PLANS PREPARATION MANUAL

Examples

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SUPERSEDES EXAMPLE RELEASED 3/16/12

FT=3, TX=8.75, WT=2, LV=border_PROJ-ID-BLOCK-anno (10), CO=0

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

THIS AREA RESERVED FOR FEDERAL AID No. DES-OE WILL INSERT FEDERAL No. ON NON-AADD PROJECTS. FOR AADD PROJECTS, SEE EXAMPLE "C".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

The number '0' shall precede the single digit district number

Use correct county abbreviation (see Table 2-1.6 of PPM)

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

INDEX OF PLANS

This area for listing of project plans sheets

Index of plans will be added by Division of Engineering Services - Office Engineer (DES-OE) for projects not AADD. For AADD projects, see Title Sheet Example "C"

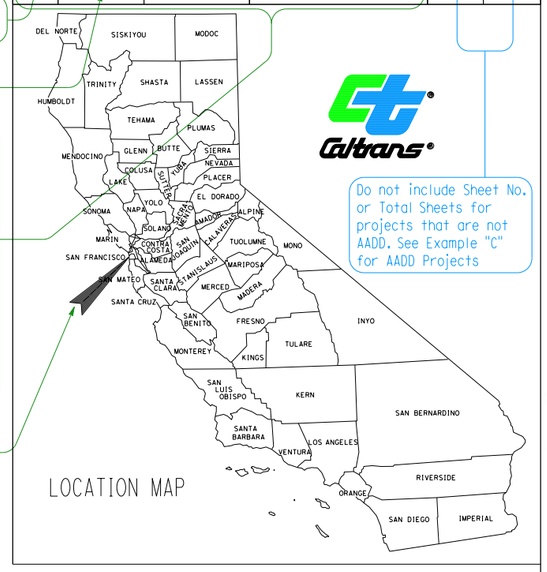
PROJECT DESCRIPTION
FT=43, TX=14.5, WT=0, LV=border_INSIDE-BORDER-anno (10), CO=0, Upper Case
or
If space is limited, use:
FT=43, TX=12, WT=0, LV=border_INSIDE-BORDER-anno (10), CO=0, Upper Case

THIS AREA FOR PROJECT DESCRIPTION

(See Section 2-2.2 of PPM for instructions on "Title Sheet Project Descriptions" and "Begin and End Points of Project Construction and Work")

The information shown on the Title Sheet for the District, County, Route and Post Mile is unique to each Contract and must be repeated on each individual sheet of project plans. (See Section 2-1.7 of PPM)

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018



LOCATION MAP

Do not include Sheet No. or Total Sheets for projects that are not AADD. See Example "C" for AADD Projects

DRAFTING STANDARDS:

- LINES, TEXT AND CELLS WITHIN THE CLIP FRAME FOR THE TITLE SHEET BORDER ARE TO BE ON LV=pp_TITLE-SHEET-MAP (60) or pp_TITLE-SHEET-anno (60) AND CO=0, UNLESS NOTED OTHERWISE.
- FOR ABBREVIATIONS, ACRONYMS, AND SYMBOLS SEE THE CURRENT CALTRANS STANDARD PLANS.
- FOR LEVELS, LINE WEIGHTS, LINE COLORS AND LINE STYLES/LINE CODES, SEE THE CADD USERS MANUAL.
- TEXT SIZES (TX) AND ACTIVE SCALE (AS) SHOWN ARE BASED ON THE CALTRANS "BASE" PLOTTING SCALE OF 1" = 50'.

Use this arrow (AC=LOCARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1) to indicate location of project. See "Title Sheet, State Location Map Examples" for additional information.

Use standard North Arrow for orientation. The preferred location of the North Arrow is the upper right portion of the Title Sheet within the clip frame.
AC=NARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1

THIS AREA FOR TITLE SHEET MAPPING

See Title Sheet Example "A1" for the defined purpose of the Title Sheet.

NOTES:

1. For information regarding the appropriate person who typically signs the title sheet, see TITLE SHEET, EXAMPLE "A1".

2. Seal Information:

   Name; TH=7, TW=5 or less, TW may be reduced for long first and last names or 2 lines may be used in the space provided.
   FT=3, WT=1, LV=border_SEAL (10), CO=0.

   Exp. Date and License No.:
   FT=3, TH=7, TW=5, WT=1, LV=border_SEAL (10), CO=0.

3. Signature: WT=1, LV=border_SIGNATURE, CO=0,
   Date: FT=3, TX=7, WT=1, LV=border_SIGNATURE (63), CO=0.
   The date of the engineer's signature is never to be later than the Plans Approval Date.

4. The Plans Approval Date will be added by DES-OE for projects not AADD. For AADD Project, see Title Sheet Example "C".

5. Contract Number/Project ID Number:

   FT=43, TX=12, WT=0, LV=border_PROJ-ID-BLOCK-anno (10), CO=0.

   a) The number '0' shall precede the single district number.
   b) The contract number for projects advertised by DES-OE will always end with a '4'. This defines the phase of the project.
   c) For Minor B projects, advertised by the district, the contract number must be shown.
   d) The Project ID number does not include the phase number.

6. The Time/Date Stamp and username/DGN file name stamp must be included on the Title Sheet and all subsequent sheets of the Project Plans.

7. "LAST REVISED" date is used by the district drafting staff to reflect the last drafting change to this sheet.

The plans approval date is the Monday of the week the project is Draft Contract Ready (DCR). If the Monday falls on a holiday, use the Tuesday of the same week.
Refer to the Ready to List Construction Contract Award Guide (RTL Guide) for overview of the DCR process.

Mandatory to have a printed name in each field, see Figure 2-6 in Section 2-1.6 of PPM.
FT=3, TX=6, WT=1, LV=border_WITHIN-BORDER-anno (10), CO=0

Use the appropriate title sheet border cell in the latest Caltrans Cell Library (CTCELLIB_NamedLevels.cel). See TITLE SHEET EXAMPLE "A1" for additional information.
AC=CFTITL for clip frame.

Use the alignment of the Contract No. and Project ID shown here so the Phase (the 4 phase) from the Contract No. stands out.

See Note 6

See Notes 1 and 2

See Note 7

See Note 5

See Notes 1 and 3

See Note 4

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

TITLE SHEET, EXAMPLE "A"
BASIC FORMAT AND INFORMATION

Do not show graphic scale, label sheet "NO SCALE" at the center bottom of sheet.
FT=3, TX=8.75, WT=2, CO=0, LV=border_INSIDE-BORDER-anno (10), Upper Case

NO SCALE

See Note 6

FT=3, TX=7, WT=1,LV=border_SHEET (10), CO=0

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

PROJECT MANAGER

DESIGN MANAGER

CONTRACT No.	00-000004
PROJECT ID	0000000000

LAST REVISION 00-00-00 — DATE PLOTTED => $DATE — TIME PLOTTED => $TIME

TITLE SHEET, EXAMPLE "A" RELEASED 12/11/2019

BORDER LAST REVISED 8/1/2016 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => $USER DGN FILE => $REQUEST | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 5/15/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

THE PURPOSE OF THE TITLE SHEET IS TO:

- Identify the general location of the project by county or counties on the Title Sheet State Location Map.
- Identify, in words, the specific project location or various locations, referencing known geographic features (Project Description).
- Identify the district, county or counties, route(s) and post miles where construction is to be performed (Project Identification Block).
- Define the project limits of construction and work on each route using station alignment and post miles or only post miles depending on the project.
- Identify all locations of construction.
- Identify the various type of plan sheets for the entire project. Plan sheets listed in Index of Plans.
- Identify the Contract No. and Project ID No.
- Identify the person assigned responsibility for coordinating the effort to produce a complete set of project plans for construction (person whose signature and license information is affixed to the Title Sheet).
- Identify the supervisor of the person signing the Title Sheet in the Design Engineer block.
- Identify the project manager.

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

See Title Sheet Example "A" for basic formatting and information not shown on this sheet.

Signature and license seal information shown on the title sheet is the person assigned responsibility for coordinating the effort to produce a complete set of project plans for construction. Depending on the type of project, the person signing the title sheet typically would be a licensed civil engineer, electrical engineer, or landscape architect. See examples on this sheet. Only one signature and license seal is to appear on the title sheet. Title sheet borders with the seal and associated signature information are available in the Caltrans Cell Library (CTCELLIB.cel). For additional signature and seal information, see Section 2-1.6 of the PPM.

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

If Landscape Architect to sign title sheet, use sheet border cell (AC=LTITLE)

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

If Civil Engineer to sign title sheet, use sheet border cell (AC=TITLE)

PROJECT ENGINEER REGISTERED ELECTRICAL ENGINEER — DATE

PLANS APPROVAL DATE

If Electrical Engineer to sign title sheet, use sheet border cell (AC=ETITLE)

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: THE TITLE SHEET SERVES AS A COVER SHEET FOR THE PROJECT. NO ITEMS OF WORK ARE TO BE IDENTIFIED ON THE TITLE SHEET, BECAUSE IT IS NOT CONSIDERED AN ENGINEERING DOCUMENT.

ALL ITEMS OF WORK INCLUDING SHOWING DETAILS OR QUANTITY TABLES ARE TO BE SHOWN ON SUBSEQUENT PLAN SHEETS AND ARE THE RESPONSIBILITY OF THE LICENSED PERSON SIGNING AND SEALING THE INDIVIDUAL PLAN SHEET.

This block is identified as "SENIOR LANDSCAPE ARCHITECT" on sheet border cell (AC=LTITLE).

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "A1"
SIGNATURE AND SEAL INFORMATION

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

TITLE SHEET, EXAMPLE "A1" RELEASED 3/16/2012

LAST REVISION 00-00-00 — DATE PLOTTED => 14-MAR-2012 TIME PLOTTED => 08:11

CONTRACT No.	00-000004
PROJECT ID	0000000000

SUPERSEDES EXAMPLE RELEASED 3/16/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

INDEX OF PLANS

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

See Title Sheet Example "A" for basic formatting and information not shown on this sheet.

LOCATION MAP

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

NOTES:

1. For projects prepared by consultants for Caltrans or for a project prepared by a Local Agency, use:
   AC=TITLE2 in the Caltrans Cell Library (CTCELLIB_NamedLevels.cel)
   or (CTCELLIB.cel for projects using numbered levels)
   AC=CFTIT2 for clip frame.

2. For a project prepared by a consultant for a permittee or Local Agency, use:
   AC=TITLE3 in the Caltrans Cell Library (CTCELLIB_NamedLevels.cel)
   or (CTCELLIB.cel for projects using numbered levels)
   AC=CFTIT3 for clip frame.

3. See Figures 2-4 and 2-5 in Section 2-1.6 of the PPM.

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.

	REGISTRATION No.	LICENSE Exp DATE	DATE SIGNED
CALTRANS DESIGN OVERSIGHT APPROVAL JOHN SMITH			
CONSULTANT DESIGN ENGINEER			

Mandatory printed information in each field.
FT=3, TX=6, WT=1, LV=border_WITHIN-BORDER-anno (10)

Mandatory signature,
WT=1, LV=border_SIGNATURE (63)

See Figure 2-7 in Section 2-1.6 of the PPM

Mandatory printed name,
FT=3, TX=6, WT=1,
LV=border_WITHIN-BORDER-anno (10)

Mandatory printed name,
FT=3, TX=6, WT=1, LV=border_WITHIN-BORDER-anno (10)

Name and address of Consultant,
Permittee or Agency:

For 4 Lines of text: FT=3, TX=6, WT=1, LV=pp_PRESENTATION (10)

For 3 Lines of text: FT=3, TX=7, WT=1, LV=pp_PRESENTATION (10)

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

ALL AMERICAN CONSULTANT AND
ENGINEERING COMPANY
1234 MAIN STREET
ANY TOWN, CA 99991-1234

CITY OF WATERFALL
234 CORPORATE AVENUE
AMERITOWN, CA 99999-4321

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "B"
BASIC FORMAT AND INFORMATION, CONSULTANT PREPARED PROJECT

NO SCALE

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

TITLE SHEET, EXAMPLE "B" RELEASED 12/11/2019

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 3/16/12

ACSTPHG-Q101(054)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				1	147

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

FEDERAL AID No.:
FT=43, TX=14.5, WT=0,
LV=PP_PRESENTATION (10),
CO=0, Upper Case

FEDERAL AID No. must be shown for Federal Funded Projects.

Include Sheet No. and Total Sheets count.
FT=3, TX=8.75, WT=2, CO=0
LV=border_PROJ-ID-BLOCK-anno (10)

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	TYPICAL CROSS SECTIONS
5-6	LAYOUTS
7-12	CONSTRUCTION DETAILS
13-19	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
20-21	UTILITY PLANS
22	CONSTRUCTION AREA SIGNS
23-40	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS
41-47	DETOUR PLANS AND QUANTITIES
48-55	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
56-61	SIGN PLANS, DETAILS AND QUANTITIES
62	SUMMARY OF QUANTITIES
63-68	ELECTRICAL PLANS
69-84	REVISED STANDARD PLANS

STRUCTURE PLANS

85-147	CLEAR WATER CREEK BRIDGE Br No. XX-XXXX

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

See Title Sheet Example "A" for basic formatting and information not shown on this sheet.

Include listing of plans and note regarding standard plans list.
The cell AC=INDEX in the CTCELLIB_NamedLevels.cel or CTCELLIB for projects using numbred levels is available to use as a template for the Index of Plans.

INDEX OF PLANS TEXT:
FT=3, TX=7.75, WT=1, LV=pp_TITLE-SHEET-anno (10), CO=0 If space to list plans is restrictive, text size may be reduced to TX=7.

All upper case except abbreviations.

Depending on their applicability to a project, Revised Standard Plans are listed under the "INDEX OF PLANS."

The term "New Standard Plan" is no longer being used. All New and Revised Standard Plans are now considered Revised Standard Plans and will be inserted in projects to follow the order of the sections in the Standard Plans Book.

Group sheets together for the index as this will save space on large projects. Do not separately list the components of a type of work. Combine sheet listings. Example: SHEET Nos. 13-19 DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES.

Use this arrow (AC=LOCARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1) to indicate location of project. See "Title Sheet, State Location Map Examples" for additional information.

County or counties of location:
LV=pp_PRESENTATION, CO=0, WT=2
patterning optional

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Insert "PLANS APPROVAL DATE":

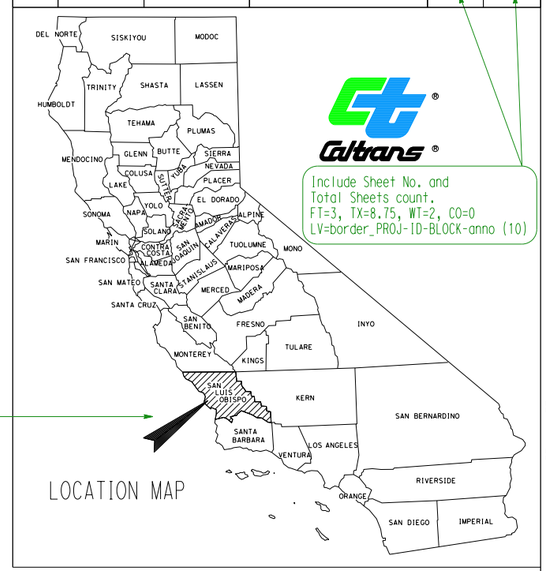
On Title Sheets:
FT=3, TX=8.75, WT=2,
LV=border_SIGNATURE (10), CO=0
Upper/Lower Case.

Example: March 19, 2012

On Other Sheets:
FT=3, TX=7, WT=1,
LV =border_SIGNATURE (10), CO=0
Upper/Lower Case.

Example: March 19, 2012

The plans approval date is the date final changes made to the project plan set are approved by District Office Engineer (DOE).



LOCATION MAP

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

TITLE SHEET, EXAMPLE "C"
ADDITIONAL INFORMATION REQUIRED FOR AADD PROJECT

NO SCALE

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

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "C" RELEASED 12/11/2019

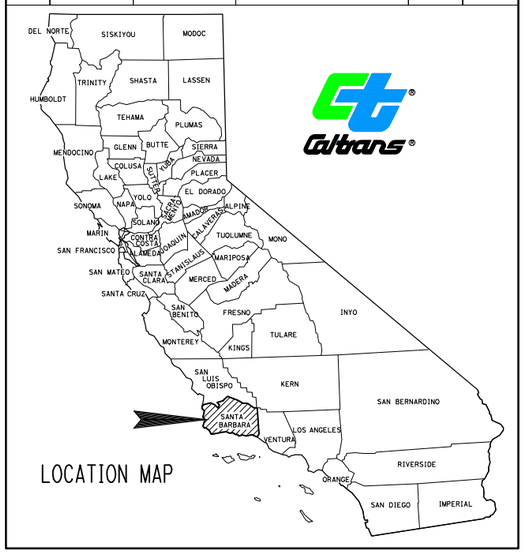
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

LAST REVISION 00-00-00

CONTRACT No.	00-000004
PROJECT ID	0000000000

SUPERSEDES EXAMPLE RELEASED 4/22/08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB				



EXAMPLE "A"

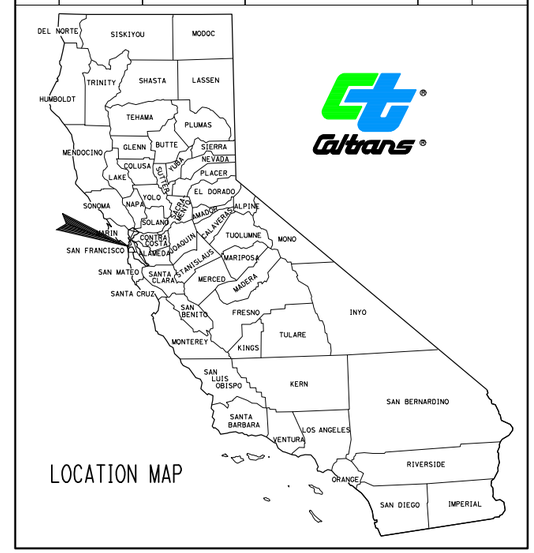
Project located in one county. Outline county and denote county with hachure marks. Show one location arrow.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sut				

EXAMPLE "B"

Project located in one county. Outline county and show one location arrow. No hachure marks used due to limited space available.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF				



EXAMPLE "C"

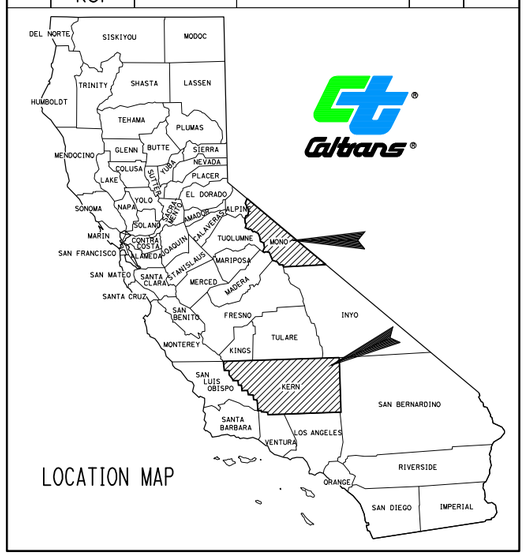
Project located in city and county of San Francisco. Show only one location arrow for this county.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, SF, SM, SCl				

EXAMPLE "D"

Project located in multiple counties with contiguous borders. Outline each county and denote each with hachure marks. Show only one location arrow.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno, Ker				



EXAMPLE "E"

Project located in multiple separate counties with no contiguous borders. Outline each county and denote each county with hachure marks. Show a location arrow for each county.

LOCATION ARROW:
AC=LOCARR, WT=1, LV=10, AS=1

OUTLINE COUNTY:
WT=2, LV=10

ALL COUNTY NAMES:
WT=0, LV=10

HACHURE MARKS:
ANGLE=45°, SPACING OF HACHURES=3'
WT=0

NOTES:

1. Except for San Francisco County as shown in Example "C" county lines shall be outlined for each county in which the project is located.
2. Use hachure marks within the county areas in which the project is located unless space is not available. See Example "B" and Example "C" for county not requiring hachure marks.
3. Hachure marks shall not extend through county names.
4. A location arrow or location arrows must be shown. See Examples this sheet.
5. Where a project is located in a county which is split by district boundaries, the complete limits of the county are to be denoted and the district boundaries disregarded. See Example "E", Kern County split by District 09 and District 06 boundaries.
6. No other information or symbols are to be shown within the location map area.

EXAMPLES OF STATE LOCATION MAPS FOR TITLE SHEETS

EXAMPLES OF STATE LOCATION MAPS FOR TITLE SHEETS, RELEASED 3/16/2012

SUPERSEDES EXAMPLE RELEASED 3/16/12

INDEX OF PLANS
TEXT

1. FT=43, TX=12, WT=0, LV=pp_PRESENTATION (60) Upper Case.
2. FT=3, TX=10, WT=2, LV=pp_PRESENTATION (60) Upper/Lower Case.
3. FT=3, TX=8.75, WT=2, Upper Case, LV=PROJ-ID-BLOCK-anno (10) See section 2-1.7 of the PPM.
4. FT=3, TX=7, WT=1, LV=pp_TITLE-SHEET-anno (60) Upper/Lower Case.
5. FT=3, TX=8.75, WT=2, LV=border_INSIDE-BORDER-anno (10), Upper Case.
6. FT=3, TX=7, WT=1, LV= pp_TITLE-SHEET-anno (60) Upper Case except standard abbreviations Upper/Lower Case.
7. FT=43, TX=10, WT=0, LV= pp_TITLE-SHEET-anno (60) Upper Case for incorporated cities. Upper and Lower Case for unincorporated areas. See "Project Description" in Section 2-2.2 of the PPM for methods of determining incorporation status of cities.
8. FT=43, TX=14.5, WT=0, LV=border_INSIDE-BORDER-anno (10), Upper Case. For option to reduce text size, see Title Sheet Example "A".
9. FT=43, TX=12, WT=0, LV=pp_PROJ-ID-BLOCK-anno (10) If letters are to be used,they must be Upper Case. Contract Number ends with a "4" if project submitted to DES-OE. Project ID does not include phase number.
10. FT=3, TX=8.75, WT=2, LV=border_SIGNATURE (10) Upper/Lower Case, Example "March 19, 2012"
11. FT=3, TX=7, WT=1, Upper/Lower Case, slant 25° (waterways and bodies of water). This includes rivers, creeks, canals, lakes, reservoirs and ponds. For bays, use FT=3, TX=8.75, WT=2, Upper Case at a slant of 25°. For Pacific Ocean, use FT=3, TX=12, WT=2, Upper Case at a slant of 25°.
12. FT=3, TX=7, WT=1, pp_TITLE-SHEET-anno (60) Routes without work.
13. FT=3, TX=8.75, WT=2, pp_TITLE-SHEET-anno (60) Routes with work.

Spacing between lines is to be no greater than the letter height. Spacing is generally half the letter height but can be slightly less if space is restricted.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

(8) IN SAN LUIS OBISPO COUNTY
IN AND NEAR ATASCADERO
FROM 1.0 MILE SOUTH OF SANTA BARBARA ROAD OVERCROSSING
TO SAN ANSELMO ROAD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

For instructions for writing Project Descriptions, see Section 2-2.2 of the PPM.

See Title Sheet Example "A" for basic formatting and information not shown on this sheet.

