

Trancas Creek Bridge Replacement Project on PCH in City of Malibu

by California Dept. of Transportation (Caltrans)

PERSPECTIVE VIEW - HIGHWAY 1 SOUTHBOUND

PHOTO SIMULATION

DRAWN BY D. FOWKES

11/04/19

Caltrans Project Team:

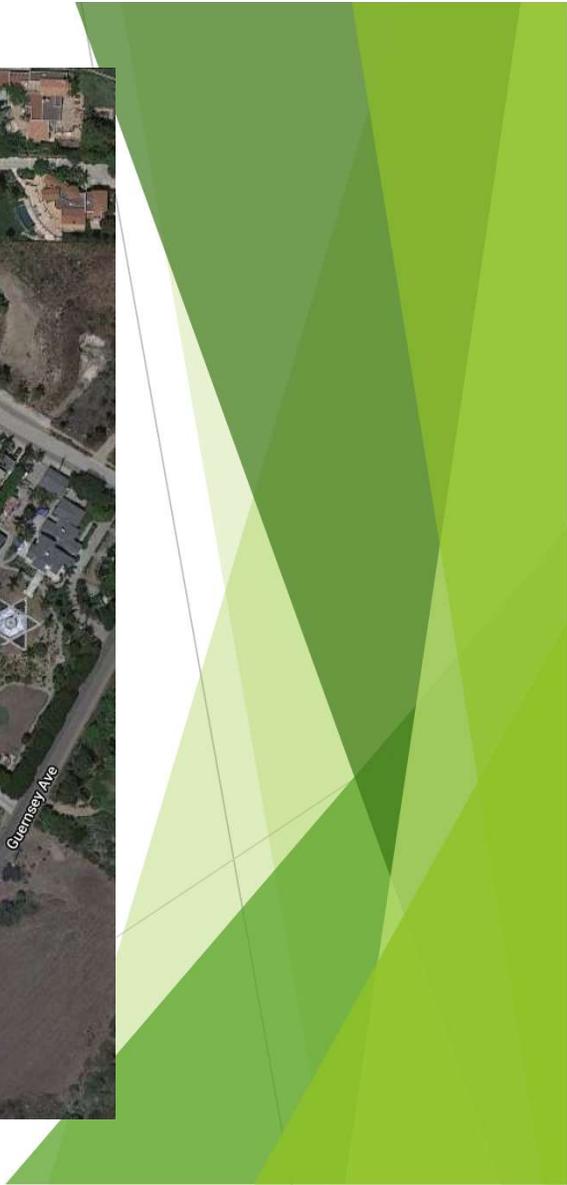
- ▶ Project Manager: Reza Fateh
- ▶ Environmental Senior: Robert Wang
- ▶ Design Manager: Orlance (OC) Lee
- ▶ Design Engineer: Barney Vorreiter
- ▶ Construction Manager: Michael Dipsia
- ▶ Resident Engineer: Alfred Ira
- ▶ Public Information Officer: Alisa Alamanzan

Existing Bridge:

- ▶ Reinforced Concrete bridge
- ▶ 85' Wide x 90' Long
- ▶ Over 96 years old
- ▶ The bridge has been determined to be **scour critical** which essentially means that earth material that support the foundation has been partially washed away which has created a potential for the bridge to become unstable.
- ▶ To minimize the foundation erosion and stabilize the bridge Caltrans did an Emergency Project and placed rock slope protection around the foundations in 2019 which provides temporary protection until the bridge is replaced.
- ▶ The superstructure also shows several signs of aging such as cracks and rusted reinforcement



Measure distance
Click on the map to add to your path
Total distance: 240.90 ft (73.42 m)













The Replacement (new) Bridge

- ▶ Dimensions:
 - ▶ Reinforced Concrete Bridge
 - ▶ 109' Wide x 240' Long on 4 x60' spans
 - ▶ 150' longer than the existing bridge to accommodate the County of LA's Flood Control District's Q50 Bulk and Burn flow.
- ▶ Cost / Schedule:
 - ▶ Engineer's Estimate - \$13.5 Mil
 - ▶ Construction Duration - 27 Months
 - ▶ Work within the creek can only be done during Dry Season which is from April 15 to November 15.
 - ▶ Hence the work will have to be done over a two year span to allow two Dry Seasons for the work in the creek.



