



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	2	48

*Jeff Johnson*  
 REGISTERED CIVIL ENGINEER DATE 2-23-10  
 4-12-10  
 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.

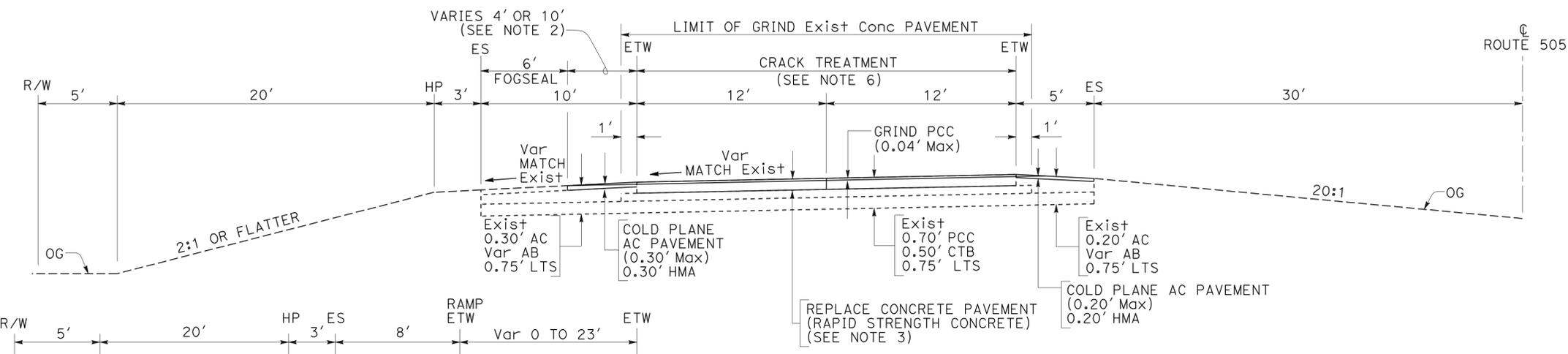
REGISTERED PROFESSIONAL ENGINEER  
**JEFF JOHNSON**  
 No. 64628  
 Exp. 6-30-11  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

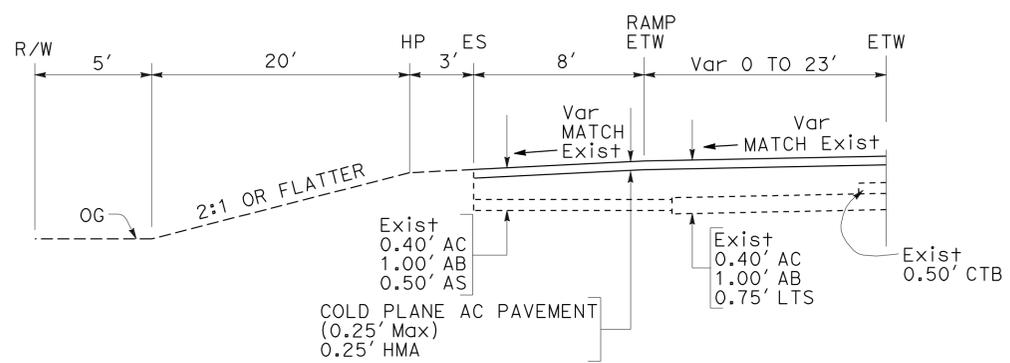
- DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SEE SUMMARY OF QUANTITIES FOR LOCATIONS AND WIDTH OF COLD PLANE.
- SEE SUMMARY OF QUANTITIES FOR LOCATIONS AND DEPTH OF CONCRETE PAVEMENT TO BE REPLACED.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY ENGINEER.
- NO WORK SHALL BE PERFORMED ON BRIDGE DECK OR APPROACH/DEPARTURE SLABS.
- CRACK TREATMENT SHALL ONLY BE PERFORMED AT LOCATIONS WITHOUT REPLACE CONCRETE PAVEMENT.
- SEE SUMMARY OF QUANTITIES FOR LOCATIONS OF COLD PLANE AC PAVEMENT.

**ABBREVIATIONS**

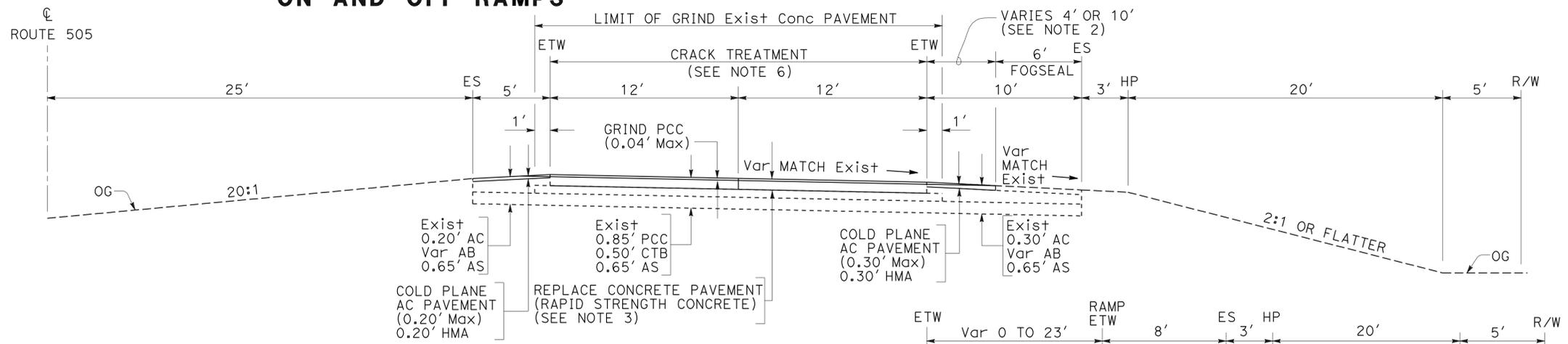
RHMA-0 RUBBERIZED HOT MIX ASPHALT (TYPE 0)



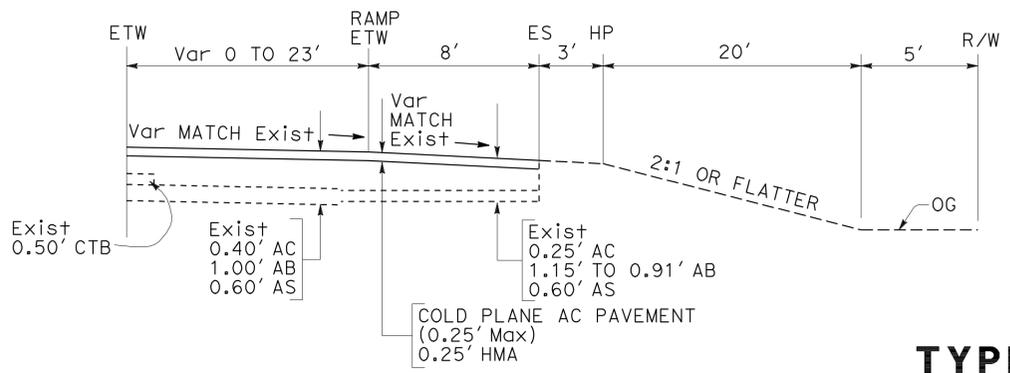
**SOUTHBOUND ROUTE 505**  
 PM 11.00 TO PM R22.30 (ROUTE 5/505 SEPARATION)



**ON AND OFF RAMPS**



**NORTHBOUND ROUTE 505**  
 PM 0.70 TO PM 10.17



**ON AND OFF RAMPS**

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION DESIGN, SOUTH DESIGN BRANCH S11  
 FUNCTIONAL SUPERVISOR JIM ELDER  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

LAST REVISION DATE PLOTTED => 02-JUL-2010  
 00-00-00 TIME PLOTTED => 10:15



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	4	48

REGISTERED CIVIL ENGINEER DATE 2-23-10  
 4-12-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JEFF JOHNSON  
 No. 64628  
 Exp. 6-30-11  
 CIVIL  
 STATE OF CALIFORNIA

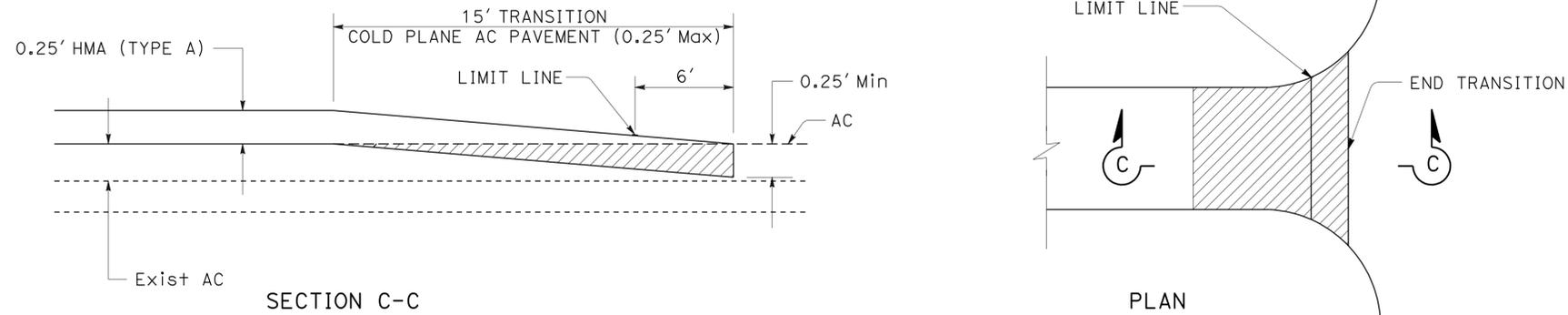
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND**

 COLD PLANE AC PAVEMENT

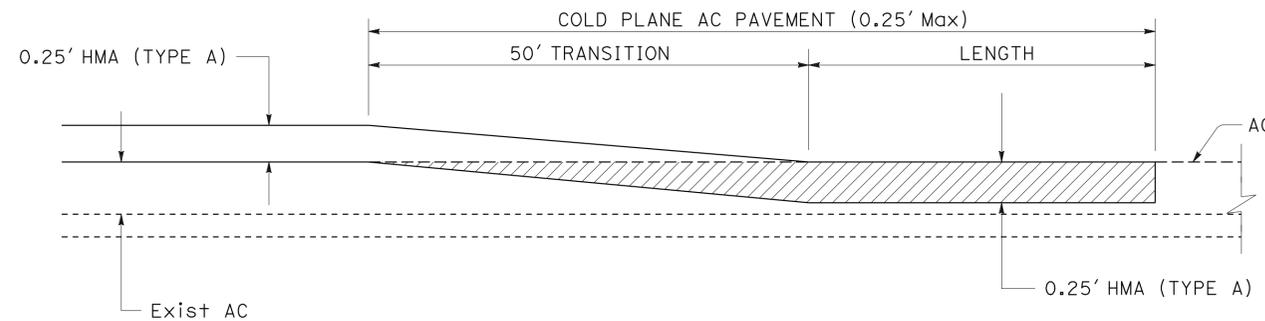
**NOTE:**

1. FOR NB COUNTY ROAD 19 OFF RAMP, NO PAVING WILL BE PERFORMED AT RAMP GORE. PAVING SHALL CONFORM TO EXISTING OGAC.



**RAMP PAVEMENT TRANSITION AT RAMP TERMINUS**

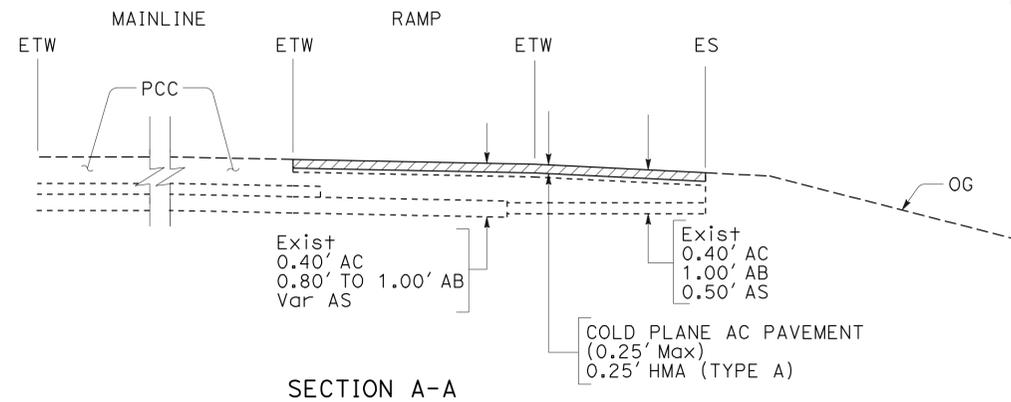
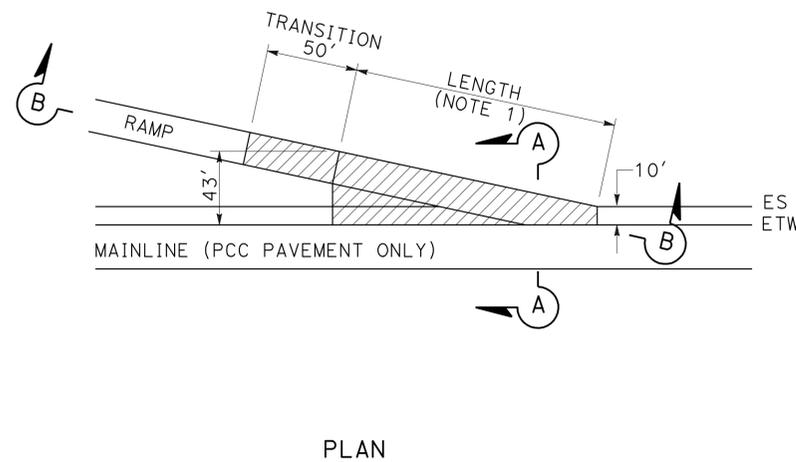
COUNTY ROADS 12, 14, AND 19



**RAMP PAVEMENT TRANSITION AT RAMP GORE**

COUNTY ROADS 12, 14, AND 19

LOCATION/DESCRIPTION	LENGTH FT
NB - COUNTY ROAD 19 OFF RAMP	0
NB - COUNTY ROAD 19 ON RAMP	1024
NB - COUNTY ROAD 14 OFF RAMP	390
NB - COUNTY ROAD 14 ON RAMP	813
NB - COUNTY ROAD 12 OFF RAMP	400
NB - COUNTY ROAD 12 ON RAMP	1014
SB - COUNTY ROAD 12 OFF RAMP	400
SB - COUNTY ROAD 12 ON RAMP	1067
SB - COUNTY ROAD 14 OFF RAMP	402
SB - COUNTY ROAD 14 ON RAMP	1013
SB - COUNTY ROAD 19 OFF RAMP	400
SB - COUNTY ROAD 19 ON RAMP	735



**COLD PLANE AC DETAIL AT RAMPS**

COUNTY ROADS 12, 14, AND 19

**CONSTRUCTION DETAILS**

NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11  
 MANUEL VILLANUEVA  
 JEFF JOHNSON  
 JIM ELDER  
 REVISIONS: 00-00-00 DATE PLOTTED => 10:15  
 00-00-00 TIME PLOTTED => 10:15

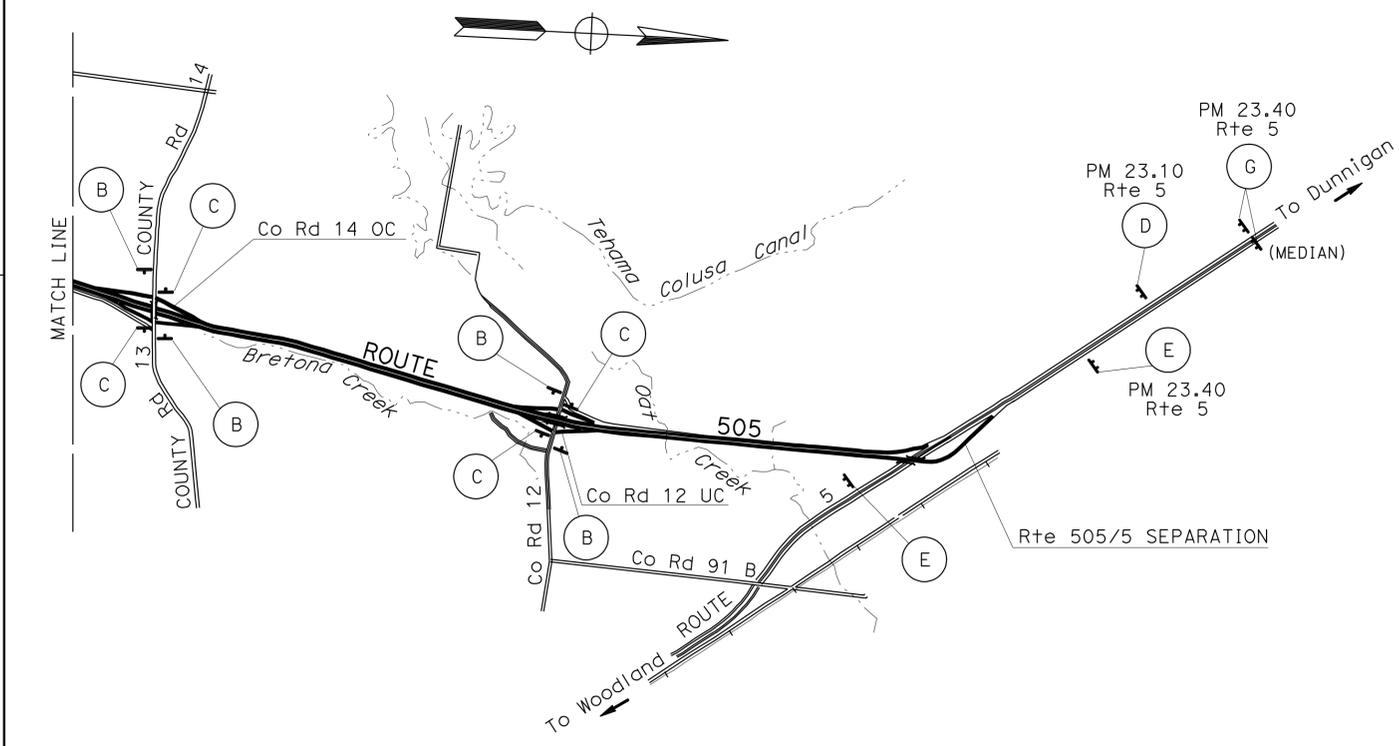
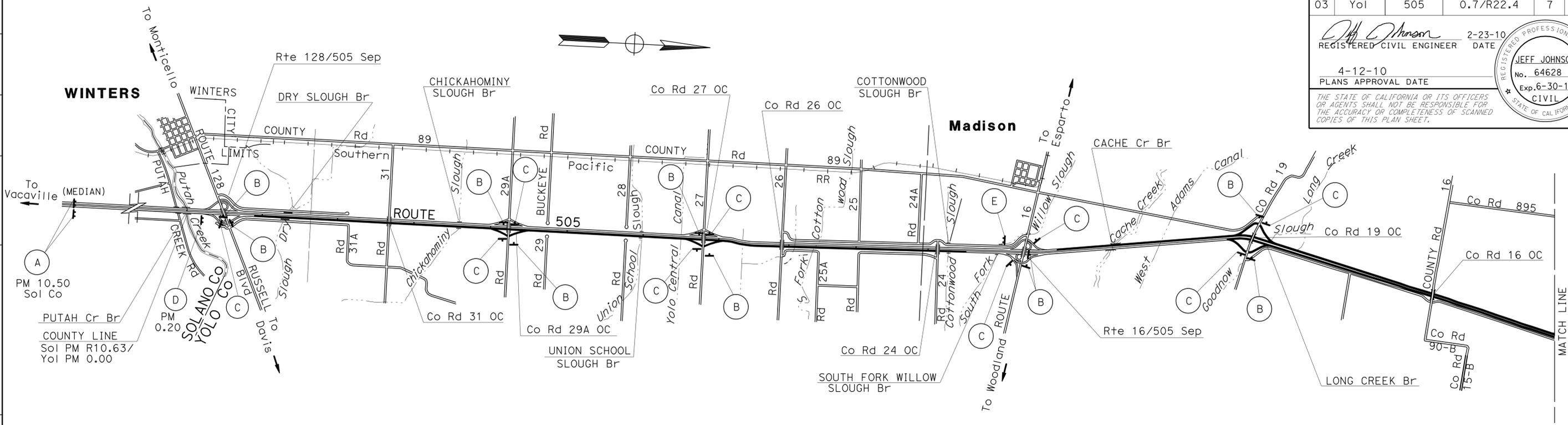




Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	7	48

REGISTERED CIVIL ENGINEER DATE 2-23-10  
 4-12-10  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 JEFF JOHNSON  
 No. 64628  
 Exp. 6-30-11  
 CIVIL  
 STATE OF CALIFORNIA



### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	G20-1 [Spec] (23)		84" x 42"	ROAD WORK NEXT 23 MILES	2 - 4" x 6"	2
(B)	W20-1	C23(CA)	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	14
(C)	G20-2	C14(CA)	36" x 18"	END ROAD WORK	1 - 4" x 4"	13
(D)		C40(Mod)(CA)	96" x 60"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6" x 6"	2
(E)		C14(CA)	48" x 24"	END ROAD WORK	1 - 4" x 6"	3
(G)	G20-1 [Spec] (12)		84" x 42"	ROAD WORK NEXT 12 MILES	2 - 4" x 6"	2

EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER

#### SIGN DETAILS

(A) G20-1 [Spec] (23)

**ROAD WORK**  
NEXT 23 MILES

8" C SERIES LETTERS  
84" x 42"

RETROREFLECTIVE ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.

(D) C40(Mod) (CA)

**TRAFFIC FINES**  
DOUBLED IN  
WORK ZONES

8" D SERIES LETTERS  
96" x 60"

RETROREFLECTIVE WHITE BACKGROUND WITH BLACK LEGEND AND BORDER.

(G) G20-1 [Spec] (12)

**ROAD WORK**  
NEXT 12 MILES

8" C SERIES LETTERS  
84" x 42"

RETROREFLECTIVE ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.

## CONSTRUCTION AREA SIGNS

NO SCALE CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11  
 FUNCTIONAL SUPERVISOR JIM ELDER  
 CALCULATED/DESIGNED BY CHECKED BY  
 MANUEL VILLANUEVA JEFF JOHNSON  
 REVISED BY DATE REVISED  
 BORDER LAST REVISED 7/1/2010

USERNAME => s113559  
 DGN FILE => 31a9501a001.dgn

RELATIVE BORDER SCALE IS IN INCHES

UNIT 0331

PROJECT NUMBER & PHASE

0300010911

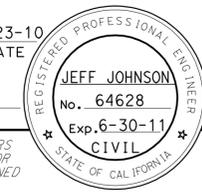
LAST REVISION DATE PLOTTED => 02-JUL-2010  
 00-00-00 TIME PLOTTED => 10:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	8	48

 2-23-10  
 REGISTERED CIVIL ENGINEER DATE

4-12-10  
 PLANS APPROVAL DATE

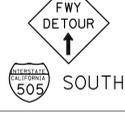
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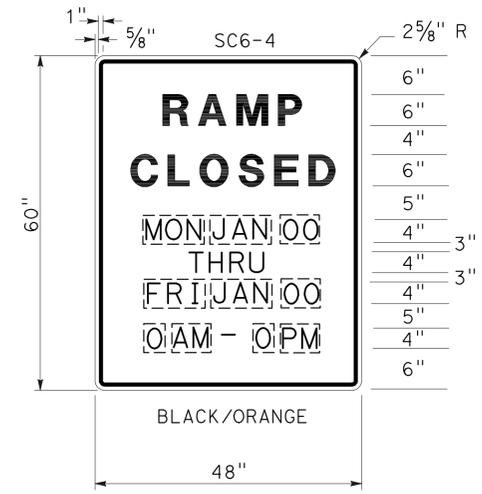


**NOTES:**

1. ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS CALIFORNIA SIGN CODES
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS SEE CONSTRUCTION AREA SIGNS SHEET.
3. SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN CODE		PANEL SIZE	No. OF POST AND SIZE	SIGN MESSAGE	No. OF SIGNS
CALIFORNIA	FEDERAL				
SC6-4<CA>		48" x 60"	1 - 6" x 6"	RAMP CLOSED	2
G27-2<CA>	M4-10(Lt) M3-1	48" x 18" 21" x 18" 24" x 12"	1 - 4" x 6"	 NORTH	1
G27-2<CA>	M4-10(Lt) M3-3	48" x 18" 21" x 18" 24" x 12"	1 - 4" x 6"	 SOUTH	1
G27-2<CA>	M4-10(Rt) M3-1	48" x 18" 21" x 18" 24" x 12"	1 - 4" x 6"	 NORTH	1
G27-2<CA>	M4-10(Rt) M3-3	48" x 18" 21" x 18" 24" x 12"	1 - 4" x 6"	 SOUTH	1
	M4-8a	24" x 18"	1 - 4" x 4"	END DETOUR	2
SC-9<CA> G27-2<CA>	M3-1	36" x 36" 21" x 18" 24" x 12"	1 - 4" x 6"	 NORTH	2
SC-9<CA> G27-2<CA>	M3-3	36" x 36" 21" x 18" 24" x 12"	1 - 4" x 6"	 SOUTH	3
	M4-10(Rt)	48" x 18"	1 - 4" x 6"		2



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11  
 Caltrans®

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	9	48

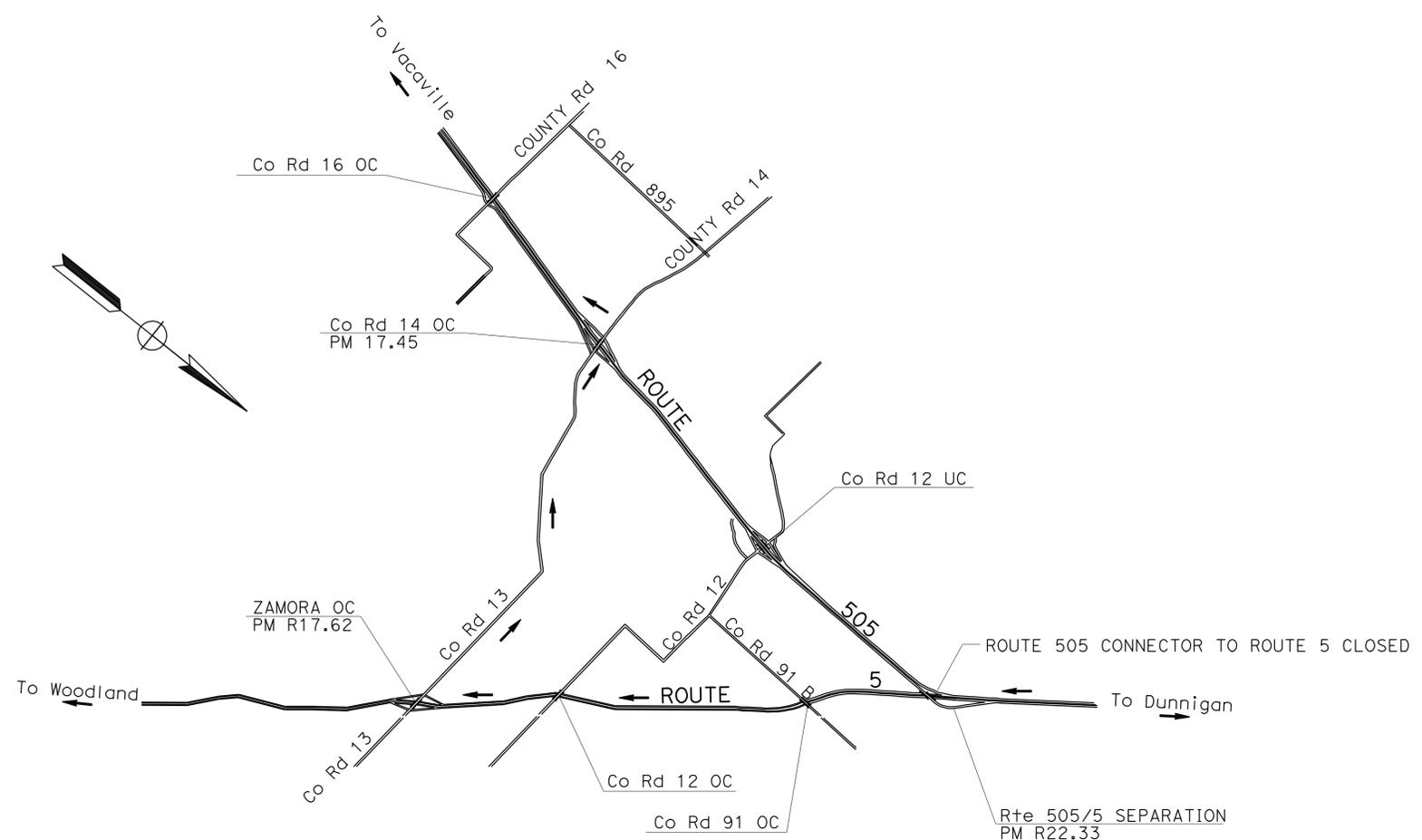
  

<i>Jeff Johnson</i> REGISTERED CIVIL ENGINEER	2-23-10 DATE
4-12-10 PLANS APPROVAL DATE	

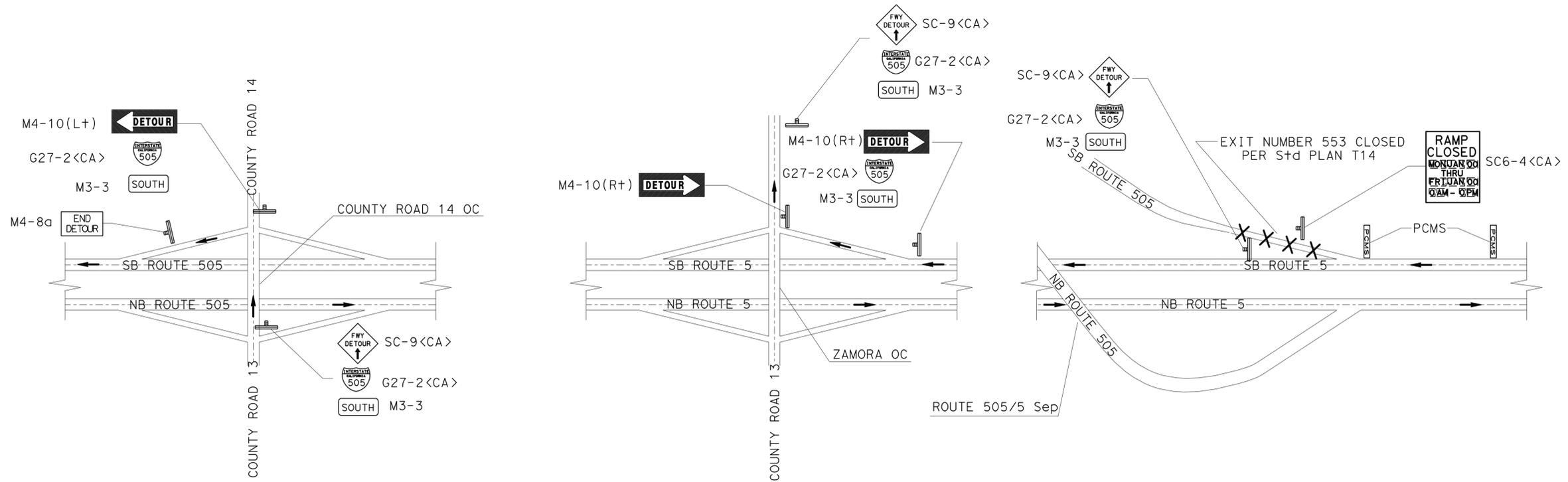
  

REGISTERED PROFESSIONAL ENGINEER
JEFF JOHNSON
No. 64628
Exp. 6-30-11
CIVIL

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**DETOUR LAYOUT FOR SB ROUTE 5 TO SB ROUTE 505 OFF RAMP CLOSURE**



**TYPICAL DETOUR SIGNING FOR SB ROUTE 5 TO SB ROUTE 505 OFF RAMP CLOSURE**

EXACT SIGN LOCATIONS TO BE DETERMINED BY ENGINEER

**DETOUR PLAN**  
NO SCALE  
**DE-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
NORTH REGION  
OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11  
Caltrans

USERNAME => s113559  
DGN FILE => 31a950mg002.dgn

RELATIVE BORDER SCALE IS IN INCHES  
0 1 2 3

UNIT 0331

PROJECT NUMBER & PHASE

0300010911

LAST REVISION DATE PLOTTED => 02-JUL-2010  
00-00-00 TIME PLOTTED => 10:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	10	48