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	101	41.3/46.9		

(3)

LOCATION MAP

END CONSTRUCTION
Sta "A1" 472+10 PM 46.9

LEADER LINES FOR BEGIN & END Const AND WORK AND LOCATIONS, LC=0, WT=1,CO=0 LV=pp_PRESENTATION (60)

Project limits of begin and end work to include temporary work to be performed in advance and beyond the identified limits of begin and end construction such as lane closure and advance construction area signing.

(2) Begin Work
Sta "A1" 165+00

(1) BEGIN CONSTRUCTION
Sta "A1" 178+15 PM 41.3

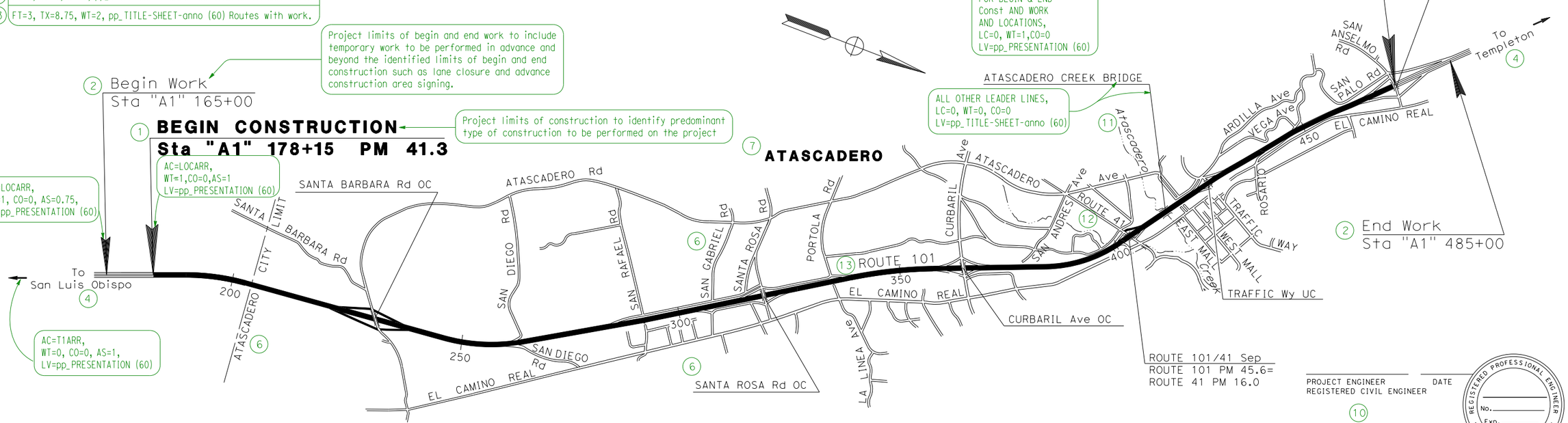
Project limits of construction to identify predominant type of construction to be performed on the project

AC=LOCARR, WT=1, CO=0, AS=0.75, LV=pp_PRESENTATION (60)

AC=LOCARR, WT=1,CO=0,AS=1 LV=pp_PRESENTATION (60)

AC=T1ARR, WT=0, CO=0, AS=1, LV=pp_PRESENTATION (60)

ALL OTHER LEADER LINES, LC=0, WT=0, CO=0 LV=pp_TITLE-SHEET-anno (60)



TITLE SHEET, EXAMPLE "D"
CONSTRUCTION ON ONE ROUTE, LENGTH OF CONSTRUCTION GREATER THAN 0.2 MILE

(5) NO SCALE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
(10)
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
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.

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

CONTRACT No.	05-0A1704
PROJECT ID	0500001234

(9)

PROJECT MANAGER
DESIGN ENGINEER

TITLE SHEET, EXAMPLE "D" RELEASED 12/11/2019

LAST REVISION 01-04-12 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 5/15/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78,111	15.3/15.8, R20.5/R22.2		

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STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

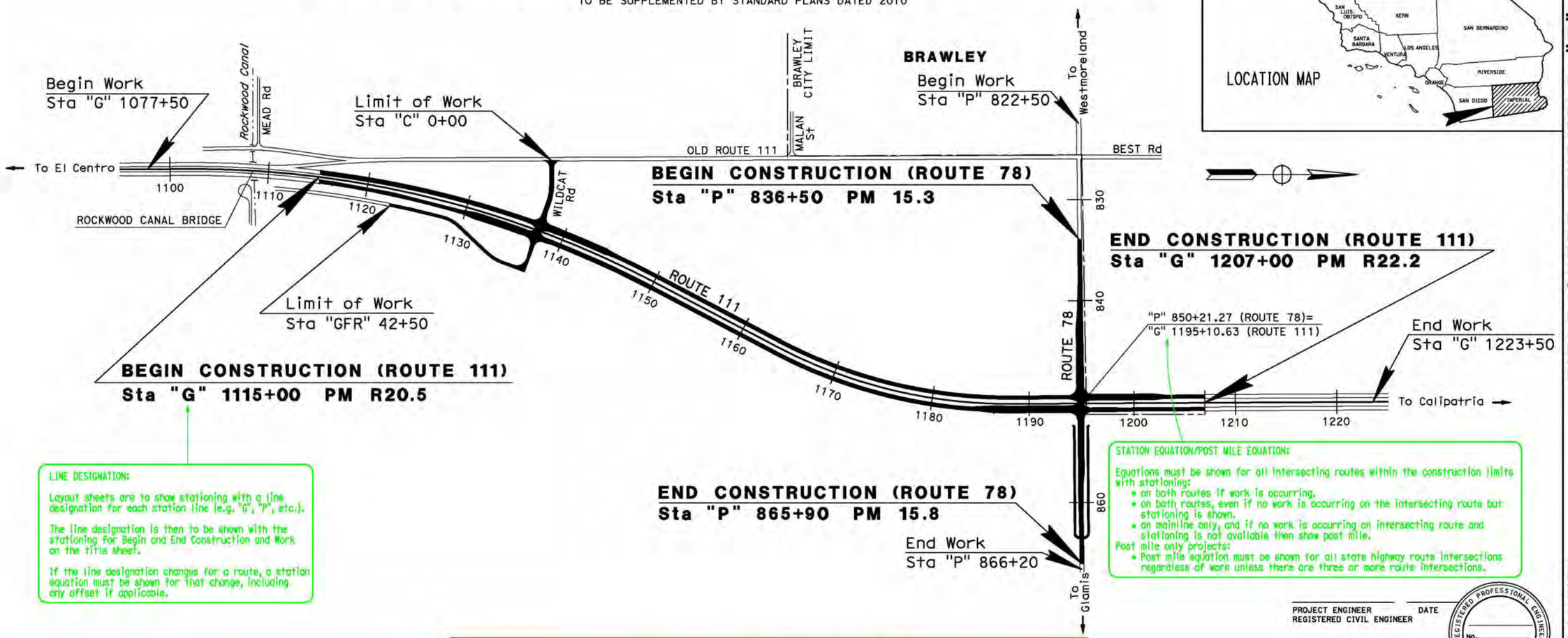
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN IMPERIAL COUNTY IN AND NEAR BRAWLEY ON ROUTE 78 FROM 0.3 MILE EAST TO 0.2 MILE WEST OF ROUTE 111 AND ON ROUTE 111 FROM 0.1 MILE NORTH OF ROCKWOOD CANAL BRIDGE TO 0.3 MILE NORTH OF ROUTE 78

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



LINE DESIGNATION:

Layout sheets are to show stationing with a line designation for each station line (e.g. "G", "P", etc.).

The line designation is then to be shown with the stationing for Begin and End Construction and Work on the title sheet.

If the line designation changes for a route, a station equation must be shown for that change, including any offset if applicable.

STATION EQUATION/POST MILE EQUATION:

Equations must be shown for all intersecting routes within the construction limits with stationing:
- on both routes if work is occurring,
- on both routes, even if no work is occurring on the intersecting route but stationing is shown,
- on mainline only, and if no work is occurring on intersecting route and stationing is not available then show post mile.

Post mile only projects:
- Post mile equation must be shown for all state highway route intersections regardless of work unless there are three or more route intersections.

TITLE SHEET, EXAMPLE "E"
CONSTRUCTION ON TWO ROUTES, LENGTH OF CONSTRUCTION ON EACH ROUTE GREATER THAN 0.2 MILE-ROUTE REALIGNMENT

NO SCALE

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	11-167874
PROJECT ID	1100000082

TITLE SHEET, EXAMPLE "E" RELEASED 3/16/2012

DATE PLOTTED => 14-MAR-2012
TIME PLOTTED => 13:19

LAST REVISION 01-04-12

PROJECT MANAGER

DESIGN ENGINEER

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

SUPERSEDES EXAMPLE RELEASED 3/16/12

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

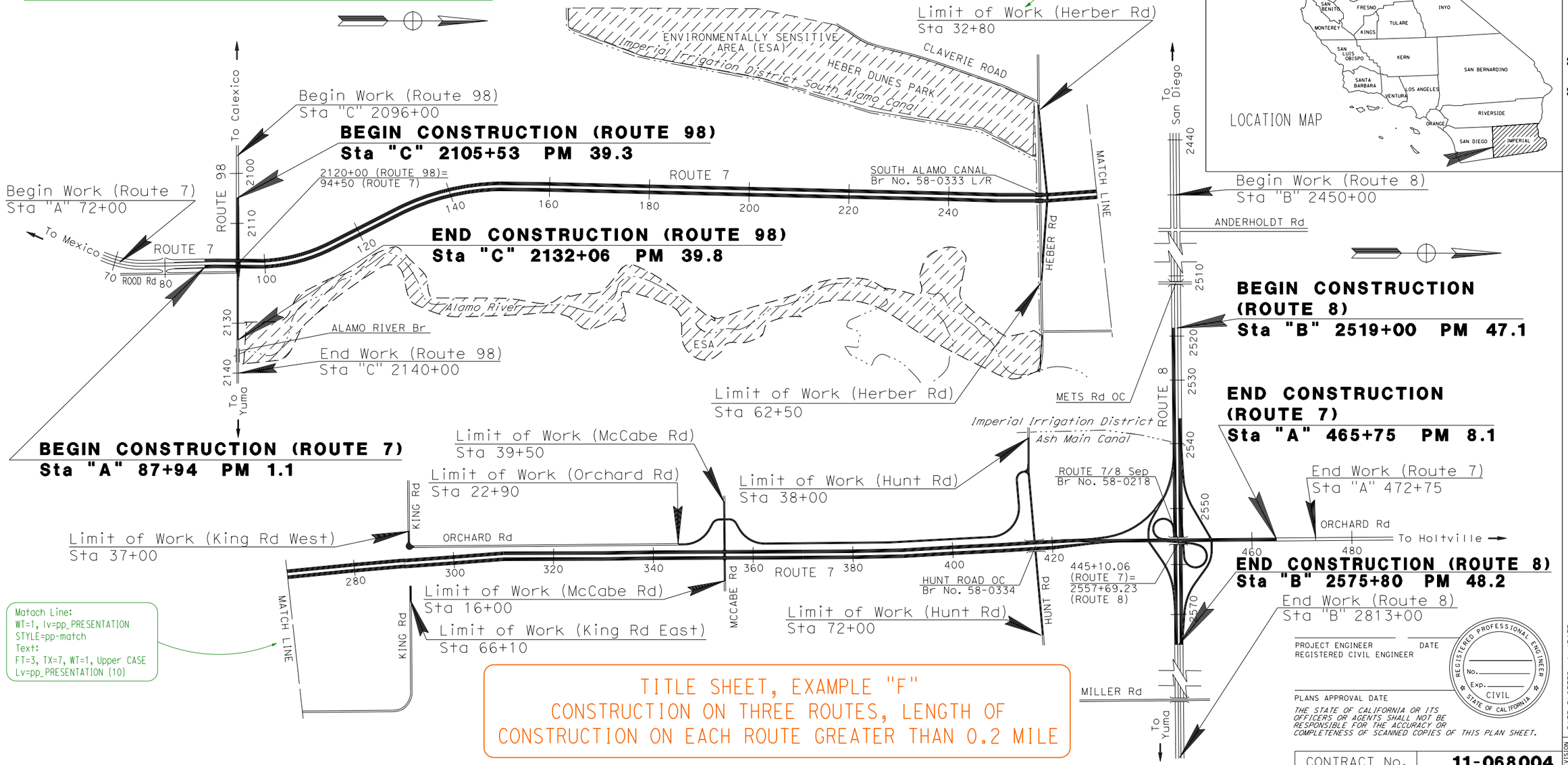
IN IMPERIAL COUNTY
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	7,8,98	Var		

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Text size for "Limit of Work" is the same as "Begin Work" and "End Work"
FT=3, TX=10, WT=2, Upper/Lower Case



Matach Line:
WT=1, lv=pp_PRESENTATION
STYLE=pp-match
Text:
FT=3, TX=7, WT=1, Upper CASE
Lv=pp_PRESENTATION (10)

TITLE SHEET, EXAMPLE "F"
CONSTRUCTION ON THREE ROUTES, LENGTH OF
CONSTRUCTION ON EACH ROUTE GREATER THAN 0.2 MILE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

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

NO SCALE

CONTRACT No.	11-068004
PROJECT ID	1100000031

PROJECT MANAGER
DESIGN ENGINEER

TITLE SHEET, EXAMPLE "F" RELEASED 12/11/2019

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION 01-04-12

SUPERSEDES EXAMPLE RELEASED 5/15/08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	49.6		

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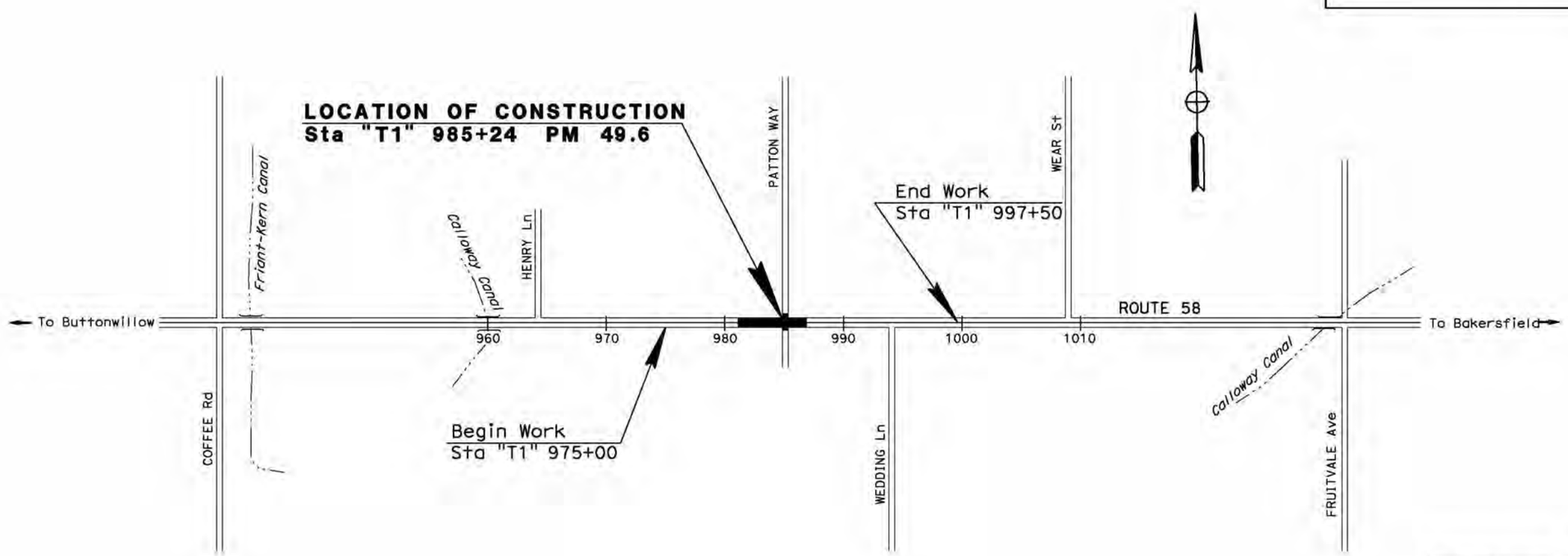
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN KERN COUNTY
NEAR
BAKERSFIELD AT PATTON WAY

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

TITLE SHEET, EXAMPLE "G"
CONSTRUCTION ON ONE ROUTE AT SPOT LOCATION

NO SCALE

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

CONTRACT No.	06-440504
PROJECT ID	0600002345

TITLE SHEET, EXAMPLE "G" RELEASED 3/16/2012

DATE PLOTTED => 14-MAR-2012
TIME PLOTTED => 08:50
LAST REVISION 01-04-12

PROJECT MANAGER
DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 2/16/12

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN FRESNO COUNTY
IN FRESNO
AT BIOLA JUNCTION OVERHEAD
AND AT HERNDON CANAL BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

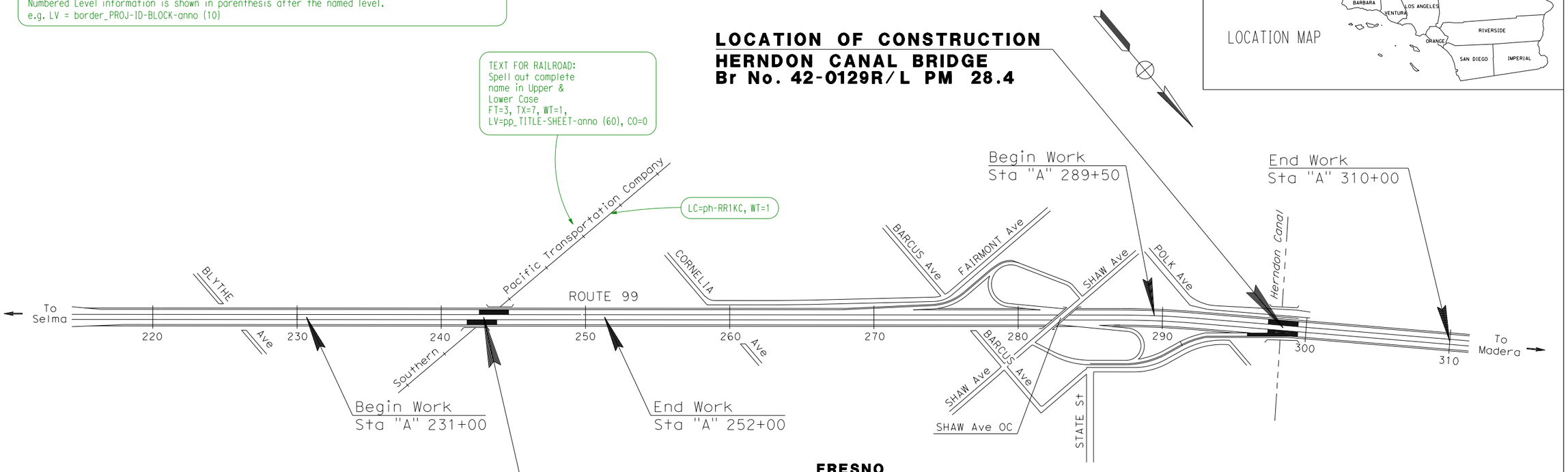
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	99	27.3,28.4		

LOCATION MAP

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

TEXT FOR RAILROAD:
Spell out complete
name in Upper &
Lower Case
FT=3, TX=7, WT=1,
LV=pp_TITLE-SHEET-anno (60), CO=0

LC=ph-RR1KC, WT=1



PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
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.

TITLE SHEET, EXAMPLE "H"
CONSTRUCTION ON ONE ROUTE AT TWO SPOT LOCATIONS

NO SCALE

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

CONTRACT No.	06-123654
PROJECT ID	0600003456

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "H" RELEASED 12/11/2019

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION 01-04-12

SUPERSEDES EXAMPLE RELEASED 3/16/12

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	R46.5/R49.1		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LOS ANGELES COUNTY
NEAR NEWHALL AT VARIOUS LOCATIONS
FROM WELDON CANYON OVERCROSSING TO
CALGROVE BOULEVARD UNDERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

LOCATION MAP

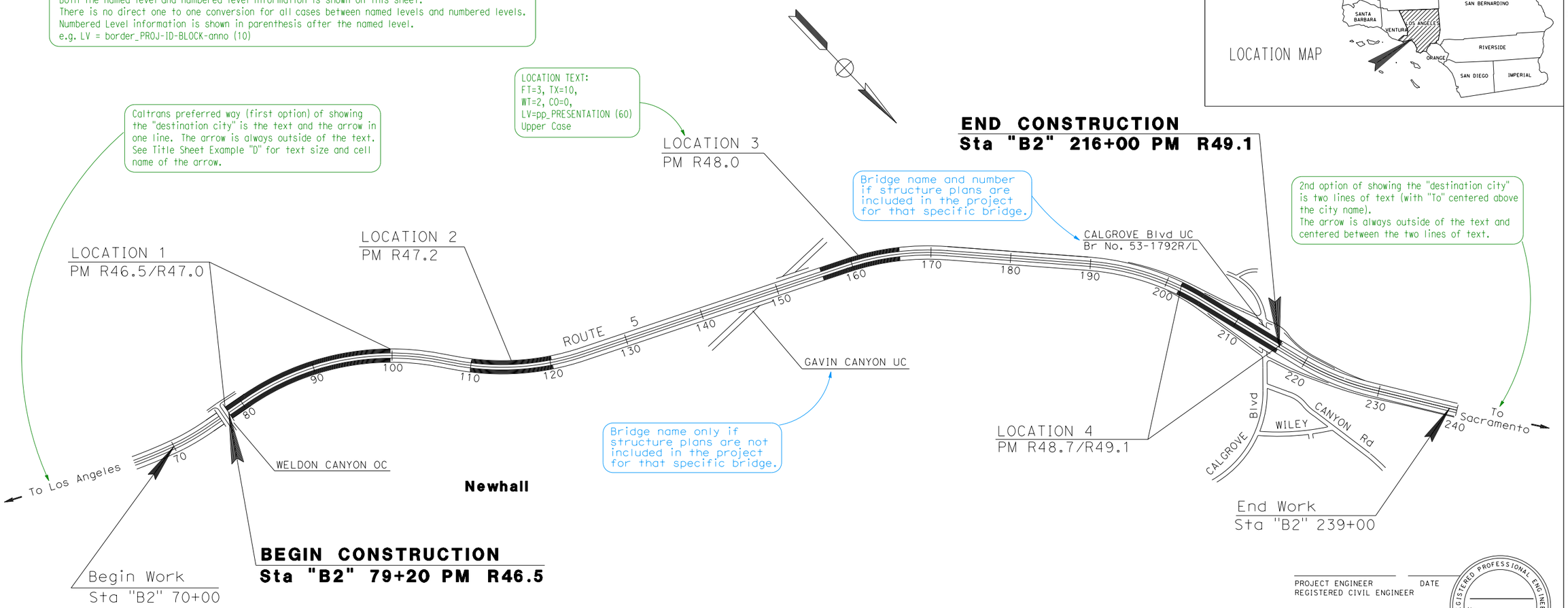
GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

LOCATION TEXT:
FT=3, TX=10,
WT=2, CO=0,
LV=pp_PRESENTATION (60)
Upper Case

Caltrans preferred way (first option) of showing the "destination city" is the text and the arrow in one line. The arrow is always outside of the text. See Title Sheet Example "D" for text size and cell name of the arrow.

Bridge name and number if structure plans are included in the project for that specific bridge.

2nd option of showing the "destination city" is two lines of text (with "To" centered above the city name).
The arrow is always outside of the text and centered between the two lines of text.



Bridge name only if structure plans are not included in the project for that specific bridge.

