

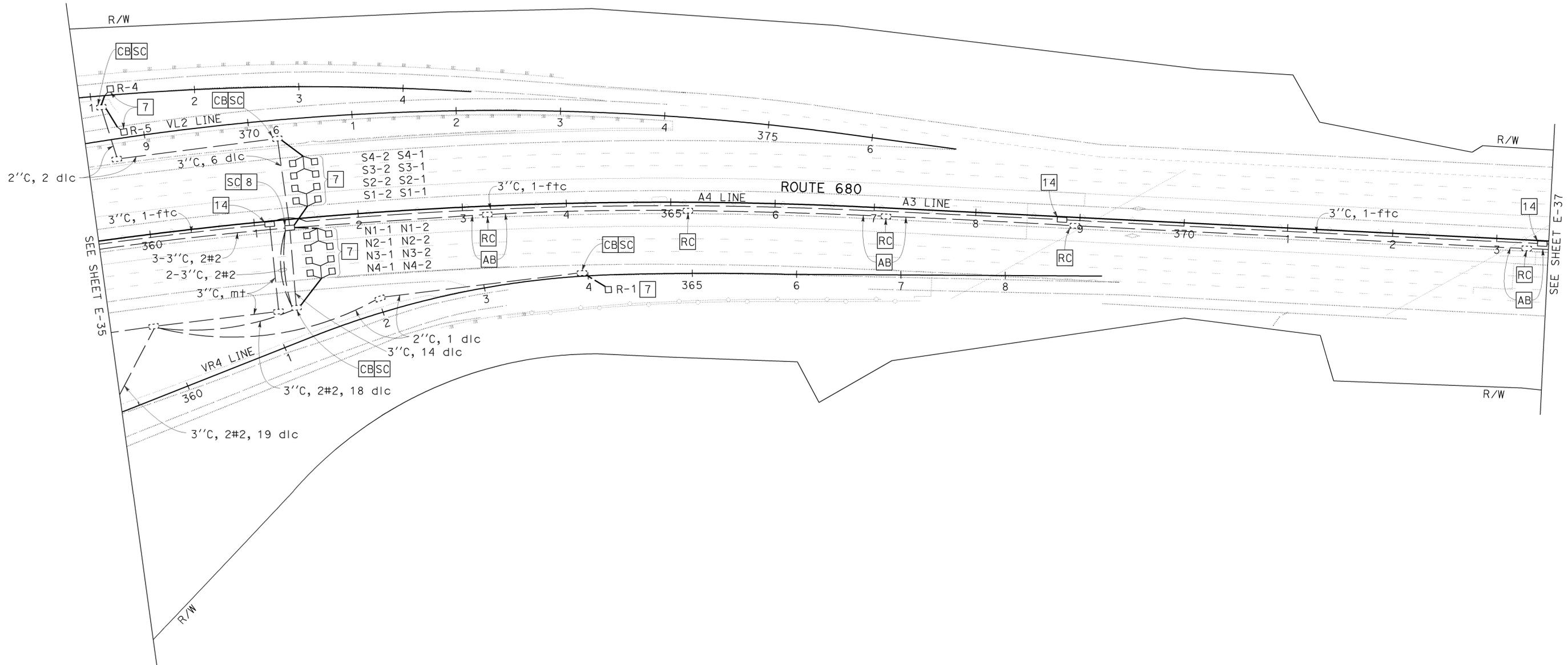
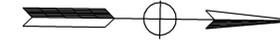
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	401	504

<i>m Now</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
Mahmood Noii	
No. 13717	
Exp. 6-30-11	
ELECT	

2-1-10
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.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 CALCULATED/DESIGNED BY: HAWA GARDIZI
 CHECKED BY: MAHMOOD NOII
 REVISIONS: (None listed)
 REVISOR: (None listed)
 DATE: (None listed)

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1



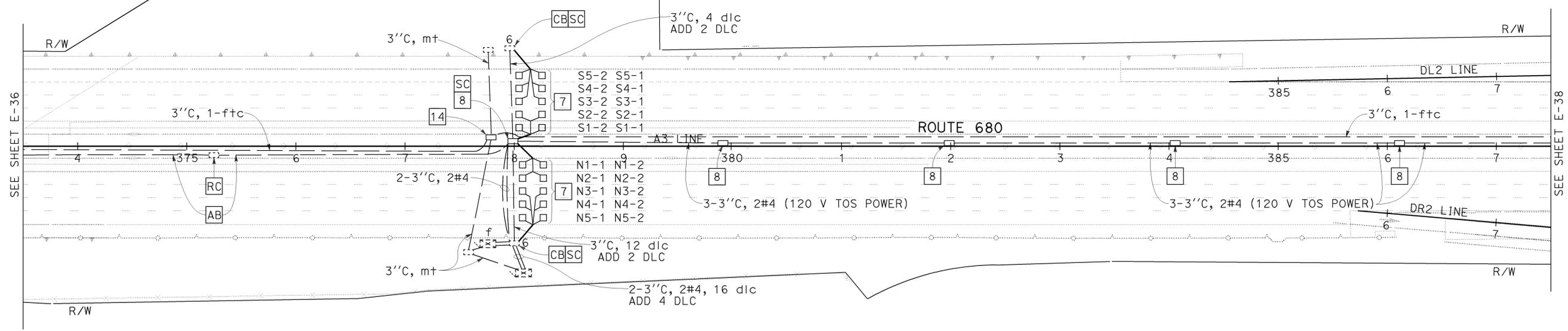
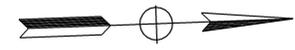
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	402	504

<i>M. Noii</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
Mahmood Noii
No. 13717
Exp. 6-30-11
ELECT

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	HAWA GARDIZI	HAWA GARDIZI
ELECTRICAL		MAHMOOD NOII	MAHMOOD NOII

TRAFFIC OPERATIONS SYSTEM

SCALE: 1" = 50'

E-37

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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



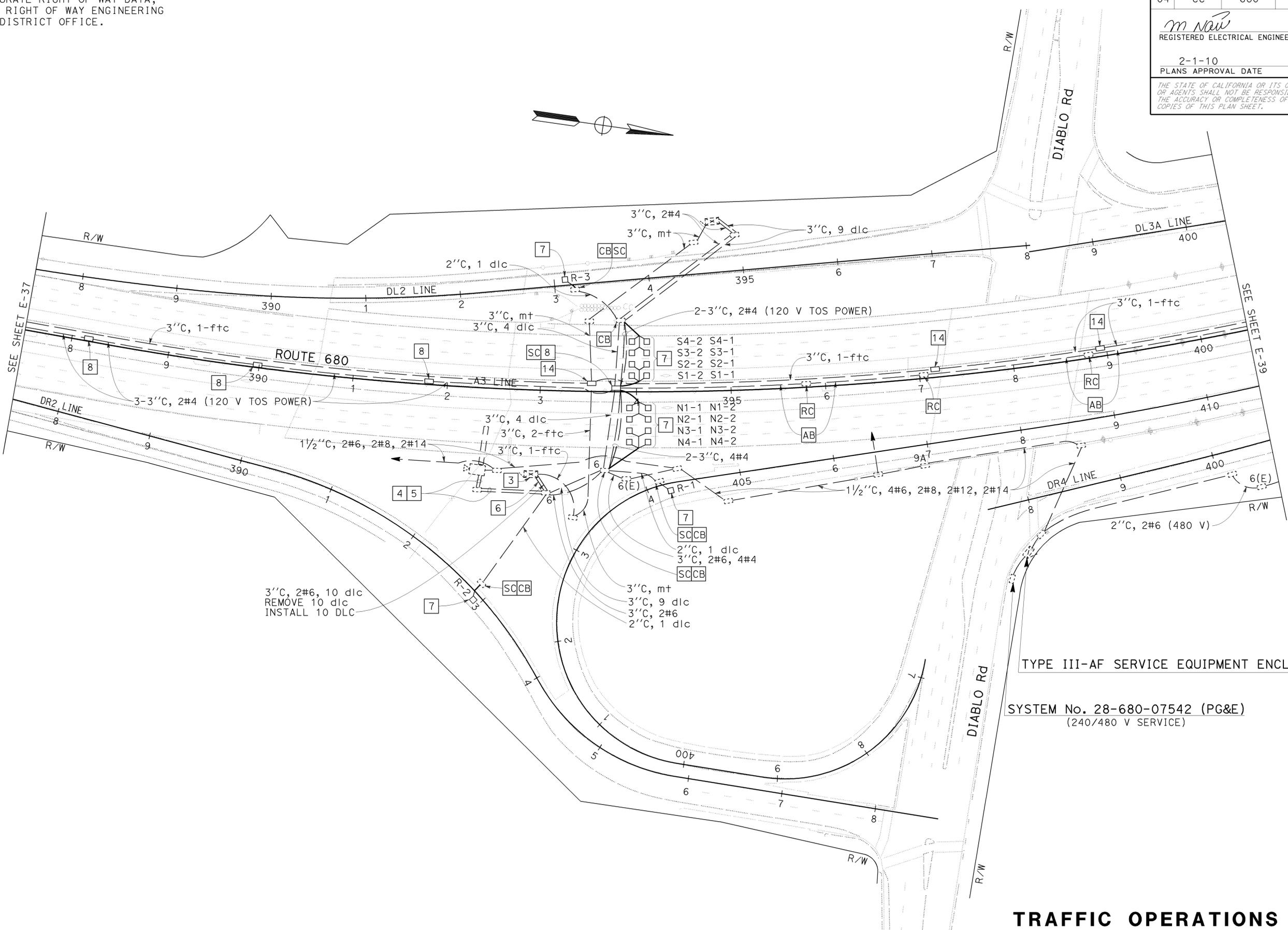
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	403	504

M. Noor
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noor
 No. 13717
 Exp. 6-30-11
 ELECT

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 CALCULATED/DESIGNED BY: HAWA GARDIZI
 CHECKED BY: MAHMOOD NOOR
 REVISIONS: (None listed)
 REVISOR: (None listed)
 DATE: (None listed)

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

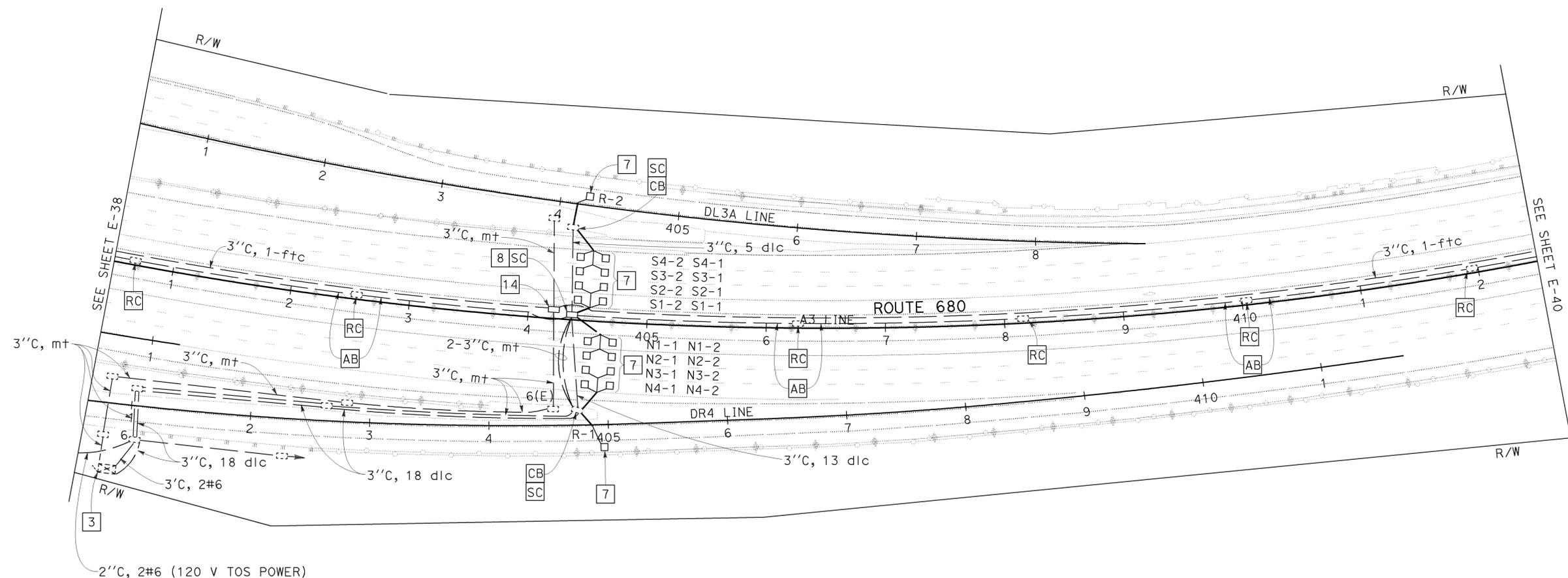
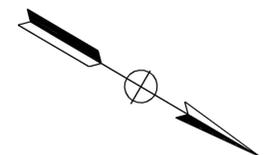
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	404	504

<i>M. Noii</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noii
 No. 13717
 Exp. 6-30-11
 ELECT
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	HAWA GARDIZI	HAWA GARDIZI
ELECTRICAL		MAHMOOD NOII	MAHMOOD NOII

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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

RELATIVE BORDER SCALE
IS IN INCHES



USERNAME => frmnguye
DGN FILE => 44470uua039.dgn

CU 04236

EA 4470U1

TRAFFIC OPERATIONS SYSTEM

SCALE: 1" = 50'

E-39

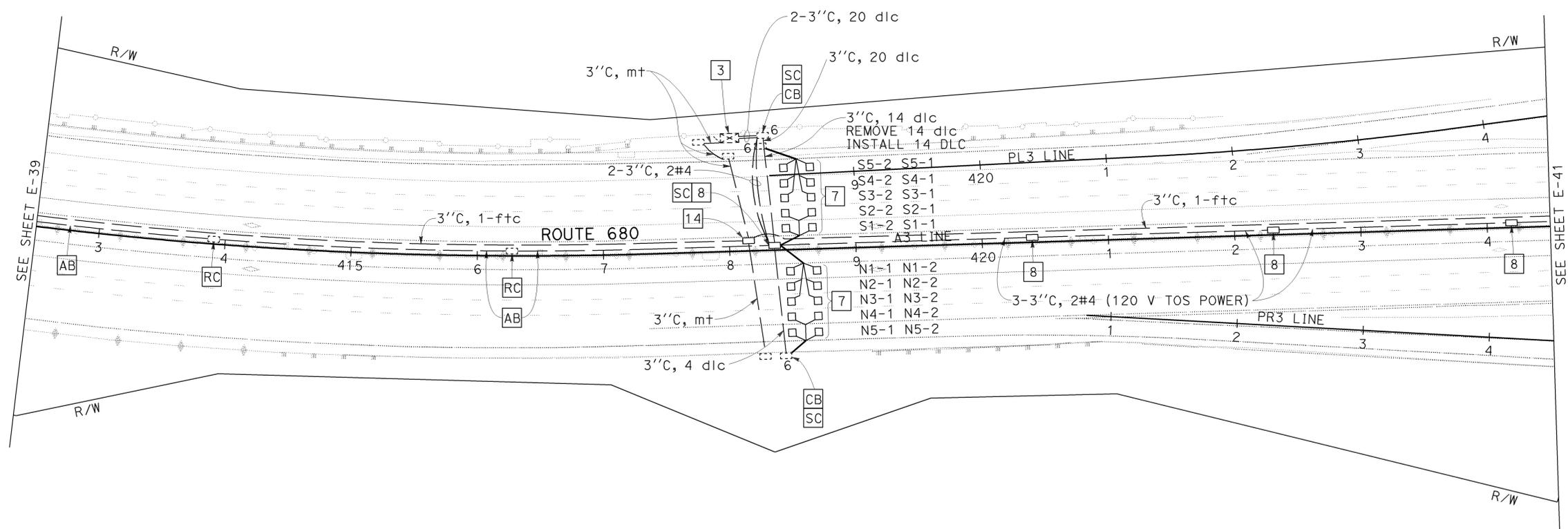
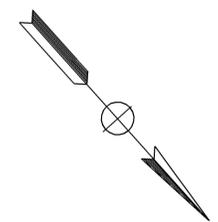
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	405	504

<i>M. Now</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
Mahmood Noii	
No. 13717	
Exp. 6-30-11	
ELECT	

2-1-10
PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	HAWA GARDIZI	HAWA GARDIZI
ELECTRICAL		MAHMOOD NOII	MAHMOOD NOII

TRAFFIC OPERATIONS SYSTEM

SCALE: 1" = 50'

E - 40

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



BORDER LAST REVISED 4/11/2008

USERNAME => frmnguye
DGN FILE => 44470uua040.dgn

CU 04236

EA 4470U1

LAST REVISION | DATE PLOTTED => 04-FEB-2010
 10-06-09 | TIME PLOTTED => 13:42

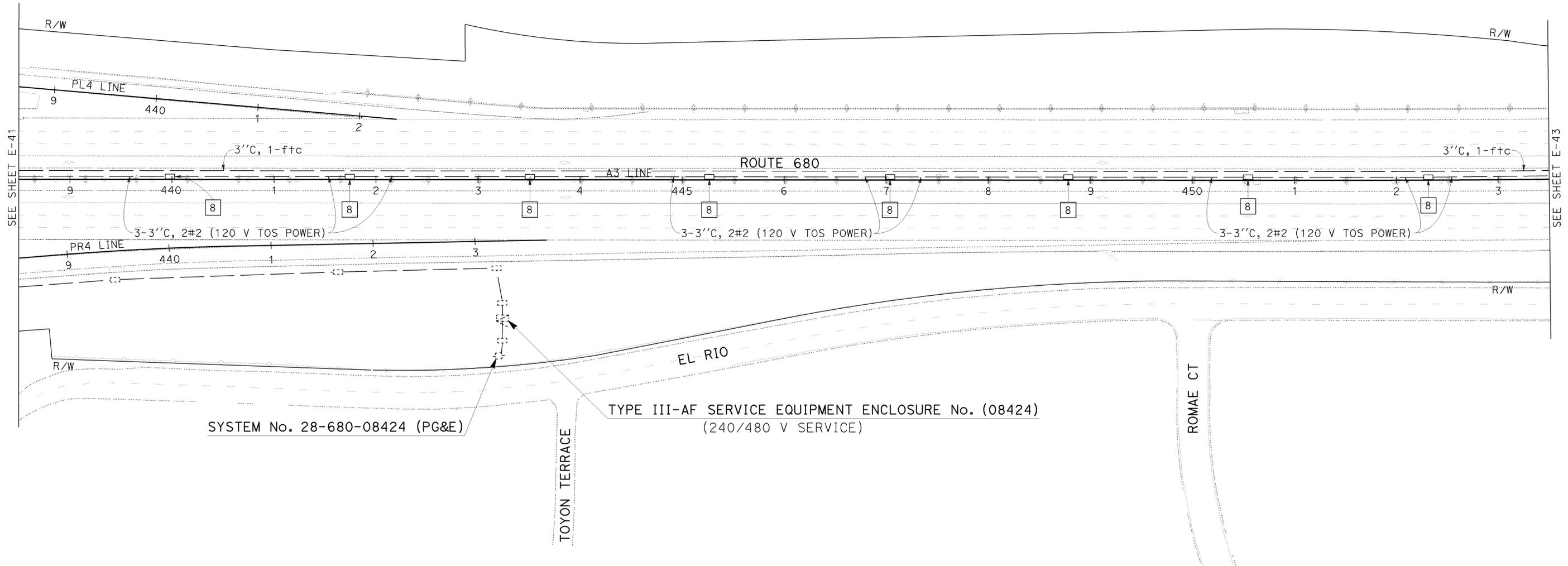
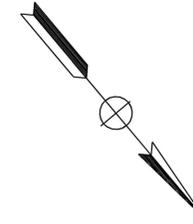
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R2.8	407	504

<i>M. Noii</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noii
 No. 13717
 Exp. 6-30-11
 ELECT
 STATE OF CALIFORNIA

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SYSTEM No. 28-680-08424 (PG&E)

TYPE III-AF SERVICE EQUIPMENT ENCLOSURE No. (08424)
(240/480 V SERVICE)

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

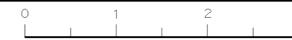
E-42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	MAHMOOD NOII	HAWA GARDIZI
ELECTRICAL		CHECKED BY	DATE REVISOR

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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

RELATIVE BORDER SCALE
IS IN INCHES



USERNAME => ttrcorol
DGN FILE => 44470uu042.dgn

CU 04236

EA 4470U1

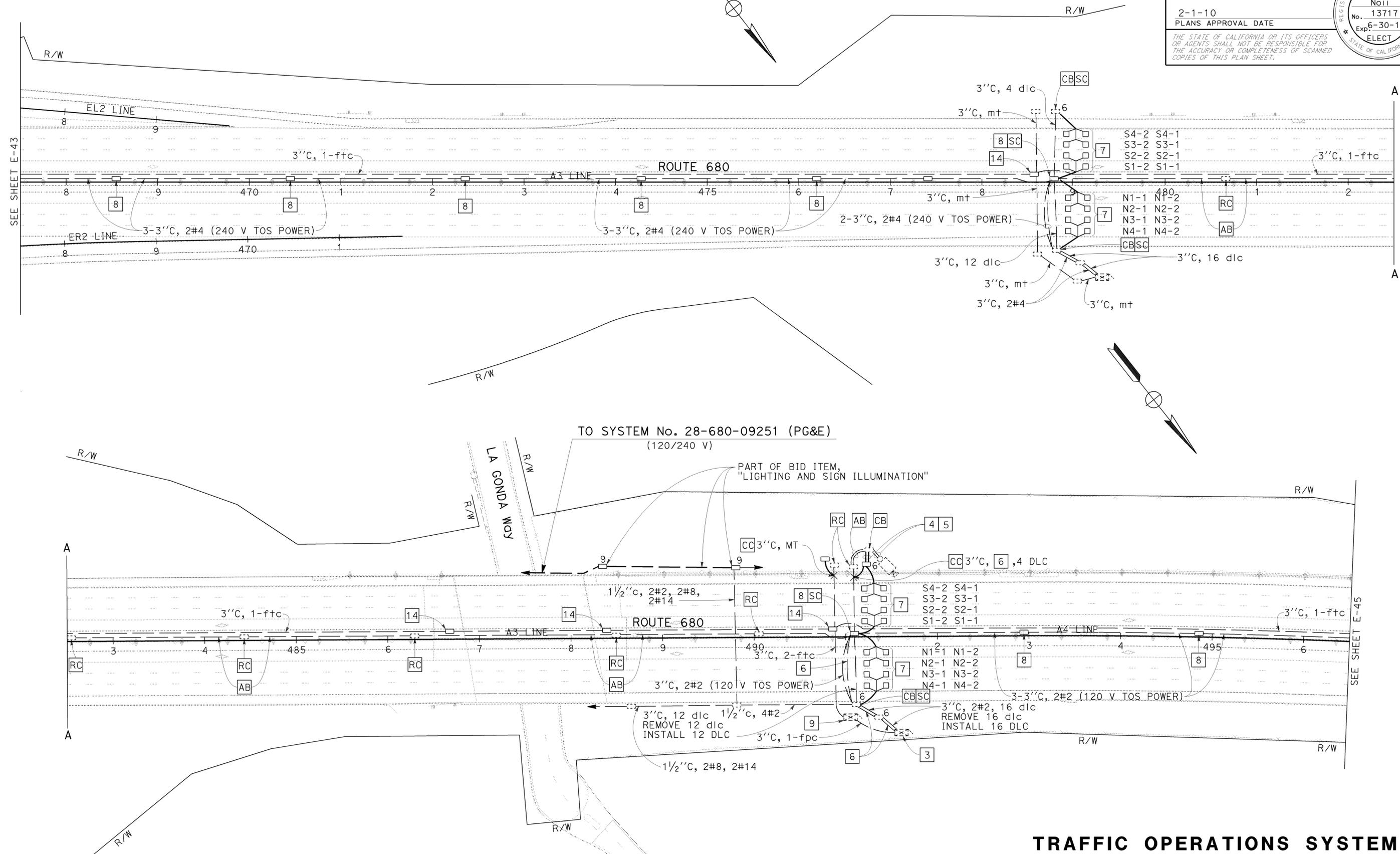
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R2.8	409	504

m Now
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noii
 No. 13717
 Exp. 6-30-11
 ELECT

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REVISIONS:
 1. HAWA GARDIZI
 2. MAHMOOD NOII
 3. LAI HONG CHIU
 4. LAI HONG CHIU
 5. LAI HONG CHIU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

E-44

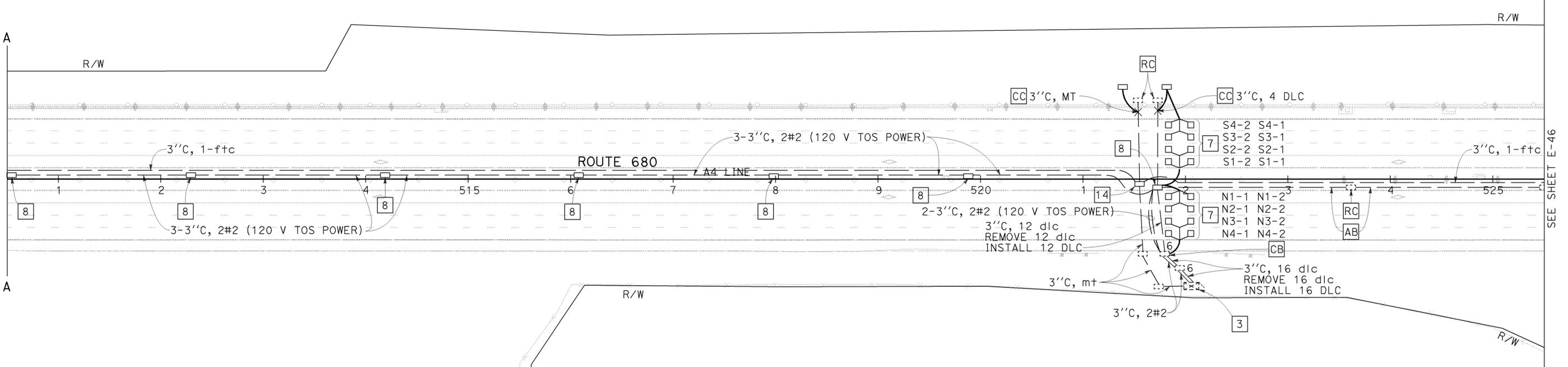
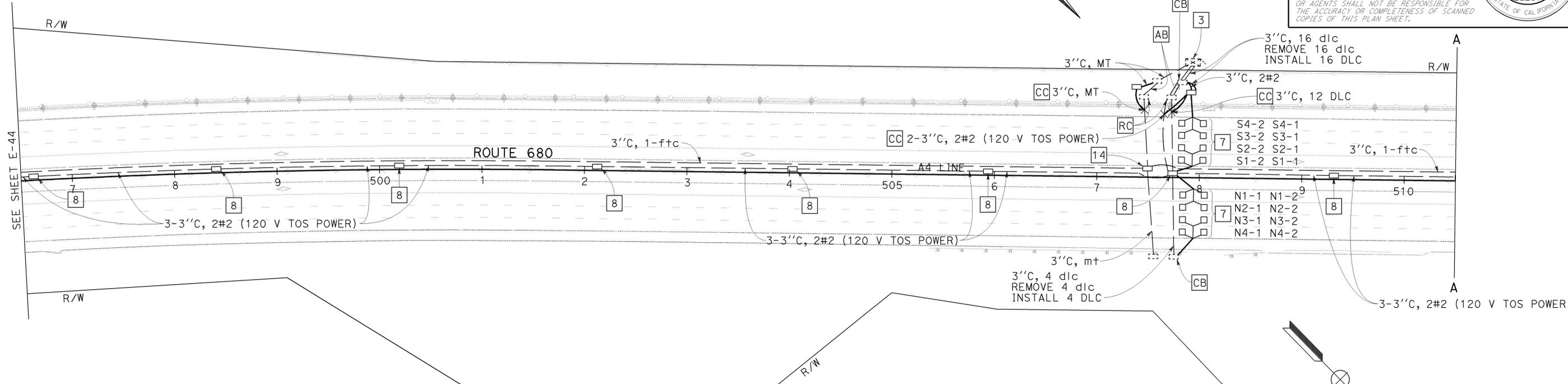
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R2.8	410	504

M. Noii
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Mahmood
 No. 13717
 Exp. 6-30-11
 ELECT
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS
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 COPIES OF THIS PLAN SHEET.



REVISIONS:
 1. HAWA GARDIZI
 2. MAHMOOD NOII
 3. LAI HONG CHIU
 4. ELECTRICAL

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

E-45

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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



USERNAME => ttrcor1
DGN FILE => 44470uu045.dgn

CU 04236

EA 4470U1

BORDER LAST REVISED 4/11/2008

LAST REVISION | DATE PLOTTED => 04-FEB-2010
 10-06-09 | TIME PLOTTED => 13:48

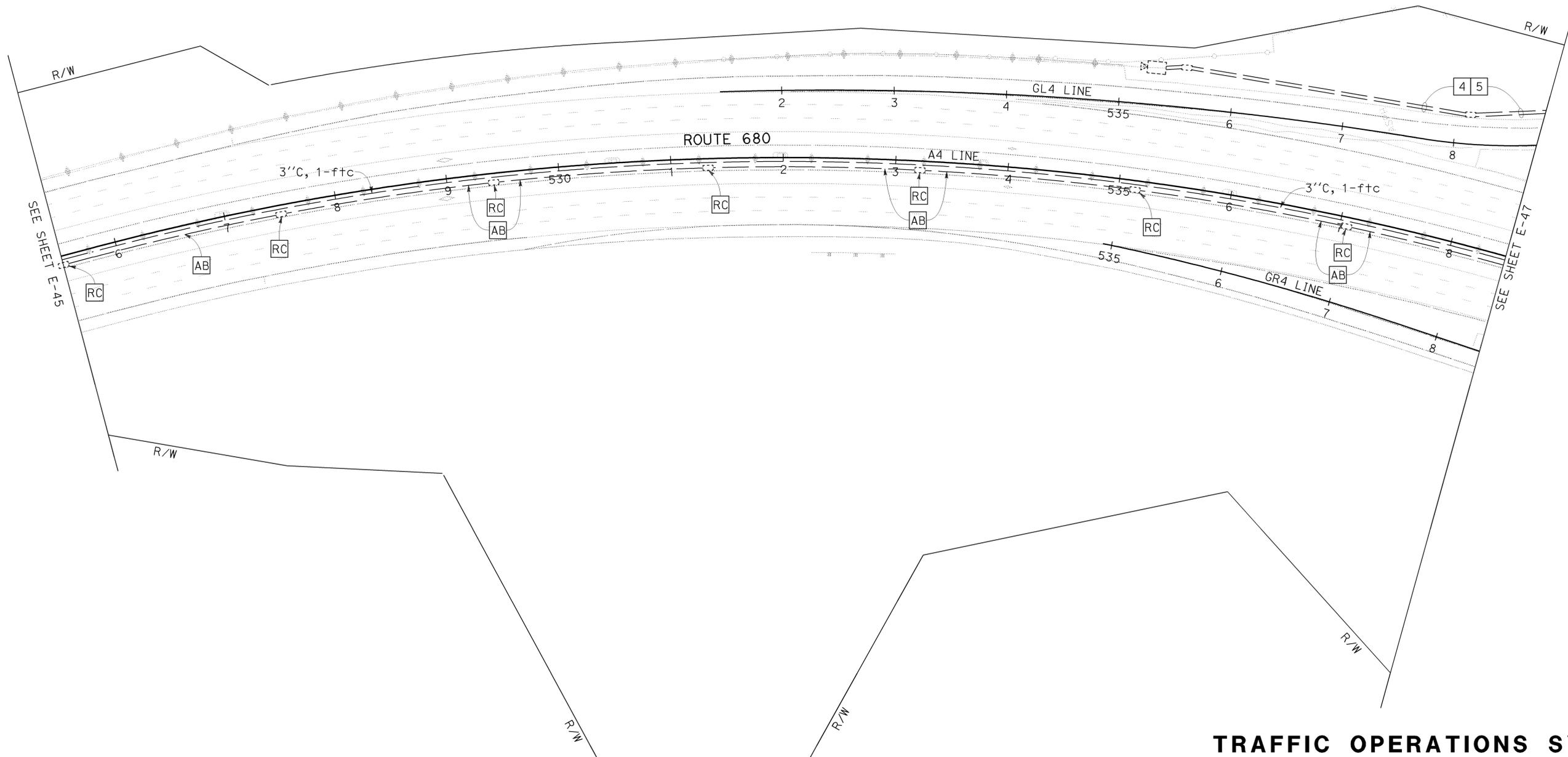
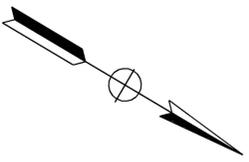
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	411	504

<i>M. Noii</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

Mahmood Noii	
No.	13717
Exp.	6-30-11
ELECT	

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	CHECKED BY	HAWA GARDIZI
ELECTRICAL			MAHMOOD NOII

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'
E-46

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1



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

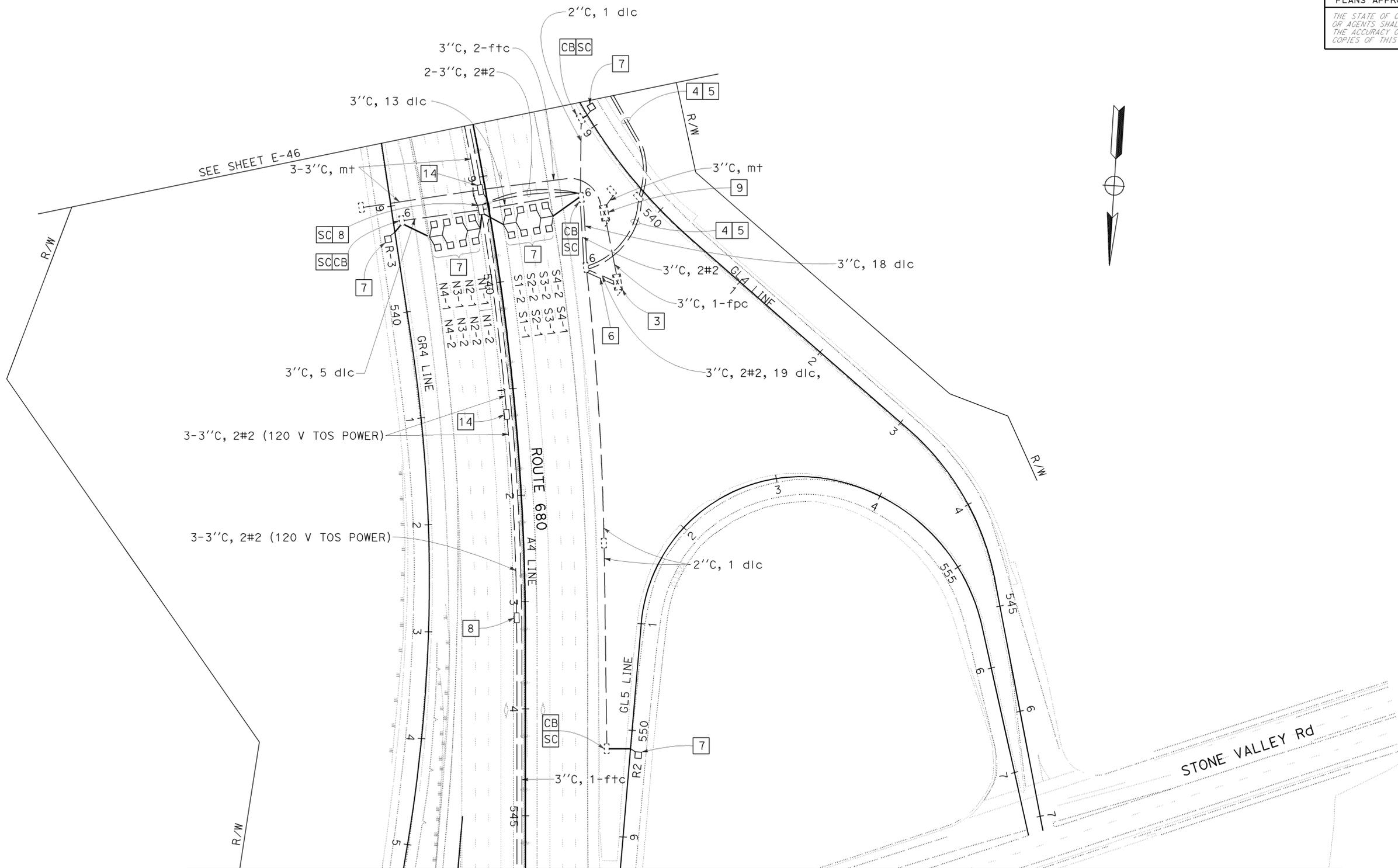
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	412	504

<i>M. Now</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
Mahmood Noii	
No. 13717	
Exp. 6-30-11	
ELECT	

2-1-10
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.

STATE OF CALIFORNIA	DEPARTMENT OF TRANSPORTATION	ELECTRICAL
Caltrans		
FUNCTIONAL SUPERVISOR	LAI HONG CHIU	
CALCULATED/DESIGNED BY	CHECKED BY	
HAWA GARDIZI	MAHMOOD NOII	
REVISED BY	DATE	REVISED



SEE SHEET E-48

TRAFFIC OPERATIONS SYSTEM

SCALE: 1" = 50'

E-47

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

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



USERNAME => trmnguye
DGN FILE => 44470uua047.dgn

CU 04236 EA 4470U1

BORDER LAST REVISED 4/11/2008

LAST REVISION | DATE PLOTTED => 04-FEB-2010
10-06-09 | TIME PLOTTED => 13:51

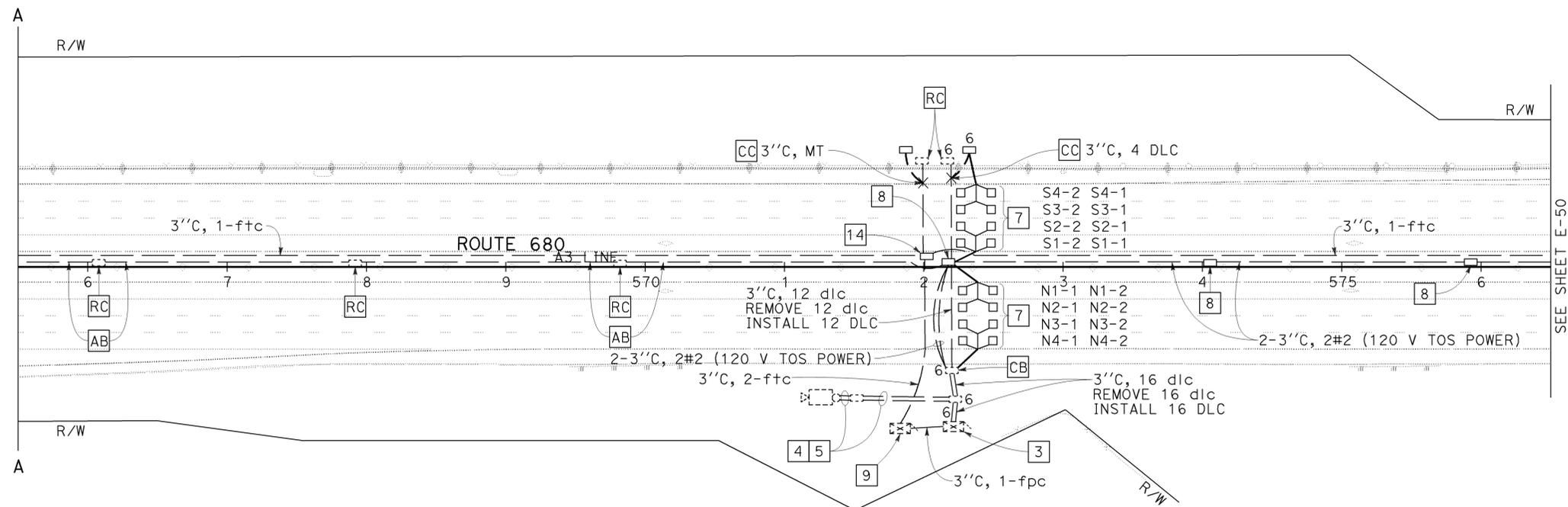
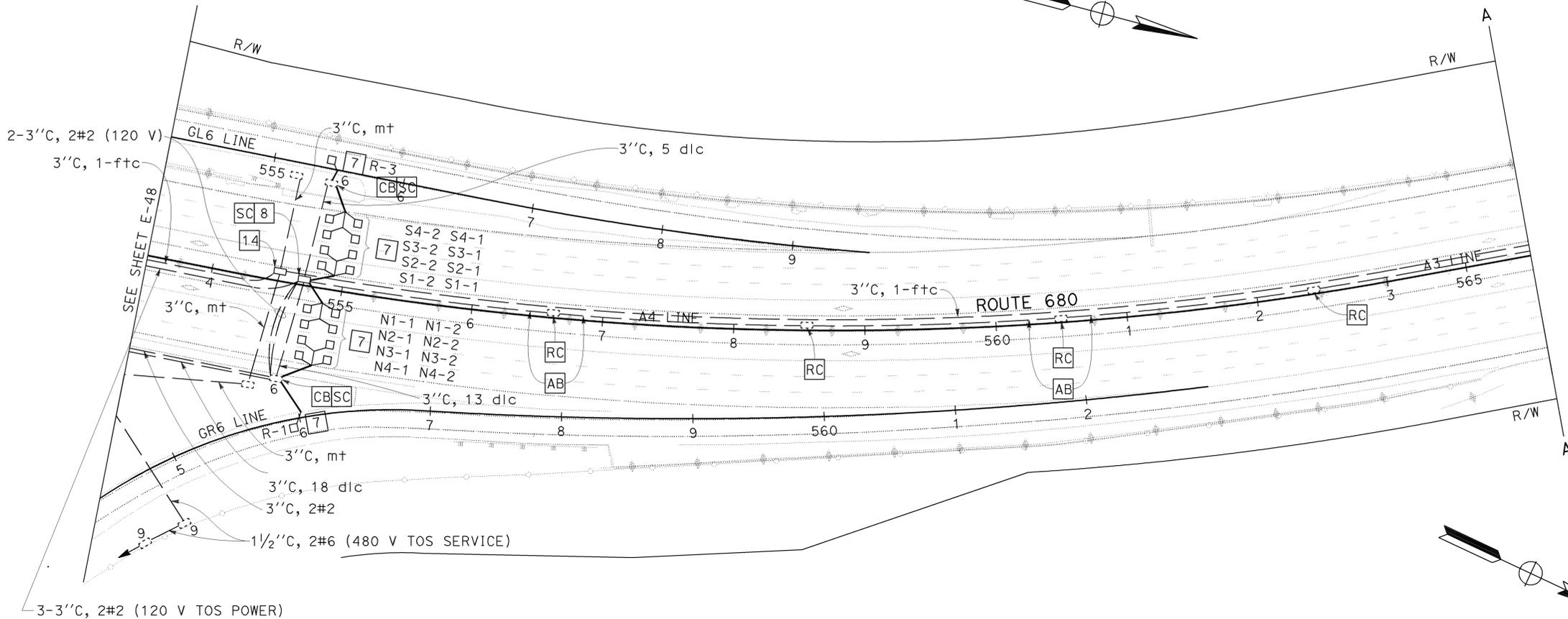
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	414	504

M. Noor
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noor
 No. 13717
 Exp. 6-30-11
 ELECT

THE STATE OF CALIFORNIA OR ITS OFFICERS
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 HAWA GARDIZI
 MAHMOOD NOOR
 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

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

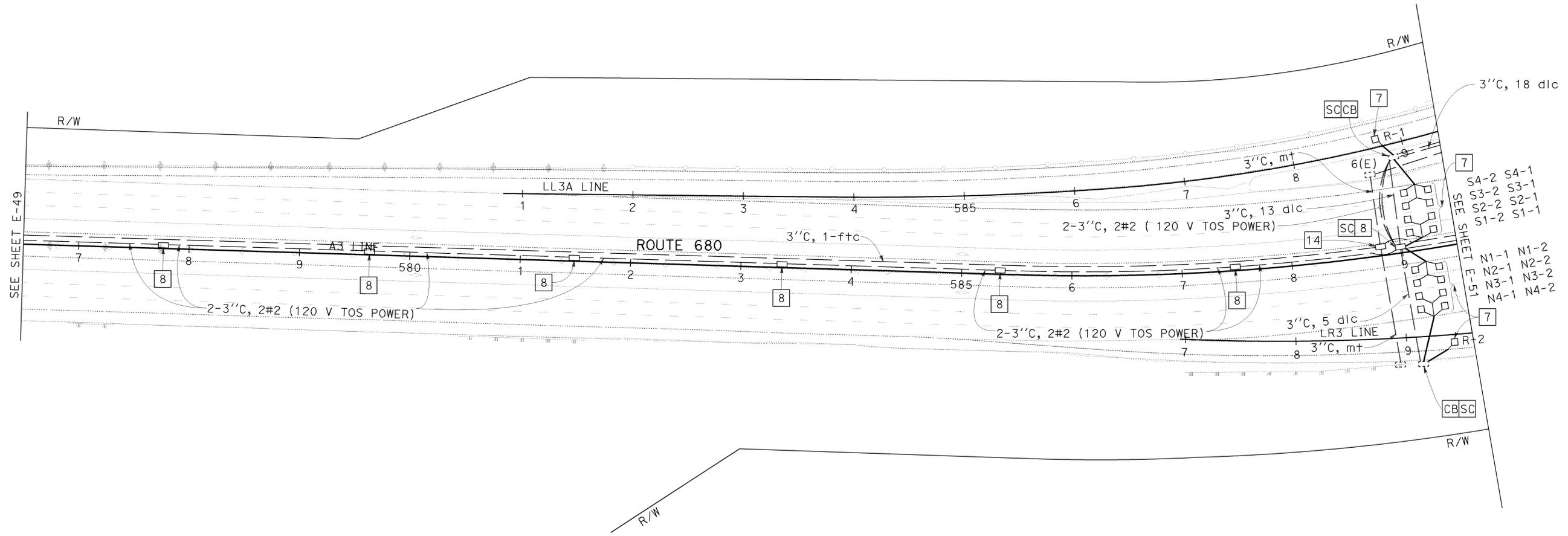
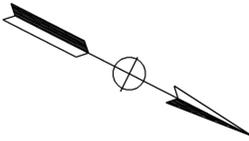
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	415	504

<i>M. Noii</i>	8-3-09
REGISTERED ELECTRICAL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

Mahmood Noii
No. 13717
Exp. 6-30-11
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.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	LAI HONG CHIU	MAHMOOD NOII	HAWA GARDIZI
ELECTRICAL		CHECKED BY	DATE REVISOR

TRAFFIC OPERATIONS SYSTEM
SCALE: 1" = 50'
E-50

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1



BORDER LAST REVISED 4/11/2008

USERNAME => trmnguye
DGN FILE => 44470uua050.dgn

CU 04236

EA 4470U1

LAST REVISION | DATE PLOTTED => 04-FEB-2010
10-06-09 | TIME PLOTTED => 13:51

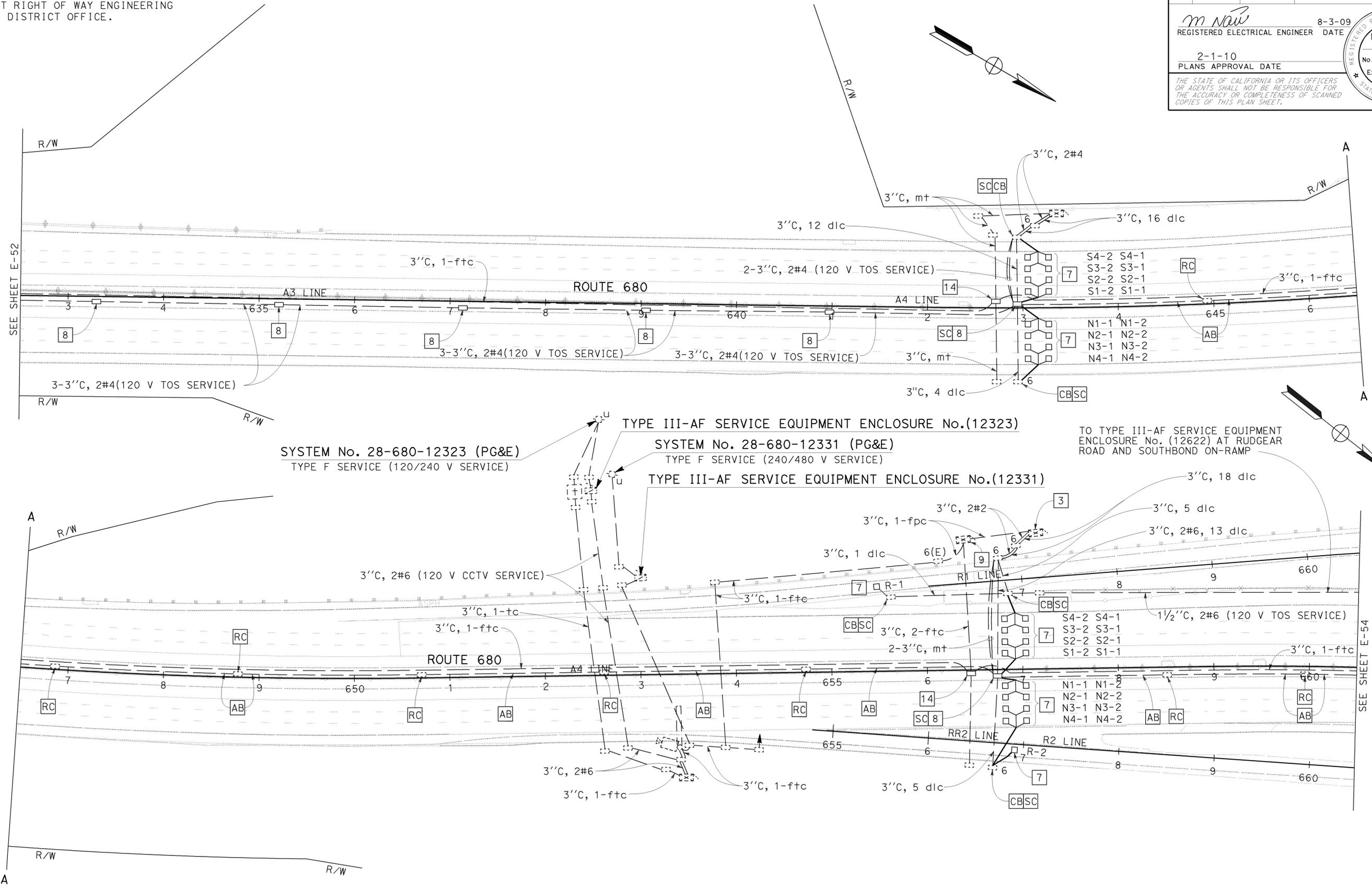
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	418	504

m Now
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 No. 13717
 Exp. 6-30-11
 ELECT

2-1-10
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
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 COPIES OF THIS PLAN SHEET.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL
 FUNCTIONAL SUPERVISOR LAI HONG CHIU
 CALCULATED/DESIGNED BY HAWA GARDIZI
 CHECKED BY MAHMOOD NOJII
 REVISED BY HAWA GARDIZI
 DATE REVISED MAHMOOD NOJII

TRAFFIC OPERATIONS SYSTEM
 SCALE: 1" = 50'
E-53

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
 FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	420	504

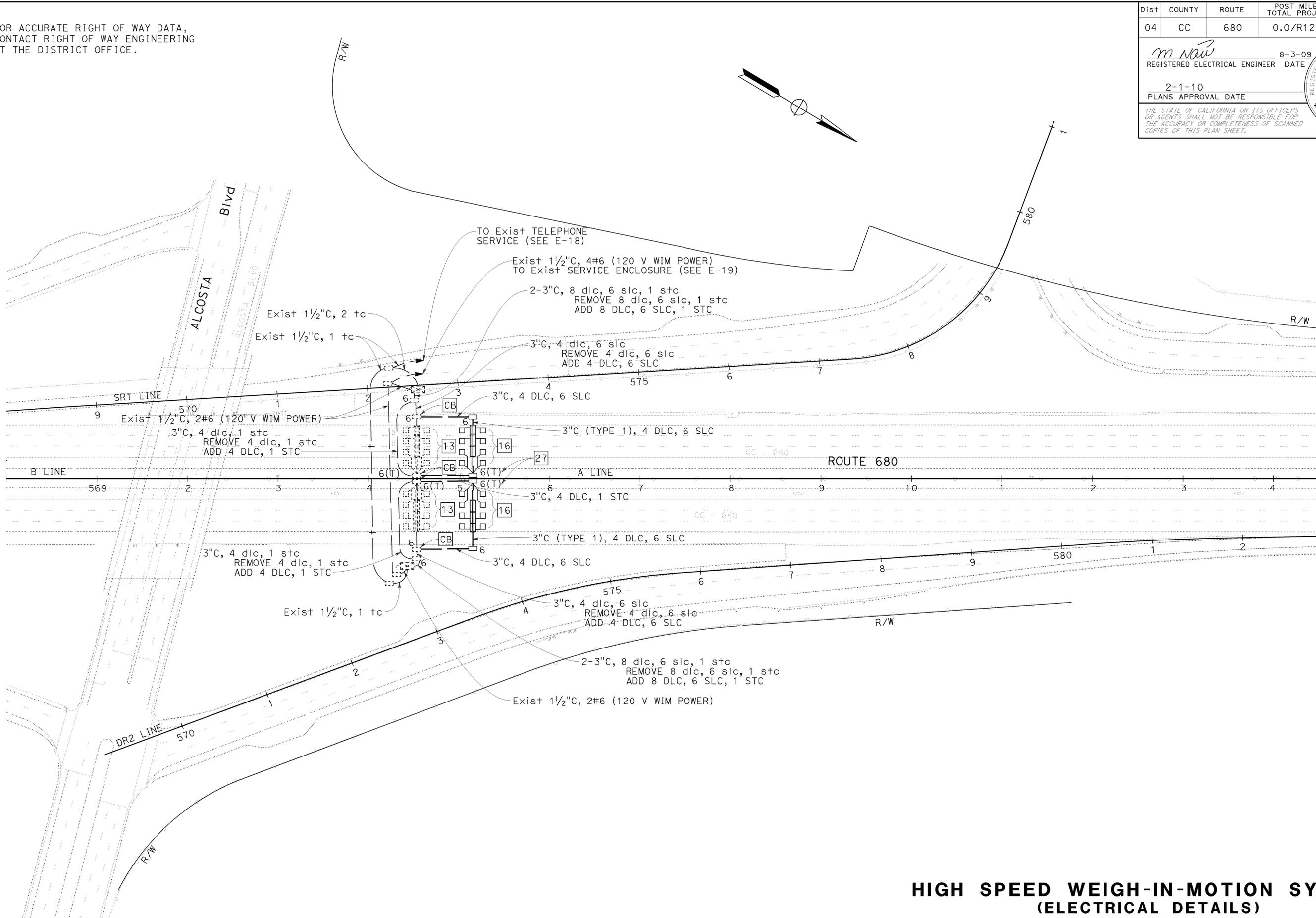
M. Noor
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Mahmood Noor
 No. 13717
 Exp. 6-30-11
 ELECT
 STATE OF CALIFORNIA

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL

FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 PARWIZ KHAZI
 MAHMOOD NOOR
 REVISED BY: [Blank] DATE: [Blank]
 REVISOR: [Blank] DATE: [Blank]



HIGH SPEED WEIGH-IN-MOTION SYSTEM (ELECTRICAL DETAILS)

SCALE: 1" = 50'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

E-55

REVISOR BY
 DATE REVISED

PARWIZ KHAZI
 MAHMOOD NOJII

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	421	504

M. Noji 8-3-09
 REGISTERED ELECTRICAL ENGINEER DATE

2-1-10
 PLANS APPROVAL DATE

Mahmood Noji
 No. 13717
 Exp. 6-30-11
 ELECT

REGISTERED PROFESSIONAL ENGINEER
 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.

COUNTY CC	ROUTE 680	PM 0.0/12.8	ROUTE 680 SB OFF-RAMP AND BOLLINGER CANYON Rd		ROUTE 680 NB OFF-RAMP AND BOLLINGER CANYON Rd		ROUTE 680 SB OFF-RAMP AND CROW CANYON Rd		ROUTE 680 NB OFF-RAMP AND CROW CANYON Rd					
			ADVANCE DETECTOR	INTERSECTION DETECTOR	ADVANCE DETECTOR	INTERSECTION DETECTOR	ADVANCE DETECTOR	INTERSECTION DETECTOR	ADVANCE DETECTOR	INTERSECTION DETECTOR				
LANE NUMBER	(FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-2 FOR LANE DESCRIPTION)		2L	2R	2L	2R	2R	1L	2R	2L	2R	2R	2L	1R
DISTANCE FROM LIMIT LINE (FEET)			240				240		650		650			
DETECTORS	A. FRONT DETECTOR B. INTERMEDIATE DETECTOR C. ADVANCE DETECTOR D. COUNT DETECTOR		C		A		C		A		C		A	
PULL BOX LOCATION:	A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK		A		A B		A		A		D		D A	
HANDHOLE LOCATION:	A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN		A		A B		A		A D A		D		D A	
DETECTOR TYPE & QUANTITY	TYPE A LOOP DETECTOR		4		6 6		2 1		6 3		3		6 3	
	TYPE B LOOP DETECTOR													
	TYPE C LOOP DETECTOR													
	TYPE D LOOP DETECTOR				2 2				2 1		2 2		2 1	
DETECTOR CONFIGURATION (SEE DETAIL A ON E-2) a...j			d		a a		c		e		c		a a f g	
PULL BOX REPLACEMENT (Y=YES N=NO)			N		N		N		N		N		N N	
HANDHOLE REPLACEMENT (Y=YES N=NO)			N		N		N		N		N		N N	
LOOP DETECTOR TOTAL			4		8 8		2 1		8 4		3		8 4	

**LOOP DETECTOR REPLACEMENT
 (TRAFFIC SIGNAL)**

LAST REVISION | DATE PLOTTED => 04-FEB-2010
 10-07-09 | TIME PLOTTED => 14:18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	422	504

M. Now
 REGISTERED ELECTRICAL ENGINEER DATE 8-3-09
 2-1-10
 PLANS APPROVAL DATE

Mahood No. 13717
 Exp. 6-30-11
 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.

COUNTY - ROUTE - PM	ROUTE 680 NB AND SYCAMORE VALLEY Rd										ROUTE 680 SB AND SYCAMORE VALLEY Rd				ROUTE 680 NB AND DIABLO Rd				ROUTE 680 SB AND DIABLO Rd																				
	CC - 680 - 6.77										CC - 680 - 6.77				CC - 680 - 7.6				CC - 680 - 7.6																				
	ADVANCE DETECTOR OFF-RAMP				INTERSECTION DETECTOR OFF-RAMP					QUEUE DETECTOR OFF-RAMP		ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP		ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP		ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP																	
LANE NUMBER (FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-2 FOR LANE DESCRIPTION)	1T	2T	3T	4T	1L	2T	3T	4T	5R	1T	2T	1L	2L	-	-	1L	2L	-	-	1L	-	-	-	1L	2L	-	-	1T	-	-	-	1T	2L	-	-				
DISTANCE FROM LIMIT LINE (FEET)	185	185	185	185	-	-	-	-	-	886	886			-	-	-	-	-	-	160	-	-	-	-	-	-	-	160	-	-	-	-	-	-	-				
DETECTORS A. FRONT DETECTOR B. BICYCLE DETECTOR C. ADVANCE DETECTOR D. INTERMEDIATE DETECTOR	C	C	C	C	A	A	A	A	A	C	C	C	C	-	-	A	A	-	-	C	-	-	-	A	A	-	-	C	-	-	-	A	A	-	-				
PULL BOX LOCATION: A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK	A				C					A		A		-		B		-		A		-		A		-		A		-									
HANDHOLE LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN	A				C					A		A		-		A		-		A		-		A		-		A		-									
DETECTOR TYPE & QUANTITY	TYPE A LOOP DETECTOR				1	1	1	1	3	3	3	3	1	2	2	1	1	-	-	3	3	-	-	1	-	-	-	3	3	-	-	1	-	-	-	3	3	-	-
	TYPE B LOOP DETECTOR																	-	-			-	-			-	-			-	-			-	-				
	TYPE C LOOP DETECTOR																	-	-			-	-			-	-			-	-			-	-				
	TYPE D LOOP DETECTOR								1	1	1	1	1					-	-	1	1	-	-			-	-	1	1	-	-			-	-				
DETECTOR CONFIGURATION (SEE DETAIL A ON E-2) a...j	j				h					i		c		b		-		h		-		a		-		h		-		a		-							
PULL BOX REPLACEMENT (Y=YES N=NO)	N				N					N		N		-		N		-		N		-		N		-		N		-									
HANDHOLE REPLACEMENT (Y=YES N=NO)	Y				Y					Y		Y		-		Y		-		Y		-		Y		-		Y		-									
LOOP DETECTOR TOTAL	1	1	1	1	4	4	4	4	2	2	2	1	1	-	-	4	4	-	-	1	-	-	-	4	4	-	-	1	-	-	-	4	4	-	-				
COMMENTS																																							

COUNTY - ROUTE - PM	ROUTE 680 NB AND EL PINTADO DRIVE						ROUTE 680 SB AND EL PINTADO DRIVE						ROUTE 680 NB AND RUDGEAR Rd																																		
	CC - 680 - 8.3						CC - 680 - 8.3						CC - 680 - 12.6																																		
	ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP		QUEUE DETECTOR OFF-RAMP		ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP		QUEUE DETECTOR OFF-RAMP		ADVANCE DETECTOR OFF-RAMP		INTERSECTION DETECTOR OFF-RAMP																																
LANE NUMBER (FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC. SEE E-2 FOR LANE DESCRIPTION)	1T	-	-	1T	2T	-	1T	-	-	1T	2T	-	1T	2T	-	1T	-	-	1T	2T	3T	-	-	1T	2T	3T	-	-																			
DISTANCE FROM LIMIT LINE (FEET)	185	-	-	-	-	-	250	-	-	185	185	-	-	-	-	250	-	-	185	185	185	-	-	-	-	-	-																				
DETECTORS A. FRONT DETECTOR B. BICYCLE DETECTOR C. ADVANCE DETECTOR D. INTERMEDIATE DETECTOR	C	-	-	A	A	-	C	-	-	C	C	-	A	A	-	C	-	-	C	C	C	A	A	A	-	-	-																				
PULL BOX LOCATION: A. RIGHT SHOULDER B. RIGHT SIDEWALK C. MEDIAN D. LEFT SHOULDER E. LEFT SIDEWALK	A	-	-	A	-	-	A	-	-	D	-	-	D	-	-	D	-	-	D	-	-	D	A	-	-	-	-	-																			
HANDHOLE LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. PAINTED MEDIAN	A	-	-	A	-	-	A	-	-	B	-	-	B	-	-	B	-	-	B	-	-	B	A	-	-	-	-	-																			
DETECTOR TYPE & QUANTITY	TYPE A LOOP DETECTOR		1	-	-	3	3	-	2	-	-	1	1	-	3	3	-	2	-	-	1	1	1	3	3	3	-	-																			
	TYPE B LOOP DETECTOR																																														
	TYPE C LOOP DETECTOR																																														
	TYPE D LOOP DETECTOR					-	-	-	1	1	-				1	1	-							1	1	1	-	-																			
DETECTOR CONFIGURATION (SEE DETAIL A ON E-2) a...j	a		-			h			-			d			-			b			-			h			-			d			-			e			g			h			-		
PULL BOX REPLACEMENT (Y=YES N=NO)	N		-			N			-			N			N			-			N			N			-			N			N			-											
HANDHOLE REPLACEMENT (Y=YES N=NO)	Y		-			Y			-			Y			Y			-			Y			Y			-			Y			Y			-											
LOOP DETECTOR TOTAL	1	-	-	4	-	-	2	-	-	1	1	4	4	4	-	2	-	-	1	1	1	4	4	4	-	-																					
COMMENTS																																															

LOOP DETECTOR REPLACEMENT (TRAFFIC SIGNAL)

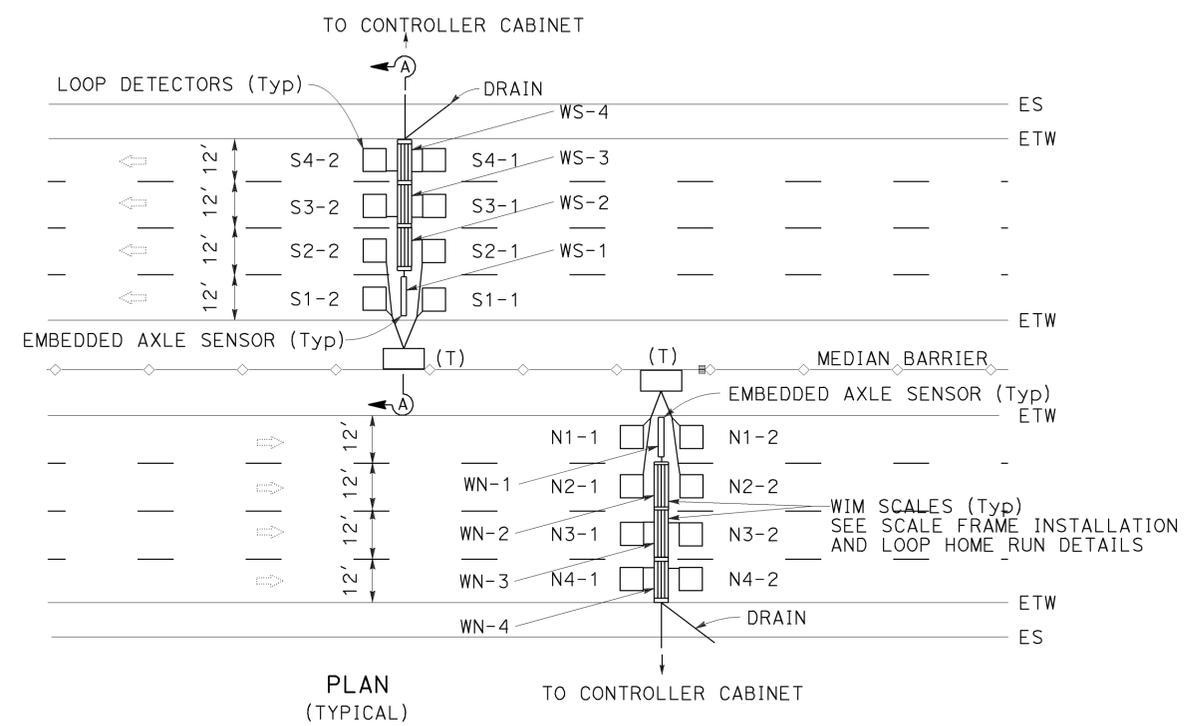
E-57

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 REVISIONS: HAWA GARDIZI, MAHMOOD NOII, HAWA GARDIZI, MAHMOOD NOII
 DESIGNED BY: HAWA GARDIZI, MAHMOOD NOII
 CHECKED BY: HAWA GARDIZI, MAHMOOD NOII
 REVISIONS: HAWA GARDIZI, MAHMOOD NOII, HAWA GARDIZI, MAHMOOD NOII
 DATE: 4/11/2008

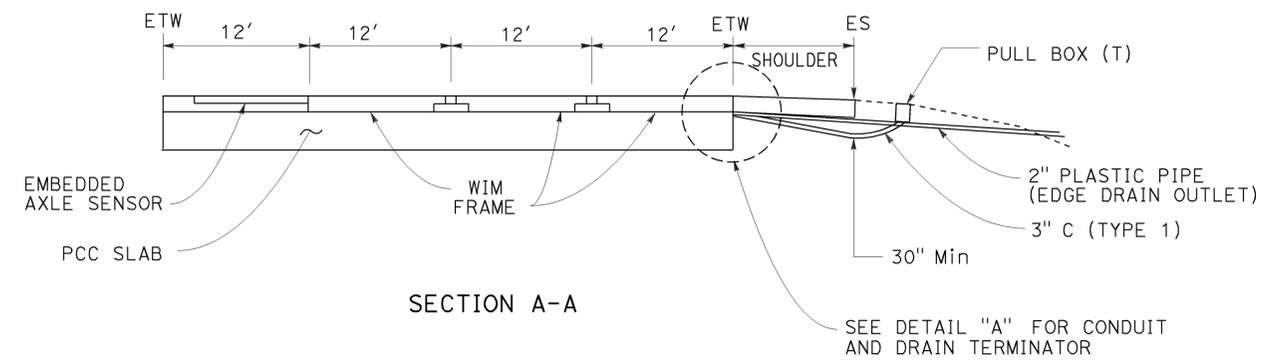
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	423	504
<i>M. Noor</i> REGISTERED ELECTRICAL ENGINEER			8-3-09	DATE	
2-1-10 PLANS APPROVAL DATE			Mahmood Noor No. 13717 Exp. 6-30-11 ELECT		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

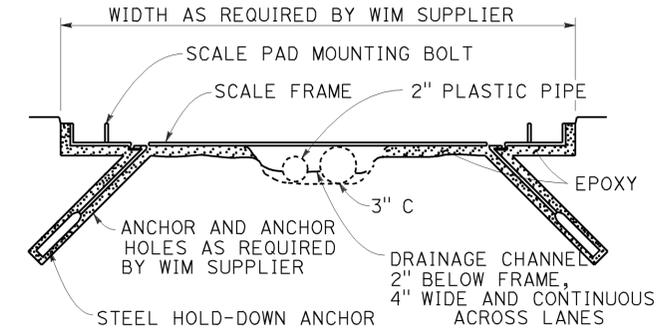
1. THE EXACT LOCATION OF THE WIM SCALES TO BE DETERMINED BY THE ENGINEER. THE ENGINEER SHALL VERIFY THE FINAL LOCATION OF THE WIM SCALES PRIOR TO THE CONTRACTOR PERFORMING ANY WORK IN THE TRAVELED WAY OR SHOULDERS. STATIONS SHOWN ON THE PLANS ARE APPROXIMATE.
2. EDGE DRAIN OUTLET SHALL CONFORM TO TYPE C OUTLET WITH OUTLET COVER AS SHOWN ON STANDARD PLAN D99B EXCEPT THAT PIPE SHALL BE 2".
3. WIM SCALE TO MATCH EXISTING ROADWAY PROFILE AND CROSS-SLOPE.
4. EXACT CONFIGURATION AND INSTALLATION PROCEDURES OF SCALE FRAME AND LOOP DETECTORS SHALL CONFORM TO THE REQUIREMENTS OF THE WIM SUPPLIER.
5. END OF CONDUIT AND/OR PVC DRAIN REST ON BOTTOM OF PAVEMENT NOTCH. CONDUIT BOTTOM MUST BE ABOVE PVC BOTTOM.
6. IN ADDITION TO THE REQUIREMENTS ON STANDARD PLAN ES-8, PULL BOX COVERS SHALL BE MARKED AS FOLLOWS:
"WIM POWER" ON PULL BOXES BETWEEN SERVICE ENCLOSURE AND CONTROLLER CABINET.
"WIM TELEPHONE" ON PULL BOXES BETWEEN TELEPHONE SERVICE AND CONTROLLER CABINET.
"WIM" ON ALL OTHER PULL BOXES.



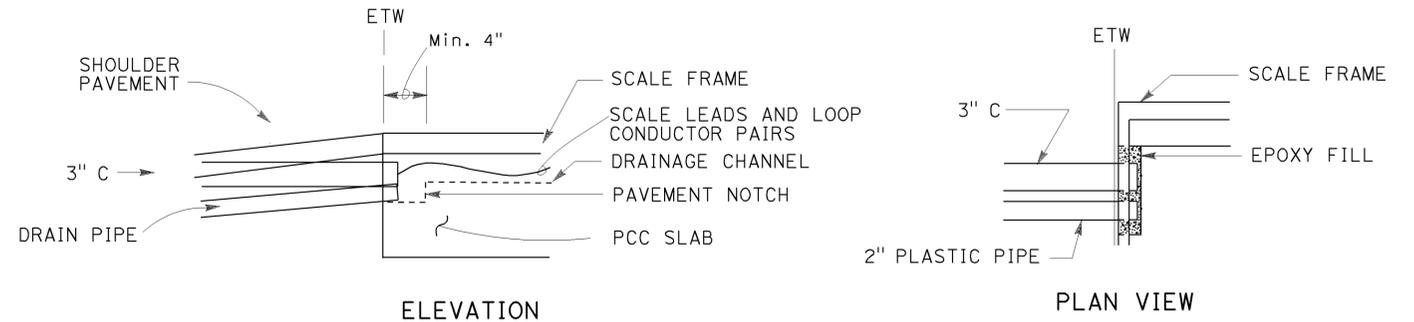
PLAN (TYPICAL)



SECTION A-A



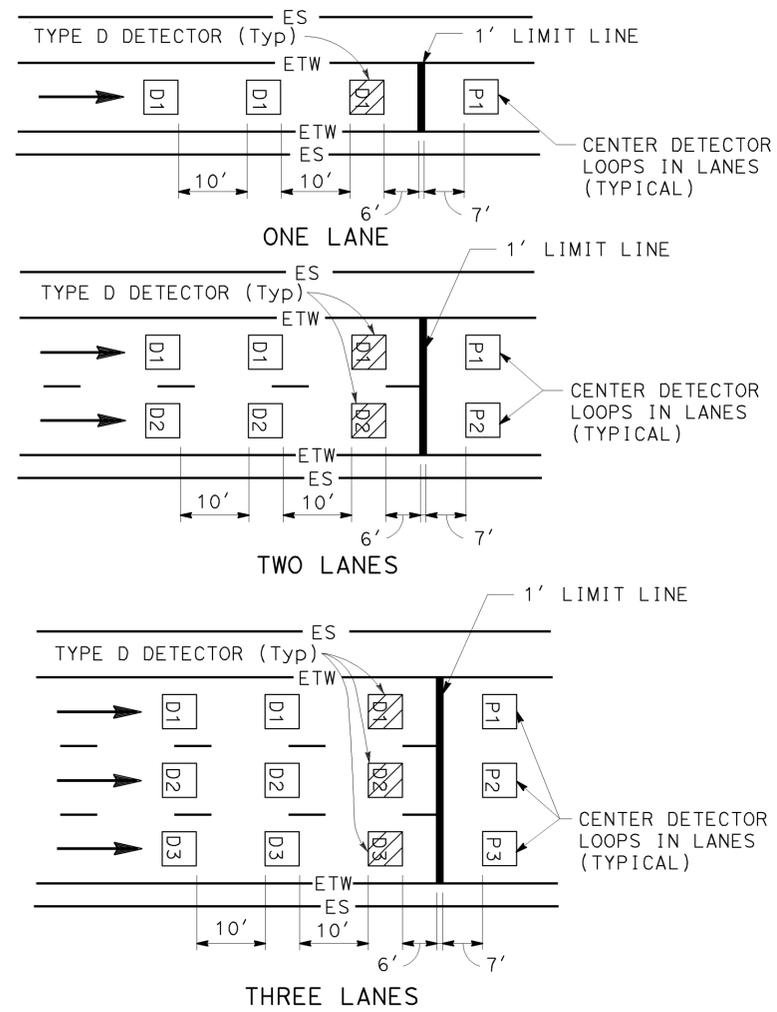
SCALE FRAME INSTALLATION DETAIL (TYPICAL)
(DRAIN AND CONDUIT AS SHOWN AT ETW ONLY)



DETAIL A
CONDUIT AND DRAIN TERMINATOR

**HIGH SPEED WEIGH-IN-MOTION SYSTEM
(ELECTRICAL DETAILS)
NO SCALE**

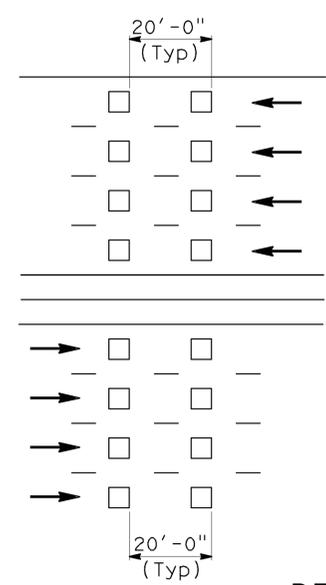
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL
FUNCTIONAL SUPERVISOR: LAI HONG CHIU
CALCULATED/DESIGNED BY: PARWIZ KHAZI
CHECKED BY: MAHMOOD NOOR
REVISED BY: MAHMOOD NOOR
DATE REVISED:



RAMP METERING STATION NOTES

- SEE ES-5A, ES-5B, AND ES-13A FOR ADDITIONAL DETAILS.
- DLC CONDUCTORS SHALL BE SPLICED TO THE LOOP CONDUCTORS IN THE NEAREST PULLBOX.
- ALL SPLICES SHALL BE TYPE "S" OR TYPE "ST" AS REQUIRED.

**DETAIL "RM"
RAMP METERING STATION**



TRAFFIC MONITORING STATION NOTES

FREEWAY MAINLINE DETECTOR DESIGNATION:

N=NORTHBOUND LANES (NB)
 S=SOUTHBOUND LANES (SB)
 E=EASTBOUND LANES (EB)
 W=WESTBOUND LANES (WB)

NUMBER OF LANES FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC:

1=FIRST LANE FROM LEFT
 2=SECOND LANE FROM LEFT
 3=THIRD LANE FROM LEFT
 4=FOURTH LANE FROM LEFT

NUMBER OF DETECTOR IN THE SAME LANE:

1=ENTERING DETECTOR
 2=LEAVING DETECTOR

RAMP DETECTOR DESIGNATION:

D=DEMAND DETECTOR
 P=PASSAGE DETECTOR
 Q=QUEUE DETECTOR
 F=OFFRAMP DETECTOR

1=FIRST LANE FROM LEFT
 2=SECOND LANE FROM LEFT

**DETAIL "TM"
TRAFFIC MONITORING STATION**

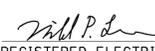
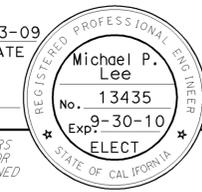
**ELECTRICAL DETAILS
(RAMP METERING AND TRAFFIC MONITORING
DETECTOR SPACING AND DESIGNATION)**

SCALE: AS SHOWN

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

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 ELECTRICAL
 FUNCTIONAL SUPERVISOR CHARLES PRICE
 RAY DUSCHANE
 REVISOR BY DATE REVISOR BY DATE
 CALCULATED/DESIGNED BY CHECKED BY
 BORDER LAST REVISED 4/11/2008

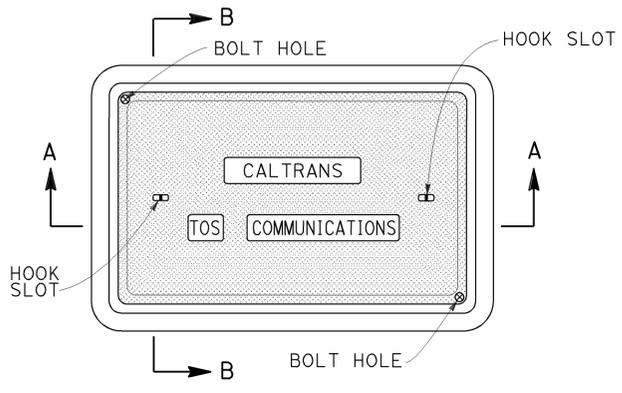
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	680	0.0/R12.8	426	504
 REGISTERED ELECTRICAL ENGINEER			8-3-09	DATE	
2-1-10 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES: (THIS SHEET ONLY)

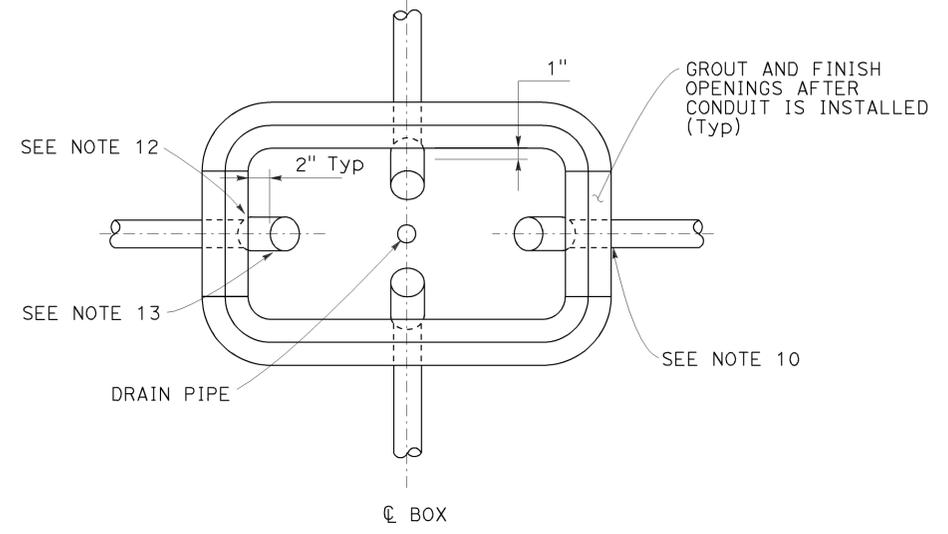
- CONCRETE SHOULD BE PLACED AROUND AND UNDER PULL BOXES (6" MINIMUM) AND SHOULD CONTAIN A MINIMUM OF 550 lbs OF PORTLAND CEMENT PER CUBIC YARD.
- PORTLAND CEMENT CONCRETE FLOOR OVER CLEAN CRUSHED ROCK SUMP. BOTTOM OF PULL BOX SHALL BE SLOPED TOWARD DRAIN PIPE FOR DRAINAGE AND SHALL HAVE SMOOTH FINISH.
- PULL BOX SHALL BE PRECAST OF STEEL REINFORCED PORTLAND CEMENT CONCRETE. PULL BOX COVER SHALL BE POLYMER CONCRETE. PULL BOX AND COVER SHALL SUPPORT MINIMUM TEST LOAD OF 25,000 lbs IF BOX IS LOCATED IN TRAVEL WAY, PULL BOX AND COVER SHALL CONFORM VERTICAL PROOF-LOAD STRENGTH REQUIREMENT AS PER CALTRANS STANDARD SPECIFICATIONS, SECTION 86-2.07.
- IF APPLICABLE, PULL BOX HEIGHT ABOVE EXISTING DIRT GRADE SHALL PERMIT 1" OF FUTURE SURFACE LANDSCAPING. WHEN PULL BOX IS INSTALLED IN EXISTING SIDEWALK, PULL BOX COVER SHALL SIT FLUSH WITH THE PAVEMENT.
- LOCKING MECHANISM SHALL BE PROVIDED FOR COVER. TWO 3/8" Ø BRASS OR STAINLESS STEEL STUB BOLTS NUTS, AND WASHERS. 2 PER BOX, RECESS IN COVER FOR NUT.
- "CALTRANS TOS COMMUNICATIONS" SHALL BE CASTED ON THE TOP FACE OF ALL COVERS.
- MINIMUM PULL BOX DEPTH WITH EXTENSION SHALL BE 20".
- SEE PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT.
- ALL CONDUITS SHALL ENTER THROUGH KNOCKOUTS. IF MORE THAN 3 CONDUITS ARE REQUIRED IN SAME KNOCKOUT, KNOCKOUT SHALL BE WIDENED TO 3/8" MORE THAN THE COMBINED CONDUIT WIDTH.
- CONDUIT FROM THE TYPICAL BORE OR TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1' PER 10' FROM THE ALIGNMENT PRECEDING OR THE FOLLOWING THE PULL BOX.
- BOTTOM OF CONDUIT CENTERLINE SHALL BE ALIGNED TO EXIT TOP OF PULL BOX TO FACILITATE CABLE PULLING. IF EXISTING CONDUIT USED, CONTRACTOR SHALL MODIFY CONDUIT SWEEP (IF NEEDED) AS SHOWN. IF NEW CONDUIT USED, CONTRACTOR SHALL INSTALL CONDUIT ELBOW AS SHOWN.
- EXCESS CONDUIT FOR ALL CONDUIT ENDS SHALL BE CUT BACK TO PROVIDE STUB ENDS OF 1" MINIMUM TO 2" MAXIMUM.
- ALL METALLIC CONDUIT SHALL HAVE THREADED METALLIC BUSHINGS. ALL PVC AND HDPE CONDUITS SHALL HAVE BELL ENDS.
- INSTALL CAPS OR DUCT PLUGS FOR ALL CONDUITS.

