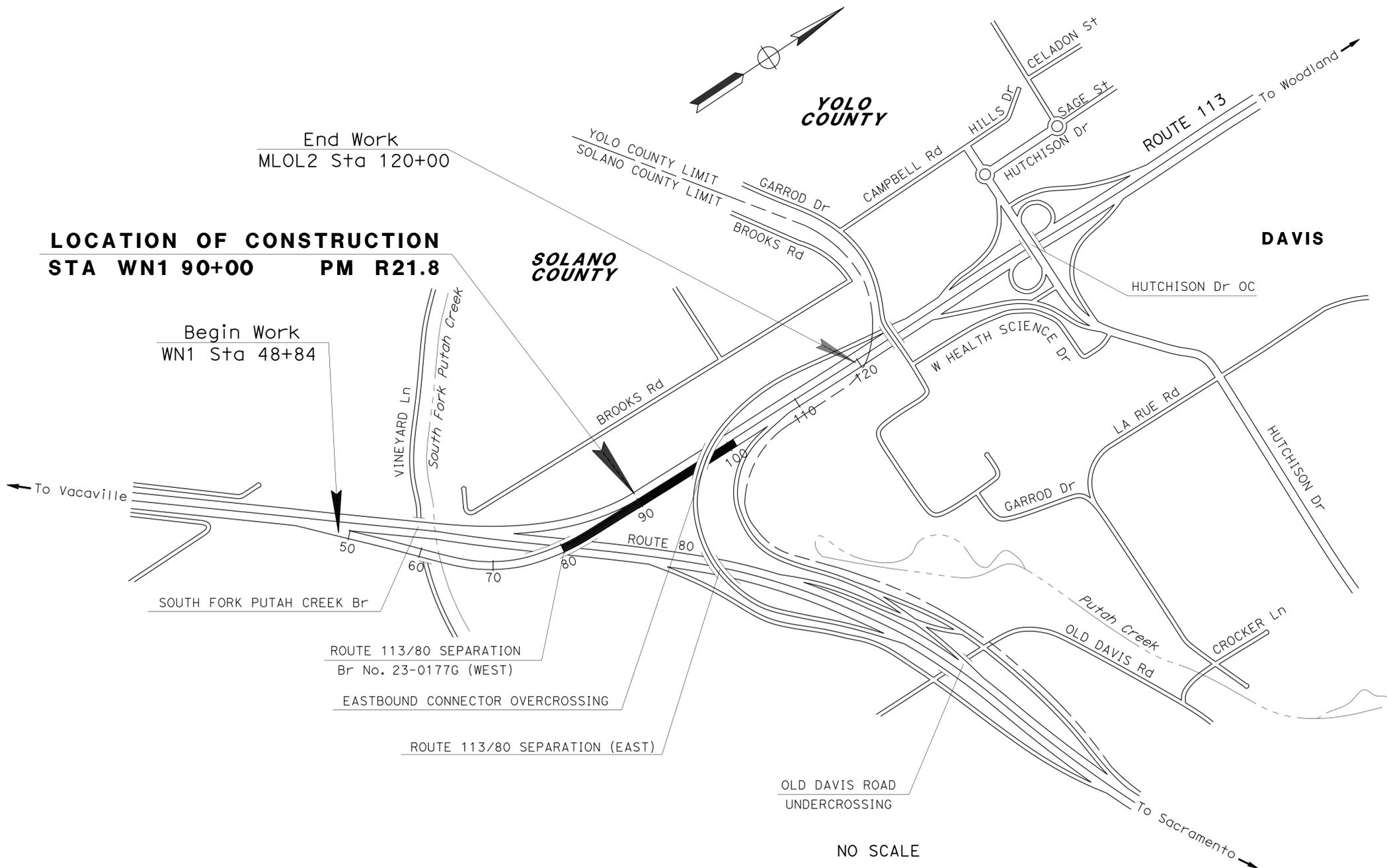
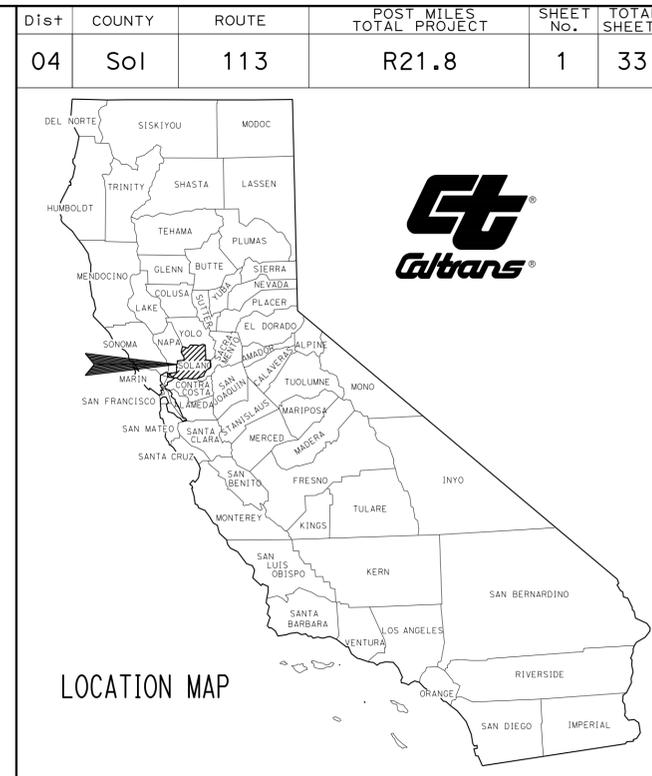


INDEX OF PLANS

| SHEET No. | DESCRIPTION |
|-----------|---|
| 1 | TITLE SHEET AND LOCATION PLAN |
| 2 | TYPICAL CROSS SECTIONS |
| 3 & 4 | LAYOUT |
| 5 & 6 | CONSTRUCTION DETAILS |
| 7 - 10 | DRAINAGE PLAN, PROFILES, DETAILS AND QUANTITIES |
| 11 | CONSTRUCTION AREA SIGNS |
| 12 & 13 | TRAFFIC HANDLING PLAN AND QUANTITIES |
| 14 | SIGN PLAN |
| 15 | SUMMARY OF QUANTITIES |
| 16 - 18 | EROSION CONTROL LEGEND, PLAN AND QUANTITIES |
| 19 - 31 | REVISED STANDARD PLANS |
| | STRUCTURE PLANS |
| 32 & 33 | CONCRETE BARRIER TRANSITION |

STATE OF CALIFORNIA **ACHSNHPG-P113(033)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SOLANO COUNTY
NEAR DAVIS
AT ROUTE 113/80 SEPARATION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



NO SCALE

PROJECT MANAGER
JAMES HSTIAO
 DESIGN MANAGER
ARLISSA PANG

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

An T. Nguyen 2/3/14
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
February 24, 2014
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



| | |
|--------------|-------------------|
| CONTRACT No. | 04-0G7504 |
| PROJECT ID | 0400001990 |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

CALCULATED/DESIGNED BY
 CHECKED BY

AN NGUYEN
 ARLISSA PANG

REVISOR BY
 DATE REVISED

ATN
 9/10/13

NOTE:

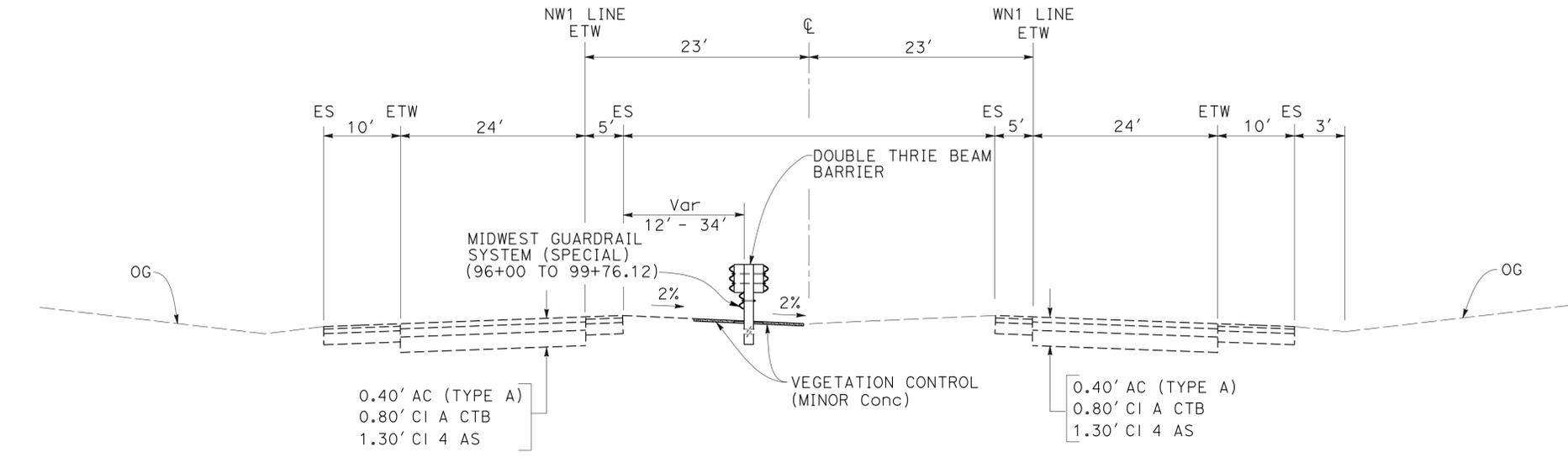
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 2 | 33 |

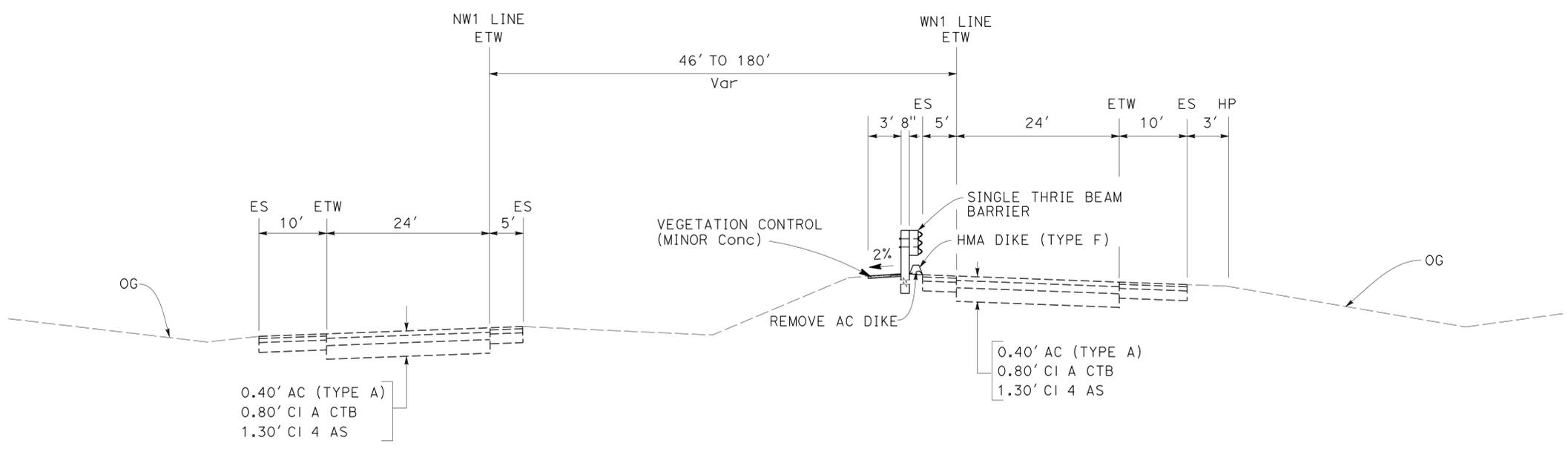
An T. Nguyen 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE

An T. Nguyen
 No. 62776
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA

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



WN1 92+78.80 TO 99+76.12



WN1 83+08.53 TO 92+78.80

TYPICAL CROSS SECTIONS
 NO SCALE

X-1

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 3 | 33 |

An T. Nguyen 2/3/14
 REGISTERED CIVIL ENGINEER DATE

2-24-14
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 An T. Nguyen
 No. 62776
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA

NOTE:

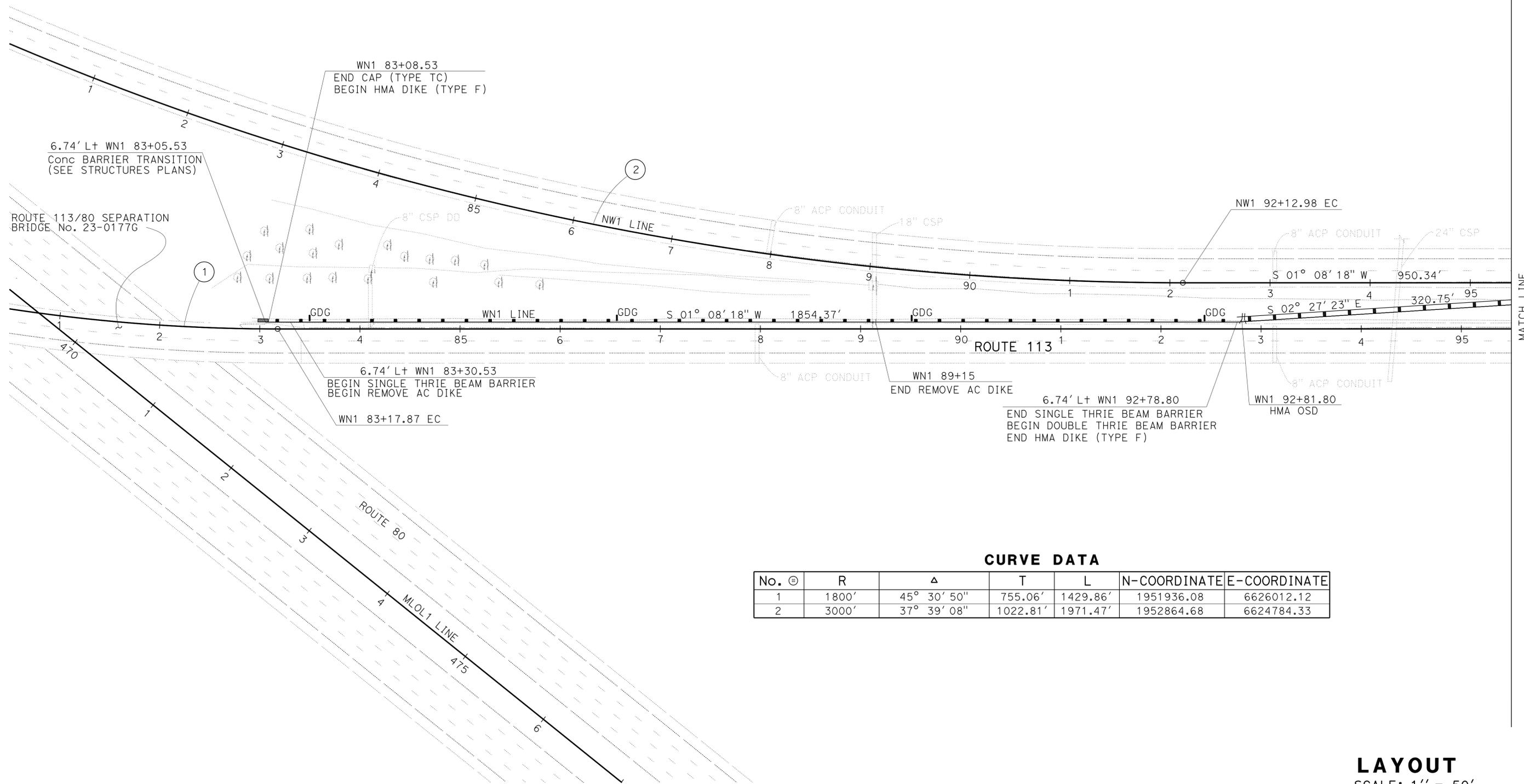
RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

NOTE:

1. COORDINATE VALUES SHOWN ARE CCS 83 ZONE 3.

LEGEND:

- █ GDG GUARD RAILING DELINEATOR (TYPE G)
- No. CURVE DATA NUMBER



CURVE DATA

| No. ② | R | Δ | T | L | N-COORDINATE | E-COORDINATE |
|-------|-------|-------------|----------|----------|--------------|--------------|
| 1 | 1800' | 45° 30' 50" | 755.06' | 1429.86' | 1951936.08 | 6626012.12 |
| 2 | 3000' | 37° 39' 08" | 1022.81' | 1971.47' | 1952864.68 | 6624784.33 |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

CALCULATED/DESIGNED BY
 CHECKED BY

AN NGUYEN
 ARLISSA PANG

REVISED BY
 DATE REVISED

ATN
 9/10/13

NOTE:

RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN.
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY
ENGINEERING AT DISTRICT OFFICE.

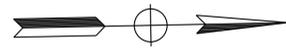
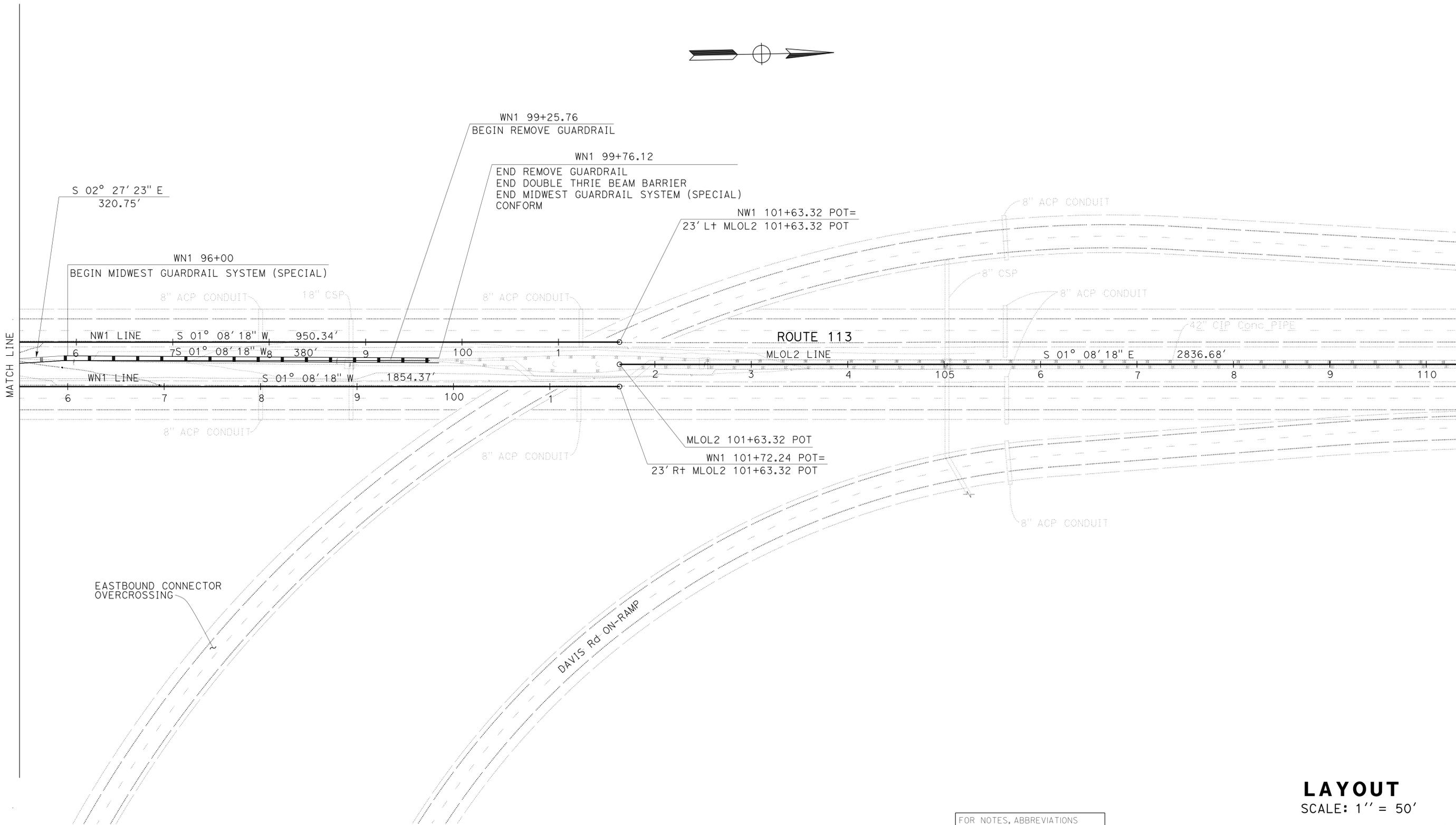
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 4 | 33 |

| | |
|---------------------------|--------|
| <i>An T. Nguyen</i> | 2/3/14 |
| REGISTERED CIVIL ENGINEER | DATE |
| 2-24-14 | |
| PLANS APPROVAL DATE | |

| |
|---|
| REGISTERED PROFESSIONAL ENGINEER No. An T. Nguyen 62776 Exp. 6-30-14 CIVIL STATE OF CALIFORNIA |
|---|

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

| |
|--|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION |
| Caltrans |
| DESIGN |
| FUNCTIONAL SUPERVISOR |
| LAWRENCE A. JONES |
| CALCULATED/DESIGNED BY |
| CHECKED BY |
| AN NGUYEN |
| ARLISSA PANG |
| REVISOR BY |
| DATE REVISED |
| ATN |
| 9/10/13 |



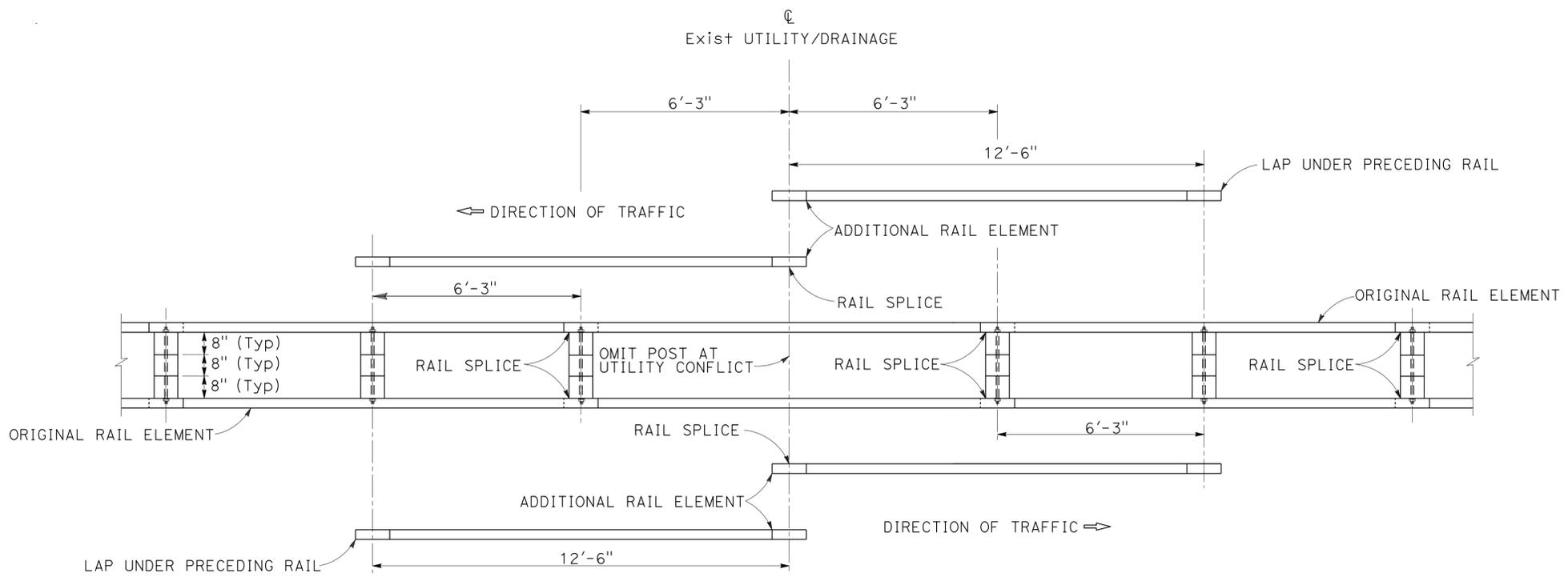
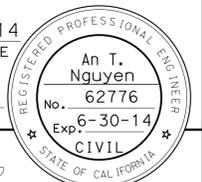
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT
SCALE: 1" = 50'

