PRELIMINARY ISSUE
THIS PLAN ISSUED FOR ADVANCE INFORMATION ONLY

122°8'10"W 122°8'0"W 122°7'50"W 122°7'40"W 122°7'30"W 122°7'20"W 122°7'10"W
38°2'20"N 38°2'10"N 38°2'0"N
6,521,923 6,524,923 6,527,923
1,776,101

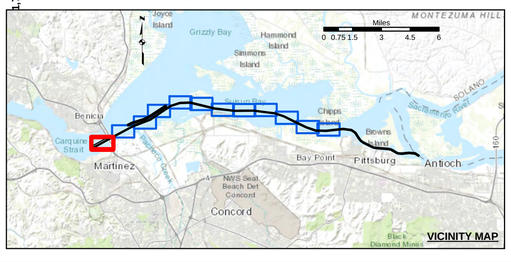
FLOOD
EBB

AMORCO Wharf East Light
AMORCO Wharf West Light
Shell Oil Wharf East End Light

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours
-35
-34
-33
-32
-31

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:
SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY CONDUCTED ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED TO REPRESENT THE GENERAL CONDITION EXISTING AT THAT TIME.

PLANE GRID, BEARING AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION,
ZONE II NAD 83, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY NATIONAL OCEAN SURVEY.
BASE MAPS ARE USDA NAIP 2010.

*SHOALEST SOUNDING PER QUARTER PER REACH

DRAWING NOT TO BE USED FOR 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 LOCATIONS 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.

THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL:
SUISUN BAY CHANNEL
(LINES 00+00 TO 160+00) BENCHMARK "9" (1948), USC&GS DISK
ELEV 14.875 FT MLLW.,
TIDE GAUGE LOCATED AT PORT OF BENICIA DOCK.

(LINES 150+00 TO 500+00) BENCHMARK "5144-P" (1990 RESET 1997),
(LINES 500+00 TO 660+00) BENCHMARK "5144-P" (1990 RESET 1997),
USC&GS DISK, ELEV 11.83 FT MLLW.
TIDE GAUGE LOCATED AT CONCORD NAVAL WEAPONS STATION TUG DOCK, NOAA STATION.

(LINES 660+00 TO 733+45) BENCHMARK "5096-B",
USC&GS DISK, ELEV 21.76 FT MLLW.
TIDE GAUGE LOCATED AT DIABLO SERVICE DOCK.

HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

Chart Date: Mar 13, 2019
Surveyed By:
Designed by:
Drawn by: PDT
Plotted By: PDT
Checked By: PDT

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT COLONEL, C.E. DISTRICT ENGINEER

Submitted:
Hydro Survey Team Leader

Recommended:
Chief, Hydro Survey Section

Approved:
Chief, Construction Branch

CALIFORNIA
CONTRA COSTA COUNTY
SUISUN BAY CHANNEL CONDITION SURVEY 5-7 MARCH 2019

Sheet Reference Number 1 of 12

PRELIMINARY ISSUE

THIS PLAN ISSUED FOR ADVANCE INFORMATION ONLY

122°7'0"W 122°6'50"W 122°6'40"W 122°6'30"W 122°6'20"W 122°6'10"W 122°6'0"W 122°5'50"W

6,527,657 6,530,657 6,533,657

1,779,263 1,777,263

38°2'50"N 38°2'40"N 38°2'30"N

MARTINEZ
North Channel Light 2

Avon Turning Basin South Light

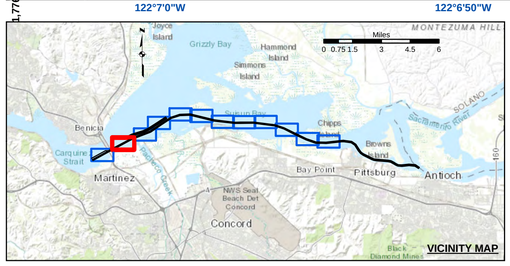
FLOOD
EBB

64+00 66+00 68+00 70+00 72+00 74+00 76+00 78+00 80+00 82+00 84+00 86+00 88+00 90+00 92+00 94+00 96+00 98+00 100+00 102+00 104+00 106+00 108+00 110+00 112+00 114+00 116+00 118+00 120+00

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale



VICINITY MAP

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours

-35 -34 -33 -32 -31

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:
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SURVEYED BY THE CORPS OF ENGINEERS.

