

INDEX OF PLANS

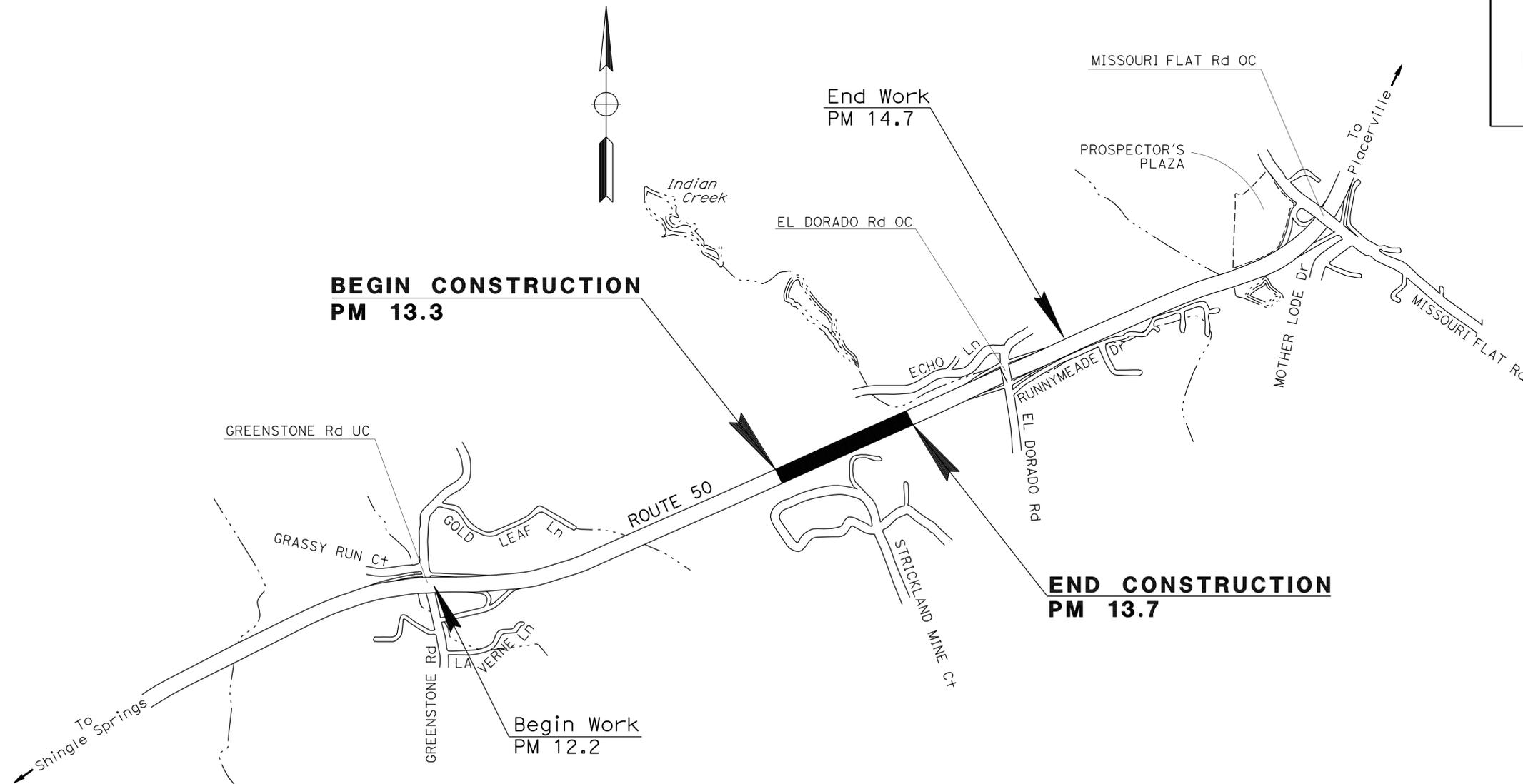
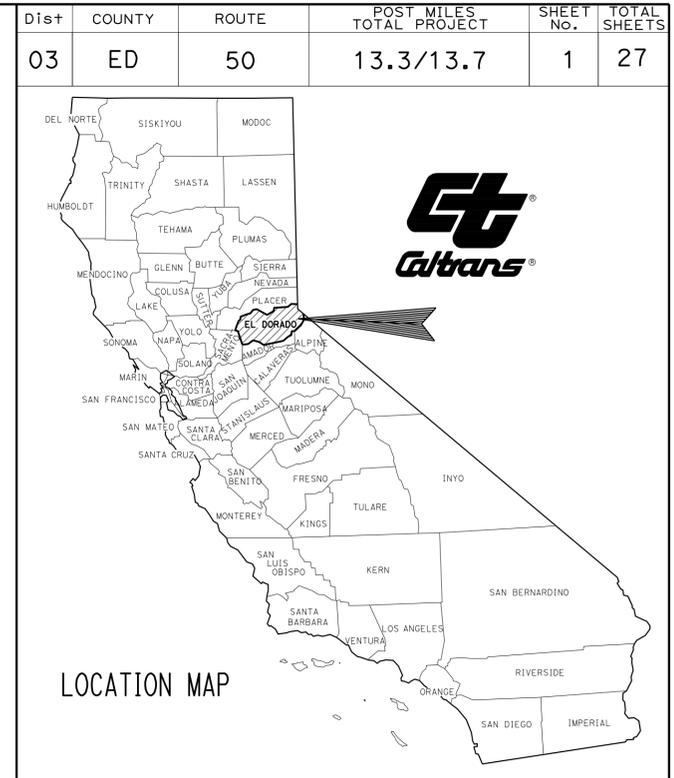
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN EL DORADO COUNTY NEAR
SHINGLE SPRINGS FROM 1.1 MILES
EAST OF GREENSTONE ROAD UNDERCROSSING TO
0.3 MILE WEST OF EL DORADO ROAD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER
CLARK PERI
DESIGN ENGINEER
CYRUS HUI

NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

Davinder Minhas 11-8-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
REGISTERED PROFESSIONAL ENGINEER
DAVINDER MINHAS
No. 70022
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

January 24, 2011
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	03-2E0404
PROJECT ID	0300000317

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	2	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE
 1-24-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DAVINDER MINHAS
 No. 70022
 Exp. 9-30-12
 CIVIL
 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.

**TYPICAL PAVEMENT
STRUCTURAL SECTIONS**

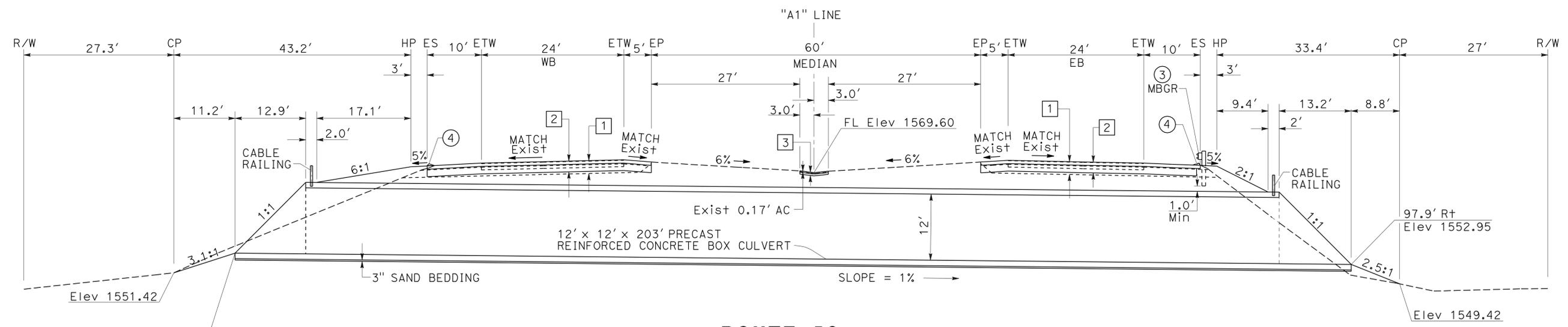
- 1 Exist
 0.08' OGAC
 0.65' AC
 0.50' CTB
 1.10' AS
- 2 0.60' HMA (TYPE A)
 1.35 (CLASS 2) AB
- 3 0.35' HMA (TYPE A)
 0.33' (CLASS 2) AB

DESIGN DESIGNATION

ADT (2008)	54,000	D 62%
ADT (2030)	89,600	T 4%
DHV	4,320	V 65 mph
ESAL	12,187,120	TI 12
	20	20

ABBREVIATIONS
 CP - CATCH POINT

- NOTES:**
- DIMENSIONS OF THE PAVEMENT STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
 - SEE LAYOUT SHEET FOR EXACT LOCATION OF METAL BEAM GUARD RAILING.
 - SEE LAYOUT SHEET FOR EXACT LOCATION AND TYPE OF DIKE.



ROUTE 50
 PM 13.5
 "A1" 102+83 TO "A1" 102+97

TYPICAL CROSS SECTION
 NO SCALE
X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 DIVISION OF ENGINEERING
 DESIGN BRANCH, S7
 Davinder Minhas
 CYRUS HUI
 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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	3	27

<i>Davinder Minhas</i> 11-8-10 REGISTERED CIVIL ENGINEER DATE	
1-24-11 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>	

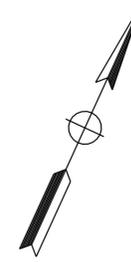
REGISTERED PROFESSIONAL ENGINEER
DAVINDER MINHAS
 No. 70022
 Exp. 9-30-12
 CIVIL
STATE OF CALIFORNIA

NOTES:

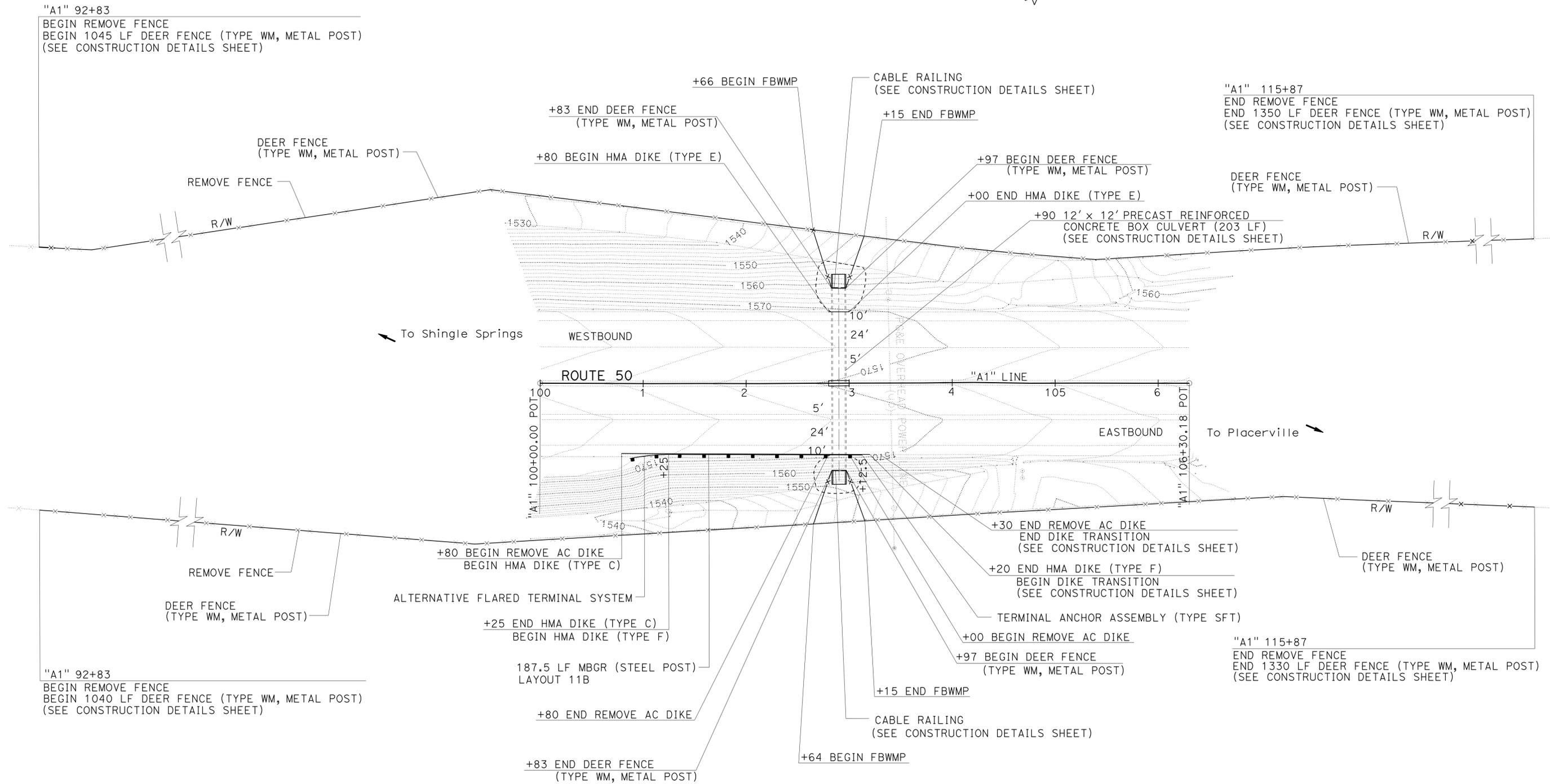
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR DETAILS OF FENCE (TYPE BW, 4-STRAND, METAL POST) MODIFIED, SEE CONSTRUCTION DETAILS SHEETS.
- BEGIN AND END STATIONS FOR DEER FENCE ARE APPROXIMATE.
- SEE PAVEMENT DELINEATION SHEETS FOR LOCATION, TYPE, AND QUANTITY OF RUMBLE STRIP.

ABBREVIATIONS:

FBWMP - FENCE (TYPE BW, 4-STRAND, METAL POST) MODIFIED



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION DIVISION OF ENGINEERING DESIGN BRANCH, S7
 FUNCTIONAL SUPERVISOR: CYRUS HUI
 DAVINDER MINHAS
 REVISIONS: (None listed)
 REVISIONS: (None listed)
 REVISIONS: (None listed)
 REVISIONS: (None listed)



"A1" 92+83
 BEGIN REMOVE FENCE
 BEGIN 1045 LF DEER FENCE (TYPE WM, METAL POST)
 (SEE CONSTRUCTION DETAILS SHEET)

"A1" 115+87
 END REMOVE FENCE
 END 1350 LF DEER FENCE (TYPE WM, METAL POST)
 (SEE CONSTRUCTION DETAILS SHEET)

"A1" 92+83
 BEGIN REMOVE FENCE
 BEGIN 1040 LF DEER FENCE (TYPE WM, METAL POST)
 (SEE CONSTRUCTION DETAILS SHEET)

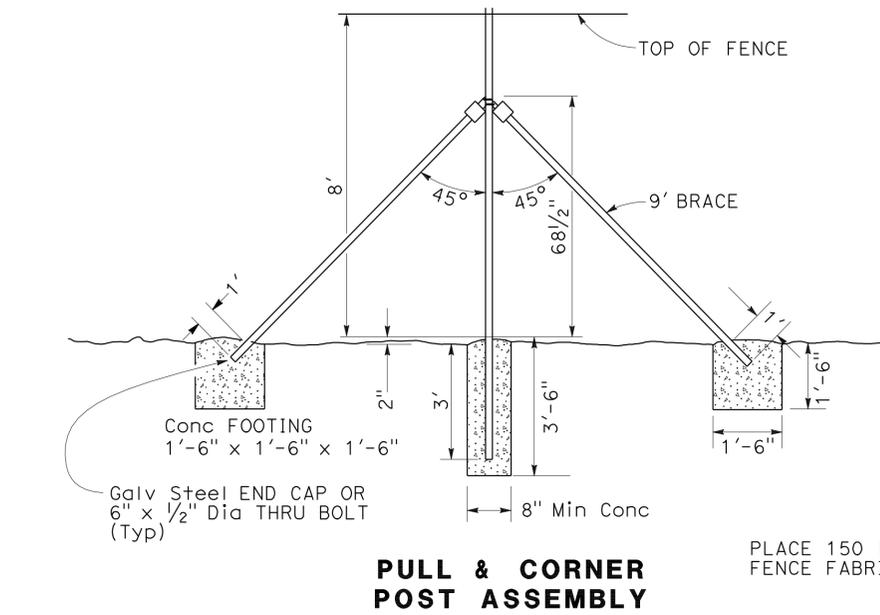
"A1" 115+87
 END REMOVE FENCE
 END 1330 LF DEER FENCE (TYPE WM, METAL POST)
 (SEE CONSTRUCTION DETAILS SHEET)

LAYOUT
 SCALE: 1" = 50'
L-1

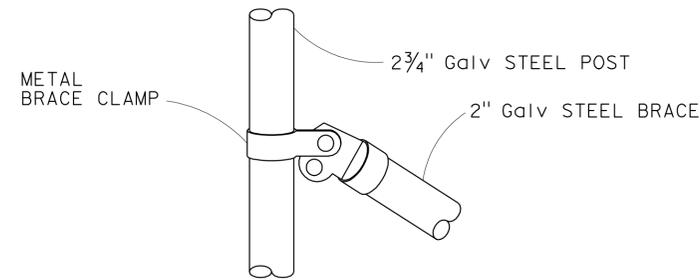
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	4	27
Davinder Minhas 11-8-10 REGISTERED CIVIL ENGINEER DATE					
1-24-11 PLANS APPROVAL DATE					
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NOTES:

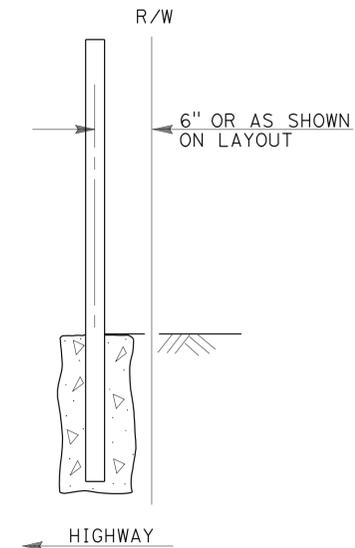
1. LINE POSTS SHALL BE 2 3/8" Galv STEEL, AND UNLESS OTHERWISE SPECIFIED ON SHEET L-1, SHALL, AT THE OPTION OF THE CONTRACTOR, EITHER BE DRIVEN 4' DEEP OR EMBEDDED MIN 2'-6" INTO 8" Dia x 3' DEEP CONCRETE FOOTING.
2. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER THE FABRIC SHALL BE ATTACHED ON THE SIDE OF THE POSTS AWAY FROM THE ROADWAY.
3. FABRIC ROLL ENDS SHALL TERMINATE AT AND BE SECURELY ATTACHED TO POSTS.
4. FOR ADDITIONAL INFORMATION SEE STANDARD PLAN A86.
5. INSTALL BRACE POST ASSEMBLY AT 400' INTERVALS.



