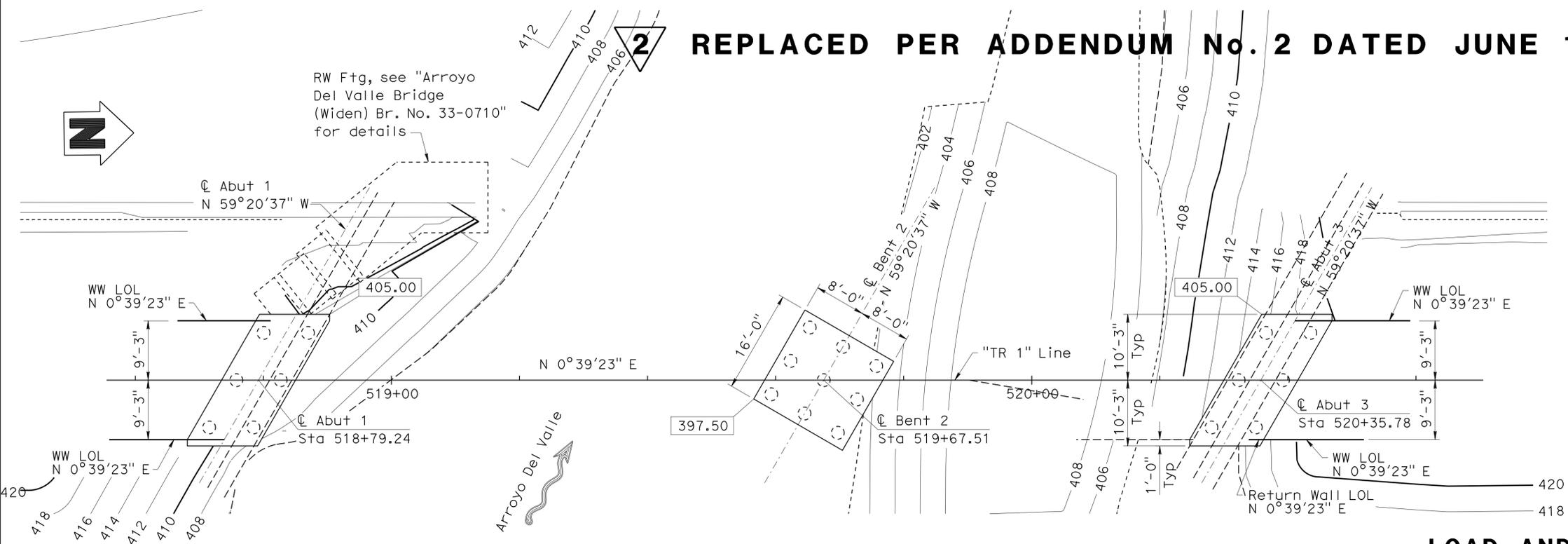


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Ala	84	22.9/22.7	765	814

REGISTERED CIVIL ENGINEER DATE 01/16/15
 Xiangyang Fu
 2-23-15
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.
 ALAMEDA COUNTY TRANSPORTATION COMMISSION
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 MGE ENGINEERING, INC.
 7415 GREENHAVEN DRIVE, SUITE 100
 SACRAMENTO, CALIFORNIA 95831

REPLACED PER ADDENDUM No. 2 DATED JUNE 10, 2015



LEGEND

- Indicates Direction of Flow
- XXX.XX Indicates Bottom of Footing Elevation
- Indicates 24" CIDH Piles

FOUNDATION PLAN
 1" = 10'-0"

ARROYO DEL VALLE TRAIL BRIDGE
 QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	266	CY
STRUCTURE EXCAVATION (TYPE A)	138	CY
STRUCTURE BACKFILL (BRIDGE)	150	CY
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	900	LF
PRESTRESSING CAST-IN-PLACE CONCRETE	LUMP	SUM
SEAL COURSE CONCRETE	38	CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	74	CY
STRUCTURAL CONCRETE, BRIDGE	255	CY
JOINT SEAL (MR 1")	43	LF
BAR REINFORCING STEEL (BRIDGE)	78,136	LB
10" WELDED STEEL PIPE (.250" THICK)	210	LF
20" WELDED STEEL PIPE (.250" THICK)	220	LF
30" WELDED STEEL PIPE (.250" THICK)	210	LF
ROCK SLOPE PROTECTION (1/4 T, METHOD B) (CY)	540	CY
ROCK SLOPE PROTECTION (NO. 2, METHOD B)	173	CY
ROCK SLOPE PROTECTION FABRIC (CLASS 8)	614	SQYD
MISCELLANEOUS METAL (BRIDGE)	1,946	LB
CHAIN LINK RAILING (TYPE 7)	374	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	374	LF