Measure distance
Click on the map to add to your path
Total distance: 240.90 ft (73.42 m)



PERSPECTIVE VIEW - SOUTHBOUND BEACH SIDE

PHOTO SIMULATION

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PERSPECTIVE VIEW - NORTHBOUND INLAND SIDE

PHOTO SIMULATION

DRAWN BY D. FOWKES

11/04/19



TRANCAS CREEK BRIDGE PROJECT - CITY OF MALIBU

DISTRICT 7 - LOS ANGELES COUNTY

PREPARED BY: CALTRANS, DES. BRIDGE ARCHITECTURE & AESTHETICS

BRIDGE REPLACEMENT

WITH CALIFORNIA ST-75 BRIDGE RAIL



PERSPECTIVE VIEW - HIGHWAY 1 SOUTHBOUND

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Project Schedule:

- ▶ Design Completion September 30, 2020
- ▶ CTC to vote funds December 2, 2020
- ▶ Advertise January 4, 2021
- ▶ Bid Open February 4, 2021
- ▶ Award February 12, 2021
- ▶ Approve Contract February 26, 2021
- ▶ End Construction July 2023

Construction:

Before Bridge Work begins:

- ▶ County of LA will relocate its 16” Water main away from the bridge temporarily
- ▶ Other utility Companies will relocate their lines- Electric, Gas, Telephone, Cable

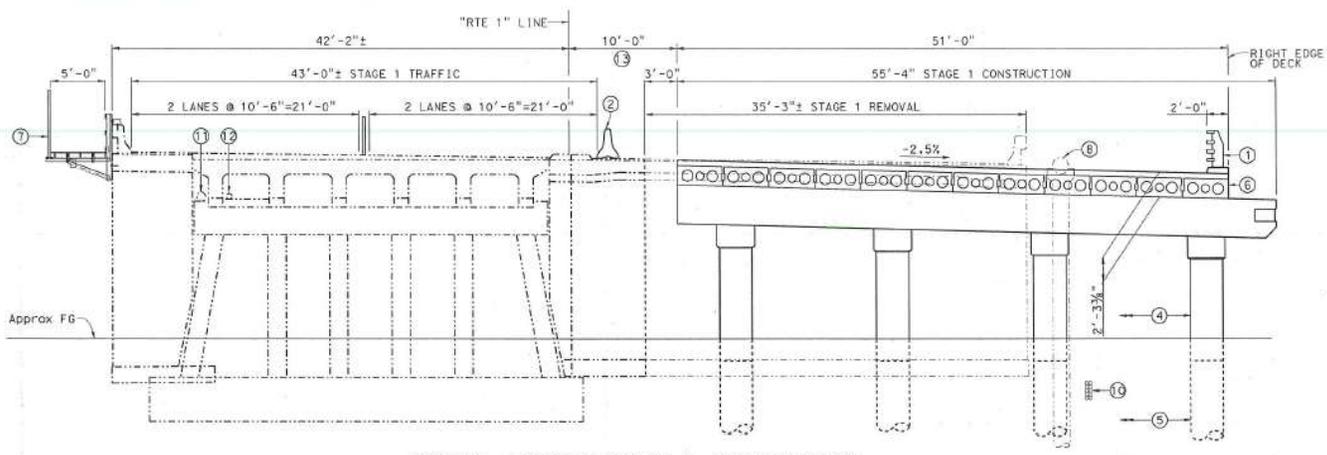
Caltrans Bridge Work - Stage 1

- ▶ Install a temporary traffic signal at Guernsey Ave
- ▶ Construct temporary Pedestrian / Bike lane on the oceanside of the bridge
- ▶ Restripe PCH and shift the existing **4 traffic lanes** to the oceanside
- ▶ Place K-rail to separate work zone from traffic
- ▶ Demolish and remove the inland half of the existing bridge (dry season work)
- ▶ Excavate and remove approximately 7000 yards of dirt
 - ▶ **Opportunity for Developers / City / County to use the excavated material locally**
 - ▶ Total of about 14000 yards - Contact PM if interested