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THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL:
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(LINES 00+00 TO 160+00) BENCHMARK "9" (1948), USC&GS DISK
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TIDE GAUGE LOCATED AT DIABLO SERVICE DOCK.

HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

Surveyed By:

Chart Date: Mar 13, 2019

Plotted By: PDT

Designed by:

Drawn By: PDT

Checked By: PDT

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted
Hydro Survey Team Leader

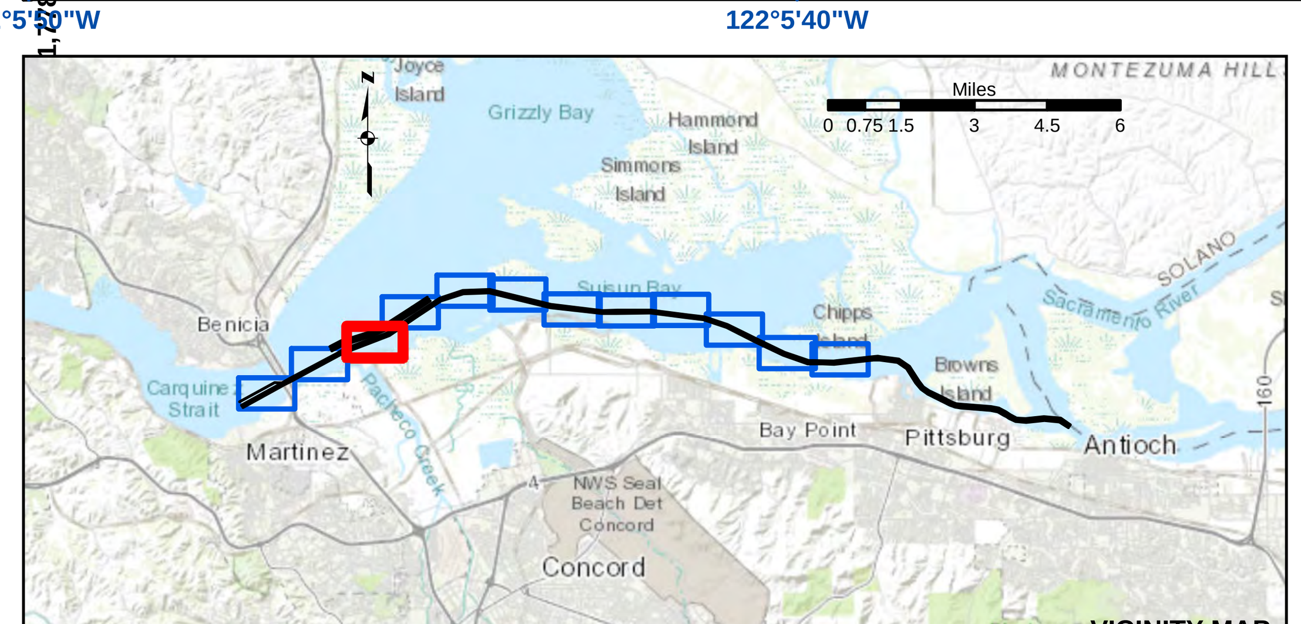
Recommended
Chief, Hydro Survey Section

Approved
Chief, Construction Branch

CALIFORNIA
CONTRA COSTA COUNTY

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 2 of 12



Legend

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours

- -35
- -34
- -33
- -32
- -31

NOTES:

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HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

Chart Date: Mar 13, 2019	Designed by:	Drawn by: PDT
Surveyed By:	Plotted By: PDT	Checked By: PDT

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader

Recommended: Chief, Hydro Survey Section

Approved: Chief, Construction Branch

CONTRA COSTA COUNTY — CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

FLOOD
EBB

B05
D05
B06

Seal Islands
Channel
Light 3

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours
-35
-34
-33
-32
-31

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

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HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