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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TITLE SHEET, EXAMPLE "I"
CONSTRUCTION ON ONE ROUTE, THREE OR MORE LOCATIONS OF CONSTRUCTION

NO SCALE

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

CONTRACT No.	07-117134
PROJECT ID	0700004567

TITLE SHEET, EXAMPLE "I" RELEASED 12/11/2019

LAST REVISION 01-04-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

PROJECT MANAGER
DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 3/16/12

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DEPARTMENT OF TRANSPORTATION

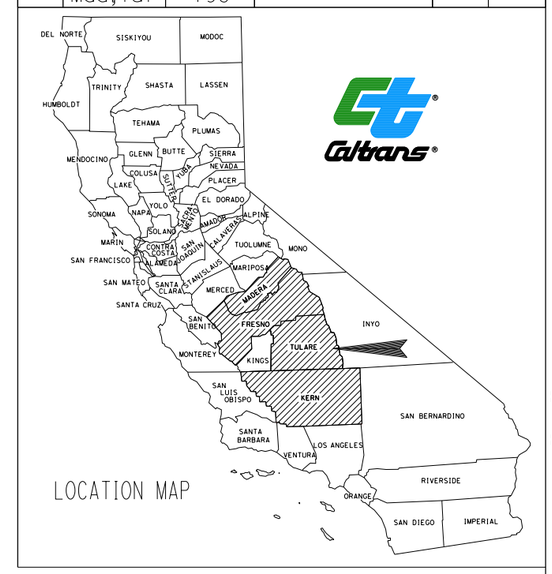
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN FRESNO, KERN, MADERA AND TULARE COUNTIES AT VARIOUS LOCATIONS

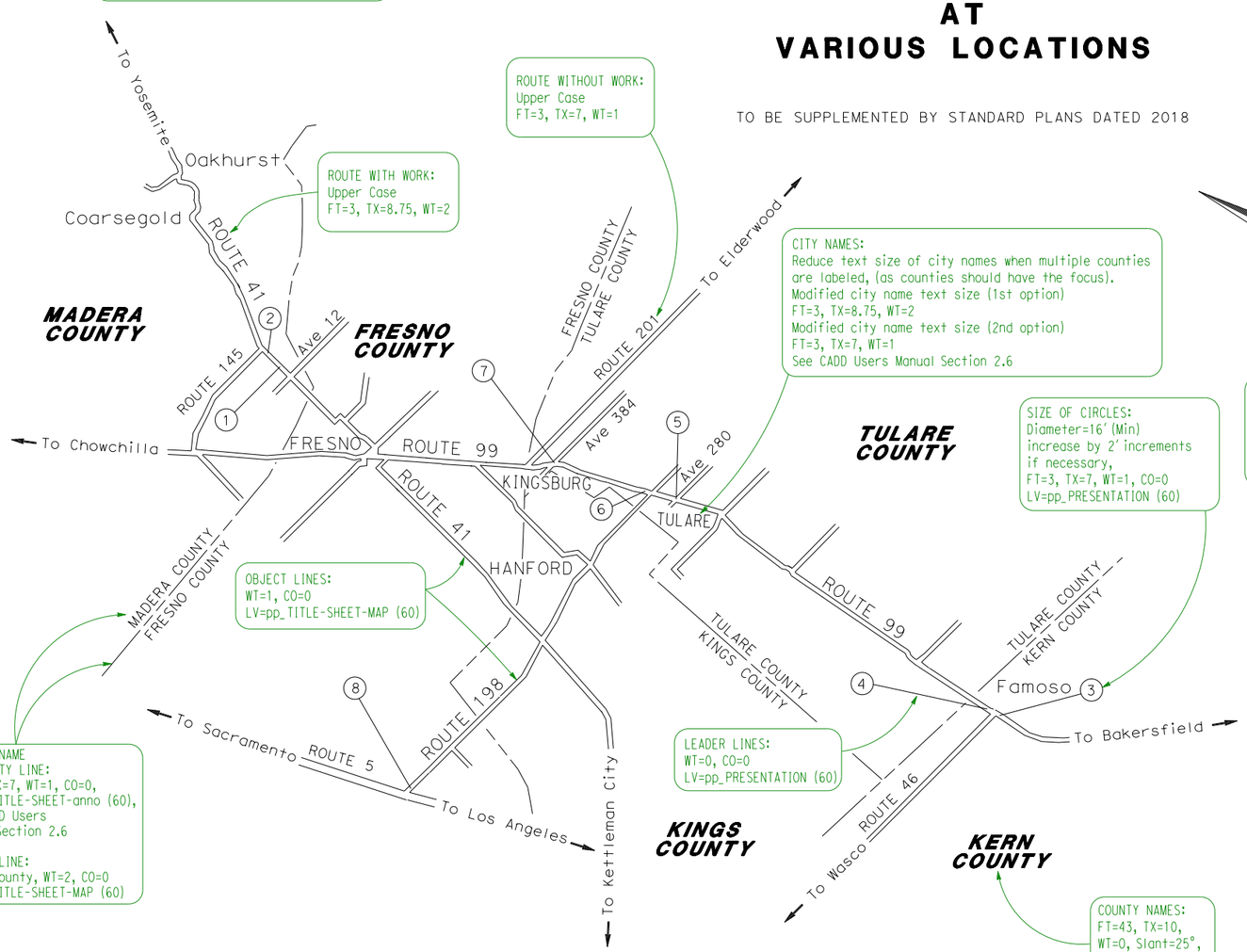
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre,Ker, Mad,Tul	41,99, 198	Var		



LOCATION MAP

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)



ROUTE WITH WORK:
Upper Case
FT=3, TX=8.75, WT=2

ROUTE WITHOUT WORK:
Upper Case
FT=3, TX=7, WT=1

CITY NAMES:
Reduce text size of city names when multiple counties are labeled, (as counties should have the focus).
Modified city name text size (1st option)
FT=3, TX=8.75, WT=2
Modified city name text size (2nd option)
FT=3, TX=7, WT=1
See CADD Users Manual Section 2.6

SIZE OF CIRCLES:
Diameter=16' (Min)
increase by 2' increments if necessary,
FT=3, TX=7, WT=1, CO=0
LV=pp_PRESENTATION (60)

OBJECT LINES:
WT=1, CO=0
LV=pp_TITLE-SHEET-MAP (60)

LEADER LINES:
WT=0, CO=0
LV=pp_PRESENTATION (60)

COUNTY NAMES:
FT=43, TX=10,
WT=0, Slant=25°,
Upper Case,
Center Justified

COUNTY NAME
AT COUNTY LINE:
FT=3, TX=7, WT=1, CO=0,
LV=pp_TITLE-SHEET-anno (60),
See CADD Users Manual Section 2.6

COUNTY LINE:
LC=pp-county, WT=2, CO=0
LV=pp_TITLE-SHEET-MAP (60)

TABLE TITLE:
on the Title sheet only,
FT=3, TX=10,WT=2,
LV=pp_TITLE-LOC-TABLE (60),
Upper Case

There are two cells available in CTCELLIB.cel for the Locations of Construction table:
AC=LOC1 if included on the Title sheet
AC=LOC2 if Locations of Construction sheet is used

COLUMN TITLES:
FT=3, TX=8.75, WT=2,
LV=pp_TITLE-LOC-TABLE (60),
Upper Case
except for Std abbreviations

LOCATIONS OF CONSTRUCTION

Loc No. ⊕	COUNTY	ROUTE	PM	DESCRIPTION	DIRECTION
1	Mad	41	4.2	1.5 MILES NORTH OF AVENUE 12	SOUTHBOUND
2	Mad	41	8.6	1.5 MILES SOUTH OF ROUTE 145	NORTHBOUND
3	Ker	99	42.6	1.5 MILES SOUTH OF ROUTE 46	NORTHBOUND
4	Ker	99	45.8	1.5 MILES NORTH OF ROUTE 46	SOUTHBOUND
5	Tul	99	R36.5	AT AVENUE 280	NORTHBOUND
6	Tul	99	42.3	1.5 MILES NORTH OF ROUTE 198	SOUTHBOUND
7	Tul	99	51.9	AT AVENUE 384	NORTHBOUND
8	Fre	198	28.9	1.5 MILES EAST OF ROUTE 5	WESTBOUND

ALL TEXT IN THE TABLE:
FT=3, TX=7, WT=1,
LV=pp_TITLE-LOC-TABLE (60),
Upper Case except for standard abbreviations

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

TITLE SHEET, EXAMPLE "J" RELEASED 12/11/2019

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION 01-11-12

TITLE SHEET, EXAMPLE "J"
CONSTRUCTION AT SPOT LOCATIONS ON MULTIPLE ROUTES IN MULTIPLE COUNTIES

NO SCALE

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

CONTRACT No.	06-123454
PROJECT ID	0600005678

PROJECT MANAGER

DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 3/16/12

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv,SBd	10,91, 215	Var		

STATE OF CALIFORNIA

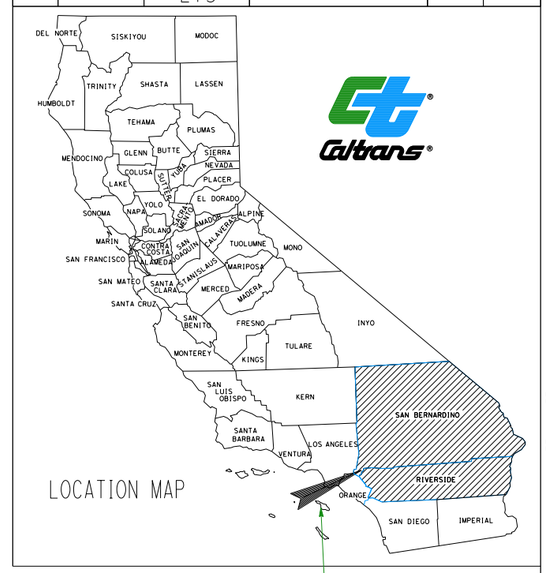
DEPARTMENT OF TRANSPORTATION

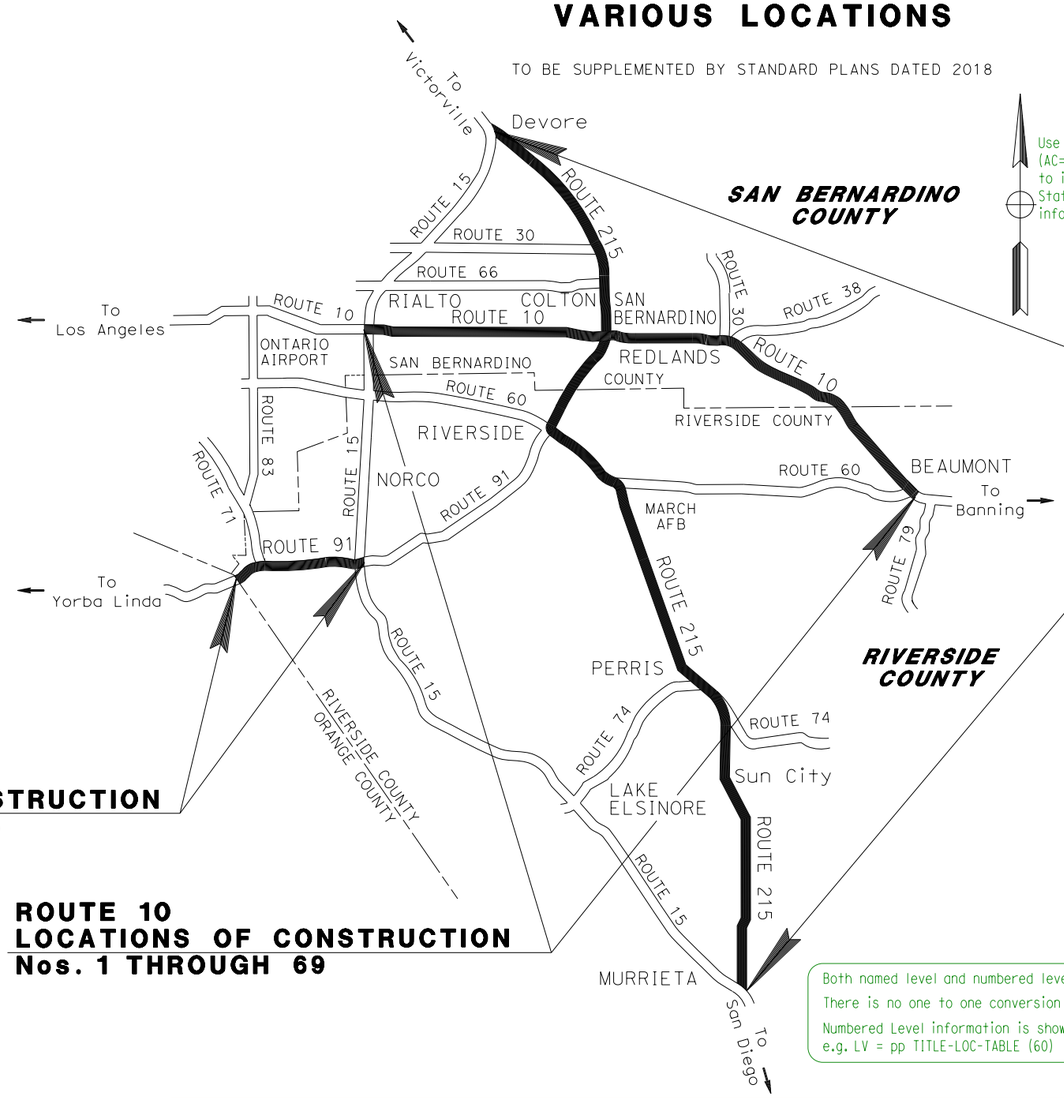
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN RIVERSIDE AND SAN BERNARDINO COUNTIES AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018





Use this arrow (AC=LOCARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1) to indicate location of project. See "Title Sheet, State Location Map Examples" for additional information.

ROUTE 215
LOCATIONS OF CONSTRUCTION
Nos. 76 THROUGH 127

The text size for "LOCATIONS OF CONSTRUCTION" is the same as "BEGIN AND END CONSTRUCTION" FT=43, TX=12, WT=0, Upper Case

Use this arrow (AC=LOCARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1) to indicate location of project. See "Title Sheet, State Location Map Examples" for additional information.

County or counties of location: LV=pp_PRESENTATION, CO=0, WT=2 patterning optional

ROUTE 91
LOCATIONS OF CONSTRUCTION
Nos. 70 THROUGH 75

ROUTE 10
LOCATIONS OF CONSTRUCTION
Nos. 1 THROUGH 69

NOTE:

THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

Both named level and numbered level information is calledout on this sheet.
There is no one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = pp TITLE-LOC-TABLE (60)

TITLE SHEET, EXAMPLE "K"
CONSTRUCTION AT MULTIPLE SPOT LOCATIONS ON THREE ROUTES IN TWO COUNTIES

NO SCALE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	08-4A3104
PROJECT ID	0800006789

PROJECT MANAGER

DESIGN ENGINEER

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

TITLE SHEET, EXAMPLE "K" RELEASED 12/11/2019

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION 01-11-12

SUPERSEDES EXAMPLE RELEASED 3/16/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv,SBd	10,91, 215	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = pp TITLE-LOC-TABLE (60)

If the Locations of Construction table is on a Locations of Construction sheet instead of the title sheet, the cell AC=LOC2 may be used. At a minimum, the table should include location number, county, route and post mile. The post mile column may indicate a "spot" location or a "to/from" location. The cell includes optional columns for description and direction.

COLUMN TITLES:

FT=3, TX=8.75, WT=2, LV=pp_TITLE-LOC-TABLE (60), Upper Case except for Std abbreviations

TABLE TITLE:

FT=43, TX=12, WT=0, LV=pp_TITLE-LOC-TABLE (60), CO=0
See Title Sheet Example "J" for size of text when table is placed on the Title Sheet.

Table Title is to be placed outside and above the table.

LOCATIONS OF CONSTRUCTION

Loc No. ⊕	COUNTY	ROUTE	PM	Loc No. ⊕	COUNTY	ROUTE	PM	Loc No. ⊕	COUNTY	ROUTE	PM	Loc No. ⊕	COUNTY	ROUTE	PM
1	SBd	10	9.7	34	SBd	10	28.4	67	Riv	10	6.2	100	SBd	215	1.3
2	SBd	10	10.2	35	SBd	10	29.1	68	Riv	10	6.6	101	SBd	215	1.9
3	SBd	10	12.1	36	SBd	10	29.5	69	Riv	10	6.8	102	SBd	215	2.7
4	SBd	10	12.6	37	SBd	10	29.9	70	Riv	91	0.9	103	SBd	215	3.5
5	SBd	10	13.0	38	SBd	10	30.3	71	Riv	91	3.5	104	SBd	215	4.6
6	SBd	10	13.4	39	SBd	10	30.7	72	Riv	91	3.8	105	SBd	215	5.1
7	SBd	10	13.8	40	SBd	10	30.9	73	Riv	91	4.2	106	SBd	215	5.6
8	SBd	10	14.4	41	SBd	10	31.1	74	Riv	91	5.2	107	SBd	215	6.6
9	SBd	10	15.1	42	SBd	10	31.7	75	Riv	91	5.5	108	SBd	215	7.1
10	SBd	10	15.3	43	SBd	10	32.2	76	Riv	215	9.4	109	SBd	215	7.4
11	SBd	10	17.0	44	SBd	10	33.0	77	Riv	215	14.0	110	SBd	215	7.8
12	SBd	10	17.7	45	SBd	10	33.4	78	Riv	215	16.5	111	SBd	215	8.0
13	SBd	10	18.4	46	SBd	10	34.0	79	Riv	215	17.3	112	SBd	215	8.5
14	SBd	10	18.8	47	SBd	10	34.4	80	Riv	215	20.0	113	SBd	215	9.1
15	SBd	10	19.3	48	SBd	10	34.8	81	Riv	215	24.3	114	SBd	215	9.5
16	SBd	10	19.8	49	SBd	10	35.3	82	Riv	215	25.5	115	SBd	215	10.4
17	SBd	10	20.1	50	SBd	10	35.6	83	Riv	215	27.0	116	SBd	215	10.9
18	SBd	10	20.8	51	SBd	10	36.3	84	Riv	215	29.5	117	SBd	215	11.4
19	SBd	10	21.1	52	SBd	10	36.9	85	Riv	215	30.8	118	SBd	215	11.8
20	SBd	10	21.8	53	SBd	10	37.1	86	Riv	215	31.1	119	SBd	215	12.5
21	SBd	10	22.0	54	SBd	10	37.8	87	Riv	215	32.5	120	SBd	215	13.2
22	SBd	10	22.4	55	SBd	10	38.5	88	Riv	215	34.3	121	SBd	215	13.8
23	SBd	10	22.8	56	SBd	10	39.1	89	Riv	215	35.6	122	SBd	215	14.2
24	SBd	10	23.1	57	Riv	10	0.2	90	Riv	215	35.7	123	SBd	215	15.0
25	SBd	10	23.4	58	Riv	10	R0.7	91	Riv	215	35.8	124	SBd	215	15.7
26	SBd	10	23.9	59	Riv	10	1.0	92	Riv	215	36.4	125	SBd	215	16.4
27	SBd	10	24.4	60	Riv	10	2.0	93	Riv	215	36.5	126	SBd	215	17.1
28	SBd	10	25.3	61	Riv	10	R3.0	94	Riv	215	37.2	127	SBd	215	17.3
29	SBd	10	26.1	62	Riv	10	3.1	95	Riv	215	37.5				
30	SBd	10	26.5	63	Riv	10	R3.9	96	Riv	215	38.4				
31	SBd	10	26.8	64	Riv	10	R4.6	97	Riv	215	43.9				
32	SBd	10	27.6	65	Riv	10	R5.4	98	SBd	215	0.1				
33	SBd	10	27.9	66	Riv	10	5.6	99	SBd	215	0.5				

LINE WIDTHS FOR THE TABLE:

Horizontal line separating heading;
WT=1, LV=pp_TITLE-LOC-TABLE (60), CO=0
Horizontal lines separating rows;
WT=0, LV=pp_TITLE-LOC-TABLE (60), CO=0
Vertical lines separating columns;
WT=1, LV=pp_TITLE-LOC-TABLE (60), CO=0
Exterior border;
WT=2, LV=pp_TITLE-LOC-TABLE (60), CO=0

ALL TEXT IN TABLE:

FT=3, TX=7, WT=1,
LV=pp_TITLE-LOC-TABLE (60), CO=0
Upper Case except for standard abbreviations

SPACING BETWEEN ROWS (for single row of text):

Use 14 feet between rows so half the height of the text is above and below the text for each row.