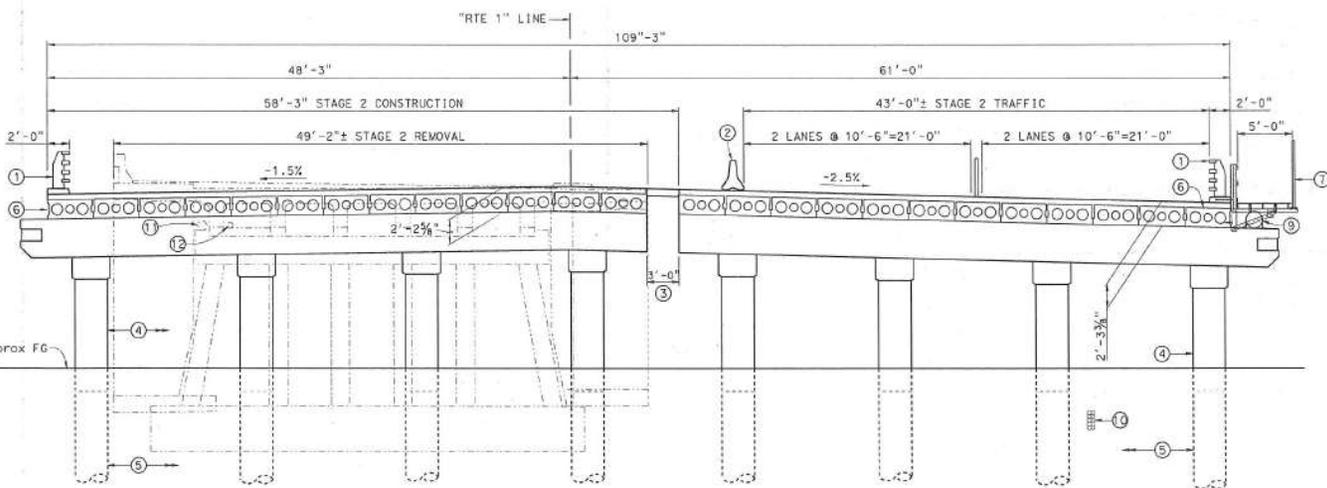
Construction:

Caltrans Bridge Work - Stage 1 (continued)

- ▶ About 7000 yards will be available in first half of 2021
- ▶ About 7000 yards will be available in first half of 2022
- ▶ More accurate timeframes will become available after the contract is awarded.
- ▶ Install piles, construct the foundation (dry season work)
- ▶ Construct the inland half of the superstructure (Bridge)
- ▶ This half will accommodate **4 lanes** of traffic for Stage 2
- ▶ Construct temporary Pedestrian/bike lane on the inland side
- ▶ Restripe the inland side of the PCH from Guernsey Ave to Trancas Canyon Road intersection to accommodate 4 lanes over the new bridge half
- ▶ Shift traffic over to the east side of PCH (inland side)



TYPICAL SECTION-STAGE 1 CONSTRUCTION
1"=5'-0"



TYPICAL SECTION-STAGE 2 CONSTRUCTION
1"=5'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
0000	CCCC	RRRR	PPPP	????	####
REGISTERED CIVIL ENGINEER			DATE	X	
MM/DD/YYYY				X	
PLANS APPROVAL DATE				X	
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.					



- NOTES:
- ① CA ST-70 Bridge Roll
 - ② Temporary Concrete Barrier Type K, see "ROADWAY PLANS"
 - ③ Closure Pour
 - ④ 3'-0" ϕ Column, typical
 - ⑤ 3'-0" ϕ CISS pile
 - ⑥ PC/PS voided slab
 - ⑦ Temporary pedestrian walkway
 - ⑧ Existing 16" LACWWD water line
 - ⑨ Proposed 18" LACWWD water line
 - ⑩ Existing 10-4" conduits - Frontier
 - ⑪ Existing 6" in 10" casing SCG gas line
 - ⑫ Existing 6" abandoned water line
 - ⑬ 10'-0" dimension at \bar{C} Abut and \bar{C} Pier