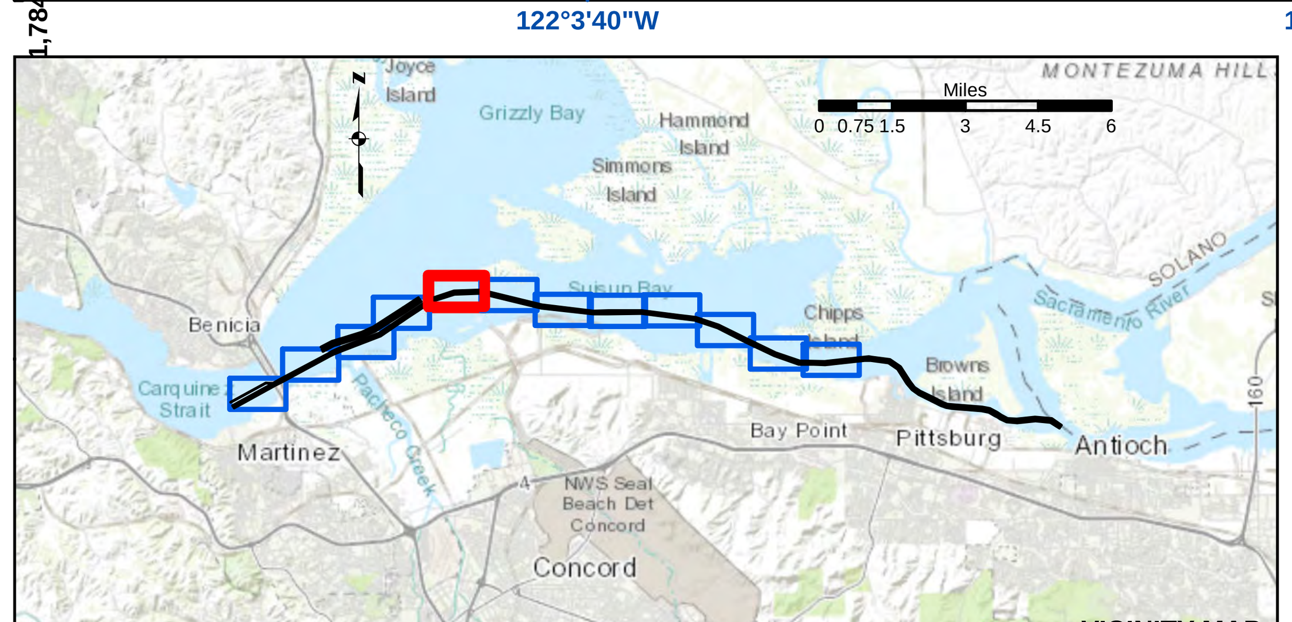
Submitted:	Hydro Survey Team Leader		
Recommended:	Chief, Hydro Survey Section		
Approved:	Chief, Construction Branch		

Chart Date: Mar 13, 2019			
Surveyed By:	Designed by:		Drawn by: PDT
	Plotted By: PDT		Checked By: PDT

CONTRA COSTA COUNTY
CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 4 of 12



Legend		
Federal Navigation Channel	Beacon, General	**Contours**
Shoaling Area	Obstruction Point	-35
Placement Area	Navigation Buoy (green)	-34
Anchorage Area	Navigation Buoy (red)	-33
Wreck Area	Shoalest Sounding*	-32
Submerged Wreck		-31
Angle Point		

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

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SURVEYED BY THE CORPS OF ENGINEERS.

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USC&GS DISK, ELEV 21.76 FT MLLW.
TIDE GAUGE LOCATED AT DIABLO SERVICE DOCK.

HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

PREPARED UNDER THE DIRECTION OF TRAVIS J. RAYFIELD LT. COLONEL, C.E., DISTRICT ENGINEER	Surveyed By:	Chart Date: Mar 13, 2019
Submitted: Hydro Survey Team Leader	Plotted By: PDT	Designed by:
Recommended: Chief, Hydro Survey Section	Checked By: PDT	Drawn by: PDT
Approved: Chief, Construction Branch		

CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

PRELIMINARY ISSUE
THIS PLAN ISSUED FOR ADVANCE INFORMATION ONLY

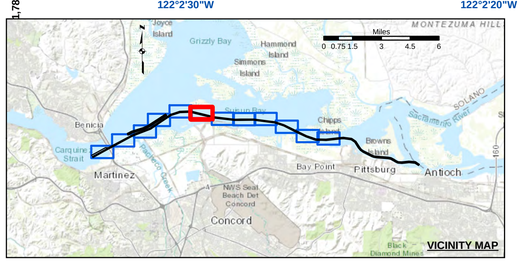
wreck showing mast/masts

FLOOD
EBB

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale



VICINITY MAP

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours
-35
-34
-33
-32
-31

NOTES:

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HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

Surveyed By:		Chart Date: Mar 13, 2019	
Plotted By: PDT	Designed by:		
Checked By: PDT	Drawn by:		PDT

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT COLONEL, U.S., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 6 of 12

PRELIMINARY ISSUE
THIS PLAN ISSUED FOR ADVANCE INFORMATION ONLY

122°1'20"W 122°1'10"W 122°1'0"W 122°0'50"W 122°0'40"W 122°0'30"W 122°0'20"W 122°0'10"W
6,555,086 6,558,086 6,561,086
1,785,209
38°3'50"N
38°3'40"N
38°3'30"N

FLOOD
EBB

364+00 366+00 368+00 370+00 372+00 374+00 376+00 378+00 380+00 382+00 384+00 386+00 388+00 390+00 392+00 394+00 396+00 398+00 400+00 402+00 404+00 406+00 408+00 410+00 412+00 414+00 416+00 418+00 420+00 422+00

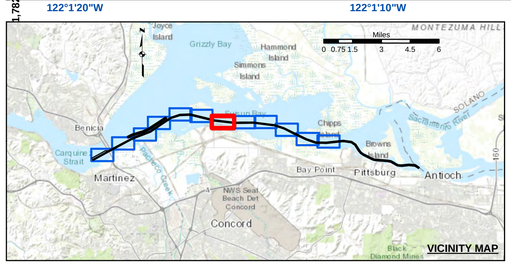
Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale

N

6,555,086 6,558,086 6,561,086
1,782,209



VICINITY MAP

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
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- Obstruction Point
- Navigation Buoy
- Navigation Buoy
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Contours
- -35
- -34
- -33
- -32
- -31

NOTES:

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(LINES 150+00 TO 500+00) BENCHMARK "5144-P" (1990 RESET 1997),
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(LINES 660+00 TO 733+45) BENCHMARK "5096-B",
USC&GS DISK, ELEV 21.76 FT MLLW.
TIDE GAUGE LOCATED AT DIABLO SERVICE DOCK.

HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader	Recommended: Chief, Hydro Survey Section	Approved: Chief, Construction Branch

Chart Date: Mar 13, 2019		
Surveyed By:	Designed by:	Drawn by: PDT
	Plotted By: PDT	Checked By: PDT

CONTRA COSTA COUNTY
CALIFORNIA
SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 7 of 12

PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

122°0'0"W 121°59'50"W 121°59'40"W 121°59'30"W 121°59'20"W 121°59'10"W 121°59'0"W

6,560,965 6,563,965 6,566,965

38°3'50"N 1,785,128

38°3'40"N

38°3'30"N

1,781,828 6,560,965 6,563,965 6,566,965 1,781,128

FLOOD
EBB

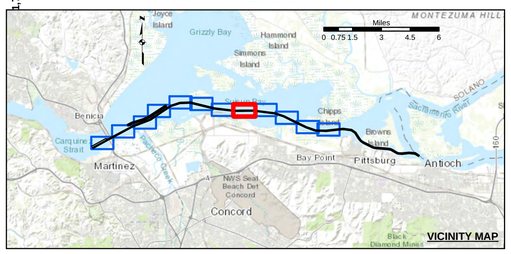
422+00 424+00 426+00 428+00 430+00 432+00 434+00 436+00 438+00 440+00 442+00 444+00 446+00 448+00 450+00 452+00 454+00 456+00 458+00 460+00 462+00 464+00 466+00 468+00 470+00 472+00 474+00 476+00 478+00 480+00

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale

N



VICINITY MAP

- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours

-35
-34
-33
-32
-31

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:
SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.