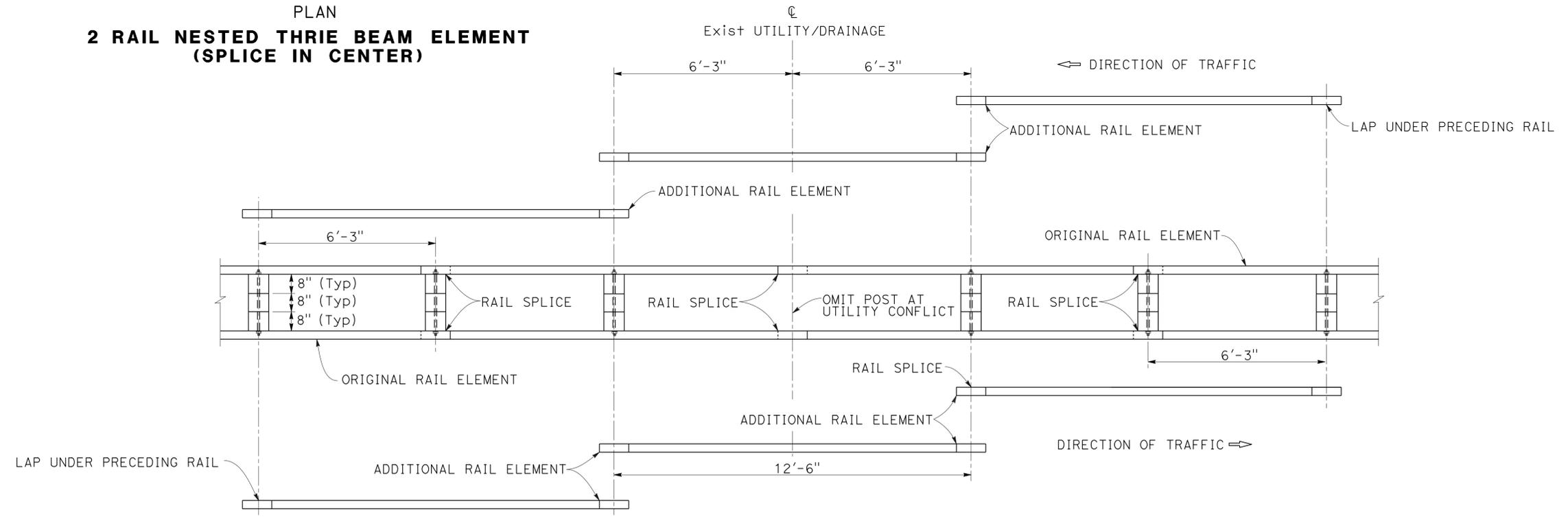
L-2

LAST REVISION: DATE PLOTTED => 14-MAR-2014 02-11-14 TIME PLOTTED => 09:51

| | | | | | |
|---|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 5 | 33 |
|  REGISTERED CIVIL ENGINEER | | | 2/3/14 | DATE | |
| PLANS APPROVAL DATE | | | 2-24-14 | | |
| 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. | | | | | |



PLAN
**2 RAIL NESTED THRIE BEAM ELEMENT
 (SPLICE IN CENTER)**



PLAN
**2 RAIL NESTED THRIE BEAM ELEMENT
 (SPLICE AT POSTS)**

NOTE:
 1. APPLICATION OF NESTED RAIL TO BE DETERMINED BY THE ENGINEER.

CONSTRUCTION DETAILS
 NO SCALE

| | |
|--|-------------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN |
| FUNCTIONAL SUPERVISOR | LAWRENCE A. JONES |
| CALCULATED/DESIGNED BY | CHECKED BY |
| AN NGUYEN | ARLISSA PANG |
| REVISOR BY | DATE REVISED |
| ATN | 9/10/13 |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

CALCULATED/DESIGNED BY
 CHECKED BY

AN NGUYEN
 ARLISSA PANG

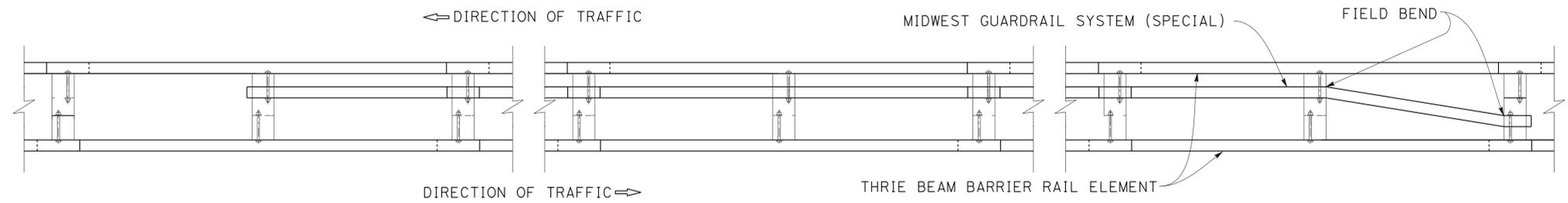
REVISOR BY
 DATE REVISED

ATN
 9/10/13

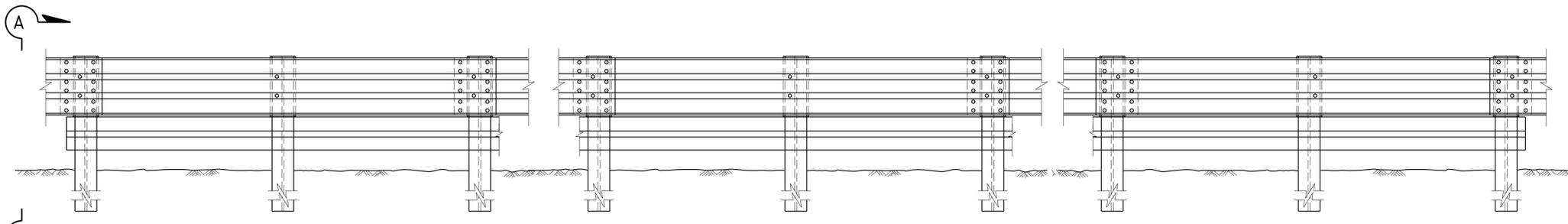
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 6 | 33 |

An T. Nguyen 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

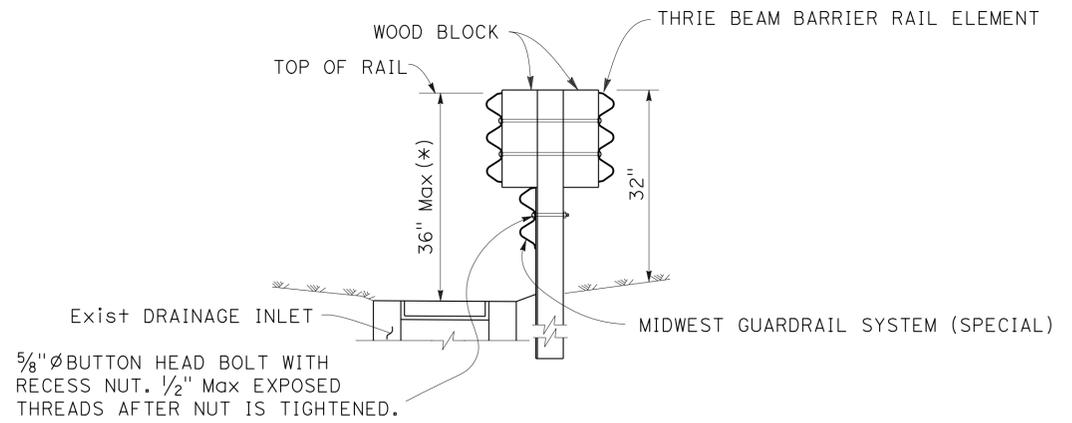
REGISTERED PROFESSIONAL ENGINEER
 An T. Nguyen
 No. 62776
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA



PLAN



ELEVATION



SECTION A-A

MIDWEST GUARDRAIL SYSTEM DETAIL
 (*) - 36" Max AT Exist DRAINAGE INLET

CONSTRUCTION DETAILS
 NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

CALCULATED-DESIGNED BY
 CHECKED BY

AN NGUYEN
 ARLISSA PANG

REVISOR BY
 DATE REVISED

ATN
 9/10/13

NOTE:

RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN.
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY
 ENGINEERING AT DISTRICT OFFICE.

NOTES:

1. LOCATIONS OF Exist DRAINAGE FACILITIES ARE APPROXIMATE. VERIFY LOCATION AND ELEVATION OF Exist DRAINAGE FACILITIES PRIOR TO MODIFYING.
2. TOP OF GRATE ELEVATIONS, STATIONS AND OFFSET TIES TO DRAINAGE STRUCTURES ARE MEASURED AS PER THE DETAIL ON SHEET DD-1.

LEGEND:

-  DRAINAGE SYSTEM NUMBER
-  DRAINAGE UNIT

ABBREVIATIONS:

- TG TOP OF GRATE
- w/ WITH

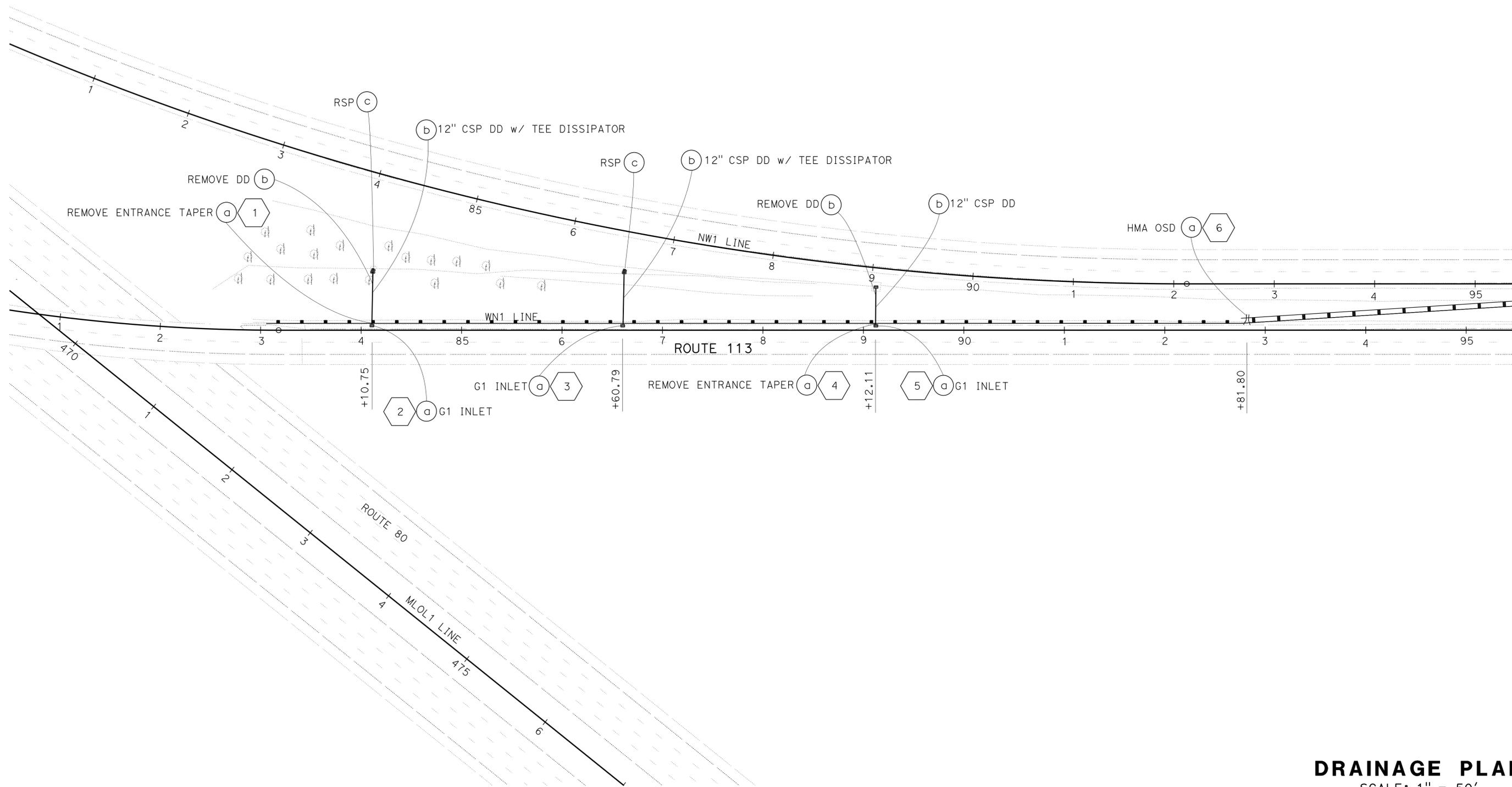


| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 7 | 33 |

 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE

An T. Nguyen
 No. 62776
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA

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



DRAINAGE PLAN
 SCALE: 1" = 50'

APPROVED FOR DRAINAGE WORK ONLY

D-1

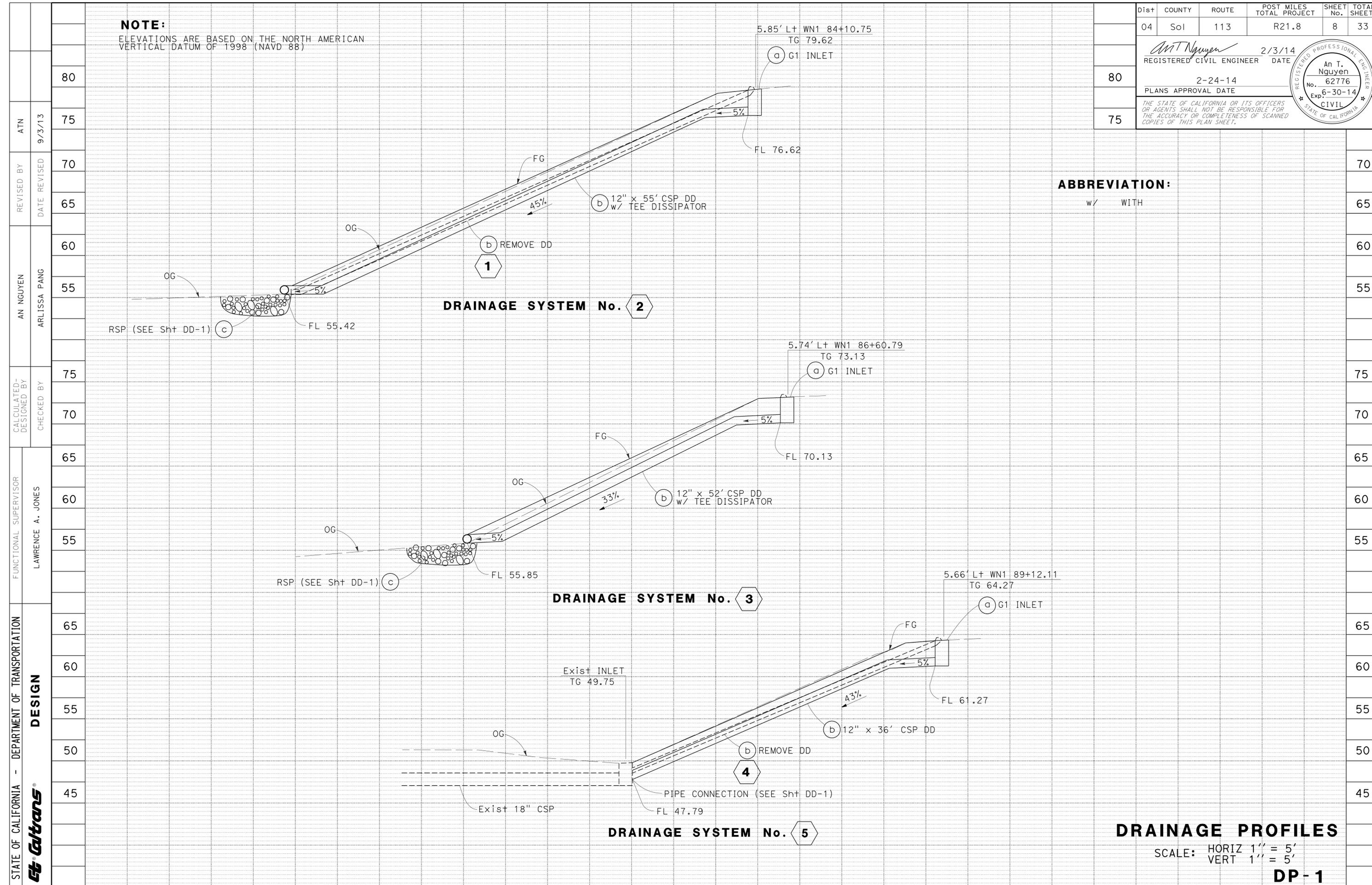


NOTE:
ELEVATIONS ARE BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1998 (NAVD '88)

| | | | | | |
|--|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 8 | 33 |
|  REGISTERED CIVIL ENGINEER | | | 2/3/14 | DATE | |
| PLANS APPROVAL DATE | | | 2-24-14 | | |
| <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> | | | | | |

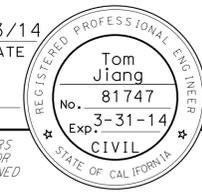


ABBREVIATION:
w/ WITH

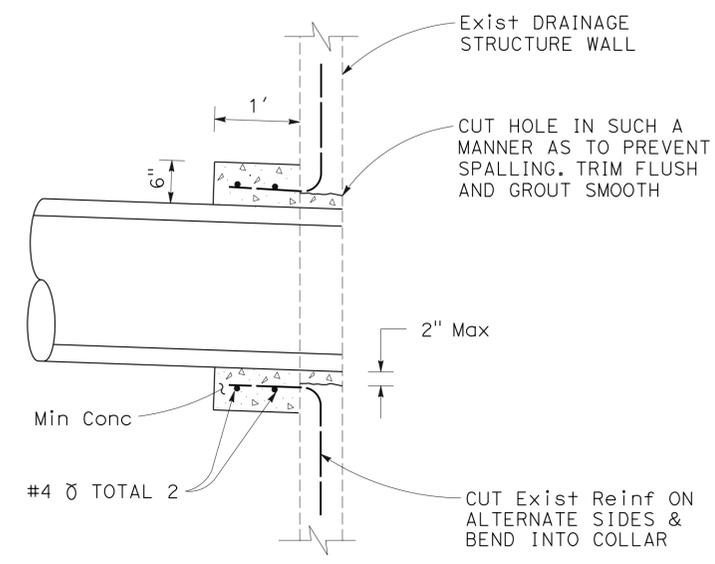
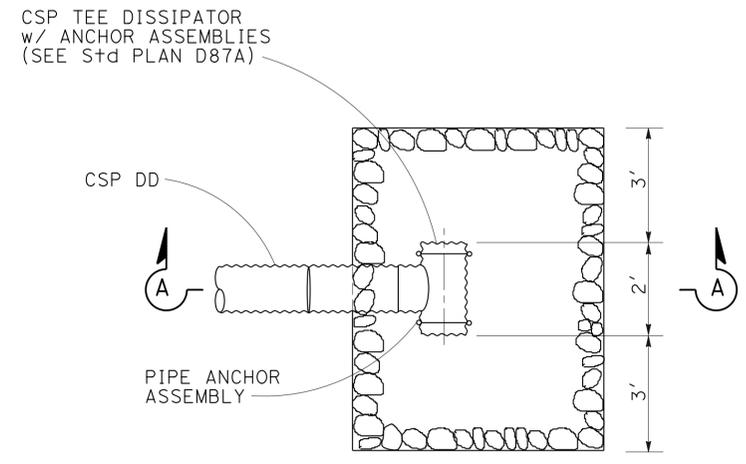


DRAINAGE PROFILES
SCALE: HORIZ 1" = 5'
VERT 1" = 5'
DP-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: LAWRENCE A. JONES
 CHECKED BY: AN NGUYEN
 REVISIONS: 9/3/13
 ATN

| | | | | | |
|--|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 9 | 33 |
|  | | | 1/23/14 | | |
| REGISTERED CIVIL ENGINEER | | | DATE | | |
| | | | 2-24-14 | | |
| | | | 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> | | | | | |
|  | | | | | |

NOTE:
FOR DD DETAILS NOT SHOWN, SEE S+D PLAN D87A.

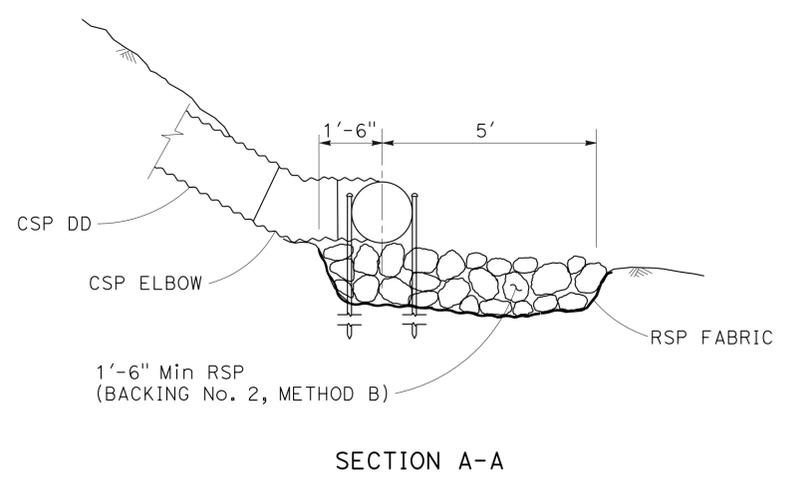


NOTES:

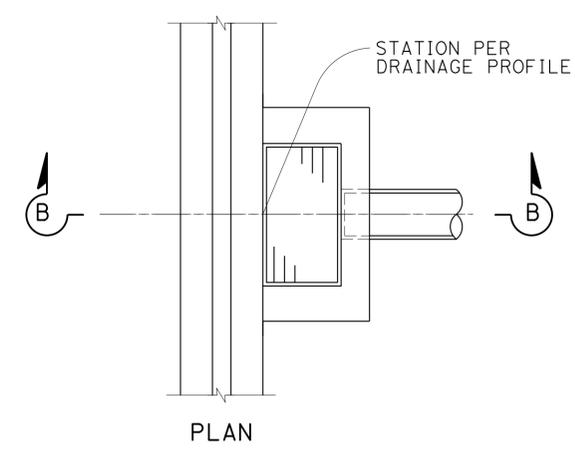
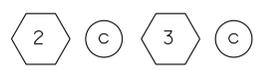
- IF WALL OF Exist DRAINAGE STRUCTURE HAS NO REINFORCING, DRILL AND BOND DOWELS, 1' ON CENTER, 6" INTO WALL AND BEND INTO COLLAR.
- SQUARE OR CIRCULAR COLLAR OPTIONAL.

ABBREVIATION:

w/ WITH

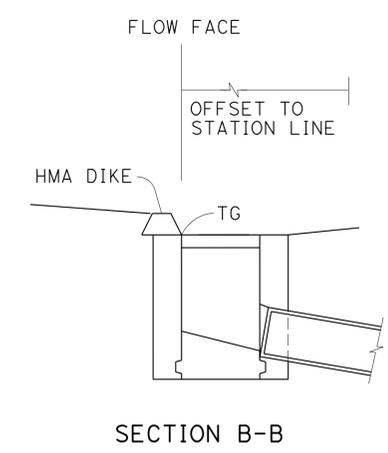


RSP AT TEE DISSIPATOR



NOTE:
FOR INLET INFORMATION NOT SHOWN, SEE S+D PLAN D73.

