

FOR CONTRACT NO.: 04-4S5404

# INFORMATION HANDOUT

## WATER QUALITY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY SECTION

TIDAL INFORMATION BOLINAS LAGOON

## PERMITS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CIWQS Place No.:750720

Site No. 02-21-C0775

STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND GAME

NOTIFICATION NO.: 1600-2010-0089-R3

UNITED STATES ARMY CORPS OF ENGINEERS

NON-REPORTING NATIONWIDE 404 PERMIT

CALIFORNIA COAST COMMISSION

WAIVER De Minimis Number: 2-10-024-W

GULF OF THE FARALLONES NATIONAL MARIN SANCTUARY

PERMIT No: GFNMS-2010-004

ROUTE: 04-MRN-1-15.0/017.0

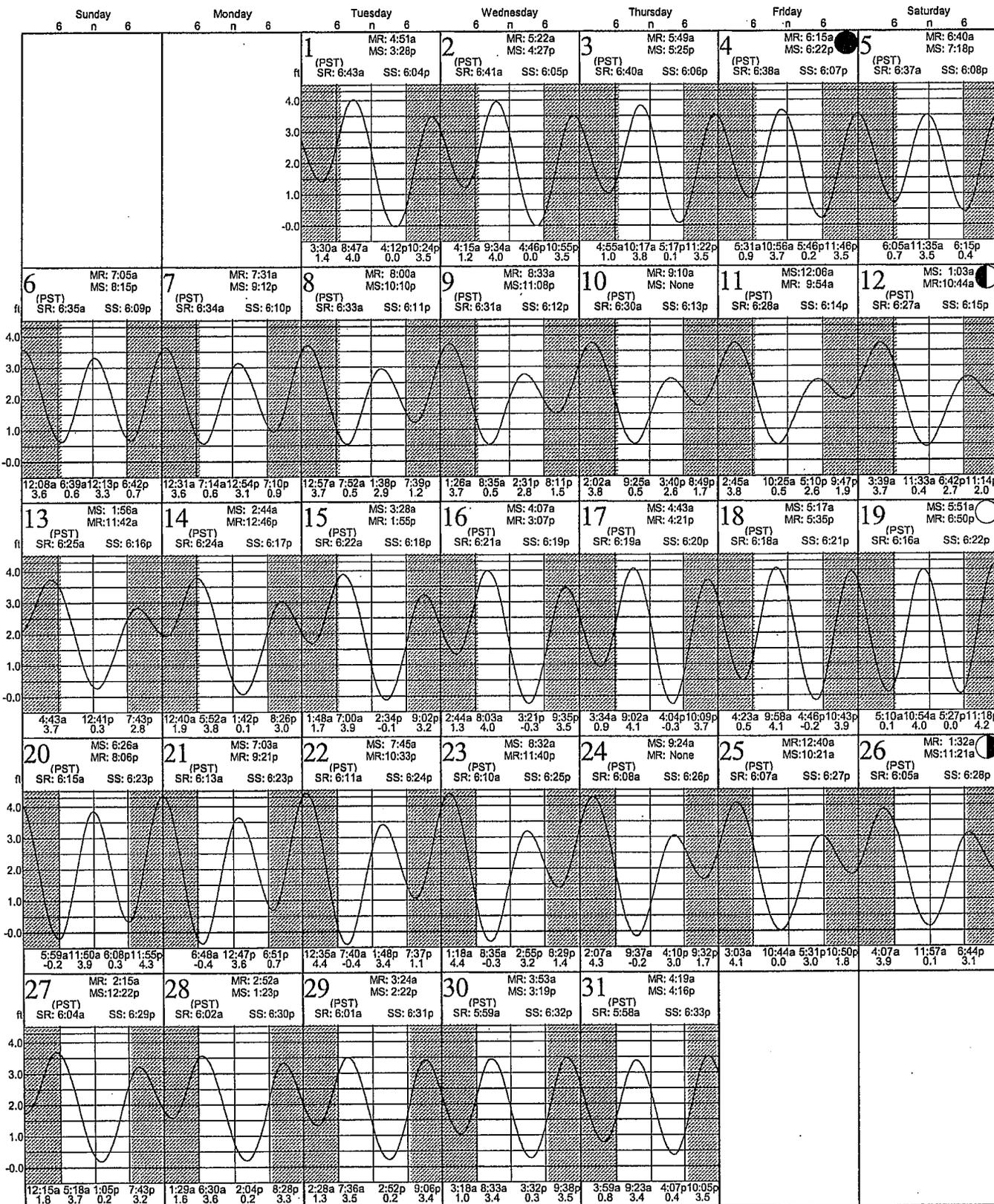
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High March 22, 12:35a 4.4 ft  
Low March 22, 7:40a -0.4 ft

## March 2011



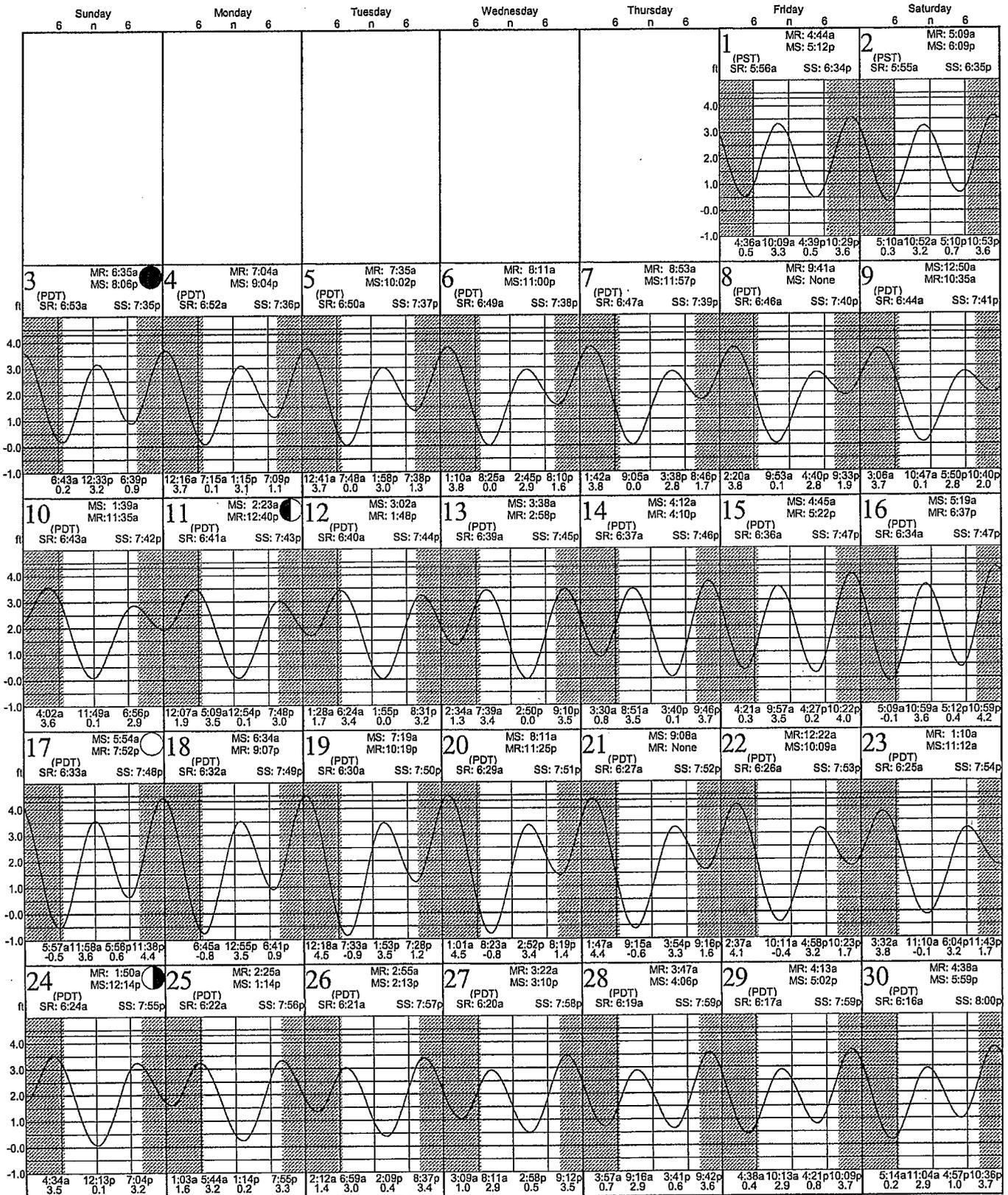
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High April 19, 12:18a 4.5 ft  
Low April 19, 7:33a -0.9 ft

## April 2011



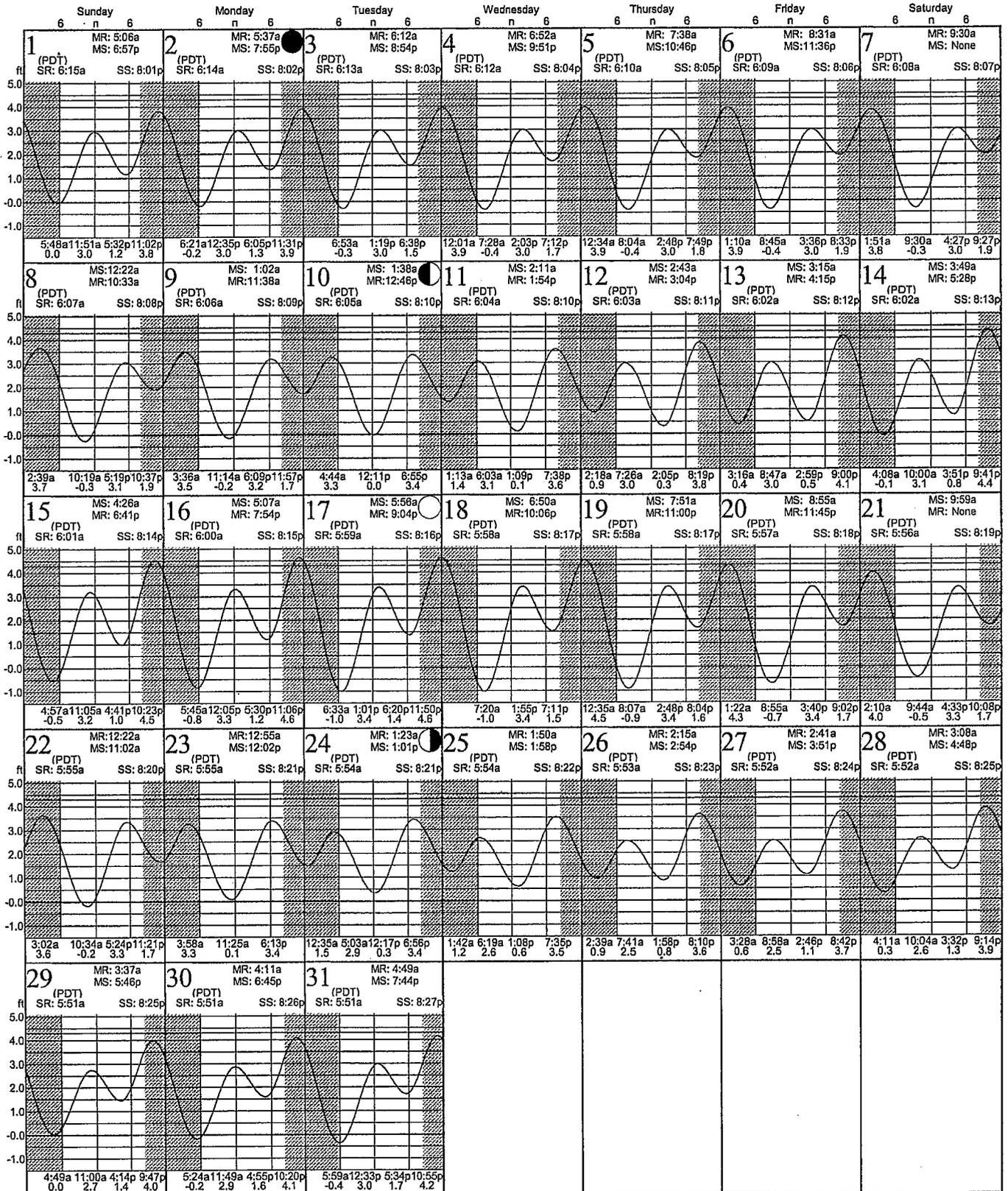
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High May 16, 11:06p 4.6 ft  
Low May 18, 7:20a -1.0 ft

## May 2011



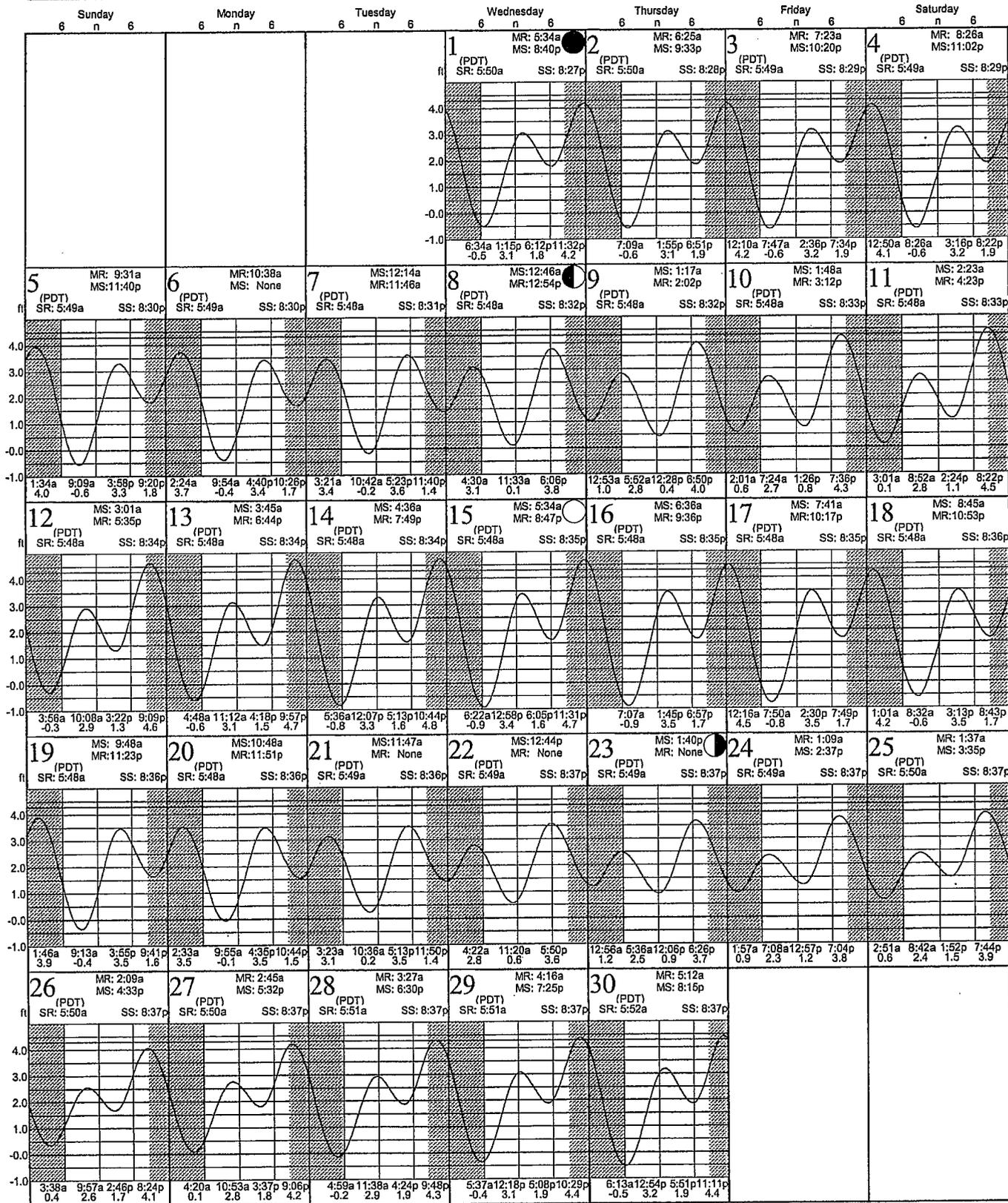
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High June 14, 10:44p 4.8 ft  
Low June 15, 6:22a -0.9 ft

## June 2011



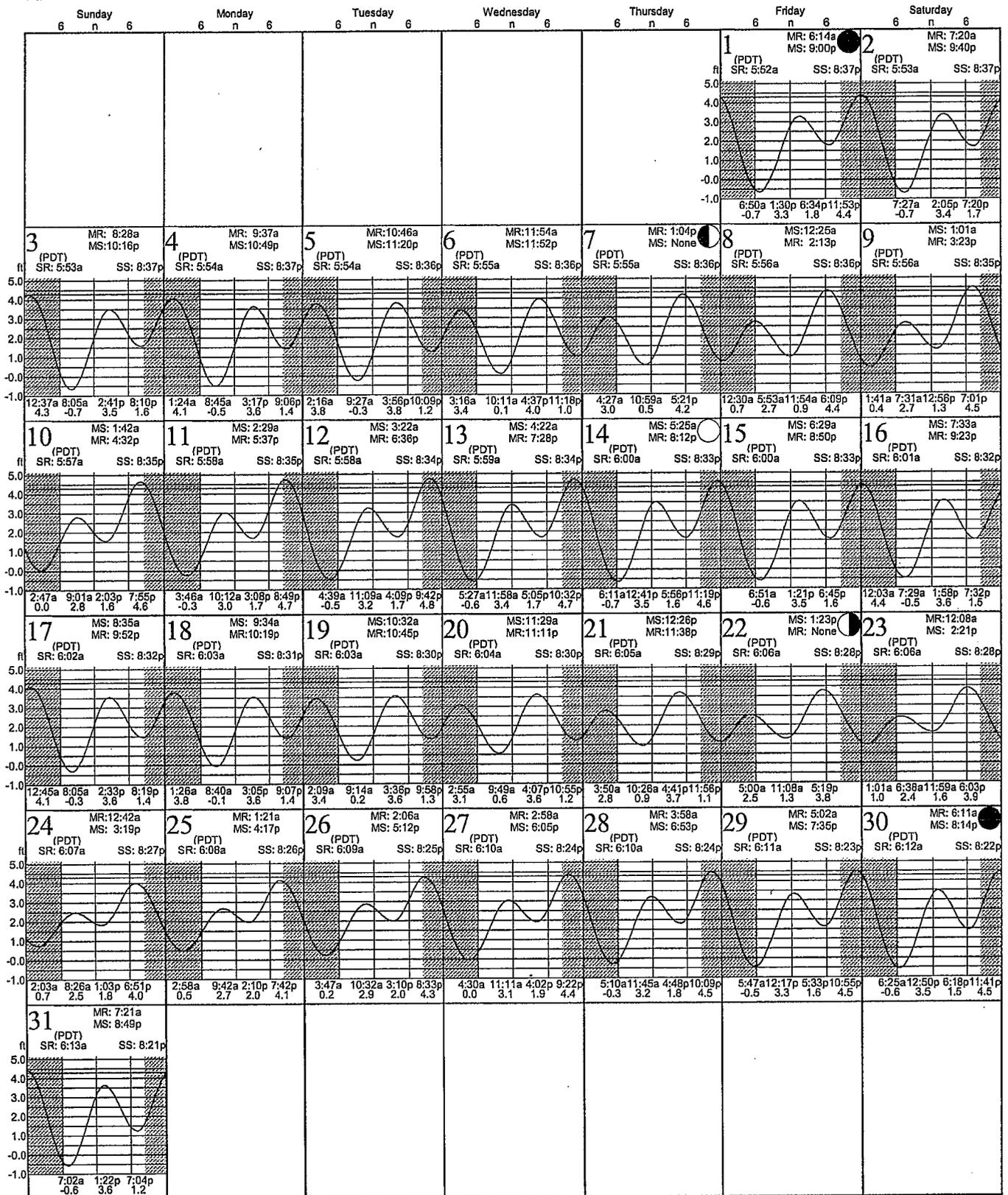
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High July 12, 9:42p 4.8 ft  
Low July 2, 7:27a -0.7 ft

## July 2011



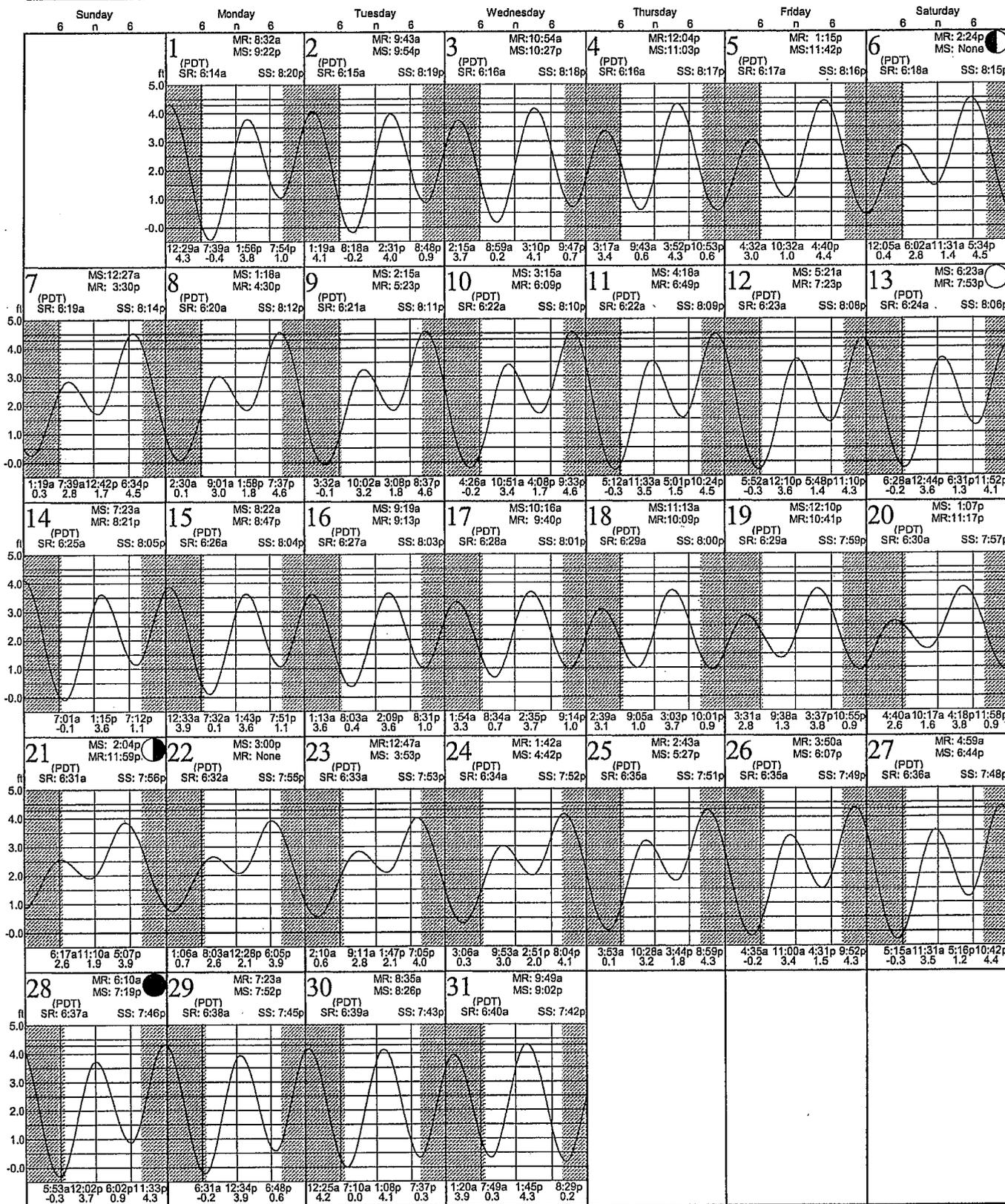
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60' N 122° 40.90' W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High August 9, 8:37p 4.6 ft  
Low August 1, 7:39a -0.4 ft

## August 2011



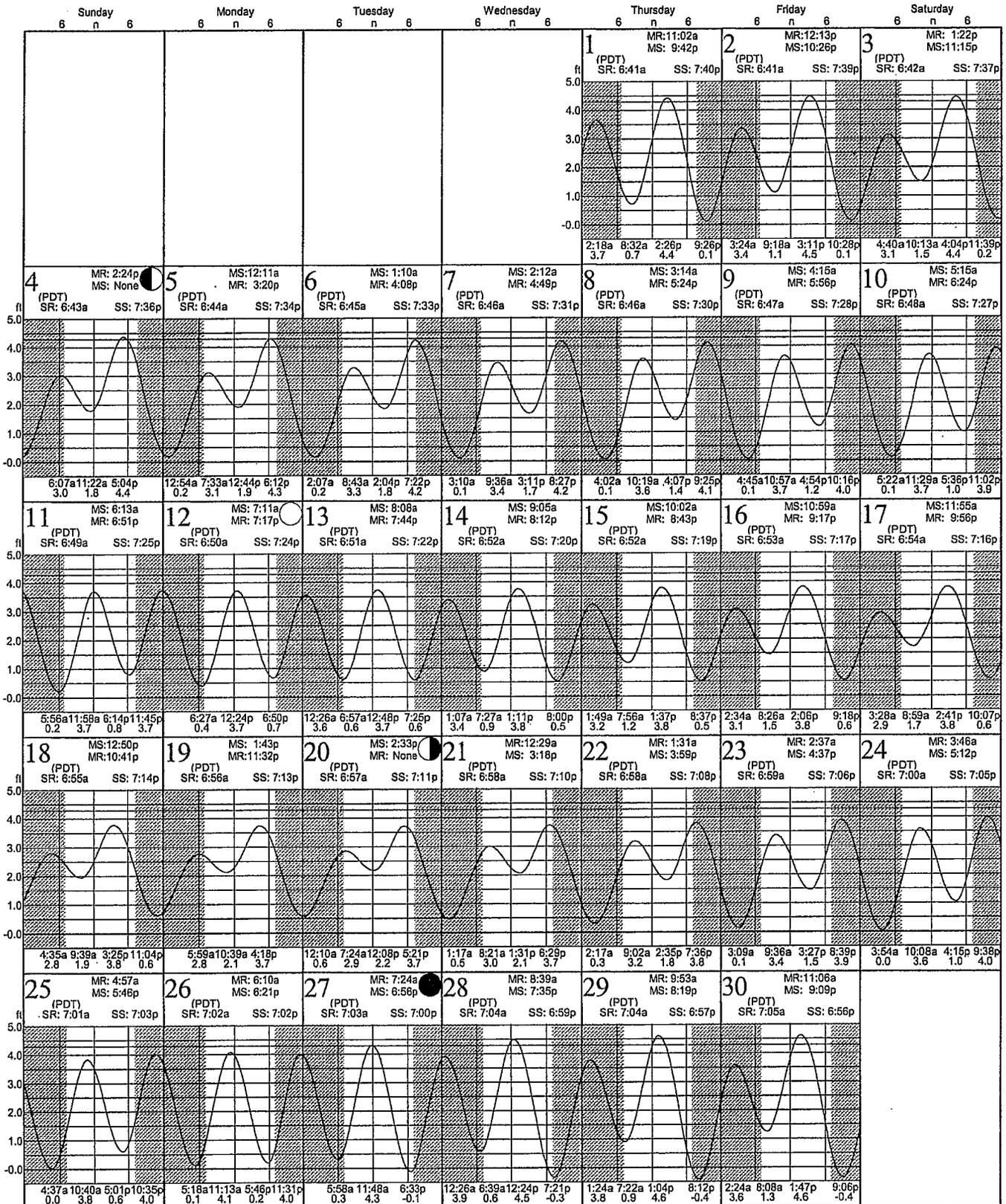
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High September 30, 1:47p 4.6 ft  
Low September 29, 8:12p -0.4 ft

## September 2011



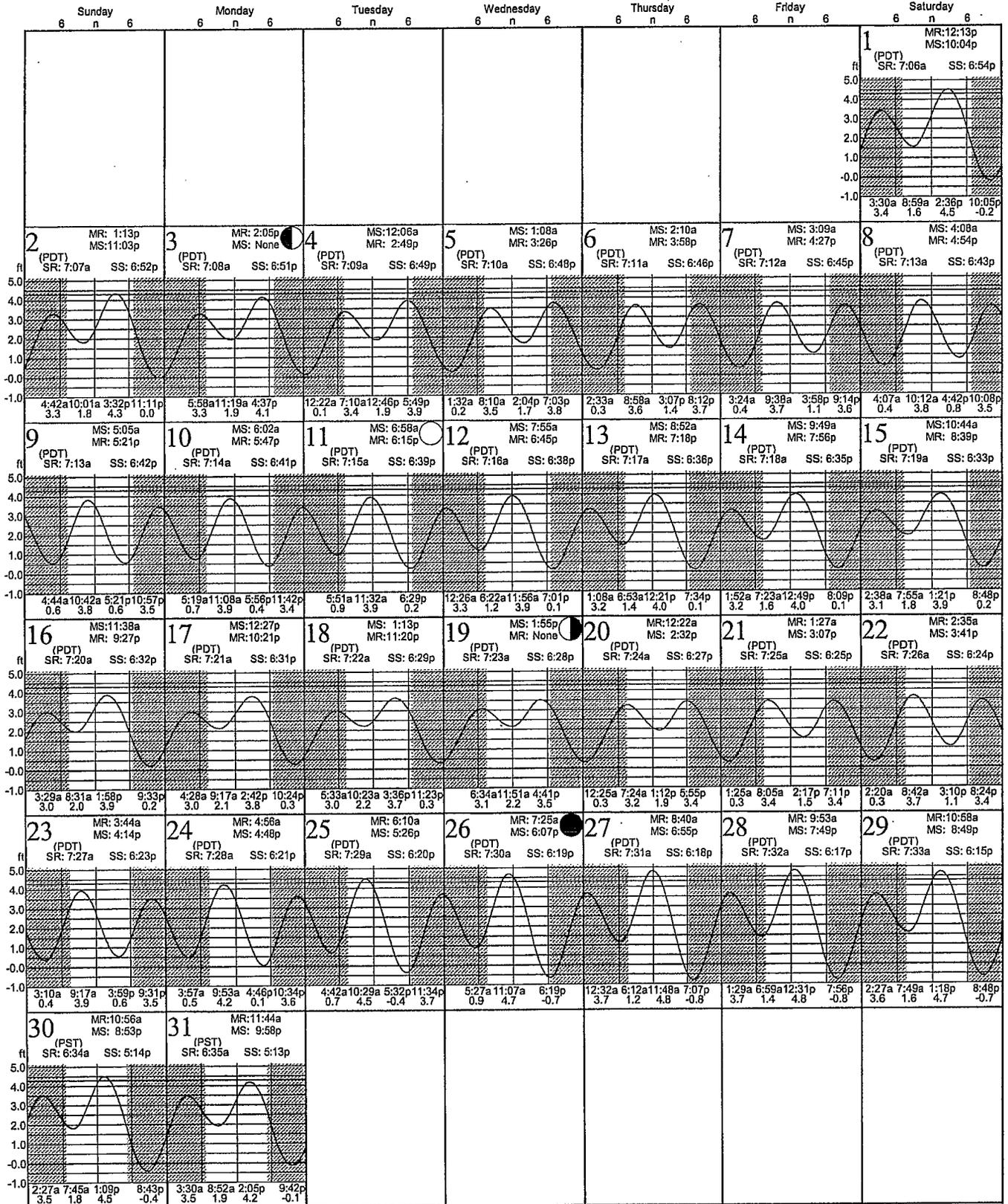
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High October 28, 12:31p 4.8 ft  
Low October 27, 7:07p -0.8 ft