DESIGN BY CHUCK LOMICKA	CHECKED CLARENCE HENSEL	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE No. 53-3103	TRANCAS CREEK BRIDGE (REPLACE) CONSTRUCTION STAGING PLAN
DETAILS BY K. KUBO	CHECKED CLARENCE HENSEL		DESIGN BRANCH 12	POST MILE 56.71	
QUANTITIES BY CHUCK LOMICKA	CHECKED MIAN MALLA				
DATE PLOTTED: 16-DEC-2019 FILE: \\S1-2103-01-000.dgn	THE PLOTTED: 16-DEC-2019 USER: MALLA	ORIGINAL SCALE IN INCHES FOR REPRODUCED PLANS	UNIT: 3000 PROJECT NUMBER & PHASE: 07120000941	CONTRACT No.: 07-291404	REVISION DATES 5-2019 10-2019 10-2019 10-2019
STRUCTURES DESIGN DETAIL SHEET EARTHQUAKE DESIGN 17/11/2019			DISPERSED PRINTS BEARING EARLIER REVISION DATES		SHEET 4 OF 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	01	56.5/56.9		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

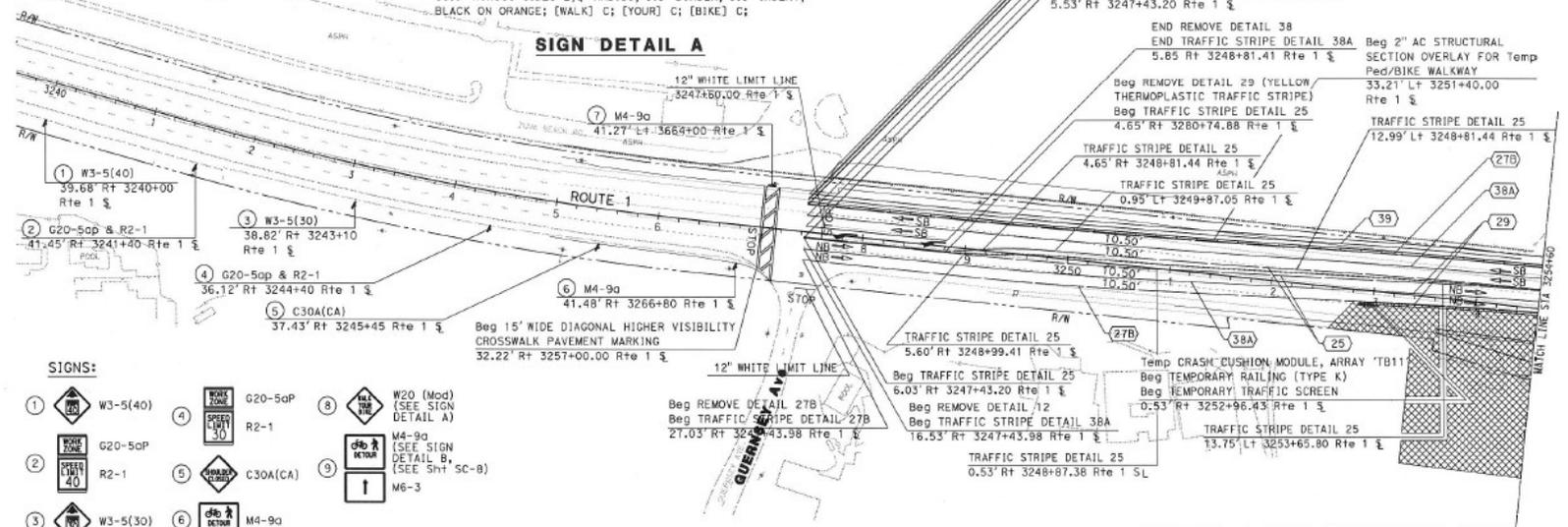
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- LEGEND:**
- CONSTRUCTION WORK AREA
 - DIRECTION OF TRAFFIC
 - CHANNELIZERS (SURFACE MOUNTED)
 - TEMPORARY RAILING (TYPE K) WITH SCUPPERS AND TEMPORARY TRAFFIC SCREEN
 - TEMPORARY CRASH CUSHION
 - TEMPORARY TRAFFIC STRIPE DETAIL NUMBER

IDENTIFIER : W20(Mod)M;
 36.0" ACROSS SIDES 2 1/4" RADIUS, 0.9" BORDER, 0.6" INDEXT,
 BLACK ON ORANGE; [WALK] C; [YOUR] C; [BIKE] C;