INLET ADJACENT TO AC DIKE



DRAINAGE DETAILS
NO SCALE

DD-1

| | | | | |
|---|-----------------------|-----------------|-----------------|---------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | DESIGNED BY | REVISOR | DATE |
|  | JOSEPH PETERSON | JOSEPH PETERSON | TOM JIANG | 10/1/13 |
| HYDRAULICS | | CHECKED BY | KATHLEEN REILLY | |



FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

AN NGUYEN
 ARLISSA PANG

REVISOR BY
 DATE REVISED

ATN
 9/10/13

NOTE:

1. PIPE JOINTS SHALL BE DOWNDRAIN TYPE JOINTS.

ABBREVIATION:

w/ WITH

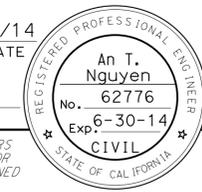
DRAINAGE QUANTITIES

| DRAINAGE SHEET No. | DRAINAGE SYSTEM No.  | DRAINAGE UNIT  | REMOVE ENTRANCE TAPER | | MINOR CONCRETE (MINOR STRUCTURE) | 12" CORRUGATED STEEL PIPE DD | FRAME & GRATE (N) (TYPE 24-12) | MISCELLANEOUS IRON AND STEEL | BACKING No. 2, METHOD B | RSP | PLACE HMA (Misc AREA) (*) | MINOR HMA | HEIGHT OF INLET (N) | 12" ANCHOR ASSEMBLY | DESCRIPTION | STATION | DRAINAGE SYSTEM No.  | DRAINAGE UNIT  |
|--------------------|---|---|-----------------------|----|----------------------------------|------------------------------|--------------------------------|------------------------------|-------------------------|------|---------------------------|-----------|---------------------|---------------------|---|--------------|---|---|
| | | | EA | DD | | | | | | | | | | | | | | |
| D-1 | 1 | a | 1 | 1 | | | | | | | | | | | REMOVE ENTRANCE TAPER REMOVE DD | WN1 84+10.75 | 1 | a |
| | | b | | | | | | | | | | | | | | | | b |
| D-1 | 2 | a | | | 0.95 | | 1 | 326 | | | | | 3.0 | | G1 INLET | WN1 84+10.75 | 2 | a |
| | | b | | | | 55 | | | | | | | | 2 | 12" CSP DD w/ TEE DISSIPATOR AND ANCHOR ASSEMBLY RSP | | | b |
| | | c | | | | | | | 2.9 | 5.8 | | | | | | | | c |
| D-1 | 3 | a | | | 0.95 | | 1 | 326 | | | | | 3.0 | | G1 INLET | WN1 86+60.79 | 3 | a |
| | | b | | | | 52 | | | | | | | | 2 | 12" CSP DD w/ TEE DISSIPATOR AND ANCHOR ASSEMBLY RSP | | | b |
| | | c | | | | | | | 2.9 | 5.8 | | | | | | | | c |
| D-1 | 4 | a | 1 | | | | | | | | | | | | REMOVE ENTRANCE TAPER REMOVE DD | WN1 89+12.11 | 4 | a |
| | | b | | 1 | | | | | | | | | | | | | | b |
| D-1 | 5 | a | | | 0.95 | | 1 | 326 | | | | | 3.0 | | G1 INLET | WN1 89+12.11 | 5 | a |
| | | b | | | | 36 | | | | | | | | | 12" CSP DD | | | b |
| D-1 | 6 | a | | | | | | | | | 2.2 | 0.5 | | | HMA OSD | WN1 92+81.80 | 6 | a |
| SHEET TOTAL | | | 2 | 2 | 2.85 | 143 | 3 | 978 | 5.8 | 11.6 | 2.2 | 0.5 | | 4 | SHEET TOTAL | | | |

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
 (*) SEE SHEET Q-1.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 10 | 33 |

 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE



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

DRAINAGE QUANTITIES

DQ-1

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 11 | 33 |

Jerri-Paul Fabian, 2/3/14
REGISTERED CIVIL ENGINEER DATE

2-24-14
PLANS APPROVAL DATE

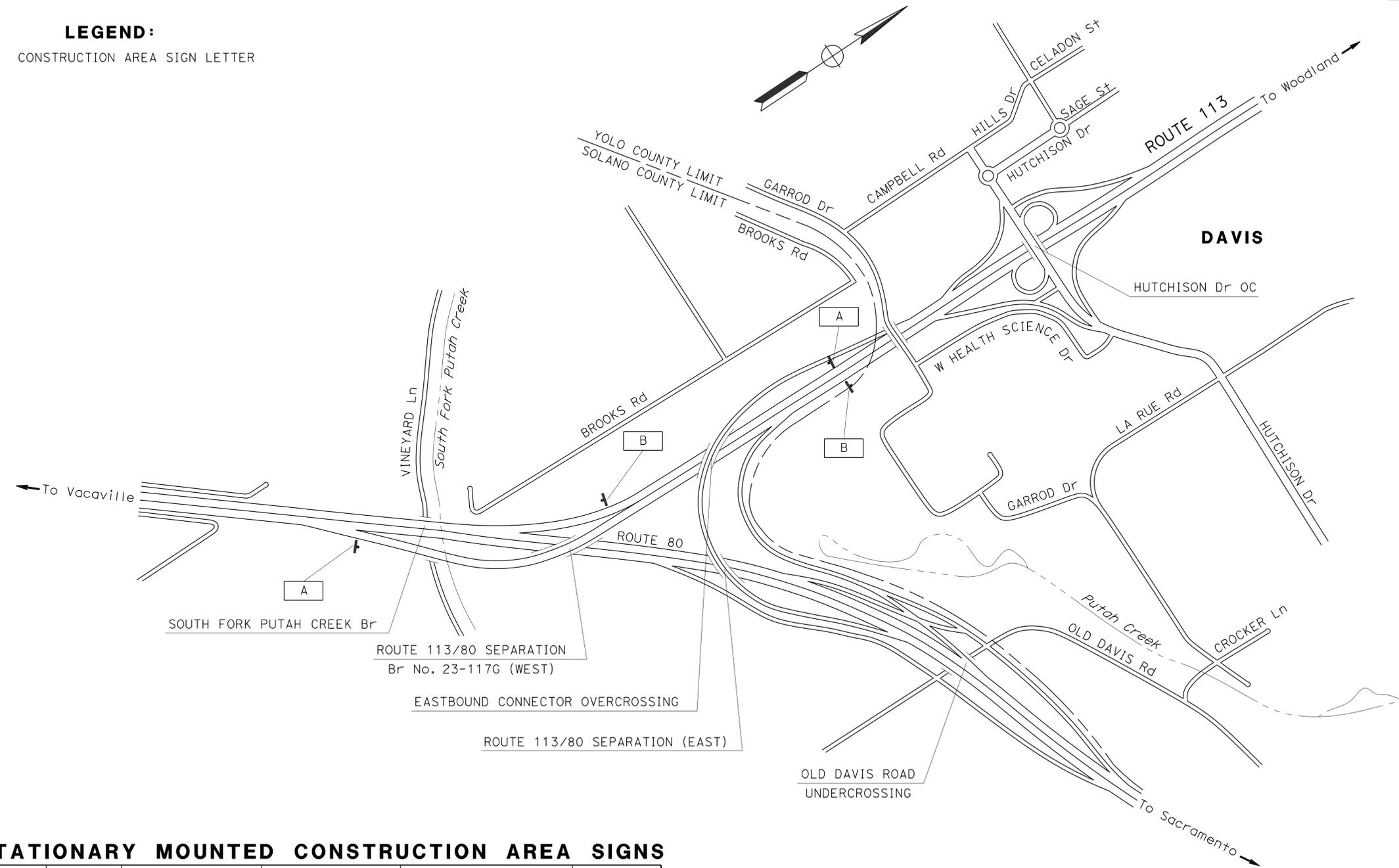
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

EXACT LOCATION AND POSITION OF SIGNS TO BE DETERMINED BY THE ENGINEER.

LEGEND:

CONSTRUCTION AREA SIGN LETTER



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

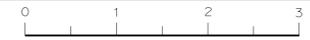
| SIGN LETTER | MUTCD CODE | MESSAGE | PANEL SIZE | NUMBER OF POST AND SIZE | No. OF SIGNS |
|-------------|------------|-----------------|------------|-------------------------|--------------|
| | W20-1 | ROAD WORK AHEAD | 48" x 48" | 1 - 4" x 6" | 2 |
| | G20-2 | END ROAD WORK | 48" x 24" | 1 - 4" x 4" | 2 |

CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CALCULATED/DESIGNED BY: JERRI-PAUL FABIAN, CLAUDIA FANG
 CHECKED BY: CLAUDIA FANG
 REVISED BY: JF
 DATE REVISED: 7/12/13



LAST REVISION DATE PLOTTED => 14-MAR-2014
 02-12-14 TIME PLOTTED => 09:51

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 12 | 33 |

| | |
|---------------------------|--------|
| <i>An T. Nguyen</i> | 2/3/14 |
| REGISTERED CIVIL ENGINEER | DATE |
| 2-24-14 | |
| PLANS APPROVAL DATE | |

| |
|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| An T. Nguyen |
| No. 62776 |
| Exp. 6-30-14 |
| CIVIL |

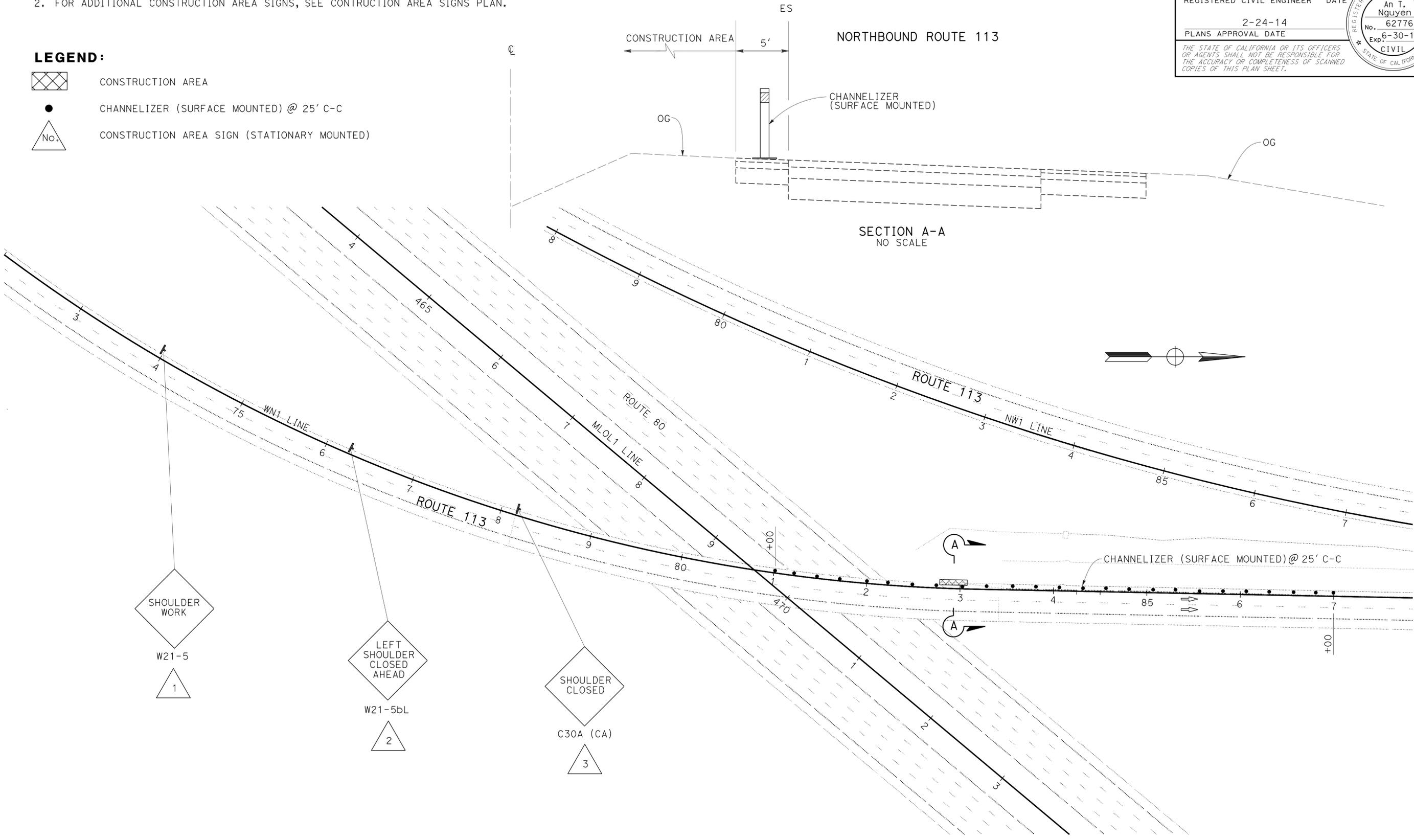
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE CONSTRUCTION AREA SIGNS PLAN.

LEGEND:

-  CONSTRUCTION AREA
-  CHANNELIZER (SURFACE MOUNTED) @ 25' C-C
-  CONSTRUCTION AREA SIGN (STATIONARY MOUNTED)



| | |
|--|--------------|
| ATN | 9/10/13 |
| REVISOR | DATE |
| AN NGUYEN | ARLISSA PANG |
| CALCULATED/DESIGNED BY | CHECKED BY |
| LAWRENCE A. JONES | |
| FUNCTIONAL SUPERVISOR | |
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN |

APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-1

LAST REVISION DATE PLOTTED => 14-MAR-2014 02-12-14 TIME PLOTTED => 09:51

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 LAWRENCE A. JONES

CALCULATED/DESIGNED BY
 CHECKED BY

AN NGUYEN
 ARLISSA PANG

REVISOR BY
 DATE REVISED

ATN
 9/10/13

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 13 | 33 |

An T. Nguyen 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 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.

TRAFFIC HANDLING QUANTITIES

| SHEET No. | STATION | CHANNELIZER (SURFACE MOUNTED) |
|-----------|--------------------|-------------------------------|
| | | EA |
| TH-1 | WN1 81+00 TO 87+00 | 25 |

CONSTRUCTION AREA SIGNS (STATIONARY-MOUNTED)

| LOCATION | SHEET No. | SIGN No. | SIGN CODE | PANEL SIZE | NUMBER OF POST AND SIZE | SIGN MESSAGE |
|--------------|-----------|----------|-----------|------------|-------------------------|----------------------------|
| NB ROUTE 113 | TH-1 | 1 | W21-5 | 48" x 48" | 1 - 4" x 6" | SHOULDER WORK |
| | | 2 | W21-5bL | 48" x 48" | 1 - 4" x 6" | LEFT SHOULDER CLOSED AHEAD |
| | | 3 | C30A (CA) | 48" x 48" | 1 - 4" x 6" | SHOULDER CLOSED |

NOTE: FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE CONSTRUCTION AREA SIGNS PLAN.

**TRAFFIC HANDLING QUANTITIES
 THQ-1**

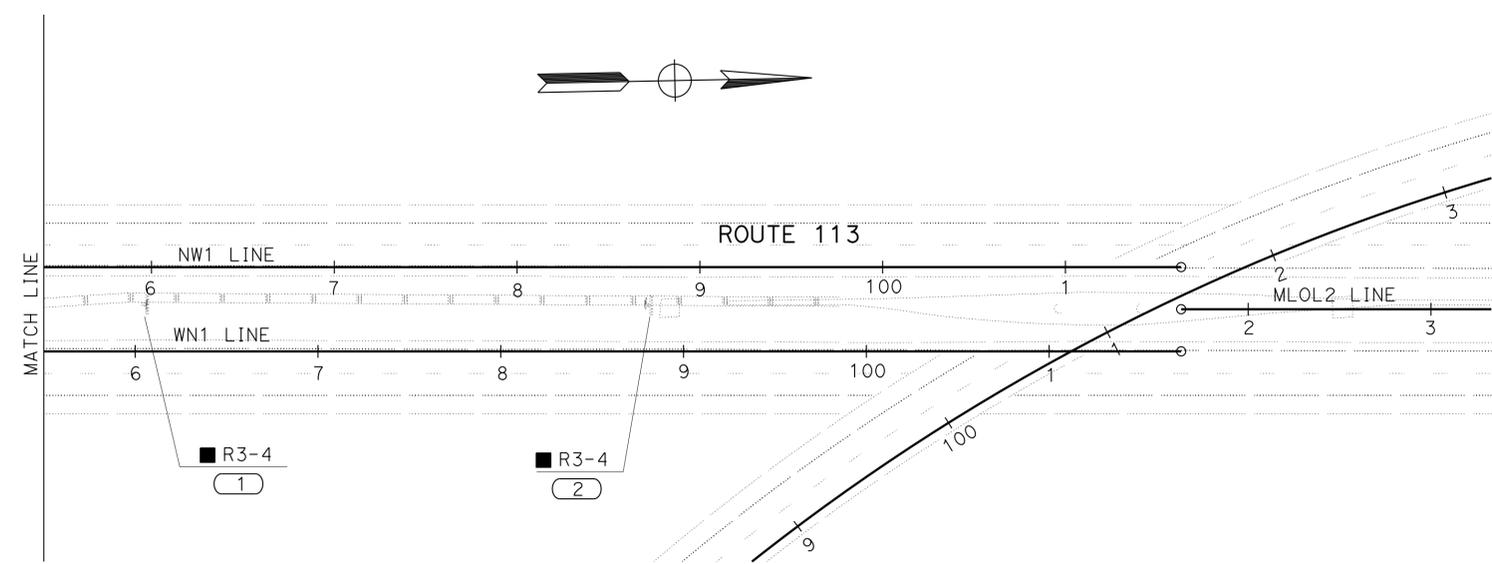
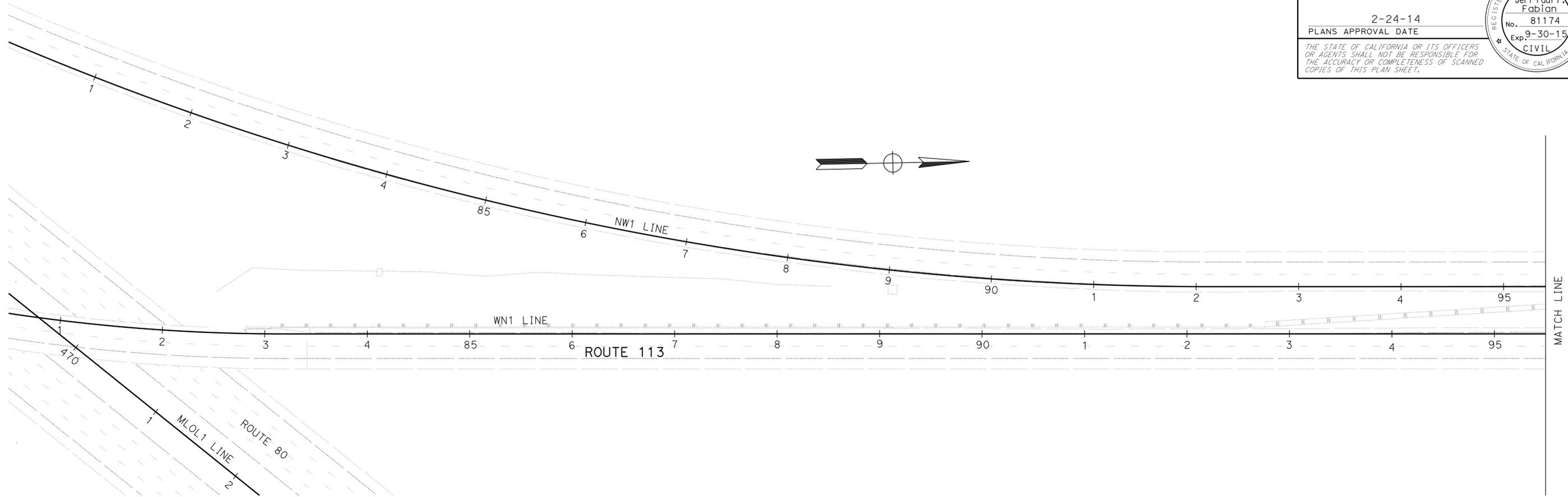
LAST REVISION
 DATE PLOTTED => 14-MAR-2014
 02-12-14 TIME PLOTTED => 09:51

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 JERI-PAUL FABIAN
 REVISOR: CLAUDIA FANG
 DATE: 8/9/13

NOTE:
 RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN.
 THE CONTRACTOR MUST CONTACT RIGHT OF WAY ENGINEERING AT THE
 DISTRICT OFFICE FOR CONDITIONS OF USE PRIOR TO COMMENCING WORK.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 14 | 33 |

Jerri-Paul Fabian 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 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.



ROADSIDE SIGN QUANTITIES

| SHEET NUMBER | SIGN NUMBER (No.) | SIGN CODE | REMOVE |
|--------------|-------------------|-----------|-------------------------|
| | | | ROADSIDE SIGN WOOD POST |
| S-1 | 1 | R3-4 | 1 |
| | 2 | R3-4 | 1 |
| TOTAL | | | 2 |

NOTE:
 1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.

LEGEND:
 ■ REMOVE ROADSIDE SIGN
 (No.) ROADSIDE SIGN NUMBER

SIGN PLAN
 NO SCALE

APPROVED FOR SIGN WORK ONLY

S-1

LAST REVISION DATE PLOTTED => 14-MAR-2014 02-12-14 TIME PLOTTED => 09:51

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN
 FUNCTIONAL SUPERVISOR LAWRENCE A. JONES
 CALCULATED/DESIGNED BY CHECKED BY
 AN NGUYEN ARLISSA PANG
 REVISED BY DATE REVISED
 ATN 9/10/13

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 15 | 33 |

An T. Nguyen 2/3/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE

An T. Nguyen
 No. 62776
 Exp. 6-30-14
 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.