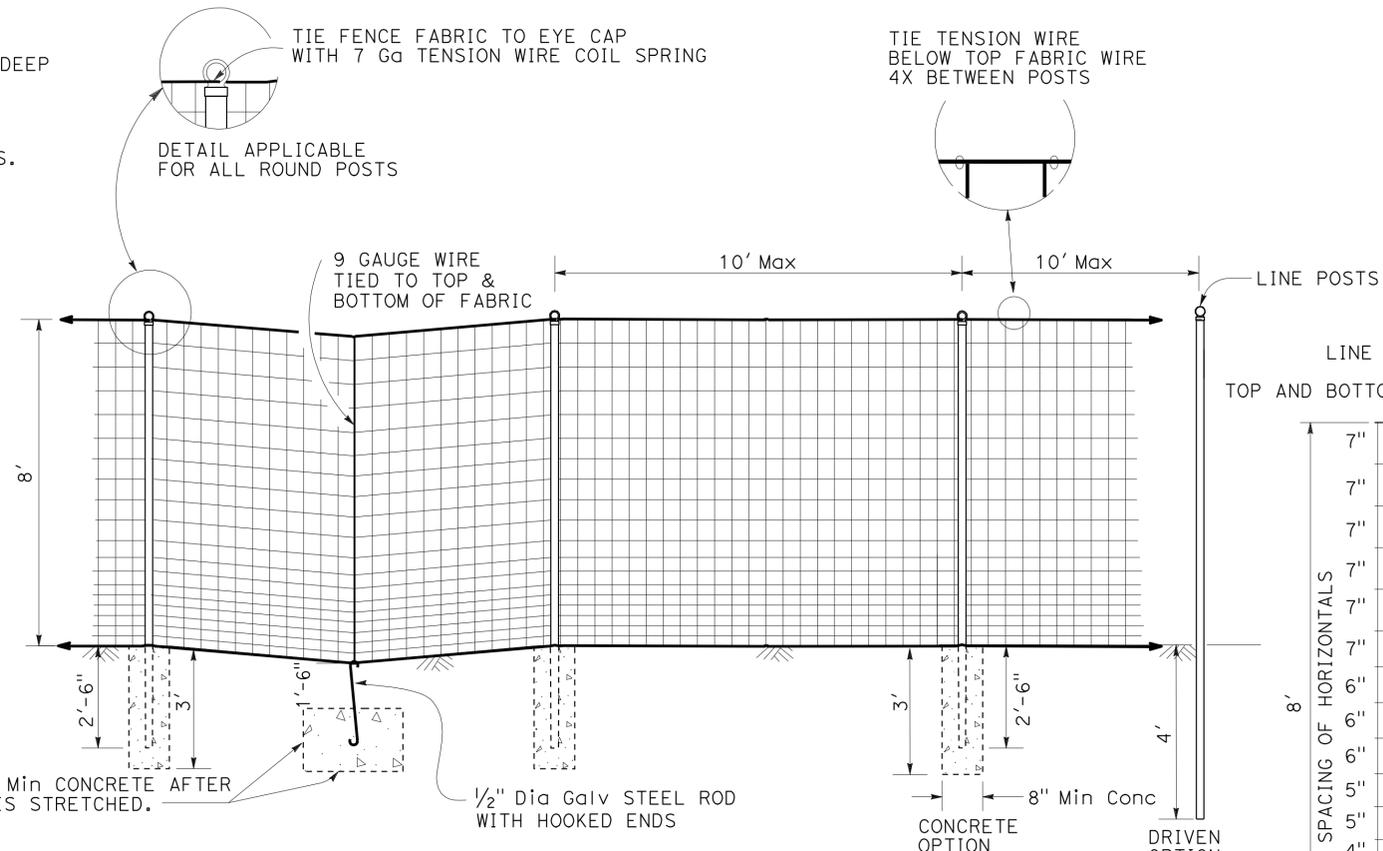
PULL & CORNER POST ASSEMBLY



BRACKET DETAIL

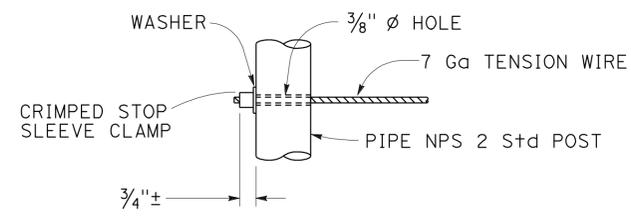


FENCE LOCATION

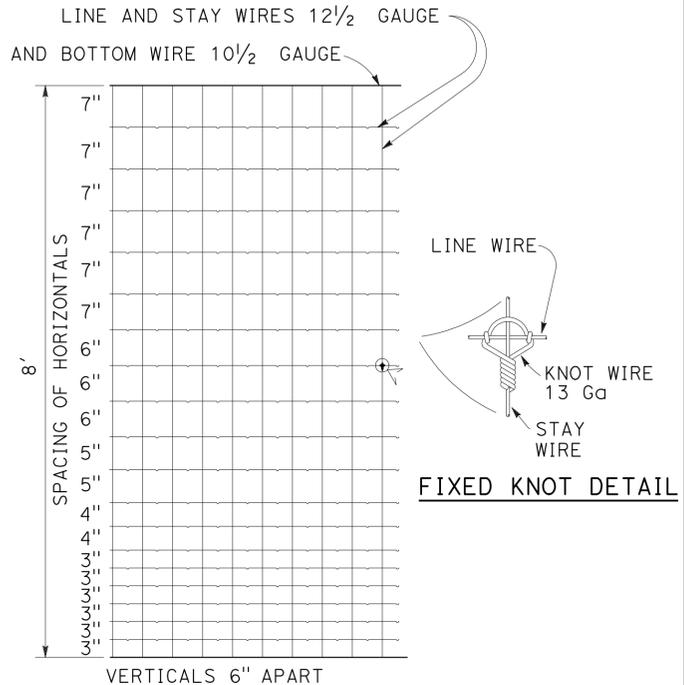
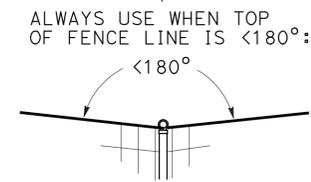


SAG CLOSURE

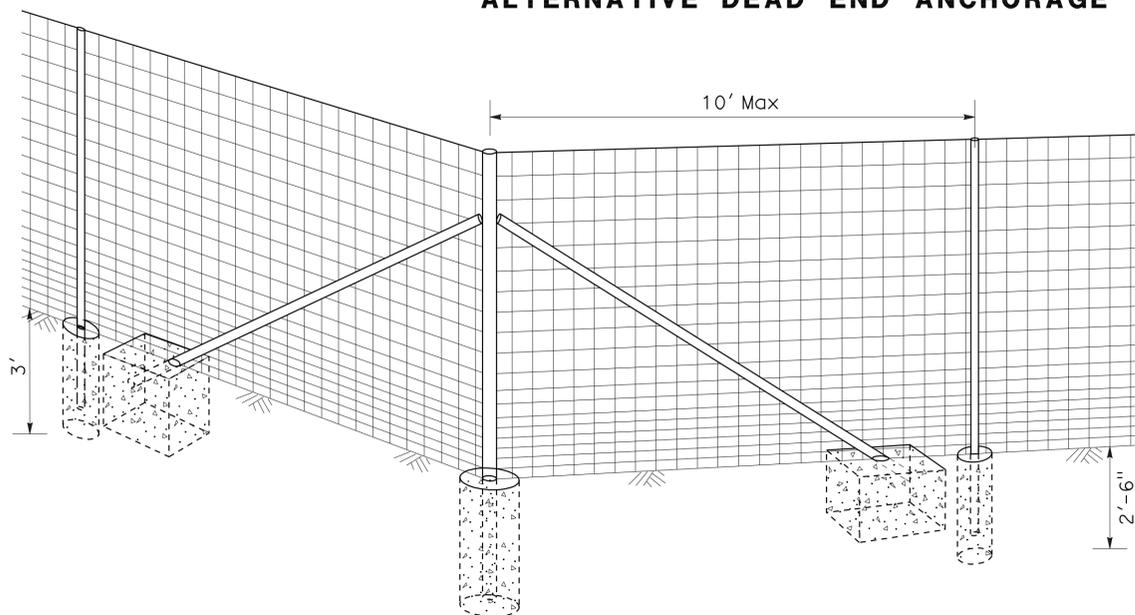
Std LINE POSTS



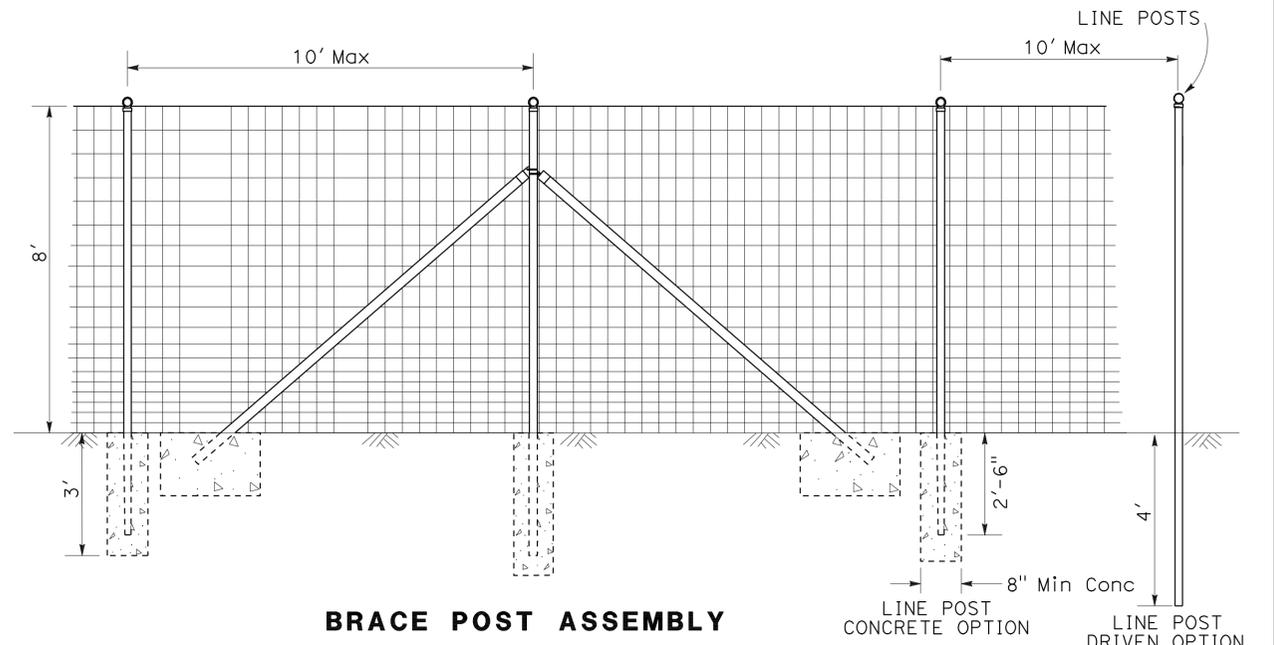
ALTERNATIVE DEAD END ANCHORAGE



FENCE FABRIC - TYPICAL



CORNER POST ASSEMBLY



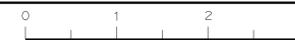
BRACE POST ASSEMBLY

DEER FENCE (TYPE WM, METAL POST)

CONSTRUCTION DETAILS

NO SCALE

C-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	5	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE

1-24-11
 PLANS APPROVAL DATE

No. 70022
 Exp. 9-30-12
 CIVIL

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.

DESIGN NOTES

SPECIFICATIONS:

DESIGN: BRIDGE DESIGN SPECIFICATIONS (1983 AASHTO SPECIFICATIONS WITH REVISIONS BY CALTRANS). DEPTH OF COVER IS ASSUMED TO BE UNIFORM.

EARTH LOAD:

EARTH PRESSURES FOR TWO CONDITIONS:
 -140 lb/cf vert, 42 lb/cf horiz
 -140 lb/cf vert, 140 lb/cf horiz

UNIT STRESSES:

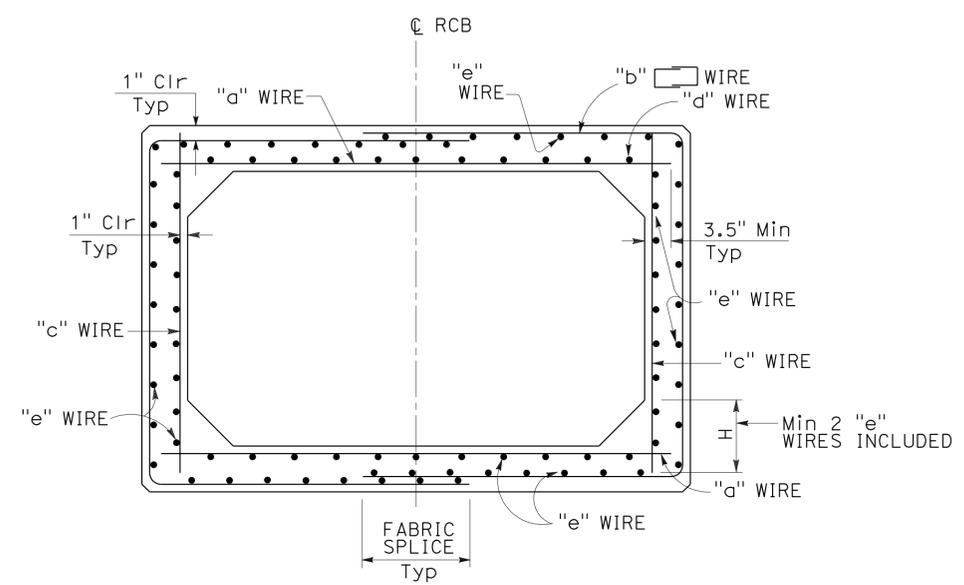
$f'_c = 5.0$ KSI
 $f'_y = 65.0$ KSI FOR WELD WIRE FABRIC
 $n = 7$

SHEAR:

MAXIMUM ALLOWABLE SHEAR, $v = 3.5 \sqrt{f'_c}$, PSI

EXCLUSION:

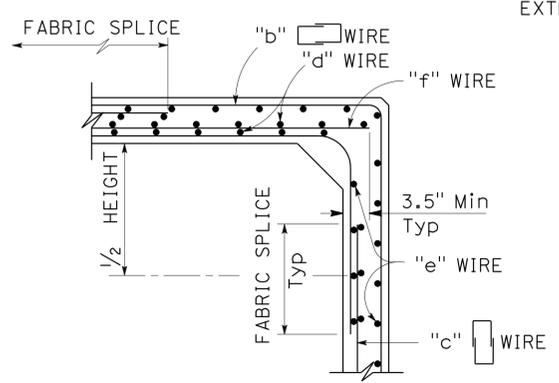
AXIAL LOADING ON THE MEMBERS HAS NOT BEEN CONSIDERED.