## October 2011



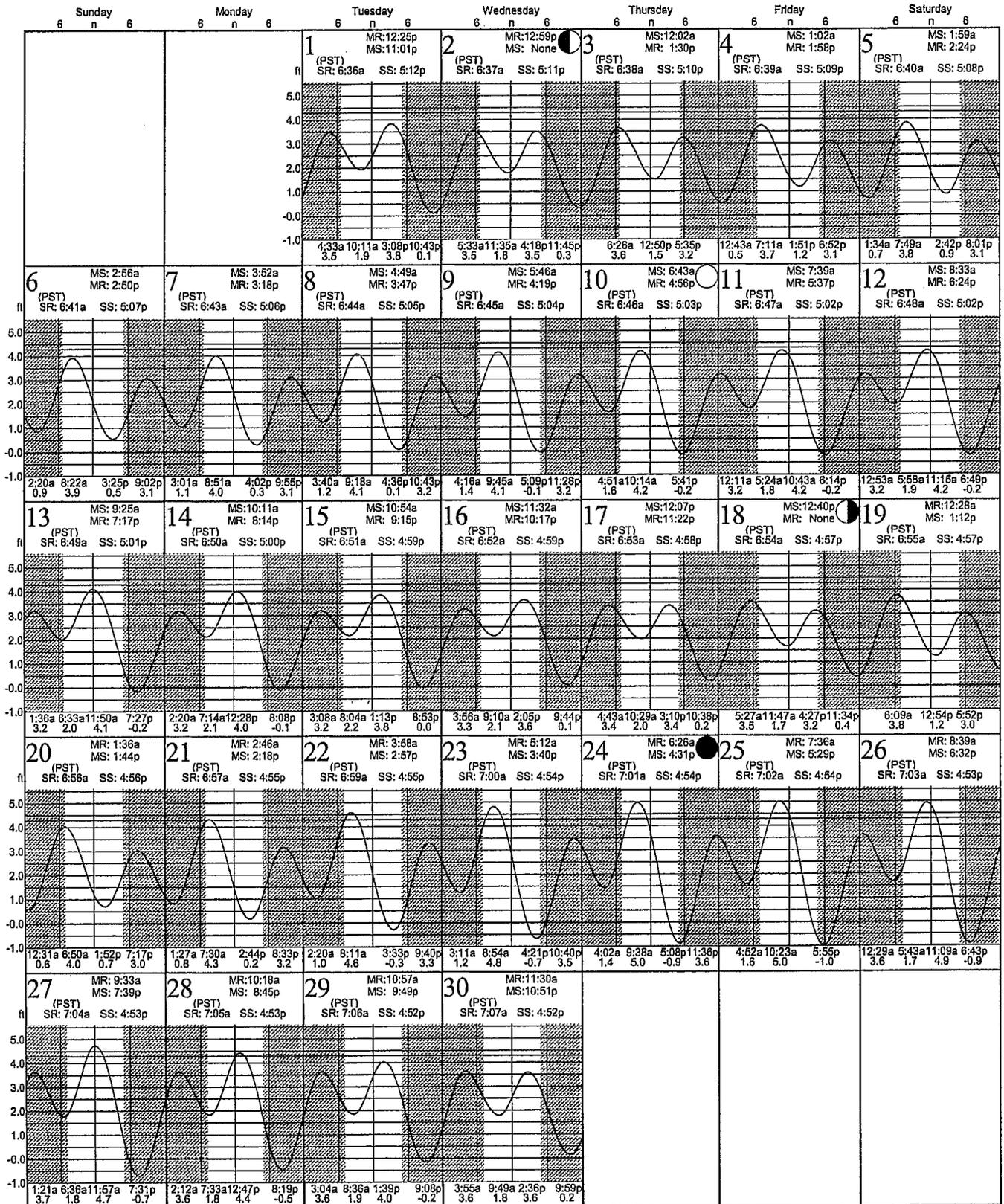
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High November 25, 10:23a 5.0 ft  
Low November 25, 5:55p -1.0 ft

## November 2011



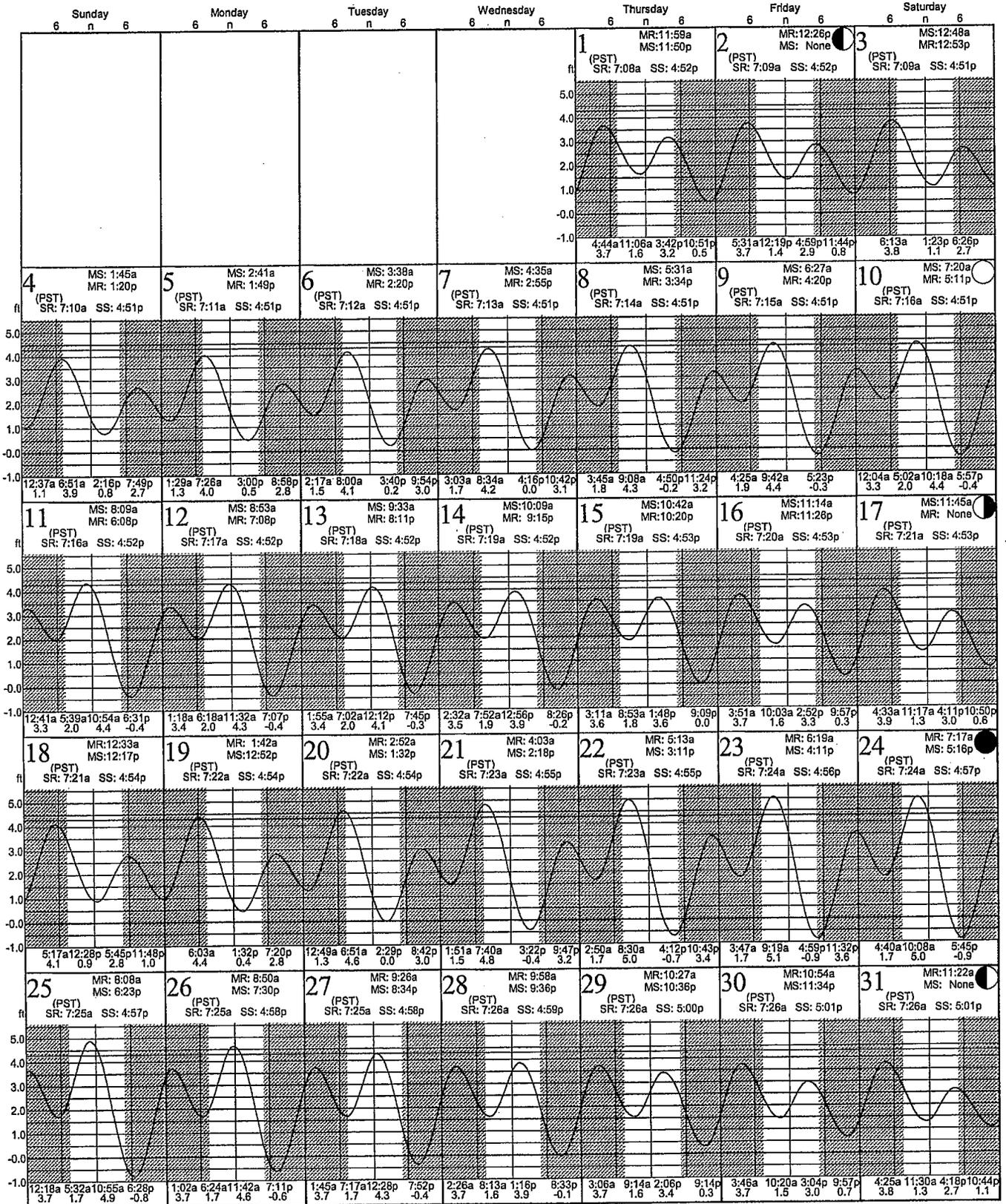
# Tides: Bolinas Lagoon

based on San Francisco (Golden Gate), California (NOAA)  
37° 54.60 N 122° 40.90 W

Average Tides  
Mean Range: 3.0 ft  
MHHW: 4.3 ft  
Mean Tide: 2.2 ft

Monthly High & Low  
High December 23, 9:19a 5.1 ft  
Low December 24, 5:45p -0.9 ft

## December 2011





# California Regional Water Quality Control Board

## San Francisco Bay Region



Linda S. Adams  
Secretary for  
Environmental  
Protection

1515 Clay Street, Suite 1400, Oakland, California 94612  
(510) 622-2300 • Fax (510) 622-2460  
<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger  
Governor

May 4, 2010  
CIWQS Place No.: 750720  
Site No. 02-21-C0775

*Sent via electronic mail: No hard copy to follow*

California Department of Transportation  
Attn: Mr. Larry Jones  
[Larry.Jones@dot.ca.gov](mailto:Larry.Jones@dot.ca.gov)  
PO Box 23660  
Oakland, CA 94623-0660

**Subject: Water Quality Certification for the Stinson Beach Route 1 Culvert Repair and Riprap Replacement Project, Marin County**

**Department Project No.: EA 04-4S540**

Dear Mr. Jones:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff have reviewed the 401 water quality certification application submitted by the California Department of Transportation (the Department) for the Stinson Beach Route One Culvert Repair and Riprap Replacement Project (Project). The Department is seeking a permit for the Project from the U.S. Army Corps of Engineers (ACOE) pursuant to Clean Water Act (CWA) Section 404 Nationwide Permit No. 3 (*Maintenance*). You applied to this office under Section 401 of the CWA for water quality certification verifying that the Project does not violate State water quality standards.

**Project:** The Department proposes to replace 14 culverts and approximately 4,600 linear feet of rock slope protection (RSP) on State Route 1 (SR1) alongside Bolinas Lagoon (Lagoon), a tidal estuary in West Marin County. The Project limits are between SR1 post miles 15.0 and 17.0. Additional Project activities include paving 14 pullouts, installing north and southbound road shoulders, replacing asphalt concrete at failed pavement sections, and resurfacing the north and southbound lanes.

### RSP Replacement

Because the current RSP design does not include filter fabric, fine particles have been displaced from the embankment and roadbed of SR1. The Department proposes to remove approximately 4,600 linear feet of existing RSP, install filter fabric, re-install the removed RSP, and replace

damaged or missing RSP with new light class RSP (20-200 lbs). All RSP removal and replacement will be conducted above Lagoon mean high water (MHW).

### Culvert Replacement

Fourteen existing, corroded and/or undersized culverts will be replaced with 18-inch diameter plastic pipes. The culverts shall be replaced using a trenching method. New inlets and flared-end outlet sections will also be installed. Undersized culverts will be replaced with larger diameter culverts and/or differing grades to improve passage of sediment and debris. At some of the culvert outfalls, existing ditches have filled with sediment and shall be cleared to provide a free-flowing outlet. All outfalls and outfall drainage ditches shall be installed above the federal-jurisdiction tidal mean high water of Bolinas Lagoon.

**Impacts:** Culvert replacement will result in the permanent fill of approximately 0.01 acres of waters of the State.

The Department will add approximately 0.71 acres of impervious area due to paving of pullouts and shoulder paving.

**Mitigation:** Because the placement of filter fabric will reduce sediment input to the lagoon, and because the culvert replacement is in-kind, no additional mitigation is required for this Project.

Mitigation for pollutants associated with impervious areas is not required because the added and reworked Project area is less than one acre. All Project culverts discharge directly to the tidal Lagoon, therefore no hydromodification mitigation is required.

**CEQA Compliance:** In October 2009, the Department found that the project was categorically exempt from CEQA pursuant to 14 CCR § 15301, existing facilities.

**Certification:** I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003 - 0017 – DWQ, “General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification” which requires compliance with all conditions of this Water Quality Certification. The following conditions are associated with this certification:

1. Except as expressly allowed in this certification, no debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete, or washings thereof, or other construction-related materials or wastes, oil or petroleum products or other organic or earthen material shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into the Lagoon. Any of these materials placed within or where they may enter the Lagoon by the

Department or any party working under contract, or with the permission of the Department shall be removed immediately. When operations are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into the Lagoon. During construction, the Department and contractor shall not dump any litter or construction debris in waters of the State, or where it may be washed into waters of the State. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site;

2. The Department shall adhere to the Standard and Regional conditions imposed by Nationwide Permit No. 3, issued to the Department by the Corps;
3. The Project shall be constructed in conformance with the Project Description described in this certification and Project Plans attached to this certification. Any change in the Project may require modification to the certification and shall be reported to the Water Board. Any significant change in Project description must be accepted by the Water Board's Executive Officer prior to implementation of said change in the Project;
4. No fueling, cleaning or maintenance of vehicles or equipment shall take place within waters of the state or within any areas where an accidental discharge to waters of the state may occur;
5. The use of recycled or broken concrete as slope protection is prohibited;
6. All work in waters of the State shall be conducted only between July 15 and October 15;
7. The Department shall maintain a copy of this water quality certification at the Project site so as to be available at all times to site operating personnel. It is the responsibility of the Department to assure that all personnel (employees, contractors, and subcontractors) are adequately informed and trained regarding the conditions of this certification;
8. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code (CWC) and Section 3867 of Title 23 of the California Code of Regulations(23 CCR);
9. This certification action does not apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to California Code of Regulations (CCR) Title 23, Subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought; and,

10. Certification is conditioned upon total payment of the full fee required in State regulations (23 CCR Section 3833). Water Board staff received full payment of \$1,781 on March 16, 2010.

We anticipate your cooperation in implementing these conditions. However, please be advised that any violation of water quality certification conditions is a violation of State law and subject to administrative civil liability pursuant to California Water Code (CWC) section 13350. Failure to respond, inadequate response, late response, or failure to meet any condition of this certification may subject you to civil liability imposed by the Water Board to a maximum of \$5,000 per day per violation or \$10 for each gallon of waste discharged in violation of this certification.

We anticipate no further action on this request. Should new information come to our attention that indicates a water quality problem with this project, the Water Board may issue Waste Discharge Requirements pursuant to 23 CCR Section 3857.

If you have any question, please contact Brendan Thompson at (510) 622-2506, or via e-mail to [BThompson@waterboards.ca.gov](mailto:BThompson@waterboards.ca.gov).

Sincerely,

Bruce H. Wolfe  
Executive Officer

cc (via e-mail): Mr. Bill Orme SWRCB-DWQ  
Mr. Hal Durio, USACE  
Ms. Jane Hicks, USACE  
Ms. Laurie Monarres, USACE  
Ms. Holly Costa, USACE

Mr. Dale Bowyer, Water Board  
USEPA  
Mr. Hardeep Takhar, Caltrans  
Mr. Cyrus Vafai, Caltrans  
Ms. Andrea Meier, USACE

**Attachment**

**Project Plans**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PROJECT PLANS FOR CONSTRUCTION ON  
 STATE HIGHWAY**  
 IN MARIN COUNTY  
 NEAR STINSON BEACH  
 FROM 2.2 MILE NORTH OF CALLE DEL ARROYO  
 TO BOLINAS ROAD

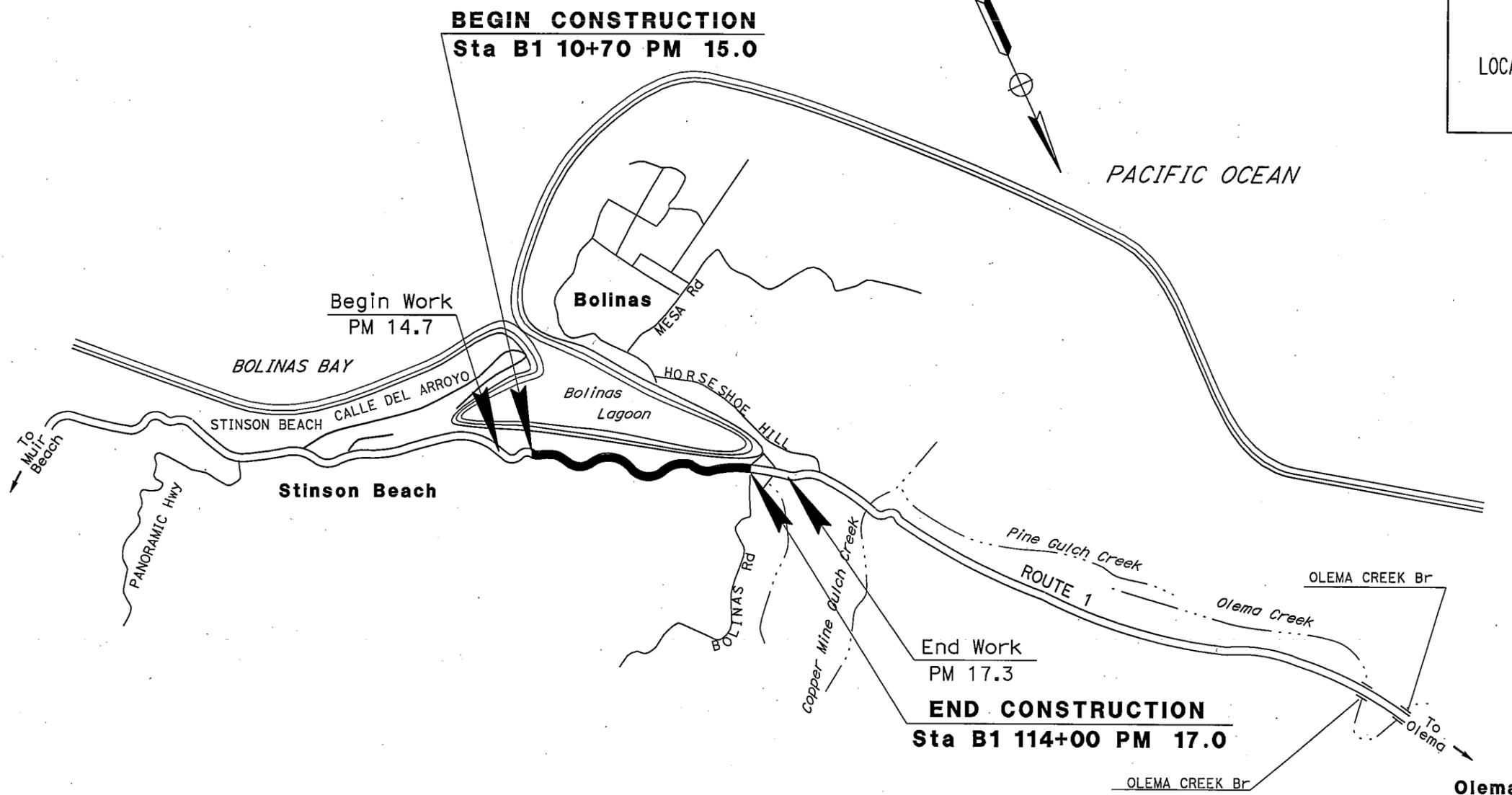
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

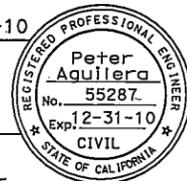




LOCATION MAP



PROJECT MANAGER  
 LAWRENCE A. JONES  
 DESIGN ENGINEER  
 PETER AGUILERA

Peter Aguilera 3-11-10  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  


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.

CONTRACT No. **04-4S5404**

CU 04224 EA 4S5401

FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 CHECKED BY: [ ]  
 DESIGNED BY: [ ]  
 SUSANA ONATE  
 PETER AGUILERA  
 REVISED BY: PA  
 DATE REVISED: 3/10/10

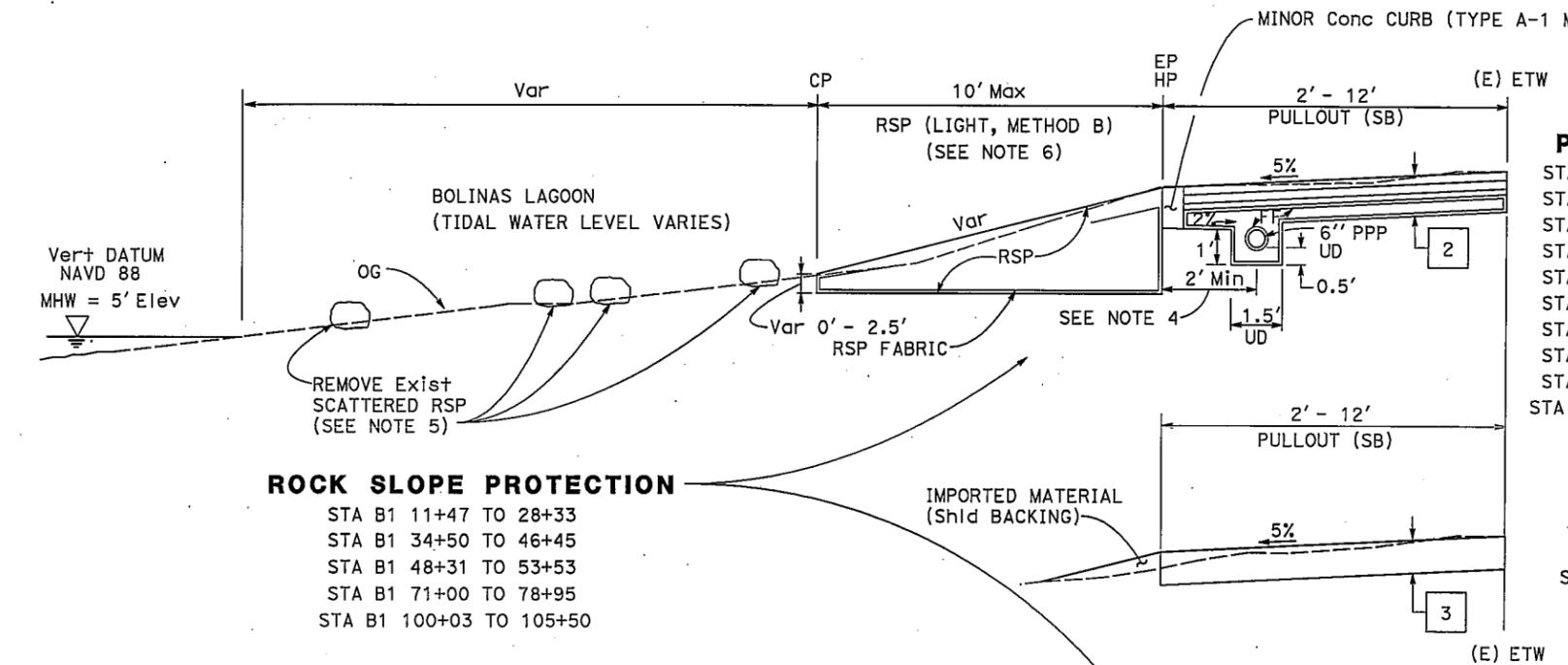
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Peter Aguilera 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aguilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

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.

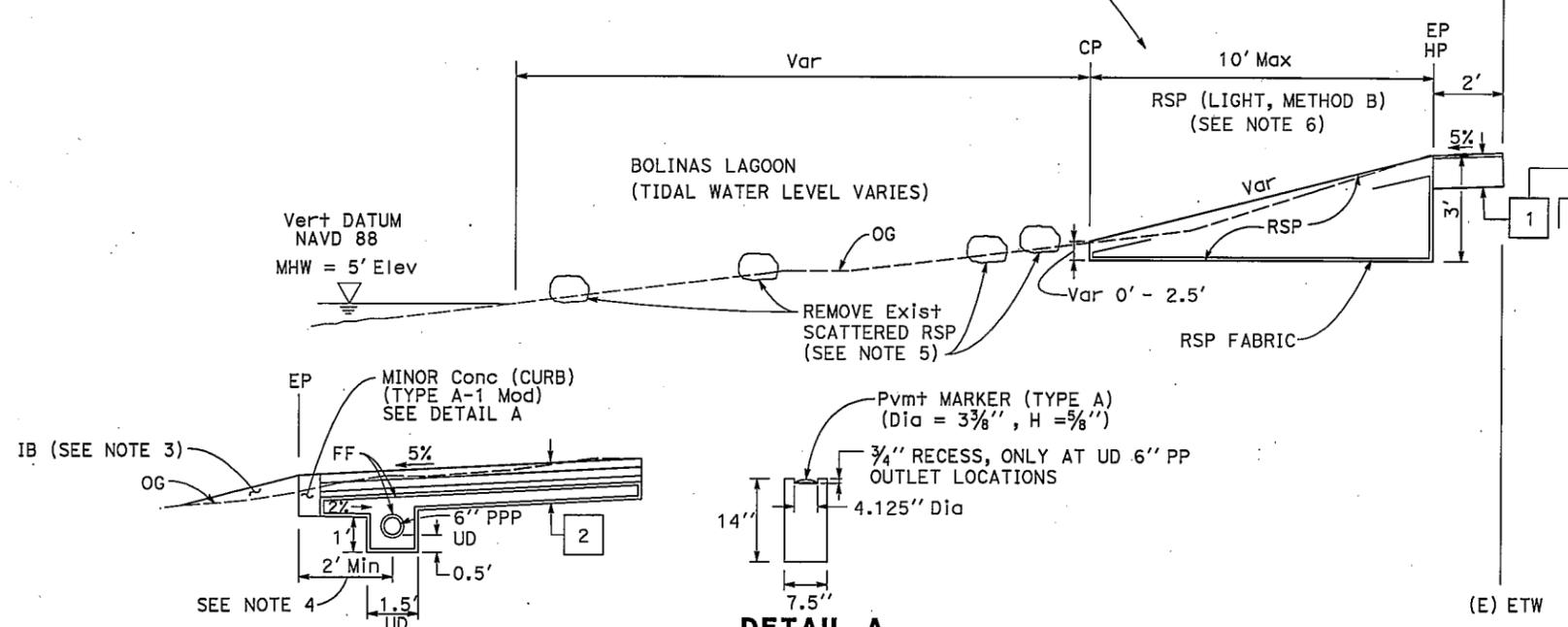


- PULLOUT (SB)**
- STA B1 10+70 TO 12+00
  - STA B1 46+34 TO 48+00
  - STA B1 49+40 TO 51+00
  - STA B1 55+20 TO 56+85
  - STA B1 57+95 TO 59+20
  - STA B1 63+65 TO 66+30
  - STA B1 73+35 TO 74+70
  - STA B1 90+00 TO 94+50
  - STA B1 98+60 TO 99+65
  - STA B1 105+50 TO 106+60

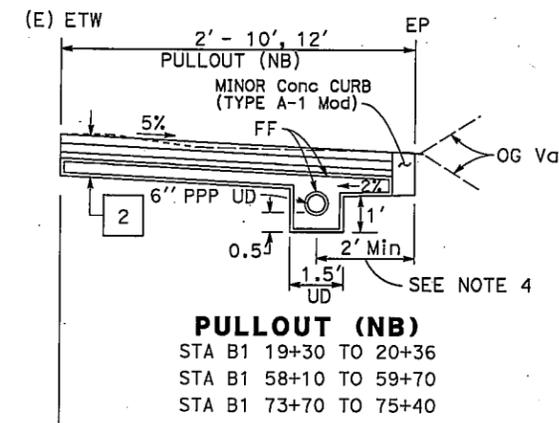
- PULLOUT (SB)**
- STA B1 80+50 TO B1 84+40

- STRUCTURAL SECTIONS:**
- |   |   |   |   |
|---|---|---|---|
| 1 | 0.08 HMA (BONDED WEARING COURSE - GAP GRADED) | 3 | 0.95' HMA (TYPE A)                            |
|   | 0.87' HMA (TYPE A)                            | 4 | 0.08 HMA (BONDED WEARING COURSE - GAP GRADED) |
| 2 | 3" HMA (OPEN GRADED)                          |   | 0.30' HMA (TYPE A)                            |
|   | 3" ATPB                                       | 5 | 3" HMA (TYPE A)                               |
|   | 2" CL 2 Perm Mtl                              |   | 11" MINOR Conc (BACKFILL)                     |
|   | 6" Perm Mtl (BLANKET)                         |   | (SEE ED-1 TO ED-3)                            |

- NOTES:**
- 6" PPP TO BE WRAPPED WITH FF.
  - Perm Mtl (BLANKET) TO BE ENCAPSULATED WITH FF.
  - FOR FILL SITUATIONS IN NON-RSP AREAS, FILL AND COMPACT WITH IB TO TOP OF CURB AS NEEDED.
  - UD SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO EP BUT NO CLOSER THAN 2'. SEE ED-1 TO ED-3.
  - REMOVE SCATTERED RSP AND RE-USE AS RSP. PAID FOR AS ROADWAY EXCAVATION.
  - AFTER INSTALLATION OF MINOR Conc CURB, EXPOSED SURFACES SHALL BE STAINED.
  - DEPTH OF COLD PLANE AC PvmT SHALL BE 0.08 Min ABOVE BASE MATERIAL. BASE MATERIAL SHALL NOT BE EXPOSED.