LEGEND: (THIS SHEET ONLY)

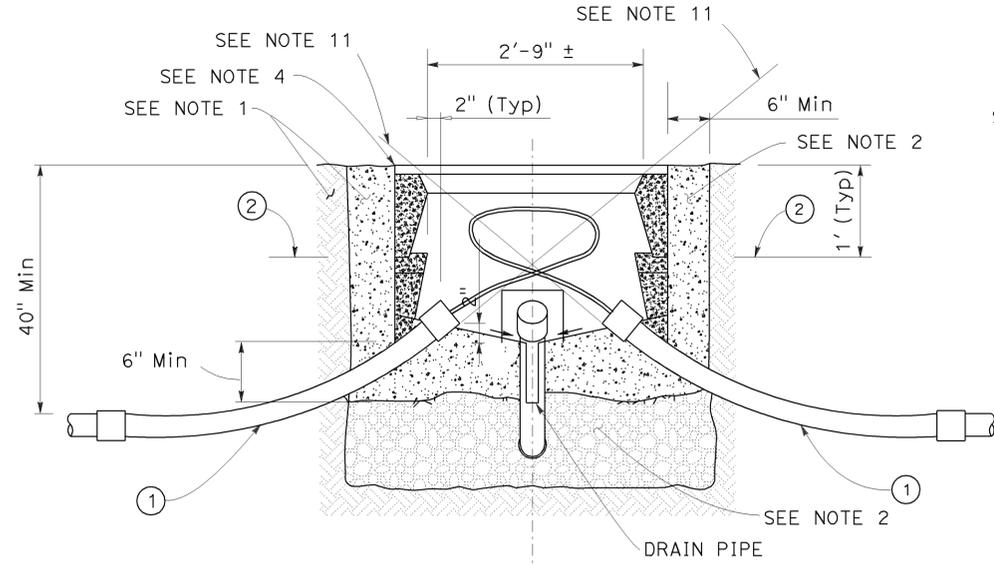
- 45 DEGREE ELBOW, 3' RADIUS Min. ELBOW AND COUPLING MAY NOT BE NECESSARY FOR NEW CONDUIT INSTALLED BY DIRECTIONAL BORING. NEW CONDUIT INSTALLED BY DIRECTIONAL BORING SHALL ENTER THE PULL BOX WITH BENDING RADIUS OF 3' Min.
- WARNING TAPE (FOR NEW CONDUIT IF INSTALLED BY TRENCHING).



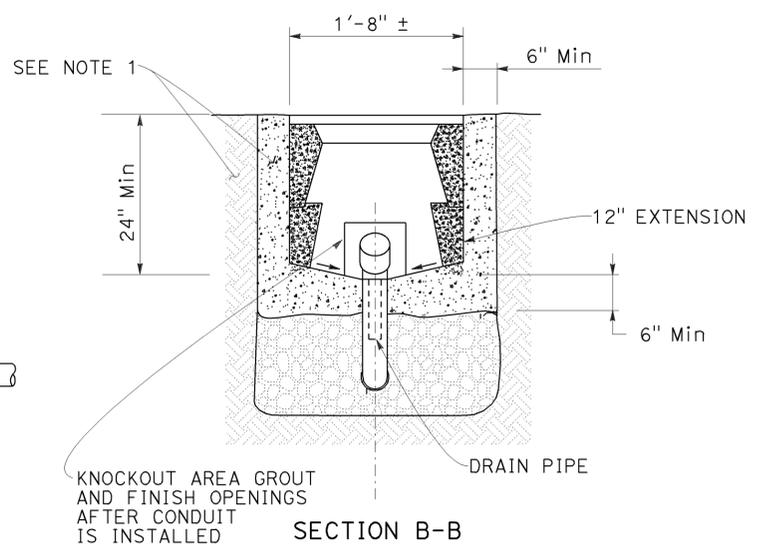
PLAN VIEW



PLAN VIEW WITHOUT COVER



SECTION A-A



SECTION B-B

**ELECTRICAL DETAILS
(FIBER OPTIC PULL BOX)
NO SCALE**

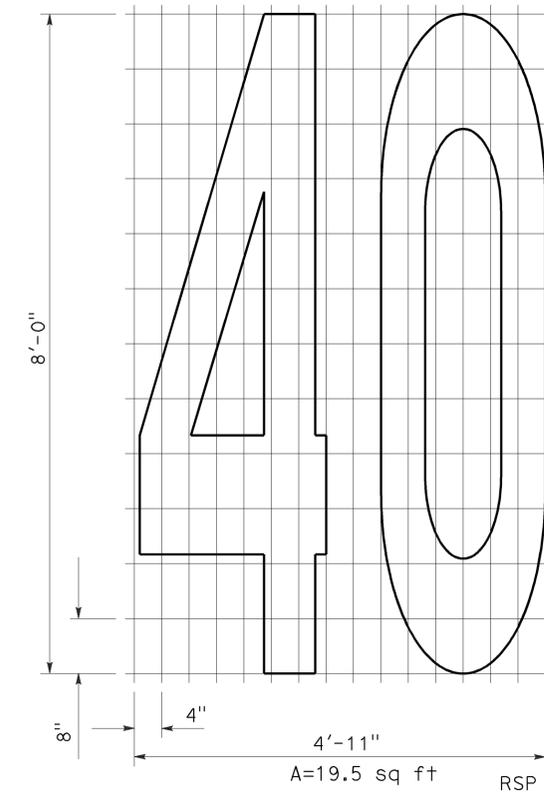
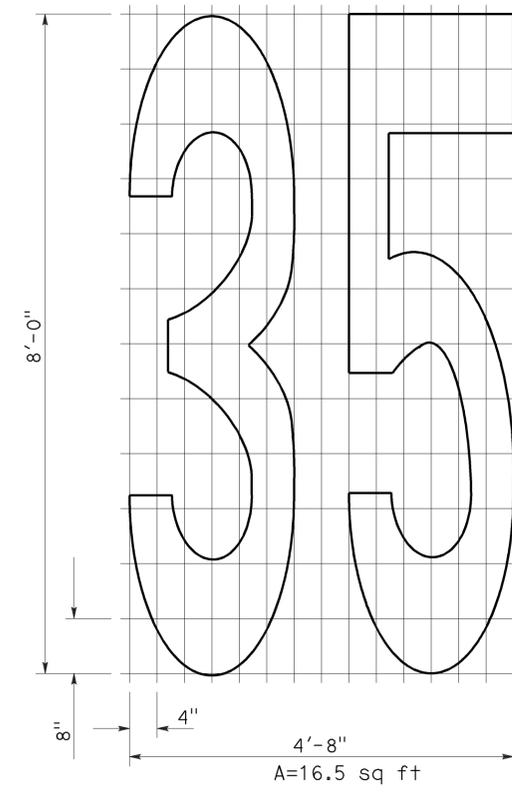
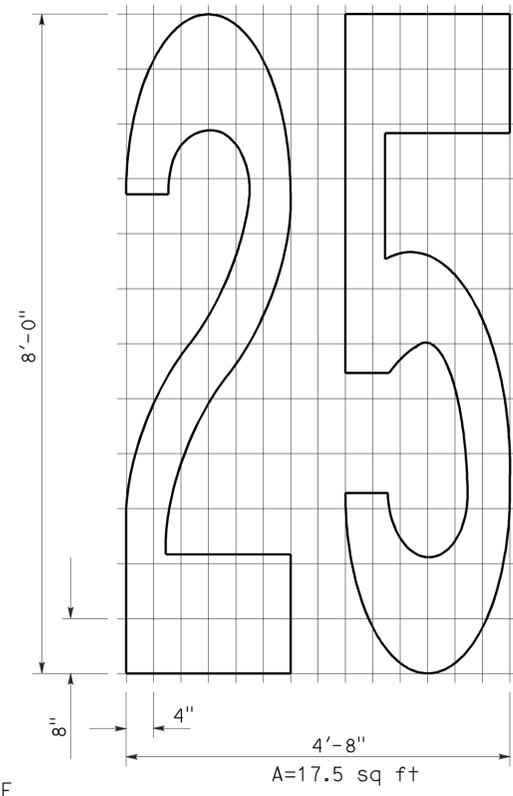
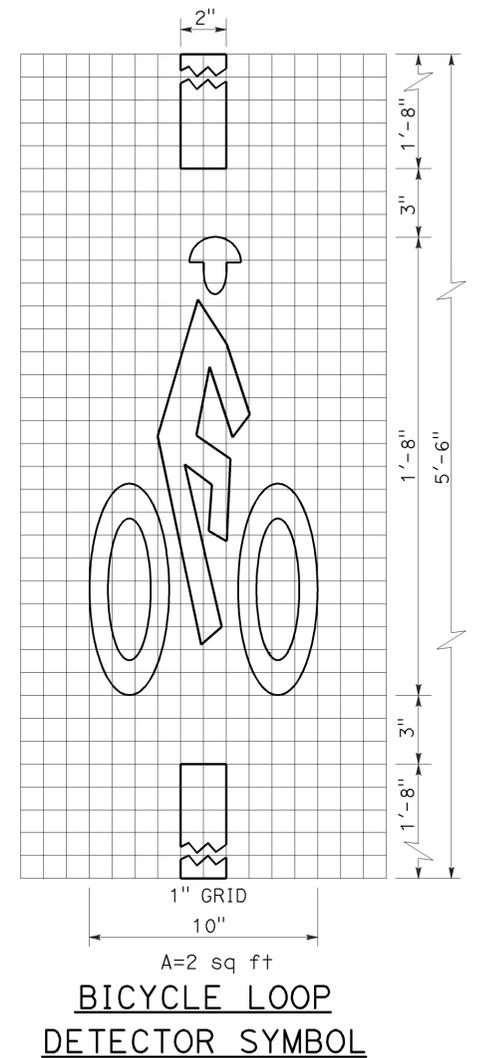
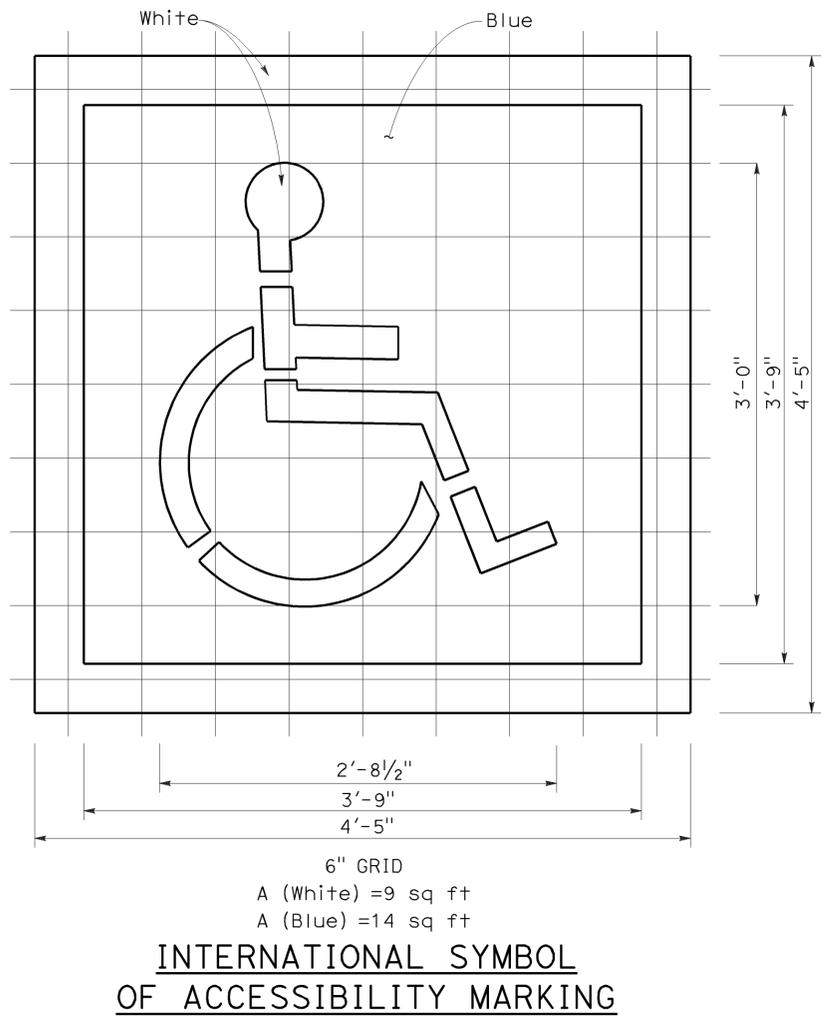
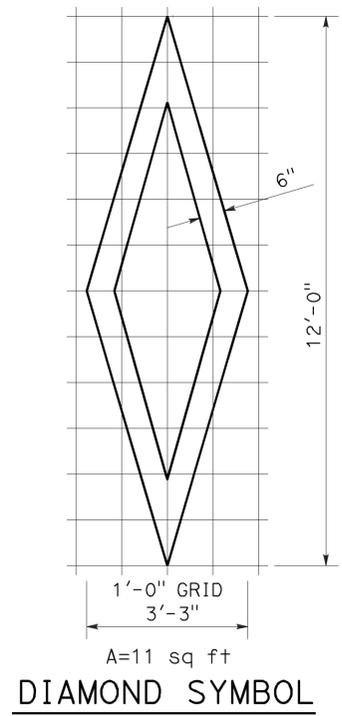
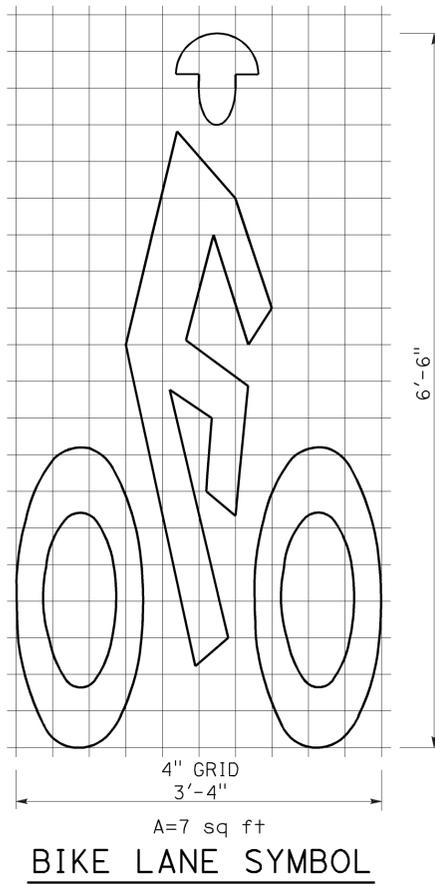
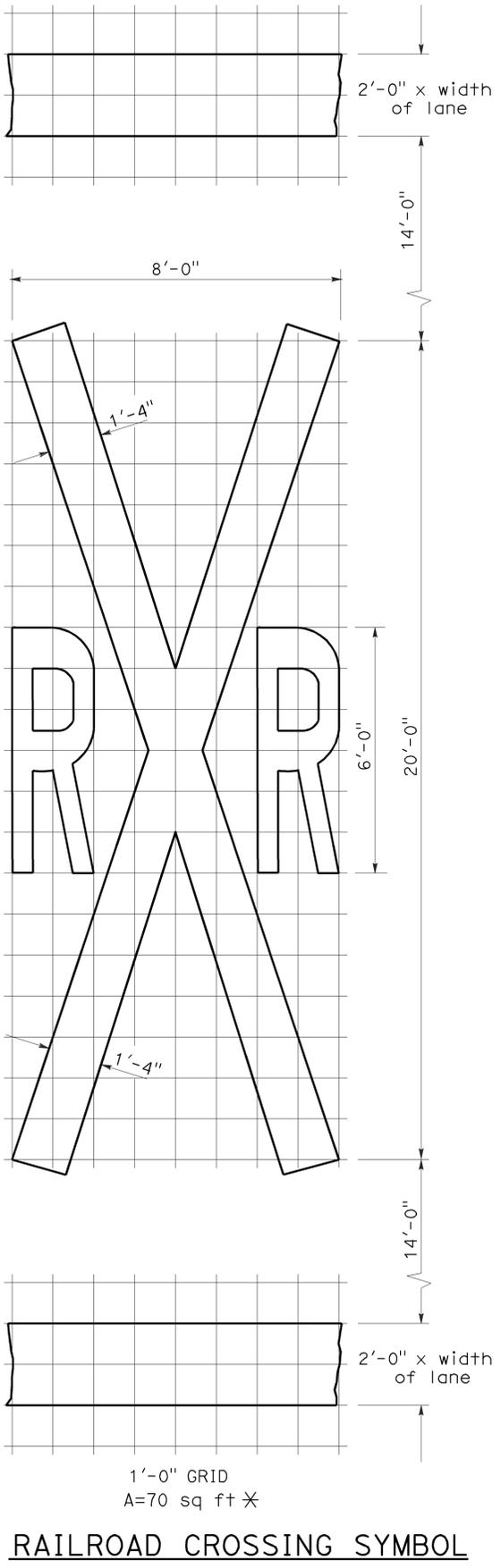
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - ELECTRICAL
 FUNCTIONAL SUPERVISOR: CHARLES PRICE
 CALCULATED/DESIGNED BY: MICHAEL LEE
 CHECKED BY: MICHAEL LEE
 REVISED BY: DATE
 REVISIONS:

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	427	504

Donald E. Howe
 REGISTERED CIVIL ENGINEER
 No. C46402
 Exp. 3-31-09
 CIVIL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE
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To accompany plans dated 2-1-10



NUMERALS

NOTE:
 1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS SYMBOLS AND NUMERALS
 NO SCALE

2006 REVISED STANDARD PLAN RSP A24C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	428	504

Dallas Forester
REGISTERED CIVIL ENGINEER

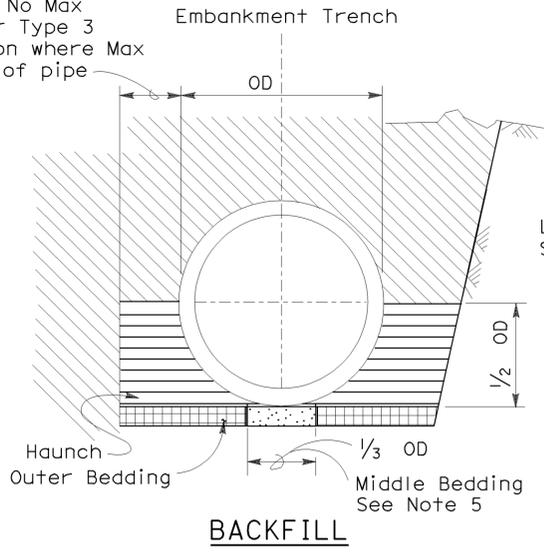
November 17, 2006
PLANS APPROVAL DATE

Dallas Forester
REGISTERED PROFESSIONAL ENGINEER
No. C37765
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

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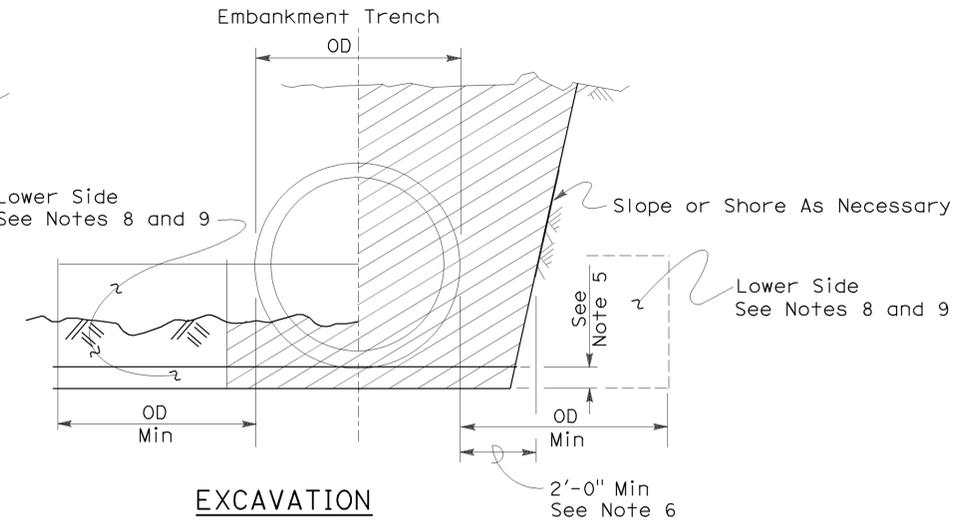
To accompany plans dated 2-1-10

2'-0" Min; No Max except for Type 3 Installation where Max Equals OD of pipe



BACKFILL

- Roadway Embankment
- Structure Backfill (Culvert) See Note 6
- Structure Backfill (Culvert) See Note 6
- Loose Backfill



EXCAVATION

- Excavation Structure (Culvert)

TYPE 1 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 30 and the maximum percentage passing the 75 μm sieve size shall be 12.

TYPE 2 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 25.

TYPE 3 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 85 percent relative compaction. 90 percent relative compaction will be required where the fill over the pipe is less than 4'-0" or 1/2 OD.

NOTES:

- Unless otherwise shown on the plans or specified in the special provision, the Contractor shall have the option of selecting the class of RCP and the type of installation to be used, provided the height of cover does not exceed the value shown for the RCP selected.
Example: 24" RCP culvert with maximum cover of 19'-0" the options are:
a) Class III or stronger with Installation Type 1.
b) Class III Special or stronger with Installation Type 2.
c) Class IV Special or stronger with Installation Type 3.
Cover is defined as the maximum vertical distance from top of the pipe to finished grade within the length of any given culvert.
- The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
- The "length of any culvert" is defined as the culvert between:
a) Successive drainage structure (inlets, junction boxes, headwalls, etc.).
b) A drainage structure and the inlet or outlet end of the culvert.
c) The inlet and outlet end of the culvert when there are no intervening drainage structures.
- Oval and arch shaped RCP shall not be used.
- 1/25 OD Min, not less than 3".
- Slurry cement backfill may be substituted for backfill in the outer bedding and haunch areas. If slurry is used the outer and middle beddings shall be omitted. Prior to installation the soil under the middle 1/3 of the outside diameter of the pipe shall be softened by scarifying or other means to a minimum depth of 1/25 OD, but not less than 3". Where slurry cement backfill is used clear distance to trench wall may be reduced as set forth in Section 19-3.062 of the Standard Specifications.
- Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimums.
- Lower side shall be suitable material as determined by the Engineer. Otherwise it shall be considered unsuitable as set forth in Section 19-2.02 of the Standard Specifications. See Note 9.
- Where the pipe is placed in a trench, if the trench walls are sloped at 5 vertical to 1 horizontal or steeper for at least 90 percent of the trench height or up to not less than 12" from the grading plane, the firmness of the soil in the lower side need not be considered.
- Non-reinforced precast concrete pipe sizes 3'-0" or smaller may be placed under installation Types 1, 2 or 3.

INSTALLATION TYPE 1

MINIMUM CLASS AND D-LOAD	COVER	
	108" Dia AND SMALLER	OVER 108" Dia
Class II 1000D	14.9'	12.9'
Class III 1350D	15.0' - 20.9'	13.0' - 18.9'
Class III Special 1700D	21.0' - 26.9'	19.0' - 24.9'
Class IV 2000D	27.0' - 31.9'	25.0' - 29.9'
Class IV Special 2500D	32.0' - 40.9'	30.0' - 38.9'
Class V 3000D	41.0' - 49.9'	39.0' - 46.9'
Class V Special 3600D	50.0' - 59.0'	47.0' - 58.0'

INSTALLATION TYPE 2

MINIMUM CLASS AND D-LOAD	COVER
Class II 1000D	9.9'
Class III 1350D	10.0' - 14.9'
Class III Special 1700D	15.0' - 19.9'
Class IV 2000D	20.0' - 24.9'
Class IV Special 2500D	25.0' - 31.9'
Class V 3000D	32.0' - 38.9'
Class V Special 3600D	39.0' - 47.0'

INSTALLATION TYPE 3

MINIMUM CLASS AND D-LOAD	COVER	
	48" Dia AND SMALLER	OVER 48" Dia
Class II 1000D	7.9'	5.9'
Class III 1350D	8.0' - 10.9'	6.0' - 8.9'
Class III Special 1700D	11.0' - 14.9'	9.0' - 12.9'
Class IV 2000D	15.0' - 17.9'	13.0' - 15.9'
Class IV Special 2500D	18.0' - 21.9'	16.0' - 19.9'
Class V 3000D	22.0' - 26.9'	20.0' - 24.9'
Class V Special 3600D	30.0' - 33.0'	25.0' - 31.0'

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**EXCAVATION AND BACKFILL
CONCRETE PIPE CULVERTS**

NO SCALE

RSP A62DA DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A62DA DATED MAY 1, 2006 - PAGE 20 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A62DA

2006 REVISED STANDARD PLAN RSP A62DA

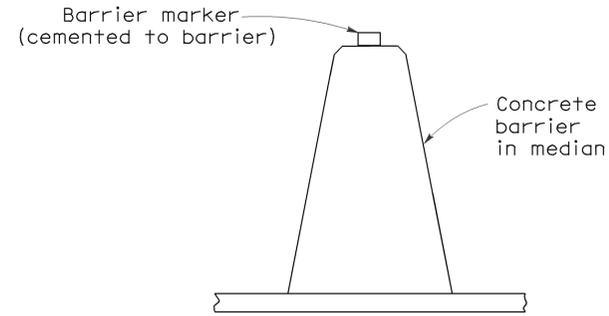
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

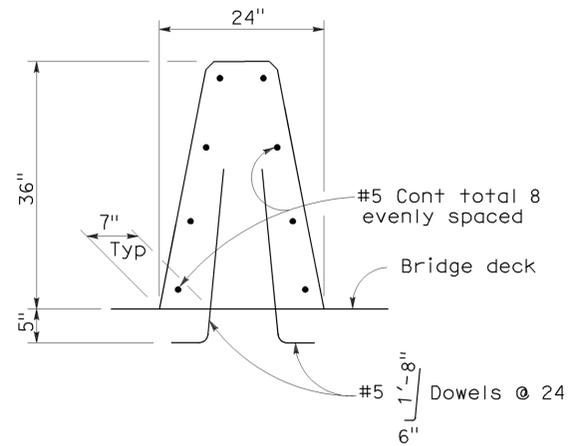
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To accompany plans dated 2-1-10



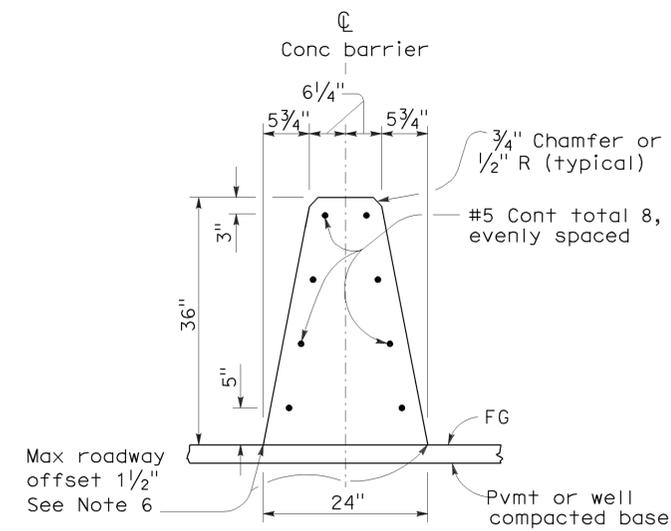
CONCRETE BARRIER TYPE 60 DELINEATION

See Notes 7 and 8



CONCRETE BARRIER TYPE 60A

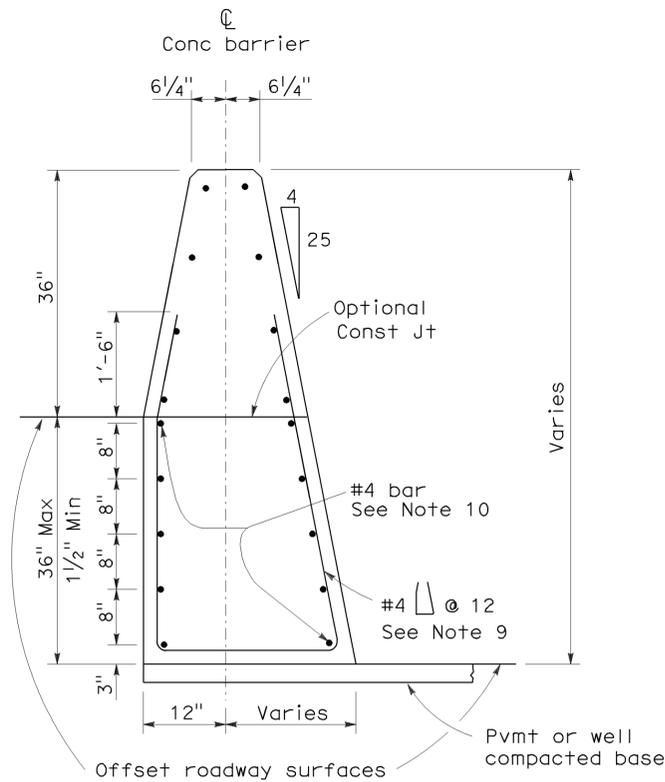
Details similar to Type 60 except as noted.



CONCRETE BARRIER TYPE 60

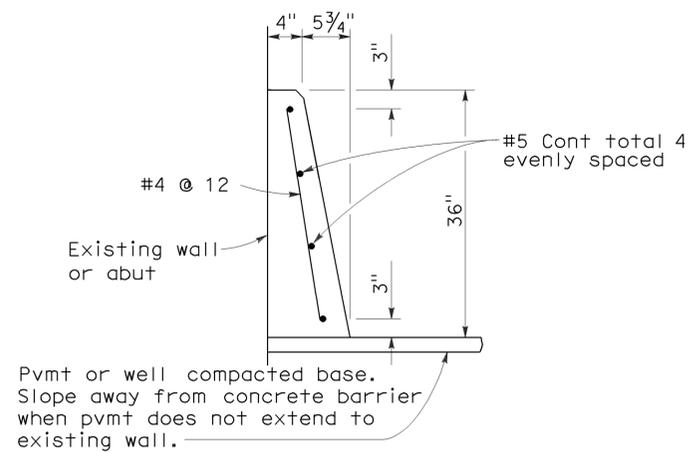
NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C

Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

CONCRETE BARRIER TYPE 60

NO SCALE

RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

2006 REVISED STANDARD PLAN RSP A76A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	430	504

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

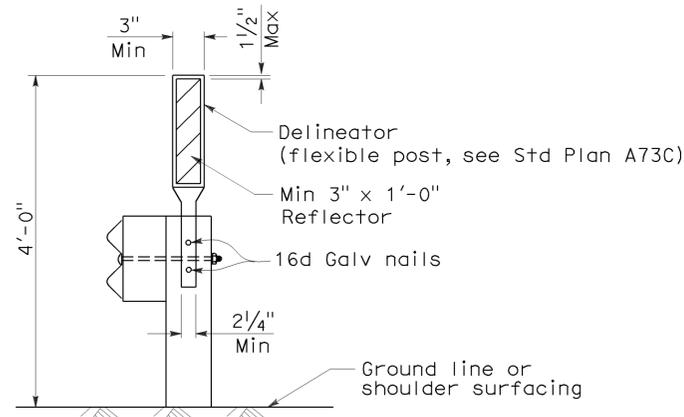
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 2-1-10

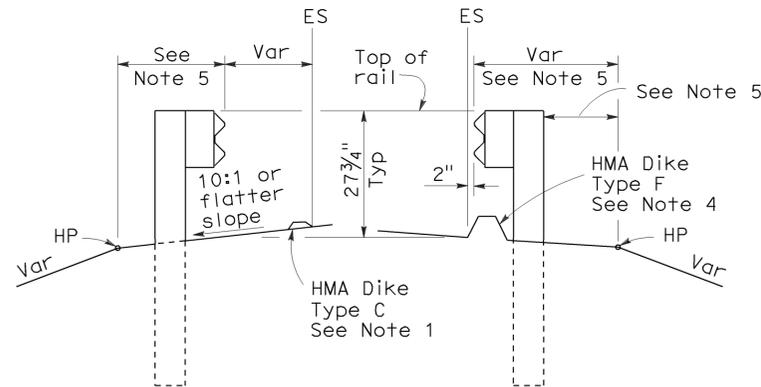
NOTES:

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
04	CC	680	0.0/R12.8	431	504

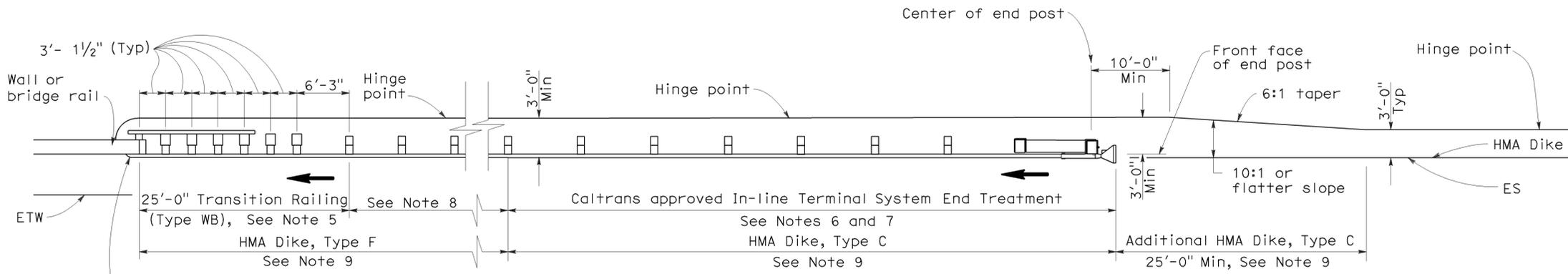
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

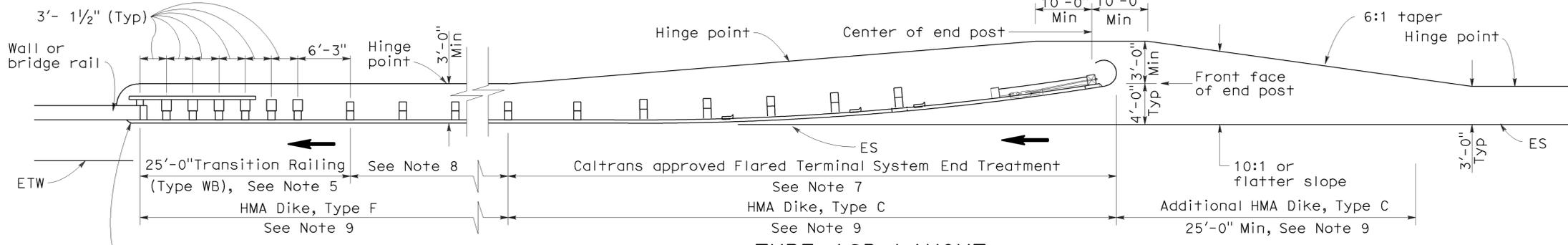
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To accompany plans dated 2-1-10



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

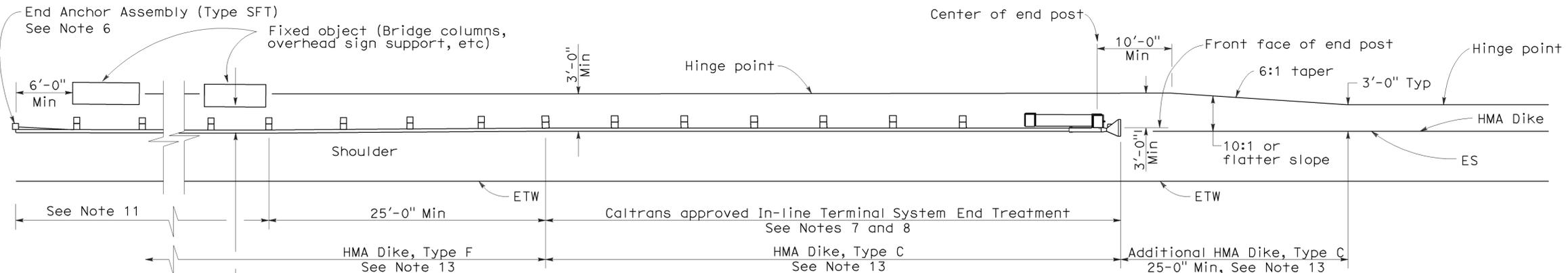
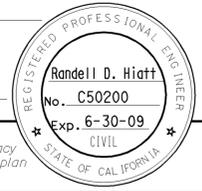
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	432	504

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June 6, 2008
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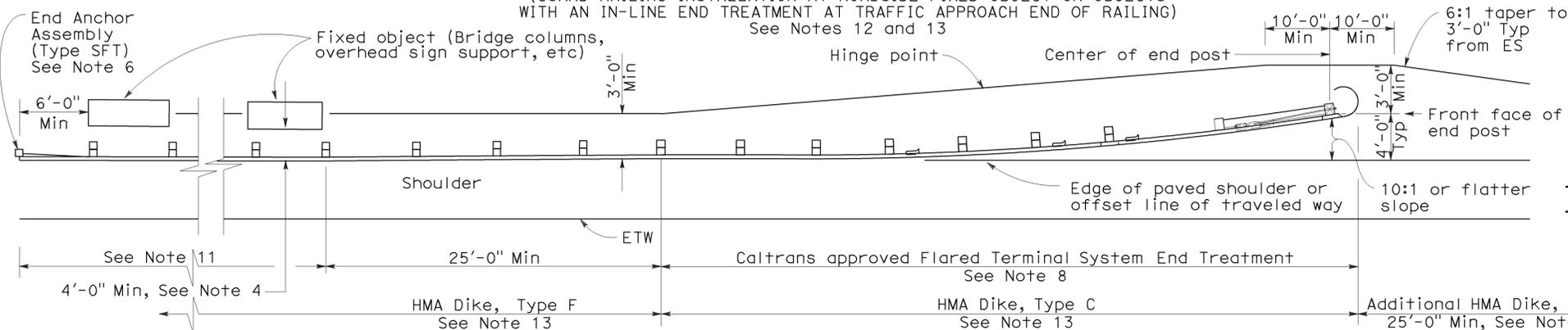
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To accompany plans dated 2-1-10



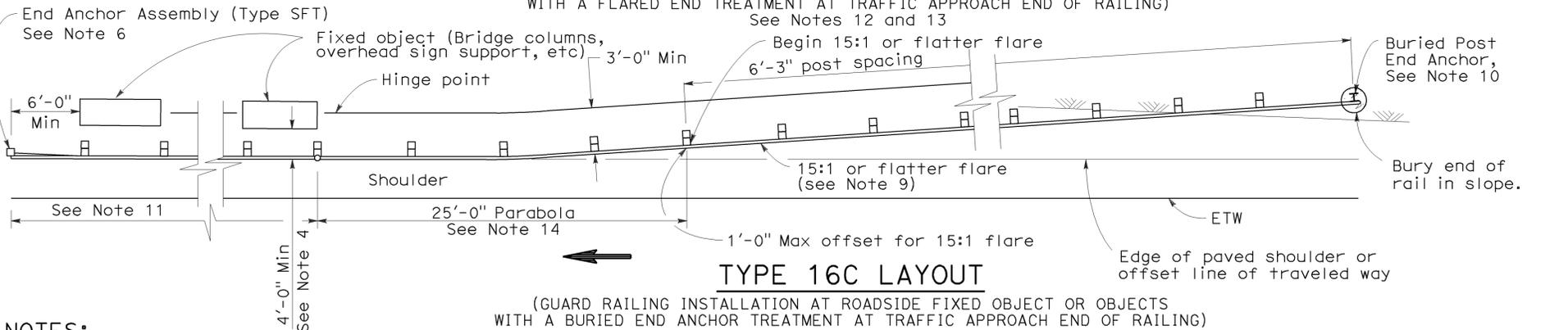
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



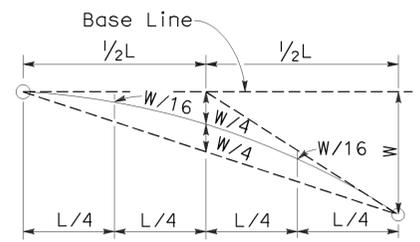
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

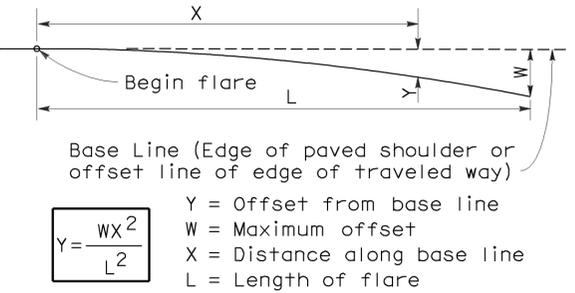


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



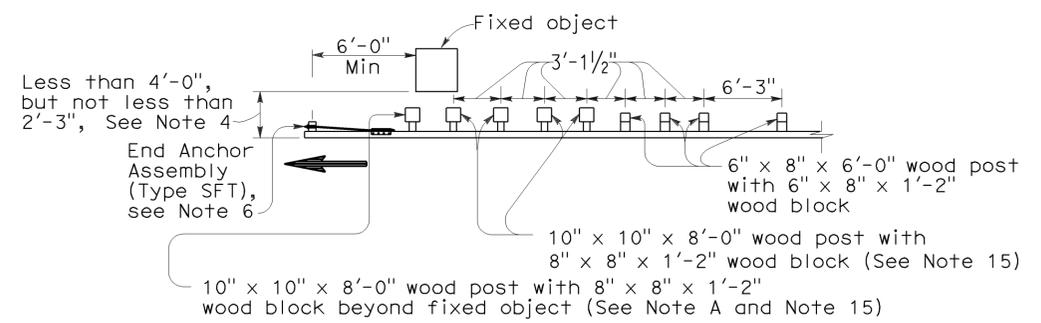
TYPICAL PARABOLIC LAYOUT



PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing 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 line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End 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.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line 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 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



NOTE A:

For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**

NO SCALE

RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

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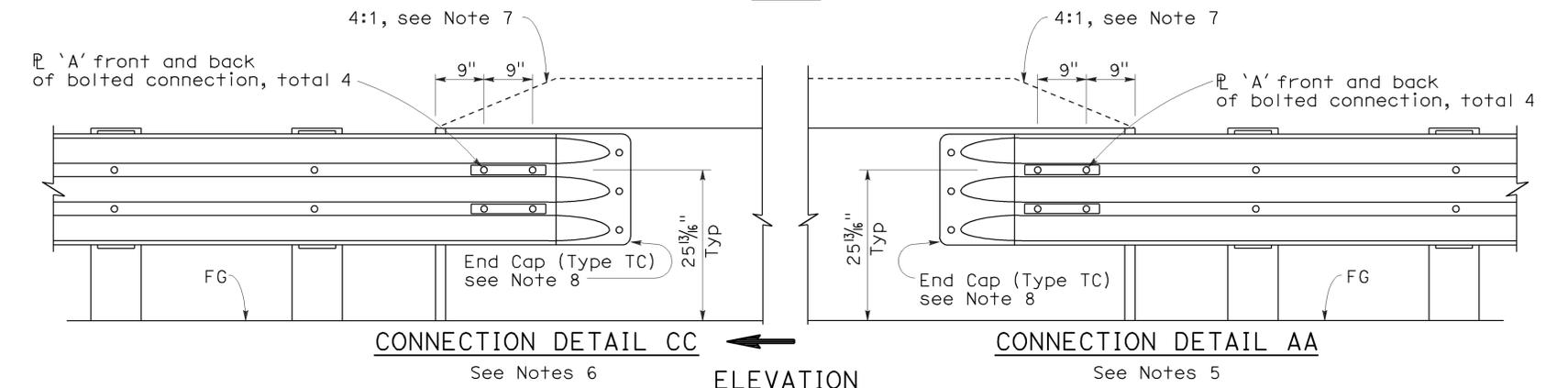
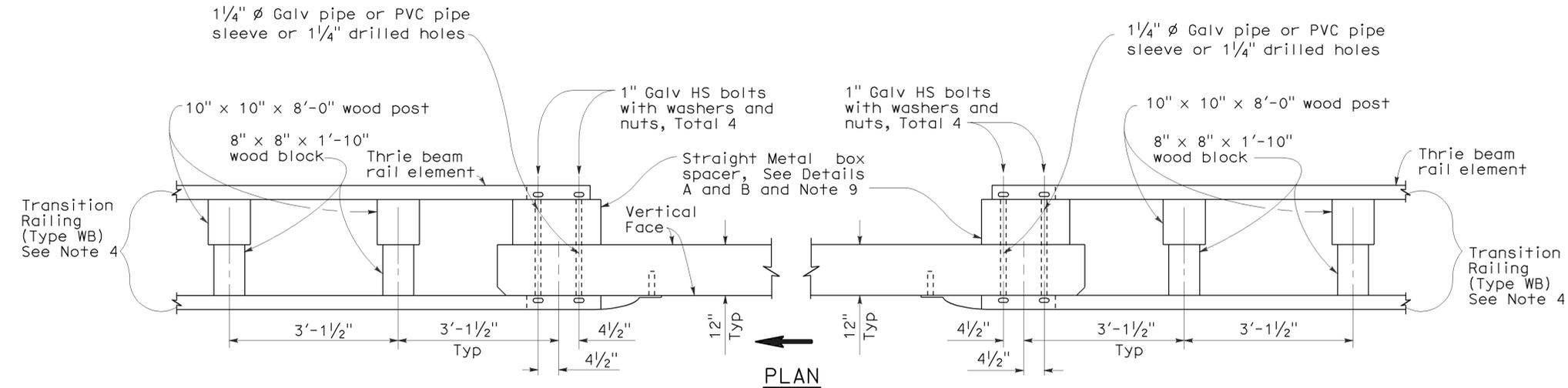
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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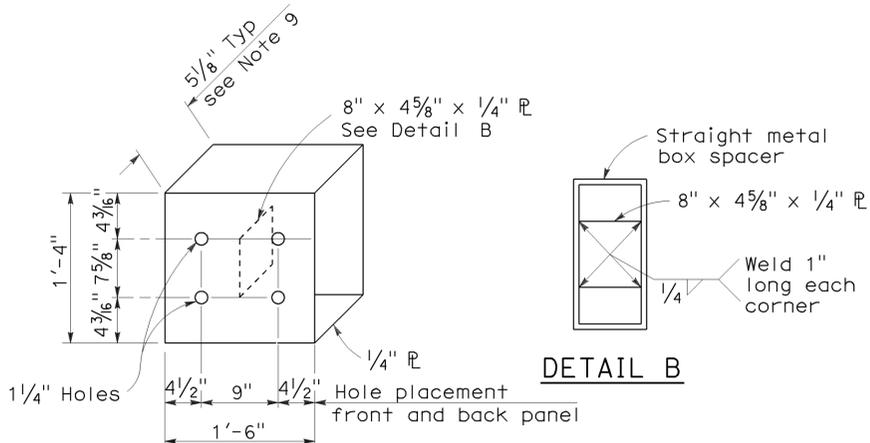
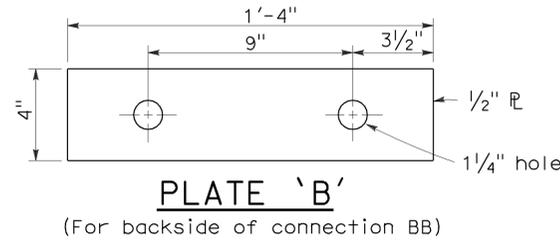
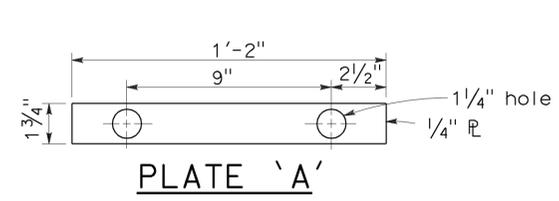
To accompany plans dated 2-1-10



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

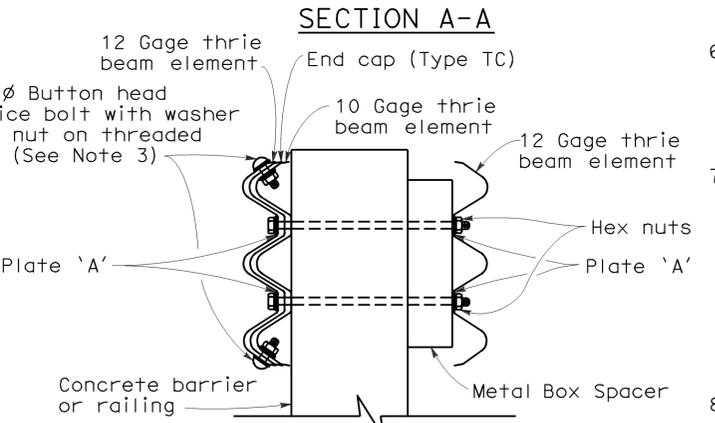
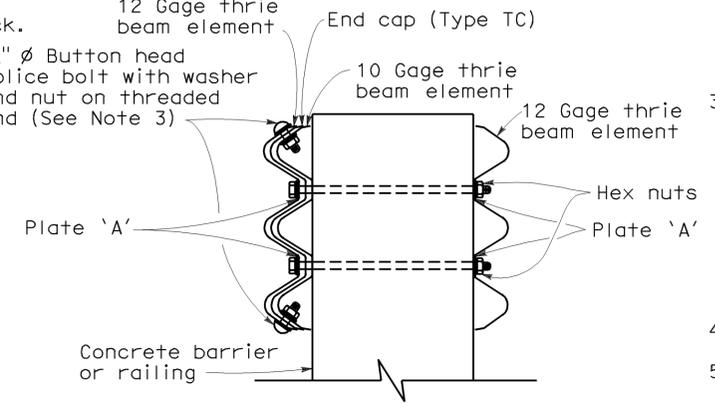
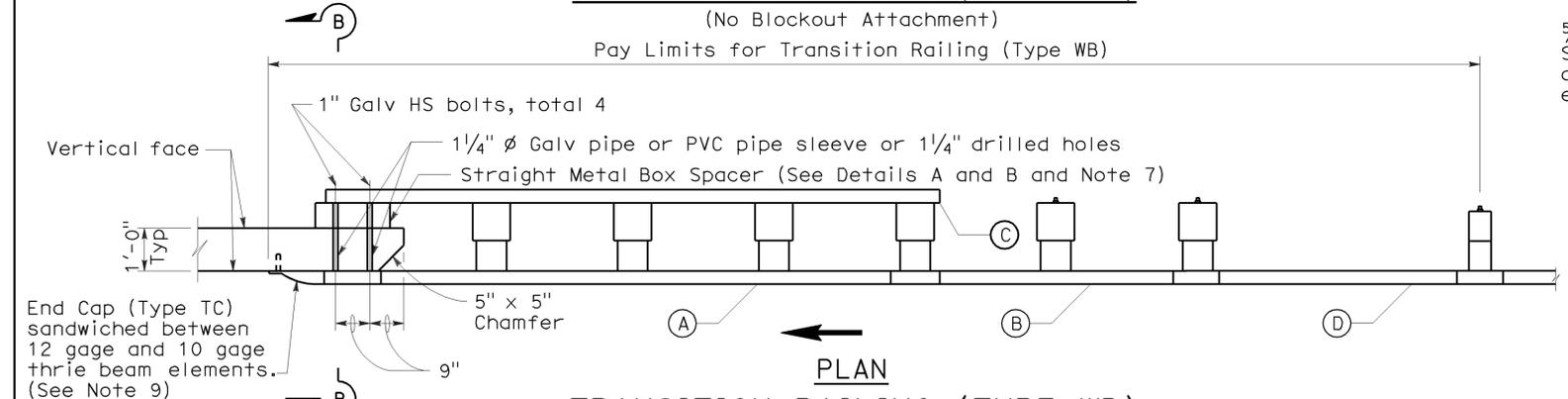
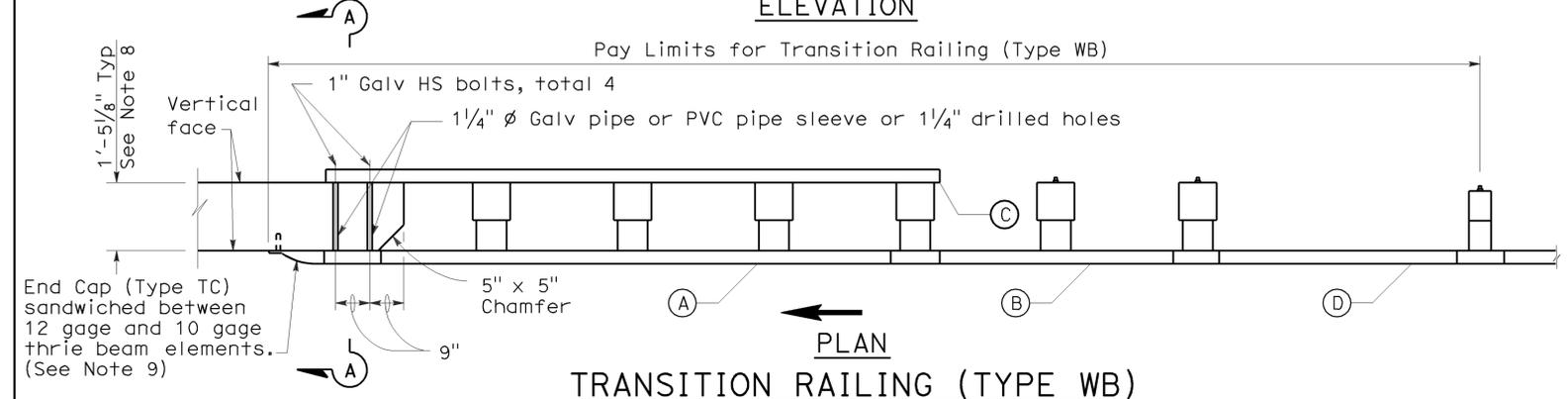
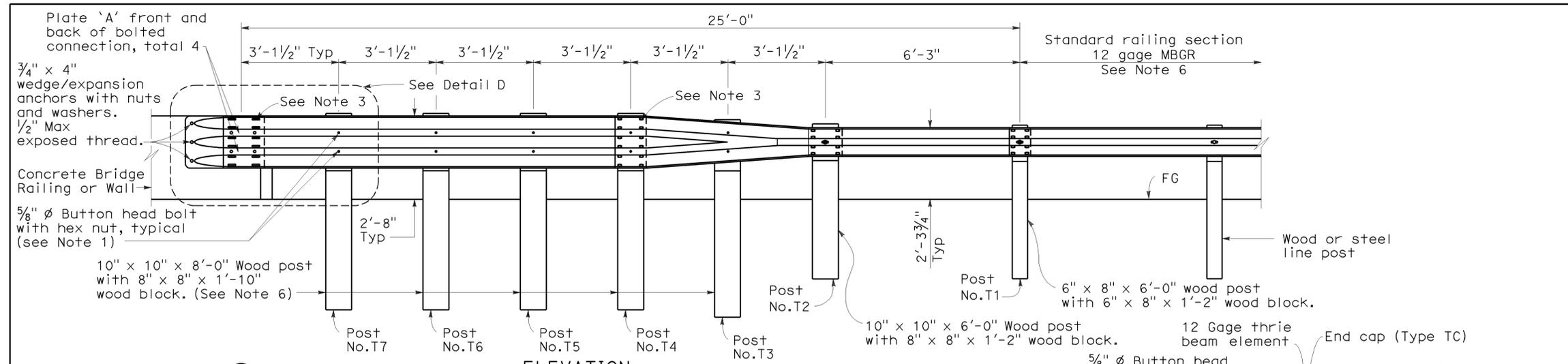
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	434	504

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

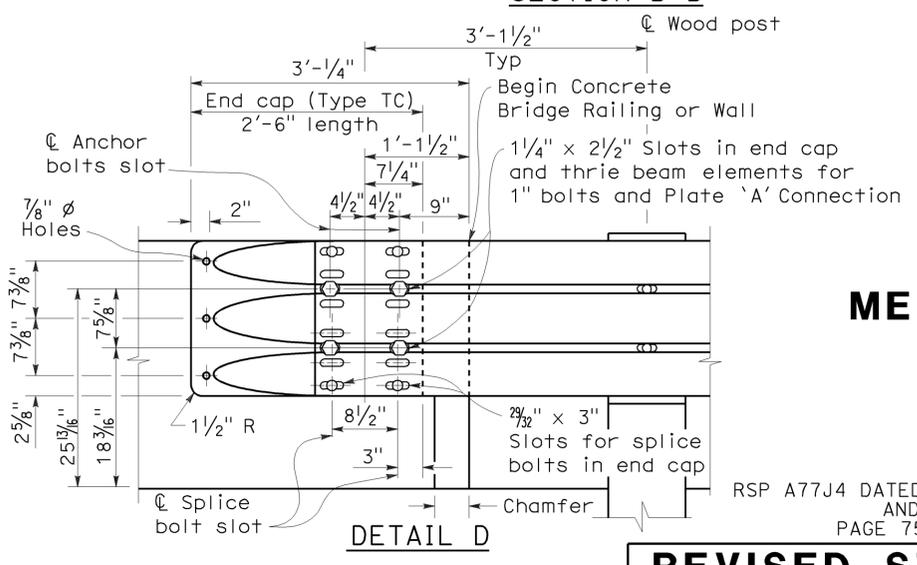
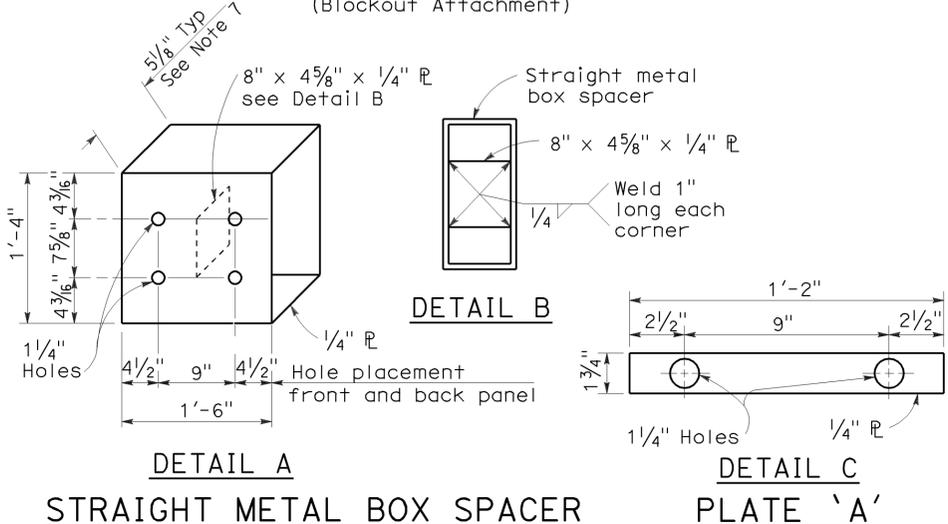
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STATE OF CALIFORNIA



- NOTES:** To accompany plans dated 2-1-10
- Use 5/8 " ϕ Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
 - 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.
 - 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 " ϕ . 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.
 - Direction of adjacent traffic indicated by \rightarrow .
 - The top elevation of Post Nos.T2 through T7 shall not project more than 1" above the top elevation of the rail element.
 - 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.
 - 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.
 - 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.
 - 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.

- 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



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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	435	504

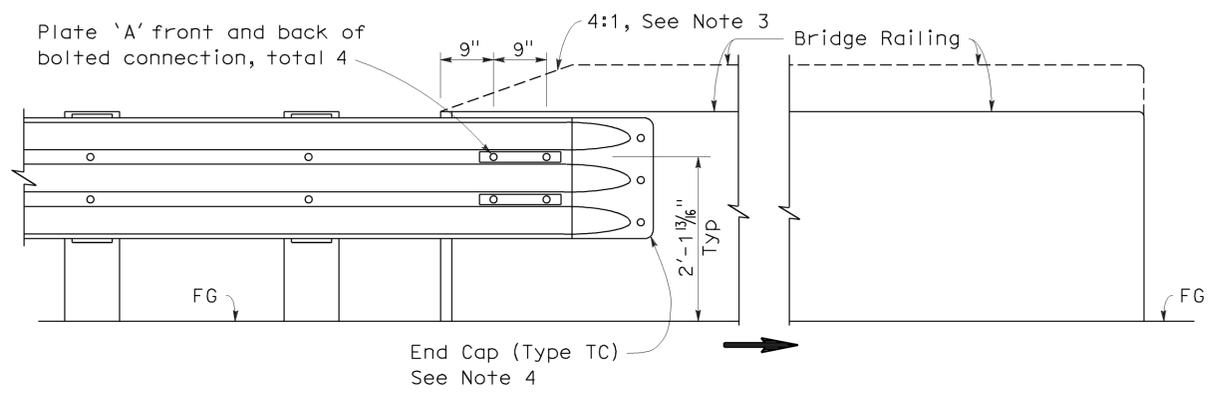
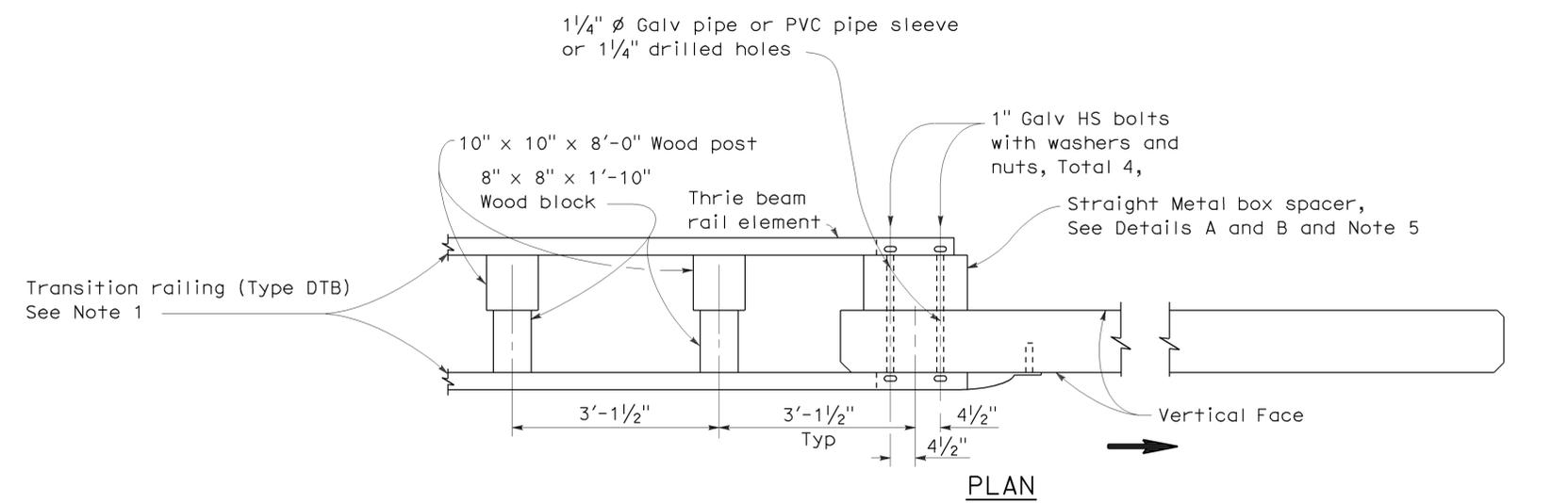
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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No. C50200
Exp. 6-30-09
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To accompany plans dated 2-1-10

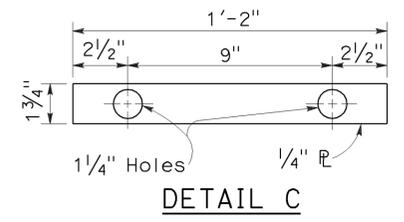
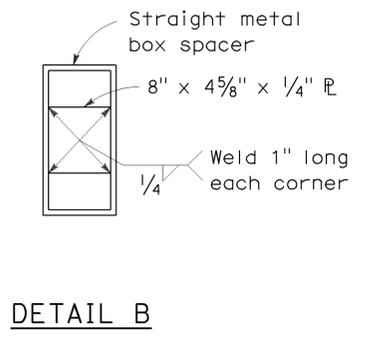
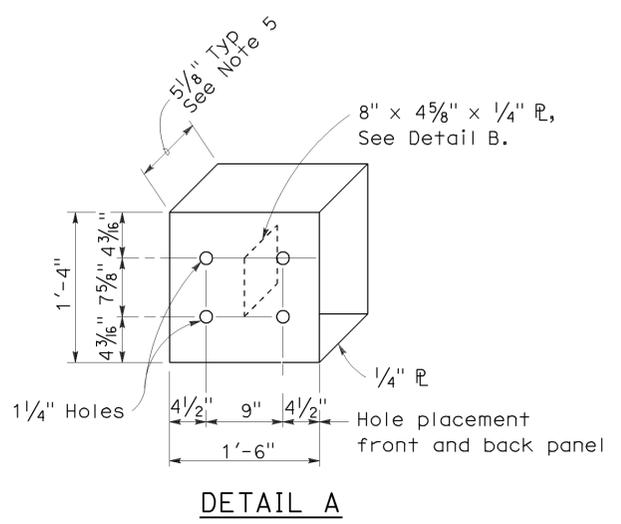


CONNECTION DETAIL 1A
See Note 2

DOUBLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

- For additional details of Transition Railing (Type DTB), see Standard Plans A78K. Transition Railing (Type DTB) transitions the standard 12 gage double thrie beam barrier to a heavier gage double thrie beam railing section then to a heavier gage nested double thrie beam barrier section which then is connected to the concrete bridge railing.
- For typical use of Connection Detail 1A, see Type 25A Connection Layout on Revised Standard Plan RSP A78H.
- Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail 1A, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
- For details of End Cap (Type TC), see Standard Plan A78C1.
- See Standard Plan A78K for additional details regarding depth dimension for straight metal box spacer.
- Direction of adjacent traffic indicated by



STRAIGHT METAL BOX SPACER

PLATE 'A'

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**DOUBLE THRIE BEAM BARRIER
CONNECTION TO
BRIDGE RAILINGS
WITHOUT SIDEWALKS**

NO SCALE

RSP A78F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78F1
DATED MAY 1, 2006 - PAGE 92 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A78F1

2006 REVISED STANDARD PLAN RSP A78F1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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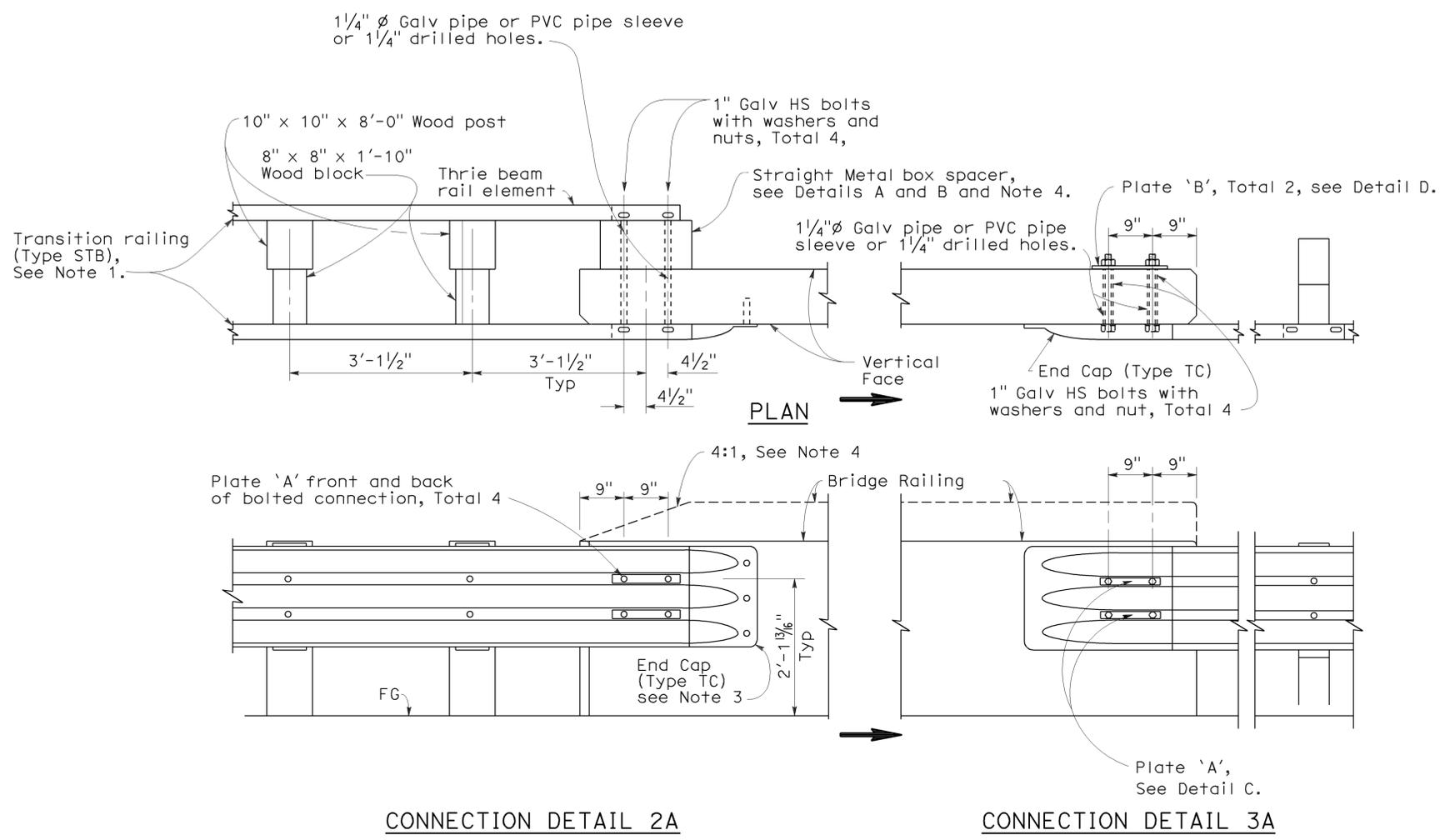
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June 6, 2008
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To accompany plans dated 2-1-10



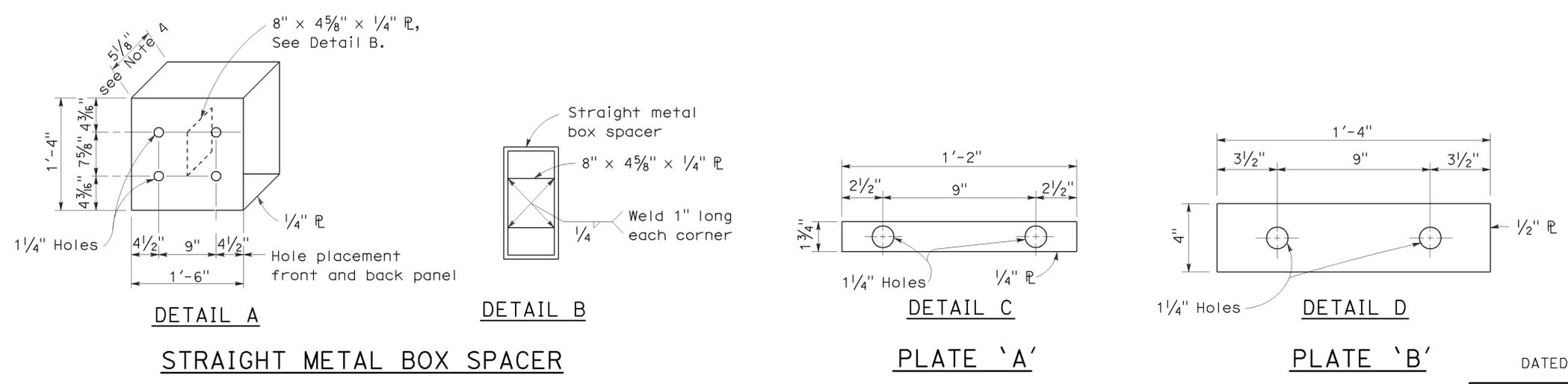
NOTES:

1. For additional details of Transition Railing (Type STB), see Standard Plans A78J. Transition Railing (Type STB) transitions the standard 12 gage single thrie beam barrier to a heavier gage single thrie beam railing section then to a heavier gage nested double thrie beam barrier section which then is connected to the concrete bridge railing.
2. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail 2A, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
3. For details of End Cap (Type TC), see Standard Plan A78C1.
4. See Standard Plan A78J for additional details regarding depth dimension for straight metal box spacer.
5. Direction of adjacent traffic indicated by ➡.