ROADWAY QUANTITIES

| SHEET No. | STATION | REMOVE AC DIKE | PLACE HMA DIKE (TYPE F) | MINOR HOT MIX ASPHALT |
|--------------|--------------------------|----------------|-------------------------|-----------------------|
| | | LF | LF | TON |
| L-1 | WN1 83+30.53 TO 89+15 | 585 | | |
| | WN1 83+08.53 TO 92+78.80 | | 971 | 22 |
| DQ-1 | WN1 92+81.80 | | | 2.2 |
| TOTAL | | 585 | 971 | 24.2 |

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

| STATION | TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX) | TEMPORARY DRAINAGE INLET PROTECTION | TEMPORARY FIBER ROLL |
|--------------------------|---|-------------------------------------|----------------------|
| | SQYD | EA | LF |
| WN1 83+05.53 TO 99+76.12 | 1000 | 5 | 2400 |
| TOTAL | 1000 | 5 | 2400 |

THRIE BEAM BARRIER

| SHEET No. | STATION | SINGLE THRIE BEAM BARRIER | DOUBLE THRIE BEAM BARRIER | END CAP (TYPE TC) | REMOVE GUARDRAIL | MIDWEST GUARDRAIL SYSTEM (SPECIAL) | VEGETATION CONTROL (MINOR Conc) | GUARD RAILING DELINEATOR | TREATED WOOD WASTE |
|--------------|--------------------------|---------------------------|---------------------------|-------------------|------------------|------------------------------------|---------------------------------|--------------------------|--------------------|
| | | LF | LF | EA | LF | SQYD | EA | LB | |
| L-1 | WN1 83+30.53 TO 92+78.80 | 949 | | | | | 475 | 4 | |
| | WN1 92+78.80 TO 95+50 | | 272 | | | | 212 | | |
| L-2 | WN1 95+50 TO 99+76.12 | | 427 | | | | 333 | | |
| L-1 | WN1 83+05.53 TO 83+08.53 | | | | | | | | |
| | WN1 83+08.53 TO 83+30.53 | | | 1 | | | | | |
| L-2 | WN1 96+00 TO 99+76.12 | | | | 51 | 377 | | | 1300 |
| | WN1 99+25.76 TO 99+76.12 | | | | | | | | |
| TOTAL | | 949 | 699 | 1 | 51 | 377 | 1020 | 4 | 1300 |

SUMMARY OF QUANTITIES

Q-1



EROSION CONTROL TYPE 1

| SEQUENCE | ITEM | MATERIAL | | APPLICATION RATE |
|----------|--|-------------|-------------|------------------|
| | | DESCRIPTION | TYPE | |
| STEP 1 | ROLLED EROSION CONTROL PRODUCT (NETTING) | NETTING | TYPE A | |
| STEP 2 | HYDROSEED | SEED | MIX 1 | 59 LB/ACRE |
| | | FIBER | COMBINATION | 285 LB/ACRE |
| STEP 3 | STRAW | STRAW | RICE | 2 TONS/ACRE |
| STEP 4 | HYDROMULCH | FIBER | COMBINATION | 285 LB/ACRE |
| | | TACKIFIER | GUAR | 125 LB/ACRE |

SEED MIX

| SEED | BOTANICAL NAME (COMMON NAME) | PERCENT GERMINATION (MINIMUM) | POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT) |
|-------|---|-------------------------------|--|
| MIX 1 | BROMUS CARINATUS ¹ (CALIFORNIA BROME) | 40 | 10 |
| | ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY) | 35 | 1 |
| | LUPINUS BICOLOR (PYGMY-LEAF LUPINE) | 40 | 6 |
| | HORDEUM BRACHYANTHERUM (MEADOW BARLEY) | 40 | 8 |
| | ELYMUS GLAUCUS (BLUE WILD RYE) | 56 | 11 |
| | ACHILLEA MILLEFOLIUM ¹ (WHITE YARROW) | 85 | 7 |
| | NASSELLA PULCHRA (PURPLE NEEDLEGRASS) | 35 | 10 |
| | VULPIA MICROSTACHYS ¹ (SMALL FESCUE) | 35 | 6 |
| | | | |

¹ SEED PRODUCED IN CALIFORNIA ONLY.
² SEED SOURCE FROM (Enter County Name) COUNTY ONLY.
³ SEED SOURCE FROM (Enter "ABOVE" or "BELOW") THE (Enter Elevation) FOOT ELEVATION LEVEL.

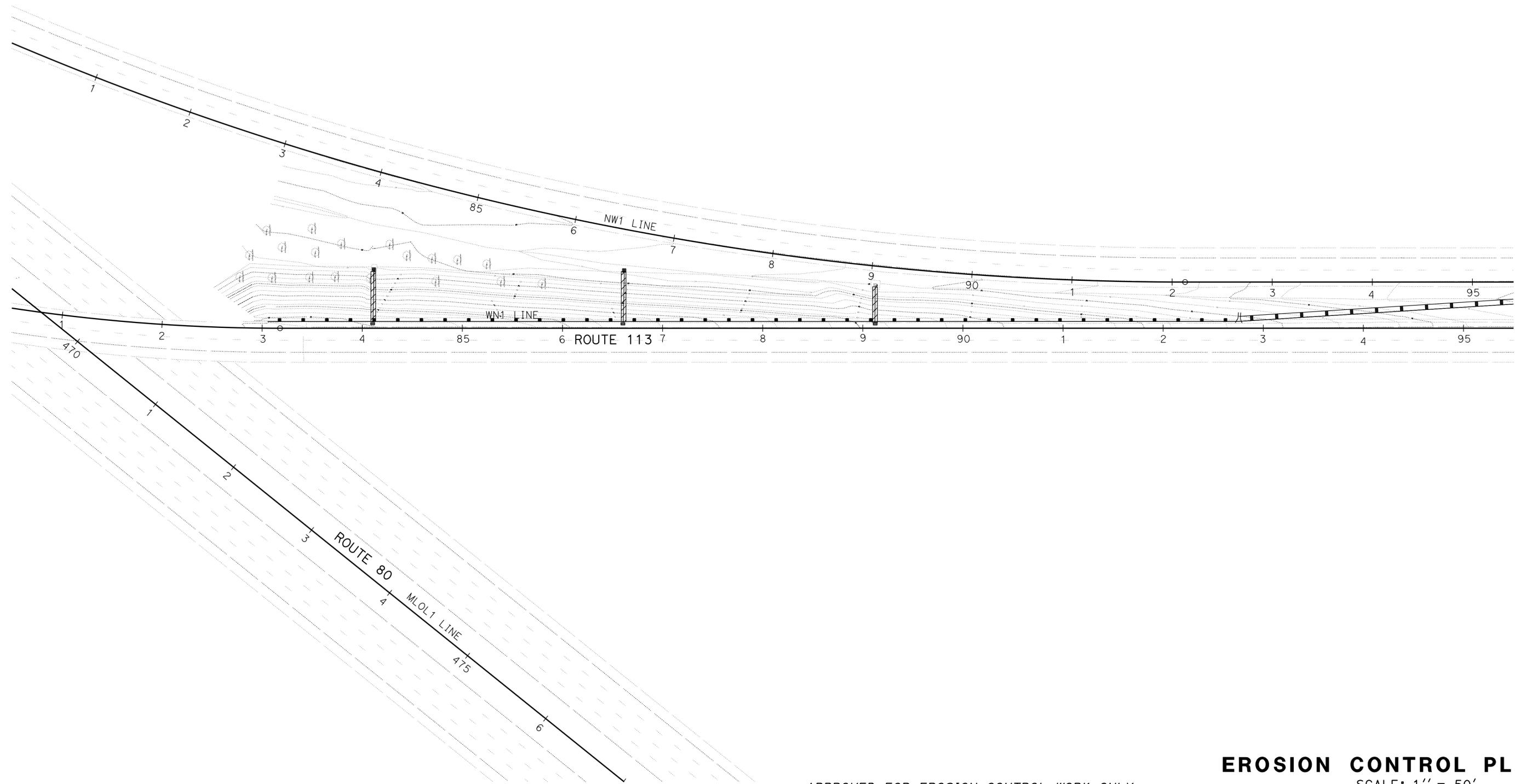
**EROSION CONTROL LEGEND
 ECL-1**

APPROVED FOR EROSION CONTROL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY
 SENIOR LANDSCAPE ARCHITECT
 CALIE TSUI
 CT
 9/18/13

NOTE:
 RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN.
 THE CONTRACTOR MUST CONTACT RIGHT OF WAY ENGINEERING AT THE
 DISTRICT OFFICE FOR CONDITIONS OF USE PRIOR TO COMMENCING WORK.

LEGEND:
 EROSION CONTROL (TYPE 1)



| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 17 | 33 |


 LICENSED LANDSCAPE ARCHITECT
 2-24-14
 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.



APPROVED FOR EROSION CONTROL WORK ONLY

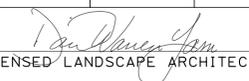
EROSION CONTROL PLAN
 SCALE: 1" = 50'

EC - 1



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY
 SENIOR LANDSCAPE ARCHITECT DAVID W. YAM
 CALCULATED/DESIGNED BY CHECKED BY CALIE TSUI DAVID YAM
 REVISED BY DATE REVISED CT 9/18/13

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 18 | 33 |


 LICENSED LANDSCAPE ARCHITECT
 2-24-14
 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.

EROSION CONTROL

| SHEET | DESCRIPTION | ROLLED EROSION CONTROL PRODUCT (NETTING) | HYDROSEED | STRAW | HYDROMULCH |
|-------|------------------------|--|-----------|-------|------------|
| | | SQFT | SQFT | SQFT | SQFT |
| EC-1 | EROSION CONTROL TYPE 1 | 710 | 710 | 710 | 710 |
| TOTAL | | 710 | 710 | 710 | 710 |

EROSION CONTROL QUANTITIES ECQ-1

APPROVED FOR EROSION CONTROL WORK ONLY

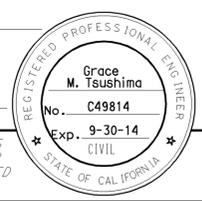


| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 19 | 33 |

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
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.



TO ACCOMPANY PLANS DATED 2-24-14

UNIT OF MEASUREMENT SYMBOLS:

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

| SYMBOL USED | DEFINITIONS |
|-------------|--------------|
| ACRE | ACRE |
| CF | CUBIC FOOT |
| CY | CUBIC YARD |
| EA | EACH |
| GAL | GALLON |
| LB | POUND |
| LF | LINEAR FOOT |
| SQFT | SQUARE FOOT |
| SQYD | SQUARE YARD |
| STA | 100 FEET |
| TAB | TABLET |
| TON | 2,000 POUNDS |

Some of the symbols used in the plans other than in the project plan quantity tables are:

| SYMBOL USED | DEFINITIONS |
|--------------------------|------------------------|
| ksi | KIPS PER SQUARE INCH |
| ksf | KIPS PER SQUARE FOOT |
| psi | POUNDS PER SQUARE INCH |
| psf | POUNDS PER SQUARE FOOT |
| lb/ft ³ , pcf | POUNDS PER CUBIC FOOT |
| tsf | TONS PER SQUARE FOOT |
| mph, MPH * | MILES PER HOUR |
| ∅ | NOMINAL DIAMETER |
| oz | OUNCE |
| lb | POUND |
| kíp | 1,000 POUNDS |
| cal | CALORIE |
| ft | FOOT OR FEET |
| gal | GALLON |

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10B

| | |
|------------|--|
| Maint | MAINTENANCE |
| Max | MAXIMUM |
| MB | METAL BEAM |
| MBB | METAL BEAM BARRIER |
| MBGR | METAL BEAM GUARD RAILING |
| Med | MEDIAN |
| MGS | MIDWEST GUARDRAIL SYSTEM |
| MH | MANHOLE |
| Min | MINIMUM |
| Misc | MISCELLANEOUS |
| Misc I & S | MISCELLANEOUS IRON AND STEEL |
| Mkr | MARKER |
| Mod | MODIFIED, MODIFY |
| Mon | MONUMENT |
| MP | METAL PLATE |
| MPGR | METAL PLATE GUARD RAILING |
| MR | MOVEMENT RATING |
| MSE | MECHANICALLY STABILIZED EMBANKMENT |
| Mt | MOUNTAIN, MOUNT |
| MtI | MATERIAL |
| MVP | MAINTENANCE VEHICLE PULLOUT |
| N | NORTH |
| NB | NORTHBOUND |
| No. | NUMBER (MUST HAVE PERIOD) |
| Nos. | NUMBERS (MUST HAVE PERIOD) |
| NPS | NOMINAL PIPE SIZE |
| NS | NEAR SIDE |
| NSP | NEW STANDARD PLAN |
| NTS | NOT TO SCALE |
| Obir | OBLITERATE |
| OC | OVERCROSSING |
| OD | OUTSIDE DIAMETER |
| OF | OUTSIDE FACE |
| OG | ORIGINAL GROUND |
| OGAC | OPEN GRADED ASPHALT CONCRETE |
| OGFC | OPEN GRADED FRICTION COURSE |
| OH | OVERHEAD |
| OHWM | ORDINARY HIGH WATER MARK |
| O-O | OUT TO OUT |
| Opp | OPPOSITE |
| OSD | OVERSIDE DRAIN |
| p | PAGE |
| PAP | PERFORATED ALUMINUM PIPE |
| PB | PULL BOX |
| PC | POINT OF CURVATURE, PRECAST |
| PCC | POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE |
| PCMS | PORTABLE CHANGEABLE MESSAGE SIGN |
| PCP | PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE |
| PCVC | POINT OF COMPOUND VERTICAL CURVE |
| PEC | PERMIT TO ENTER AND CONSTRUCT |
| Ped | PEDESTRIAN |
| Ped OC | PEDESTRIAN OVERCROSSING |
| Ped UC | PEDESTRIAN UNDERCROSSING |
| Perm MtI | PERMEABLE MATERIAL |

| | |
|------------|--|
| Maint | MAINTENANCE |
| Max | MAXIMUM |
| MB | METAL BEAM |
| MBB | METAL BEAM BARRIER |
| MBGR | METAL BEAM GUARD RAILING |
| Med | MEDIAN |
| MGS | MIDWEST GUARDRAIL SYSTEM |
| MH | MANHOLE |
| Min | MINIMUM |
| Misc | MISCELLANEOUS |
| Misc I & S | MISCELLANEOUS IRON AND STEEL |
| Mkr | MARKER |
| Mod | MODIFIED, MODIFY |
| Mon | MONUMENT |
| MP | METAL PLATE |
| MPGR | METAL PLATE GUARD RAILING |
| MR | MOVEMENT RATING |
| MSE | MECHANICALLY STABILIZED EMBANKMENT |
| Mt | MOUNTAIN, MOUNT |
| MtI | MATERIAL |
| MVP | MAINTENANCE VEHICLE PULLOUT |
| N | NORTH |
| NB | NORTHBOUND |
| No. | NUMBER (MUST HAVE PERIOD) |
| Nos. | NUMBERS (MUST HAVE PERIOD) |
| NPS | NOMINAL PIPE SIZE |
| NS | NEAR SIDE |
| NSP | NEW STANDARD PLAN |
| NTS | NOT TO SCALE |
| Obir | OBLITERATE |
| OC | OVERCROSSING |
| OD | OUTSIDE DIAMETER |
| OF | OUTSIDE FACE |
| OG | ORIGINAL GROUND |
| OGAC | OPEN GRADED ASPHALT CONCRETE |
| OGFC | OPEN GRADED FRICTION COURSE |
| OH | OVERHEAD |
| OHWM | ORDINARY HIGH WATER MARK |
| O-O | OUT TO OUT |
| Opp | OPPOSITE |
| OSD | OVERSIDE DRAIN |
| p | PAGE |
| PAP | PERFORATED ALUMINUM PIPE |
| PB | PULL BOX |
| PC | POINT OF CURVATURE, PRECAST |
| PCC | POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE |
| PCMS | PORTABLE CHANGEABLE MESSAGE SIGN |
| PCP | PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE |
| PCVC | POINT OF COMPOUND VERTICAL CURVE |
| PEC | PERMIT TO ENTER AND CONSTRUCT |
| Ped | PEDESTRIAN |
| Ped OC | PEDESTRIAN OVERCROSSING |
| Ped UC | PEDESTRIAN UNDERCROSSING |
| Perm MtI | PERMEABLE MATERIAL |

| | |
|---------|---|
| PG | PROFILE GRADE |
| PI | POINT OF INTERSECTION |
| PJP | PARTIAL JOINT PENETRATION |
| Pkwy | PARKWAY |
| PL, PL | PLATE |
| P/L | PROPERTY LINE |
| PM | POST MILE, TIME FROM NOON TO MIDNIGHT |
| PN | PAVING NOTCH |
| POC | POINT OF HORIZONTAL CURVE |
| POT | POINT OF TANGENT |
| POVC | POINT OF VERTICAL CURVE |
| PP | PIPE PILE, PLASTIC PIPE, POWER POLE |
| PPL | PREFORMED PERMEABLE LINER |
| PPP | PERFORATED PLASTIC PIPE |
| PRC | POINT OF REVERSE CURVE |
| PRF | PAVEMENT REINFORCING FABRIC |
| PRVC | POINT OF REVERSE VERTICAL CURVE |
| PS&E | PLANS, SPECIFICATIONS AND ESTIMATES |
| PS, P/S | PRESTRESSED |
| PSP | PERFORATED STEEL PIPE |
| PT | POINT OF TANGENCY |
| PVC | POLYVINYL CHLORIDE |
| Pvmt | PAVEMENT |
| Qty | QUANTITY |
| R | RADIUS |
| R & D | REMOVE AND DISPOSE |
| R & S | REMOVE AND SALVAGE |
| R/C | RATE OF CHANGE |
| RCA | REINFORCED CONCRETE ARCH |
| RCB | REINFORCED CONCRETE BOX |
| RCP | REINFORCED CONCRETE PIPE |
| RCPA | REINFORCED CONCRETE PIPE ARCH |
| Rd | ROAD |
| Reinf | REINFORCED, REINFORCEMENT, REINFORCING |
| Rel | RELOCATE |
| Repl | REPLACEMENT |
| Ret | RETAINING |
| Rev | REVISED, REVISION |
| Rdwy | ROADWAY |
| RHMA | RUBBERIZED HOT MIX ASPHALT |
| Riv | RIVER |
| RM | ROAD-MIXED |
| RP | RADIUS POINT, REFERENCE POINT |
| RR | RAILROAD |
| RSP | ROCK SLOPE PROTECTION, REVISED STANDARD PLAN |
| Rt | RIGHT |
| Rte | ROUTE |
| RW | REDWOOD, RETAINING WALL |
| R/W | RIGHT OF WAY |
| Rwy | RAILWAY |

| | |
|-------|----------------------------------|
| S | SOUTH, SUPPLEMENT |
| SAE | STRUCTURE APPROACH EMBANKMENT |
| Salv | SALVAGE |
| SAPP | STRUCTURAL ALUMINUM PLATE PIPE |
| SB | SOUTHBOUND |
| SC | SAND CUSHION |
| SCSP | SLOTTED CORRUGATED STEEL PIPE |
| SD | STORM DRAIN |
| Sec | SECOND, SECTION |
| Sep | SEPARATION |
| SG | SUBGRADE |
| Shld | SHOULDER |
| Sht | SHEET |
| Sim | SIMILAR |
| ∫ | STATION LINE |
| SM | SELECTED MATERIAL |
| Spec | SPECIAL, SPECIFICATIONS |
| SPP | SLOTTED PLASTIC PIPE |
| SS | SLOPE STAKE |
| SSBM | STRAP AND SADDLE BRACKET METHOD |
| SSD | STRUCTURAL SECTION DRAIN |
| SSPA | STRUCTURAL STEEL PLATE ARCH |
| SSPP | STRUCTURAL STEEL PLATE PIPE |
| SSPPA | STRUCTURAL STEEL PLATE PIPE ARCH |
| SSRP | STEEL SPIRAL RIB PIPE |
| St | STREET |
| Sta | STATION |
| STBB | SINGLE THRIE BEAM BARRIER |
| Std | STANDARD |
| Str | STRUCTURE |
| Surf | SURFACING |
| SW | SIDEWALK, SOUND WALL |
| Swr | SEWER |
| Sym | SYMMETRICAL |
| S4S | SURFACE 4 SIDES |
| T | SEMI-TANGENT |
| Tan | TANGENT |
| TBB | THRIE BEAM BARRIER |
| Tbr | TIMBER |
| TC | TOP OF CURB |
| TCB | TRAFFIC CONTROL BOX |
| TCE | TEMPORARY CONSTRUCTION EASEMENT |
| TeI | TELEPHONE |
| Temp | TEMPORARY |
| TG | TOP OF GRADE |
| Tot | TOTAL |
| TP | TELEPHONE POLE |
| TPB | TREATED PERMEABLE BASE |
| TPM | TREATED PERMEABLE MATERIAL |
| Trans | TRANSITION |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
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| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-------|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS OTHERWISE NOTED |
| UP | UNDERPASS |
| V | VALVE, DESIGN SPEED |
| Var | VARIABLE, VARIES |
| VC | VERTICAL CURVE |
| VCP | VITRIFIED CLAY PIPE |
| Vert | VERTICAL |
| Via | VIADUCT |
| Vol | VOLUME |
| W | WEST, WIDTH |
| WB | WESTBOUND |
| WH | WEEP HOLE |
| WM | WIRE MESH |
| WS | WATER SURFACE |
| WSP | WELDED STEEL PIPE |
| Wt | WEIGHT |
| WV | WATER VALVE |
| WW | WINGWALL |
| WWLOL | WINGWALL LAYOUT LINE |
| X Sec | CROSS SECTION |
| Xing | CROSSING |
| Yr | YEAR |
| Yrs | YEARS |

| | |
|-----|---|
| TS | TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL |
| Typ | TYPICAL |
| UC | UNDERCROSSING |
| UD | UNDERDRAIN |
| UG | UNDERGROUND |
| UON | UNLESS |

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | Soi | 113 | R21.8 | 20 | 33 |

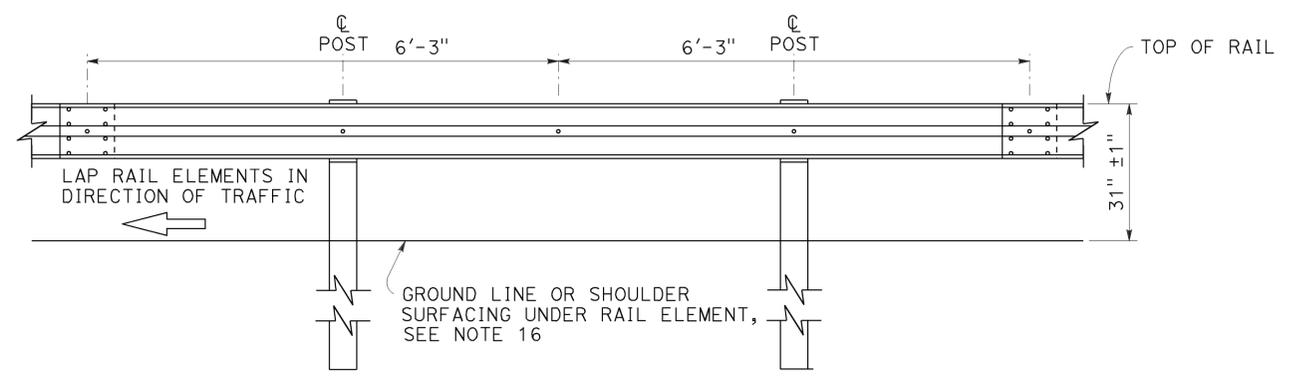
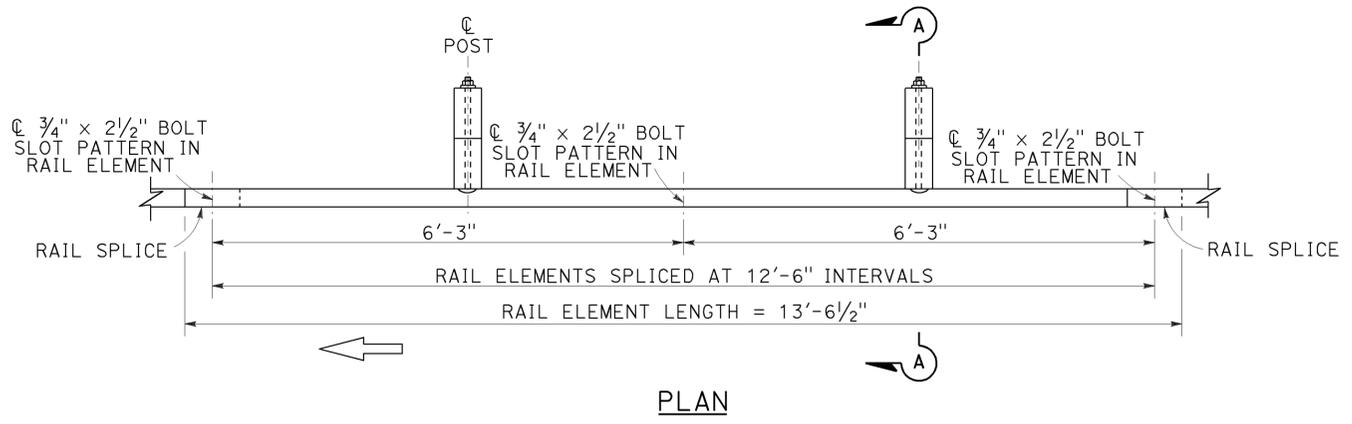
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