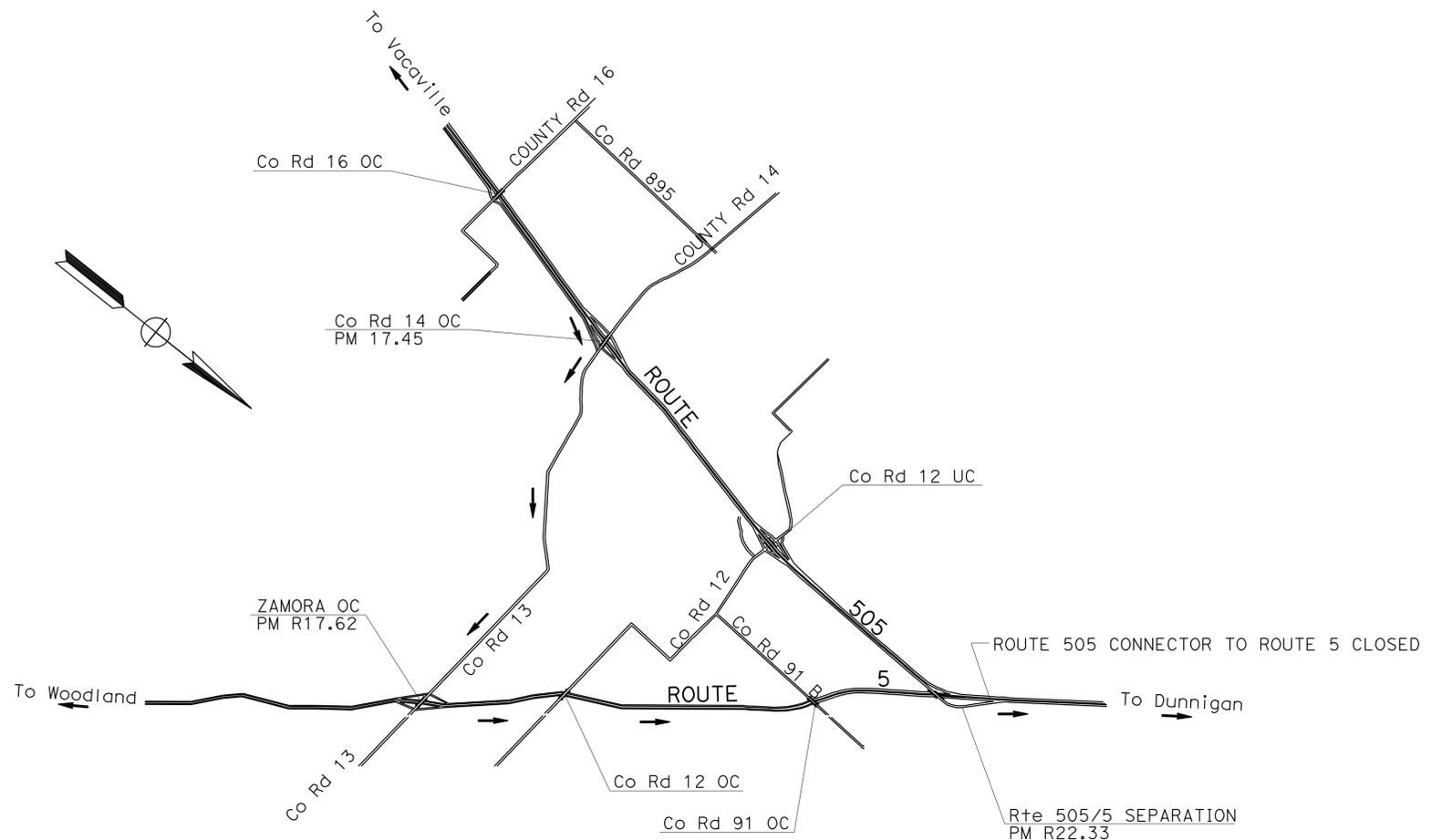
  

<i>Jeff Johnson</i>	2-23-10
REGISTERED CIVIL ENGINEER	DATE
4-12-10	
PLANS APPROVAL DATE	

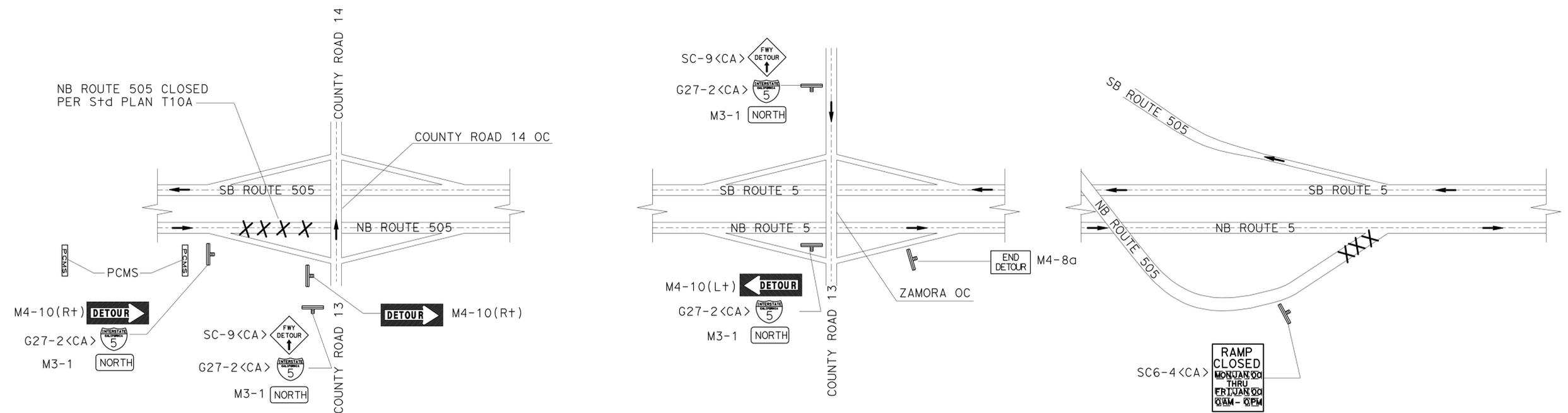
  

REGISTERED PROFESSIONAL ENGINEER
JEFF JOHNSON
No. 64628
Exp. 6-30-11
CIVIL

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**DETOUR LAYOUT FOR NB ROUTE 505 TO NB ROUTE 5 ON RAMP CLOSURE**



**TYPICAL DETOUR SIGNING FOR NB ROUTE 505 TO NB ROUTE 5 ON RAMP CLOSURE**

EXACT SIGN LOCATIONS TO BE DETERMINED BY ENGINEER

**DETOUR PLAN**  
NO SCALE  
**DE-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
NORTH REGION  
OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	11	48

<i>Jeff Johnson</i> REGISTERED CIVIL ENGINEER	2-23-10 DATE
4-12-10 PLANS APPROVAL DATE	

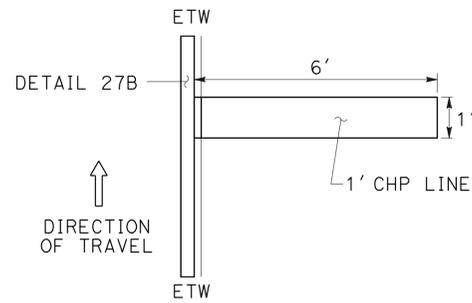
  

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CIVIL

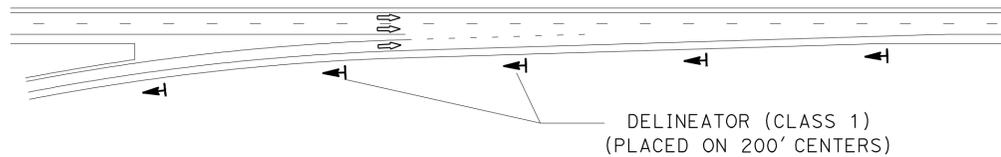
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**NOTE:**

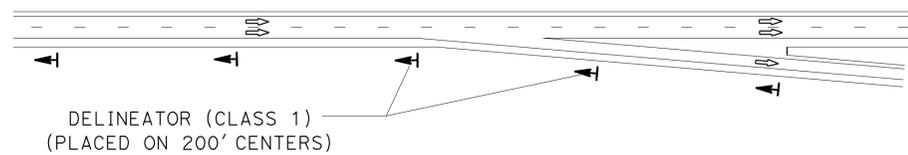
1. SHALL BE PLACED AT EXISTING LOCATION OR AS DIRECTED BY THE ENGINEER.



**CHP LINE DETAIL**  
(SEE NOTE 1)



**TYPICAL DELINEATOR PLACEMENT ON FREEWAY ON RAMP**  
(SEE NOTE 1)



**TYPICAL DELINEATOR PLACEMENT ON FREEWAY OFF RAMP**  
(SEE NOTE 1)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED, DESIGNED BY	REVISOR
<b>Caltrans</b>	JIM ELDER	CHECKED BY	DATE
NORTH REGION OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11			
		MANUEL VILLANUEVA	JEFF JOHNSON

**PAVEMENT DELINEATION DETAILS**  
NO SCALE  
**PDD-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	12	48

 2-23-10  
 REGISTERED CIVIL ENGINEER DATE

4-12-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**JEFF JOHNSON**  
 No. 64628  
 Exp. 6-30-11  
 CIVIL  
 STATE OF CALIFORNIA

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### REMOVE THERMOPLASTIC PAVEMENT MARKINGS AND TRAFFIC LINES

LOCATION PM/DESCRIPTION	REMOVE THERMOPLASTIC PAVEMENT MARKING					REMOVE THERMOPLASTIC TRAFFIC STRIPE		REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)
	ARROWS		WORDS		LIMIT LINE	DETAIL 36	DETAIL 36A	DETAIL 25A
	TYPE I (18'-0")	TYPE V	"STOP"	"AHEAD"				
	SQFT	SQFT	SQFT	SQFT	LF	LF		
NB - COUNTY ROAD 19 OFF RAMP		66	44	31	80	500		1,149
NB - COUNTY ROAD 19 ON RAMP	25						300	1,620
NB - COUNTY ROAD 14 OFF RAMP		66	44	31	80	500		1,225
NB - COUNTY ROAD 14 ON RAMP	25						270	847
NB - COUNTY ROAD 12 UC OFF RAMP		66	44	31	80	540		1,070
NB - COUNTY ROAD 12 UC ON RAMP	25						280	556
SB - COUNTY ROAD 12 UC OFF RAMP		66	44	31	80	500		950
SB - COUNTY ROAD 12 UC ON RAMP	25						280	728
SB - COUNTY ROAD 14 OFF RAMP		66	44	31	80	500		1,278
SB - COUNTY ROAD 14 ON RAMP	25						270	765
SB - COUNTY ROAD 19 OFF RAMP		66	44	31	80	500		1,220
SB - COUNTY ROAD 19 ON RAMP								
<b>SUBTOTAL</b>	125	396	264	186	480	3,040	1,400	11,408
<b>TOTAL</b>					1,451		4,440	11,408

### DELINEATOR (CLASS 1)

LOCATION/ DESCRIPTION	DIRECTION	DELINEATOR (CLASS 1)	
		TYPE F	TYPE G
	NB/SB	EA	EA
COUNTY ROAD 29A OFF RAMP	NB	9	6
COUNTY ROAD 29A ON RAMP	NB	7	3
COUNTY ROAD 27 OFF RAMP	NB	8	4
COUNTY ROAD 27 ON RAMP	NB	8	5
COUNTY ROAD 19 OFF RAMP	NB	5	3
COUNTY ROAD 19 ON RAMP	NB	7	3
COUNTY ROAD 14 OFF RAMP	NB	8	
COUNTY ROAD 14 ON RAMP	NB	10	3
COUNTY ROAD 12 OFF RAMP	NB	6	
COUNTY ROAD 12 ON RAMP	NB	6	3
ROUTE 505/5 MERGE LANE	NB	10	
ROUTE 505/5 MERGE LANE	SB	10	4
COUNTY ROAD 12 OFF RAMP	SB	6	
COUNTY ROAD 12 ON RAMP	SB	7	4
COUNTY ROAD 14 OFF RAMP	SB	8	
COUNTY ROAD 14 ON RAMP	SB	7	3
COUNTY ROAD 19 OFF RAMP	SB	5	3
COUNTY ROAD 19 ON RAMP	SB	8	3
<b>SUBTOTAL</b>		135	47
<b>TOTAL</b>			182

## PAVEMENT DELINEATION QUANTITIES

### PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11

FUNCTIONAL SUPERVISOR  
 JIM ELDER

CALCULATED/DESIGNED BY  
 CHECKED BY

MANUEL VILLANUEVA  
 JEFF JOHNSON

REVISED BY  
 DATE REVISED

LAST REVISION | DATE PLOTTED => 02-JUL-2010  
 00-00-00 | TIME PLOTTED => 10:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	13	48

*Jeff Johnson* 2-23-10  
 REGISTERED CIVIL ENGINEER DATE

4-12-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**JEFF JOHNSON**  
 No. 64628  
 Exp. 6-30-11  
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 STATE OF CALIFORNIA

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### PAVEMENT MARKERS AND TRAFFIC LINES

LOCATION PM/DESCRIPTION	DIRECTION	THERMOPLASTIC PAVEMENT MARKING						4" THERMOPLASTIC TRAFFIC STRIPE			4" THERMOPLASTIC TRAFFIC STRIPE			8" THERMOPLASTIC TRAFFIC STRIPE		PAVEMENT MARKER		
		ARROWS		WORDS		LIMIT LINE AND CROSSWALK	CHP LINE	BROKEN 17-7	BROKEN 36-12		4" THERMOPLASTIC TRAFFIC STRIPE			8" THERMOPLASTIC TRAFFIC STRIPE		RETROREFLECTIVE		
		TYPE I (24'-0")	TYPE V	"STOP"	"AHEAD"			DETAIL No.		DETAIL No.						DETAIL No.		
		SQFT		SQFT		SQFT		9	12	14A	25	25A	27B	36	36A	C	G	H
		NB/SB	SQFT		SQFT		SQFT		LF			LF			LF		EA	
ROUTE 505, PM 0.70 TO PM 10.17	NB							49,138	1,152	50,002		50,002			32	1,044	1,043	
ROUTE 505, PM 13.20 TO PM 22.40	NB							47,280	1,152	48,576		48,576			32	1,014	1,013	
ROUTE 505, PM 22.30 TO PM 11.00	SB							58,368	1,728	59,664		59,664			48	1,245	1,244	
COUNTY ROAD 29A OFF RAMP	NB		66	66	31	49					903	903	480			21	39	
COUNTY ROAD 29A ON RAMP	NB	31					280				633	903		270		13	28	
COUNTY ROAD 27 OFF RAMP	NB		66	66	31	46					1,001	1,001	500			22	43	
COUNTY ROAD 27 ON RAMP	NB	31					240				803	1,103		300		14	35	
COUNTY ROAD 19 OFF RAMP	NB		66	44	31	80					1,149	1,149	500			22	49	
COUNTY ROAD 19 ON RAMP	NB	31					220				1,620	1,920		300		14	69	
COUNTY ROAD 14 OFF RAMP	NB		66	44	31	70					1,225	1,225	500			22	53	
COUNTY ROAD 14 ON RAMP	NB	31					240				847	1,117		270		13	37	
COUNTY ROAD 12 OFF RAMP	NB		66	44	31	60					1,070	1,070	540			24	46	
COUNTY ROAD 12 ON RAMP	NB	31					200				556	836		280		13	25	
COUNTY ROAD 12 OFF RAMP	SB		66	44	31	60					950	950	500			22	41	
COUNTY ROAD 12 ON RAMP	SB	31					250				728	1,008		280		13	32	
COUNTY ROAD 14 OFF RAMP	SB		66	44	31	76					1,278	1,278	500			22	55	
COUNTY ROAD 14 ON RAMP	SB	31					220				765	1,035		270		13	33	
COUNTY ROAD 19 OFF RAMP	SB		66	44	31	70					1,220	1,220	500			22	52	
COUNTY ROAD 19 ON RAMP	SB	31					200				1,205	1,425		270		11	52	
<b>SUBTOTAL</b>		248	528	396	248	511	155	1,850	154,786	4,032	158,242	15,953	176,385	4,020	2,240	112	3,584	3,989
<b>TOTAL</b>						2,086		1,850		158,818		350,580		6,260			7,685	

## PAVEMENT DELINEATION QUANTITIES

### PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11  
 Caltrans®

LAST REVISION | DATE PLOTTED => 02-JUL-2010  
 00-00-00 | TIME PLOTTED => 10:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	14	48

 2-23-10  
 REGISTERED CIVIL ENGINEER DATE

4-12-10  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
**JEFF JOHNSON**  
 No. 64628  
 Exp. 6-30-11  
 CIVIL

**NOTES:**

1. REPLACE CONCRETE PAVEMENT SHALL BE TYPE I. SEE S+d PLAN P8 FOR DETAILS. FOR SLAB REPLACEMENTS GREATER THAN 100 FEET USE LANE RECONSTRUCTION DETAILS ON S+d PLAN P1.
2. DOWEL BAR RETROFIT SHALL BE OMITTED AT REPLACE CONCRETE PAVEMENT LOCATIONS.
3. SEAL JOINTS SHALL BE PLACED AT NEW TRANSVERSE JOINT LOCATIONS AT REPLACE CONCRETE PAVEMENT WITH MULTIPLE SLABS. SEE S+d PLAN P8 AND P1 FOR DETAILS.

**REPLACE CONCRETE PAVEMENT QUANTITIES**

REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)							DRILL AND BOND DOWEL	SEAL JOINTS
NORTHBOUND ROUTE 505								
BEGIN PM	(N) LANE #	(N) No. OF SLABS	(N)	(N)	(N)	QUANTITY	EA	LF
			LENGTH FT	WIDTH FT	DEPTH FT			
1.05	2	1	17	12	0.85	6	16	
1.10	1	1	40	12	0.85	15	16	12
1.16	1	5	79	12	0.85	55*	16	36
1.16	2	5	79	12	0.85	55*	16	36
1.30	1	1	17	12	0.85	6	16	
2.00	1	2	46	12	0.85	17	16	12
2.00	2	2	46	12	0.85	17	16	12
2.10	2	1	17	12	0.85	6	16	
2.20	2	10	170	12	0.85	64	16	96
2.25	2	9	153	12	0.85	58	16	84
2.30	2	4	68	12	0.85	26	16	24
2.50	1	1	14	12	0.85	5	16	
2.90	2	1	17	12	0.85	6	16	
3.10	2	2	37	12	0.85	14	16	12
3.30	2	3	50	12	0.85	19	16	12
3.40	2	3	51	12	0.85	19	16	12
3.50	2	1	17	12	0.85	6	16	
4.50	1	8	136	12	0.85	51	16	72
4.50	2	8	136	12	0.85	51	16	72
7.60	2	5	85	12	0.85	32	16	36
9.00	2	5	85	12	0.85	32	16	36
13.60	2	1	17	12	0.70	5	16	
13.65	2	3	51	12	0.70	16	16	12
14.00	2	3	46	12	0.70	14	16	12
14.60	2	1	17	12	0.70	5	16	
15.00	2	2	30	12	0.70	9	16	12
15.10	2	2	33	12	0.70	10	16	12
16.20	1	2	34	12	0.70	11	16	12
16.20	2	2	34	12	0.70	11	16	12
16.30	1	4	43	12	0.70	27*	16	12
16.30	2	4	43	12	0.70	27*	16	12
17.59	1	2	33	12	0.70	21*	16	12
17.59	2	2	33	12	0.70	21*	16	12
19.70	2	2	34	12	0.70	11	16	12
20.10	1	2	33	12	0.70	10	16	12
20.10	1	2	33	12	0.70	10	16	12
20.90	1	1	20	12	0.70	13*	16	12
20.90	2	1	20	12	0.70	13*	16	12
22.60	1 & 2	120	1,920	24	0.70	1,195	16	816
<b>SUBTOTAL NB</b>						<b>1,989</b>	<b>624</b>	<b>2,736</b>

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**REPLACE CONCRETE PAVEMENT QUANTITIES**

REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)							DRILL AND BOND DOWEL	SEAL JOINTS
SOUTHBOUND ROUTE 505								
BEGIN PM	(N) LANE #	(N) No. OF SLABS	(N)	(N)	(N)	QUANTITY	EA	LF
			LENGTH FT	WIDTH FT	DEPTH FT			
22.30	2	145	1,600	12	0.70	498	16	1,104
20.10	2	2	33	12	0.70	10	16	12
20.00	2	3	50	12	0.70	16	16	12
19.90	2	2	33	12	0.70	21*	16	12
19.70	1	2	37	12	0.70	12	16	12
19.70	2	2	37	12	0.70	12	16	12
19.30	1	4	63	12	0.70	40*	16	24
19.30	2	4	63	12	0.70	40*	16	24
19.20	1	4	64	12	0.70	40*	16	24
19.20	2	4	64	12	0.70	40*	16	24
19.08	1	2	34	12	0.70	22*	16	12
19.08	2	2	34	12	0.70	22*	16	12
18.80	1	2	40	12	0.70	25*	16	12
18.80	2	2	40	12	0.70	25*	16	12
18.03	1	2	40	12	0.70	25*	16	12
16.60	1	1	17	12	0.70	5	16	
16.60	2	1	17	12	0.70	5	16	
16.40	1	2	33	12	0.70	10	16	12
16.40	2	2	33	12	0.70	10	16	12
16.20	2	6	102	12	0.70	32	16	48
16.10	2	1	17	12	0.70	5	16	
15.96	2	5	85	12	0.70	26	16	36
15.80	1	2	34	12	0.70	11	16	12
15.80	2	2	34	12	0.70	11	16	12
15.00	1	3	46	12	0.70	29*	16	12
15.00	2	3	46	12	0.70	29*	16	12
14.00	1	3	51	12	0.70	16	16	12
14.00	2	3	51	12	0.70	16	16	12
13.90	1	3	50	12	0.70	16	16	12
13.90	2	3	50	12	0.70	16	16	12
13.80	2	2	34	12	0.70	11	16	12
12.70	2	3	51	12	0.70	16	16	12
12.60	2	25	425	12	0.70	132	16	276
12.40	2	10	170	12	0.70	53	16	96
12.30	2	2	34	12	0.70	11	16	12
11.70	1	3	50	12	0.70	16	16	12
<b>SUBTOTAL SB</b>						<b>1,324</b>	<b>576</b>	<b>1,944</b>
<b>SUBTOTAL NB</b>						<b>1,989</b>	<b>624</b>	<b>2,736</b>
<b>TOTAL</b>						<b>3,313</b>	<b>1,200</b>	<b>4,680</b>

\* QUANTITIES FOR REPLACE CONCRETE PAVEMENT INCLUDE ADDITIONAL QUANTITY TO RECONSTRUCT LOCATIONS WITH LOCALIZED BASE FAILURE, SEE CONSTRUCTION DETAILS.

**SUMMARY OF QUANTITIES**

**Q-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	15	48


 REGISTERED CIVIL ENGINEER DATE 2-23-10  
 4-12-10  
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REGISTERED PROFESSIONAL ENGINEER  
 JEFF JOHNSON  
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 STATE OF CALIFORNIA

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**NOTE:**

1. ASPHALTIC EMULSION (FOG SEAL) TO BE PLACED ON REMAINING OUTSIDE AC SHOULDER.

**ROADWAY QUANTITIES**

LOCATION/ DESCRIPTION	(N)	(N)	(N)	(N)	(N)	COLD PLANE AC PAVEMENT SQYD	HOT MIX ASPHALT (TYPE A) TON	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED) TON	CRACK TREATMENT LNMI	TACK COAT TON	SHOULDER RUMBLE STRIP (AC, GROUND-IN INDENTATIONS) STA	ASPHALTIC EMULSION (FOG SEAL COAT) TON
	DIRECTION	SHOULDER	LENGTH	WIDTH	DEPTH							
	NB/SB	L+/R+	FT	FT	FT							
COUNTY ROAD 29A OFF RAMP	NB				0.25/0.08/0.33	4,953	344	79		1.72		
COUNTY ROAD 29A ON RAMP	NB				0.08/0.25	6,687	557	141		2.00		
COUNTY ROAD 27 OFF RAMP	NB				0.25/0.08/0.33	5,041	291	64		1.91		
COUNTY ROAD 27 ON RAMP	NB				0.08/0.25	8,074	695	181		2.31		
COUNTY ROAD 19 OFF RAMP	NB				0.25	9	533		0.23	0.78		
COUNTY ROAD 19 OFF RAMP	NB		130	22	0.40	318	92			0.29		
COUNTY ROAD 19 ON RAMP	NB				0.25	3,025	1,370		0.36	1.22		
COUNTY ROAD 19 ON RAMP	NB		100	4	0.40	44	13			0.03		
COUNTY ROAD 14 OFF RAMP	NB				0.25	1,158	767		0.25	0.82		
COUNTY ROAD 14 ON RAMP	NB				0.25	2,403	931		0.22	0.74		
COUNTY ROAD 12 OFF RAMP	NB				0.25	1,187	697		0.21	0.71		
COUNTY ROAD 12 ON RAMP	NB				0.25	2,995	921		0.17	0.56		
ROUTE 505/5 RAMP	SB		170	30	0.25	567	315			0.17		
COUNTY ROAD 12 OFF RAMP	SB				0.25	1,187	642		0.19	0.63		
COUNTY ROAD 12 ON RAMP	SB				0.25	3,151	1,028		0.20	0.68		
COUNTY ROAD 14 OFF RAMP	SB				0.25	1,193	788		0.25	0.84		
COUNTY ROAD 14 ON RAMP	SB				0.25	2,992	1,009		0.21	0.70		
COUNTY ROAD 19 OFF RAMP	SB				0.25	1,187	769		0.24	0.82		
COUNTY ROAD 19 OFF RAMP	SB				0.40	89	26			0.05		
COUNTY ROAD 19 ON RAMP	SB				0.25	2,174	1,031		0.28	0.94		
COUNTY ROAD 19 ON RAMP	SB		1,456	22	0.40	3,558	1,025			1.89		
PM 0.7 TO PM 2.30	NB	R+	8,448	10	0.30	9,387	2,028			4.69		
PM 2.30 TO PM 7.50	NB	R+	27,456	4	0.30	12,203	2,636			6.10		
PM 7.50 TO PM 10.17	NB	R+	14,098	10	0.30	15,665	3,384			7.83		
PM 13.20 TO PM 15.00	NB	R+	9,504	4	0.30	4,224	913			2.11		
PM 15.00 TO PM 15.01	NB	R+	30	10	0.30	34	8			0.02		
PM 15.01 TO PM 22.40	NB	R+	39,020	4	0.30	17,343	3,746			8.67		
PM 22.30 TO PM 22.00	SB	R+	1,584	10	0.30	1,760	381			0.88		
PM 22.00 TO PM 18.04	SB	R+	20,909	4	0.30	9,293	2,008			4.65		
PM 18.04 TO PM 18.03	SB	R+	53	10	0.30	59	13			0.03		
PM 18.03 TO PM 11.00	SB	R+	37,119	4	0.30	16,498	3,564			8.25		
PM 0.17 TO PM 10.17	NB	L+	50,002	5	0.20	27,779	4,001			13.89	1,001	
PM 13.20 TO PM 22.40	NB	L+	48,576	5	0.20	26,987	3,887			13.49	1,014	
PM 22.30 TO PM 11.00	SB	L+	59,664	5	0.20	33,147	4,774			16.57	1,204	
PM 0.17 TO PM 10.17	NB	R+	50,002	6								16.67
PM 13.20 TO PM 22.40	NB	R+	48,576	6								16.90
PM 22.30 TO PM 11.00	SB	R+	59,664	6								20.06
FROM Q-3							12		61.00			
<b>TOTAL</b>						226,371	45,119	465	63.81	106.99	3,219*	53.63

**HIGHWAY POST MARKER**

LOCATION AND NUMERAL ON PLATE	DIRECTION	HIGHWAY POST MARKER
		EA
1.00	NB ROUTE 505	1
2.00	NB ROUTE 505	1
3.00	NB ROUTE 505	1
4.00	NB ROUTE 505	1
5.00	NB ROUTE 505	1
6.00	NB ROUTE 505	1
7.00	NB ROUTE 505	1
8.00	NB ROUTE 505	1
9.00	NB ROUTE 505	1
10.00	NB ROUTE 505	1
14.00	NB ROUTE 505	1
15.00	NB ROUTE 505	1
16.00	NB ROUTE 505	1
17.00	NB ROUTE 505	1
18.00	NB ROUTE 505	1
19.00	NB ROUTE 505	1
20.00	NB ROUTE 505	1
21.00	NB ROUTE 505	1
22.00	NB ROUTE 505	1
11.00	SB ROUTE 505	1
12.00	SB ROUTE 505	1
13.00	SB ROUTE 505	1
14.00	SB ROUTE 505	1
15.00	SB ROUTE 505	1
16.00	SB ROUTE 505	1
17.00	SB ROUTE 505	1
18.00	SB ROUTE 505	1
19.00	SB ROUTE 505	1
20.00	SB ROUTE 505	1
21.00	SB ROUTE 505	1
22.00	SB ROUTE 505	1
<b>TOTAL</b>		31

\* RUMBLE STRIP QUANTITY REFLECTS INSIDE AND OUTSIDE SHOULDER.  
 (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**SUMMARY OF QUANTITIES**

Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11  
 MANUEL VILLANUEVA  
 JEFF JOHNSON  
 JIM ELDER  
 CALTRANS



LAST REVISION DATE PLOTTED => 02-JUL-2010  
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	16	48

*Jeff Johnson*  
 REGISTERED CIVIL ENGINEER DATE 2-23-10  
 4-12-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JEFF JOHNSON  
 No. 64628  
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**GRIND EXISTING CONCRETE PAVEMENT**

LOCATION/ DESCRIPTION	DIRECTION	GRIND EXISTING CONCRETE PAVEMENT	CRACK TREATMENT	** DOWEL BAR RETROFIT
	NB/SB	SQYD	LNMI	EA
ROUTE 505, PM 0.70 TO PM 10.17	NB	144,450	19	18,756
ROUTE 505, PM 13.20 TO PM 22.40	NB	146,432	19	19,008
ROUTE 505, PM 22.30 TO PM 11.00	SB	183,040	23	23,760
<b>TOTAL</b>		473,922	61*	61,524

\*FOR TOTAL QUANTITY SEE ROADWAY QUANTITIES, SHEET Q-2  
 \*\*QUANTITY FOR #2 LANE ONLY, 3 DOWELS PER WHEEL PATH PER Std PLAN P7.

**METAL BEAM GUARD RAILING**

LOCATION/ DESCRIPTION	DIRECTION		REMOVE MBGR LF	(N) REMOVE CABLE ANCHOR ASSEMBLY EA	(N) REMOVE TERMINAL SECTION (TYPE C) EA	METAL BEAM GUARD RAILING LF	(N) LAYOUT TYPE	END ANCHOR ASSEMBLY (TYPE SFT) EA	ALTERNATIVE FLARED TERMINAL SYSTEM EA	TRANSITION RAILING (TYPE WB) EA	OBJECT MARKER (TYPE L-1) EA	GUARD RAILING DELINEATOR		PLACE HMA DIKE (TYPE C) LF	PLACE HMA DIKE (TYPE E) LF	PLACE HMA DIKE (TYPE F) LF	HOT MIX ASPHALT TON	REMOVE AC DIKE LF	VEGETATION CONTROL (MINOR CONCRETE) SQYD
	NB/SB	Lt/Rt										(TYPE G-1)	(TYPE F-1)						
												EA							
COUNTY ROAD 29A OFF RAMP	NB	R+	190		1	153	11B		1		1		2	37.5		153	1	153	86
COUNTY ROAD 29A ON RAMP	NB	R+	410	1		410		1					3						168
COUNTY ROAD 27 OFF RAMP	NB	R+	220		1	183	11B		1		1		2	37.5		183	1	183	98
COUNTY ROAD 27 ON RAMP	NB	R+	220	1		220		1					3						90
COUNTY ROAD 19 ON RAMP (Br No. 22-0057S)	NB	R+	66		1	25	12B		1	1	1		1	37.5			1	50	34
COUNTY ROAD 19 ON RAMP (Br No. 22-0057S)	NB	L+	66		1	25	12B		1	1	1	1		37.5			1	50	11
COUNTY ROAD 12 OFF RAMP	NB	R+													235		1	235	23
COUNTY ROAD 12 ON RAMP	NB	R+													245		1	245	
PM 22.38 TO PM 22.40 (ROUTE 505/5 Sep)	NB	R+	845	1		820		1		1			8			845	1	845	335
COUNTY ROAD 12 OFF RAMP	SB	R+													315		1	315	
COUNTY ROAD 14 OFF RAMP	SB	R+													220		1	220	
COUNTY ROAD 14 ON RAMP	SB	R+	295	1		25	11B	1	1		1		1	37.5		258	1	258	34
CACHE CREEK Br APPROACH	SB	R+	1008			1008							6				1		412
CACHE CREEK Br DEPARTURE	SB	R+	443	1		418	12AA	1		1			3			443	1	443	171
<b>SUBTOTAL</b>			3763	5	4	3287		5	5	4	5	1	27	187.5	1015	1982	12	2997	1462
<b>TOTAL</b>			3763	5	4	3287		5	5	4	5		28	187.5	1015	1982	12*	2997	1462

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.  
 \* FOR TOTAL QUANTITY SEE ROADWAY QUANTITIES, SHEET Q-2

**SUMMARY OF QUANTITIES**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11  
 FUNCTIONAL SUPERVISOR: JIM ELDER  
 CALCULATED/DESIGNED BY: MANUEL VILLANUEVA  
 CHECKED BY: JEFF JOHNSON  
 REVISED BY: MANUEL VILLANUEVA  
 DATE REVISED: JEFF JOHNSON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	17	48

 2-23-10  
 REGISTERED CIVIL ENGINEER DATE

4-12-10  
 PLANS APPROVAL DATE

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



### SHOULDER BACKING

LOCATION/ DESCRIPTION	DIRECTION L+/R+	IMPORTED MATERIAL (SHOULDER BACKING)
		TON
NB - COUNTY ROAD 19 OFF RAMP	L+ & R+	30
NB - COUNTY ROAD 19 ON RAMP	L+ & R+	78
NB - COUNTY ROAD 14 OFF RAMP	L+ & R+	54
NB - COUNTY ROAD 14 ON RAMP	L+	24
NB - COUNTY ROAD 12 OFF RAMP	L+	23
NB - COUNTY ROAD 12 ON RAMP	L+	18
SB - COUNTY ROAD 12 OFF RAMP	L+ & R+	42
SB - COUNTY ROAD 12 ON RAMP	L+	22
SB - COUNTY ROAD 14 OFF RAMP	L+	27
SB - COUNTY ROAD 14 ON RAMP	L+ & R+	46
SB - COUNTY ROAD 19 OFF RAMP	L+ & R+	54
SB - COUNTY ROAD 19 ON RAMP	L+ & R+	62
<b>TOTAL</b>		480

### TEMPORARY CONSTRUCTION BMPS

ITEM/DESCRIPTION	UNIT	QUANTITY
TEMPORARY DRAINAGE INLET PROTECTION	EA	10
TEMPORARY FIBER ROLL	LF	2000
TEMPORARY CHECK DAM	LF	400
TEMPORARY SILT FENCE	LF	200
TEMPORARY CONSTRUCTION ENTRANCE	EA	2
TEMPORARY CONCRETE WASHOUT (FACILITY)	EA	6

## SUMMARY OF QUANTITIES

Q-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  

 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11

FUNCTIONAL SUPERVISOR  
 JIM ELDER

CALCULATED/DESIGNED BY  
 CHECKED BY

MANUEL VILLANUEVA  
 JEFF JOHNSON

REVISED BY  
 DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	18	48

<i>H. Golban</i>	2-23-10
REGISTERED ELECT ENGINEER	DATE
4-12-10	
PLANS APPROVAL DATE	

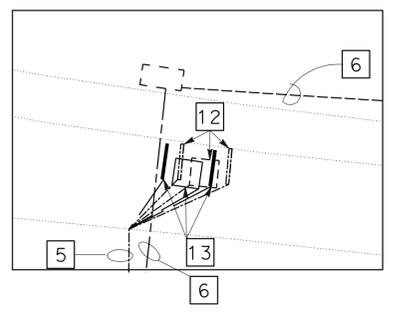
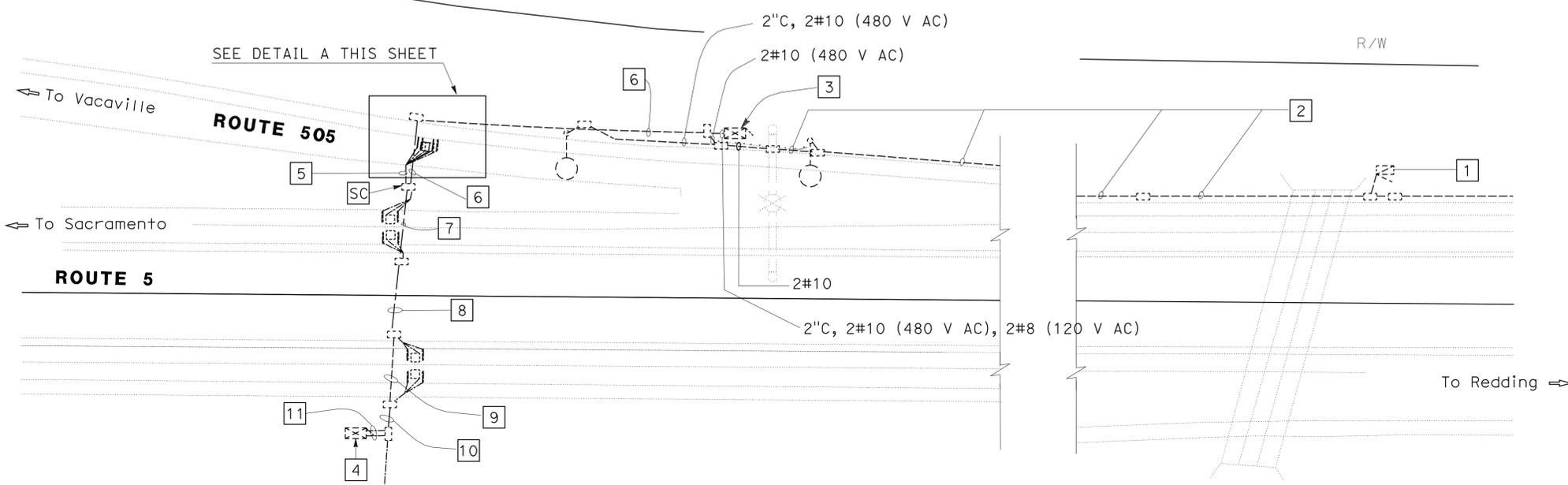
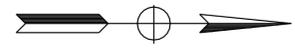
H. GOLBAN
No. E17928
Exp. 09-30-10
ELECT

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.