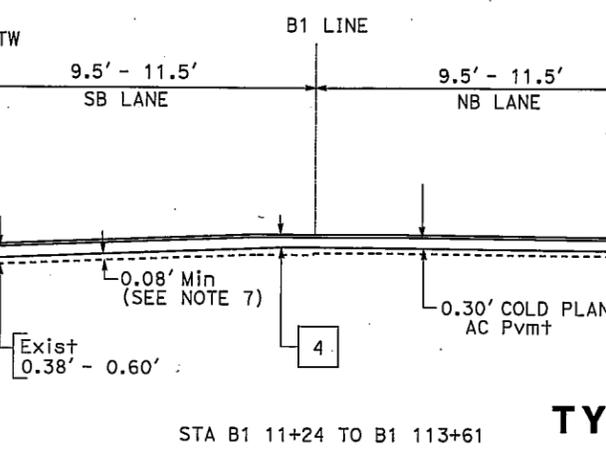
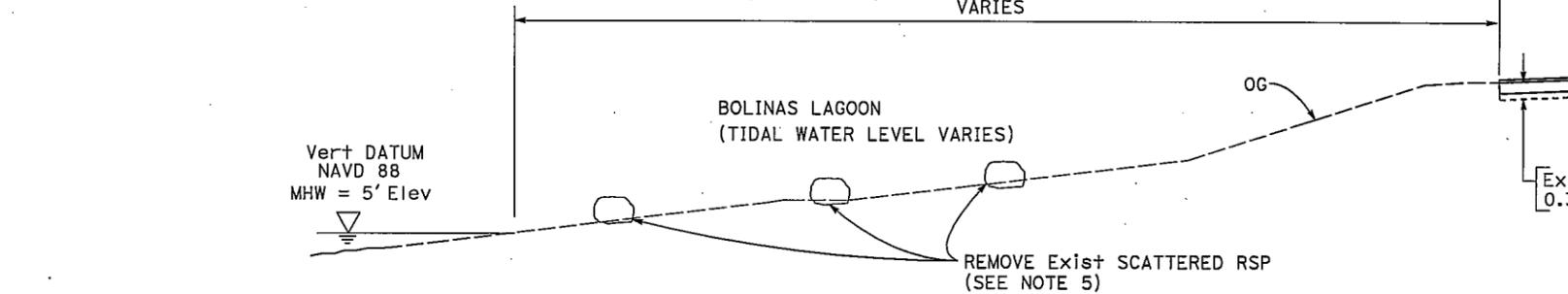
- PULLOUT (NB)**
- STA B1 14+00 TO 18+50
  - STA B1 20+76 TO 24+00
  - STA B1 35+50 TO 39+50
  - STA B1 40+59 TO 42+55
  - STA B1 44+50 TO 46+34
  - STA B1 48+31 TO 49+40
  - STA B1 51+00 TO 53+53
  - STA B1 71+00 TO 73+35
  - STA B1 74+70 TO 78+95
  - STA B1 100+03 TO 105+50



- PULLOUT (NB)**
- STA B1 19+30 TO 20+36
  - STA B1 58+10 TO 59+70
  - STA B1 73+00 TO 75+40

**TYPICAL (NB AND SB) NON-RSP LOCATIONS**

**DETAIL A MINOR Conc (CURB) (TYPE A-1 Mod) (SEE NOTE 6)**



**TYPICAL CROSS SECTIONS NO SCALE**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

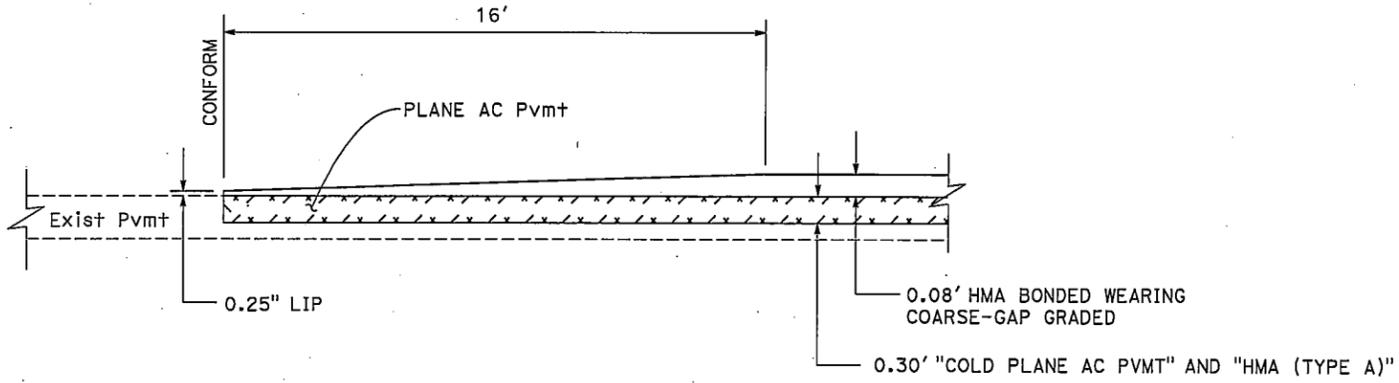
*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

Peter Aguilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL

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.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 CHECKED BY: PETER AGUILERA  
 SUSANA ORATE  
 REVISIONS: PA 3/10/10, SO 3/9/10

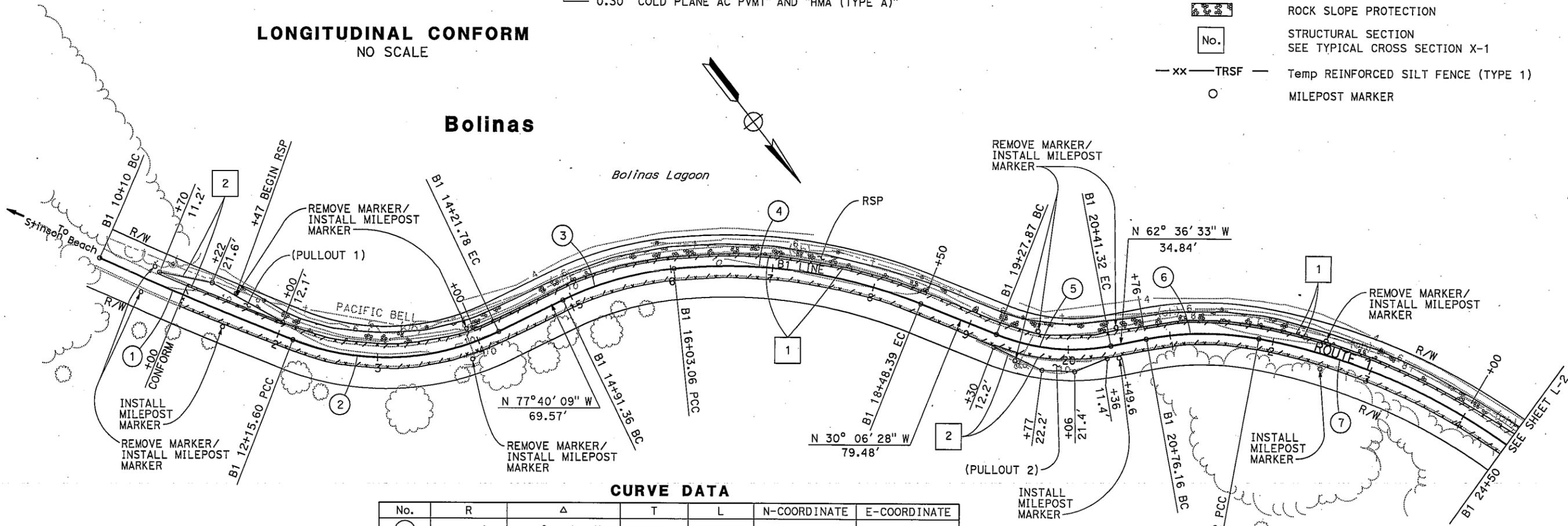


**NOTES:**

- COORDINATE VALUES SHOWN ARE CCS83 ZONE 3W.
- VERTICAL DATUM NAVD 88.
- SEE DRAINAGE SHEETS FOR ADDITIONAL TEMPORARY REINFORCED SILT FENCE.

**LEGEND:**

- "COLD PLANE AC PVMT", "HMA (TYPE A)" AND "HMA BONDED WEARING COURSE-GAP GRADED" SURFACING
- ROCK SLOPE PROTECTION
- STRUCTURAL SECTION SEE TYPICAL CROSS SECTION X-1
- Temp REINFORCED SILT FENCE (TYPE 1)
- MILEPOST MARKER



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
1	4500'	02° 37' 04"	102.82'	205.60'	2162814.23	5931497.33
2	250'	47° 15' 11"	109.36'	206.18'	2164965.91	5935162.40
3	320'	20° 00' 00"	56.42'	111.70'	2165537.62	5935216.16
4	510'	27° 33' 41"	125.09'	245.33'	2165698.17	5935317.77
5	200'	32° 30' 04"	58.30'	113.45'	2165410.77	5934663.69
6	300'	21° 00' 00"	55.60'	109.96'	2165870.75	5934862.78
7	600'	25° 33' 06"	136.05'	267.58'	2166069.96	5935087.09

**LAYOUT**  
SCALE: 1" = 50'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
04	Mrn	1	15.0/17.0	

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

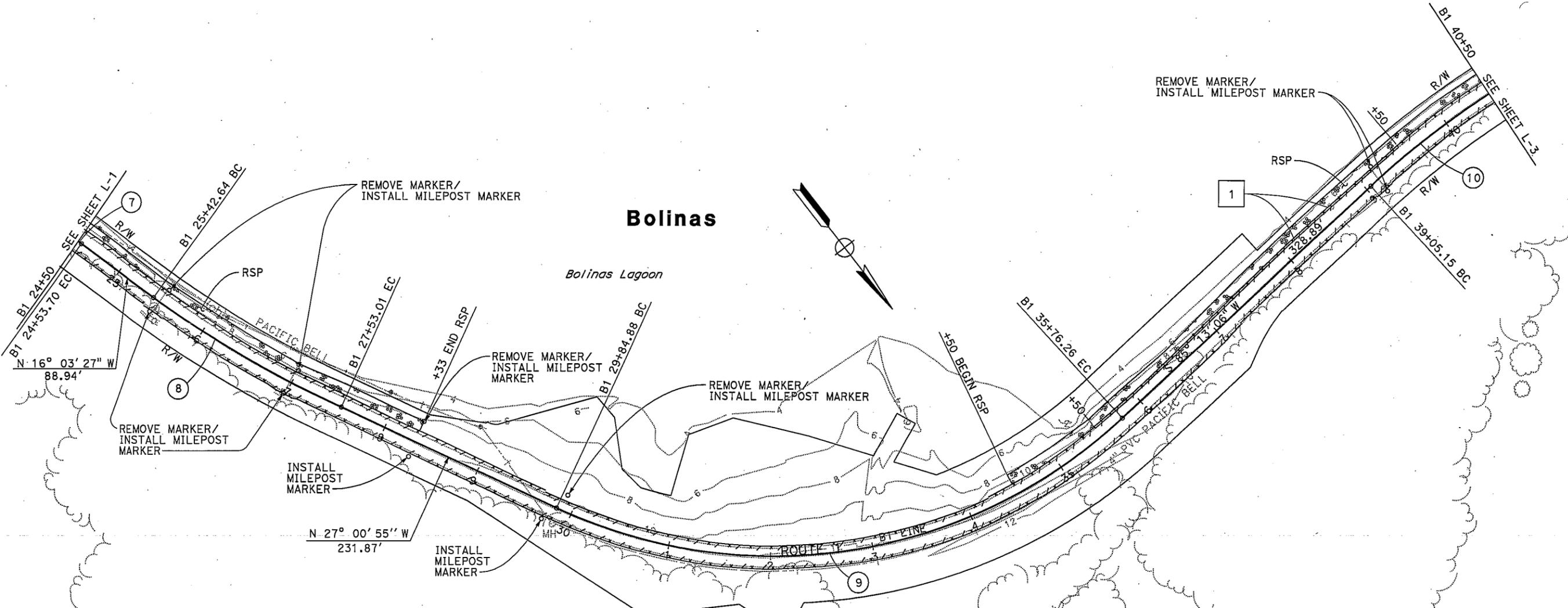
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FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SO 3/10/10  
 SUSANA ONATE  
 PETER AGUILERA  
 ARLISSA PANG  
 DESIGN  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Et-Gilberts



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
7	600'	25° 33' 06"	136.05'	267.58'	2166069.96	5935087.09
8	1100'	10° 57' 28"	105.51'	210.37'	2165685.21	5933428.81
9	500'	67° 45' 59"	335.77'	591.37'	2166164.31	5933858.03
10	880'	11° 00' 00"	84.73'	168.95'	2167512.10	5933415.24

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

**LAYOUT**  
SCALE: 1" = 50'

**L-2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

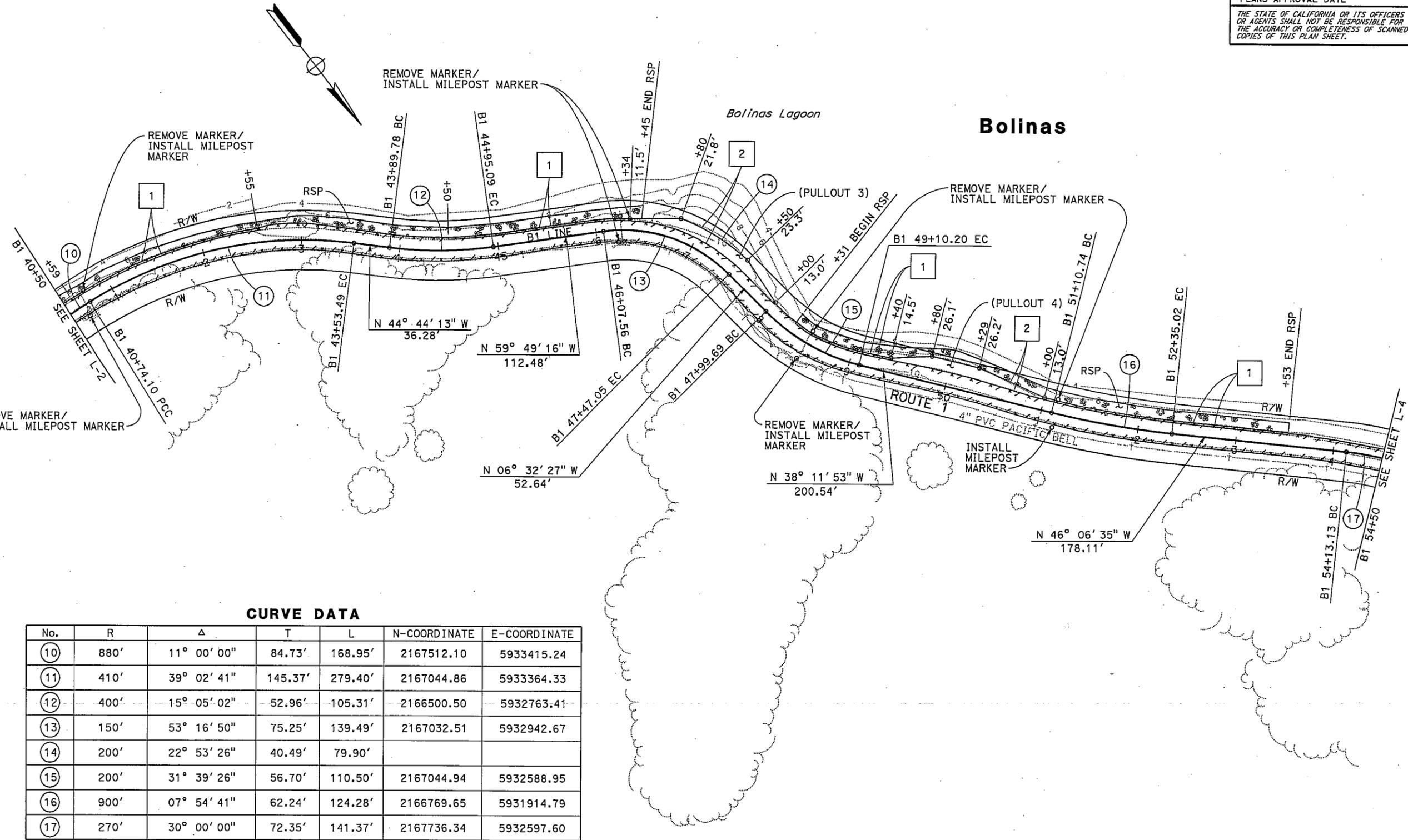
PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aguilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**DESIGN**

FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 CALCULATED/DESIGNED BY: SUSANA ONATE  
 CHECKED BY: PETER AGUILERA  
 REVISOR: SO  
 DATE REVISOR: 3/9/10  
 PA: 3/10/10



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
10	880'	11° 00' 00"	84.73'	168.95'	2167512.10	5933415.24
11	410'	39° 02' 41"	145.37'	279.40'	2167044.86	5933364.33
12	400'	15° 05' 02"	52.96'	105.31'	2166500.50	5932763.41
13	150'	53° 16' 50"	75.25'	139.49'	2167032.51	5932942.67
14	200'	22° 53' 26"	40.49'	79.90'		
15	200'	31° 39' 26"	56.70'	110.50'	2167044.94	5932588.95
16	900'	07° 54' 41"	62.24'	124.28'	2166769.65	5931914.79
17	270'	30° 00' 00"	72.35'	141.37'	2167736.34	5932597.60

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

**LAYOUT**  
SCALE: 1" = 50'

**L-3**

FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
REGISTERED CIVIL ENGINEER DATE

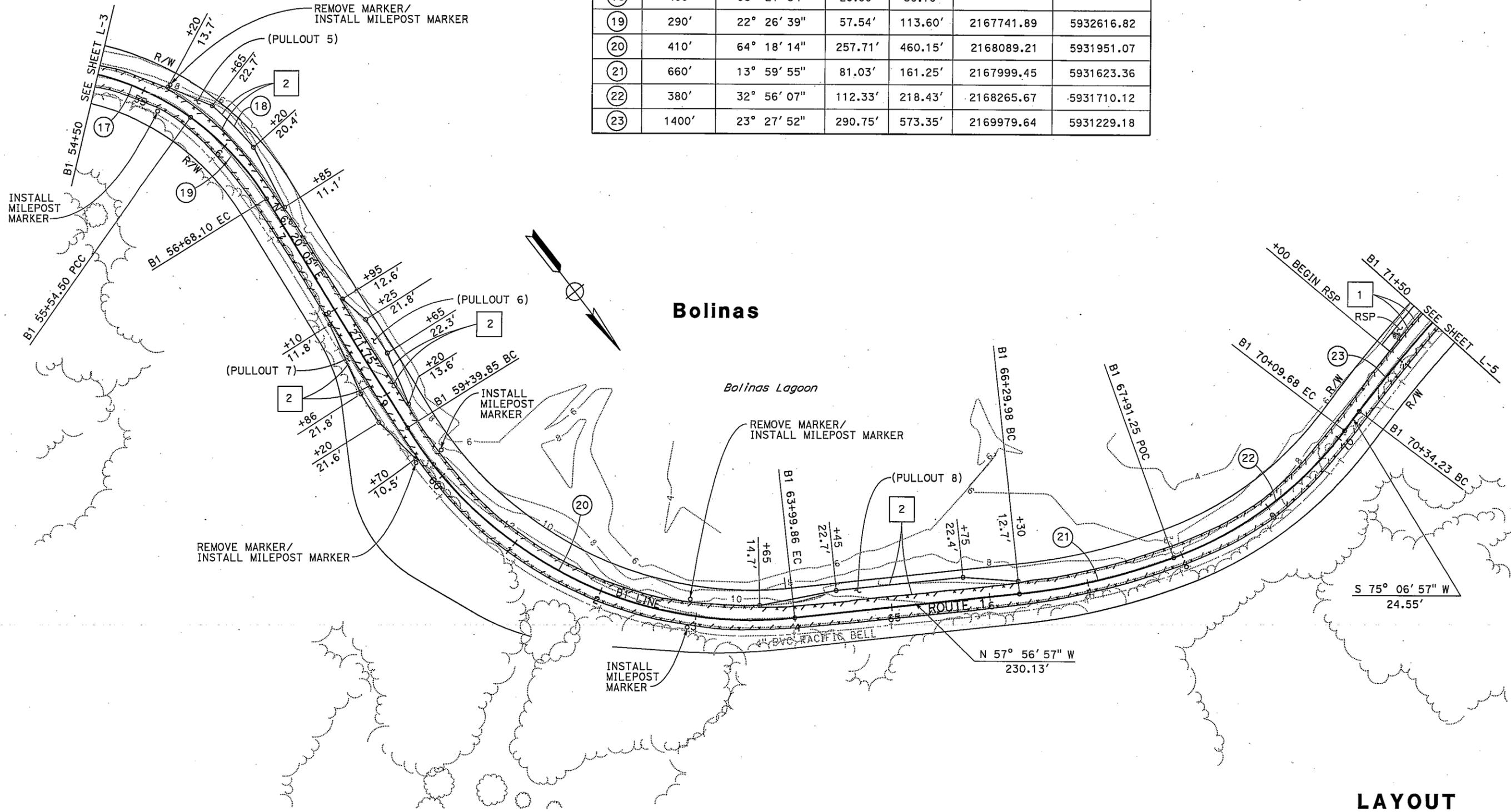
PLANS APPROVAL DATE

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.

**Peter Aguilera**  
REGISTERED PROFESSIONAL ENGINEER  
No. 55287  
Exp. 2-31-10  
CIVIL  
STATE OF CALIFORNIA

**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
17	270'	30° 00' 00"	72.35'	141.37'	2167736.34	5932597.60
18	400'	08° 27' 54"	29.60'	59.10'		
19	290'	22° 26' 39"	57.54'	113.60'	2167741.89	5932616.82
20	410'	64° 18' 14"	257.71'	460.15'	2168089.21	5931951.07
21	660'	13° 59' 55"	81.03'	161.25'	2167999.45	5931623.36
22	380'	32° 56' 07"	112.33'	218.43'	2168265.67	5931710.12
23	1400'	23° 27' 52"	290.75'	573.35'	2169979.64	5931229.18



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
DESIGN

FUNCTIONAL SUPERVISOR: ARLISSA PANG

CHECKED BY: PETER AGUILERA

DESIGNED BY: SUSANA OÑATE

REVISOR: PA

DATE REVISOR: 3/10/10

DATE REVISOR: 3/9/10

BORDER LAST REVISED 4/11/2008

**Bolinas**

FOR NOTES, ABBREVIATIONS  
AND LEGEND, SEE SHEET L-1

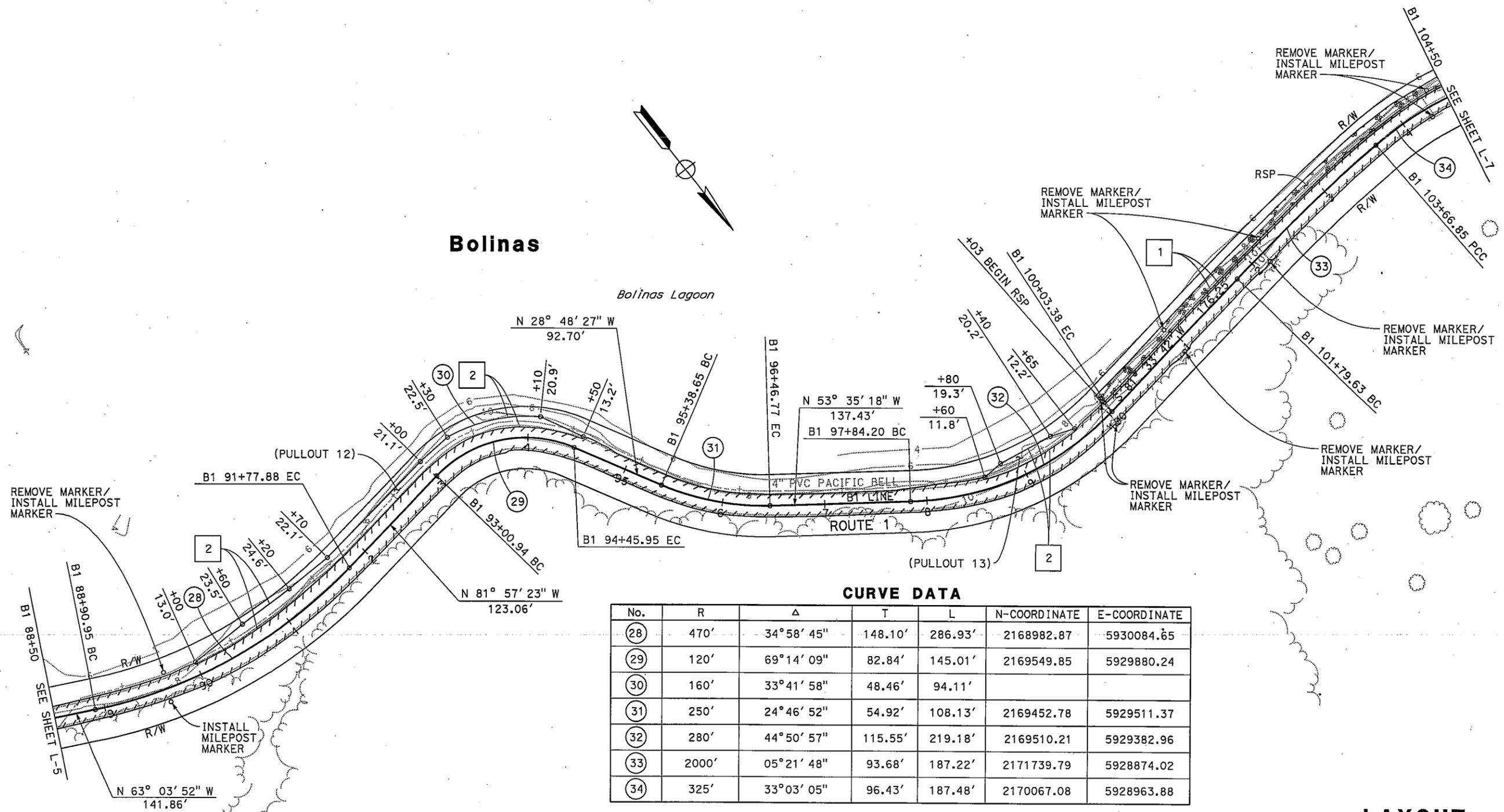
**LAYOUT**  
SCALE: 1" = 50'



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		
Peter Aquilera		3-11-10	REGISTERED CIVIL ENGINEER DATE		
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.					

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE	DATE	DATE
CALTRANS	ARLISSA PANG	SUSANA ONATE	SO	3/9/10	VH	3/10/10
	DESIGN	PETER AGUILERA	REVISOR	DATE	DATE	DATE



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
28	470'	34°58'45"	148.10'	286.93'	2168982.87	5930084.65
29	120'	69°14'09"	82.84'	145.01'	2169549.85	5929880.24
30	160'	33°41'58"	48.46'	94.11'		
31	250'	24°46'52"	54.92'	108.13'	2169452.78	5929511.37
32	280'	44°50'57"	115.55'	219.18'	2169510.21	5929382.96
33	2000'	05°21'48"	93.68'	187.22'	2171739.79	5928874.02
34	325'	33°03'05"	96.43'	187.48'	2170067.08	5928963.88

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

**LAYOUT**  
SCALE: 1" = 50'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Peter Aquilera 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

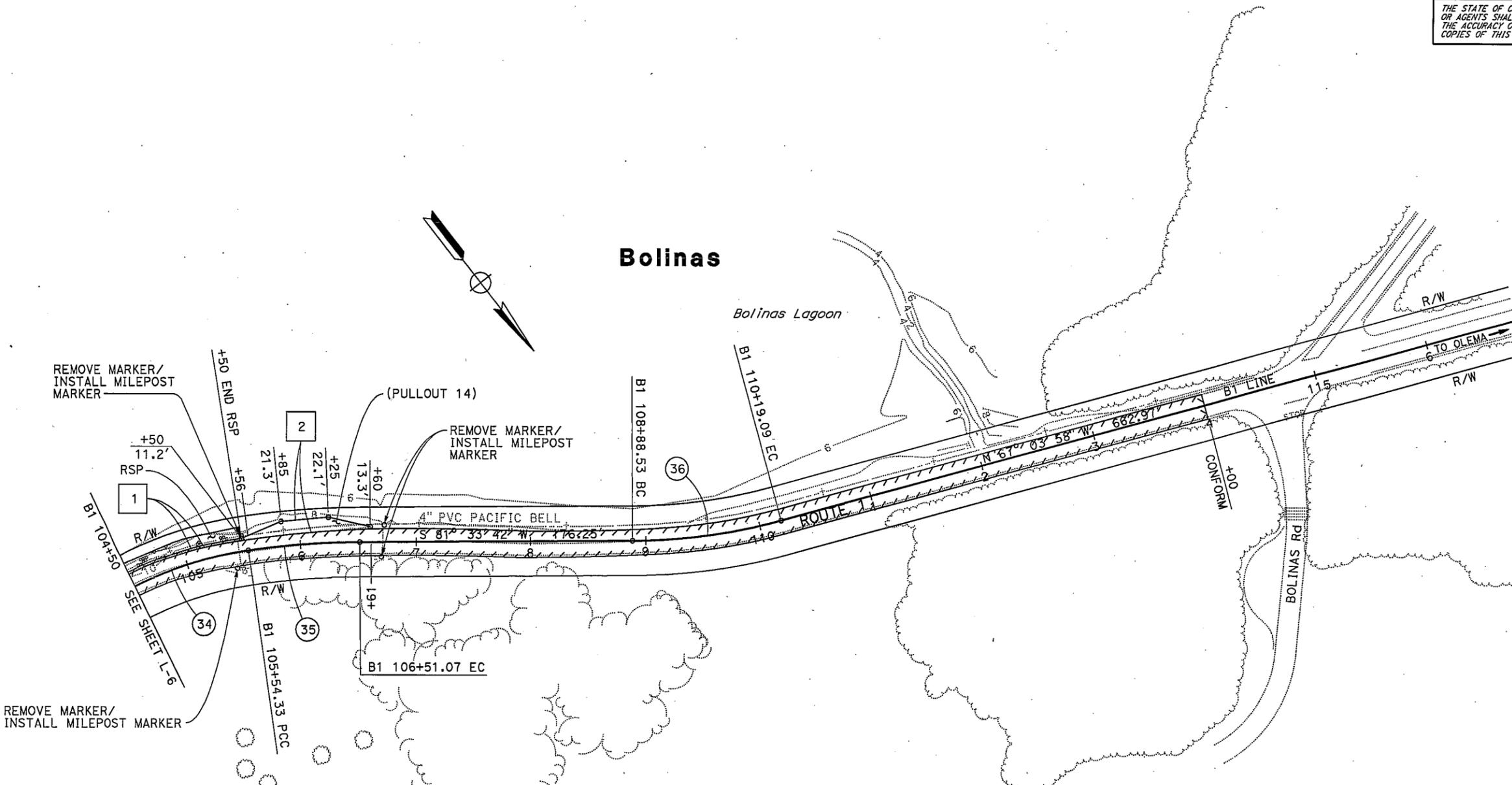
Peter Aquilera  
 No. 55287  
 Exp. 2-31-10  
 CIVIL  
 STATE OF CALIFORNIA

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.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**St. Gobans**  
**DESIGN**  
 FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 SUSANA ONATE  
 PETER AGUILERA  
 REVISIONS: 3/10/10 (VH), 3/9/10 (SO)  
 REVISIONS: 3/9/10 (SO), DATE REVISED  
 CHECKED BY: PETER AGUILERA  
 CALCULATED/DESIGNED BY: ARLISSA PANG



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
34	325'	33° 03' 05"	96.43'	187.48'	2170067.08	5928963.88
35	700'	07° 55' 08"	48.45'	96.74'	2170391.89	5929151.23
36	500'	14° 57' 40"	65.65'	130.56'	2169590.80	5928226.81

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

**LAYOUT**  
SCALE: 1" = 50'

L-7

**NOTES:**

1. TEMPORARY DELINEATOR (CLASS 2) SHALL BE "TYPE J" AND PLACED AT RSP AND DRAINAGE WORK LOCATIONS 25 FEET ON CENTER. NO LOWER THAN Elev 5' NAVD 88.
2. TEMPORARY GRAVEL BAG BERM SHOWN FOR LONGITUDINAL PLACEMENT ONLY.
3. EXACT LOCATIONS FOR ALL WPC MEASURES AS SHOWN OR TO BE DETERMINED BY THE ENGINEER.
4. EXACT LOCATION OF THE TEMPORARY GRAVEL BAG BERM TO BE DETERMINED BY THE ENGINEER.
5. TEMPORARY DELINEATOR (CLASS 2) SHALL SERVE AS WORK LIMIT BOUNDARY. NO WORK SHALL BE CONDUCTED BEYOND DELINEATORS. DELINEATORS SHALL BE REMOVED ONCE WORK AT THAT LOCATION HAS BEEN COMPLETED.
6. TEMPORARY REINFORCED SILT FENCE (TYPE 1) SHOWN ON DRAINAGE PLANS.