LOCATIONS OF CONSTRUCTION

LOCATIONS OF CONSTRUCTION SHEET, FOR TITLE SHEET EXAMPLE "K"

LC-1

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

LOCATIONS OF CONSTRUCTION SHEET, EXAMPLE "K" RELEASED 12/11/2019

LAST REVISION 01-11-12 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 3/16/12

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

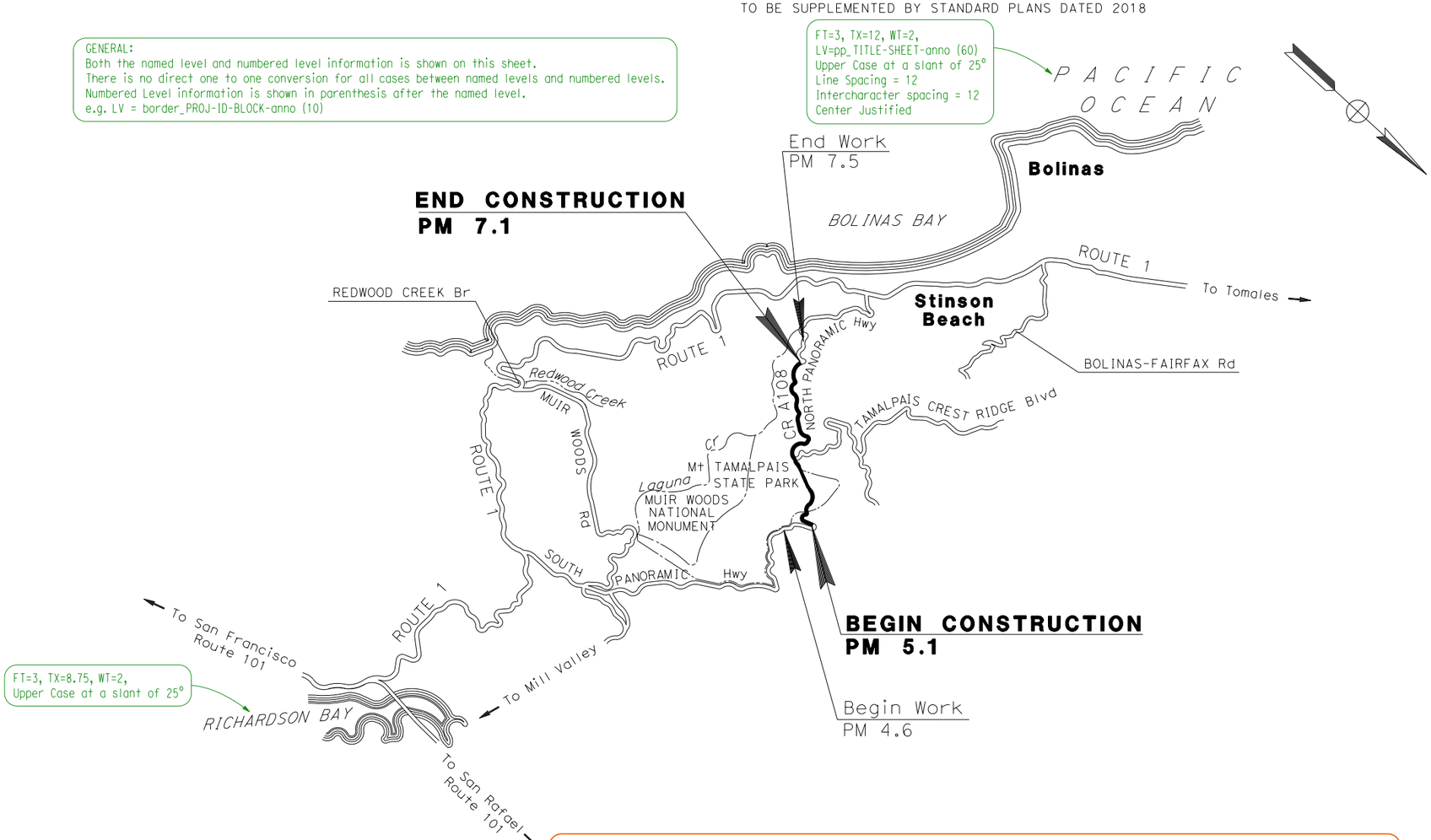
PROJECT PLANS FOR CONSTRUCTION ON
COUNTY ROAD
IN MARIN COUNTY
NEAR STINSON BEACH
ON COUNTY ROAD A108
FROM 2.0 MILES NORTH OF MUIR WOODS ROAD
TO 2.0 MILES SOUTH OF STATE ROUTE 1

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	CR A108	5.1/7.1		

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

FT=3, TX=12, WT=2,
LV=pp_TITLE-SHEET-anno (60)
Upper Case at a slant of 25°
Line Spacing = 12
Intercharacter spacing = 12
Center Justified



FT=3, TX=8.75, WT=2,
Upper Case at a slant of 25°

TITLE SHEET, EXAMPLE "L"
CONSTRUCTION ON COUNTY ROAD, LENGTH GREATER THAN 0.2 MILE

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

CONTRACT No.	04-4S2504
PROJECT ID	0400001219

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "L" RELEASED 12/11/2019

LAST REVISION 01-11-12 DATE PLOTTED => $DATE TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 3/16/12

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	29.4		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR BUILDING CONSTRUCTION ON

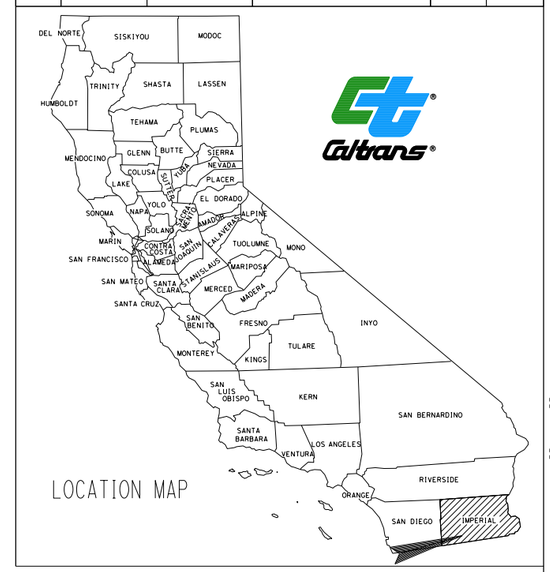
STATE HIGHWAY

IN IMPERIAL COUNTY
ABOUT 2.4 MILES SOUTH OF CALIPATRIA AT THE TWO RIVERS SAFETY ROADSIDE REST AREA

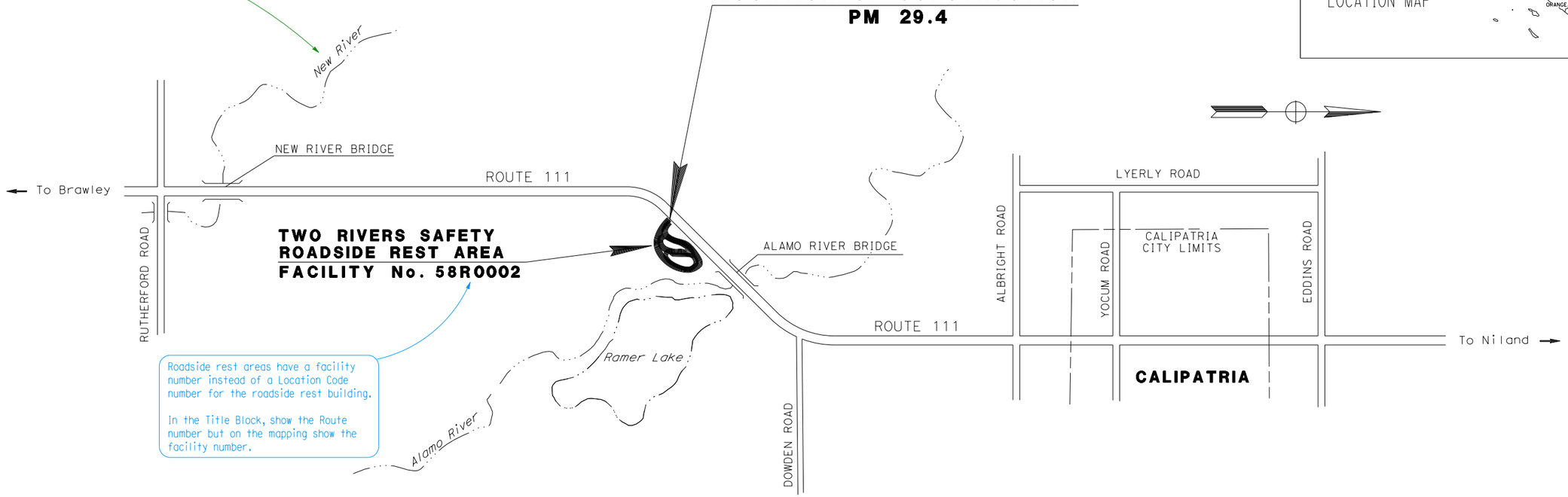
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

FT=3, TX=7, WT=1,
LV=pp_TITLE-SHEET-anno (60)
Upper and Lower Case at a slant of 25°
Placed above or along river

For building construction projects,this reference to the Standard Plans is only to be made when the contract is to be administered under the Standard Specifications.



LOCATION OF CONSTRUCTION
PM 29.4



Roadside rest areas have a facility number instead of a Location Code number for the roadside rest building.

In the Title Block, show the Route number but on the mapping show the facility number.

GENERAL:
Both the named level and numbered level information is shown on this sheet.
There is no direct one to one conversion for all cases between named levels and numbered levels.
Numbered Level information is shown in parenthesis after the named level.
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

TITLE SHEET, EXAMPLE "M"
BUILDING WORK, RURAL LOCATION ON STATE HIGHWAY

NO SCALE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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

CONTRACT No.	11-199714
PROJECT ID	1100009876

TITLE SHEET, EXAMPLE "M" RELEASED 12/11/2019

LAST REVISION 01-11-12 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

PROJECT MANAGER | DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 5/15/09

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yub	5506			

INDEX OF PLANS

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

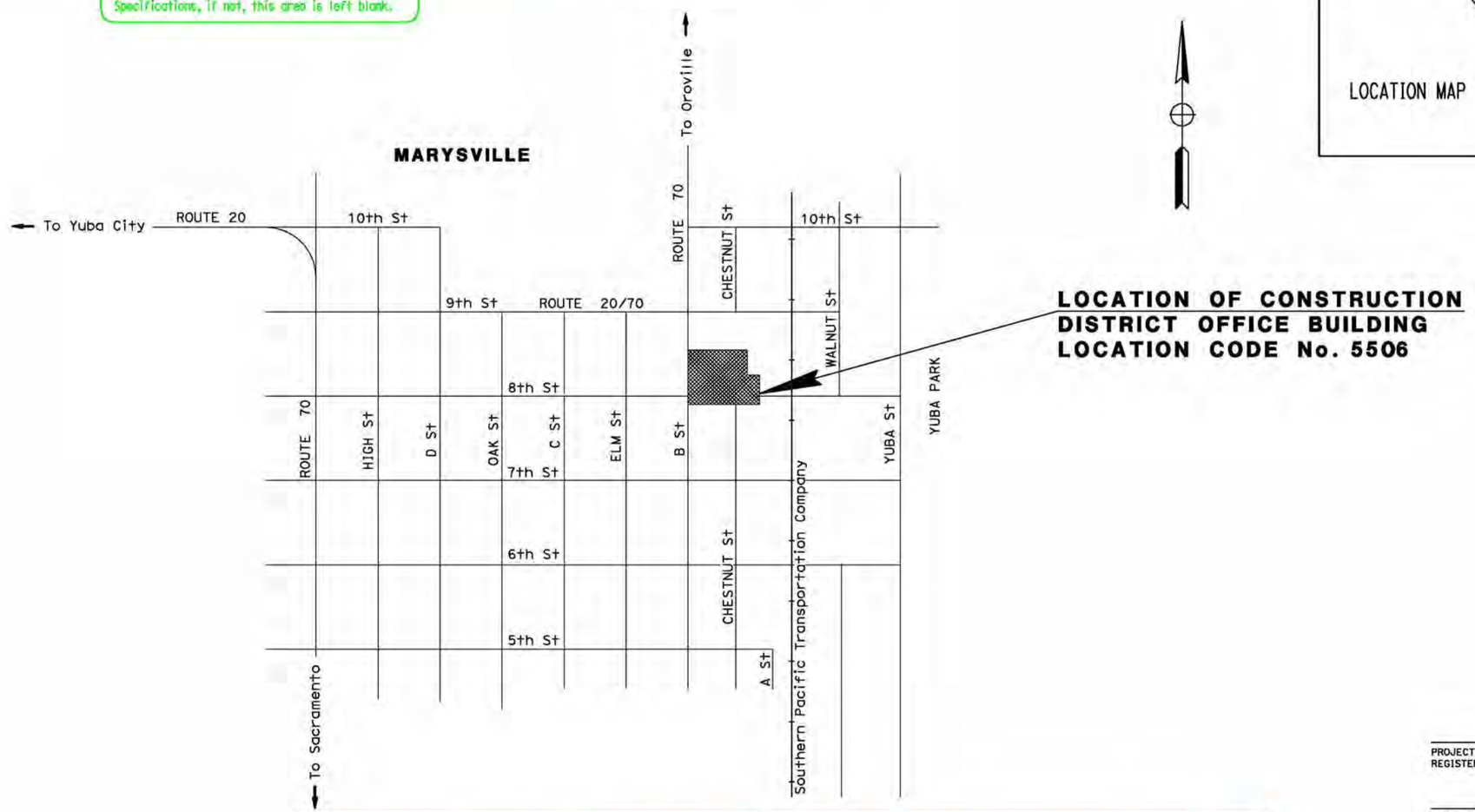
PROJECT PLANS FOR BUILDING CONSTRUCTION

Building Location Code No. (found in the Division of Accounting's Coding Manual) is used in place of Route No.

No post mile is to be used due to this project not being on State Highway

IN YUBA COUNTY
IN MARYSVILLE
AT THE DISTRICT OFFICE
AT 703 B STREET

For building construction projects, the reference to the Standard Plans is only made when the contract is administered under the Standard Specifications, if not, this area is left blank.



TITLE SHEET, EXAMPLE "N"
BUILDING CONSTRUCTION, CITY OR URBAN LOCATION OFF OF STATE HIGHWAY

NO SCALE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	03-185244
PROJECT ID	0300006543

LAST REVISION 01-11-12 DATE PLOTTED => 14-MAR-2012 TIME PLOTTED => 09:00

TITLE SHEET, EXAMPLE "N" RELEASED 3/16/2012

PROJECT MANAGER

DESIGN ENGINEER

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

INDEX OF PLANS

This project is considered one location of work, even though it is located in two counties (because the work does not "begin and end" at the county line). The post mile equation must be shown at the county line when the project limits continues from one county to another.

Since this project happens to fall within the limits of only two cities, both are to be mentioned in the project description, after identifying the county or counties and before the "from/to" locations.

If the project falls within the limits of three or more cities, only the city where the construction begins and the city where the construction ends, are to be identified in the project description.

Where the construction limits are continuous, show the post mile limits for both counties.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4		

STATE OF CALIFORNIA

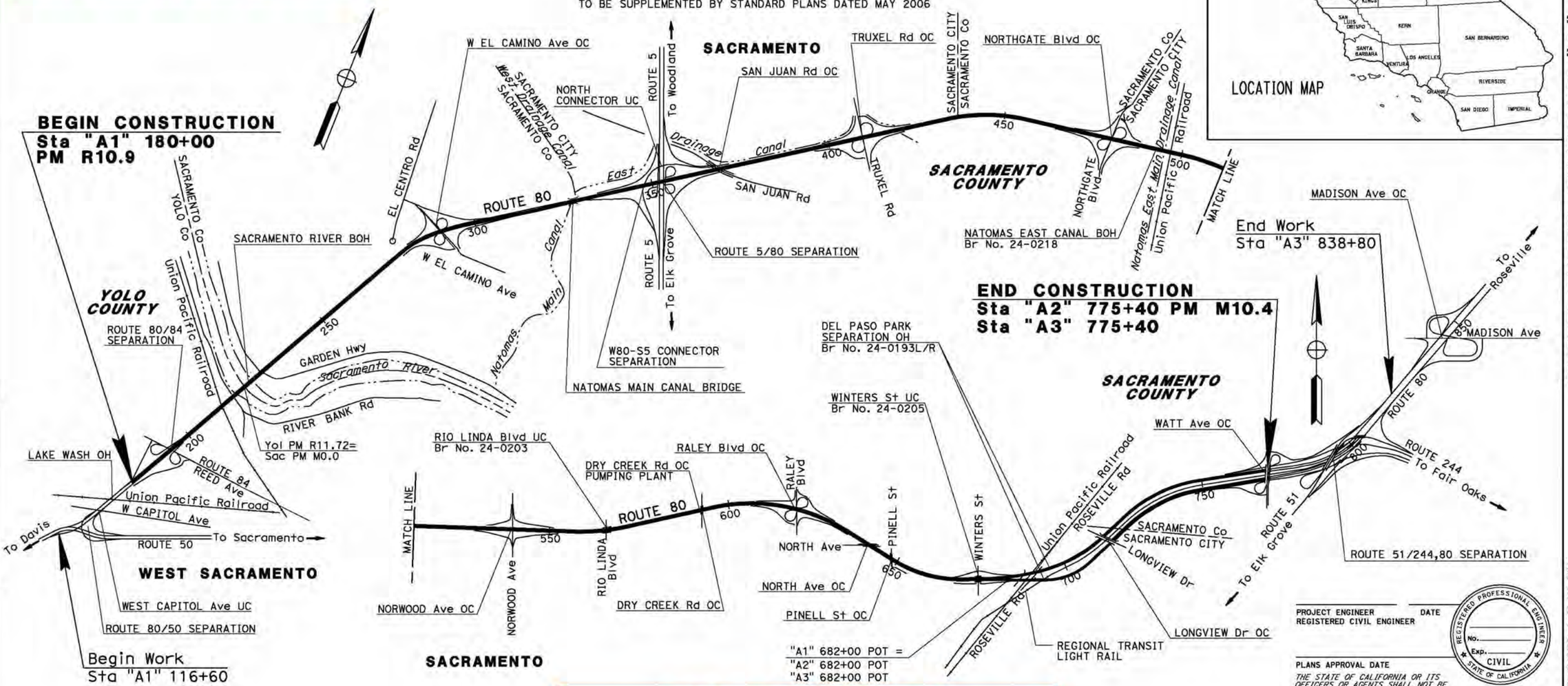
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN YOLO AND SACRAMENTO COUNTIES IN AND NEAR WEST SACRAMENTO AND SACRAMENTO FROM 0.2 MILE WEST OF ROUTE 80/84 SEPARATION TO WATT AVENUE OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



TITLE SHEET, EXAMPLE "O"
ONE CONTINUOUS LOCATION THROUGH 2 COUNTIES

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "O" RELEASED 4/20/2011

DATE PLOTTED => 07-APR-2011
TIME PLOTTED => 07:31

LAST REVISION 00-00-00

PROJECT MANAGER

DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 7/7/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Lak, Men	29,175	Var		

INDEX OF PLANS

Construction limits must always be shown on the title sheet. On projects that identify the post miles as "Var" in the project identification block, the construction limits must be identified with each location (as this example shows). If a Locations of Construction table is needed to identify all the locations, the post miles for the construction limits (to the nearest hundredth) must be included.

The text designating Begin and End Construction is not used for this project, but the construction limits are identified with each location callout. The size of text for identifying Begin and End Construction takes up significant space when there are three or more locations.

STATE OF CALIFORNIA

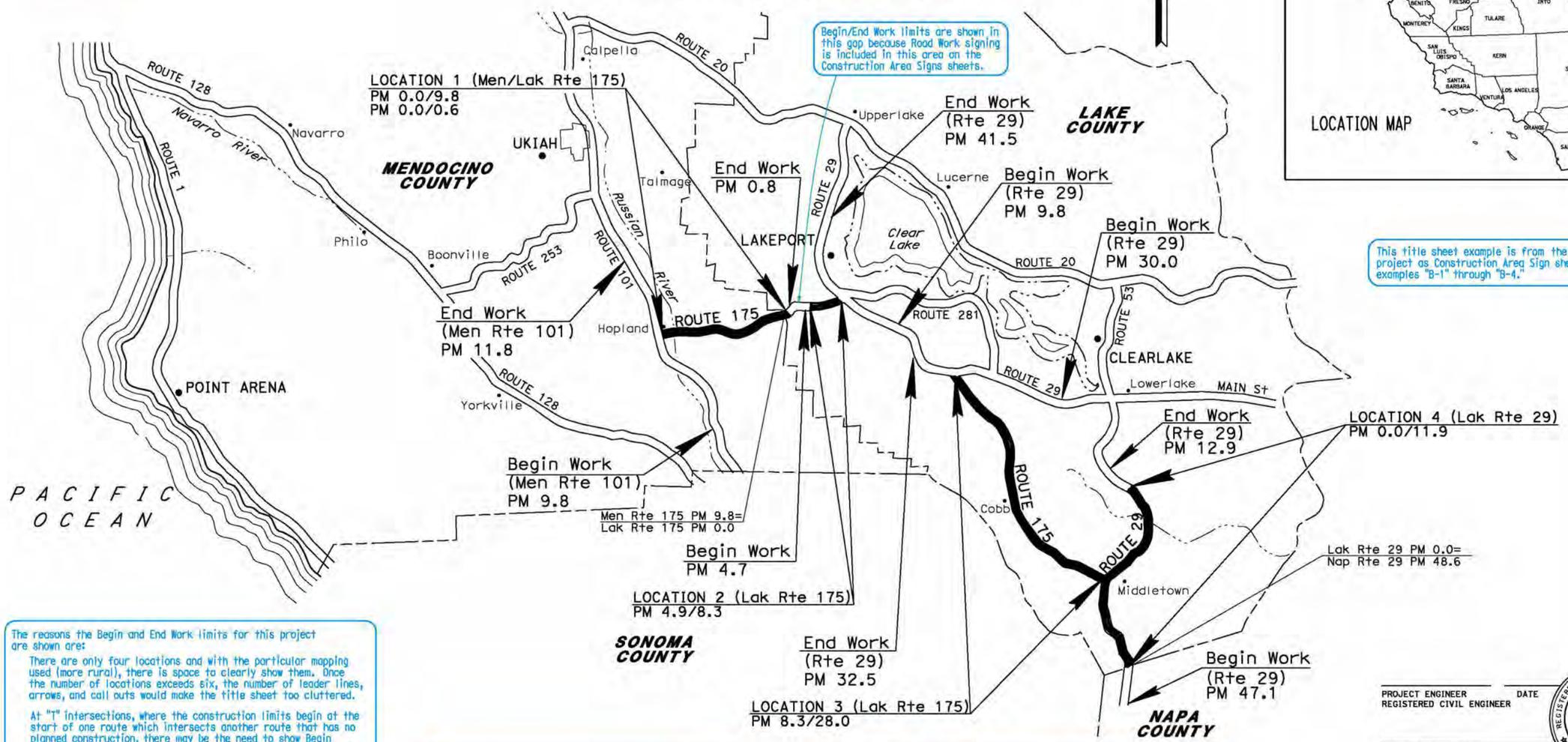
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LAKE AND MENDOCINO COUNTIES AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



This title sheet example is from the same project as Construction Area Sign sheet examples "B-1" through "B-4."

LOCATION MAP

The reasons the Begin and End Work limits for this project are shown are:

There are only four locations and with the particular mapping used (more rural), there is space to clearly show them. Once the number of locations exceeds six, the number of leader lines, arrows, and call outs would make the title sheet too cluttered.

At "T" intersections, where the construction limits begin at the start of one route which intersects another route that has no planned construction, there may be the need to show Begin and End Work limits on that adjoining route. This would depend if the type of work affects the traveling public on the adjoining route.

TITLE SHEET, EXAMPLE "P"
CONSTRUCTION AT MULTIPLE LOCATIONS INCLUDING A "T" INTERSECTION

NO SCALE

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

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "P" RELEASED 3/16/2012

DATE PLOTTED => 14-MAR-2012
TIME PLOTTED => 13:20

LAST REVISION 00-00-00

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s116122 DGN FILE => Title_Example_P.dgn | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 7/7/11

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	82 101	4.8/19.3 6.6/20.7		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN SAN MATEO COUNTY ON ROUTE 82 AND AT VARIOUS LOCATIONS ON AND ADJACENT TO ROUTE 101 FROM WHIPPLE AVENUE IN REDWOOD CITY TO ROUTE 380 IN SAN BRUNO

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

This title sheet illustrates the case where stationing and post miles run in opposite directions. The sheet should be oriented so that stationing runs left to right. However, the project description, begin and end construction, and begin and end work are to follow the order of post miles.

This project has continuous work on Route 82 but only spot locations on Route 101.

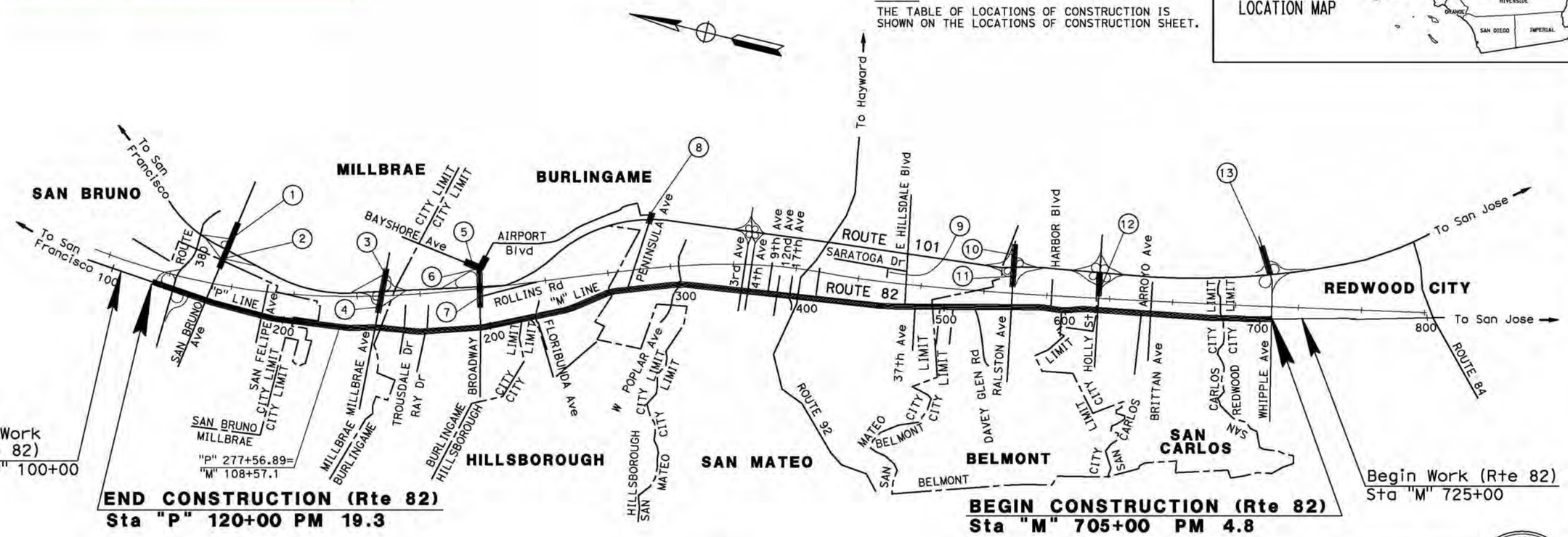
If a title sheet covers more than two cities, only list the first and last cities that correspond to begin and end construction.