**PROJECT NOTES (THIS SHEET ONLY)**

- 1 Exist TYPE III-AF SERVICE EQUIPMENT ENCLOSURE CTID No. 032205R021420B
- 2 3"C, 2#8(RAMP LIGHTING 480 V), 2#10(CONTROLLER POWER 480 V) 2#10, 2#12(SIGN ILLUMINATION AND TEST SWITCH 240 V)
- 3 POWER SHUT OFF IN CABINET
- 4 Exist TYPE 322 CONTROLLER CABINET
- 5 RC 1 PAIR OF TWISTED LOOP CONDUCTORS, 2 stc. ADD 1 PAIR LOOP CONDUCTORS, 2 STC
- 6 2"C, 2#8

- 7 2"C, 2#8, 2 dlc, 4 stc, RC 2 stc, ADD 2 STC
- 8 2"C, 2#8, 3 dlc, 6 stc, RC 2 stc, ADD 2 STC
- 9 2"C, 2#8, 4 dlc, 8 stc, RC 2 stc, ADD 2 STC
- 10 2"C, 2#8, 5 dlc, 10 stc, RC 2 stc, ADD 2 STC
- 11 2"C, 2#8, 7 dlc, 14 stc, RC 6 stc, ADD 6 STC
- 12 AB EXISTING 2 PIEZO ELECTRIC AXLE SENSORS AND 1 INDUCTIVE LOOP
- 13 INSTALL 2 PIEZO ELECTRIC AXLE SENSORS AND 1 INDUCTIVE LOOP FOR DETAIL SEE DETAIL C THIS SHEET



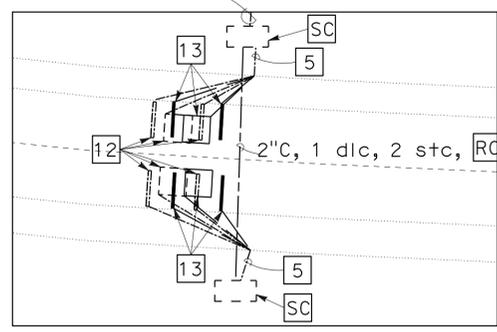
**DETAIL A**  
NO SCALE

**LEGEND AND ABBREVIATIONS**

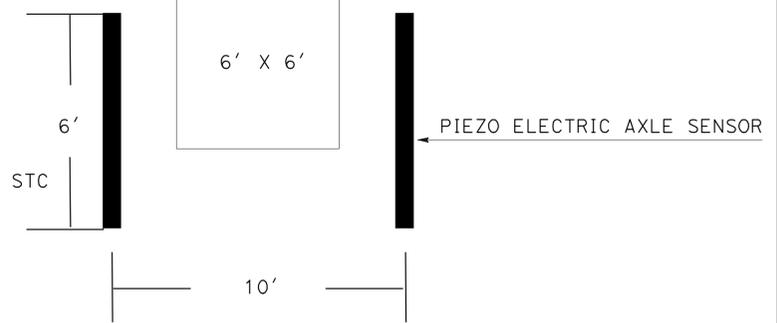
- cs - COUNT STATION
- CTID - CALTRANS IDENTIFICATION
- stc - SCREENED TRANSMISSION CABLE
- stc - EXISTING SCREENED TRANSMISSION CABLE
- - PROPOSE 2 PIEZO ELECTRIC AXLE SENSORS, 1 INDUCTIVE LOOP
- - EXISTING 2 PIEZO ELECTRIC AXLE SENSORS, 1 INDUCTIVE LOOP

2"C, 2 dlc, 4 stc, RC 4 stc, ADD 4 STC

2"C, 2 dlc, 4 stc, RC 4 stc, ADD 4 STC



**DETAIL B**  
NO SCALE



**DETAIL C**  
SCALE SHOWN

CS No. 079/080/965  
YOL-05-R022.91

**MODIFY AUTOMATIC VEHICLE CLASSIFICATION SYSTEM**

SCALE: 1" = 50'

**E-1**

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 OFFICE OF ELECTRICAL DESIGN  
 SACRAMENTO  
 FUNCTIONAL SUPERVISOR  
 NELSON LEE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 HABILB GOLBAN  
 OANH D NGUYEN  
 REVISOR BY  
 DATE REVISOR

USERNAME => s113559  
DGN FILE => 31a950ua001.dgn



UNIT 0403

PROJECT NUMBER & PHASE

0300001091

BORDER LAST REVISED 7/1/2010

LAST REVISION DATE PLOTTED => 02-JUL-2010  
 01-26-10 TIME PLOTTED => 10:17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	19	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

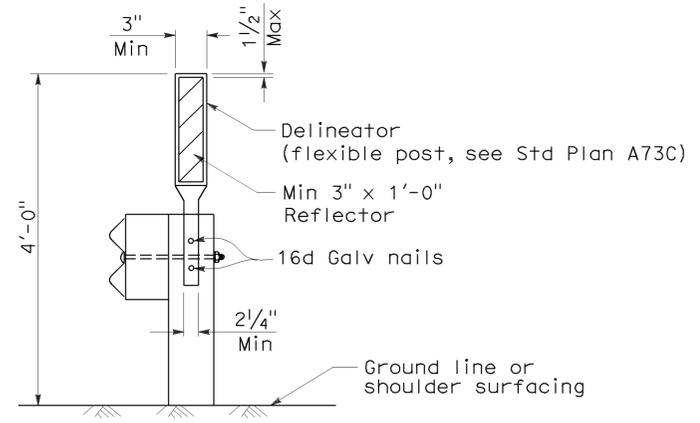
June 6, 2008  
PLANS APPROVAL DATE

*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.*

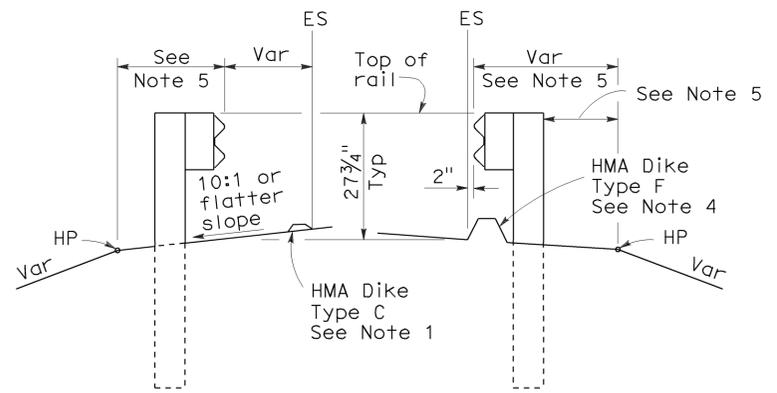
To accompany plans dated 4-12-10

**NOTES:**

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



**GUARD RAILING DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL RAILING DELINEATION  
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77C4  
DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77C4**

2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	20	48

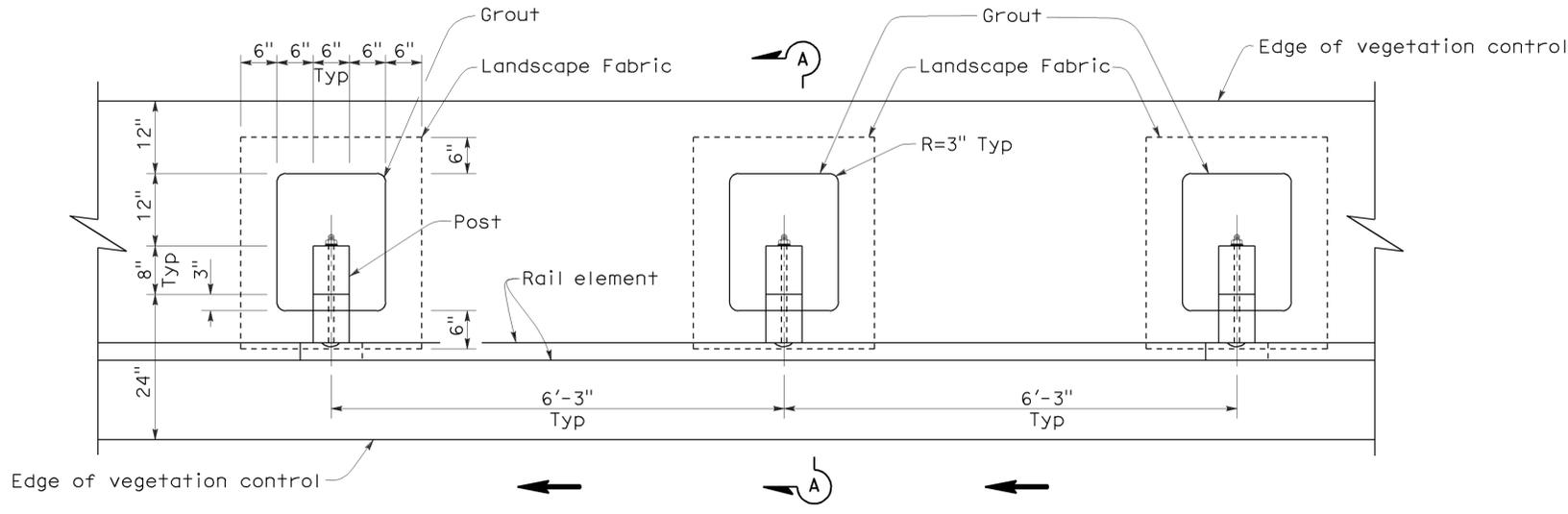
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

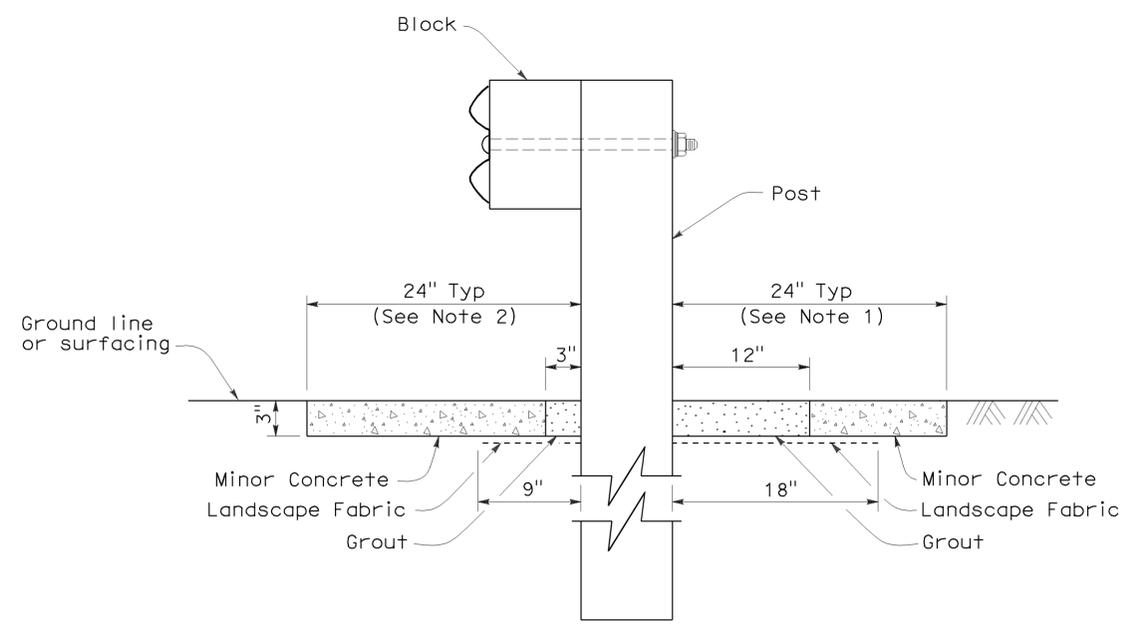
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-07  
CIVIL  
STATE OF CALIFORNIA

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To accompany plans dated 4-12-10



PLAN



SECTION A-A

NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ← .

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
STANDARD RAILING SECTION**

NO SCALE

NSP A77C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A77C5**

2006 NEW STANDARD PLAN NSP A77C5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	21	48

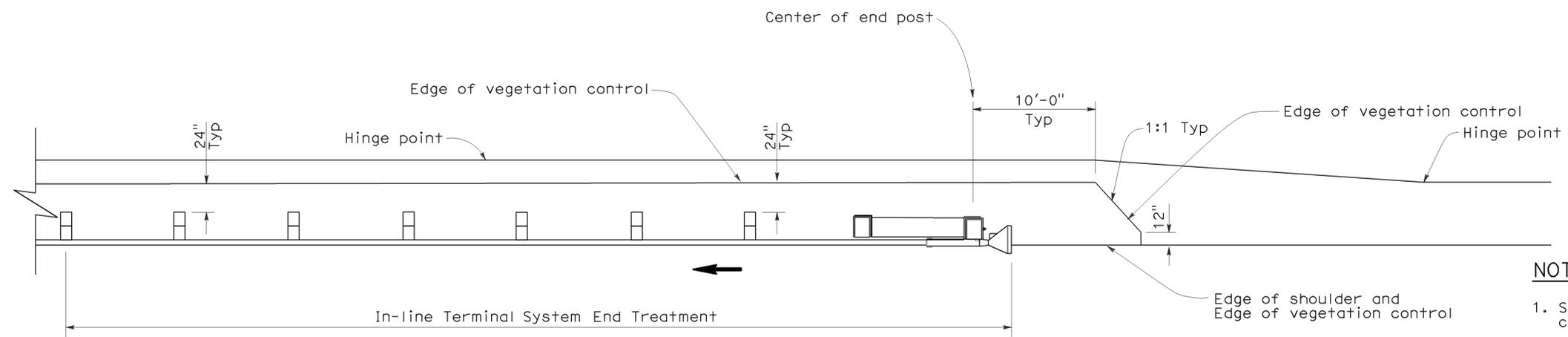
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

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To accompany plans dated 4-12-10

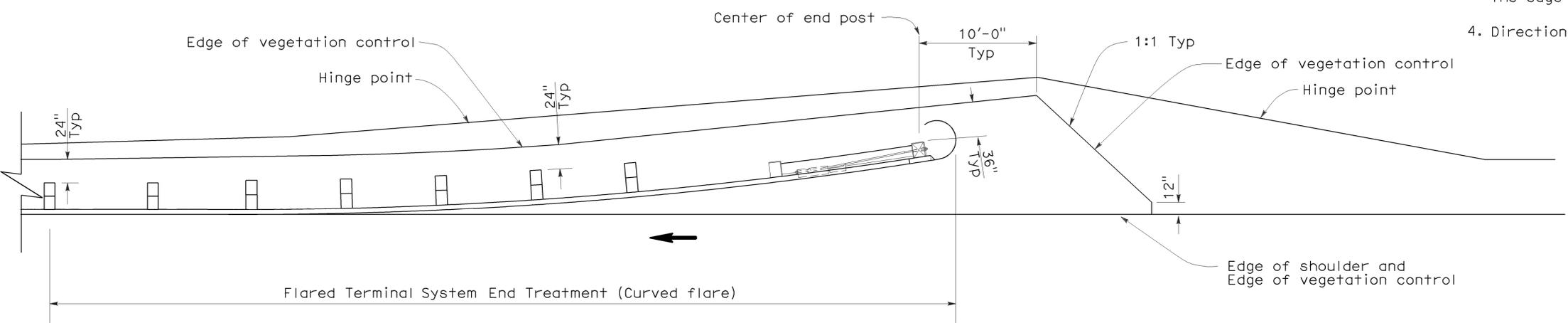
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-07  
CIVIL  
STATE OF CALIFORNIA



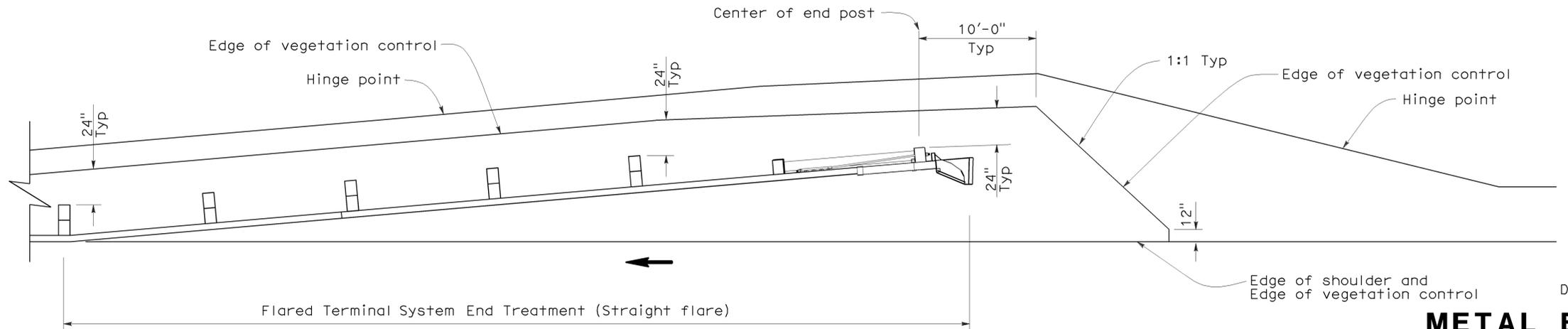
PLAN

**NOTES:**

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



PLAN



PLAN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
FOR TERMINAL SYSTEM END TREATMENTS**

NO SCALE  
NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C6

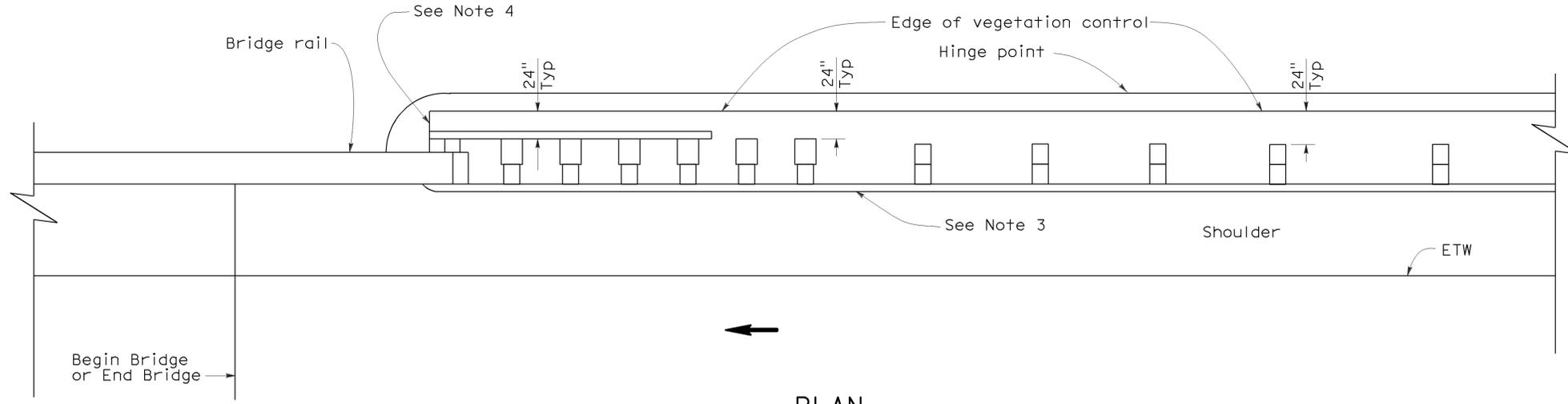
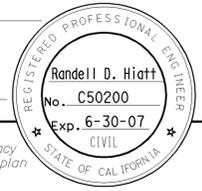
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	22	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

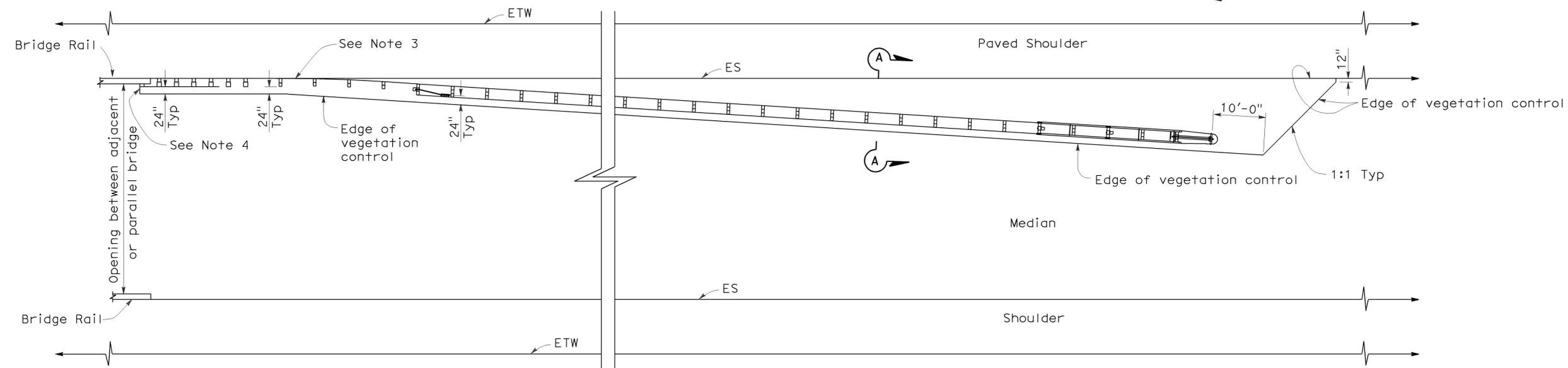
October 20, 2006  
PLANS APPROVAL DATE

*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.*

To accompany plans dated 4-12-10



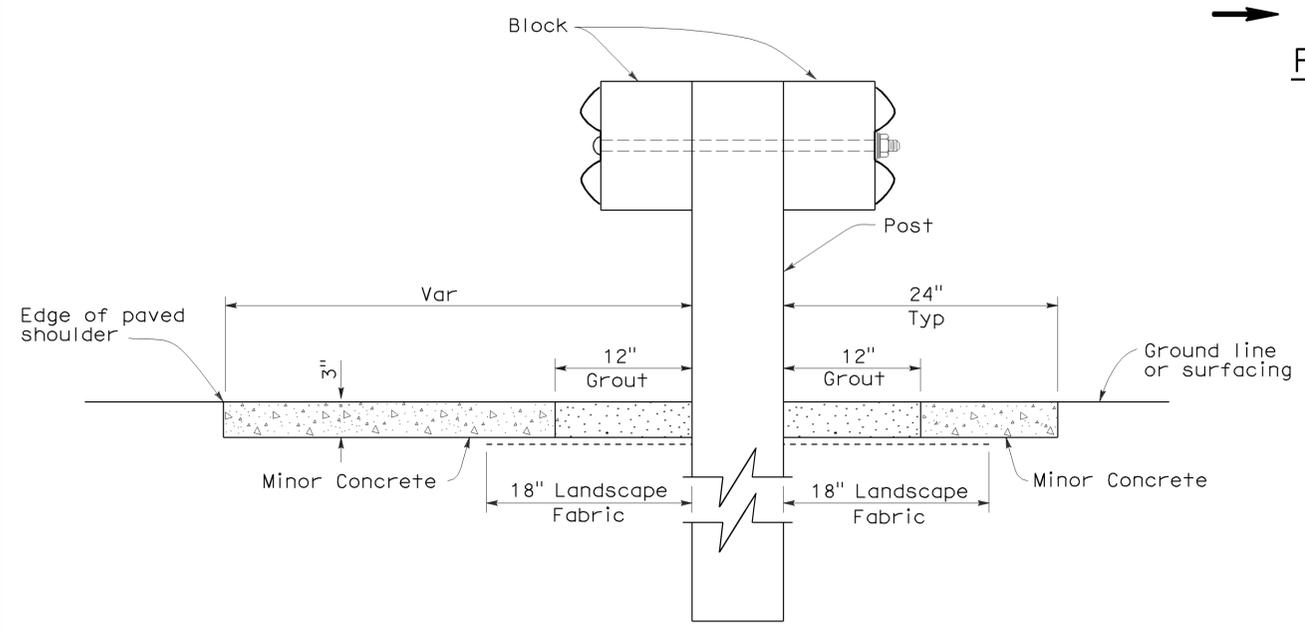
PLAN



PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. End vegetation control at end of backside rail element.
5. Direction of adjacent traffic indicated by ←.



SECTION A-A

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
AT STRUCTURE APPROACH  
AND DEPARTURE**

NO SCALE  
NSP A77C7 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	23	48

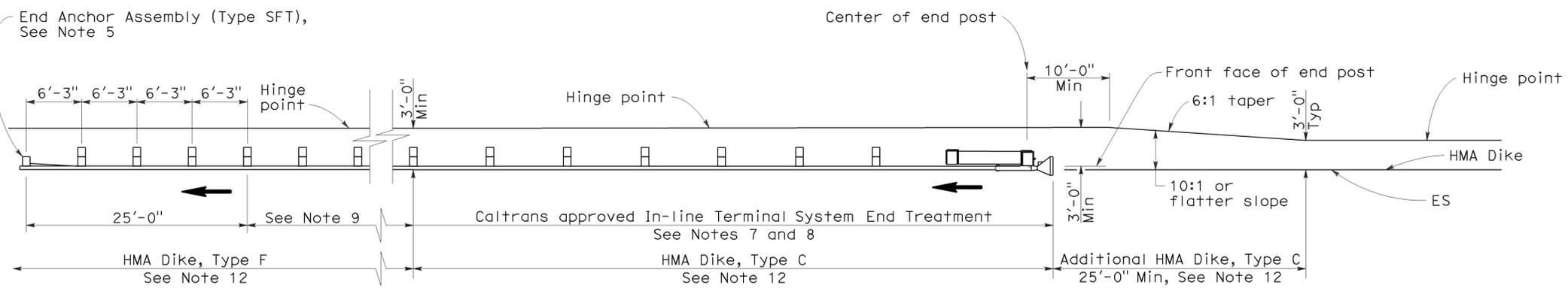
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
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.*

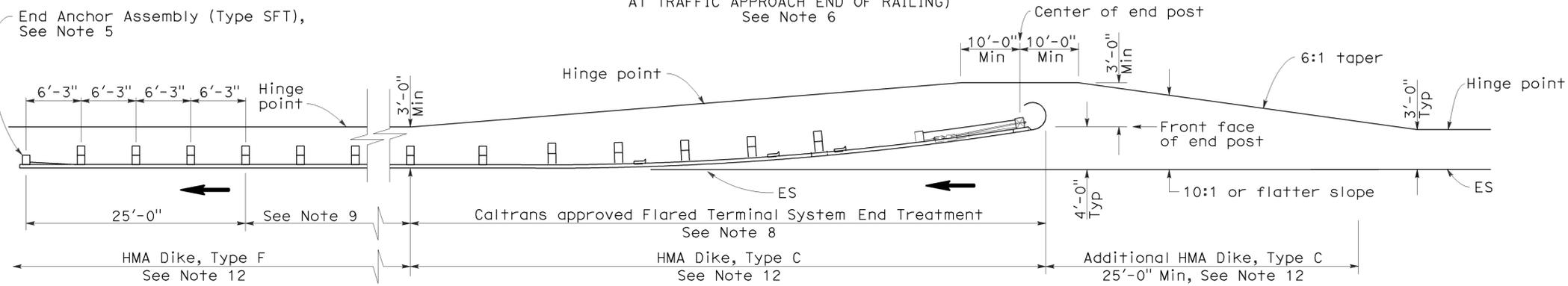
To accompany plans dated 4-12-10

2006 REVISED STANDARD PLAN RSP A77E1



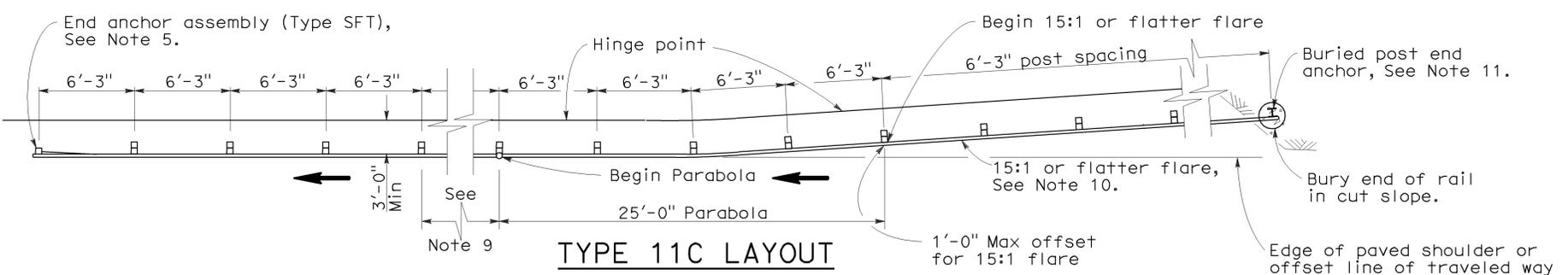
**TYPE 11A LAYOUT**

(EMBANKMENT GUARD INSTALLATION WITH IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Note 6



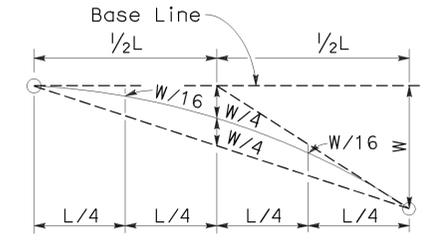
**TYPE 11B LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Note 6

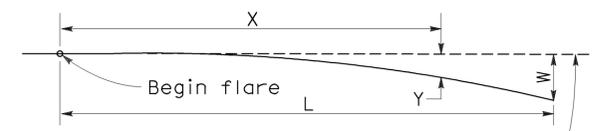


**TYPE 11C LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 6 and 12



**TYPICAL PARABOLIC LAYOUT**

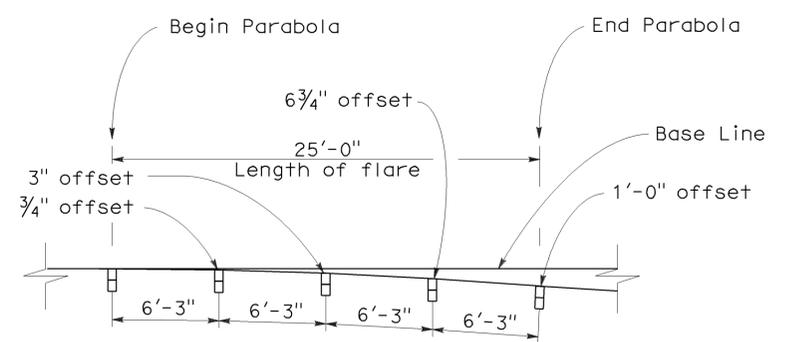


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$Y = \frac{WX^2}{L^2}$

Y = Offset from base line  
W = Maximum offset  
X = Distance along base line  
L = Length of flare