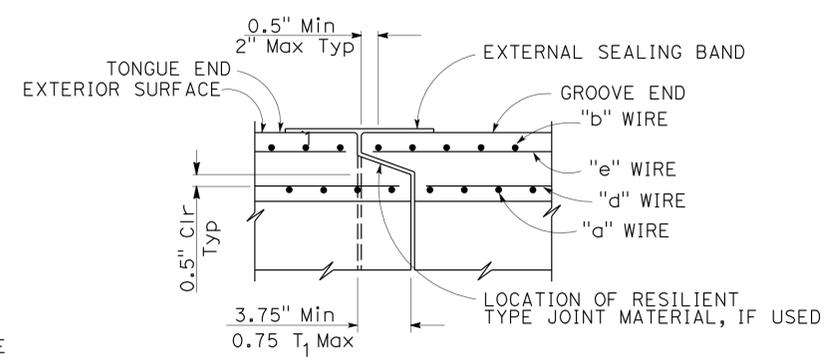
TYPICAL SECTION

AASHTO STANDARD SHAPE		M259 AND M273																					
SPAN (ft)		12																					
HEIGHT (ft)		6 7 8 9 10 11 12																					
MAXIMUM EARTH COVER (ft)	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20	10 20										
CONCRETE (INCH)	$T_1 = T_2 = T_3$	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12										
MINIMUM WELDED WIRE FABRIC Reinf AREAS (SQUARE INCH/LF)	"a"	.51	.85	.52	.87	.53	.89	.54	.90	.54	.90	.54	.89	.53	.88								
	"b"	.53	.80	.55	.83	.58	.87	.63	.93	.69	1.01	.77	1.12	.86	1.24								
	"c"	.25	.25	.25	.25	.25	.25	.25	.25	.35	.38	.54	.51	.76									
	"d"	.15	.13	.15	.13	.16	.13	.16	.13	.16	.13	.16	.13	.16	.13								
	"e"	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13								
"f"	.26	.60	.27	.62	.28	.64	.29	.65	.29	.55	.16	.35	.02	.12									
* QUANTITY	Conc	1.56	1.63	1.70	1.78	1.85	1.93	2.00	Reinf	173	243	184	259	198	276	215	297	233	328	265	372	302	425

*SEE NOTE 3



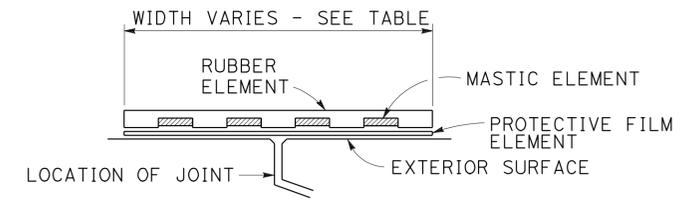
ALTERNATIVE DETAILING OPTION



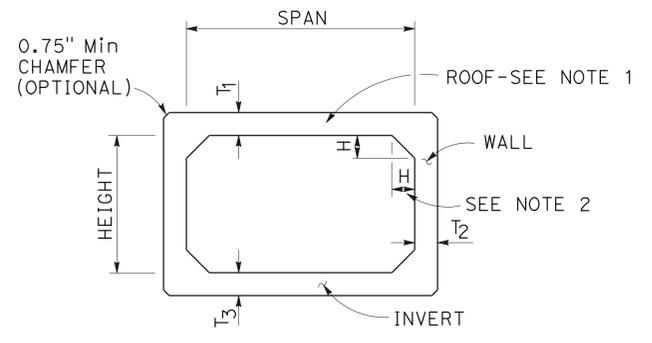
END JOINT DETAIL

TABLE	
SPAN (ft)	EXTERNAL SEALING BAND WIDTH (inch)
10-12	13

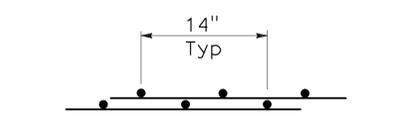
DESIGN BEARING PRESSURE TSF		
SPAN	COVER	10'
10' thru 12'		1.3



EXTERNAL SEALING BAND SCHEMATIC



SCHEMATIC



FABRIC SPLICE DETAIL

NOTES:

1. THE INSIDE AND OUTSIDE SURFACES OF THE RCB ROOF SHALL BE MARKED "TOP."
2. H MINIMUM SHALL BE 12"
H MAXIMUM SHALL BE 14"
3. QUANTITIES ARE APPROXIMATE AND FOR DESIGN PURPOSES ONLY.
4. SEE SHEET C-3 FOR ADDITIONAL DESIGN AND DETAILS.
5. STANDARD SINGLE PRECAST BOX CULVERT IS SHOWN ON THE PLANS AS SPAN TIMES HEIGHT OF 12' x 12' WITH MAXIMUM COVER OF 10' OVER ROOF.
6. CONSTRUCTION LOADS: STRUTTING MAY BE REQUIRED NEAR TEMPORARY ENDS. FOR CONSTRUCTION LOADS ON CULVERTS, SEE STANDARD PLAN D88.

**BOX CULVERT
DEER UNDERCROSSING**

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION DIVISION OF ENGINEERING DESIGN BRANCH, S7
 Davinder Minhas
 Functional Supervisor
 Cyrus Hui
 Calculated/Designed By
 Checked By
 Revised By
 Date Revised

LAST REVISION | DATE PLOTTED => 31-JAN-2011
 00-00-00 | TIME PLOTTED => 07:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	6	27

<i>Davinder Minhas</i> 11-8-10 REGISTERED CIVIL ENGINEER DATE	
1-24-11 PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER DAVINDER MINHAS No. 70022 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

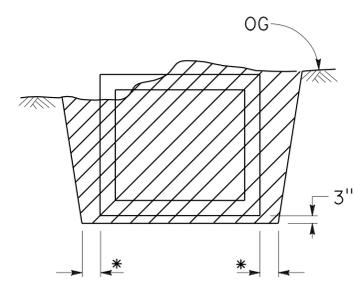
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LEGEND

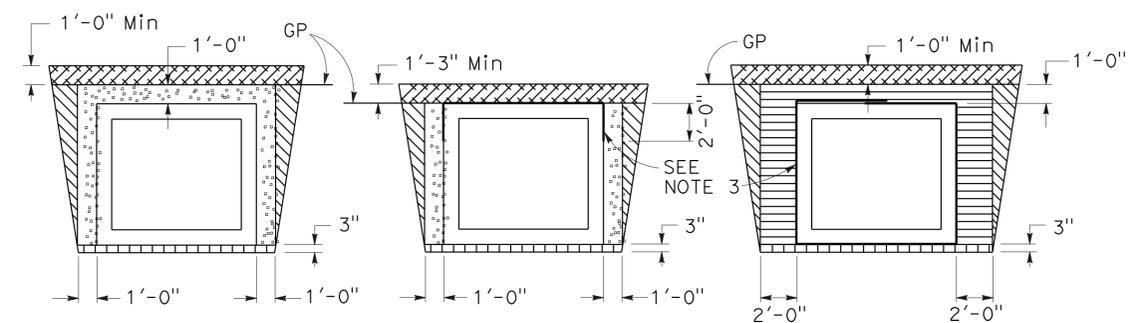
-  ROADWAY EXCAVATION (NATURALLY OCCURRING ASBESTOS)
-  STRUCTURE BACKFILL (CULVERT) 95% RELATIVE COMPACTION
-  ROADWAY EMBANKMENT
-  SLURRY CEMENT BACKFILL
-  SAND BEDDING (CULVERT)
-  ROADWAY STRUCTURAL SECTION
-  ORIGINAL GROUND

NOTES:

1. SLOPE OR SHORE EXCAVATION SIDES AS NECESSARY.
2. DIMENSIONS SHOWN ARE MINIMUM.
3. METHOD 2 AND 3 REQUIRES AN APPROVED EXTERNAL SEALING BAND. SEE "PRECAST RCB CULVERT, REINFORCEMENT AND DESIGN TABLES" SHEET.
4. CONSTRUCTION OF ROADWAY STRUCTURAL SECTION IN METHOD 2 OR METHOD 3 SHALL NOT DISTURB THE EXTERNAL SEALING BAND INSTALLATION.



EXCAVATION



METHOD 1

METHOD 2

METHOD 3

BACKFILL

* 1'-0" WHERE METHOD 1 OR 2 BACKFILL IS USED.
 2'-0" WHERE METHOD 3 BACKFILL IS USED.

WILDLIFE UNDERCROSSING

CONSTRUCTION DETAILS

NO SCALE

C-3

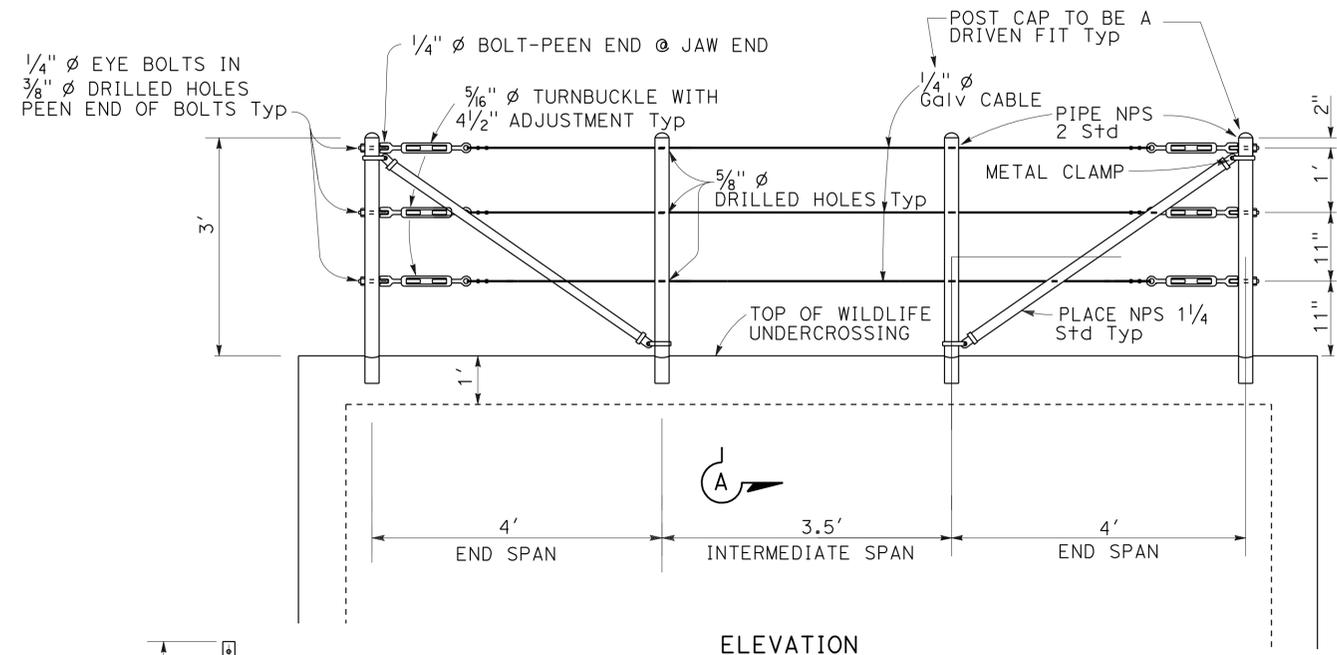
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 NORTH REGION
 DIVISION OF ENGINEERING
 DESIGN BRANCH, S7
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 FUNCTIONAL SUPERVISOR
 CYRUS HUI
 CALCULATED/DESIGNED BY
 CHECKED BY
 DAVINDER MINHAS
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	7	27

<i>Davinder Minhas</i> 11-8-10 REGISTERED CIVIL ENGINEER DATE	
1-24-11 PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER DAVINDER MINHAS No. 70022 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA
--

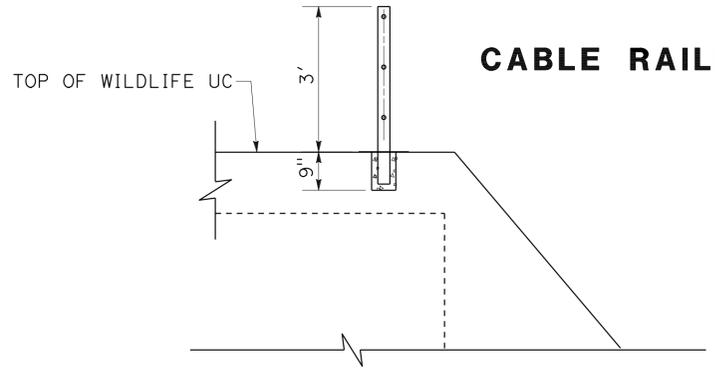
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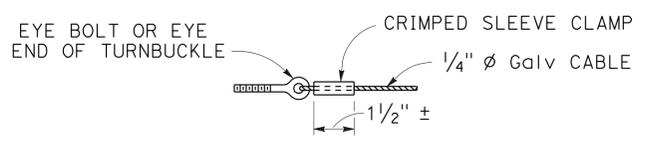
CABLE RAILING FOR WILDLIFE UNDERCROSSING

NOTES:

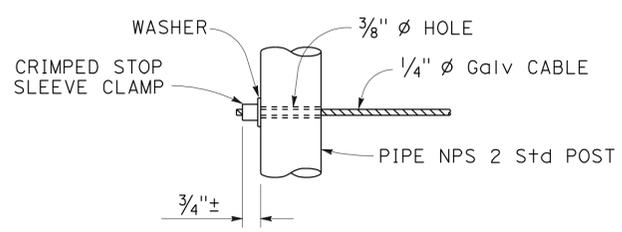
1. ALL POSTS, CABLE, AND HARDWARE TO BE GALVANIZED.
2. POSTS TO BE VERTICAL.
3. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
4. ALTERNATIVE DETAILS MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
5. PROVIDE THIMBLES AT ALL CABLE LOOPS.



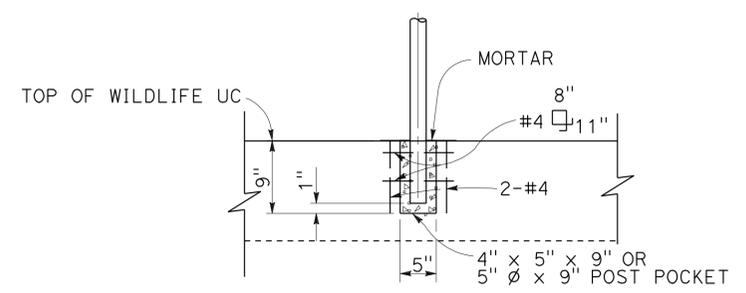
SECTION A-A



ALTERNATIVE CABLE CONNECTION



ALTERNATIVE DEAD END ANCHORAGE



POST POCKET

CONSTRUCTION DETAILS

NO SCALE

C-4

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 NORTH REGION
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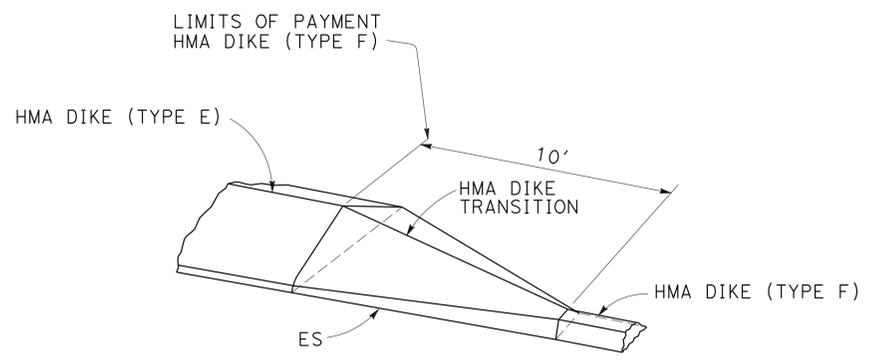
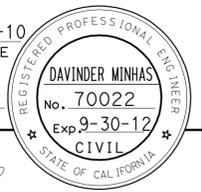
REVISOR BY
 DATE

DAVINDER MINHAS
 D. MINHAS

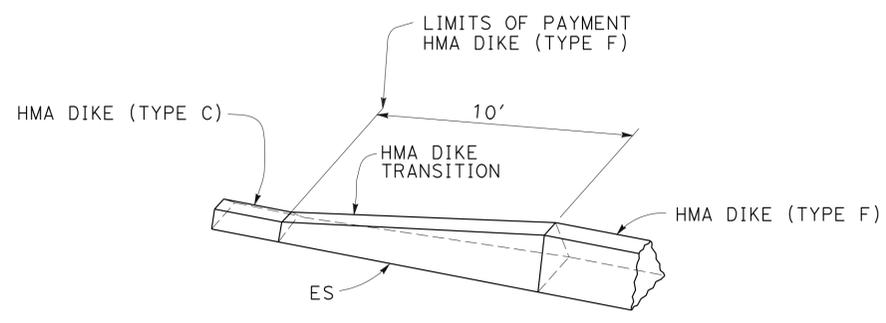
CALCULATED-
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FUNCTIONAL SUPERVISOR
 C. R. S. H. P. I.

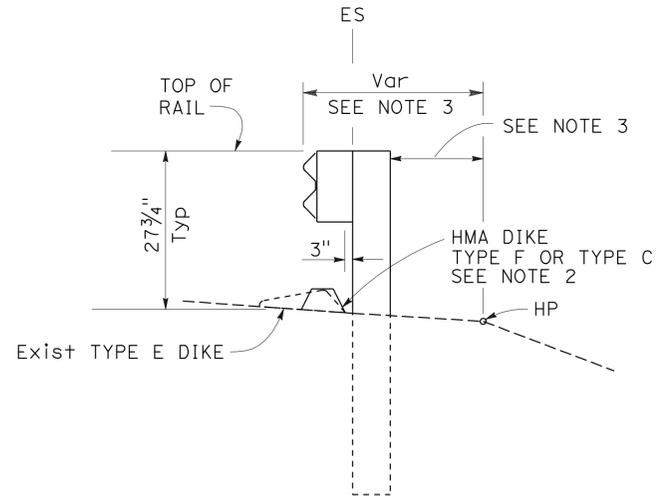
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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<i>Davinder Minhas</i> 11-8-10 REGISTERED CIVIL ENGINEER DATE			1-24-11 PLANS APPROVAL DATE		
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**HMA DIKE TRANSITION
TYPE F TO TYPE E**
(SEE LAYOUT SHEETS FOR LOCATION)



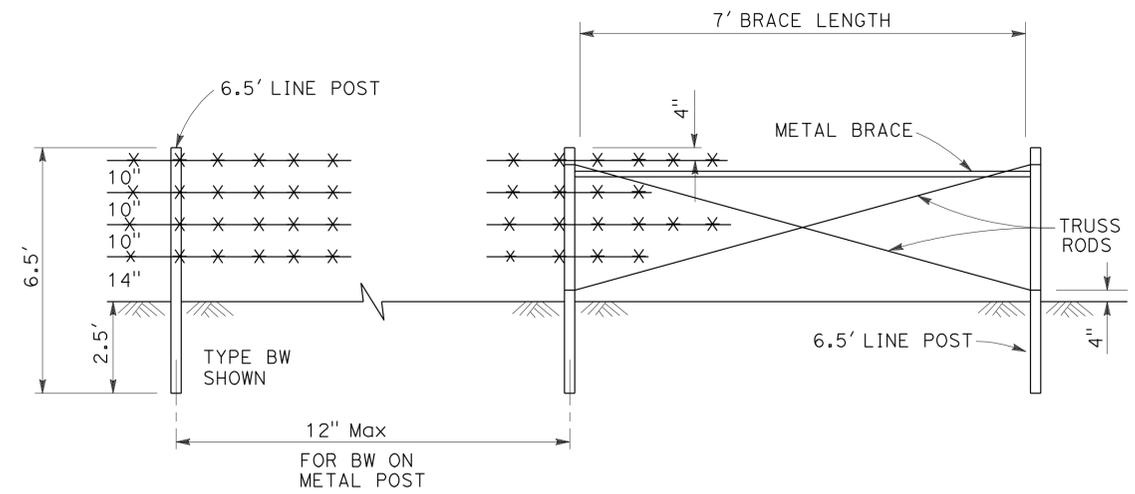
**HMA DIKE TRANSITION
TYPE C TO TYPE F**
(SEE LAYOUT SHEETS FOR LOCATION)



DIKE POSITIONING

NOTES:

1. FOR DETAILS NOT SHOWN, SEE REVISED S+d PLAN A77C4.
2. FOR DIKE AND CURB DETAILS, SEE REVISED S+d PLANS RSP A87A AND S+d PLAN A87B.
3. FOR DETAILS OF TYPICAL DISTANCE BETWEEN THE FACE OF RAIL AND HINGE POINT, SEE S+d PLAN A77C3.