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ZONE II NAD 83, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY NATIONAL OCEAN SURVEY.
BASE MAPS ARE USDA NAIP 2010.

*SHOALEST SOUNDING PER QUARTER PER REACH

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SURVEYED BY THE CORPS OF ENGINEERS.

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

THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL:
SUISUN BAY CHANNEL
(LINES 00+00 TO 160+00) BENCHMARK "9" (1948), USC&GS DISK
ELEV 14.875 FT MLLW.;
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(LINES 660+00 TO 733+45) BENCHMARK "5096-B",
USC&GS DISK, ELEV 21.76 FT MLLW.
TIDE GAUGE LOCATED AT DIABLO SERVICE DOCK.

HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

Chart Date: Mar 13, 2019

Surveyed By:

Designed by:

Plotted By: PDT

Drawn by: PDT

Checked By: PDT

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader

Recommended: Chief, Hydro Survey Section

Approved: Chief, Construction Branch

CALIFORNIA
CONTRA COSTA COUNTY

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 8 of 12

PRELIMINARY ISSUE
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121°58'50"W 121°58'40"W 121°58'30"W 121°58'20"W 121°58'10"W 121°58'0"W 121°57'50"W 121°57'40"W
6,566,850 6,569,850 6,572,850
1,785,175
38°3'50"N
38°3'40"N
38°3'30"N

FLOOD
EBB

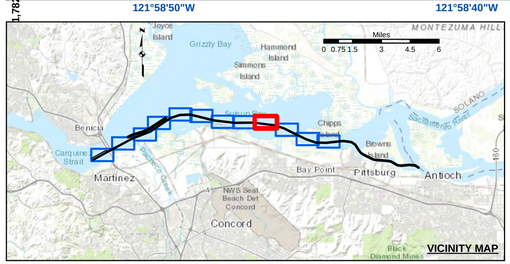
480+00 482+00 484+00 486+00 488+00 490+00 492+00 494+00 496+00 498+00 500+00 502+00 504+00 506+00 508+00 510+00 512+00 514+00 516+00 518+00 520+00 522+00 524+00 526+00 528+00 530+00 532+00 534+00 536+00 538+00 540+00

Feet
0 200 400 800 1,200

1 inch = 200 feet
Relative Scale (ANSI D 22x34)

1:2,400
Absolute Scale

N



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*

Contours
- -35
- -34
- -33
- -32
- -31

NOTES:

HORIZONTAL COORDINATE SYSTEM:
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:
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SURVEYED BY THE CORPS OF ENGINEERS.

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THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL:
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(LINES 00+00 TO 160+00) BENCHMARK "9" (1948), USC&GS DISK
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HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