**ABBREVIATION:**

MHW MEAH HIGH WATER

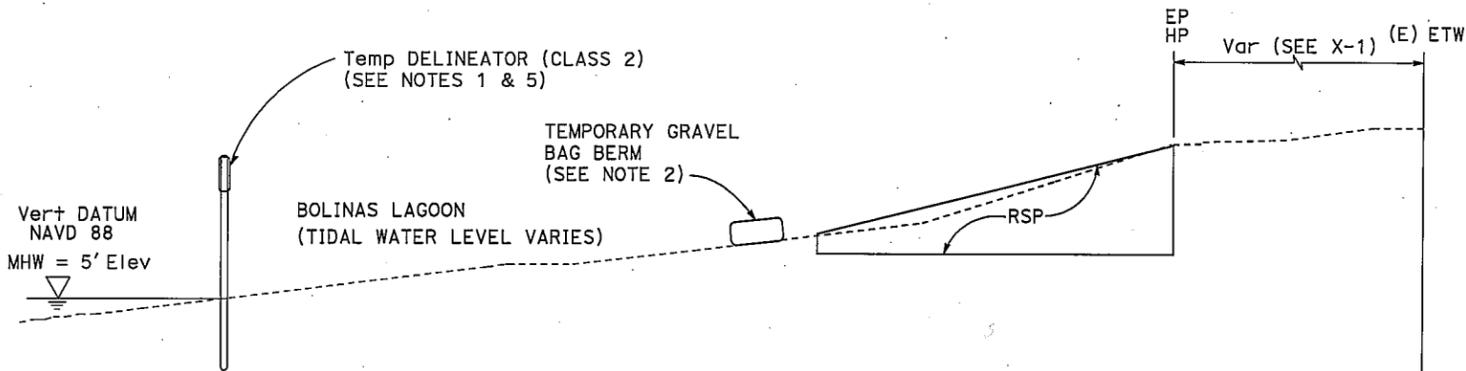
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Kamran Nakhji 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

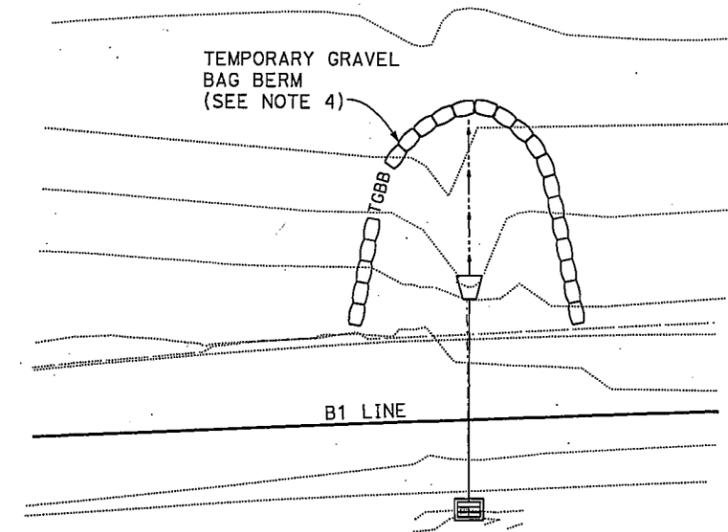
PLANS APPROVAL DATE

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.

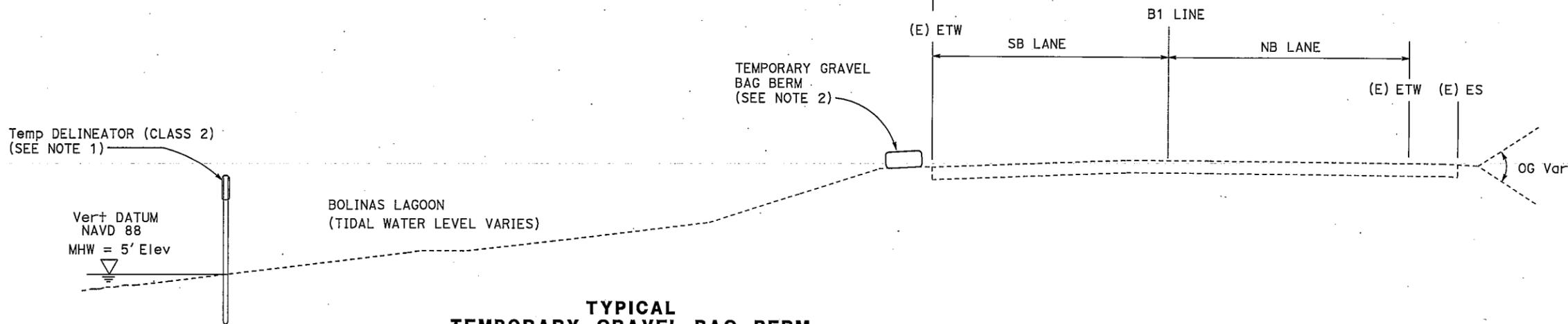
**REGISTERED PROFESSIONAL ENGINEER**  
 Kamran Nakhji  
 No. 57499  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA



**TYPICAL TEMPORARY GRAVEL BAG BERM AND DELINEATOR CLASS 2 AT ROCK SLOPE PROTECTION**



**TYPICAL TEMPORARY GRAVEL BAG BERM AT DRAINAGE LOCATIONS**



**TYPICAL TEMPORARY GRAVEL BAG BERM AND DELINEATOR CLASS 2 AT NON ROCK SLOPE PROTECTION**

**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
 NO SCALE

THIS PLAN ACCURATE FOR WATER POLLUTION CONTROL WORK ONLY

**WPCD-1**

FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Sally Bang*  
 LICENSED LANDSCAPE ARCHITECT  
 LICENSE NO. 11-50-1  
 STATE OF CALIFORNIA

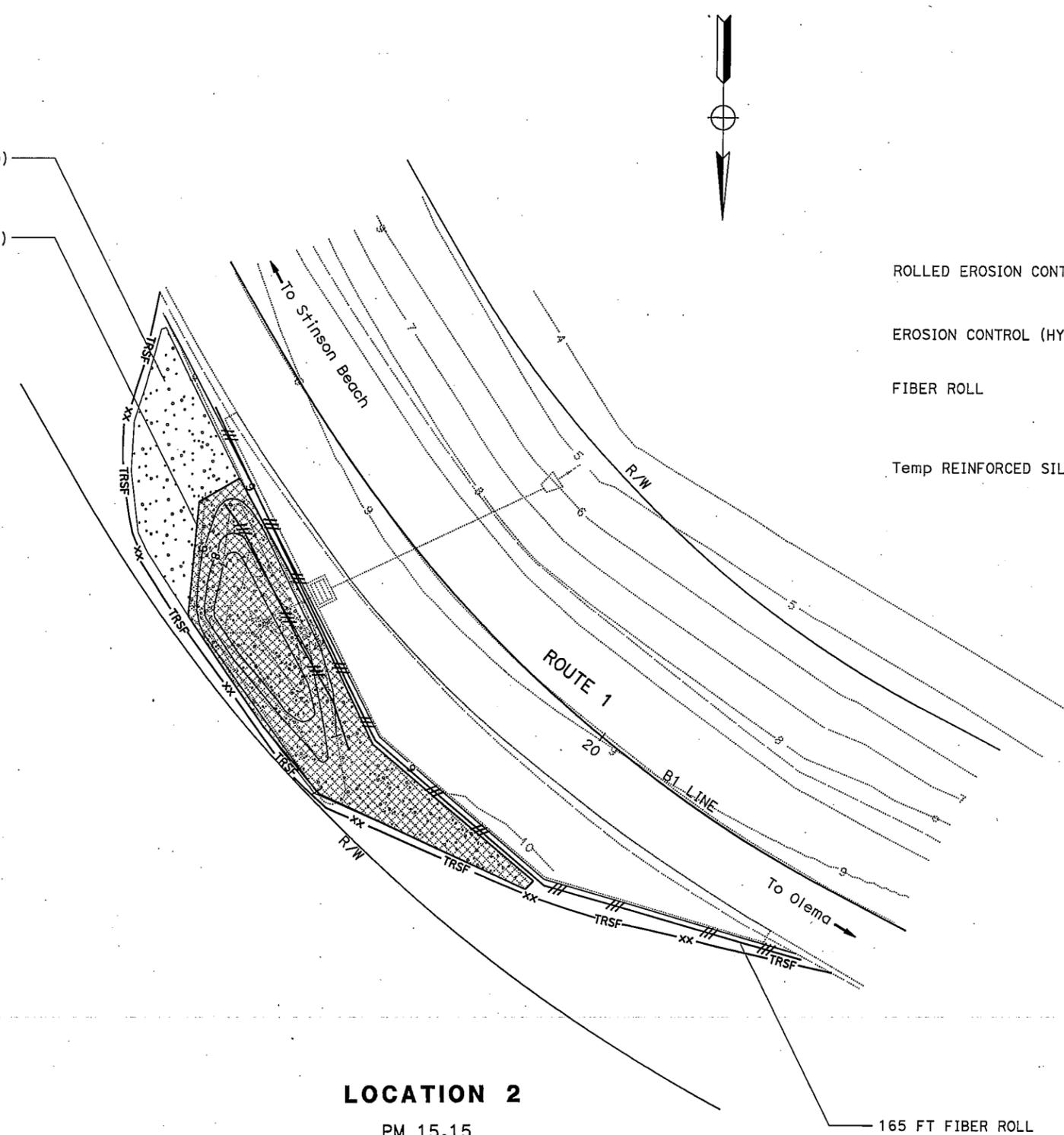
PLANS APPROVAL DATE \_\_\_\_\_

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.

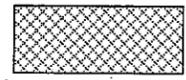
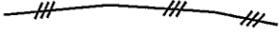
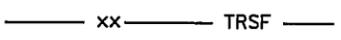
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Water Quality**  
 SENIOR LANDSCAPE ARCHITECT  
**DAVID W. YAM**  
 CHECKED BY  
 SALLY BANG  
 REVISIONS: 3/9/10  
 AK

1200 SQFT EROSION CONTROL (HYDROSEED)

800 SQFT ROLLED EROSION CONTROL PRODUCT (NETTING)



**LEGEND:**

- ROLLED EROSION CONTROL PRODUCT (NETTING) 
- EROSION CONTROL (HYDROSEED) 
- FIBER ROLL 
- Temp REINFORCED SILT FENCE (TYPE 1) 

**LOCATION 2**  
PM 15.15

165 FT FIBER ROLL

**EROSION CONTROL PLAN**  
SCALE: 1" = 10'

**EC-1**

THIS PLAN ACCURATE FOR  
EROSION CONTROL WORK ONLY

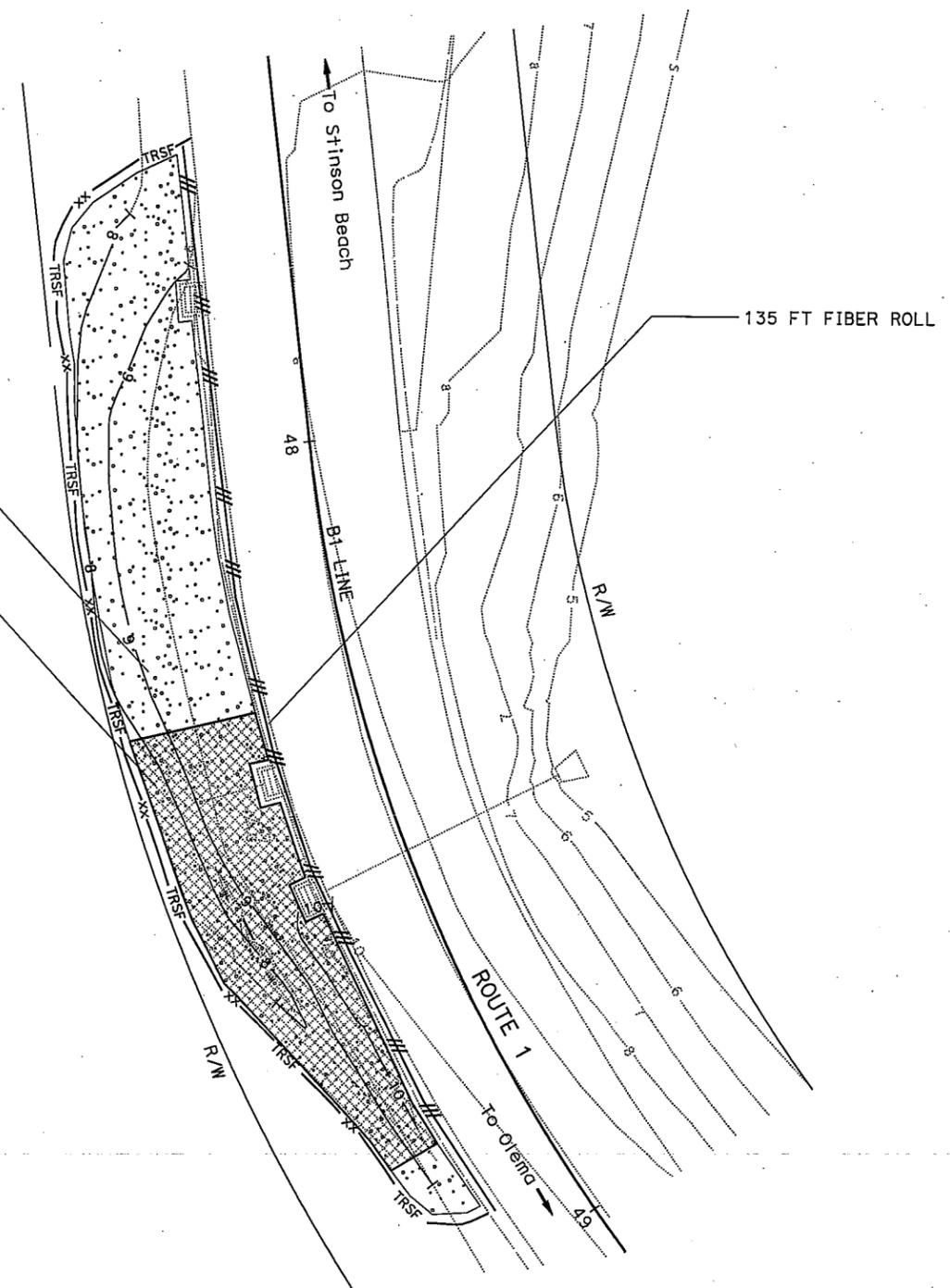
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Sally Bang*  
 LICENSED LANDSCAPE ARCHITECT  
 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.

FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.



1800 SQFT EROSION CONTROL (HYDROSEED)  
700 SQFT ROLLED EROSION CONTROL PRODUCT (NETTING)



**LOCATION 8**  
PM 15.71

**EROSION CONTROL PLAN**  
SCALE: 1" = 10'

**EC-2**

FOR NOTES, ABBREVIATIONS  
AND LEGEND, SEE SHEET EC-1

THIS PLAN ACCURATE FOR  
EROSION CONTROL WORK ONLY



USERNAME => s126849  
DGN FILE => 44s540ge002.dgn

CU 04224

EA 4S5401

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	REVISOR	DATE
	DAVID W. YAM	ANGELA KWAN	3/9/10
Stantec	CHECKED BY	REVISOR	DATE
	ANGELA KWAN	ANGELA KWAN	3/9/10
WATER QUALITY	CALCULATED-DESIGNED BY	REVISOR	DATE
	DAVID W. YAM	ANGELA KWAN	3/9/10

BORDER LAST REVISED 4/11/2008

LAST REVISION DATE PLOTTED => 18-MAR-2010  
03-10-10 TIME PLOTTED => 16:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
Charlotte A. Cashin  
No. 34417  
Exp. 9-30-11  
CIVIL  
STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**ABBREVIATIONS:**

CMPA CORRUGATED METAL PIPE ARCH  
TCP TERRA COTTA PIPE  
TRSF TEMPORARY REINFORCED SILT FENCE

**NOTES:**

1. SEE WPCD-1 FOR FOR TEMPORARY GRAVEL BAG BERM PLACEMENT.
2. AVOID IMPACTS TO EXISTING VEGETATION, OR AS DIRECTED BY ENGINEER.

**LEGEND:**

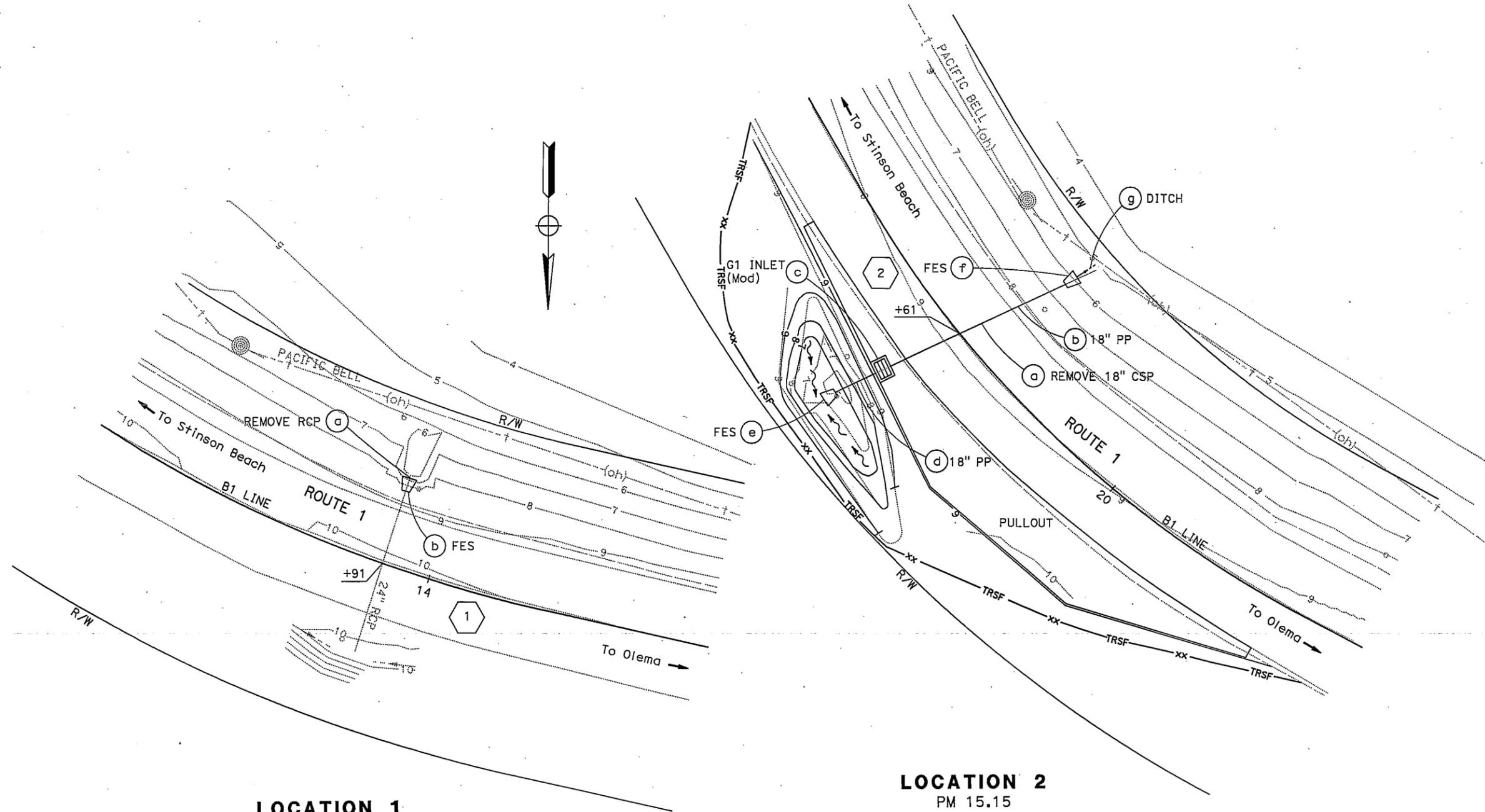
- ⬡ No. DRAINAGE SYSTEM NUMBER  
⊙ a DRAINAGE UNIT  
— xx — TRSF — Temp REINFORCED SILT FENCE (TYPE 1)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** HYDRAULICS

FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
DESIGNED BY: JOSEPH PETERSON  
CHECKED BY: JOSEPH PETERSON

CHARLOTTE CASHIN  
JOSEPH PETERSON

REVISOR: CC  
DATE REVISOR: 3/9/10



**LOCATION 1**  
PM 15.05

**LOCATION 2**  
PM 15.15

**DRAINAGE PLAN**  
SCALE: 1" = 10'

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

**D-1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

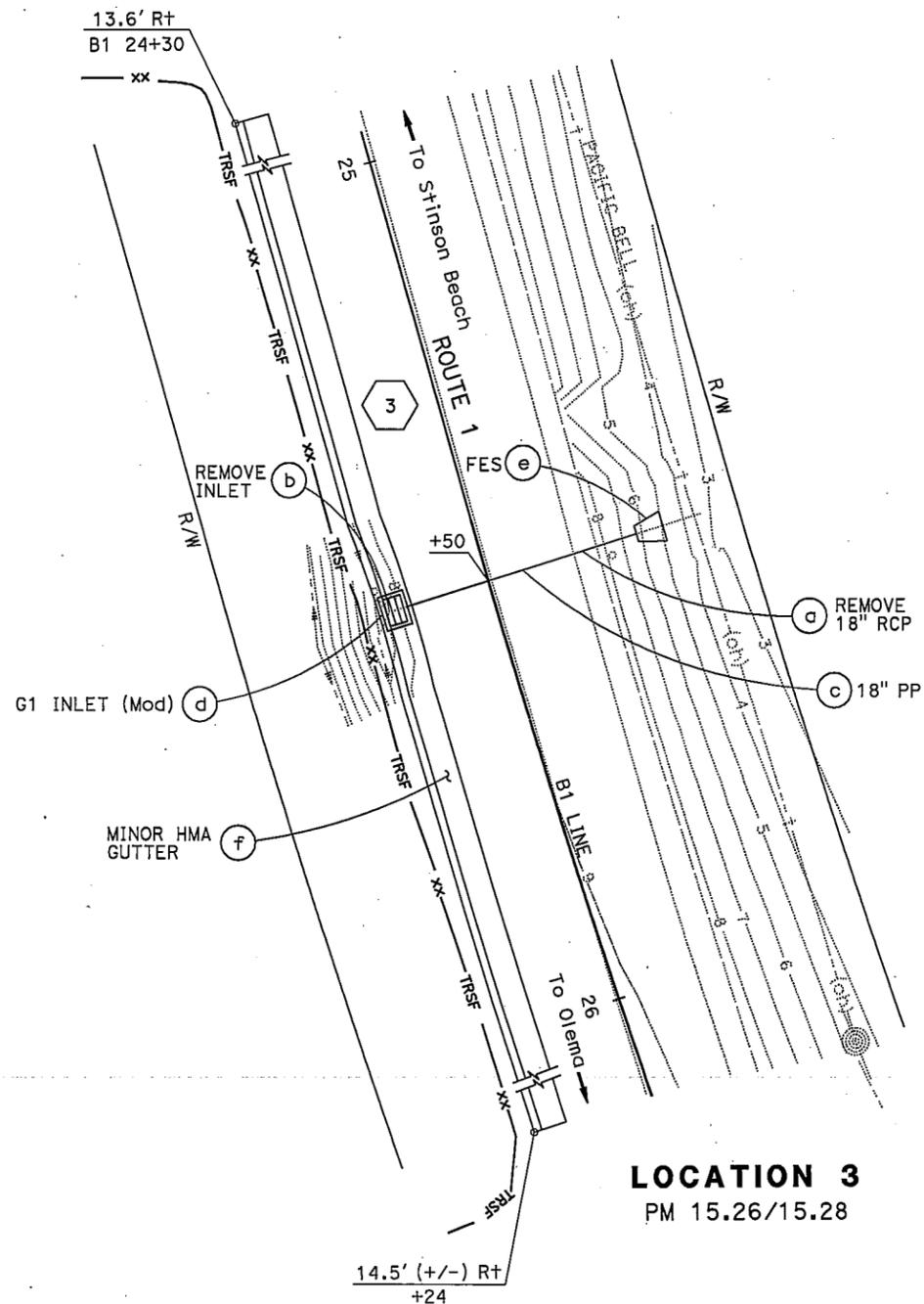
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Charlotte A. Cashin  
 No. 34417  
 Exp. 9-30-11  
 CIVIL  
 STATE OF CALIFORNIA

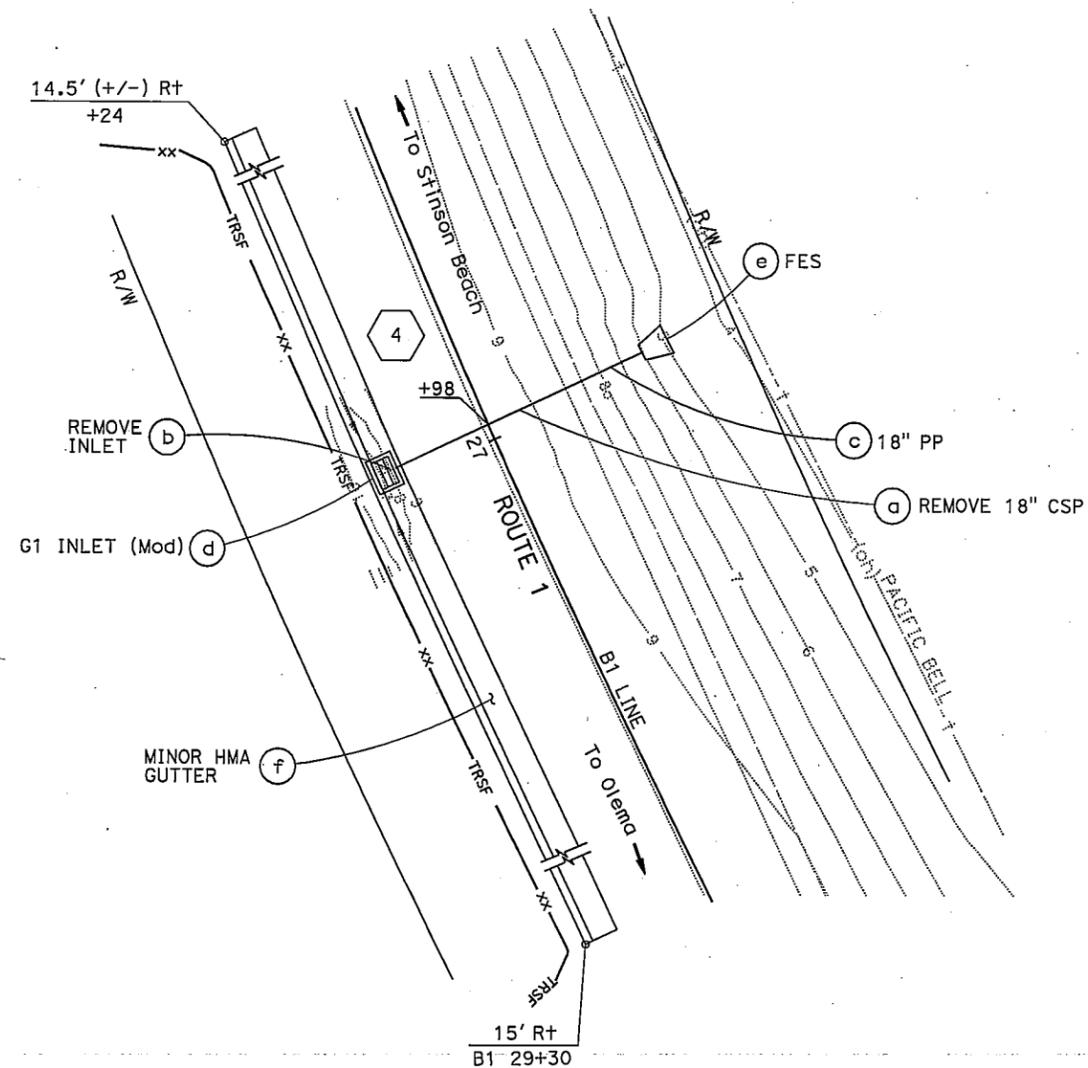
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**HYDRAULICS**

FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
 CHECKED BY: JOSEPH PETERSON  
 CALCULATED-DESIGNED BY: CHARLOTTE CASHIN  
 REVISOR: JOSEPH PETERSON  
 DATE REVISED: 3/9/10  
 CC



**LOCATION 3**  
PM 15.26/15.28



**LOCATION 4**  
PM 15.30

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET D-1

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

**DRAINAGE PLAN**  
SCALE: 1" = 10'

**D-2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
 Charlotte A. Cashin  
 No. 34417  
 Exp. 9-30-11  
 CIVIL  
 STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**HYDRAULICS**

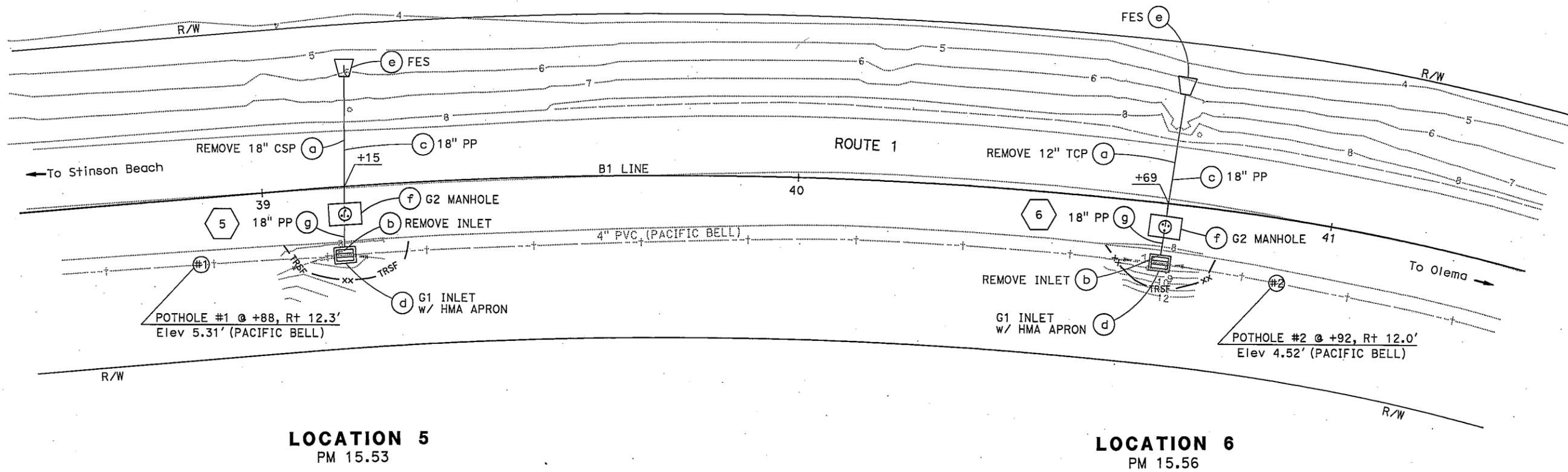
FUNCTIONAL SUPERVISOR  
JOSEPH PETERSON

CALCULATED-DESIGNED BY  
CHECKED BY

CHARLOTTE CASHIN  
JOSEPH PETERSON

REVISED BY  
DATE REVISED

CC  
3/9/10



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET D-1

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

**DRAINAGE PLAN**  
SCALE: 1" = 10'

**D-3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
REGISTERED CIVIL ENGINEER DATE

Charlotte A. Cashin  
No. 34417  
Exp 9-30-11  
CIVIL  
STATE OF CALIFORNIA

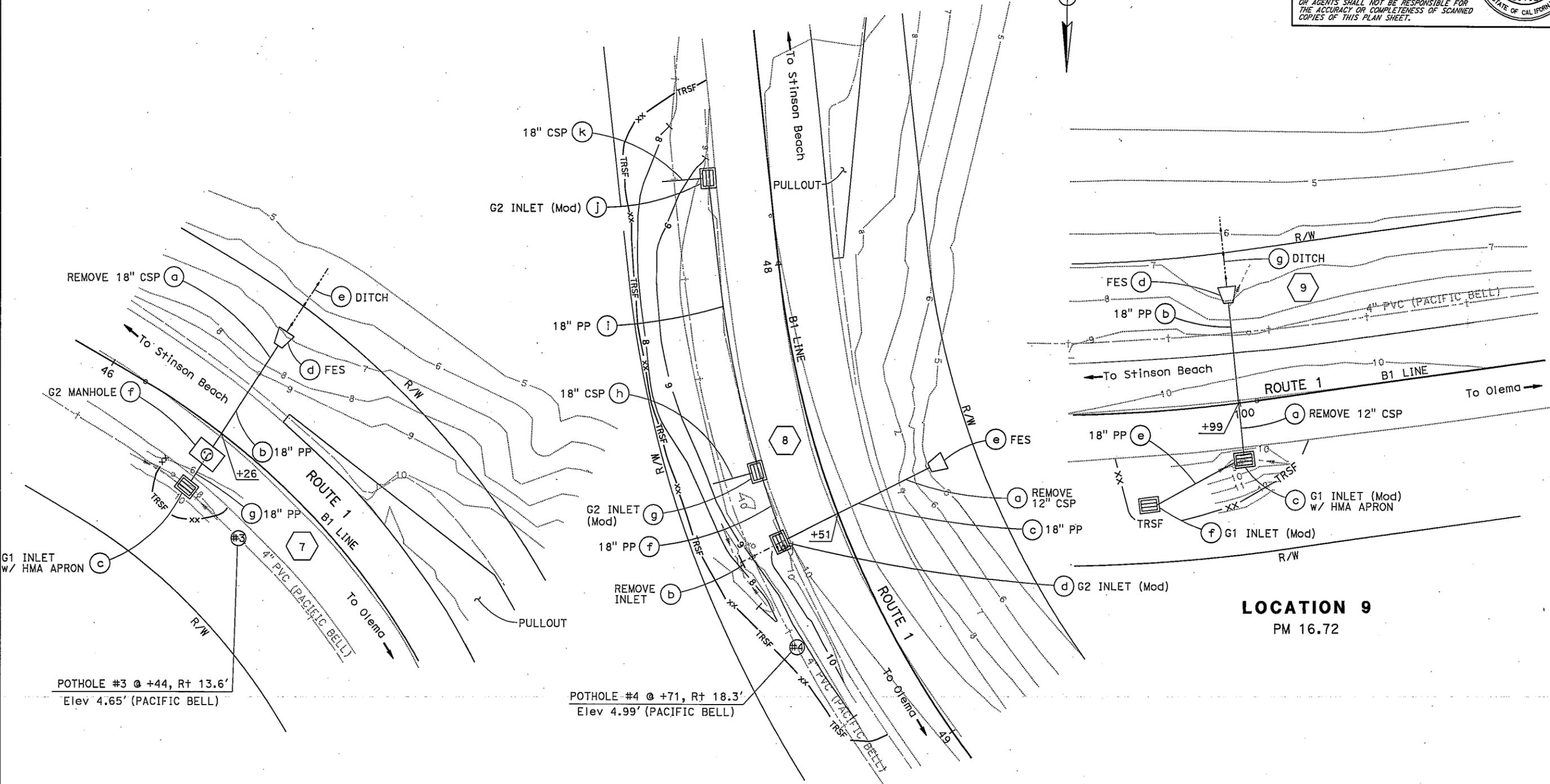
PLANS APPROVAL DATE

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.

FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
HYDRAULICS

FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
DESIGNED BY: CHARLOTTE CASHIN  
CHECKED BY: JOSEPH PETERSON  
REVISOR: JOSEPH PETERSON  
DATE REVISED: 3/9/10  
CC: 3/9/10



POTHOLE #3 @ +44, Rt 13.6'  
Elev 4.65' (PACIFIC BELL)

POTHOLE #4 @ +71, Rt 18.3'  
Elev 4.99' (PACIFIC BELL)

**LOCATION 7**  
PM 15.67

**LOCATION 8**  
PM 15.71

**LOCATION 9**  
PM 16.72

FOR NOTES, ABBREVIATIONS  
AND LEGEND, SEE SHEET D-1

THIS PLAN ACCURATE FOR  
DRAINAGE WORK ONLY

**DRAINAGE PLAN**  
SCALE: 1" = 10'

**D-4**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
Charlotte A. Cashin  
No. 34417  
Exp. 9-30-11  
CIVIL  
STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING  
AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**HYDRAULICS**

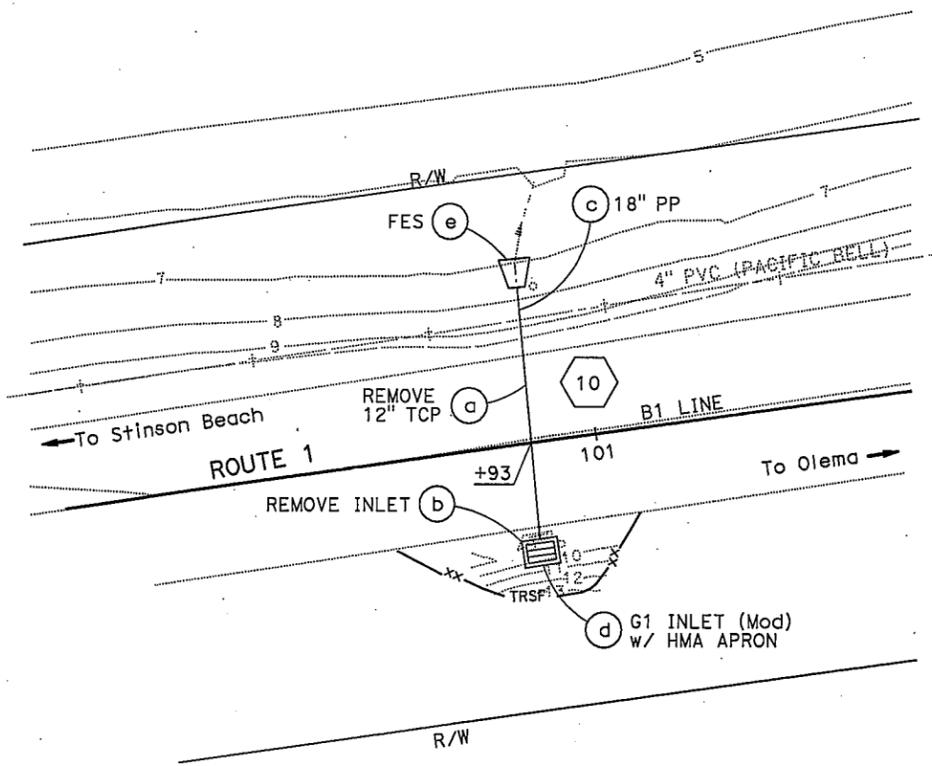
FUNCTIONAL SUPERVISOR  
JOSEPH PETERSON

CALCULATED-DESIGNED BY  
CHECKED BY

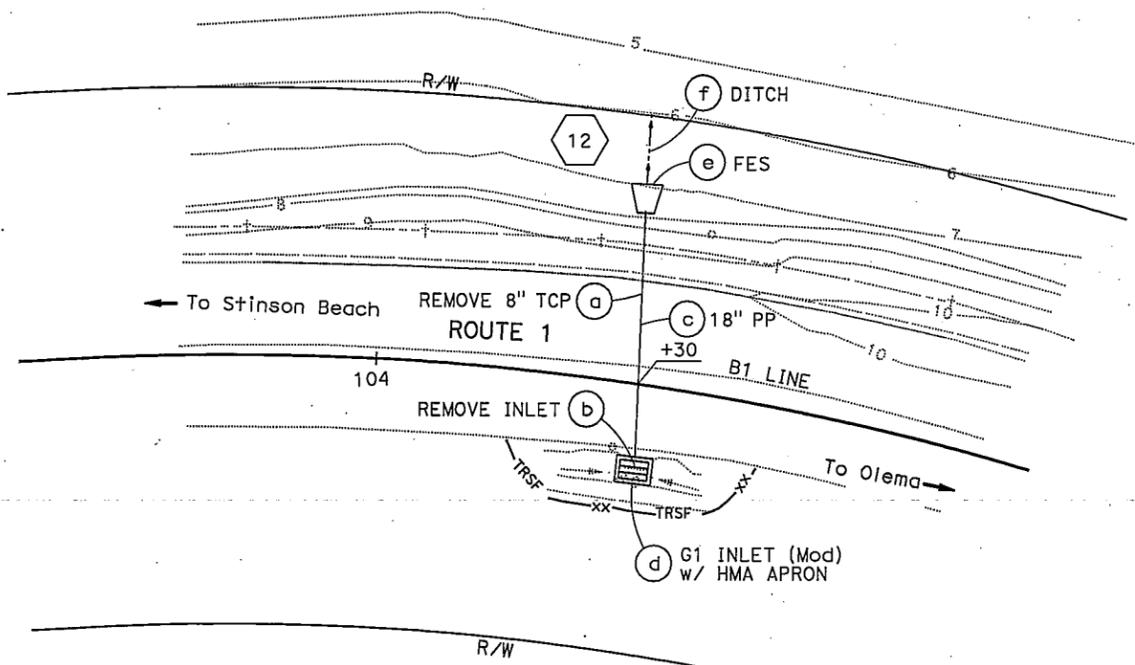
CHARLOTTE CASHIN  
JOSEPH PETERSON

REVISED BY  
DATE REVISED

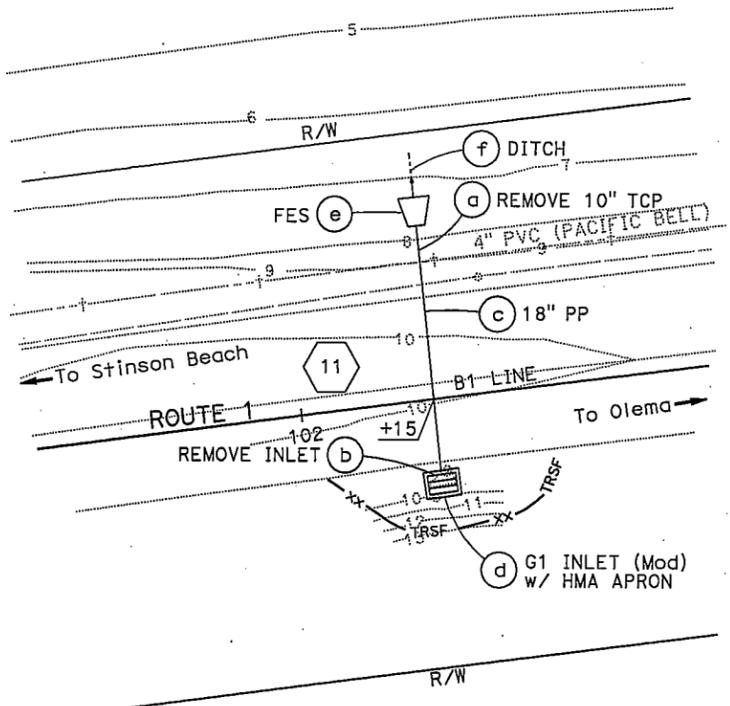
CC  
3/9/10



**LOCATION 10**  
PM 16.74



**LOCATION 12**  
PM 16.80



**LOCATION 11**  
PM 16.76

FOR NOTES, ABBREVIATIONS  
AND LEGEND, SEE SHEET D-1

THIS PLAN ACCURATE FOR  
DRAINAGE WORK ONLY

**DRAINAGE PLAN**  
SCALE: 1" = 10'

**D-5**

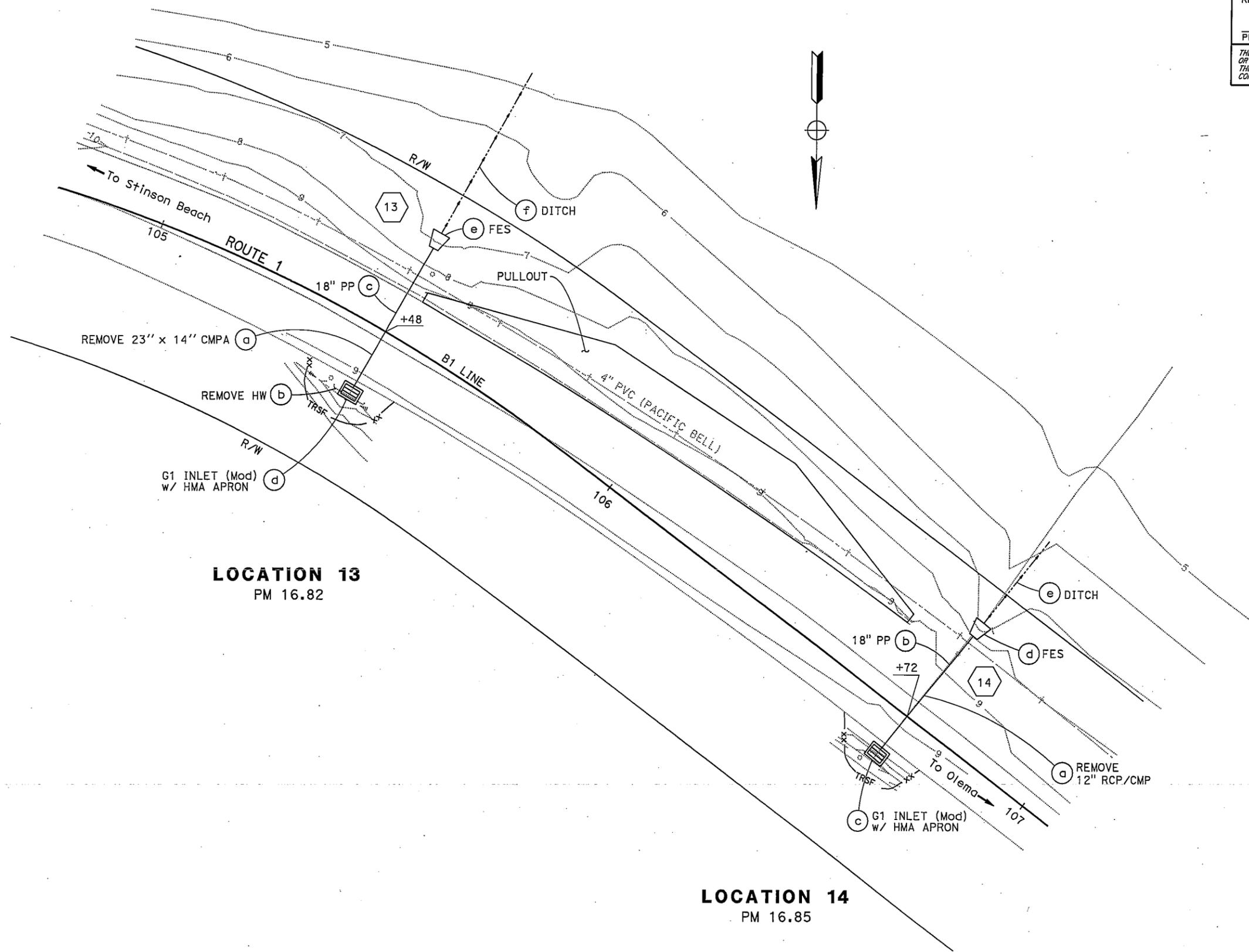
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
 REGISTERED CIVIL ENGINEER DATE  
 No. 34417  
 Exp. 9-30-11  
 CIVIL  
 STATE OF CALIFORNIA

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.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**HYDRAULICS**  
 FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
 CHECKED BY: JOSEPH PETERSON  
 CALCULATED-DESIGNED BY: JOSEPH PETERSON  
 REVISIONS: 3/9/10  
 REVISED BY: CC  
 DATE REVISED: 3/9/10



**LOCATION 13**  
PM 16.82

**LOCATION 14**  
PM 16.85

**DRAINAGE PLAN**  
SCALE: 1" = 10'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET D-1

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

**D-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**St. Kittans** DESIGN

FUNCTIONAL SUPERVISOR  
 ARLISSA PANG

CALCULATED-DESIGNED BY  
 CHECKED BY

SUSANA ONATE  
 PETER AGUILERA

REVISOR  
 DATE REVISOR

SO  
 3/9/10

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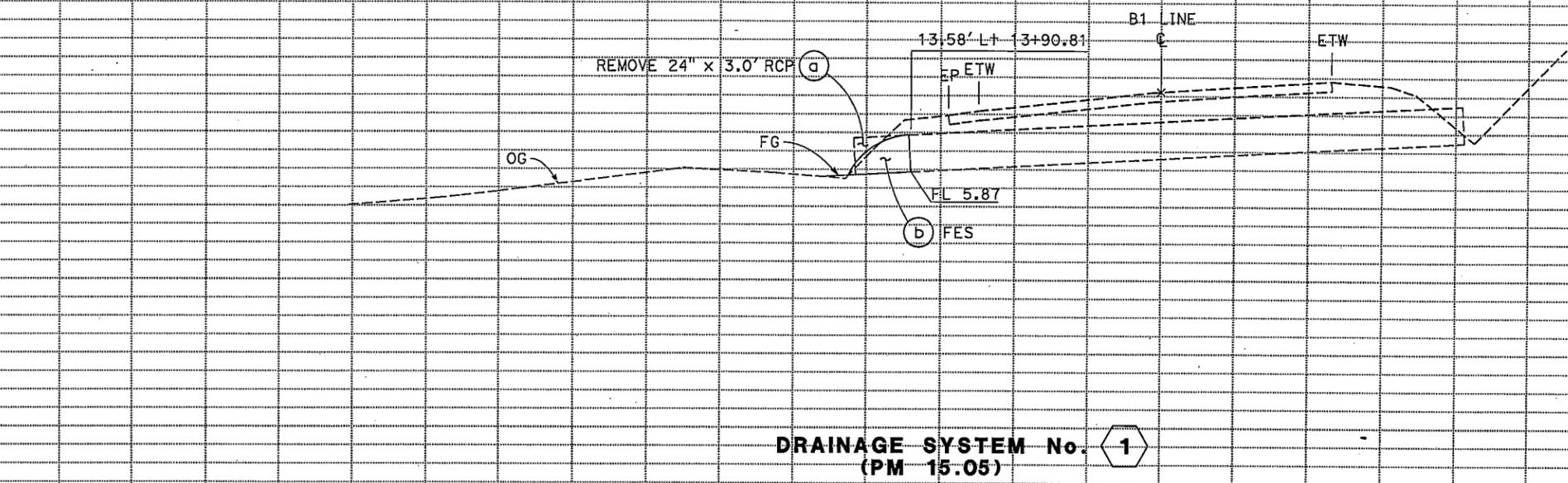
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

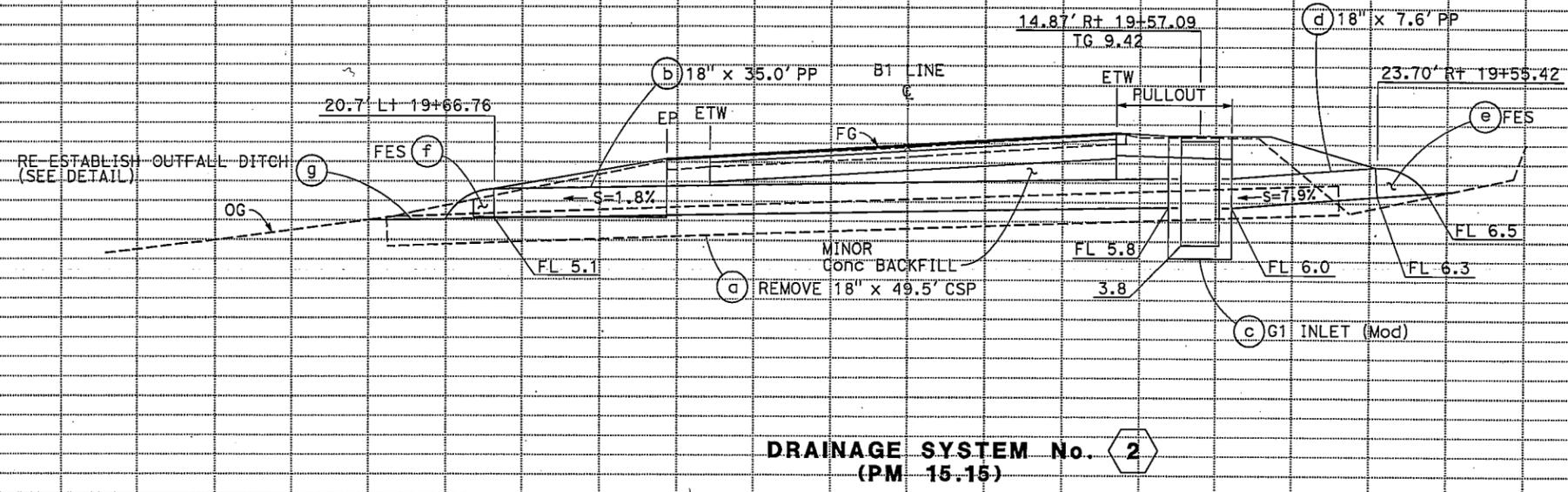
*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

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.



- NOTES:**
- RSP NOT SHOWN.
  - FOR TRENCH BACKFILL AND PAVING, SEE SHEET DD-1.



**DRAINAGE PROFILES**

SCALE: HORIZ 1" = 4'  
 VERT 1" = 4'

**DP-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

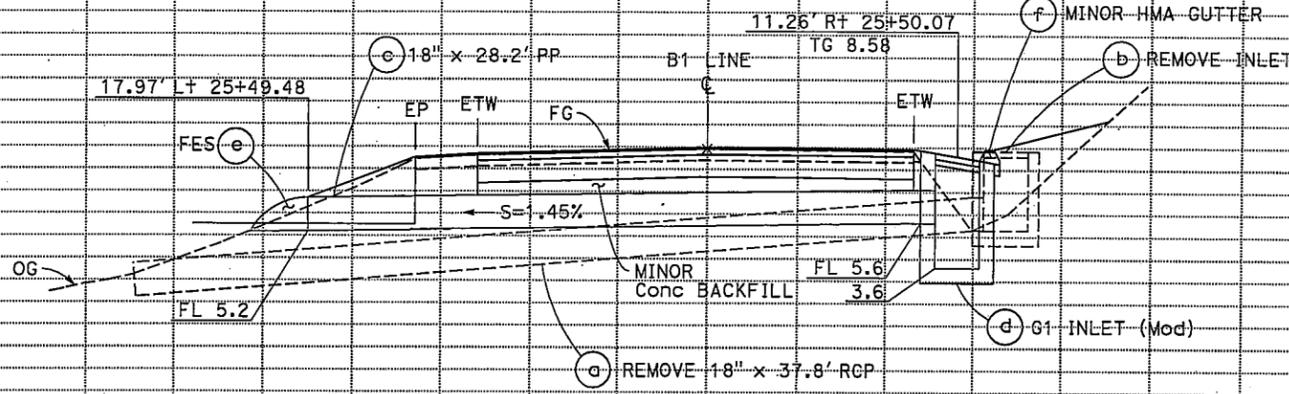
FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 SUSANA ONATE  
 PETER AGUILERA  
 SO: 3/9/10  
 REVISED BY: DATE REVISION: 12, 10, 8, 6, 4, 2, 0

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

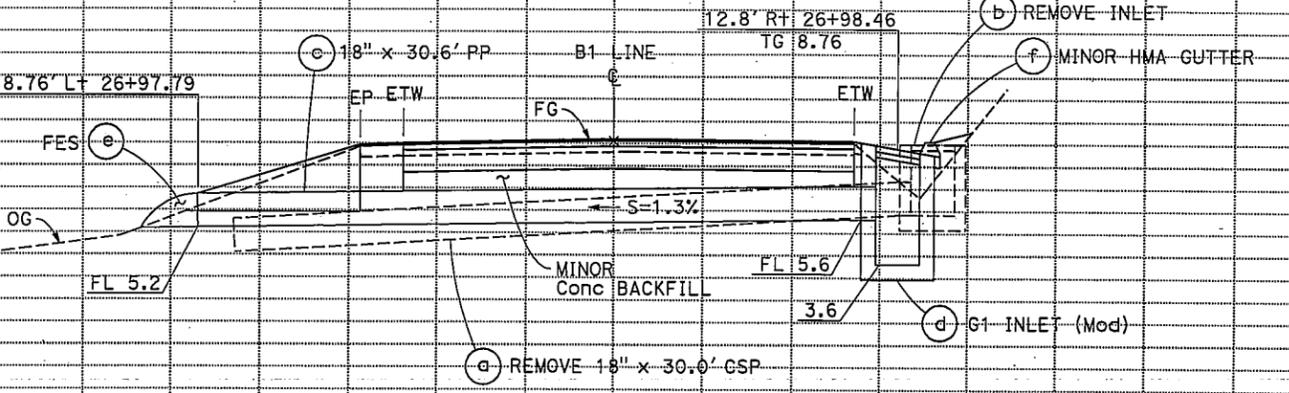
REGISTERED CIVIL ENGINEER: Peter Aguilera, No. 55287, Exp. 2-31-10, DATE: 3-11-10

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.



**DRAINAGE SYSTEM No. 3**  
 (PM 15.26/15.28)



**DRAINAGE SYSTEM No. 4**  
 (PM 15.30)

**DRAINAGE PROFILES**

SCALE: HORIZ 1" = 4'  
 VERT 1" = 4'

**DP-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

FUNCTIONAL SUPERVISOR  
 ARLISSA PANG

CALCULATED/DESIGNED BY  
 CHECKED BY

SUSANA ORATE  
 PETER AGUILERA

REVISOR  
 SO

DATE REVISOR  
 DATE

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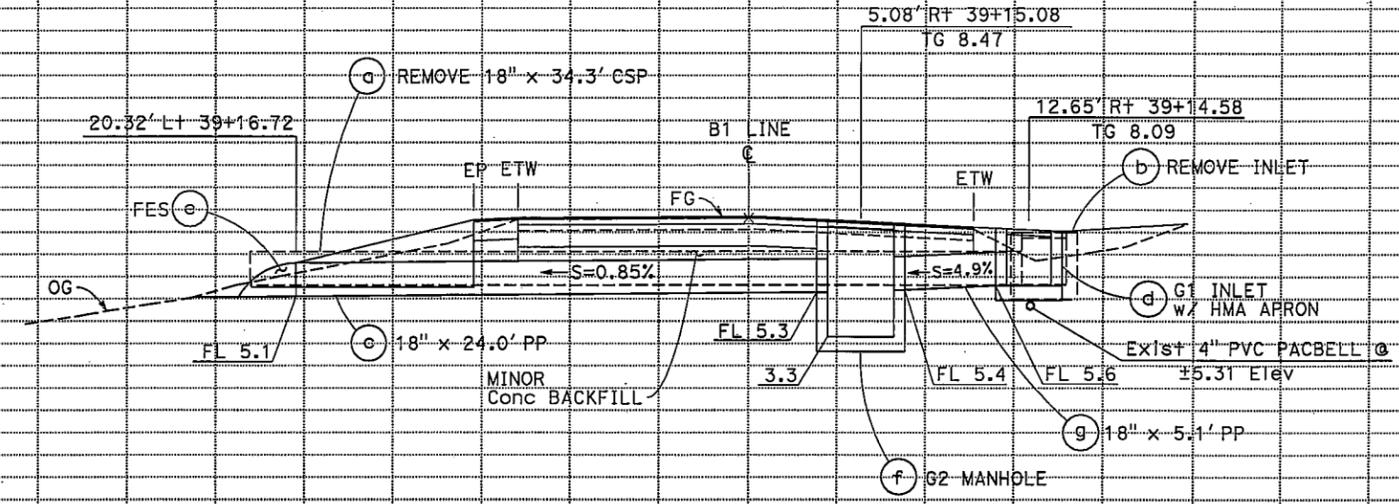
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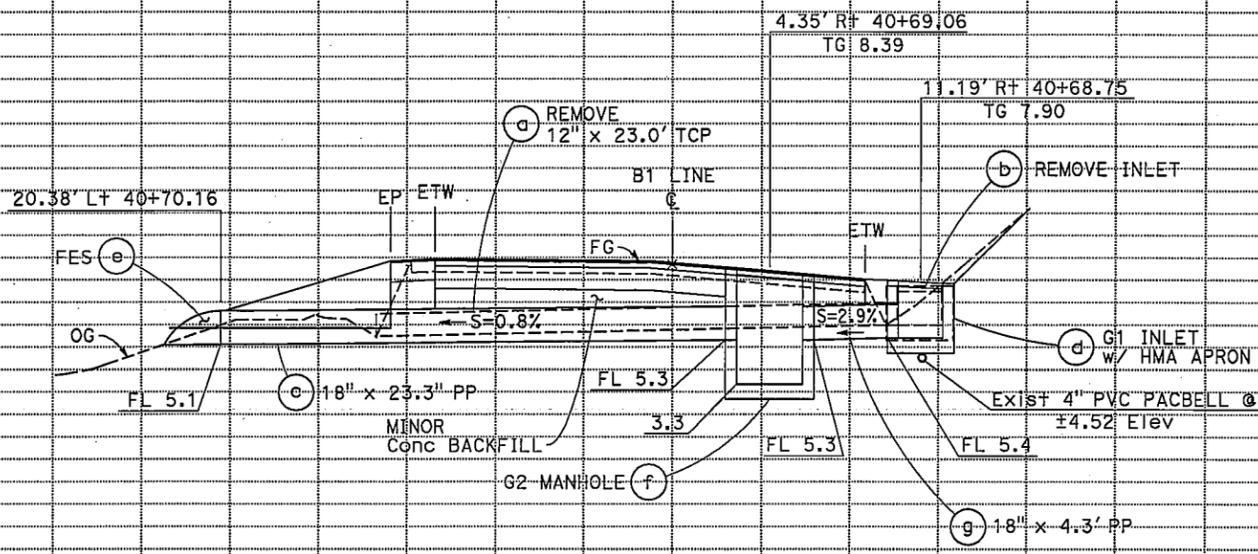
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Peter Aquilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aquilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA



**DRAINAGE SYSTEM No. 5**  
 (PM 15.53)



**DRAINAGE SYSTEM No. 6**  
 (PM 15.56)

**DRAINAGE PROFILES**

SCALE: HORIZ 1" = 4'  
 VERT 1" = 4'