**FENCE (TYPE BW, 4 STRAND, METAL POST) MODIFIED
PULL POST ASSEMBLY**

(FOR DETAILS NOT SHOWN, SEE S+d PLAN A86)

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 CYRUS HUI

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 CHECKED BY

A. FONG
 D. MINHAS

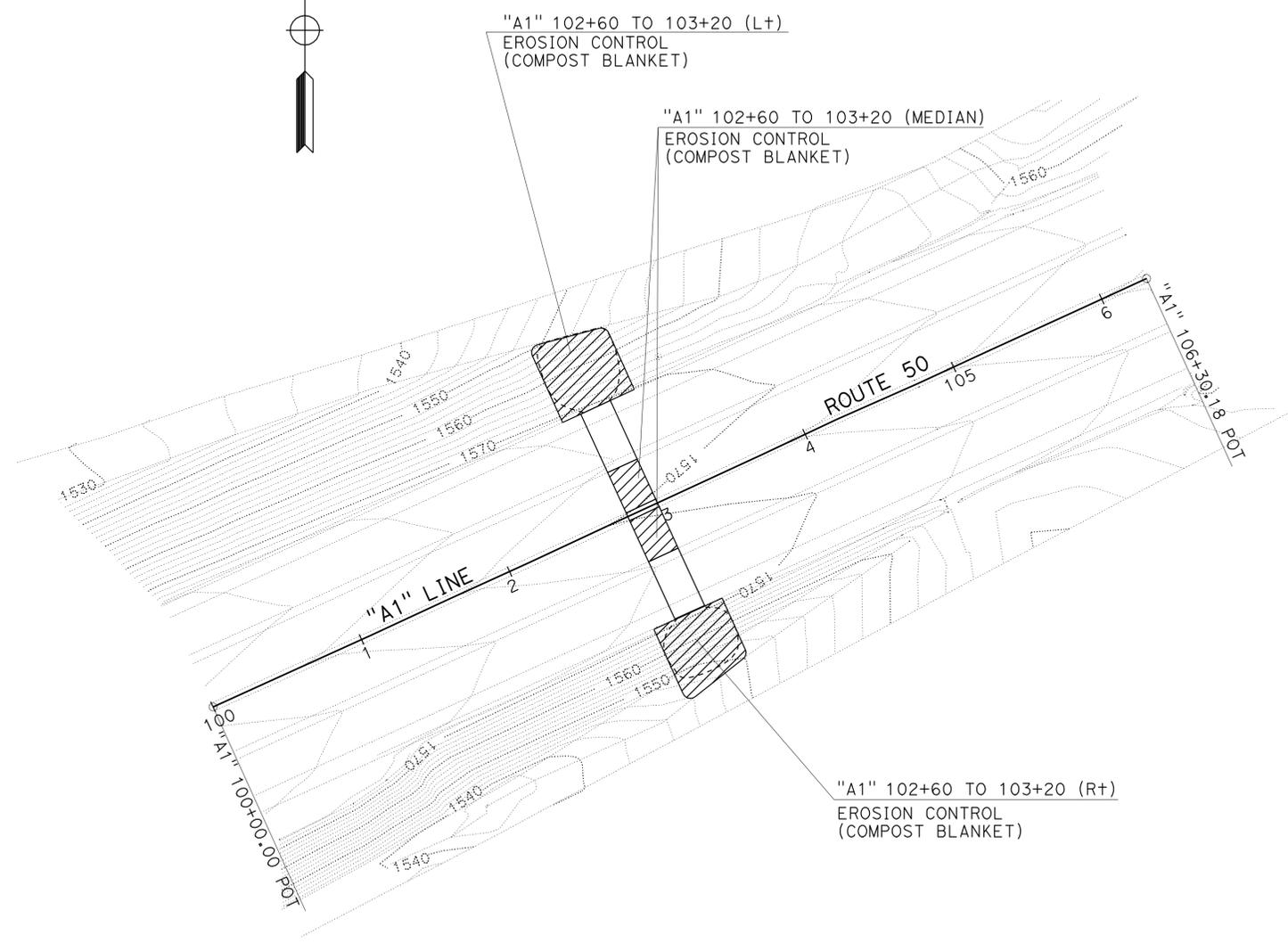
REVISED BY
 DATE REVISED

NOTES:

1. EROSION CONTROL (COMPOST BLANKET) DEPTH = 2"

LEGEND

 EROSION CONTROL (COMPOST BLANKET)



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	9	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE
 1-24-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DAVINDER MINHAS
 No. 70022
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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EROSION CONTROL PLAN
 SCALE: 1" = 50'
EC-1

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	10	27

Davinder Minhas 11-8-10
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1-24-11
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REGISTERED PROFESSIONAL ENGINEER
DAVINDER MINHAS
No. 70022
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE	PANEL SIZE (in x in)	SIGN MESSAGE	NUMBER OF POST AND SIZE (in)	NUMBER OF SIGNS
(A)	W20-1	60 x 60	ROAD WORK AHEAD	2 - 4 x 6	4
(B)	C14<CA>	48 x 24	END ROAD WORK	1 - 4 x 6	2
(C)	C40(Mod)<CA>	96 x 60	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6 x 6	2

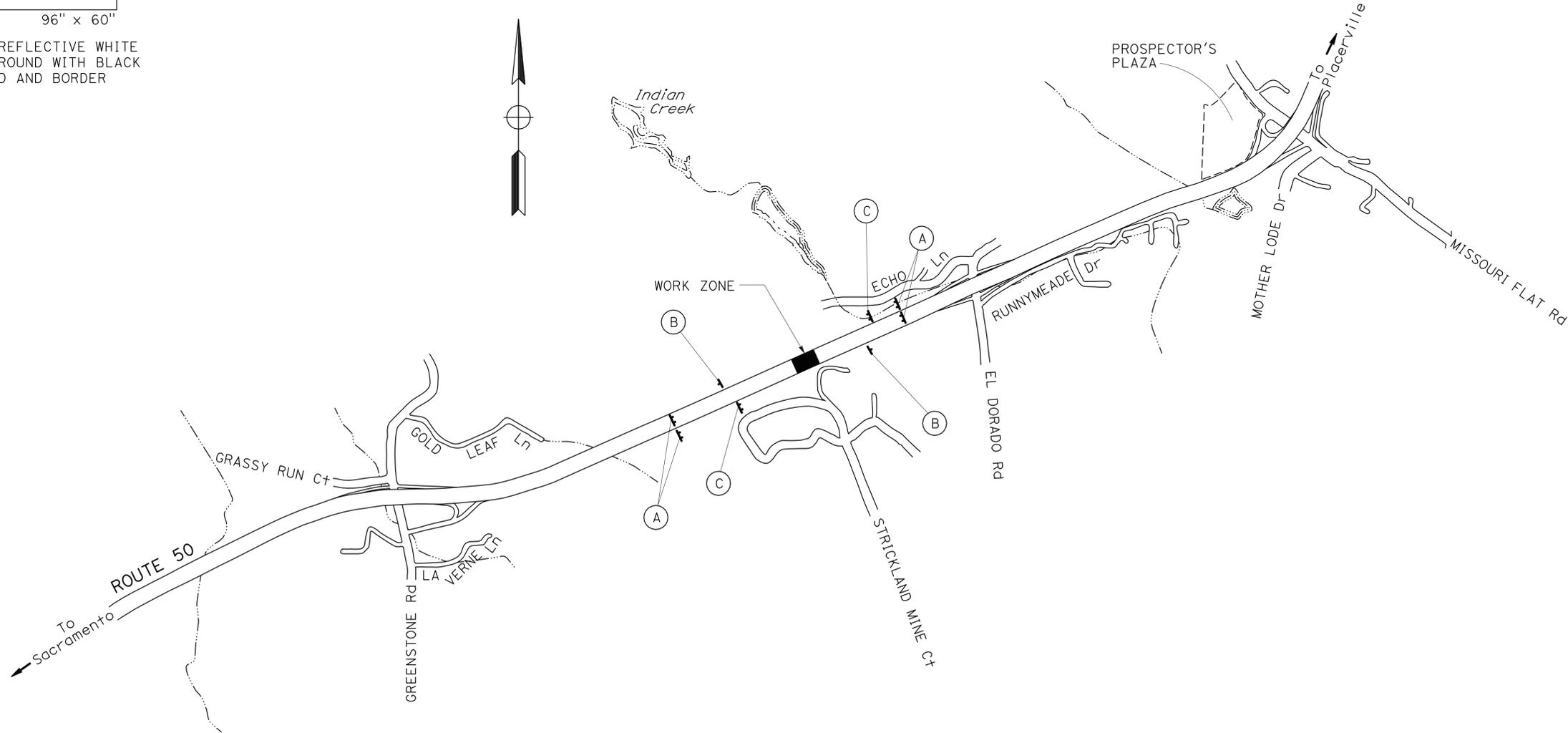
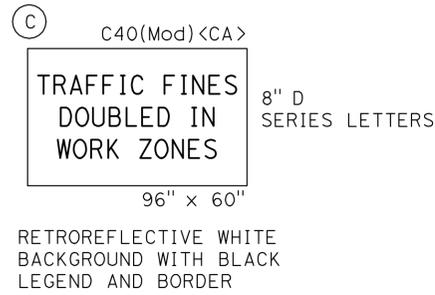
NOTES:

- CONSTRUCTION AREA SIGN LOCATIONS ARE APPROXIMATE. EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

LEGEND

- (A) CONSTRUCTION AREA SIGN LETTER
- ┆ SIGN - SINGLE POST
- ┆ SIGN - TWO POST
- <CA> CALIFORNIA SIGN CODE

SIGN DETAILS



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Caltrans
NORTH REGION DIVISION OF ENGINEERING DESIGN BRANCH, S7
FUNCTIONAL SUPERVISOR: CYRUS HUI
DESIGNED BY: A. FONG
CHECKED BY: D. MINHAS
REVISOR: REVISED BY: DATE REVISOR: DATE REVISOR: DATE

CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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 NORTH REGION
 DIVISION OF ENGINEERING
 DESIGN BRANCH, S7

FUNCTIONAL SUPERVISOR
 CYRUS HUI

CALCULATED-DESIGNED BY
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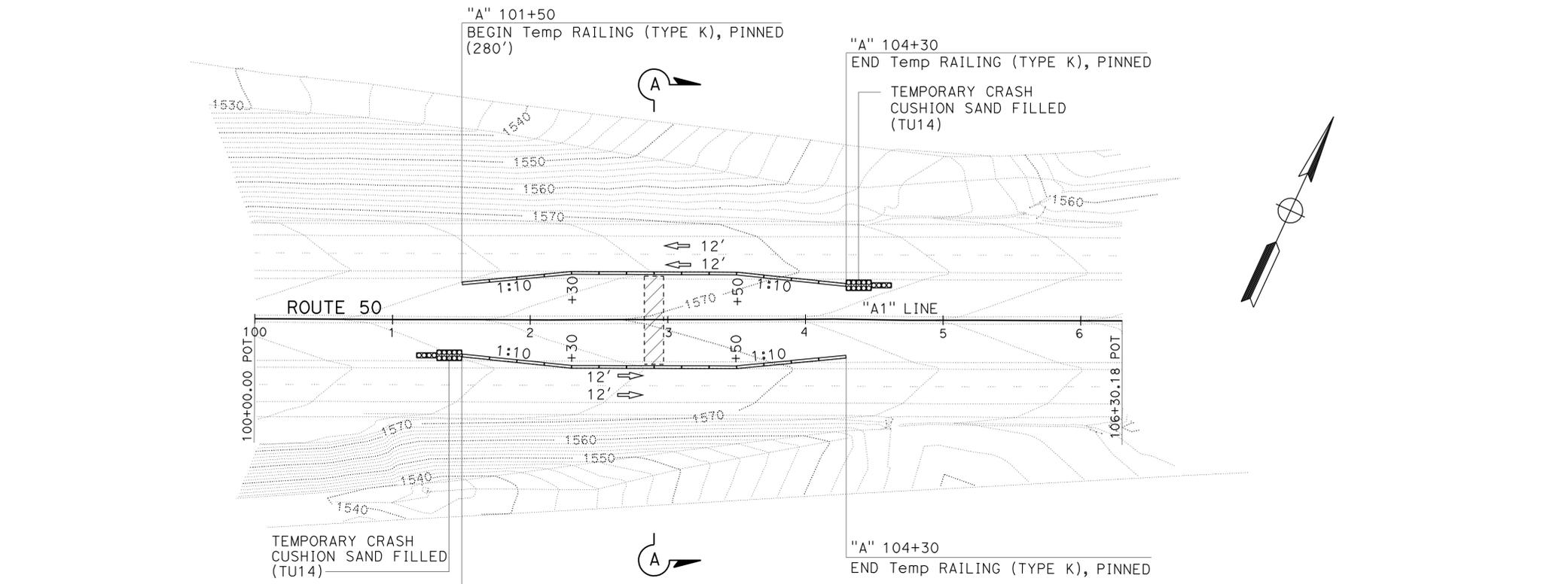
DAVINDER MINHAS

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 DATE REVISED

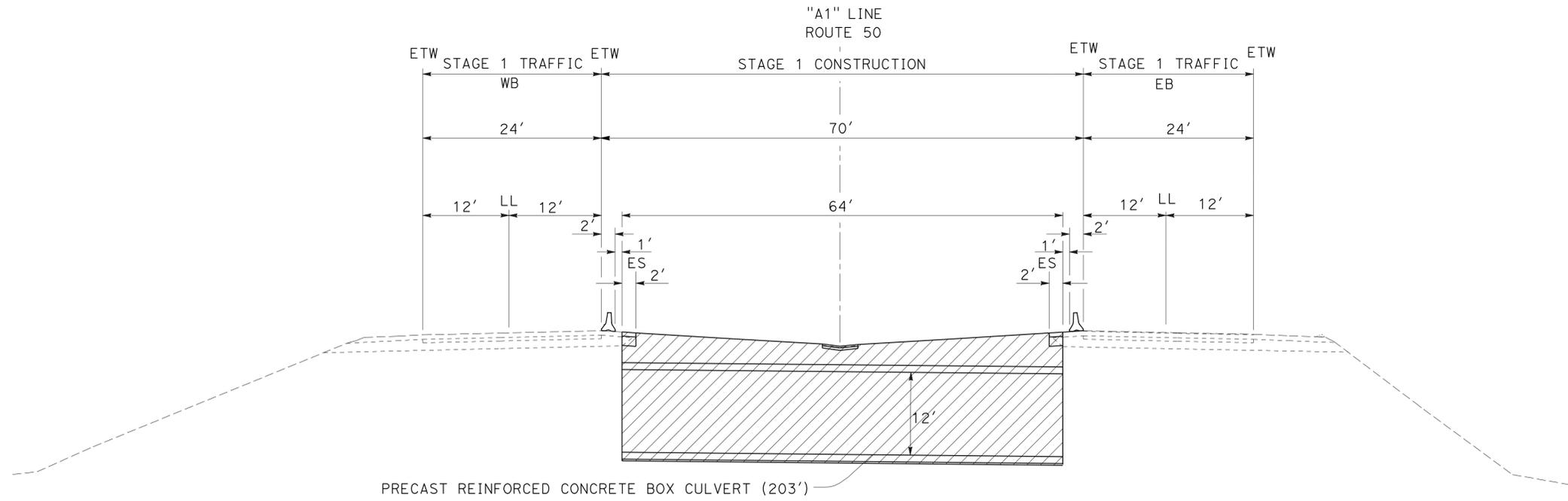
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	11	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE
 1-24-11
 PLANS APPROVAL DATE
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- LEGEND**
- CONSTRUCT THIS STAGE
 - Temp RAILING (TYPE K), PINNED
 - DIRECTION OF TRAFFIC
- ABBREVIATIONS**
- LL LANE LINE