CONNECTION DETAIL 2A **CONNECTION DETAIL 3A**

ELEVATION

SINGLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK



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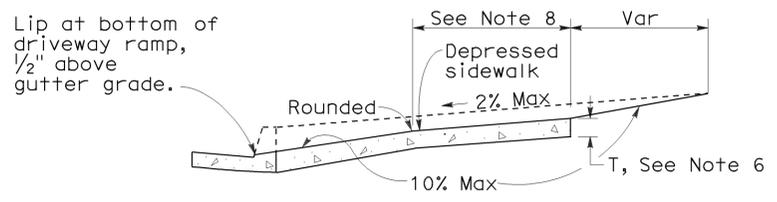
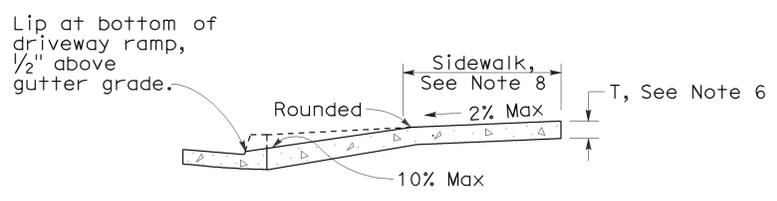
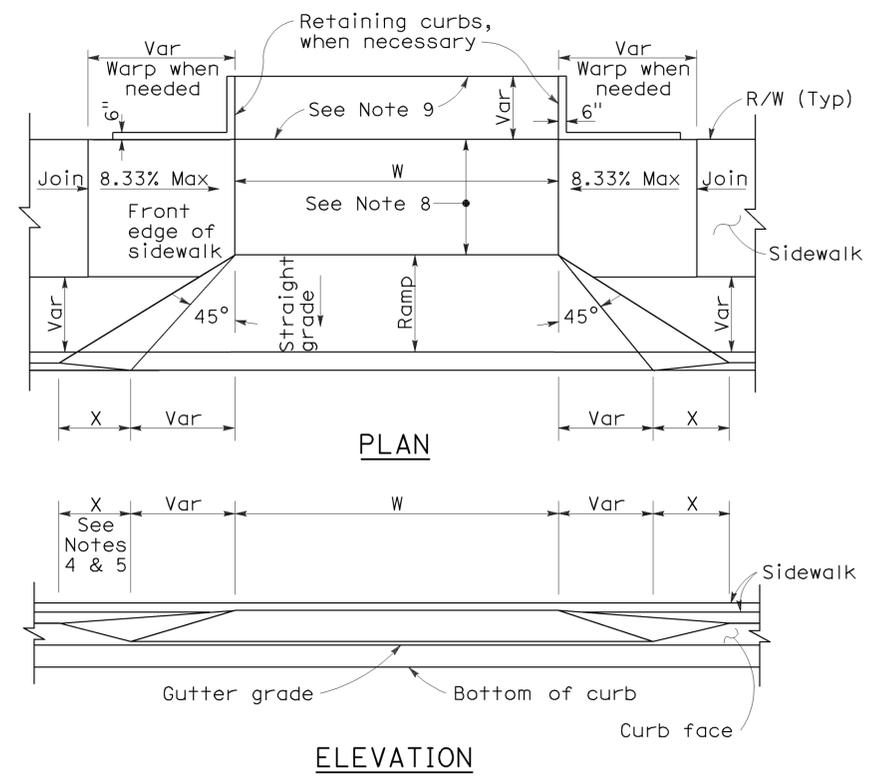
SINGLE THRIE BEAM BARRIER CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS

NO SCALE

RSP A78F2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78F2 DATED MAY 1, 2006 - PAGE 93 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A78F2

2006 REVISED STANDARD PLAN RSP A78F2



CASE A
Typical driveway, sidewalk not depressed

CASE B
Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

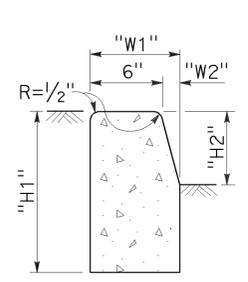
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

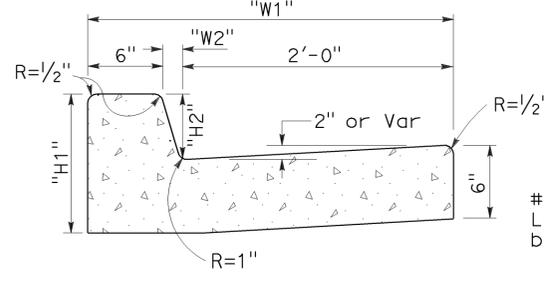
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-8"

To accompany plans dated 2-1-10

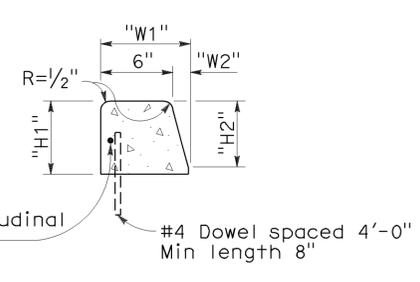
DRIVEWAYS



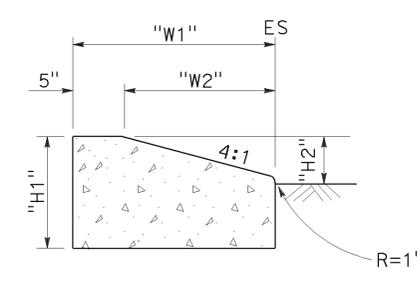
TYPE A1 CURBS
See Table A



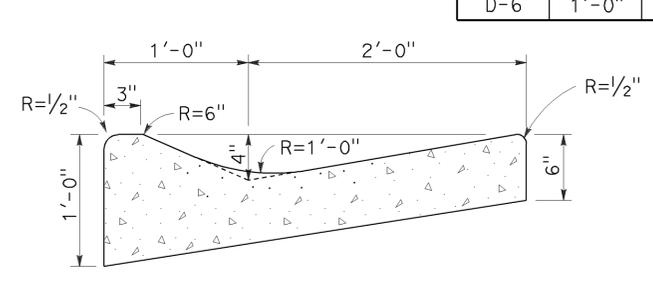
TYPE A2 CURBS
See Table A



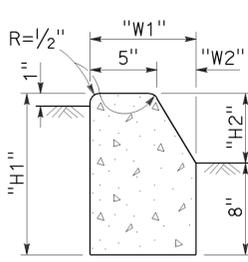
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



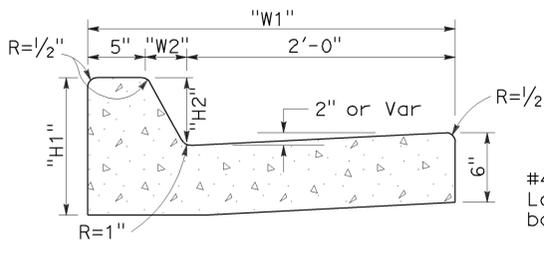
TYPE D CURBS
See Table A



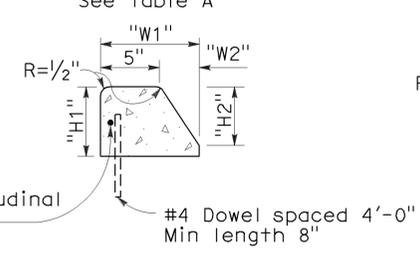
TYPE E CURB



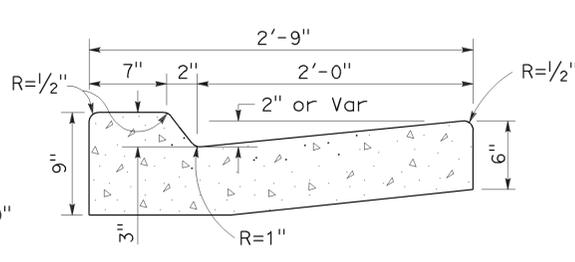
TYPE B1 CURBS
See Table A



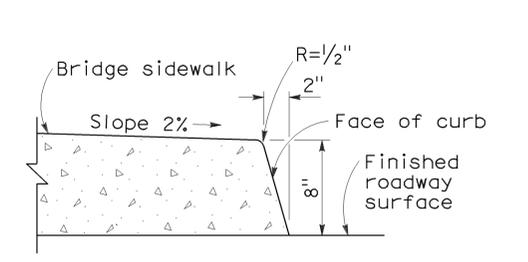
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

CURBS

NOTES:

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

NO SCALE

RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

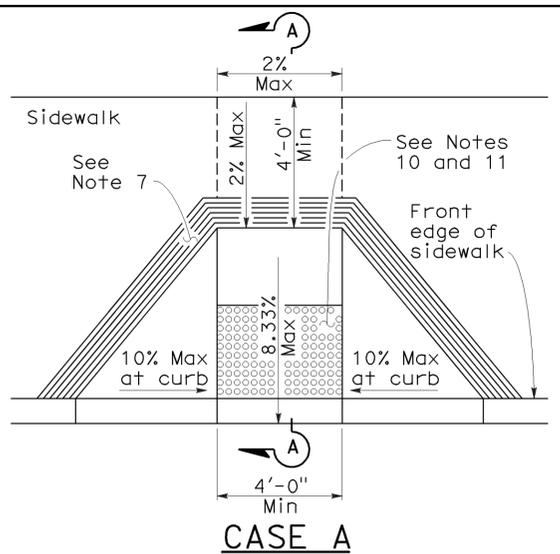
REVISED STANDARD PLAN RSP A87A

2006 REVISED STANDARD PLAN RSP A87A

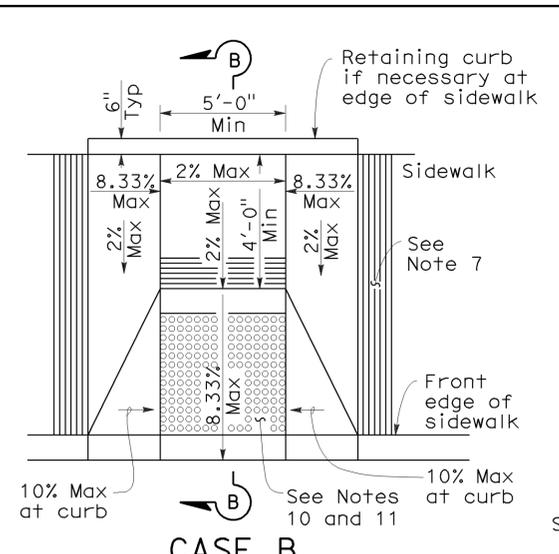
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	438	504

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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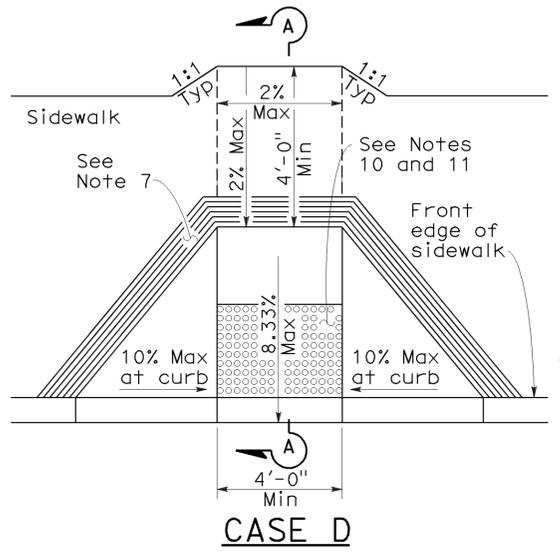
REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



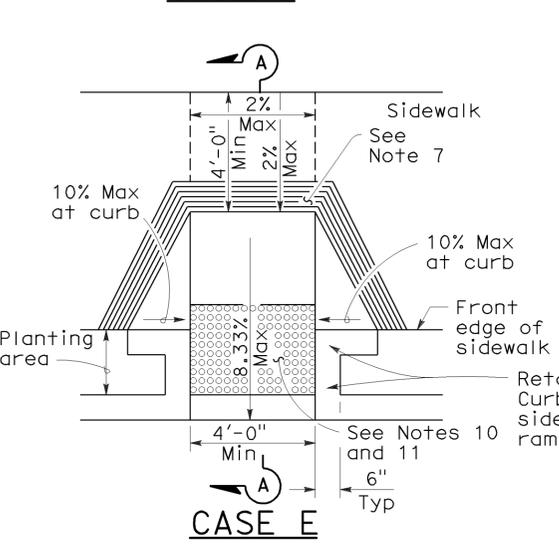
CASE A



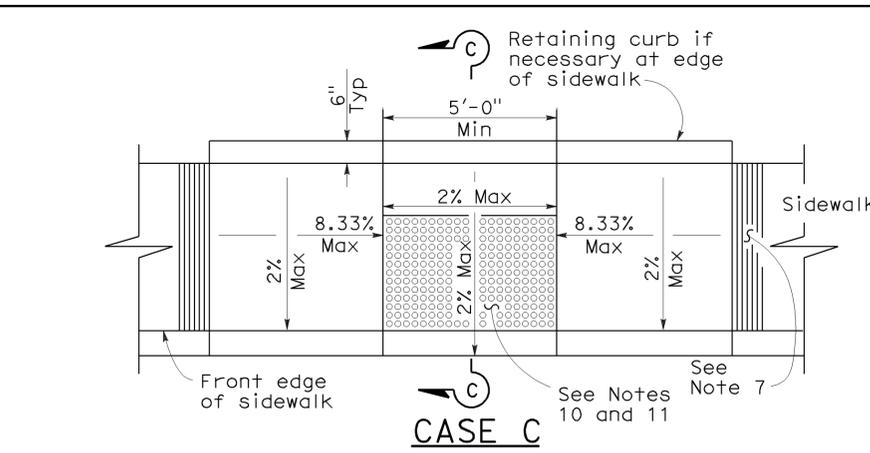
CASE B



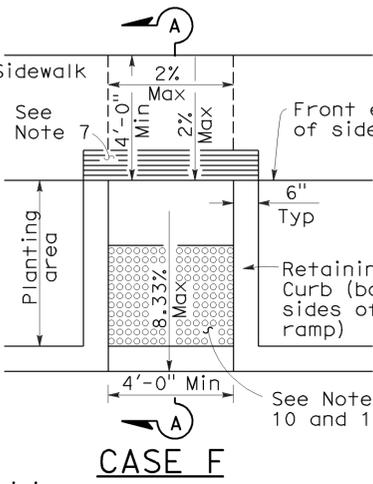
CASE D



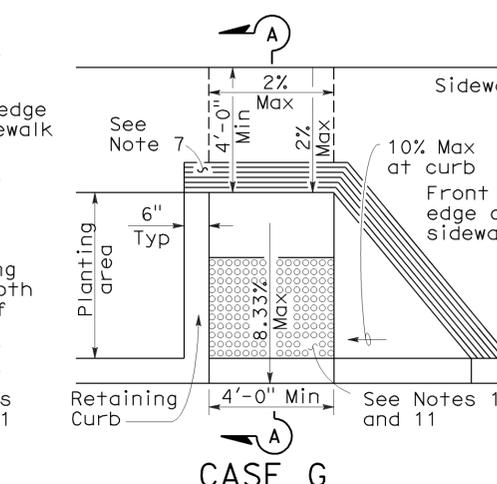
CASE E



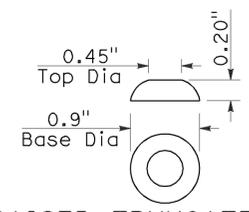
CASE C



CASE F



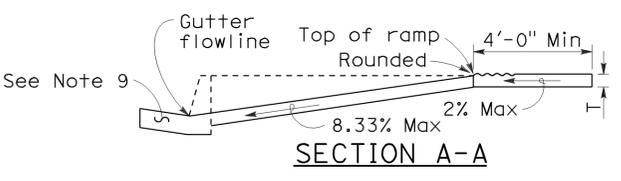
CASE G



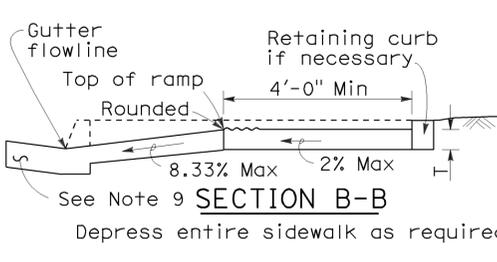
RAISED TRUNCATED DOME

NOTES:

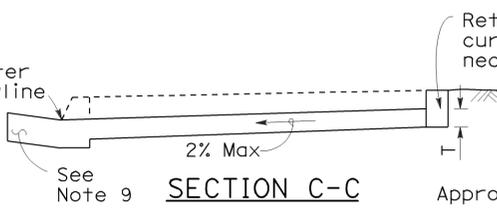
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
- Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
- Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



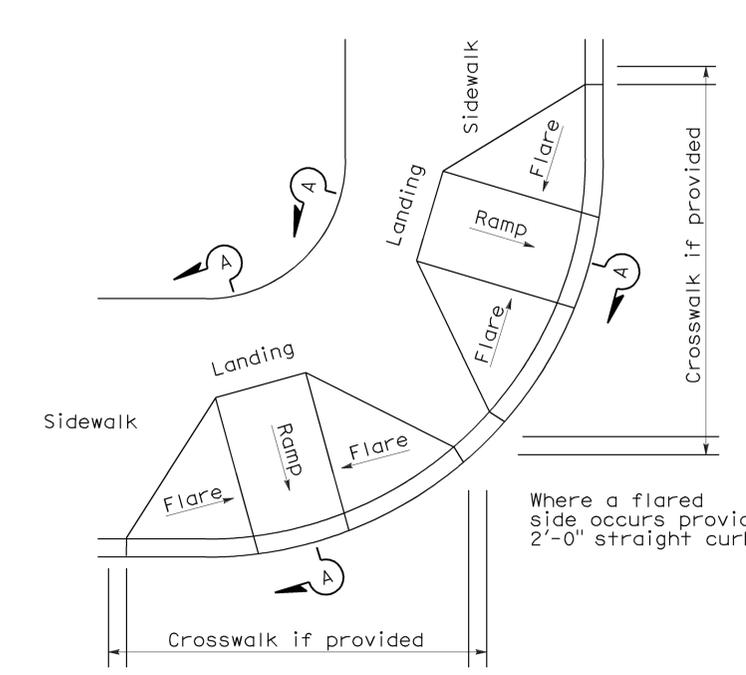
SECTION A-A



SECTION B-B

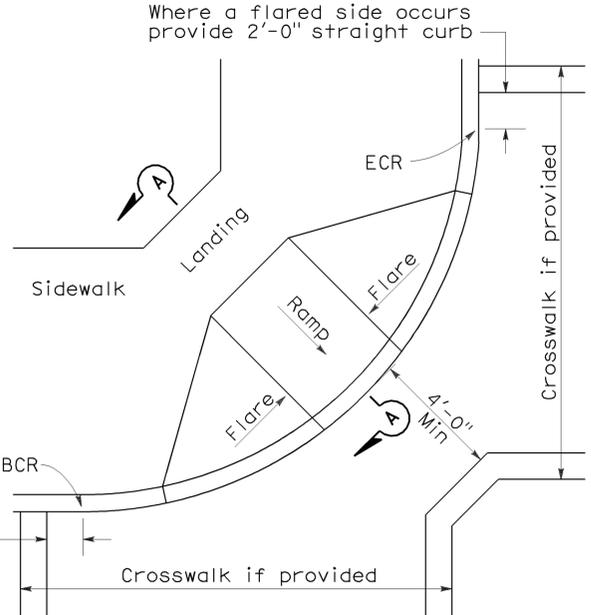


SECTION C-C



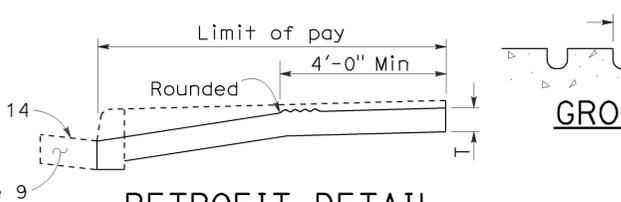
DETAIL A

TYPICAL TWO-RAMP CORNER INSTALLATION

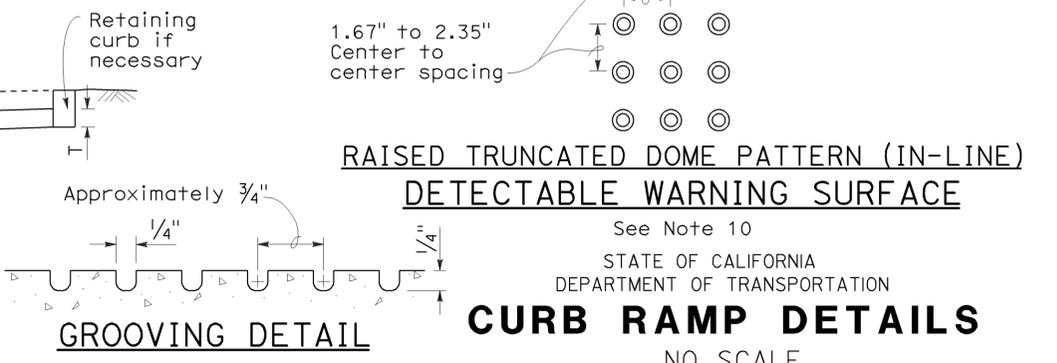


DETAIL B

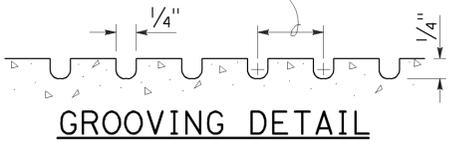
TYPICAL ONE-RAMP CORNER INSTALLATION



RETROFIT DETAIL



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE



GROOVING DETAIL

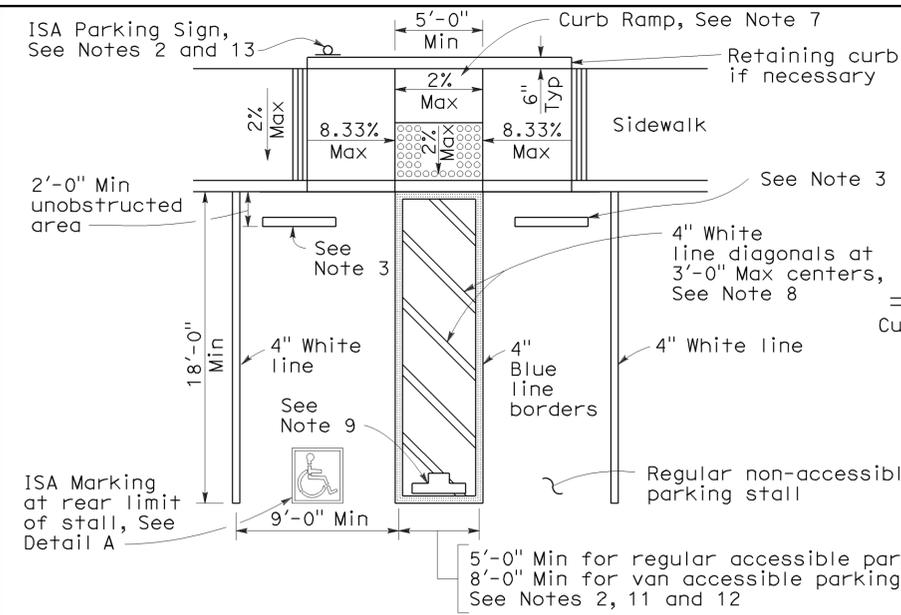
CURB RAMP DETAILS

NO SCALE

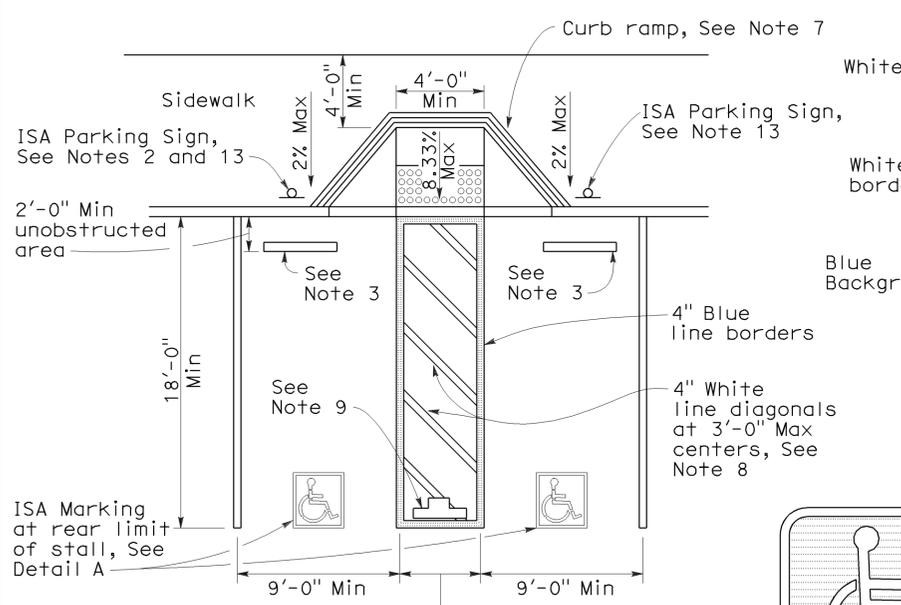
RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A88A

2006 REVISED STANDARD PLAN RSP A88A



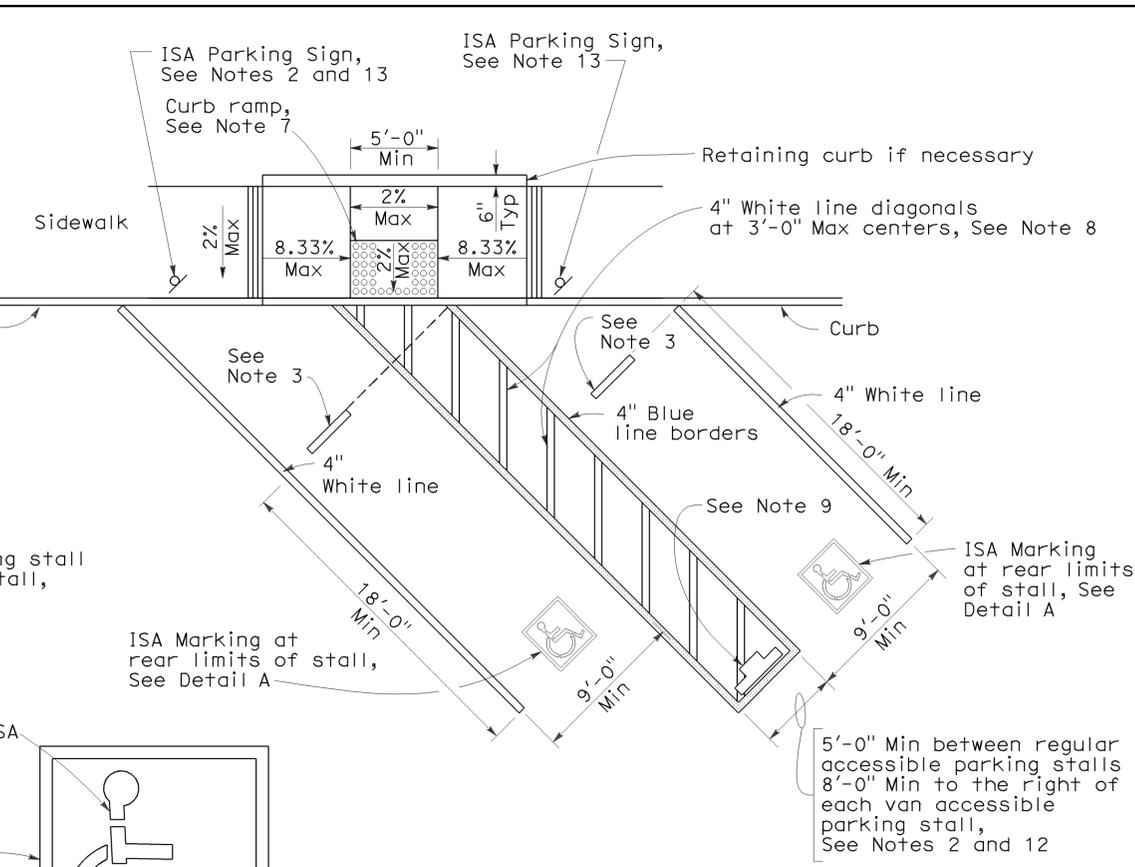
SINGLE PARKING STALL



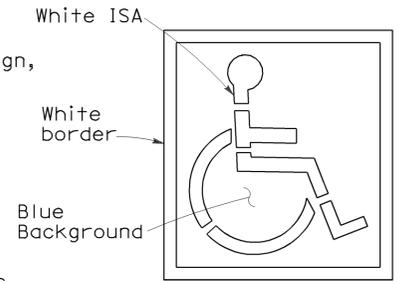
DOUBLE PARKING STALL

TABLE A

Total Number of Parking Spaces or Stalls	Minimum Number of Disabled Accessible Parking Spaces or Stalls
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1000	2 percent of total
Greater than 1001	20 plus 1 for each 100 or fraction thereof over 1001



DIAGONAL DOUBLE PARKING STALLS



DETAIL A
ISA MARKING
See Revised Std Plan RSP A24C



SIGN R99 (CA)



PLAQUE R99B (CA)
SIGN R99 (CA) with PLAQUE R99B (CA)
See Note 6



SIGN R99C (CA)
See Note 6



SIGN R100B (CA)
See Note 10



SIGN R7-8b
See Notes 2 and 6

NOTES:

1. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility.
2. One in every eight accessible off-street parking stalls, but not less than one, shall be served by an accessible aisle of 8'-0" minimum width and shall be signed van accessible. The R7-8b sign shall be mounted below the R99B (CA) plaque or the R99C (CA) sign.
3. In each parking stall, a curb or bumper shall be provided and located to prevent encroachment of vehicles over the required width of walkways. Parking stalls shall be so located that persons with disabilities are not compelled to wheel or walk behind parked cars other than their own.
4. Surface slopes of accessible off-street parking stalls shall be the minimum possible and shall not exceed 2 percent in any direction.
5. Table A shall be used to determine the required number of accessible parking stalls in each parking lot or garage.
6. Where Plaque R99B (CA), Sign R99C (CA) or Sign R7-8b are installed, the bottom of the sign or plaque panel shall be a minimum of 7'-0" above the surrounding surface.
7. Curb ramps shall conform to the details shown on Revised Standard Plan RSP A88A.
8. Blue paint, instead of white may be used for marking accessibility aisles in areas where snow may cause white markings to not be visible.
9. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high and located so that it is visible to traffic enforcement officials. See Revised Standard Plan RSP A90B for details of the "NO PARKING" pavement marking.
10. A R100B (CA) sign shall be posted in a conspicuous place at each entrance to off-street parking facilities or immediately adjacent to and visible from each stall. The sign shall include the address where the towed vehicle may be reclaimed and the telephone number of the local traffic law enforcement agency.
11. Where a single (non-van) accessible parking space is provided, the loading and unloading access aisle shall be on the passenger side of the vehicle as the vehicle is going forward into the parking space.
12. Where a van accessible parking space is provided, the loading and unloading access aisle shall be 8'-0" wide minimum, and shall be on the passenger side of the vehicle as the vehicle is going forward into the parking space.
13. Accessible Parking Only Sign shall be Sign R99C (CA) or Sign R99 (CA) with Plaque R99B (CA).

OFF-STREET PARKING SIGNS
(Parking lot or garage)
See Note 6

ACCESSIBLE PARKING OFF-STREET

REVISED STANDARD PLAN RSP A90A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
NO SCALE
RSP A90A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A90A
DATED MAY 1, 2006 - PAGE 117 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	440	504

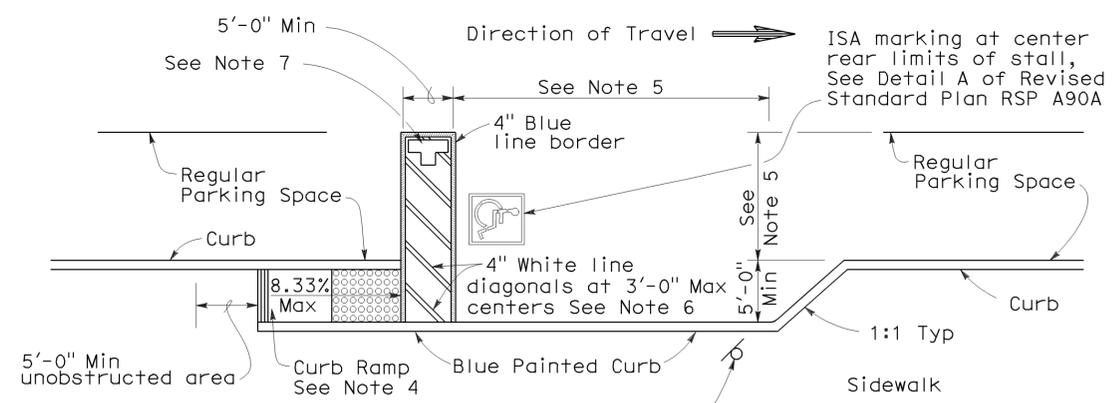
H. David Cordova
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

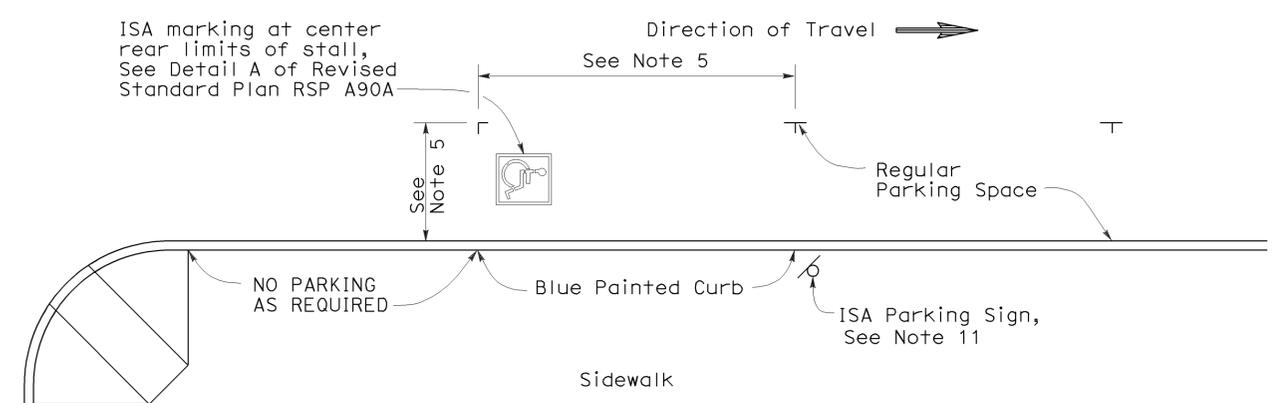
Hector David Cordova
REGISTERED PROFESSIONAL ENGINEER
No. C41957
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 2-1-10



CONVENTIONAL
(See Note 9)



RESTRICTED RIGHT OF WAY WIDTH
ON-STREET PARKING
(Parallel parking)
(See Note 10)

NO
PARKING

PAVEMENT MARKING
See Note 7



SIGN R99 (CA)



PLAQUE R99B (CA)
SIGN R99 (CA) with PLAQUE R99B (CA)
See Note 3



SIGN R99C (CA)
See Note 3

NOTES:

- Parking spaces shall be so located that persons with disabilities are not compelled to wheel or walk behind parked cars other than their own.
- Surface slopes of accessible on-street parking spaces shall be the minimum feasible.
- Where Plaque R99B (CA) or Sign R99C (CA) are installed, the bottom of the sign or plaque panel shall be a minimum of 7'-0" above the surrounding surface.
- Curb ramps shall conform to the details shown on Revised Standard Plan RSP A88A.
- Accessible on-street parking spaces shall not be smaller in length or width than that specified by the local jurisdiction for other parking spaces, but not less than 20'-0" in length and not less than 8'-0" in width.
- Blue paint, instead of white may be used for marking accessibility aisles in areas where snow may cause white markings to not be visible.
- The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials. See Standard Plan A24E for square foot area for painting the words "NO PARKING".
- There shall be no obstructions on the sidewalk adjacent to and for the full length of the parking space, except for the ISA parking sign shown.
- The Conventional detail should be the primary choice of accessible on-street parking. However, if the sidewalk lacks adequate space to construct a standard curb ramp, the Restricted Right of Way detail should be used.
- If the Restricted Right of Way width detail is selected and it conflicts with a bus stop or other uses, this detail may apply to the other end of the block.
- Accessible Parking Only Sign shall be Sign R99C (CA) or Sign R99 (CA) with Plaque R99B (CA).

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ACCESSIBLE PARKING
ON-STREET**

NO SCALE

RSP A90B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A90B
DATED MAY 1, 2006 - PAGE 118 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A90B

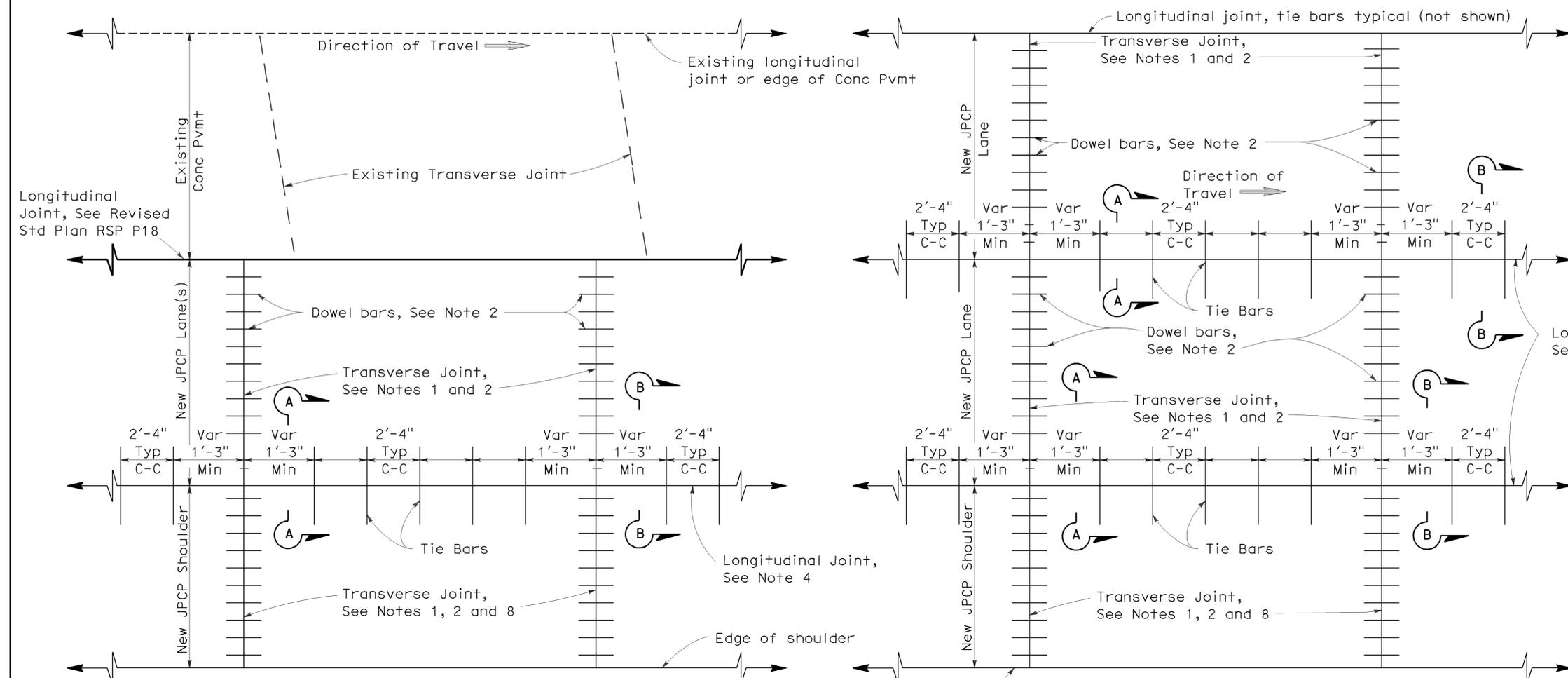
ISA = International Symbol of Accessibility

2006 REVISED STANDARD PLAN RSP A90B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	441	504

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 2-1-10



PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION

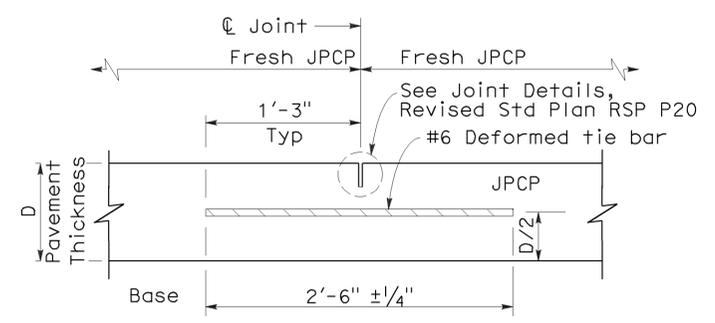
See Notes 6 and 7

PLAN
NEW CONSTRUCTION

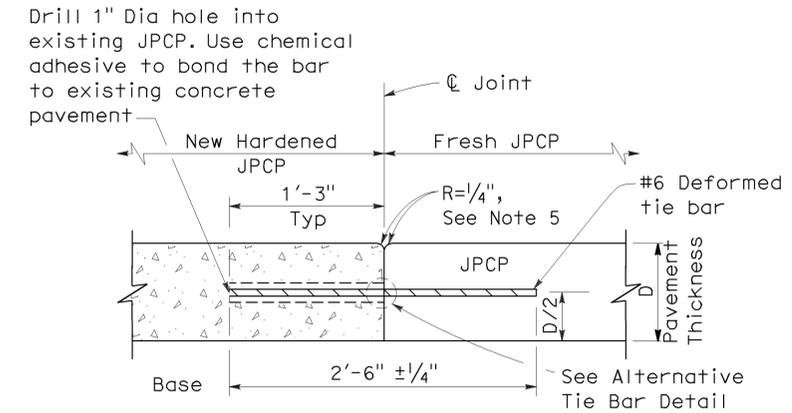
See Notes 6 and 7

NOTES:

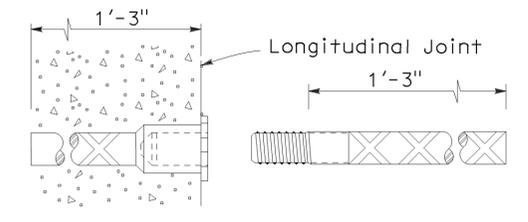
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
3. Construct 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.



SECTION A-A
LONGITUDINAL CONTRACTION JOINT



SECTION B-B
LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE TIE BAR SPLICE DETAIL
(Splice Coupler)

TIE BAR DETAILS

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

NO SCALE

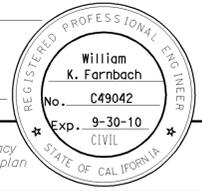
RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

2006 REVISED STANDARD PLAN RSP P1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	442	504

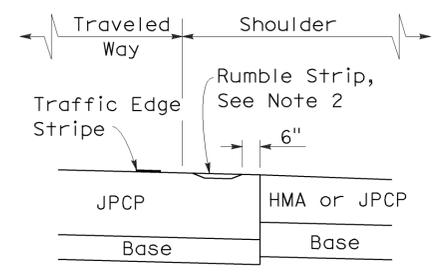
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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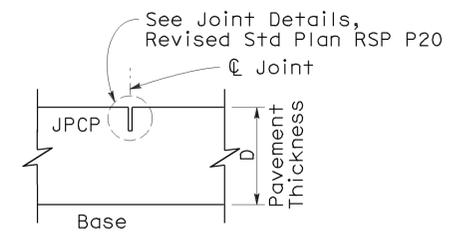
To accompany plans dated 2-1-10

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 locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
3. Joint spacing patterns do not apply to intersections.



DETAIL "A"



SECTION C-C

TRANSVERSE/LONGITUDINAL JOINT

(no dowel bars/tie bars)

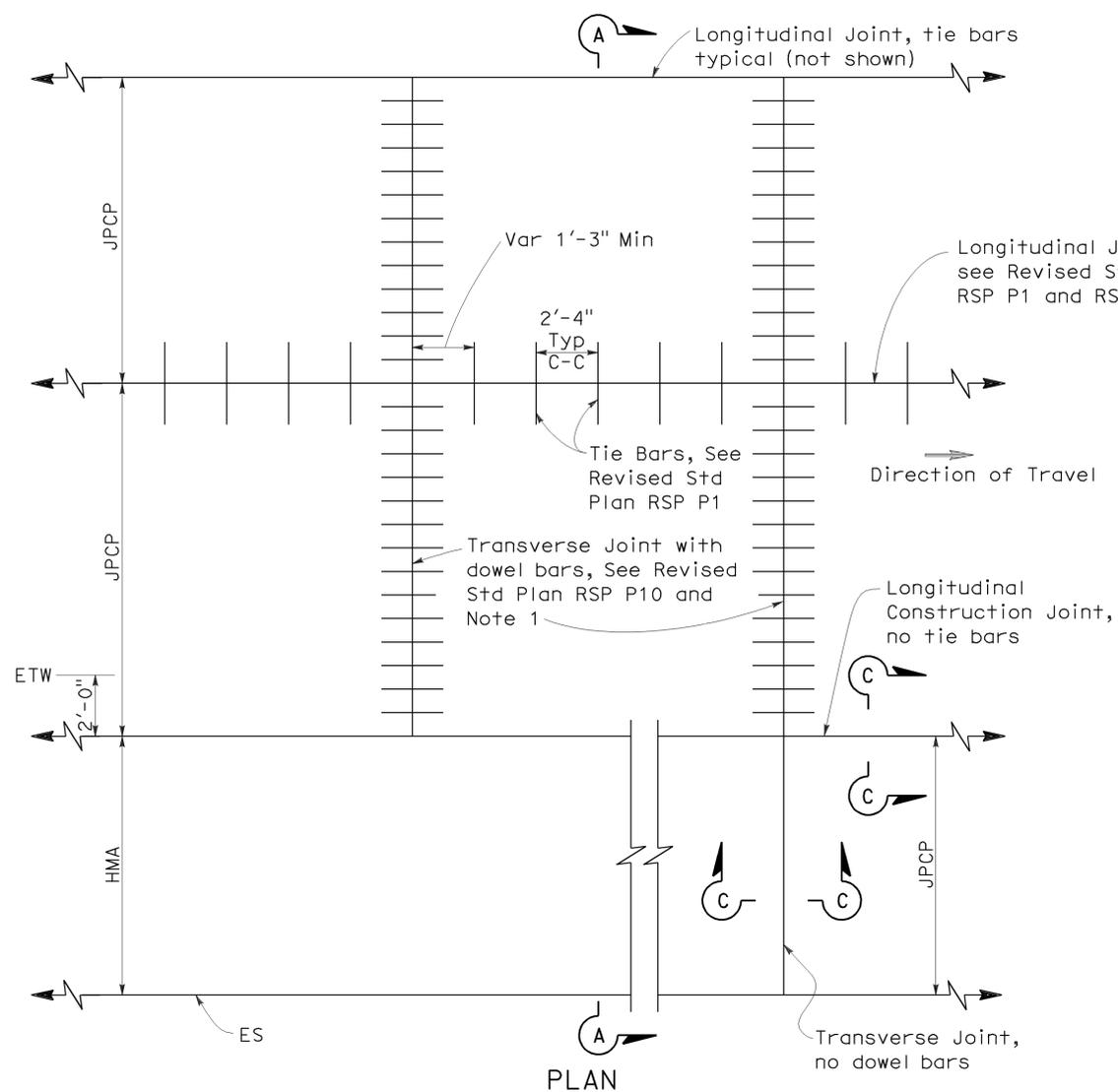
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT-WIDENED SLAB DETAILS

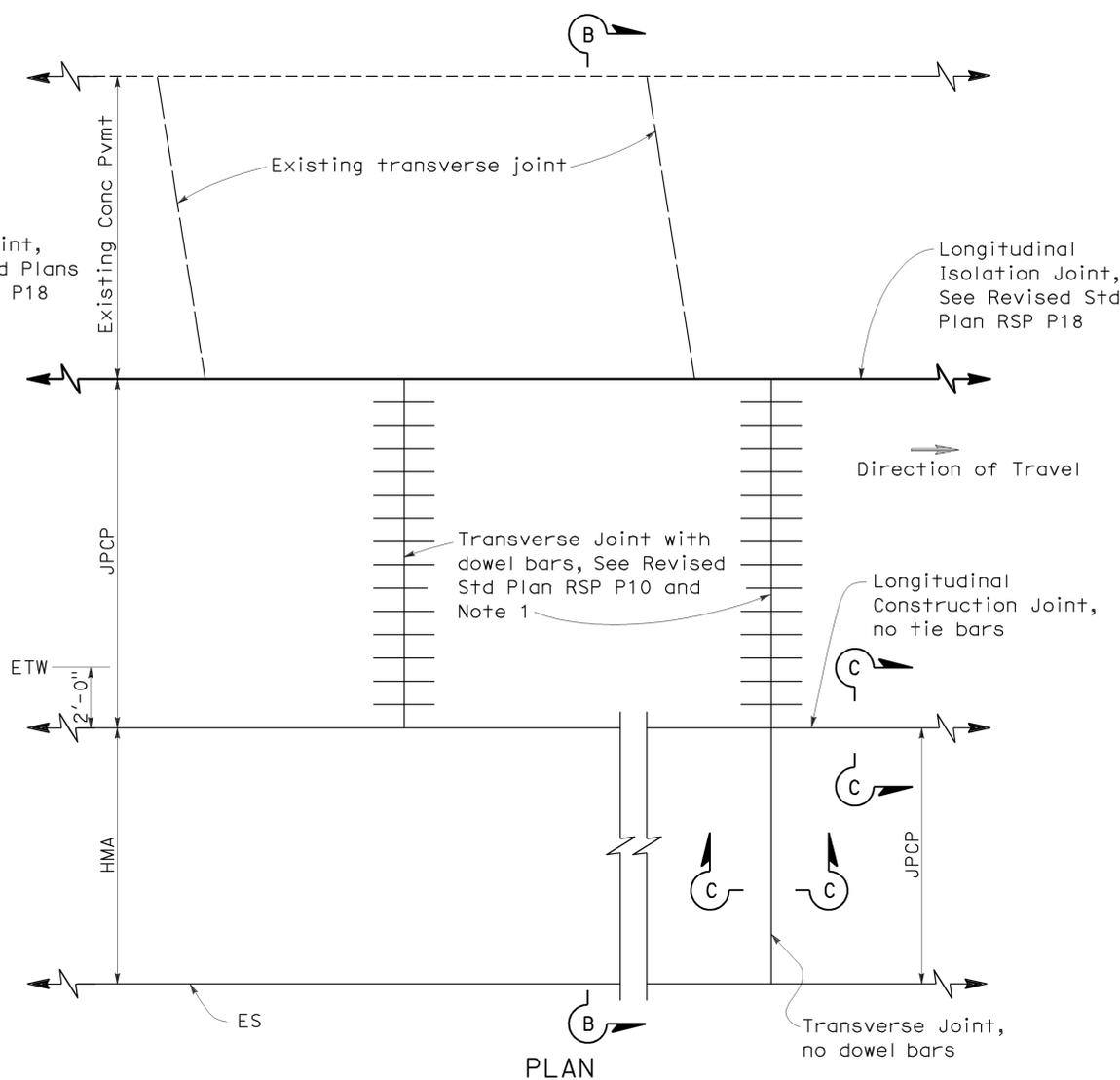
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

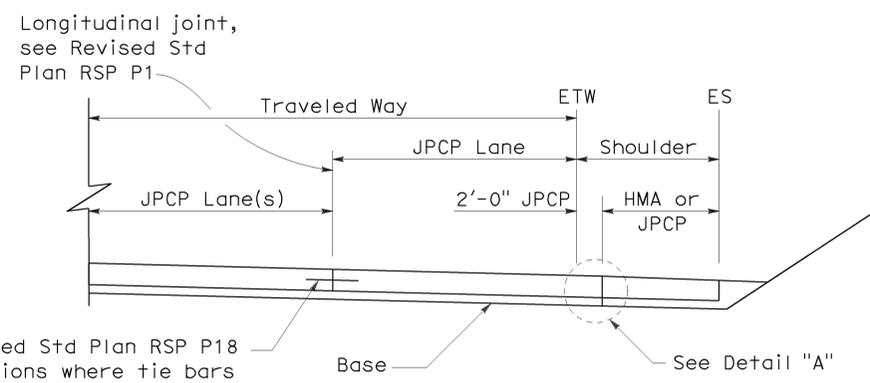
REVISED STANDARD PLAN RSP P2



PLAN NEW CONSTRUCTION

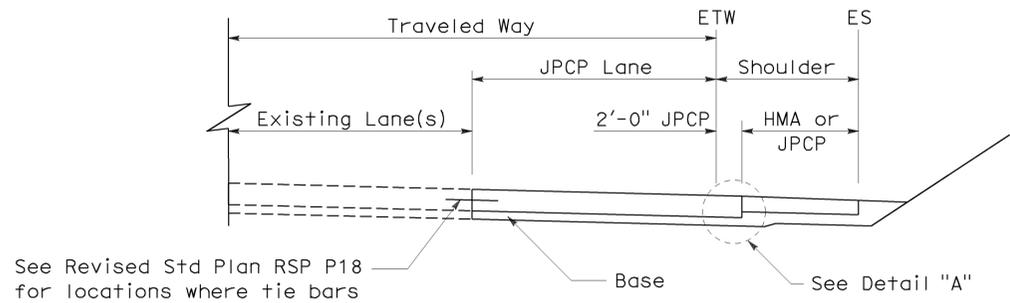


PLAN LANE/SHOULDER ADDITION OR RECONSTRUCTION



SECTION A-A

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint



SECTION B-B

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint

2006 REVISED STANDARD PLAN RSP P2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	443	504

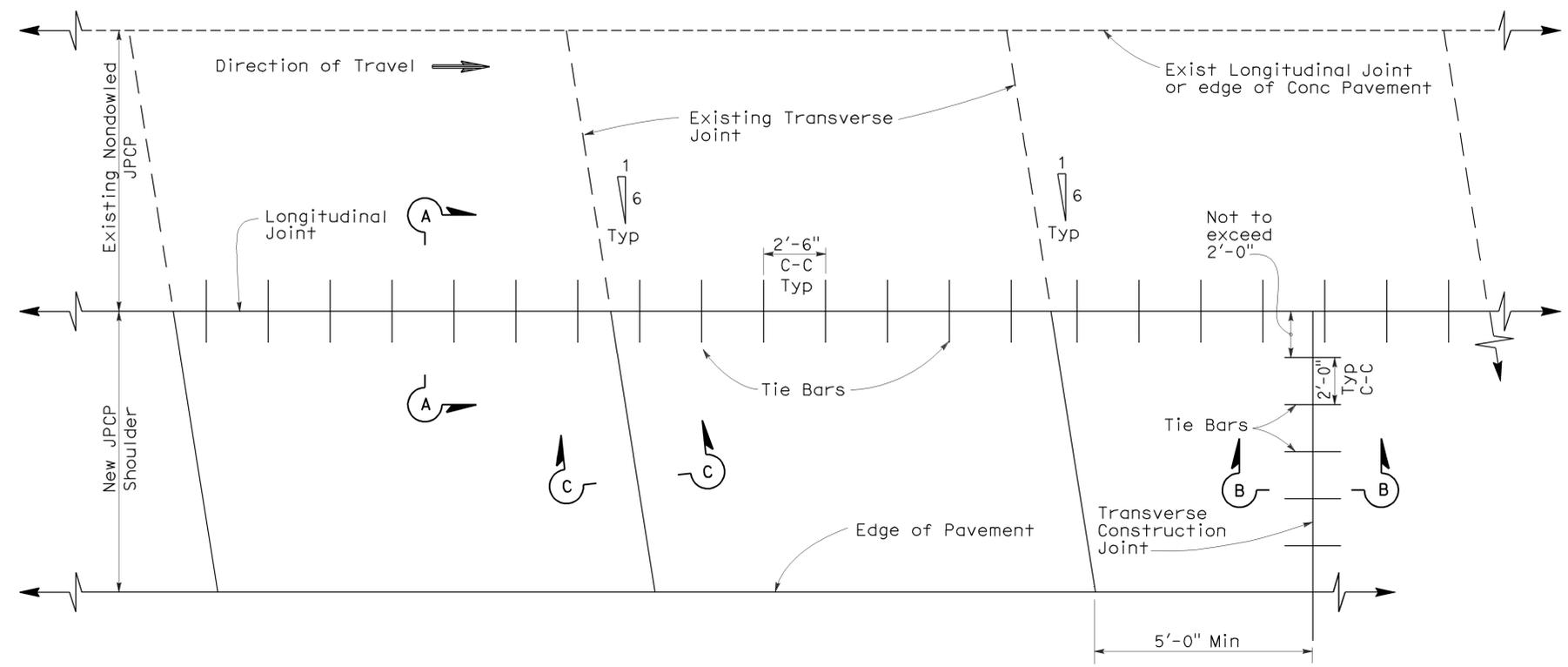
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 2-1-10

2006 REVISED STANDARD PLAN RSP P3



PLAN

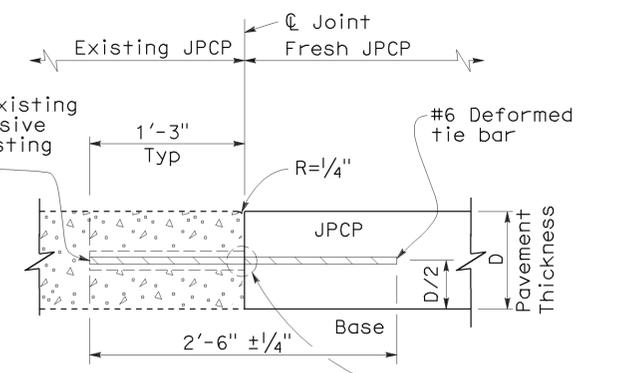
NOTES:

1. New transverse contraction joints shall match the skewed offset and spacing of the adjacent existing contraction joints, as shown.
2. Transverse construction joints, with tie bars spaced as shown, shall be installed at the end of paving operations. Transverse construction joints shall be placed at least 5'-0" from any contraction joint.
3. This Standard Plan only applicable for constructing a nondoweled Jointed Plain Concrete Pavement shoulder next to existing nondoweled Jointed Plain Concrete Pavement lane.
4. 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.

TABLE A

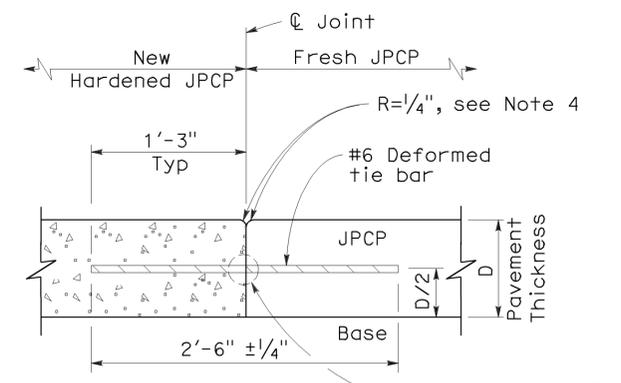
Tie Bar Spacing		
Slab Length	Total Tie Bars per Slab	Clearance Tie Bar to Transverse Joint
9'-0"	3	1'-3"
9'-6"	3	1'-4 1/2"
12'-0"	5	1'-4"
13'-0"	5	1'-10"
14'-0"	5	2'-3 3/4"
15'-0"	6	1'-8"

Drill 1" Dia hole into existing JPCP. Use chemical adhesive to bond tie bar to existing concrete pavement.



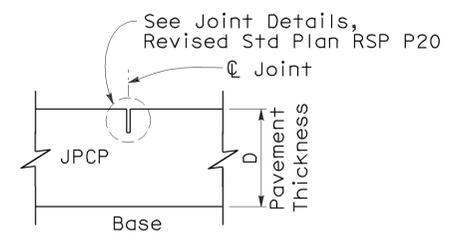
SECTION A-A

LONGITUDINAL JOINT
(Between fresh and hardened concrete)



SECTION B-B

TRANSVERSE CONSTRUCTION JOINT



SECTION C-C

TRANSVERSE CONTRACTION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT-NONDOWELED SHOULDER ADDITION/RECONSTRUCTION

NO SCALE

RSP P3 DATED MAY 15, 2009 SUPERSEDES RSP P3 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P3 DATED MAY 1, 2006 - PAGE 121 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P3

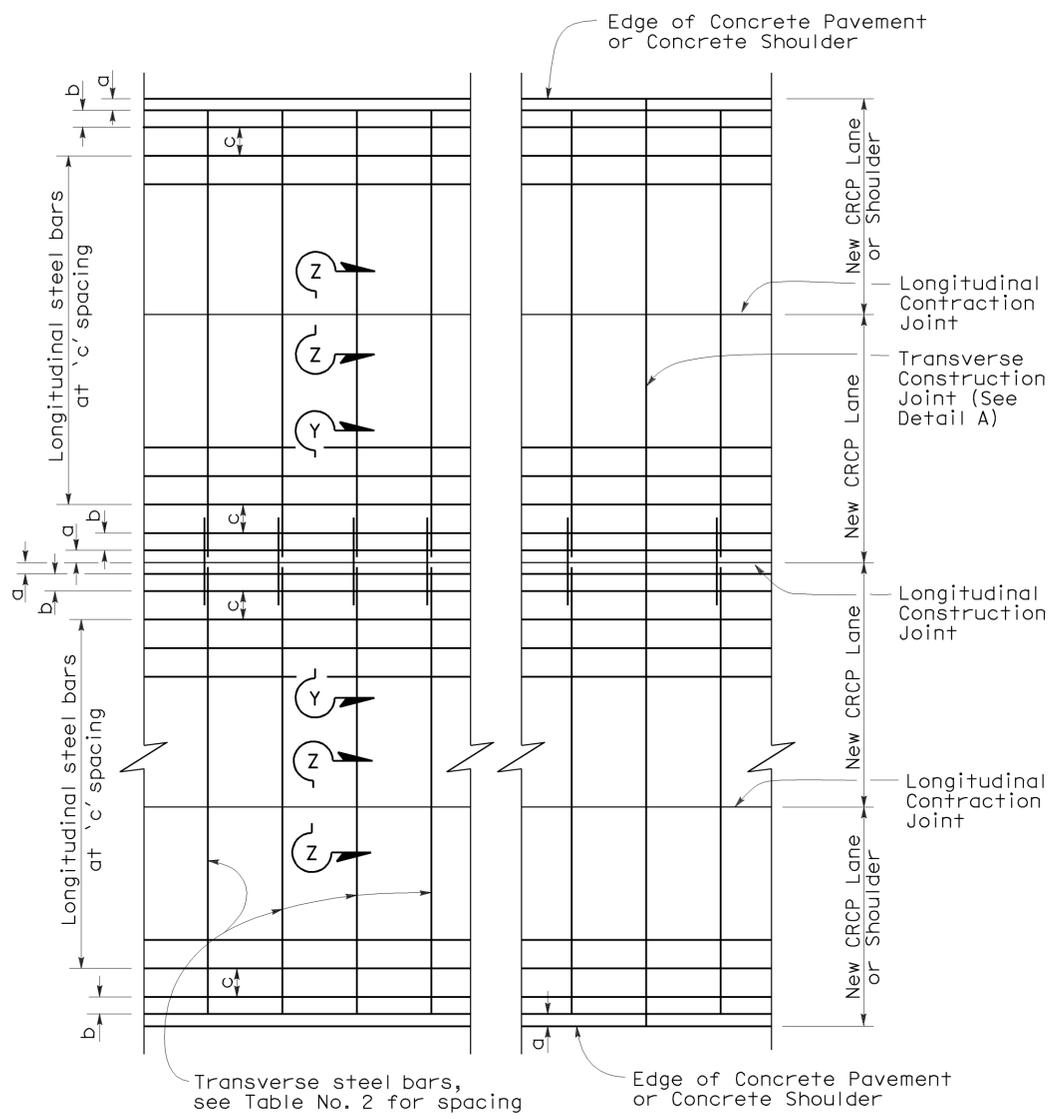
To accompany plans dated 2-1-10

TABLE No. 1 LONGITUDINAL STEEL

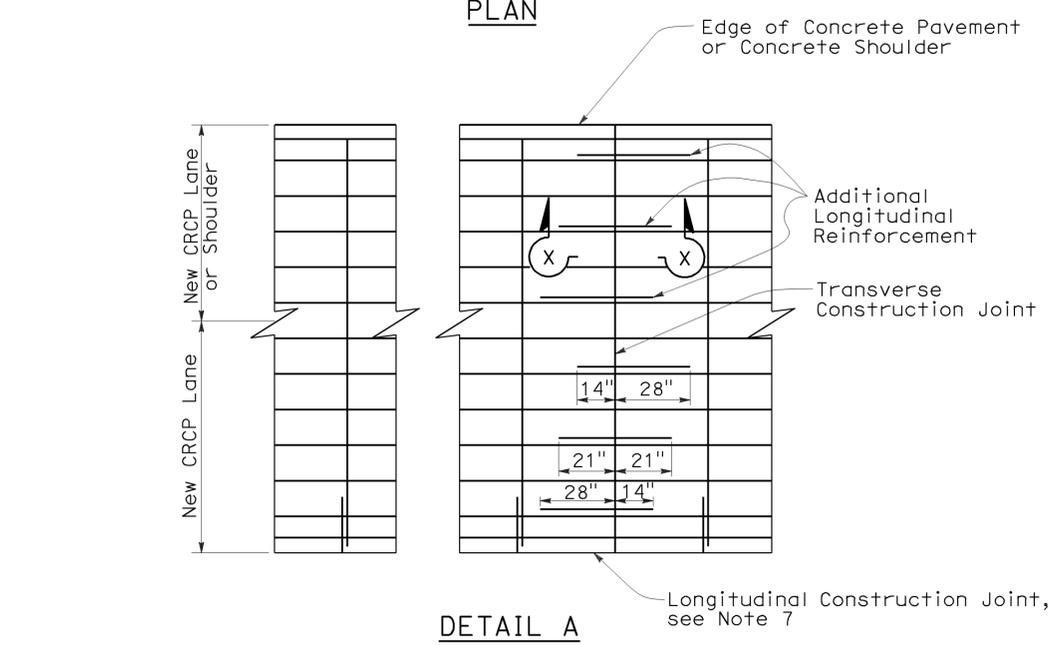
Slab Thickness and Bar Size	First Spacing at Edge or Joint	Second Spacing from Edge or Joint	Regular Steel Bars	Additional Reinforcement at Transverse Construction Joint	Cir		
D	Bar Size	Spacing a	Spacing b	Spacing c	Spacing 2 x c	Length L	X
.80'	#6	3" TO 4"	3" TO 8"	8"	16"	42"	4"
.85'	#6	3" TO 4"	3" TO 7"	7"	14"	42"	4"
.90'	#6	3" TO 4"	3" TO 6.5"	6.5"	13"	42"	4"
.95'	#6	3" TO 4"	3" TO 6"	6.5"	13"	42"	4"
1.00'	#6	3" TO 4"	3" TO 6"	6"	12"	42"	4.25"
1.05'	#6	3" TO 4"	3" TO 5.5"	6"	12"	42"	4.5"
1.10'	#6	3" TO 4"	3" TO 5.5"	5.5"	11"	42"	4.75"

TABLE No. 2 TRANSVERSE STEEL

Slab Thickness and Bar Size	Pvmt Width (From Edge of Conc Pvmt or Conc Shld to Nearest Edge of Conc Pvmt or Conc Shld)							
	≤ 48'	≤ 60'	≤ 72'	≤ 84'	≤ 96'	≤ 108'	≤ 120'	
D	Bar Size	Spacing						
.80'	#6	3'	3'	3'	2.5'	2'	2'	1.5'
.85'	#6	3'	3'	2.5'	2.5'	2'	1.5'	1.5'
.90'	#6	3'	2.5'	2.5'	2'	2'	1.5'	1.5'
.95'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.00'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.05'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'
1.10'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'

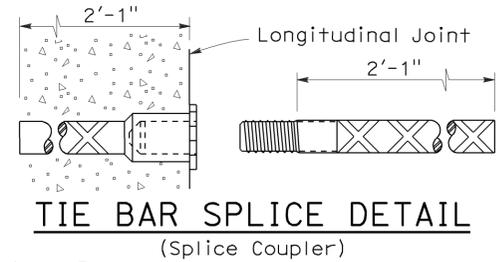


PLAN

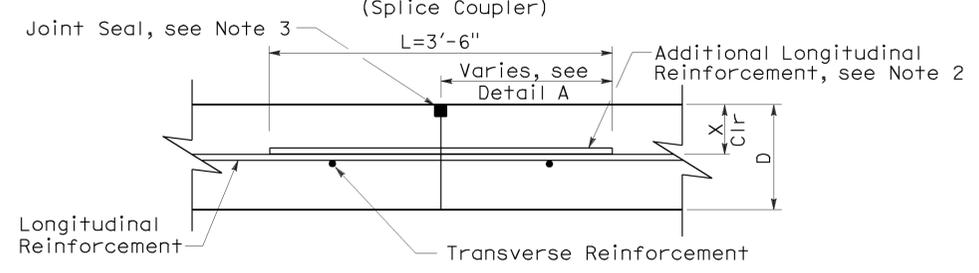


DETAIL A

ADDITIONAL LONGITUDINAL REINFORCEMENT AT TRANSVERSE CONSTRUCTION JOINT

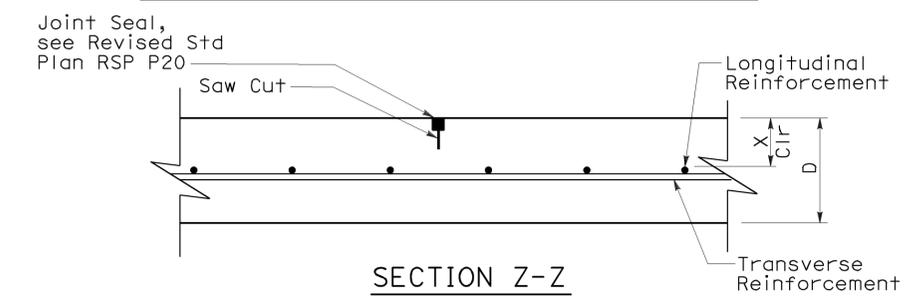


TIE BAR SPLICE DETAIL



SECTION X-X

TRANSVERSE CONSTRUCTION JOINT

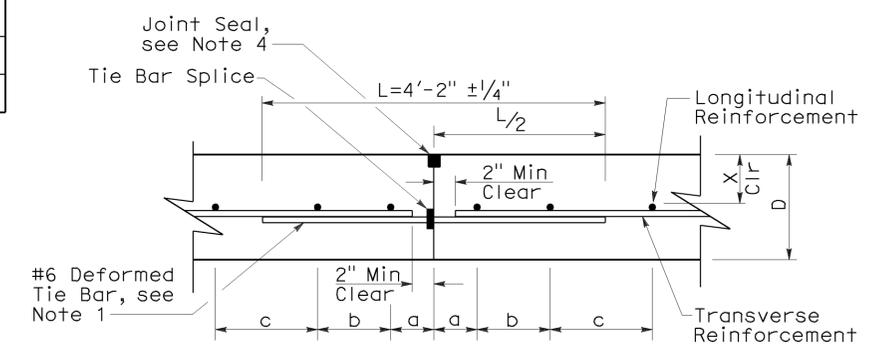


SECTION Z-Z

LONGITUDINAL CONTRACTION JOINT

NOTES:

1. Place tie bar in the same plane as transverse reinforcements.
2. Place additional longitudinal reinforcement in the same horizontal plane as the longitudinal reinforcement without horizontal space.
3. Joint seals at transverse construction joints shall conform to the details shown on Revised Standard Plan RSP P20 for Type C joint.
4. Joint seals at longitudinal construction joints shall conform to the details shown on Revised Standard Plan RSP P20 for Type C joint.
5. Tie bar spacing shall be equal to transverse bar spacing.
6. Reinforcing bar splices shall be a minimum of 25".
7. Additional longitudinal reinforcement symmetrical about longitudinal construction joint.



SECTION Y-Y

LONGITUDINAL CONSTRUCTION JOINT

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT**
 NO SCALE

NSP P4 DATED MAY 15, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP P4

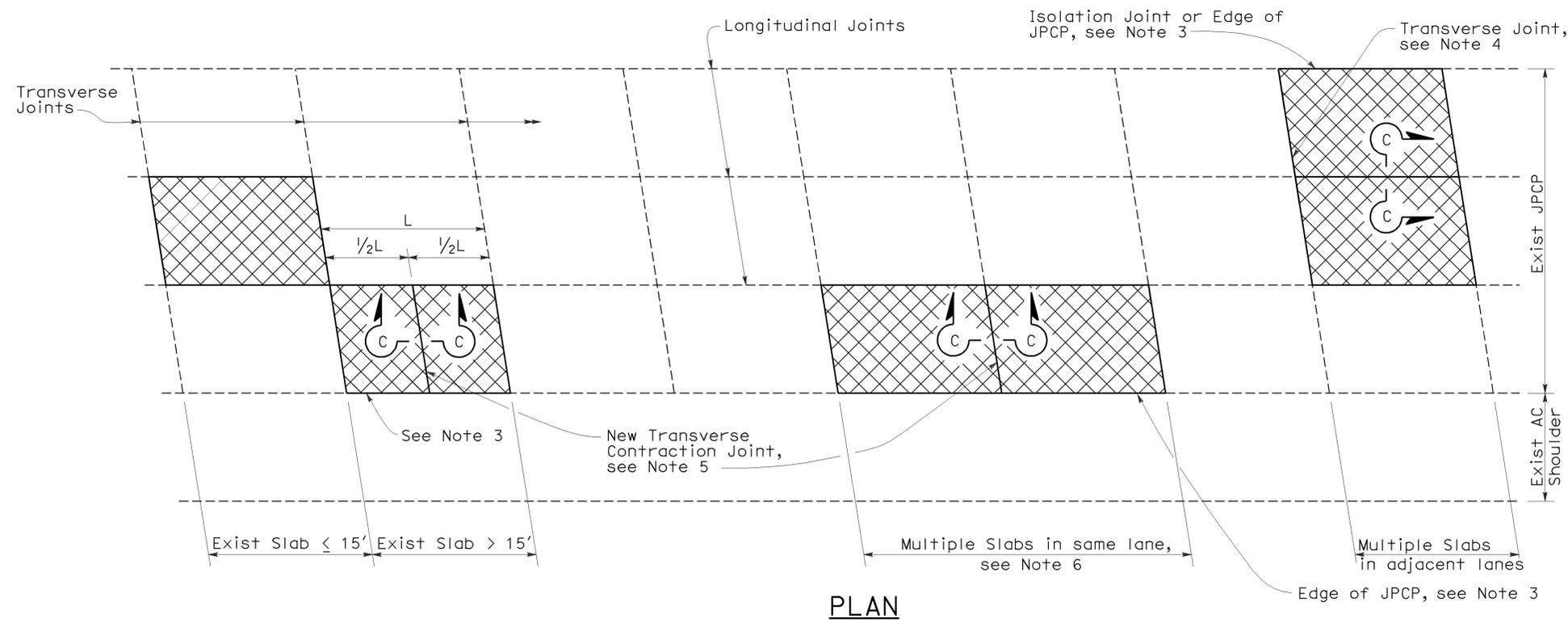
2006 NEW STANDARD PLAN NSP P4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	445	504

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

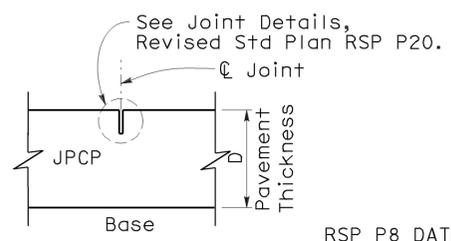
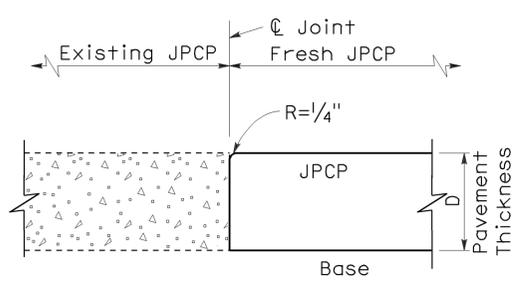
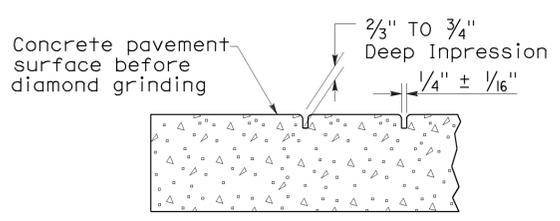
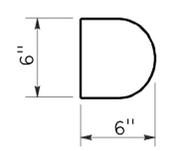
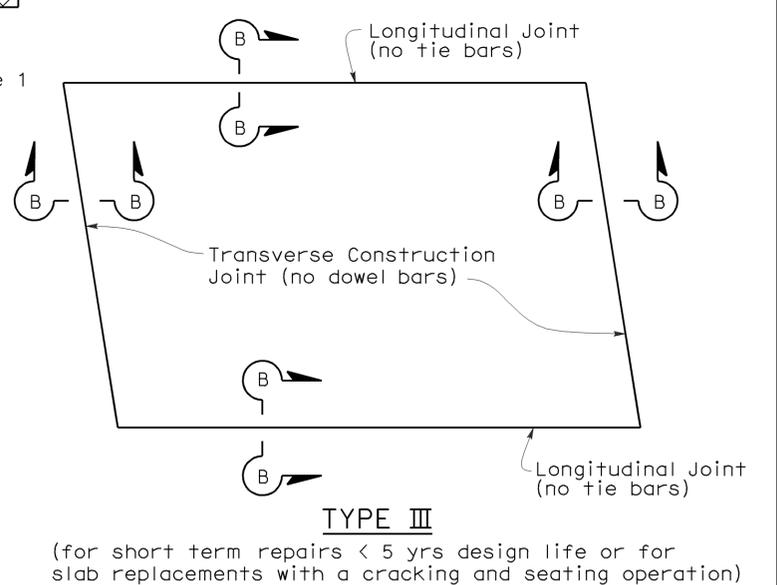
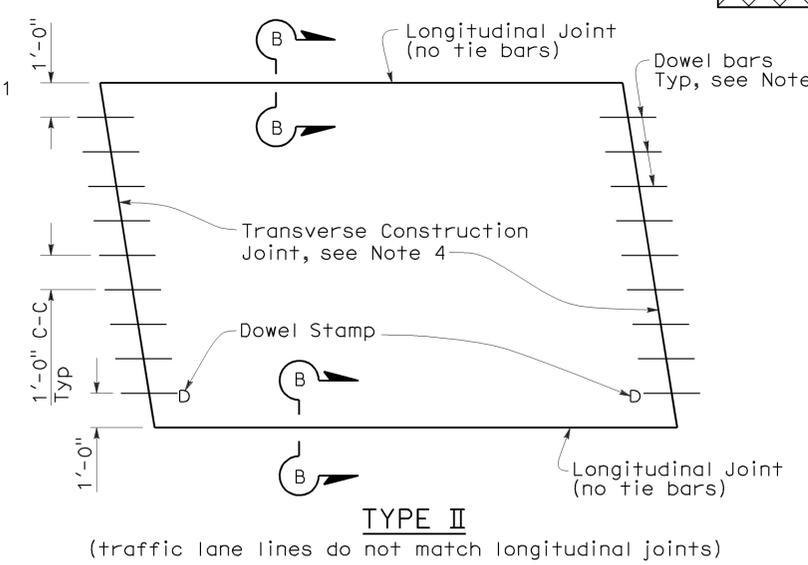
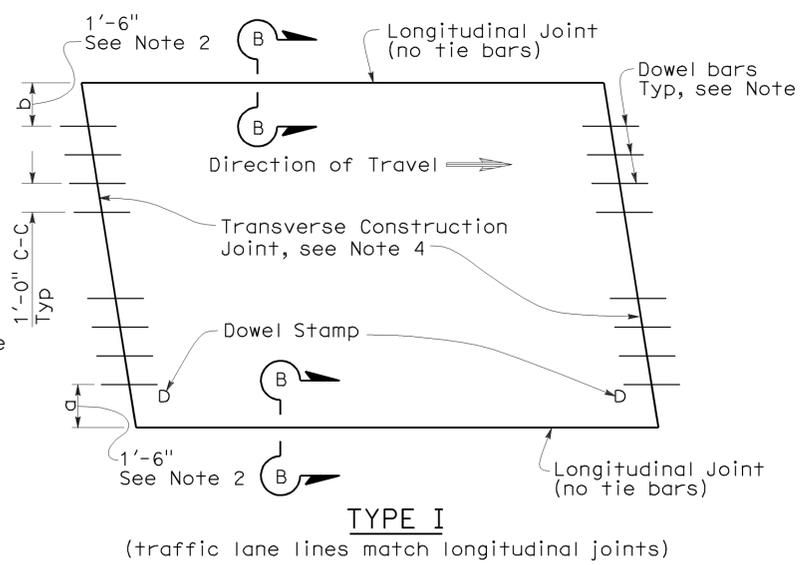
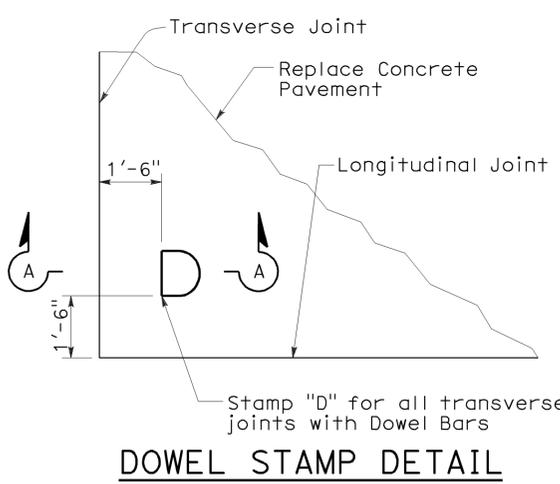
To accompany plans dated 2-1-10



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

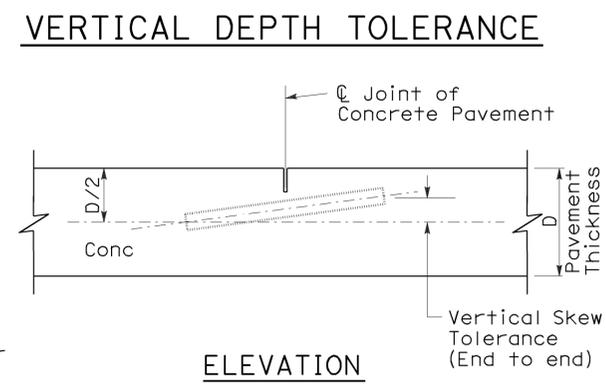
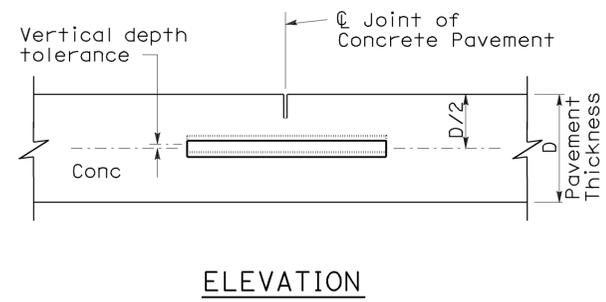
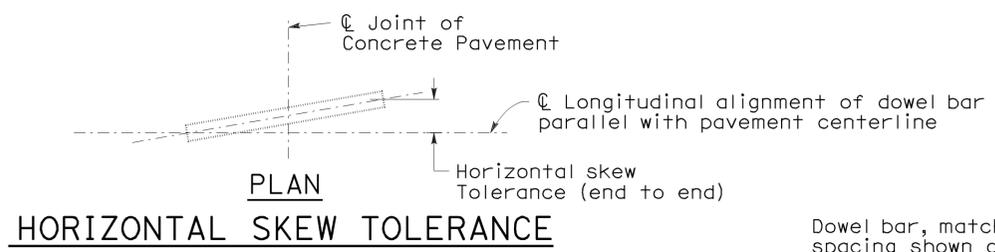
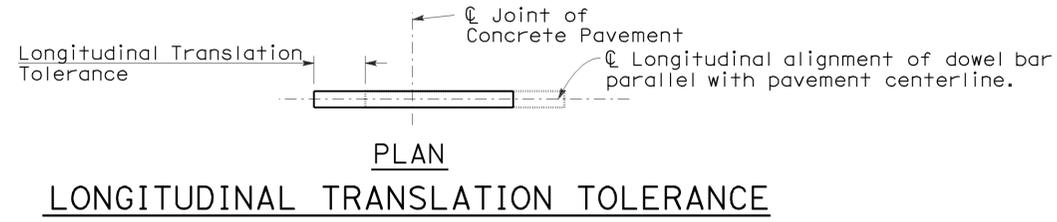
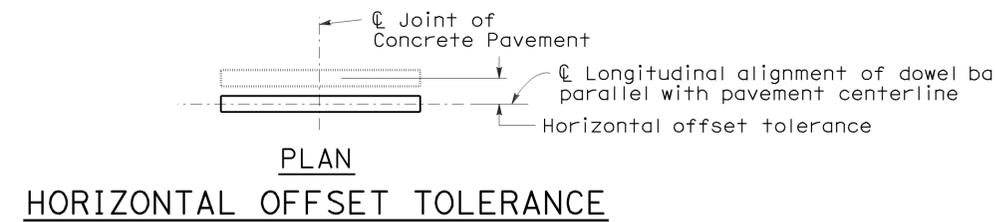
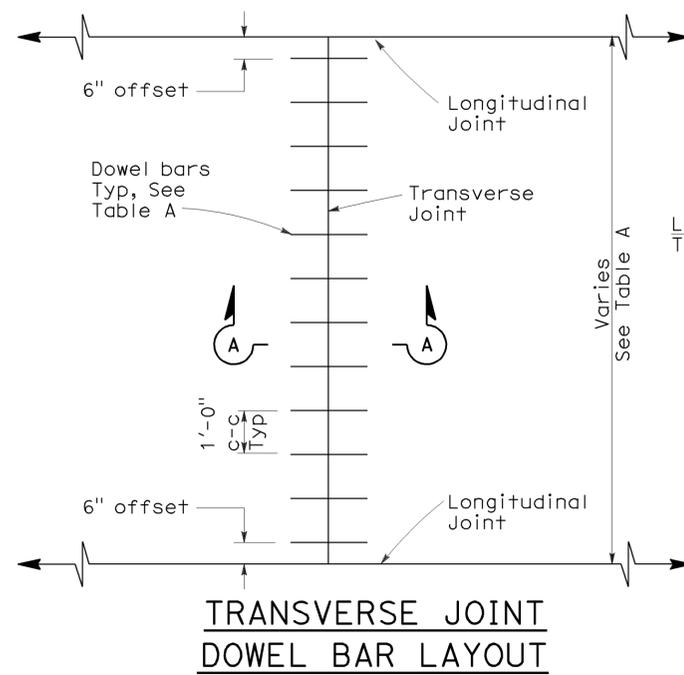


STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT
 NO SCALE

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



- To accompany plans dated 2-1-10
- NOTES:**
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
 - 1 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 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.

