
— - - - FEDERAL CHANNEL

DREDGING BOUNDARY

— - - — PARTICIPATING PROPERTY PARCEL PARTICIPATING PROPERTY PARCEL

EXTENSION TO FEDERAL CHANNEL — - - — OTHER PROPERTY PARCEL

SOUNDINGS LEGEND

DESIGN DREDGE ELEVATION = -6' MLLW

COLOR DEPTH BLUE ABOVE -6.0' RED -6.0' AND BELOW

NOTES

- 1. BATHYMETRY SURVEYED BY GAHAGAN & BRYANT ASSOCIATES, INC. ON JUNE 1 & 3, 2022.
- 2. SOUNDINGS BASED ON DEPTH BELOW MEAN LOWER LOW WATER (MLLW). THE DREDGE TARGET ELEVATION OF -6' IS AN ELEVATION ALSO BASED ON MLLW.
- 3. PLANE GRID, BEARINGS AND COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE III (NAD83) AS DESCRIBED IN SPECIAL
- PUBLICATION NO. 253 PUBLISHED BY THE NATIONAL OCEAN SURVEY. SOUNDINGS WERE ACQUIRED BY SEABAT T50 MULTIBEAM TRANSDUCER OR MANUALLY WITH A RTK TOPOGRAPHIC ROD AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT. TIDE STATION REFERENCED TO NGS BENCHMARK PID HT3837, DESCRIBED AS "HPGN D CA 04 HF" HAVING AN ELEVATION OF 6.72' MLLW, '83-'01 TIDAL EPOCH, BASED ON A VDATUM CONVERSION FROM PUBLISHED NAVD88 ELEVATION.
- 5. MULTIBEAM SURVEY DATA AUGMENTED WITH RTK TOPOGRAPHIC DATA. RTK DATA IS SHOWN ON DRAWING WITH ITALICIZED TEXT.
- 6. HORIZONTAL POSITION CORRECTION ACQUIRED WITH LEICA SMARTNET RTK NETWORK, POSITION AND HEADING VIA TRIMBLE MP500 MARINE INERTIA POSITIONING SYSTEM.
- 7. HORIZONTAL CONTROL BASED ON OPUS PID HT3837, "HPGN D CA 04 HF" WITH COORDINATES OF NORTHING: 2,187,425.99, EASTING: 5,995,011.34.
- 8. THE BATHYMETRIC INFORMATION SHOWN ON THIS DRAWING IS BASED ON SURVEYS MADE ON THE DATE(S) INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
- BACKGROUND IMAGERY PROVIDED BY NEARMAP.
- 10. DREDGE FOOTPRINTS ARE GENERAL REFERENCE ONLY AND ARE APPROXIMATE IN NATURE.



SCALE IN FEET

HALEY & ALDRICH, INC. 426 17th Street, Suite 700 Oakland, CA 94612-2930 Tel: 510.879.4555 www.haleyaldrich.com

PREPARED FOR:

DRAFT

Project No.: 0200493-001 AS SHOWN 29-AUGUST-2022 Drawn By: Designed By: MR Checked By: MA Approved By: MA

Rev. Description By Date MAINTENANCE DREDGING IN

THE NON-FEDERAL PORTION OF SAN RAFAEL CREEK PROJECT PHASE

> CITY OF SAN RAFAEL SAN RAFAEL, CA

MAINTENANCE DREDGING PLAN -AREA 1

C-101 Sheet: 3 of 7

PREPARED FOR:

Tel: 510.879.4555

426 17th Street, Suite 700 Oakland, CA 94612-2930

MAINTENANCE DREDGING IN THE NON-FEDERAL PORTION OF SAN RAFAEL CREEK PROJECT PHASE

> CITY OF SAN RAFAEL SAN RAFAEL, CA

MAINTENANCE DREDGING PLAN -AREA 2

C-102

Sheet: 4 of 7

FEDERALLY MAINTAINED CHANNEL DREDGING BOUNDARY, TYP. DREDGING AT DOCK FACE, TYP. SECTION, TYP. TARGET DREDGE ELEVATION SAN RAFAEL YACHT HARBOR

LEGEND

— - - - FEDERAL CHANNEL

——— DREDGING BOUNDARY

——— PARTICIPATING PROPERTY PARCEL

PARTICIPATING PROPERTY PARCEL EXTENSION TO FEDERAL CHANNEL

— - - — OTHER PROPERTY PARCEL

SOUNDINGS LEGEND

DESIGN DREDGE ELEVATION = -6' MLLW

COLOR DEPTH
BLUE ABOVE -6.0'
RED -6.0' AND BELOW

-6' —

NOTES

ON JUNE 1 & 3, 2022.

ALSO BASED ON MLLW.