**PARABOLIC FLARE OFFSETS**



**TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET**

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1, and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
EMBANKMENTS**

NO SCALE

RSP A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1  
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	24	48

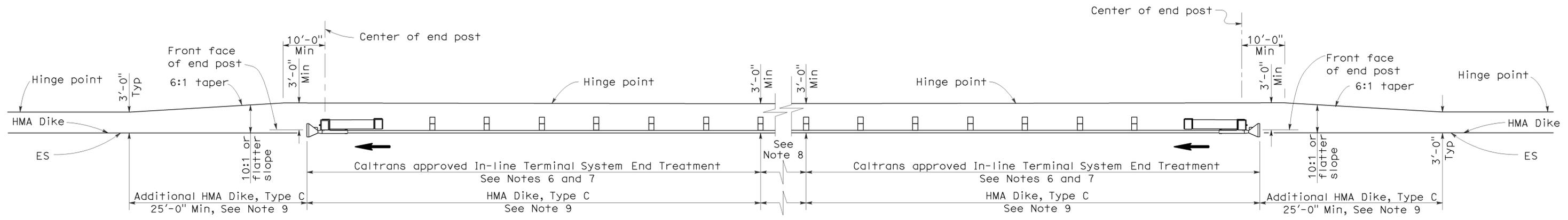
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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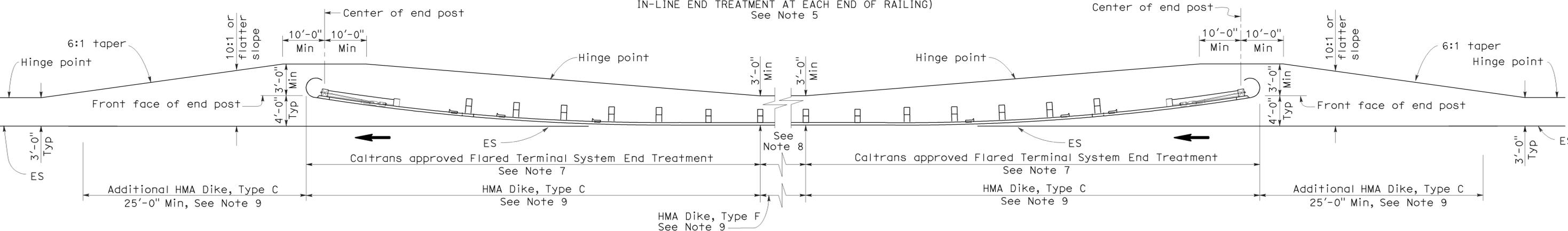
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 4-12-10



**TYPE 11D LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AT EACH END OF RAILING)  
See Note 5



**TYPE 11E LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT EACH END OF RAILING)  
See Note 5

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks, W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
EMBANKMENTS**

NO SCALE  
RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2  
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E2**

2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	25	48

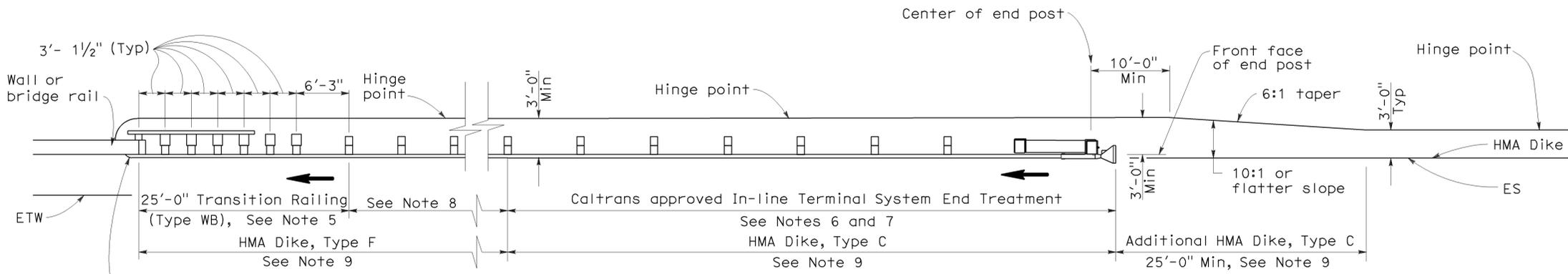
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

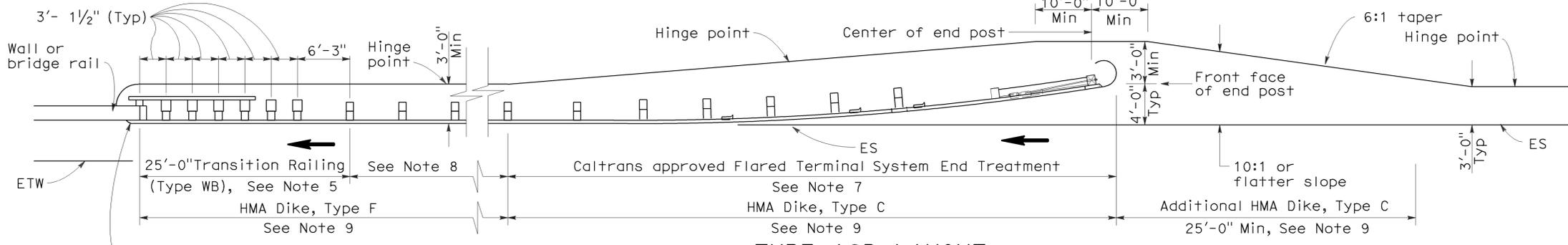
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To accompany plans dated 4-12-10



**TYPE 12A LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 10



**TYPE 12B LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 10

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
  - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
  - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1  
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77F1**

2006 REVISED STANDARD PLAN RSP A77F1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	26	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

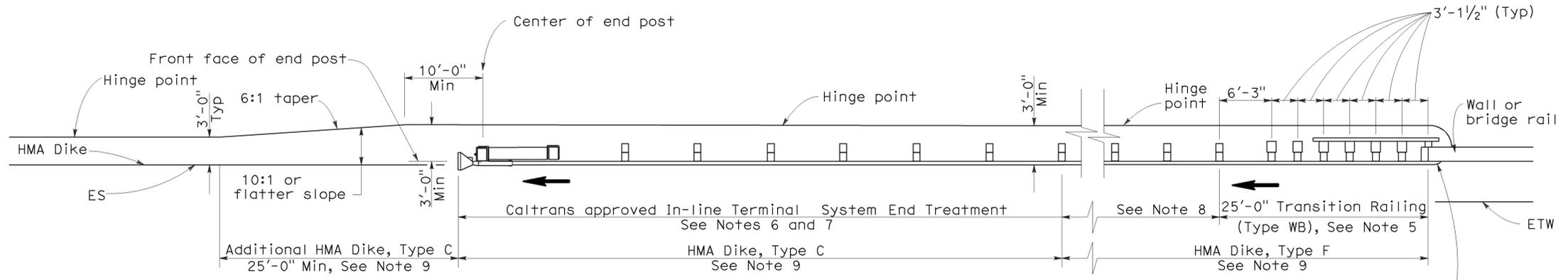
June 6, 2008  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

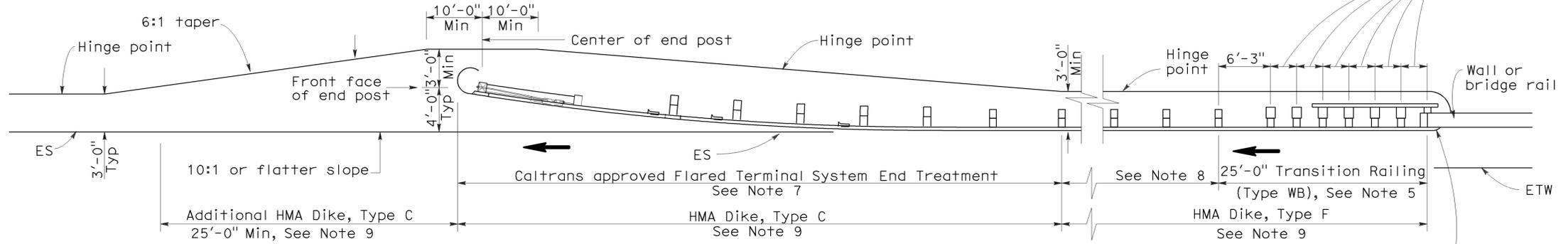
To accompany plans dated 4-12-10

2006 REVISED STANDARD PLAN RSP A77F4



**TYPE 12AA LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 10



**TYPE 12BB LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 10

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- For Transition Railing (Type WB) details for Types 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatments.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of typical connections to bridge rail, see Connection Detail CC on Revised Standard Plan RSP A77J2 and Connection Detail HH on Standard Plans A77K2.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
STRUCTURE DEPARTURE**

NO SCALE

RSP A77F4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F4  
DATED MAY 1, 2006 - PAGE 57 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77F4**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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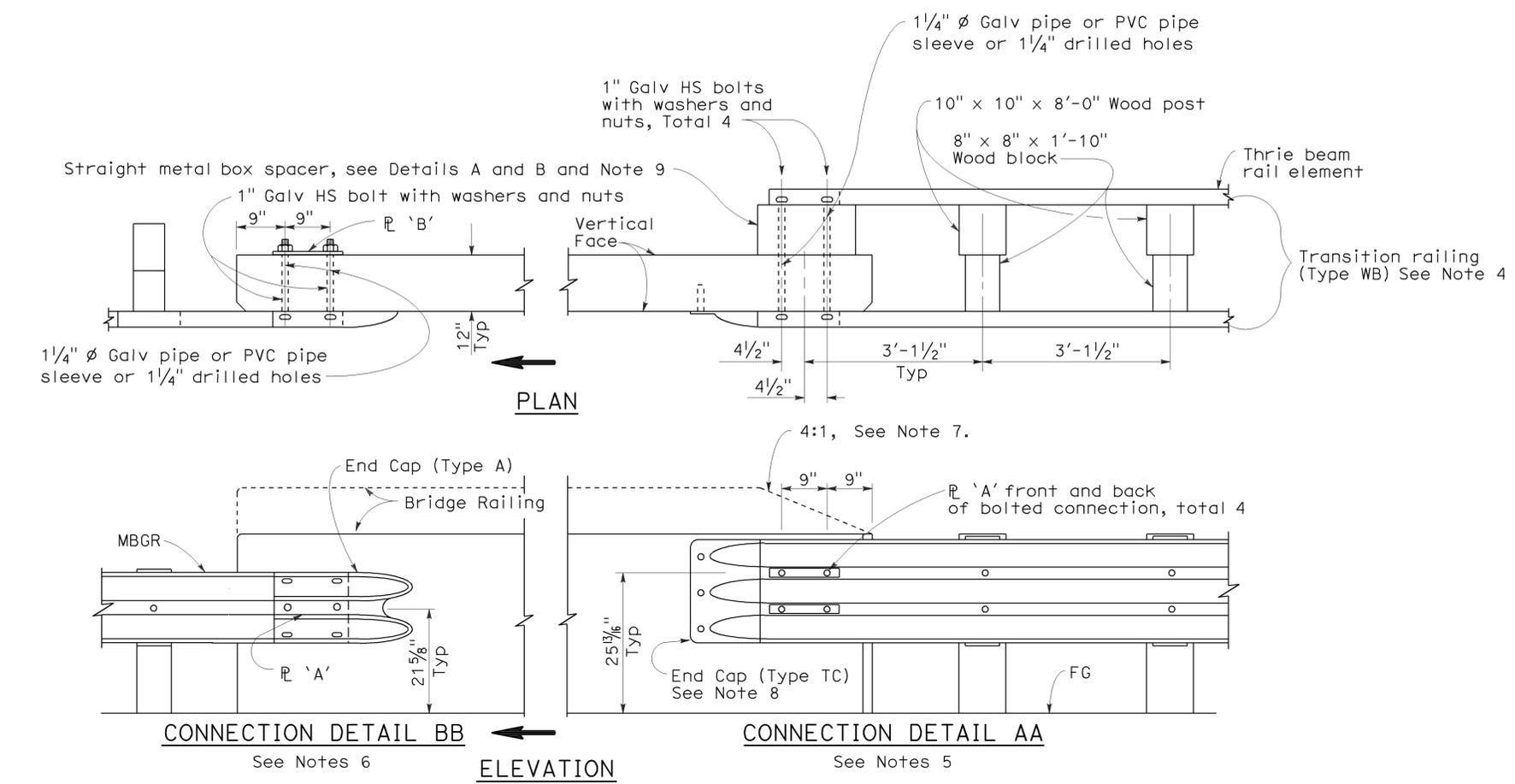
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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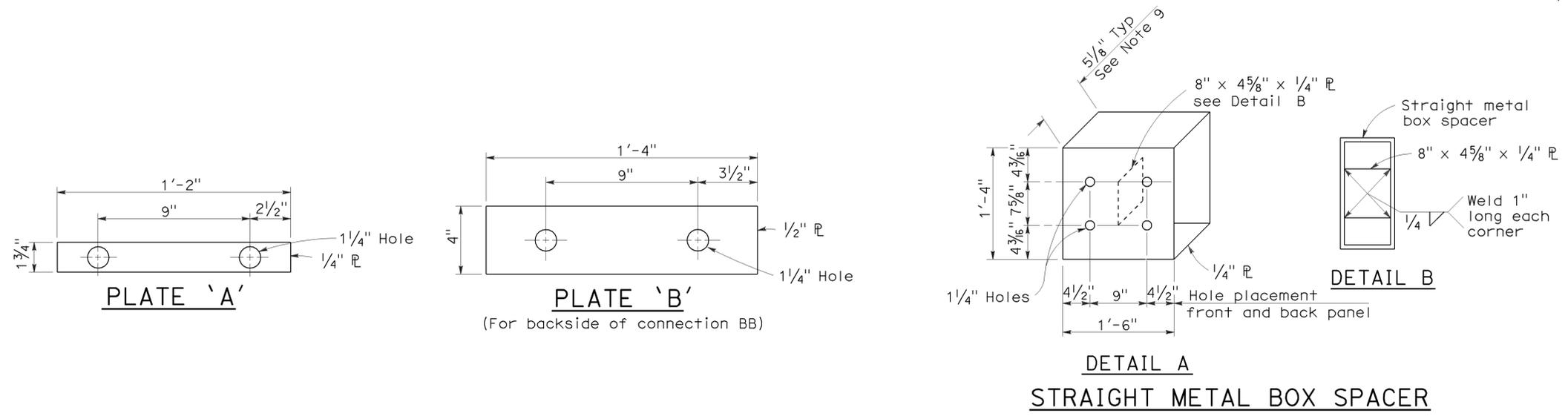
To accompany plans dated 4-12-10



**GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**

**NOTES:**

1. See Revised Standard Plan RSP A77J2 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by  $\rightarrow$ .
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
8. For details of End Cap (Type TC), see Standard Plan A77J4.
9. See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.1**

NO SCALE  
RSP A77J1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J1  
DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	28	48

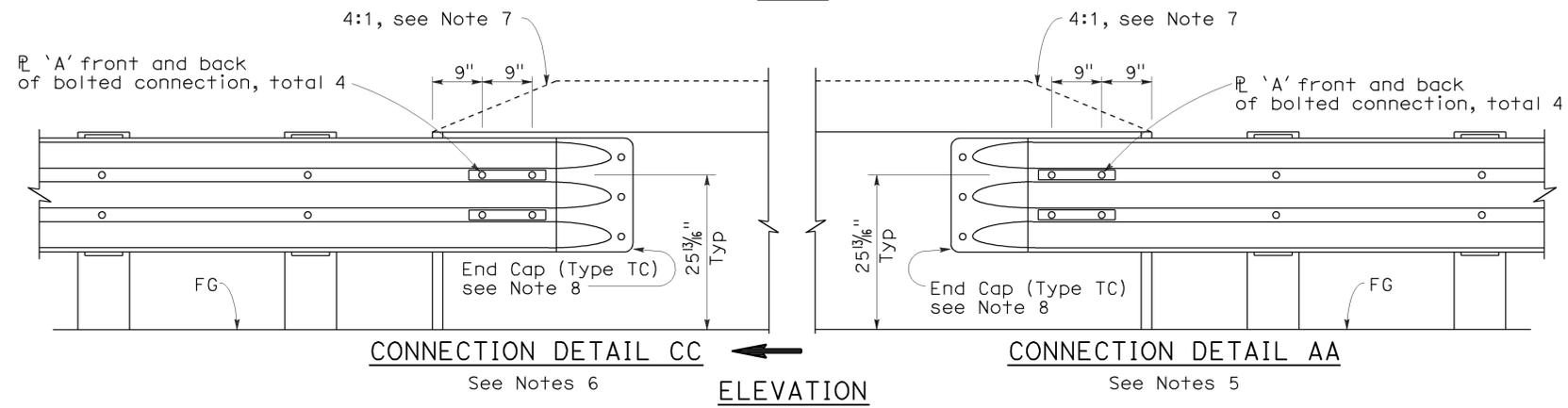
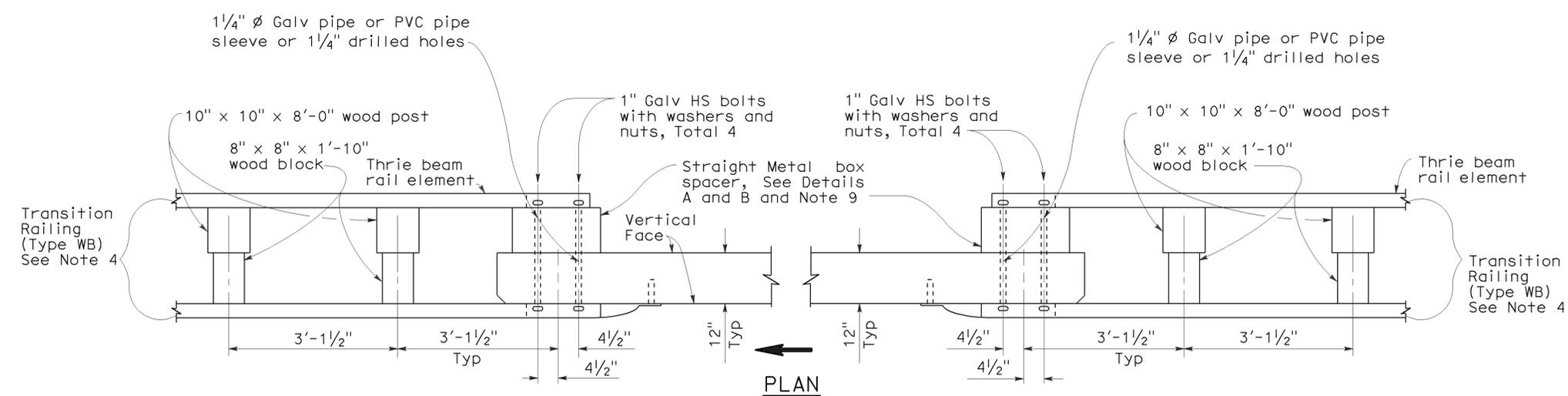
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

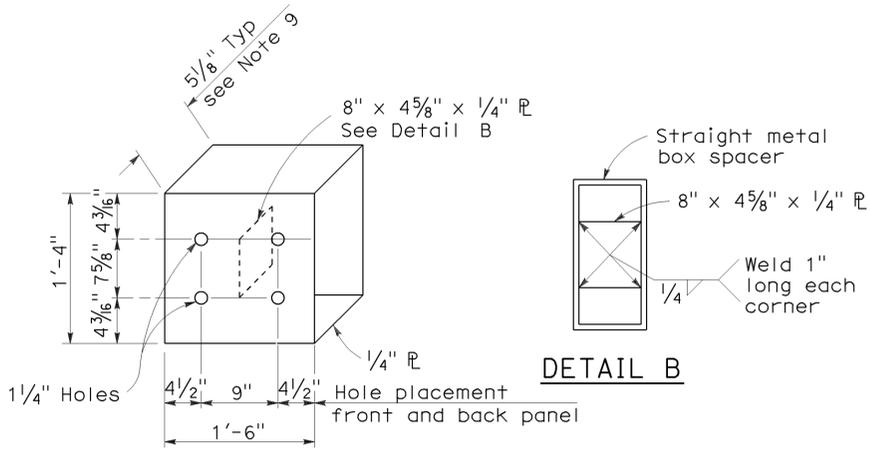
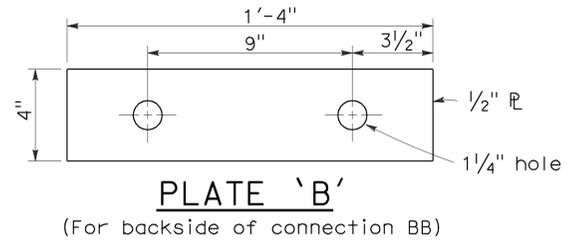
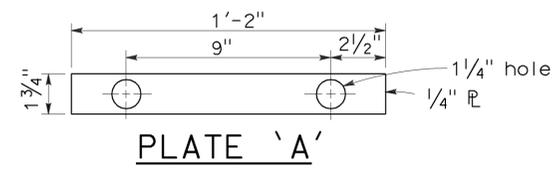
To accompany plans dated 4-12-10



**GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**

**NOTES:**

1. See Revised Standard Plan RSP A77J1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by →.
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Standard Plan A77F4 and Layout Type 12CC on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
8. For details of End Cap (Type TC), see Standard Plans A77J4.
9. See Standard Plans A77J4 for additional details regarding depth dimension for straight metal box spacer.



**DETAIL A  
STRAIGHT METAL BOX SPACER**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
CONNECTIONS TO BRIDGE RAILINGS  
WITHOUT SIDEWALKS DETAILS No.2**

NO SCALE  
RSP A77J2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J2  
DATED MAY 1, 2006 - PAGE 73 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77J2**

2006 REVISED STANDARD PLAN RSP A77J2

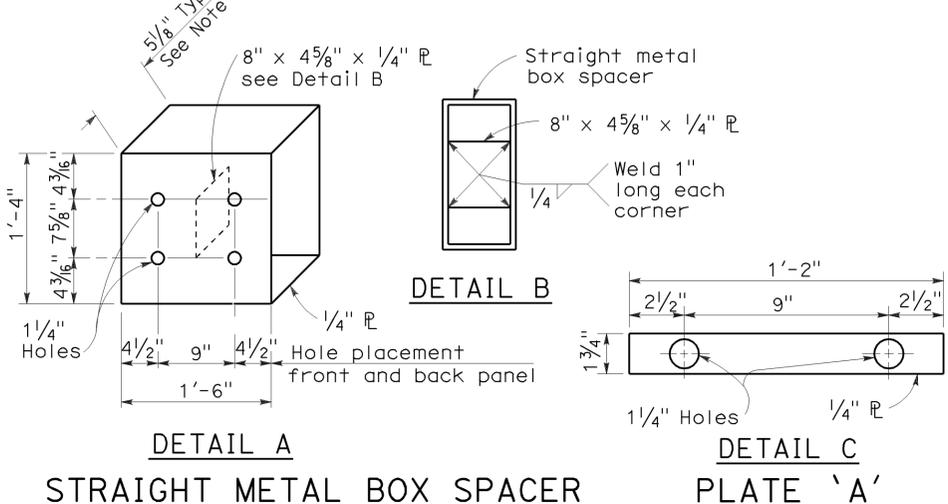
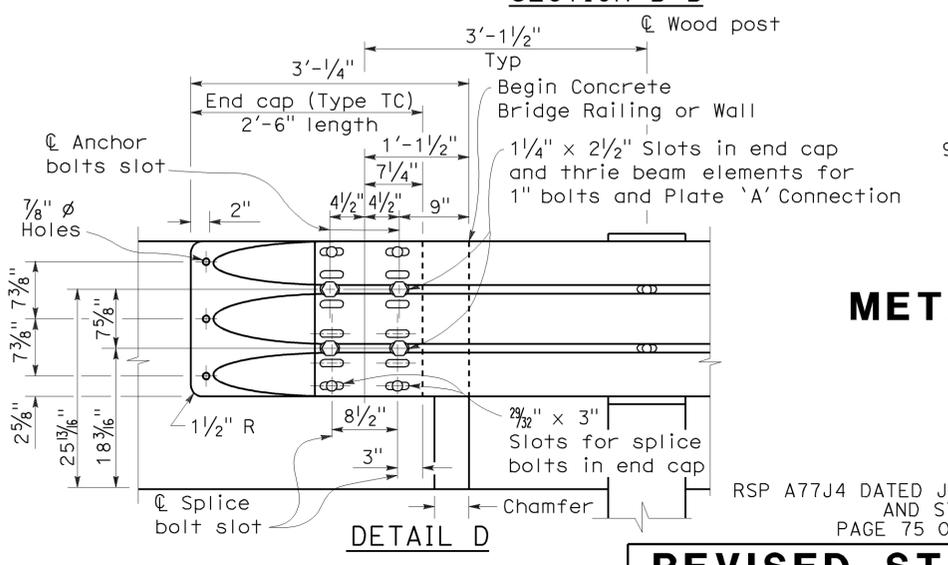
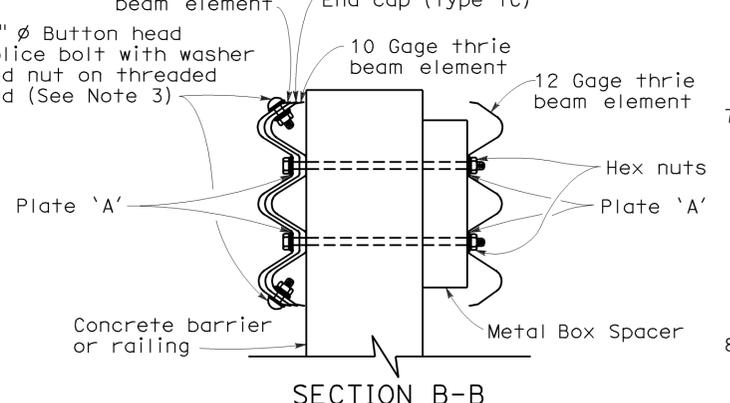
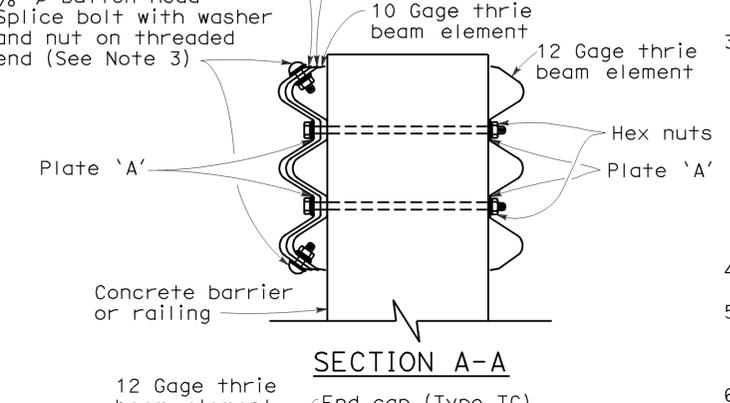
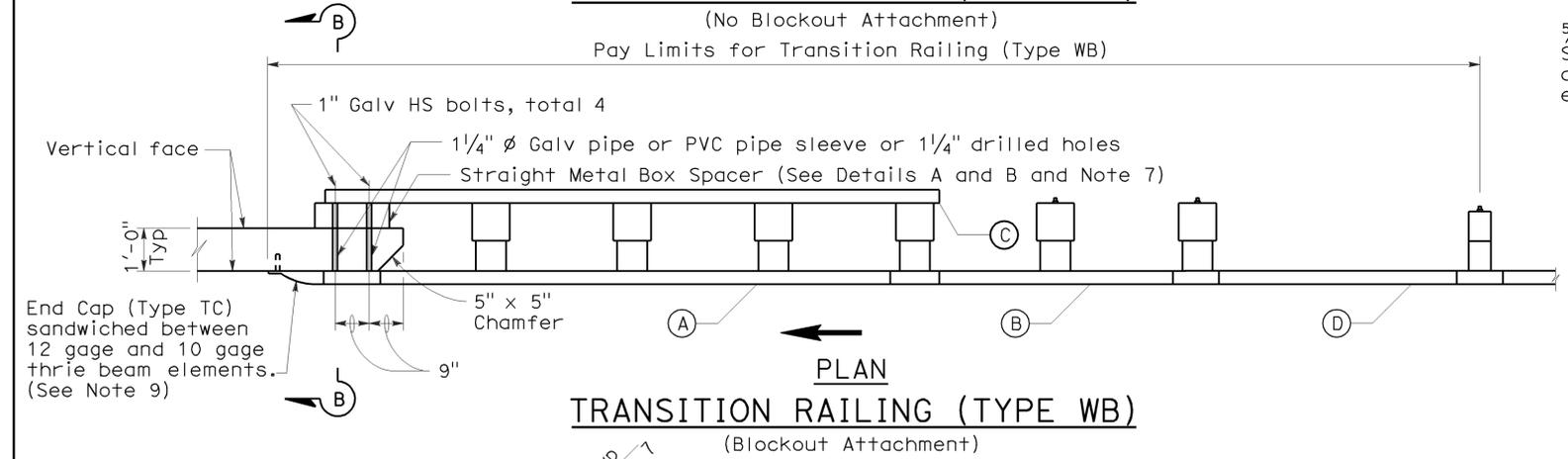
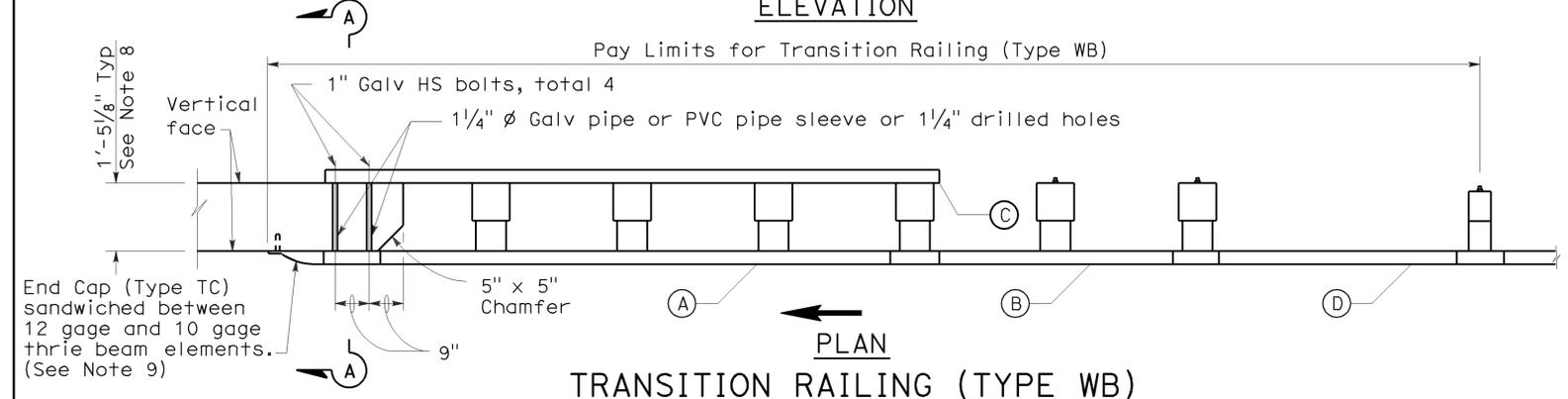
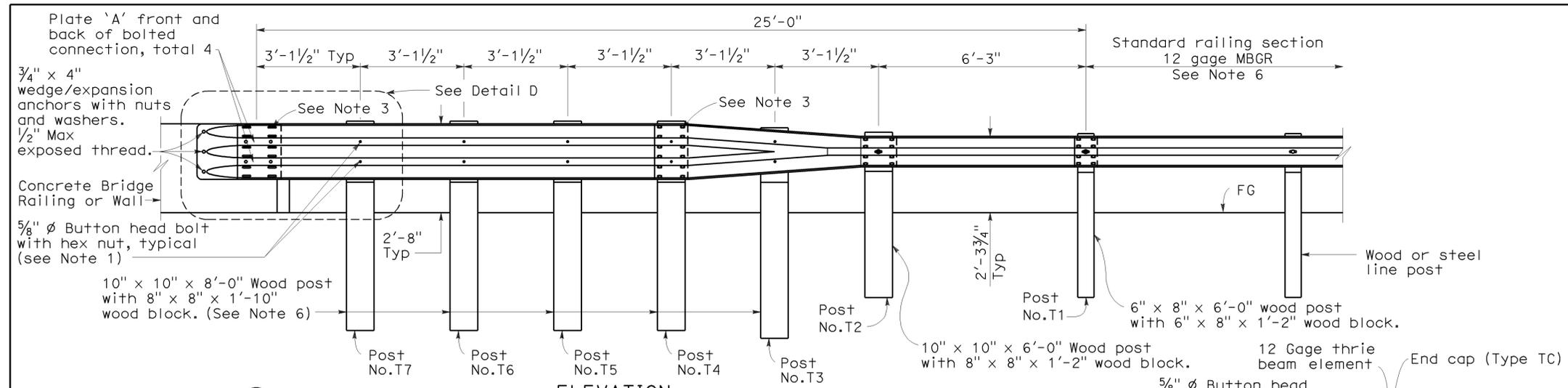
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	29	48