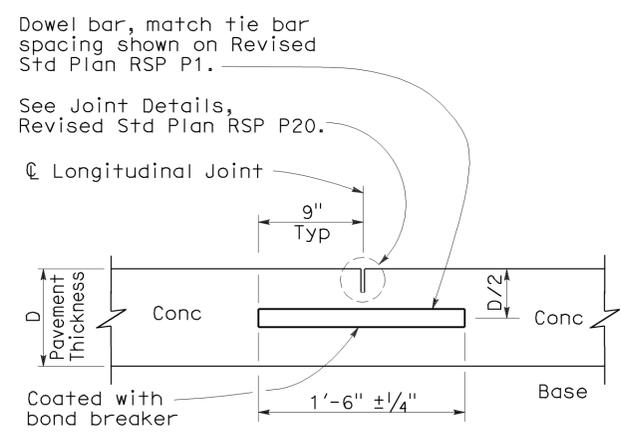
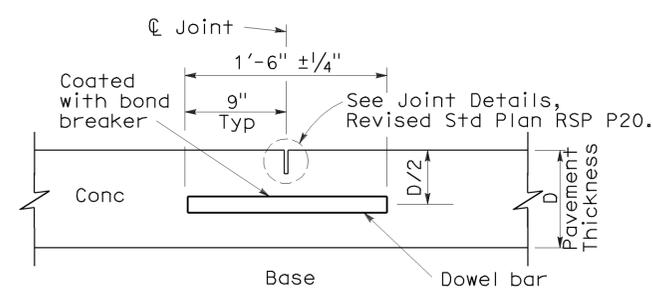
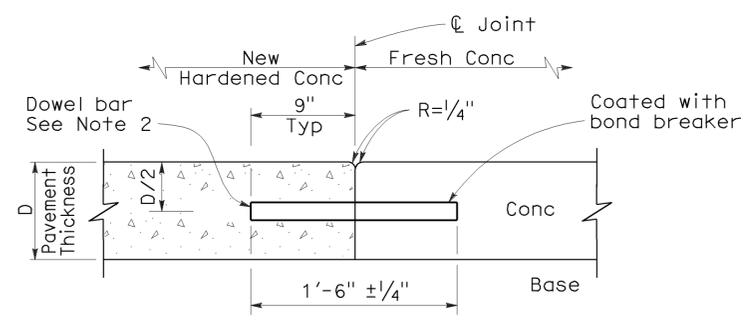


TABLE A (See Note 3)

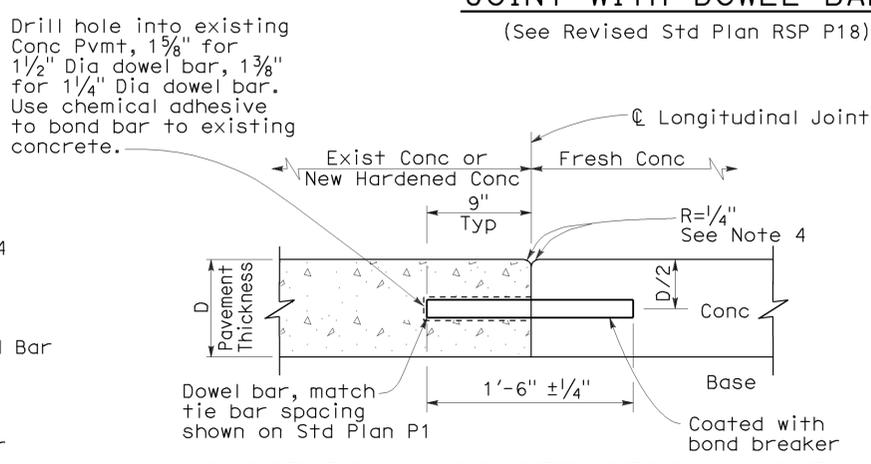
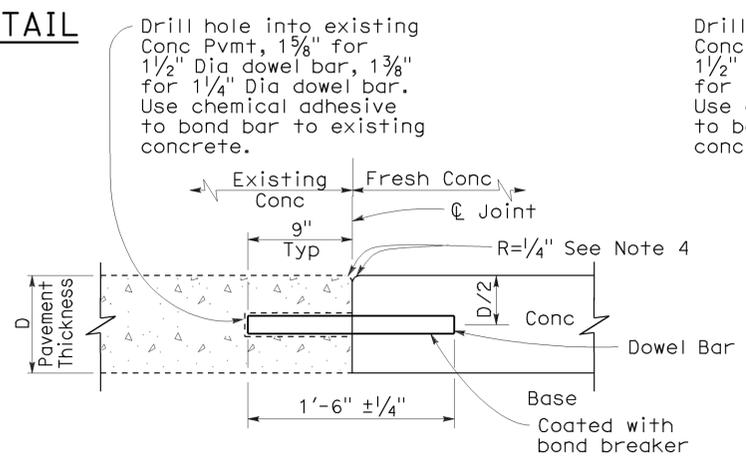
Dowel Bar Transverse Spacing Table

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.

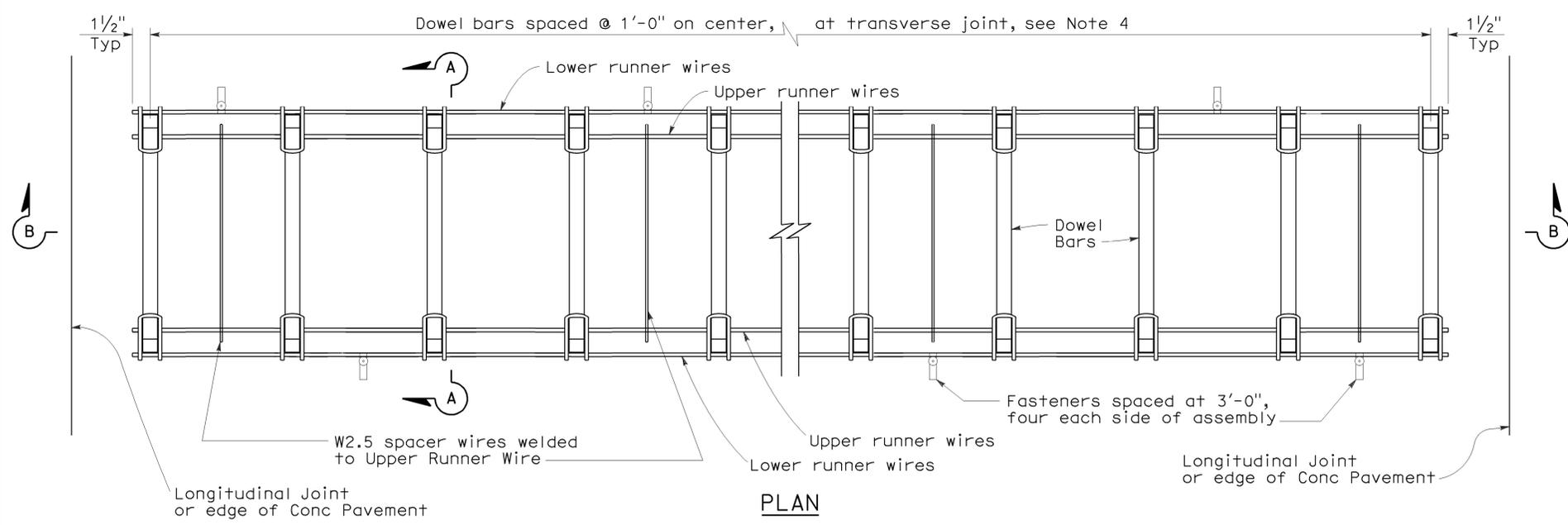
2006 REVISED STANDARD PLAN RSP P10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	447	504

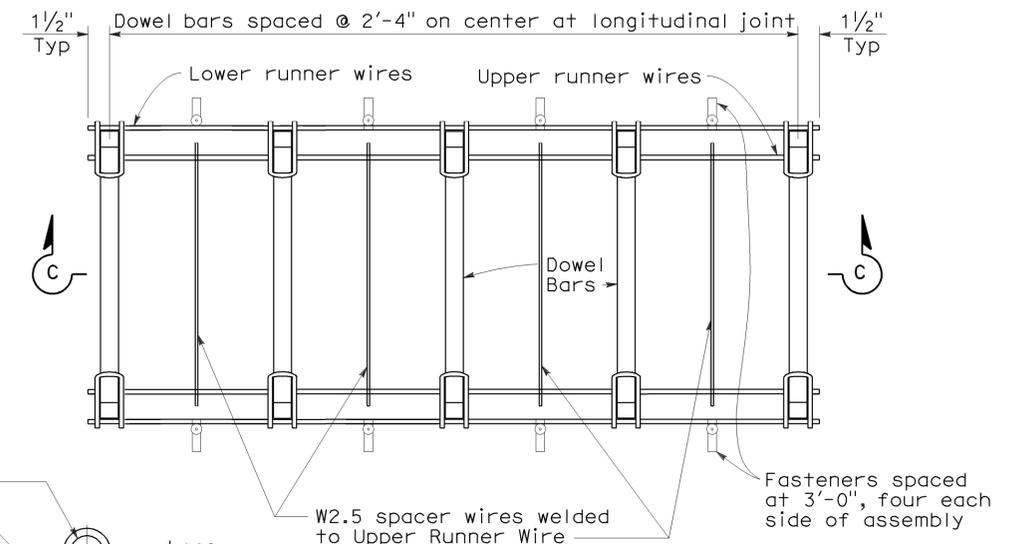
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

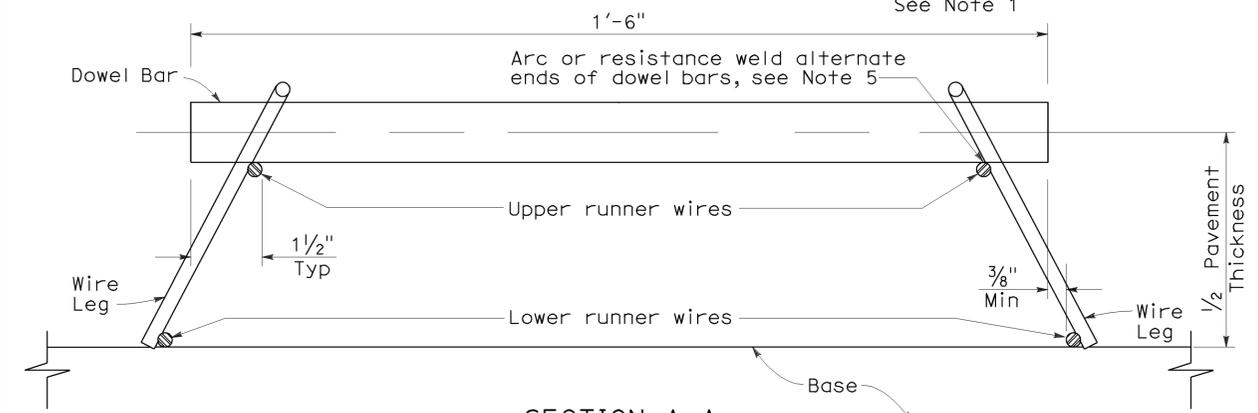
To accompany plans dated 2-1-10



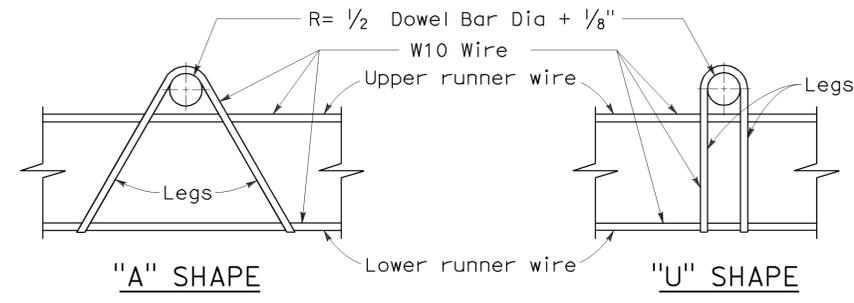
PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)
 See Note 1



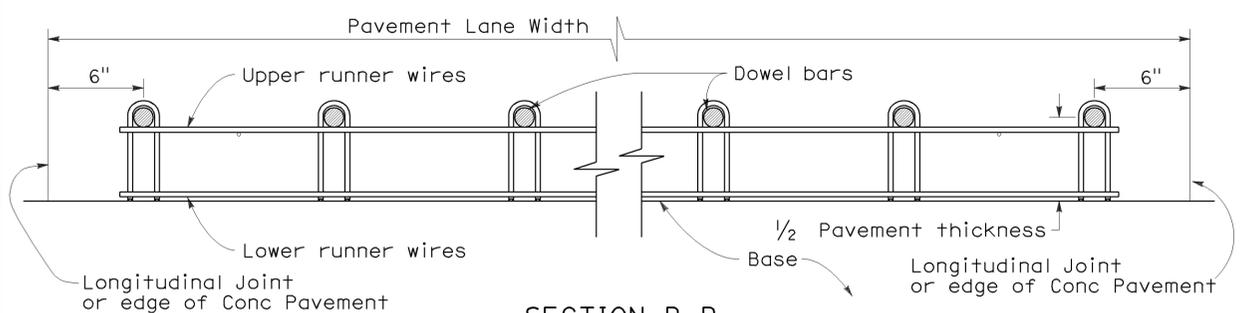
PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)
 See Note 1



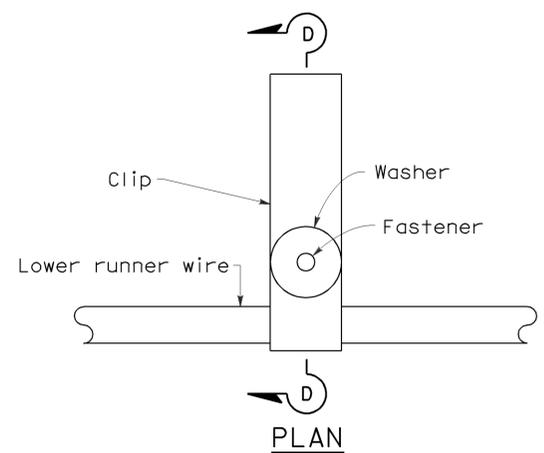
SECTION A-A



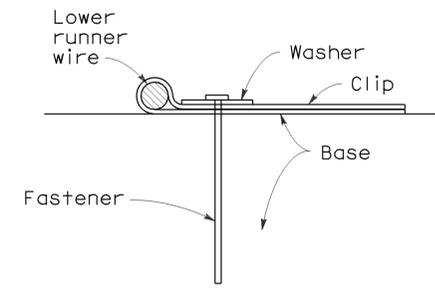
ASSEMBLY FRAME DETAILS



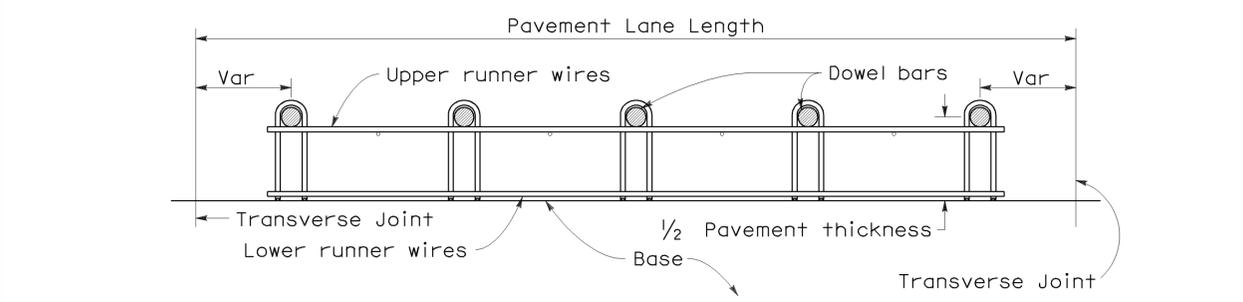
SECTION B-B



FASTENER DETAIL



SECTION D-D



SECTION C-C

NOTES:

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT -
DOWEL BAR BASKET
DETAILS**

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

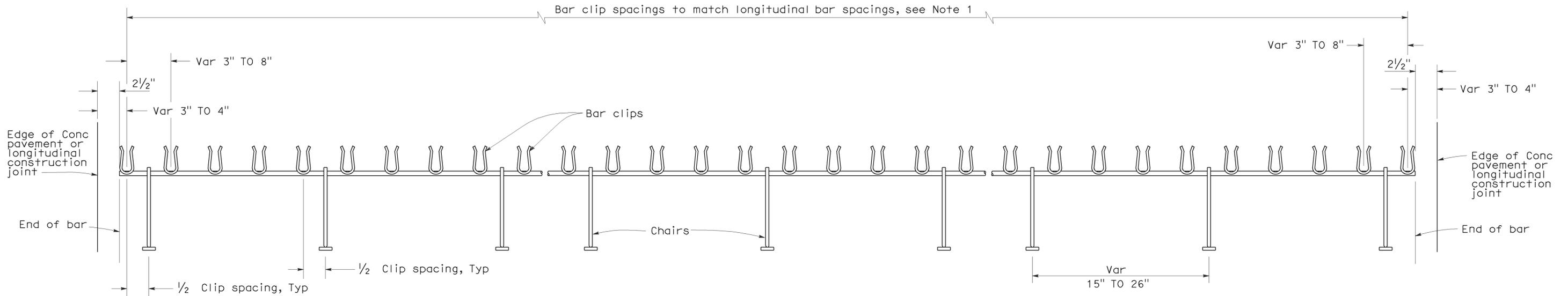
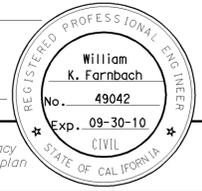
2006 REVISED STANDARD PLAN RSP P12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	448	504

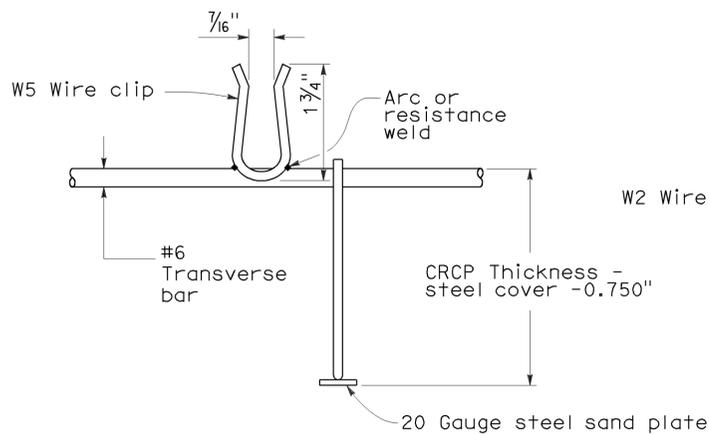
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE

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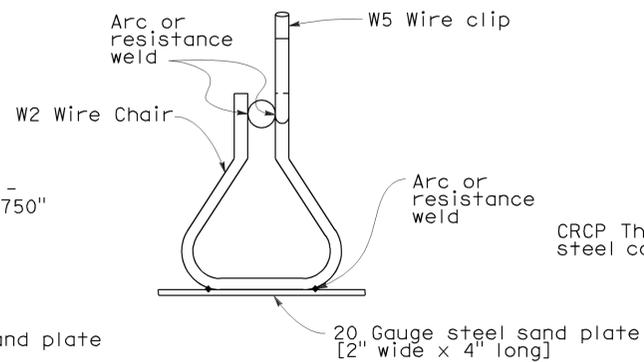
To accompany plans dated 2-1-10



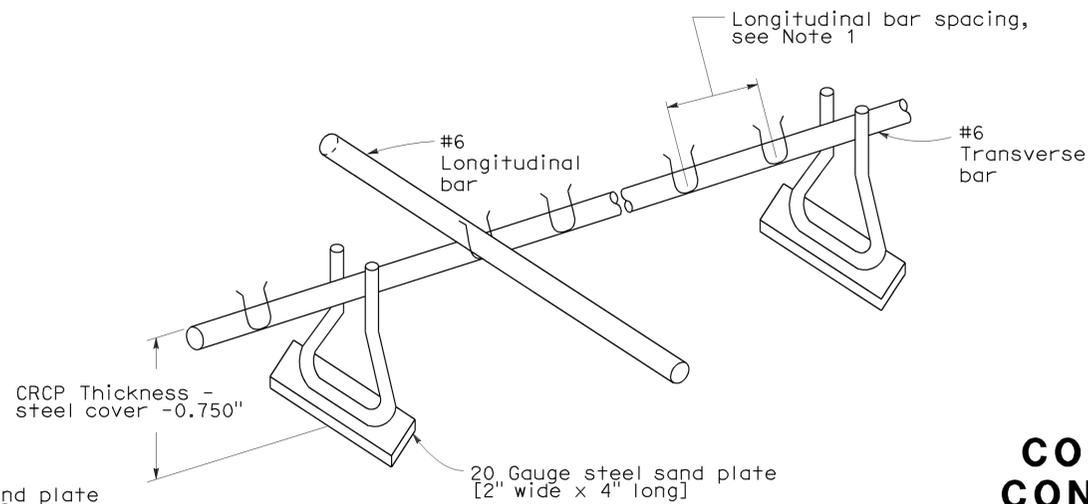
TRANSVERSE BAR ASSEMBLY



#6 BAR CLIP DETAIL



CHAIR DETAIL



ISOMETRIC VIEW OF CHAIR ASSEMBLY

NOTES:

1. See New Standard Plan NSP P4 for spacing of longitudinal bars.
2. Tensile strength of chair shall be at least 50,000 psi.
3. Wire sizes shown are minimum required.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT-SINGLE
PIECE TRANSVERSE BAR
ASSEMBLY**

NO SCALE

NSP P13 DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP P13

2006 NEW STANDARD PLAN NSP P13

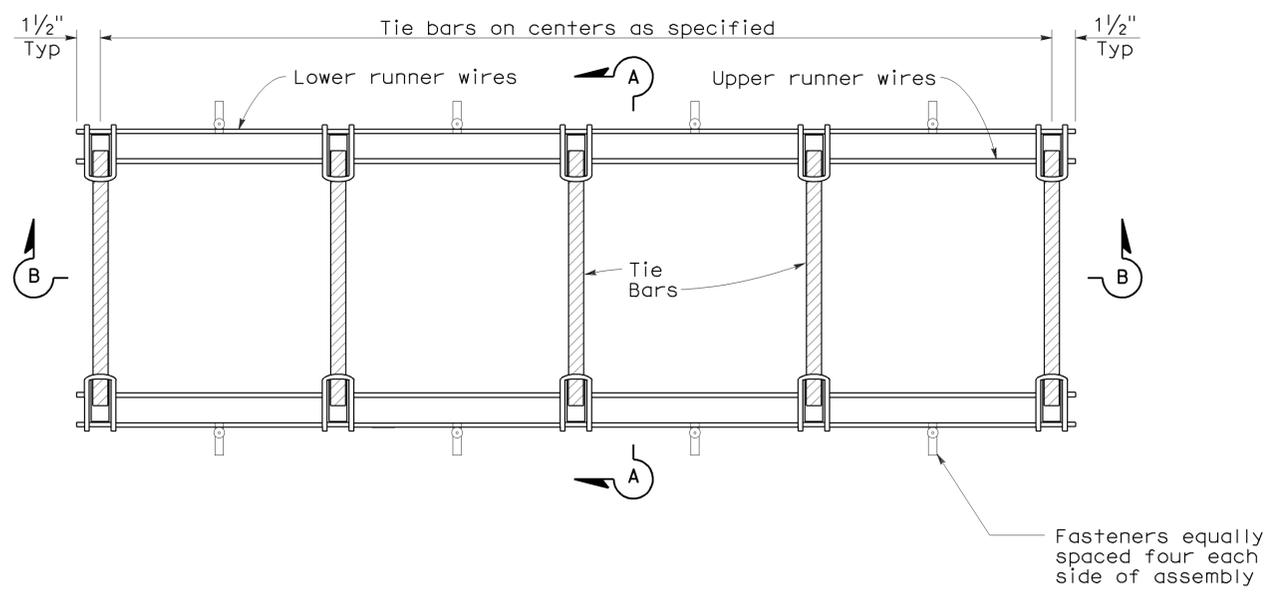
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	449	504

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

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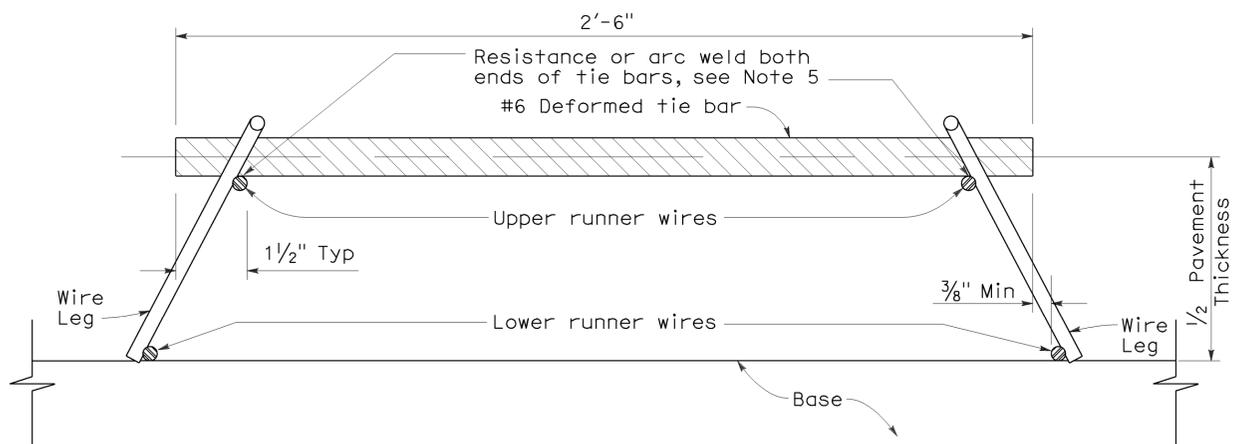
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 2-1-10

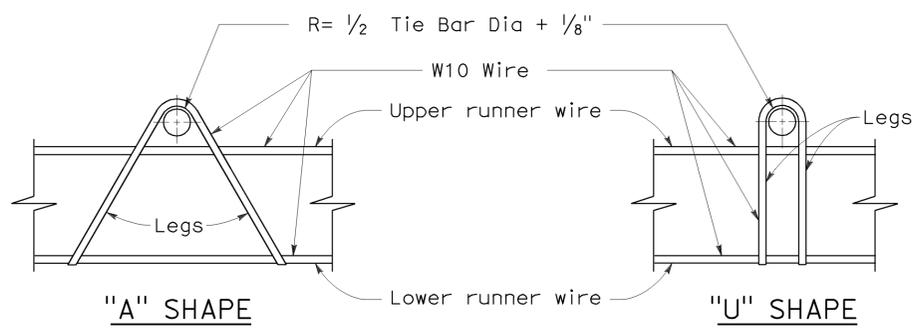


PLAN
TIE BAR BASKET
 (TIE BARS AT LONGITUDINAL JOINT)
 See Note 1

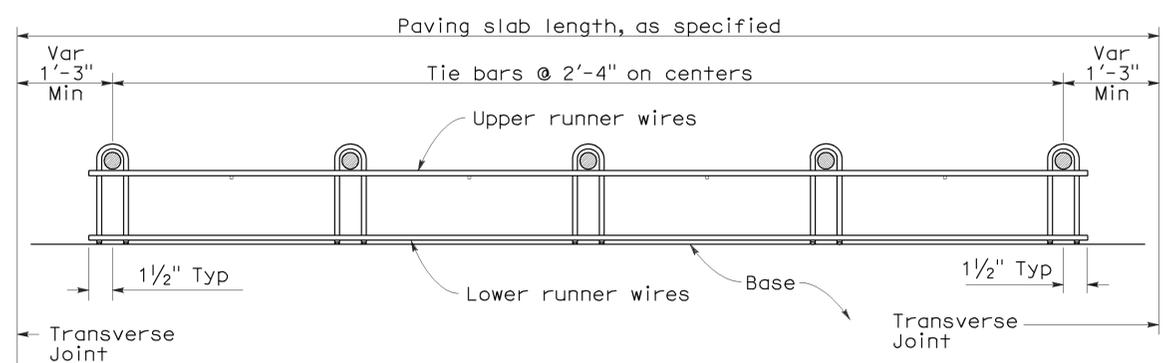
- NOTES:**
- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
 - Wire sizes shown are minimum required.
 - All wire intersections are to be resistance welded.
 - Not for use on nondoweled skewed jointed plain concrete pavement.
 - Weld may be at top or bottom of tie bar.



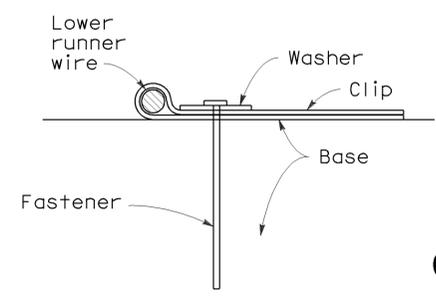
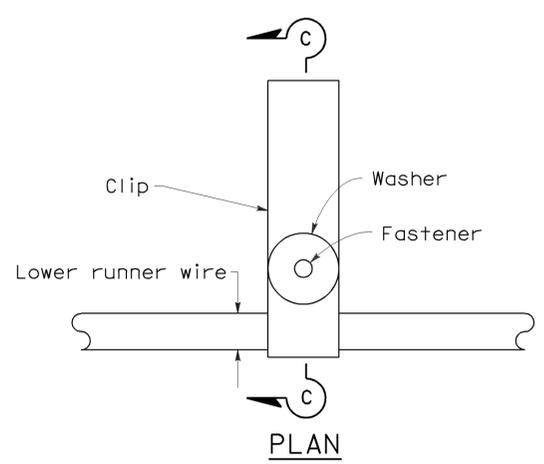
SECTION A-A



ASSEMBLY FRAME DETAILS



SECTION B-B
 See Note 1



FASTENER DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT -
 TIE BAR BASKET
 DETAILS**

NO SCALE

RSP P17 DATED MAY 15, 2009 SUPERSEDES RSP P17 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P17 DATED MAY 1, 2006 - PAGE 126 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P17

2006 REVISED STANDARD PLAN RSP P17

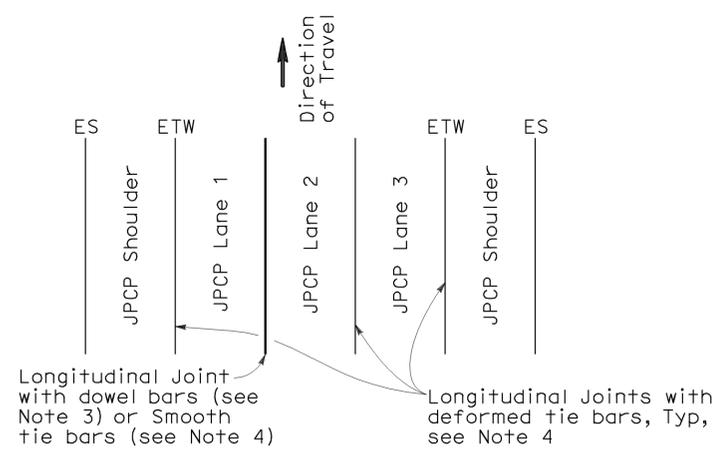
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	450	504

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE

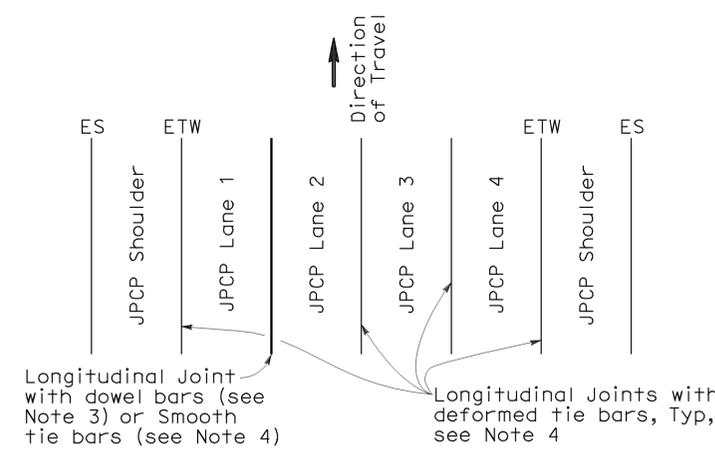
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
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 STATE OF CALIFORNIA

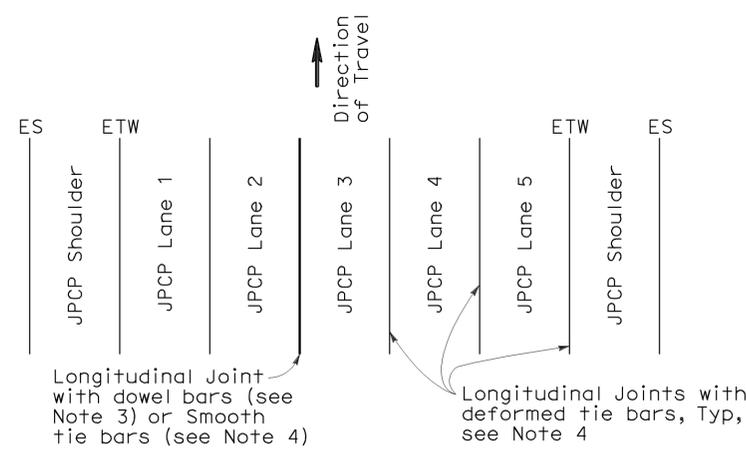
To accompany plans dated 2-1-10



3 LANES WITH TIED CONCRETE SHOULDERS
PLAN

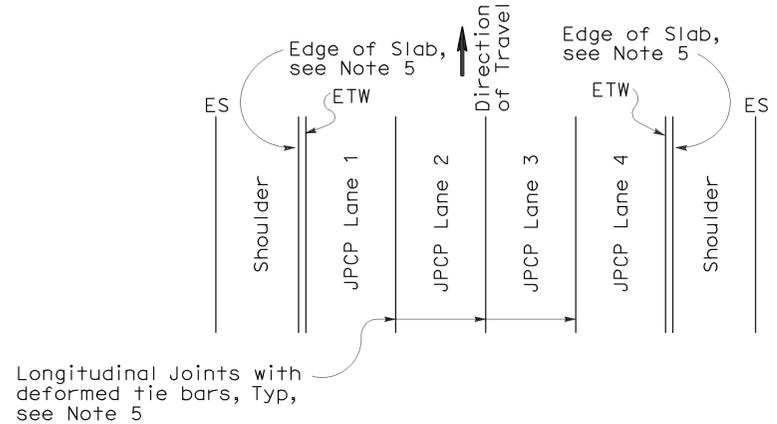


4 LANES WITH TIED CONCRETE SHOULDERS
PLAN

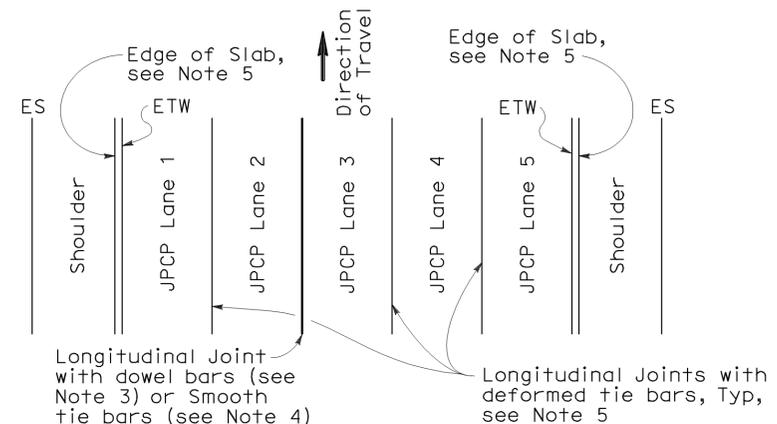


5 LANES WITH TIED CONCRETE SHOULDERS
PLAN

- NOTES:**
- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
 - Use $\frac{5}{8}'' \pm \frac{1}{16}''$ dimension for silicone sealant.
 - See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
 - See Revised Standard Plan RSP P1.
 - See Revised Standard Plan RSP P2.

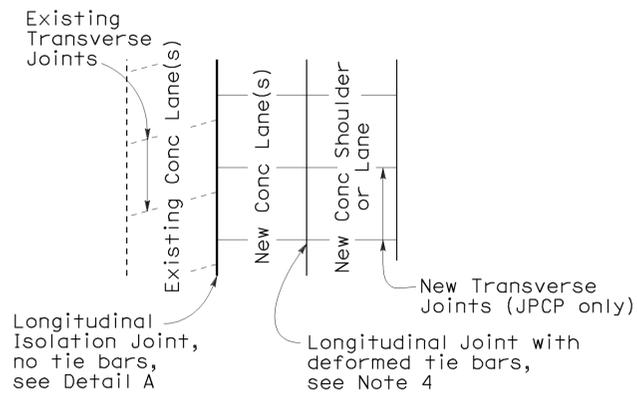


4 LANES OR LESS WITH WIDENED SLAB
PLAN



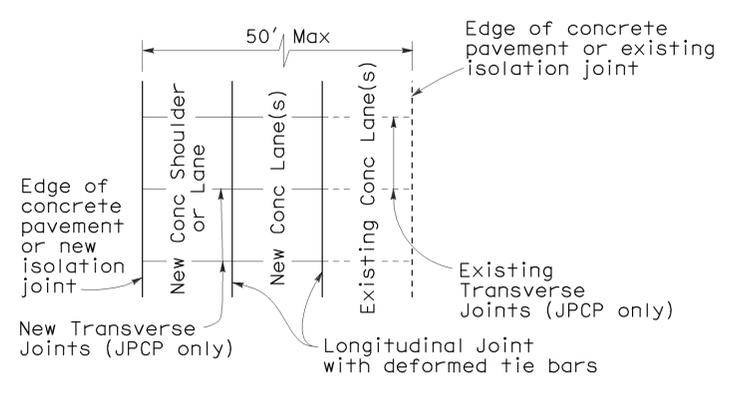
5 LANES WITH WIDENED SLAB
PLAN

NEW CONSTRUCTION
Location of Longitudinal Joints
(For JPCP)



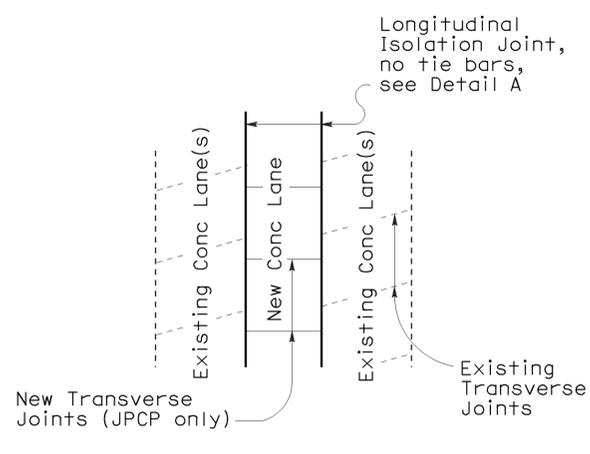
CASE 1
PLAN

Transverse Joints do not align between new and existing



CASE 2
PLAN

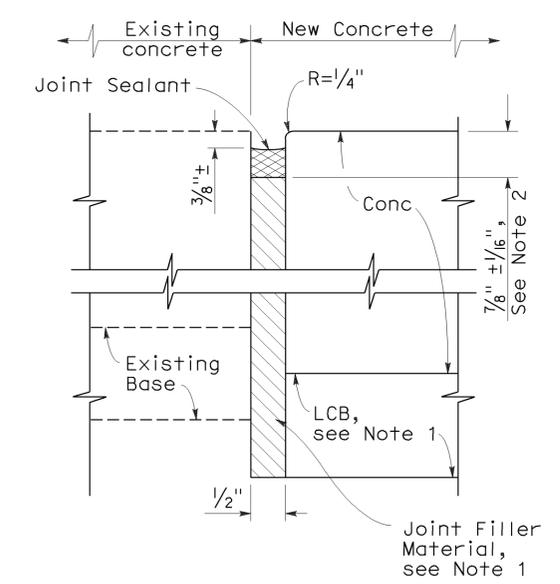
Transverse Joints align between new and existing



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN

Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
(For JPCP and CRCP)



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
LANE SCHEMATICS
AND ISOLATION JOINT DETAIL**

NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

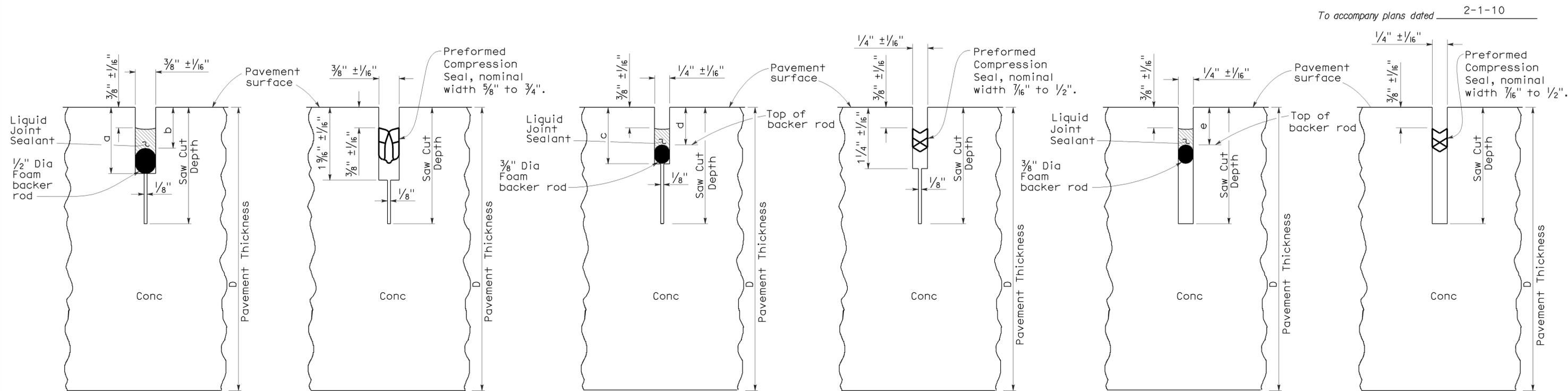
NOTE:

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
04	CC	680	0.0/R12.8	451	504

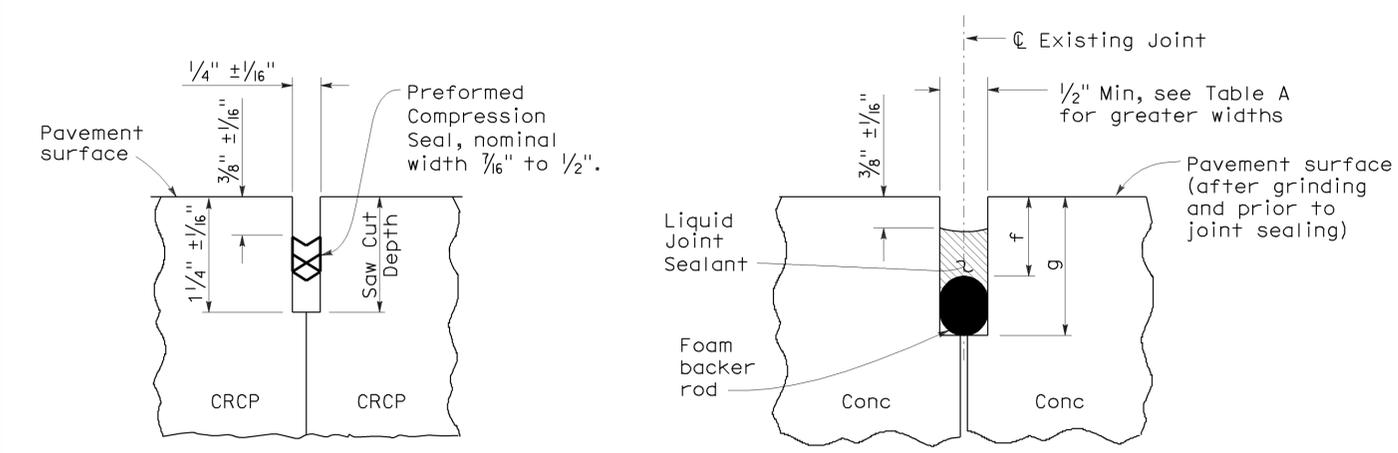
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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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

To accompany plans dated 2-1-10



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

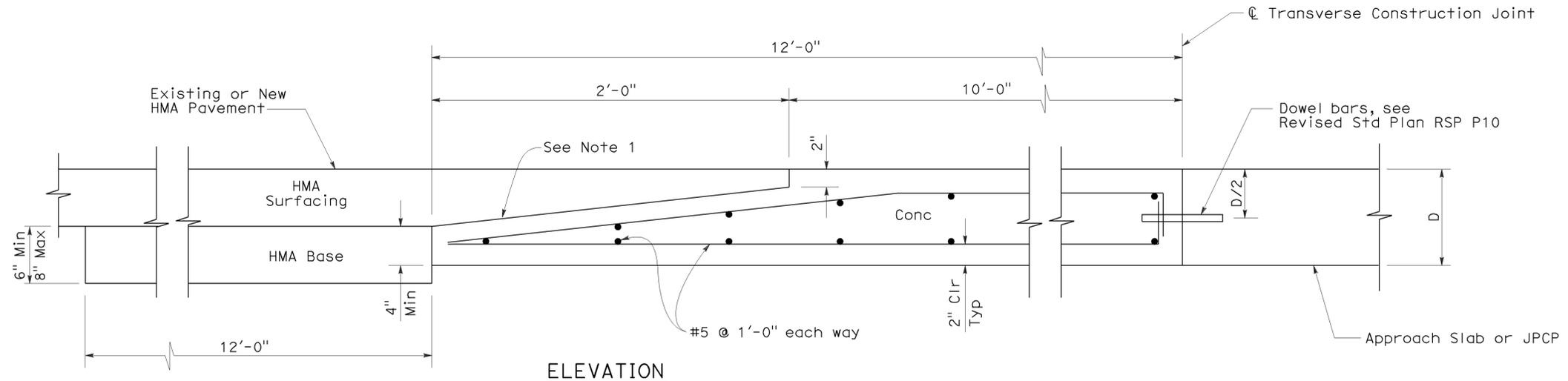
RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P20

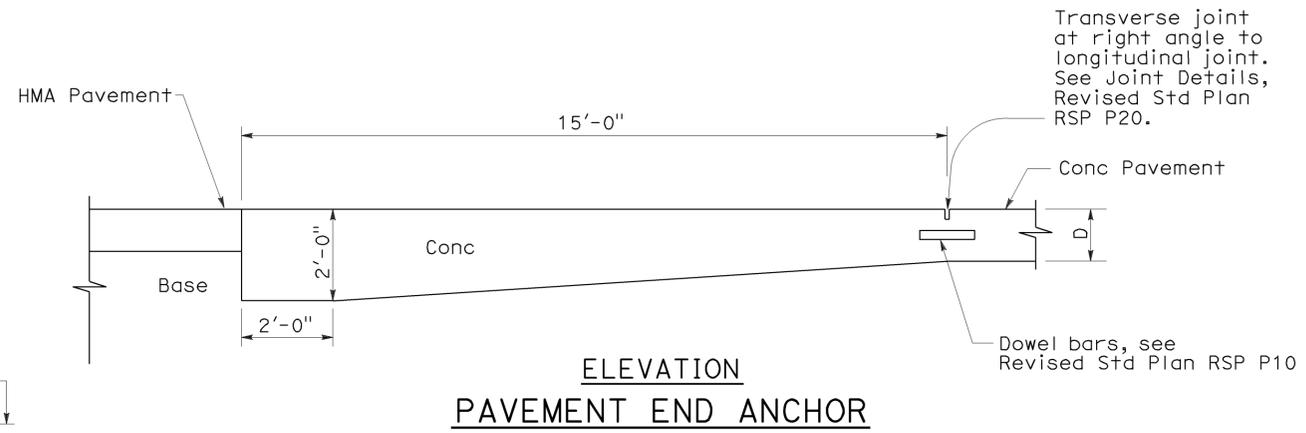
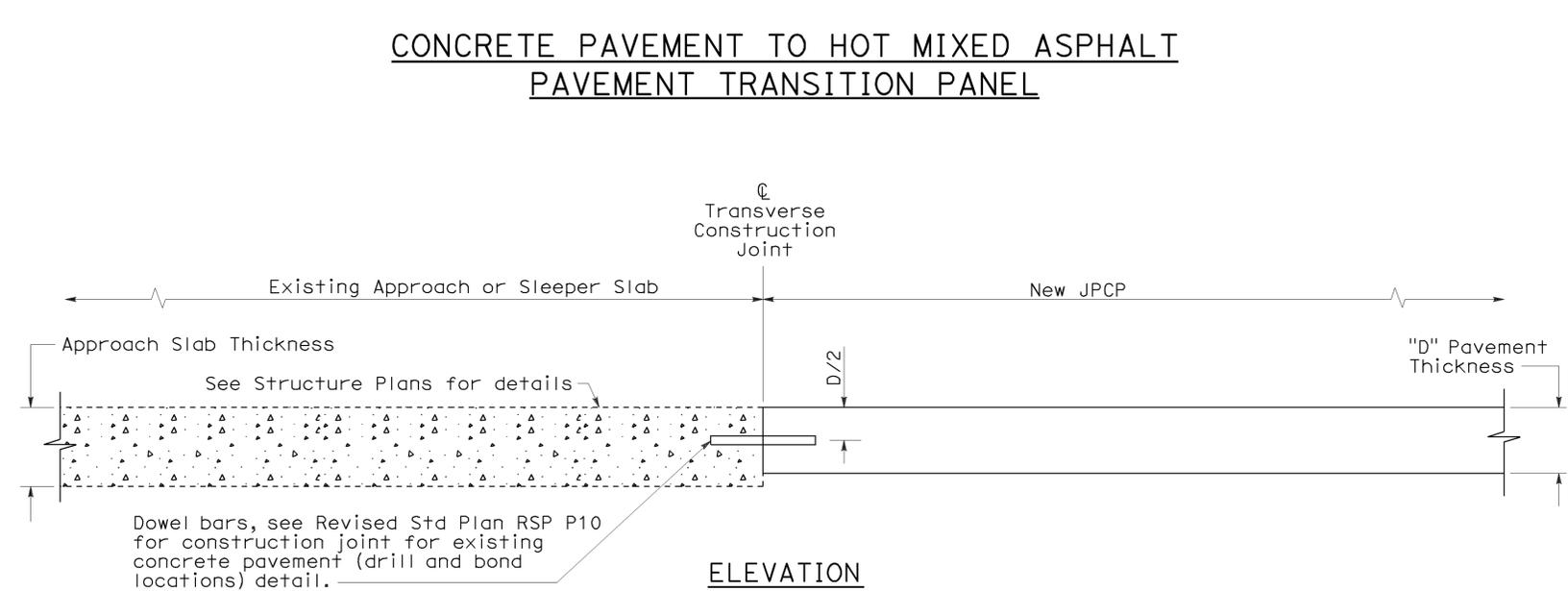
2006 REVISED STANDARD PLAN RSP P20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	452	504

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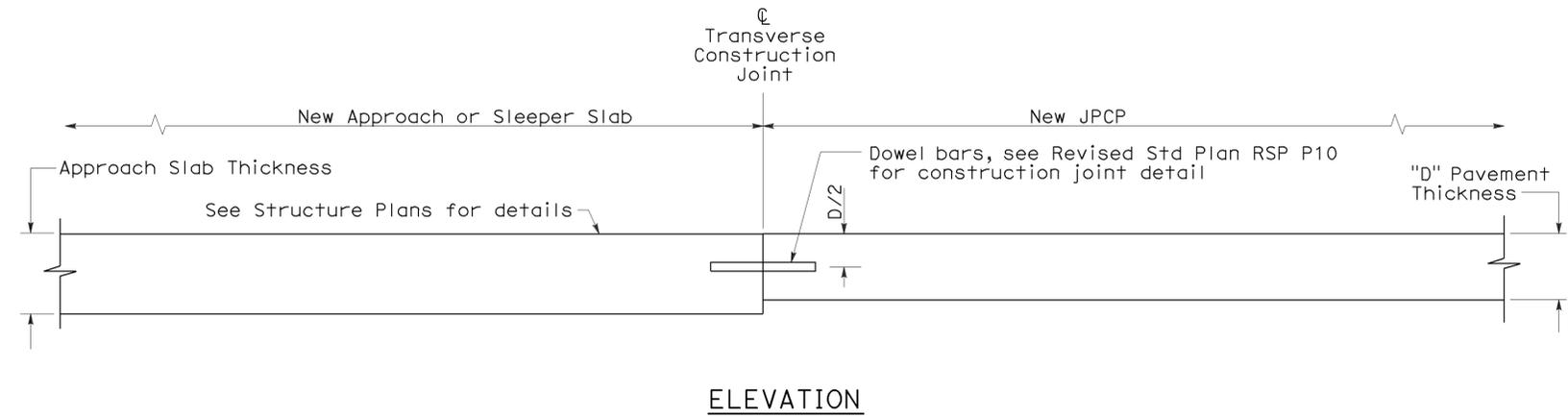


CONCRETE PAVEMENT TO HOT MIXED ASPHALT PAVEMENT TRANSITION PANEL



PAVEMENT END ANCHOR

NOTE:
1. Heavy broom finish.



CONCRETE PAVEMENT TRANSITION TO APPROACH OR SLEEPER SLAB

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**JOINTED PLAIN CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**
NO SCALE

RSP P30 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P30
DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P30

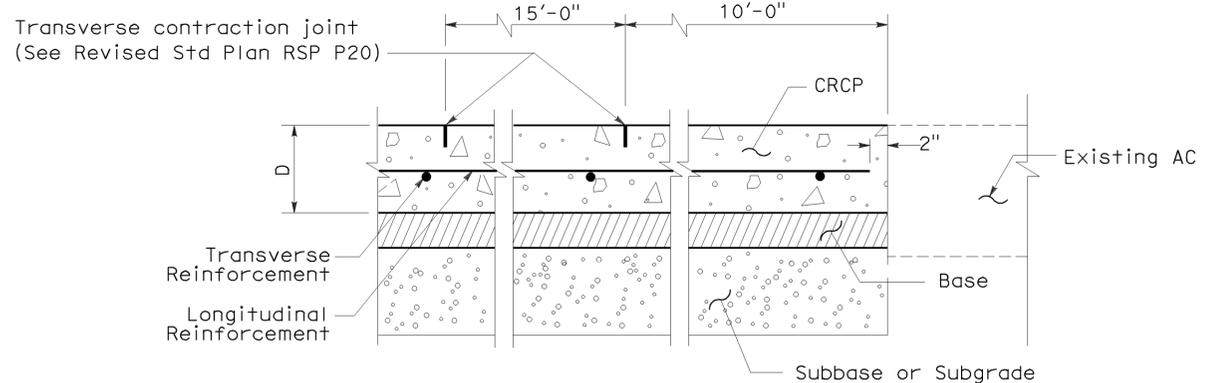
2006 REVISED STANDARD PLAN RSP P30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	453	504

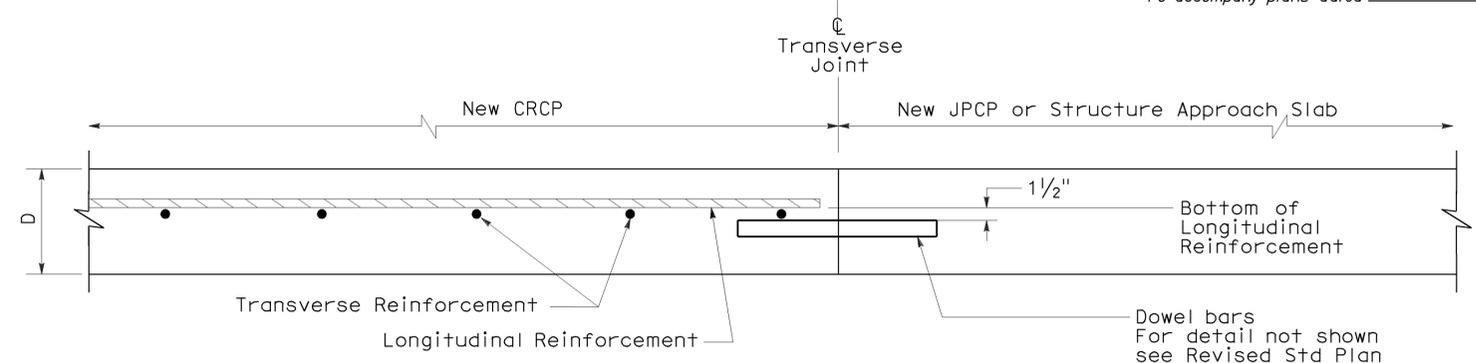
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. 49042
 Exp. 09-30-10
 STATE OF CALIFORNIA

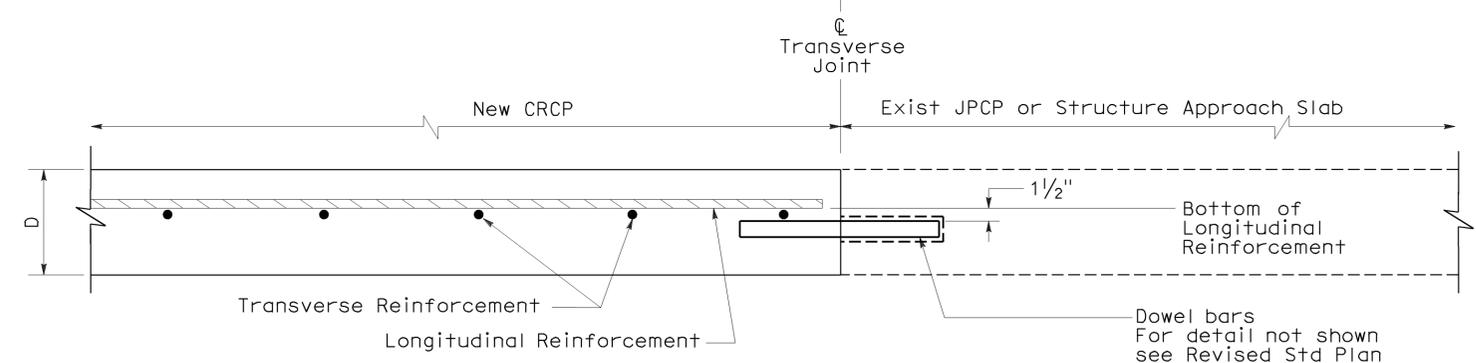
To accompany plans dated 2-1-10



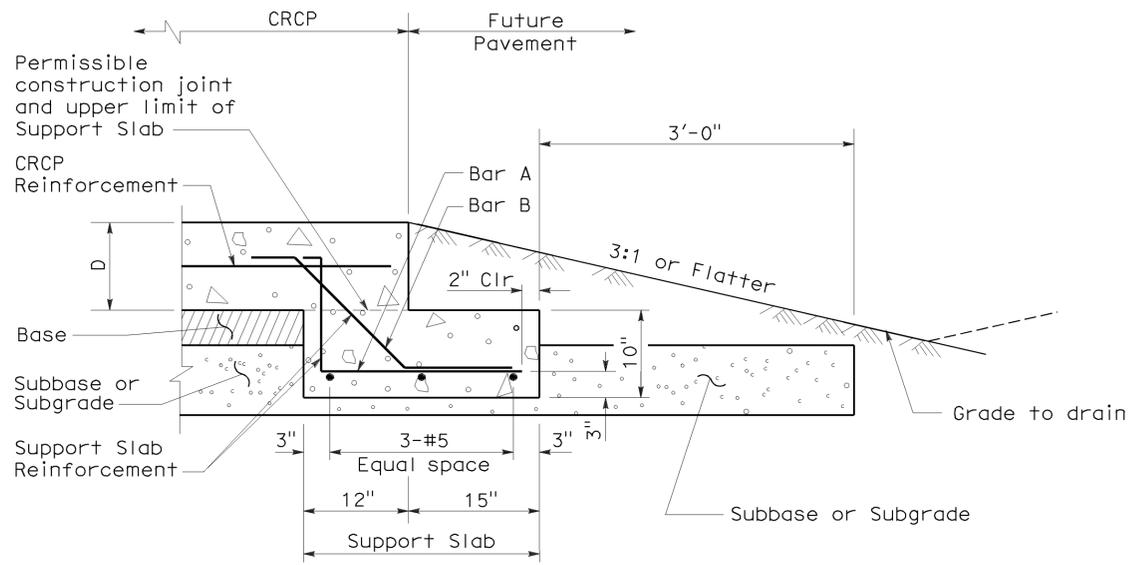
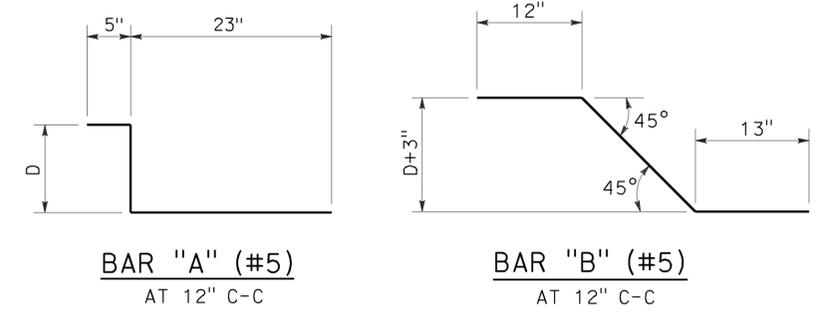
TERMINAL JOINT TYPE A
(For Existing AC)



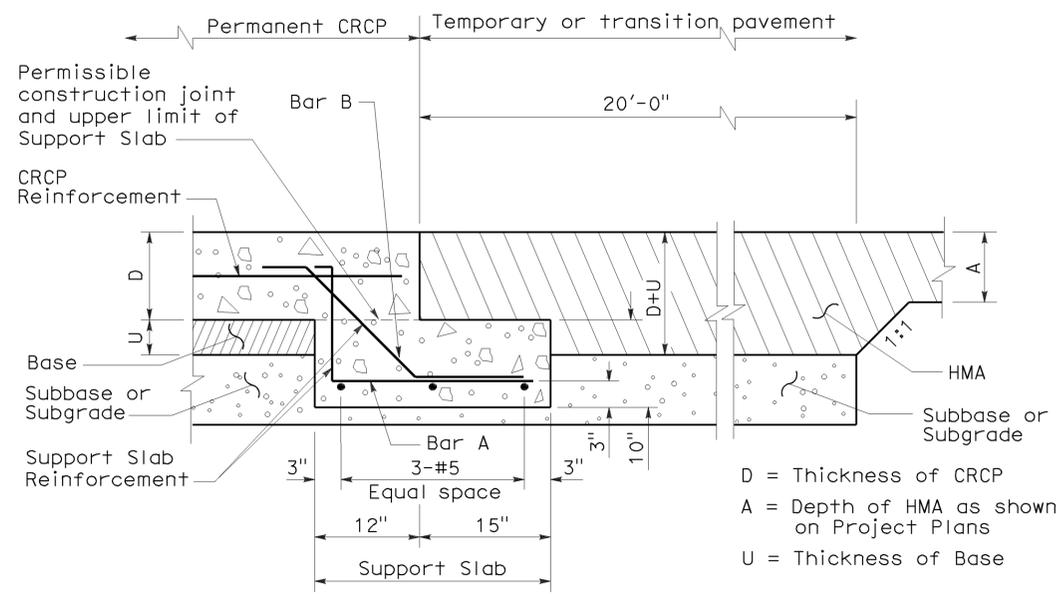
TERMINAL JOINT TYPE E
(For New JPCP or Structure Approach Slabs)



TERMINAL JOINT TYPE D
(For Existing JPCP or Structure Approach Slabs)



TERMINAL JOINT TYPE B
(For Future Pavement)



TERMINAL JOINT TYPE C
(For Temporary HMA Pavement)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT -
TERMINAL JOINT DETAILS**

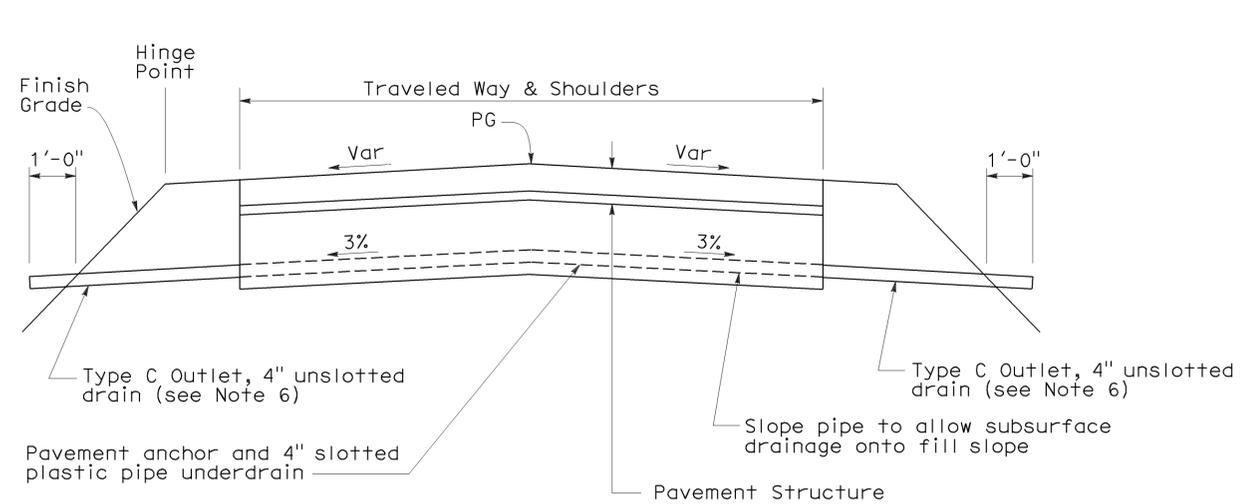
NO SCALE
NSP P31A DATED JUNE 5, 2009 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP P31A

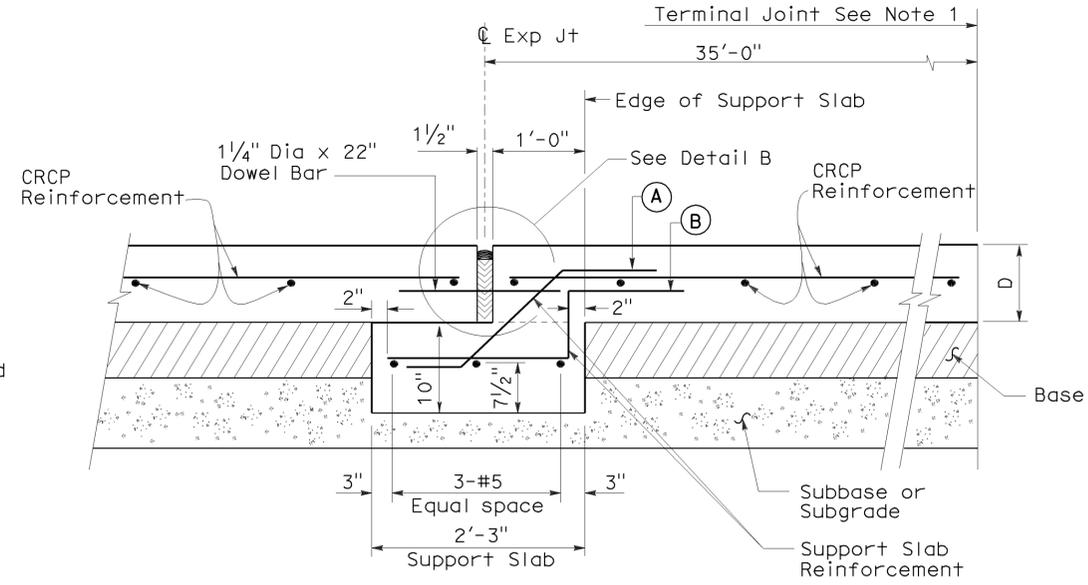
2006 NEW STANDARD PLAN NSP P31A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	454	504

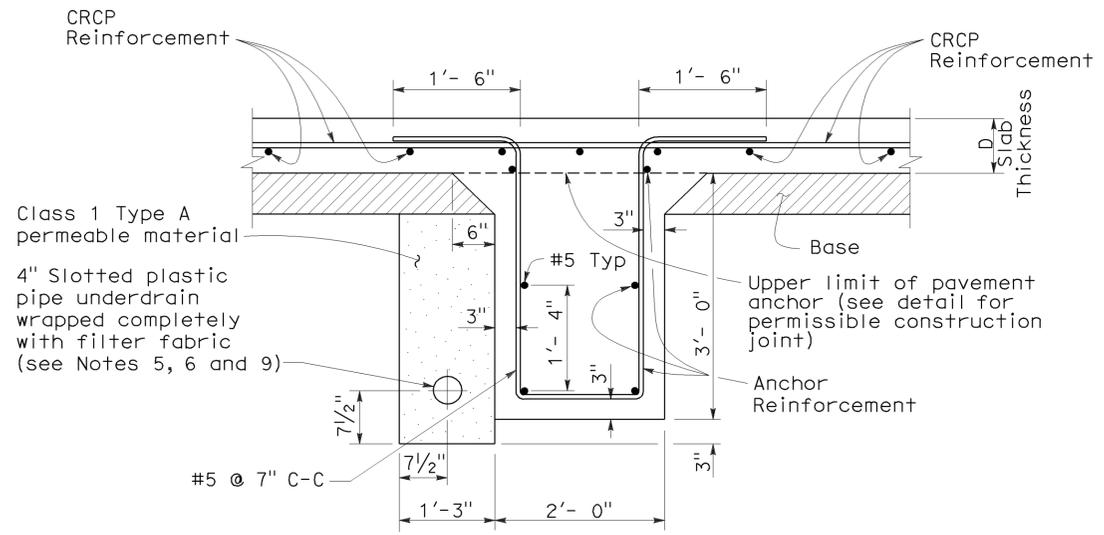
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. 49042
 Exp. 09-30-10
 STATE OF CALIFORNIA



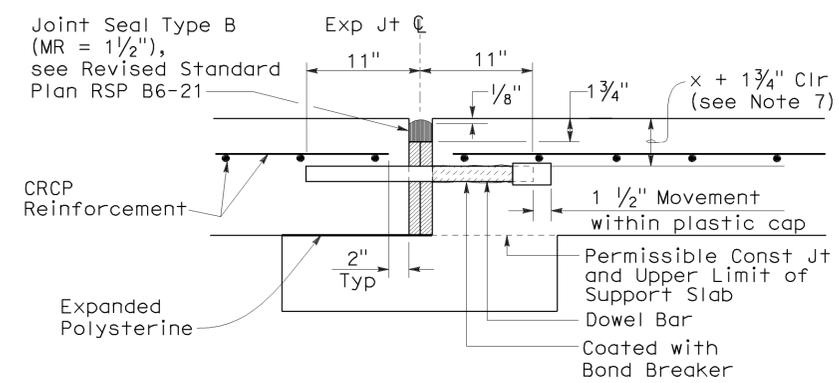
PAVEMENT ANCHOR PROFILE



EXPANSION JOINT TYPE AN

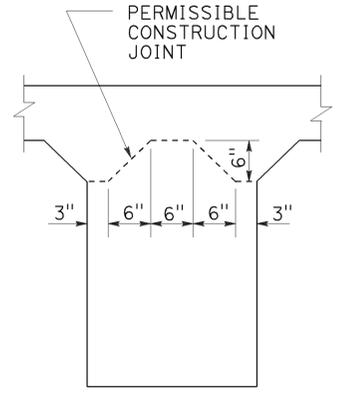


PAVEMENT ANCHOR

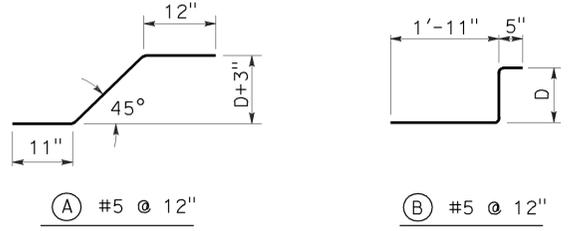


DETAIL B

(For layout, tolerances, and other details not shown, see Revised Standard Plan RSP P10.)



PAVEMENT ANCHOR DETAIL SHOWING PERMISSIBLE CONSTRUCTION JOINT



REINFORCEMENT DETAIL

NOTES:

1. For the locations of the terminal joints, expansion joints and pavement anchors, see project plans.
2. The CRCP shall continue across the pavement anchor and expansion joints as shown.
3. Details of reinforcement, tie bars, and longitudinal joints (and if necessary, transverse construction joints) are shown on New Standard Plan NSP P4.
4. Transverse construction joints are not allowed within 20'-0" of the pavement anchor.
5. When placing pipe through concrete barrier, use 4" unslotted plastic pipe wrapped completely with 3/8" polystyrene.
6. See Standard Plan D99B for details not shown.
7. See New Standard Plan NSP P4 for "x".
8. D = thickness of CRCP
9. Place the 4" Slotted Plastic Pipe on the high side of the longitudinal grade.

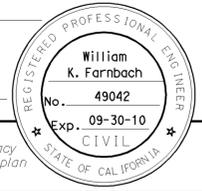
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT - EXPANSION JOINT AND ANCHOR DETAILS

NO SCALE
 NSP P31B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

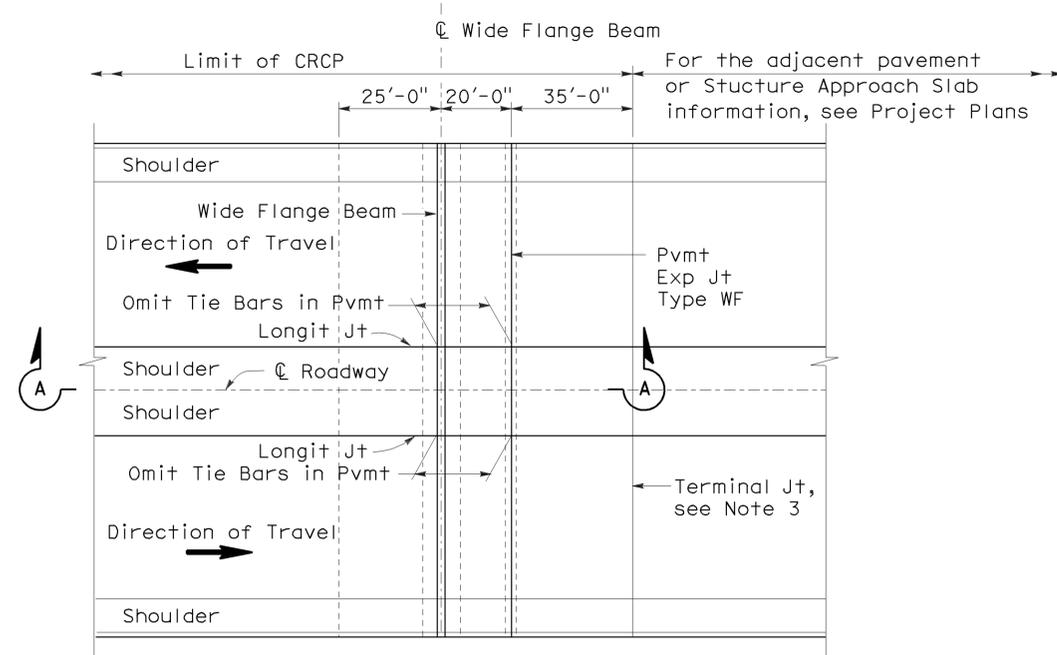
2006 NEW STANDARD PLAN NSP P31B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	455	504

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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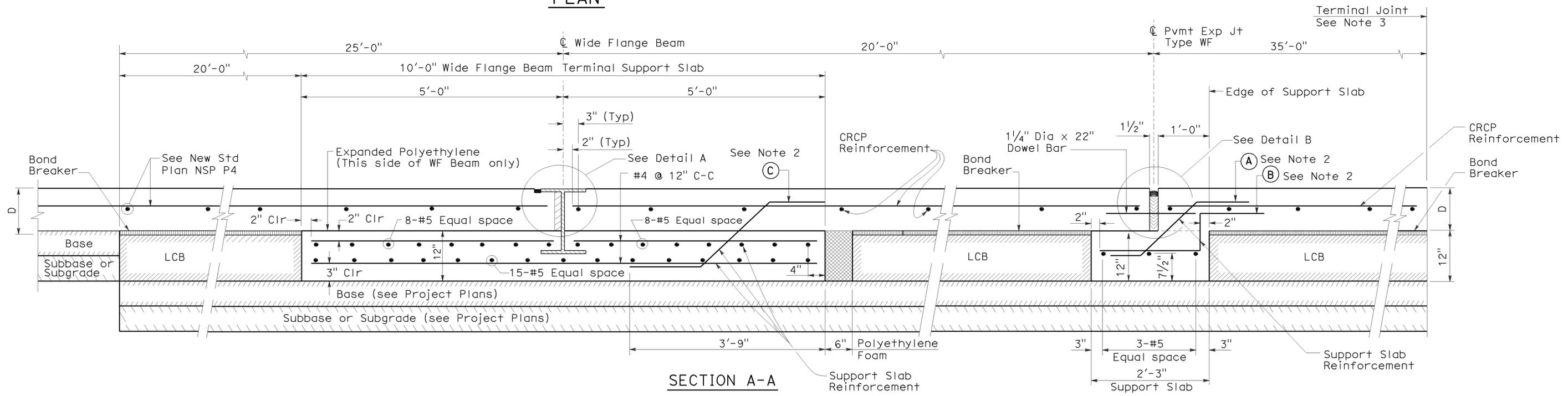
To accompany plans dated 2-1-10



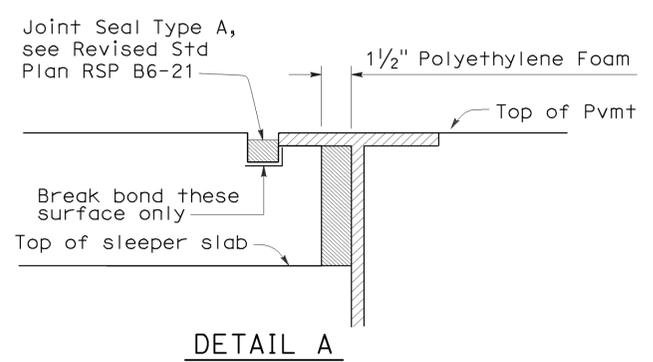
PLAN

NOTES:

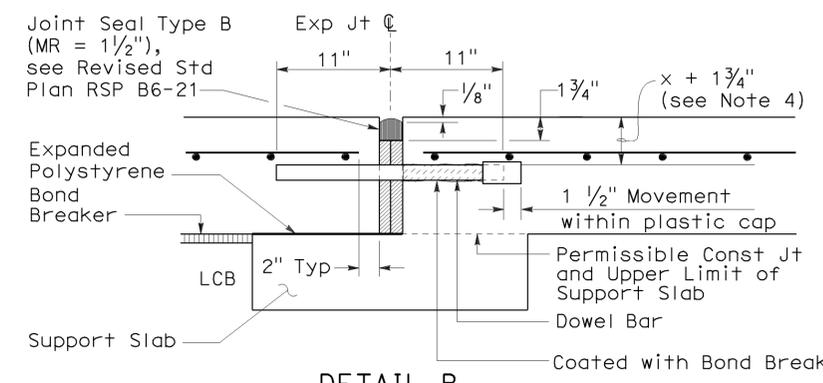
1. For additional details on reinforcement member quantities of the wide flange beam terminal and Pavement Expansion Joint Type WF, see New Standard Plan NSP P32B.
 2. For reinforcement (A), (B), and (C) Details, see New Standard Plan NSP P32B.
 3. For the Pavement Terminal Joint Details, see New Standard Plan NSP P31A. For Pavement Terminal Joint Type, see Project Plans.
 4. See New Standard Plan NSP P4 for "x".
- D = Thickness of CRCP



SECTION A-A



DETAIL A

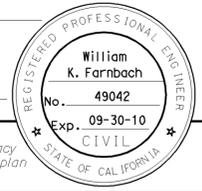


DETAIL B

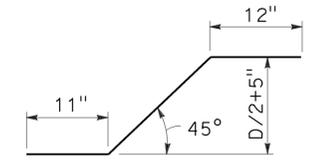
(For layout, tolerances, and other details not shown see Revised Std Plan RSP P10.)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT -
 WIDE FLANGE BEAM TERMINALS**
 NO SCALE
 NSP P32A DATED JUNE 5, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006
NEW STANDARD PLAN NSP P32A

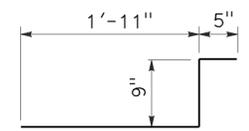
2006 NEW STANDARD PLAN NSP P32A



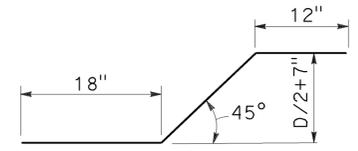
To accompany plans dated 2-1-10



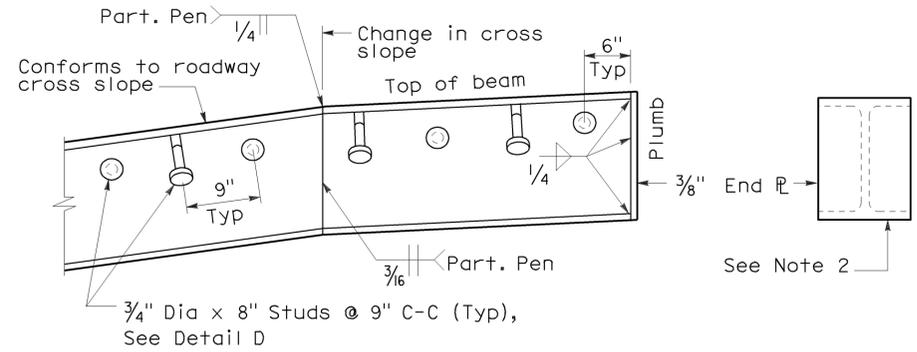
(A) #5 @ 12"



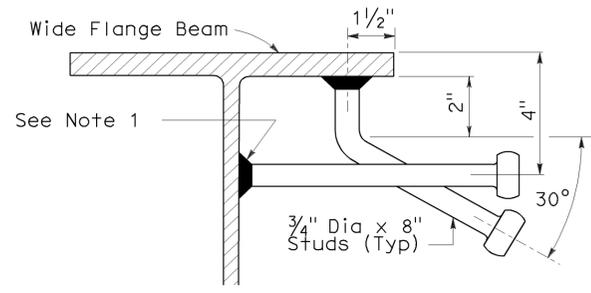
(B) #5 @ 12"



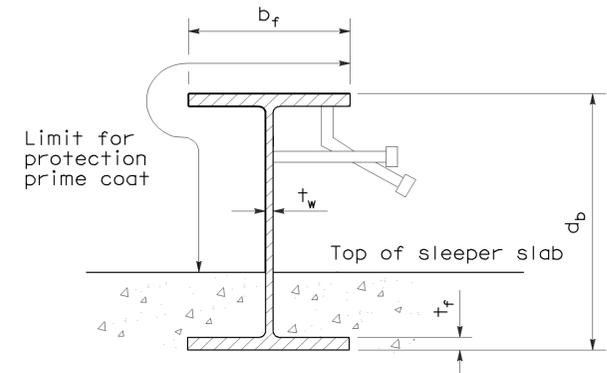
(C) #4 @ 12"



WIDE FLANGE DETAIL



DETAIL D



WIDE FLANGE PAINTING DETAIL

SEE "TABLE OF BEAM SIZES"

LEGEND:

- b_f - flange width
- t_f - flange thickness
- t_w - web thickness
- d_b - beam depth

NOTES:

1. Studs shall be electric arc end welded with complete fusion. Any stud which is dislodged in shipping or can be dislodged by hammer shall be replaced.
2. Weld 3/8" Plate to each end of wide flange beam at pavement edges only. End plate covers entire wide flange beam.