SECTION A-A
 "A1" 102+90

STAGE CONSTRUCTION
STAGE 1
 NO SCALE
SC-1

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

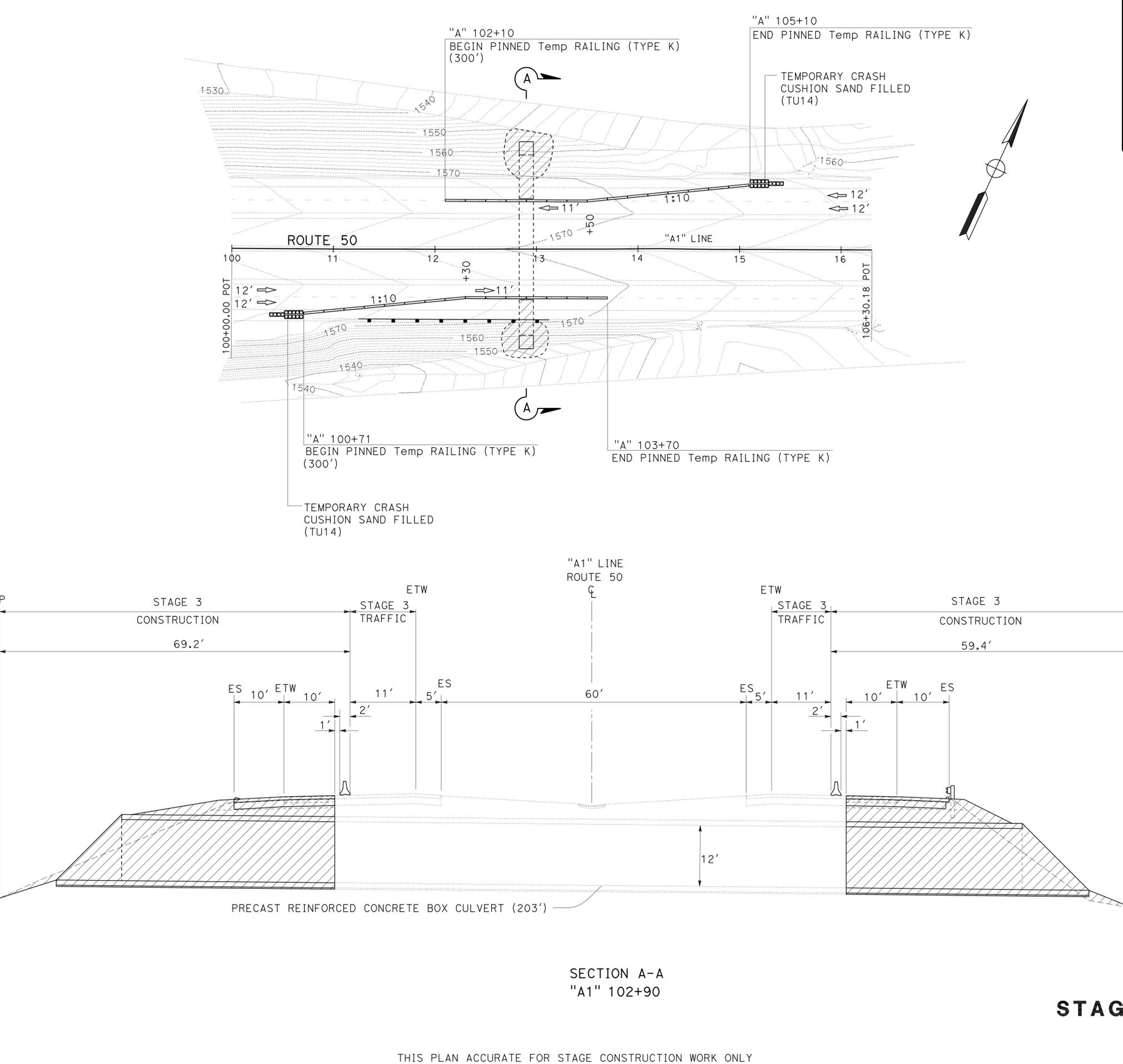
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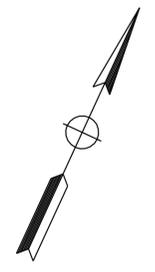


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	13	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE
 1-24-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DAVINDER MINHAS
 No. 70022
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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SECTION A-A
 "A1" 102+90

STAGE CONSTRUCTION
STAGE 3
 NO SCALE
SC-3

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	15	27

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DAVINDER MINHAS

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4" THERMOPLASTIC TRAFFIC STRIPE

DETAIL NUMBER	LF
25	384
27B	384
TOTAL	768

4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)

DETAIL NUMBER	LF
12	384
TOTAL	384

PAVEMENT MARKER (RETROREFLECTIVE)

DETAIL NUMBER	TYPE G	TYPE H
	EA	EA
12	10	
25		10
SUBTOTAL	10	10
TOTAL	20	

OBJECT MARKER

OBJECT MARKER (TYPE L-1)		EA
	1	

RUMBLE STRIP

STATION LIMITS	HMA, GROUND-IN INDENTATIONS
	Sta
"A1" 102+80 TO "A1" 103+00 (EB)	0.4
"A1" 102+80 TO "A1" 103+00 (WB)	0.4
TOTAL	0.8

PAVEMENT DELINEATION QUANTITIES

PDQ-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	13.3/13.7	16	27

Davinder Minhas 11-8-10
 REGISTERED CIVIL ENGINEER DATE
 1-24-11
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ROADWAY AND BOX CULVERT QUANTITIES

STATION	12' x 12' PRECAST REINFORCED CONCRETE BOX CULVERT	ROADWAY EXCAVATION (NATURALLY OCCURRING ASBESTOS)	HMA (TYPE A)	CLASS 2 AGGREGATE BASE	TACK COAT
	LF	CY	TON	CY	TON
"A1" 102+80 TO "A1" 103+00 FROM "PLACE HMA DIKE" TABLE	203	2,200	73	80	0.14
			3.7		
TOTAL	203	2,200	76.7	80	0.14

TEMPORARY RAILING (TYPE K)

STATION LIMITS	LF
STAGE 1	
"A1" 101+50 TO 104+30 EB	280
"A1" 101+50 TO 104+30 WB	280
STAGE 2	
"A1" 101+11 TO 103+70 EB	360
"A1" 102+10 TO 105+69 WB	360
STAGE 3	
"A1" 100+71 TO 103+70 EB	300
"A1" 102+10 TO 105+10 WB	300
TOTAL	1880

TEMPORARY WATER POLLUTION CONTROL

ITEM DESCRIPTION	Qty	UNIT
TEMPORARY FIBER ROLL	135	LF
TEMPORARY SILT FENCE	100	LF

REMOVE ASPHALT CONCRETE DIKE

STATION LIMITS	LF
"A1" 100+80 TO "A1" 102+80	200
"A1" 103+00 TO "A1" 103+30	30
TOTAL	230

FENCE QUANTITY

STATION LIMITS	REMOVE FENCE	DEER FENCE (TYPE WM, METAL POST)	FENCE (TYPE BW, 4 STRAND, METAL POST) MODIFIED
	LF	LF	LF
"A1" 92+83 TO "A1" 102+83 R+		1040	
"A1" 102+97 TO "A1" 115+87 R+		1330	
"A1" 92+83 TO "A1" 102+83 L+		1045	
"A1" 102+97 TO "A1" 115+87 L+		1350	
"A1" 92+83 TO "A1" 115+87 R+	2310		
"A1" 92+83 TO "A1" 115+87 L+	2325		
"A1" 101+66 TO "A1" 103+15 L+			50
"A1" 102+64 TO "A1" 103+15 R+			50
TOTAL	4635	4765	100

METAL BEAM GUARD RAILING (WOOD POST) & VEGETATION CONTROL

STATION LIMITS	(N)	LAYOUT TYPE	METAL BEAM GUARD RAILING (STEEL POST)	TERMINAL ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE FLARED TERMINAL SYSTEM	VEGETATION CONTROL (MINOR CONCRETE)
			LF	EA	EA	SQYD
"A1" 101+25 TO "A1" 103+12.5 R+	11B		187.5	1	1	120
TOTAL	11B		187.5	1	1	120

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

CABLE RAILING

STATION LIMITS	LF
"A1" 102+84 TO "A1" 102+96 L+	12
"A1" 102+84 TO "A1" 102+96 R+	12
TOTAL	24

PLACE HMA DIKE

STATION LIMITS	TYPE C	TYPE E	TYPE F	HMA (TYPE A)
	LF	LF	LF	TON
"A1" 100+80 TO "A1" 101+25 R+	45			0.4
"A1" 101+25 TO "A1" 103+30 R+			25	2.8
"A1" 102+80 TO "A1" 103+00 L+		20		0.5
TOTAL	45	20	25	3.7 *

* SEE "ROADWAY AND BOX CULVERT QUANTITIES" TABLE FOR TOTAL QUANTITY OF HMA (TYPE A)

EROSION CONTROL (COMPOST BLANKET)

STATION LIMITS	CY
"A1" 102+60 TO "A1" 103+20 R+	13
"A1" 102+60 TO "A1" 103+20 L+	13
"A1" 102+60 TO "A1" 103+00 MEDIAN	10
TOTAL	36

TEMPORARY CRASH CUSHION (MODULE TU14)

STAGE	EA
STAGE 1	2
STAGE 2	2
STAGE 3	2
TOTAL	6

SUMMARY OF QUANTITIES

Q-1

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 NORTH REGION DIVISION OF ENGINEERING DESIGN BRANCH, S7
 FUNCTIONAL SUPERVISOR: CYRILUS HUJI
 CALCULATED/DESIGNED BY: DAVINDER MINHAS
 CHECKED BY: D. MINHAS
 REVISED BY: DATE REVISION:

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	17	27

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

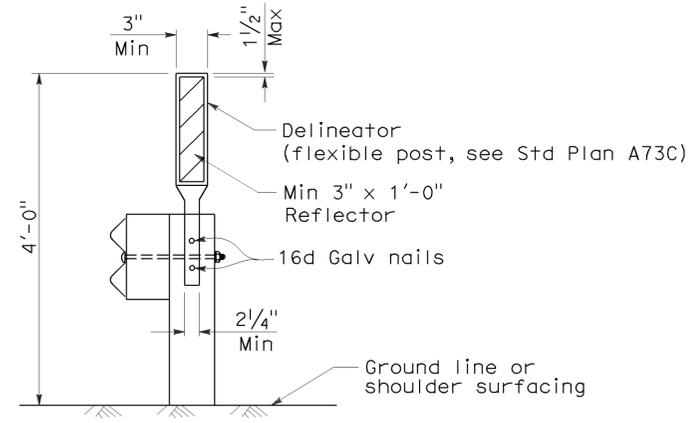
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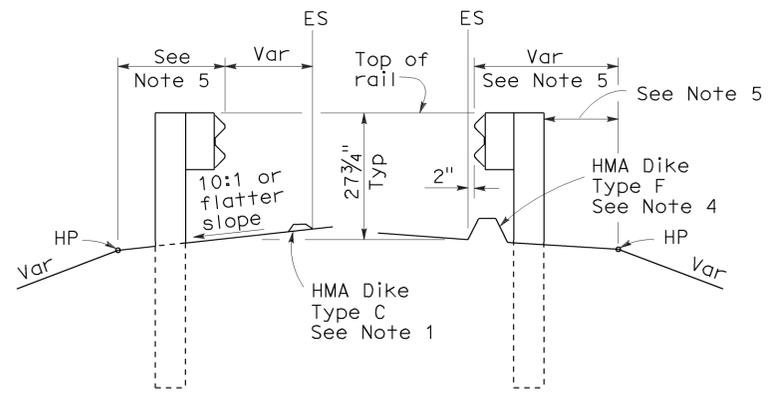
To accompany plans dated 1-24-11

NOTES:

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



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	18	27

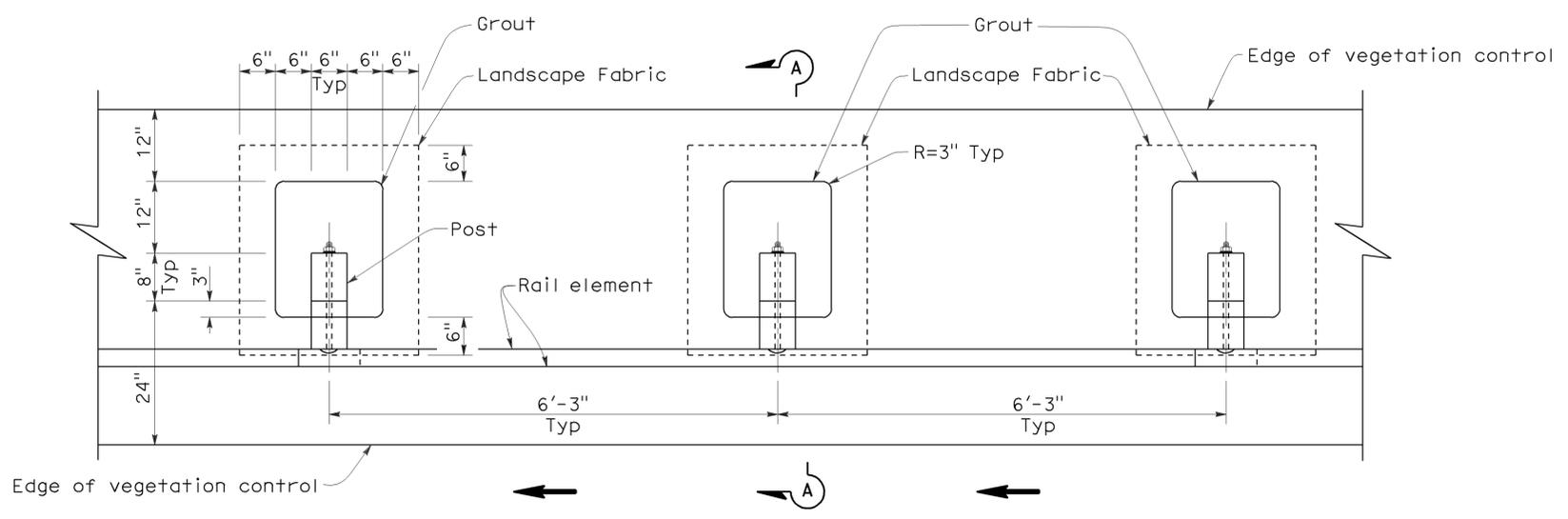
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

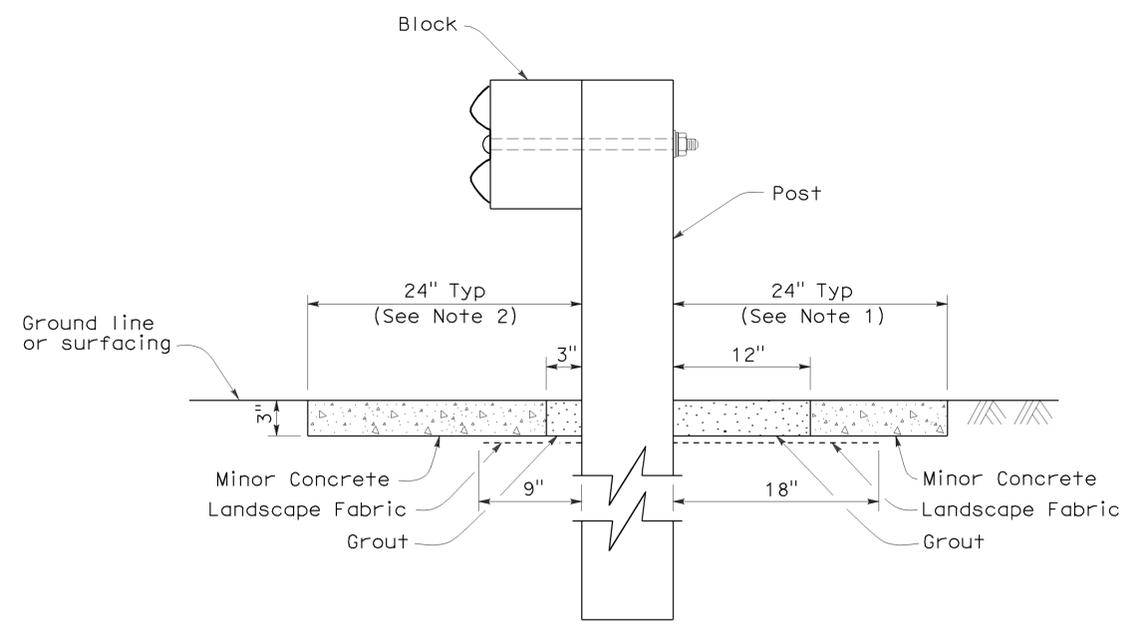
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Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 1-24-11



PLAN



SECTION A-A

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

NEW STANDARD PLAN NSP A77C5

2006 NEW STANDARD PLAN NSP A77C5

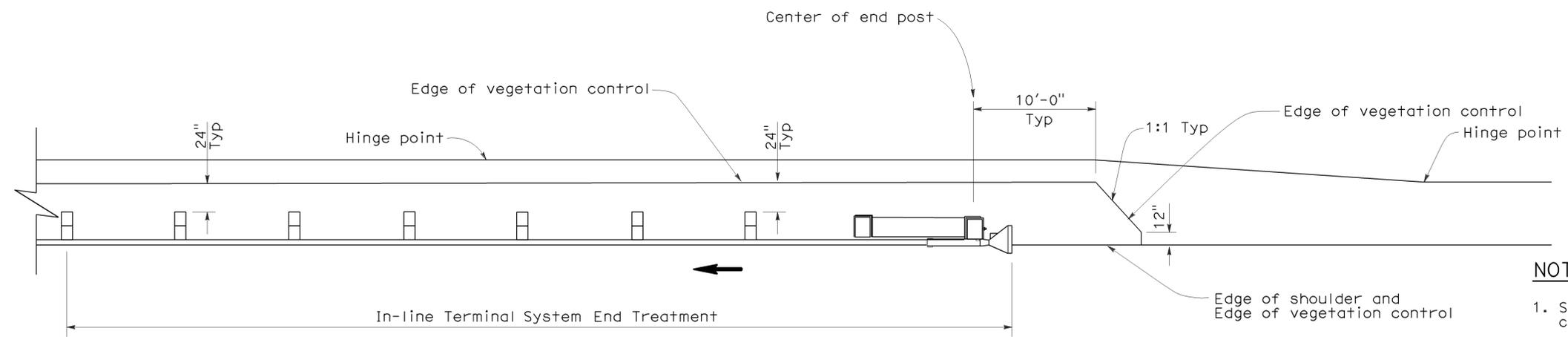
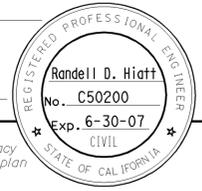
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	19	27