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

June 5, 2009  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA



- LEGEND**
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
  - (B) One 10 gage "W" beam to thrie beam element.
  - (C) One 12 gage thrie beam element.
  - (D) One 10 gage "W" beam rail element (7'-3 1/2" length)
- 10 gage = 0.135" thick  
12 gage = 0.108" thick

- NOTES:** To accompany plans dated 4-12-10
1. Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  3. Exterior splice bolt holes for rail element splices at Post No. T4 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4"  $\phi$ . Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No. T4 and the connection to the concrete barrier or railing.
  4. Direction of adjacent traffic indicated by  $\rightarrow$ .
  5. The top elevation of Post Nos. T2 through T7 shall not project more than 1" above the top elevation of the rail element.
  6. Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing or an approved Caltrans end treatment attached to Post No. T1.
  7. The depth of the metal box spacer varies from the 5 1/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  8. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. 4 through No. 7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  9. End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TRANSITION RAILING  
(TYPE WB)**

NO SCALE

RSP A77J4 DATED JUNE 5, 2009 SUPERSEDES RSP A77J4 DATED JUNE 6, 2008  
AND STANDARD PLAN A77J4 DATED MAY 1, 2006 -  
PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77J4**

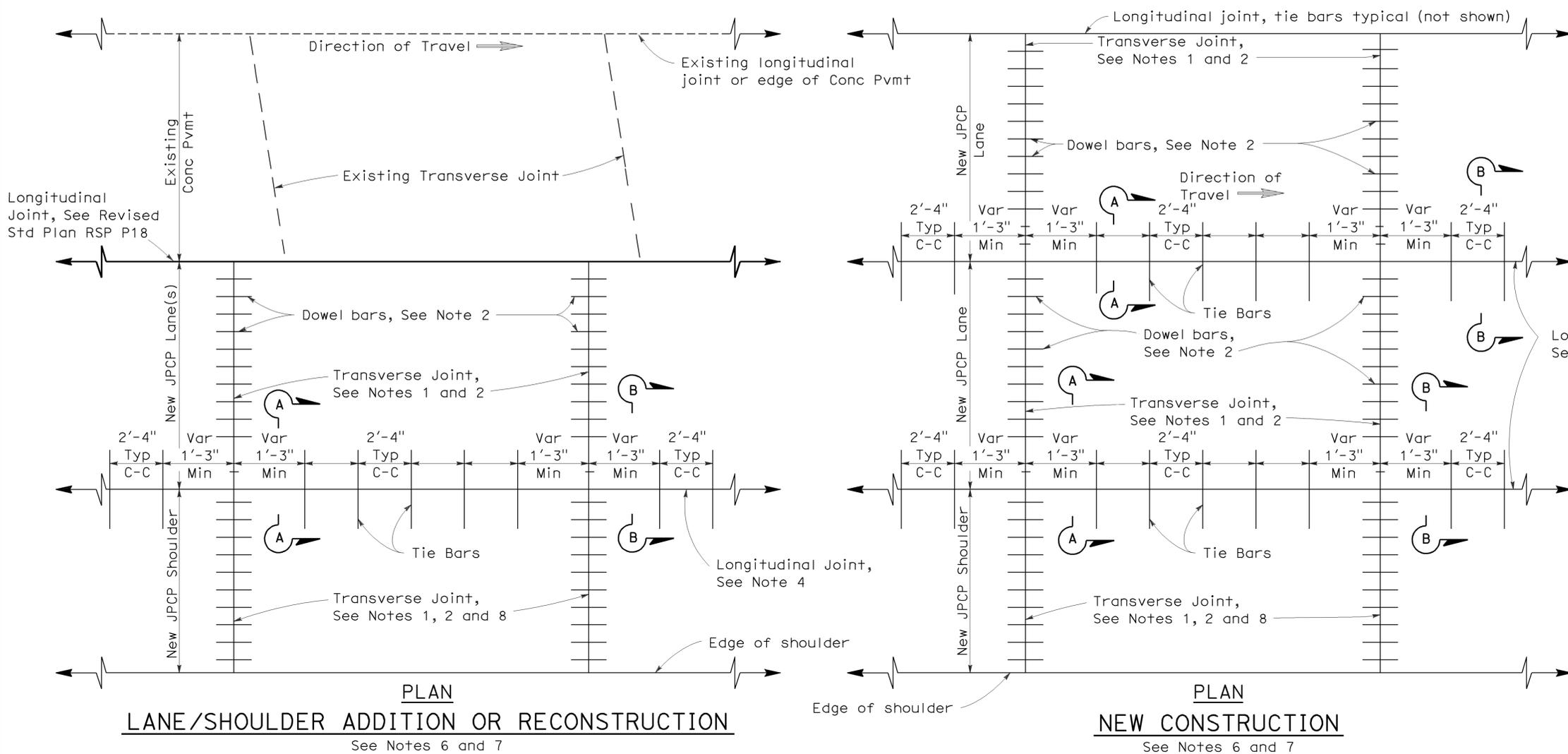
2006 REVISED STANDARD PLAN RSP A77J4

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03	Yol	505	0.7/R22.4	30	48

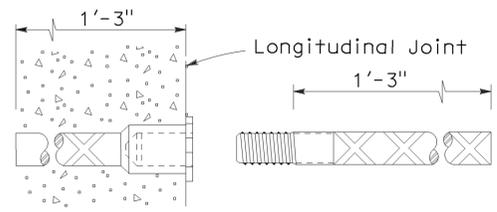
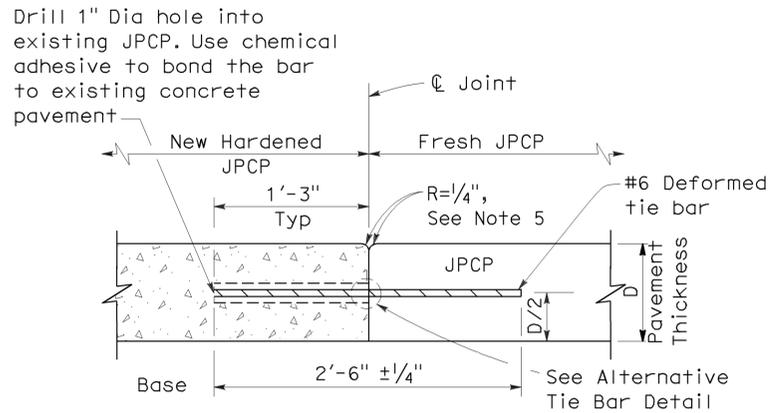
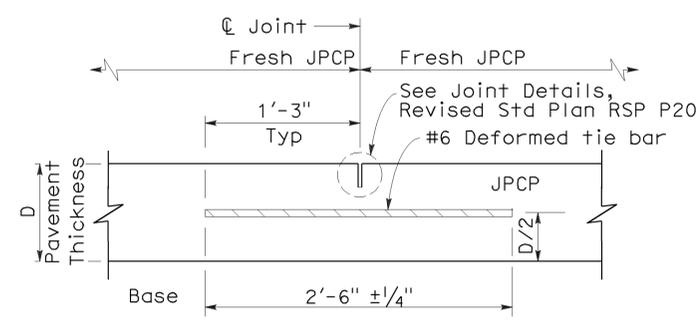
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE  
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2006 REVISED STANDARD PLAN RSP P1

To accompany plans dated 4-12-10



- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
  2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
  3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
  4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
  5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
  6. Joint spacing patterns do not apply to intersections.
  7. Details can also apply to inside widening.
  8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**JOINTED PLAIN  
CONCRETE PAVEMENT**

NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1  
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

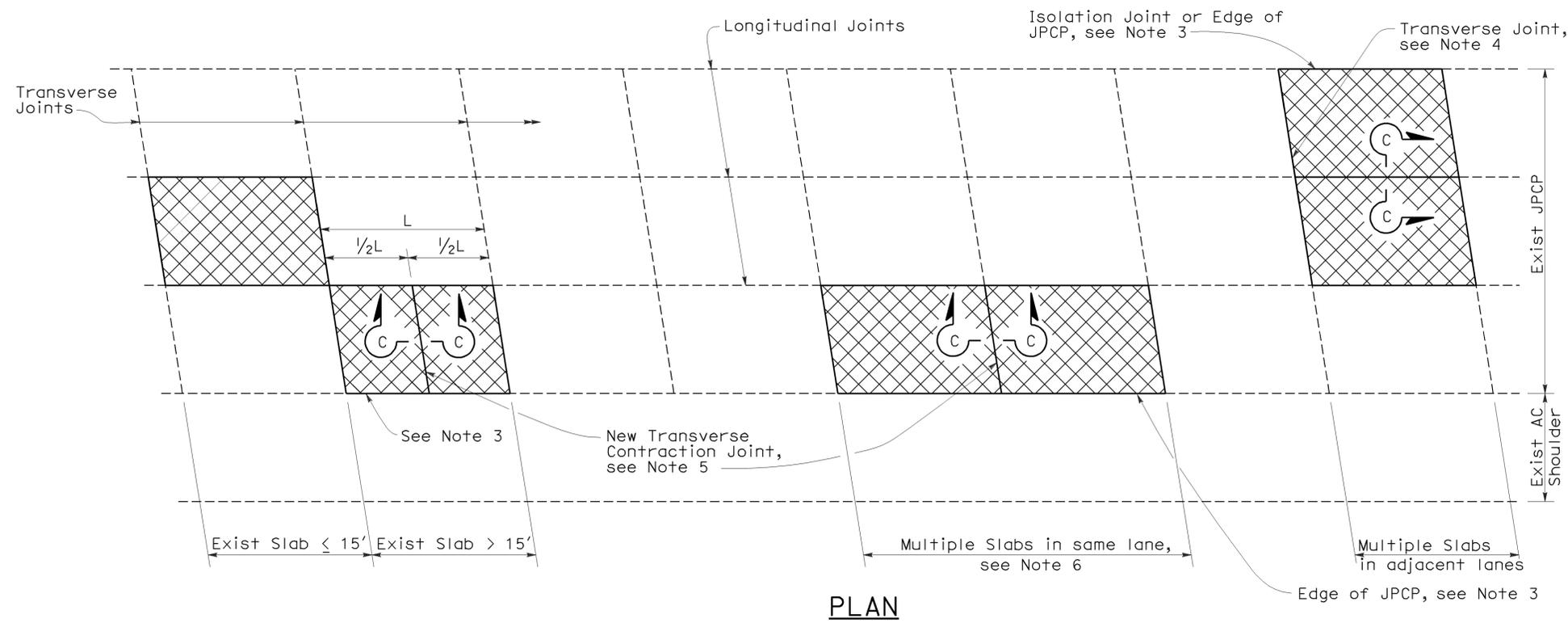
**REVISED STANDARD PLAN RSP P1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	31	48

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

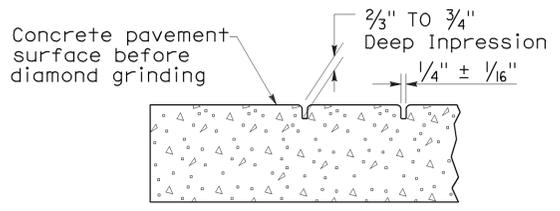
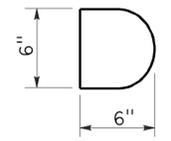
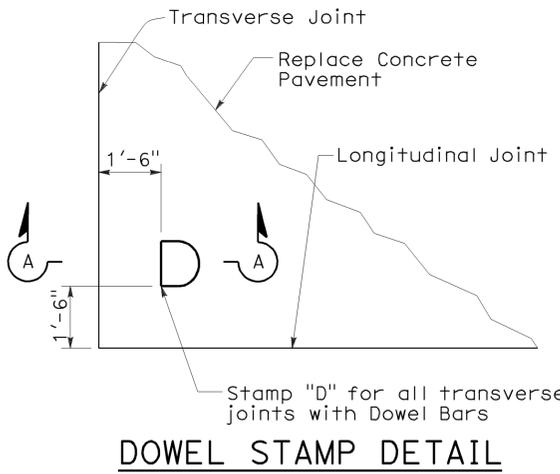
To accompany plans dated 4-12-10



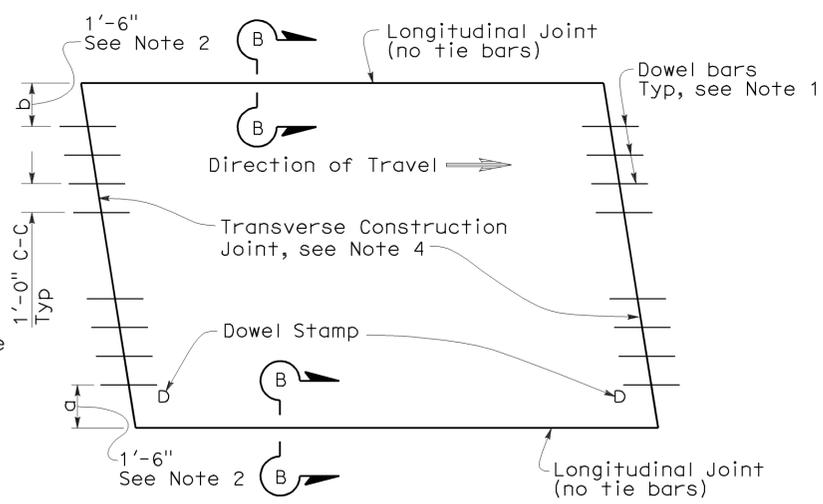
**NOTES:**

1. For details not shown, see Revised Standard Plan RSP P10.
2. Where the existing outer shoulder pavement is asphalt concrete pavement, the "a" dimension shall be 1'-0" and the "b" dimension shall be 2'-0".
3. Side forms shall be used where edge of pavement is adjacent to asphalt concrete.
4. For detail, see Transverse Construction Joint for existing concrete pavement detail on Revised Standard Plan RSP P10.
5. Transverse joint to match skew of existing joint. Omit dowel bars.
6. This Standard Plan only applicable when replacing multiple slabs in the same lane is less than 100'.

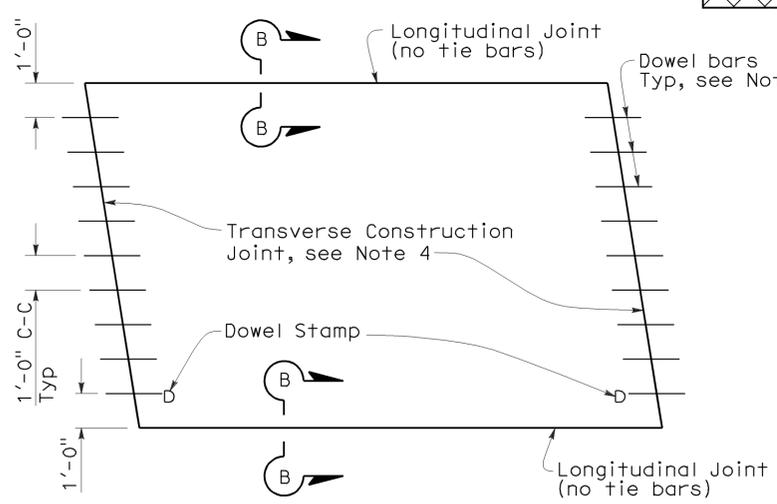
**LEGEND**



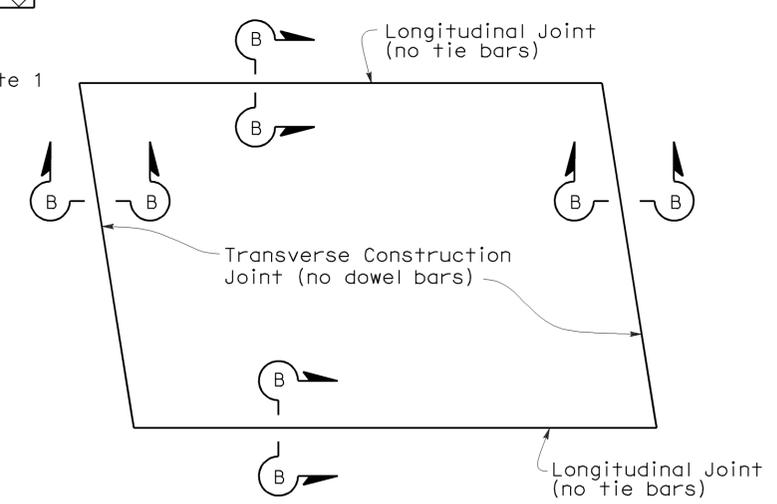
SECTION A-A



**TYPE I**  
(traffic lane lines match longitudinal joints)

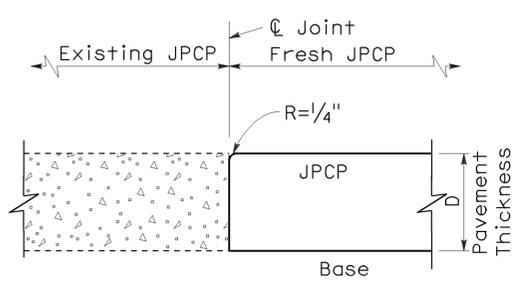


**TYPE II**  
(traffic lane lines do not match longitudinal joints)

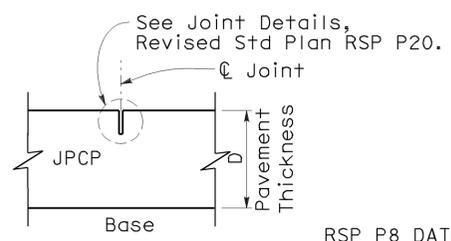


**TYPE III**  
(for short term repairs < 5 yrs design life or for slab replacements with a cracking and seating operation)

**SLAB LAYOUT**



SECTION B-B



SECTION C-C

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT**

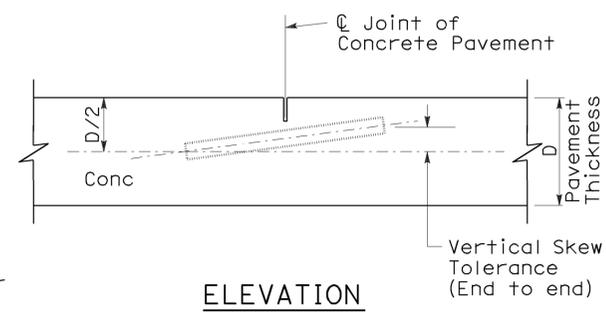
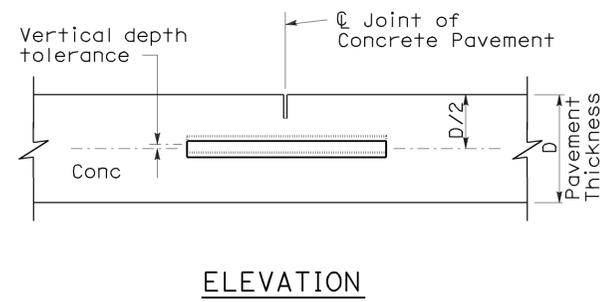
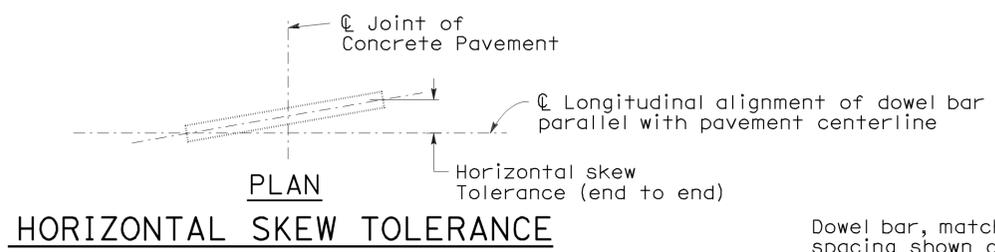
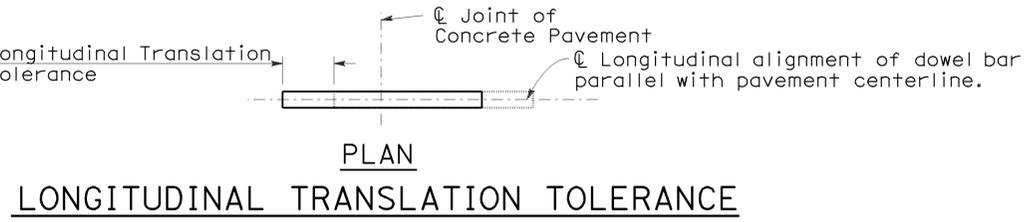
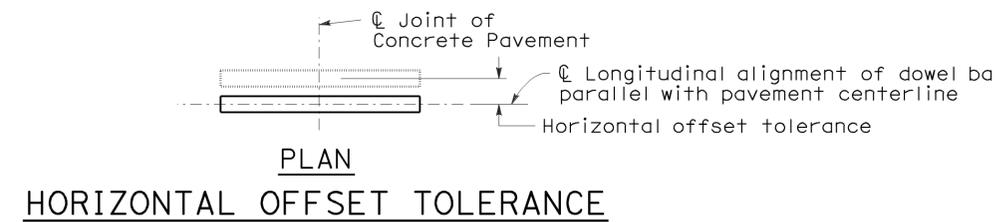
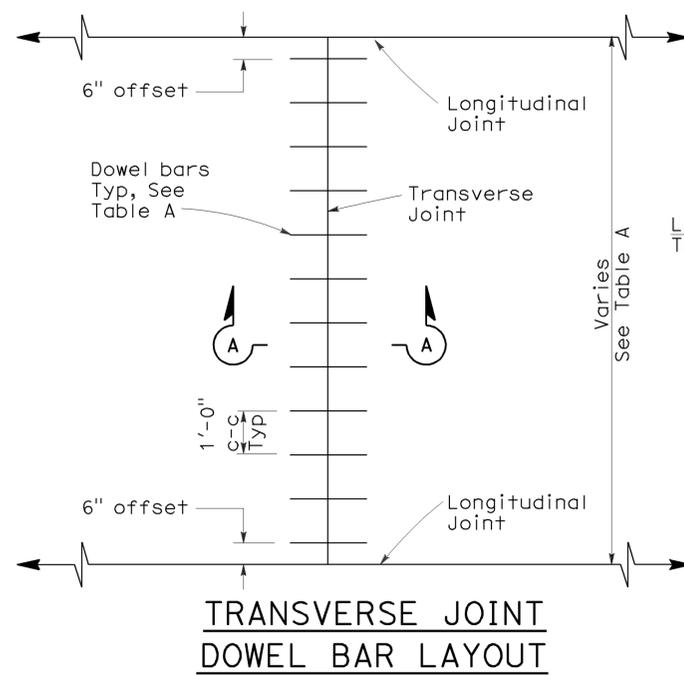
NO SCALE

RSP P8 DATED MAY 15, 2009 SUPERSEDES RSP P8 DATED SEPTEMBER 1, 2006 AND STANDARD PLAN P8 DATED MAY 1, 2006 - PAGE 123 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P8**

2006 REVISED STANDARD PLAN RSP P8

123



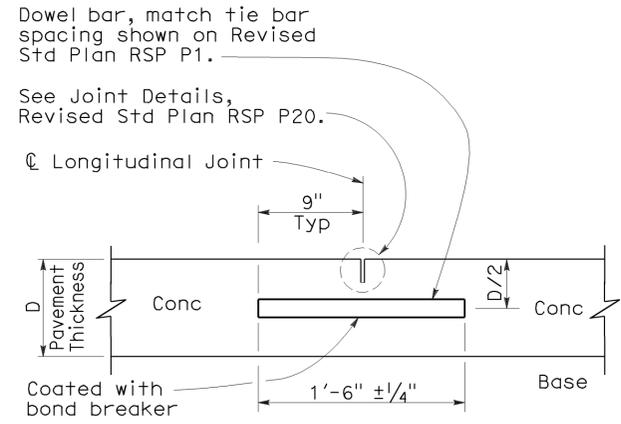
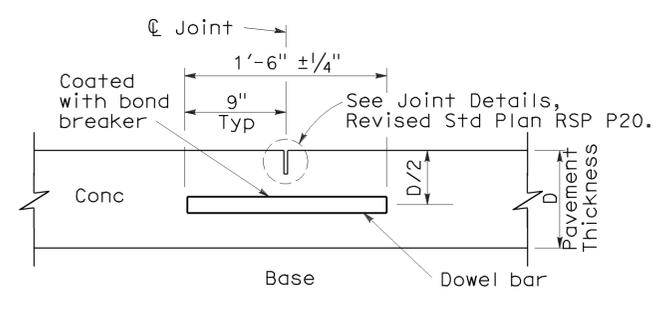
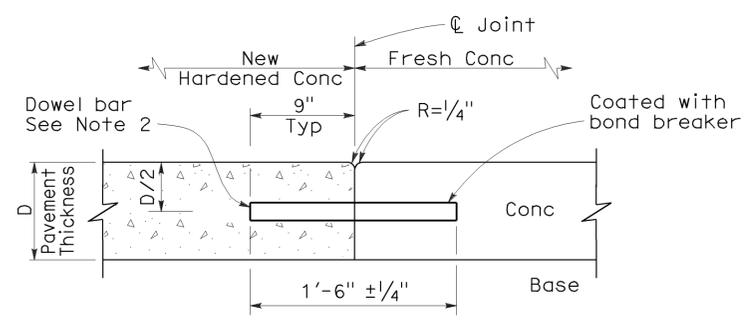
To accompany plans dated 4-12-10

- NOTES:**
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
  - 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1/4" Dia smooth dowel bars.
  - For widths not shown, see Project Plans.
  - If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the 1/4" radius, as shown.

**TABLE A (See Note 3)**

Dowel Bar Transverse Spacing Table

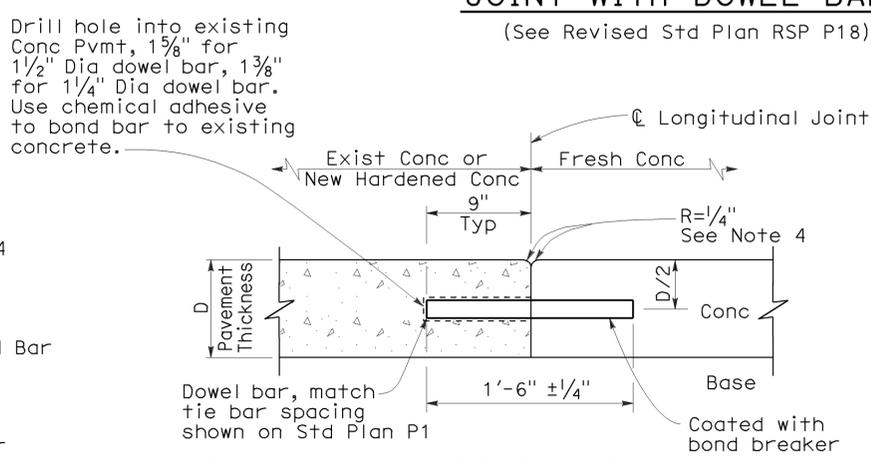
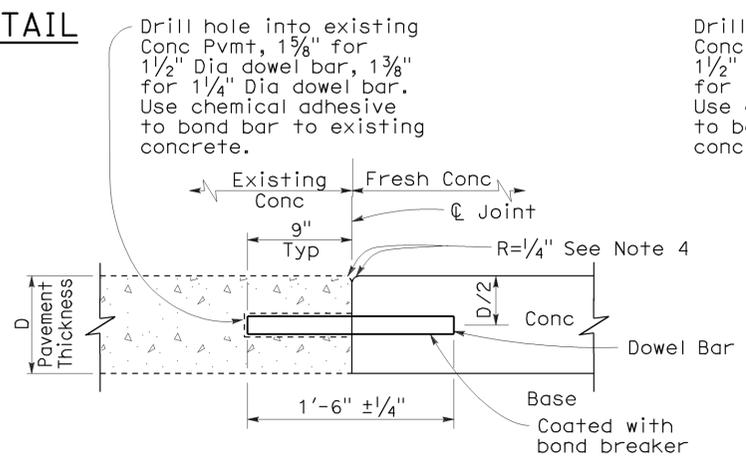
Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4



**SECTION A-A  
TRANSVERSE  
CONSTRUCTION JOINT DETAIL**

**TRANSVERSE CONTRACTION JOINT**

**LONGITUDINAL CONTRACTION  
JOINT WITH DOWEL BARS**  
(See Revised Std Plan RSP P18)



**TRANSVERSE CONSTRUCTION JOINT  
FOR EXISTING CONCRETE PAVEMENT**  
(Drill and bond locations)

**LONGITUDINAL CONSTRUCTION JOINT  
WITH DOWEL BARS**  
(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-  
DOWEL BAR  
DETAILS**  
NO SCALE

RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10  
DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

124

2006 REVISED STANDARD PLAN RSP P10

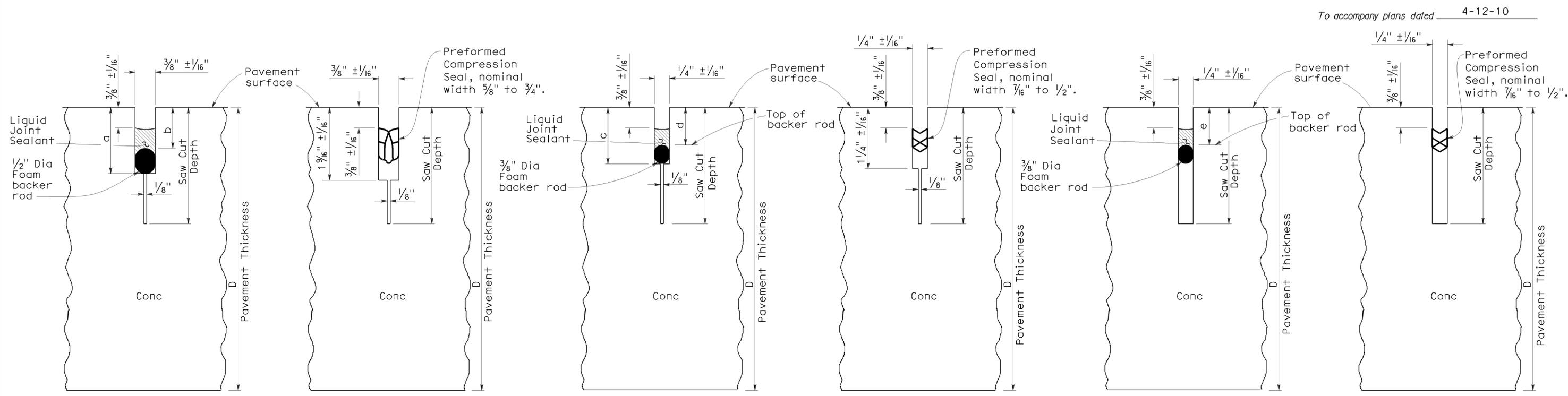
**NOTE:**

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

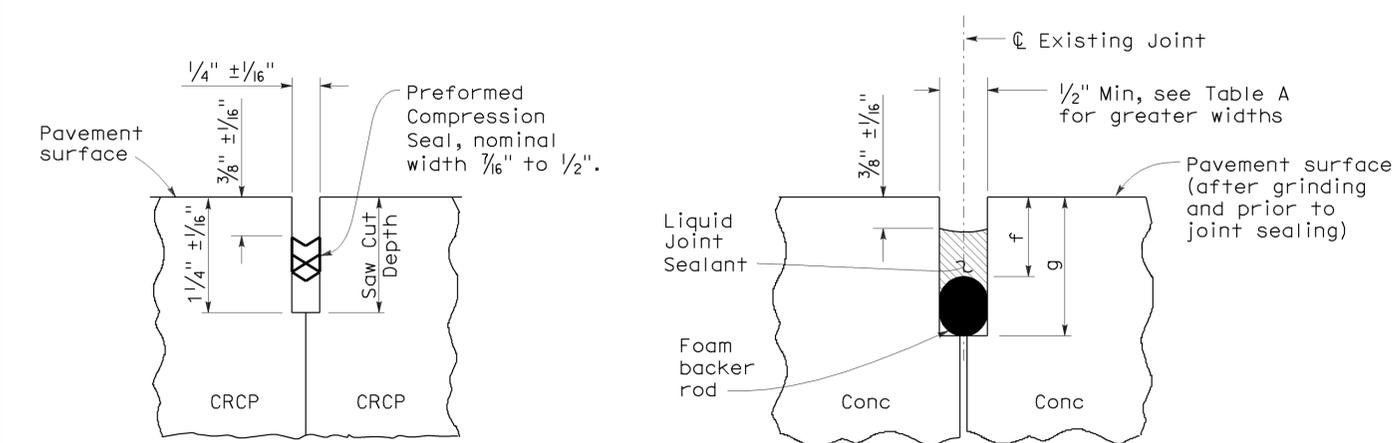
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	33	48

*William K. Farnbach*  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE

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**LIQUID SEALANT**      **COMPRESSION SEAL**      **LIQUID SEALANT**      **COMPRESSION SEAL**      **LIQUID SEALANT**      **COMPRESSION SEAL**  
**TYPE A1**      **TYPE A2**      **TYPE B**  
 Transverse Contraction Joints      Longitudinal Contraction Joints      Longitudinal or Transverse Contraction Joint



**COMPRESSION SEAL**      **LIQUID SEALANT**  
**TYPE C**      **TYPE R**  
 Transverse and Longitudinal Construction Joints (For CRCP)      Retrofit Transverse and Longitudinal Joints

**LIQUID SEALANT RESERVOIR DEPTH**

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

**TABLE A (TYPE R JOINT)**

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"