Begin and end work does not need to be shown for each location on Route 101, instead, show begin work before the first location and end work after the last location.

NOTE:

THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

LOCATION MAP



NO SCALE

This title sheet example is from the same project as Construction Area Signs sheet example "A-1" and Motorist Information Plan sheet examples "A-1" through "A-5."

TITLE SHEET, EXAMPLE "Q"
TWO ROUTES - CONTINUOUS CONTRUCTION ON ONE ROUTE AND MULTIPLE SPOT LOCATIONS ON SECOND ROUTE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "Q" RELEASED 3/16/2012

DATE PLOTTED => 14-MAR-2012
TIME PLOTTED => 09:03

LAST REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

LOCATIONS OF CONSTRUCTION

Loc No.(#)	COUNTY	ROUTE	PM	DESCRIPTION
1	SM	101	19.97	SAN BRUNO Ave AND Rte 101 NB RAMPS
2	SM	101	19.97	SAN BRUNO Ave AND Rte 101 SB RAMPS
3	SM	101	18.15	MILLBRAE Ave AND Rte 101 NB RAMPS
4	SM	101	18.15	MILLBRAE Ave AND Rte 101 SB RAMPS
5	SM	101	16.58	BROADWAY AND Rte 101 NB ON-RAMP
6	SM	101	16.70	BROADWAY/ BAYSHORE Ave/ AIRPORT Blvd
7	SM	101	16.71	BROADWAY, ROLLINS Rd AND Rte 101 SB RAMP
8	SM	101	14.69	PENINSULA Blvd AND Rte 101 NB RAMP
9	SM	*		200 FRANKLIN Pkwy W
10	SM	101	9.55	RALSTON Ave AND Rte 101 NB RAMPS
11	SM	101	9.55	RALSTON Ave AND Rte 101 SB RAMPS
12	SM	101	8.62	HOLLY St AND Rte 101 RAMPS
13	SM	101	6.60	WHIPPLE Ave AND Rte 101 RAMPS

* LOCAL STREET

LOCATIONS OF CONSTRUCTION SHEET, FOR TITLE SHEET EXAMPLE "Q"

LOCATIONS OF CONSTRUCTION SHEET, FOR EXAMPLE "Q" RELEASED 7/7/2011

LOCATIONS OF CONSTRUCTION

LC-1

LAST REVISION 00-00-00 DATE PLOTTED => 06-JUL-2011 TIME PLOTTED => 12:52

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	78	0.0/13.2		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

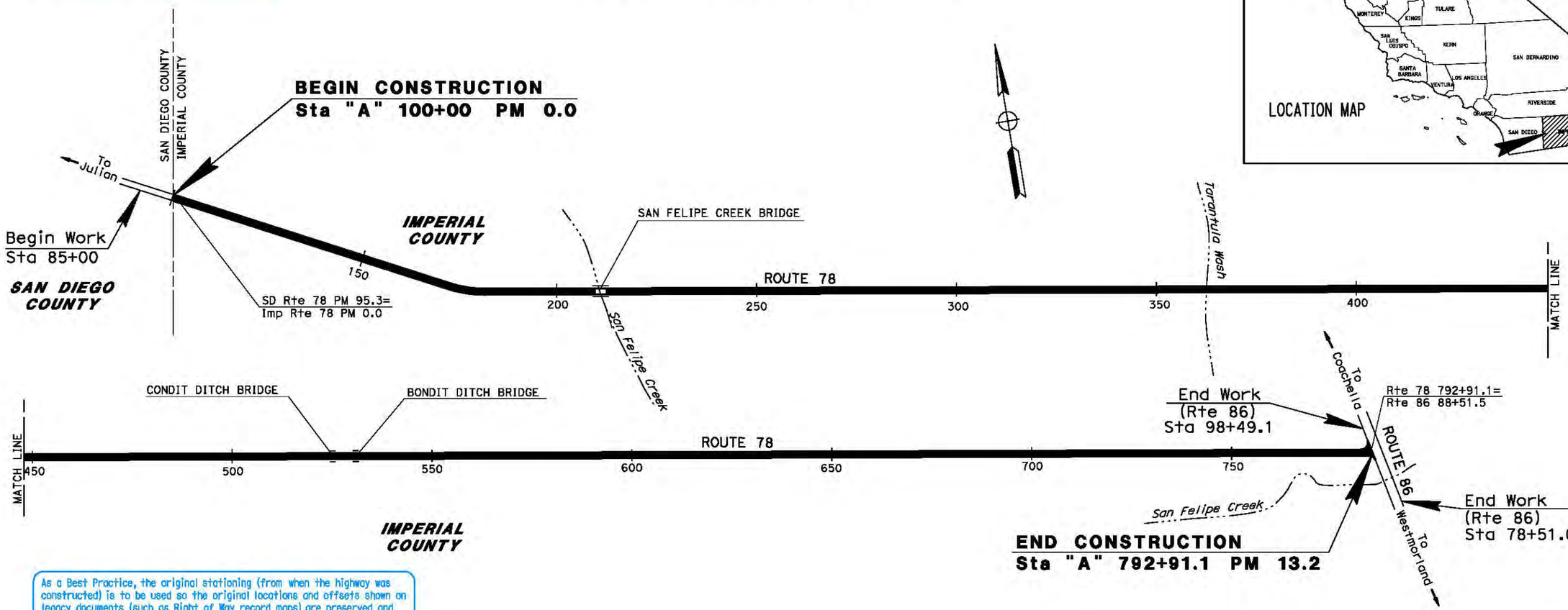
IN IMPERIAL COUNTY FROM THE SAN DIEGO COUNTY LINE TO ROUTE 86

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

If stationing is shown for the construction limits and appears on the layouts and other plan view sheets, the stationing must be shown for Begin and End Work limits.

When the construction limits begin or end at a county line, the Begin or End Work limits are to be located in the adjacent county.

LOCATION MAP



As a Best Practice, the original stationing (from when the highway was constructed) is to be used so the original locations and offsets shown on legacy documents (such as Right of Way record maps) are preserved and perpetuated. Arbitrarily creating new stationing creates confusion (in identifying certain points) among the legacy documents that are preserved for that highway.

TITLE SHEET, EXAMPLE "R"
BEGIN WORK LIMIT EXTENDS TO COUNTY ADJACENT TO BEGIN CONSTRUCTION LIMIT

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

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

NO SCALE

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "R" RELEASED 7/7/2011

LAST REVISION 00-00-00

DATE PLOTTED => 07-JUL-2011
TIME PLOTTED => 10:14

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

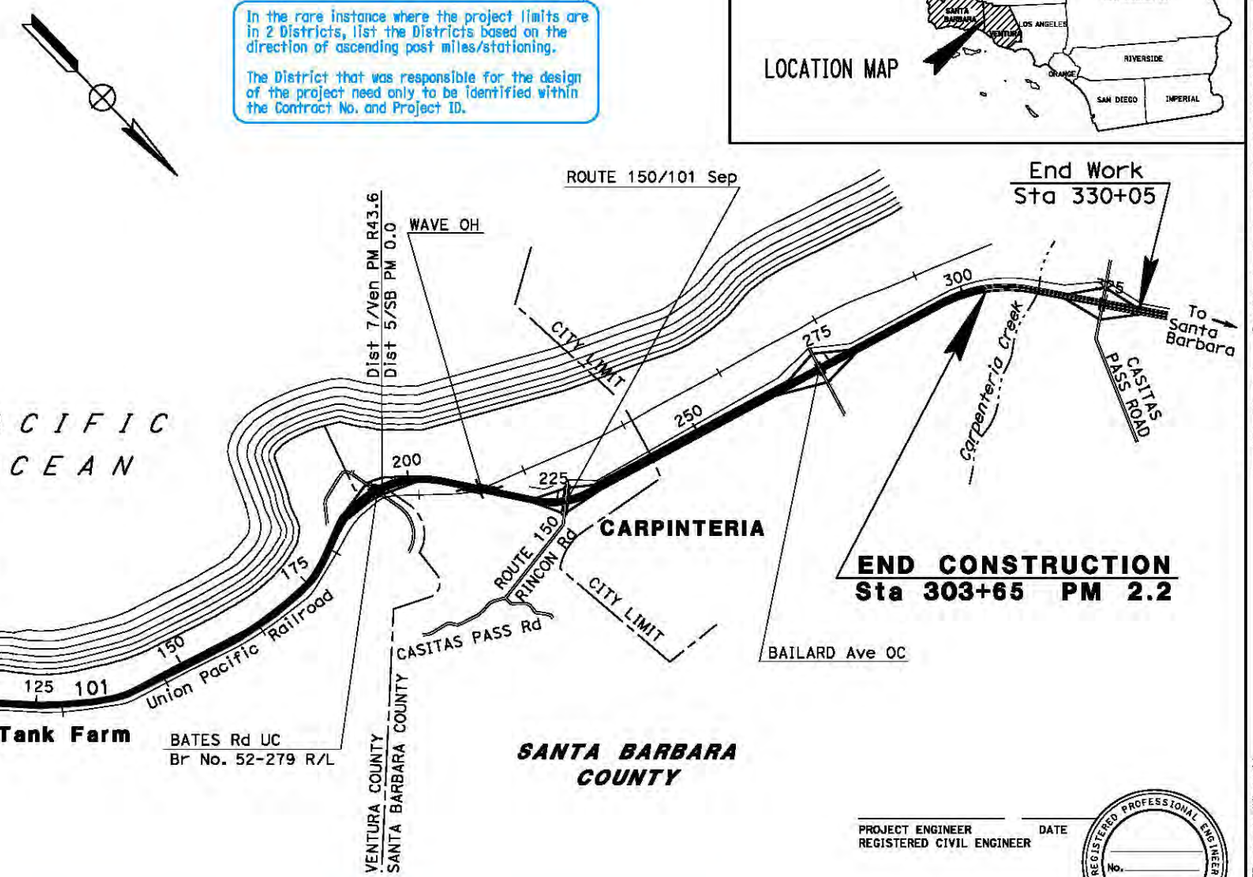
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN VENTURA AND SANTA BARBARA COUNTIES
IN AND NEAR CARPINTERIA
FROM MOBIL PIER UNDERCROSSING
TO 0.4 MILE SOUTH OF CASITAS PASS ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07 05	Ven SB	101	R39.8/R43.6 0.0/2.2		

In the rare instance where the project limits are in 2 Districts, list the Districts based on the direction of ascending post miles/stationing.

The District that was responsible for the design of the project need only to be identified within the Contract No. and Project ID.



TITLE SHEET, EXAMPLE "S"
CONSTRUCTION ON ONE CONTINUOUS LOCATION IN TWO COUNTIES AND TWO DISTRICTS

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	07-000004
PROJECT ID	0700000000

PROJECT MANAGER
DESIGN ENGINEER

TITLE SHEET, EXAMPLE "S" RELEASED 7/7/2011

LAST REVISION 00-00-00 DATE PLOTTED => 06-JUL-2011 TIME PLOTTED => 12:36

INDEX OF PLANS

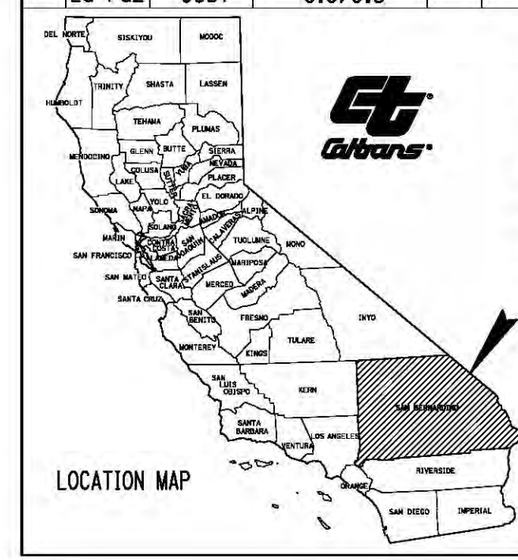
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

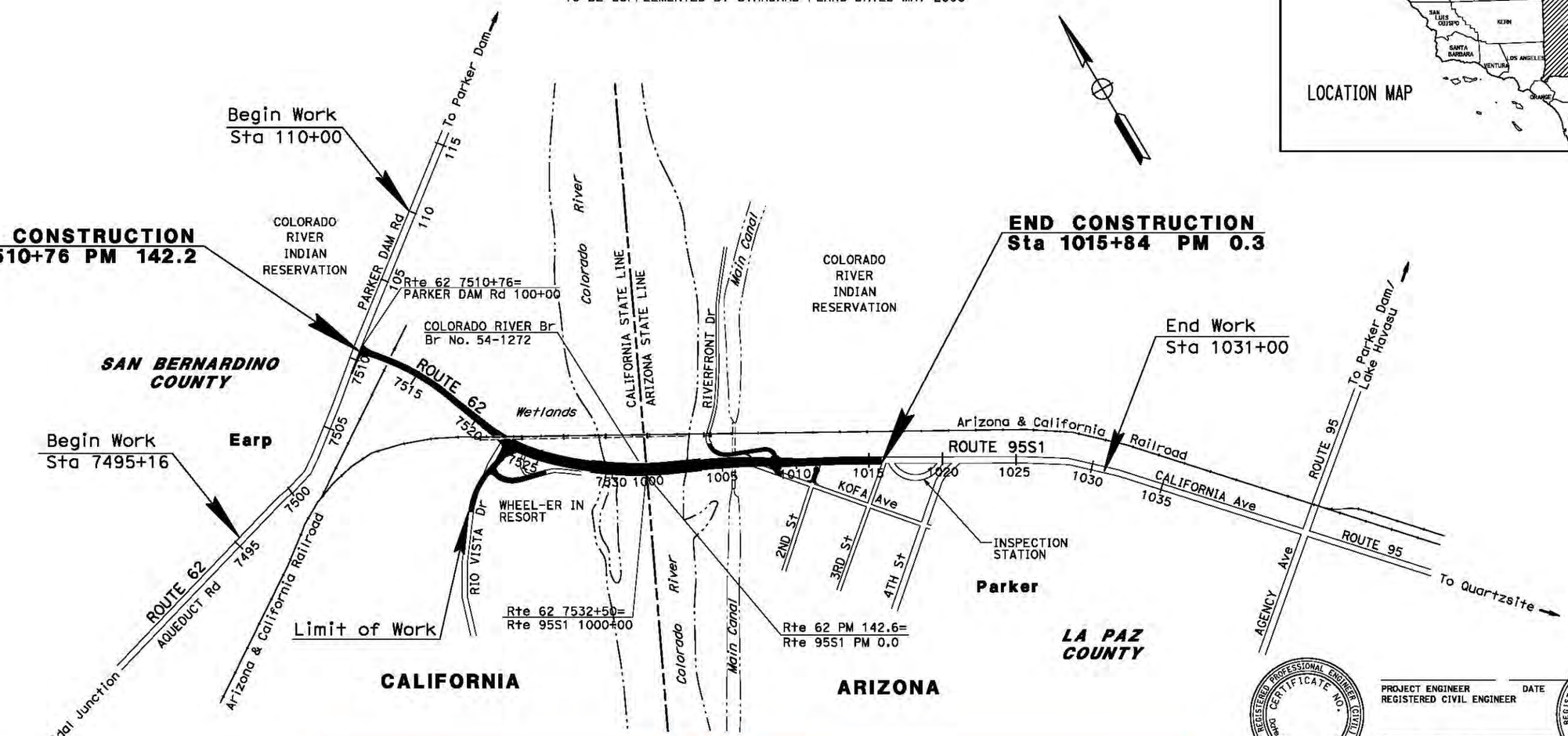
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SAN BERNARDINO COUNTY, CALIFORNIA AND
IN LA PAZ COUNTY, ARIZONA
FROM THE INTERSECTION OF PARKER ROAD AT EARP
TO THIRD STREET AT PARKER

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6, 0.0/0.3		





TITLE SHEET, EXAMPLE "T"
CONTINUOUS CONSTRUCTION ON ONE ROUTE IN TWO COUNTIES IN TWO STATES

NO SCALE

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. Date Signed ARIZONA U.S.A. EXPIRES

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	00-000004
PROJECT ID	0000000000

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

PROJECT MANAGER

DESIGN ENGINEER

TITLE SHEET, EXAMPLE "T" RELEASED 7/7/2011

LAST REVISION 00-00-00

DATE PLOTTED => 06-JUL-2011
TIME PLOTTED => 12:37

INDEX OF PLANS

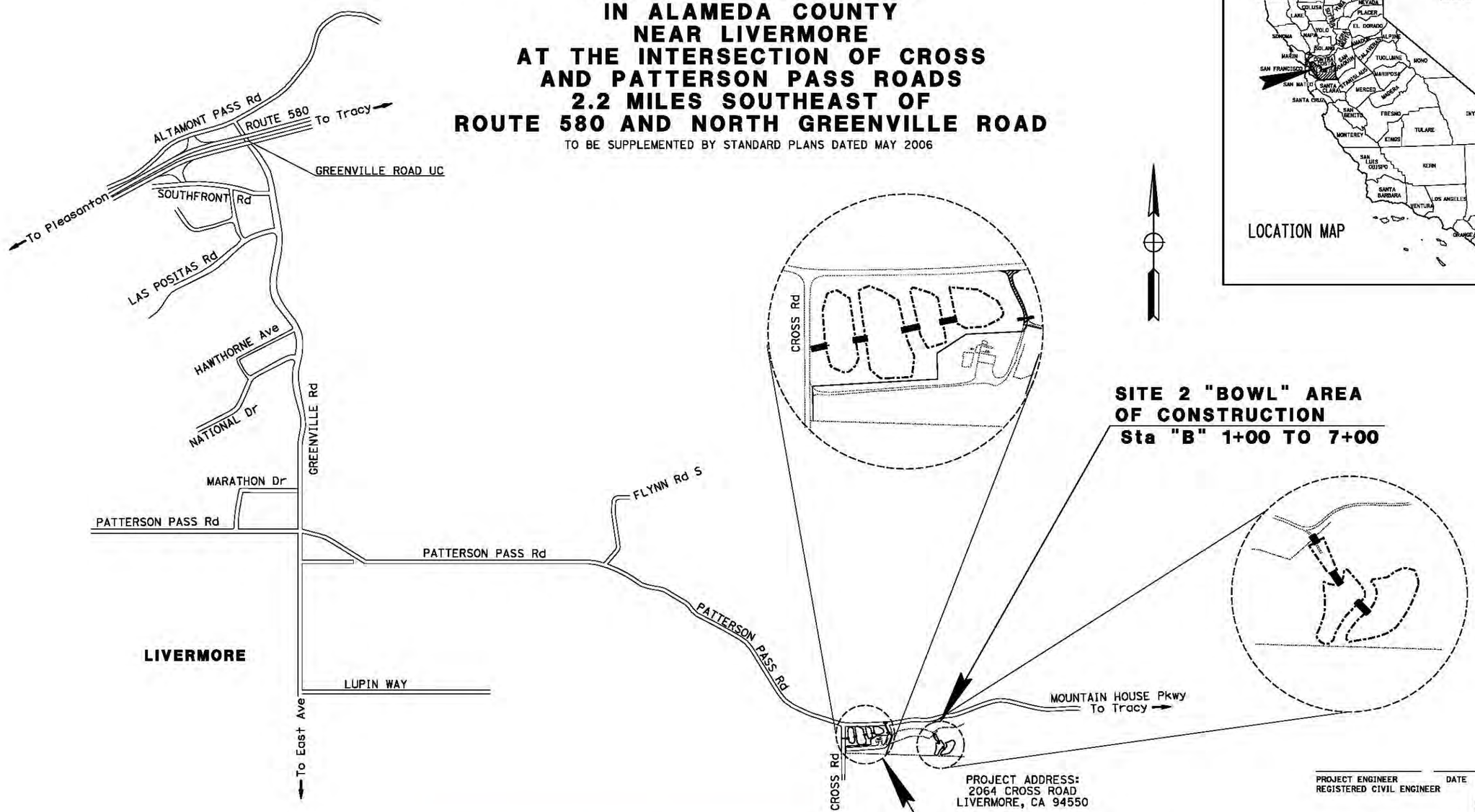
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR WETLAND CONSTRUCTION NEAR
STATE HIGHWAY
IN ALAMEDA COUNTY
NEAR LIVERMORE
AT THE INTERSECTION OF CROSS AND PATTERSON PASS ROADS
2.2 MILES SOUTHEAST OF ROUTE 580 AND NORTH GREENVILLE ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	580	R8.3		