3. PLANE GRID, BEARINGS AND COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION. ZONE III (NAD83) AS DESCRIBED IN SPECIAL

2. SOUNDINGS BASED ON DEPTH BELOW MEAN LOWER LOW WATER

1. BATHYMETRY SURVEYED BY GAHAGAN & BRYANT ASSOCIATES, INC.

(MLLW). THE DREDGE TARGET ELEVATION OF -6' IS AN ELEVATION

PROJECTION, ZONE III (NAD83) AS DESCRIBED IN SPECIAL PUBLICATION NO. 253 PUBLISHED BY THE NATIONAL OCEAN SURVEY.

SOUNDINGS WERE ACQUIRED BY SEABAT T50 MULTIBEAM TRANSDUCER OR MANUALLY WITH A RTK TOPOGRAPHIC ROD AND

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- 5. MULTIBEAM SURVEY DATA AUGMENTED WITH RTK TOPOGRAPHIC
- DATA. RTK DATA IS SHOWN ON DRAWING WITH ITALICIZED TEXT.

 6. HORIZONTAL POSITION CORRECTION ACQUIRED WITH LEICA
 SMARTNET RTK NETWORK, POSITION AND HEADING VIA TRIMBLE
- 7. HORIZONTAL CONTROL BASED ON OPUS PID HT3837, "HPGN D CA 04 HF" WITH COORDINATES OF NORTHING: 2,187,425.99, EASTING: 5,995,011.34.
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- 9. BACKGROUND IMAGERY PROVIDED BY NEARMAP.

MP500 MARINE INERTIA POSITIONING SYSTEM.

10. DREDGE FOOTPRINTS ARE GENERAL REFERENCE ONLY AND ARE APPROXIMATE IN NATURE.



SCALE IN FEET

DRAFT

AS SHOWN

29-AUGUST-2022

Project No.: 0200493-001

Drawn By:

Designed By: MR Checked By: MA Approved By: MA

HALEY & ALDRICH, INC. 426 17th Street, Suite 700 Oakland, CA 94612-2930 Tel: 510.879.4555 www.haleyaldrich.com

PREPARED FOR:



LEGEND

— - - - FEDERAL CHANNEL

DREDGING BOUNDARY

— - - — PARTICIPATING PROPERTY PARCEL

PARTICIPATING PROPERTY PARCEL _____ **EXTENSION TO FEDERAL CHANNEL**

— - - — OTHER PROPERTY PARCEL

SOUNDINGS LEGEND

DESIGN DREDGE ELEVATION = -6' MLLW

COLOR DEPTH BLUE ABOVE -6.0' RED -6.0' AND BELOW

NOTES

ON JUNE 1 & 3, 2022.

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240 SCALE IN FEET

C-103

Sheet: 5 of 7

Rev. Description By Date MAINTENANCE DREDGING IN

THE NON-FEDERAL PORTION OF SAN RAFAEL CREEK

PROJECT PHASE

CITY OF SAN RAFAEL

SAN RAFAEL, CA

MAINTENANCE

DREDGING PLAN -

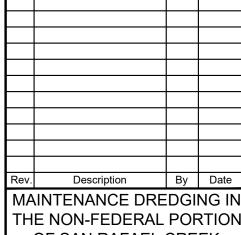
AREA 3

HALEY & ALDRICH, INC. 426 17th Street, Suite 700 Oakland, CA 94612-2930 Tel: 510.879.4555 www.haleyaldrich.com

PREPARED FOR:

DRAFT

Project No.:	0200493-001
Scale:	AS SHOWN
Date:	29-AUGUST-2022
Drawn By:	OS
Designed By:	MR
Checked By:	MA
Approved By:	MA
Stamp:	



OF SAN RAFAEL CREEK PROJECT PHASE

CITY OF SAN RAFAEL SAN RAFAEL, CA

MAINTENANCE DREDGING PLAN -AREA 4

Sheet: 6 of 7

LEGEND

— - - - FEDERAL CHANNEL

DREDGING BOUNDARY

PARTICIPATING PROPERTY PARCEL _____ **EXTENSION TO FEDERAL CHANNEL**

— - - — PARTICIPATING PROPERTY PARCEL

— - - — OTHER PROPERTY PARCEL

SOUNDINGS LEGEND

DESIGN DREDGE ELEVATION = -6' MLLW

COLOR DEPTH BLUE ABOVE -6.0' RED -6.0' AND BELOW

NOTES

ON JUNE 1 & 3, 2022.

ALSO BASED ON MLLW. 3. PLANE GRID, BEARINGS AND COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE III (NAD83) AS DESCRIBED IN SPECIAL PUBLICATION NO. 253 PUBLISHED BY THE NATIONAL OCEAN SURVEY.

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240 SCALE IN FEET