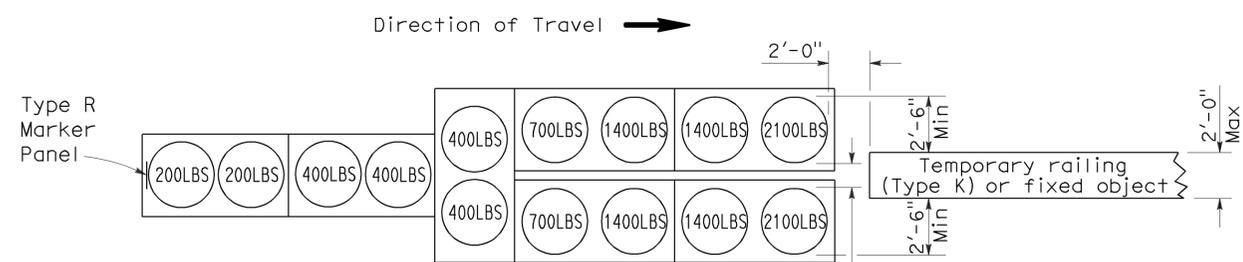
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-JOINT DETAILS**  
 NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20  
 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P20**

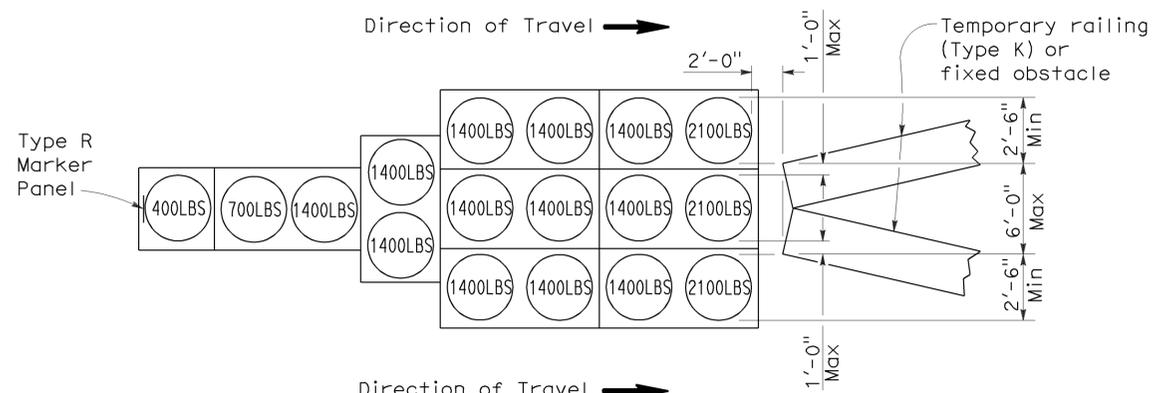
To accompany plans dated 4-12-10

2006 REVISED STANDARD PLAN RSP T1A



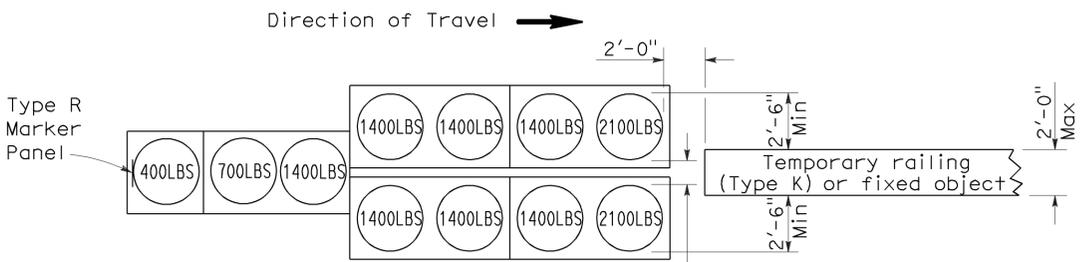
**ARRAY 'TU14'**

Approach speed 45 mph or more



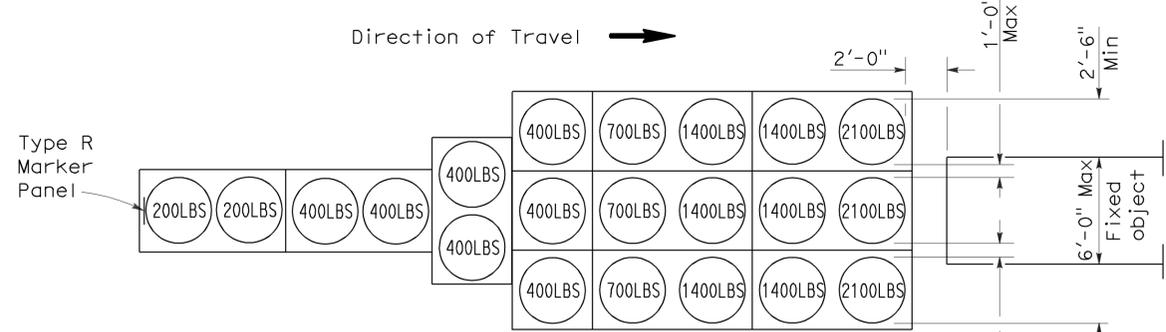
**ARRAY 'TU17'**

Approach speed less than 45 mph



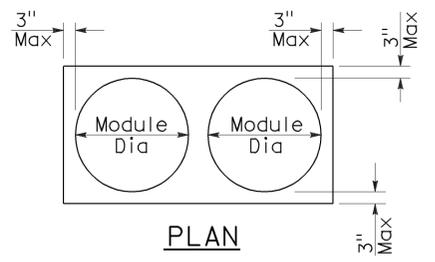
**ARRAY 'TU11'**

Approach speed less than 45 mph

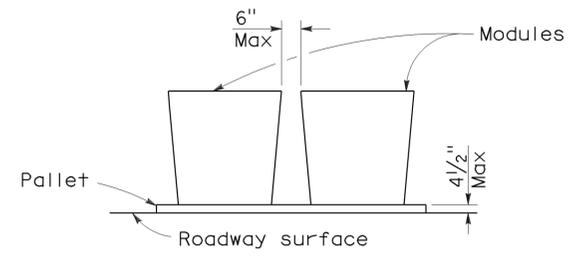


**ARRAY 'TU21'**

Approach speed 45 mph or more



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A  
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	35	48

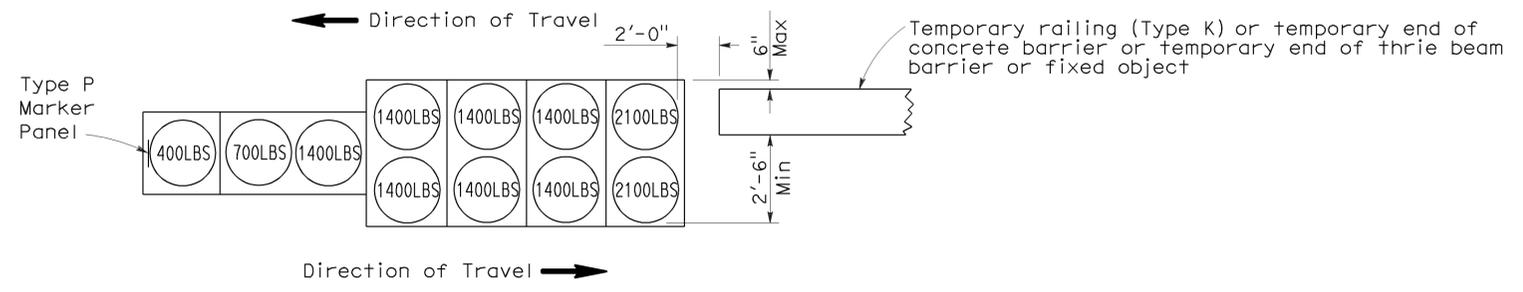
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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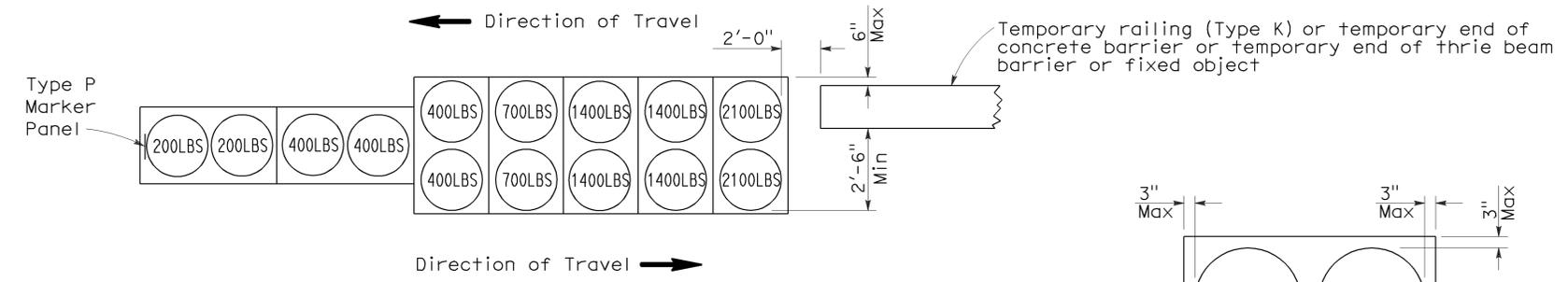
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 4-12-10



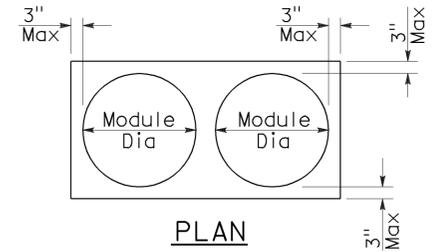
**ARRAY 'TB11'**

Approach speed less than 45 mph

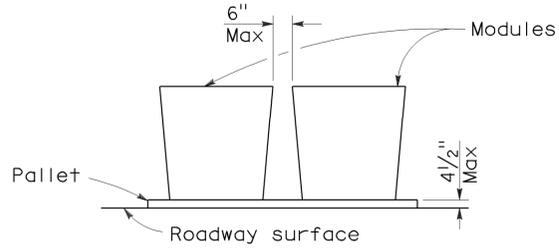


**ARRAY 'TB14'**

Approach speed 45 mph or more



PLAN



ELEVATION

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B  
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

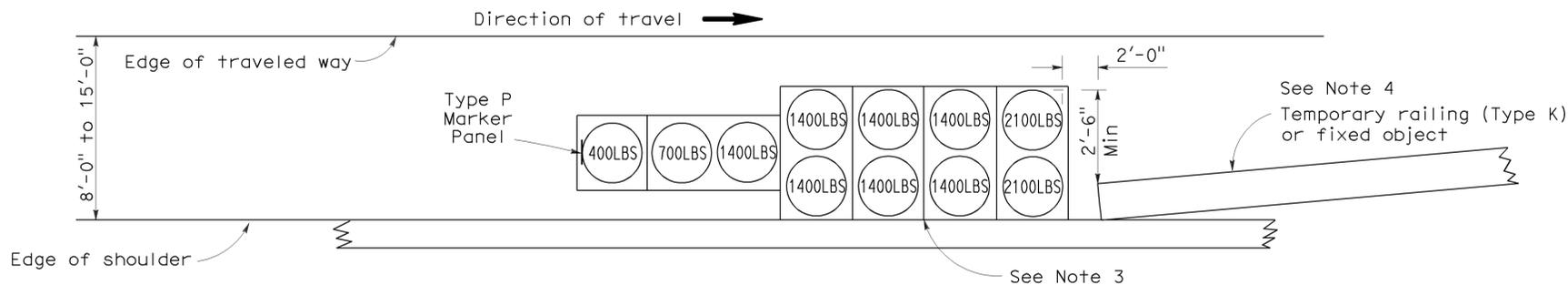
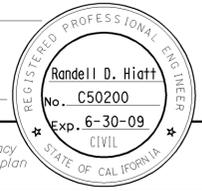
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	36	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

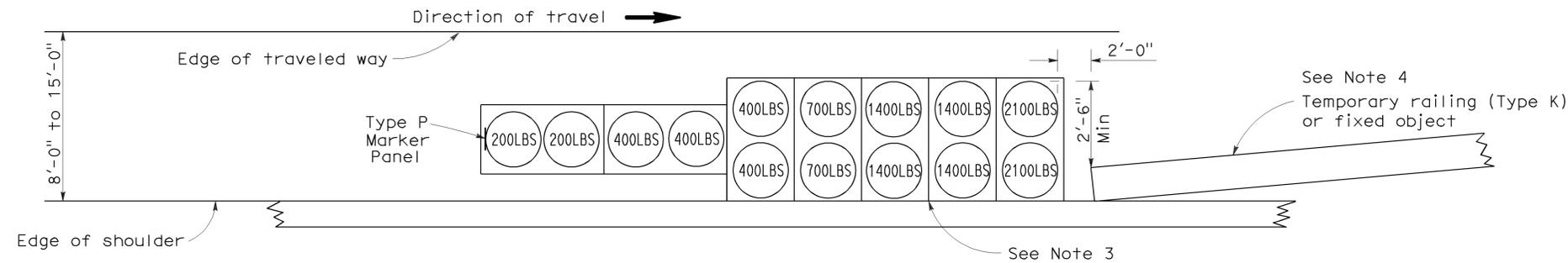
June 6, 2008  
PLANS APPROVAL DATE

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To accompany plans dated 4-12-10



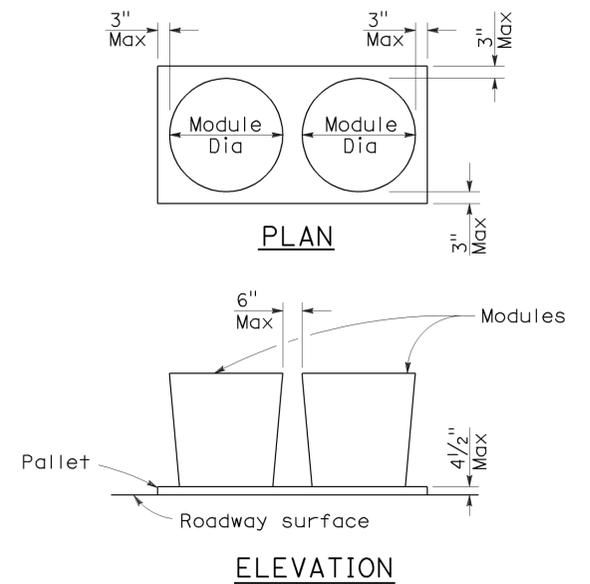
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9

**NOTES:**

- (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
- All sand weights are nominal.
- The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
- If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



**CRASH CUSHION PALLET DETAIL**  
See Note 11

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**  
NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	38	48

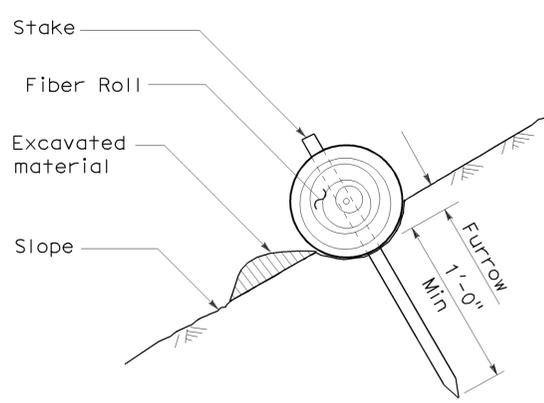
Robert B. Schott  
LICENSED LANDSCAPE ARCHITECT

April 3, 2009  
PLANS APPROVAL DATE

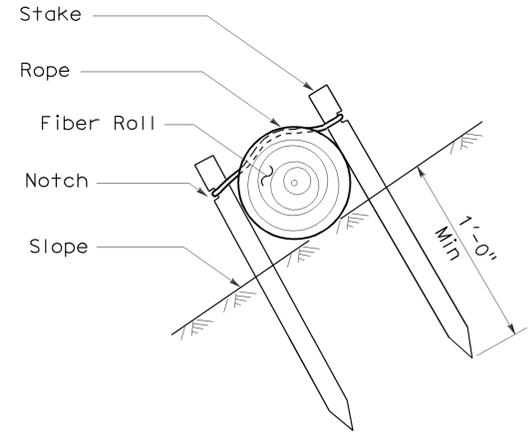
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

STATE OF CALIFORNIA  
LICENSED LANDSCAPE ARCHITECT  
Robert B. Schott 11-30-10  
2-25-09  
DATE

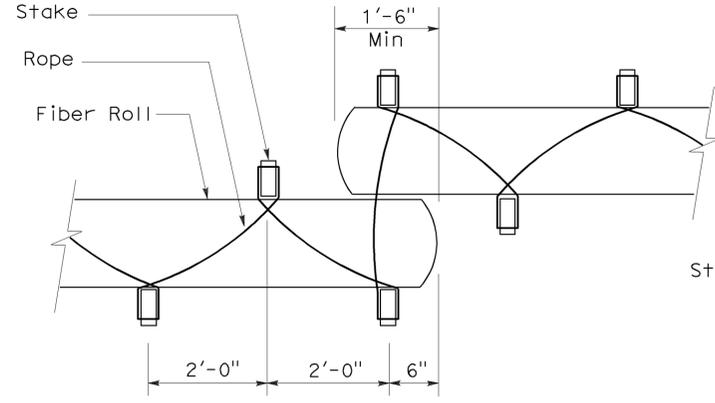
To accompany plans dated 4-12-10



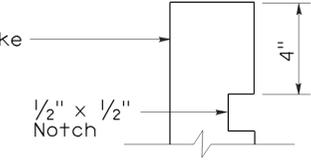
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 1)**



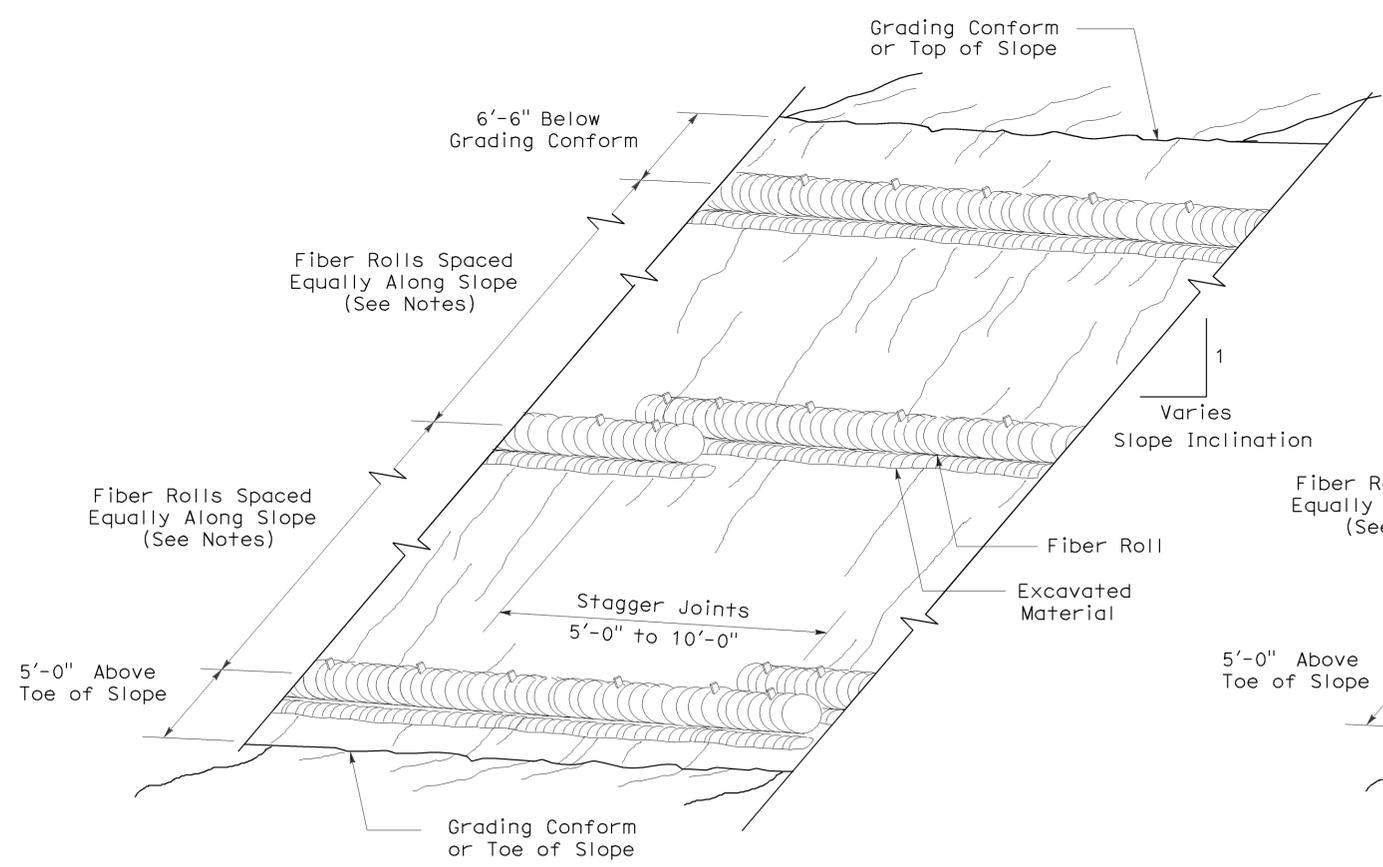
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 2)**



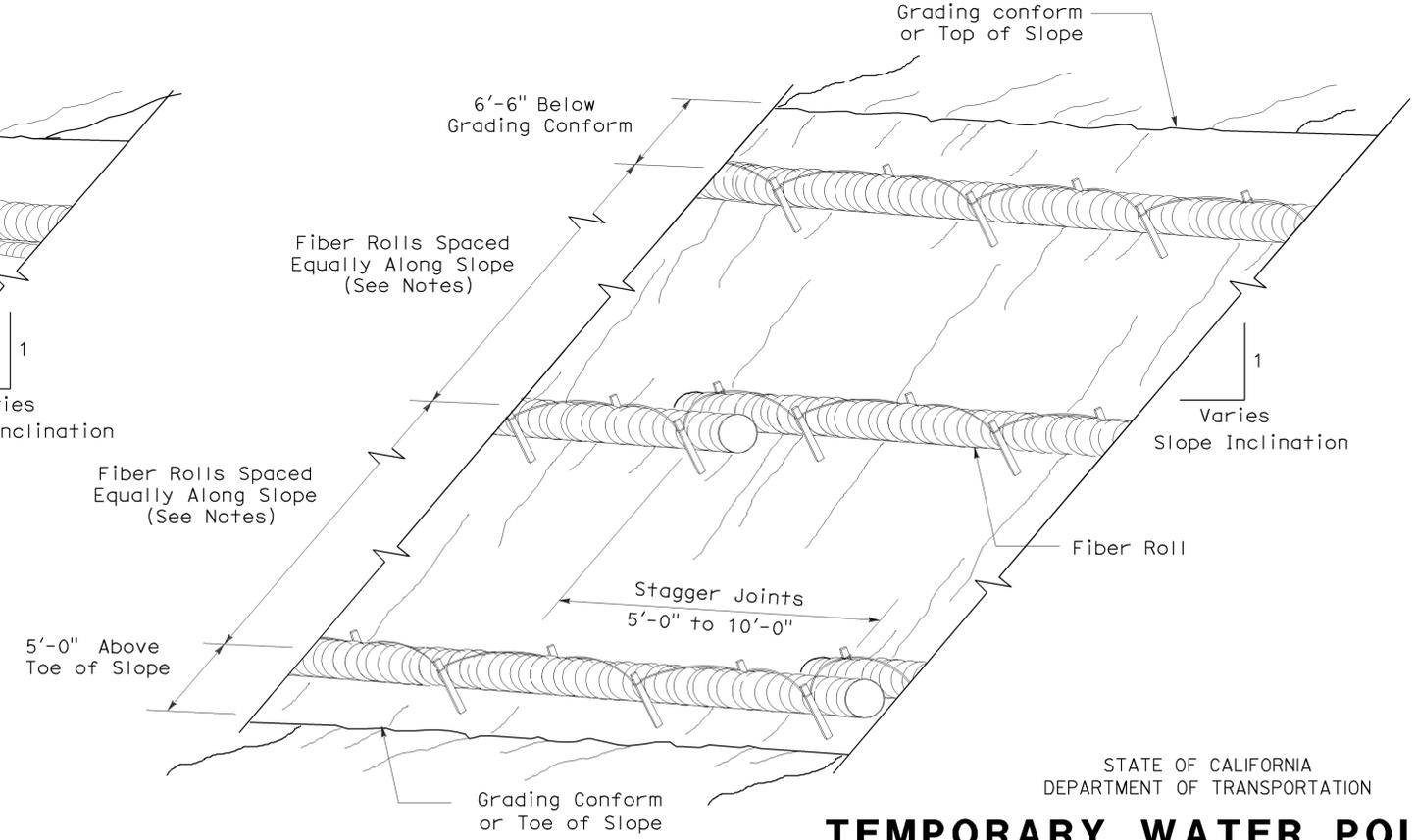
**PLAN**  
**ELEVATION**  
**STAKE NOTCH DETAIL**



- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
  2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)**

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T56**

232

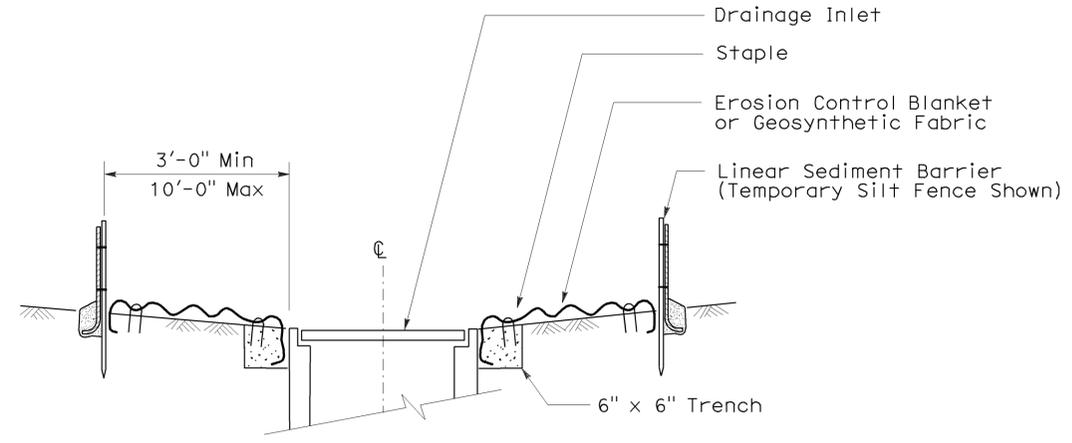
2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	39	48

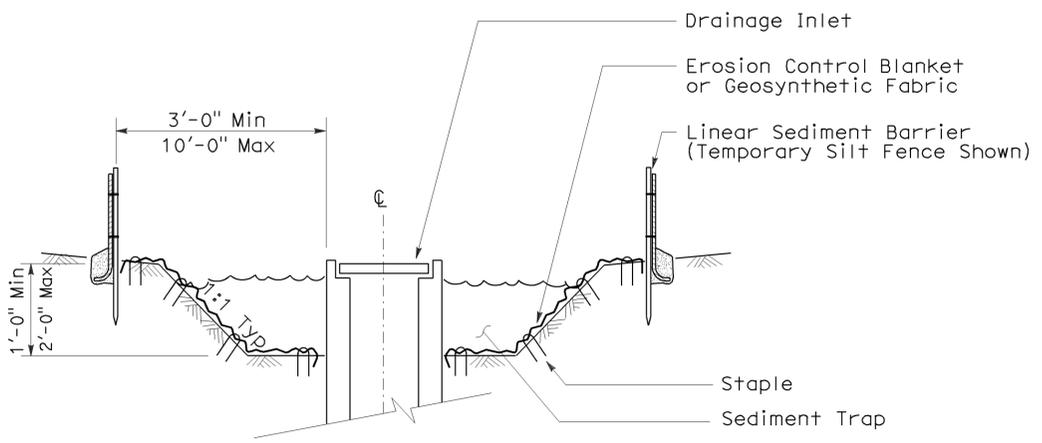
Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE

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.

To accompany plans dated 4-12-10

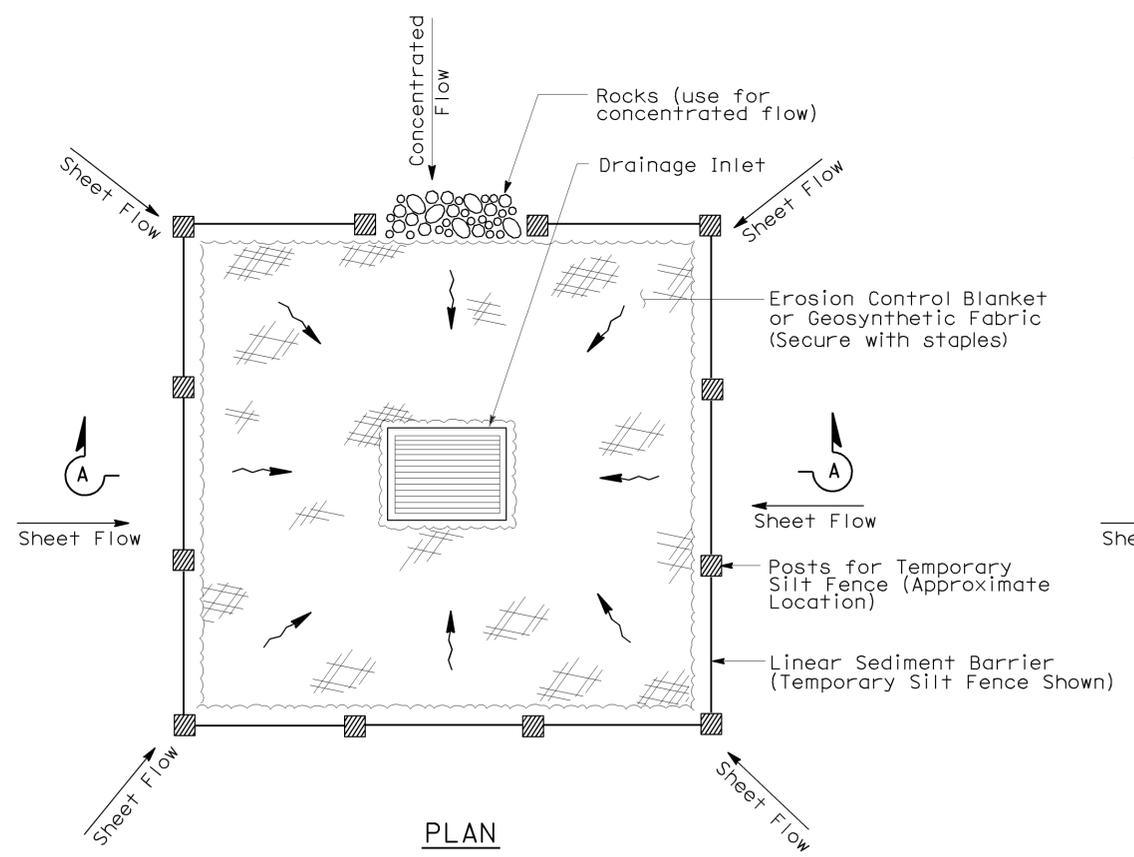


SECTION A-A

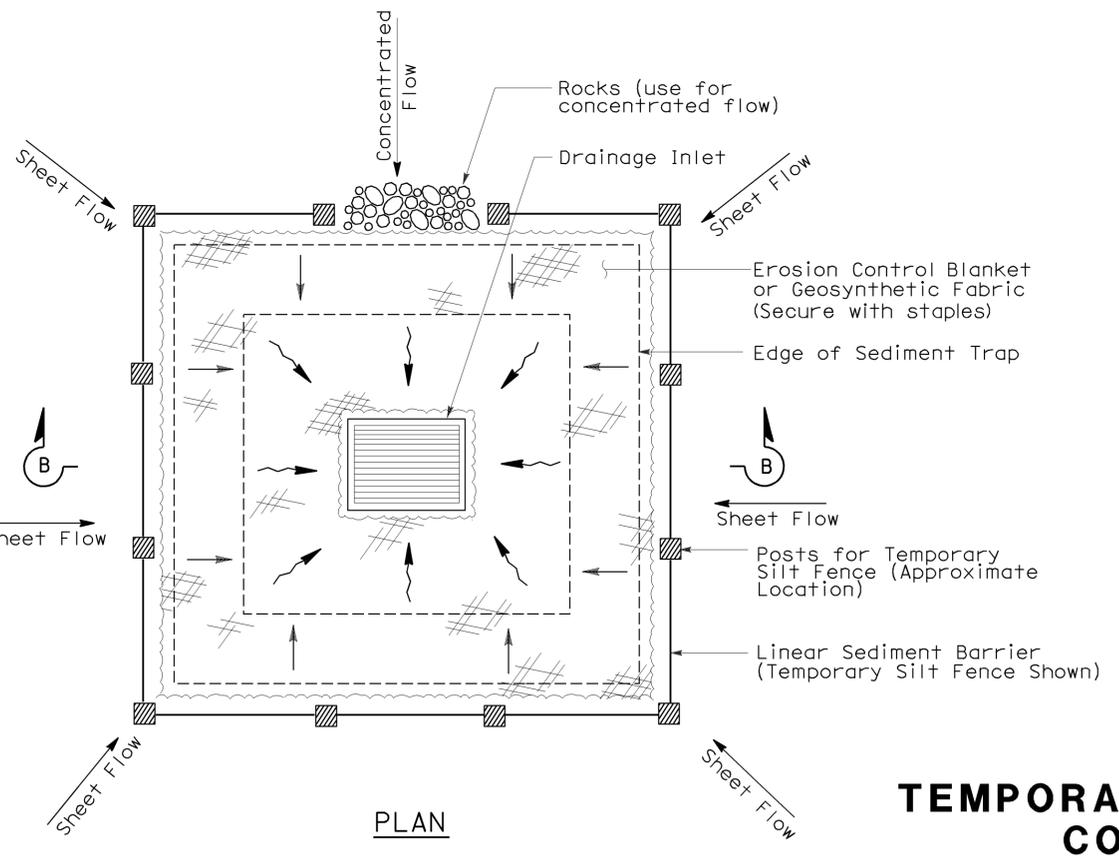


SECTION B-B

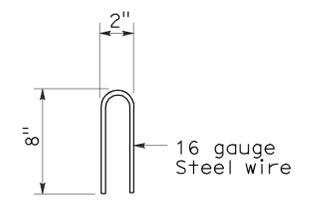
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
  2. Dimensions may vary to fit field conditions.