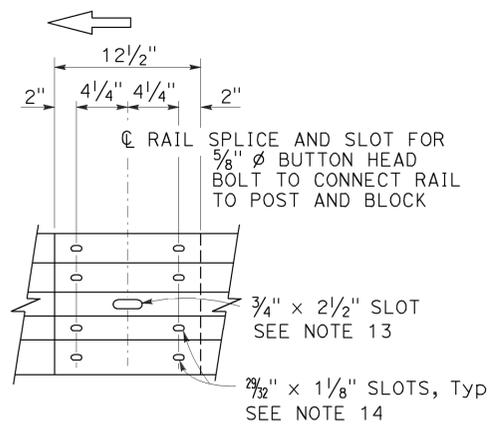
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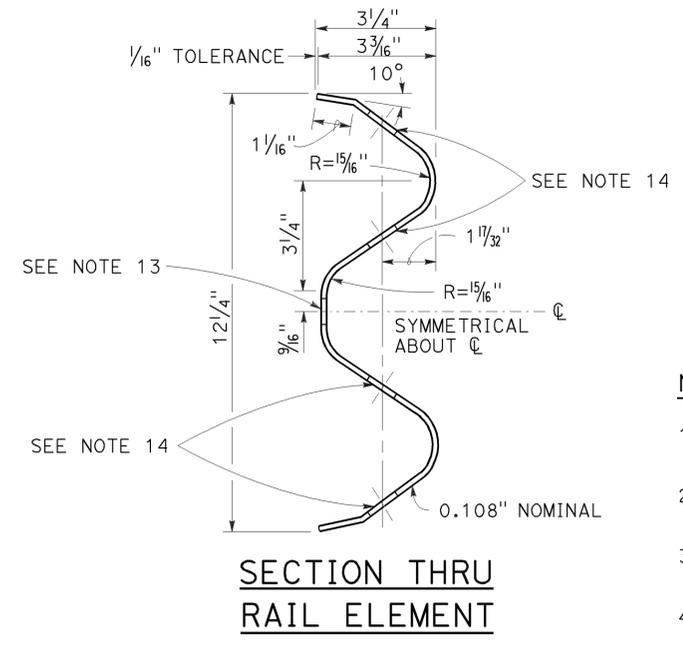
TO ACCOMPANY PLANS DATED 2-24-14



MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS

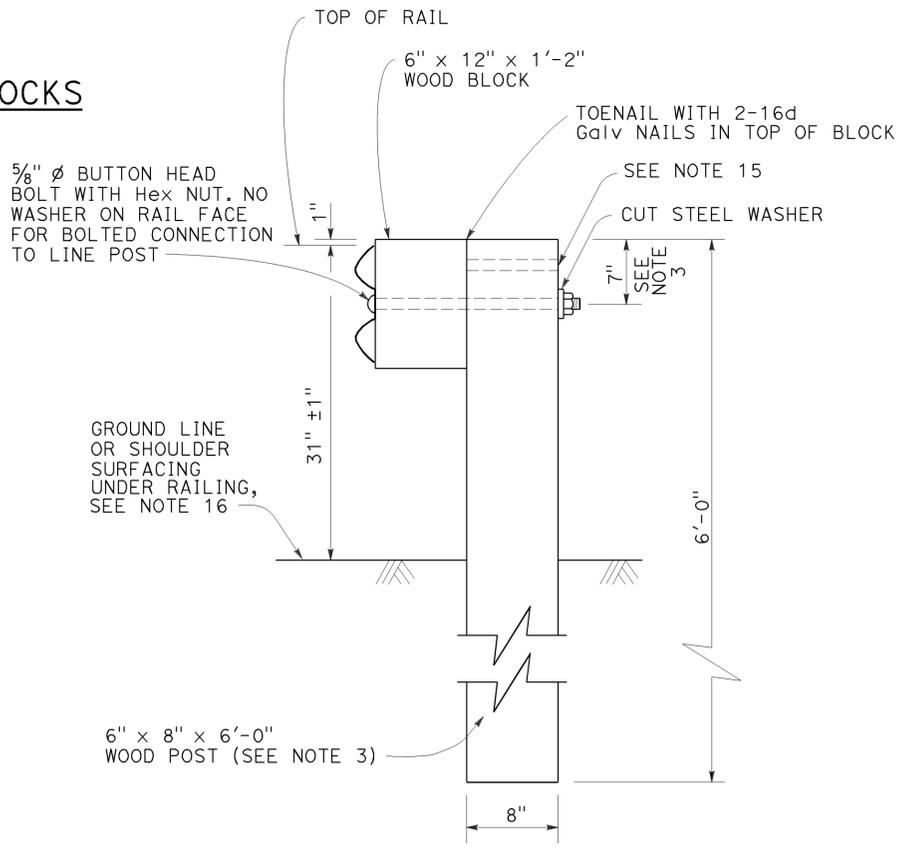


- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ \times $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{7}{32}$ " \times $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.



SECTION A-A
TYPICAL WOOD LINE POST INSTALLATION
See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH WOOD BLOCK)

NO SCALE

RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1

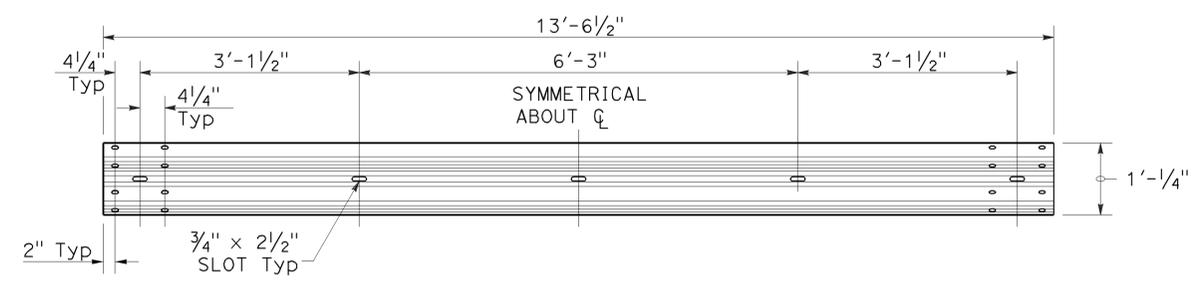
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | Soi | 113 | R21.8 | 21 | 33 |

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July 19, 2013
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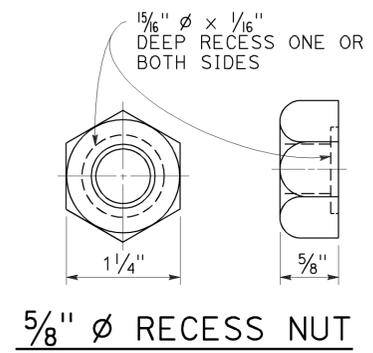
TO ACCOMPANY PLANS DATED 2-24-14



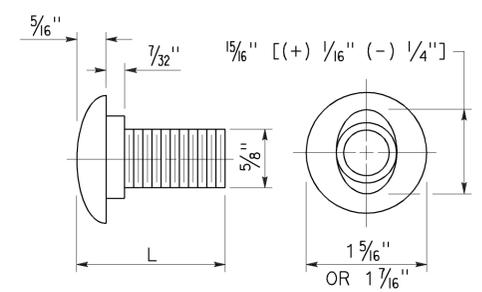
TYPICAL RAIL ELEMENT

NOTE:

1. Slotted holes for splice bolts to overlap ends of rail element.



5/8" Ø RECESS NUT

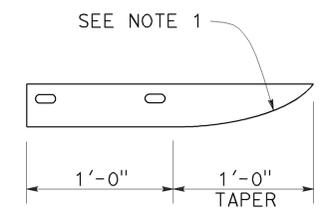


5/8" Ø BUTTON HEAD BOLT

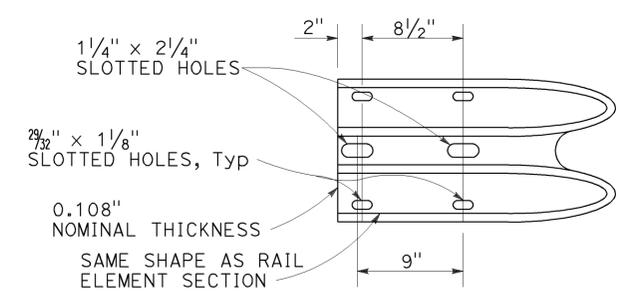
BUTTON HEAD BOLT

| L | THREAD LENGTH |
|-----------|----------------------|
| 1 3/8" | FULL THREAD LENGTH |
| 2" | FULL THREAD LENGTH |
| 10" | 4" Min THREAD LENGTH |
| 18" | 4" Min THREAD LENGTH |
| 20" | 4" Min THREAD LENGTH |
| 22" | 4" Min THREAD LENGTH |
| 26" | 4" Min THREAD LENGTH |
| 36" | 4" Min THREAD LENGTH |
| ** 2 3/4" | 2" Min THREAD LENGTH |
| ** 19" | 4" Min THREAD LENGTH |

** For nested rail applications.



PLAN



**ELEVATION
END CAP
(TYPE A)**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

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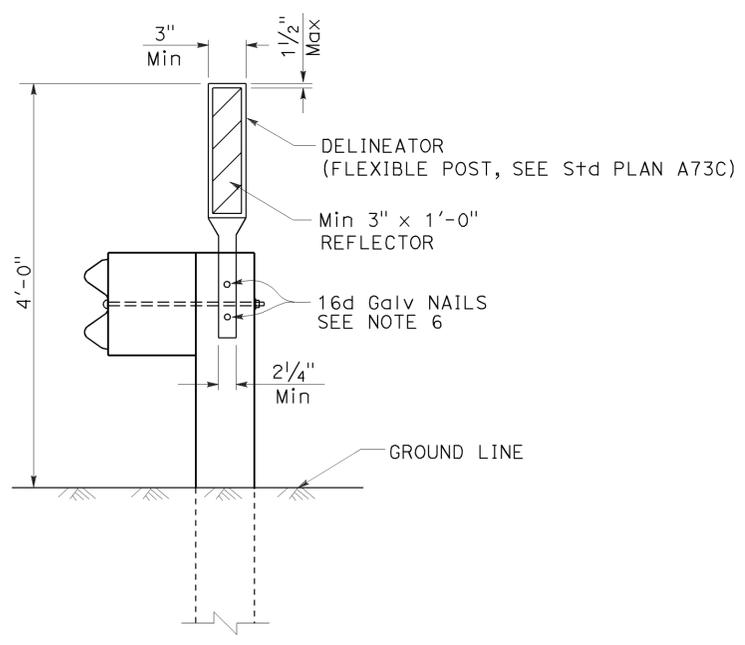
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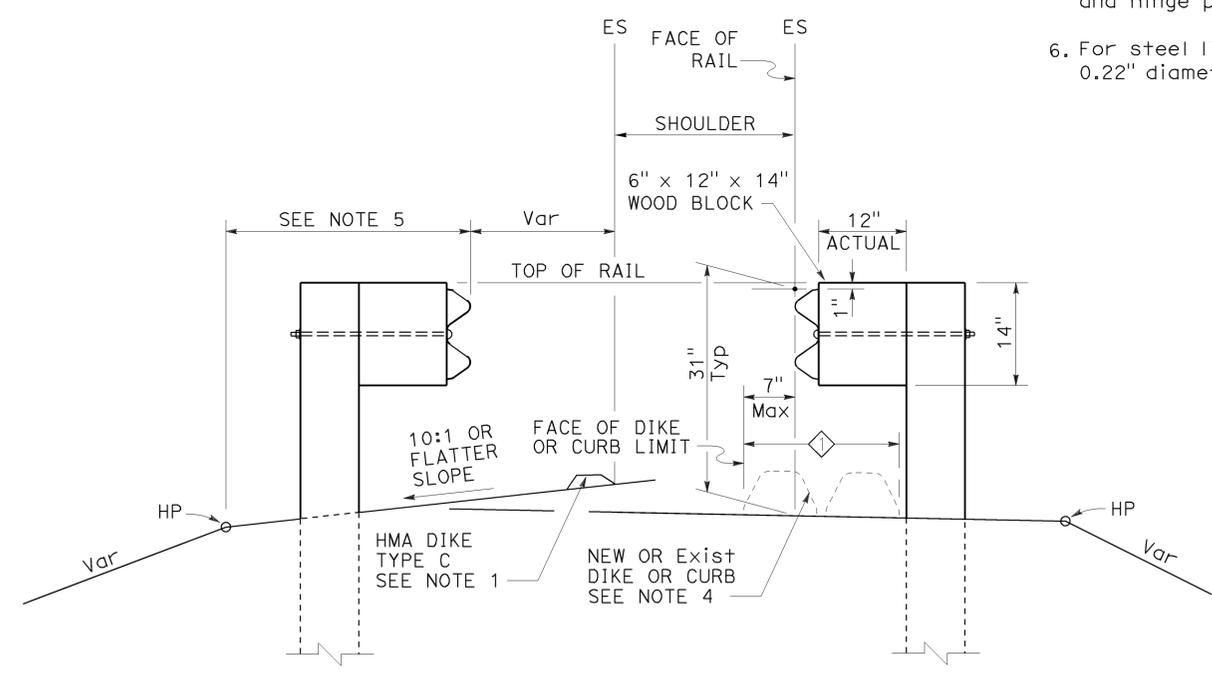
TO ACCOMPANY PLANS DATED 2-24-14

NOTES:

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | Soi | 113 | R21.8 | 23 | 33 |

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July 19, 2013
PLANS APPROVAL DATE

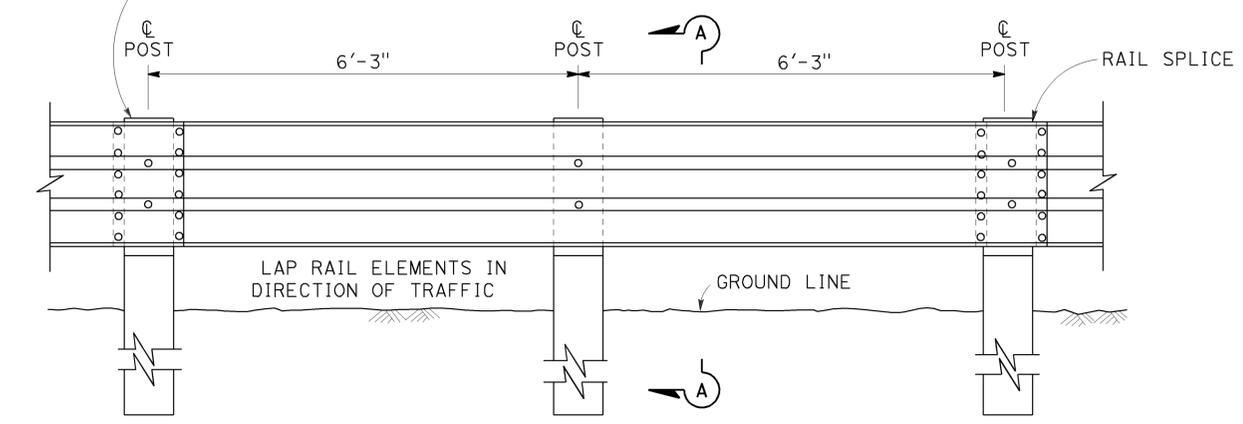
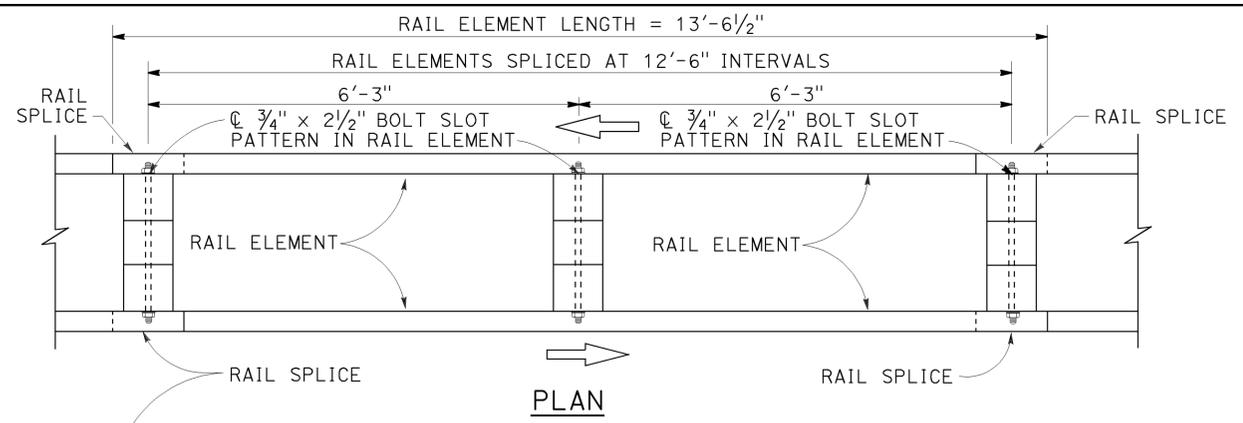
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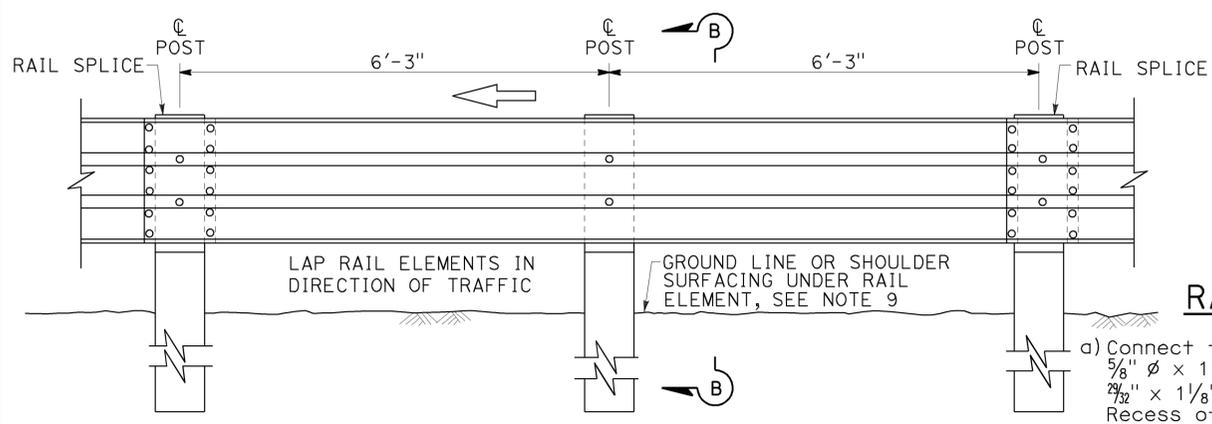
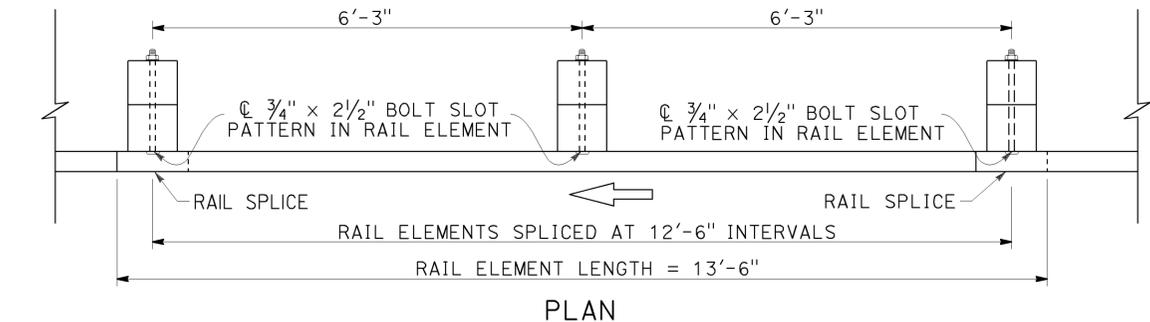
TO ACCOMPANY PLANS DATED 2-24-14

NOTES:

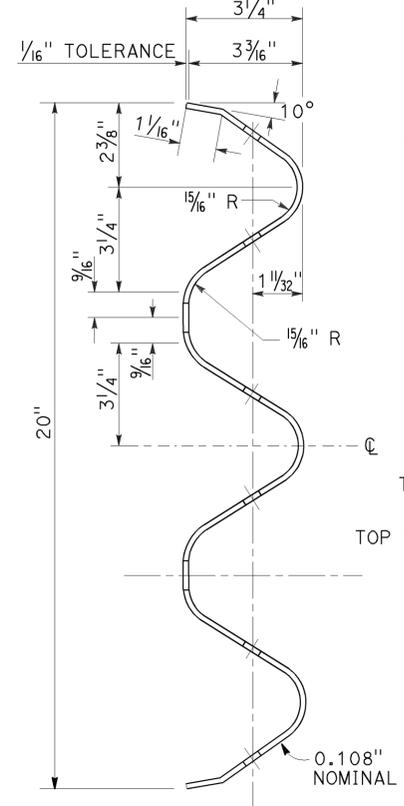
- For details of steel post thrie beam barrier, see Standard Plan A78B.
- For details of standard hardware, posts and blocks used to construct thrie beam barrier, see Standard Plan A78C1 and Revised Standard Plan RSP A78C2.
- Thrie beam barrier post spacing to be 6'-3" center to center, except as otherwise noted.
- Top of barrier rail to be 2'-8" above ground line or shoulder surfacing under the rail element.
- For barrier end treatments and barrier connections, see Standard Plans A78E3 and A78G, and Revised Standard Plans RSP A78E1, RSP A78E2 RSP A77Q1, RSP A77Q2 and RSP A78H.
- For connection to Concrete Barrier (Type 60), see Standard Plans A78I.
- For details of thrie beam barrier on bridge see Standard Plan A78D2. For details of thrie beam barrier at fixed object, see Revised Standard Plan RSP A78D1.
- Median barrier delineation to be used when required by the Special Provisions. Spacing of barrier markers to match spacing of raised pavement markers on adjacent median edgeline pavement delineation.
- Install posts in soil.



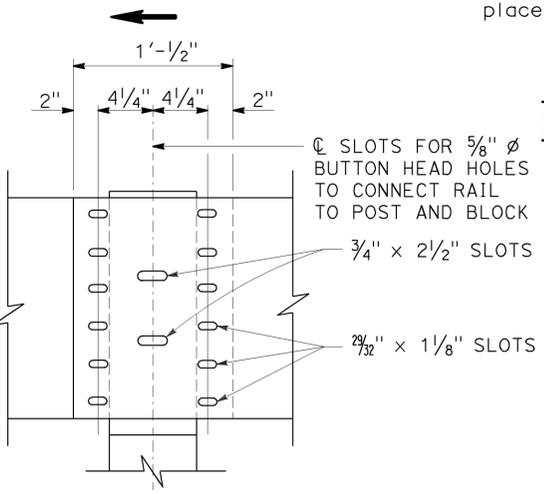
ELEVATION
DOUBLE THRIE BEAM BARRIER
(Wood post and blocks)
See Note 1



ELEVATION
SINGLE THRIE BEAM BARRIER
(Wood post and blocks)
See Note 1

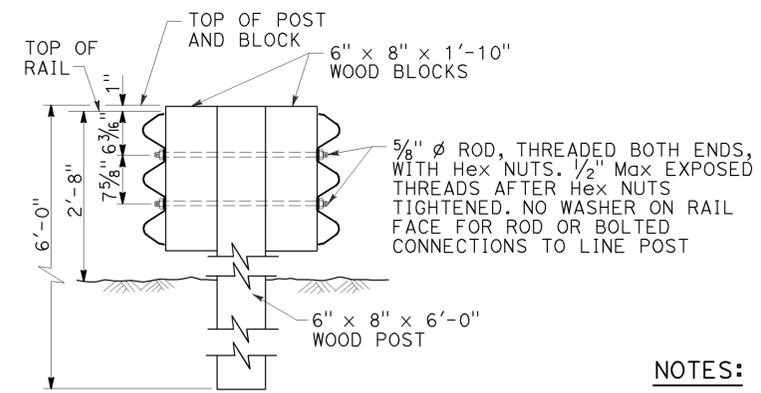


SECTION THRU
RAIL ELEMENT

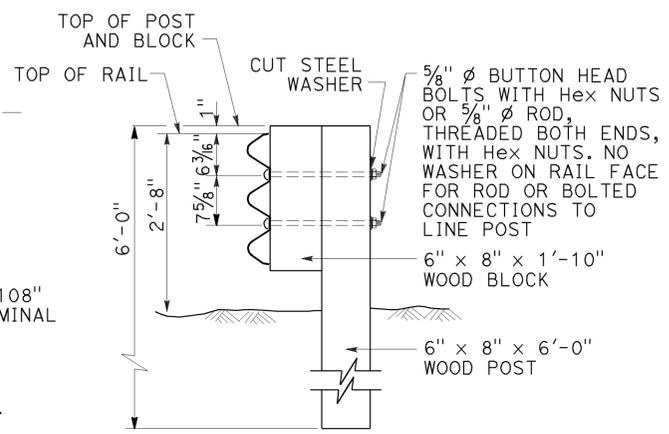


ELEVATION
RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped ends of the thrie beam rail elements with 5/8" Ø x 1 1/4" button head oval shoulder bolts inserted into the 29/32" x 1 1/8" slots and bolted together with 5/8" Ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 12 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used. Where a return cap is to be attached to the ends of rail elements, a total of 8 of the above described splice bolts and nuts are to be used.