CONCRETE AND STEEL QUANTITIES

ITEM	PAVEMENT THICKNESS						
	.80'	.85'	.90'	.95'	1.00'	1.05'	1.10'
Wide Flange Beam Concrete	4.81CY						
Terminal Slab Reinforcing Steel	552.2 LBS	552.4 LBS	552.6 LBS	552.8 LBS	553.0 LBS	553.1 LBS	553.3 LBS
Exp Joint Type Concrete	1.1 CY						
WF Support Slab Reinforcing Steel	99.9 LBS	100.2 LBS	100.5 LBS	100.8 LBS	101.1 LBS	101.1 LBS	101.6 LBS
Steel Beam (Weight of Wide Flange Beam and Studs)	69.51 LBS/LF +2 PLATES @ 14.87 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA

TABLE OF BEAM SIZES

PAVEMENT THICKNESS	WIDE FLANGE BEAM DESIGNATION	d _b	b _f	t _f	t _w
.80'	W14 X 68	14.04"	10.04"	0.72"	0.42"
.85'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.90'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.95'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.00'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.05'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.10'	W18 X 97	18.59"	11.15"	0.87"	0.54"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT -
WIDE FLANGE BEAM TERMINALS**

NO SCALE

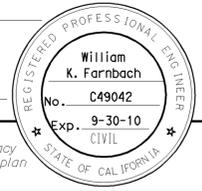
NSP P32B DATED JUNE 5, 2009 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006

NEW STANDARD PLAN NSP P32B

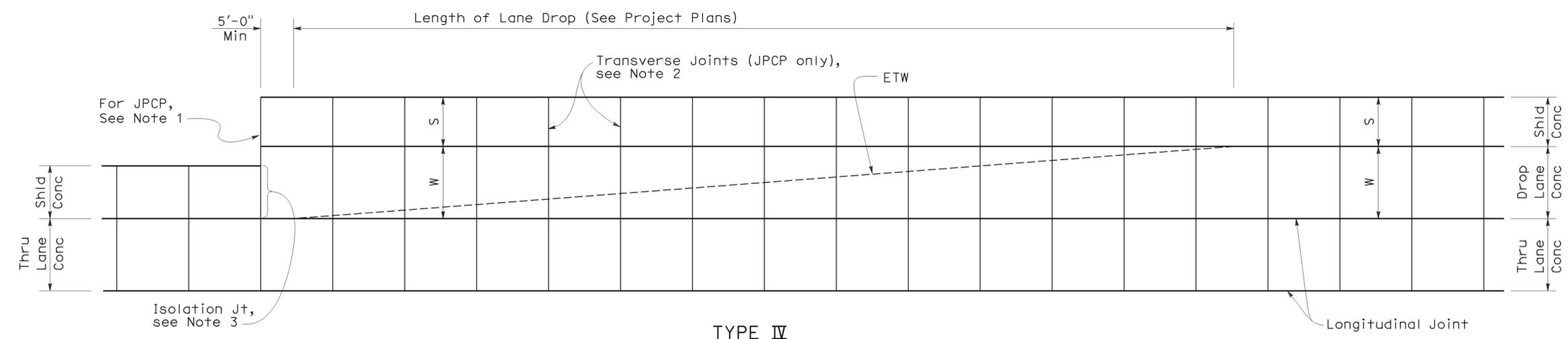
2006 NEW STANDARD PLAN NSP P32B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	457	504

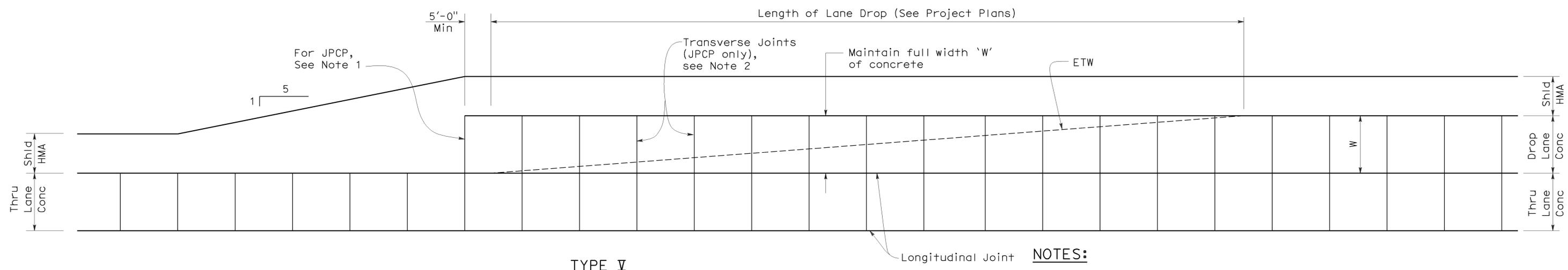
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 2-1-10

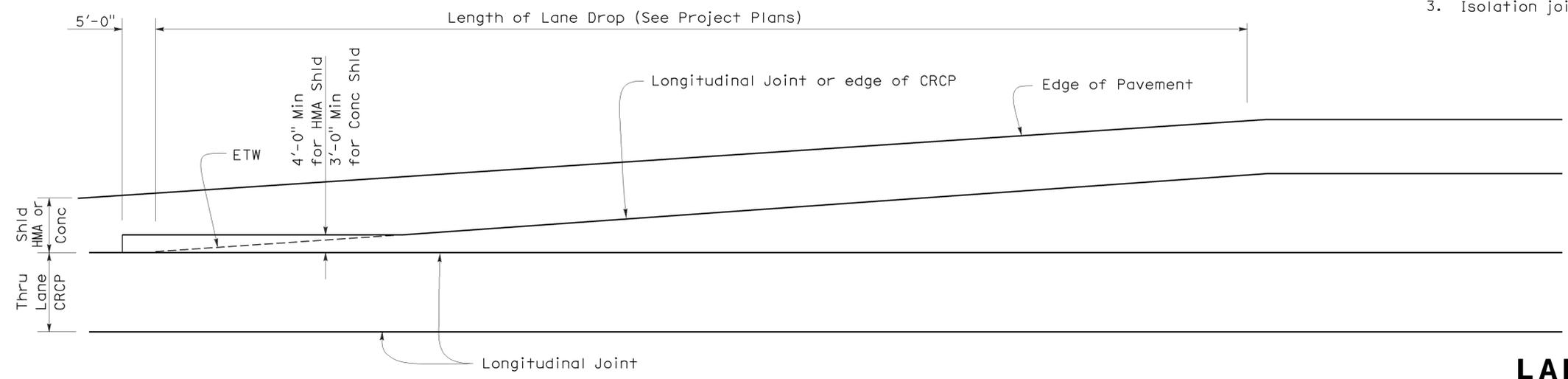


TYPE IV
JOINED PLAIN AND CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
 (See Revised Std Plans RSP P1, RSP P2, or New Std Plan NSP P4 for details not shown)



TYPE V
JOINED PLAIN AND CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
 (See Revised Std Plans RSP P1, RSP P2, or New Std Plan NSP P4 for details not shown)

- NOTES:**
1. Location of transverse joint to match transverse joint of adjacent lane.
 2. Place transverse joint of lane and shoulder perpendicular to longitudinal joint of through lane.
 3. Isolation joint detail shown on Revised Standard Plan RSP P18.



TYPE VI
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
 (See New Std Plan NSP P4 for details not shown)

LEGEND
 S - Shoulder width
 W - Lane width

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 LANE DROP PAVING DETAILS No. 2**
 NO SCALE

NSP P34 DATED MAY 15, 2009 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP P34

2006 NEW STANDARD PLAN NSP P34

NOTES:

1. Details for gore area paving are applicable to both exit and entrance ramps.
2. Transverse Joint Layouts are not shown. Refer to Revised Standard Plan RSP P1 or Project Plans for details regarding joint layouts, tie bars, and dowel bars not shown.
3. WWF 4 x 4 - W4.0 x W4.0 can be used in place of steel reinforcement for gore area paving only.
4. Omit longitudinal joint when concrete on ramp shoulder is less than 3'-0".
5. Place joint perpendicular to ramp longitudinal joints. Match location of joint with ramp transverse joints.
6. Place joint perpendicular to ramp longitudinal joints. Match location of joint with mainline transverse joints.
7. Isolation joint detail shown on Revised Standard Plan RSP P18.
8. For jointed plain concrete pavement, transverse joints to be spaced from fixed transverse joint and shall follow spacing pattern on Revised Standard Plan RSP P1. Minimum spacing shall be 6 feet.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	458	504

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

To accompany plans dated 2-1-10

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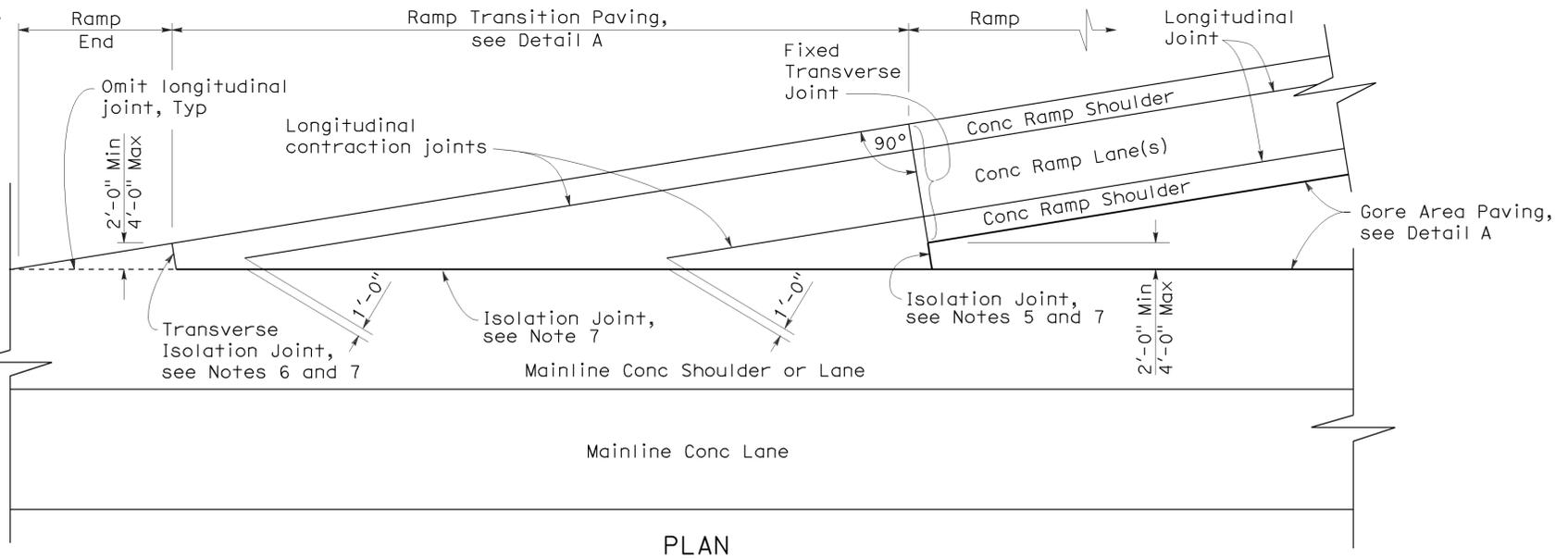
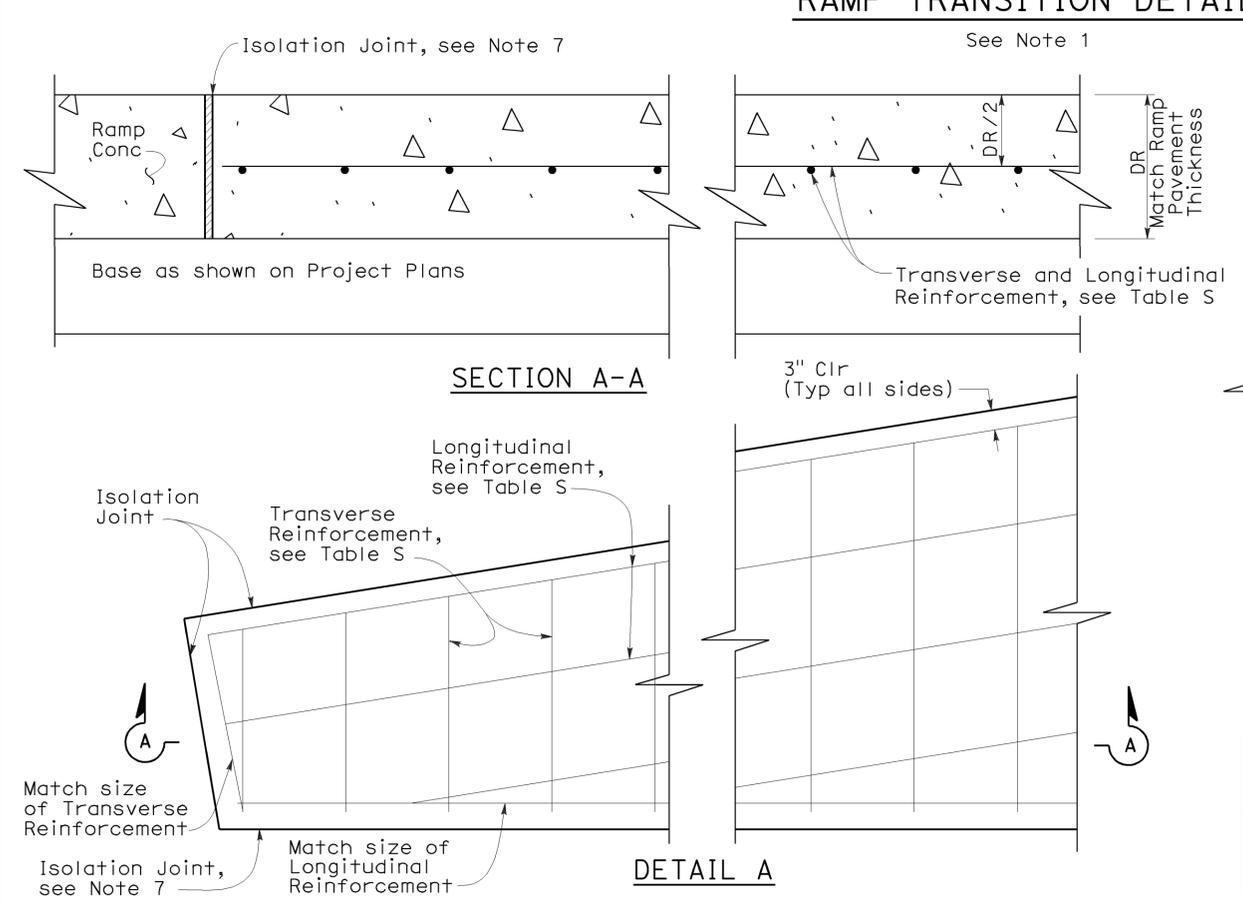
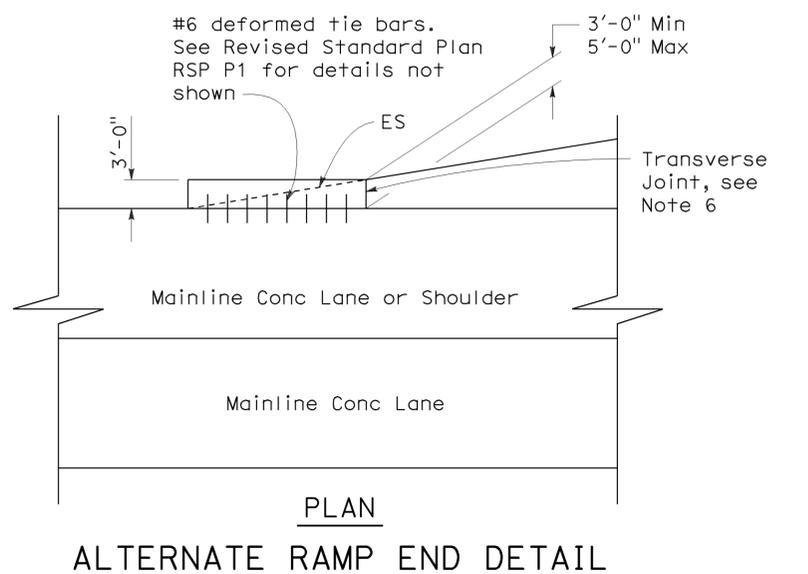
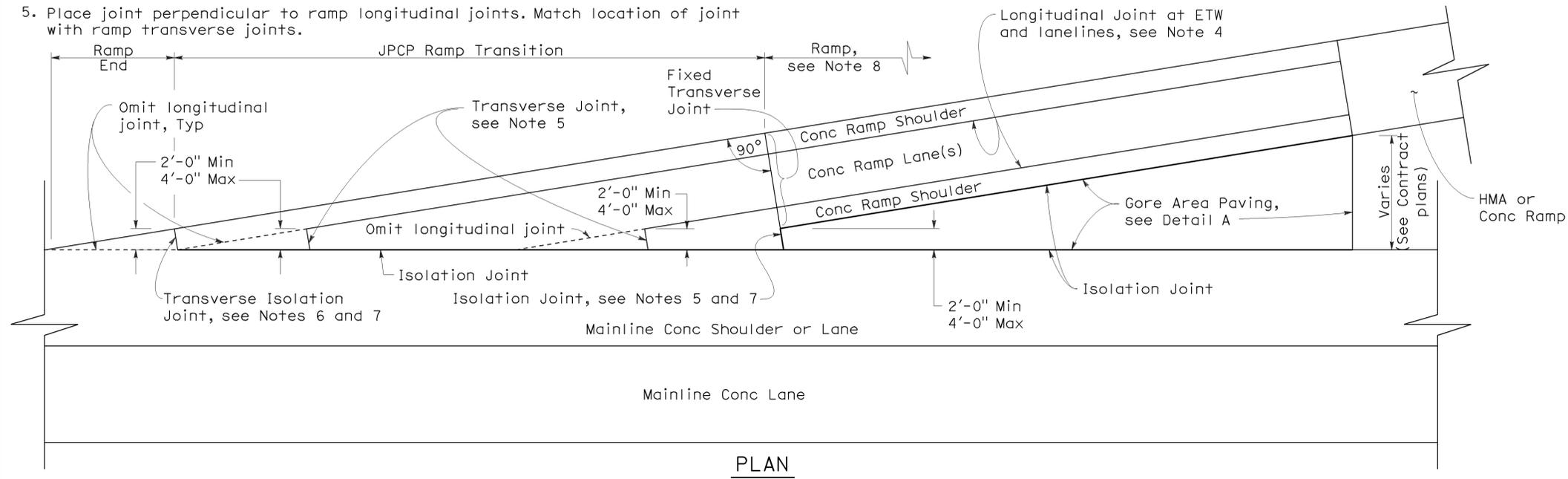


TABLE S
(For JPCP and CRCP)

Location	Transverse Reinf	Longitudinal Reinf
Gore Area Paving	#4 @ 1'-0" *	#4 @ 1'-0" *
Ramp Transition (JPCP)	#6 @ 1'-6"	#6 @ 9"
Ramp Transition (CRCP)	See NSP P4, Table No. 2	See NSP P4, Table No. 1

* See Note 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

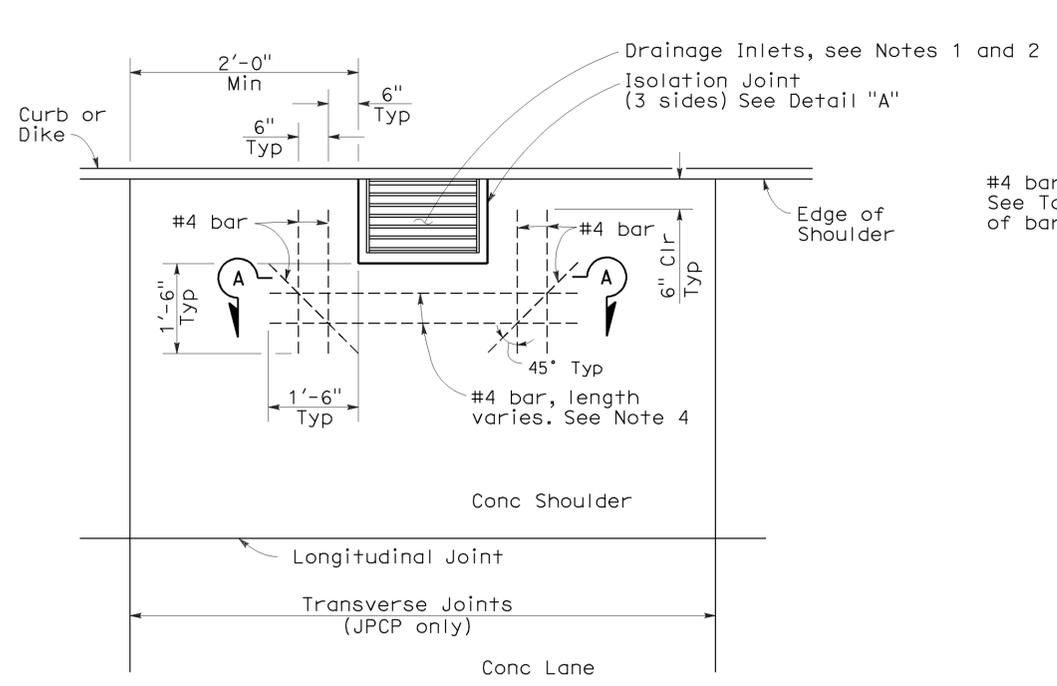
CONCRETE PAVEMENT - RAMP TRANSITION PAVING DETAILS

NO SCALE

RSP P35 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P35 DATED MAY 1, 2006 - PAGE 131 OF THE STANDARD PLANS BOOK DATED MAY 2006.

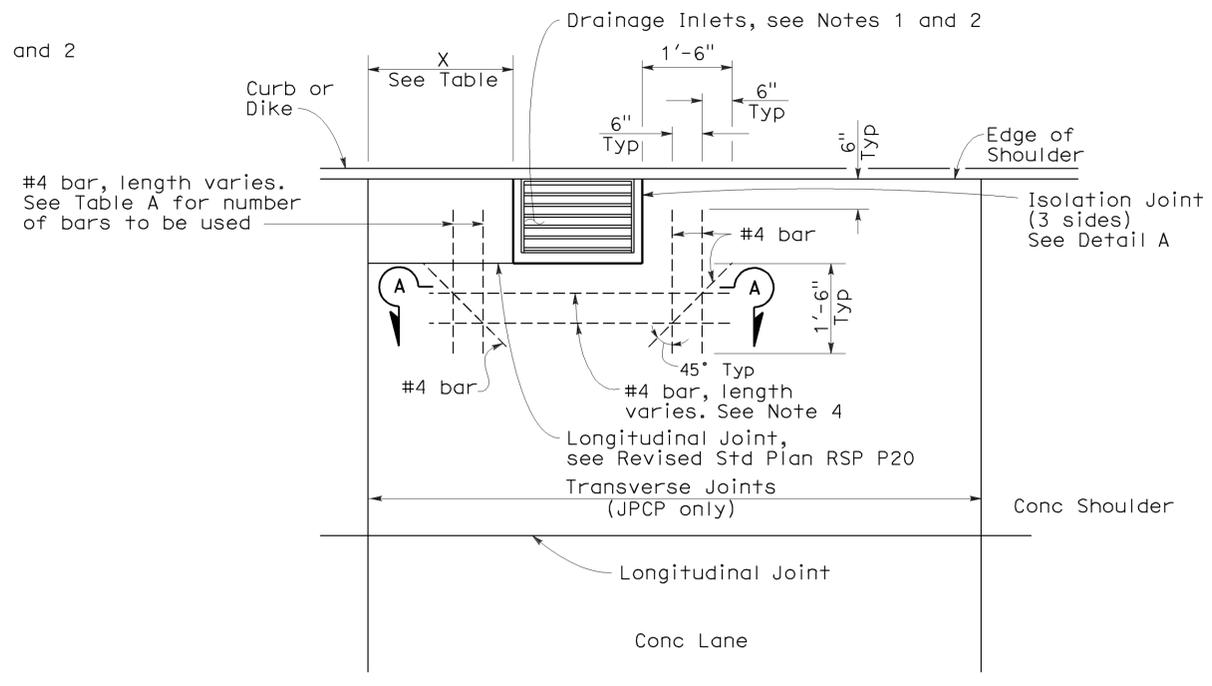
REVISED STANDARD PLAN RSP P35

2006 REVISED STANDARD PLAN RSP P35



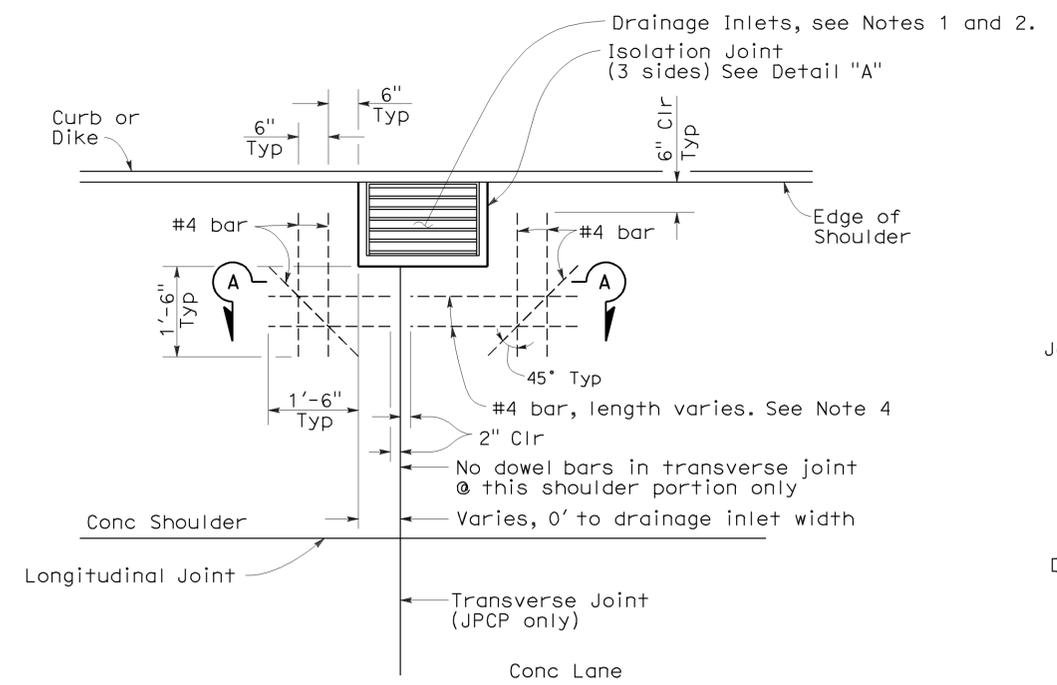
CASE 1

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



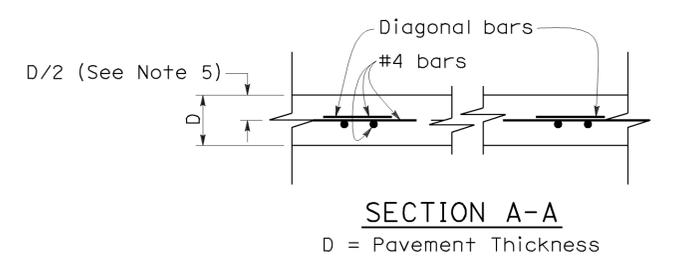
CASE 3

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



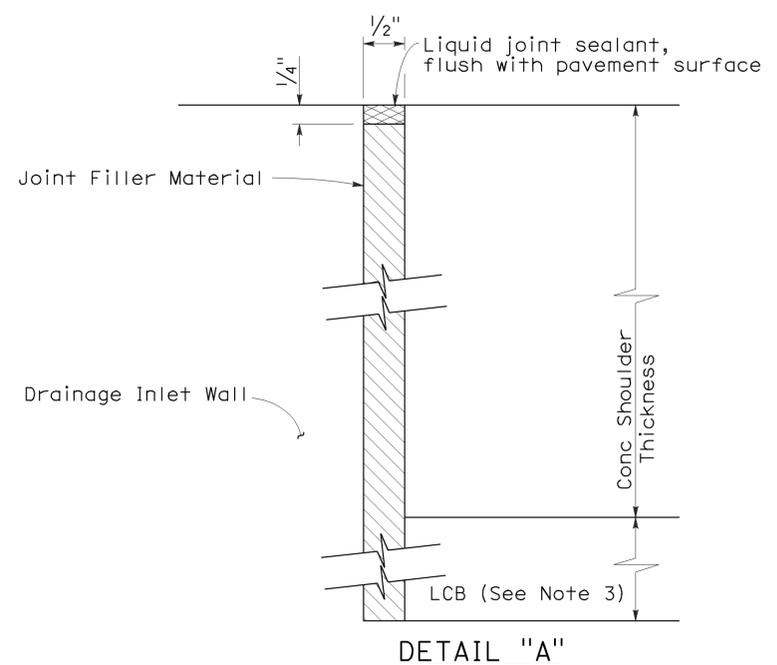
CASE 2

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



SECTION A-A

D = Pavement Thickness



DETAIL "A"

ISOLATION JOINT AROUND DRAINAGE INLET

NOTES:

1. Refer to Project Plans for location and Type of drainage inlets.
2. Top of inlet shall be flush with shoulder surface.
3. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
5. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
6. Dowel and tie bars not shown, see Revised Standard Plan RSP P1.

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 9"	1 @ X/2
9" or less	None

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 1**
 NO SCALE

RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45
 DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P45

2006 REVISED STANDARD PLAN RSP P45

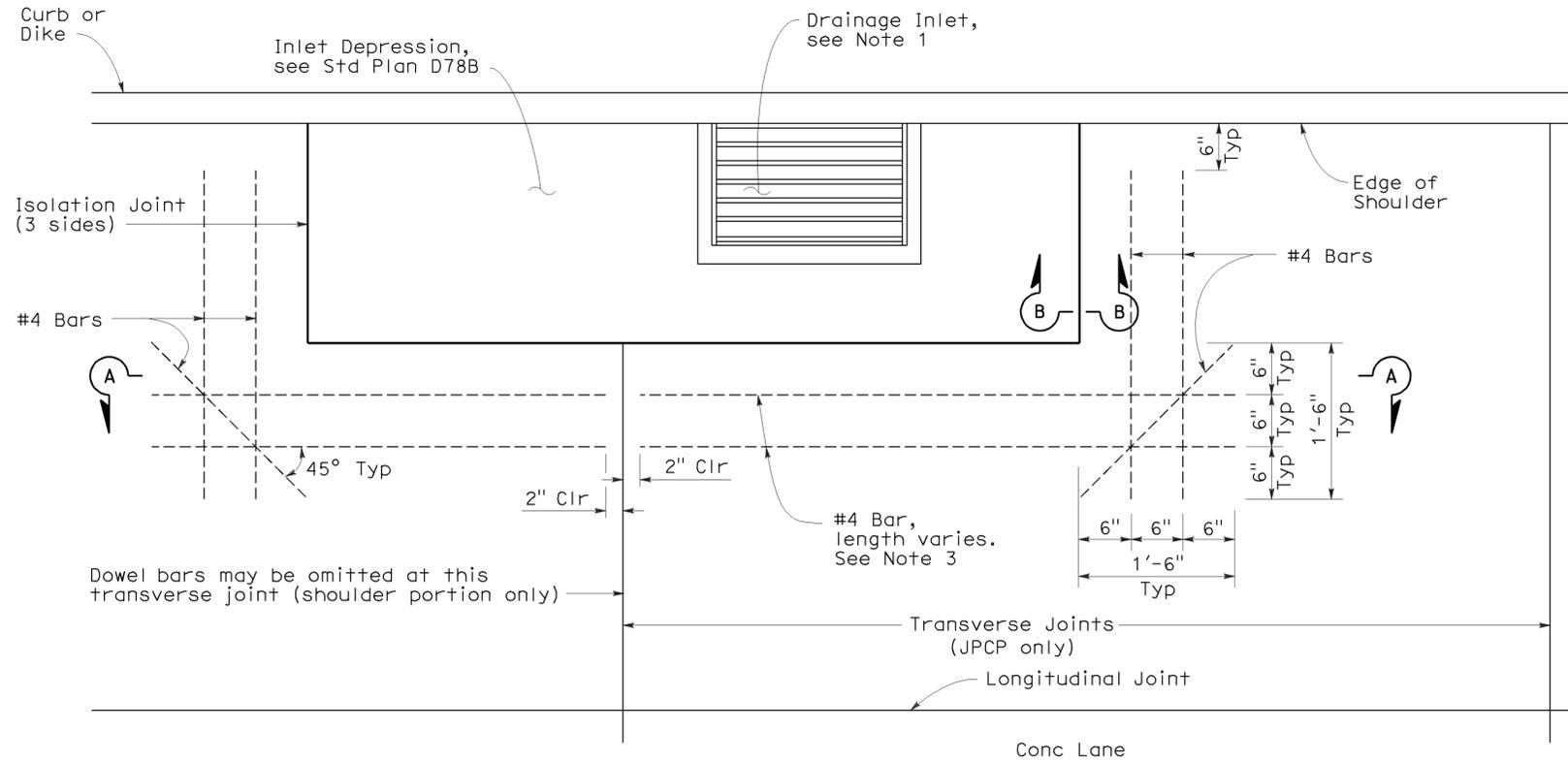
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	460	504

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

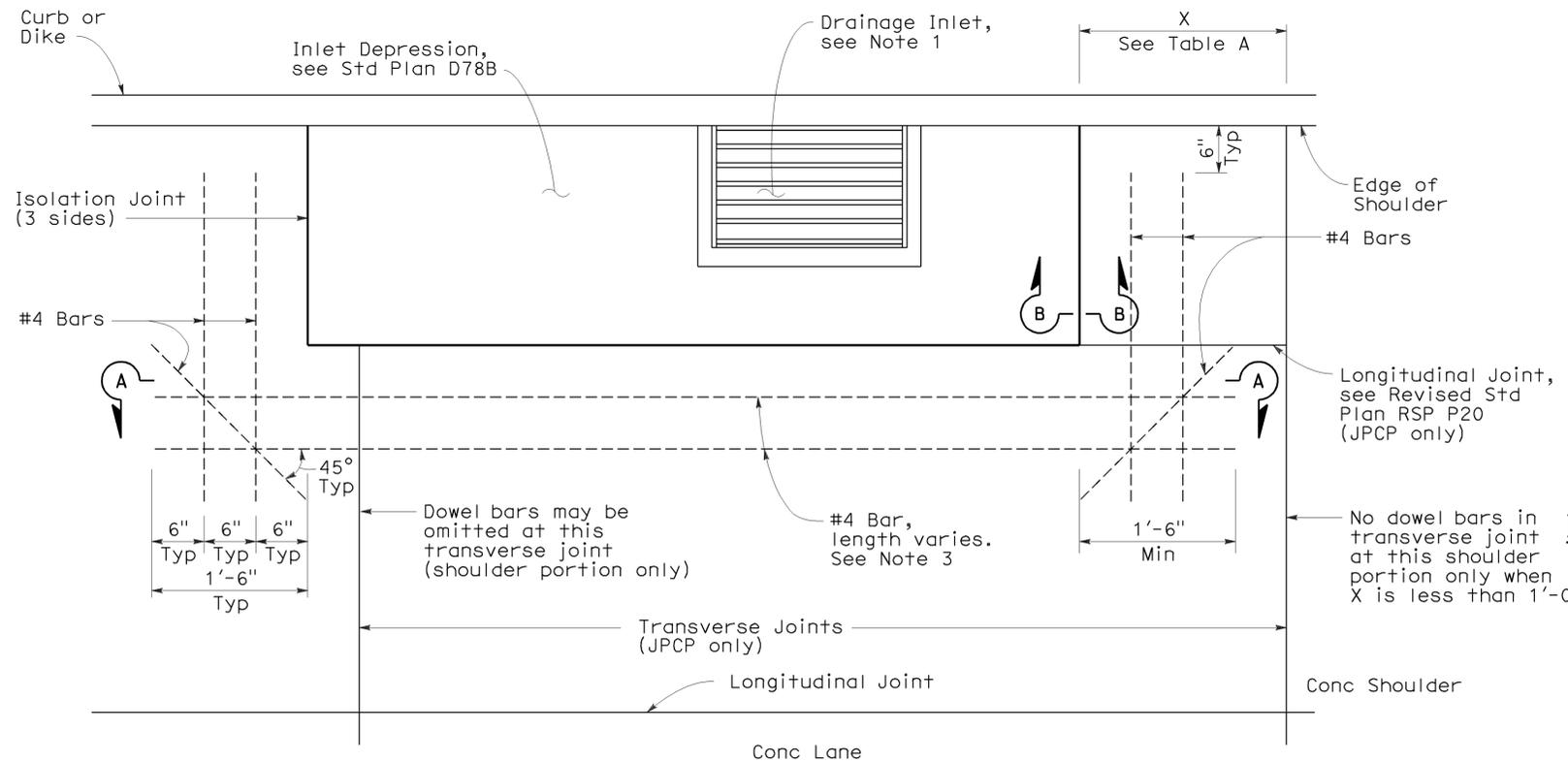
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-1-10



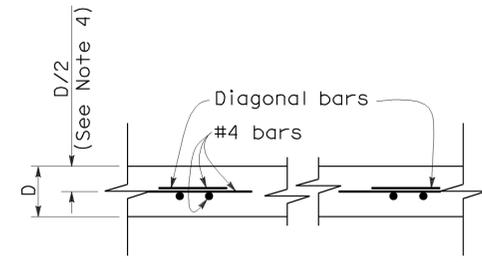
CASE A

Transverse Joint intersects inlet depression or no transverse joints.



CASE B

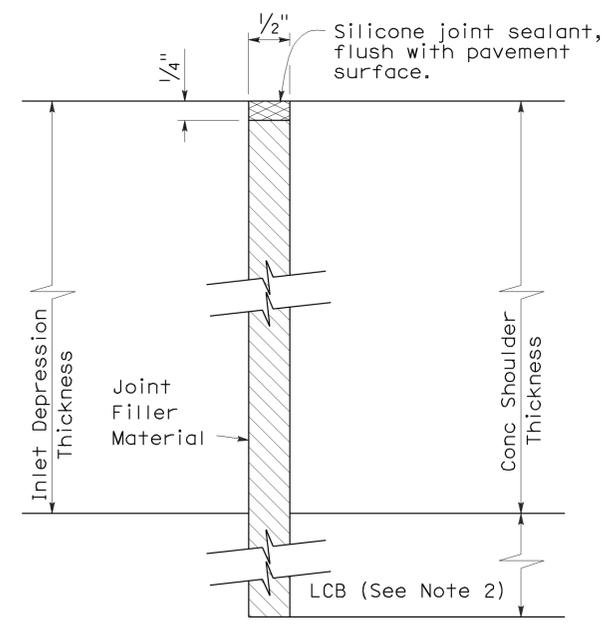
Transverse Joint within 2'-0" of edge of inlet depression.



SECTION A-A
D = Pavement Thickness

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 1'-0"	1
1'-0" or less	None



SECTION B-B

ISOLATION JOINT AROUND INLET DEPRESSION

No dowel bars in transverse joint at this shoulder portion only when X is less than 1'-0"

NOTES:

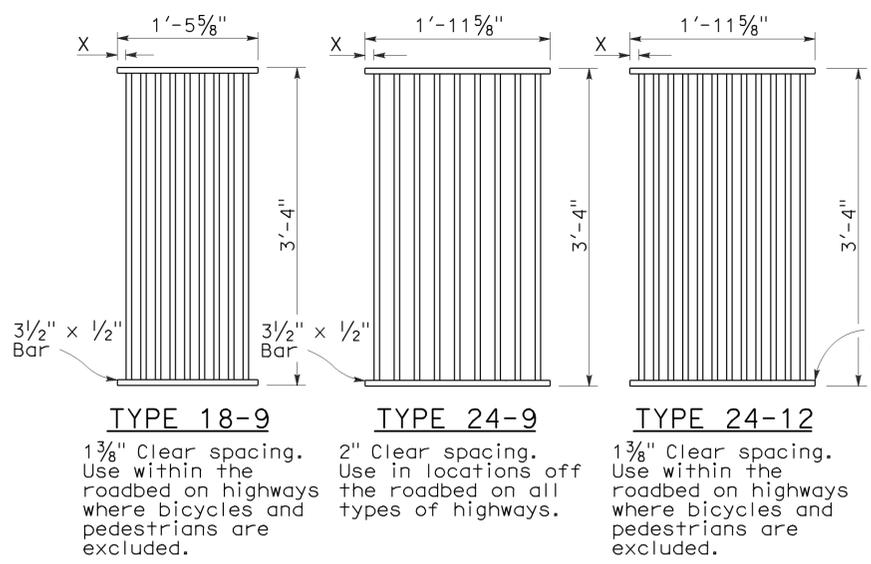
1. Refer to Project Plans for location and type of drainage inlets.
2. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
3. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 2**
 NO SCALE

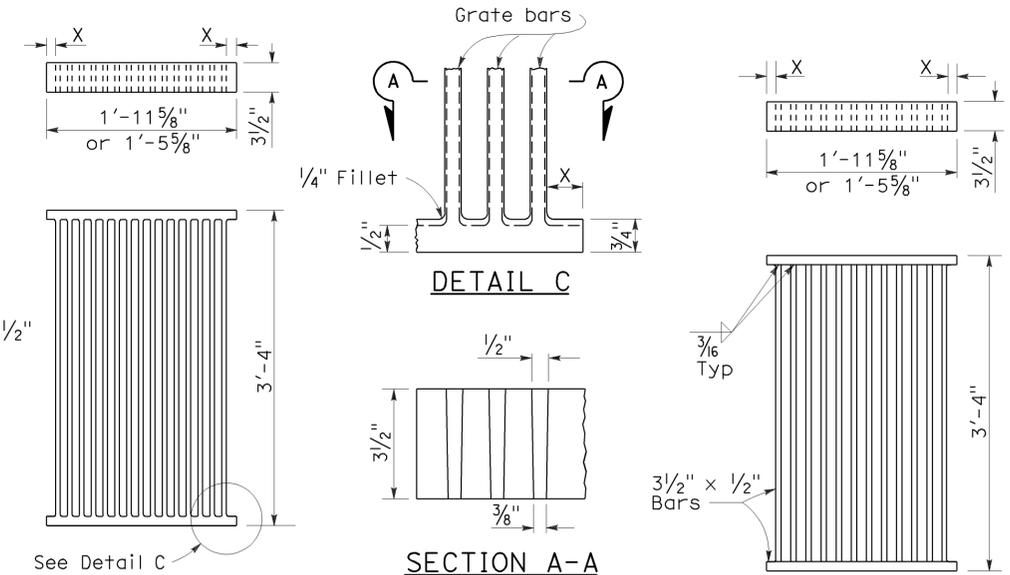
RSP P46 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P46
 DATED MAY 1, 2006 - PAGE 133 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P46

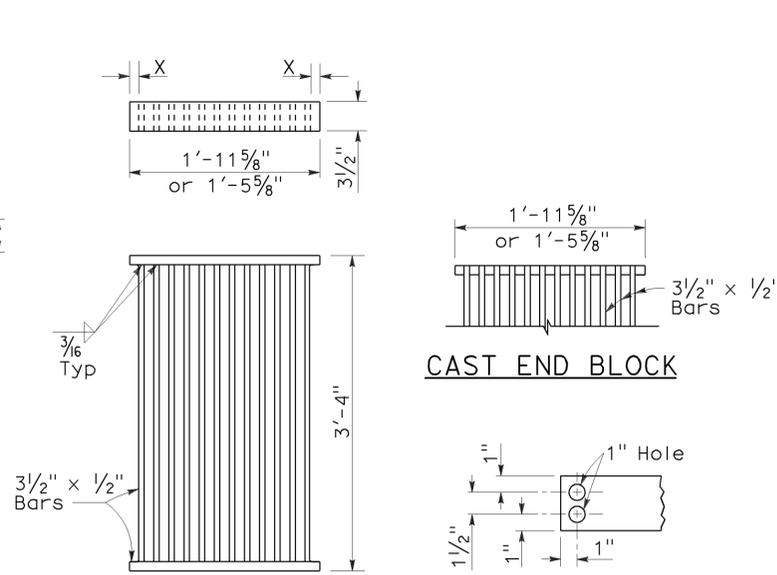
2006 REVISED STANDARD PLAN RSP P46



RECTANGULAR GRATE DETAILS
(See table below)

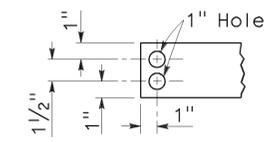


ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE

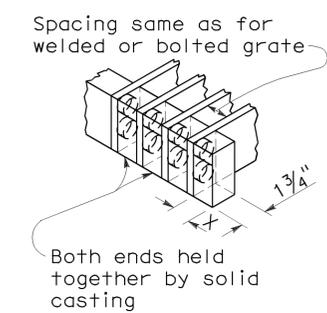


ALTERNATIVE WELDED GRATE

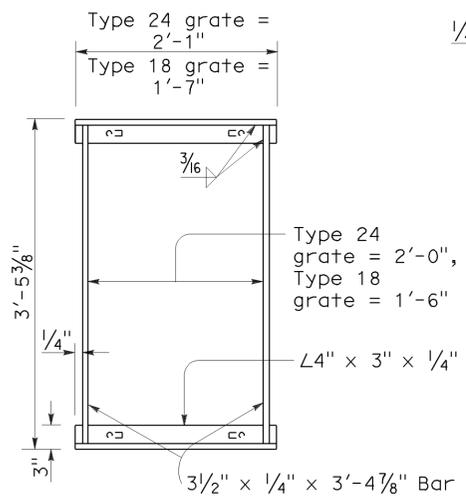
CAST END BLOCK



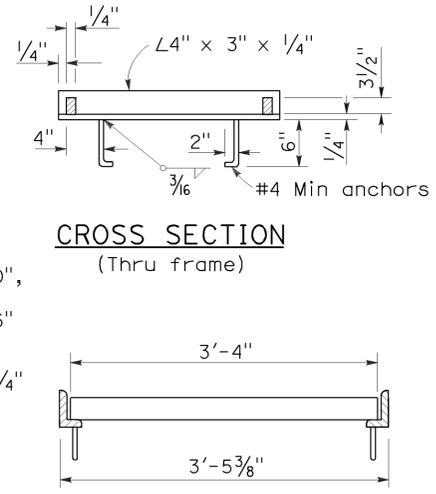
END OF BAR



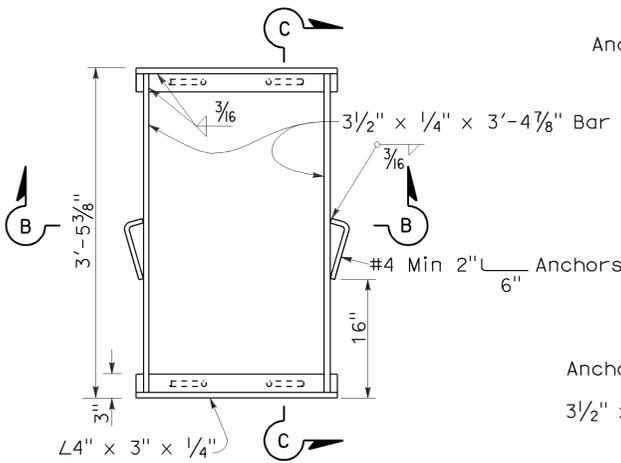
ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE



TYPICAL FRAME

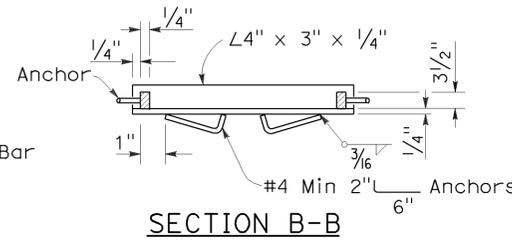


LONGITUDINAL SECTION (Thru frame and grate)

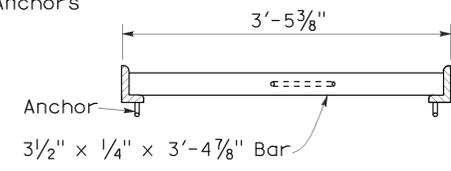


TYPICAL FRAME

ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)



SECTION B-B



SECTION C-C

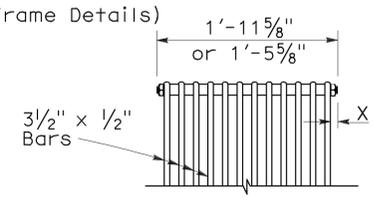
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

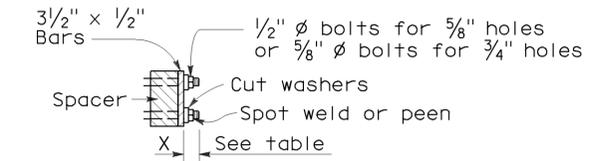
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22

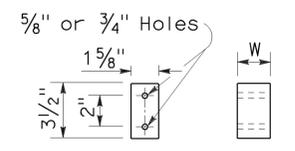


BOLTED END BLOCK

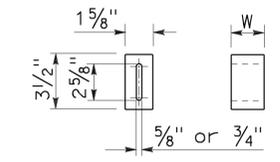


BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER



ALTERNATIVE SPACER
W = 1 3/8" or 2"

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See General Notes, No 8)

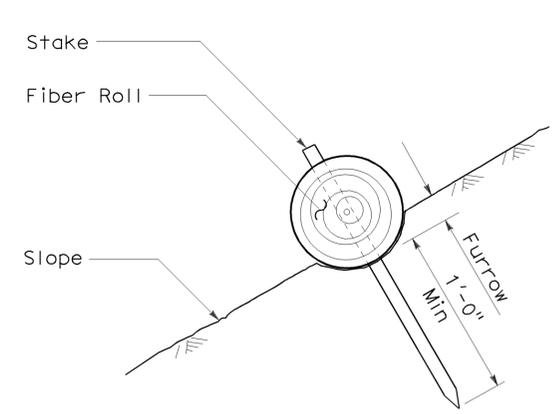
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	462	504

Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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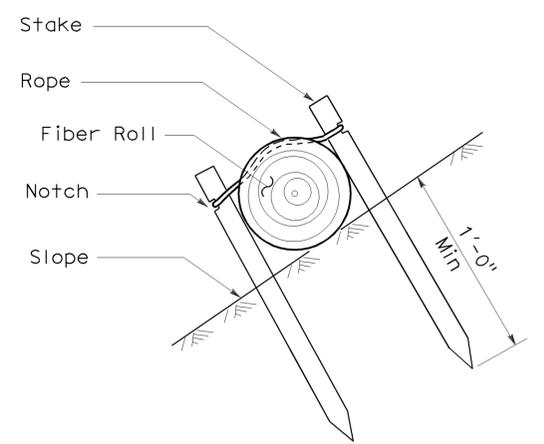
To accompany plans dated 2-1-10

NOTES:

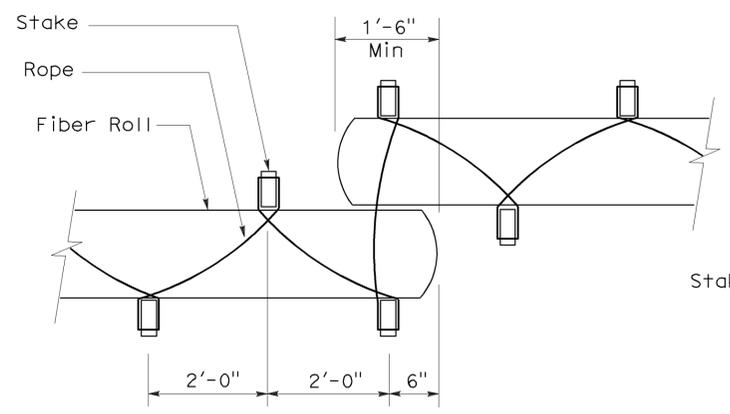
1. Fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



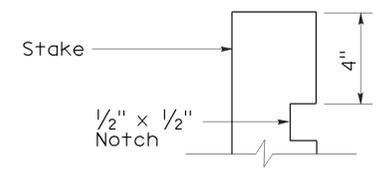
SECTION
FIBER ROLL
(TYPE 1)



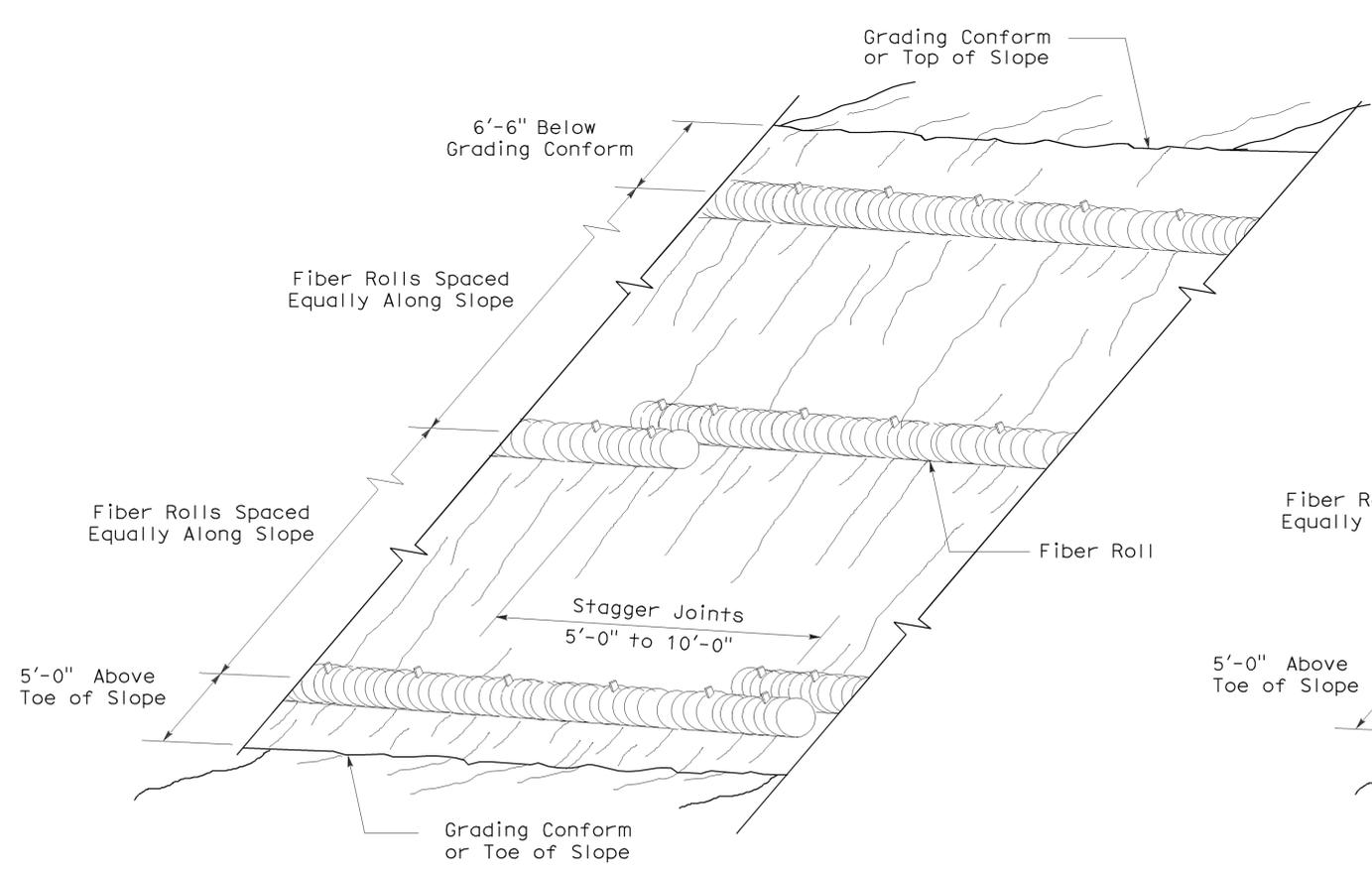
SECTION



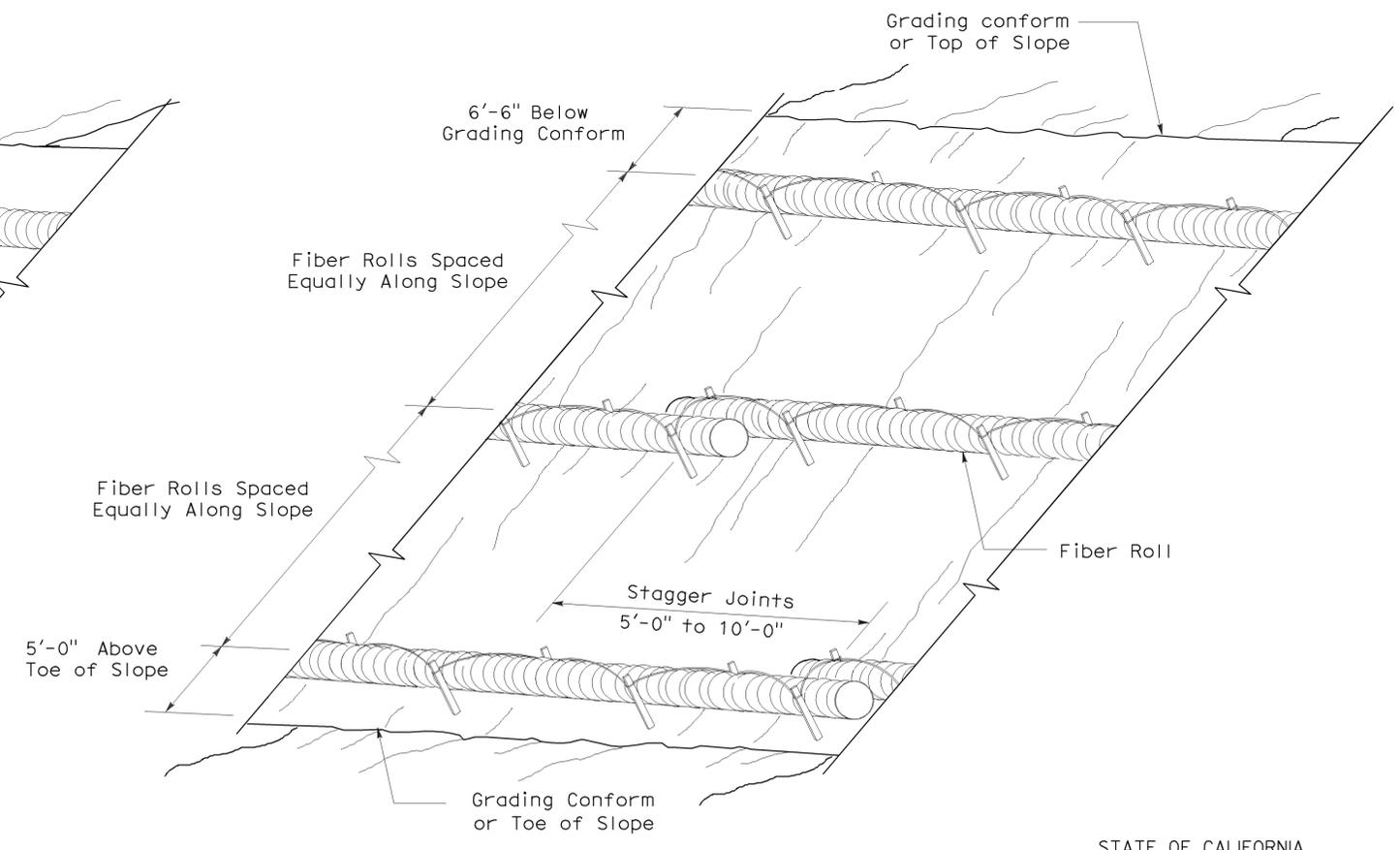
PLAN
FIBER ROLL
(TYPE 2)



ELEVATION
STAKE NOTCH DETAIL



PERSPECTIVE
FIBER ROLL (TYPE 1)



PERSPECTIVE
FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EROSION CONTROL DETAILS
(FIBER ROLL)

NO SCALE

RNSP H51 DATED APRIL 3, 2009 SUPERSEDES NSP H51 DATED DECEMBER 1, 2006 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED NEW STANDARD PLAN RNSP H51

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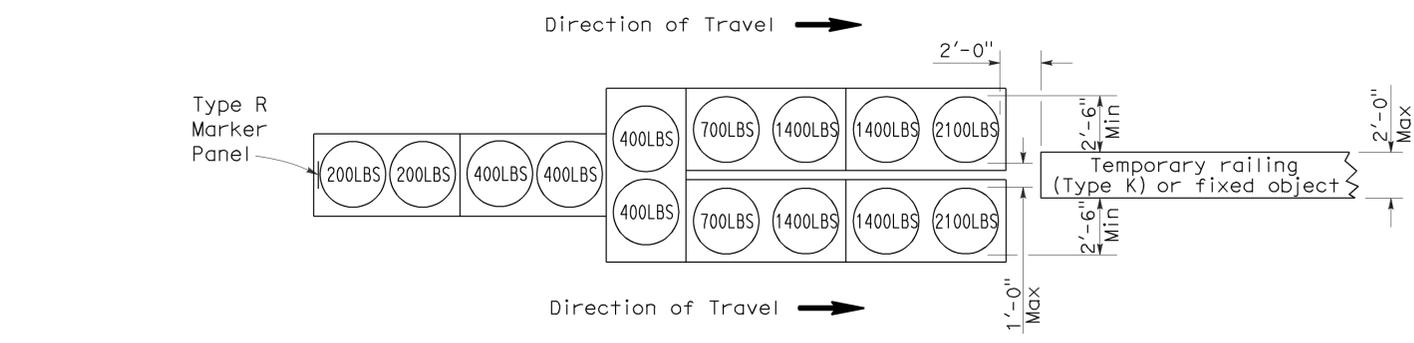
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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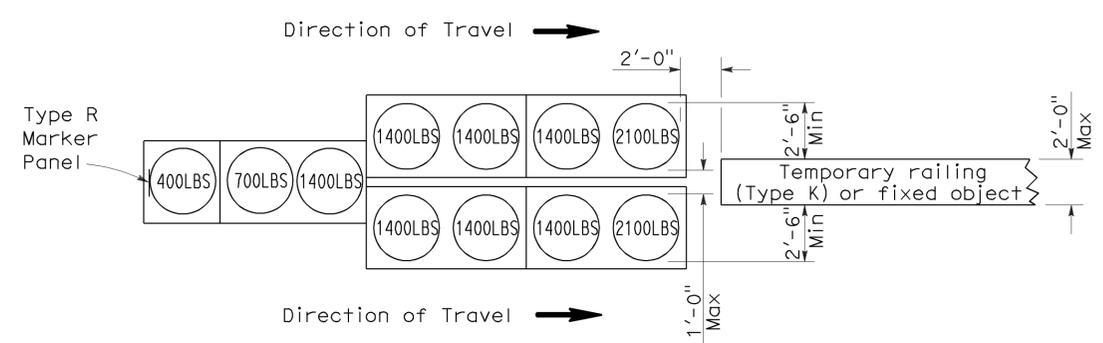
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 2-1-10



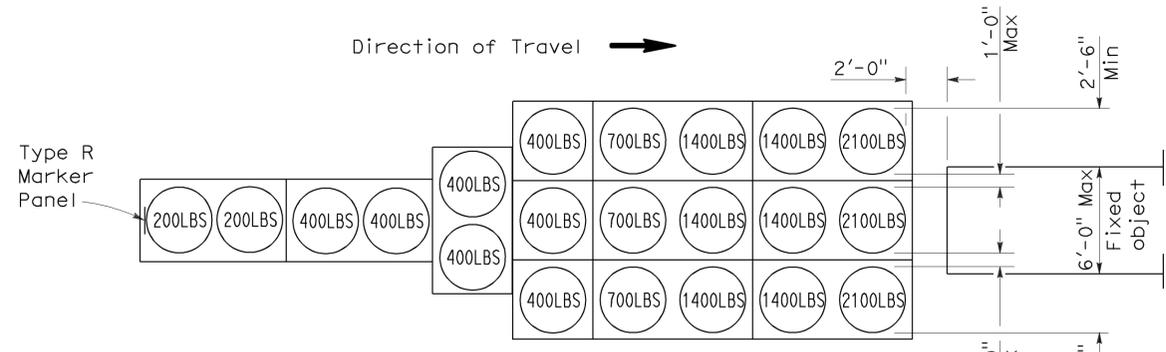
ARRAY 'TU14'

Approach speed 45 mph or more



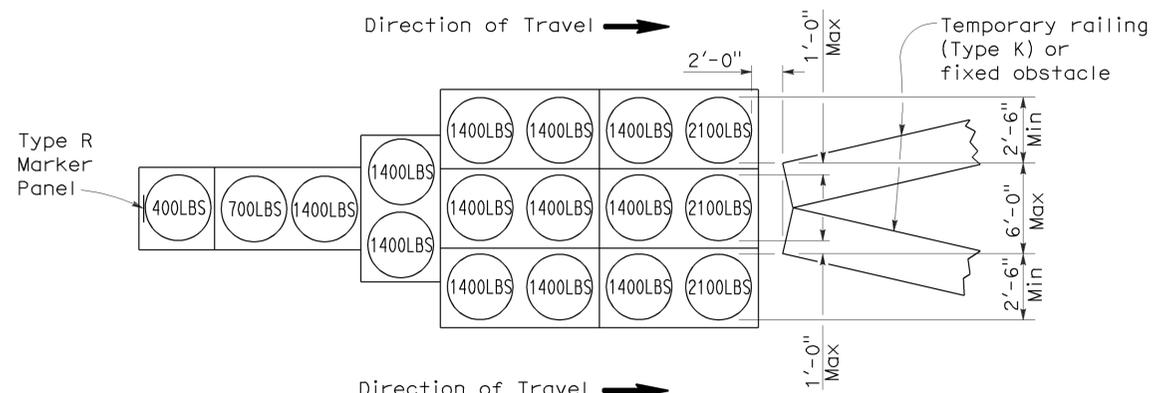
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more

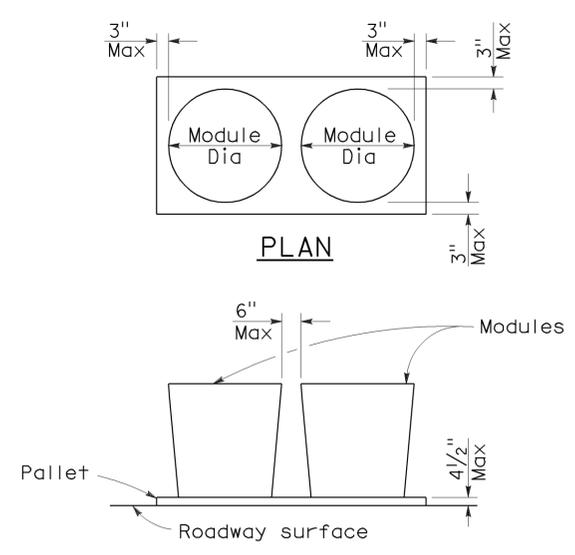


ARRAY 'TU17'

Approach speed less than 45 mph

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.



CRASH CUSHION PALLET DETAIL
See Note 7

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

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	464	504

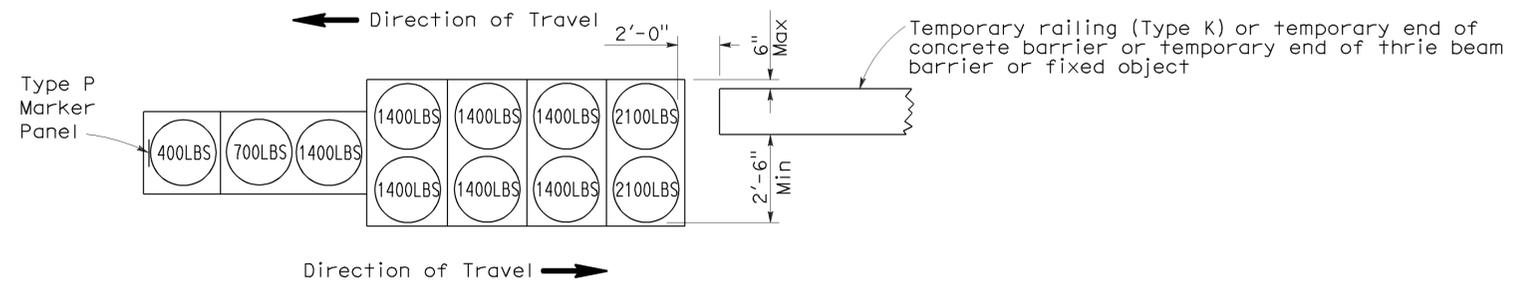
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

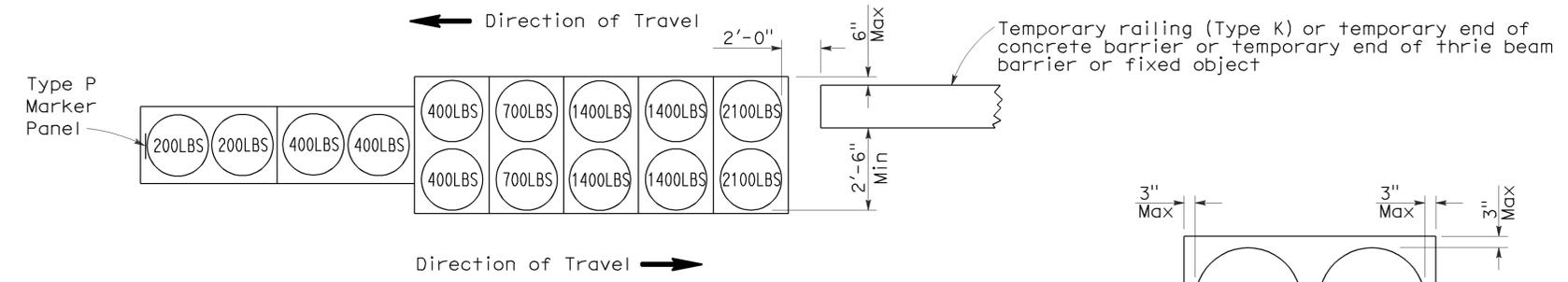
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

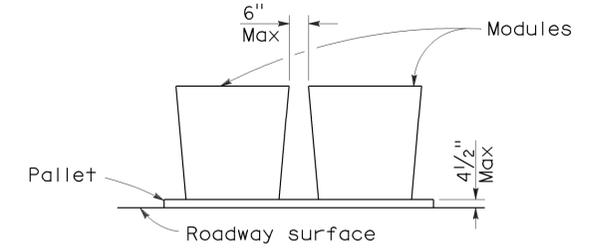
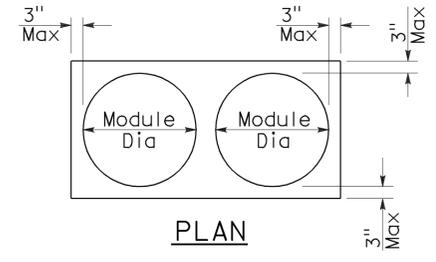
To accompany plans dated 2-1-10



ARRAY 'TB11'
Approach speed less than 45 mph



ARRAY 'TB14'
Approach speed 45 mph or more



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
04	CC	680	0.0/R12.8	465	504

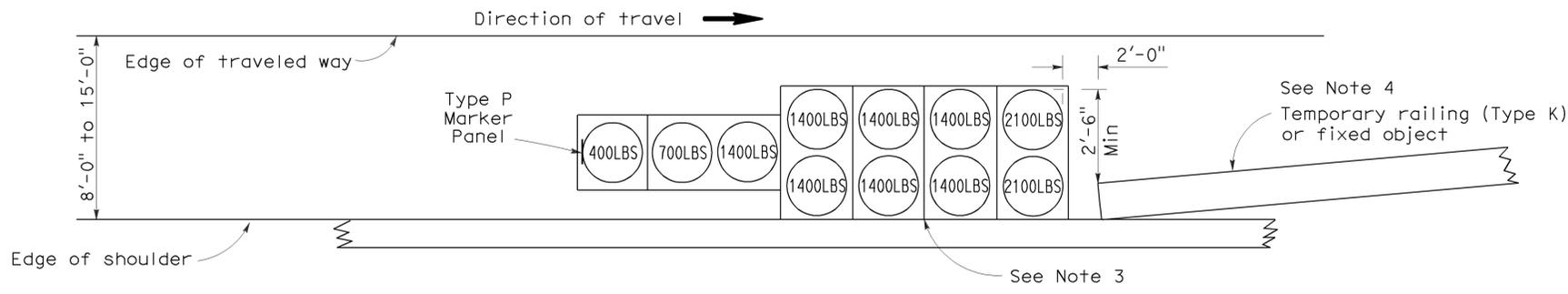
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

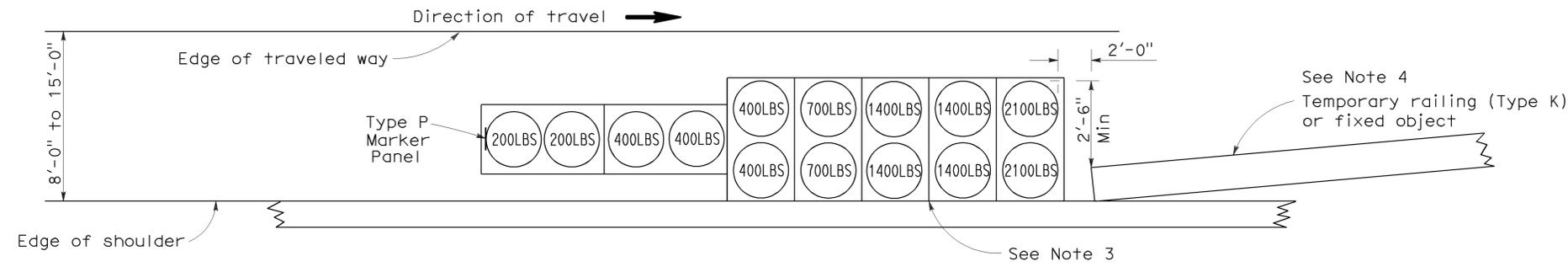
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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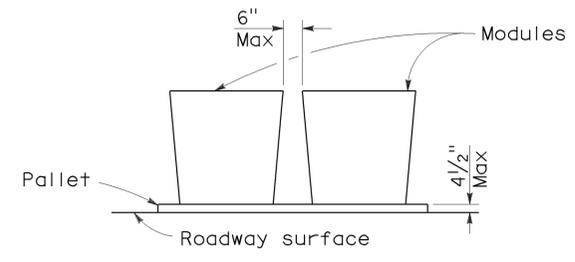
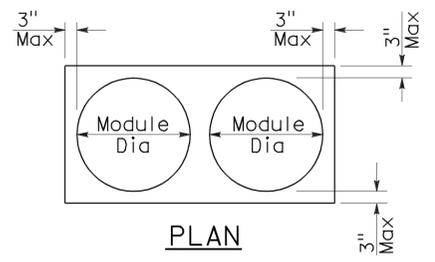
To accompany plans dated 2-1-10



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

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.

