSTA COUNTY CALIFORNIA

RICHMOND INNER HARBOR
PREDREDGE SURVEY
27-29 AUGUST 2002

Sheet reference number
C2



N.A.D 1983 FEET COORDINATES		
CHANNEL ∠	NORTH	EAST
08	2156972.67	6020299.00
09	2157565.40	6019811.96
10	2156366.16	6023187.69
11	2157068.34	6022179.34
12	2156256.20	6024797.51
13	2156977.43	6023175.20
14	2156630.06	6025133.87
15	2157243.59	6024071.67
16	2157620.81	6025096.39
17	2157571.89	6024244.59
18	2158699.14	6024794.29
19	2159896.43	6023863.10
20	2159700.46	6024629.96

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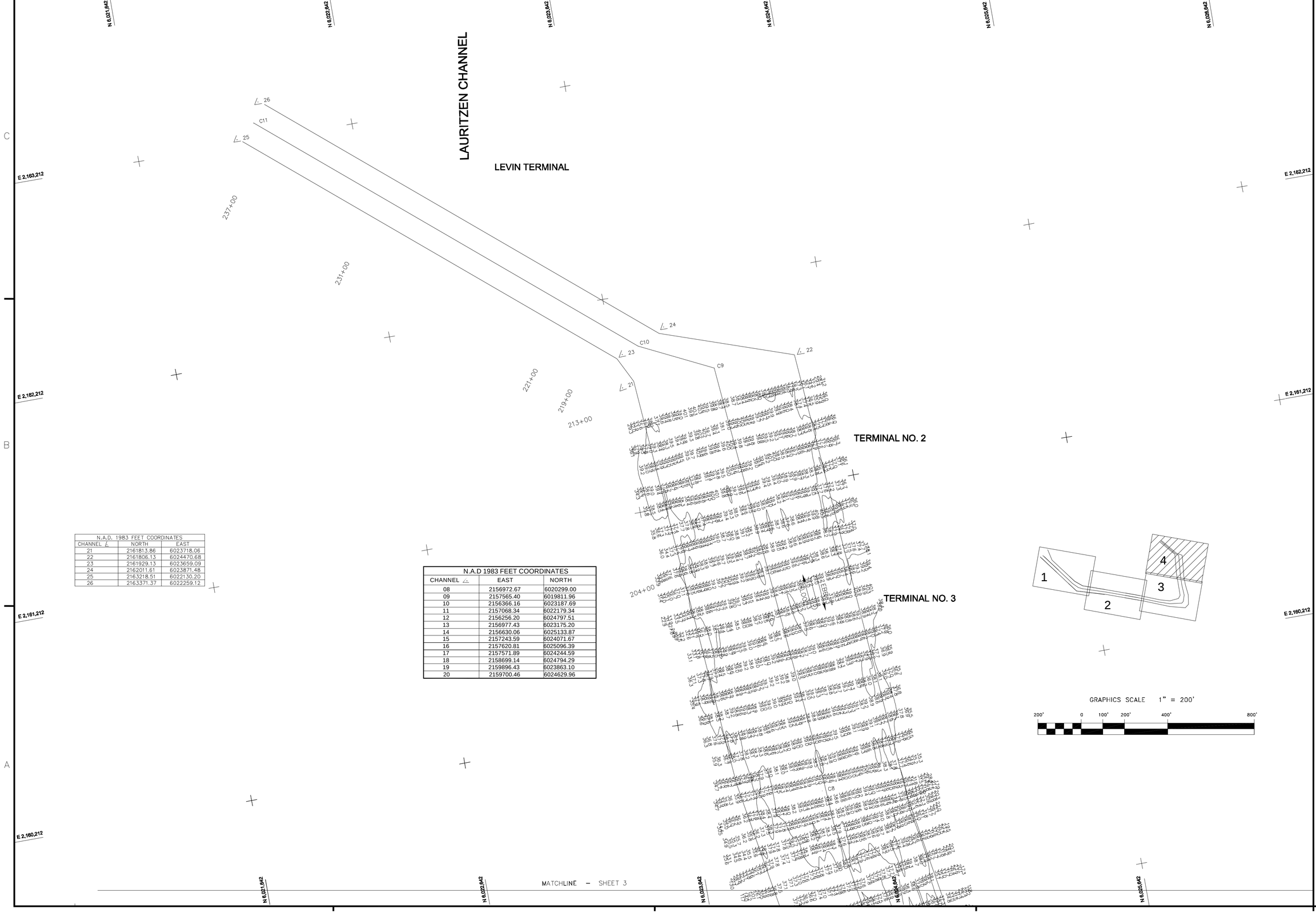
PREPARED UNDER THE DIRECTION OF
MICHAEL McCORMICK
LT. COLONEL, C.E., DISTRICT ENGINEER

SUBMITTED:
APPROVAL RECOMMENDED:
Chief, Engineering Branch
APPROVED:
Chief, Engineering Technical & Services Dir.

CONTRA COSTA COUNTY CALIFORNIA

RICHMOND INNER HARBOR
PREDREDGE SURVEY
27–29 AUGUST 2002

Sheet reference number
C3



N.A.D. 1983 FEET COORDINATES		
CHANNEL ∠	NORTH	EAST
21	2161813.86	6023718.06
22	2161806.13	6024470.68
23	2161929.13	6023659.09
24	2162011.61	6023871.48
25	2163218.51	6022130.20
26	2163371.37	6022259.12

N.A.D 1983 FEET COORDINATES		
CHANNEL ∠	EAST	NORTH
08	2156972.67	6020299.00
09	2157565.40	6019811.96
10	2156366.16	6023187.69
11	2157068.34	6022179.34
12	2156256.20	6024797.51
13	2156977.43	6023175.20
14	2156630.06	6025133.87
15	2157243.59	6024071.67
16	2157620.81	6025096.39
17	2157571.89	6024244.59
18	2158699.14	6024784.29
19	2159896.43	6023863.10
20	2159700.46	6024629.96

GRAPHICS SCALE 1" = 200'

200' 0 100' 200' 400' 800'

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DRAWN BY: EWC
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SUBMITTED:
DATE: 9/5/2002
SHEET NO. 4 OF 4
DRAWING NO. 9
2
323
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
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PREDREDGE SURVEY
27–29 AUGUST 2002

Sheet reference number
C4