LOCATION MAP



TITLE SHEET, EXAMPLE "U"
WETLANDS AREA NEAR STATE HIGHWAY

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "U" RELEASED 7/7/2011

DATE PLOTTED => 06-JUL-2011
TIME PLOTTED => 12:37

LAST REVISION 00-00-00

PROJECT MANAGER

DESIGN ENGINEER

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

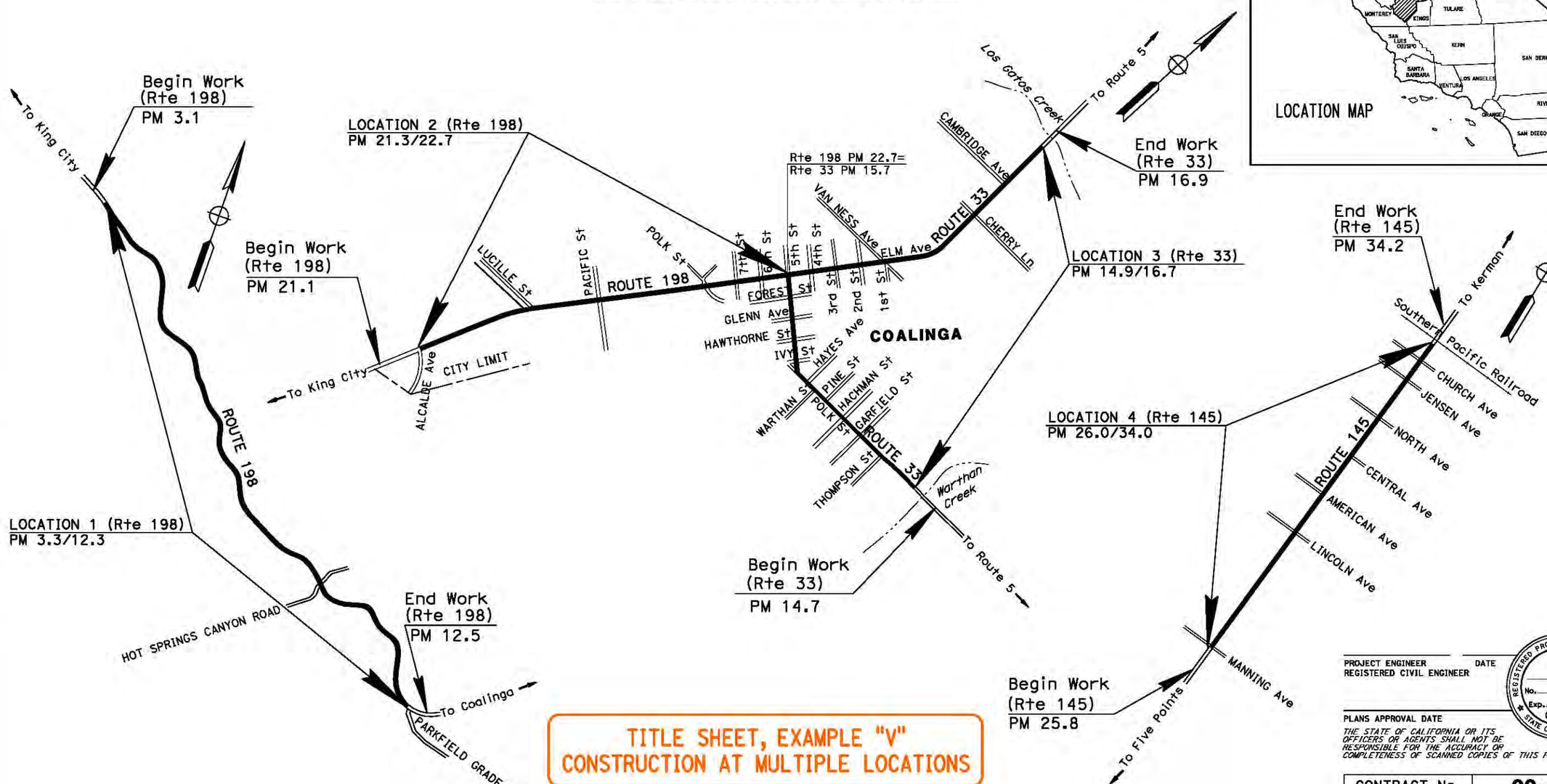
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN FRESNO COUNTY
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	33, 145, 198	Var		

LOCATION MAP



TITLE SHEET, EXAMPLE "V"
CONSTRUCTION AT MULTIPLE LOCATIONS

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "V" RELEASED 7/7/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 07-JUL-2011 | TIME PLOTTED => 10:18

PROJECT MANAGER | DESIGN ENGINEER

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s116122 DGN FILE => Title_Example_V.dgn | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

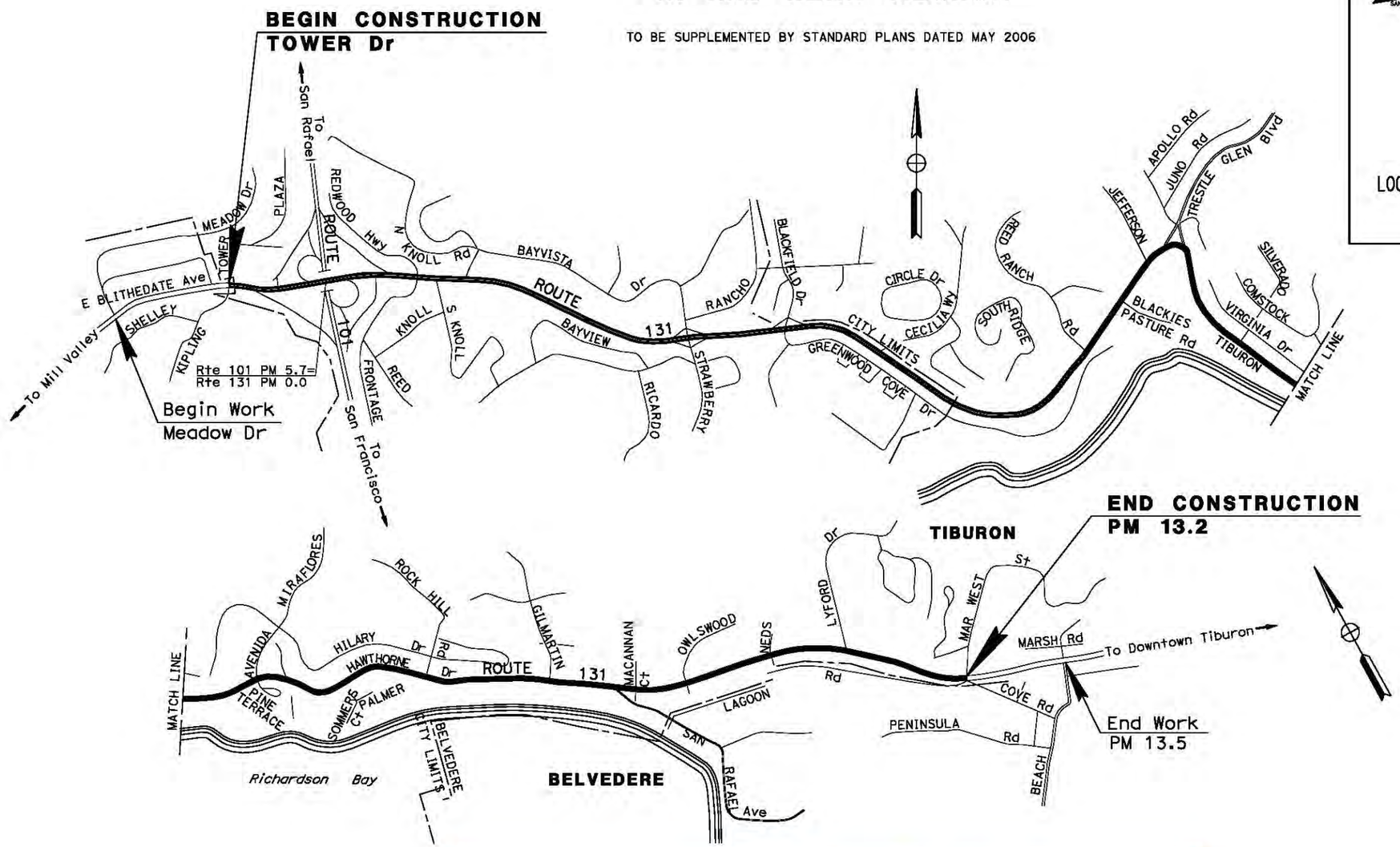
For this project, Begin Construction and Work are located on a city street. Since there aren't post miles or stationing for the city street, identify local streets for the limits.

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY AND CITY STREET

IN MARIN COUNTY
IN AND NEAR TIBURON

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Mrn	131	0.0/13.2		



TITLE SHEET, EXAMPLE "W"
CONTINUOUS CONSTRUCTION ON ONE ROUTE AND A CITY STREET

NO SCALE

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

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "W" RELEASED 7/7/2011

DATE PLOTTED => 07-JUL-2011
TIME PLOTTED => 11:17
LAST REVISION 00-00-00

PROJECT MANAGER
DESIGN ENGINEER

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

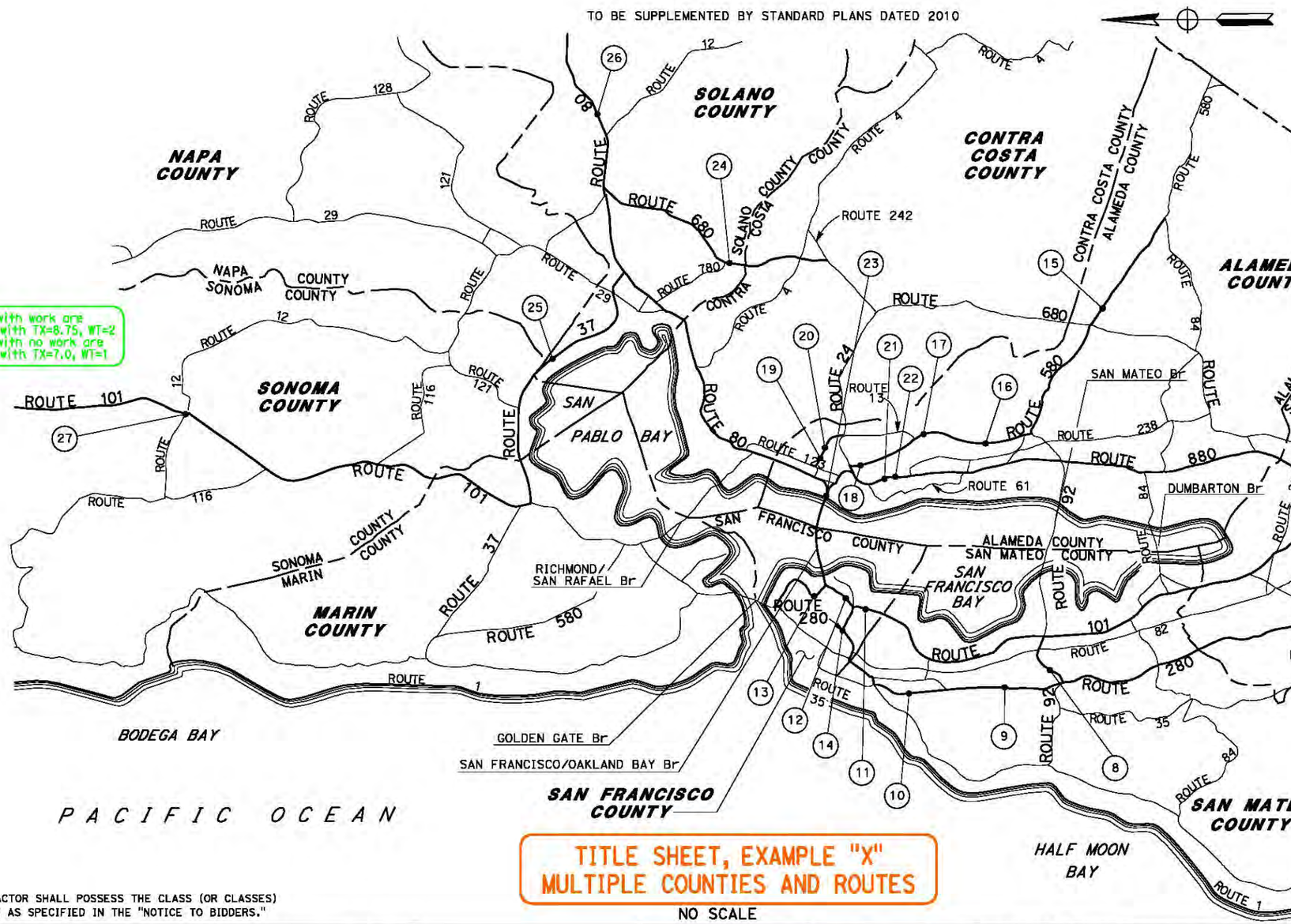
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN ALAMEDA, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SOLANO, AND SONOMA COUNTIES AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,SF, SM,SCl, Sol,Son	17,24,37, 80,87,*etc.*	Var		

When a project is on more than six routes, the first five are listed in numerical order with "*etc.*" at the end.
The special provisions for the project must list all routes.



Routes with work are labeled with TX=8.75, WT=2
Routes with no work are labeled with TX=7.0, WT=1

NOTE:
THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

TITLE SHEET, EXAMPLE "X"
MULTIPLE COUNTIES AND ROUTES

NO SCALE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "X" RELEASED 5/4/2012

DATE PLOTTED => 02-MAY-2012
TIME PLOTTED => 08:10

LAST REVISION 00-00-00

PROJECT MANAGER
DESIGN ENGINEER

INDEX OF PLANS

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

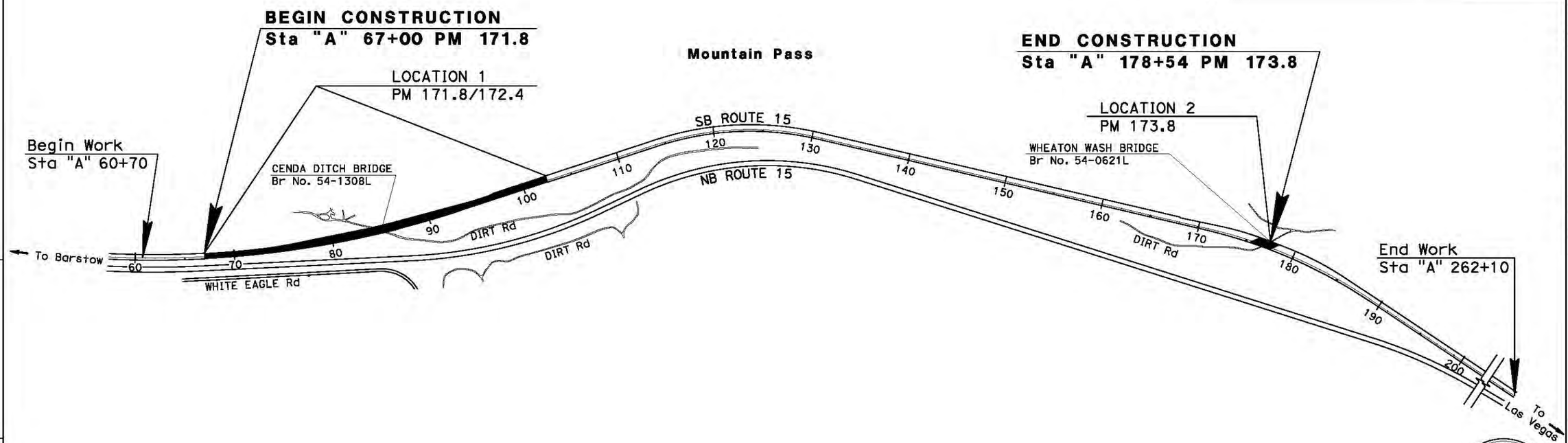
STATE HIGHWAY

IN SAN BERNARDINO COUNTY
AT MOUNTAIN PASS
FROM 0.3 MILE WEST
OF CENDA DITCH BRIDGE
TO WHEATON WASH BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LOCATION MAP



NO SCALE

TITLE SHEET, EXAMPLE "Y"
CONSTRUCTION ON ONE ROUTE AT TWO LOCATIONS
NEAR A NAME PLACE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	
PROJECT ID	

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

PROJECT MANAGER

DESIGN MANAGER

TITLE SHEET, EXAMPLE "y" RELEASED 10/10/2014

DATE PLOTTED => 09-OCT-2014
TIME PLOTTED => 11:35

LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,SF,SM, SCl,Sol,Son	17,24,37, 80,87,etc.	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

Note:
This table includes an additional column for CMS numbers. Different districts may have different numbering schemes for their Changeable Message Signs.

LOCATIONS OF CONSTRUCTION

Loc No.⊛	CMS No.	COUNTY	ROUTE	PM	DIRECTION	CMS LOCATION
1	CM036	SCl	17	6.1	SB	SANTA CRUZ Ave ON-RAMP
2	CM035	SCl	17	11.5	SB	S OF CAMPBELL Ave OC
3	CM081	SCl	87	2.5	NB	200 Ft S OF CAROL Dr
4	CM033	SCl	280	R0.76	NB	N OF MCLAUGHLIN Ave UC
5	CM075	SCl	880	3.0	NB	N OF COLEMAN Ave OC
6	CM074	SCl	880	5.4	SB	N OF BROKAW Rd
7	CM082	SCl	101	43.4	SB	S OF LAWRENCE Exp
8	CM072	SM	92	R8.67	WB	100 Ft W OF DE ANZA Blvd IC
9	CM135	SM	280	R15.0	SB	N OF BLACK MOUNTAIN Rd
10	CM137	SM	280	22.2	SB	S OF HICKEY Blvd
11	CM079	SF	101	0.19	NB	N OF CANDLESTICK Dr
12	CM028	SF	101	3.0	SB	N OF ARMY St
13	CM043	SF	101	R5.14	SB	S VAN NESS Ave ON-RAMP
14	CM080	SF	280	R3.1	NB	MISSION St OC
15	CM111	Ala	580	18.4	WB	HACIENDA Rd OFF-RAMP
16	CM109	Ala	580	R33.6	EB	E OF GRAND Ave
17	CM108	Ala	580	R37.0	WB	E OF FONTAINE St OC
18	CM097	Ala	580	44.0	WB	CHETWOOD St OC
19	CM096	Ala	24	R2.9	WB	SHATTUCK Ave/55TH St
20	CM025	Ala	24	R3.5	EB	W OF BROADWAY OFF-RAMP
21	CM098	Ala	880	31.0	NB	S OF OAK St OFF-RAMP
22	CM068	Ala	880	R32.6	NB	7TH St ON-RAMP TO N880
23	CM078	Ala	80	6.2	EB	E OF UNIVERSITY Ave
24	CM054	Sol	680	R0.8	SB	S OF BAYSHORE Rd
25	CM107	Sol	37	9.0	WB	W OF Jct Rte 29
26	CM029	Sol	80	14.0	WB	CORDELIA WEIGH STATION
27	CM113	Son	101	21.6	SB	90 MILES S OF STEELE LANE

LOCATIONS OF CONSTRUCTION SHEET, FOR TITLE SHEET EXAMPLE "X"

LOCATIONS OF CONSTRUCTION

LC-1

LOCATIONS OF CONSTRUCTION SHEET, EXAMPLE "X" RELEASED 5/4/2012

LAST REVISION 02-03-12 | DATE PLOTTED => 27-APR-2012 | TIME PLOTTED => 13:11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 8/31/09

INDEX OF PLANS

HPLUL-6203(030)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

NOTE:

THE LISTING OF THE INDEX OF PLANS IS SHOWN ON THE INDEX OF PLANS SHEET.

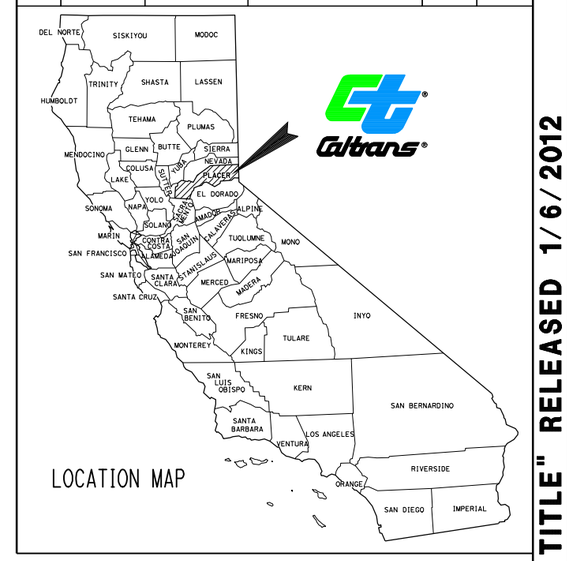
SUFFICIENT SPACE WAS NOT AVAILABLE ON THIS TITLE SHEET TO LIST THE INDEX OF PLANS. IN THIS CASE, LISTING OF THE INDEX OF PLANS WOULD CLUTTER AND DISTRACT FROM THE OTHER NECESSARY INFORMATION REQUIRED TO BE SHOWN.

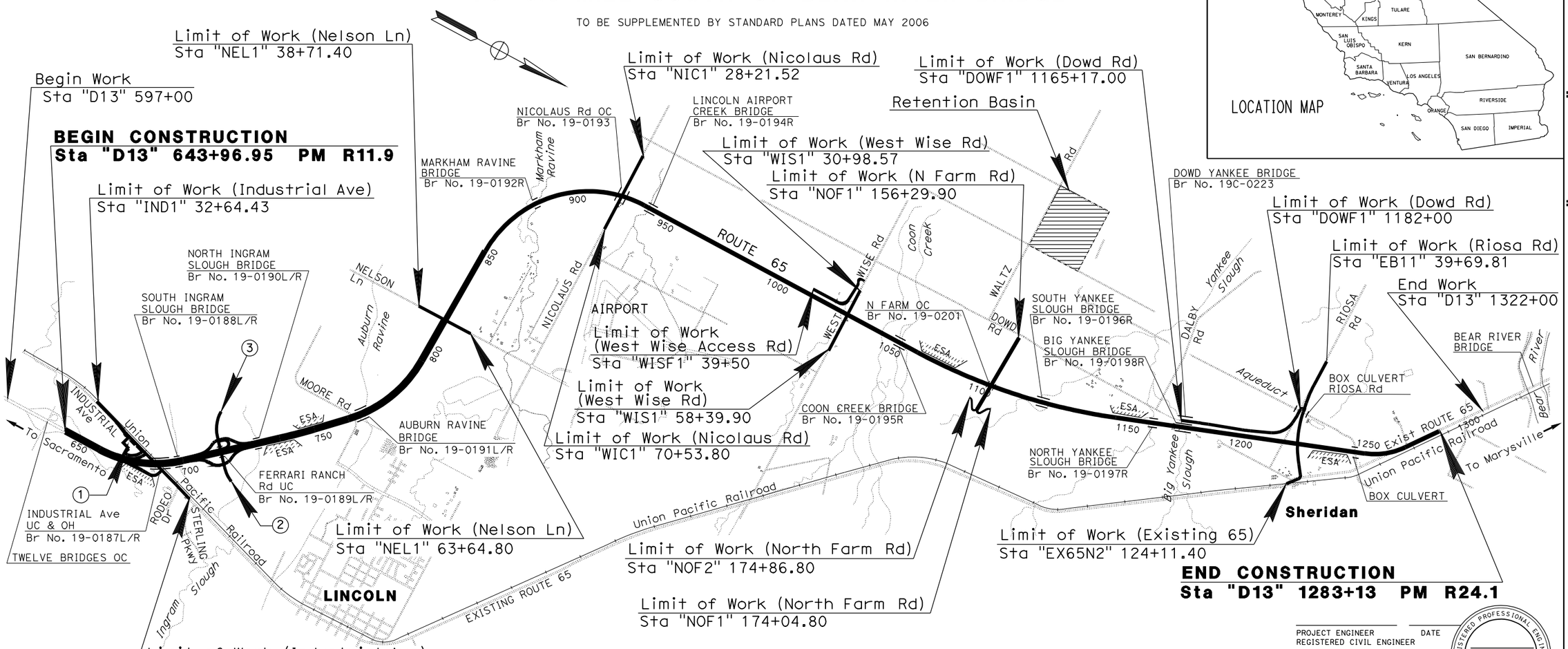
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN PLACER COUNTY
NEAR LINCOLN
FROM 0.4 MILE NORTH OF TWELVE BRIDGES OVERCROSSING TO 0.8 MILE SOUTH OF BEAR RIVER BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006





1. Industrial Park and Ride
2. Limit of Work (Ferrari Ranch Rd) Sta "FR" 89+89.50
3. Limit of Work (Ferrari Ranch Rd) Sta "FR" 62+66.40

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

TITLE SHEET, EXAMPLE "65 TITLE"
ROUTE REALIGNMENT

NO SCALE

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	00-000004
PROJECT ID	0000000000

TITLE SHEET, EXAMPLE "65 TITLE" RELEASED 1/6/2012

DATE PLOTTED => 29-DEC-2011
TIME PLOTTED => 07:56

LAST REVISION 00-00-00

PROJECT MANAGER

DESIGN ENGINEER

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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 OF PLANS