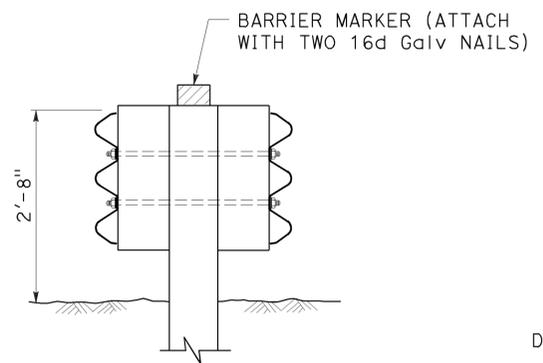


SECTION A-A
TYPICAL WOOD LINE
POST INSTALLATION



SECTION B-B
TYPICAL WOOD LINE
POST INSTALLATION

Where bolts are used, install so that the threaded end of the bolts and nuts are placed away from traffic side of rail.



THRIE BEAM BARRIER
DELINEATION
See Note 8

THRIE BEAM BARRIER
STANDARD BARRIER RAILING
SECTION (WOOD POST
WITH WOOD BLOCK)

NO SCALE

RSP A78A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78A DATED MAY 20, 2011 - PAGE 89 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A78A

2010 REVISED STANDARD PLAN RSP A78A

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 24 | 33 |

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July 19, 2013
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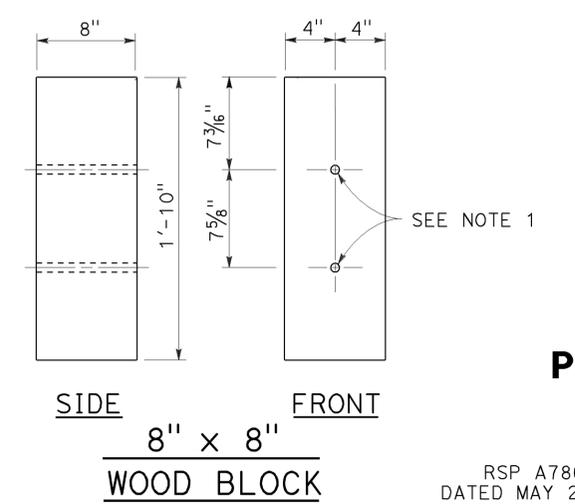
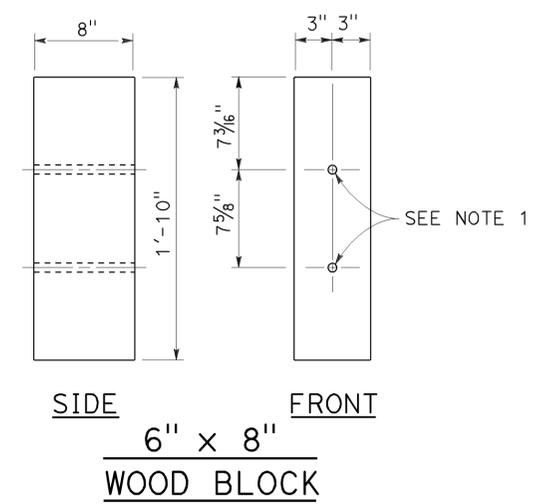
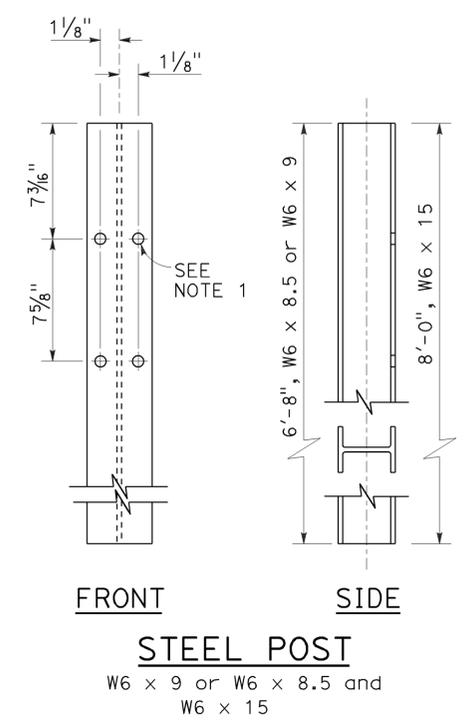
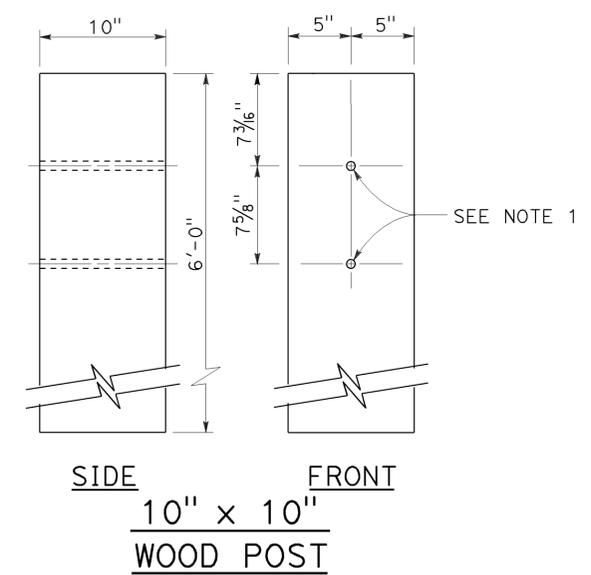
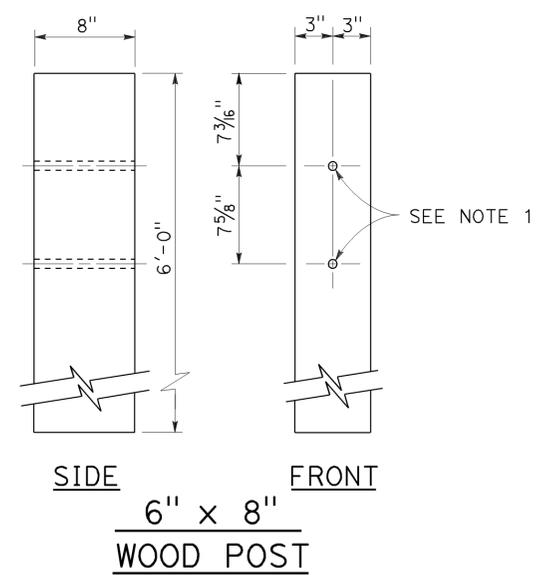
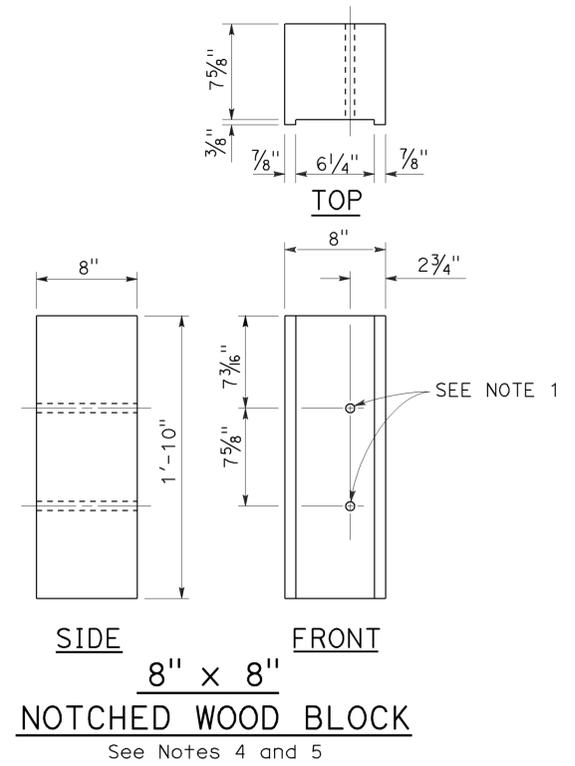
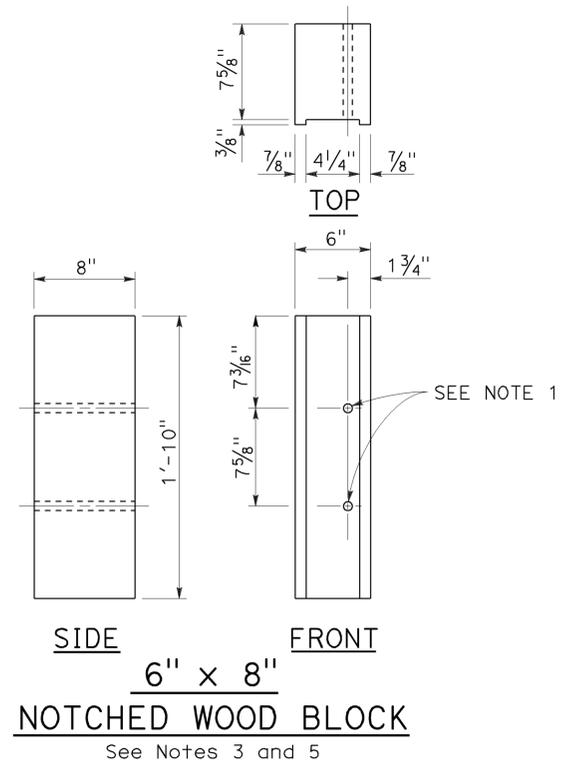
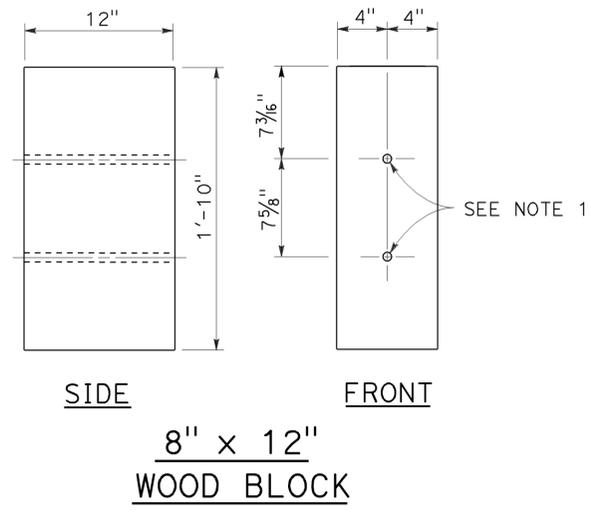
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Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-24-14

NOTES:

1. All holes in steel post to be $\frac{13}{16}$ " Dia maximum. Holes in wood posts and wood blocks to be $\frac{3}{4}$ " Dia $\pm \frac{1}{16}$ ".
2. Dimensions shown for wood post are nominal.
3. For use with W6 x 8.5 or W6 x 9 steel post.
4. For use with W6 x 15 steel post.
5. Notched face of block faces steel post.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER
POST AND BLOCK DETAILS**

NO SCALE

RSP A78C2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78C2
DATED MAY 20, 2011 - PAGE 92 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A78C2

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 25 | 33 |

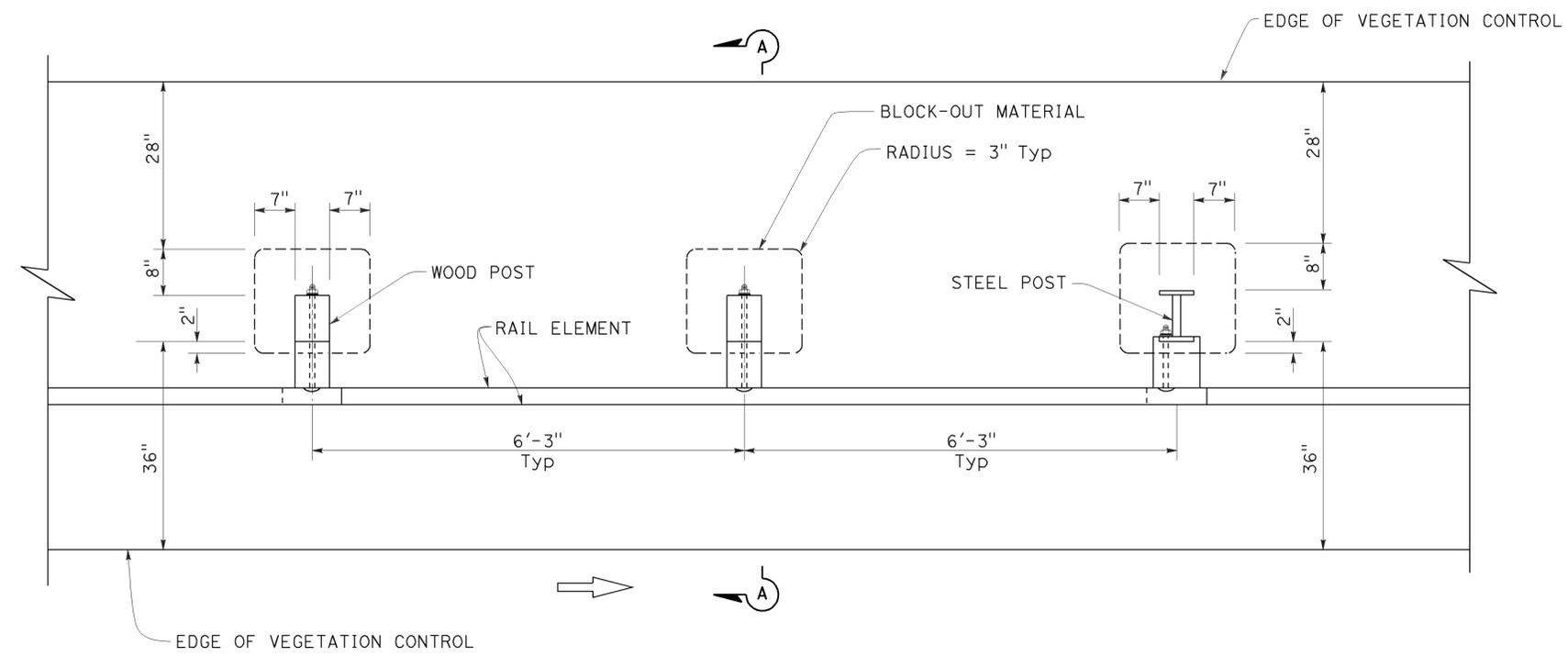
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July 19, 2013
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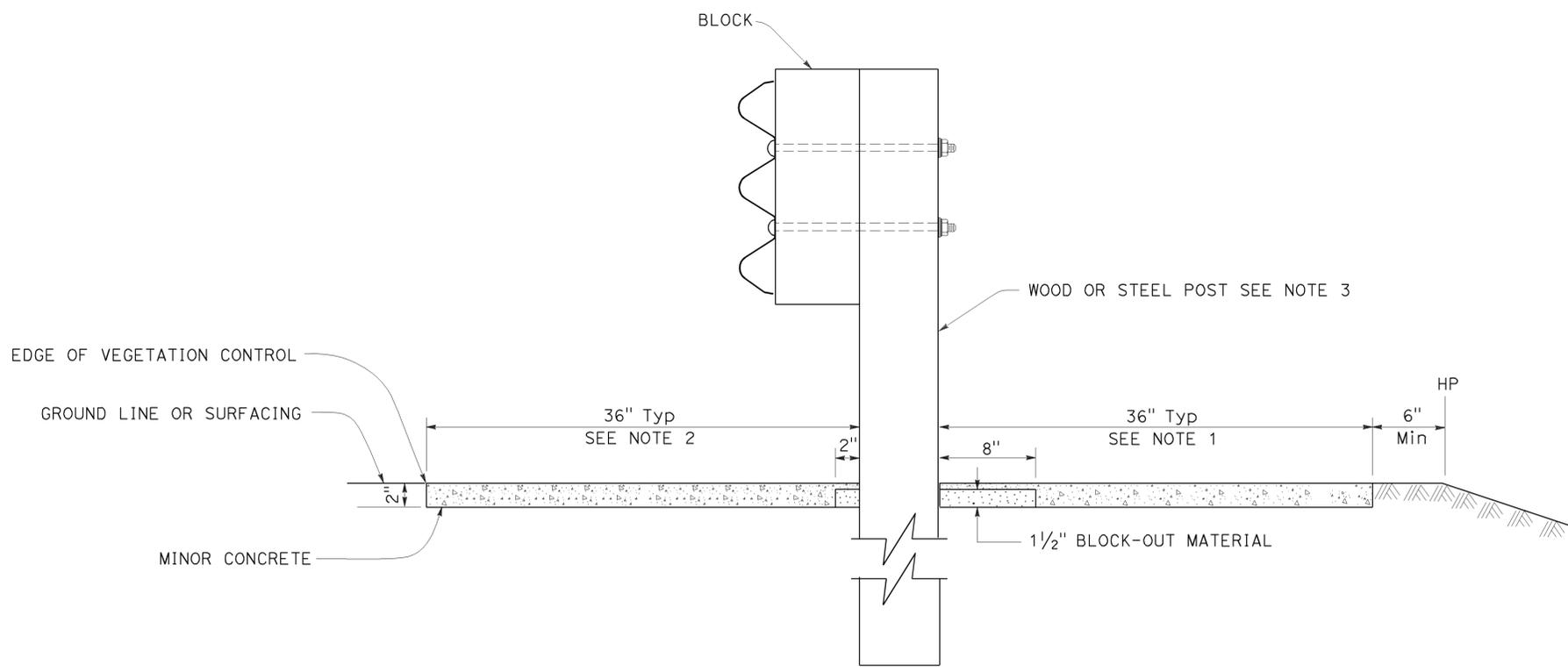
TO ACCOMPANY PLANS DATED 2-24-14



PLAN

NOTES:

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under barrier, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood and steel post sizes, see Revised Standard Plan RSP A77N2.
4. For details not shown, see Standard Plan A78B and Revised Standard Plan RSP A78A.



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**SINGLE THRIE BEAM BARRIER
TYPICAL VEGETATION CONTROL
STANDARD BARRIER RAILING SECTION**

NO SCALE

RSP A78C3 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78C3
DATED MAY 20, 2011 - PAGE 93 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A78C3

2010 REVISED STANDARD PLAN RSP A78C3

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 26 | 33 |

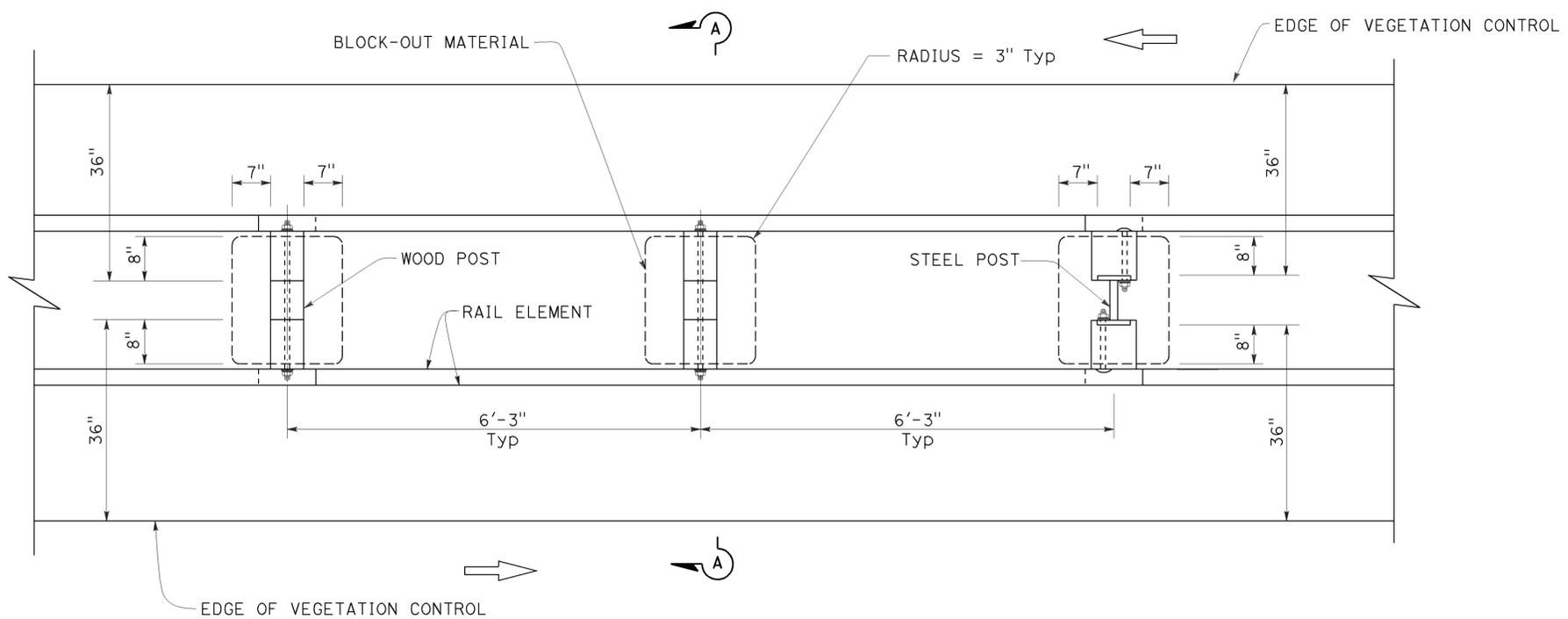
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

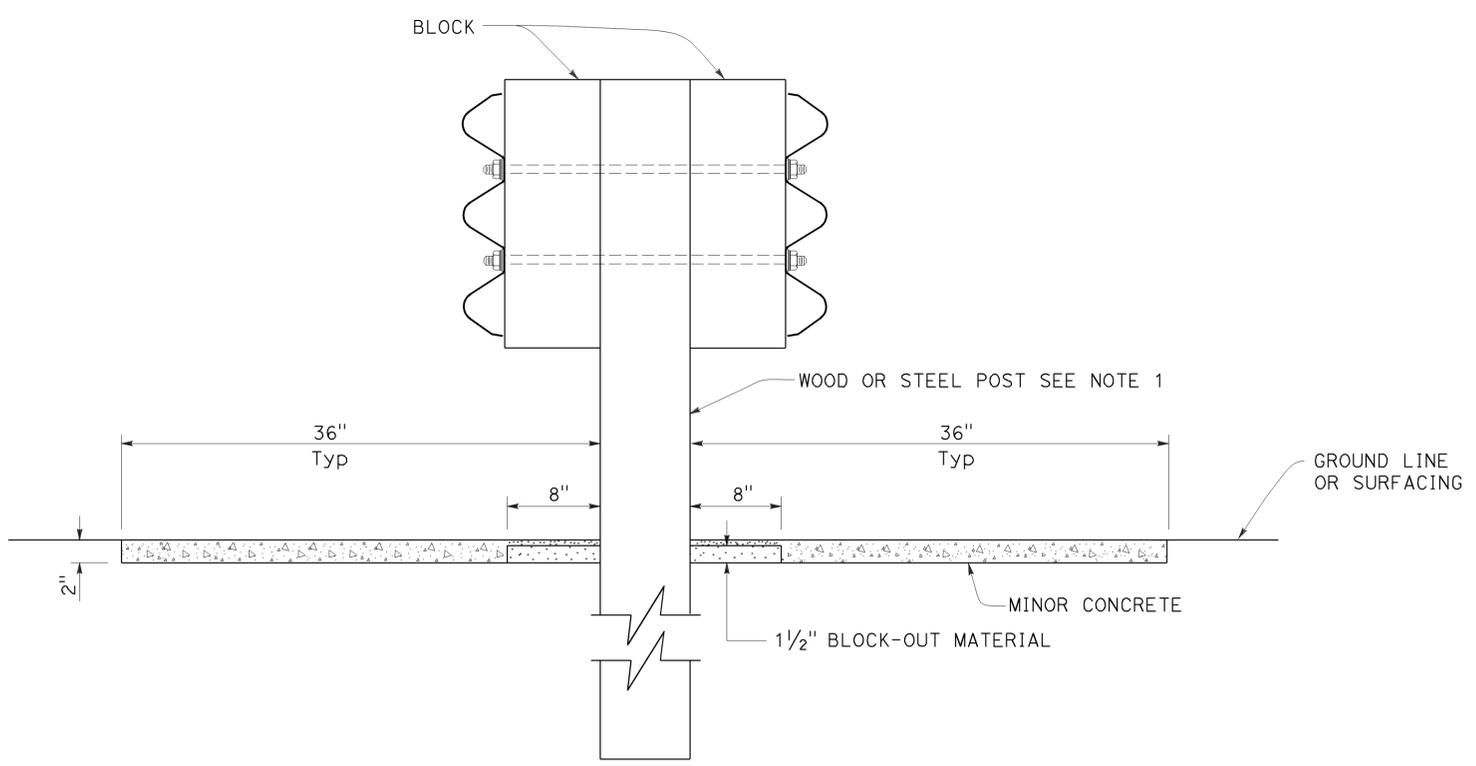
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 2-24-14