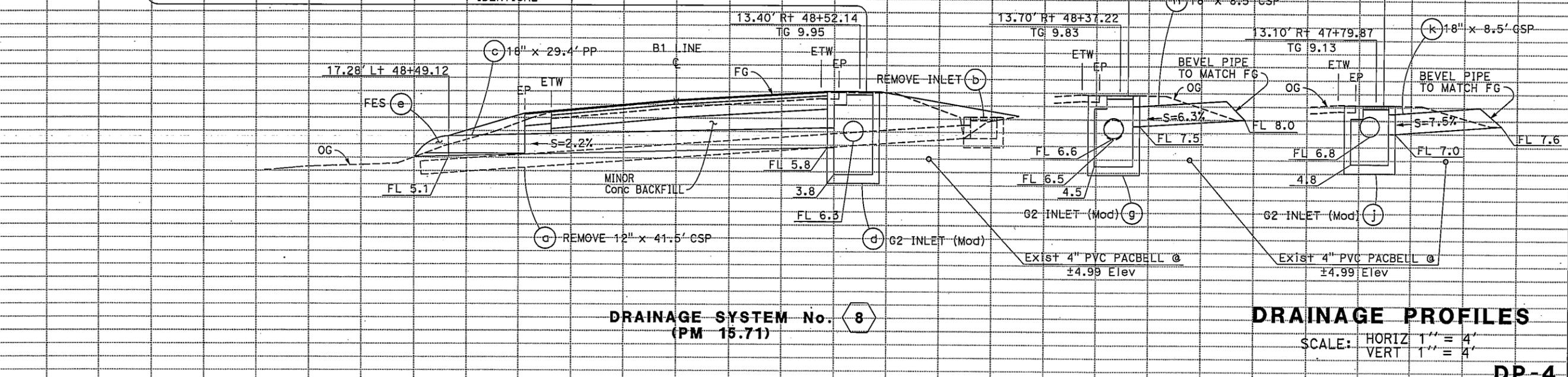
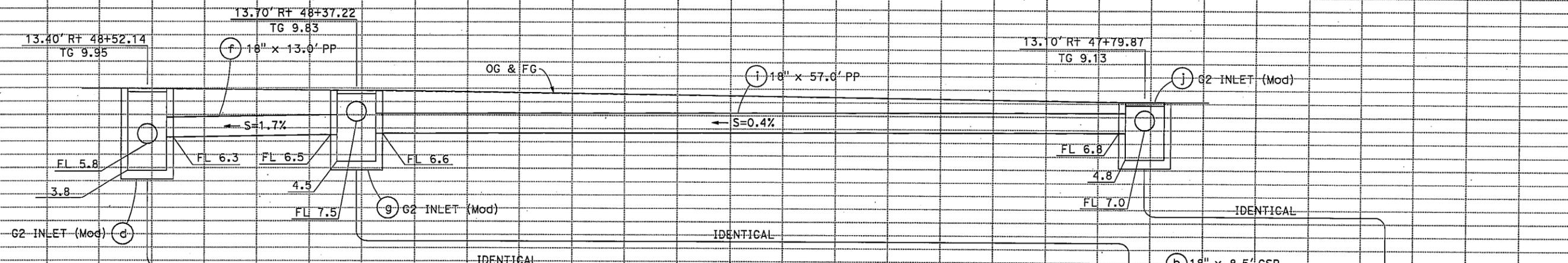
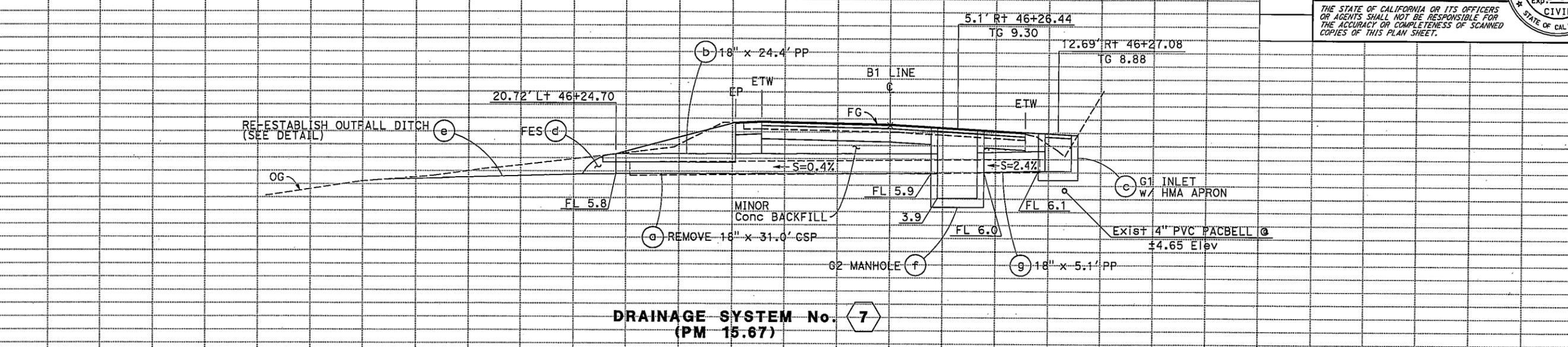
**DP-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 SUSANA OÑATE  
 PETER AGUILERA  
 SO: 3/9/10  
 REVISIONS: 12, 10, 8, 6, 4, 2, 0

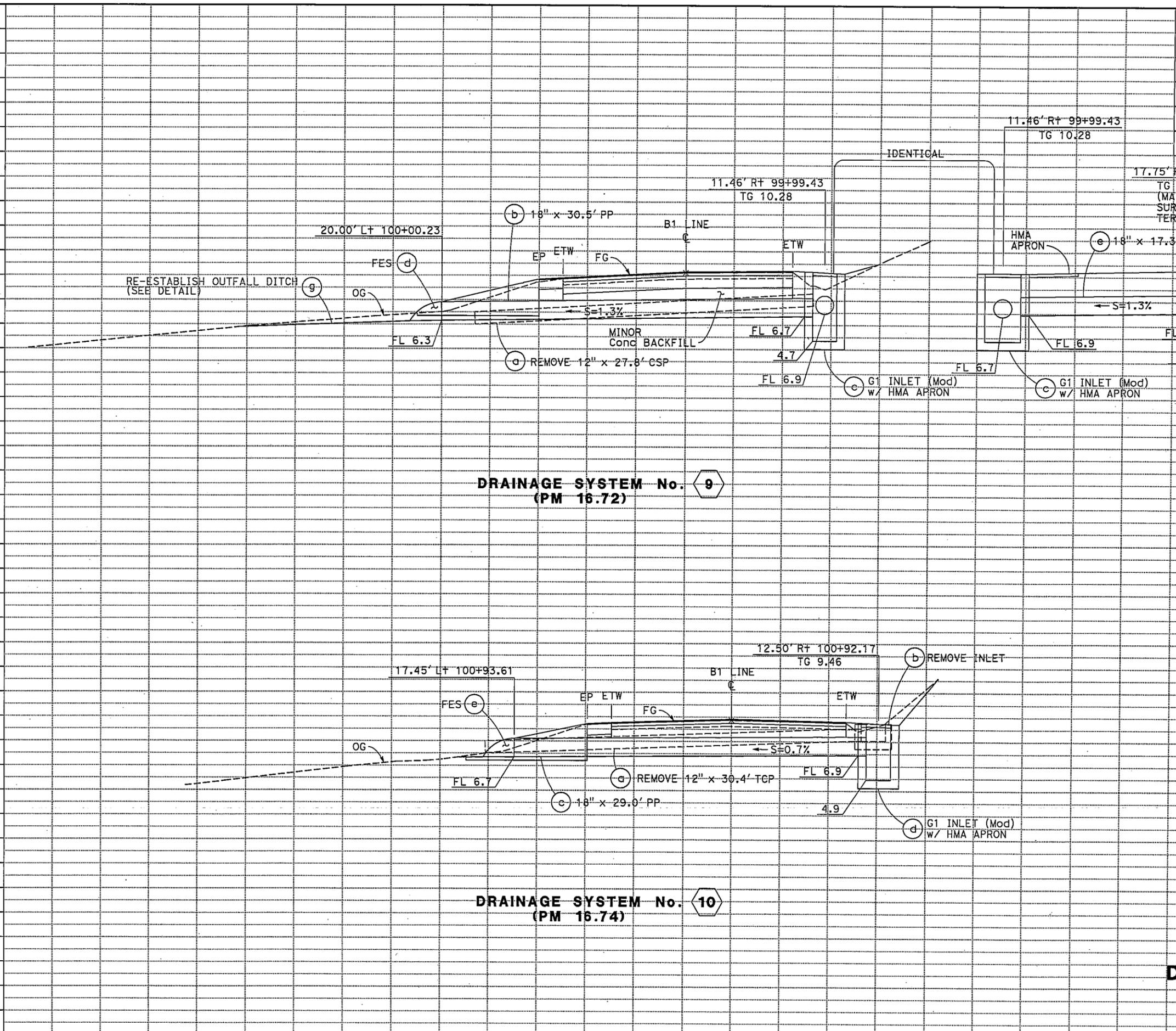
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

REGISTERED CIVIL ENGINEER: Peter Aguilera, No. 55287, Exp. 12-31-10  
 DATE: 3-11-10  
 PLANS APPROVAL DATE: 3-11-10  
 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.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

FUNCTIONAL SUPERVISOR: ARLISSA PANG  
 SUSANA ONATE  
 PETER AGUILERA  
 SO: 3/9/10  
 REVISED BY: DATE REVISED: 12/10/08



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aguilera  
 No. 55287  
 Exp. 2-31-10  
 CIVIL  
 STATE OF CALIFORNIA

**DRAINAGE PROFILES**

SCALE: HORIZ 1" = 4'  
 VERT 1" = 4'

**DP-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

FUNCTIONAL SUPERVISOR  
 ARLISSA PANG

CALCULATED-DESIGNED BY  
 CHECKED BY

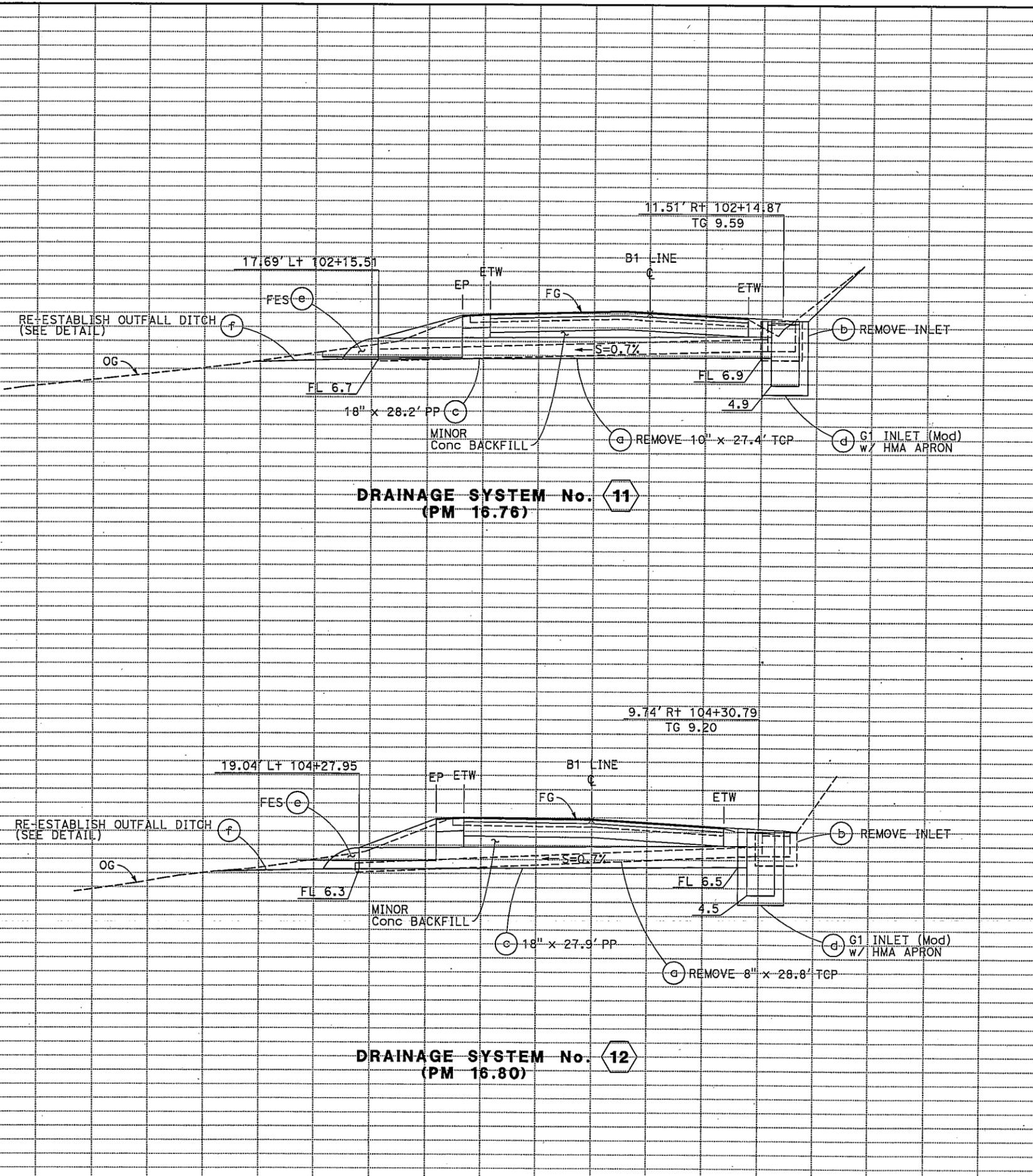
SUSANA ONATE  
 PETER AGUILERA

SO  
 3/9/10

REVISED BY  
 DATE REVISED

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aguilera  
 No. 55287  
 Exp. 2-31-10  
 CIVIL  
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN

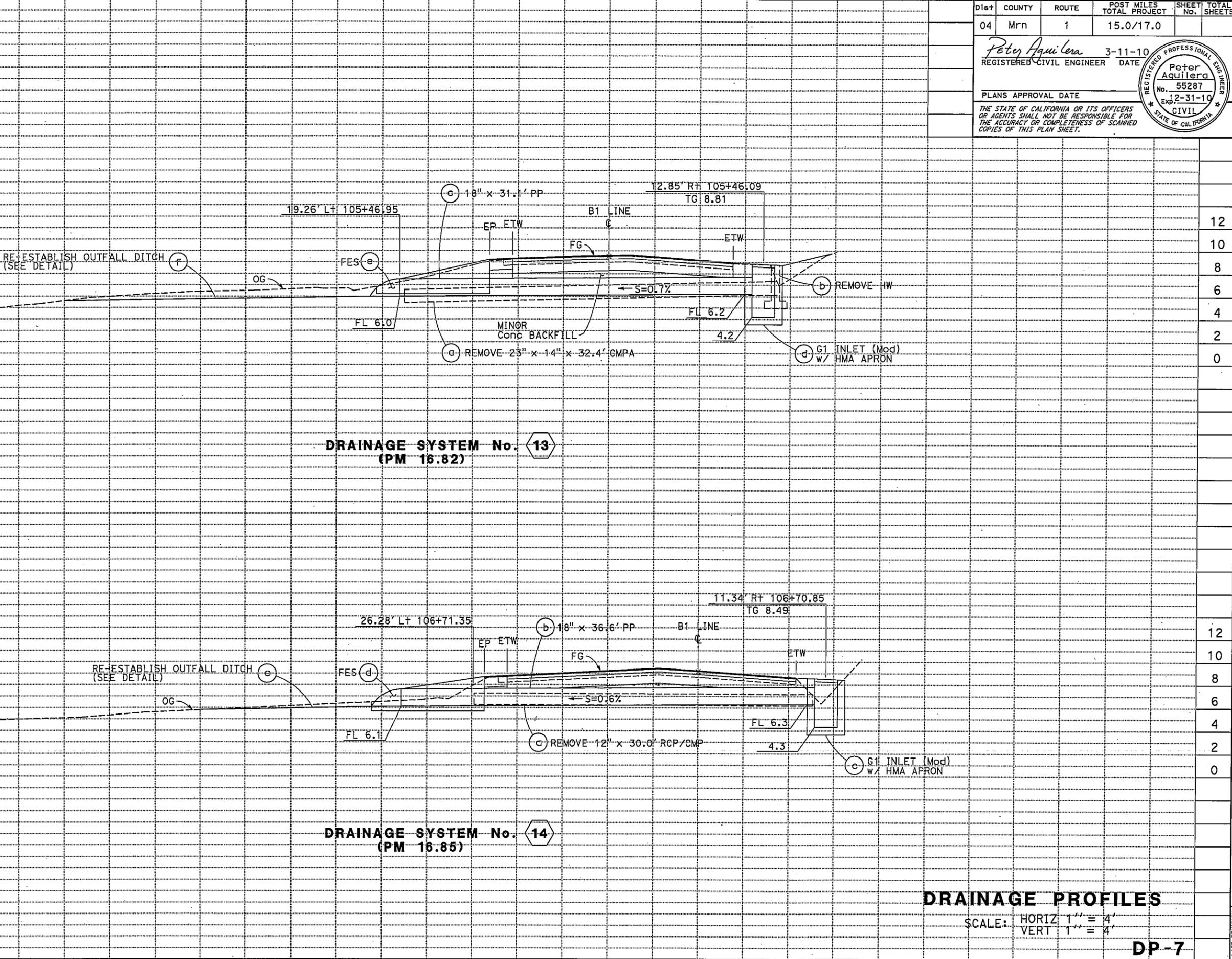
FUNCTIONAL SUPERVISOR  
 ARLISSA PANG

CALCULATED-DESIGNED BY  
 CHECKED BY

SUSANA OÑATE  
 PETER AGUILERA

REVISED BY  
 DATE REVISED

SO  
 3/9/10



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

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.

**Peter Aguilera**  
 No. 55287  
 Exp. 12-31-10  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 STATE OF CALIFORNIA

**DRAINAGE SYSTEM No. 13**  
 (PM 16.82)

**DRAINAGE SYSTEM No. 14**  
 (PM 16.85)

**DRAINAGE PROFILES**

SCALE: HORIZ 1" = 4'  
 VERT 1" = 4'

**DP-7**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

Charlotte A. Cashin 3-11-10  
REGISTERED CIVIL ENGINEER DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
Charlotte A. Cashin  
No. 34417  
Exp. 9-30-11  
CIVIL  
STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
HYDRAULICS

FUNCTIONAL SUPERVISOR  
JOSEPH PETERSON

DESIGNED BY  
JOSEPH PETERSON

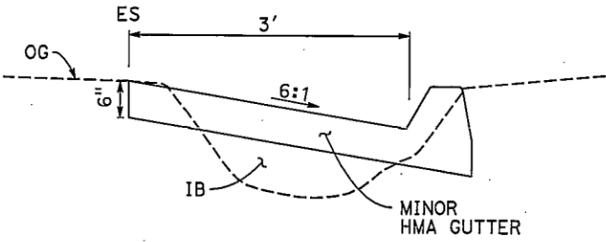
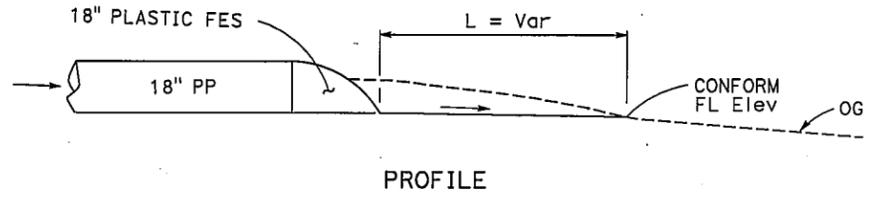
CHECKED BY

REVISOR  
CHARLOTTE CASHIN

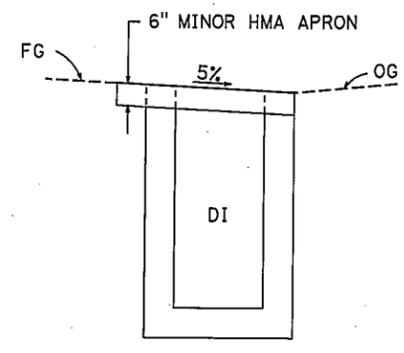
DATE REVISOR  
JOSEPH PETERSON

REVISOR  
CC

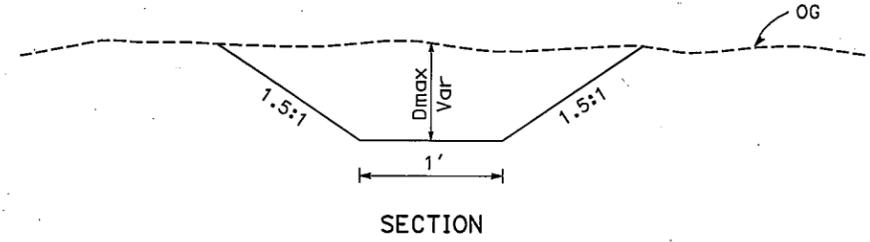
DATE REVISOR  
3/2/10



**HMA GUTTER**  
Rt B1 24+30 TO 29+30  
3 f 4 f



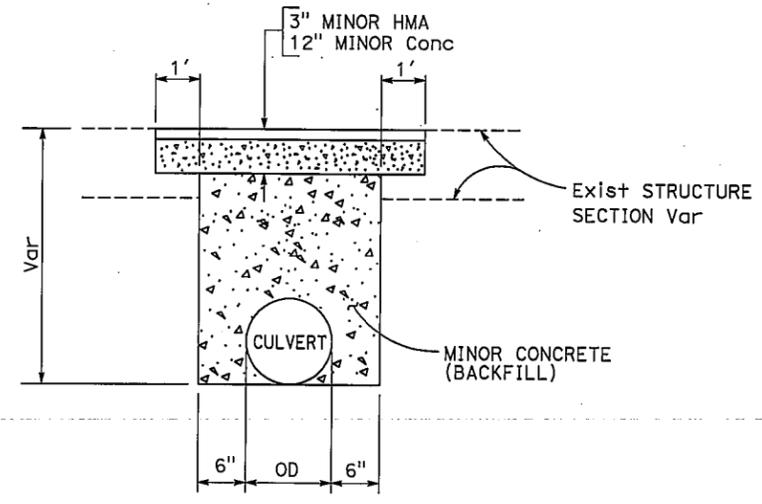
SECTION A-A



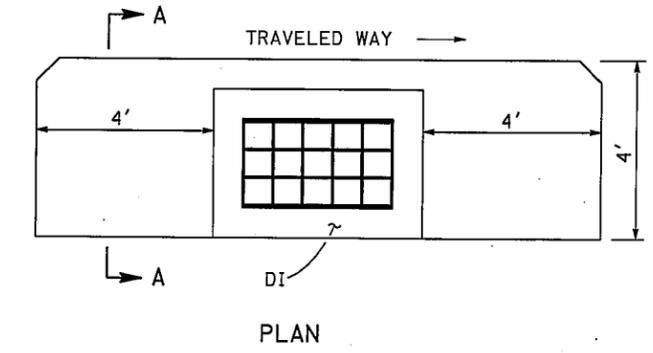
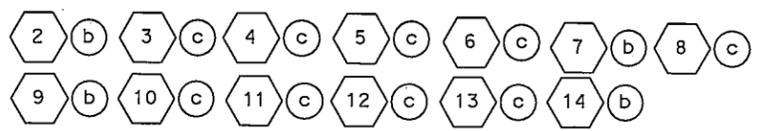
SECTION

**RE-ESTABLISH OUTFALL DITCH**

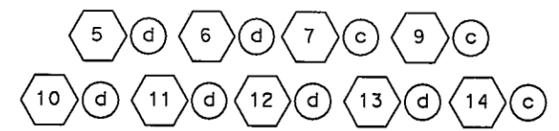
SYSTEM No.	PM	Dmax	L	CONFORM FL
		FT	FT	Elev
2g	15.15	0.8	4	5.0
7e	15.67	1.2	15	5.3
9g	16.72	0.5	14	5.8
11f	16.76	0.4	6.5	6.5
12f	16.80	0.6	7.9	6.1
13f	16.82	0.9	27	5.6
14e	16.85	0.5	15.1	5.8



**TRENCH PAVING DETAIL**



**MINOR HMA APRON**



**DRAINAGE DETAILS**  
NO SCALE

DD-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

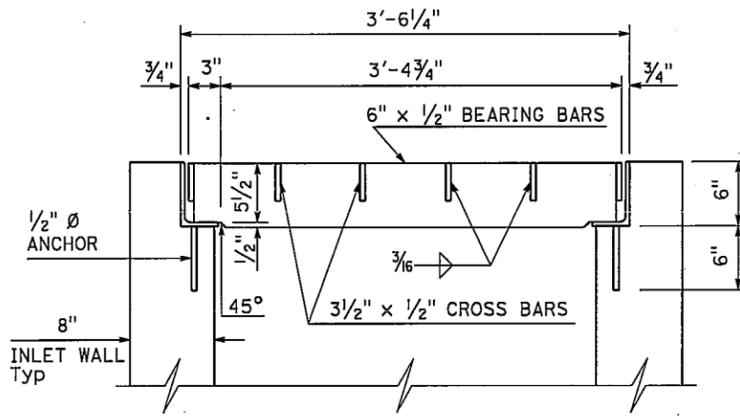
Charlotte A. Cashin 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
 Charlotte A. Cashin  
 No. 34417  
 Exp 9-30-11  
 CIVIL  
 STATE OF CALIFORNIA

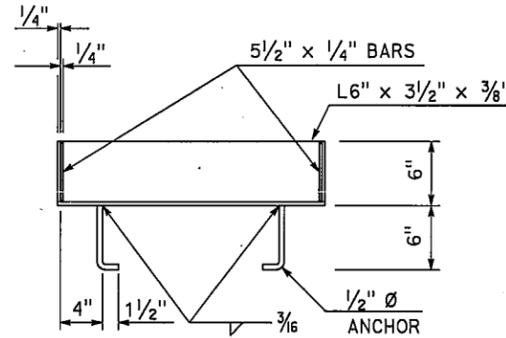
PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTE:**

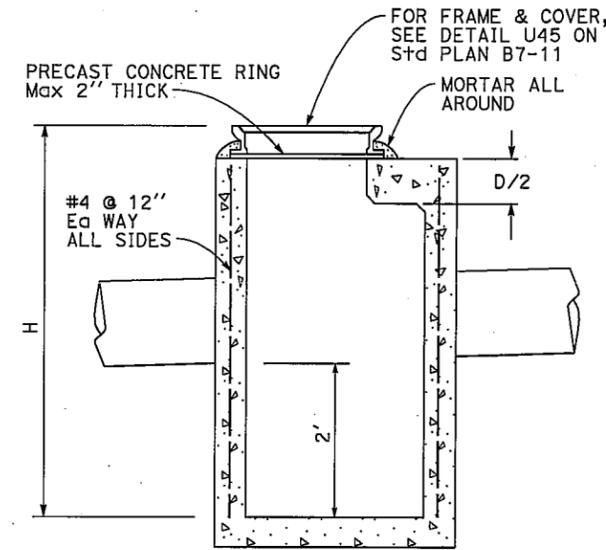
1. FOR DRAIN INLET DETAILS TYPE G1 (Mod) AND G2 (Mod) NOT SHOWN, SEE STANDARD PLANS.



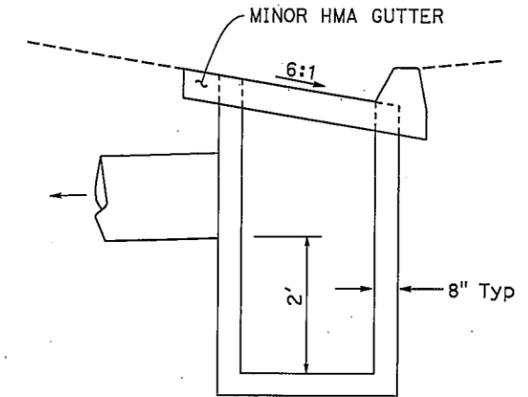
**LONGITUDINAL SECTION**  
(THRU FRAME, GRATE AND INLET)



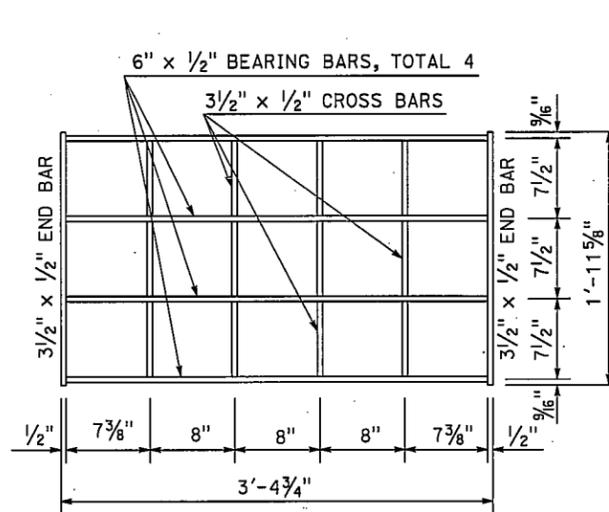
**CROSS SECTION**  
(THRU FRAME)



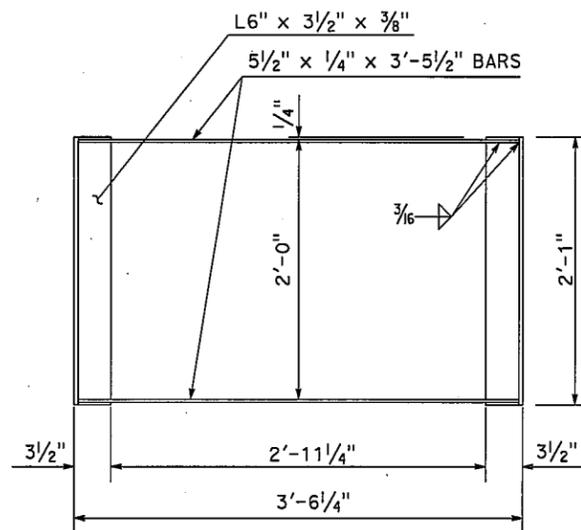
SECTION A-A



**G1 INLET (Mod) IN MINOR HMA GUTTER**

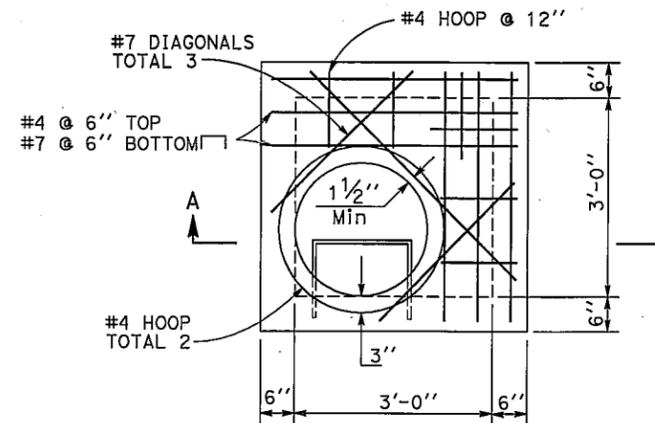


**GRATE**



**FRAME**

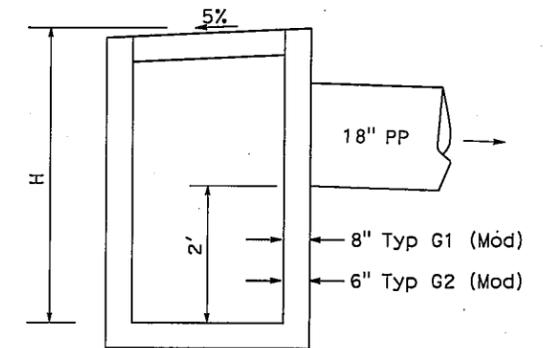
**FRAME AND GRATE TYPE 24-12 MODIFIED**



PLAN  
**G2 MH**



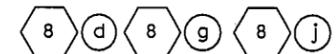
NOTE:  
FOR DETAILS NOT SHOWN, SEE S+d PLAN D73 G2 INLET



**G1 INLET (Mod) WITH SUMP**



**G2 INLET (Mod) WITH SUMP**



NOTE:  
FOR DETAILS NOT SHOWN, SEE S+d PLAN D73 G1 INLET  
FOR DETAILS NOT SHOWN, SEE S+d PLAN D73 G2 INLET

**DRAINAGE DETAILS**  
NO SCALE

**DD-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 HYDRAULICS  
 FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
 CHECKED BY: JOSEPH PETERSON  
 CALCULATED/DESIGNED BY: CHARLOTTE CASHIN  
 REVISED BY: JOSEPH PETERSON  
 DATE REVISED: 3/2/10  
 CC



### DRAINAGE QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

*Peter Aguilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
**Peter Aguilera**  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

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.