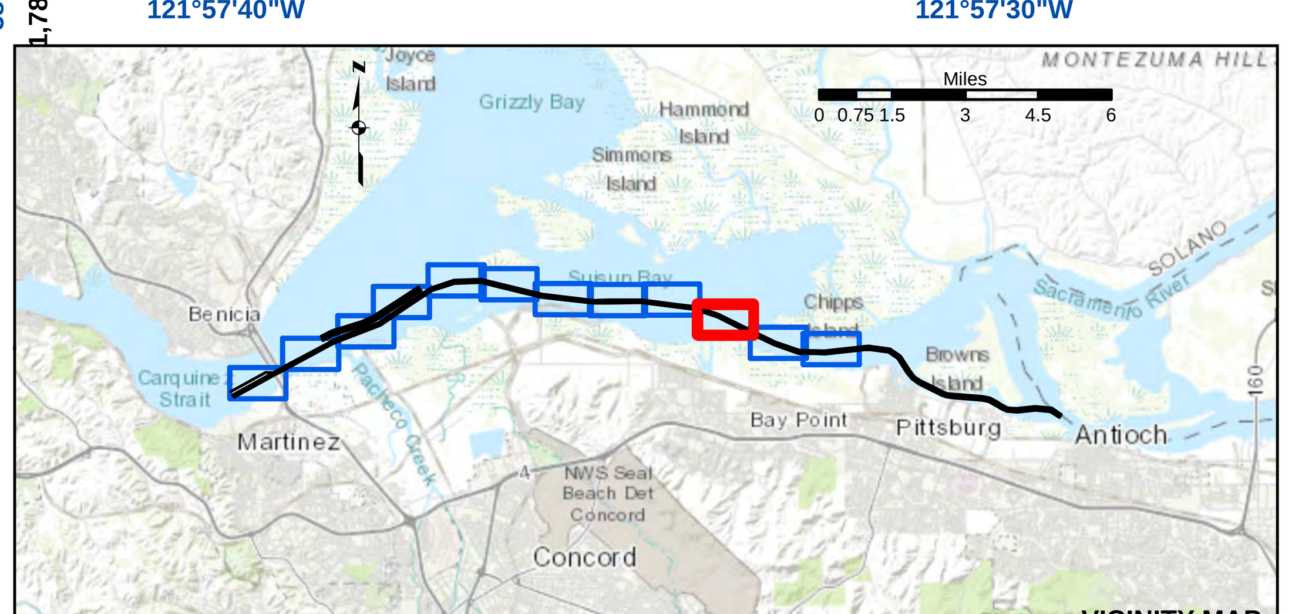
Chart Date: Mar 13, 2019			
Surveyed By:	Designed by:		
Plotted By: PDT		Drawn by:	PDT
Submitted: Hydro Survey Team Leader		Checked By:	PDT
Recommended: Chief, Hydro Survey Section			
Approved: Chief, Construction Branch			

PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

CALIFORNIA
CONTRA COSTA COUNTY

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019

Sheet Reference Number 9 of 12



- Federal Navigation Channel
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HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON

US Army Corps of Engineers®
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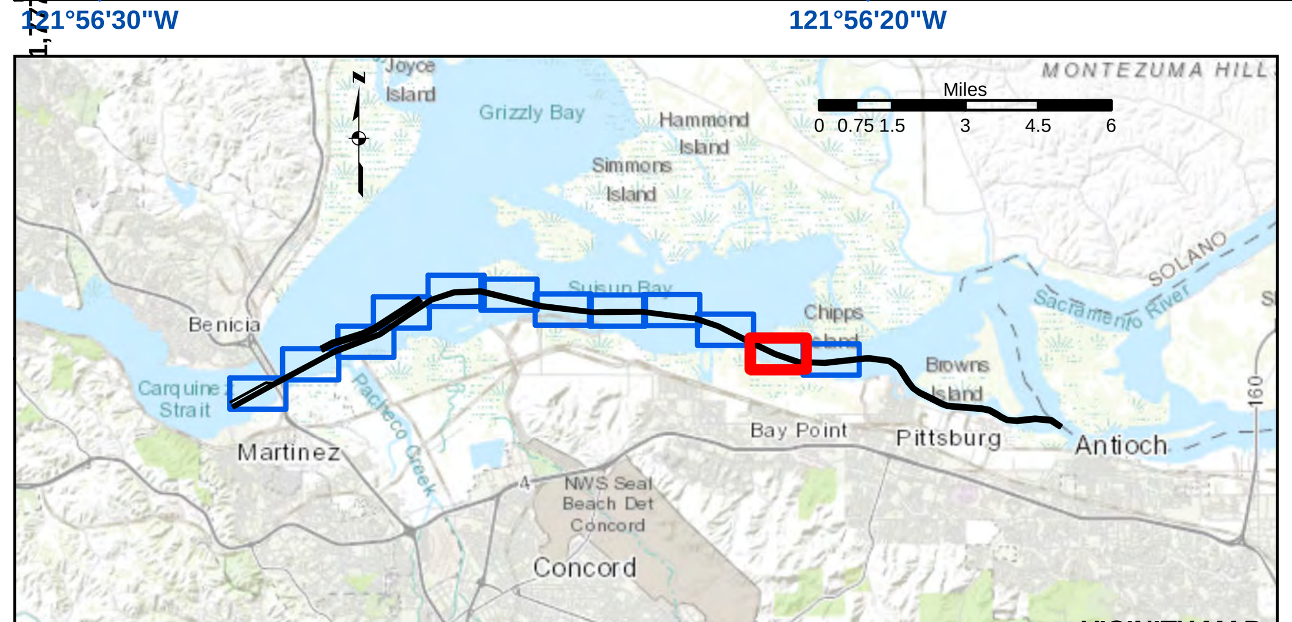
PREPARED UNDER THE DIRECTION OF TRAVIS J. RAYFIELD LT. COLONEL, C.E., DISTRICT ENGINEER	Surveyed By:	Chart Date: Mar 13, 2019
Submitted: Hydro Survey Team Leader	Plotted By: PDT	Designed by:
Recommended: Chief, Hydro Survey Section		
Approved: Chief, Construction Branch	Checked By: PDT	Drawn by: PDT

CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019



Federal Navigation Channel	Beacon, General
Shoaling Area	Obstruction Point
Placement Area	Navigation Buoy
Anchorage Area	Navigation Buoy
Wreck Area	Shoalest Sounding*
Submerged Wreck	
Angle Point	

Contours

- -35
- -34
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San Francisco District
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PREPARED UNDER THE DIRECTION OF
TRAVIS J. RAYFIELD
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

Surveyed By:	Chart Date: Mar 13, 2019
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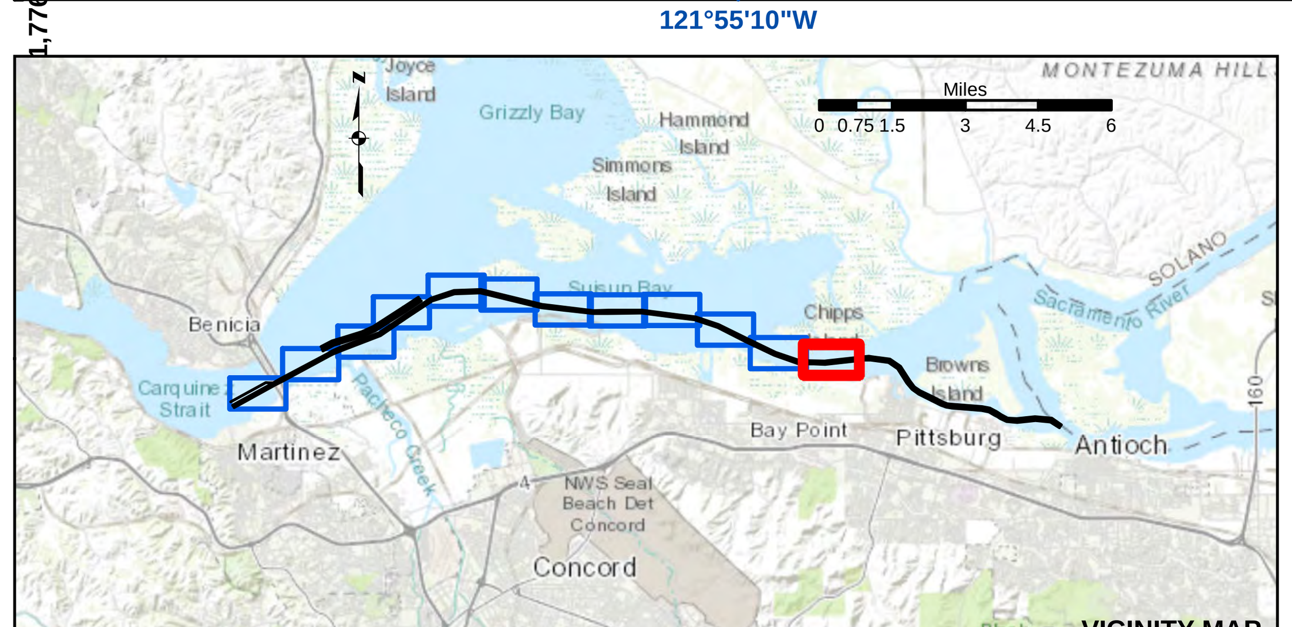
CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019



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US Army Corps of Engineers
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Chart Date: Mar 13, 2019	Surveyed By:
Designed by:	Plotted By: PDT
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CONTRA COSTA COUNTY CALIFORNIA

SUISUN BAY CHANNEL
CONDITION SURVEY
5-7 MARCH 2019