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

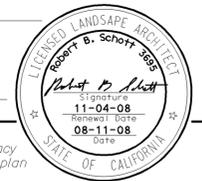
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE

Nsp t61 dated august 15, 2008 supplements the standard plans book dated may 2006.

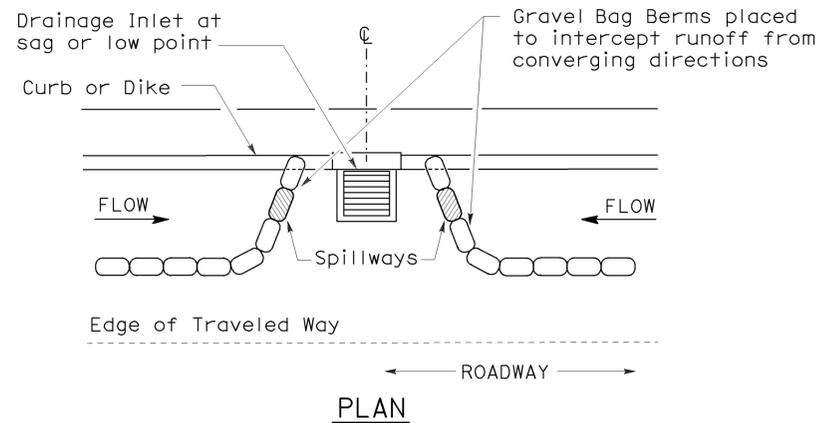
2006 NEW STANDARD PLAN NSP T61



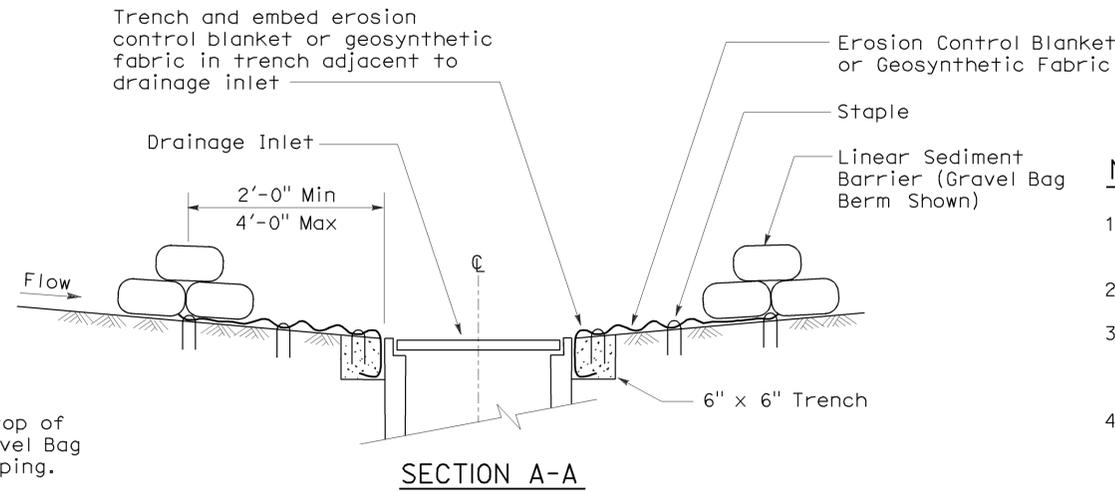
### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



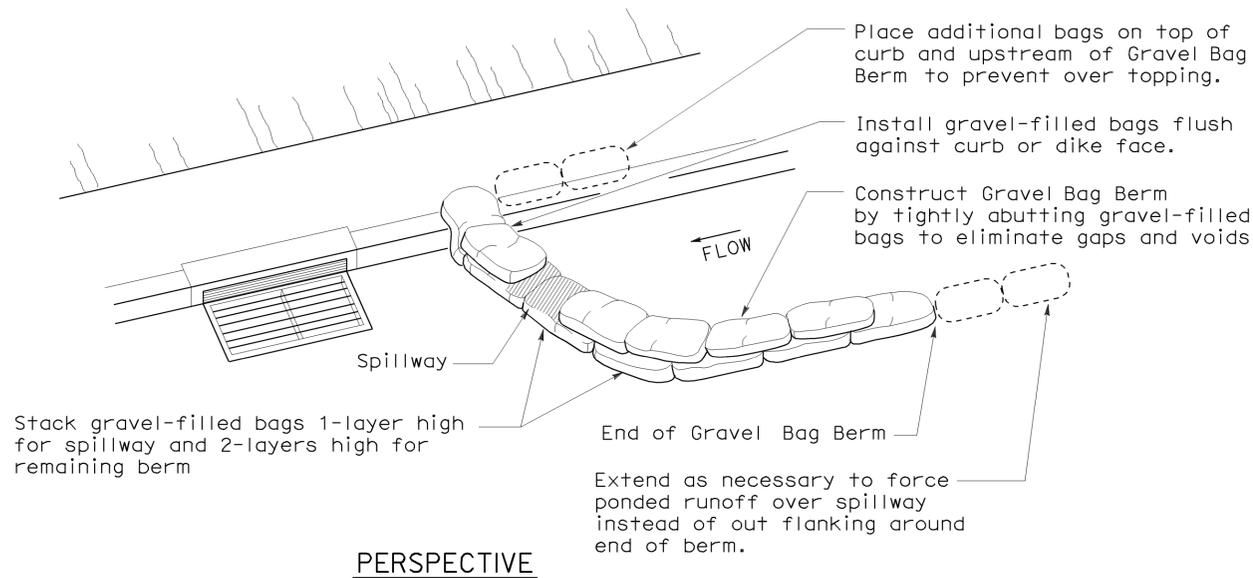
**PLAN**  
**CONFIGURATION FOR SAG POINT INLET**  
**(GRAVEL BAG BERM)**



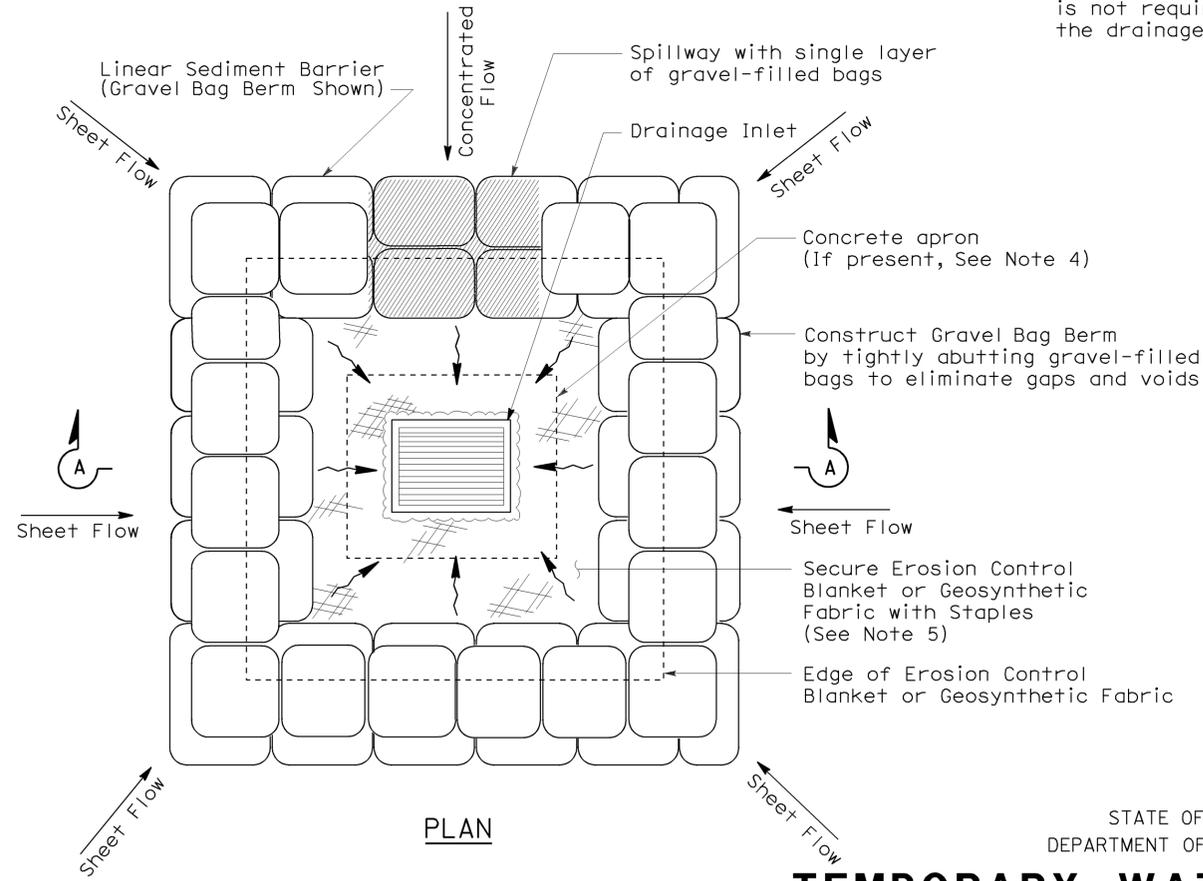
**SECTION A-A**

**NOTES:**

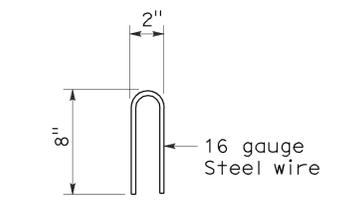
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



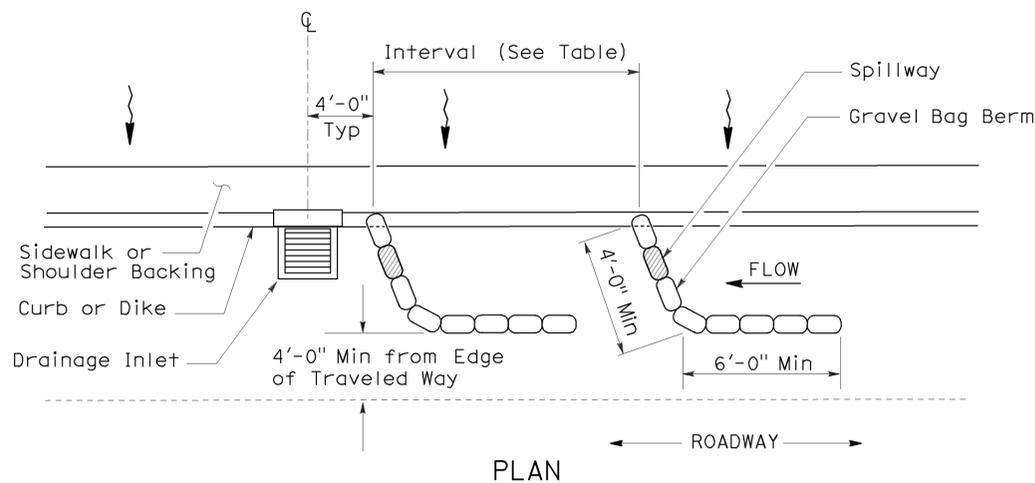
**PERSPECTIVE**



**PLAN**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 3B)**



**STAPLE DETAIL**



**PLAN**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 3A)**  
**(GRAVEL BAG BERM)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE  
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

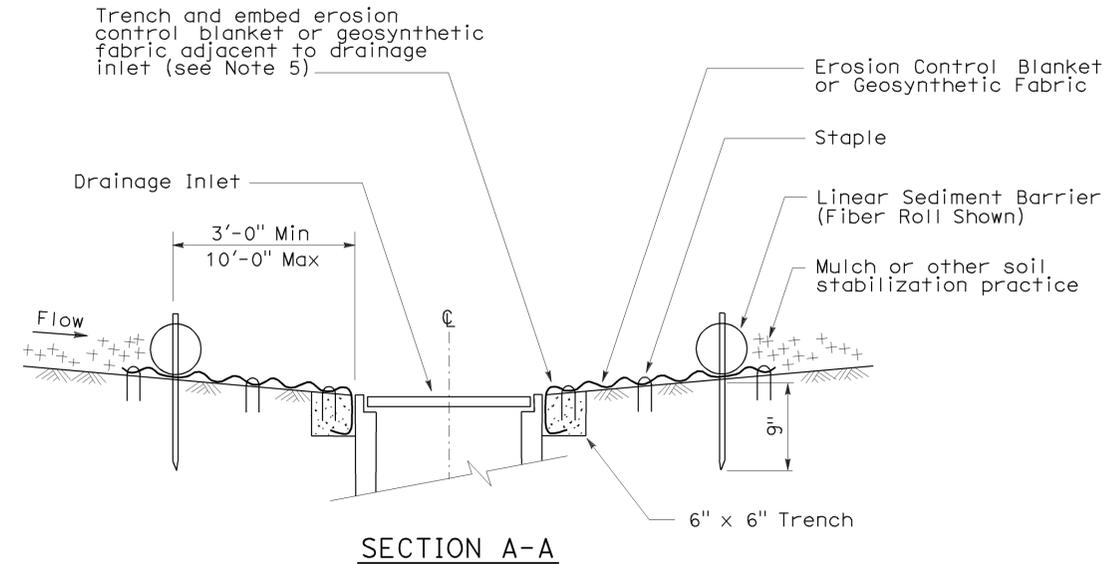
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	41	48

Robert B. Schott  
LICENSED LANDSCAPE ARCHITECT

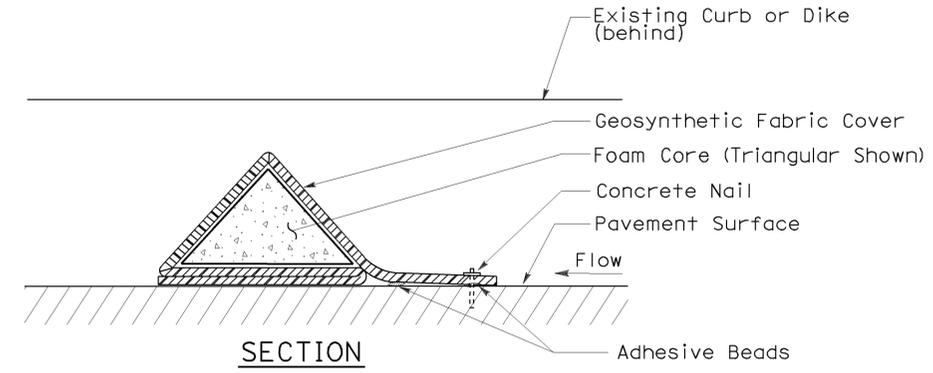
August 15, 2008  
PLANS APPROVAL DATE

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.

To accompany plans dated 4-12-10



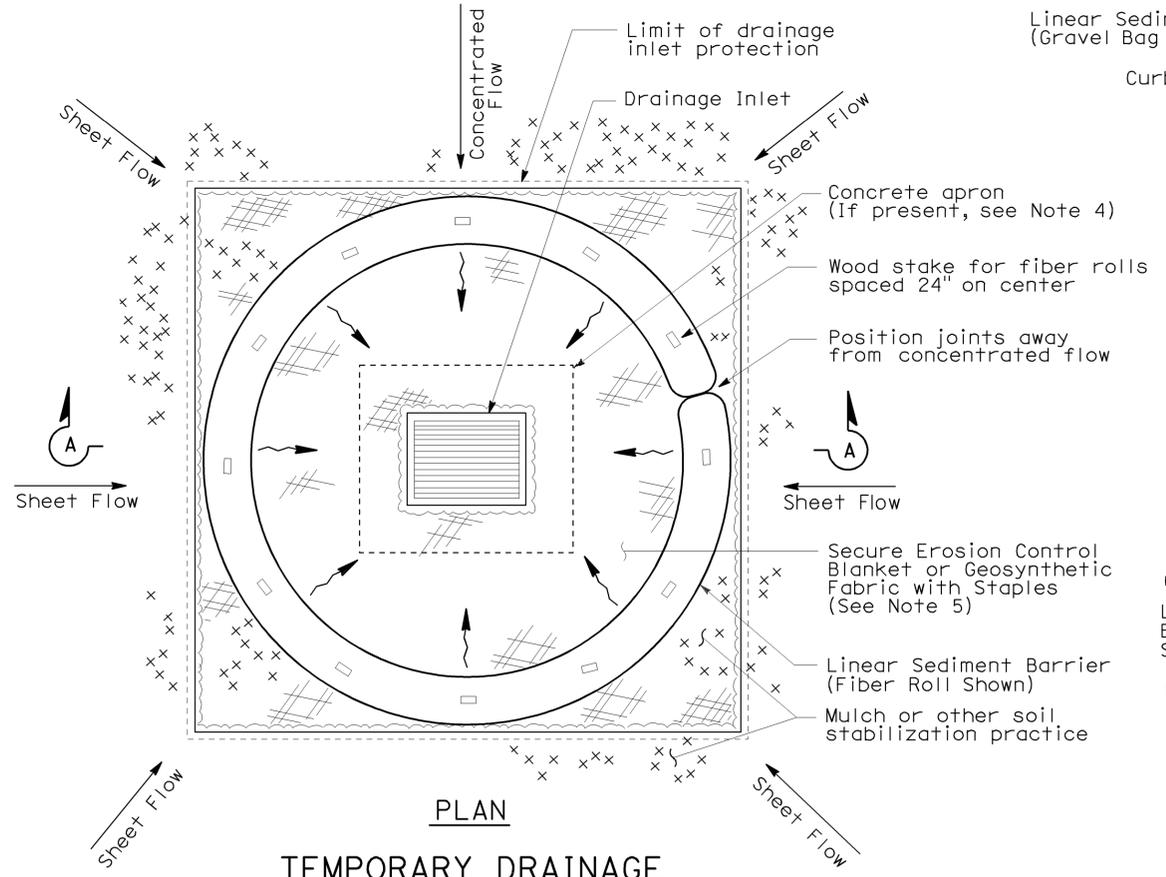
SECTION A-A



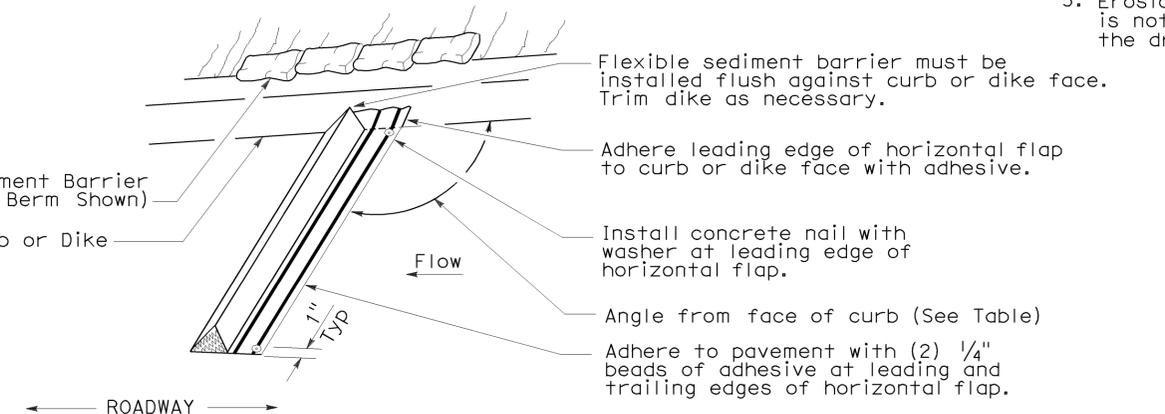
SECTION  
FLEXIBLE SEDIMENT BARRIER DETAIL  
(FOAM BARRIER SHOWN)

NOTES:

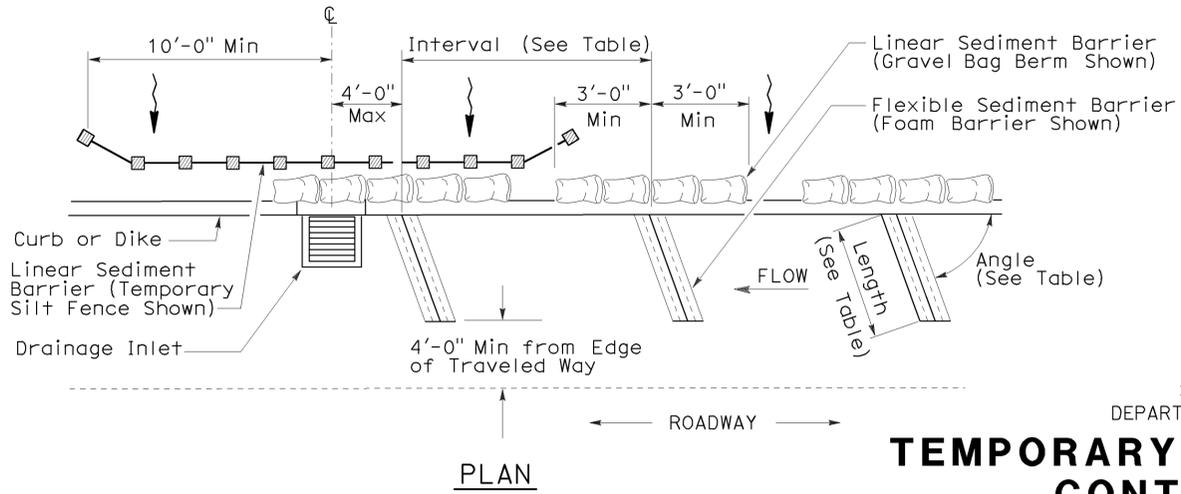
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
- Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



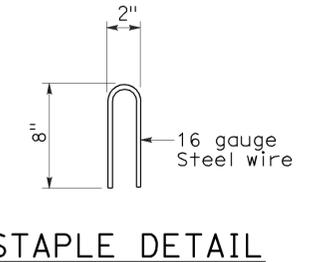
PLAN  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 4A)



PERSPECTIVE



PLAN  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 4B)  
FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

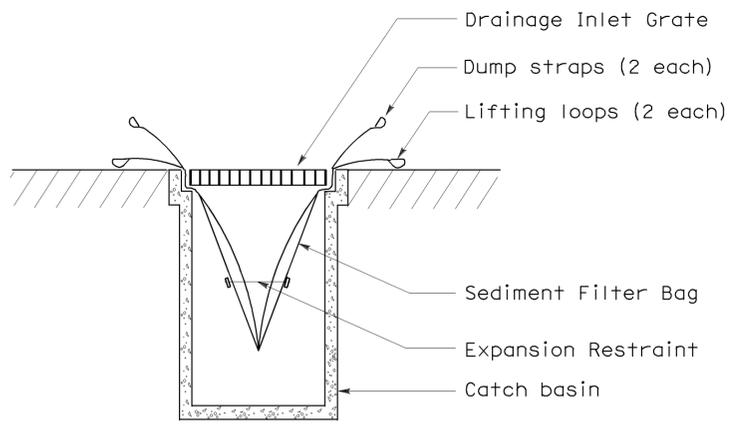
**TEMPORARY WATER POLLUTION  
CONTROL DETAILS  
(TEMPORARY DRAINAGE  
INLET PROTECTION)**

NO SCALE  
NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

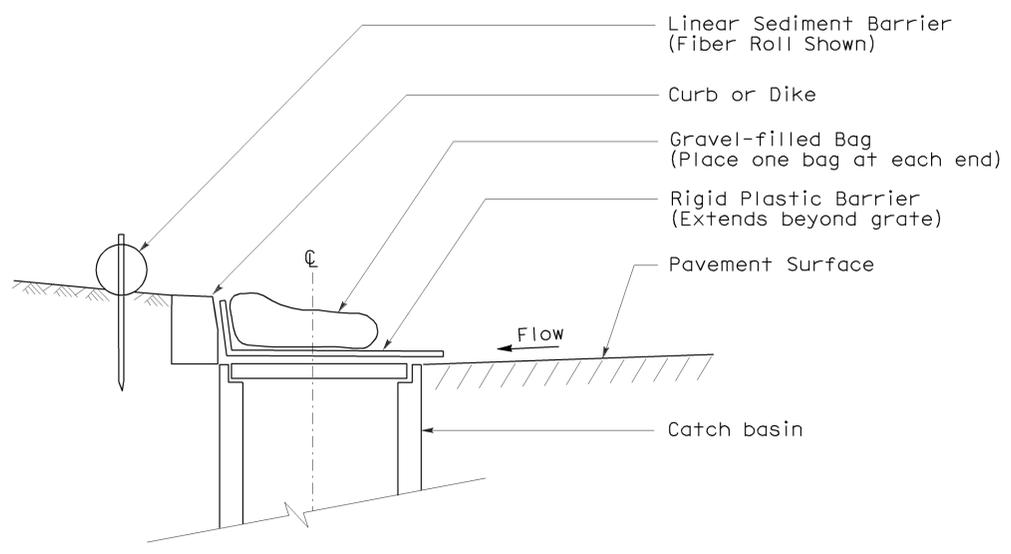
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	42	48

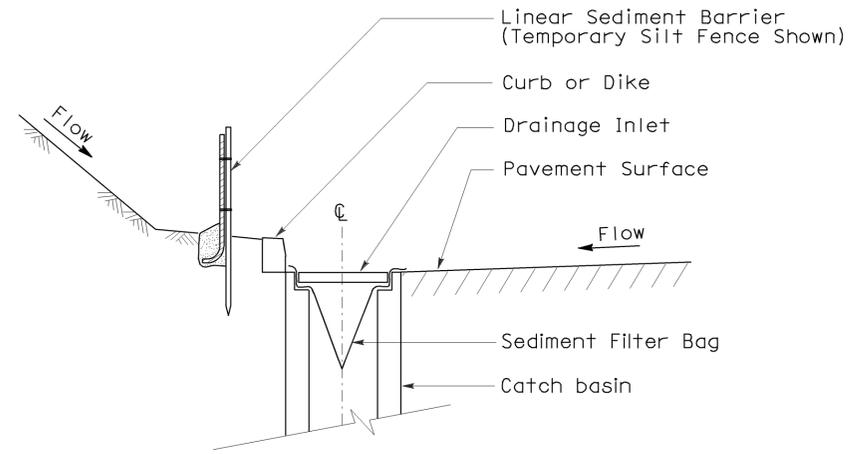
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



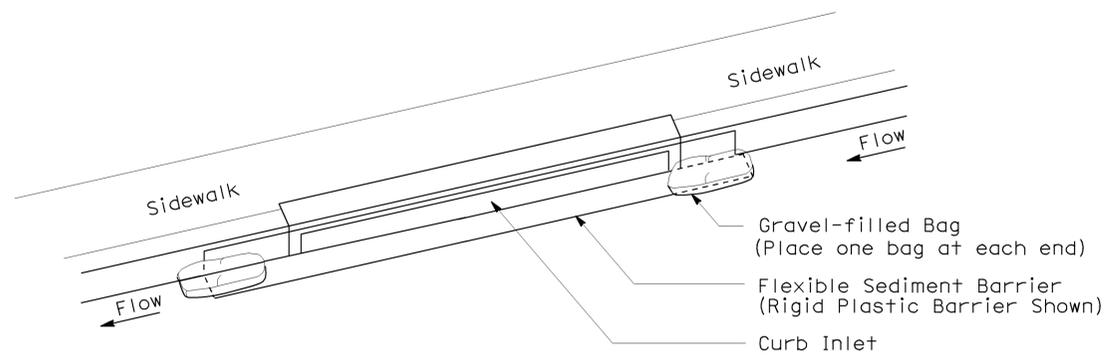
**SECTION B-B**  
**SEDIMENT FILTER BAG DETAIL**



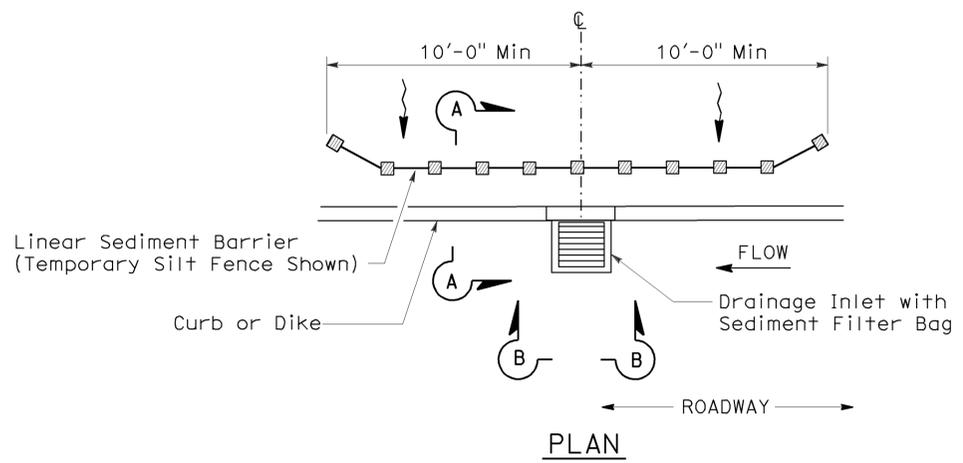
**SECTION**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 6A)**  
**(CATCH BASIN WITH GRATE)**



**SECTION A-A**



**PERSPECTIVE**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 6B)**  
**(CURB INLET WITHOUT GRATE)**



**PLAN**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 5)**  
**(SEDIMENT FILTER BAG)**

- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
  2. Dimensions may vary to fit field conditions.