SIGN DETAIL A



- SIGNS:**
- 1 W3-5(40)
 - 2 G20-50P R2-1
 - 3 W3-5(30)
 - 4 G20-50P R2-1
 - 5 C30A(CA)
 - 6 M4-9a
 - 7 M4-9a
 - 8 W20 (Mod) (SEE SIGN DETAIL A)
 - 9 M4-9a (SEE SIGN DETAIL B, (SEE SH SC-8))
 - M6-3

**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
 STAGE 1**

SCALE: 1" = 50'

SC-4

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

DESIGN
 DEPARTMENT OF TRANSPORTATION
 STATE OF CALIFORNIA
 CC LEE
 BARNABAS F. VORREITER
 REVISIONS

DATE PLOTTED => 23-MAR-2020
 TIME PLOTTED => 11:07



END SEE STRUCTURE PLANS FOR Temp Ped WALKWAY
 Beg 2" AC STRUCTURAL SECTION OVERLAY FOR Temp
 Ped/BIKE WALKWAY EXCEPT AT DRIVEWAYS
 40.01' Lt 3258+23.66 Rte 1 §
 Beg Temp RAILING (TYPE K) EXCEPT AT DRIVEWAYS
 39.74' Lt 3258+23.66 Rte 1 §

TRAFFIC STRIPE DETAIL 25
 3.40' Lt 3263+62.54 Rte 1 §
 END 2" AC STRUCTURAL SECTION OVERLAY FOR Temp Ped/BIKE WALKWAY
 32.70' Lt 3263+25.00 Rte 1 §

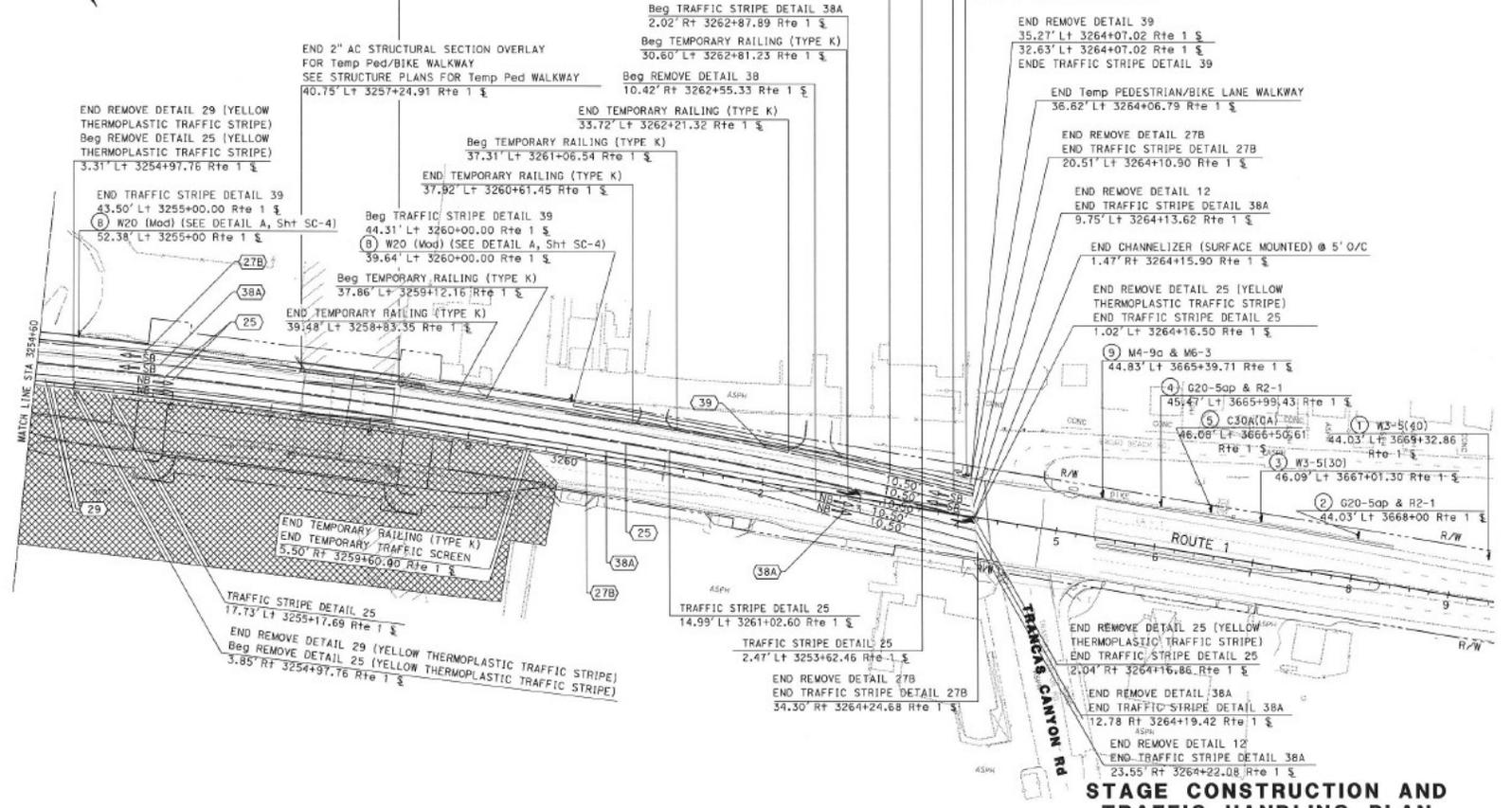
END TEMPORARY RAILING (TYPE K)
 Temp CRASH CUSHION MODULE ARRAY 'TB11
 22.62' Lt 3263+91.09 Rte 1 §