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

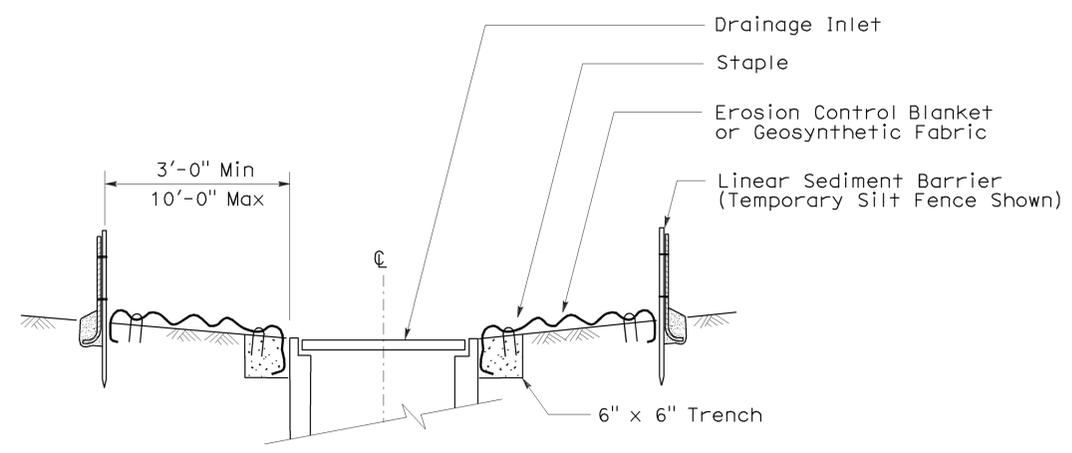
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	467	504

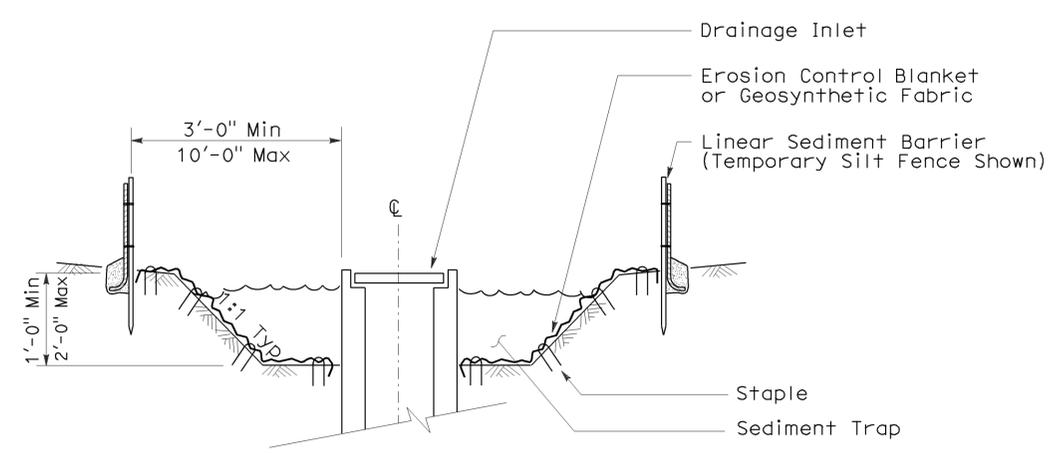
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-1-10

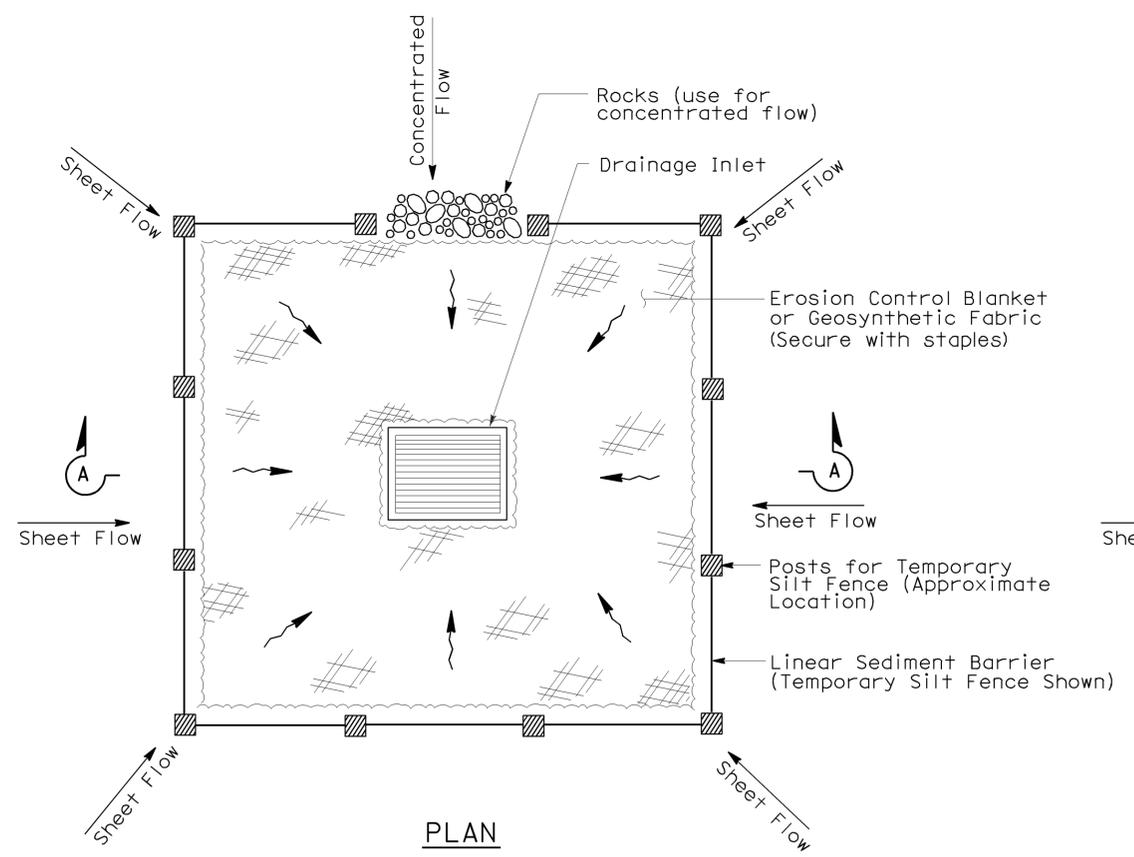
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



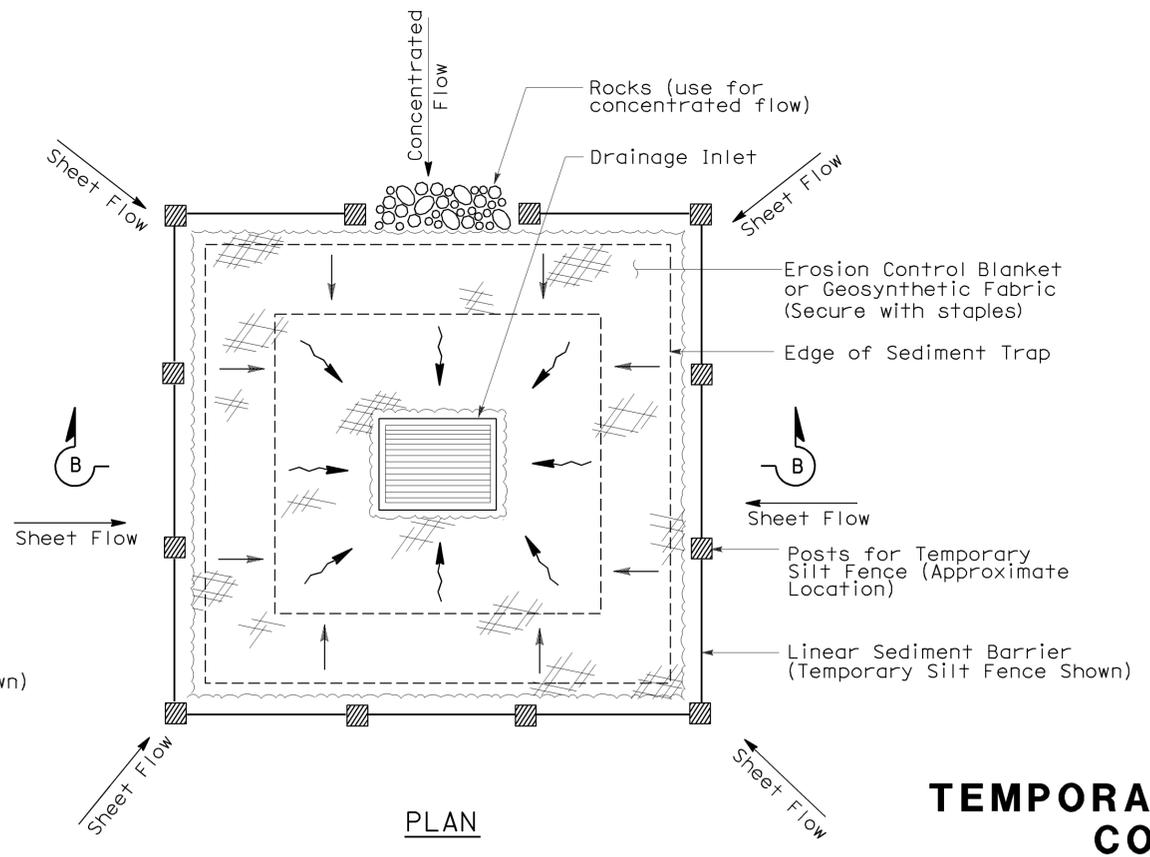
SECTION A-A



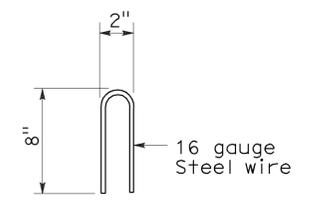
SECTION B-B



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

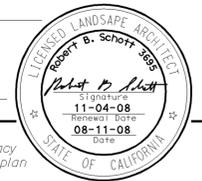
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	468	504

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

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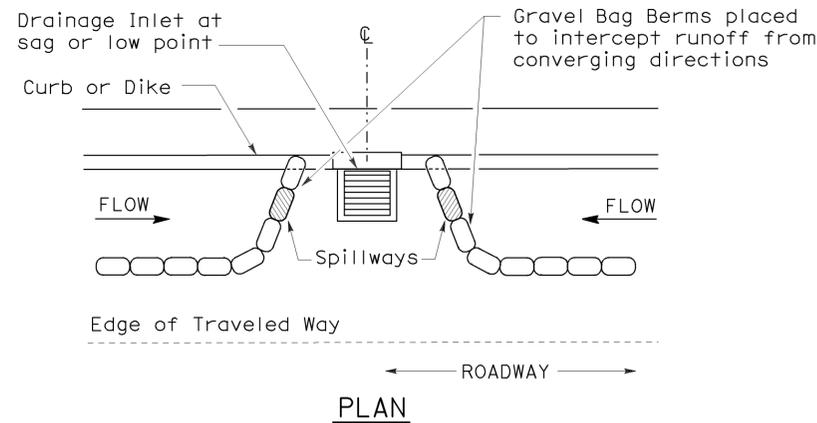
To accompany plans dated 2-1-10



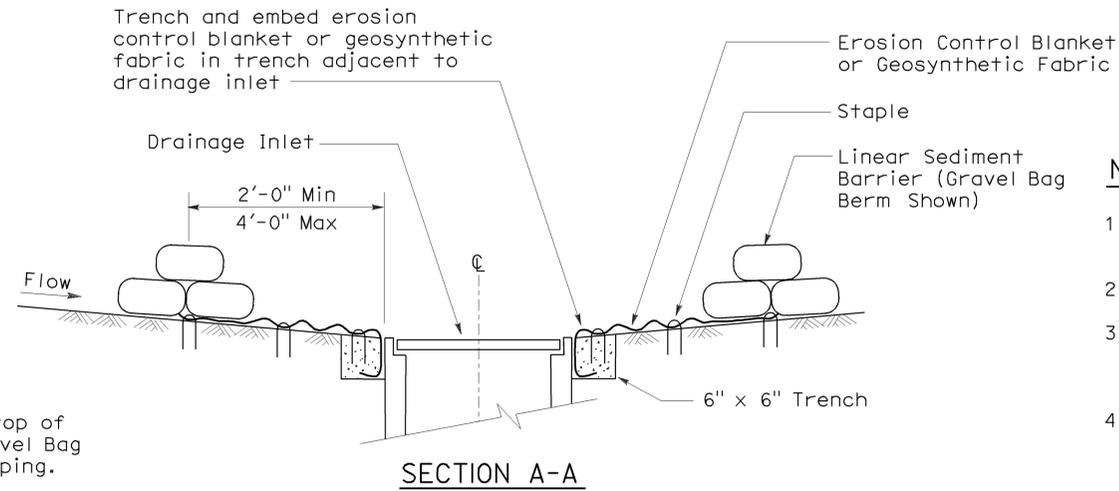
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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



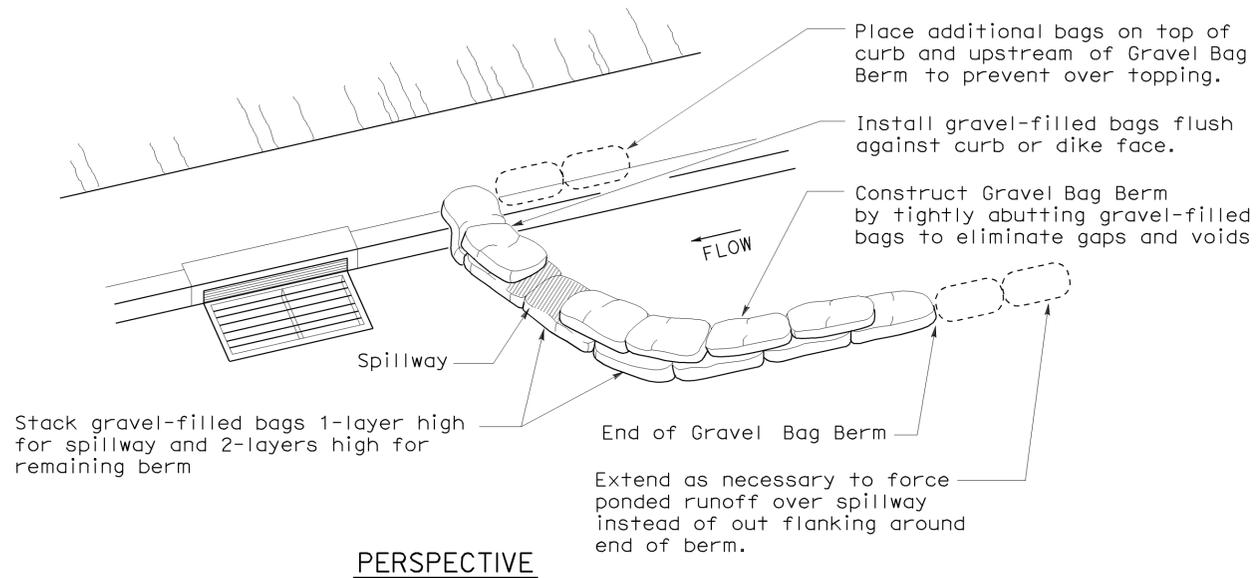
PLAN
CONFIGURATION FOR SAG POINT INLET
(GRAVEL BAG BERM)



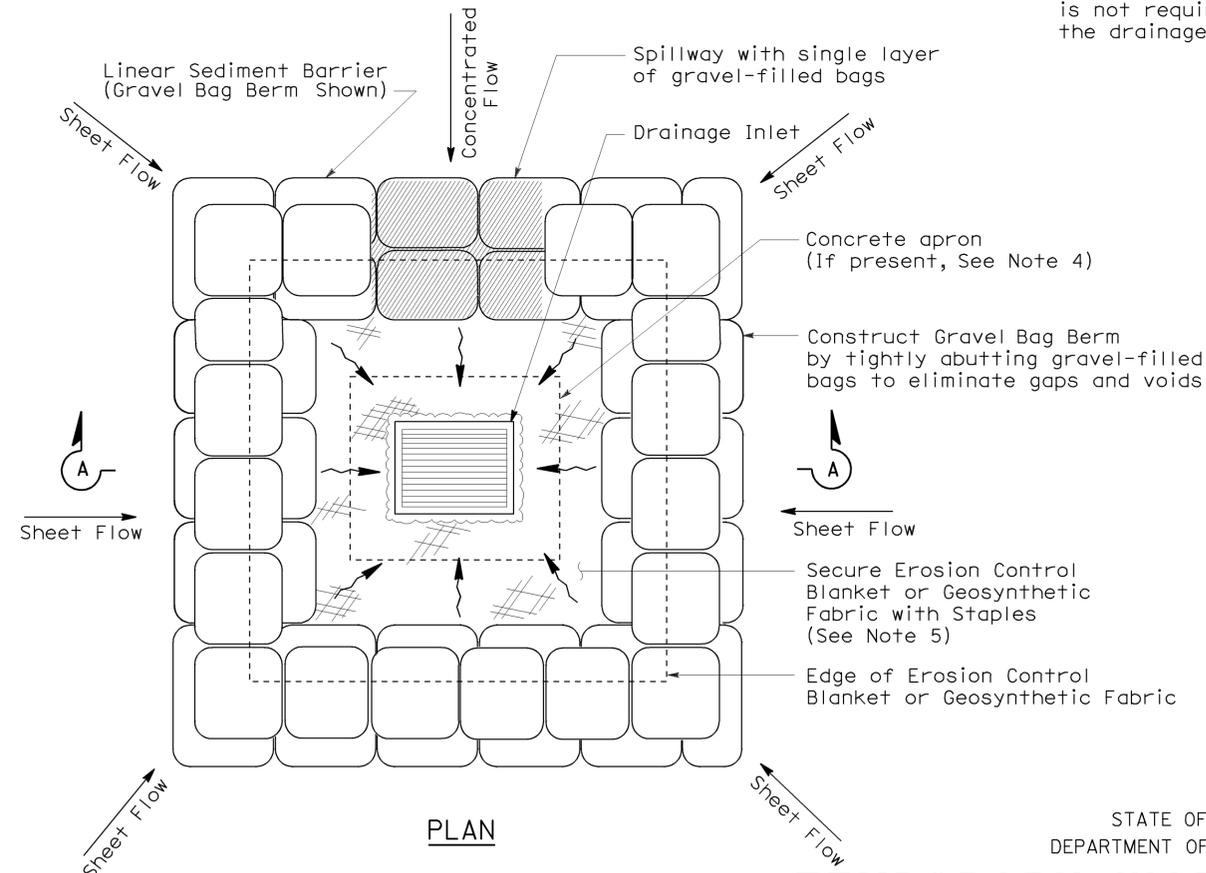
SECTION A-A

NOTES:

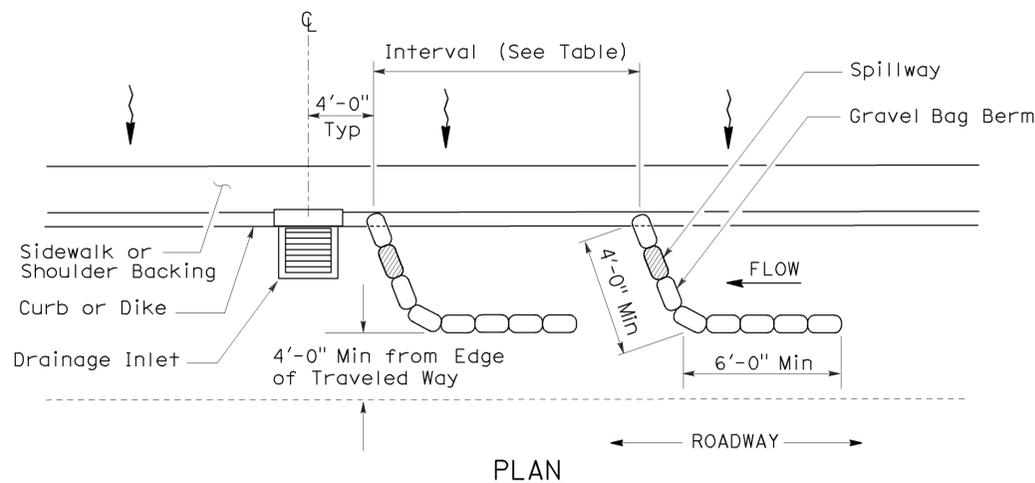
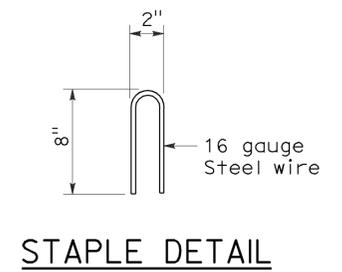
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
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)



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.

2006 NEW STANDARD PLAN NSP T62

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'

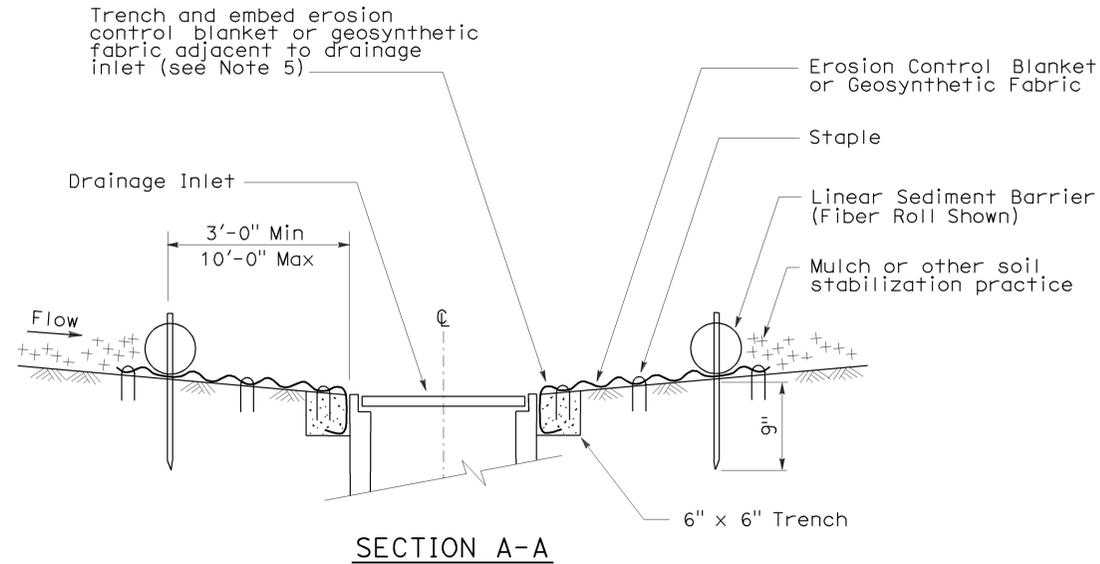
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	469	504

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

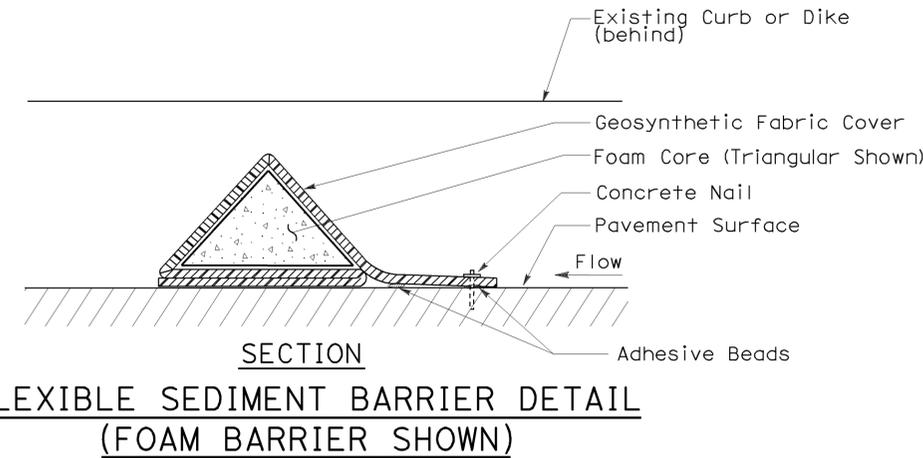
August 15, 2008
PLANS APPROVAL DATE

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To accompany plans dated 2-1-10



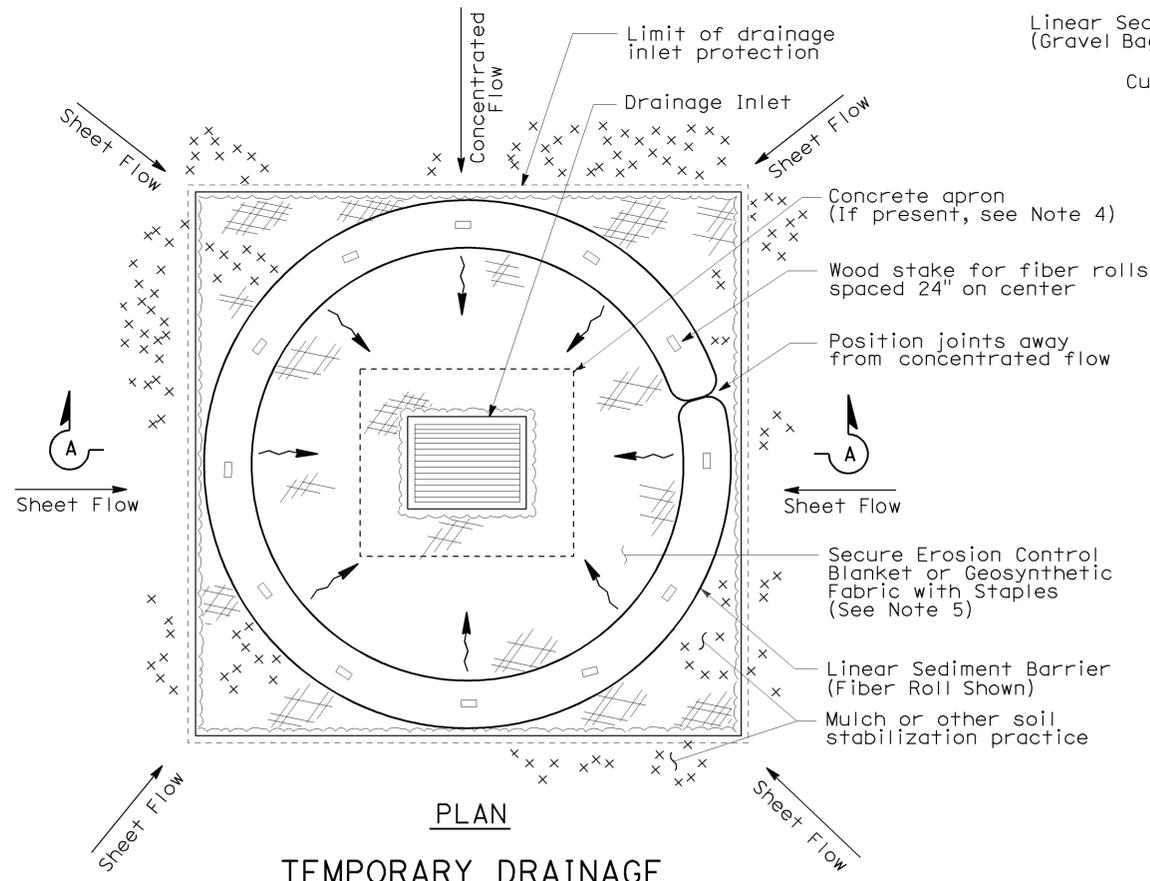
SECTION A-A



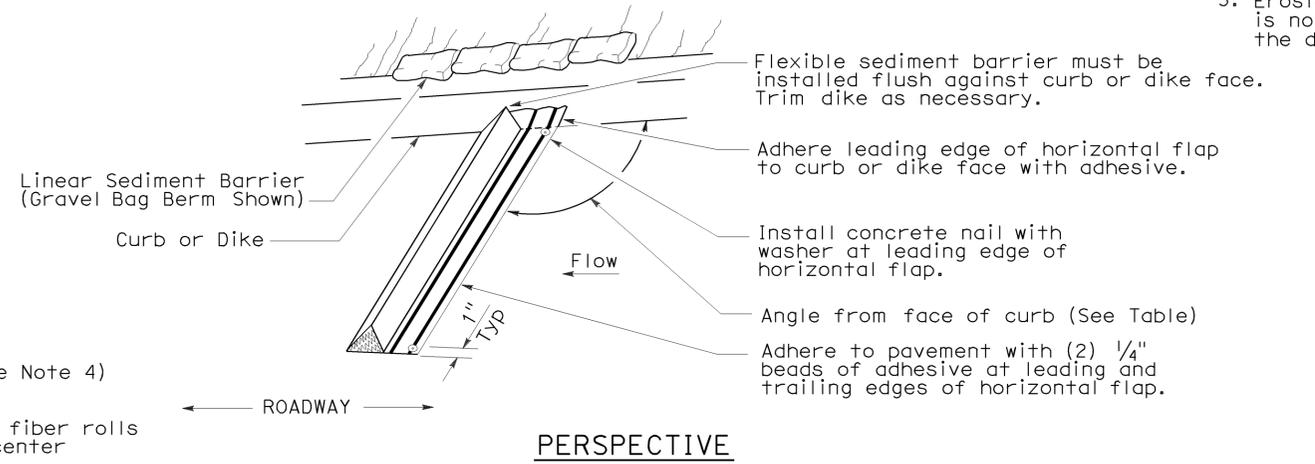
SECTION
FLEXIBLE SEDIMENT BARRIER DETAIL
(FOAM BARRIER SHOWN)

NOTES:

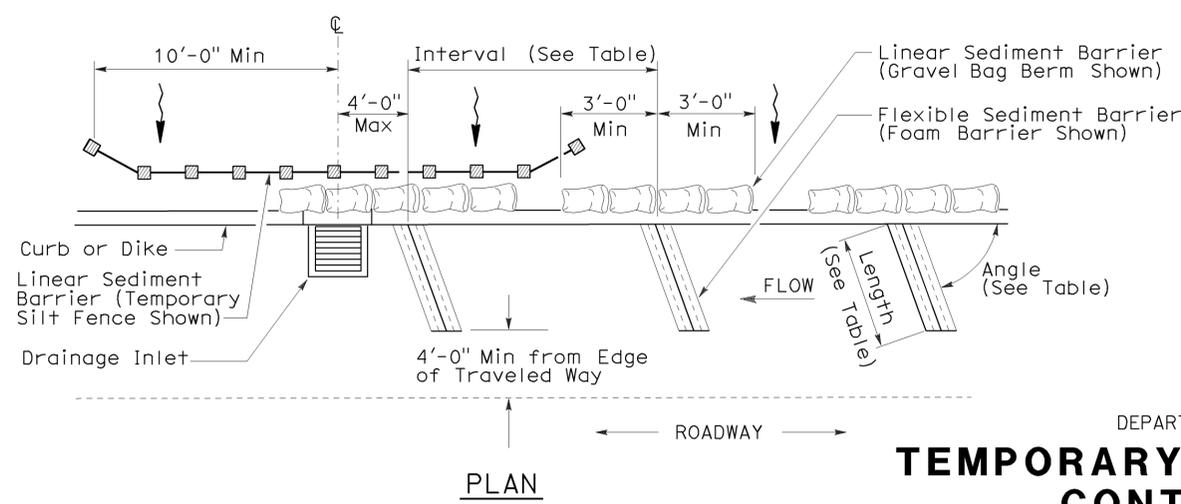
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



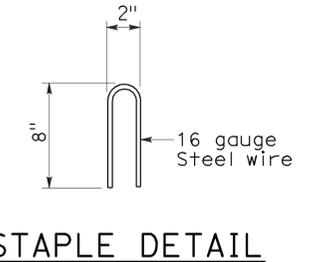
PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 4A)



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)**

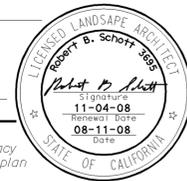
NO SCALE
NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T63

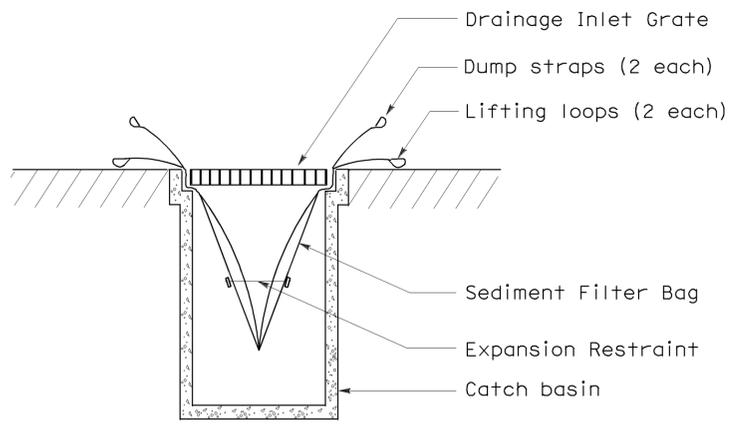
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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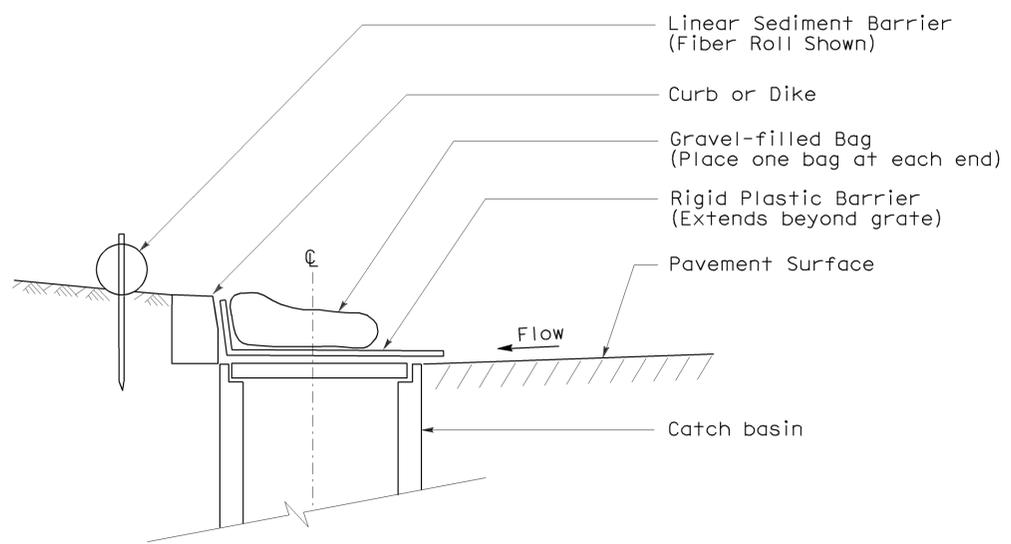
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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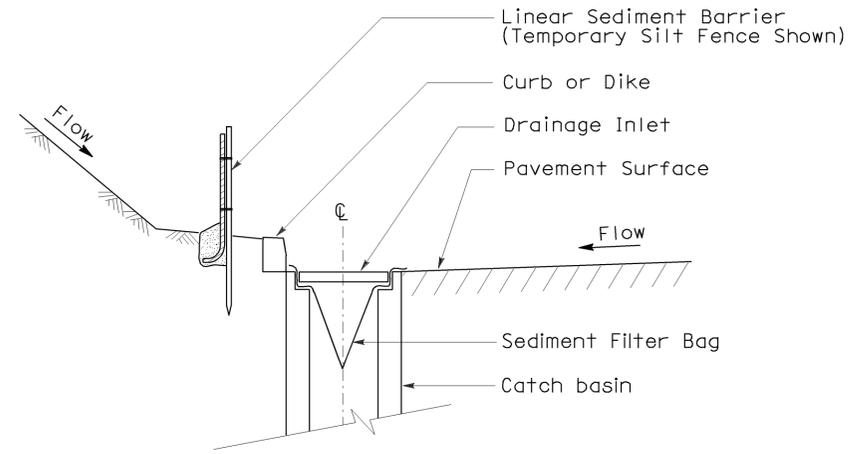
To accompany plans dated 2-1-10



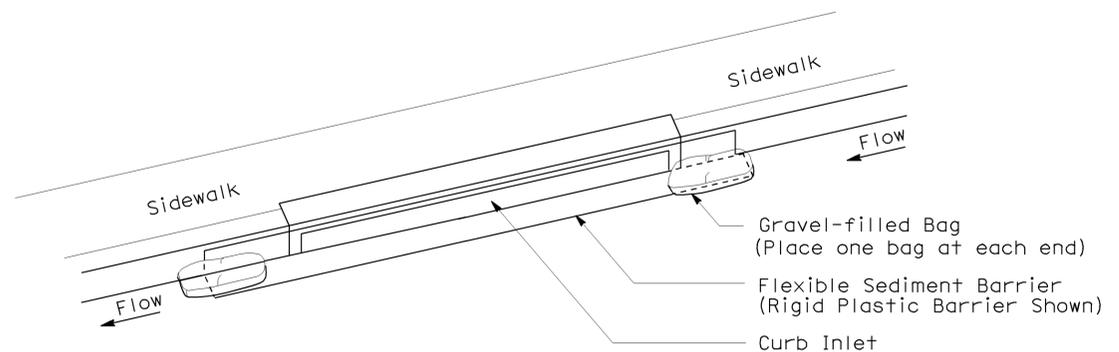
SECTION B-B
SEDIMENT FILTER BAG DETAIL



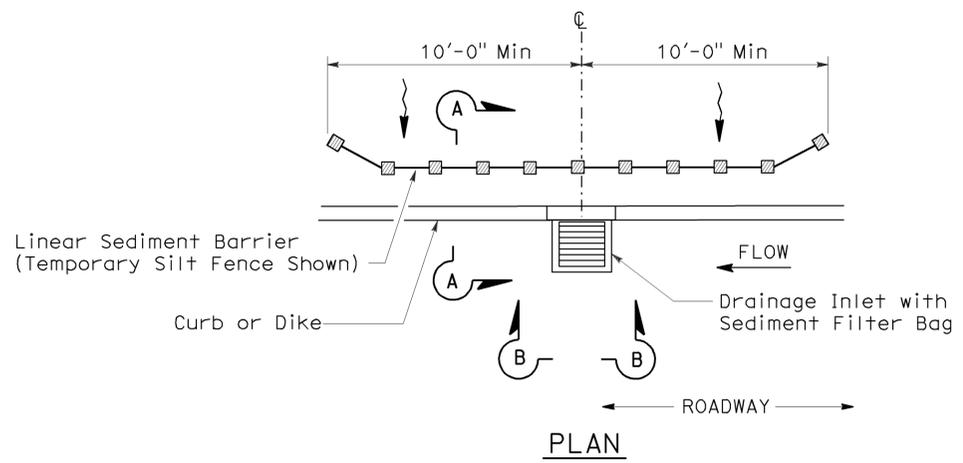
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



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.

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

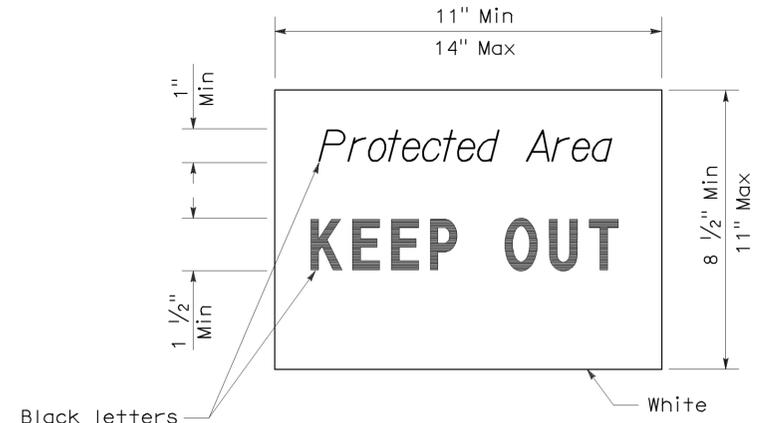
2006 NEW STANDARD PLAN NSP T64

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	471	504

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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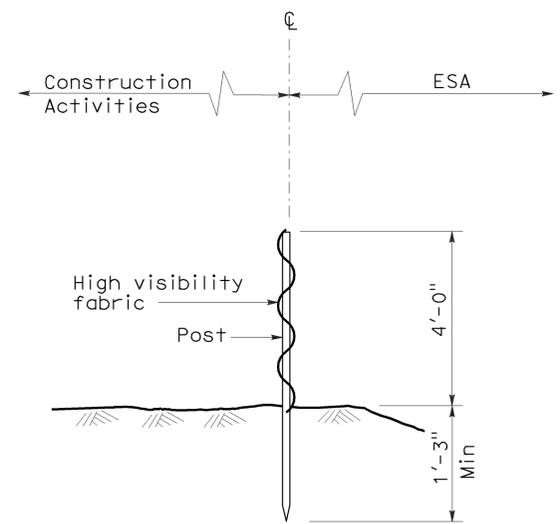
To accompany plans dated 2-1-10



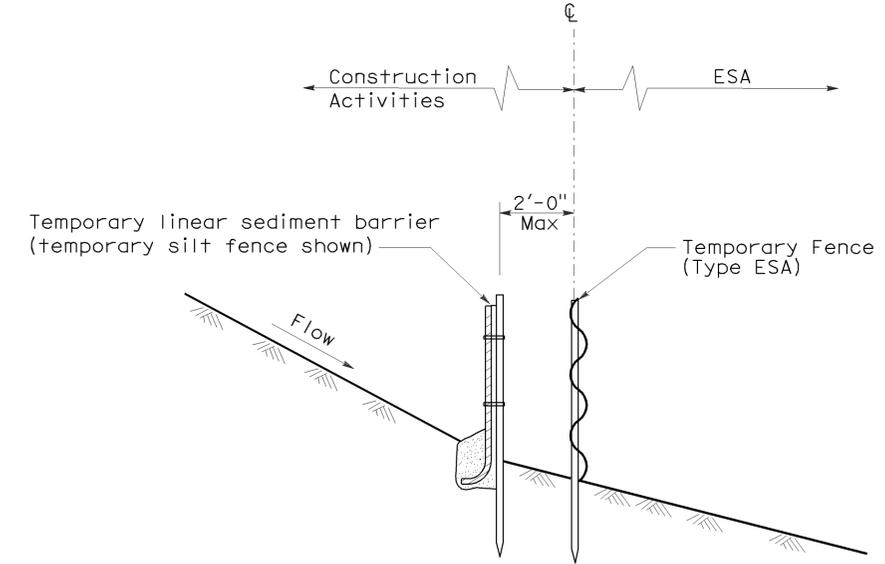
SIGN DETAIL

NOTE:

1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.

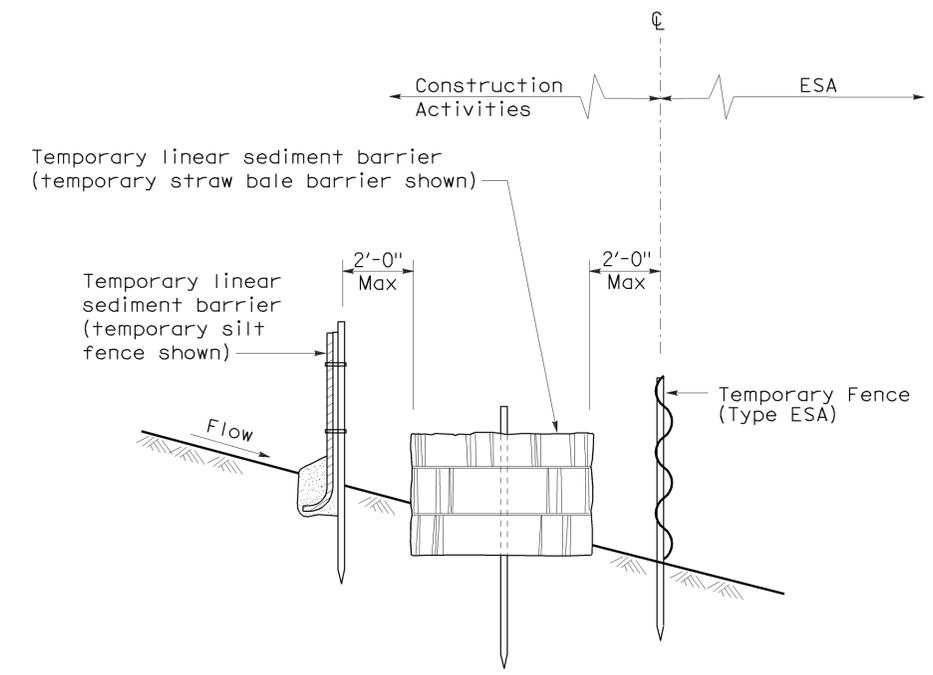


SECTION
TEMPORARY FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY LINEAR SEDIMENT BARRIER
USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1)



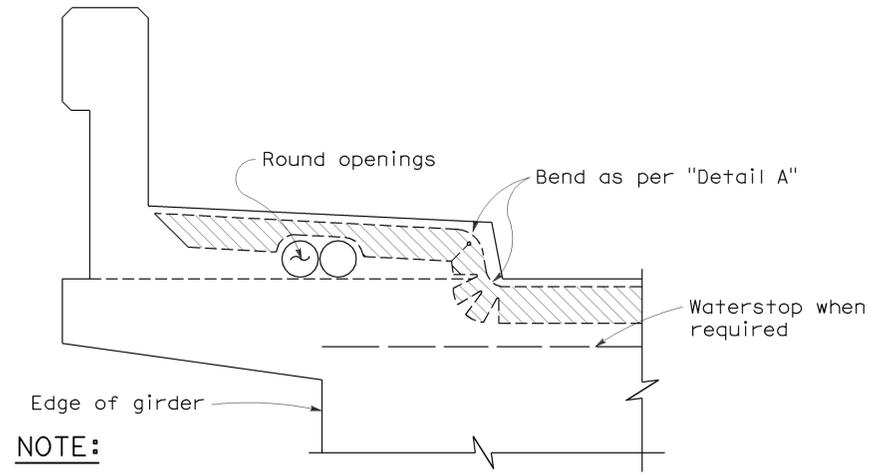
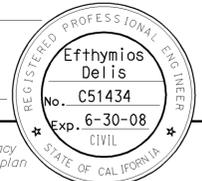
SECTION
PLACEMENT DETAIL
FOR TEMPORARY LINEAR SEDIMENT BARRIER
AND TEMPORARY STRAW BALE BARRIER
USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
[TEMPORARY FENCE (TYPE ESA)]
NO SCALE

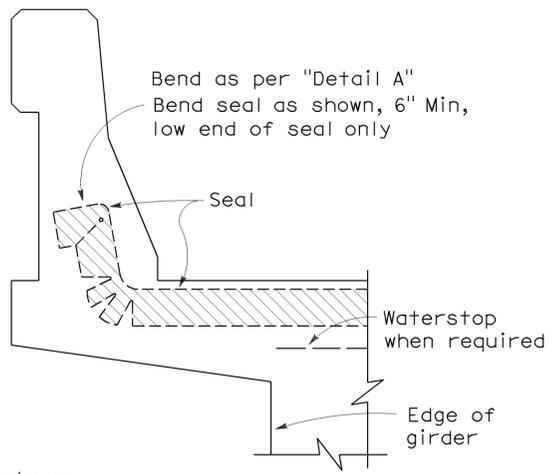
NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T65

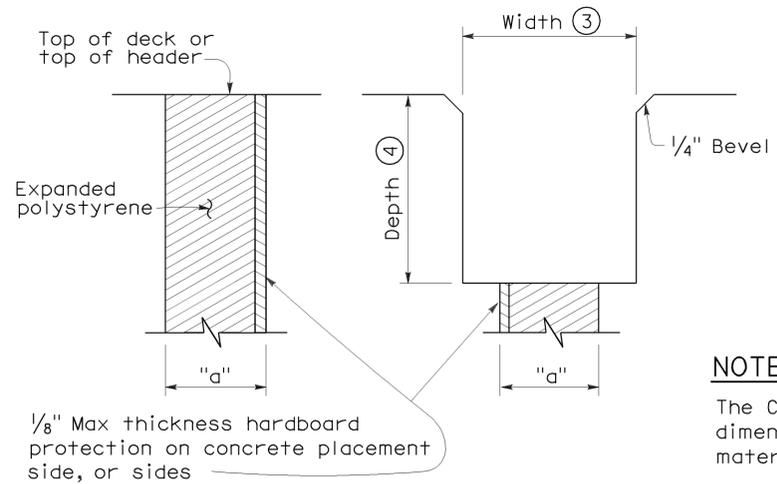


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



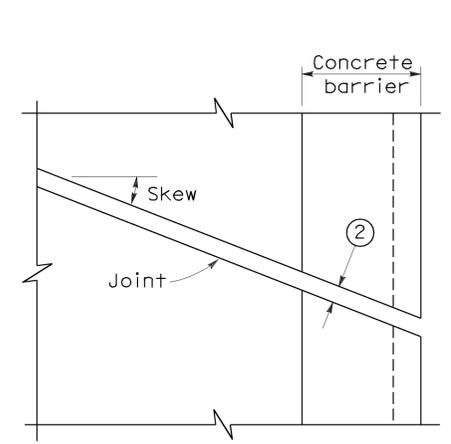
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

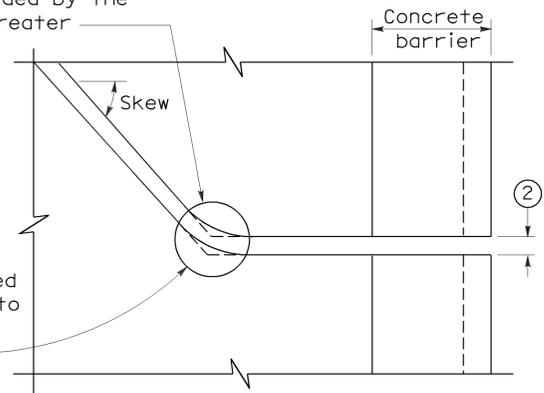
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



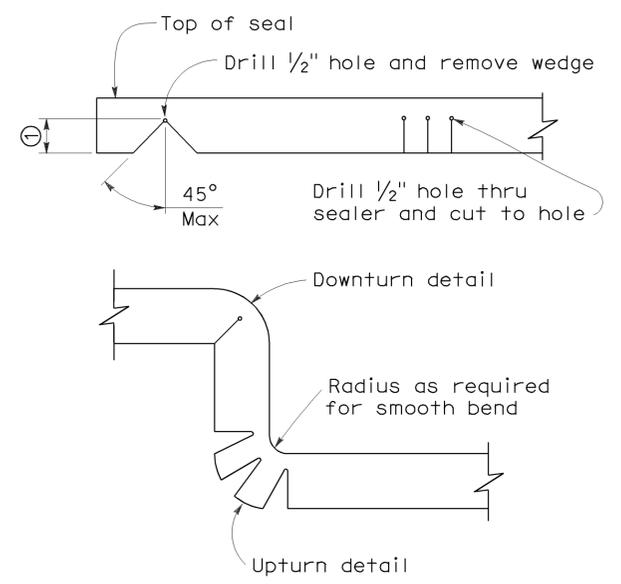
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater



PLAN OF JOINT (SKEW > 20°)

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



DETAIL A

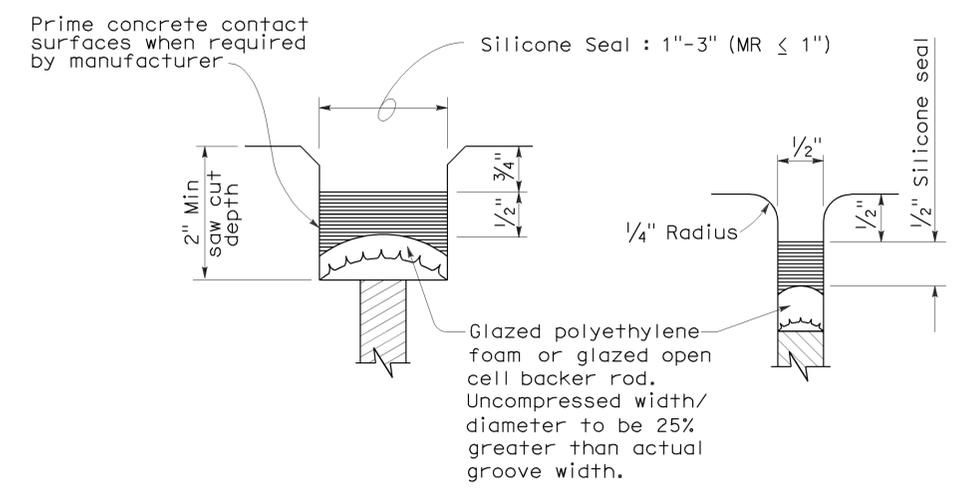
NOTES:

- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
- Opening in barrier to match width of sawn deck joint.
- Sawcut groove widths shall be as ordered by the Engineer.
- Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
- MR (movement rating) as shown on other plan sheets.
- Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")
 NO SCALE

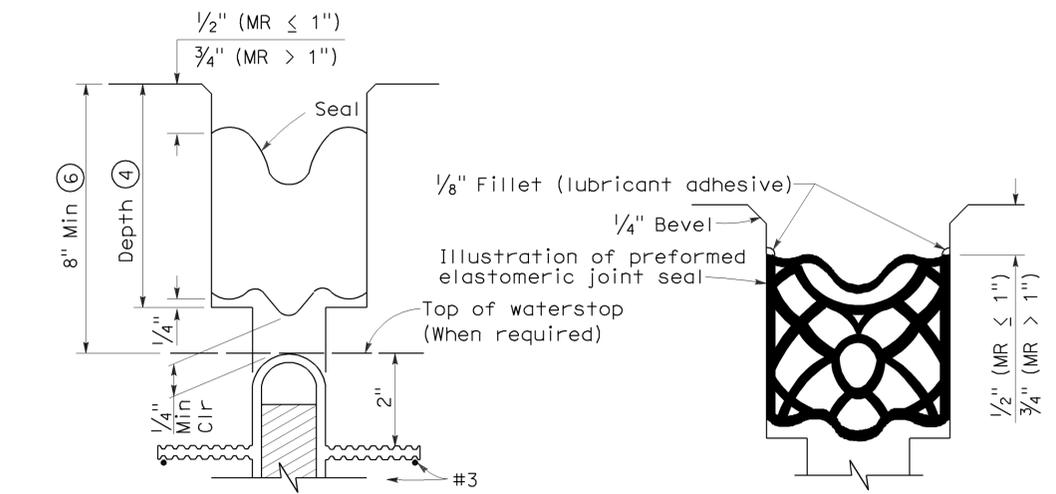


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

TYPE B SEAL

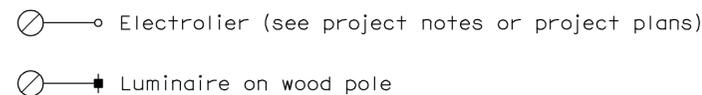
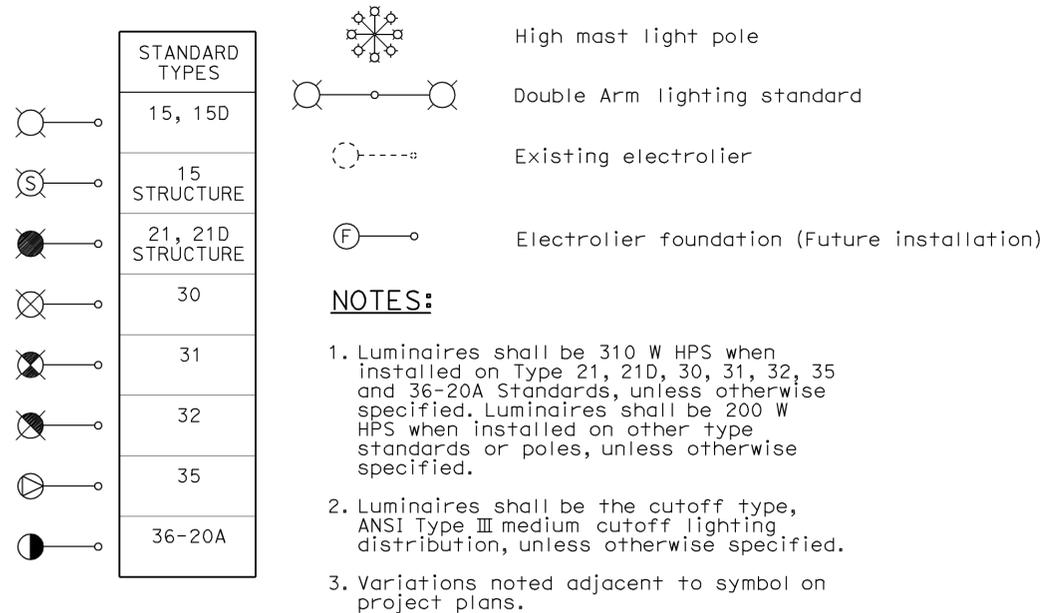
Movement Rating ≤ 2"

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

2006 REVISED STANDARD PLAN RSP B6-21

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
04	CC	680	0.0/R12.8	473	504

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 2-1-10

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

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
04	CC	680	0.0/R12.8	474	504

Jeffrey 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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CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

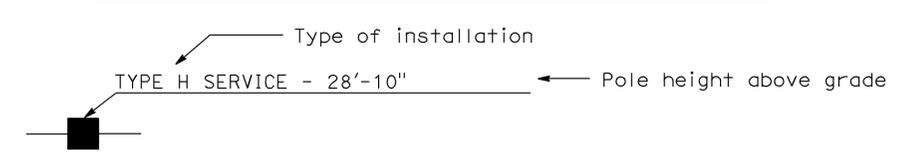
SIGNAL EQUIPMENT

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	
		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

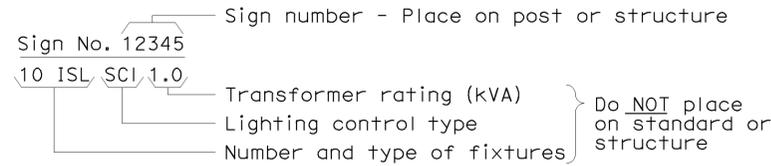
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

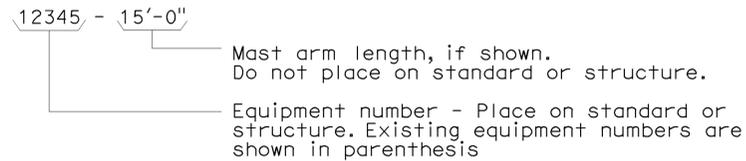
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

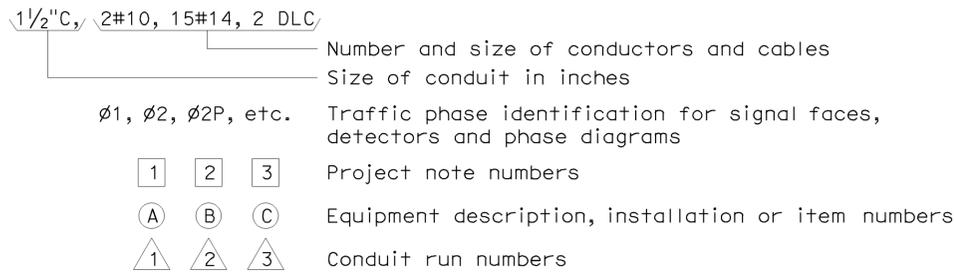
ILLUMINATED SIGN IDENTIFICATION NUMBER:



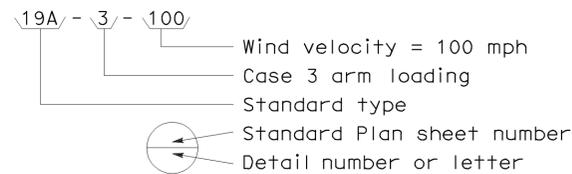
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



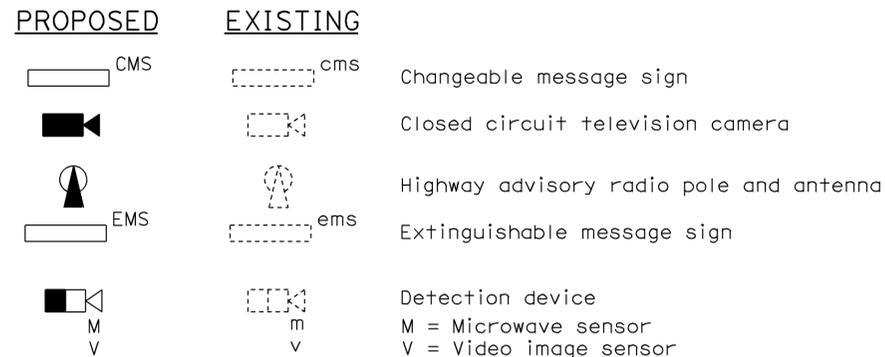
CONDUIT AND CONDUCTOR IDENTIFICATION:



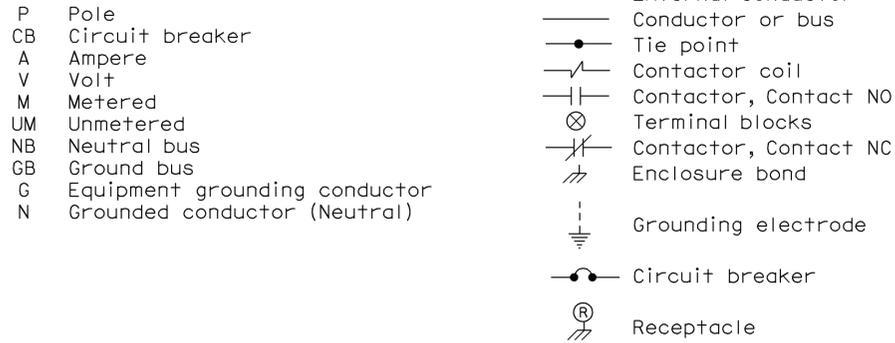
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



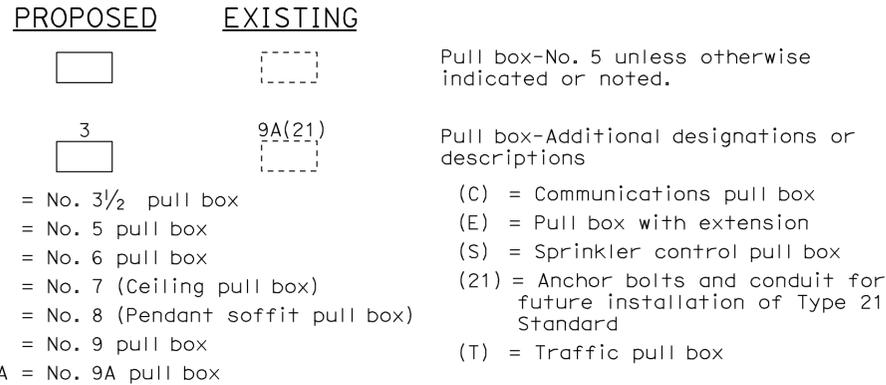
MISCELLANEOUS EQUIPMENT



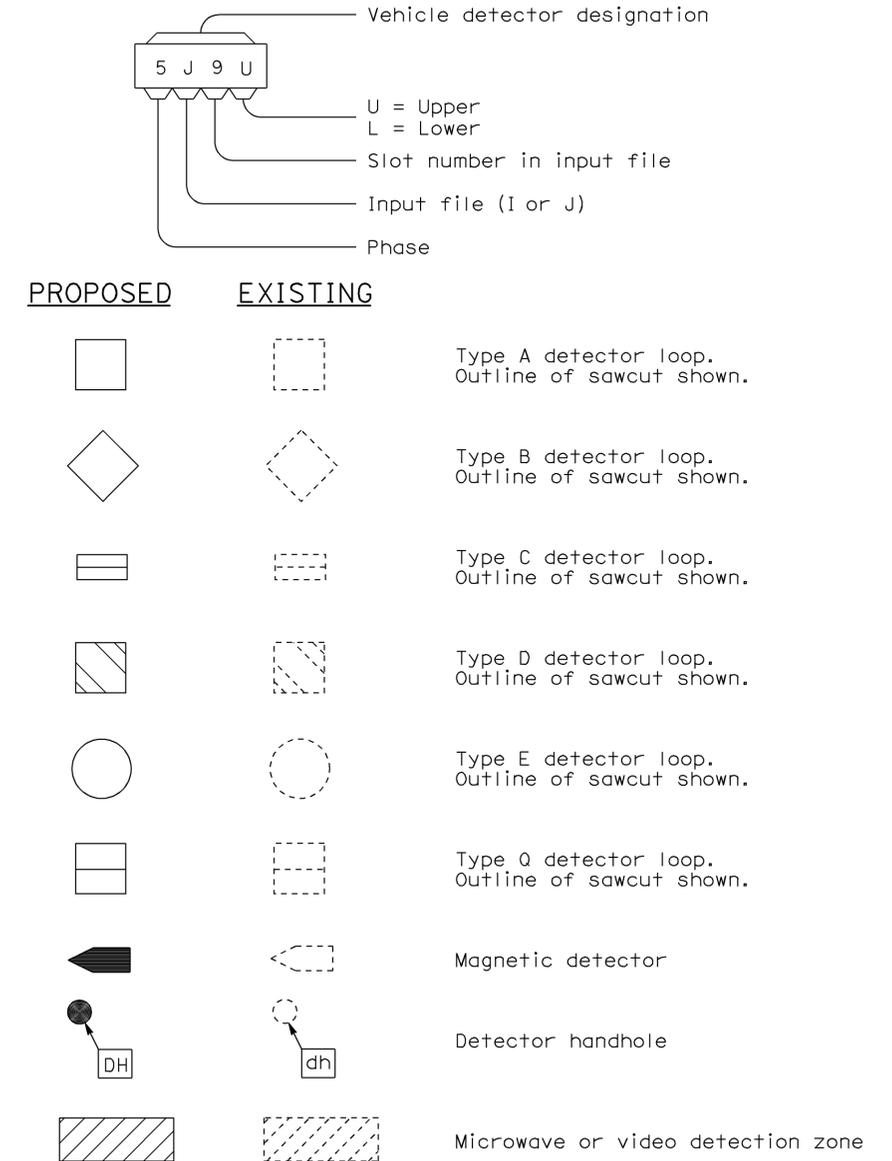
WIRING DIAGRAM LEGEND



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

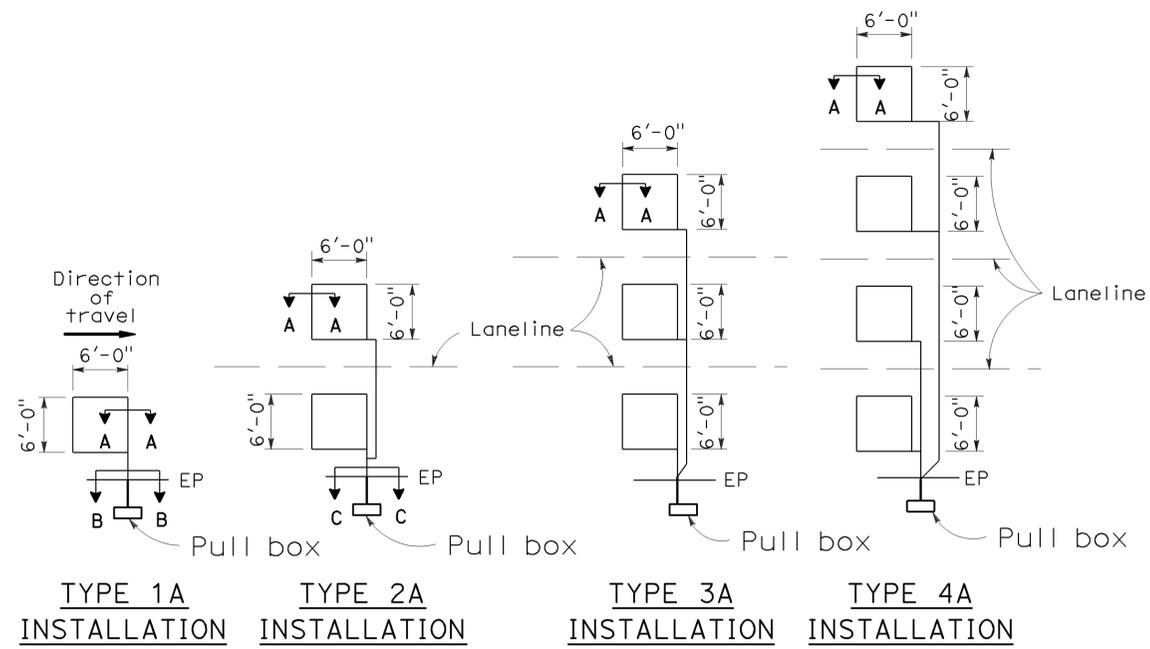
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	476	504

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 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.

REGISTERED PROFESSIONAL ENGINEER
Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

LOOP INSTALLATION PROCEDURE

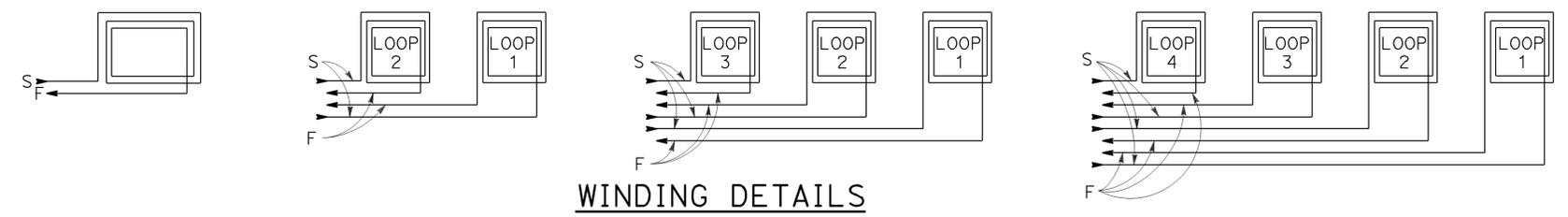
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no 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

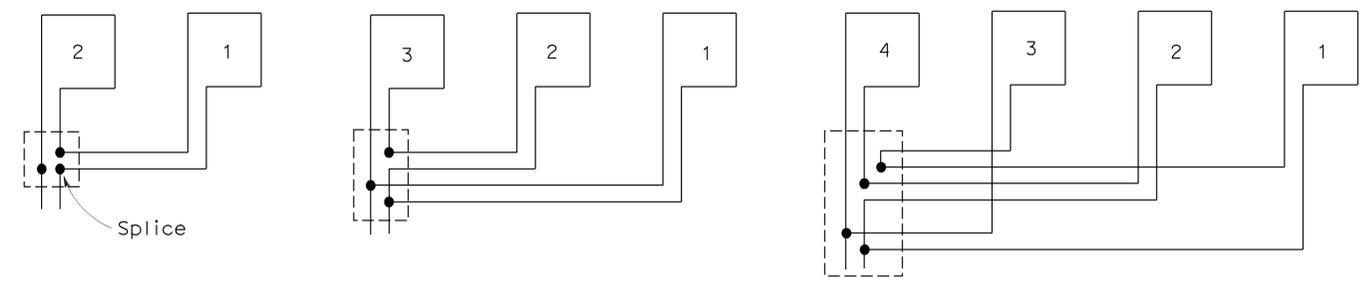
SAWCUT DETAILS

- (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)



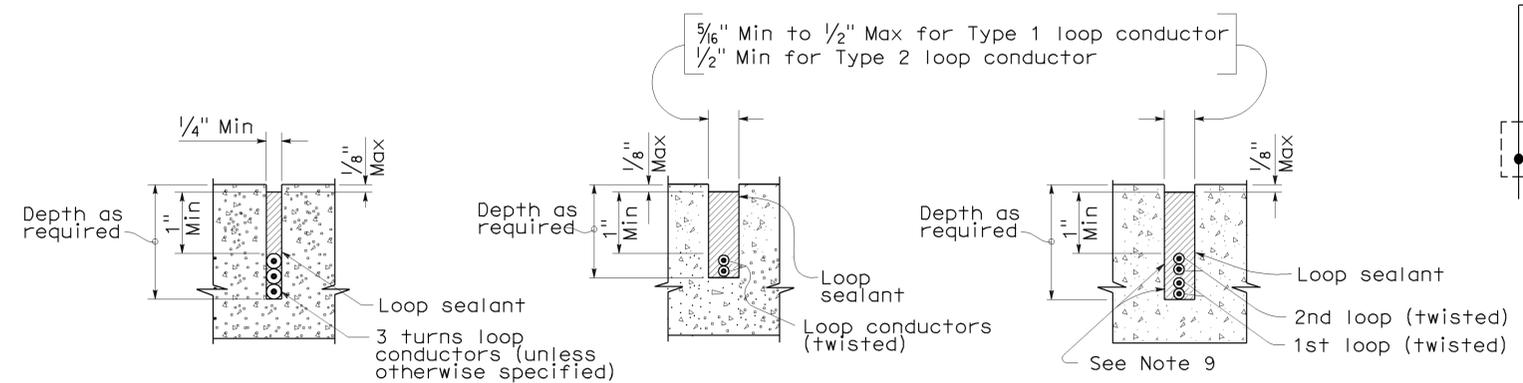
WINDING DETAILS

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.

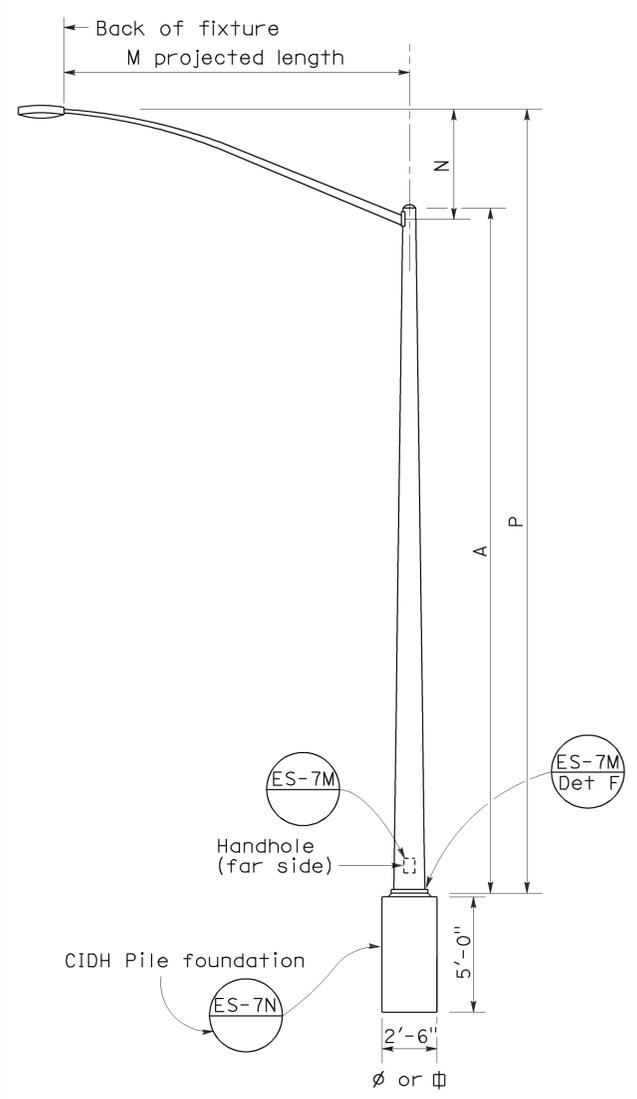
2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	477	504

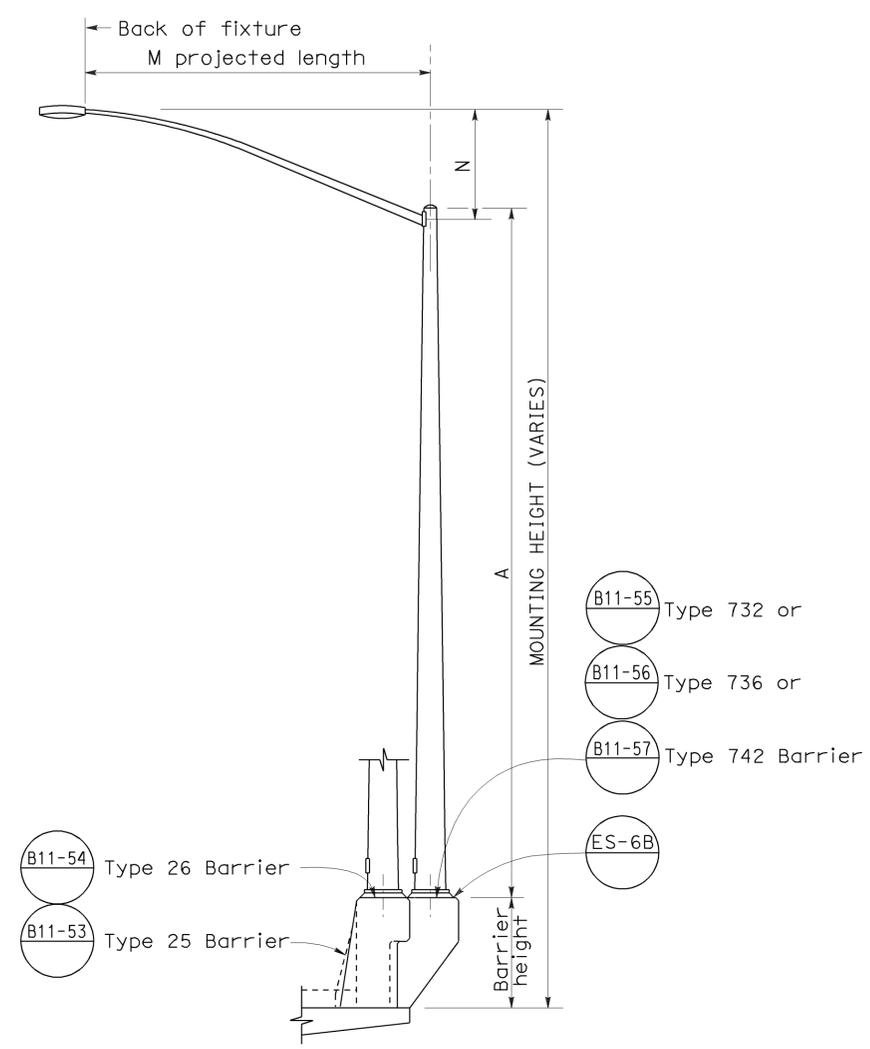
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

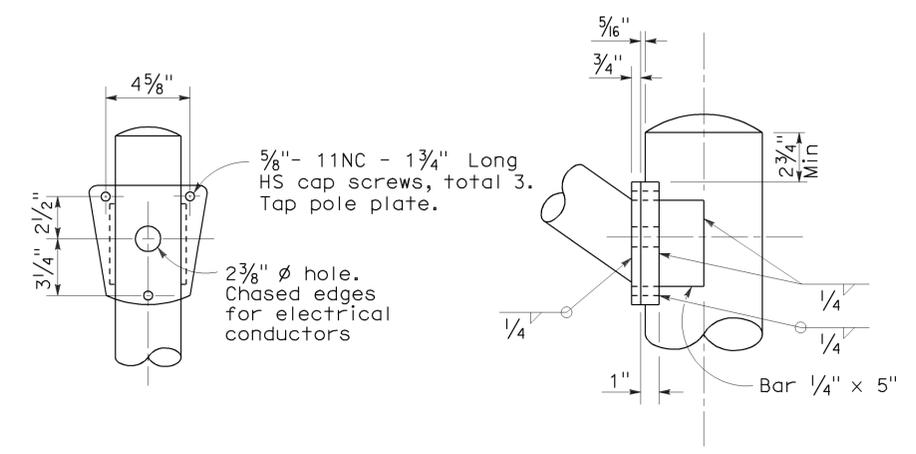
To accompany plans dated 2-1-10



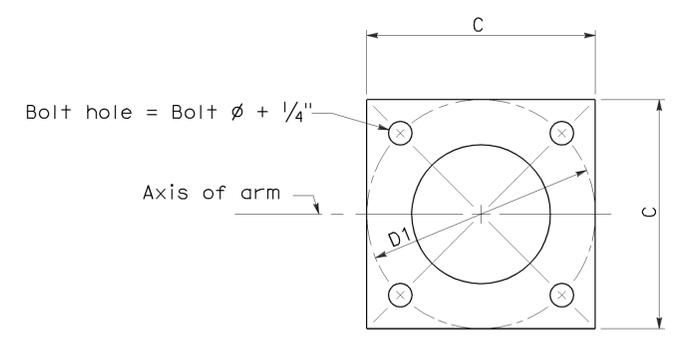
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD Base	Min OD Top	Wall Thickness	C	D1 Bolt Circle	Thick-ness	Anchor Bolts Size	
15	30'	8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1" ϕ x 3'-0" x 4"*	6' - 15' 12'
21	35'	8 5/8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1 1/4" ϕ x 3'-0" x 4"*	6' - 15' 12'

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	P	
				Type 15	Type 21
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

* For barrier rail bolts, see Standard Plan ES-6B.

NOTES:

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
- For additional notes, see Standard Plan ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)

NO SCALE

RSP ES-6A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-6A DATED MAY 1, 2006 - PAGE 427 OF THE STANDARD PLANS BOOK DATED MAY 2006.

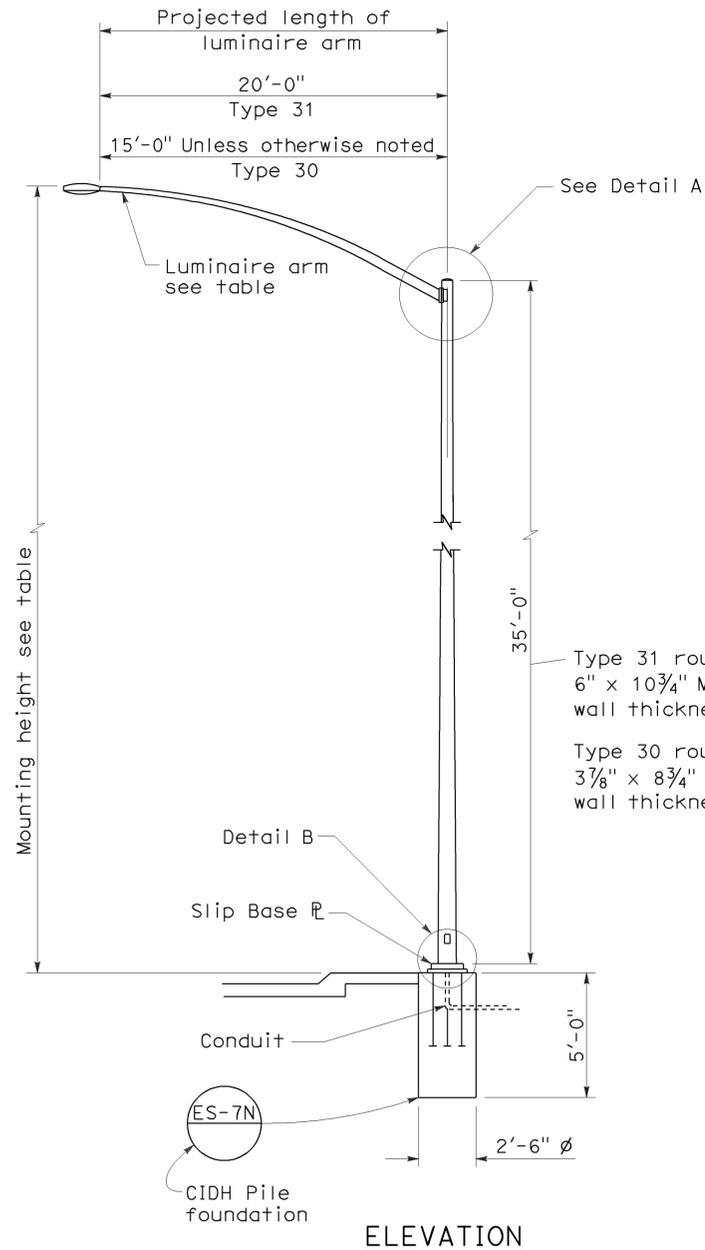
REVISED STANDARD PLAN RSP ES-6A

2006 REVISED STANDARD PLAN RSP ES-6A

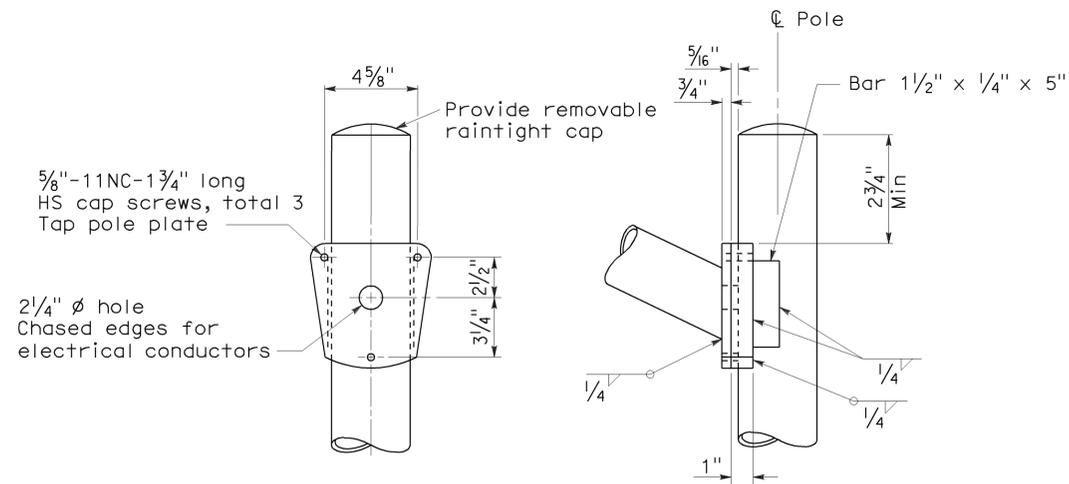
LUMINAIRE ARM DATA

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3/4"	36'-9"±
8'-0"		3/2"	37'-3"±
10'-0"		3 3/4"	38'-0"±
12'-0"		3 3/4"	39'-0"±
15'-0"		4 1/4"	39'-6"±
** 20'-0"	0.1793"	5"	37'-0"±

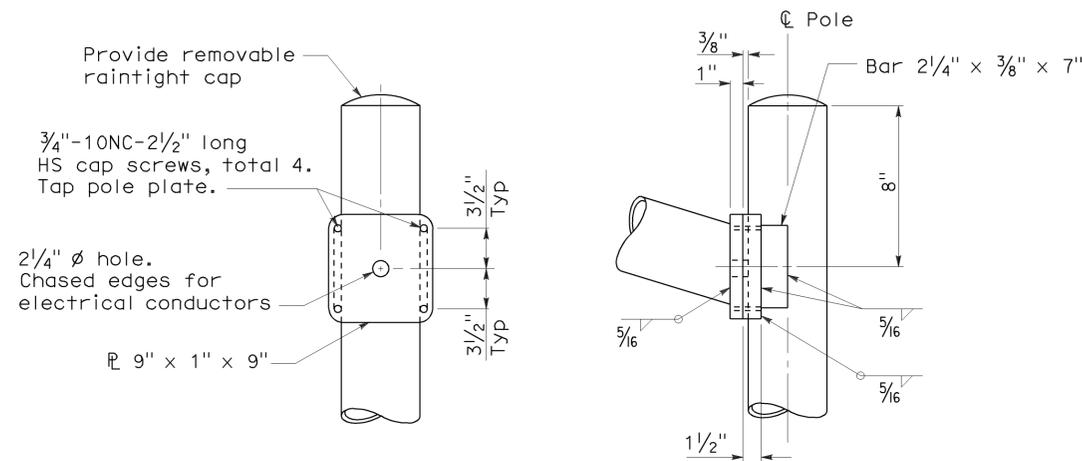
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



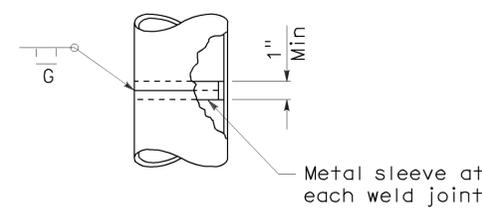
ELEVATION



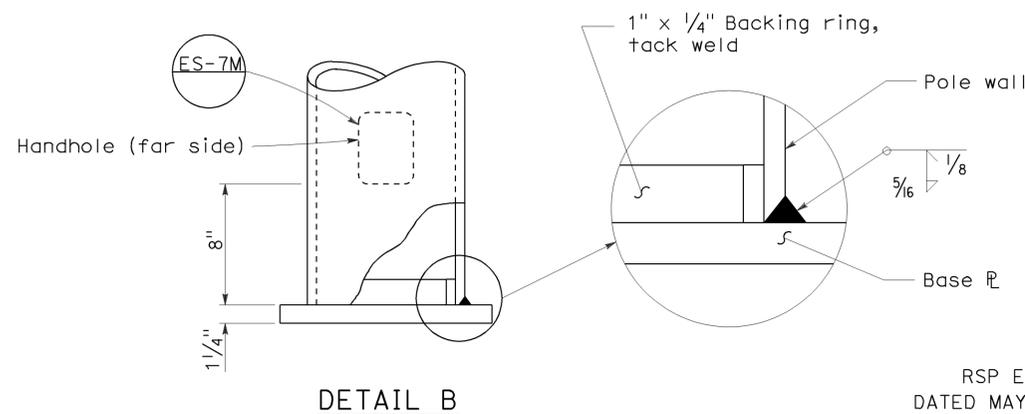
DETAIL A - TYPE 30



DETAIL A - TYPE 31



POLE SPLICE



DETAIL B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	478	504

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA

January 18, 2008
 PLANS APPROVAL DATE

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To accompany plans dated 2-1-10

NOTES:

- Sheet steel shall have a minimum yield of 48,000 psi.
- For slip base details see Standard Plan ES-6F.
- For Type 30 fixed base use Type 15 base plate, and foundation shown on Revised Standard Plan RSP ES-6A. Use 1 1/4" Dia x 3'-6" x 4" anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
- Handhole shall be located on downstream side of traffic unless noted otherwise on plans.
- For additional general notes refer to Standard Plan ES-7M.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD
 TYPES 30 AND 31)**

NO SCALE

RSP ES-6E DATED JANUARY 18, 2008 SUPERCEDES STANDARD PLAN ES-6E
 DATED MAY 1, 2006 - PAGE 430 OF THE STANDARD PLANS BOOK DATED MAY 2006.