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REGISTERED CIVIL ENGINEER

October 20, 2006
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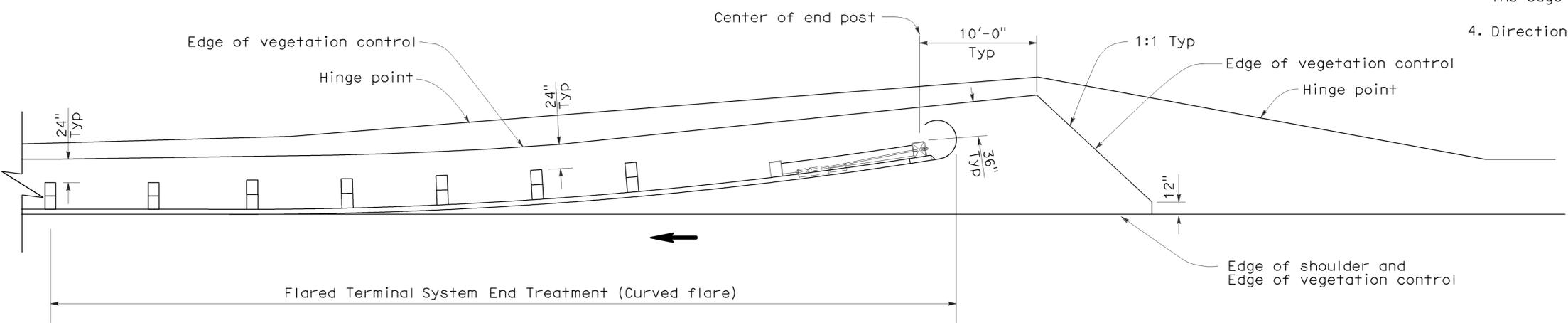
To accompany plans dated 1-24-11



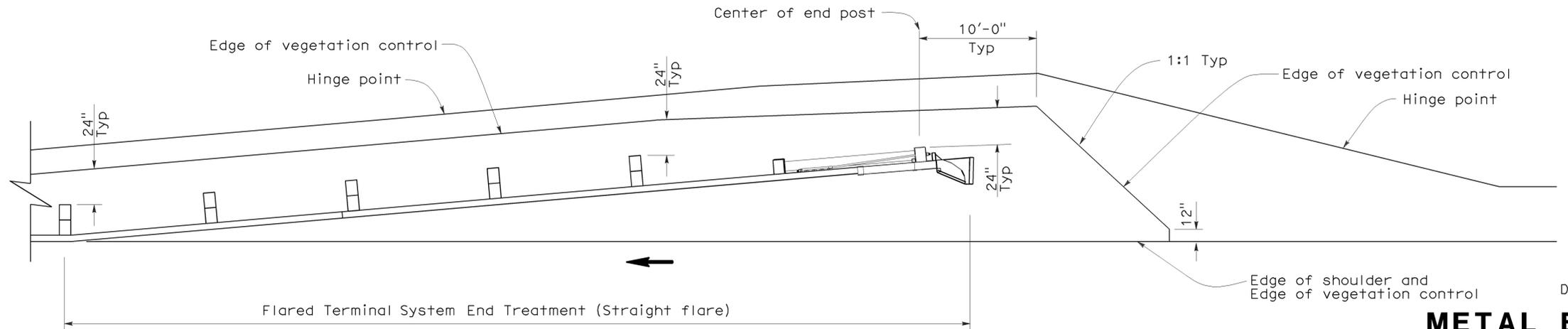
PLAN

NOTES:

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



PLAN



PLAN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C6

2006 NEW STANDARD PLAN NSP A77C6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	20	27

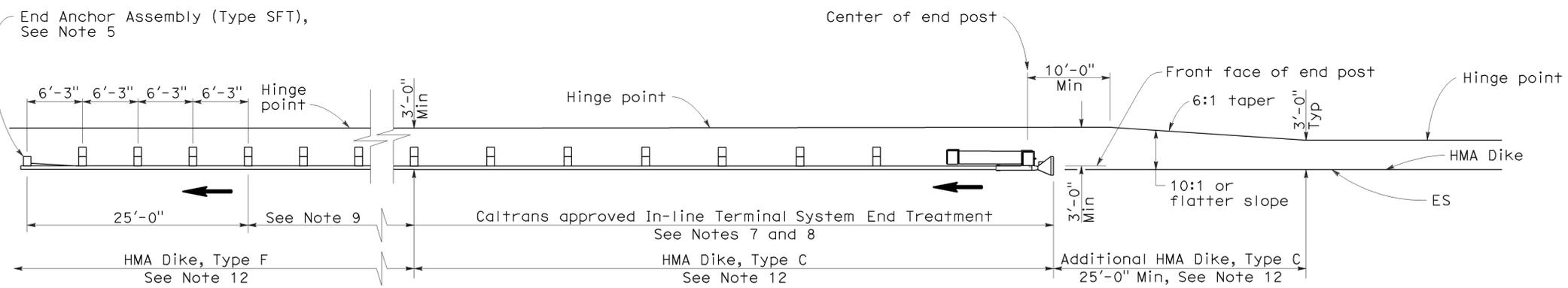
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

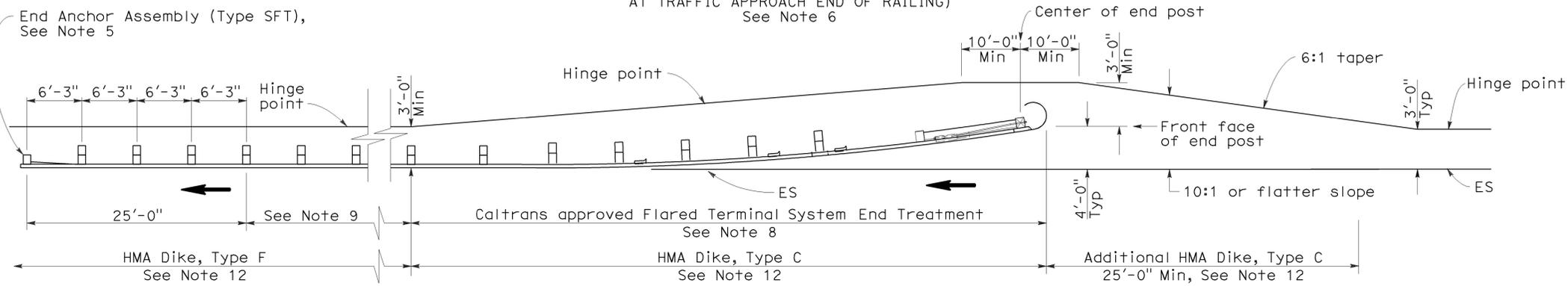
To accompany plans dated 1-24-11

2006 REVISED STANDARD PLAN RSP A77E1



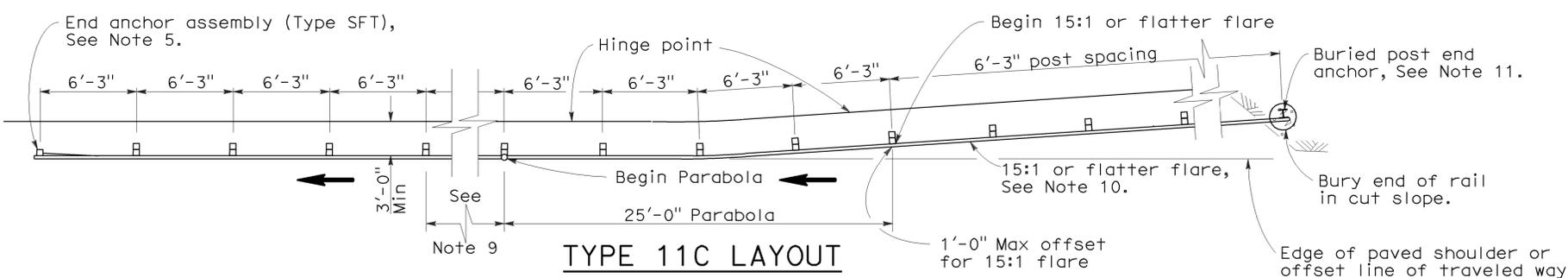
TYPE 11A LAYOUT

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



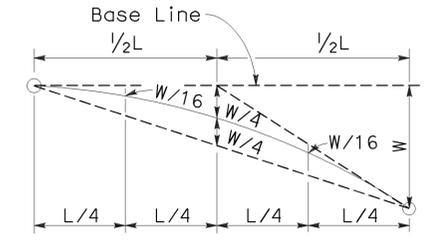
TYPE 11B LAYOUT

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

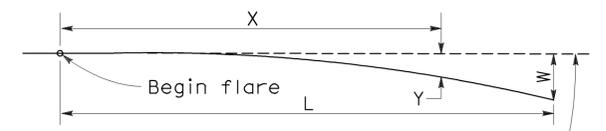


TYPE 11C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

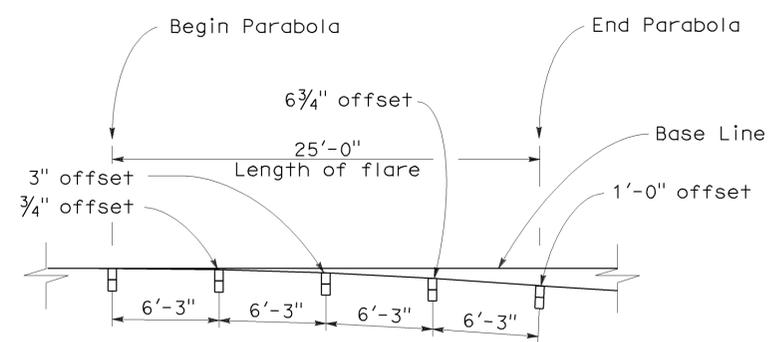


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

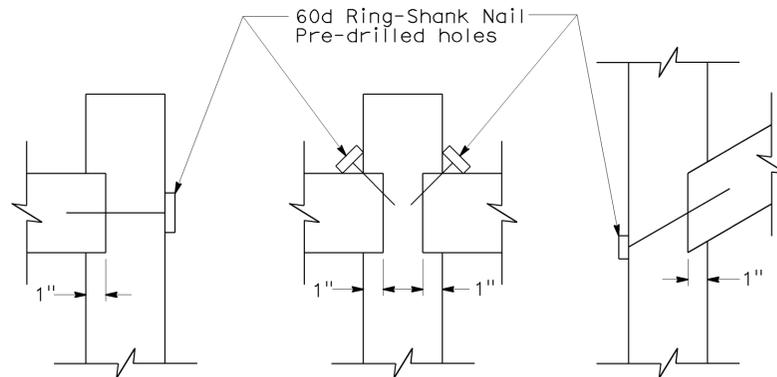
REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	21	27

Glenn DeCou
 REGISTERED CIVIL ENGINEER
 No. C34547
 Exp. 9-30-09
 STATE OF CALIFORNIA

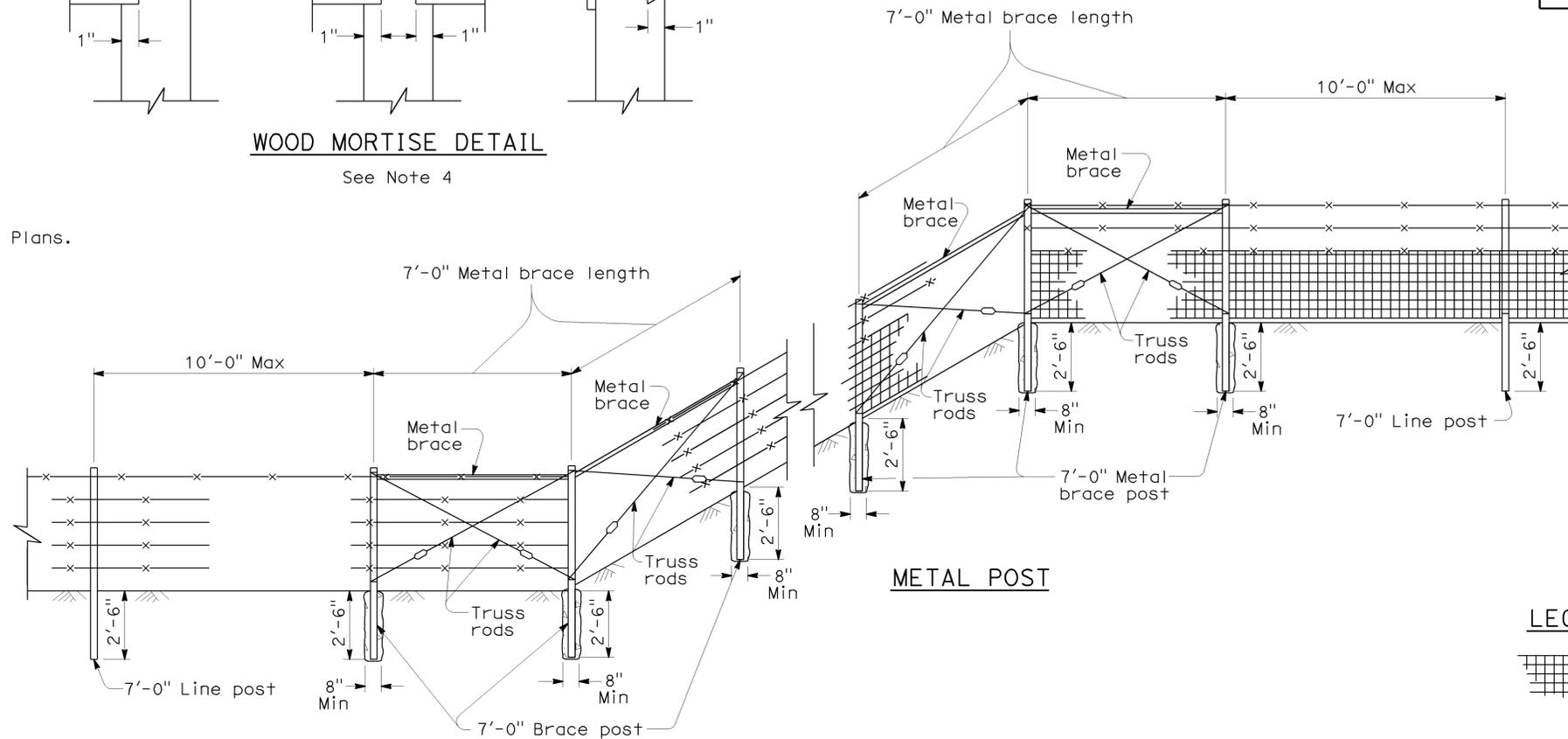
NOTES:

1. Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
2. Line post spacing for wood post equals 12'-0" maximum. Line post spacing for metal post equals 10'-0" maximum.
3. See Standard Plan A86 for Barbed Wire and Wire Mesh dimensions and for steel post and wood post dimensions and weight.
4. Use wood posts when specified in the Special Provisions or shown on the Project Plans.

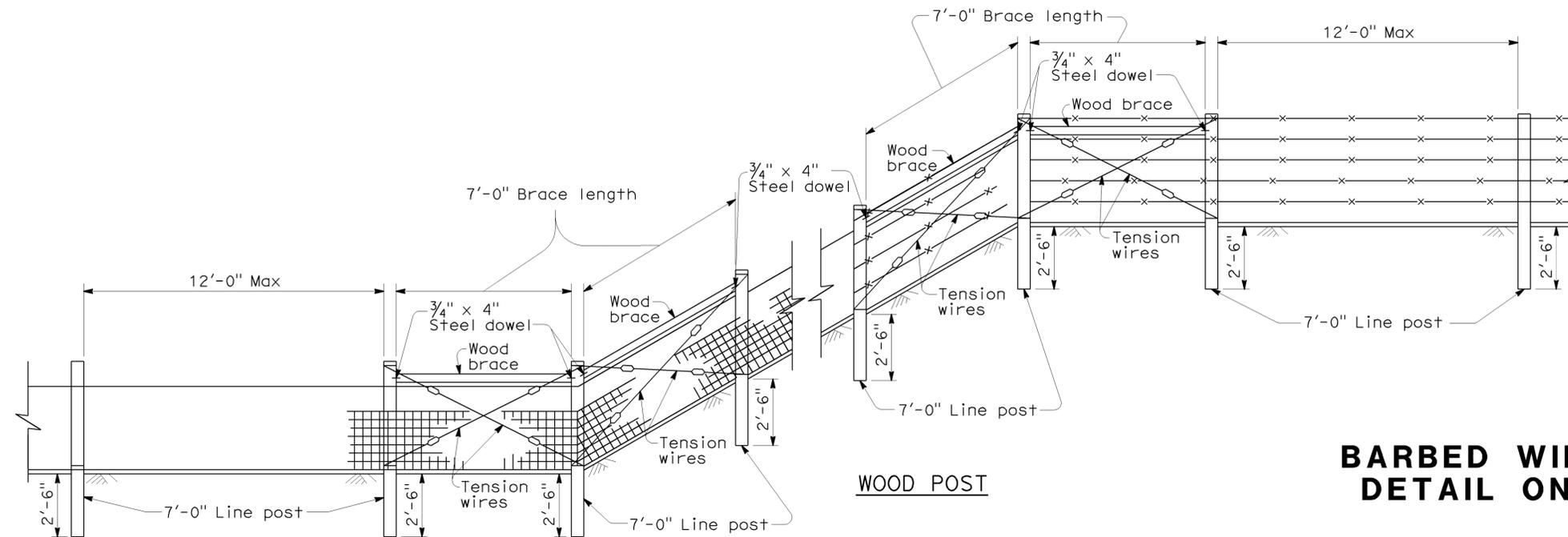


WOOD MORTISE DETAIL

See Note 4



METAL POST



WOOD POST

FENCE ON SHARP BREAK IN GRADE

To accompany plans dated 1-24-11

LEGEND

- Wire Mesh fencing
- Barbed Wire fencing

**BARBED WIRE AND WIRE MESH FENCE
DETAIL ON SHARP BREAK IN GRADE**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

NSP A86A DATED JUNE 5, 2009 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A86A