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition and the Caltrans Amendments, Preface dated November 2011; except that Abutments and Concrete Barrier Type 736 are designed using Bridge Design Specifications ('96 AASHTO w/ Revisions by Caltrans)

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.7 dated April 2013

DEAD LOAD: Includes 35 psf for future wearing surface

LIVE LOADING: HL93 and Permit Design Vehicle

SEISMIC LOADING: Modified Caltrans SDC ARS Curve
 Peak Ground Acceleration = 0.61g
 Vs30 = 360 m/s

PILE DATA TABLE

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevations (ft)	Specified Tip Elevations (ft)
		Compression	Tension		
Abut 1	24" CIDH	320	0	359.0 (a)	359.0
				374.0 (c)	
Bent 2	24" CIDH	350	130	356.0 (a)	356.0
				371.0 (b)	
Abut 3	24" CIDH	290	0	365.0 (a)	365.0
				374.0 (c)	

Design tip elevation is controlled by the following demands:
 (a) Compression, (b) Tension, (c) Lateral

HYDROLOGIC SUMMARY

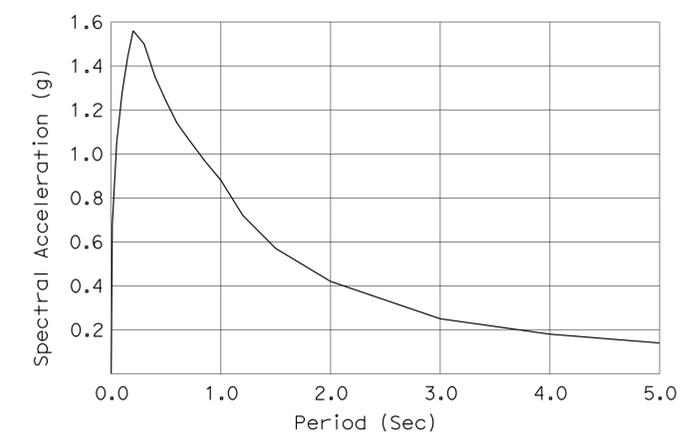
Drainage Area 160 square miles

	Design Flood	Base Flood	Overtopping Flood/Flood of Record
Frequency (Years)	50	100	N/A
Discharge (Cubic feet per second)	5,400	7,000	N/A
Water Surface (Elevation at bridge)	410.55	411.71	N/A

Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.

BENCHMARK DATA

- BM-16 - MONUMENT GTS220. MONUMENT IS A SET MAG NAIL IN DECORATIVE BRICK. MONUMENT IS LOCATED ON ISLAND AT NW RETURN OF ISABEL AND VINEYARD, 4.5 FT. FROM SE CORNER OF ISLAND, ELEVATION: 425.51 NORTHING: 2062597.788 EASTING: 6183687.773
- BM-17 - MONUMENT GTS219. MONUMENT IS A SET MAG NAIL WITH WASHER IN AC LABELED "GTS CONTROL POINT." MONUMENT IS LOCATED ON THE EAST SIDE OF ISABEL 60 FT NORTH OF BRIDGE ABUTMENT FOR CREEK NORTH OF VINEYARD, 2 FT NORTH OF END OF BARRIER RAIL. ELEVATION: 421.73' NORTHING: 2063315.901 EASTING: 6183722.273



CONCRETE: fy = 60 ksi
 fc = 3.6 ksi
 n = 8
 See "Prestressing Notes" on "GIRDER LAYOUT" sheet.

Stephen Huang 01/16/15 REGISTERED PROFESSIONAL ENGINEER APPROVAL DATE

DESIGN OVERSIGHT
 David Soon
 2-23-15
 SIGN OFF DATE

DESIGN	BY X. Fu	CHECKED D. Wang
DETAILS	BY K. Wang	CHECKED D. Wang
QUANTITIES	BY R. Huang	CHECKED W. Sennett

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Xiangyang Fu
 PROJECT ENGINEER

BRIDGE NO. N/A
ARROYO DEL VALLE TRAIL BRIDGE
 FOUNDATION PLAN