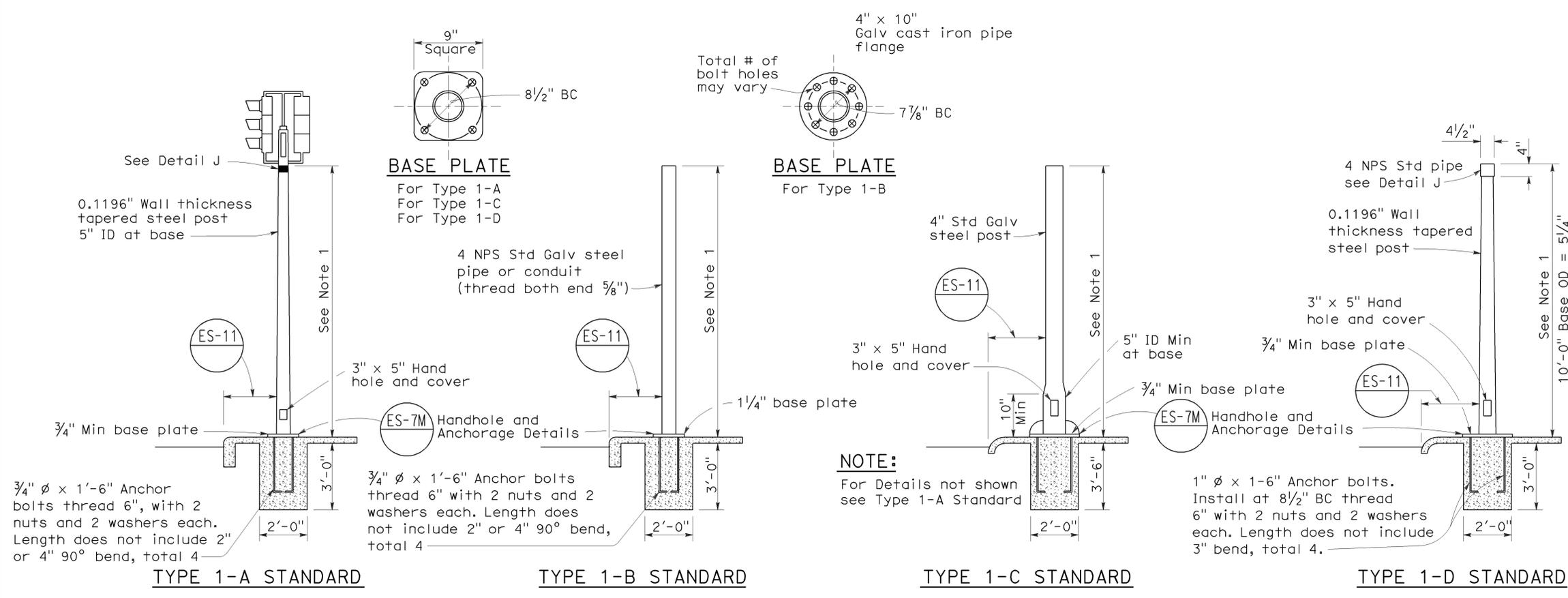
REVISED STANDARD PLAN RSP ES-6E

2006 REVISED STANDARD PLAN RSP ES-6E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	479	504

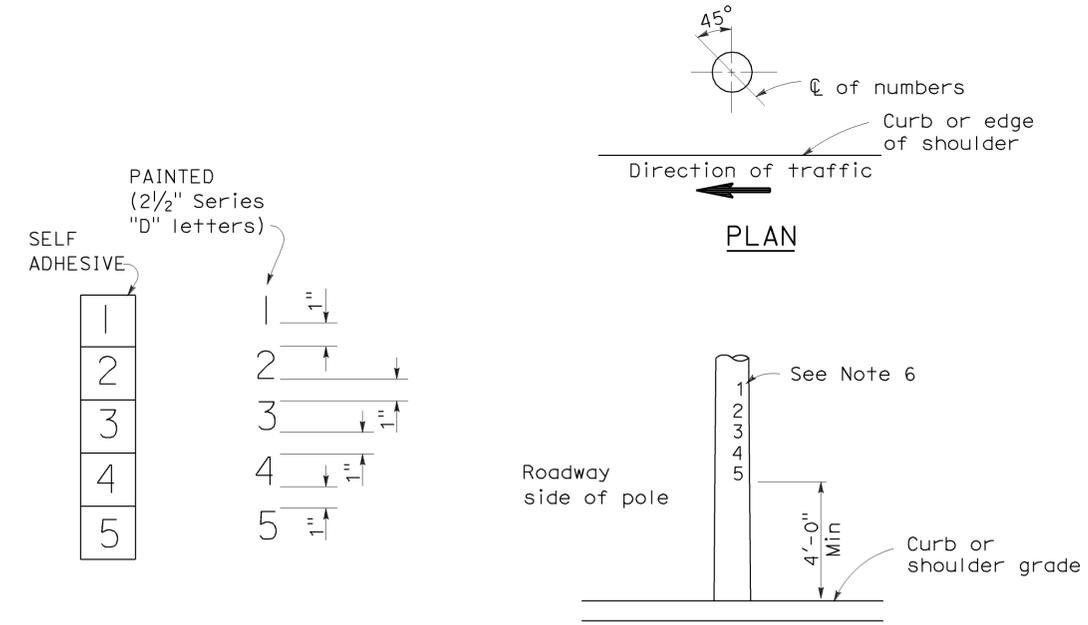
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 2-1-10

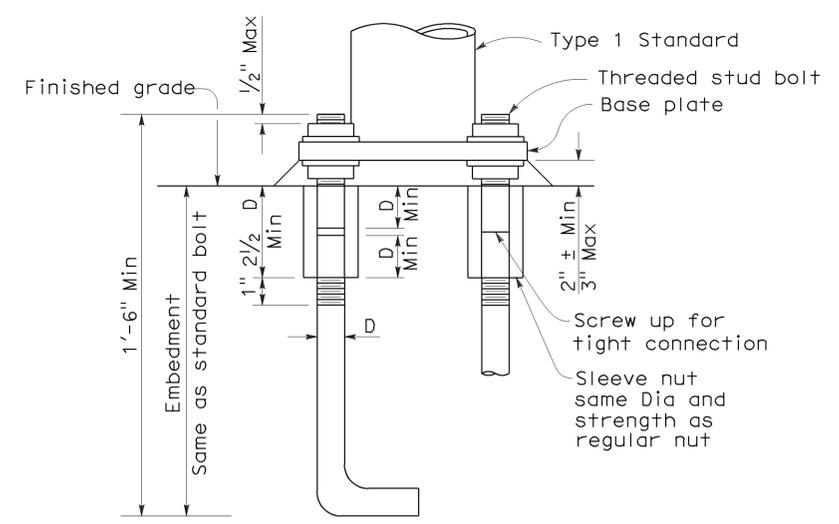


- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
 - Anchor bolts shall be bonded to conduit or grounding conductor.
 - Conduit between standard and adjacent pull box shall be 2" minimum.
 - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

TYPE 1 SIGNAL STANDARDS

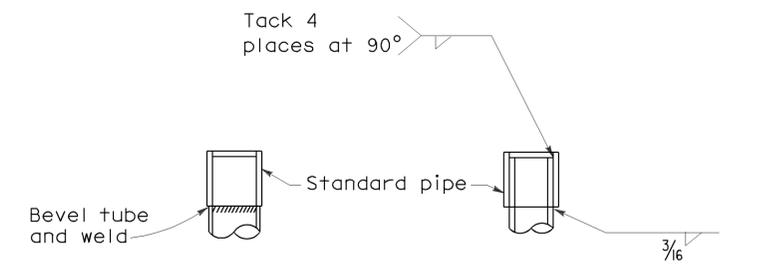


LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



ANCHOR BOLTS WITH SLEEVE NUTS

Sleeve nuts to be used only when shown or specified on Project Plans
 D = Diameter of anchor bolt



DETAIL J

Tube may be inserted into pipe or butted as required

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)

NO SCALE

RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-7B

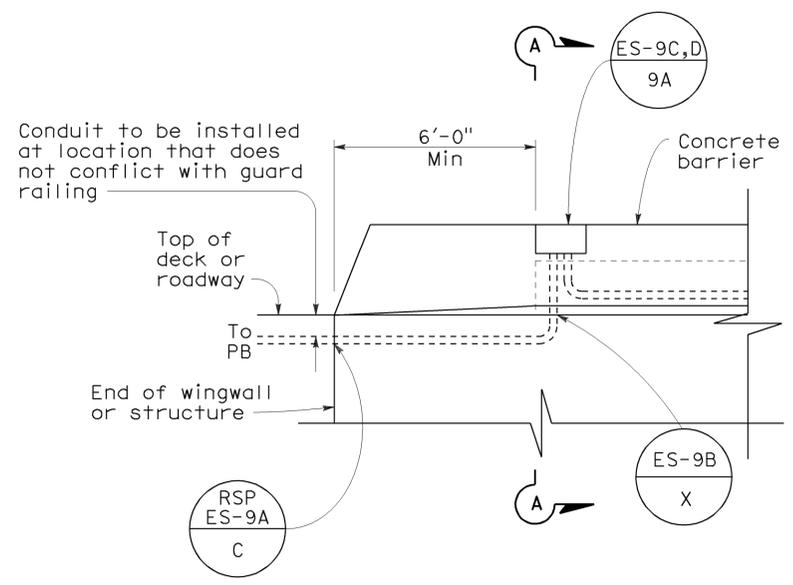
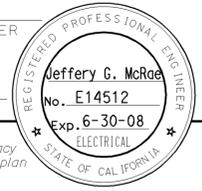
2006 REVISED STANDARD PLAN RSP ES-7B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	480	504

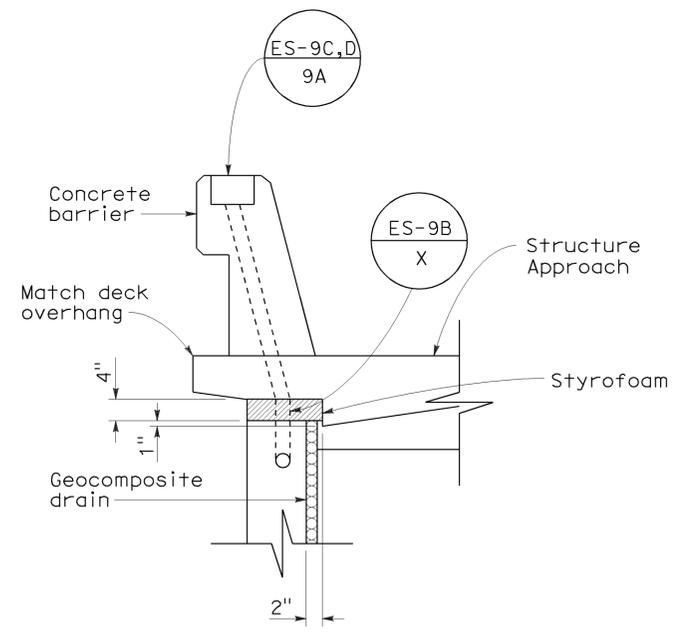
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 2-1-10

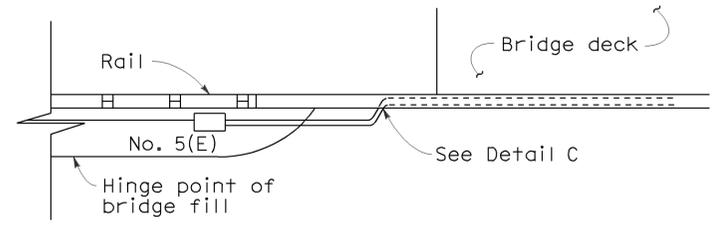


SIDEVIEW

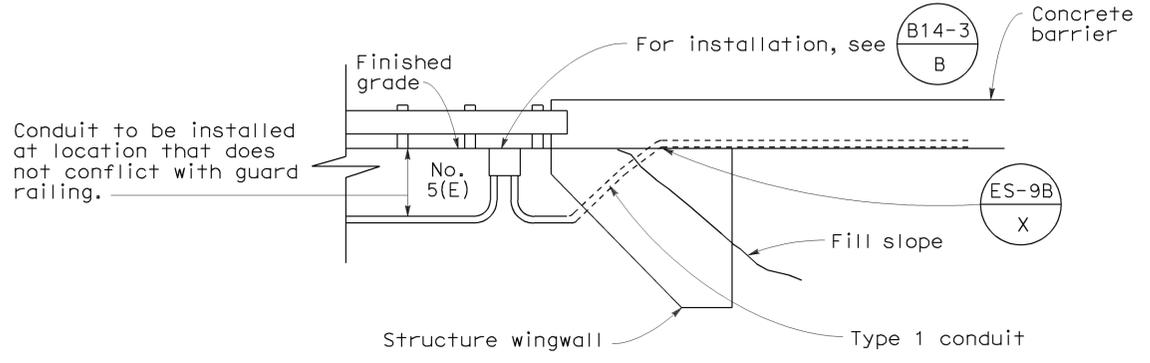


SECTION A-A

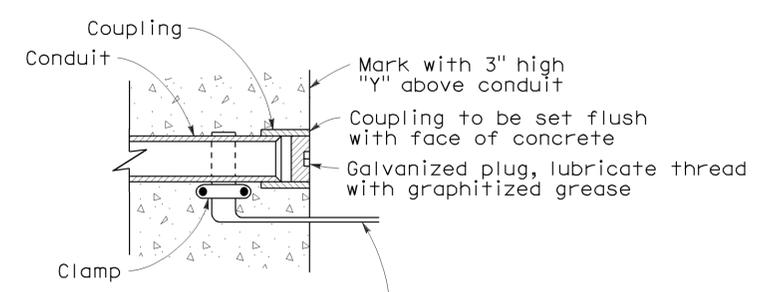
**DETAIL A
CONDUIT TERMINATION**



TOP VIEW



**SIDE VIEW
DETAIL I
CONDUIT TERMINATION**



Copper bonding strap install only at structure construction joint, extend at least 6" from face of concrete

**DETAIL C
CONDUIT TERMINATION**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE

RSP ES-9A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9A DATED MAY 1, 2006 - PAGE 454 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-9A

2006 REVISED STANDARD PLAN RSP ES-9A

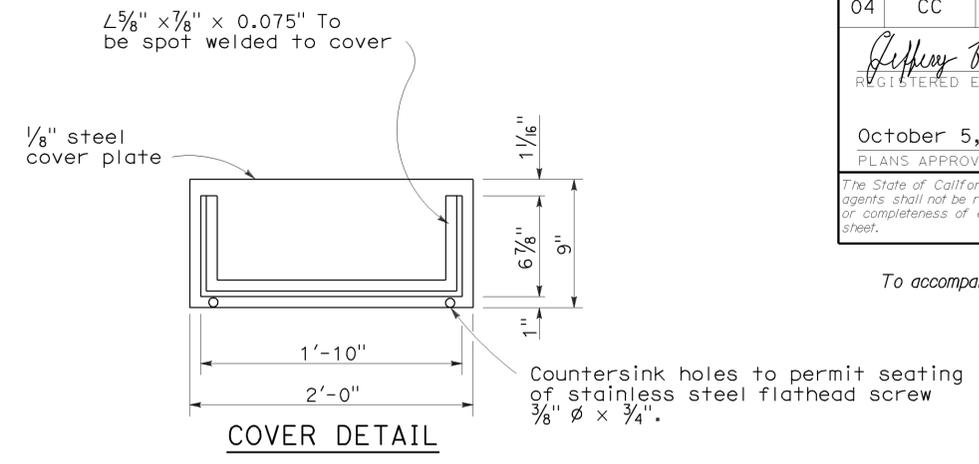
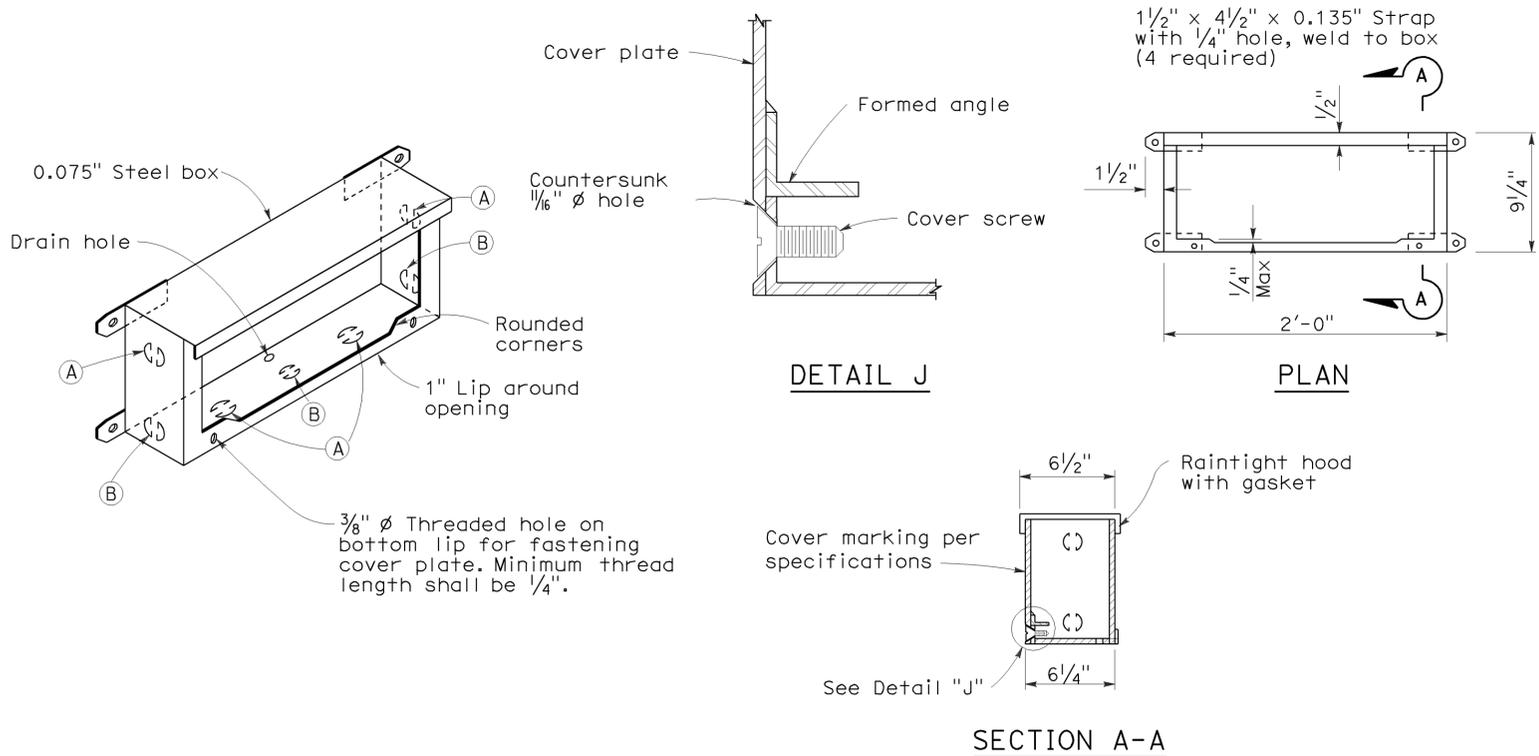
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	481	504

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

October 5, 2007
 PLANS APPROVAL DATE

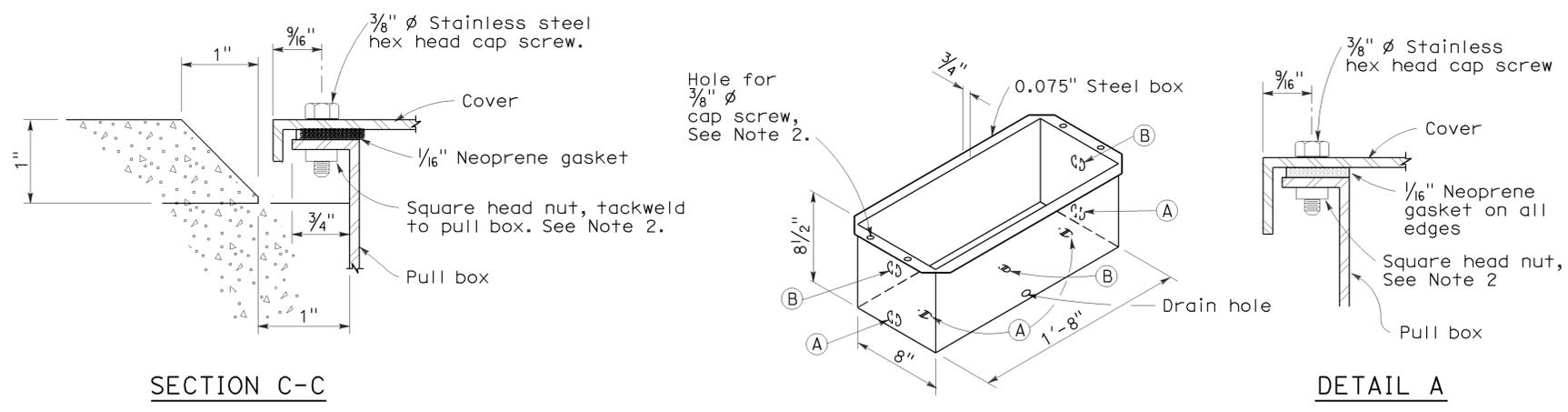
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To accompany plans dated 2-1-10



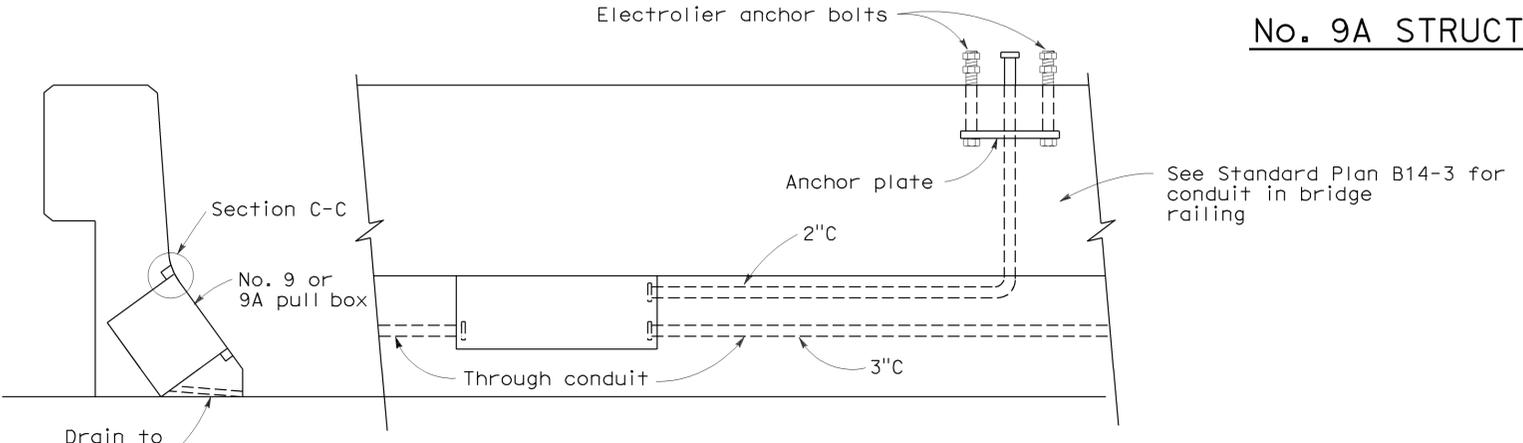
INSTALLATION NOTE:
 Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

No. 9 STRUCTURE PULL BOX



- NOTES:** No. 9 and 9A Pull Box
- Corner joints shall be lapped and secured by spot welding or riveting.
 - Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
 - Pound knockouts flat after punching.
 - Multiple size knockouts shall not be permitted.
 - Pull box covers shall be marked as shown on Standard Plan ES-8.

No. 9A STRUCTURE PULL BOX



- KNOCKOUT SCHEDULE**
No. 9 AND 9A PULL BOX
- (A) 2"C, 1 each end, 2 on bottom.
 - (B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)

NO SCALE
 RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.
REVISED STANDARD PLAN RSP ES-9C

2006 REVISED STANDARD PLAN RSP ES-9C

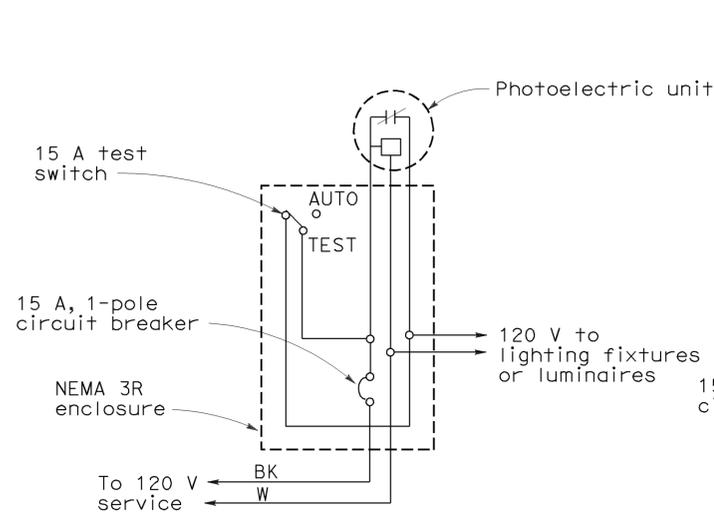
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	CC	680	0.0/R12.8	482	504

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 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.

NOTES: (FOR LIGHTING AND SIGN ILLUMINATION CONTROL)

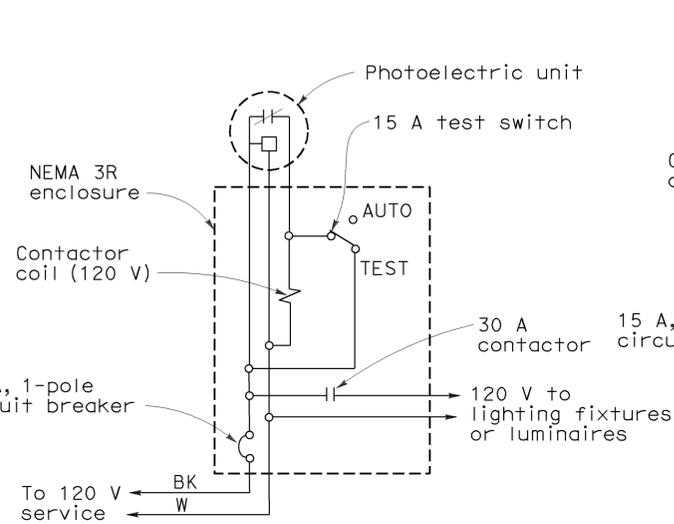
1. The ballast voltages of lighting fixtures and luminaires shall match line service voltages.
2. Voltage rating of photoelectric controls shall conform to the service voltage indicated on the plans.
3. Terminal strip shall be provided for wiring to fixtures.
4. Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC3 controls respectively except test switch and wiring are not required.

To accompany plans dated 2-1-10



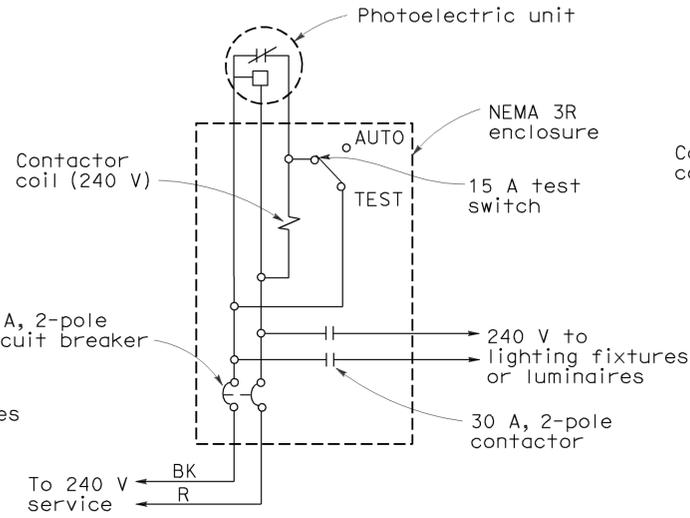
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 800 W load.



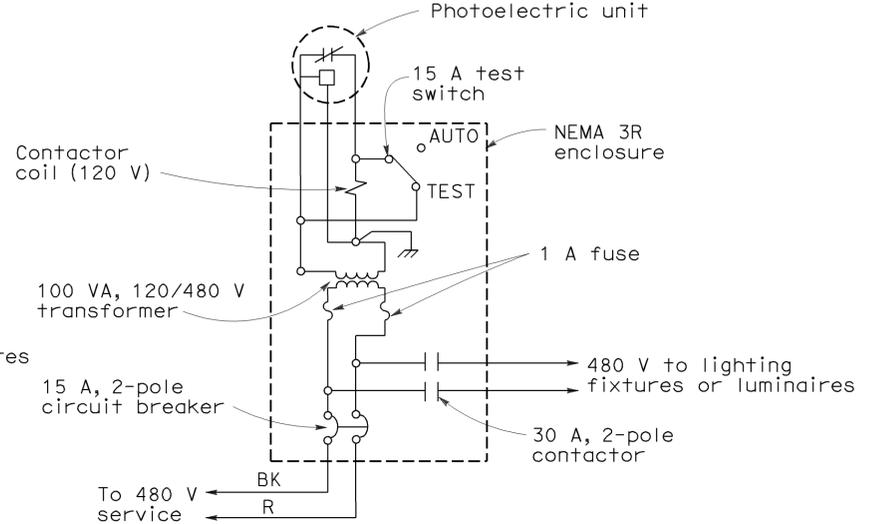
TYPE LC2 CONTROL

For 120 V unswitched circuit



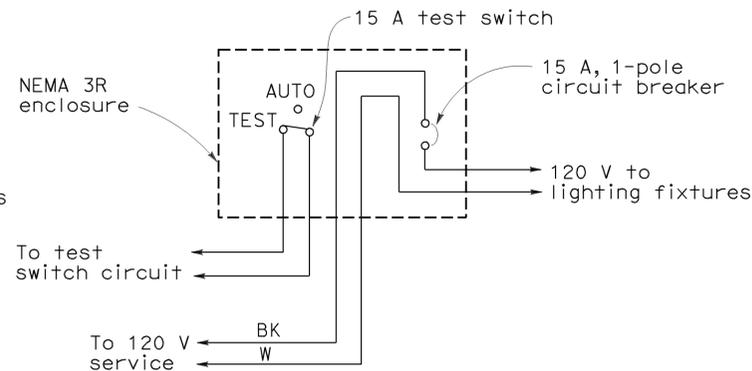
TYPE LC3 CONTROL

For 240 V and 480 V unswitched circuits



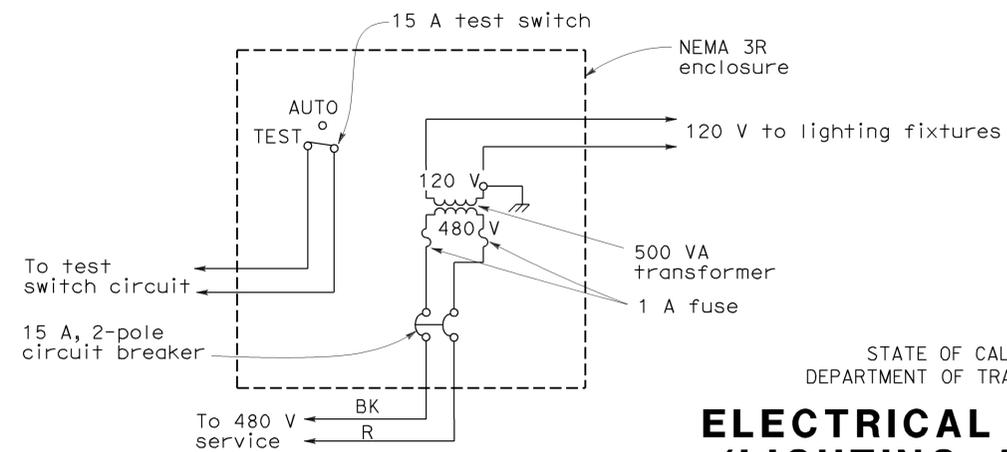
TYPE SC1 CONTROL

For 240 V or 480 V switched circuit, see Note 4 for Type SC1A



TYPE SC2 CONTROL

For 120 V switched circuit, see Note 4 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 4 for Type SC3A

ELECTRICAL SYSTEMS (LIGHTING AND SIGN ILLUMINATION CONTROL)

NO SCALE

RSP ES-15D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-15D DATED MAY 1, 2006 - PAGE 472 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-15D

2006 REVISED STANDARD PLAN RSP ES-15D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	483	504

5-18-09
 REGISTERED CIVIL ENGINEER DATE
 2-1-10
 PLANS APPROVAL DATE
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Mike Van De Pol
 No. C35610
 Exp. 09-30-09
 CIVIL
 STATE OF CALIFORNIA

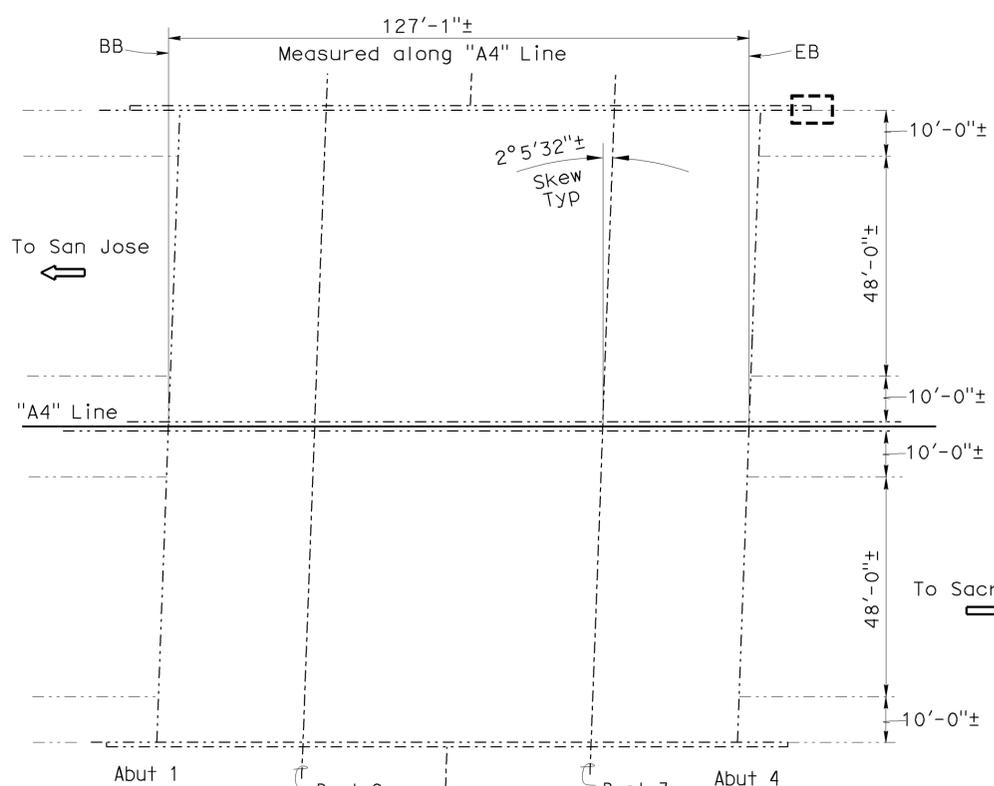
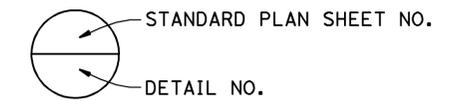
INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	GENERAL PLAN No. 3
4	GENERAL PLAN No. 4
5	GENERAL PLAN No. 5
6	JOINT SEAL DETAILS No. 1
7	HINGE JOINT SEAL DETAILS No. 1
8	HINGE JOINT SEAL DETAILS No. 2
9	HINGE JOINT SEAL DETAILS No. 3
10	HINGE JOINT SEAL DETAILS No. 4
11	HINGE JOINT SEAL DETAILS No. 5
12	HINGE JOINT SEAL DETAILS No. 6
13	CONCRETE BARRIER DETAILS No. 1
14	CONCRETE BARRIER DETAILS No. 2
15	CONCRETE BARRIER DETAILS No. 3
16	CONCRETE BARRIER DETAILS No. 4
17	STRUCTURE APPROACH TYPE R(30D)
18	CONCRETE BARRIER TYPE 27
19	THRIE BEAM CONNECTION DETAILS BARRIER RAILING TYPE 1 & TYPE 2
20	THRIE BEAM CONNECTION DETAILS BARRIER RAILING TYPE 27
21	THRIE BEAM CONNECTION DETAILS BARRIER RAILING TYPE 9 AND TYPE 9-11 SHEET 1 OF 2
22	THRIE BEAM CONNECTION DETAILS BARRIER RAILING TYPE 9 AND TYPE 9-11 SHEET 2 OF 2

- Notes:**
- - - - - Indicates existing
 - — — — — Indicates limits of remove existing joint seal and place new joint seal. Prior to placement of new joint seal repair joint spalls.
 - See "Joint Seal Details No. 1" sheet
 - □ □ □ Denotes Location of MBGR Anchor Block, see "Thrie Beam Connection Details" Sheets
 - ○ ○ ○ Denotes Approximate Location of Deck Repair, see "Joint Seal Details No. 1" Sheet

STANDARD PLANS DATED MAY 2006

A10A-A10B	ACRONYMS AND ABBREVIATIONS
A10C-A10D	SYMBOLS
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
RSP A78F1	DOUBLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALKS
RSP A78F2	SINGLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALKS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B11-56	CONCRETE BARRIER TYPE 736

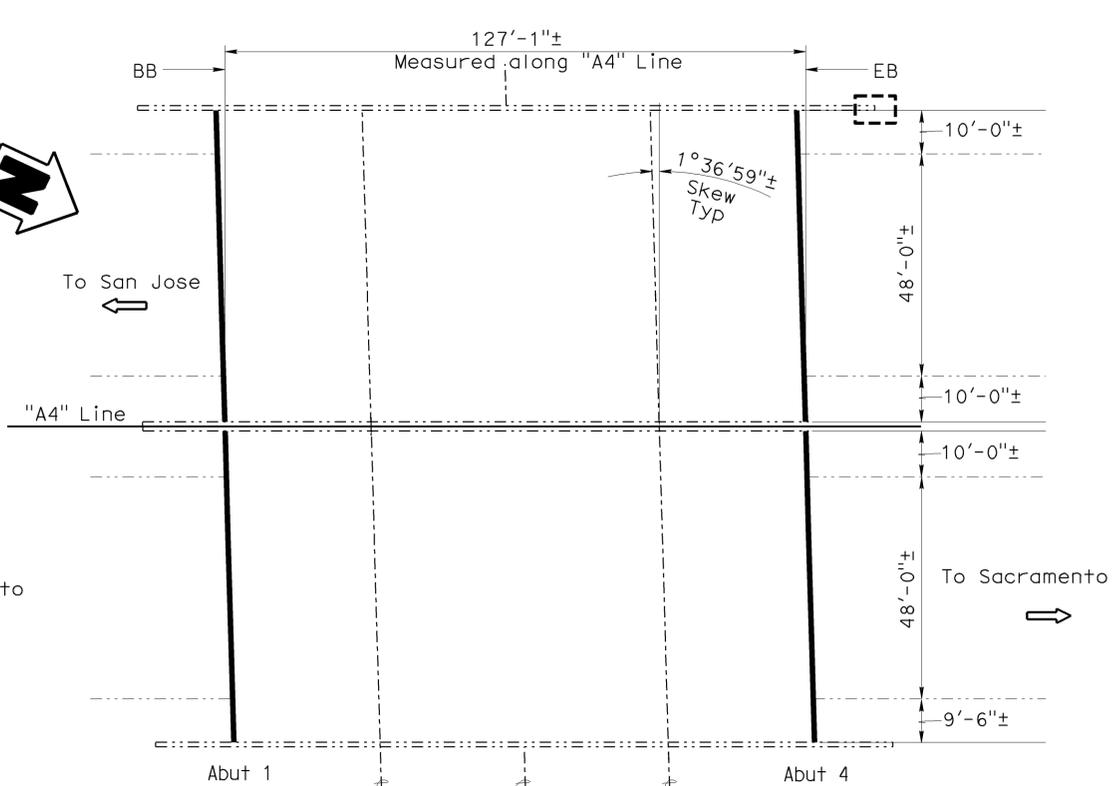


PINE VALLEY ROAD UNDERCROSSING

Br No. 28-0221, Rte 680, CC, PM 1.1
 "A4" 57+25 to 58+52
 1"=20'

QUANTITIES

CONCRETE BARRIER (TYPE 736 MODIFIED)	4	LF
--------------------------------------	---	----



MONTEVIDEO ROAD UNDERCROSSING

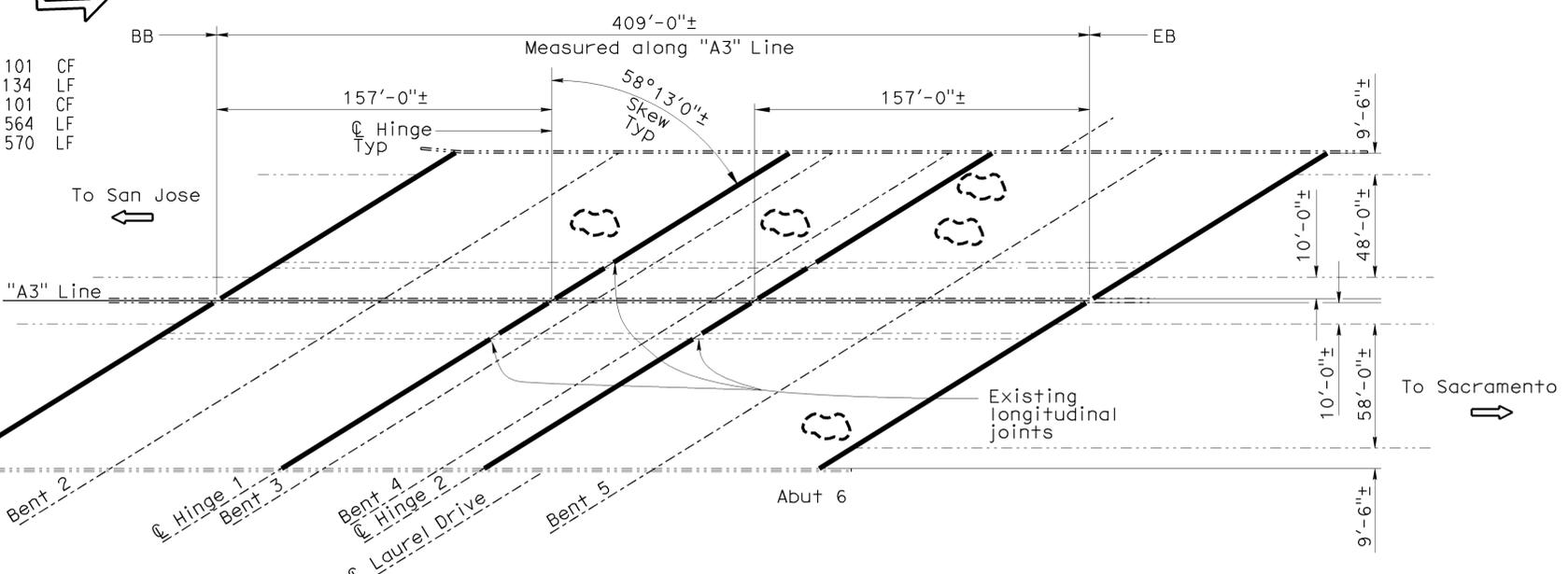
Br No. 28-0222, Rte 680, CC, PM 1.9
 "A4" 99+35 to 100+62
 1"=20'

QUANTITIES

CLEAN EXPANSION JOINT JOINT SEAL (MR 1")	280	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	280	LF
	4	LF

QUANTITIES

REMOVE UNSOUND CONCRETE	101	CF
CLEAN EXPANSION JOINT	1,134	LF
RAPID SETTING CONCRETE (PATCH)	101	CF
JOINT SEAL (MR 1")	564	LF
JOINT SEAL (MR 1 1/2")	570	LF



LAUREL DRIVE UNDERCROSSING

Br No. 28-0196, Rte 680, CC, PM 7.0
 "A3" 369+20 to 373+29
 1"=40'

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

DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	LAYOUT	BY Tim Fairall	CHECKED Mike Van De Pol
DETAILS	BY Tim Fairall	CHECKED Mike Van De Pol	SPECIFICATIONS	BY Todd Geerts	PLANS AND SPECS COMPARED Todd Geerts
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol			

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH **9**

BRIDGE NO. Various
 POST MILE Varies
ROUTE 680 BRIDGES
GENERAL PLAN No. 1

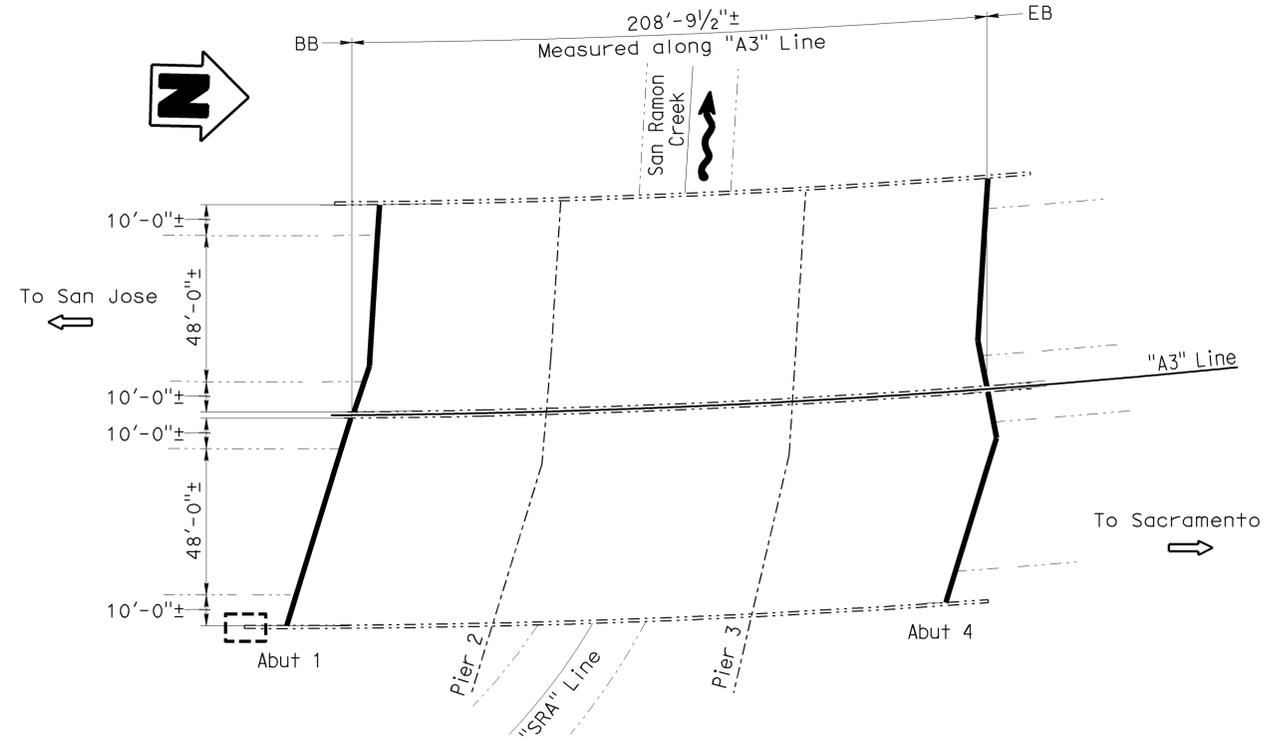
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	484	504


 5-18-09
 REGISTERED CIVIL ENGINEER DATE

2-1-10
 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.

REGISTERED PROFESSIONAL ENGINEER
 Mike Van De Pol
 No. C35610
 Exp. 09-30-09
 CIVIL
 STATE OF CALIFORNIA

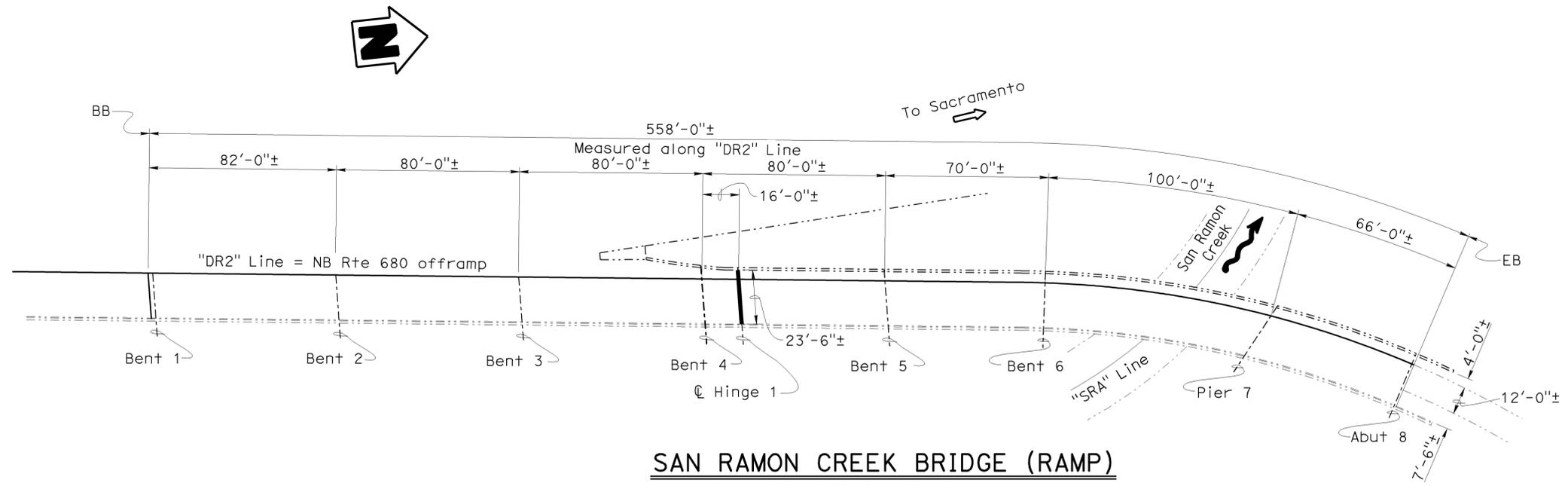


QUANTITIES

CLEAN EXPANSION JOINT	290 LF
JOINT SEAL (MR 1 1/2")	290 LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	5 LF

- Notes:
- Indicates existing
 - Indicates limits of remove existing joint seal and place new joint seal. Prior to placement of new joint seal repair joint spalls. See "Joint Seal Details No. 1" sheet
 - Denotes Location of MBGR Anchor Block, see "Thrie Beam Connection Details" Sheets

SAN RAMON CREEK BRIDGE
 Br No. 28-0197, Rte 680, CC, PM 7.4
 1"=30'



QUANTITIES

CLEAN EXPANSION JOINT	26 LF
JOINT SEAL (MR 2")	26 LF

SAN RAMON CREEK BRIDGE (RAMP)
 Br No. 28-0197S, Rte 680, CC, PM 7.4
 1"=30'

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

Gordon Danke DESIGN ENGINEER	DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	LAYOUT	BY Tim Fairall	CHECKED Mike Van De Pol	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	Various	ROUTE 680 BRIDGES GENERAL PLAN No. 2								
	DETAILS	BY Tim Fairall	CHECKED Mike Van De Pol		BY Tim Fairall	CHECKED Mike Van De Pol			POST MILE	Varies									
	QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol		BY Todd Geerts	PLANS AND SPECS COMPARED			Todd Geerts	REVISION DATES		<table border="1"> <tr> <td>04-05-07</td> <td>10-24-07</td> <td>11-21-07</td> <td>8-15-08</td> <td>9-18-08</td> <td>12-16-08</td> </tr> </table>	04-05-07	10-24-07	11-21-07	8-15-08	9-18-08	12-16-08	
04-05-07	10-24-07	11-21-07	8-15-08	9-18-08	12-16-08														
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 10/25/05)							ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	<table border="1"> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> </table>	0	1	2	3	CU 04239 EA 4470u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <td>SHEET</td> <td>OF</td> </tr> <tr> <td>2</td> <td>22</td> </tr> </table>	SHEET	OF	2	22
0	1	2	3																
SHEET	OF																		
2	22																		

USERNAME => hrmikes DATE PLOTTED => 04-FEB-2010 TIME PLOTTED => 06:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	485	504

5-18-09
DATE

REGISTERED CIVIL ENGINEER

2-1-10
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER

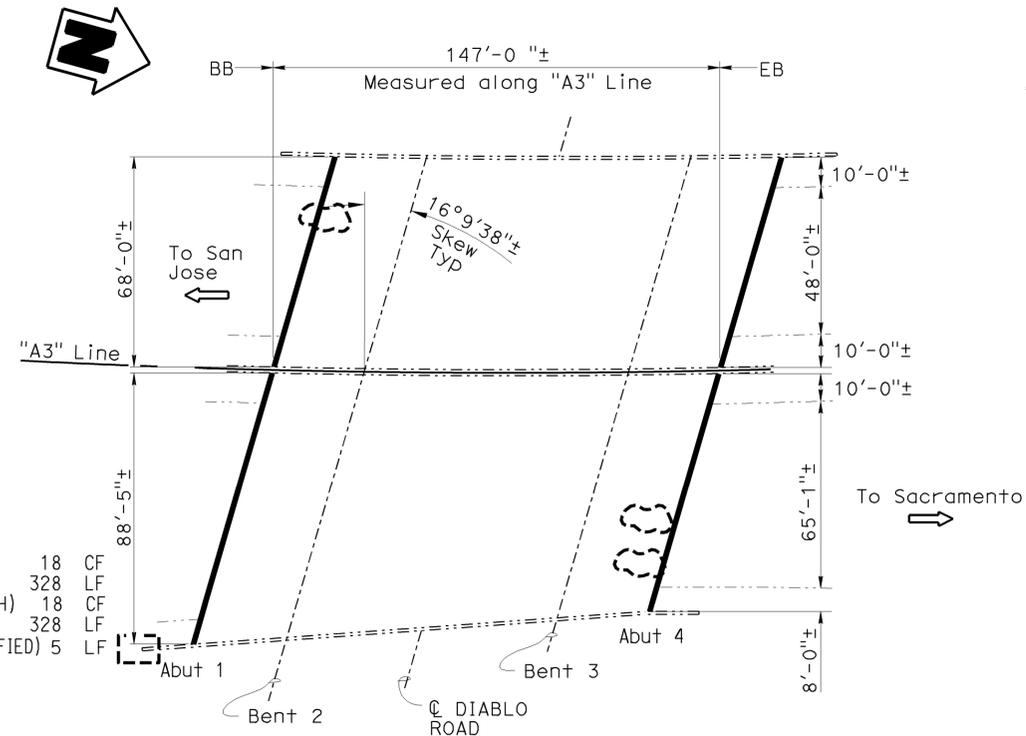
Mike Van De Pol

No. C35610

Exp. 09-30-09

CIVIL

STATE OF CALIFORNIA

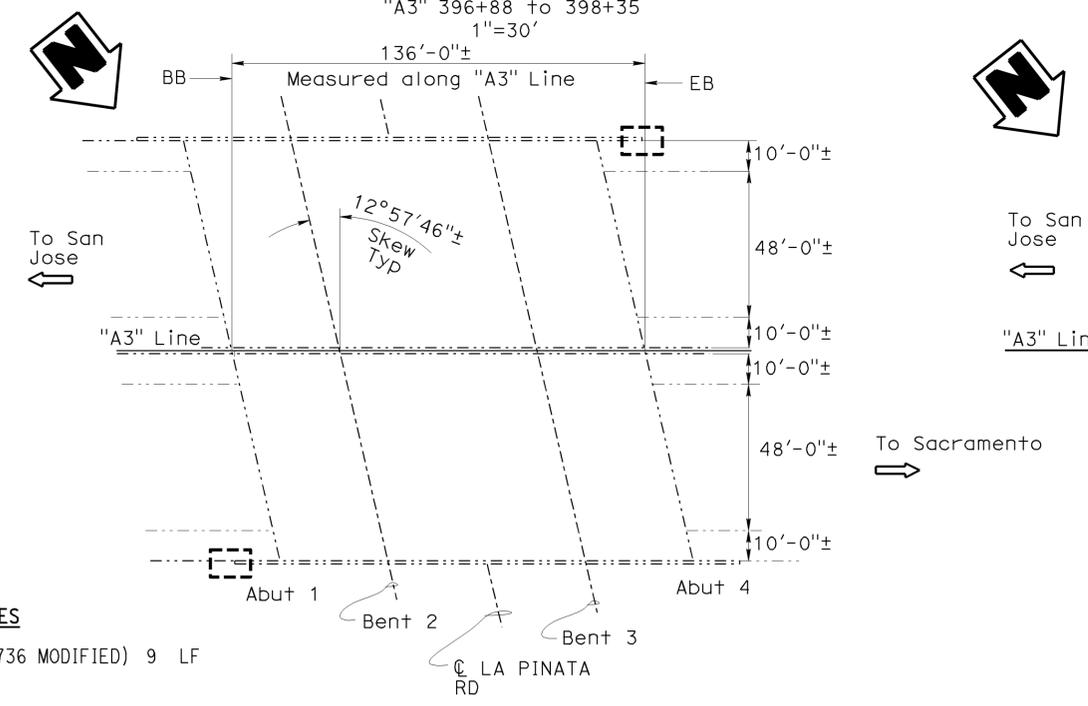


QUANTITIES

REMOVE UNSOUND CONCRETE	18	CF
CLEAN EXPANSION JOINT	328	LF
RAPID SETTING CONCRETE (PATCH)	18	CF
JOINT SEAL (MR 1")	328	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	5	LF

DIABLO ROAD UNDERCROSSING

Br No. 28-0198, Rte 680, CC, PM 7.6
"A3" 396+88 to 398+35
1"=30'



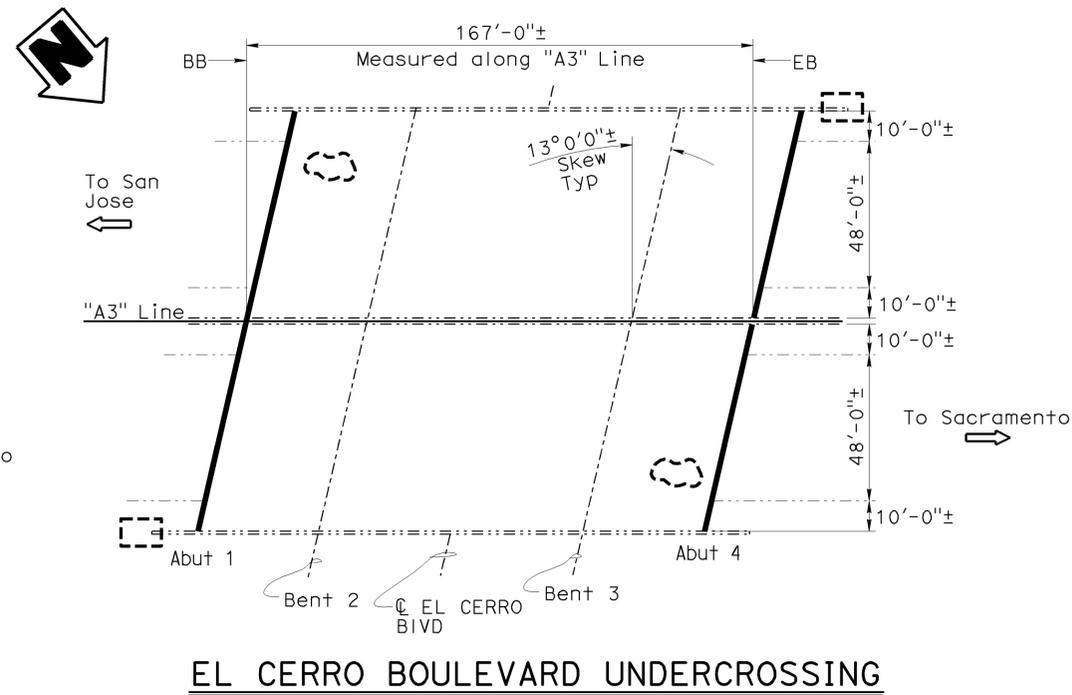
QUANTITIES

CONCRETE BARRIER (TYPE 736 MODIFIED)	9	LF
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EL PINTADO ROAD UNDERCROSSING

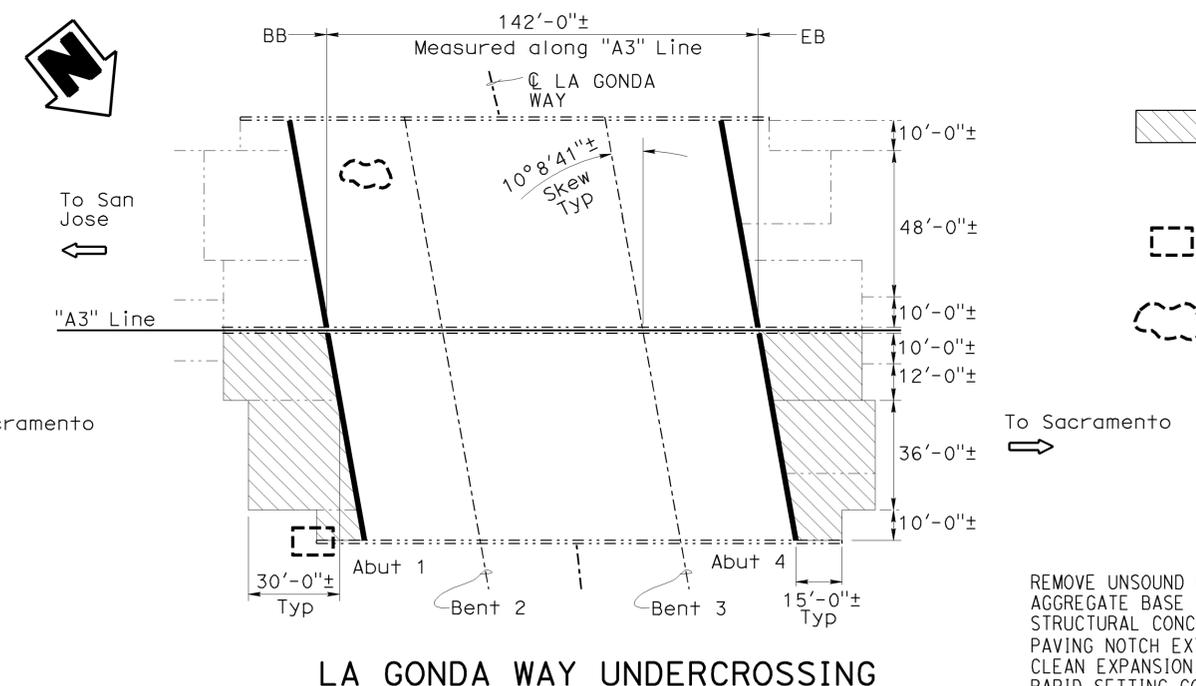
Br No. 28-0200, Rte 680, CC, PM 8.7
"A3" 460+08 to 461+44
1"=30'

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



EL CERRO BOULEVARD UNDERCROSSING

Br No. 28-0199, Rte 680, CC, PM 8.2
"A3" 429+70 to 431+37
1"=30'



LA GONDA WAY UNDERCROSSING

Br No. 28-0192, Rte 680, CC, PM 9.2
"A3" 486+50 to 488+60
1"=30'

Notes:

- Indicates existing
- Indicates limits of remove existing joint seal and place new joint seal. Prior to placement of new joint seal repair joint spalls. See "Joint Seal Details No. 1" sheet
- ▨ Indicates limits of remove existing structure approach and place new structure approach see "Structure Approach Type R(30D)" sheet
- Denotes Location of MBGR Anchor Block, see "Thrie Beam Connection Details" Sheets
- Denotes Approximate Location of Deck Repair, see "Joint Seal Details No. 1" Sheet

QUANTITIES

REMOVE UNSOUND CONCRETE	16	CF
AGGREGATE BASE (APPROACH SLAB)	16	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	156	CY
PAVING NOTCH EXTENSION	513	CY
CLEAN EXPANSION JOINT	141	LF
RAPID SETTING CONCRETE (PATCH)	16	CF
JOINT SEAL (MR 1")	282	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	5	LF

DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	LAYOUT	BY Tim Fairall	CHECKED Mike Van De Pol
DETAILS	BY Tim Fairall	CHECKED Mike Van De Pol	SPECIFICATIONS	BY Todd Geerts	CHECKED Todd Geerts
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol	PLANS AND SPECS COMPARED	BY Todd Geerts	CHECKED Todd Geerts

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

ROUTE 680 BRIDGES
GENERAL PLAN No. 3

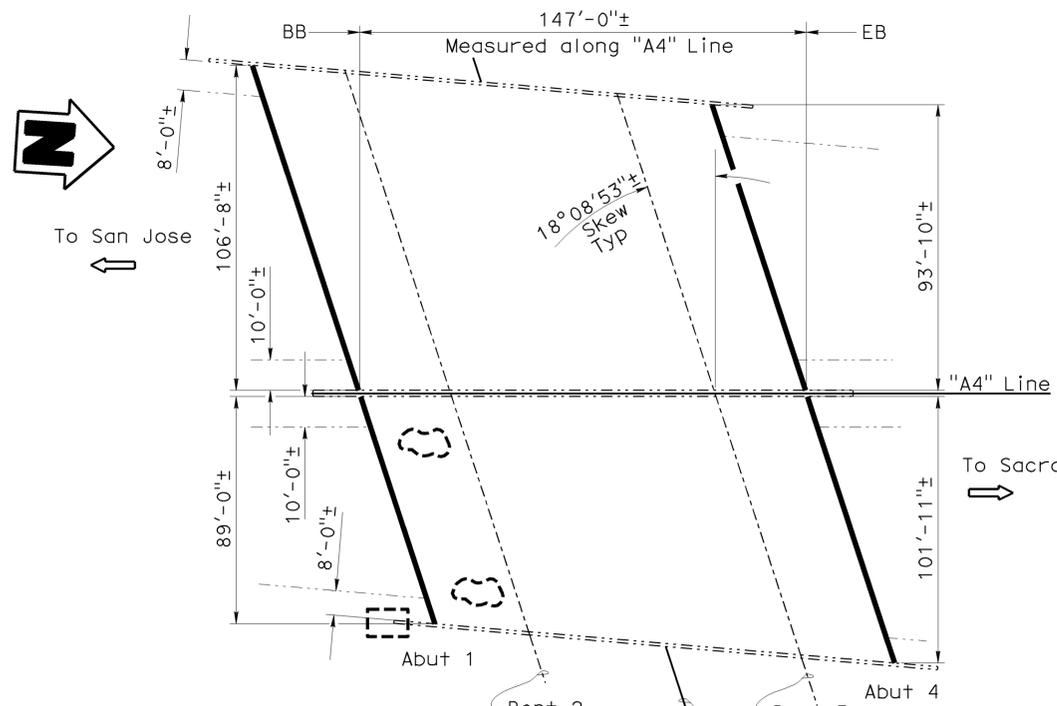
BRIDGE NO. Various
POST MILE Varies

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	486	504

5-18-09
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 2-1-10
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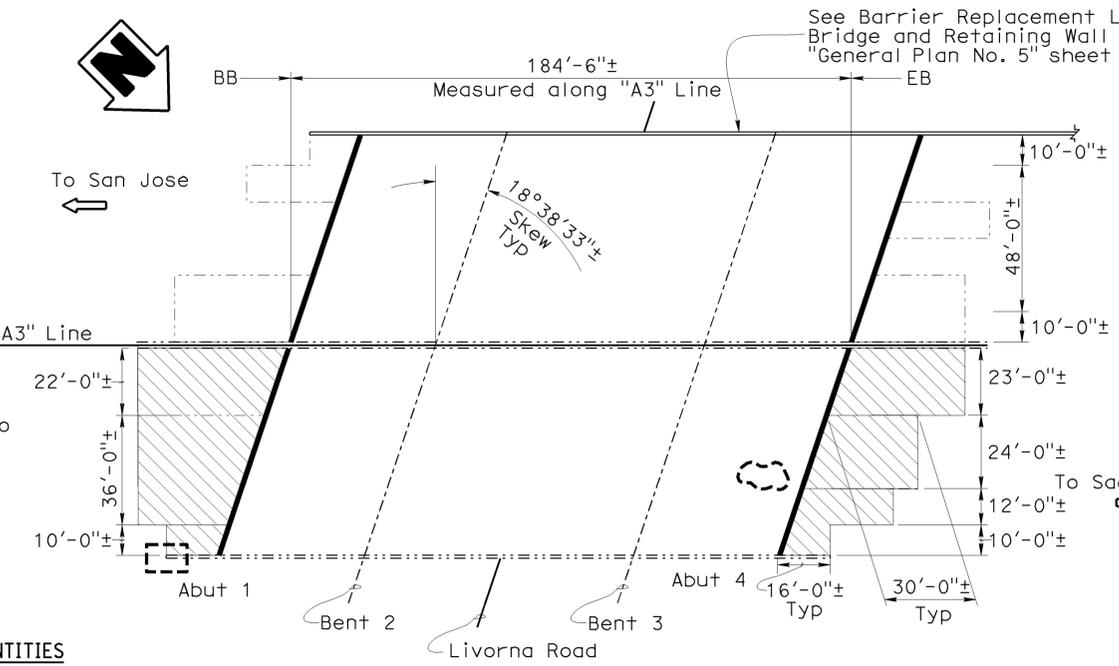
Mike Van De Pol
 No. C35610
 Exp. 09-30-09
 CIVIL
 STATE OF CALIFORNIA



STONE VALLEY ROAD UNDERCROSSING
 Br No. 28-0201, Rte 680, CC, PM 10.3
 "A4" 545+50 to 547+85
 1"=30'

QUANTITIES

REMOVE UNSOUND CONCRETE	11	CF
CLEAN EXPANSION JOINT	416	LF
RAPID SETTING CONCRETE (PATCH)	11	CF
JOINT SEAL (MR 1")	416	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	5	LF

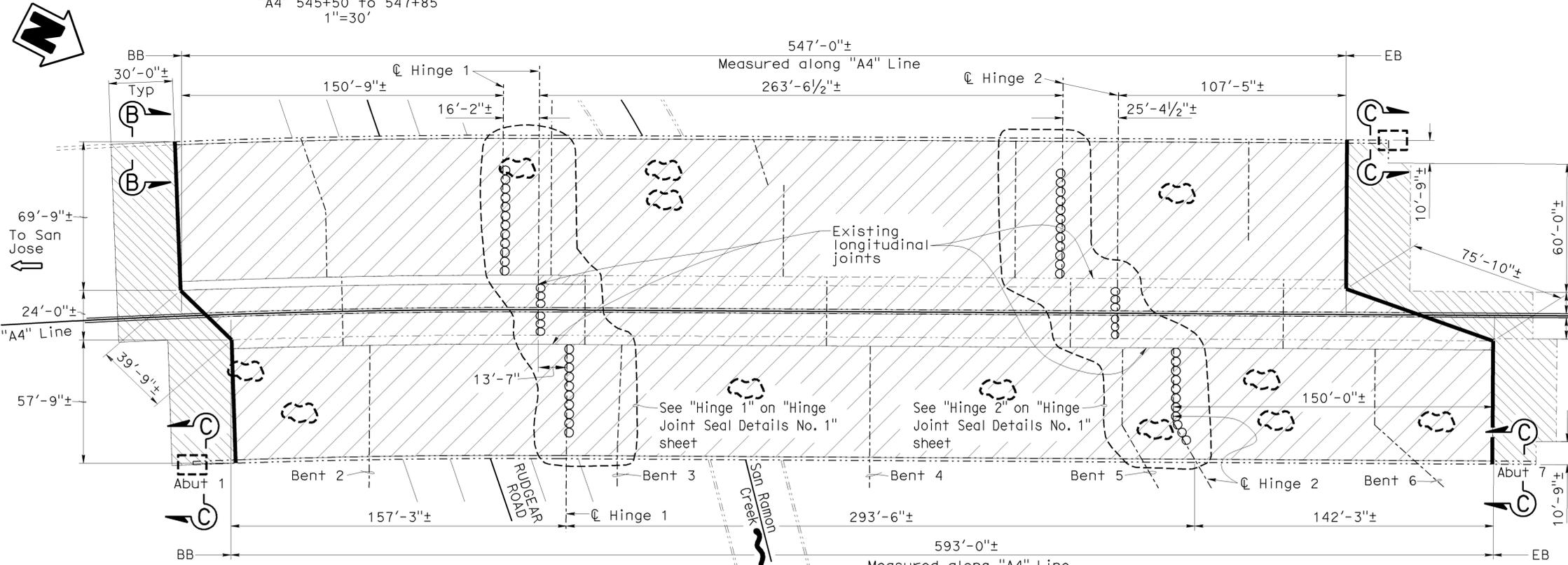


LIVORNA ROAD UNDERCROSSING
 Br No. 28-0191, Rte 680, CC, PM 11.3
 "A3" 595+01 to 597+62
 1"=30'

QUANTITIES

REMOVE UNSOUND CONCRETE	21	CF
BRIDGE REMOVAL (PORTION), LOCATION A	LUMP	SUM
STRUCTURE EXCAVATION (RETAINING WALL)	31	CY
STRUCTURE BACKFILL (RETAINING WALL)	31	CY
AGGREGATE BASE (APPROACH SLAB)	17	CY
STRUCTURAL CONCRETE, BRIDGE	2	CY
STRUCTURAL CONCRETE, RETAINING WALL	43	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	170	CY
PAVING NOTCH EXTENSION	540	CY
DRILL AND BOND DOWEL	101	LF
CLEAN EXPANSION JOINT	146	LF
RAPID SETTING CONCRETE (PATCH)	21	CF
JOINT SEAL (MR 1")	296	LF
BAR REINFORCING STEEL (RETAINING WALL)	12,110	LB
CONCRETE BARRIER (TYPE 736 MODIFIED)	755	LF

- Notes:
- Denotes Location of MBGR Anchor Block, see "Thrie Beam Connection Details" Sheets
 - Denotes Approximate Location of Deck Repair, see "Joint Seal Details No. 1" Sheet
 - Indicates limits of remove existing joint seal and place new joint seal. Prior to placement of new joint seal repair joint spalls.
 - See "Joint Seal Details No. 1" sheet
 - Indicates limits of remove existing joint seal and place new joint seal assembly
 - Indicates limits of remove existing structure approach and place new structure approach see "Structure Approach Type R(300)" sheet
 - Indicates limits of clean and treat bridge deck with high molecular weight methacrylate and core treated bridge deck. Prior to bridge deck treatment remove unsound concrete and patch with rapid setting concrete.
 - For "Sections B-B and C-C" see "Concrete Barrier Details No. 1" sheet
 - Indicates existing
 - Denotes new construction



RUDGEAR ROAD UNDERCROSSING
 Br No. 28-0059, Rte 680, CC, PM 12.6
 "A4" 665+39 to 672+20
 1"=30'

QUANTITIES

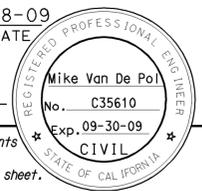
PUBLIC SAFETY PLAN	LUMP	SUM
REMOVE UNSOUND CONCRETE	70	CF
CLEAN BRIDGE DECK	83,250	SOFT
BRIDGE REMOVAL (PORTION), LOCATION B	LUMP	SUM
AGGREGATE BASE (APPROACH SLAB)	38	CY
STRUCTURAL CONCRETE, BRIDGE	11	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	384	CY
DRILL AND BOND DOWEL	208	LF
RAPID SETTING CONCRETE (PATCH)	70	CF
CORE TREATED BRIDGE DECK	8	EA
JOINT SEAL (MR 1")	340	LF
JOINT SEAL ASSEMBLY (MR 3/2")	208	LF
Bar Reinforcing Steel (Bridge)	1460	LB
TREAT BRIDGE DECK	83,250	SOFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	940	GAL
CONCRETE BARRIER (TYPE 736 MODIFIED)	1,005	LF

NOTE:
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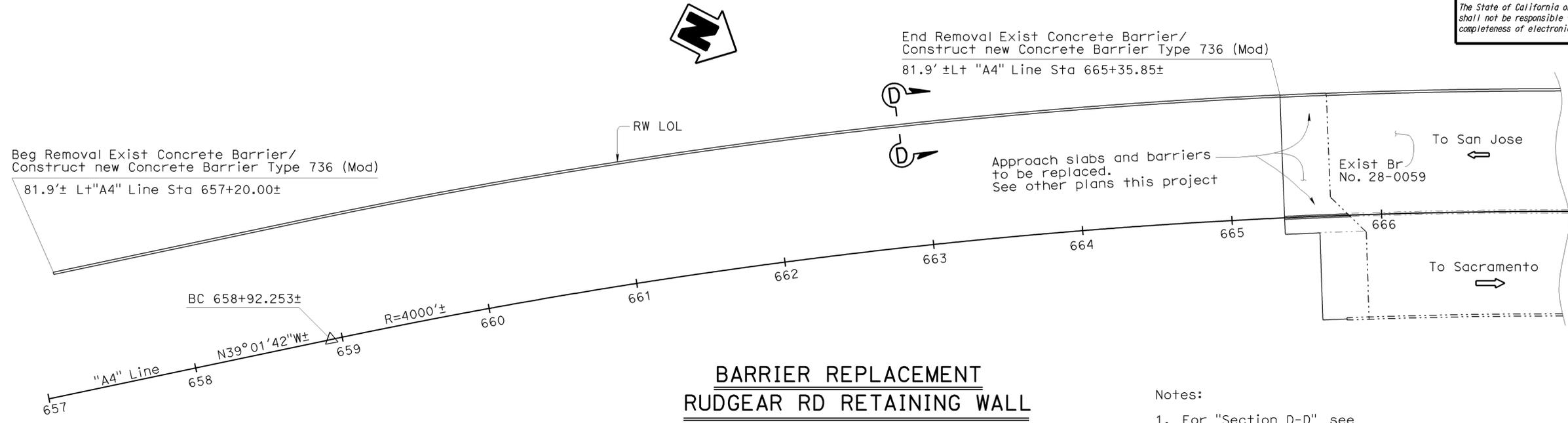
Gordon Danke DESIGN ENGINEER	DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	LAYOUT	BY Tim Fairall	CHECKED Mike Van De Pol	SPECIFICATIONS	BY Todd Geerts	PLANS AND SPECS COMPARED	Todd Geerts	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	Various	ROUTE 680 BRIDGES GENERAL PLAN No. 4	SHEET	4	OF	22
	DETAILS	BY Tim Fairall	CHECKED Mike Van De Pol		BY Tim Fairall	CHECKED Mike Van De Pol		POST MILE		Varies			REVISION DATES	04-05-07 10-29-07 11-24-07 8-15-08 9-18-08 12-16-08					
	QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol		BY Todd Geerts	CHECKED Todd Geerts		EA 4470u1		DISREGARD PRINTS BEARING EARLIER REVISION DATES			04-05-07 10-29-07 11-24-07 8-15-08 9-18-08 12-16-08						

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS CU 04239 EA 4470u1 FILE => 04-4470u1-a-gp04.dgn STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	487	504

 5-18-09
 REGISTERED CIVIL ENGINEER DATE
 2-1-10
 PLANS APPROVAL DATE


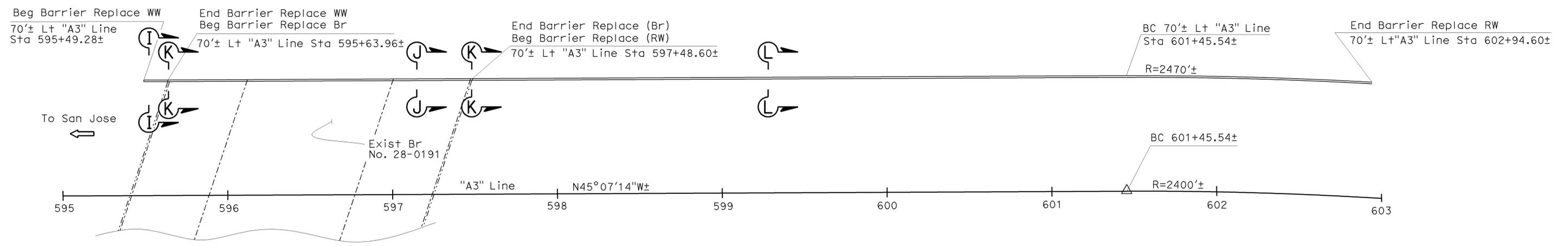
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**BARRIER REPLACEMENT
RUDGEAR RD RETAINING WALL**

Rte 680, CC, PM 12.63
1"=40'

- Notes:
- For "Section D-D" see "Concrete Barrier Details No. 2" sheet
 - For "Sections I-I and J-J" see "Concrete Barrier Details No. 3" sheet
 - For "Sections K-K and L-L" see "Concrete Barrier Details No. 4" sheet
- Indicates existing
 _____ Denotes new construction