2006 NEW STANDARD PLAN NSP A86A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	22	27

REGISTERED CIVIL ENGINEER
 Glenn DeCou
 No. C34547
 Exp. 9-30-09
 STATE OF CALIFORNIA

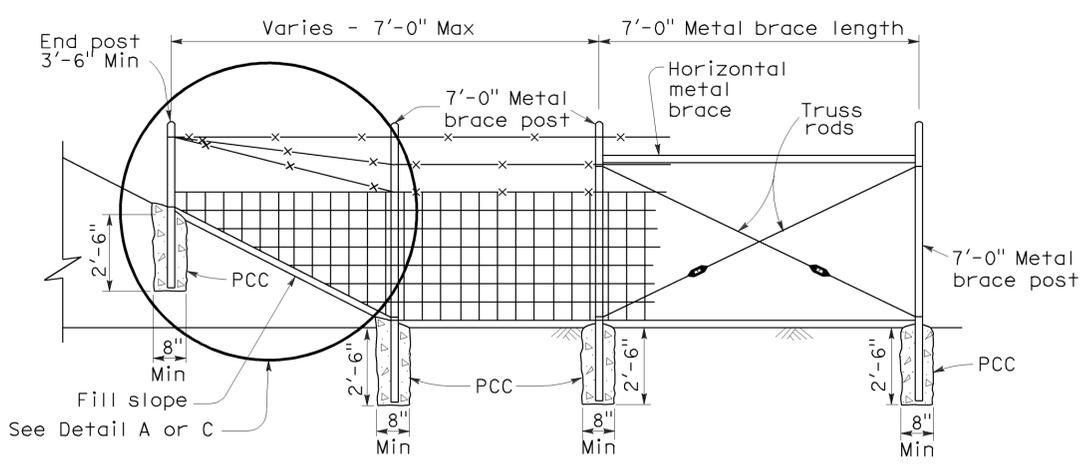
June 5, 2009
 PLANS APPROVAL DATE

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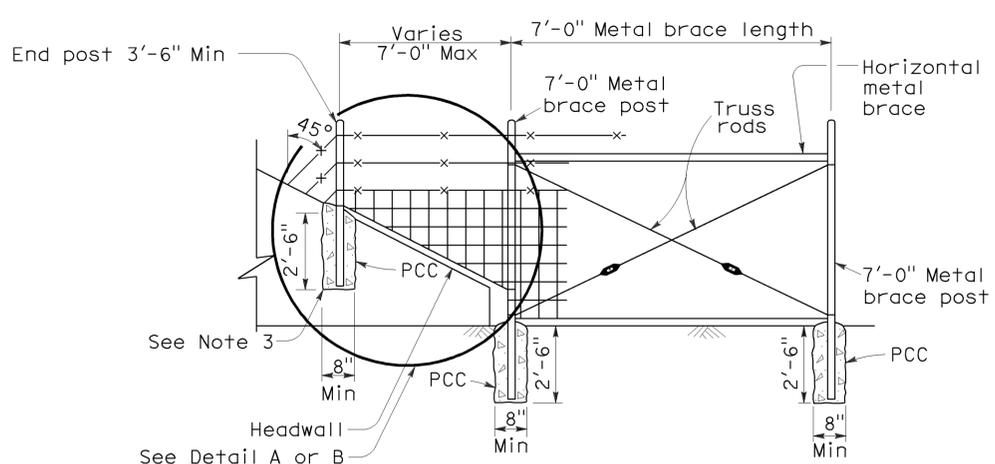
To accompany plans dated 1-24-11

NOTES:

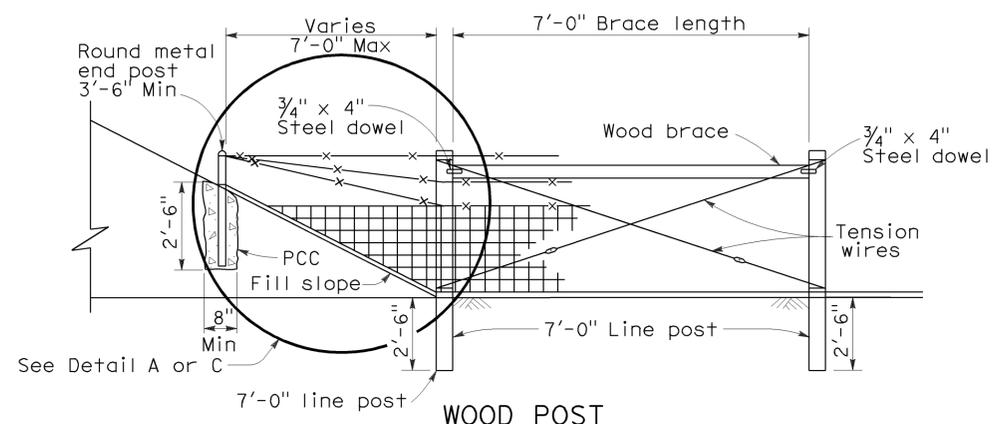
1. Wire Mesh fencing shown, can also use Barbed Wire fencing.
2. See Standard Plan A86 for Wire Mesh and Barbed Wire fence dimensions.
3. See Standard Plan B11-7 Alternative Anchorage Detail for connection at headwall. Round metal post to be used for all fence types.



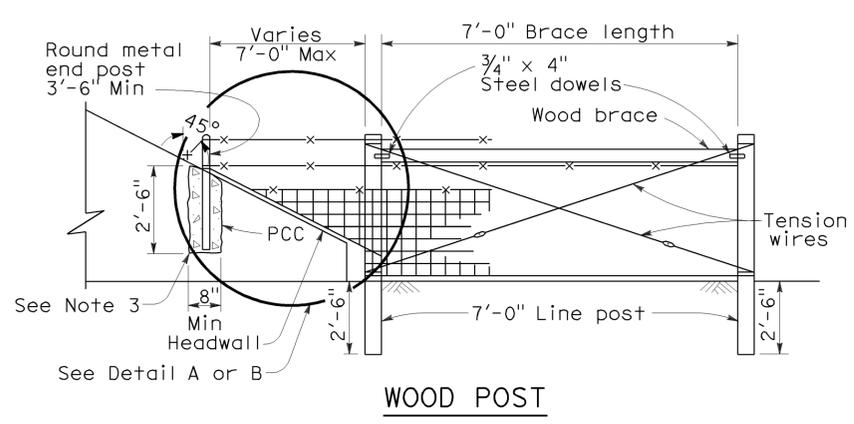
METAL POST



METAL POST



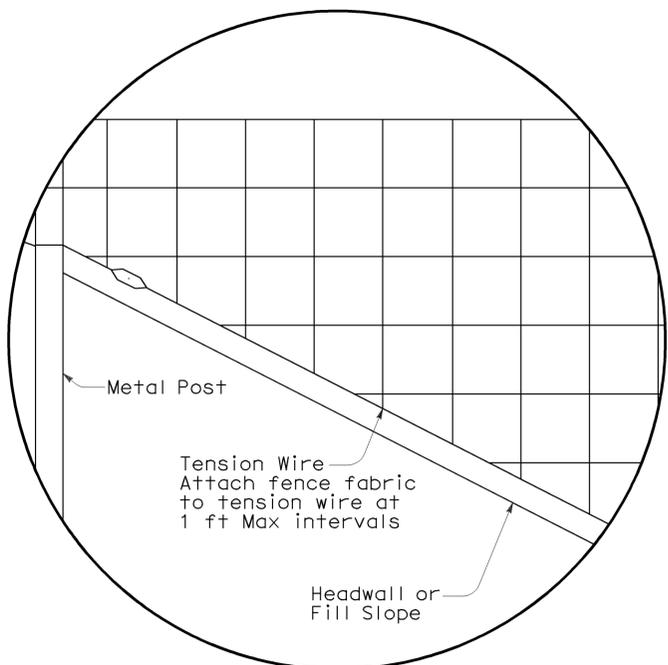
WOOD POST



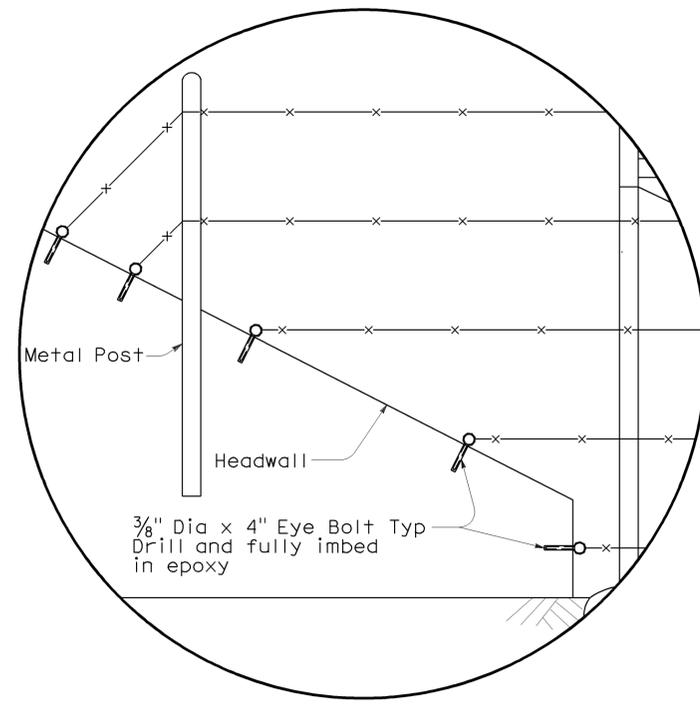
WOOD POST

METHOD OF ERECTING FENCE FOR FILL SLOPE

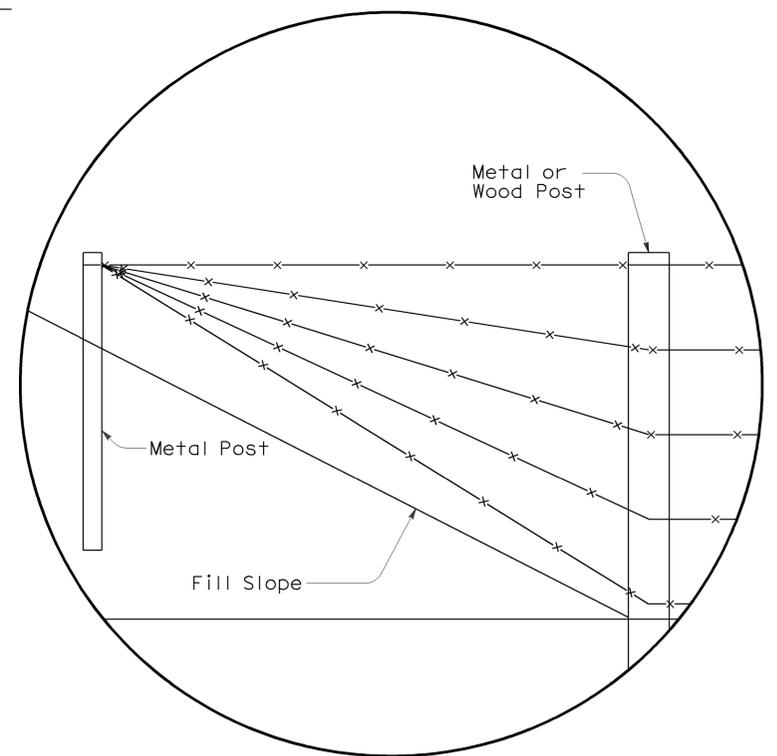
METHOD OF TYING FENCE TO HEADWALL



DETAIL A



DETAIL B



DETAIL C

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**BARBED WIRE AND WIRE MESH
 FENCE DETAILS**

NSP A86B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A86B

2006 NEW STANDARD PLAN NSP A86B

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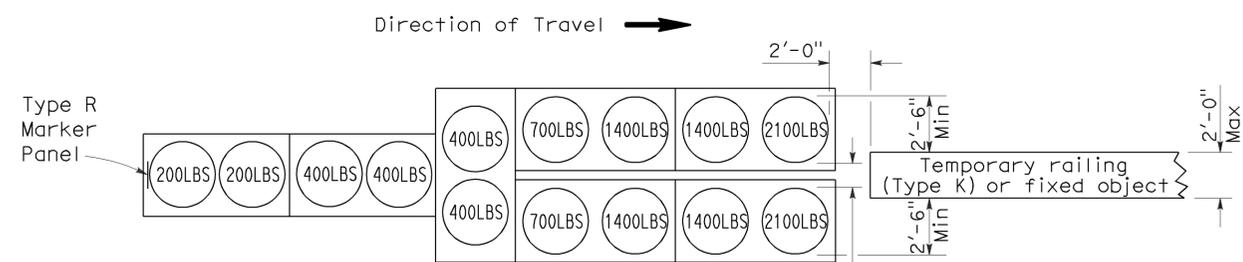
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

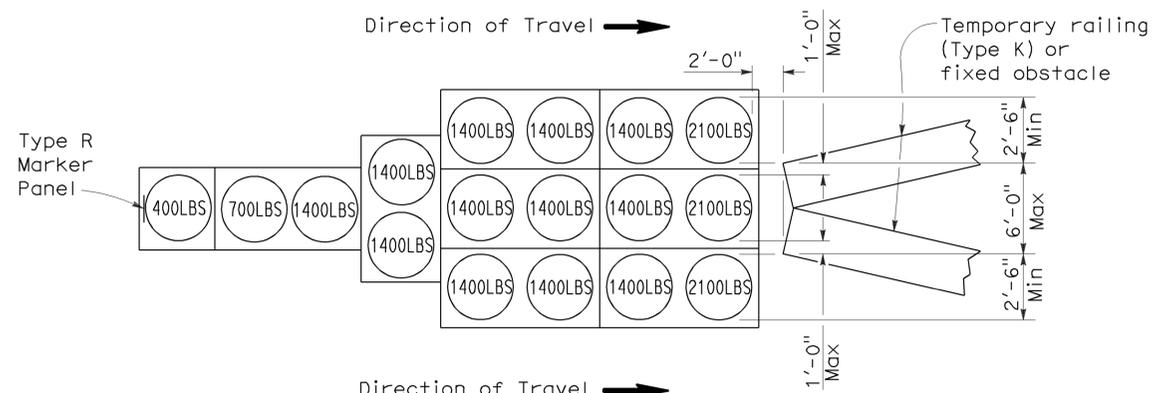
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To accompany plans dated 1-24-11



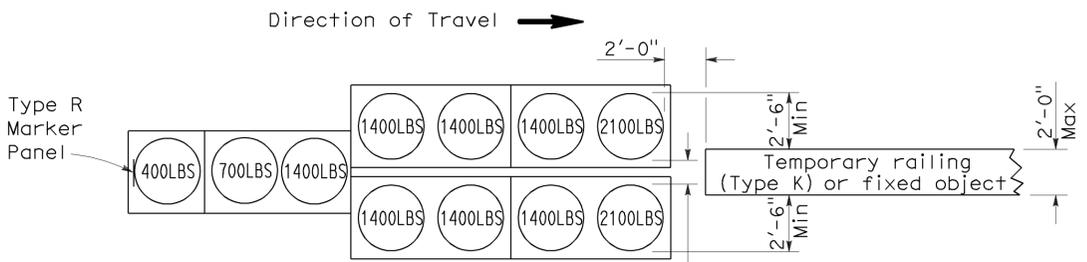
ARRAY 'TU14'

Approach speed 45 mph or more



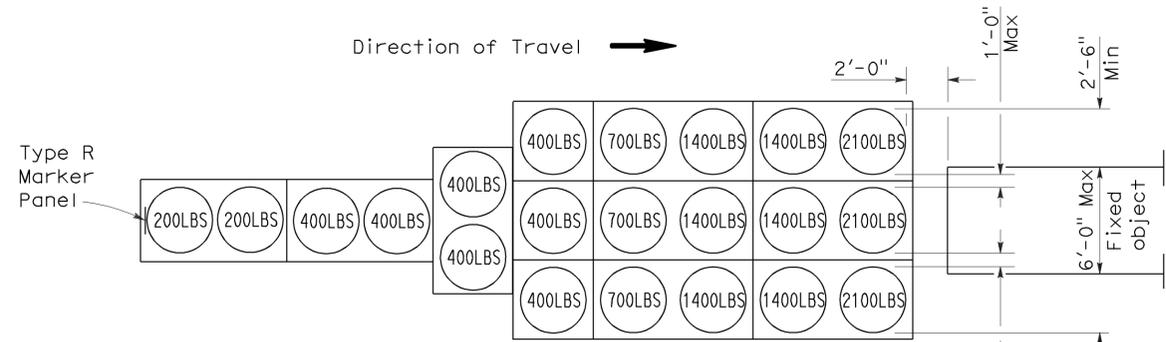
ARRAY 'TU17'

Approach speed less than 45 mph



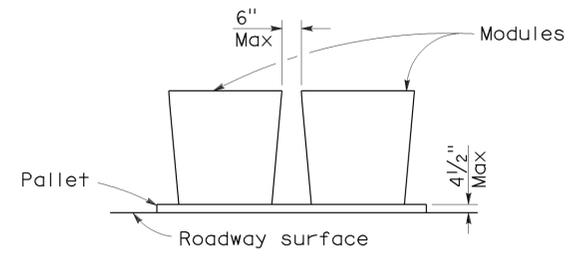
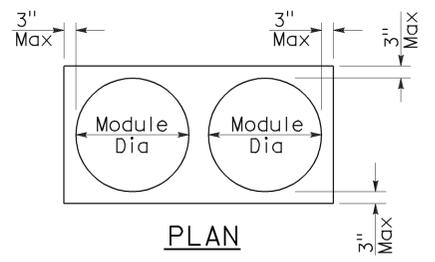
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

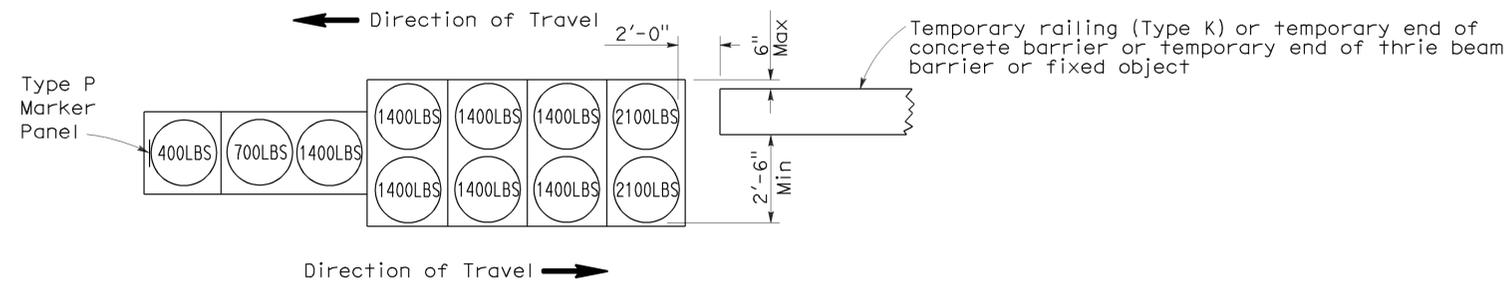
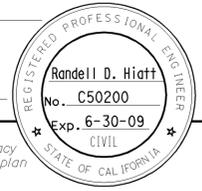
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	24	27