To accompany plans dated 4-12-10

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

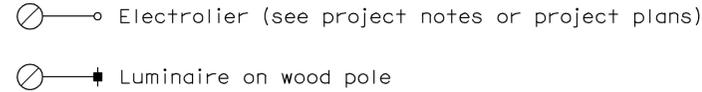
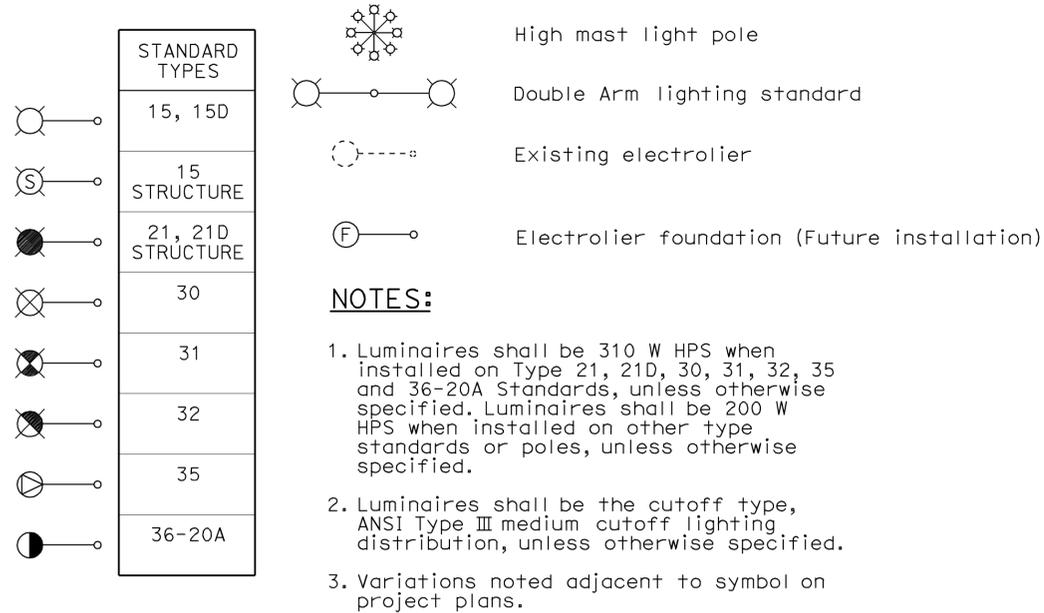
NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T64**

2006 NEW STANDARD PLAN NSP T64

# ELECTROLIERS



## STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	43	48

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

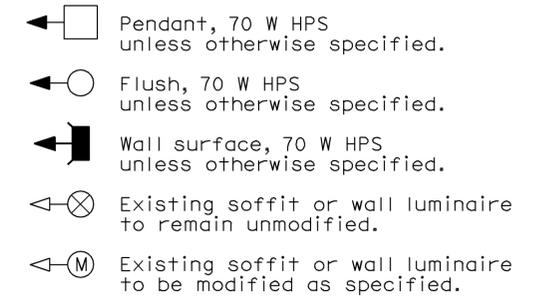
October 5, 2007  
PLANS APPROVAL DATE

Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

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To accompany plans dated 4-12-10

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1A**

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Yol	505	0.7/R22.4	44	48

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

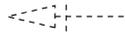
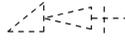
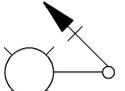
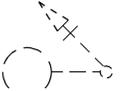
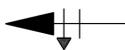
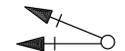
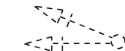
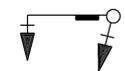
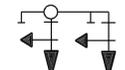
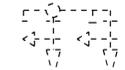
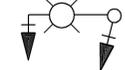
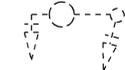
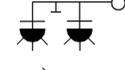
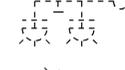
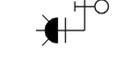
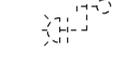
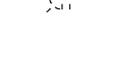
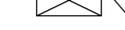
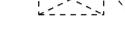
Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

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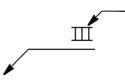
### CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

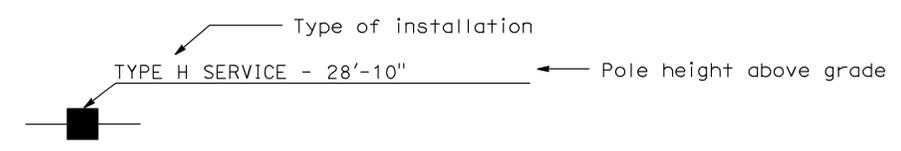
### SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

### SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH---	---oh---	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

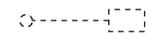
### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

### SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

### NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

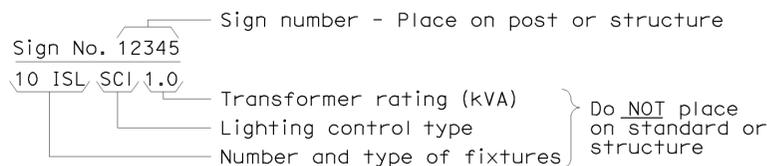
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1B**

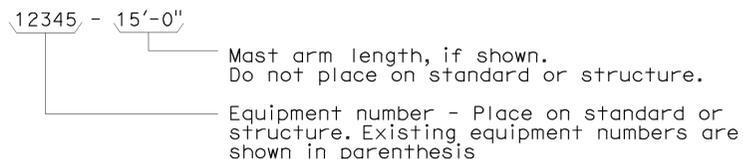
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

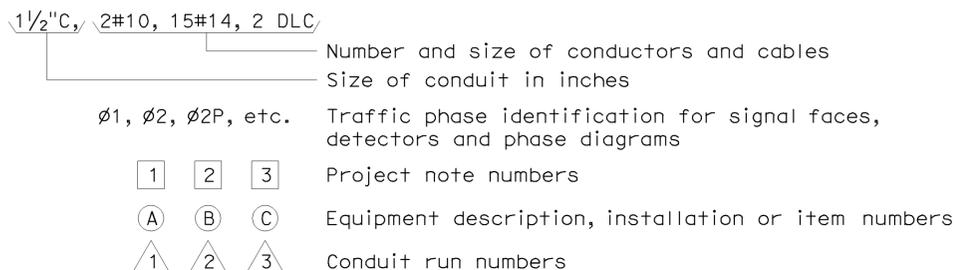
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



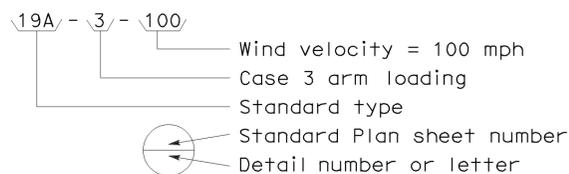
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



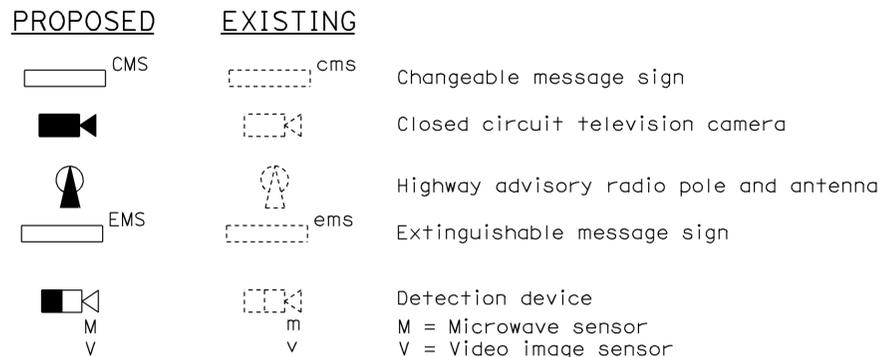
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



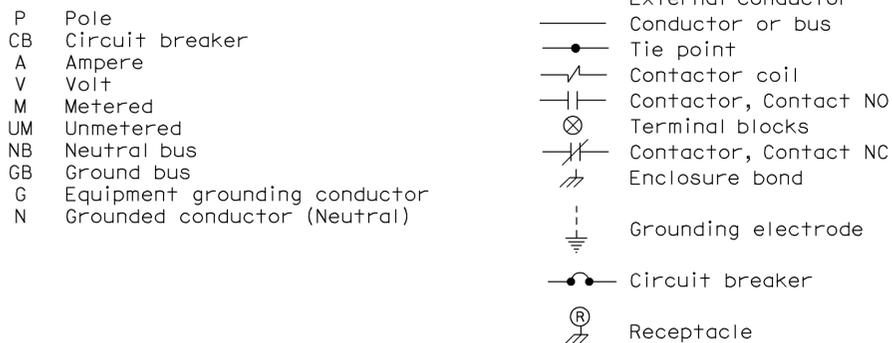
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



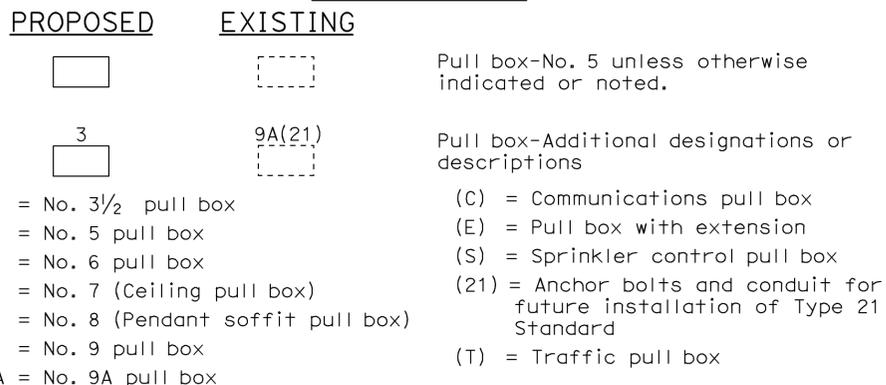
### MISCELLANEOUS EQUIPMENT



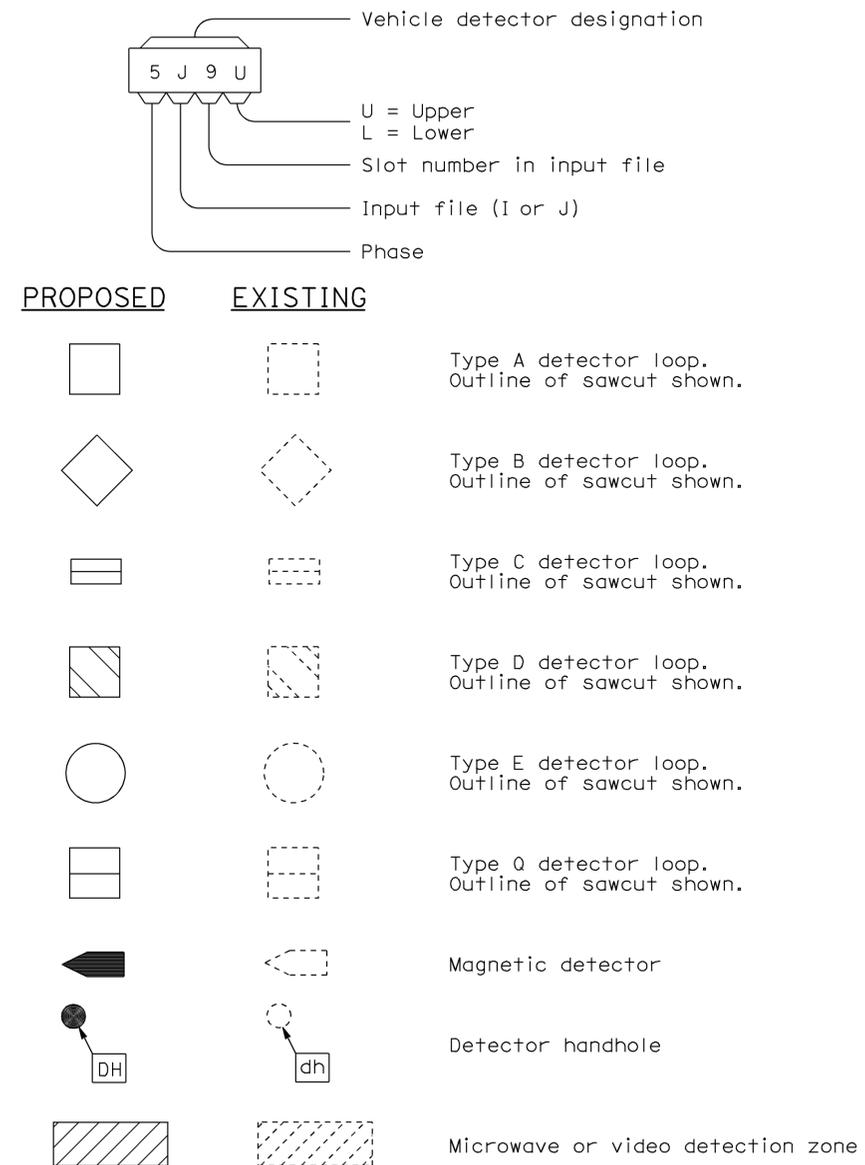
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C  
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1C**

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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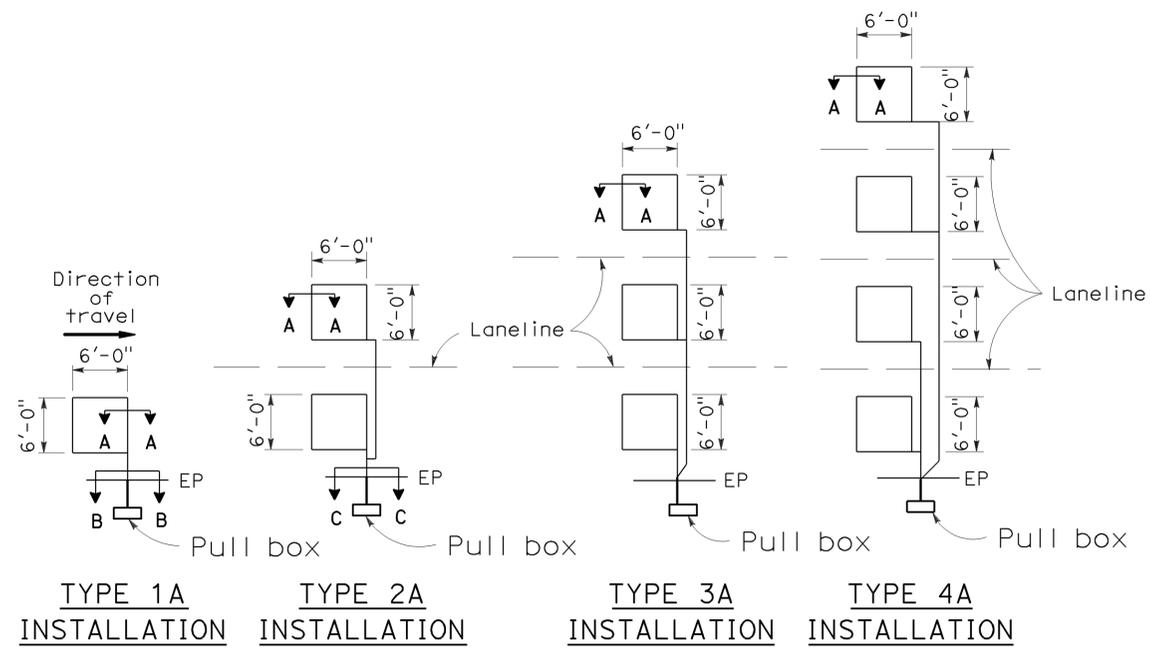
*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE

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## LOOP INSTALLATION PROCEDURE

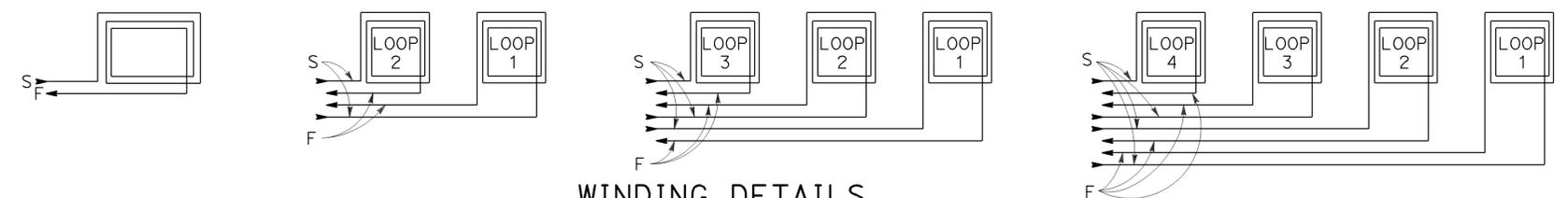
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

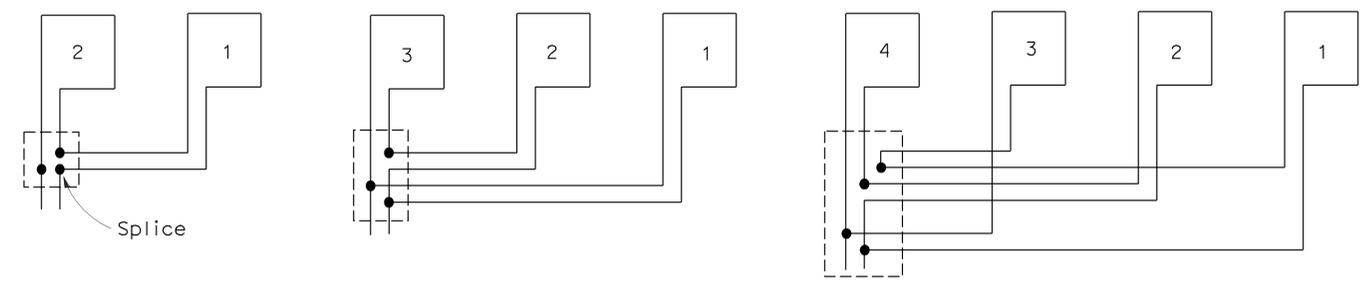
### SAWCUT DETAILS

- (Type A loop detector configurations illustrated)
- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



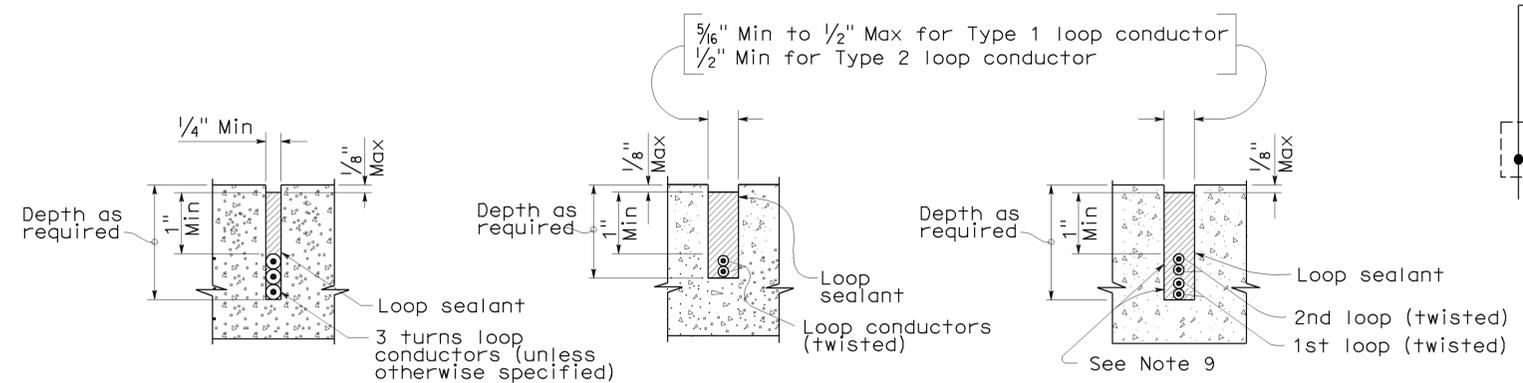
### WINDING DETAILS

See Notes 6 and 7



### TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A SECTION B-B SECTION C-C  
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

## ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

NO SCALE

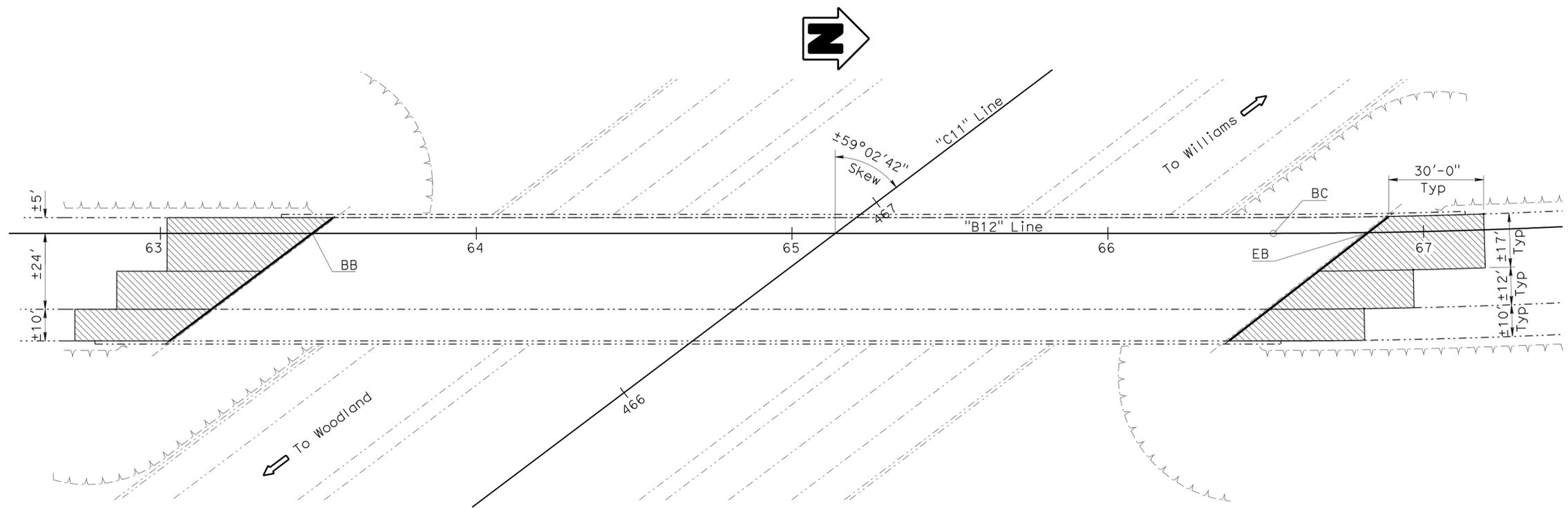
RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A  
DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

## REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol	505	0.7/R22.4	47	48

2-22-10  
 REGISTERED CIVIL ENGINEER DATE  
 4-12-10  
 PLANS APPROVAL DATE  
 K. Selventhiran  
 No. C67973  
 Exp. 6-30-11  
 CIVIL  
 STATE OF CALIFORNIA  
 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.



**PLAN**  
1" = 20'

**GENERAL NOTES**  
**LOAD AND FACTOR DESIGN**

DESIGN: Bridge Design Specifications (1996 AASHTO with Revisions by CALTRANS)  
 DEAD LOAD: Includes 35 psf for future wearing surface.  
 LIVE LOADING: HS20-44 and alternative and permit design load.  
 REINFORCED CONCRETE:  $f_y = 60$  ksi  
 $f'_c = 3.6$  ksi  
 $n = 8$

- NOTES:**
- For Approach Slab details, see "Structure Approach Type R(30D)" sheet. Paving Notch Extension is required for Diaphragm Abutment.
  - Cross Slope and Finished Grade of new approach slab to match existing.
  - Place Joint Seals (MR=1 1/4") 3" into barrier rail on low side of deck if barrier and deck joint align.
- Indicates limits of saw cut and remove existing approach slab pavement and place new Structure Approach Type R(30D).  
 - - - - - Indicates Existing Structures  
 ——— Indicates location of remove existing joint seal and replace with new seal, for detail, see "Standard plan 2006" and see "Joint Seal Table"

B6-21

**NOTE:**  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

JOINT SEAL TABLE		
Joint Seal Location	Minimum "MR"	Approx. Length
	in	ft
Abut 1	1 1/4	76
Abut 5	1 1/4	76

**QUANTITIES**

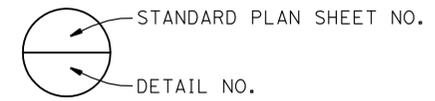
AGGREGATE BASE (APPROACH SLAB)	12 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	120 CY
PAVING NOTCH EXTENSION	114 CF
JOINT SEAL (MR=1 1/4")	152 FT

**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	STRUCTURE APPROACH TYPE R(30D)

**STANDARD PLANS DATED MAY 2006**

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS
A10D	SYMBOLS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
P1	JOINTED PLAIN CONCRETE PAVEMENT



**ROUTE 505 / 5 SEPARATION**  
**APPROACH SLABS**  
**GENERAL PLAN**

G. Setberg DESIGN ENGINEER	DESIGN	BY K. Selventhiran	CHECKED N. Nguyen	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 2	BRIDGE NO.	22-0143	
	DETAILS	BY C. Figuerres	CHECKED N. Nguyen	LAYOUT	BY K. Selventhiran			CHECKED N. Nguyen	POST MILE	R22.33
	QUANTITIES	BY K. Selventhiran	CHECKED N. Nguyen	SPECIFICATIONS	BY I. Huang			PLANS AND SPECS COMPARED	I. Huang	

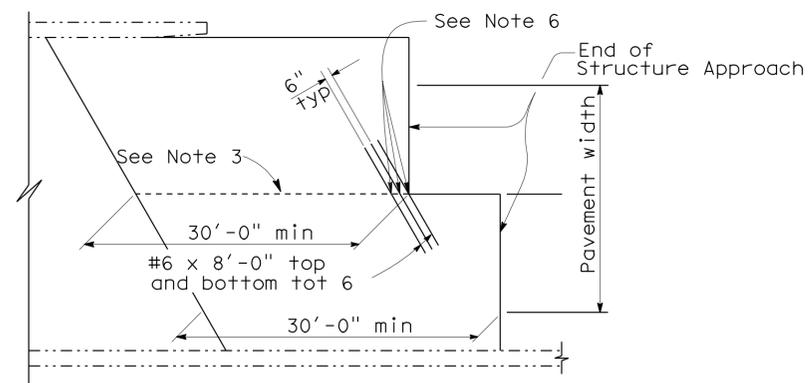
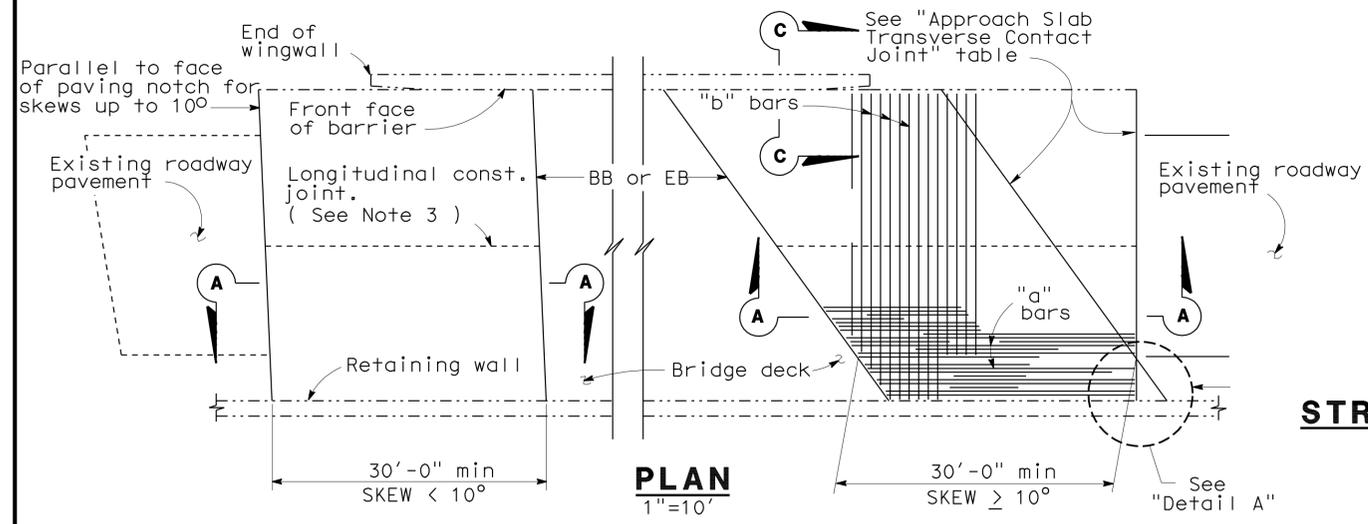
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



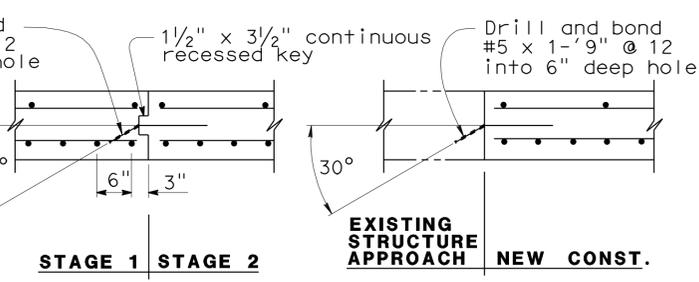
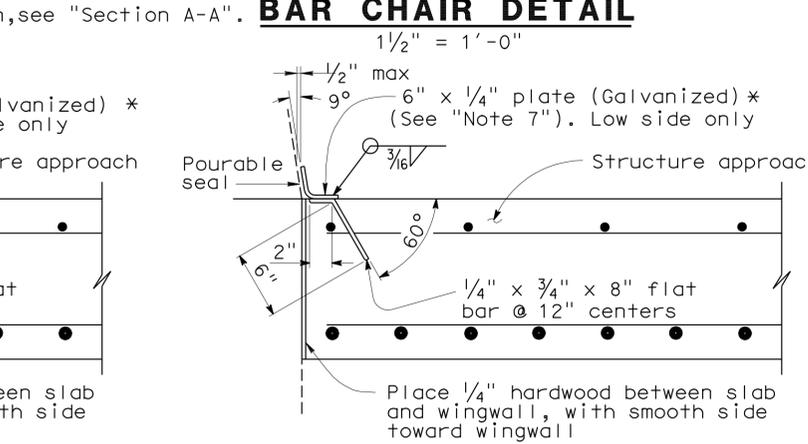
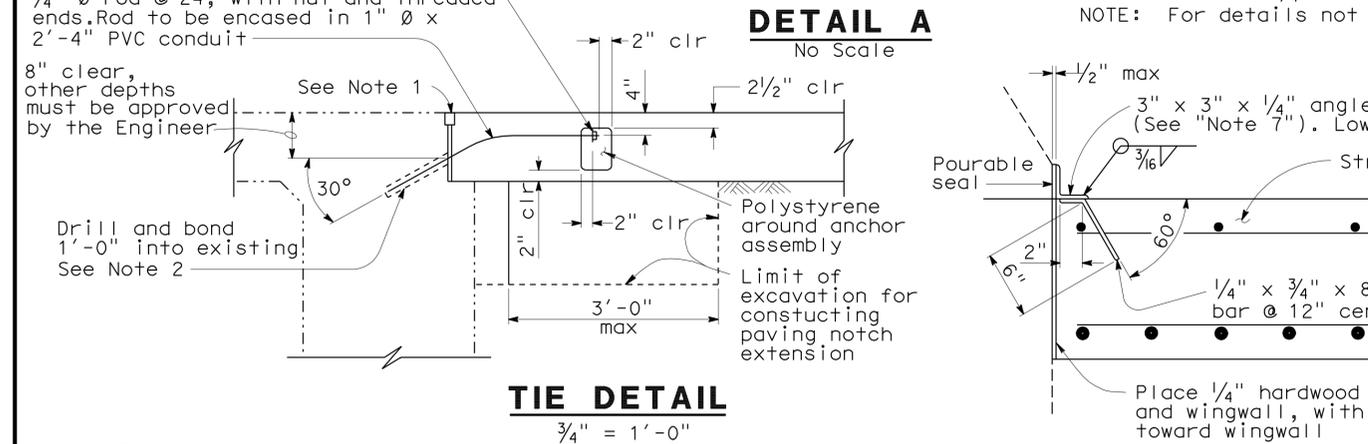
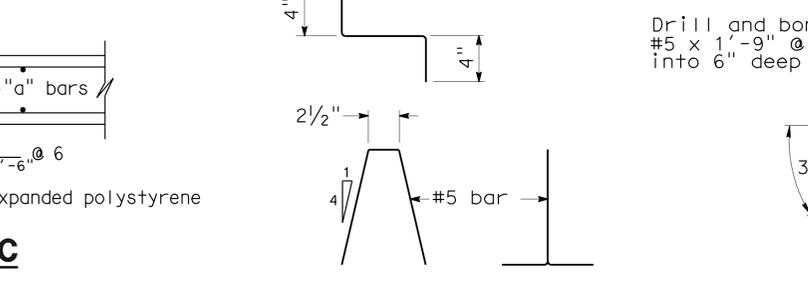
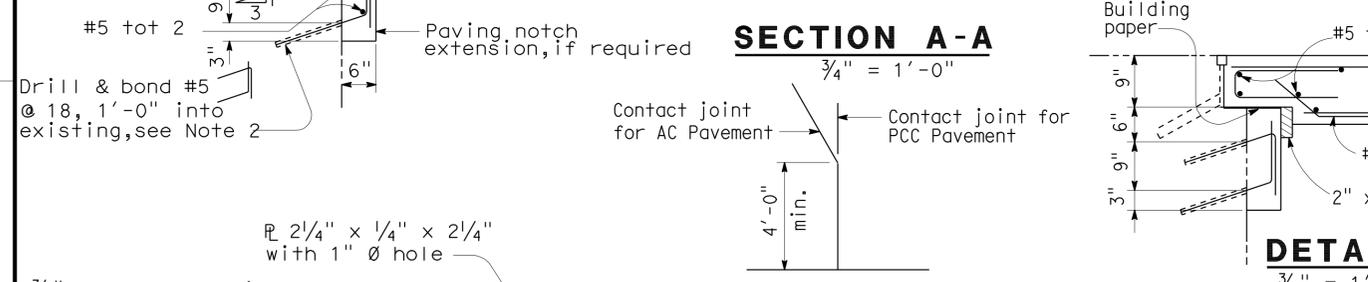
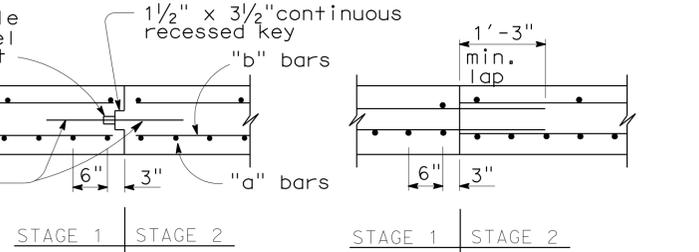
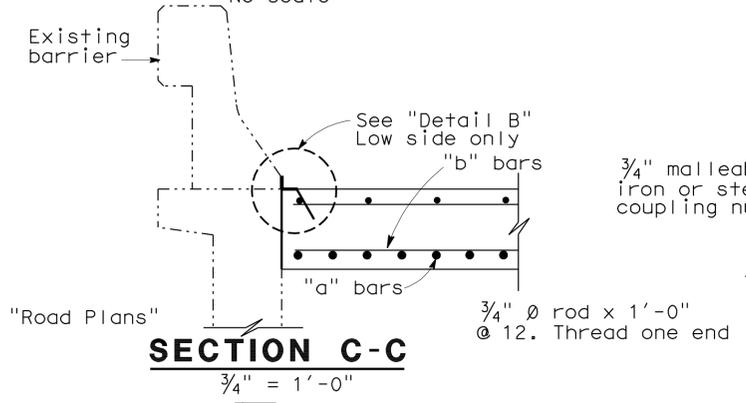
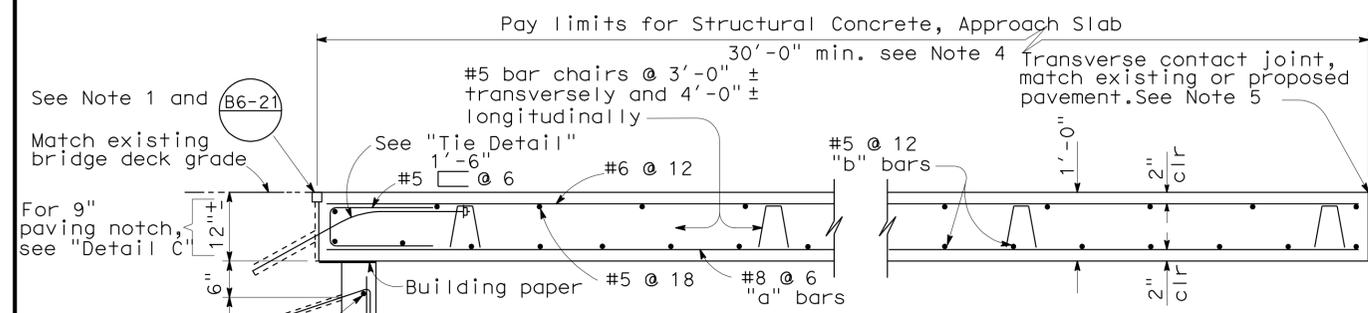
CU 03  
EA 1A9501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
7-28-10	2-04-10	2-04-10	2-18-10	1	2



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line



- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - Space to avoid existing prestress anchorages and main reinforcement.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - Couplers are required for stage construction.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

<b>STANDARD DRAWING</b>				<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>ROUTE 505/5 SEPARATION</b>	
RELEASE DATE 3/14/05	DESIGN BY M. TRAFFALIS	CHECKED BY E. THORKILDSEN	RELEASED BY	DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 22-0143		APPROACH SLABS	
FILE NO. xs3-140e	DETAILS BY R. YEE	CHECKED BY E. THORKILDSEN				MILE POST R22.33		STRUCTURE APPROACH TYPE R(30D)	
	SUBMITTED BY M. HA	DRAWING DATE 8/92	OFFICE CHIEF			DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		CU 03 EA 1A9501		SHEET 2 OF 2	