SHEET NO.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	INDEX OF PLANS
3-25	TYPICAL CROSS SECTIONS
26	KEY MAP AND LINE INDEX
27-118	LAYOUTS
119-226	PROFILES AND SUPERELEVATION DIAGRAMS
227-292	CONSTRUCTION DETAILS
293	TEMPORARY WATER POLLUTION CONTROL DETAILS
294-328	CONTOUR GRADING
329-546	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
547-620	UTILITY PLANS, PROFILES, DETAILS AND QUANTITIES
621	CONSTRUCTION AREA SIGNS
622-822	STAGE CONSTRUCTION PLANS, DETAILS AND QUANTITIES
823-885	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
886-917	SIGN DETAILS AND QUANTITIES
918-932	SUMMARY OF QUANTITIES
933-1002	SOUND WALL PLANS
1003-1096	ELECTRICAL PLANS
1097-1147	NEW AND REVISED STANDARD PLANS

STRUCTURE PLANS

1148-1173	INDUSTRIAL Ave UC AND OH LEFT, Br No. 19-0187L
1174-1198	INDUSTRIAL Ave UC AND OH RIGHT, Br No. 19-0187R
1199-1218	SOUTH INGRAM SLOUGH Br LEFT, Br No. 19-0188L
1219-1237	SOUTH INGRAM SLOUGH Br RIGHT, Br No. 19-0188R
1238-1261	FERRARI RANCH Rd UC, Br No. 19-0189L/R
1262-1288	NORTH INGRAM SLOUGH Br, Br No. 19-0190L/R
1289-1290	RETAINING WALL No. 2
1291-1313	AUBURN RAVINE Br RIGHT, Br No. 19-0191R
1314-1335	MARHAM RAVINE Br RIGHT, Br No. 19-0192R
1336-1351	NICOLAUS Rd OC, Br No. 19-0193
1352-1365	LINCOLN AIRPORT Cr Br RIGHT, Br No. 19-0194R
1366-1383	COON Cr Br RIGHT, Br No. 19-0195R
1384-1396	SOUTH YANKEE Br RIGHT, Br No. 19-0196R
1397-1409	NORTH YANKEE Br RIGHT, Br No. 19-0196R
1410-1424	BIG YANKEE SLOUGH Br RIGHT, Br No. 19-0198R
1425-1439	NORTH FARM OC, Br No. 19-0201
1440	DOWD Rd Br AND BIG YANKEE SLOUGH, Br No. 19C-223
1441-1456	DOWD YANKEE Br, Br No. 19C-0223
1457-1461	RETAINING WALL No. 1 WITH SOUND WALL, Br No. 19E0002
1462-1465	AUBURN RAVINE Br LEFT, Br No. 19-0191L

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

THIS SHEET ONLY TO BE USED IN THE RARE INSTANCES WHEN SUFFICIENT SPACE IS NOT AVAILABLE ON THE TITLE SHEET TO LIST THE INDEX OF PLANS.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

INDEX OF PLANS SHEET, EXAMPLE "65 INDEX"
(FOR TITLE SHEET, EXAMPLE "65 TITLE")

INDEX OF PLANS
IOP-1

INDEX OF PLANS SHEET, EXAMPLE "65 INDEX" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 04-JAN-2012 TIME PLOTTED => 10:03

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 12/08/17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTES:

FT=3, TX=8.75, WT=2, LV=rd_TYP-X-SECTION-anno(60), CO=0

NOTES 1 AND 2 (AC=NOTE40 AND NOTE41 IN THE CTCELLIB_NamedLevels.cel) ARE REQUIRED ON THE FIRST SHEET OF TYPICAL CROSS SECTIONS IF A PAVEMENT STRUCTURE IS TO BE CONSTRUCTED. FT=3, TX=7, WT=1, LV=rd_TYP-X-SECTION-anno(60), CO=0

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Include a generic note regarding location of dikes, curbs, guard railing, concrete barrier, retaining walls, etc. shown on the typical cross sections sheets. An example of this note would be: "EXACT LOCATIONS AND TYPES OF DIKES, CURBS, GUARD RAILING, AND CONCRETE BARRIER ARE SHOWN ON THE LAYOUTS AND THE SUMMARY OF QUANTITIES SHEETS." If the project has no layout sheets, delete the words "THE LAYOUTS AND" from this note. In this note, list only those construction items shown on the layouts or wall plans (dikes, curbs, underdrains, guard railing, concrete barrier, retaining walls, etc.) that appear on the typical cross section sheets. Do not include the pavement structure items in this note.

See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.

FT=3, TX=8.75, WT=2, LV=rd_TYP-X-SECTION-anno(60), CO=0

DESIGN DESIGNATION

ADT (2013)	130,000	D	67%
ADT (2033)	194,000	T	13%
DHV	25,000	V	70 mph
ESAL	4,500,000	TI_{20}	16

PAVEMENT CLIMATE REGION

INLAND VALLEY

FT=3, TX=7, WT=1, LV=rd_TYP-X-SECTION-anno(60), CO=0

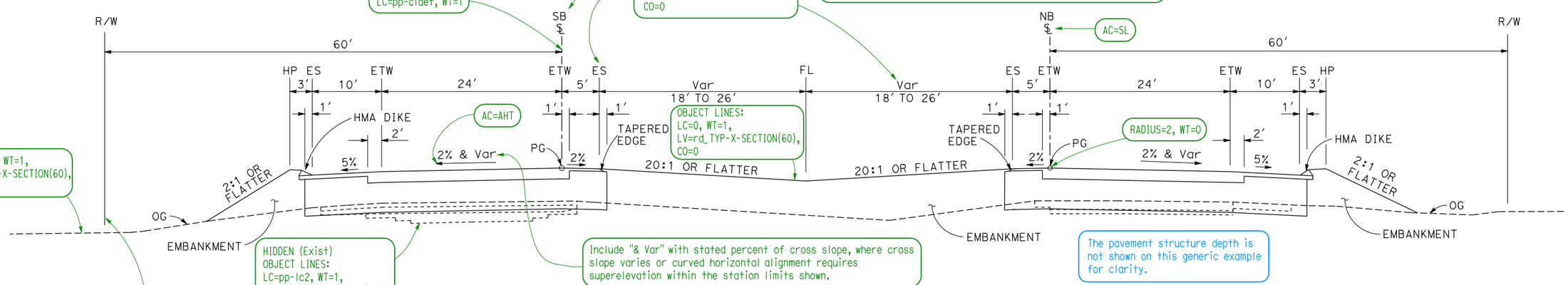
The design designation information should appear for new, reconstruction, widening or rehabilitation projects. Refer to the Highway Design Manual Topic 103 for additional information. Design designation information is typically not required for pavement preservation projects (seal coat, surface course, CAPM, etc.). The Pavement Climate Region (HDM Topic 615) is required for all projects.

LEADER LINES, DIMENSION LINES AND EXTENSION LINES: LC=0, WT=0, LV=rd_TYP-X-SECTION-anno(60), CO=0

The Caltrans Named Level Cell Library (CTCELLIB_NamedLevels.cel) has cells available for the Design Designation table and Pavement Climate Region. AC=DDCLIM, CLIM1 and CLIM2

FT=3, TX=7, WT=1, LV=rd_TYP-X-SECTION-anno(60), CO=0

LC=pp-cldet, WT=1



LC=pp-lc3, WT=1, LV=rd_TYP-X-SECTION(60), CO=0

HIDDEN (Exist) OBJECT LINES: LC=pp-lc2, WT=1, LV=rd_TYP-X-SECTION(60), CO=0

Include "& Var" with stated percent of cross slope, where cross slope varies or curved horizontal alignment requires superelevation within the station limits shown.

The pavement structure depth is not shown on this generic example for clarity.

Typically, right of way lines should be shown if the right of way is constant enough to be shown with one distance or a range. If a range is shown, give minimum and maximum values. Right of way lines are to be shown as a reference when 15 feet or less from the catch point (toe of fill or top of cut). Showing the right of way indicates that the project construction will take place within state right of way.

The only time the right of way note (which is shown on all plan view sheets where the right of way line is shown) is to appear on the typical cross sections is when there are no plan view sheets of any type in the contract plans.

Pavement structure textural symbols, such as patterns or hatching, are not to be used on the typical cross section for clarity.

FT=43, TX=12, WT=0, LV=rd_TYP-X-SECTION-anno(60), CO=0

SOUTHBOUND
Sta 224+56 TO Sta 290+57

ROUTE XX

NORTHBOUND
Sta 224+56 TO Sta 301+77.55

STATION TEXT: FT=3, TX=8.75, WT=2, LV=rd_TYP-X-SECTION-anno(60), CO=0

Stationing to be shown to the nearest whole foot or to hundredths of a foot (e.g. 10+07.20, 10+89.21) where detailed accuracy is necessary

If more detailed information is necessary for a portion of a typical cross section, a breakout (enlarged view of that area) may be shown on the typical cross section sheet.
Construction details should not generally be shown on the typical cross section sheets, but on the appropriate detail sheet.

The number of typical cross sections shown for any project is determined by changes to the pavement structure (thickness, width, type of material, etc.). Construction items such as concrete barrier, walls, dike, guard railing, cut and fill, underdrains, etc., are shown as an overall representation of items on the layouts or wall sheets. But these items do not dictate the number of typical cross sections.

NOTE:
When there are multiple typical cross sections to be shown on the sheet, the section with the lowest stationing limits is shown on the bottom portion of the sheet and the additional sections are to advance up the sheet in the direction of greater stationing. Where a typical cross section covers more than one range of stationing, stationing is to be stacked one above the other, with the lowest stationing at the top of the stack. If the typical cross sections for a route or road can be displayed in columns, start typicals in the left column, then proceed to the right column.

For those occasional small projects on minor routes where there is no stationing, post miles are to be used in the same way as stationing to identify typical cross sections.

BORDER: CTCELLIB_NamedLevels.cel AC=FULPLN LV=border_SHEET(10), CO=0

SHEET NAME AND ID CODE: FT=43, TX=14.5, WT=0, LV=border_INSIDE-BORDER-anno (10), CO=0

GENERIC TYPICAL CROSS SECTION SHEET, BASIC REQUIRED INFORMATION

TYPICAL CROSS SECTIONS

TEXT: FT=3, TX=8.75, WT=2 LV=border_INSIDE-BORDER-anno (10), CO=0, centered below sheet name.

NO SCALE

X-1

GENERIC TYPICAL CROSS SECTION SHEET, RELEASED 04/16/2020

LAST REVISION 00-00-00 | DATE PLOTTED => 16-APR-2020 | TIME PLOTTED => 14:24

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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TAPERED EDGE, PAVEMENT CLIMATE REGION AND PAVEMENT STRUCTURE FOR SHOULDERS

For information on when the shoulder pavement structure depth is to be the same (or different) as the adjacent lane, refer to Highway Design Manual Topic 613.5 (2). For variable shoulder thickness options, see figures 613.5A and 613.5B.

Regardless of the pavement structure of the shoulder, if the cross slope of the shoulder is different than the adjacent traveled way, the break is to occur at the edge of traveled way.

The grading plane for shoulders are to match the grading plane of the adjacent traveled way pavement structure.

DESIGN DESIGNATION

ADT (2013)	XXX,XXX	D	XX%
ADT (2033)	XXX,XXX	T	XX%
DHV	XX,XXX	V	XX mph
ESAL	X,XXX,XXX	TI_{20}	XX

PAVEMENT CLIMATE REGION: SOUTH MOUNTAIN

AC = DDCLIM For showing both design designation and pavement climate region.

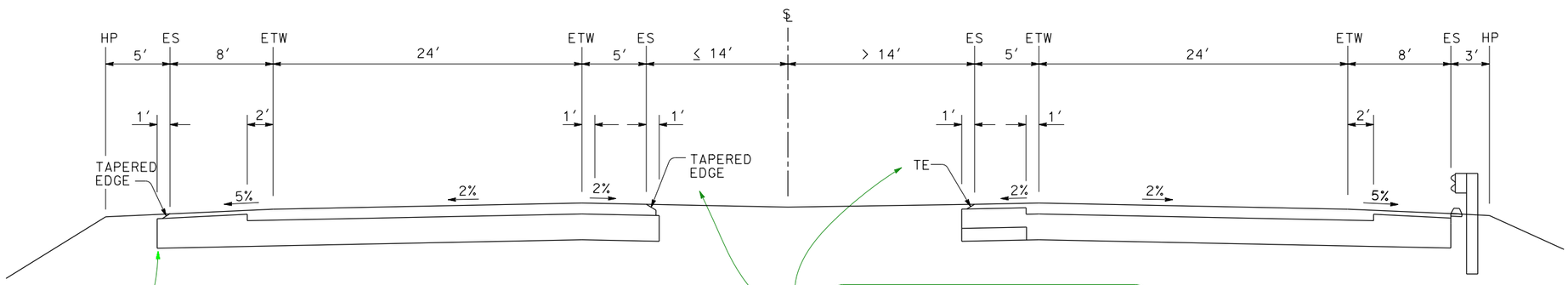
PAVEMENT CLIMATE REGION

SOUTH MOUNTAIN

AC = CLIM1 For showing pavement climate region only.

PAVEMENT CLIMATE REGION: SOUTH MOUNTAIN

AC = CLIM2 For adding pavement climate region to existing design designation.



In Topic 613.5 (2) of the Highway Design Manual, it recommends that bases and subbases for new or reconstructed shoulders should extend at least one foot beyond the edge of shoulder.

In Topic 613.5 (2) of the Highway Design Manual, it states that the total depth of new or reconstructed shoulder pavement structure shall match the adjacent traffic lane when:

- The shoulder width is less than 5 feet
- The median width is 14 feet or less
- On roads with less than two lanes in the direction of travel and there is a sustained (greater than 1 mile in length) grades of over 4 percent without a truck climbing lane
- The shoulders are adjacent to exclusive truck or bus only lanes, or weigh station ramps

For all other cases:

The total depth of shoulder shall match the adjacent traffic lane for the first 2 feet of the outside shoulder width and 1 foot of the inside shoulder measured from the edge of traveled way.

Label either as "TAPERED EDGE" or "TE." If using "TE" then include in abbreviations on the first sheet of the Typical Cross Sections.

For when, where and how to place tapered edge, see Revised Standard Plans P74, P75 and P76. Topic 302.3 in the Highway Design Manual states tapered edge shall be included on all projects except for the following locations:

- Next to curbs, dikes, guardrails, barriers, walls, or landscape paving.
- Where the distance from edge of shoulder to hinge point is less than 1′ and there is not enough room for the tapered edge.
- Within 3′ of driveways or intersections.
- Pavement overlays that are less than 0.15′ in thickness.

Tapered edge is NOT to be shown on layout sheets or other plan view sheets. Locations for tapered edge (both sheet number and stationing) is to be shown in a quantity table on the summary of quantities. The bid item for tapered edge is to be added to the project's quantities for tons of HMA or cubic yards of concrete.

GENERIC TYPICAL CROSS SECTION SHEET 2, ADDITIONAL BASIC REQUIRED INFORMATION

TYPICAL CROSS SECTIONS

NO SCALE

X-3

GENERIC TYPICAL CROSS SECTION SHEET 2, RELEASED 04/16/2020

LAST REVISION 00-00-00 DATE PLOTTED => 16-APR-2020 TIME PLOTTED => 14:24

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PLANS PREPARATION MANUAL

SUPERSEDES EXAMPLE RELEASED 12/08/17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.
3. EXACT LOCATIONS AND TYPES OF HMA DIKE ARE SHOWN ON THE LAYOUTS AND SUMMARY OF QUANTITIES SHEETS.

FOR SIDE SLOPES USE WHOLE NUMBERS WHEN SLOPES ARE 2:1 OR FLATTER. FRACTIONS ARE TO BE USED WHEN SIDE SLOPES ARE BETWEEN 2:1 AND 1:1 OR STEEPER THAN 1:1.

EXAMPLE: 1½:1 OR ¾:1

REFER TO THE HIGHWAY DESIGN MANUAL TOPIC 304 FOR SIDE SLOPE STANDARDS.

DESIGN DESIGNATION

ADT (2013)	130,000	D	67%
ADT (2033)	194,000	T	13%
DHV	25,000	V	70 mph
ESAL	4,500,000	TI_{20}	16

PAVEMENT CLIMATE REGION

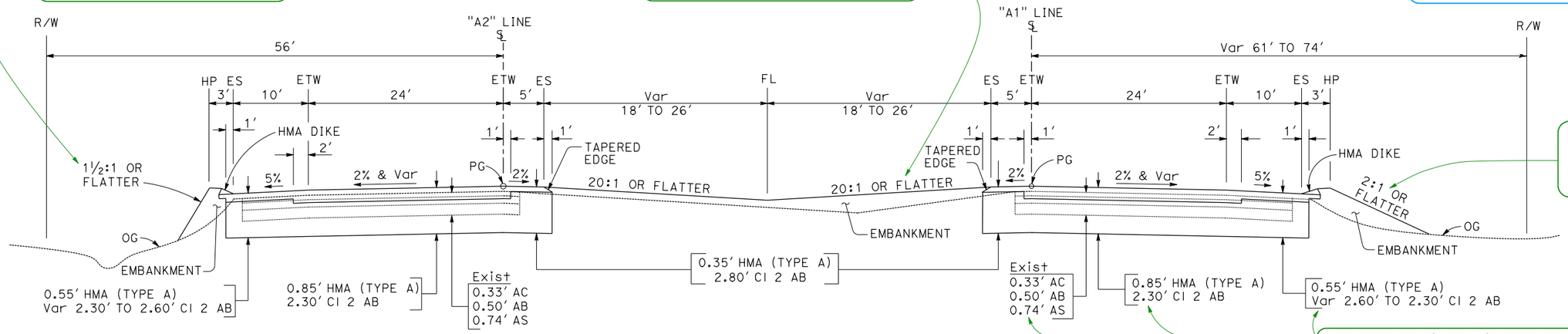
INLAND VALLEY

To take into account the effects that climactic conditions have on pavement performance, the state has been divided into nine climate regions (HDM Topic 615). The appropriate region is required to be included for all projects.

3rd OPTION OF SHOWING SIDE SLOPES (WHEN SPACE IS VERY RESTRICTED): SINGLE OR TWO LINES OF TEXT WITH LEADER LINE AND ARROWHEAD POINTING TO SLOPE LINE.

CALTRANS PREFERRED WAY OF SHOWING SIDE SLOPES: SINGLE LINE OF TEXT ABOVE SLOPE LINE IF SPACE IS AVAILABLE.

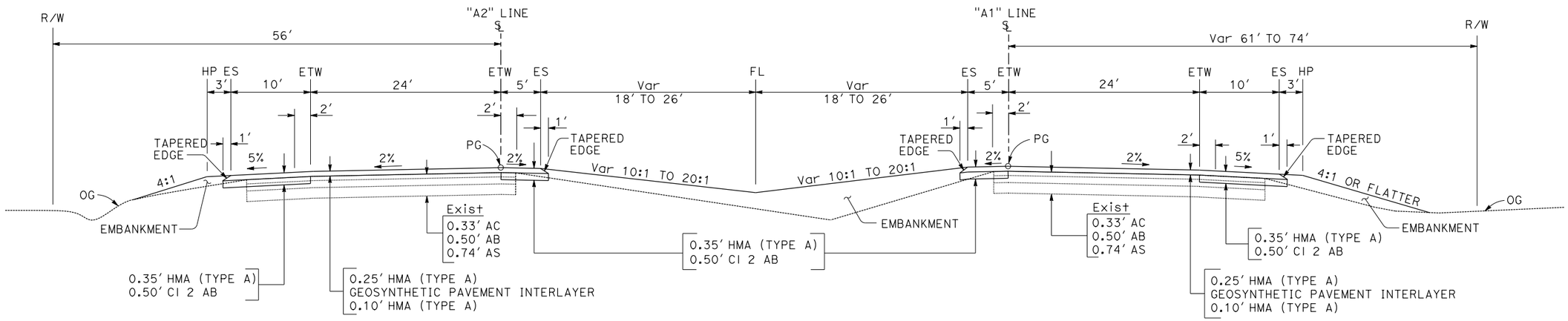
2nd OPTION OF SHOWING SIDE SLOPES (WHEN SUFFICIENT SPACE IS NOT AVAILABLE): TWO LINES OF TEXT ABOVE SLOPE LINE.



"A2" LINE
Sta 70+68 TO Sta 91+98

"A1" LINE
Sta 70+60 TO Sta 91+98

Show type of material and thickness of each layer of new pavement structure to the nearest 0.05-foot. Show type of material and thickness of each layer of existing pavement structure to hundredths of a foot (e.g. 0.67').



"A2" LINE
Sta 43+48 TO Sta 70+68
Sta 91+98 TO Sta 123+45

ROUTE 99

"A1" LINE
Sta 43+48 TO Sta 70+60
Sta 91+98 TO Sta 123+39

TYPICAL CROSS SECTION SHEET, EXAMPLE "A"
REHABILITATE AND RECONSTRUCT HIGHWAY

TYPICAL CROSS SECTIONS

NO SCALE

X-1

TYPICAL CROSS SECTION, EXAMPLE "A" RELEASED 04/16/2020

LAST REVISION 00-00-00 | DATE PLOTTED => 16-APR-2020 | TIME PLOTTED => 14:25

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PLANS PREPARATION MANUAL

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.
3. FOR DITCH FLOW LINE AND SLOPE, SEE DRAINAGE PLANS.
4. FOR METAL BEAM GUARD RAILING, SEE LAYOUTS.
5. FOR SOUND WALL, SEE SOUND WALL PLANS.