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

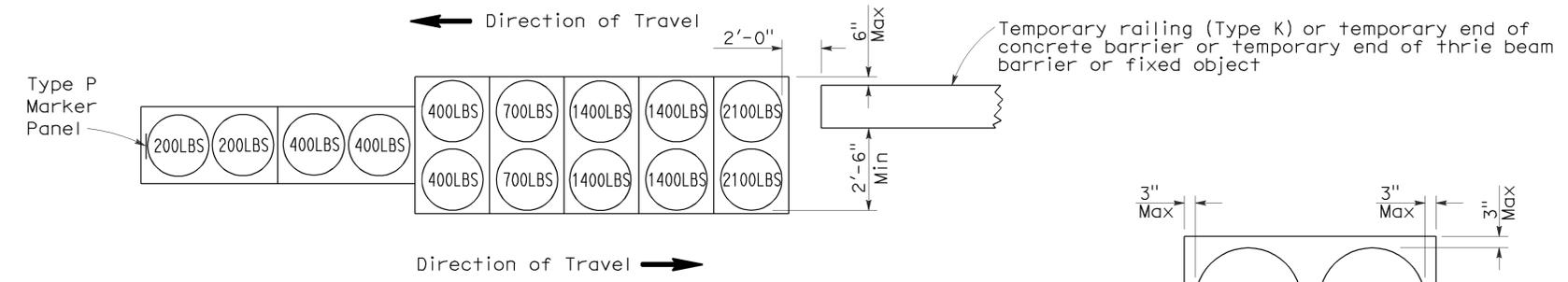
June 6, 2008
PLANS APPROVAL DATE

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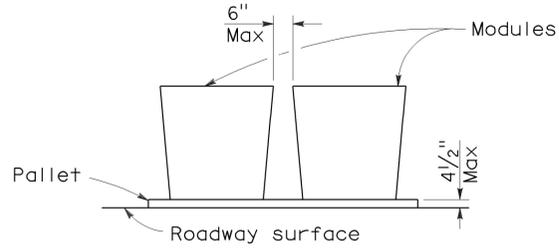
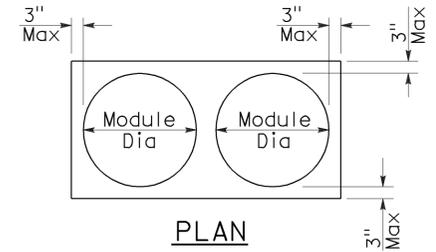
To accompany plans dated 1-24-11



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

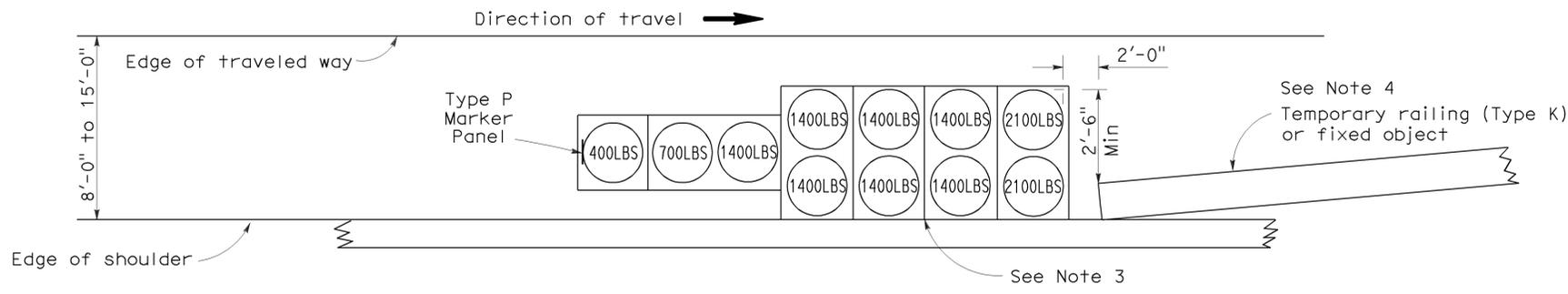
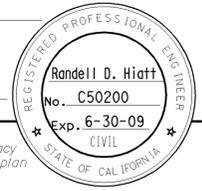
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED	50	13.3/13.7	25	27

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

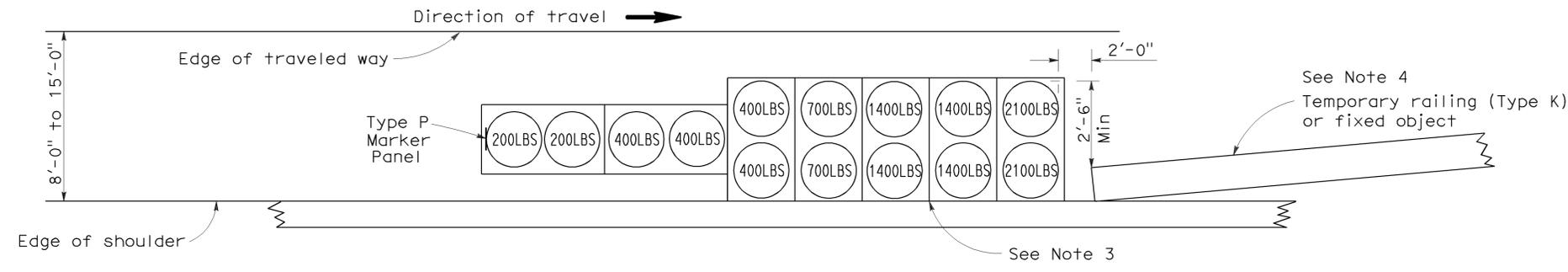
June 6, 2008
PLANS APPROVAL DATE

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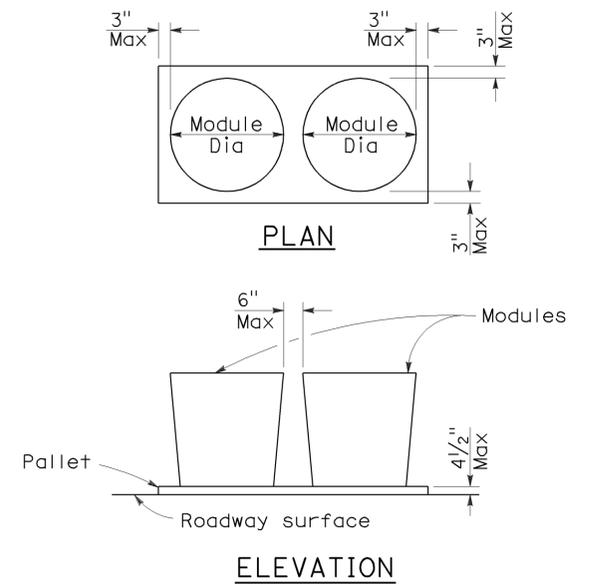
To accompany plans dated 1-24-11



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
03	ED	50	13.3/13.7	27	27

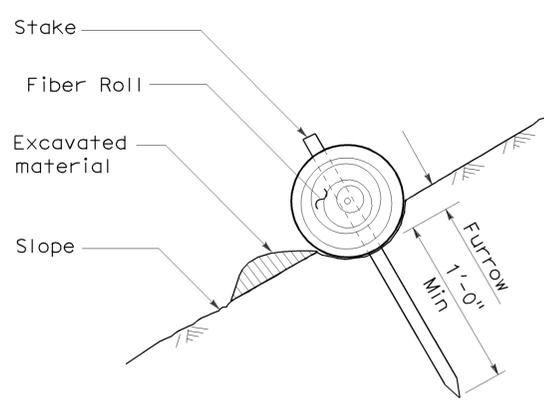
Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

April 3, 2009
PLANS APPROVAL DATE

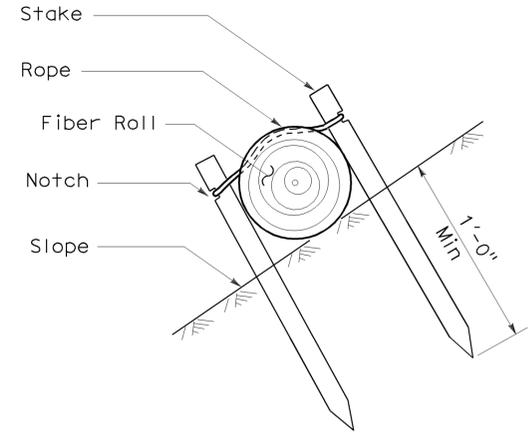
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

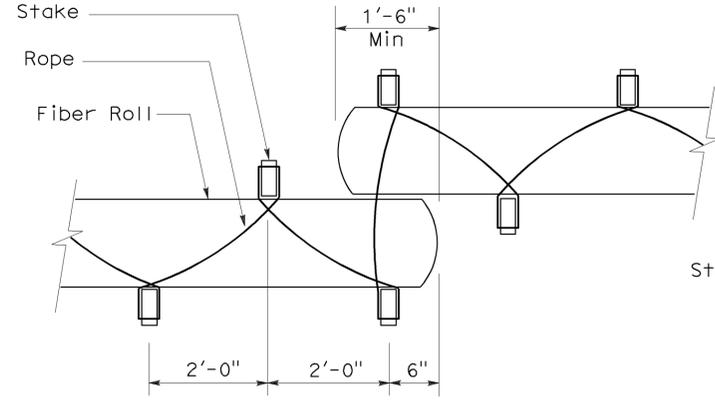
To accompany plans dated 1-24-11



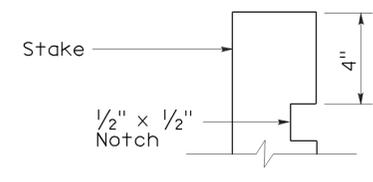
SECTION
TEMPORARY FIBER ROLL
(TYPE 1)



SECTION
TEMPORARY FIBER ROLL
(TYPE 2)

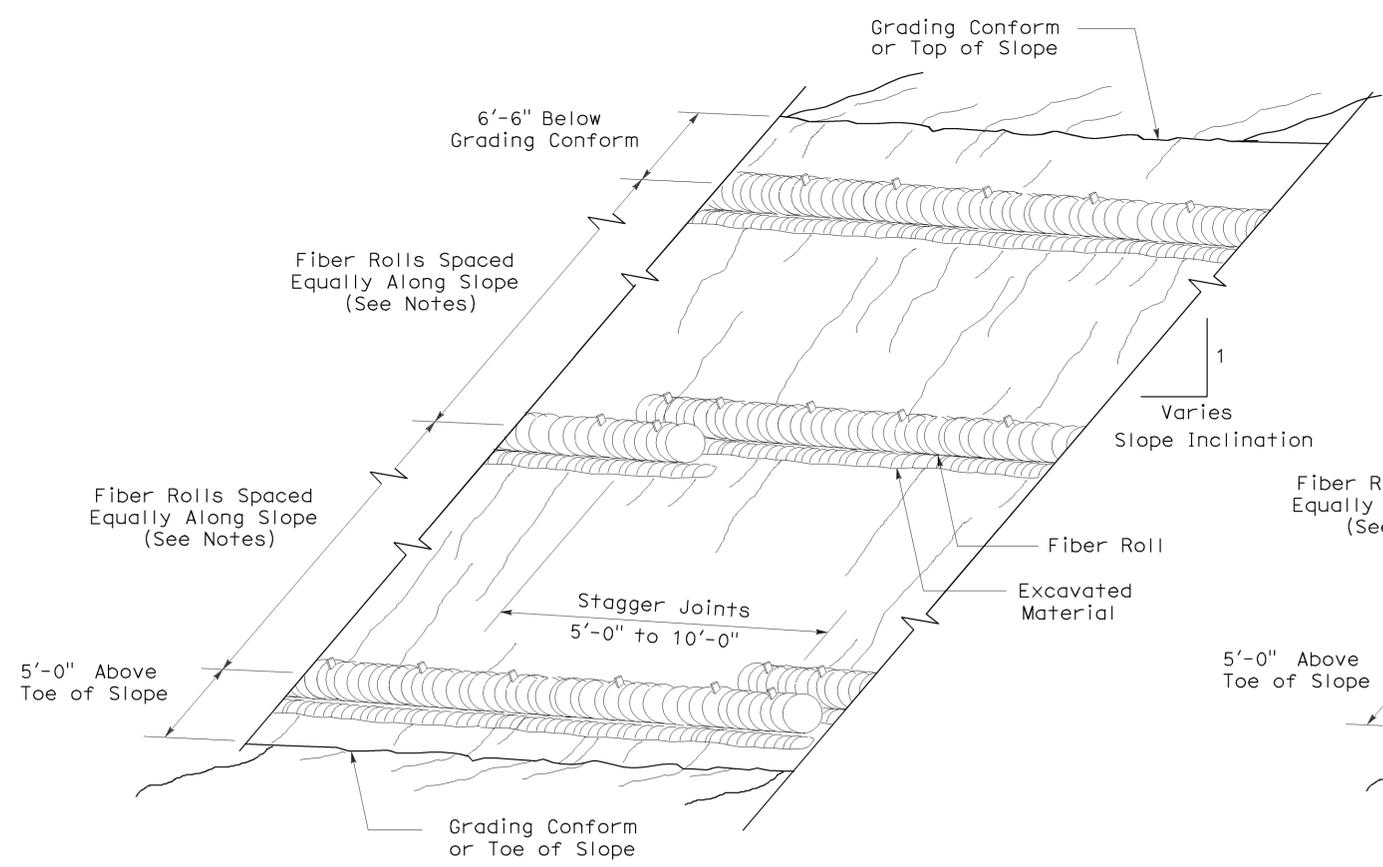


PLAN

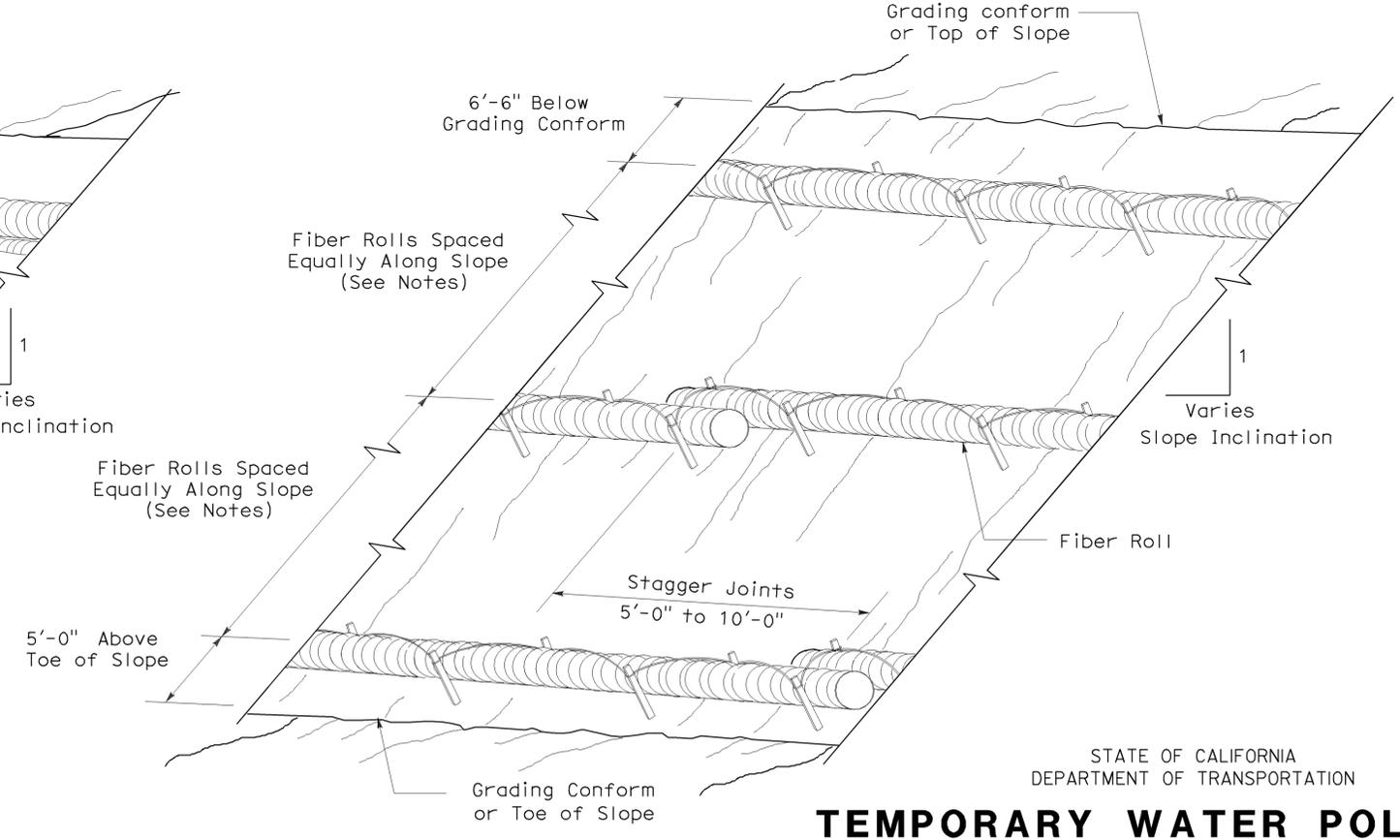


ELEVATION
STAKE NOTCH DETAIL

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



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T56

232

2006 REVISED STANDARD PLAN RSP T56