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	REMOVE CULVERT	REMOVE INLET	REMOVE HEADWALL	MINOR HOT MIX ASPHALT	HMA (Misc AREA)	MINOR CONCRETE	MINOR CONCRETE (MINOR STRUCTURE)	MINOR CONCRETE (BACKFILL)	18" PP	18" CSP (0.064" THICK)	18" PLASTIC FLARED END SECTION	24" PLASTIC FLARED END SECTION	DITCH EXCAVATION	Misc IRON & STEEL	FRAME & GRATE [N] TYPE 24-12 (Mod)	FRAME & GRATE [N] TYPE 24-12X	MAXIMUM COVER [N]	HEIGHT OF INLET "H" [N]	TYPE U45 (FRAME & COVER) [N]	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	
			LF	EA	TON	SQYD	CY	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA						EA
D-4	8	a	41.5																			REMOVE 12" CSP	B1 48+51	D-4	8	a	
		b		1																		REMOVE INLET				b	
		c				1.7		3.4		3.4	29.4										2.7	18" PP				c	
		d							2.13							239					6.2	G2 INLET (Mod)				d	
		e											1									18" PLASTIC FES				e	
		f									13.0										2.2	18" PP				f	
		g						1.90								239					5.3	G2 INLET (Mod)				g	
		h									8.5										0.8	18" CSP				h	
		i									57.0										1.7	18" PP				i	
		j						1.64								239					4.3	G2 INLET (Mod)				j	
		k									8.5										0.6	18" CSP				k	
D-4	9	a	27.8																			REMOVE 12" CSP	B1 99+99	D-4	9	a	
		b				1.6		3.1		2.8	30.5										2.3	18" PP				b	
		c				1.3	3.9		1.52							281	1				5.6	G1 INLET (Mod) w/ HMA APRON				c	
		d									17.3			1							2.0	18" PLASTIC FES				d	
		e								1.50											5.5	18" PP				e	
		f													281	1						G1 INLET (Mod)				f	
		g													0.5							RE-ESTABLISH OUTFALL DITCH				g	
D-5	10	a	30.4																			REMOVE 12" TCP	B1 100+93	D-5	10	a	
		b																				REMOVE INLET				b	
		c				1.6		3.2		1.4	29.0										1.5	18" PP				c	
		d				1.3	3.9		1.30							281	1				4.6	G1 INLET (Mod) w/ HMA APRON				d	
		e												1								18" PLASTIC FES				e	
D-5	11	a	27.4																			REMOVE 10" TCP	B1 102+15	D-5	11	a	
		b																				REMOVE INLET				b	
		c				1.6		3.1		2.0	28.2										1.9	18" PP				c	
		d				1.3	3.9		1.32							281	1				4.7	G1 INLET (Mod) w/ HMA APRON				d	
		e												1								18" PLASTIC FES				e	
		f													0.2							RE-ESTABLISH OUTFALL DITCH				f	
D-5	12	a	28.8																			REMOVE 8" TCP	B1 104+30	D-5	12	a	
		b																				REMOVE INLET				b	
		c				1.6		3.1		2.3	27.9										2.1	18" PP				c	
		d				1.3	3.9		1.32							281	1				4.7	G1 INLET (Mod) w/ HMA APRON				d	
		e												1								18" PLASTIC FES				e	
		f													0.3							RE-ESTABLISH OUTFALL DITCH				f	
D-6	13	a	32.4																			REMOVE 23" x 14" CMPA	B1 105+48	D-6	13	a	
		b																				REMOVE HEADWALL				b	
		c				1.6		3.2		2.2	31.1										2.0	18" PP				c	
		d				1.3	3.9		1.30							281	1				4.6	G1 INLET (Mod) w/ HMA APRON				d	
		e												1								18" PLASTIC FES				e	
		f													2.1							RE-ESTABLISH OUTFALL DITCH				f	
D-6	14	a	30.0																			REMOVE 12" RCP/CMP	B1 106+72	D-6	14	a	
		b																				REMOVE INLET				b	
		c				2.2		4.3		2.1	36.6										1.7	18" PP				c	
		d				1.3	3.9		1.21							281	1				4.2	G1 INLET (Mod) w/ HMA APRON				d	
		e												1								18" PLASTIC FES				e	
		f													0.5							RE-ESTABLISH OUTFALL DITCH				f	
			218.3	4	1	19.7	23.4	23.4	15.1	16.2	300.0	17.0	7	0	3.6	2684	7	3					SUBTOTAL (DQ-2)				
			426.9	8	1	77.3	254.4	43.5	27.9	31.8	488.9	17.0	14	1	5.8	5633	12	4					TOTAL (FROM DQ-1 & DQ-2)				

[N] = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

## DRAINAGE QUANTITIES DQ-2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

Peter Aquilera 3-11-10	
REGISTERED CIVIL ENGINEER	DATE
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.	

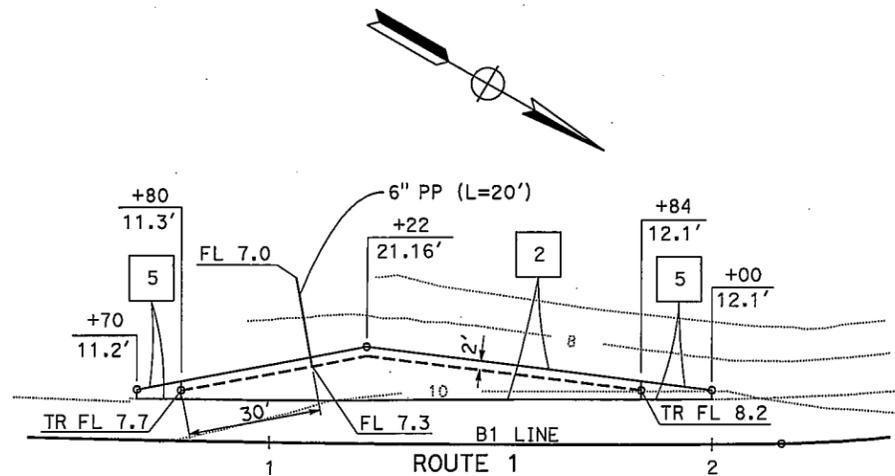
REGISTERED PROFESSIONAL ENGINEER  
 Peter Aquilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

**ABBREVIATION:**

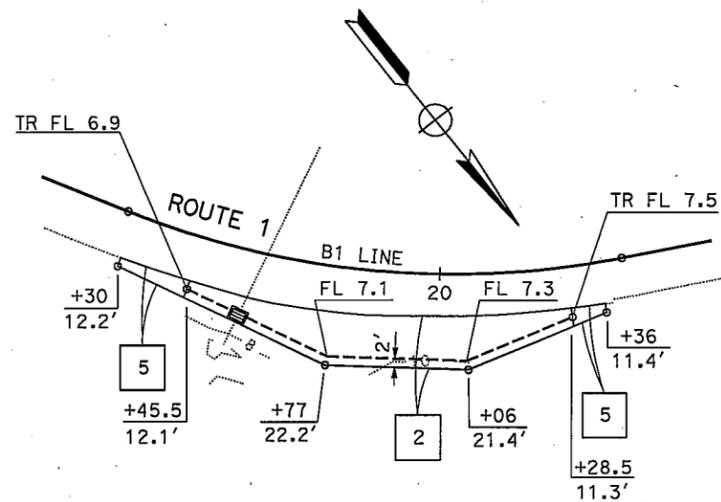
TR TERMINAL RISER

**LEGEND:**

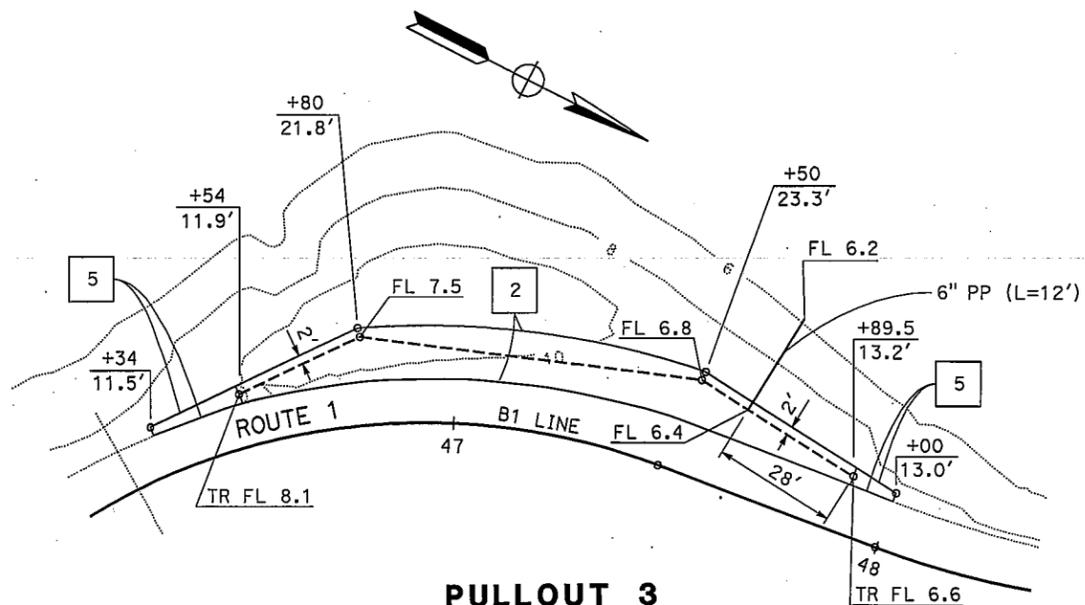
- 6" PPP UD @
- No. STRUCTURAL SECTION SEE TYPICAL CROSS SECTION X-1



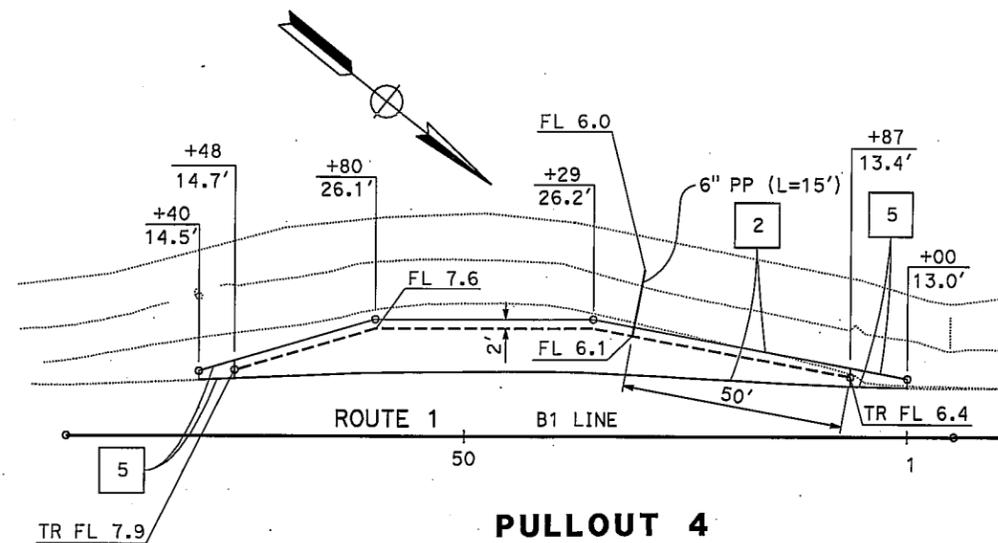
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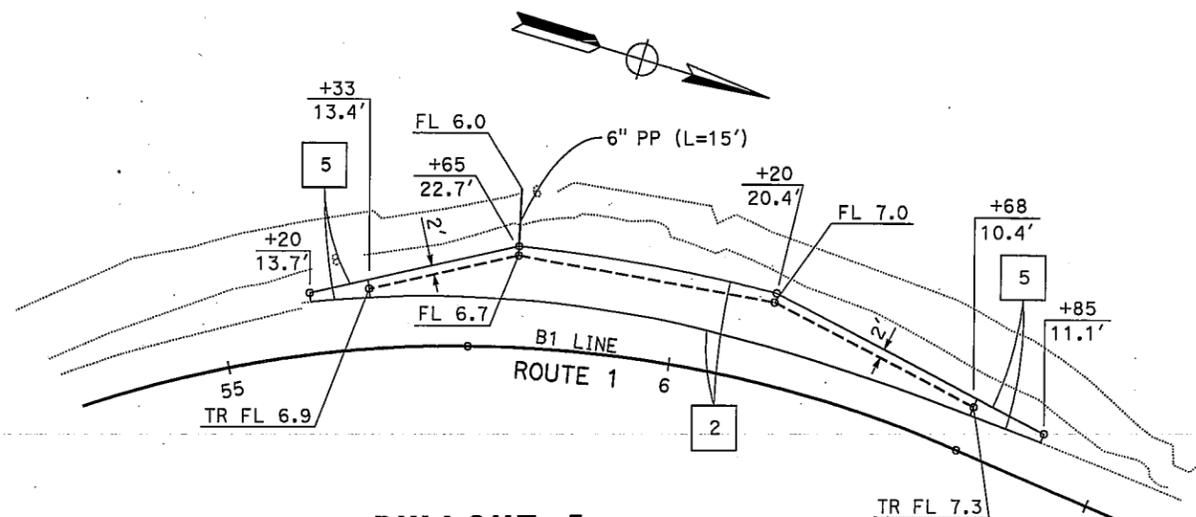
**PULLOUT 2**



**PULLOUT 3**



**PULLOUT 4**



**PULLOUT 5**

**SUBSURFACE DRAINS UNDERDRAINS**  
SCALE: 1" = 20'

THIS PLAN ACCURATE FOR UNDERDRAIN WORK ONLY

**ED-1**

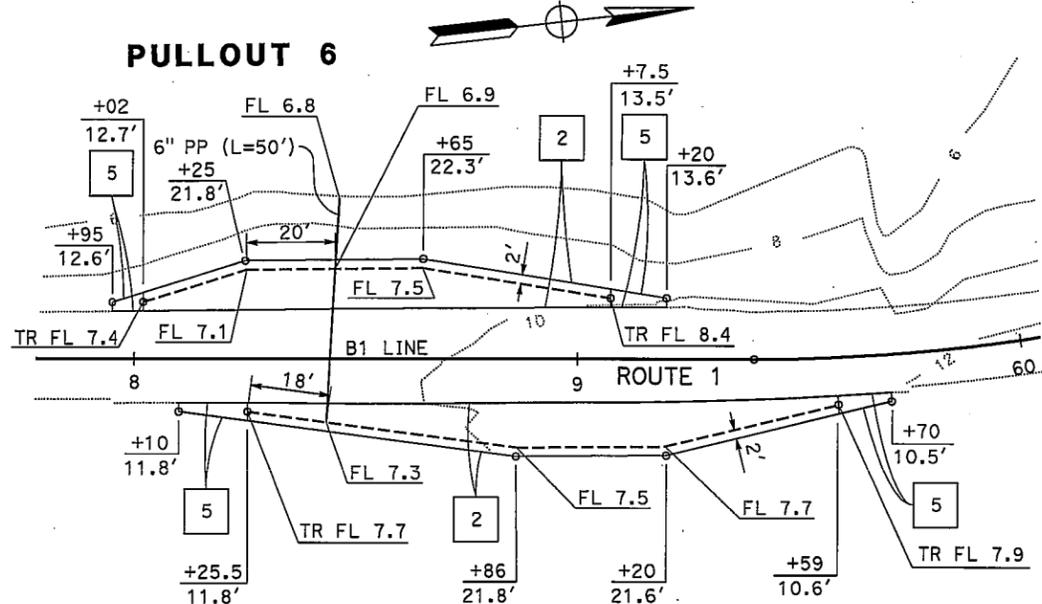
SO 3/9/10  
 SUSANA OÑATE  
 PETER AGUILERA  
 ARLISSA PANG  
 DESIGN  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Galtrans®

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mtn	1	15.0/17.0		

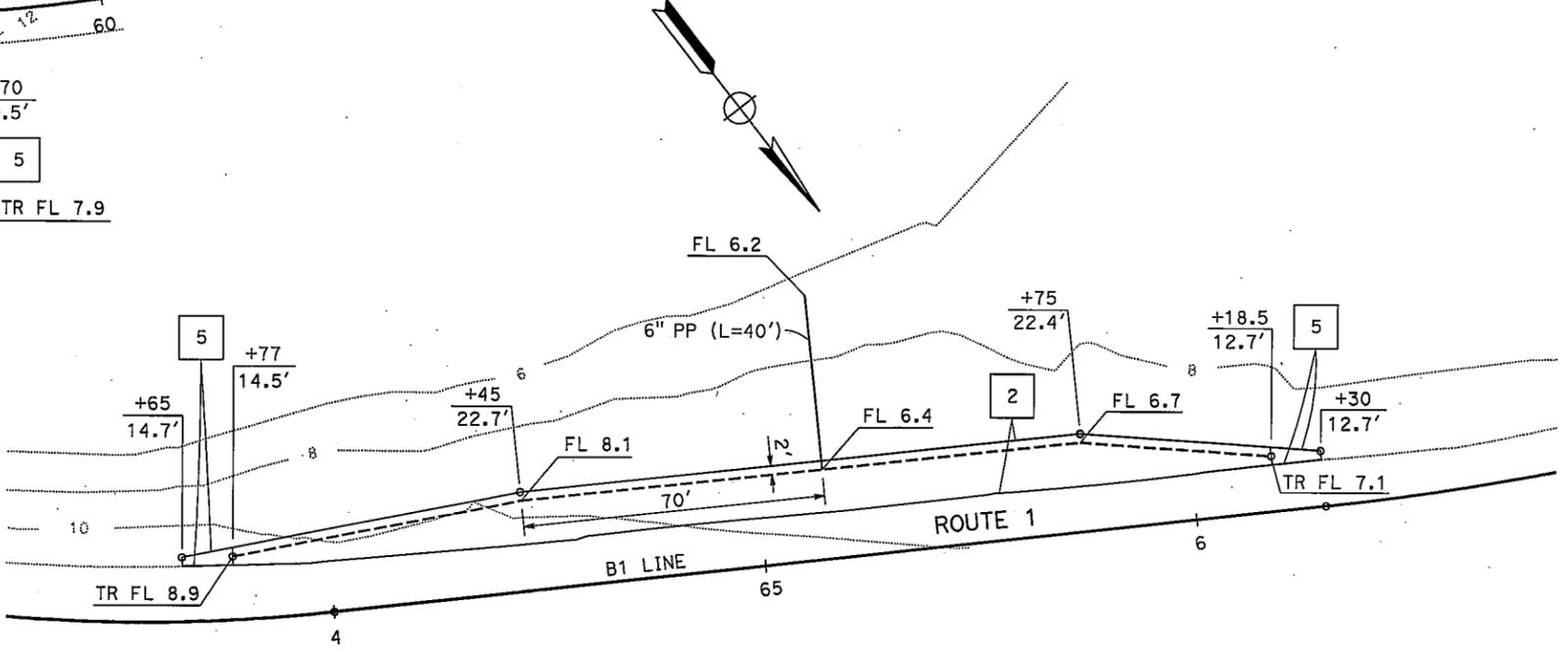
Peter Aquilera 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
 Peter Aquilera  
 No. 55287  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

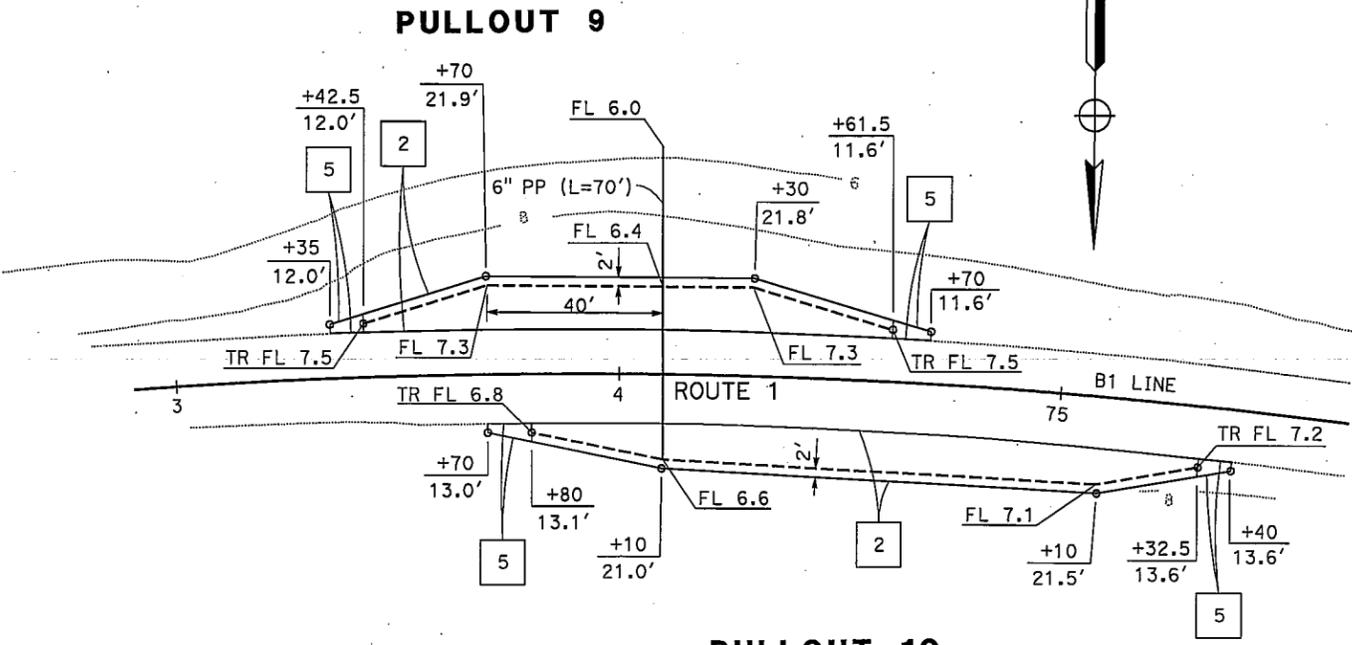
PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**PULLOUT 7**



**PULLOUT 8**



**PULLOUT 9**

**PULLOUT 10**

**SUBSURFACE DRAINS UNDERDRAINS**  
 SCALE: 1" = 20'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET ED-1

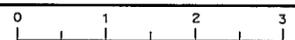
THIS PLAN ACCURATE FOR UNDERDRAIN WORK ONLY

**ED-2**

SO 3/9/10  
 SUSANA OÑATE  
 PETER AGUILERA  
 ARLISSA PANG  
 DESIGN  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 St. Caltrans

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => s126849  
 DGN FILE => 44s5401e002.dgn

CU 04224

EA 4S5401

LAST REVISION DATE PLOTTED => 18-MAR-2010  
 03-15-10 TIME PLOTTED => 16:06

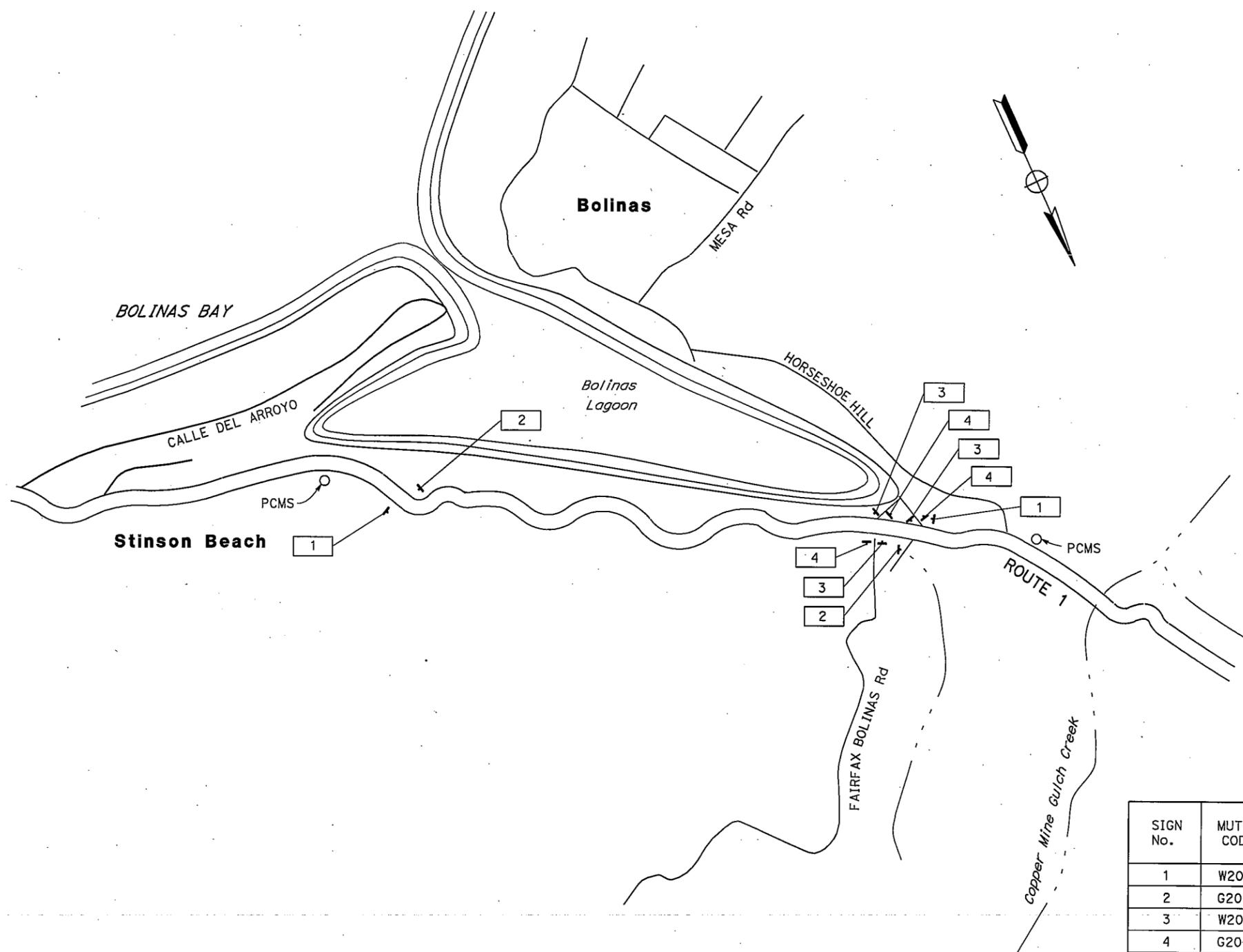
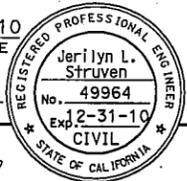


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC

FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG  
 CALCULATED/DESIGNED BY: JERILYN L. STRUVEN  
 CHECKED BY: ROLAND AU-YEUNG  
 REVISED BY: JS  
 DATE REVISED: 3/9/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

3-11-10  
 REGISTERED CIVIL ENGINEER DATE  
 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.



**ABBREVIATION:**

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

**LEGEND:**

□ CONSTRUCTION AREA SIGN NUMBER

**NOTES:**

1. EXACT LOCATION OF CONSTRUCTION AREA SIGNS AND PCMS TO BE DETERMINED BY THE ENGINEER.
2. CONSTRUCTION AREA SIGNS TO BE STATIONARY MOUNTED UNLESS OTHERWISE NOTED.

**CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE (In x In)	No. OF POSTS & SIZE (EA - In x In)	QUANTITY
					EA
1	W20-1	ROAD WORK AHEAD	48 x 48	1 - 4 x 6	2
2	G20-2	END ROAD WORK	48 x 24	1 - 4 x 4	2
3	W20-1	ROAD WORK AHEAD	36 x 36	1 - 4 x 4	3
4	G20-2	END ROAD WORK	36 x 18	1 - 4 x 4	3

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

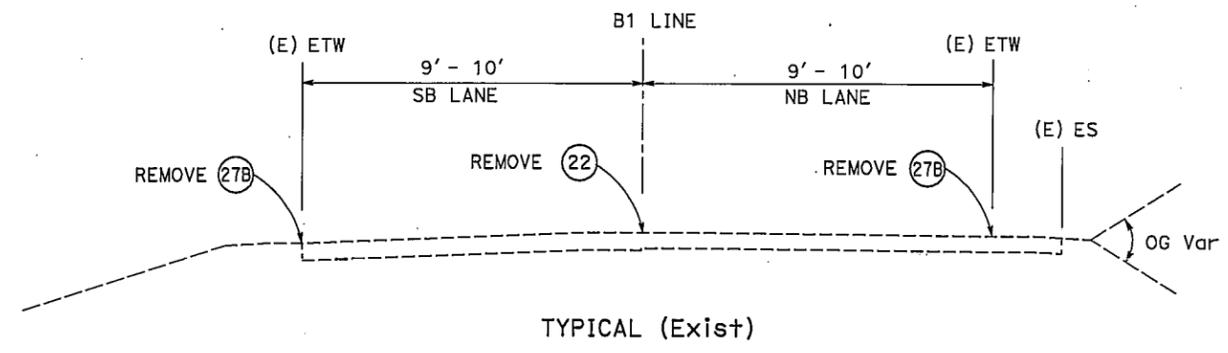
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
04	Mtn	1	15.0/17.0	

*Peter Aquilera* 3-11-10  
 REGISTERED CIVIL ENGINEER DATE

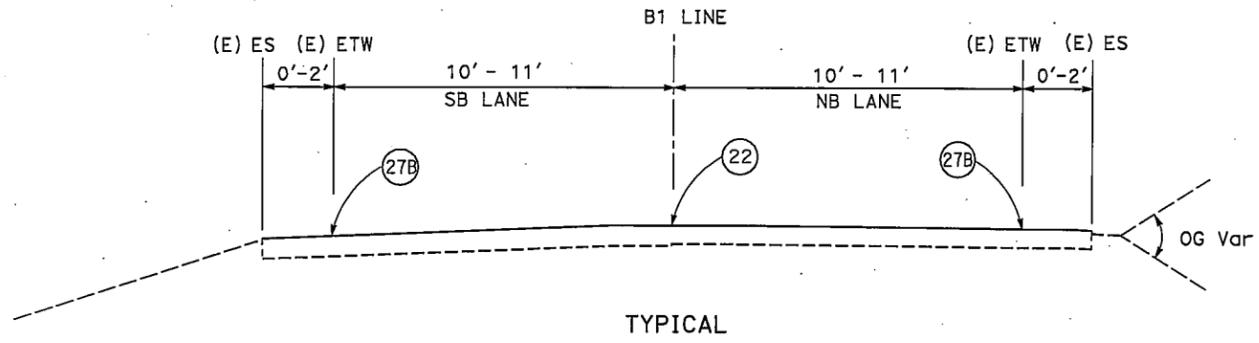
PLANS APPROVAL DATE

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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR  
 ARLISSA PANG  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 SUSANA OÑATE  
 PETER AGUILERA  
 REVISED BY  
 DATE REVISED  
 SO  
 3/9/10



**NOTE:**  
 1. PAVEMENT MARKERS FOR DETAIL 22 SHALL BE RECESSED.



**TRAFFIC STRIPES AND PAVEMENT MARKERS**

LOCATION	DETAIL No.	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC TRAFFIC STRIPE		THERMOPLASTIC TRAFFIC STRIPE		PAVEMENT MARKER (RETROREFLECTIVE RECESSED)	REMOVE MARKER	MILEPOST MARKER
			4"		4"				
			YELLOW	WHITE	YELLOW	WHITE			
		EA	FT				EA		
B1 10+70 TO 114+00	22	428	20660		20660		1291		
	27B			20660		20660		42	52
TOTAL		428	20660	20660	41320		1291	42	52

**PAVEMENT DELINEATION AND QUANTITIES**  
 NO SCALE

PD-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	1	15.0/17.0		

*Peter Aquilera* 3-11-10  
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

### ROCK SLOPE PROTECTION

LOCATION	SHEET No.	ROCK SLOPE PROTECTION (LIGHT, METHOD B)	ROCK SLOPE PROTECTION FABRIC	EXCAVATION (ROCK SLOPE PROTECTION) [N]
		CY	SQYD	CY
STA B1 11+47 TO 28+33	L-1	1634	2810	1339
STA B1 34+50 TO 46+45	L-2, L-3	1135	1992	930
STA B1 48+31 TO 53+53	L-3	499	870	409
STA B1 71+00 TO 78+95	L-4, L-5	772	1325	632
STA B1 100+03 TO 105+50	L-6, L-7	500	912	410
<b>TOTAL</b>		<b>4540</b>	<b>7909</b>	<b>3720</b>

[N] FOR INFORMATION ONLY. NOT A SEPARATE PAY ITEM.

### EARTHWORK

LOCATION	SHEET No.	IMPORTED BORROW	ROADWAY EXCAVATION
		TON	CY
STA B1 100+02 Rt TO 106+70 Rt	L-6, L-7	133	
STA B1 10+70 Lt TO 106+60 Lt (Exist SCATTERED RSP IN BOLINAS LAGOON)	L-1 TO L-7		250
DRAINAGE SYSTEM 2 (NB)	D-1, DP-1	36	
DRAINAGE SYSTEM 8 (NB)	D-4, DP-4	216	
<b>TOTAL</b>		<b>385</b>	<b>250</b>

[N] FOR INFORMATION ONLY. NOT A SEPARATE PAY ITEM.