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	01	56.5/56.9		

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
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REVISOR: BARMBAS F. VORREITER
 DATE: _____
 CALCULATED BY: _____
 CHECKED BY: _____
 FUNCTIONAL SUPERVISOR: OC LEE
 DESIGN



STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 1

SCALE: 1" = 50'

SC-5

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

BORDER LAST REVISED 7/2/2010

USER NAME => e112731
 DGN FILE => 129140n005.dgn

RELATIVE BORDER SCALE 15/32 INCHES



UNIT 1814

PROJECT NUMBER & PHASE

0712000094

DATE PLOTTED => 30-MAR-2008
 TIME PLOTTED => 11:01

Construction Staging:

Caltrans Bridge Work Stage 2:

- ▶ Shift Traffic over to the east (inland side) on newly built Bridge half
- ▶ Remove Temporary Ped/bike lane on the oceanside
- ▶ Demolish the remaining half of the old bridge (oceanside)
- ▶ Excavate and remove the existing foundation (Dry season work)
- ▶ Excavate and remove approximately 7000 yards of dirt
- ▶ Install piles and build the new foundation (Dry season work)
- ▶ Construct the second half of the superstructure (bridge)
- ▶ Remove the temporary Bike and Ped path on the inland side
- ▶ County of LA to re-install its 16" watermain back on the new bridge
- ▶ All Utilities will complete relocating to their permanent locations
- ▶ Restripe the new bridge to its final configuration
- ▶ Shift traffic back to its permanent configuration providing two lanes in each direction
- ▶ Remove temp signal at Guernsey Ave.

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07	LA	01	56.5/56.9	

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	



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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