PLAN



SECTION A-A

NOTES:

1. For wood and steel post sizes, see Standard Plan A78C2.
2. For details not shown, see Standard Plans A78A and A78B.

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DEPARTMENT OF TRANSPORTATION

**DOUBLE THRIE BEAM BARRIER
TYPICAL VEGETATION CONTROL
STANDARD BARRIER RAILING SECTION**

NO SCALE

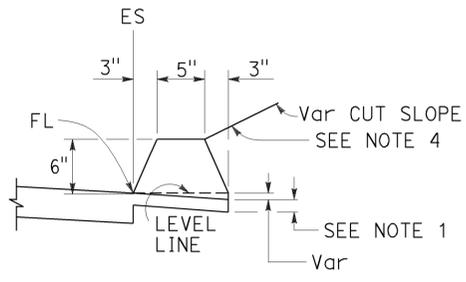
RSP A78C4 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A78C4
DATED MAY 20, 2011 - PAGE 94 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A78C4

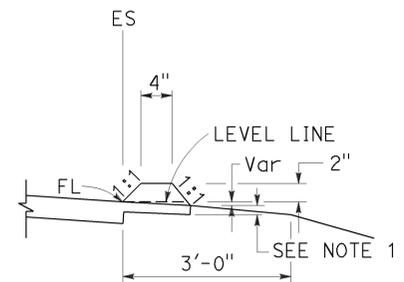
2010 REVISED STANDARD PLAN RSP A78C4



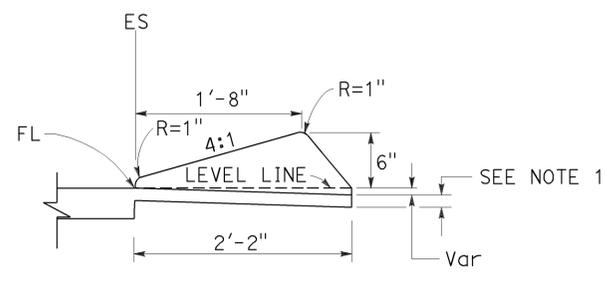
TO ACCOMPANY PLANS DATED 2-24-14



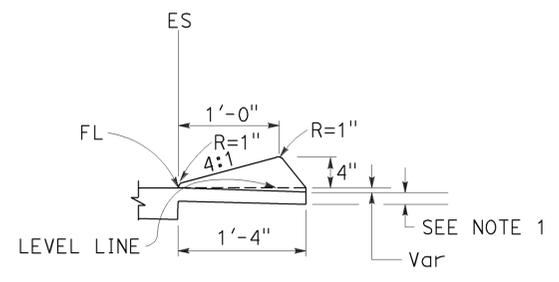
TYPE A
See Note 3



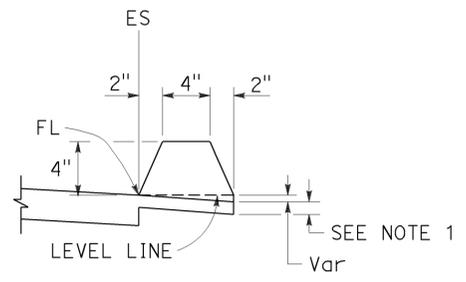
TYPE C



TYPE D

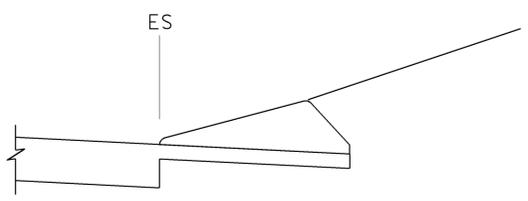


TYPE E

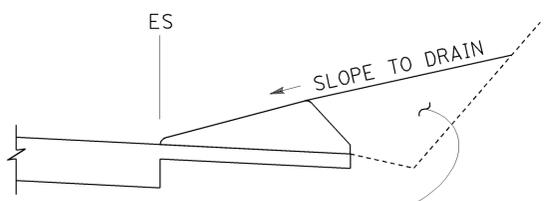


TYPE F
See Note 5

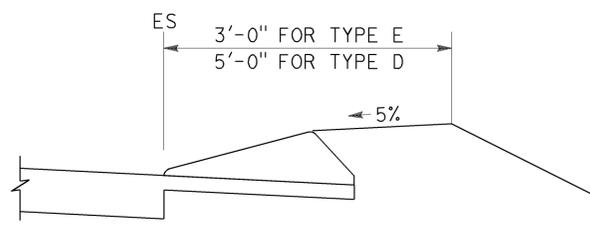
DIKES



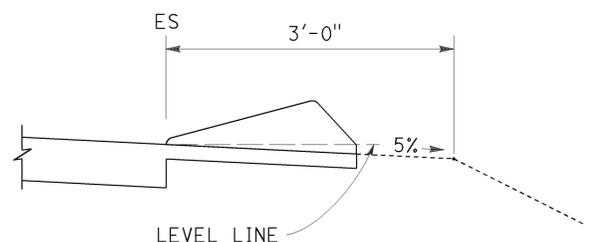
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

DIKE QUANTITIES

| TYPE | CUBIC YARDS PER LINEAR FOOT |
|------|--------------------------------|
| A | 0.0135 |
| C | 0.0038 |
| D | 0.0293 |
| E | 0.0130 |
| F | 0.0066 |

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

2010 REVISED STANDARD PLAN RSP A87B

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | Soi | 113 | R21.8 | 28 | 33 |

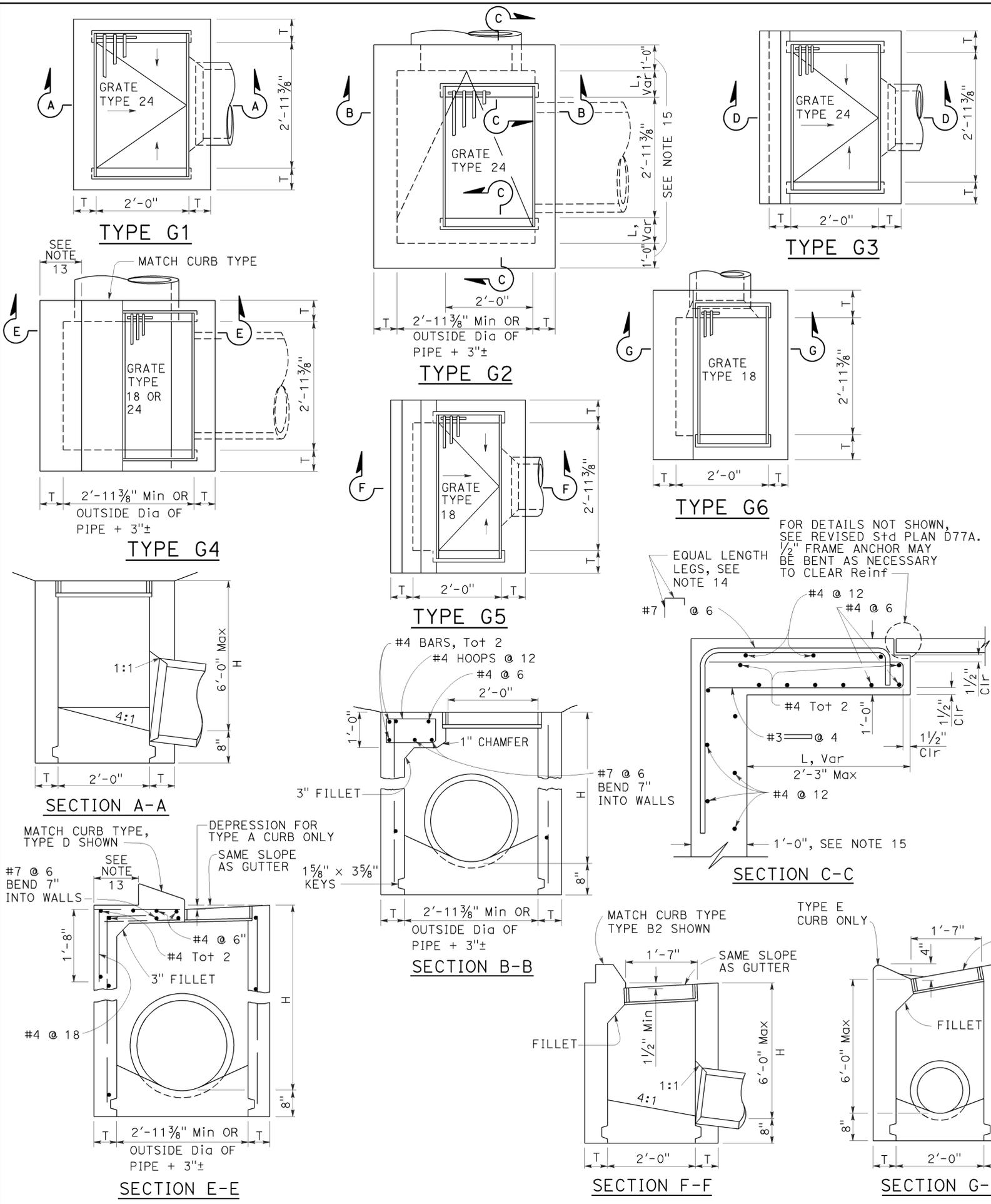
Glenn DeCou
REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

Glenn DeCou
No. C34547
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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2010 REVISED STANDARD PLAN RSP D73



- NOTES:**
- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
 - For "T" wall thickness, see Table A below.
 - Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
 - Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round bottom.
 - Steps-None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
 - Details shown apply to both metal and concrete pipe.
 - Pipe(s) can be placed in any wall.
 - Curb section shall match adjacent curb.
 - Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
 - Set inlet so that grate bars are parallel to direction of principal surface flow.
 - See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
 - See Standard Plan D78A for gutter depression details.
 - This dimension will vary with different grates, curbs types, box width and wall thickness.
 - Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
 - Where "L" is 6" or less, wall thickness shall be as shown in Table A.
 - Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

TABLE A

CONCRETE QUANTITIES

| TYPE | H=3'-0" TO 8'-0" (T=6") | | H=8'-1" TO 20'-0" (T=8") | |
|----------------|-------------------------|------------------------------|--------------------------|------------------------------|
| | H=3'-0" (CY) | ADDITIONAL PCC PER FOOT (CY) | H=8'-1" (CY) | ADDITIONAL PCC PER FOOT (CY) |
| G-1 | 0.95 | 0.220 | See Note A | SEE NOTE A |
| G-2* | 1.31 | 0.255 | 3.50 | 0.357 |
| G-3 | 1.03 | 0.220 | See Note A | SEE NOTE A |
| G-4* (TYPE 24) | 1.27 | 0.255 | 3.48 | 0.357 |
| G-4* (TYPE 18) | 1.30 | 0.255 | 3.50 | 0.357 |
| G-5 | 1.02 | 0.220 | SEE NOTE A | SEE NOTE A |
| G-6 | 1.04 | 0.220 | SEE NOTE A | SEE NOTE A |

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. * QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

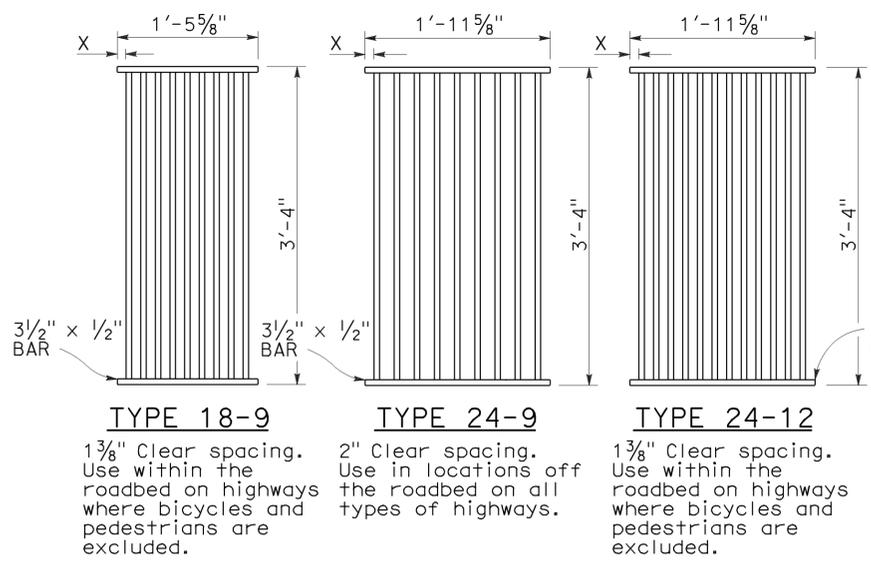
NOTE A:
Maximum allowable height 6'-0".

STATE OF CALIFORNIA
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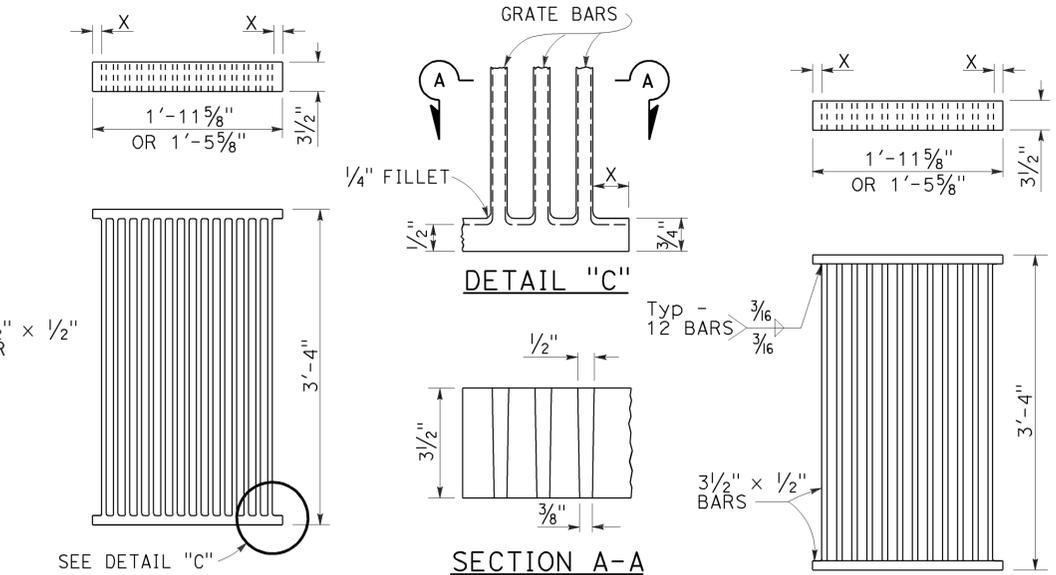
DRAINAGE INLETS
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73

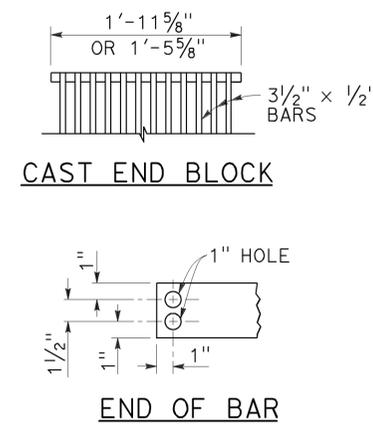


RECTANGULAR GRATE DETAILS
(See table below)

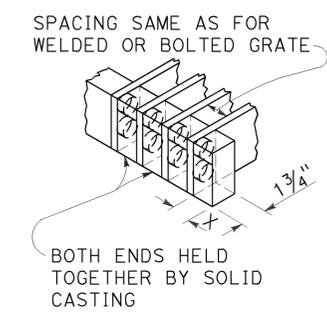


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE

ALTERNATIVE WELDED GRATE

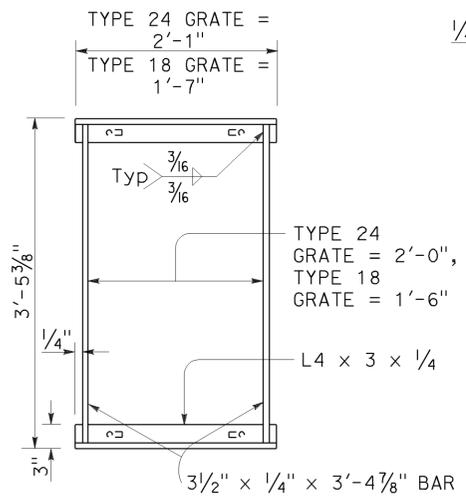


CAST END BLOCK

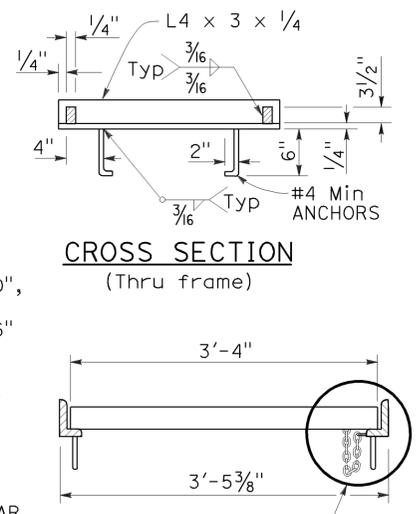


ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE

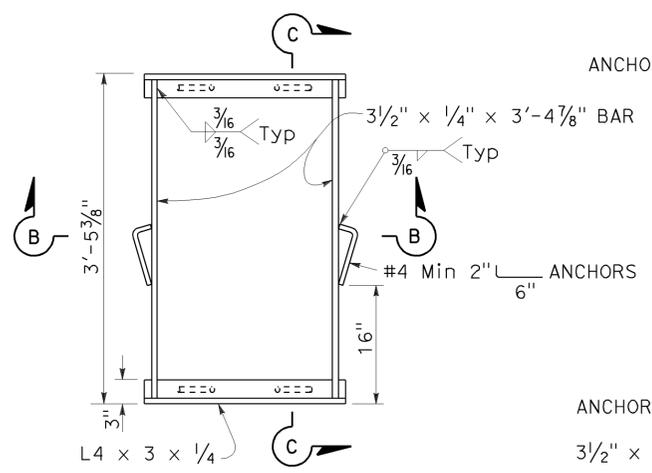
- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 - Rounded top of bars optional on all grates.
 - Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
 - Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 - Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 - Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
 - Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.



TYPICAL FRAME



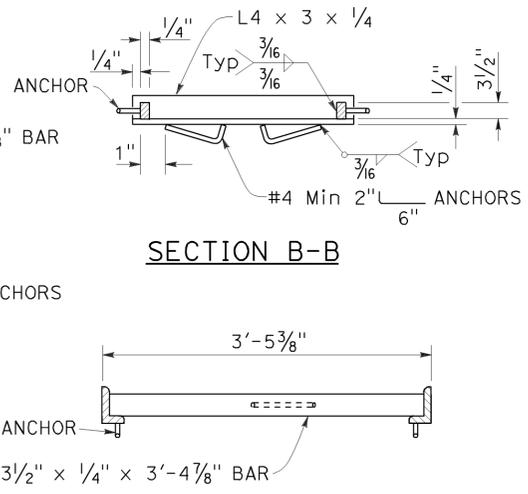
LONGITUDINAL SECTION
(Thru frame and grate)



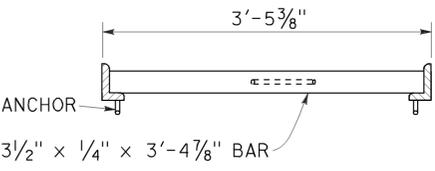
TYPICAL FRAME

ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME

(For details not shown, See Rectangular Frame Details)



SECTION B-B



SECTION C-C

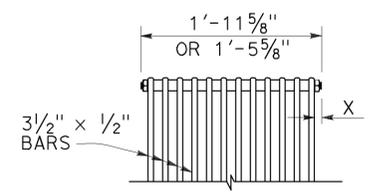
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

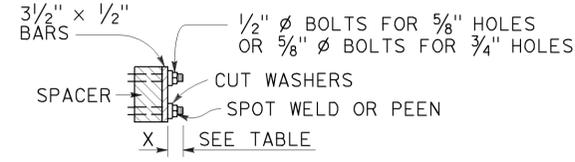
| TYPE | NO. OF BARS | CLEAR BAR SPACING | X |
|-------|-------------|-------------------|---------|
| 18-9 | 9 | 1 3/8" | 1 1/16" |
| 24-9 | 9 | 2" | 1 9/16" |
| 24-12 | 12 | 1 3/8" | 1 1/4" |

| 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 |
| GRATE CHAIN | | | 3 |

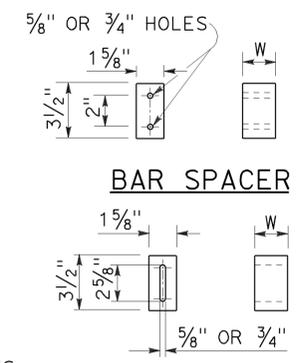


BOLTED END BLOCK



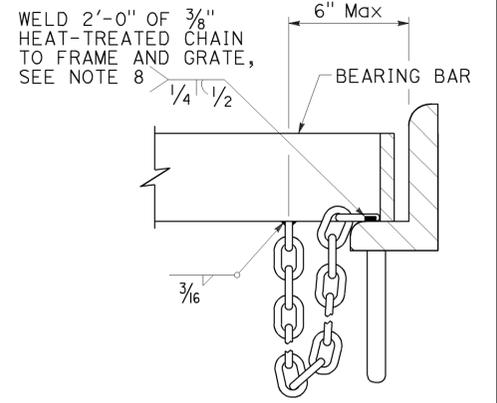
BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER

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



DETAIL "D"
(Steel grates only)

GRATE DETAILS No. 1
NO SCALE

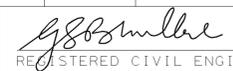
BASIS FOR Misc IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 04 | SoI | 113 | R21.8 | 30 | 33 |