### ROADWAY QUANTITIES

LOCATION	DIRECTION	SHEET No.	COLD PLANE AC PAVEMENT	HOT MIX ASPHALT (TYPE A)	MINOR Conc (BACKFILL)	HMA (BONDED WEARING COURSE GAP GRADED)	ASPHALTIC EMULSION MEMBRANE (BONDED WEARING COURSE)	HOT MIX ASPHALT (OPEN GRADED)	LIQUID ASPHALT (PRIME COAT)	ASPHALT TREATED PERMEABLE BASE	PERMEABLE MATERIAL			MINOR CONCRETE (CURB) TYPE A-1 Mod	PAVEMENT MARKER (NON-REFLECTIVE) TYPE A	UNDERDRAIN				
											CI 2	BLANKET	FILTER FABRIC [N]			6" PERFORATED PLASTIC PIPE UNDERDRAIN	6" PLASTIC PIPE*	FILTER FABRIC [N]	PERMEABLE MATERIAL [N]	
																				CY
STA B1 11+24 TO 113+61	NB/SB	L-1 to L-7	25024	5067.3		1064	21													
STA B1 14+00 TO 18+50	SB	L-1		58.7																
STA B1 20+76 TO 24+00	SB	L-1		42.3																
STA B1 35+50 TO 39+50	SB	L-2		52.2																
STA B1 40+59 TO 42+55	SB	L-3		25.6																
STA B1 44+50 TO 46+34	SB	L-3		24.0																
STA B1 48+31 TO 49+40	SB	L-3		14.2																
STA B1 51+00 TO 53+53	SB	L-3		33.0																
STA B1 71+00 TO 73+35	SB	L-4, L-5		30.7																
STA B1 74+70 TO 78+95	SB	L-5		55.5																
STA B1 100+03 TO 105+50	SB	L-6		71.4																
STA B1 10+70 TO 12+00 (PULLOUT 1)	NB	L-1, ED-1		1.5	2.7			17.0	0.1	8.4	5.6	16.8	217	3.7	1	104.9	24	53	6.6	
STA B1 19+30 TO 20+36 (PULLOUT 2)	SB	L-1, ED-1		1.4	2.4			16.4	0.1	8.1	5.4	16.2	207	3.2	1	88.0	4	46	5.7	
STA B1 46+34 TO 48+00 (PULLOUT 3)	NB	L-3, ED-1		1.8	3.2			28.9	0.2	14.3	9.5	28.6	363	4.9	1	148.6	16	71	8.8	
STA B1 49+40 TO 51+00 (PULLOUT 4)	NB	L-3, ED-1		1.2	2.2			25.6	0.2	12.7	8.5	25.3	322	4.4	1	141.3	19	63	7.9	
STA B1 55+20 TO 56+85 (PULLOUT 5)	NB	L-4, ED-1		1.7	3.1			26.4	0.2	13.0	8.7	26.1	333	4.8	1	144.3	19	69	8.5	
STA B1 57+95 TO 59+20 (PULLOUT 6)	NB	L-4, ED-2		1.1	2.0			18.6	0.1	9.2	6.1	18.4	235	3.4	1	107.1		49	6.1	
STA B1 58+10 TO 59+70 (PULLOUT 7)	SB	L-4, ED-2		1.5	2.8			23.9	0.1	11.8	7.9	23.6	310	4.4	1	135.1	58	63	7.9	
STA B1 63+65 TO 66+30 (PULLOUT 8)	NB	L-5, ED-2		1.3	2.4			47.1	0.3	23.3	15.5	46.5	588	7.2	1	241.6	44	103	12.8	
STA B1 73+35 TO 74+70 (PULLOUT 9)	NB	L-5, ED-2		0.9	1.7			23.2	0.1	11.5	7.7	22.9	291	3.8	1	122.6		54	6.7	
STA B1 73+70 TO 75+40 (PULLOUT 10)	SB	L-5, ED-2		1.0	1.8			27.5	0.2	13.6	9.1	27.2	345	4.6	1	151.8	78	66	8.2	
STA B1 80+54 TO 84+40 (PULLOUT 11)	NB	L-5		297.2											1					
STA B1 90+00 TO 94+50 (PULLOUT 12)	NB	L-6, ED-3		1.3	2.4			85.6	0.5	42.3	28.2	84.6	1067	12.6	1	436.6	59	182	22.6	
STA B1 98+60 TO 99+65 (PULLOUT 13)	NB	L-6, ED-3		0.6	1.0			16.8	0.1	8.3	5.6	16.6	211	2.7	1	90.8	18	39	4.9	
STA B1 105+50 TO 106+59 (PULLOUT 14)	NB	L-7, ED-3		0.9	1.6			18.3	0.1	9.0	6.0	18.1	230	3.1	1	99.4	24	45	5.6	
<b>TOTAL</b>			<b>25024</b>	<b>5788.3</b>	<b>29.3</b>	<b>1064</b>	<b>21</b>	<b>375.5</b>	<b>2.3</b>	<b>185.5</b>	<b>123.9</b>	<b>370.9</b>	<b>4709</b>	<b>62.8</b>	<b>14</b>	<b>2012.1</b>	<b>343</b>	<b>904</b>	<b>112.2</b>	

[N] FOR INFORMATION ONLY. NOT A SEPARATE PAY ITEM.  
\* QUANTITY INCLUDES TERMINAL RISER LENGTH.

### SUMMARY OF QUANTITIES

Q-1



DEPARTMENT OF FISH AND GAME

Bay Delta Region  
Post Office Box 47  
Yountville, California 94599  
(707) 944-5520  
[www.dfg.ca.gov](http://www.dfg.ca.gov)



May 12, 2010

Chuck Morton  
California Department of Transportation  
111 Grand Avenue  
Oakland, CA 94623

Subject: Final Lake or Streambed Alteration Agreement  
Notification No. 1600-2010-0089-R3  
Marin 2 Bolinas Lagoon Culvert Rehabilitation

Dear Mr. Morton:

Enclosed is the final Streambed Alteration Agreement (“Agreement”) for the Route 1 Bolinas Lagoon Culvert Rehabilitation (“Project”). Before the Department may issue an Agreement, it must comply with the California Environmental Quality Act (“CEQA”). In this case, the Department, acting as a lead agency, determined you project is exempt from CEQA and filed a notice of exemption (“NOE”) on May 12, 2010.

Under CEQA, filing a NOE starts a 35-day period within which a party may challenge the filing agency’s approval of the project. You may begin your project before the 35-day period expires if you have obtained all necessary local, state, and federal permits or other authorizations. However, if you elect to do so, it will be at your own risk.

If you have any questions regarding this matter, please contact Melissa Escaron, Staff Environmental Scientist at (707)339-0334 or [mescaron@dfg.ca.gov](mailto:mescaron@dfg.ca.gov).

Sincerely,

Scott Wilson  
Environmental Program Manager  
Bay Delta Region

cc: Melissa Escaron  
Lieutenant Riske

**CALIFORNIA DEPARTMENT OF FISH AND GAME**

BAY DELTA REGION  
POST OFFICE BOX 47  
YOUNTVILLE, CALIFORNIA 94599  
(707) 944-5520

[WWW.DFG.CA.GOV](http://WWW.DFG.CA.GOV)



**STREAMBED ALTERATION AGREEMENT**

NOTIFICATION NO. 1600-2010-0089-3  
MARIN COUNTY STATE ROUTE 1

CALIFORNIA DEPARTMENT OF TRANSPORTATION  
BOLINAS LAGOON CULVERT REHABILITATION PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and California Department of Transportation (Permittee) as represented by Mr. Chuck Morton.

**RECITALS**

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on February 16, 2009 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement

**PROJECT LOCATION**

The project is located within on State Route 1, adjacent to Bolinas Lagoon, in the County of Marin, State of California; Latitude 37.92222/39.9264, Longitude -122.6733/-122.6806, or between Post Miles (PM) 15.5 and 15.71.

## PROJECT DESCRIPTION

The project is limited to replacing small drainage culverts that are tributary to Bolinas Lagoon along State Route 1 in Marin County. At PM 15.15 there is an existing cracked headwall and failed 18" corrugated metal pipe that drains an area less than 2 acres in size. Caltrans proposes to install an 18" smooth interior plastic pipe, extend the culvert upstream by 15 feet, and install a flared end section. This work will result in filling approximately 30 square feet with 20 cubic yards of fill within the drainage. At PM 15.71 the existing pipe will be replaced with a smooth interior plastic pipe. To accommodate this work approximately 20 cubic yards of fill will be removed.

In addition to the above work, Caltrans proposes culvert improvements at the following PMs: 15.26/8, 15.3, 15.32, 15.53, 15.56, 15.67, 16.72, 16.74, 16.76, 16.8, 16.82, and 16.85. The new drainage inlets will have frames and grates that will allow the passage of rocky material into a .4 cubic yard sump. These sumps are designed to retain smaller material, such as sand and gravel to improve water quality in Bolinas Lagoon.

To accomplish this work the following equipment will be used: backhoe, dump truck, front-end loader, tamper, concrete truck.

## PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: Aquatic habitat within Bolinas Lagoon.

The adverse effects the project could have on the fish or wildlife resources identified above include: Temporarily increased sedimentation and decreased water quality at the project site and downstream from the project site.

## MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

### 1. Administrative Measures

Permittee (Caltrans and/or its Designee) shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times

and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.

- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

## **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee (Caltrans and/or its Designee) shall implement each measure listed below.

- 2.1 Permittee shall conduct all work according to the project description stated above as well as the plans submitted to DFG that are not in conflict with the above stated project description. Caltrans shall notify the DFG of any modifications made to the plans submitted to DFG that pertain to impacts to drainages.
- 2.2 Permittee shall monitor Storm Water Pollution Prevention Plan measures for proper installation and maintain them to prevent sediment transport into the creek and agricultural ditches.
- 2.3 Permittee shall not work within the drainages between October 15 and June 15.
- 2.4 Permittee shall not use temporary or permanent erosions control devices containing plastic, including photo- or bio-degradable plastic.
- 2.5 Permittee shall be in compliance with Migratory Bird Treaty Act (MBTA) and Fish and Game Code 3503. To avoid potential impacts to nesting birds, Permittee shall remove vegetation or install exclusion measures during the time period of August 15 to February 15. If construction activities that have the potential to violate MBTA and Fish and Game Code 3503 are scheduled during the nesting season, focused surveys for active nests shall be conducted within

72 hours of said construction activities. If active nests are identified, a 50-foot no-work buffer for non-raptors and a 300-foot no-work buffer for raptors shall be established. If active nests are found, Caltrans shall consult with DFG and the United States Fish and Wildlife Service (USFWS) regarding appropriate action to comply with the MBTA of 1918 and the Fish & Game Code of California.

- 2.6 Permittee shall allow any wildlife encountered during the course of construction to leave the construction area unharmed. This authorization does not allow for the trapping, capture, or relocation of any state or federally listed species.
- 2.7 This authorization does not allow for the removal of any trees. If the project changes such that tree removal becomes necessary, the Permittee shall consult with the DFG.
- 2.8 If any state or federal listed species, or state species of special concern, are observed during project surveys, Permittee shall submit California Natural Diversity Data Base (CNDDDB) forms to the CNDDDB for all preconstruction survey data within five working days of the sightings, and provide DFG Region 3 with copies of the CNDDDB forms and survey maps.
- 2.9 Permittee shall have readily available, at all times, plastic sheeting or visquine and will cover exposed spoil piles and exposed areas to prevent these areas from losing loose soil into the stream. These covering materials shall be applied when it is evident rainy conditions threaten to erode loose soils into the stream.
- 2.10 Permittee shall not commence construction within any drainage if the associated erosion control measures cannot be completed prior to the onset of a storm event. 72-hour weather forecasts from the National Weather Service shall be consulted prior to start up of any phase of the project.
- 2.11 Permittee shall not operate equipment or vehicles in water-covered portions of the stream, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in this Agreement and as necessary to complete authorized work.
- 2.12 Permittee shall locate staging and storage areas for equipment, materials, fuels, lubricants and solvents, outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream will be positioned over drip pans. Any equipment or

vehicles driven and/or operated within or adjacent to the stream will be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication.

- 2.13 Permittee shall prevent raw cement/concrete or washings thereof, asphalt, straw, paint or other coating material, oil or other petroleum products, or any other substances related to project activities which could be hazardous to aquatic life, wildlife, or riparian habitat from contaminating the soil and/or entering the waters of the State. Permittee may be subject to a citation for placing materials where they may enter a stream or lake.
- 2.14 Permittee shall not dump any litter or construction debris within the riparian/stream zone. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
- 2.15 Any materials placed in seasonally dry portions of a stream or lake, that could be washed downstream or could be deleterious to aquatic life, wildlife, or riparian habitat shall be removed by Permittee prior to inundation by high flows.
- 2.16 A copy of this Agreement shall be provided to all contractors, subcontractors and all Resident Engineers. Copies of this Agreement shall be available at the project site during all periods of active work and must be presented to DFG personnel upon demand. DFG personnel shall be allowed onto the work site at any time during and after construction of the project for the purposes of establishing compliance with this Agreement.

### **3. Contact Information**

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Chuck Morton  
California Department of Transportation  
111 Grand Ave., Oakland, Ca 94623  
(510) 286-5016  
chuck\_morton@dot.ca.gov

To DFG:

Department of Fish and Game  
Bay Delta Region  
7329 Silverado Trail  
Attn: Lake and Streambed Alteration Program – Melissa Escaron  
Notification #1600-2010-0089-R3  
mescaron@dfg.ca.gov

**LIABILITY**

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

**SUSPENSION AND REVOCATION**

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

**ENFORCEMENT**

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

## **OTHER LEGAL OBLIGATIONS**

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

## **AMENDMENT**

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **TRANSFER AND ASSIGNMENT**

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **EXTENSIONS**

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

## **EFFECTIVE DATE**

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html).

## **TERM**

This Agreement shall expire on December 31, 2013, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

## **AUTHORITY**

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

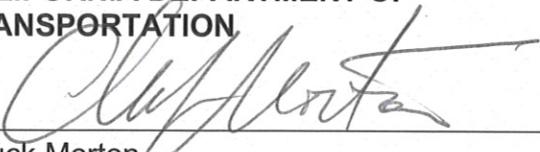
## **AUTHORIZATION**

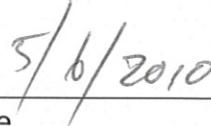
This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

**CONCURRENCE**

The undersigned accepts and agrees to comply with all provisions contained herein.

**FOR MR. CHUCK MORTON REPRESENTING  
CALIFORNIA DEPARTMENT OF  
TRANSPORTATION**

  
\_\_\_\_\_  
Chuck Morton

  
\_\_\_\_\_  
Date

**FOR DEPARTMENT OF FISH AND GAME**

  
\_\_\_\_\_  
Scott Wilson  
Environmental Program Manager

  
\_\_\_\_\_  
Date

Prepared by: Melissa Escaron  
Staff Environmental Scientist  
Date Prepared: May 5, 2010



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1398

MAY 20 2010

Regulatory Division

SUBJECT: File Number 2010-00128N

Mr. Chuck Morton  
California Department of Transportation  
District 4, Division of Maintenance  
PO Box 23660  
Oakland, California 94623

Dear Mr. Morton:

This letter is in reference to the California Department of Transportation (Caltrans) application dated March 15, 2010, concerning Department of the Army authorization to construct the Highway 1 at Bolinas Lagoon rehabilitation project located between post mile 15.0 and 17.0 in west Marin County, California. Caltrans will rehabilitate approximately 4,900 linear feet of existing rock slope protection (RSP) which has been dislodged or moved from original locations. Approximately 4,540 cubic yards of riprap will be removed and replaced or reused along the 4,900 feet of Highway 1. In addition, Caltrans will replace 14 culverts within project area (two are within Corps of Engineers jurisdiction). The existing culverts at post mile 15.15 and 15.71 will be replaced with new 18-inch plastic pipes and associated features. The project will result in the loss of 30,000 square feet of salt marsh, which will be replaced through the removal of rock from 30,000 square feet of areas that were salt marsh prior to the movement of the RSP.

The enclosed maps, entitled "Permit Plan," Exhibits A-1 to A-7, in seven (7) sheets date certified May 20, 2010, accurately depict the extent and location of Corps jurisdiction within the study area boundary. The jurisdictional delineation is based on the current conditions of the site, as verified during a field investigation of April 20, 2010, and other data included with your submittal. This jurisdictional delineation will expire in five (5) years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date.

You are advised that the Corps has established an Administrative Appeal Process, as described in 33 CFR Part 331 (65 FR 16,486; Mar. 28, 2000), and outlined in the flowchart and "Notification of Administrative Appeal Options, Process, and Request for Appeal" form (NAO-RFA). If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to the District Engineer for reconsideration or submit a completed NAO-RFA form to the Division Engineer to initiate the appeal process. You will relinquish all rights to appeal, unless the Corps receives new information or a completed NAO-RFA form within sixty (60) days of the date of the NAO-RFA.

Based on a review of the information you submitted and an inspection of the project site conducted by Corps personnel, your project qualifies for authorization under Department of the Army NWP 3 Maintenance (72 Fed. Reg. 11092, March 12, 2007), pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403), and Section 404 of the Clean Water Act (33 U.S.C. Section 1344). See Enclosure 1. The project will be completed as shown in the attached drawings titled "Permit Plan," Exhibit A-1 to Exhibit A-7, dated May 7, 2010, "Drainage Plan," D-1 to D-6, dated March 4, 2010, "Drainage Profiles," DP-1 to DP-7, dated March 2, 2010, "Drainage Details," DD-1 to DD-2, dated March 2, 2010, "Typical Cross Section", X-1, dated March 8, 2010, and "Layout," L-1 to L-7, dated March 3, 2010 (Enclosure 2).

The project must be in compliance with the General Conditions cited in Enclosure 3 for this Nationwide Permit authorization to remain valid. Non-compliance with any condition could result in the suspension, modification or revocation of the authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This Nationwide Permit authorization does not obviate the need to obtain other State or local approvals required by law.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, Enclosure 4, verifying that you have complied with the terms and conditions of the permit.

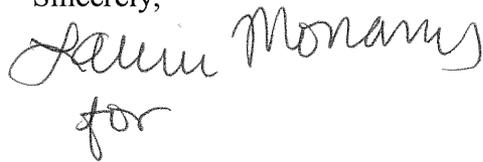
This authorization will not be effective until you have obtained a Section 401 water quality certification from the San Francisco Bay Regional Water Quality Control Board (RWQCB). If the RWQCB fails to act on a valid request for certification within two (2) months after receipt of a complete application, the Corps will presume a waiver of water quality certification has been obtained. You shall submit a copy of the certification to the Corps prior to the commencement of work. This authorization will not be effective until you have obtained a concurrence from the California Coastal Commission that your project will comply with California's Coastal Zone Management Act. If the Commission fails to act on a valid request for concurrence with your certification within six (6) months after receipt, the Corps will presume a concurrence has been obtained. You shall submit a copy of the concurrence to the Corps prior to the commencement of work.

To ensure compliance with this Nationwide Permit authorization, the following special conditions shall be implemented:

- 1) ~~Vegetation monitoring shall be completed as stated in the “Caltrans Marin 1 Bolinas Lagoon Vegetation Monitoring Plan,” dated April 2010. If success criteria has been achieved prior to the end of the 5 year monitoring period the District Engineer may waive the remaining amount of years in writing.~~
- 2) Monitoring reports shall be submitted annually, no later than October 31, to the Corps for 5 years.
- 3) If at any time it appears that the success criteria will not be met within the 5 year monitoring period, then contingency measures will be developed by the Applicant and presented to the Corps for review and approval prior to implementation.
- 4) Your responsibility to complete the required compensatory mitigation as set forth in Special Conditions 1, 2, and 3 will not be considered fulfilled until you have received written verification from the U.S. Army Corps of Engineers.
- 5) If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
- 6) Any waste material that enters the water or the wetland/creek bottom shall be removed of immediately.
- 7) All material and debris generated as a result of project construction shall be removed from the site and disposed of in an approved location outside of Corps jurisdiction.
- 8) All staging, maintenance, and storage of heavy machinery shall be conducted in such a location and manner that no fuel, oil, or other petroleum products may run off or be washed by rainfall into the water.
- 9) All appropriate best management practices shall be implemented throughout the project site to help minimize sediment disturbance and suspension within the water.
- 10) Any change in the project design, materials, or construction methods, must be approved by the Corps in writing.

Should you have any questions regarding this matter, please call Bryan Matsumoto of our Regulatory Division at 415-503-6786. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available through the Forms and Contacts Block on our website: [www.spn.usace.army.mil/regulatory/](http://www.spn.usace.army.mil/regulatory/)

Sincerely,

A handwritten signature in cursive script that reads "Jane M. Hicks" followed by the word "for" written below it.

Jane M. Hicks  
Chief, Regulatory Division

Enclosures

Copy furnished (w/ delineation map only):  
CA RWQCB, Oakland, CA

Copy furnished (w/o Enclosures):  
NMFS, Santa Rosa, CA (Attn: Dave Walsh)  
CCC, San Francisco, CA (Attn: Renee Ananda)

## 2007 Nationwide Permits

3. *Maintenance.* (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays. (b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer. (c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate. (d) This NWP does not authorize maintenance dredging for the primary purpose of navigation or beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

*Notification:* For activities authorized by paragraph (b) of this NWP, the permittee must submit a preconstruction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)

**Note:** This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

**CALIFORNIA COASTAL COMMISSION**

NORTH CENTRAL COAST DISTRICT  
45 FREMONT, SUITE 2000  
SAN FRANCISCO, CA 94105-2219  
VOICE AND TDD (415) 904-5260  
FAX (415) 904-5400

**NOTICE OF COASTAL DEVELOPMENT PERMIT WAIVER**

DATE: November 4, 2010  
TO: Caltrans, Attn: Chuck Morton  
FROM: Peter M. Douglas, Executive Director  
SUBJECT: Waiver of Coastal Development Permit Requirement:  
**Waiver De Minimis Number 2-10-024-W**

Based on project plans and information submitted by the applicant(s) named below regarding the development described below, the Executive Director of the Coastal Commission hereby waives the requirement for a Coastal Development Permit, pursuant to Title 14, Section 13238 of the California Code of Regulations.

APPLICANT: Caltrans, Attn: Chuck Morton

LOCATION: State Highway 1, Bolinas Lagoon, Post Miles 15 to 17, between Stinson Beach and Bolinas, Stinson Beach (Marin County)

DESCRIPTION: Replacement of 4,900' of existing rock slope protection (RSP) between Highway 1 and Bolinas Lagoon (as described in the Project Description dated October 11, 2010 on file at the Commission's North Central Coast District Office). All work will be conducted from above the high tide line and will entail installation of filter fabric to prevent transport of fines from the roadway to the lagoon to improve water quality. Project also includes the replacement of roadway cross culverts and roadway pavement; paving of existing dirt pullouts to reduce/eliminate surface runoff; a public access enhancement plan to develop and install interpretive signs adjacent to Bolinas Lagoon; and improved pullouts for public access.

RATIONALE: Development will retain/provide safe, enhanced public access to the coast and includes Best Management Practices to protect lagoon water quality; therefore involves no significant impacts on coastal resources or public access to the shoreline.

IMPORTANT: This waiver is not valid unless the site has been posted AND until the waiver has been reported to the Coastal Commission. This waiver is proposed to be reported to the Commission at the meeting of Thursday, November 18, 2010, in Santa Monica. If four Commissioners object to this waiver, a coastal development permit will be required.

Persons wishing to object to or having questions regarding the issuance of a coastal permit waiver for this project should contact the Commission office at the above address or phone number prior to the Commission meeting date.

Sincerely,  
PETER M. DOUGLAS  
Executive Director

  
By: RENÉE T. ANANDA  
Coastal Program Analyst

cc: Local Planning Dept.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE

Gulf of the Farallones National Marine Sanctuary  
991 Marine Drive  
San Francisco, CA 94129

## GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY GENERAL PERMIT

**Permittee:**

Mr. Chuck Morton  
Caltrans, District 4  
111 Grand Avenue  
6th floor  
Oakland, CA 94623-0660

**Permit Number:** GFNMS-2010-004  
**Effective Date:** December 1, 2010  
**Expiration Date:** December 31, 2012

**Project Title:** Highway 1 / Bolinas Lagoon Rock Slope Protection Repair, Culvert Replacement, Pavement Rehabilitation and Pullout Enhancement Project

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This permit is issued for activities in accordance with the National Marine Sanctuaries Act (NMSA), 16 USC §1431 *et seq.*, and regulations thereunder (15 CFR Part 922). All activities must be conducted in accordance with those regulations and law. No activity prohibited in 15 CFR Part 922 is allowed except as specified in the activity description below.

Subject to the terms and conditions of this permit, the National Oceanic and Atmospheric Administration (NOAA), Office of National Marine Sanctuaries (ONMS) hereby authorizes the permittee listed above to conduct general activities within Gulf of the Farallones National Marine Sanctuary (GFNMS or sanctuary). All activities are to be conducted in accordance with this permit and the permit application received March 16, 2010. The permit application is incorporated into this permit and made a part hereof; provided, however, that if there are any conflicts between the permit application and the terms and conditions of this permit, the terms and conditions of this permit shall be controlling.

**Permitted Activity Description:**

The following activities are authorized by this permit:

The permittee is hereby authorized to alter the seabed by excavating and removing four culverts within Bolinas Lagoon for the purpose of restoration consistent with the Bolinas Lagoon Ecosystem Restoration Project.

No further violation of sanctuary regulations is allowed.

**Permitted Activity Location:**

The permitted activity is allowed only in the following location(s):

Along Highway 1 northerly of Stinson Beach and southerly of the Bolinas turnoff between mile post markers 15.15 and 15.26/28, 15.30 and 15.71.



**Special Terms and Conditions:**

1. All mechanical and staging construction activities shall be conducted from the existing roadway or established pullouts. The permittee is responsible for assuring that the contractor and all heavy equipment operators adhere to this restriction.
2. Construction work or equipment operations may only be conducted below mean high water when tidal waters have receded from authorized work areas. Grading of intertidal areas is prohibited.
3. No material (e.g., sediment, rip rap, asphalt, construction-related fluids) may be discharged into the sanctuary at any time.
4. All construction materials must be stored beyond the reach of tidal waters during the construction period.
5. Use of Natina, or other stain in areas that may be in contact with lagoon waters or has the potential to run-off into the sanctuary, is prohibited.
6. The permittee shall immediately report to the GFNMS Superintendent regarding any unauthorized discharges/deposits of any matter (e.g., uncured concrete, chemicals, rip-rap, etc.) entering the sanctuary as a result of this project. In addition, a detailed description of any such incident must be included in the written report required by this authorization.
7. This authorization does not allow disturbance of marine mammals or seabirds protected under provisions of the Endangered Species Act, Marine Mammal Protection Act, or Migratory Bird Treaty Act. Authorization for incidental or direct harassment of species protected by these acts must be secured from the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service, depending upon the species affected.
8. Within thirty (30) days of the completion of the activities authorized by this authorization, the permittee shall submit a report summarizing all activities, including any unauthorized discharges/deposits of matter into the sanctuary. This report should include photographic documentation of the four culvert locations depicting conditions before, during and after construction as well as monthly post-construction for at least six months, or until equilibrium is reached at these locations, to document lagoon restoration from the culvert removal.

**General Terms and Conditions:**

1. Within 30 (thirty) days of the date of issuance, the permittee must sign and date this permit for it to be considered valid. Once signed, the permittee must send copies, via mail or email, to the following individuals:

Carliane Johnson  
Acting Permit Coordinator

National Permit Coordinator  
NOAA Office of National Marine Sanctuaries

Gulf of the Farallones National Marine  
Sanctuary  
625 Miramontes St., Suite 106  
Half Moon Bay, CA 94019  
[carliane.johnson@noaa.gov](mailto:carliane.johnson@noaa.gov)

1305 East-West Highway (N/ORM6)  
SSMC4, 11<sup>th</sup> Floor  
Silver Spring, MD 20910  
[nmspermits@noaa.gov](mailto:nmspermits@noaa.gov)

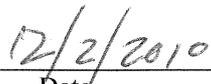
2. It is a violation of this permit to conduct any activity authorized by this permit prior to the ONMS having received a copy signed by the permittee.
3. This permit may only be amended by the ONMS. The permittee may not change or amend any part of this permit at any time. The terms of the permit must be accepted in full, without revision; otherwise, the permittee must return the permit to the sanctuary office unsigned with a written explanation for its rejection. Amendments to this permit must be requested in the same manner the original request was made.
4. All persons participating in the permitted activity must be under the supervision of the permittee, and the permittee is responsible for any violation of this permit, the NMSA, and sanctuary regulations for activities conducted under, or in junction with, this permit. The permittee must assure that all persons performing activities under this permit are fully aware of the conditions herein.
5. This permit is non-transferable and must be carried by the permittee at all times while engaging in any activity authorized by this permit.
6. This permit may be suspended, revoked, or modified for violation of the terms and conditions of this permit, the regulations at 15 CFR Part 922, the NMSA, or for other good cause. Such action will be communicated in writing to the applicant or permittee, and will set forth the reason(s) for the action taken.
7. This permit may be suspended, revoked or modified if requirements from previous ONMS permits or authorizations issued to the permittee are not fulfilled by their due date.
8. Permit applications for any future activities in the sanctuary or any other sanctuary in the system by the permittee might not be considered until all requirements from this permit are fulfilled.
9. This permit does not authorize the conduct of any activity prohibited by 15 CFR § 922, other than those specifically described in the "Permitted Activity Description" section of this permit. If the permittee or any person acting under the permittee's supervision conducts, or causes to be conducted, any activity in the sanctuary not in accordance with the terms and conditions set forth in this permit, or who otherwise violates such terms and conditions, the permittee may be subject to civil penalties, forfeiture, costs, and all other remedies under the NMSA and its implementing regulations at 15 CFR Part 922.
10. Any publications and/or reports resulting from activities conducted under the authority of this permit must include the notation that the activity was conducted under National

Marine Sanctuary Permit GFNMS-2010-004 and be sent to the ONMS officials listed in General Terms and Conditions number 1.

11. This permit does not relieve the permittee of responsibility to comply with all other federal, state and local laws and regulations, and this permit is not valid until all other necessary permits, authorizations, and approvals are obtained. Particularly, this permit does not allow disturbance of marine mammals or seabirds protected under provisions of the Endangered Species Act, Marine Mammal Protection Act, or Migratory Bird Treaty Act. Authorization for incidental or direct harassment of species protected by these acts must be secured from the U.S. Fish and Wildlife Service and/or NOAA Fisheries, depending upon the species affected.
12. The permittee shall indemnify and hold harmless the Office of National Marine Sanctuaries, NOAA, the Department of Commerce and the United States for and against any claims arising from the conduct of any permitted activities.
13. Any question of interpretation of any term or condition of this permit will be resolved by NOAA.

Your signature below, as permittee, indicates that you accept and agree to comply with all terms and conditions of this permit. This permit becomes valid when you, the permittee, countersign and date below. Please note that the expiration date on this permit is already set and will not be extended by a delay in your signing.

  
\_\_\_\_\_  
Chuck Morton  
Senior Environmental Planner  
Caltrans, District 4

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Maria Brown  
Superintendent  
Gulf of the Farallones National Marine Sanctuary

12/1/2010  
\_\_\_\_\_  
Date