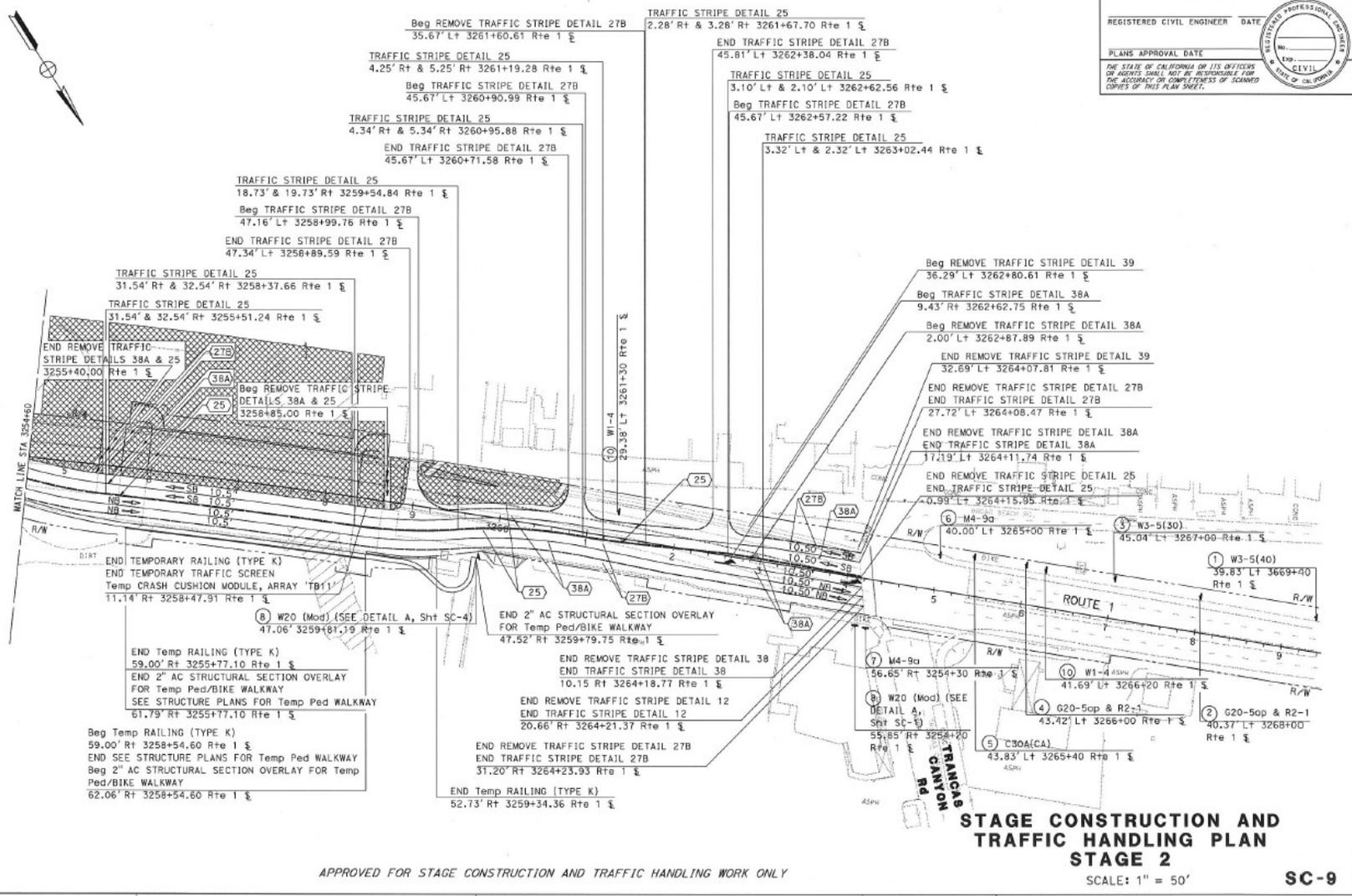
DESIGN

FUNCTIONAL SUPERVISOR: OC LEE

DESIGNED BY: BARBARAS F. VORREITER

CHECKED BY:

REVISOR: DATE



APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 2**

SCALE: 1" = 50'

SC-9

DATE PLOTTED => 03-30-2010 TIME PLOTTED => 10:05

Public Outreach During Construction

- ▶ Caltrans Public Information Officer (PIO) will:
 - ▶ Notify City of Malibu Public Works and its PIO of any planned closures on PCH
 - ▶ Issue Media Releases to the public
 - ▶ Post closures / detours on social media
 - ▶ Issue a detour map if necessary
 - ▶ Tag City of Malibu on all social media posts on the project
- ▶ The Resident Engineer will be available to address any concerns the public has during construction.
- ▶ You can also reach me: email: Reza.fateh@dot.ca.gov
Tel. : 213-269-1434
- ▶ You are encouraged to send your inquiries to:
 - ▶ TrancasBridgeProject@dot.ca.gov

Questions / Comments?

Should be submitted to:

TrancasBridgeProject@dot.ca.gov



PERSPECTIVE VIEW - HIGHWAY 1 SOUTHBOUND

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