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 2-24-14

TABLE 1

| TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING | | | | | | | |
|---|--|-----------|--------------|--------------|-------------------------------------|---------|----------|
| SPEED (S) | MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W) | | | | MAXIMUM CHANNELIZING DEVICE SPACING | | |
| | TANGENT 2L | MERGING L | SHIFTING L/2 | SHOULDER L/3 | Z ** | | |
| | | | | | TAPER | TANGENT | CONFLICT |
| mph | ft | ft | ft | ft | ft | ft | ft |
| 20 | 160 | 80 | 40 | 27 | 20 | 40 | 10 |
| 25 | 250 | 125 | 63 | 42 | 25 | 50 | 12 |
| 30 | 360 | 180 | 90 | 60 | 30 | 60 | 15 |
| 35 | 490 | 245 | 123 | 82 | 35 | 70 | 17 |
| 40 | 640 | 320 | 160 | 107 | 40 | 80 | 20 |
| 45 | 1080 | 540 | 270 | 180 | 45 | 90 | 22 |
| 50 | 1200 | 600 | 300 | 200 | 50 | 100 | 25 |
| 55 | 1320 | 660 | 330 | 220 | 55 | 110 | 27 |
| 60 | 1440 | 720 | 360 | 240 | 60 | 120 | 30 |
| 65 | 1560 | 780 | 390 | 260 | 65 | 130 | 32 |
| 70 | 1680 | 840 | 420 | 280 | 70 | 140 | 35 |

* - For other offsets, use the following merging taper length formula for L:
 For speed of 40 mph or less, $L = WS^2/60$
 For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
 W = Width of offset in feet
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

| LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING | | | | |
|---|----------|---------------------|-----|-----|
| SPEED * | Min D ** | DOWNGRADE Min D *** | | |
| | | -3% | -6% | -9% |
| | | ft | ft | ft |
| 20 | 115 | 116 | 120 | 126 |
| 25 | 155 | 158 | 165 | 173 |
| 30 | 200 | 205 | 215 | 227 |
| 35 | 250 | 257 | 271 | 287 |
| 40 | 305 | 315 | 333 | 354 |
| 45 | 360 | 378 | 400 | 427 |
| 50 | 425 | 446 | 474 | 507 |
| 55 | 495 | 520 | 553 | 593 |
| 60 | 570 | 598 | 638 | 686 |
| 65 | 645 | 682 | 728 | 785 |
| 70 | 730 | 771 | 825 | 891 |

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph
 ** - Longitudinal buffer space or flagger station spacing
 *** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

| ADVANCE WARNING SIGN SPACING | | | |
|------------------------------------|--------------------------|------|------|
| ROAD TYPE | DISTANCE BETWEEN SIGNS * | | |
| | A | B | C |
| | ft | ft | ft |
| URBAN - 25 mph OR LESS | 100 | 100 | 100 |
| URBAN - MORE THAN 25 mph TO 40 mph | 250 | 250 | 250 |
| URBAN - MORE THAN 40 mph | 350 | 350 | 350 |
| RURAL | 500 | 500 | 500 |
| EXPRESSWAY / FREEWAY | 1000 | 1500 | 2640 |

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM TABLES
 FOR LANE AND RAMP CLOSURES**

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T9

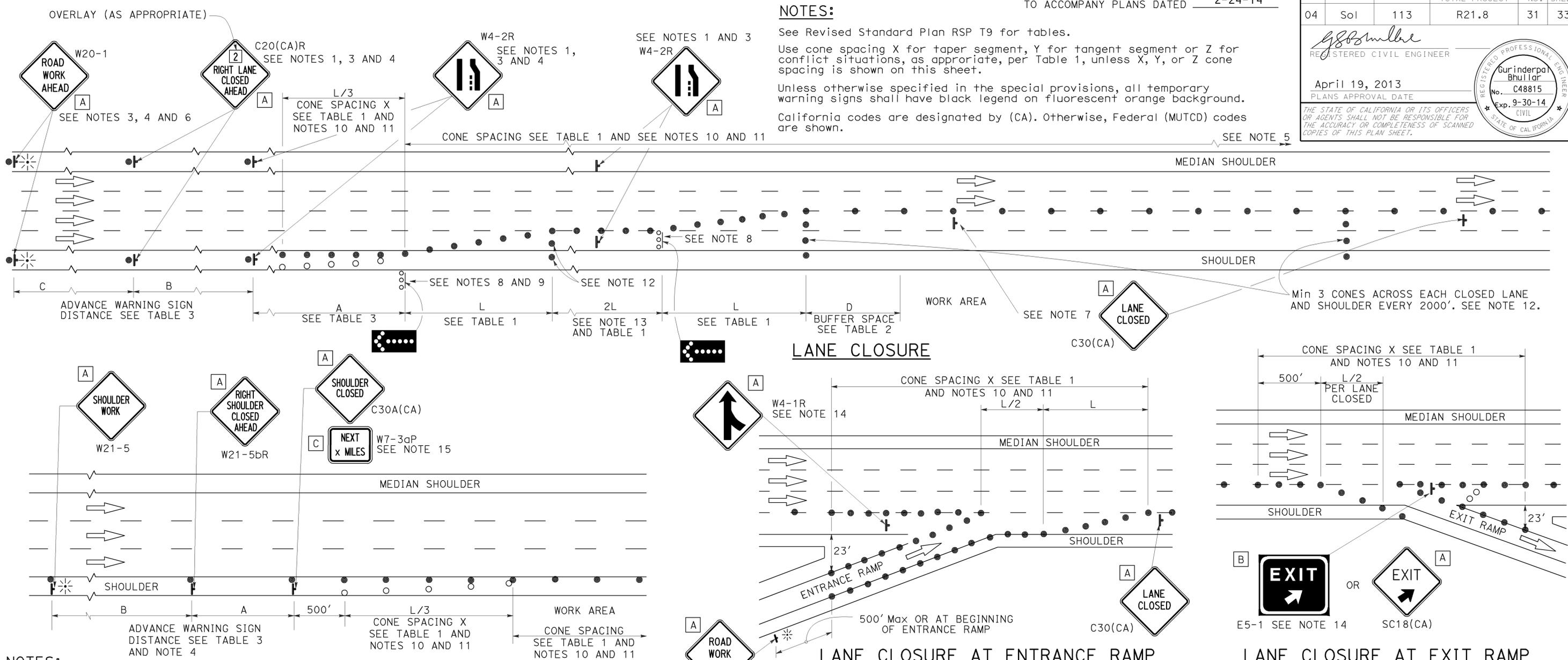
2010 REVISED STANDARD PLAN RSP T9

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 31 | 33 |

REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE

Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL ENGINEER
 STATE OF CALIFORNIA

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- NOTES:**
1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
 2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
 3. Duplicate sign installations are not required:
 - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
 4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
 5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

- SHOULDER CLOSURE**
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
 7. Place a C30(CA) sign every 2000' throughout length of lane closure.
 8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
 9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
 10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

- LANE CLOSURE AT ENTRANCE RAMP**
- LANE CLOSURE AT EXIT RAMP**
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
 13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
 14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
 15. A W7-3aP "NEXT _____ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

| | |
|---|-----------|
| A | 48" x 48" |
| B | 72" x 60" |
| C | 36" x 30" |

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

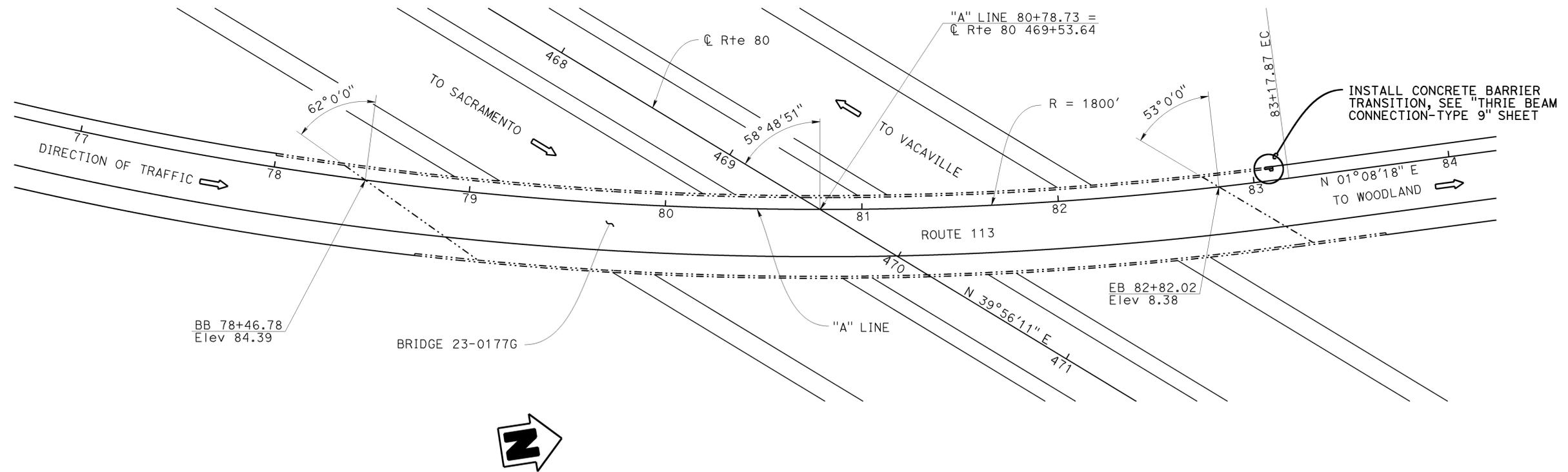
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|--------|-------|---------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 32 | 33 |
| | | | 1/16/14 | | |
| | | | REGISTERED CIVIL ENGINEER | | |
| | | | DATE | | |
| | | | 2-24-14 | | |
| | | | PLANS APPROVAL DATE | | |
| <i>Victor Lopez</i> REGISTERED PROFESSIONAL ENGINEER No. C61373 Exp. 6/30/15 CIVIL STATE OF CALIFORNIA | | | | | |
| The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet. | | | | | |

INDEX TO PLANS

STANDARD PLANS DATED 2010

| SHEET NO. | TITLE |
|-----------|--|
| 1. | GENERAL PLAN |
| 2. | CONCRETE BARRIER TRANSITION-THRIE BEAM CONNECTION - TYPE 9 |

| | |
|----------|--|
| A10A | ABBREVIATIONS (SHEET 1 OF 2) |
| RSP A10B | ABBREVIATIONS (SHEET 2 OF 2) |
| A62C | LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE |
| A78C1 | THRIE BEAM MARRIER - STANDARD HARDWARE DETAILS |
| A78F2 | SINGLE THRIE BEAM BARRIER - CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS |



LEGEND:

- - - - - Indicates existing structure.
- Indicates new construction.

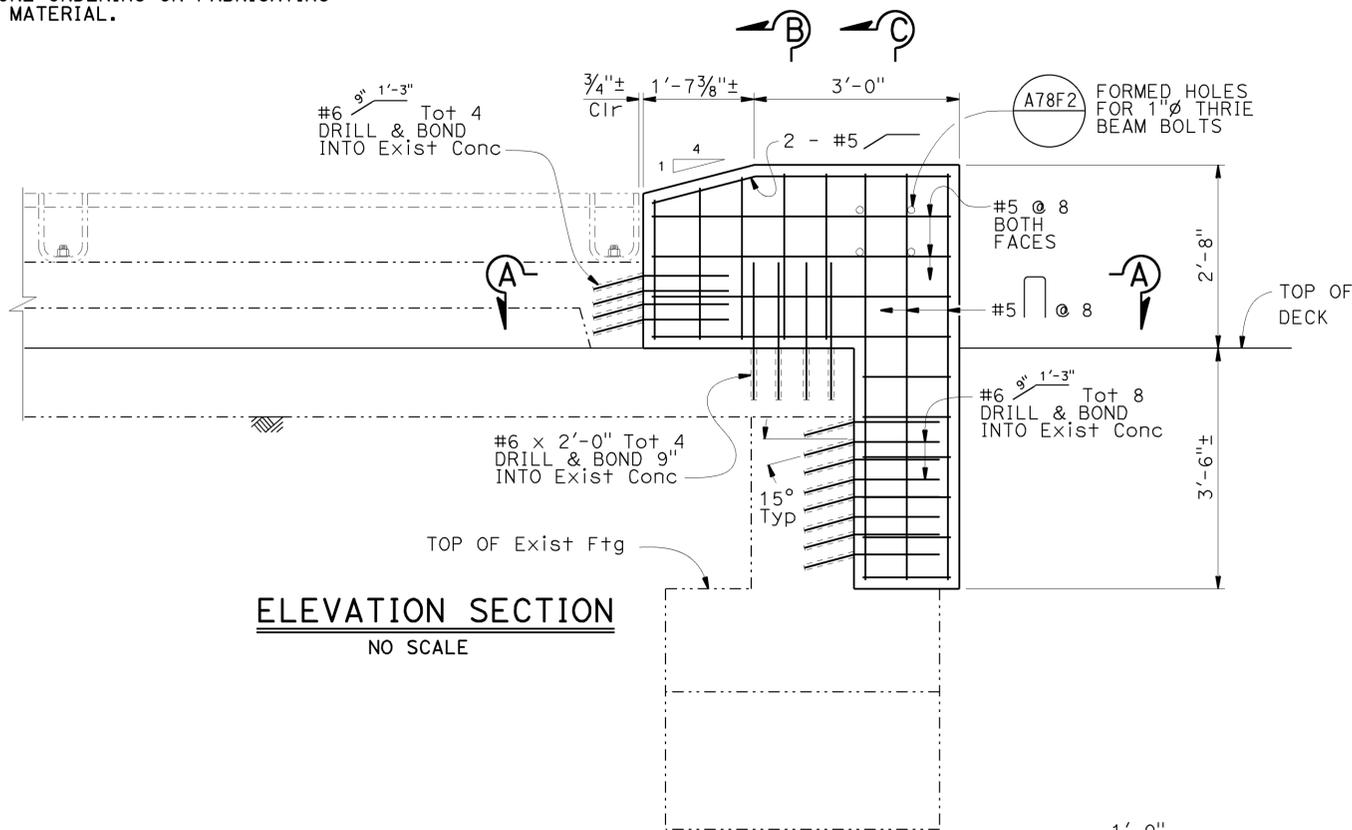
PLAN
1" = 30'

QUANTITIES
CONCRETE BARRIER (TRANSITION) 5 LF

NOTE: For "THRIE BEAM BARRIER", see Roadway Plans

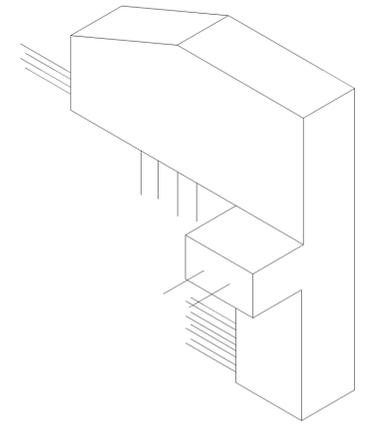
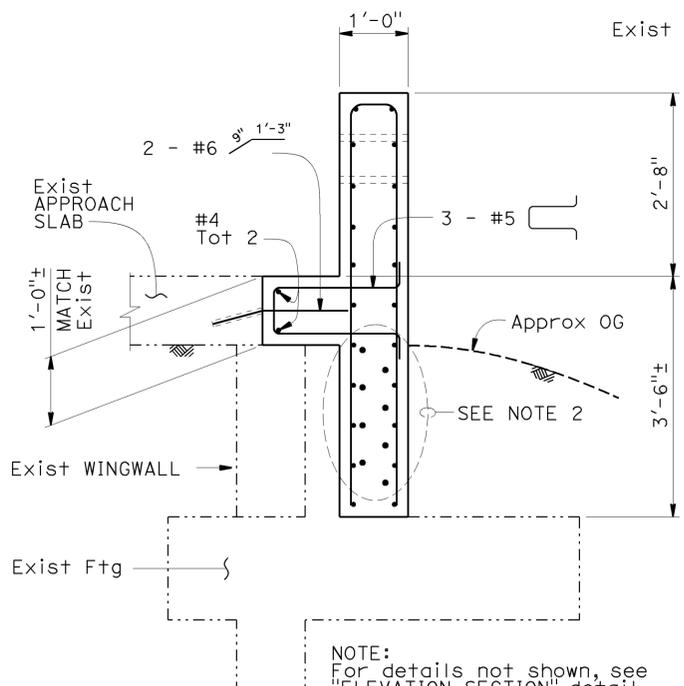
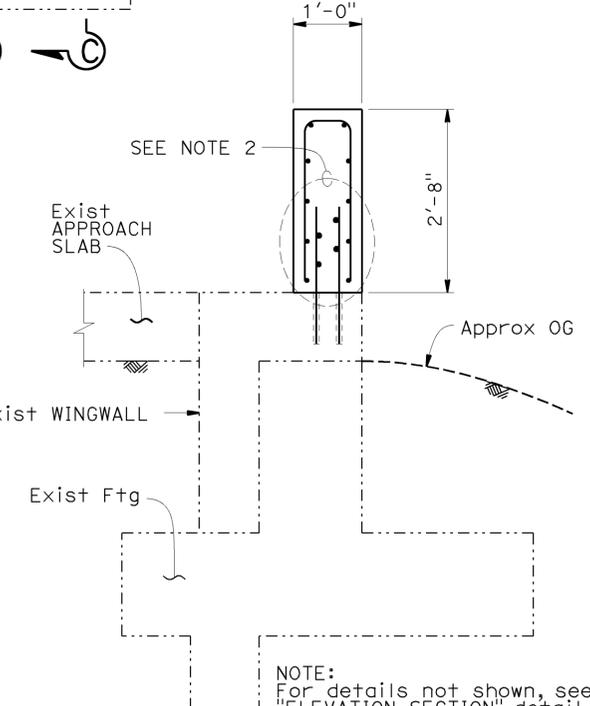
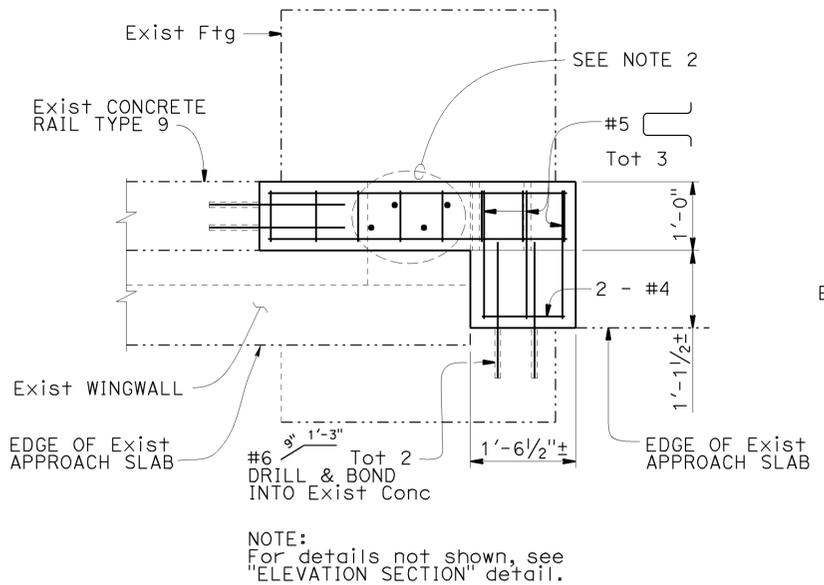
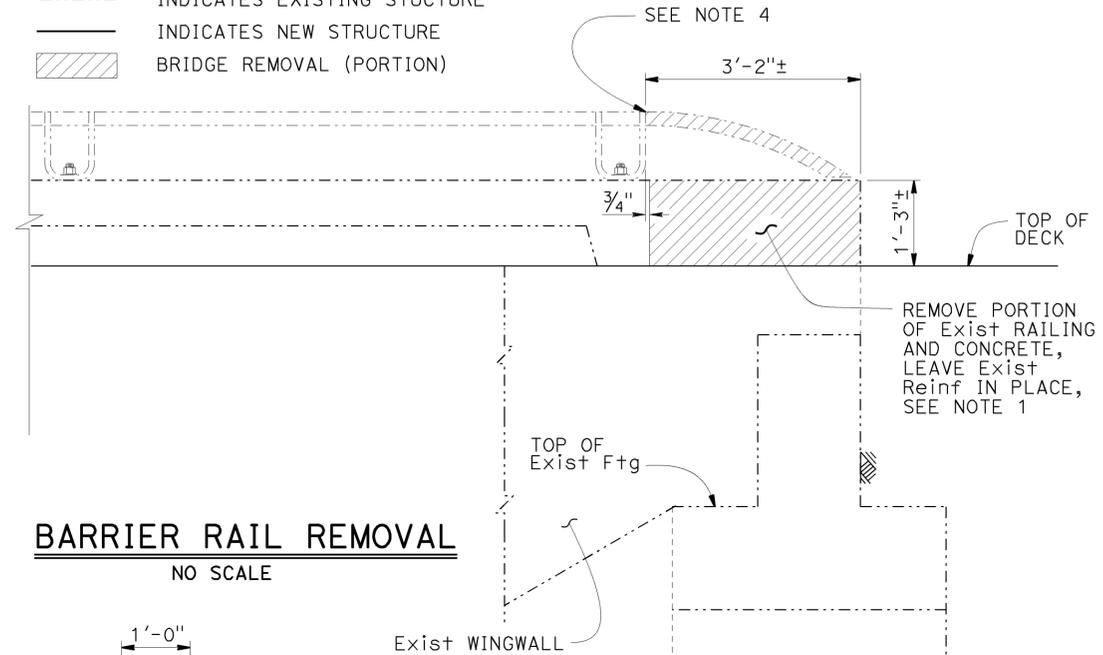
| | | | | | | | |
|----------------------|------------|---------------------------|---------------------|---|---|---|----------|
| | | | | ROUTE 113/80 SEPARATION (WEST) | | | |
| | | | | CONCRETE BARRIER TRANSITION | | | |
| | | | | GENERAL PLAN | | | |
| X DESIGN ENGINEER | DESIGN | BY VICTOR LOPEZ | CHECKED JOEL MAGANA | LOAD & RESISTANCE FACTOR DESIGN | LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE | BRIDGE NO. | 23-0177G |
| | DETAILS | BY S.JIANG / B.HUDDLESTON | CHECKED JOEL MAGANA | LAYOUT | BY BOB EDWARDS | POST MILE | 21.8 |
| | QUANTITIES | BY VICTOR LOPEZ | CHECKED JOEL MAGANA | SPECIFICATIONS | BY TINA N. CHEN | | |
| | | | | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 | | | |
| | | | | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH | |
| | | | | UNIT: 3619 PROJECT NUMBER & PHASE: 04000019901 | | CONTRACT NO.: 04-0G7501 | |
| | | | | DISREGARD PRINTS BEARING EARLIER REVISION DATES | | REVISION DATES 7-05-13 8-29-13 | |
| | | | | SHEET 1 OF 2 | | | |

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



- NOTE:
- Exposed Exist Reinf shall be formed into new concrete adjacent to new Reinf.
 - Drill & bond #6 dowels shall be staggered to maintain a 4" minimum separation and 4" clearance from all concrete faces.
 - For limits of excavation and backfill, see "STANDARD PLANS 2010" sheet A62C, Section E-E.
 - Remove sharp edges, grind smooth, and apply zinc coating.

LEGEND:
 - - - - - INDICATES EXISTING STRUCTURE
 _____ INDICATES NEW STRUCTURE
 [Hatched Area] BRIDGE REMOVAL (PORTION)



| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 04 | SoI | 113 | R21.8 | 33 | 33 |

Victor O. Lopez 1/16/14
 REGISTERED CIVIL ENGINEER DATE
 2-24-14
 PLANS APPROVAL DATE
 No. C61373
 Exp. 6/30/15
 CIVIL
 STATE OF CALIFORNIA

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ROUTE 113/80 SEPARATION (WEST)
CONCRETE BARRIER TRANSITION
THRIE BEAM CONNECTION-TYPE 9

| | | | | | | |
|------------|---------------------------|---------------------|---|--|------------|----------|
| DESIGN | BY VICTOR LOPEZ | CHECKED JOEL MAGANA | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH | BRIDGE NO. | 23-0177G |
| DETAILS | BY S.JIANG / B.HUDDLESTON | CHECKED JOEL MAGANA | | | POST MILE | 21.8 |
| QUANTITIES | BY VICTOR LOPEZ | CHECKED JOEL MAGANA | | | | |