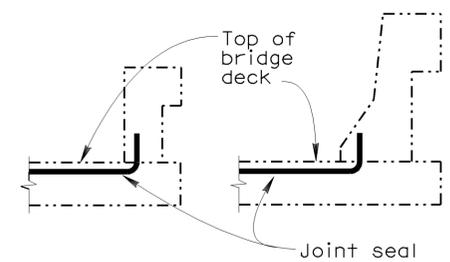
**BARRIER REPLACEMENT
LIVORNA RD BRIDGE AND RETAINING WALL**

Rte 680, CC, PM 11.3
1"=30'

NOTE:
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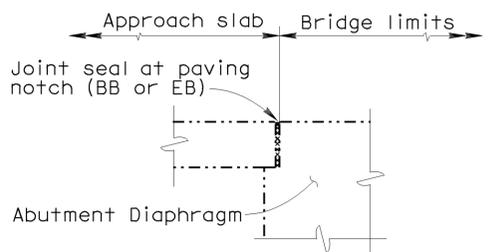
Gordon Danke DESIGN ENGINEER	DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	LAYOUT	BY Rania Heider	CHECKED Mike Van De Pol	SPECIFICATIONS	BY Todd Geerts	PLANS AND SPECS COMPARED Todd Geerts	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	ROUTE 680 BRIDGES			
	DETAILS	BY Rania Heider	CHECKED Mike Van De Pol		POST MILE	GENERAL PLAN No. 5										
	QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol		VARIES	REVISION DATES		SHEET 5 OF 22								

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 04239 EA 4470u1 DISREGARD PRINTS BEARING EARLIER REVISION DATES 11-10-08 FILE => 04-4470u1-a-gp05.dgn STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 07-24-06)



JOINT SEAL
AT LOW SIDE OF DECK

No Scale
 Details shown for illustration purposes only.
 For use only where deck joint matches the barrier rail joint

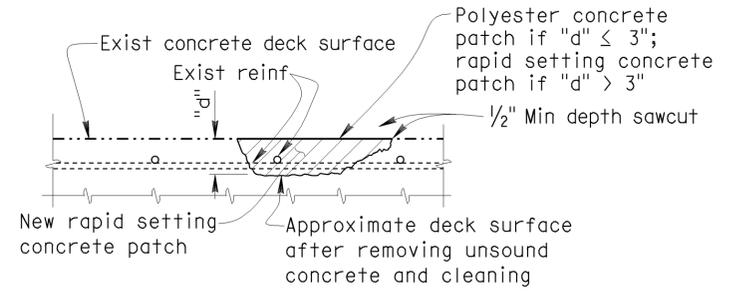


JOINT SEAL LOCATION

- The following notes applies to JOINT SEAL TYPE A:
1. Install Type A joint seal 3 inch up into curb or rail on the low side of the deck where joint matches curb or rail joint
 2. For details not shown see 

- The following notes apply to JOINT SEAL TYPE B:
1. Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements
 2. Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer
 3. W1 shall be the smaller of the values determined as follows:
 - A) 0.85 times the manufacturer's designed minimum uncompressed width of seal
 - B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3 psi
 4. Bend Type B joint seal 6 inch up into curb or rail on the low side of the deck where deck joint matches curb or rail joint
 5. For details not shown see 

NOTE:
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DECK REPAIR DETAIL

No Scale
 Locations, area and depth of deck removal and replacement to be determined by the Engineer. For approximate locations, see "General Plan" sheets. Reinforcement may be encountered during deck concrete removal. Existing Reinforcement to remain

THRIE BEAM GUARD RAIL ANCHOR BLOCK APPLICATION CHART

Bridge Name	Bridge Number	Location *	Exist Barrier Type	Applicable Details
PINE VALLEY ROAD UC	28-0221	SB	1	NOTE B
MONTEVIDEO ROAD UC	28-0222	SB	1	NOTE B
SAN RAMON CREEK BR	28-0197	NB	9	NOTE A
DIABLO ROAD UC	28-0198	NB	9	NOTE A
EL CERRO BLVD UC	28-0199	NB SB	9	NOTE A
EL PINTADO ROAD UC	28-0200	NB SB	9	NOTE A
LA GONDA WAY UC	28-0192	NB	9	NOTE A
STONE VALLEY ROAD UC	28-0201	NB	9	NOTE A
LIVORNA ROAD UC	28-0191	NB SB	9 736	NOTE A NA
RUDGEAR ROAD UC	28-0059	NB SB	27	NOTE C

* Denotes Traffic Approach Quadrant of Structure Existing where new Guard Rail Connection will be made to Barrier (MOD). For details, see "General Plan" sheets

Note A: For End Block Alternative Details, see "Thrie Beam Connection Details Barrier Railing Type 9 and 9-11" sheet

Note B: For End Block Alternative Details, see "Thrie Beam Connection Details Barrier Railing Type 1 & 2" sheet

Note C: For End Block Alternative Details, see "Thrie Beam Connection Details Barrier Railing Type 27" sheet

JOINT SEAL TABLE

	Bridge Number	Location	Minimum MR (Inch)	Approximate Length (Foot)	Existing Waterstop	Approx. Depth to Clean Exp Joint (Inch)	Remove and Patch Deck Concrete (ft ³) **
MONTEVIDEO ROAD UC	28-0222	Abut 1 BB	1	140	NO	12	NA
		Abut 4 EB	1	140	NO	12	
LAUREL DRIVE UC	28-0196	Abut 1 BB	1	282	NO	12	101
		Hinge 1 H	1 1/2	285	NO	12	
		Hinge 2 H	1 1/2	285	NO	12	
SAN RAMON CREEK BR	28-0197	Abut 1 BB	1 1/2	145	NO	12	NA
		Abut 4 EB	1 1/2	145	NO	12	
SAN RAMON CREEK BR	28-0197S	Bent 1 BB	NA	NA	NO	NA	NA
		Hinge 1 H	2	26	NO	30	
		Abut 8 EB	NA	NA	NO	NA	
DIABLO ROAD UC	28-0198	Abut 1 BB	1	164	NO	12	18
		Abut 4 EB	1	164	NO	12	
EL CERRO BLVD UC	28-0199	Abut 1 BB	1	143	NO	12	18
		Abut 4 EB	1	143	NO	12	
LA GONDA WAY UC	28-0192	Abut 1 BB	1	141	NO	12	16
		Abut 4 EB	1	141	NO	12	
STONE VALLEY ROAD UC	28-0201	Abut 1 BB	1	208	NO	12	11
		Abut 4 EB	1	208	NO	12	
LIVORNA ROAD UC	28-0191	Abut 1 BB	1	148	NO	12	21
		Abut 4 EB	1	148	NO	12	
RUDGEAR ROAD UC	28-0059	Abut 1 BB	1	154	NO	12	70
		Hinge 1 H	3	104	Yes	36	
		Hinge 2 H	3	104	Yes	36	
		Abut 7 EB	1	186	NO	12	

Notes:

1. Bridge 28-0196 Hinge 1 and 2 replace with bonded joint seal
2. NA= Not Applicable
H= Hinge joint

----- Denotes Exist

** Denotes Approximate Volume of Deck Concrete to be Removed and Replaced. Existing Deck Reinf to Remain. See "Deck Repair Detail"

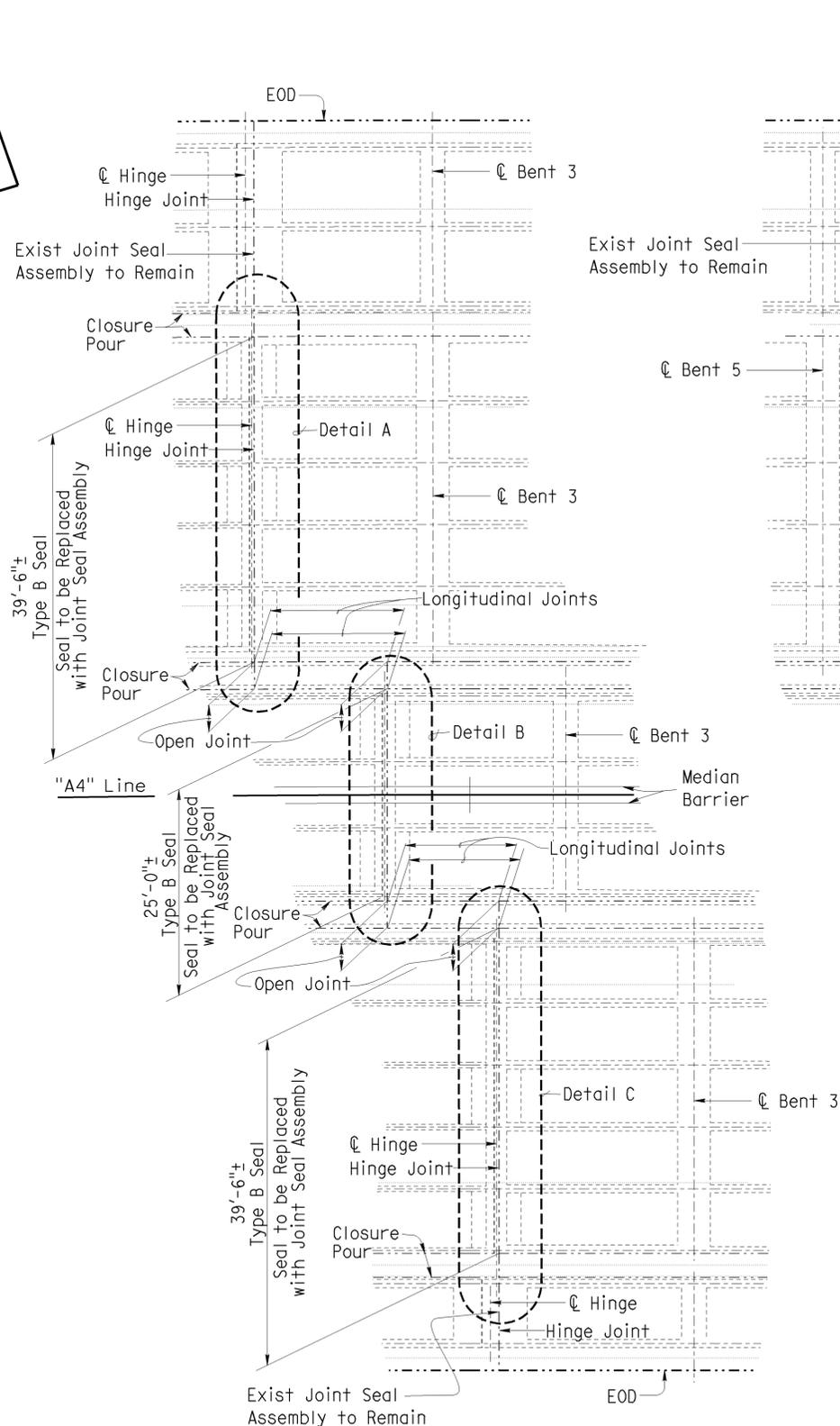
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	489	504

5-18-09
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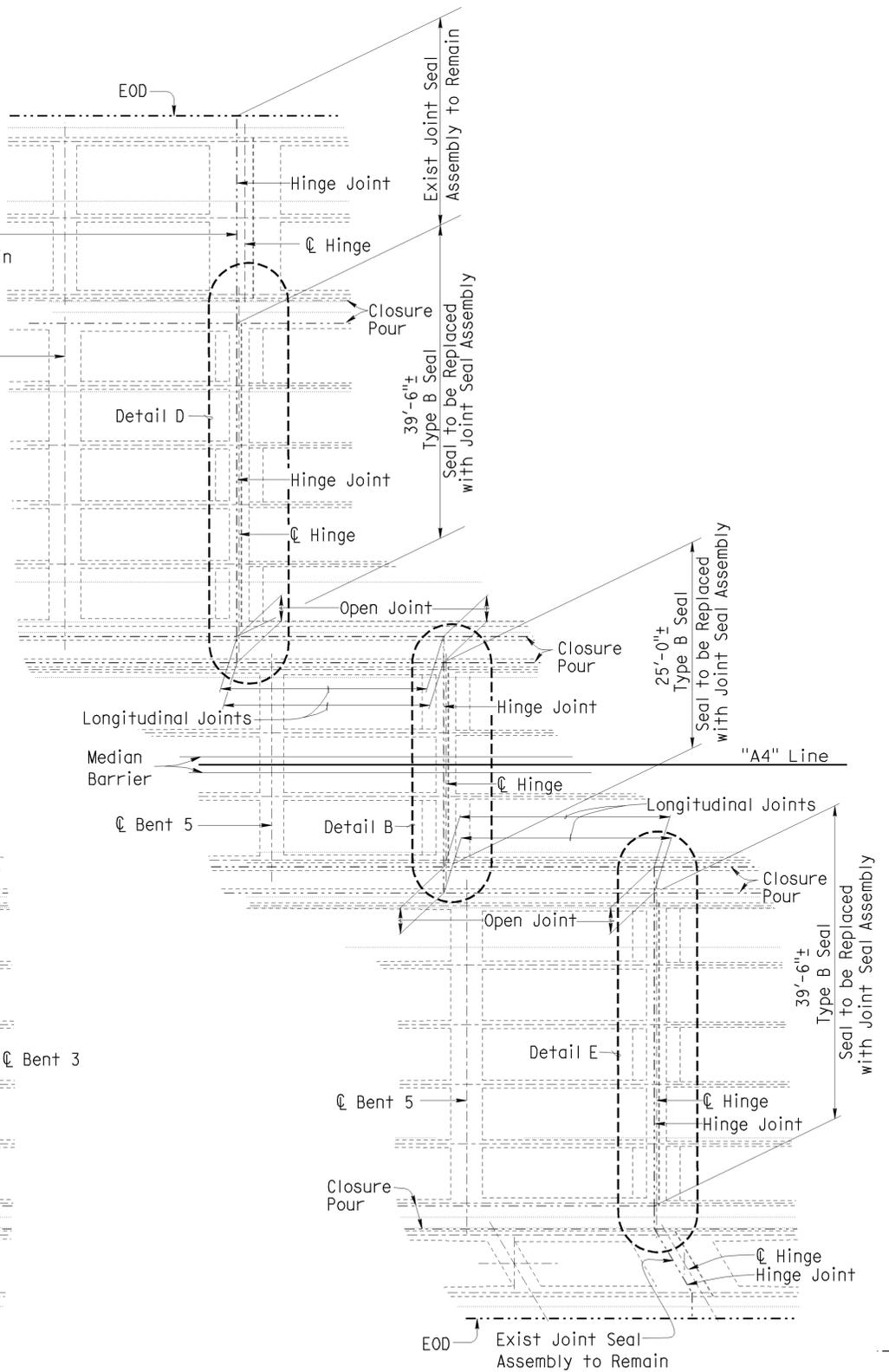
2-1-10
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Mike Van De Pol
No. C35610
Exp. 09-30-09
CIVIL
STATE OF CALIFORNIA



HINGE 1



HINGE 2

PART PLANS

1" = 10'

RUDGEAR ROAD UNDERCROSSING

Notes:

1. For "Detail A", "Detail B" and "Detail C" see "Hinge Joint Details No. 2" sheet
2. For "Detail D" and "Detail E" see "Hinge Joint Details No. 3" sheet
3. For Locations of "Hinge 1 and 2" see "Rudgear Road UC" on "General Plan No. 4" sheet

----- Indicates existing

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

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DESIGN</td> <td style="width: 30%;">BY John O'Brien</td> <td style="width: 30%;">CHECKED Mike Van De Pol</td> </tr> <tr> <td>DETAILS</td> <td>BY Mike Van De Pol/T. Fairall</td> <td>CHECKED John O'Brien</td> </tr> <tr> <td>QUANTITIES</td> <td>BY John O'Brien</td> <td>CHECKED Mike Van De Pol</td> </tr> </table>	DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	DETAILS	BY Mike Van De Pol/T. Fairall	CHECKED John O'Brien	QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol	<p>STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION</p>	<p>DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BRIDGE NO.</td> <td>28-0059</td> </tr> <tr> <td>POST MILE</td> <td>12.6</td> </tr> </table>	BRIDGE NO.	28-0059	POST MILE	12.6	<p>ROUTE 680 BRIDGES HINGE JOINT SEAL DETAILS No. 1</p>
DESIGN	BY John O'Brien	CHECKED Mike Van De Pol															
DETAILS	BY Mike Van De Pol/T. Fairall	CHECKED John O'Brien															
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol															
BRIDGE NO.	28-0059																
POST MILE	12.6																
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 04239 EA 4470u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">REVISION DATES</th> </tr> <tr> <td style="width: 50%;">1-06-09</td> <td style="width: 50%;"></td> </tr> </table>	REVISION DATES		1-06-09									
REVISION DATES																	
1-06-09																	
				SHEET 7 OF 22	USERNAME => hrmikes1 DATE PLOTTED => 04-FEB-2010 TIME PLOTTED => 06:06 FILE => 04-4470u1-q-hngjntd101.dgn												

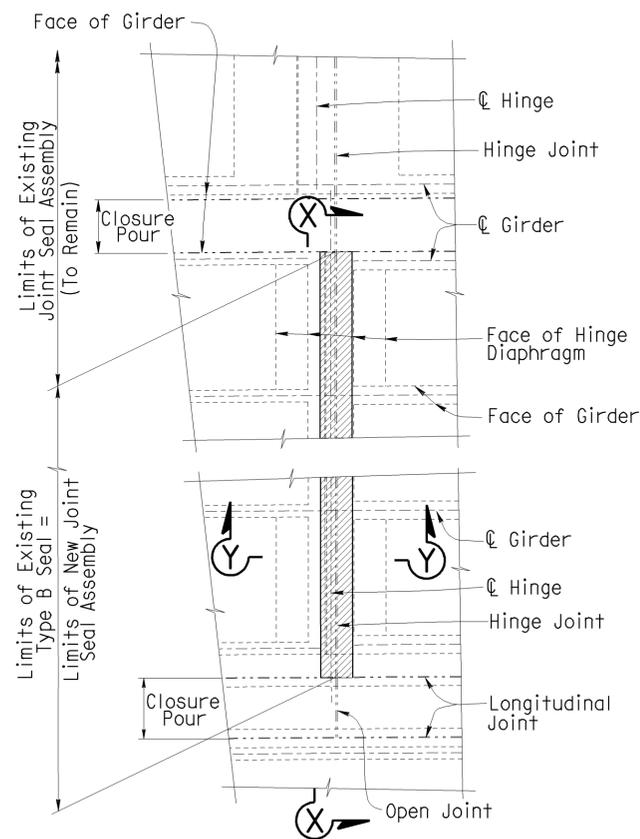
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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5-18-09
REGISTERED CIVIL ENGINEER DATE

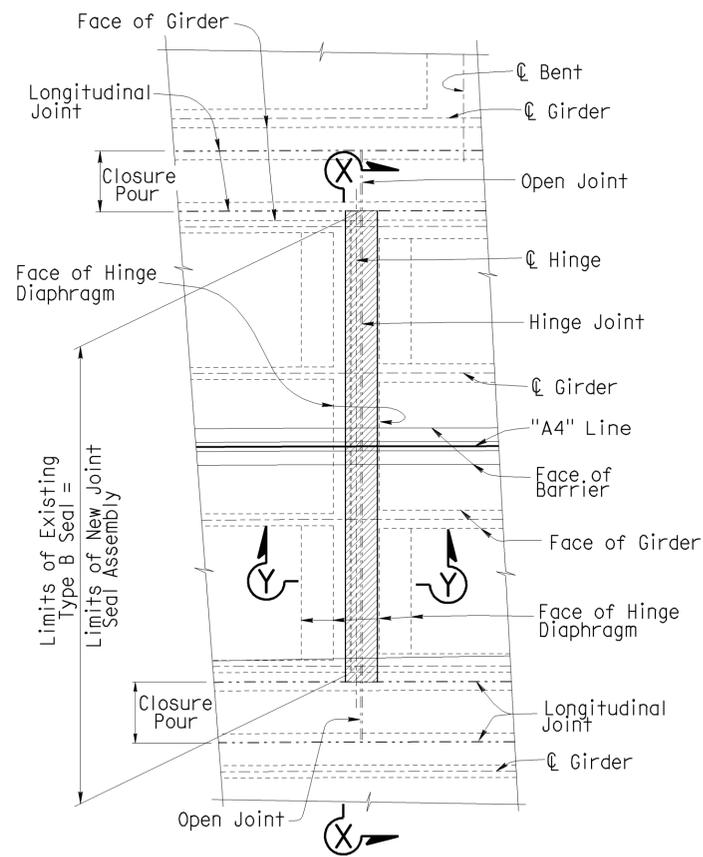
2-1-10
PLANS APPROVAL DATE

No. C35610
Exp. 09-30-09
CIVIL
STATE OF CALIFORNIA

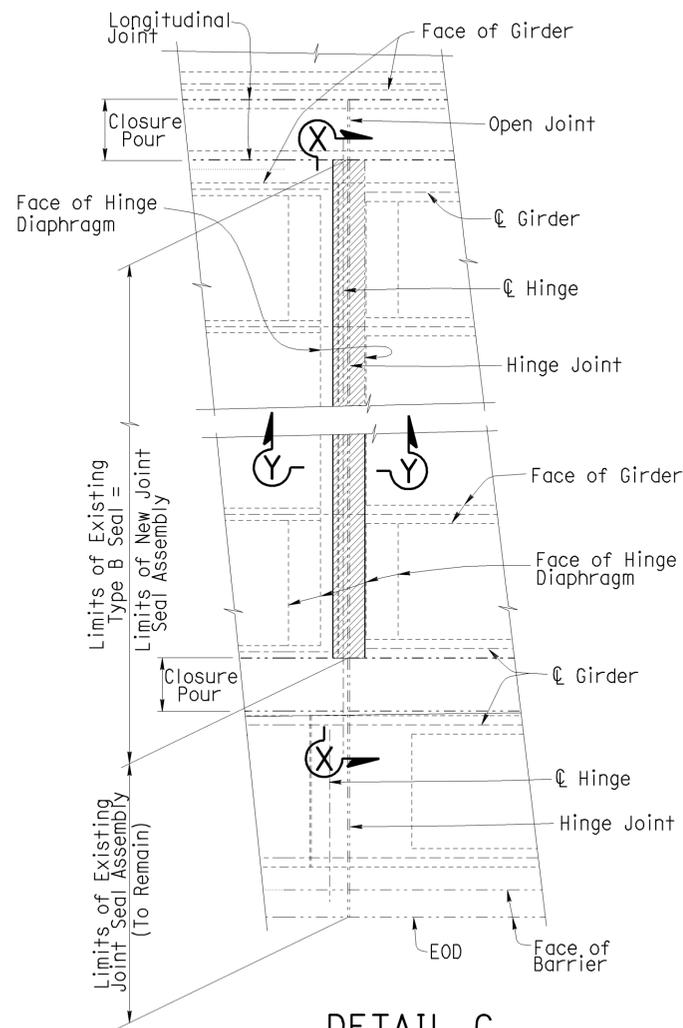
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DETAIL A
1" = 5'



DETAIL B
1" = 5'



DETAIL C
1" = 5'

Notes:

1. For "Section X-X" see "Hinge Joint Details No. 4" sheet
2. For "Section Y-Y" see "Hinge Joint Details No. 5" sheet
3. For location of "Detail A", "Detail B", and "Detail C" see "Hinge Joint Seal Details No. 1" sheet

----- Indicates existing

Denotes limits of removal of existing deck/hinge concrete. Existing reinforcement to remain except as noted on "Hinge Joint Seal Details No. 5" sheet

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

DESIGN	BY John O'Brien	CHECKED Mike Van De Pol
DETAILS	BY Mike Van De Pol/T. Fairall	CHECKED John O'Brien
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	28-0059
POST MILE	12.6

ROUTE 680 BRIDGES
HINGE JOINT SEAL DETAILS No. 2

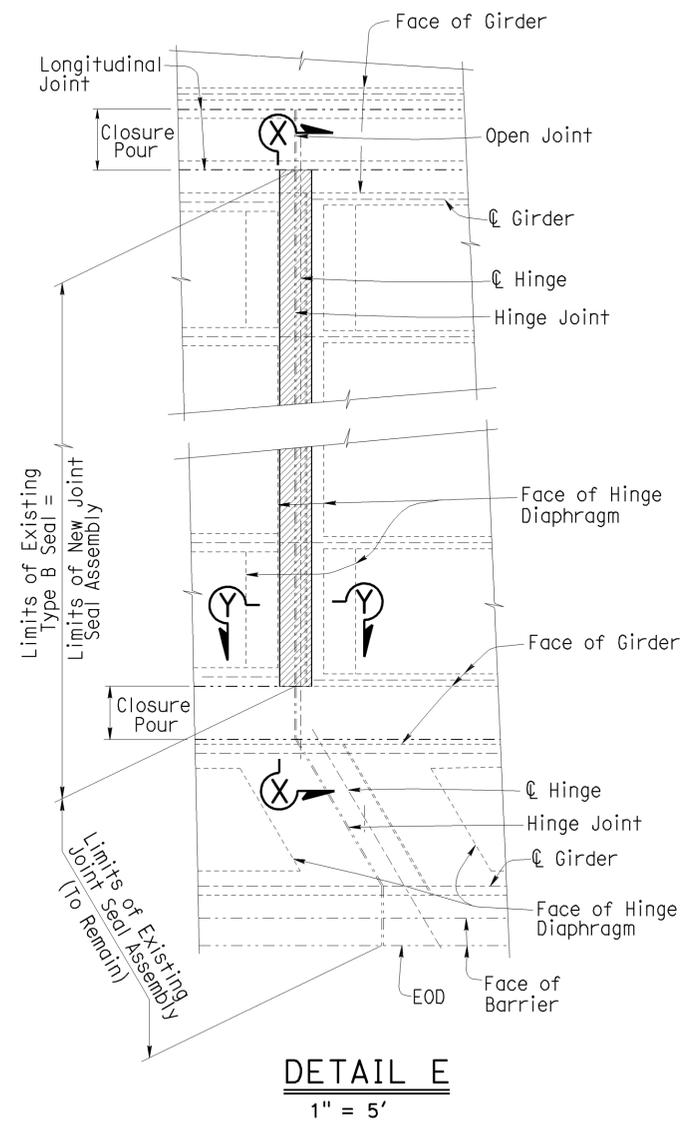
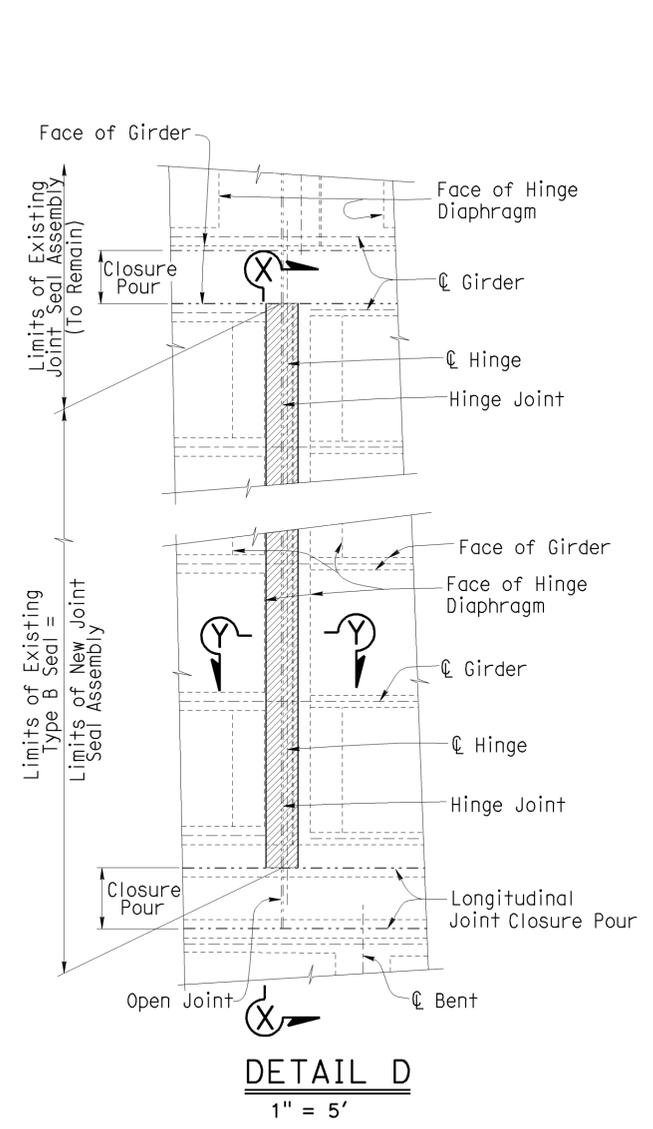
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04	CC	680	0.0/R12.8	491	504

 5-18-09
 REGISTERED CIVIL ENGINEER DATE

2-1-10
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 Mike Van De Pol
 No. C35610
 Exp. 09-30-09
 CIVIL
 STATE OF CALIFORNIA



- Notes:
1. For "Section X-X" see "Hinge Joint Details No. 4" sheet
 2. For "Section Y-Y" see "Hinge Joint Details No. 5" sheet
 3. For location of "Detail D", and "Detail E" see "Hinge Joint Seal Details No.1" sheet
- - - - - Indicates existing
 Denotes limits of removal of existing deck/hinge concrete. Existing reinforcement to remain except as noted on "Hinge Joint Seal Details No. 5" sheet

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

DESIGN	BY John O'Brien	CHECKED Mike Van De Pol
DETAILS	BY Mike Van De Pol/T. Fairall	CHECKED John O'Brien
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	28-0059	ROUTE 680 BRIDGES HINGE JOINT SEAL DETAILS No.3
POST MILE	12.6	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

CU 04239
 EA 4470u1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	1-15-09								
SHEET	9	OF 22							

USERNAME => hmgjntd DATE PLOTTED => 04-FEB-2010 TIME PLOTTED => 06:06

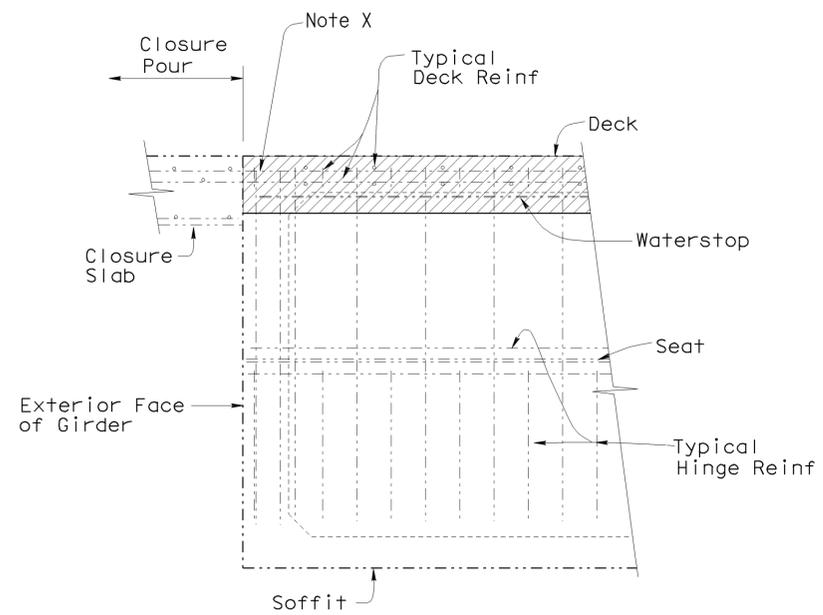
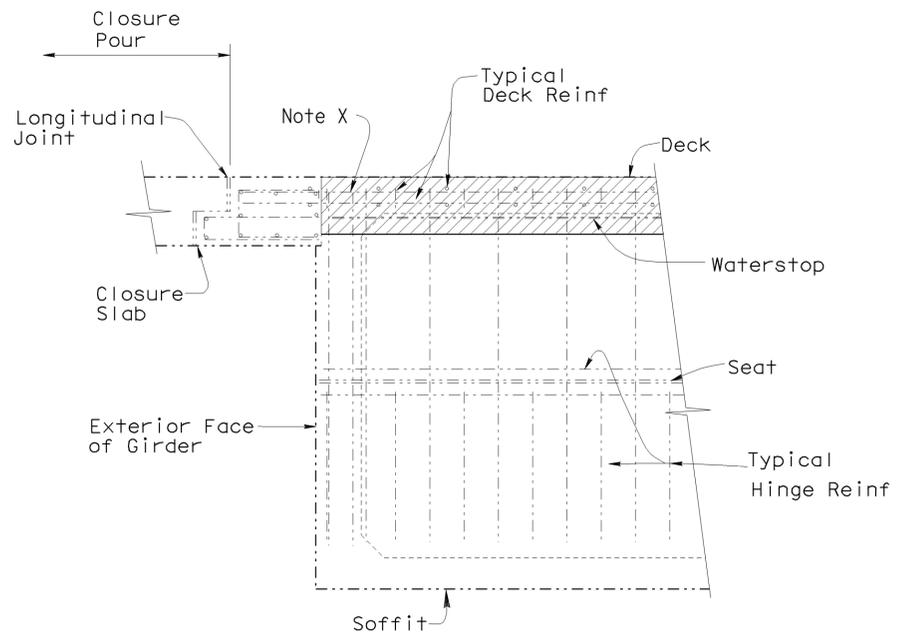
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 5-18-09
 REGISTERED CIVIL ENGINEER DATE

2-1-10
 PLANS APPROVAL DATE

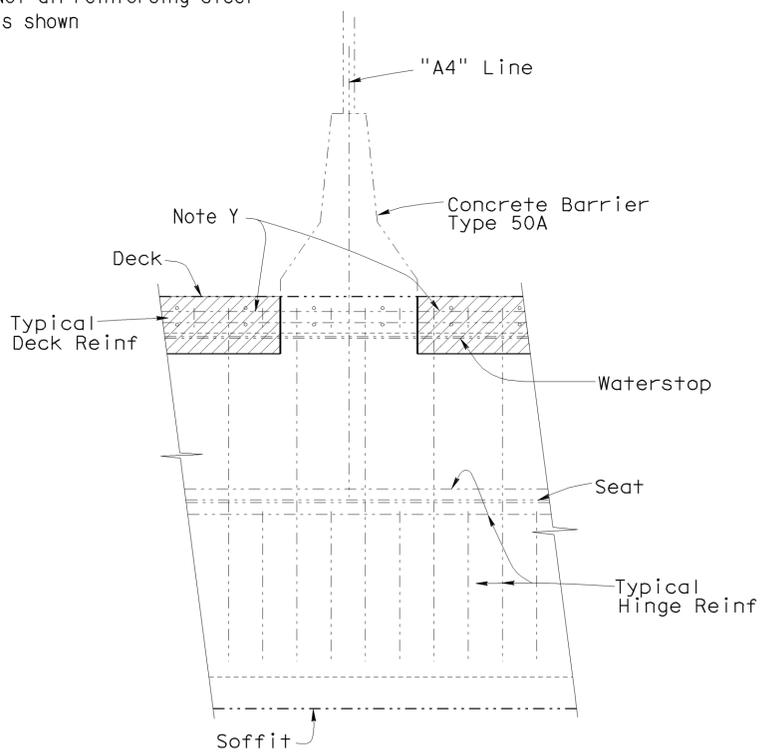
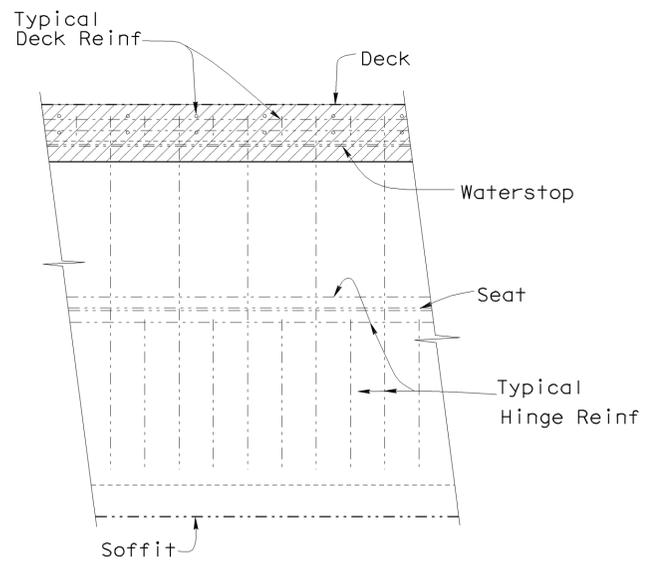
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Mike Van De Pol
 No. C35610
 Exp. 09-30-09
 CIVIL
 STATE OF CALIFORNIA



SECTION X-X
 $\frac{3}{4}'' = 1'$
 Notes:
 Not all reinforcing steel is shown

- Notes:
- For locations of "Section X-X" see "Hinge Joint Seal Details No. 2 and No. 3" sheets
 - At option of contractor, a portion of the existing median barrier may be removed to facilitate seal replacement. Barrier shall be replaced to match existing dimensions and reinforcement content



SECTION X-X
 $\frac{3}{4}'' = 1'$
 Notes:
 Not all reinforcing steel is shown

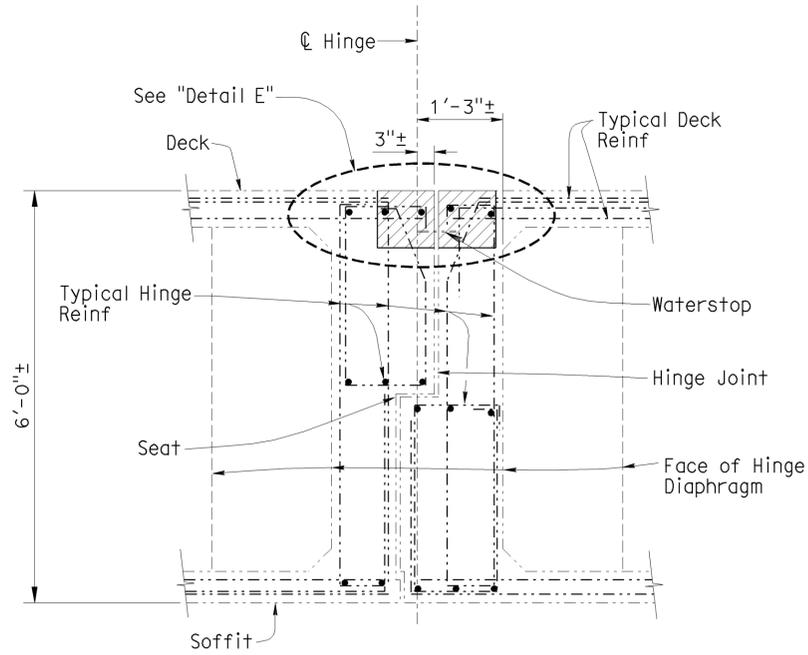
- Indicates existing
- Denotes limits of removal of existing deck/hinge concrete. Existing reinforcement to remain except as noted on "Hinge Joint Seal Details No. 5" sheet

- Note X
 A portion of the existing transverse horizontal closure pour reinforcement, extending into the deck shall remain, to allow for lap splice with new joint seal closure continuous #6 bars. See details on "Hinge Joint Seal Details No. 5" sheet
- Note Y
 A portion of the existing transverse horizontal reinforcement, extending into the deck shall remain, to allow for lap splice with new joint seal closure continuous #6 bars. See details on "Hinge Joint Seal Details No. 5" sheet

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

DESIGN BY John O'Brien CHECKED Mike Van De Pol DETAILS BY Mike Van De Pol/T. Fairall CHECKED John O'Brien QUANTITIES BY John O'Brien CHECKED Mike Van De Pol	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 28-0059 POST MILE 12.6	ROUTE 680 BRIDGES HINGE JOINT SEAL DETAILS No. 4	REVISION DATES SHEET 10 OF 22
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 04239 EA 4470u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		
	STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)		FILE => 04-4470u1-q-hngjntd#04.dgn		USERNAME => hrmikes DATE PLOTTED => 04-FEB-2010 TIME PLOTTED => 06:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	493	504
			5-18-09	DATE	
			2-1-10	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER Mike Van De Pol No. C35610 Exp. 09-30-09 CIVIL STATE OF CALIFORNIA					



SECTION Y-Y
 $\frac{3}{4}'' = 1'$
 Notes:
 Not all reinforcing steel is shown

Notes:

- For locations of "Section Y-Y" see "Hinge Joint Seal Details No. 2 and No. 3" sheets
 - * Cut off and remove #6, leaving sufficient length for lap splice at each end. See Note X and Note Y on "Hinge Joint Seal Details No. 4" sheet
 - ** New #6 lapped with existing #6 transverse reinforcement bars. See Note X and Note Y on "Hinge Joint Seal Details No. 4" sheet
- For joint seal assembly details see "Hinge Joint Seal Details No. 6" sheet

If existing reinforcement intended for retention gets damaged, then new dowel bars shall be placed adjacent to the damaged reinforcement. Utilize #4 dowels in 6" deep hole. As approved by the Engineer

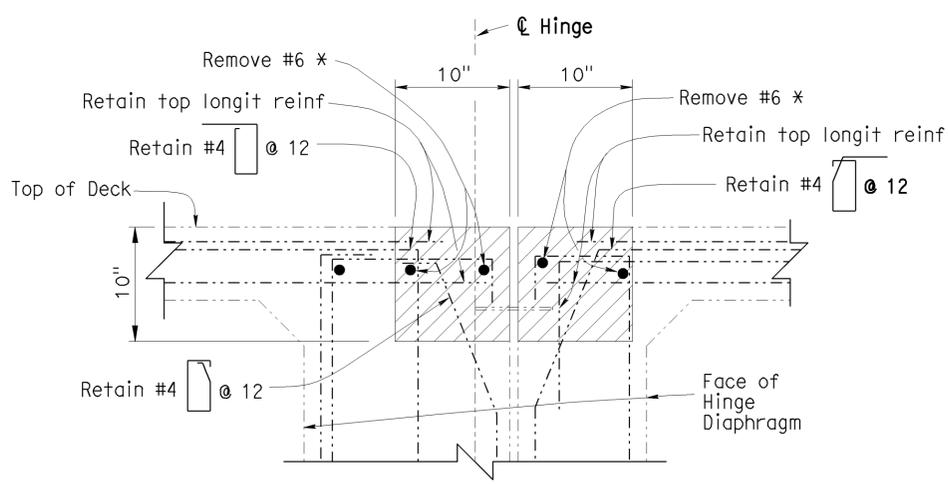
If horizontal dowels are used, the drilled hole shall have a slope of $\frac{3}{1}$

Denotes limits of removal of existing deck/hinge concrete. Existing reinforcement to remain except as noted (reposition as required).

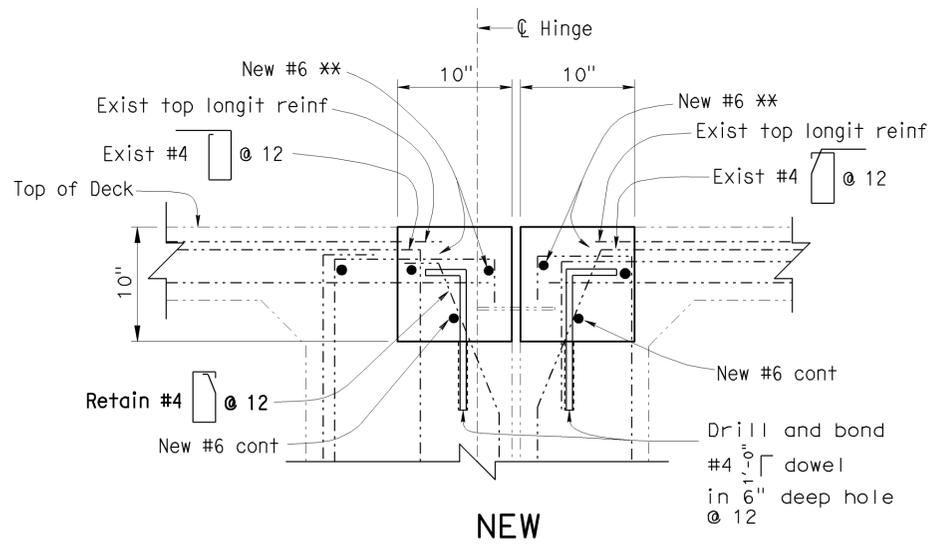
Indicates existing

Indicates new construction

A new Waterstop is not required



EXISTING CONDITION



NEW

DETAIL E

$\frac{1}{2}'' = 1'-0''$
 All reinforcing steel not shown
 Joint seal assembly not shown

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

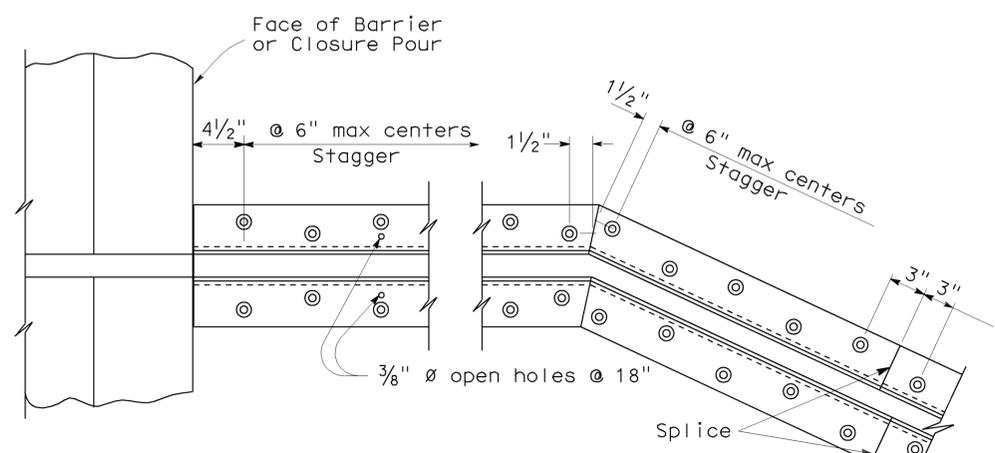
DESIGN	BY John O'Brien	CHECKED Mike Van De Pol
DETAILS	BY Mike Van De Pol/T. Fairall	CHECKED John O'Brien
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

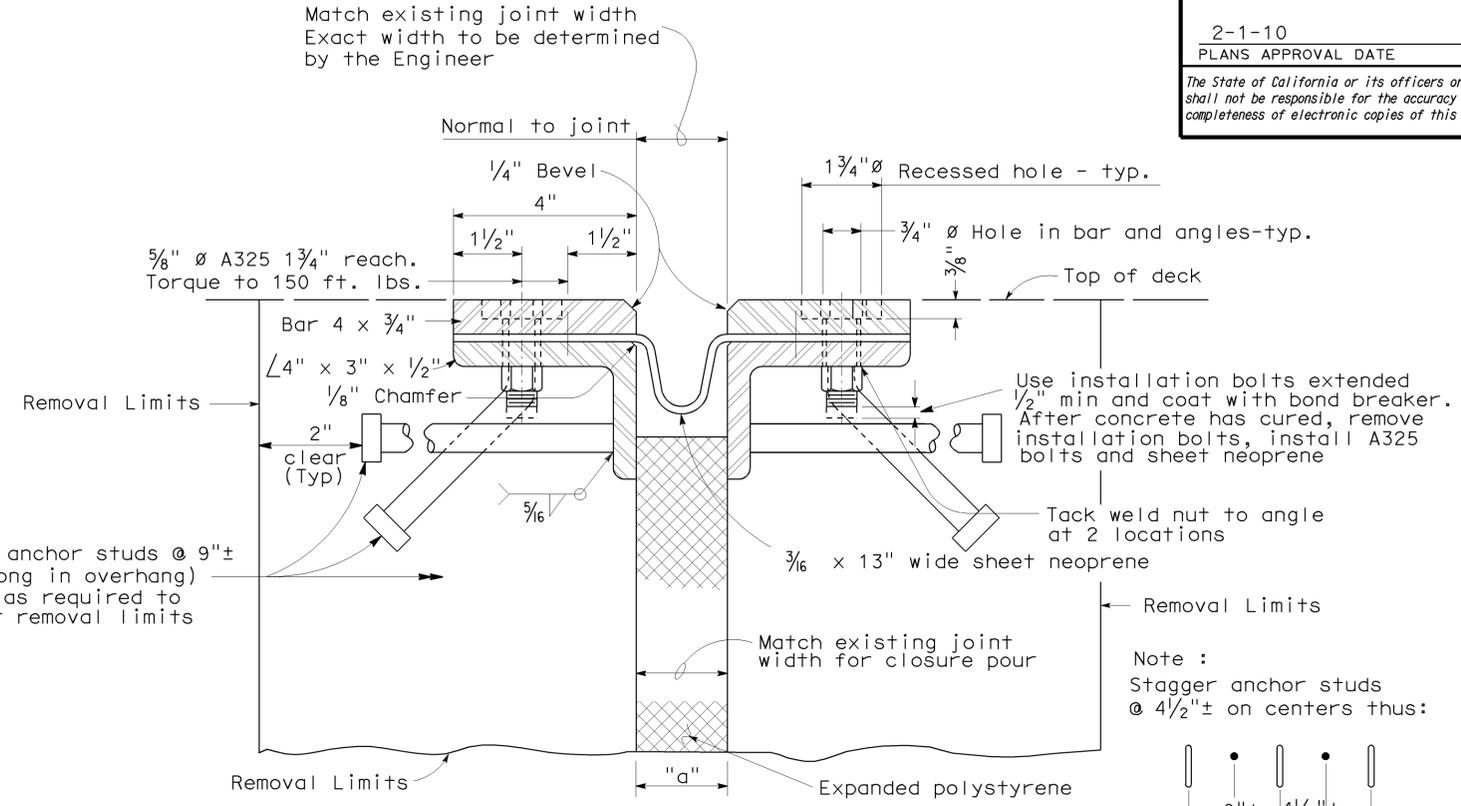
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH **9**

BRIDGE NO.	28-0059
POST MILE	12.6

ROUTE 680 BRIDGES
 HINGE JOINT SEAL DETAILS No. 5

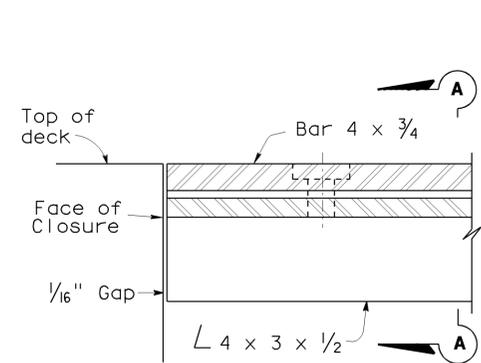


PLAN BOLT & PLATE LAYOUT
NO SCALE

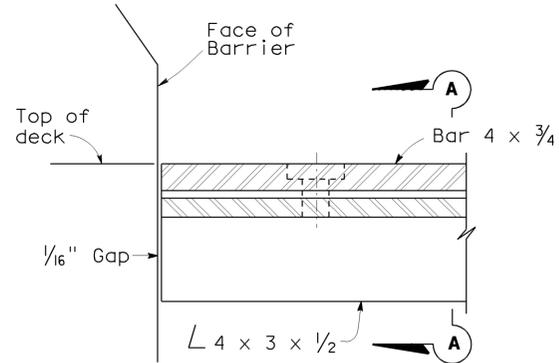


SECTION A-A
NO SCALE

For Removal Limits see "Hinge Joint Seal Details No. 2" Through "Hinge Joint Seal Details No. 5" Sheets



DETAIL AT CLOSURE POUR
NO SCALE



DETAIL AT MEDIAN BARRIER
NO SCALE

Joint Information			"a" Dimensions		
Location	Movement Rating (MR)	Skew	Winter	Spring & Fall	Summer
Hinge 1	3"	0°	3"	2 1/4"	1 1/2"
Hinge 2	3"	0°	3"	2 1/4"	1 1/2"

NOTES: Full penetration butt welds may be substituted for fillet welds on all anchor studs. Alternate types of anchor studs may be permitted subject to the approval by the Engineer. Joint seal assembly to be used in conjunction with closure pour. (For deck removal limits see other sheets).

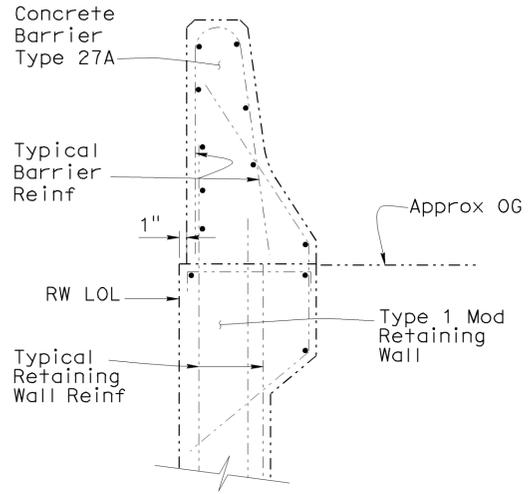
Use joint at crown of roadway, at any change in traverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication.

Sheet neoprene shall be fabricated in one continuous piece or joints shall be vulcanized. Neoprene shall be fabricated to bend around corners. 1 inch holes in neoprene sheets shall be drilled or punched so that the neoprene is not distorted at the time of installation.

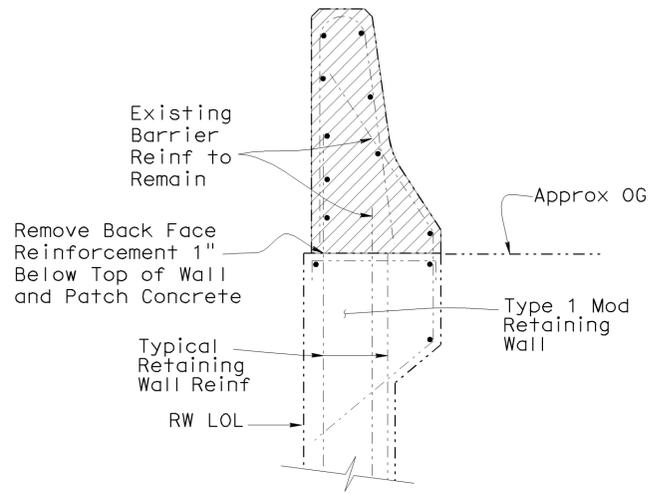
NOTE A
Insert assembly or expansion anchorage for 5/8 inch x 1 3/4 inch A325 bolt.

NOTE:
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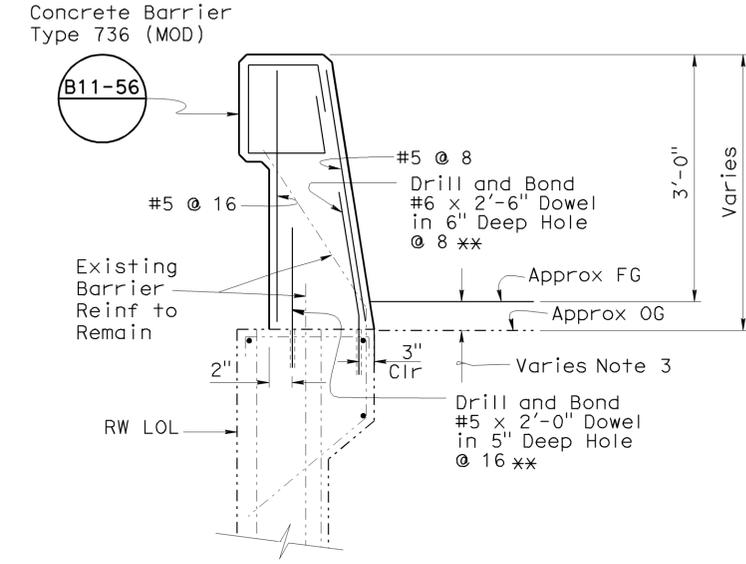
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04	CC	680	0.0/R12.8	496	504
			5-18-09	REGISTERED CIVIL ENGINEER DATE	
			2-1-10	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER Mike Van De Pol No. C35610 Exp. 09-30-09 CIVIL STATE OF CALIFORNIA					
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EXISTING CONDITION



REMOVAL



NEW

SECTION D-D

1" = 1'-0"

Notes:

- Indicates existing
 - Denotes new construction
 - Denotes removal of existing concrete barrier. Portion of existing reinforcement to remain
1. For location and limits of "Section D-D" see "General Plan No. 5" sheet
 2. Not all existing reinforcing steel is shown. For details, see Standard Plan B11-56
 3. For additional details, see "Road Plans"
- ** Evenly space dowels between retained existing Barrier and Retaining Wall Reinf

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

DESIGN	BY Mike Van De Pol	CHECKED John O'Brien
DETAILS	BY Tim Fairall/Rania Heider	CHECKED Mike Van De Pol
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

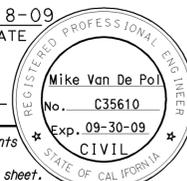
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

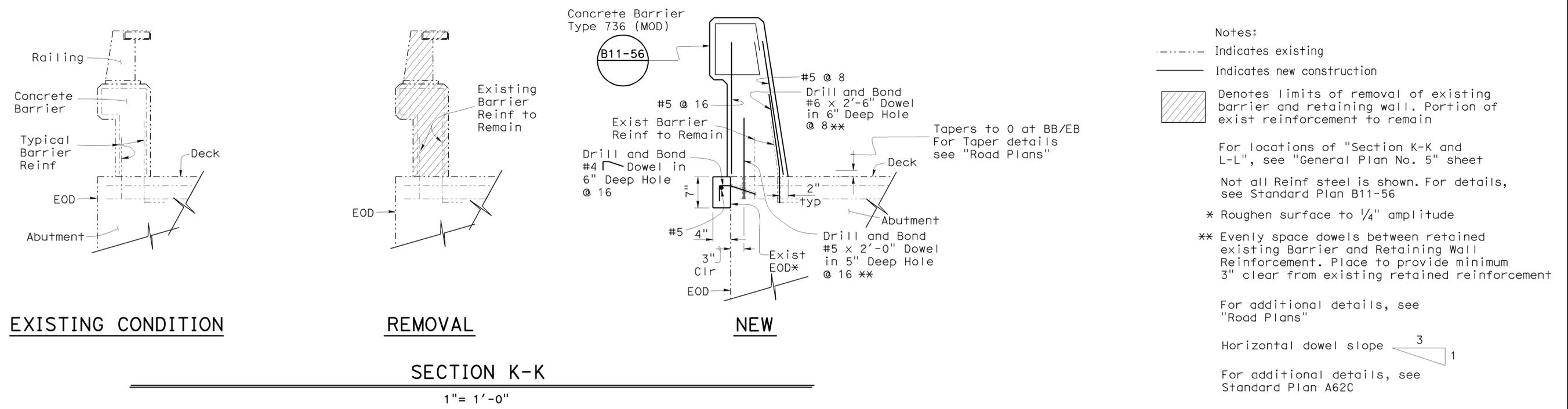
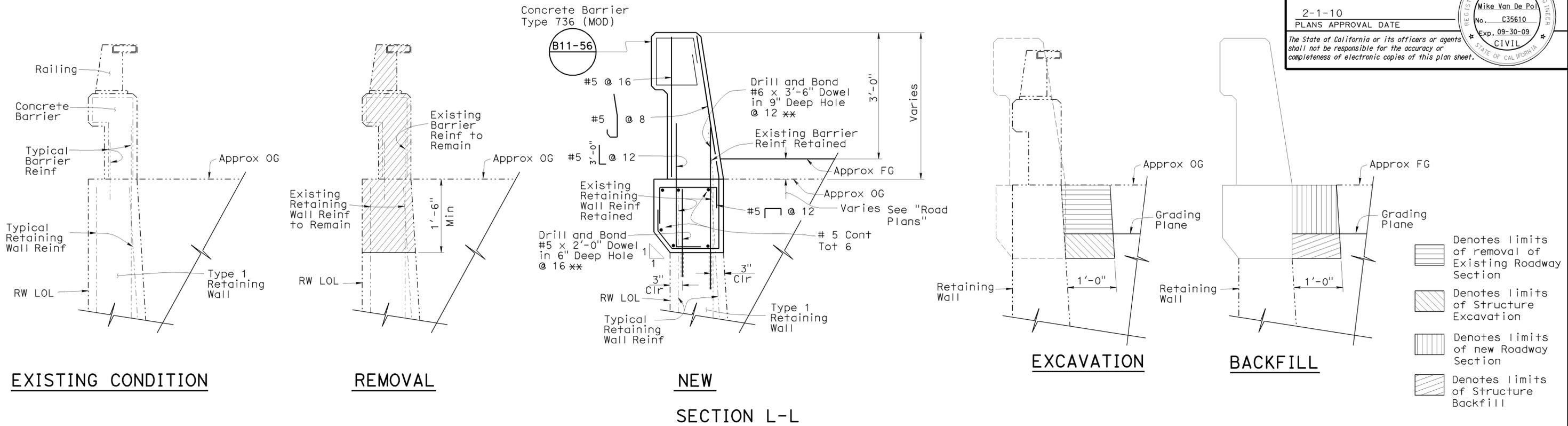
BRIDGE NO.	Various
POST MILE	Varies

ROUTE 680 BRIDGES
CONCRETE BARRIER DETAILS No.2

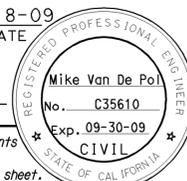
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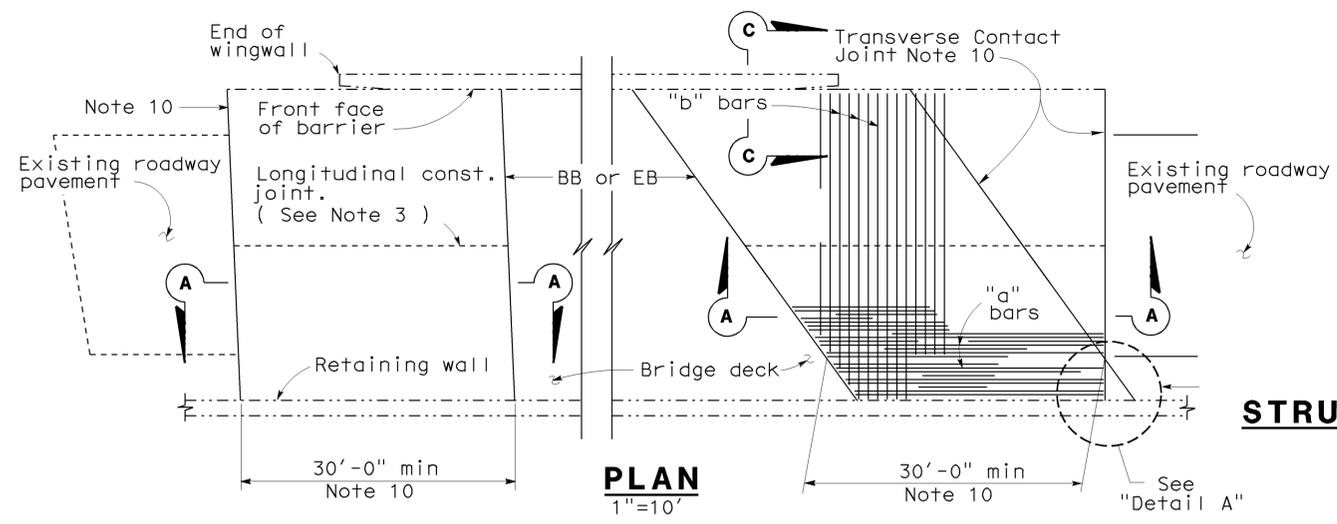
NOTE:
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BEFORE ORDERING OR FABRICATING
ANY MATERIAL.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	498	504
 REGISTERED CIVIL ENGINEER DATE 5-18-09					
2-1-10 PLANS APPROVAL DATE					
<small>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.</small>					

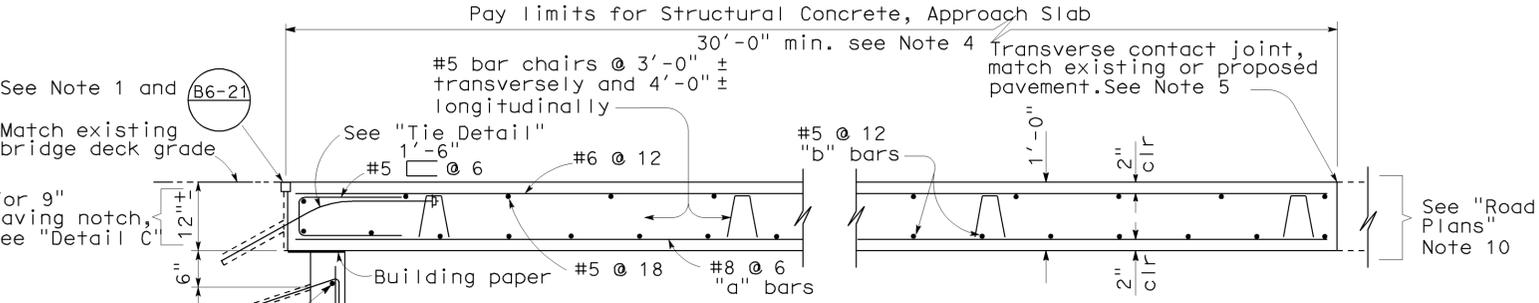
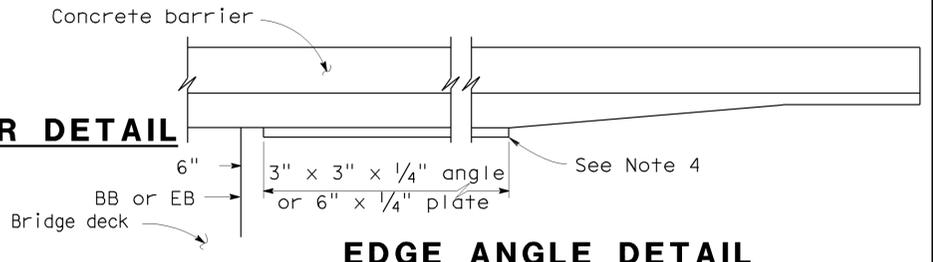
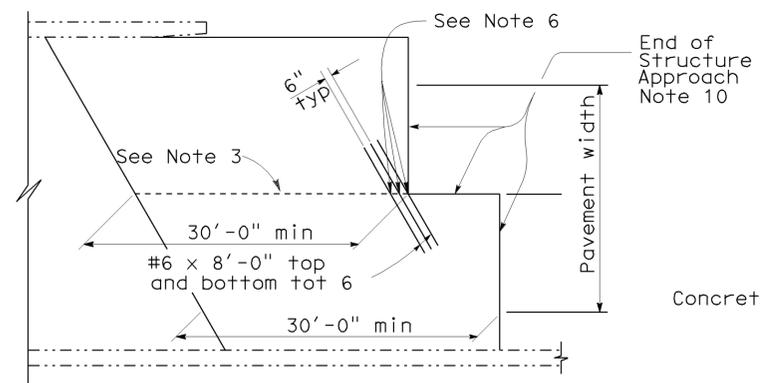


STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Mike Van De Pol	CHECKED John O'Brien	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	ROUTE 680 BRIDGES CONCRETE BARRIER DETAILS No.4
	DETAILS	BY Mike Van De Pol	CHECKED John O'Brien			Various	
	QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol			Varies	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 04239 EA 4470u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 16 OF 22

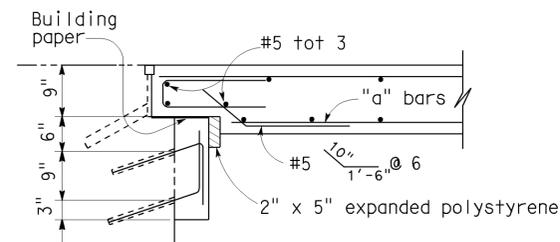
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	499	504
			5-18-09 REGISTERED CIVIL ENGINEER DATE		
2-1-10 PLANS APPROVAL DATE			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



STRUCTURE APPROACH - END STAGGER DETAIL



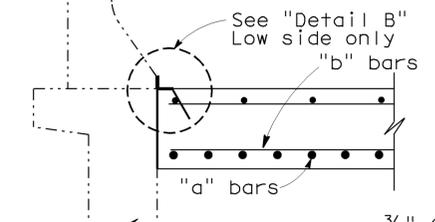
SECTION A-A



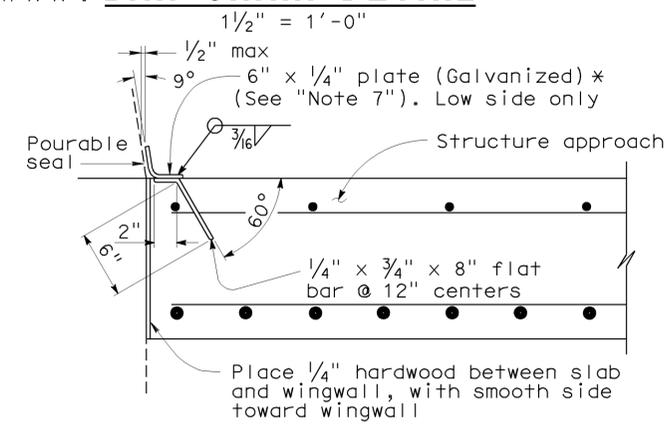
DETAIL C

NOTE: For details not shown, see "Section A-A".

SECTION C-C



BAR CHAIR DETAIL



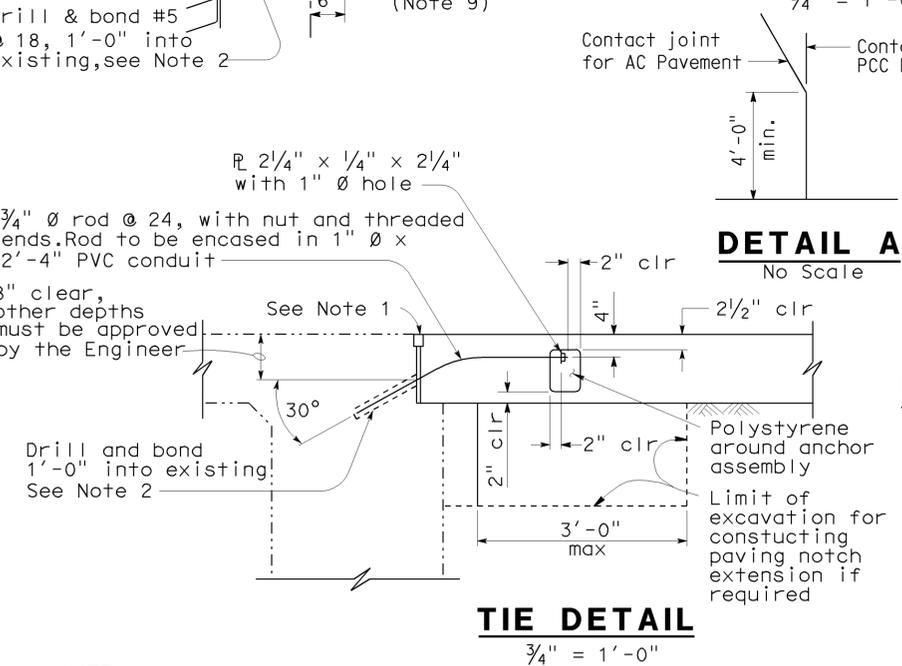
*** (TO BE USED WITH TYPE 25, TYPE 27 TYPE 9 OR TYPE 1 CONCRETE BARRIER)**

*** (TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)**

DETAIL B

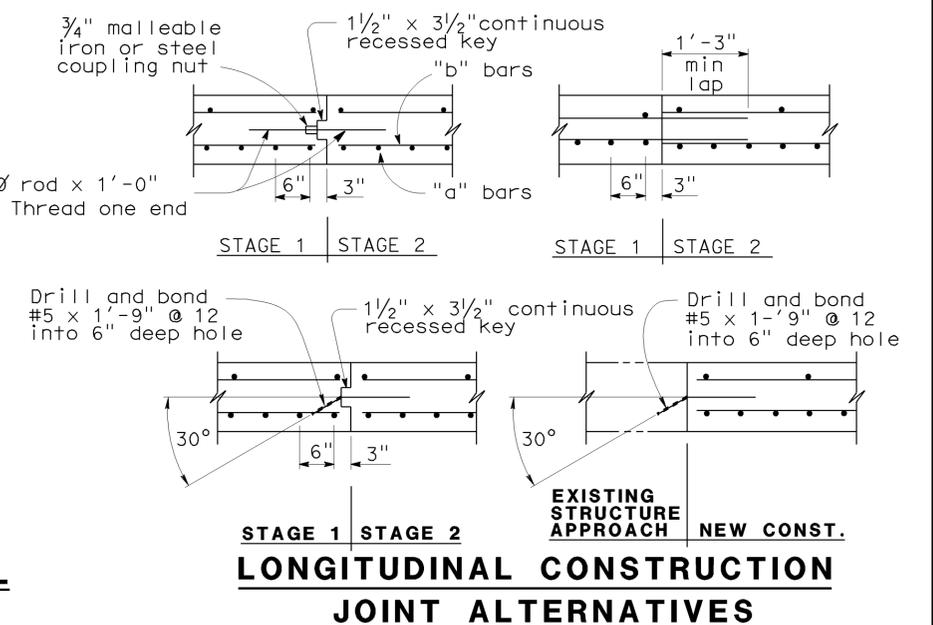
1/2" = 1'-0"

SPECIAL DETAILS



TIE DETAIL

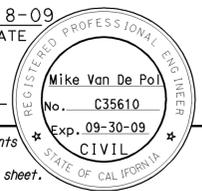
NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

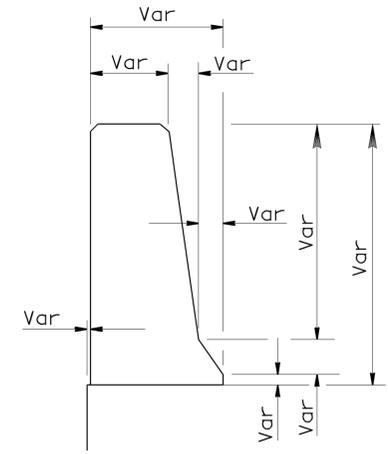


LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES

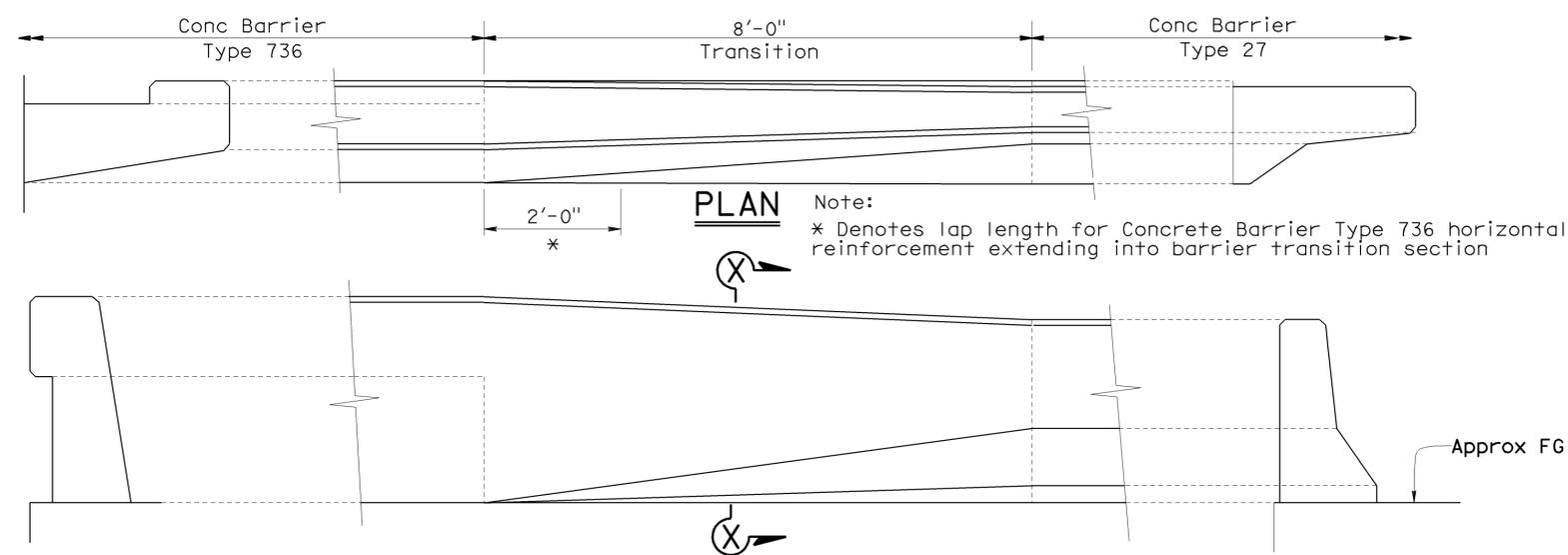
- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - Space to avoid existing prestress anchorages and main reinforcement.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on 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.
 - For approach slab details at Rudgear Road Bridge see "Barrier Replacement Details No.1" sheet
 - Where paving notch exists, the paving notch shall be reused.
 - Limits of new structure approach to match limits of removal of existing structure approach. See "General Plan" sheets

DESIGN	BY John O'Brien	CHECKED Mike Van De Pol	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	ROUTE 680 BRIDGES STRUCTURE APPROACH TYPE R (30D)
DETAILS	BY John O'Brien	CHECKED Mike Van De Pol			VARIOUS	
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol			VARIOUS	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 04239 EA 4470u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
			0 1 2 3	FILE => 04-4470u1-r-brd05_sa.dgn	7-06-09 2-02-09	SHEET 17 OF 22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	CC	680	0.0/R12.8	500	504
			5-18-09	REGISTERED CIVIL ENGINEER DATE	
			2-1-10	PLANS APPROVAL DATE	
					
<small>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.</small>					

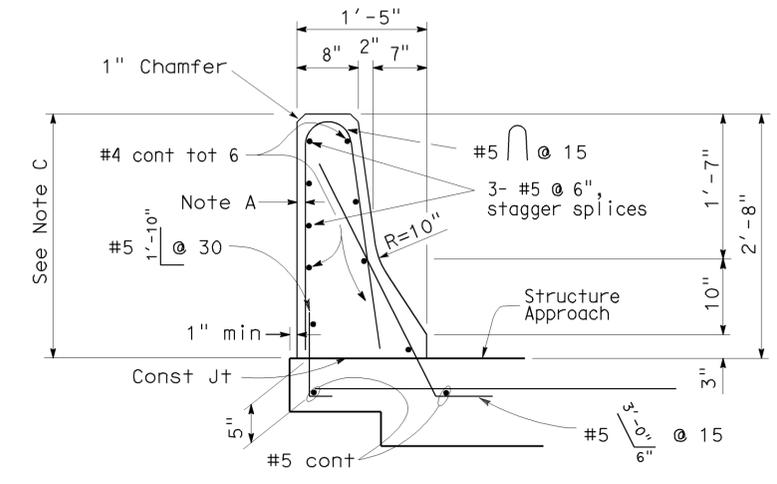


SECTION X-X
No Scale
Note: "For reinforcement see Concrete Barrier Type 27 Details"



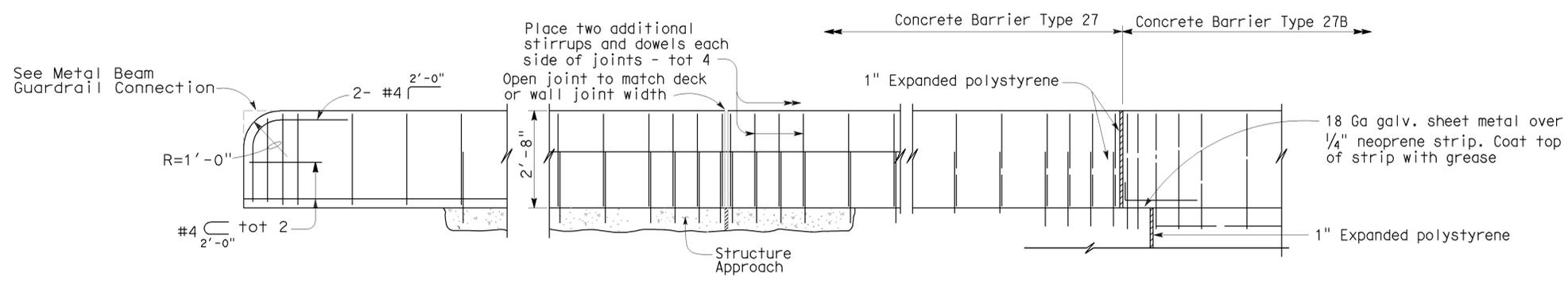
PLAN
Note: * Denotes lap length for Concrete Barrier Type 736 horizontal reinforcement extending into barrier transition section

ELEVATION
BARRIER TRANSITION TYPE 27 TO TYPE 736
No Scale
Note: Barrier Transition located Southwest structure approach Rudgear Road UC. See "General Plan No. 4" sheet



CONCRETE BARRIER TYPE 27
No Scale
Structure Approach Reinf not all Shown

- NOTES:**
- A. Clearance to reinforcing steel in rail to be 1". Longitudinal reinforcement to stop at expansion joints, and be continuous at construction joints. Hairpin stirrups to be rotated to meet clearance.
 - B. Rail joints shall be located at deck and principal wall joints.
 - C. Dimension may vary with cross-slope and with certain thickness of surfacing. See Bridge Plans.
 - D. When glare screen is required, see "Concrete Barrier Type 50".
 - E. For Metal Beam Guardrail details not shown see Standard Plans.
 - F. For Metal Beam Guardrail connections see "Thrie Beam Connection Details Barrier Railing Type 27" sheet
 - G. For Structure Approach details see "General Plan No. 4", "Barrier Replacement Details No. 1", and "Structure Approach Type R (30D)" sheets.
 - H. For location of Concrete Barrier Type 27 and Transition Section, see "General Plan No. 4" Sheet



END DETAIL
DECK OR WALL JOINT
AT CONNECTION TO STRUCTURE
See Note B
ELEVATION
No Scale

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DETAILS	BY John O'Brien	CHECKED Mike Van De Pol
QUANTITIES	BY John O'Brien	CHECKED Mike Van De Pol

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	Various	ROUTE 680 BRIDGES
POST MILE	Varies	
		CONCRETE BARRIER TYPE 27

USERNAME => HTTIGHT DATE PLOTTED => 16-FEB-2010 TIME PLOTTED => 11:01