ABBREVIATIONS:

RHMA RUBBERIZED HOT MIX ASPHALT
TCE TEMPORARY CONSTRUCTION EASEMENT

ROUTE 65 DESIGN DESIGNATION

ADT (2011)	51,150	D	54%
ADT (2031)	63,150	T	9%
DHV	6,000	V	80 mph
ESAL	14,640,000	TI_{20}	12.5

TYPICAL PAVEMENT STRUCTURE SECTIONS

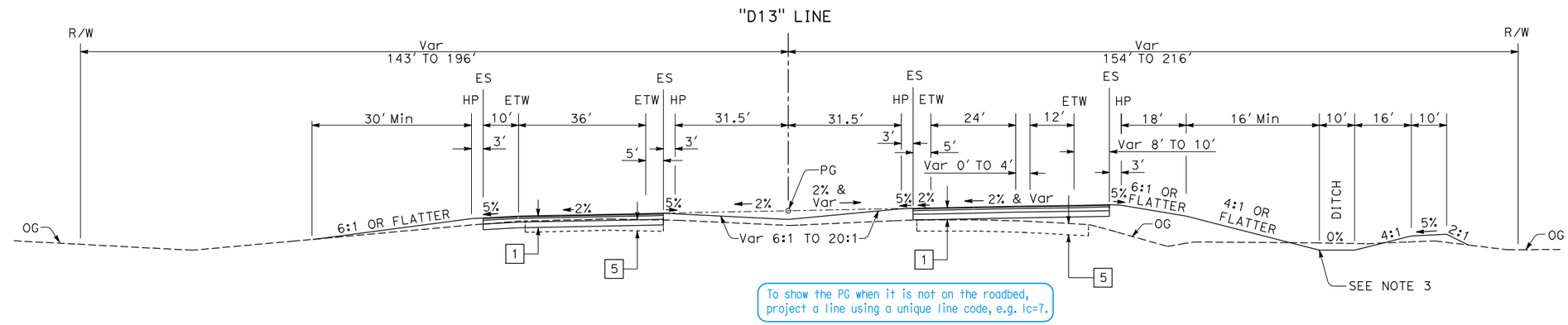
1 — 0.20′ RHMA-G
0.45′ HMA (TYPE A)
1.05′ CLASS 2 AB
1.40′ CLASS 2 AS

2 — 0.50′ HMA (TYPE A)
1.40′ CLASS 2 AB

3 — 0.25′ HMA (TYPE A)
0.85′ CLASS 2 AB

4 — Exist
0.08′-0.41′ AC
0.33′-0.66′ CLASS 2 AB

5 — Exist
0.06′ OGAC
0.26′ AC
1.48′ AC BASE
0.98′ LIME TREATED BASE



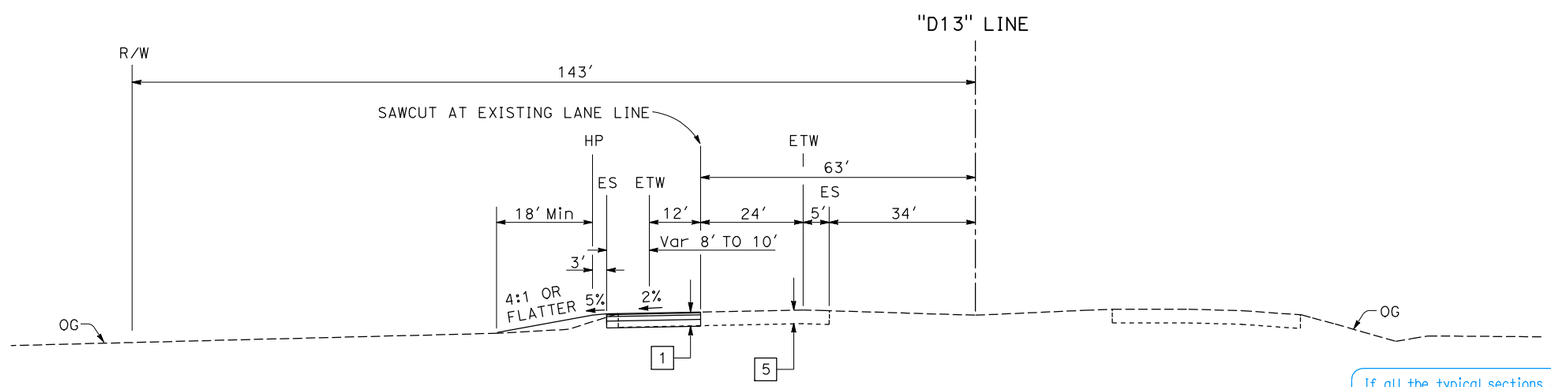
To show the PG when it is not on the roadbed, project a line using a unique line code, e.g. lc=7.

SOUTHBOUND

"D13" 645+66.69 TO "D13" 648+29.20

NORTHBOUND

"D13" 645+66.69 TO "D13" 647+73.40



SOUTHBOUND

NORTHBOUND

"D13" 643+96.95 TO "D13" 645+66.69

ROUTE 65

If all the typical sections on one sheet are for one route or road, then only label the route or road once as shown in this example. If more than one route or road is shown on any given sheet, label each typical section shown with its appropriate route or road as shown on Example Sheet "65 XSEC-16."

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-1"
(NEW CONSTRUCTION)

TYPICAL CROSS SECTIONS

NO SCALE

X-1

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-20 TIME PLOTTED => 08:19

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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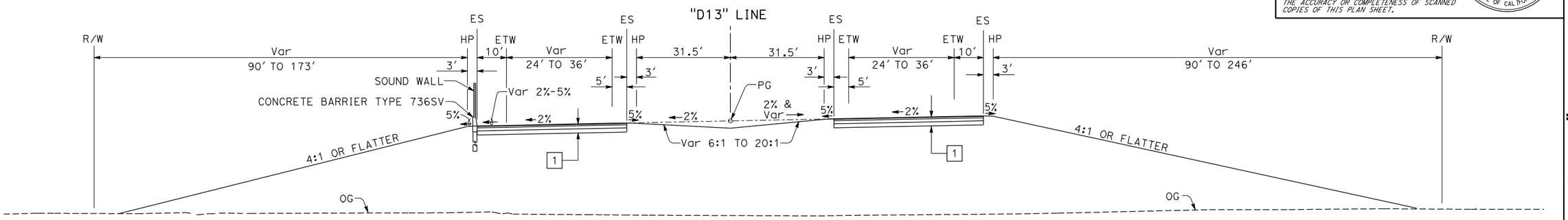
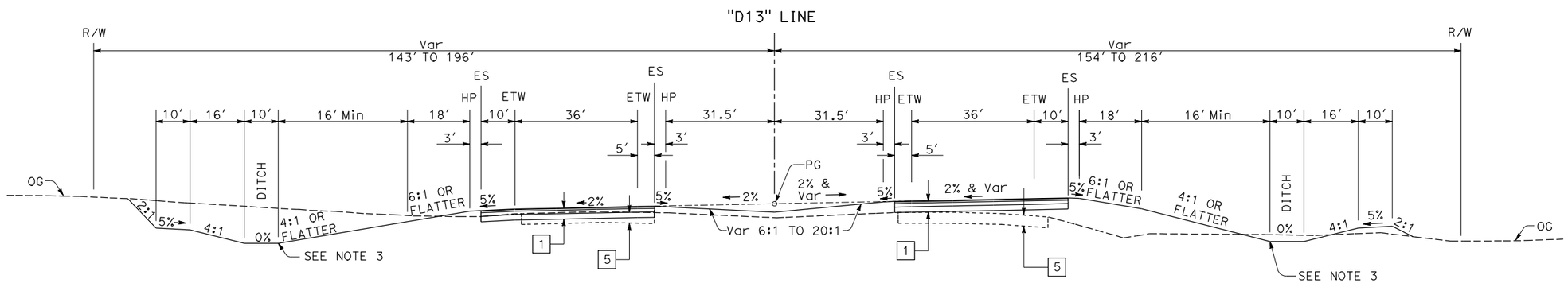


SOUTHBOUND

"D13" 661+70.30 TO "D13" 676+52.98

NORTHBOUND

"D13" 659+93.56 TO "D13" 677+71.38



SOUTHBOUND

"D13" 648+29.20 TO "D13" 661+70.30

NORTHBOUND

"D13" 647+73.40 TO "D13" 659+93.56

ROUTE 65

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-2"
(NEW CONSTRUCTION)

TYPICAL CROSS SECTIONS

NO SCALE

X-2

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-2" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2012 | TIME PLOTTED => 08:22

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BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ca-65 XSEC-002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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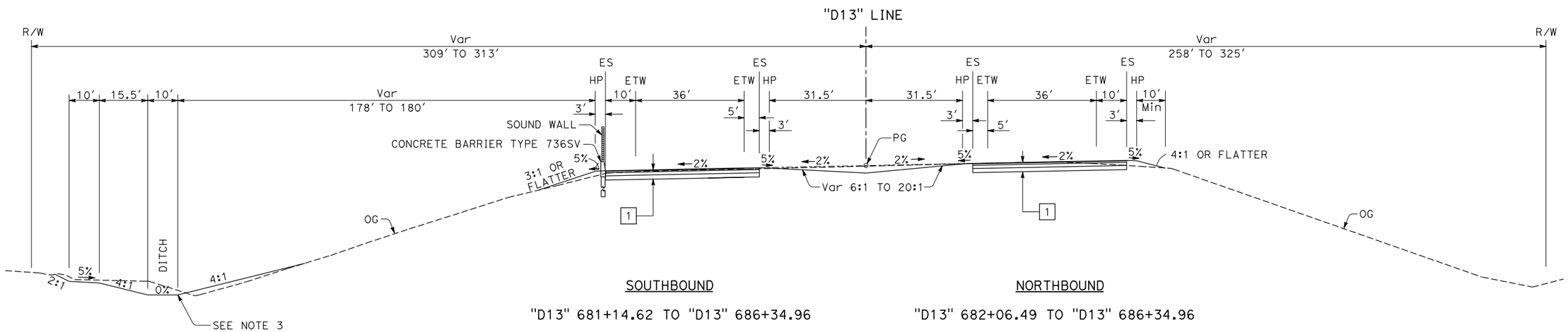

SOUTHBOUND

"D13" 681+14.62 TO "D13" 686+34.96

NORTHBOUND

"D13" 682+06.49 TO "D13" 686+34.96

ROUTE 65

BREAK IN STATIONING FROM THAT SHOWN ON EXAMPLE "65 XSEC-2" IS FOR CONSTRUCTION OF A BRIDGE.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-3"
(NEW CONSTRUCTION)

TYPICAL CROSS SECTIONS

NO SCALE

X-3

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REVISED BY

DATE REVISED

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-3" RELEASED 1/6/2012

LAST REVISION 00-00-00

DATE PLOTTED => 29-DEC-2012
TIME PLOTTED => 08:24

BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => ca-65 XSEC-003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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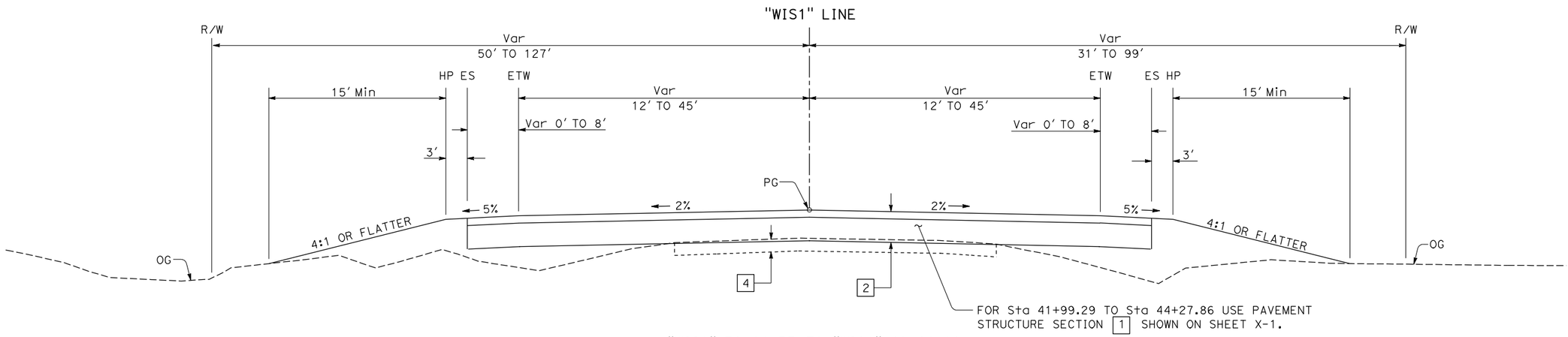
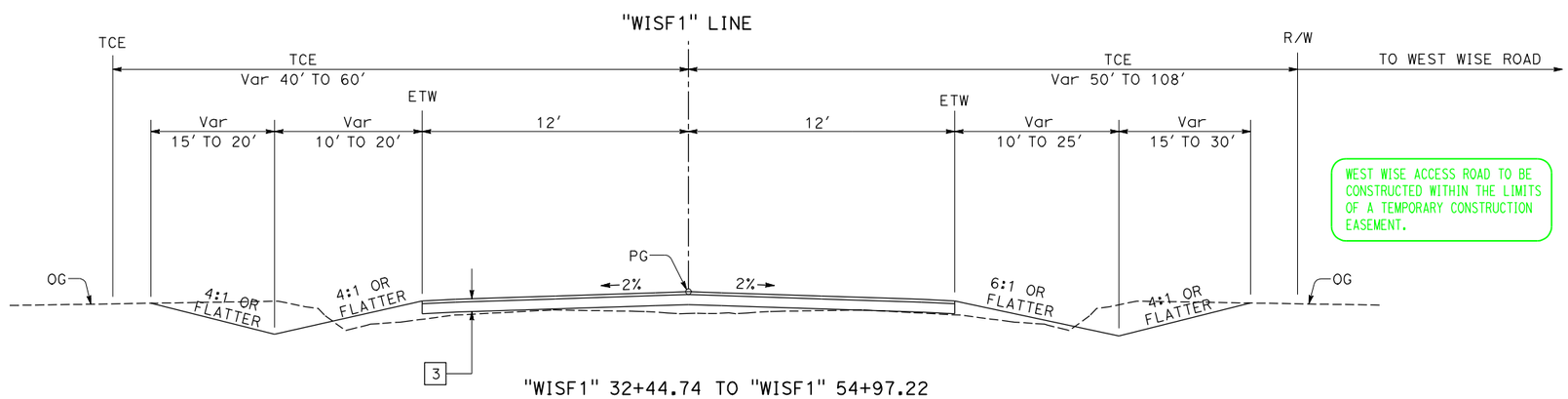


"WIS1" 30+98.57 TO "WIS1" 41+99.29
"WIS1" 44+27.86 TO "WIS1" 53+98.54

WEST WISE ROAD



WEST WISE ACCESS ROAD TO BE CONSTRUCTED WITHIN THE LIMITS OF A TEMPORARY CONSTRUCTION EASEMENT.

"WISF1" 32+44.74 TO "WISF1" 54+97.22

WEST WISE ACCESS ROAD

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-16"
(NEW CONSTRUCTION)

TYPICAL CROSS SECTIONS

NO SCALE

X-16

TYPICAL CROSS SECTION SHEET, EXAMPLE "65 XSEC-16" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2 | TIME PLOTTED => 08:26

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REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ca-65 XSEC-016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	52, 125			

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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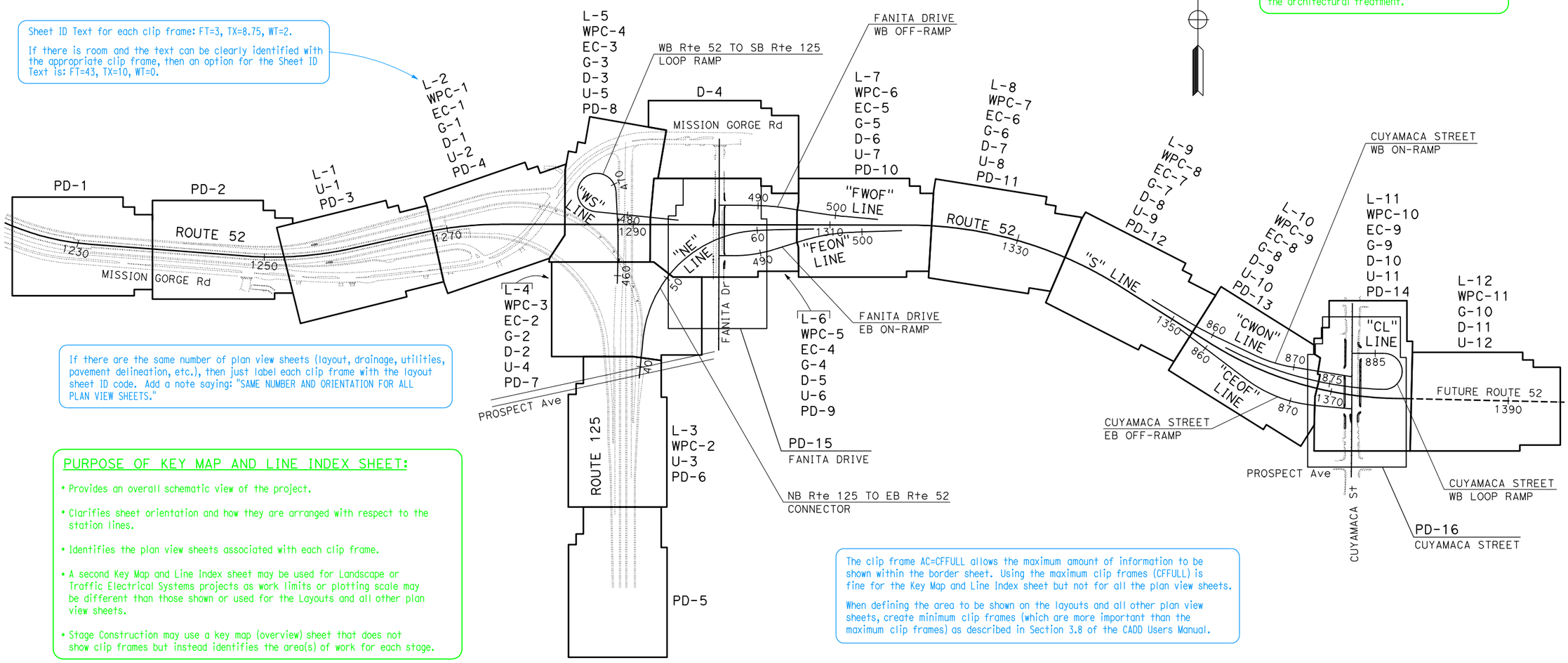
DEVELOPING KEY MAP SHEET:

- Use clip frame from Caltrans Cell Library (CTCELLIB.cel) AC=CFFULL
  - -Trim clip frames at match line.
  - -Clip frames may overlap when there is no match line or when there is work on routes that cross each other.
- Each clip frame can identify multiple plan view sheets, but only one of each plan view type. (The only exception being Demolition sheets.) For example, a single clip frame cannot be L-1, L-9 and L-27. Label each clip frame with all the various plan view sheets associated with it, using the project sheet ID codes (e.g., L-1, D-1, U-1, PD-1, S-1, etc.). A project may or may not have the same number of layout sheets as other types of plan view sheets. On these projects, a particular type of work (e.g., drainage) may not necessarily be performed within the limits of an individual clip frame. For instance, if drainage work does not occur within the limits of clip frames L-1 and L-2 but starts at L-3 then the sheet ID codes for the third clip frame would be L-3, D-1, etc.
- Place sheet ID codes outside of the clip frame, so as not to interfere with station lines and route designation. Stack the various sheet ID codes above or below the clip frame (be consistent as possible).
- If there is not enough room to clearly place the sheet ID codes above or below the clip frame, then bracket the codes and use an arc with an arrow (or a tilde) to point to the appropriate clip frame.
- Show gaps between clip frames if work is not continuous on the alignment lines shown.
- If the alignment line and number of the clip frames are too long to fit within the full plan border sheet in one row, it can be stacked in multiple rows and match lines used.
- Use a single line to represent the alignment of each highway, road, ramp, etc. It is not necessary to show the width of the roadways (perhaps just some background topo). As an option, the title sheet strip map alignment may be used to produce the alignment lines for this sheet. Stationing of alignment lines should be shown and labeled at 1000 feet, 2000 feet, or 5000 feet, depending on the size of the project. Identify stationing at intervals of 50, 20 or 10 stations, as applicable to the project.
- Identify route numbers and the streets or roads intersecting the route or routes where construction is to take place.
- Key Map and Line Index sheets are at "NO SCALE."

Identifying architectural treatment for multiple walls can be handled with a key map (overview) sheet. Clip frame are not necessary, only the strip map showing the locations of all the sound walls, retaining walls, and abutments receiving the architectural treatment.

Sheet ID Text for each clip frame: FT=3, TX=8.75, WT=2.

If there is room and the text can be clearly identified with the appropriate clip frame, then an option for the Sheet ID Text is: FT=43, TX=10, WT=0.



If there are the same number of plan view sheets (layout, drainage, utilities, pavement delineation, etc.), then just label each clip frame with the layout sheet ID code. Add a note saying: "SAME NUMBER AND ORIENTATION FOR ALL PLAN VIEW SHEETS."

PURPOSE OF KEY MAP AND LINE INDEX SHEET:

- Provides an overall schematic view of the project.
- Clarifies sheet orientation and how they are arranged with respect to the station lines.
- Identifies the plan view sheets associated with each clip frame.
- A second Key Map and Line Index sheet may be used for Landscape or Traffic Electrical Systems projects as work limits or plotting scale may be different than those shown or used for the Layouts and all other plan view sheets.
- Stage Construction may use a key map (overview) sheet that does not show clip frames but instead identifies the area(s) of work for each stage.

The clip frame AC=CFFULL allows the maximum amount of information to be shown within the border sheet. Using the maximum clip frames (CFFULL) is fine for the Key Map and Line Index sheet but not for all the plan view sheets.

When defining the area to be shown on the layouts and all other plan view sheets, create minimum clip frames (which are more important than the maximum clip frames) as described in Section 3.8 of the CADD Users Manual.

KEY MAP AND LINE INDEX SHEET, EXAMPLE "A"
DIFFERENT NUMBER OF PLAN VIEW TYPE SHEETS

KEY MAP AND LINE INDEX

NO SCALE

K-1

KEY MAP AND LINE INDEX SHEET, EXAMPLE "A" RELEASED 5/4/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 27-APR-2012 | TIME PLOTTED => 13:04

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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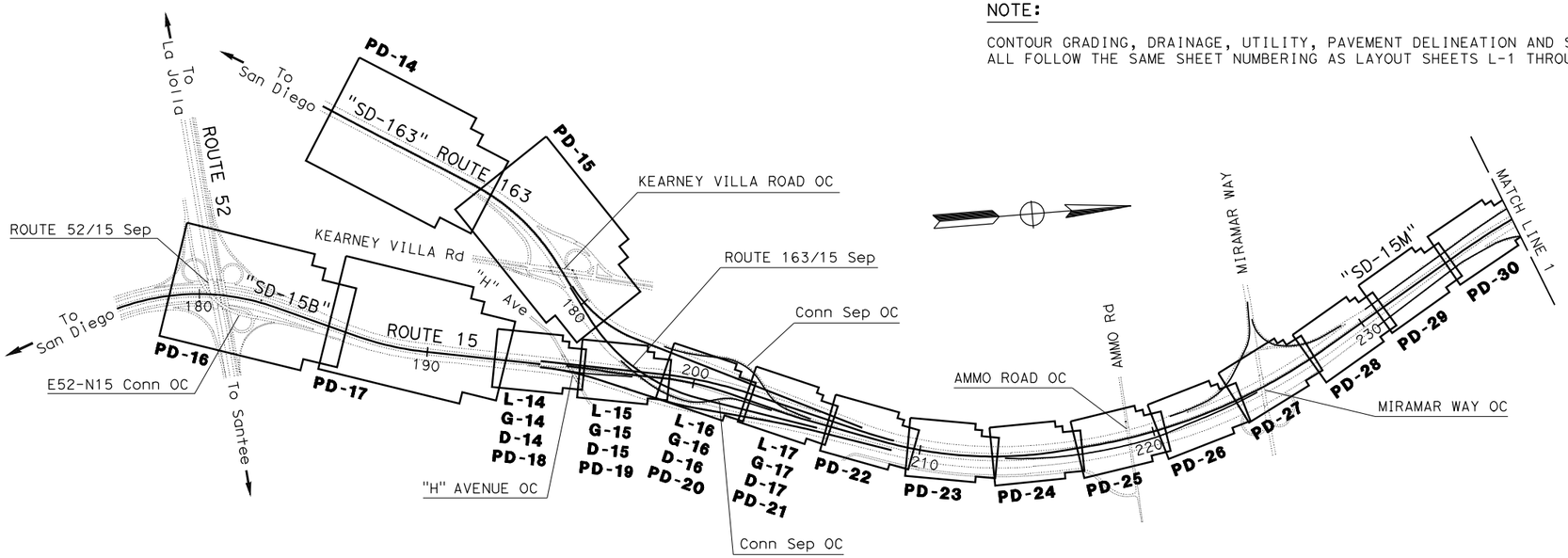
NOTE:

CONTOUR GRADING, DRAINAGE, UTILITY, PAVEMENT DELINEATION AND SIGN PLANS ALL FOLLOW THE SAME SHEET NUMBERING AS LAYOUT SHEETS L-1 THROUGH L-13.



A Key Map is useful to add clarity to projects with complex line designations, plan sheets that are not in consecutive order or are presented at a different plotting scale.

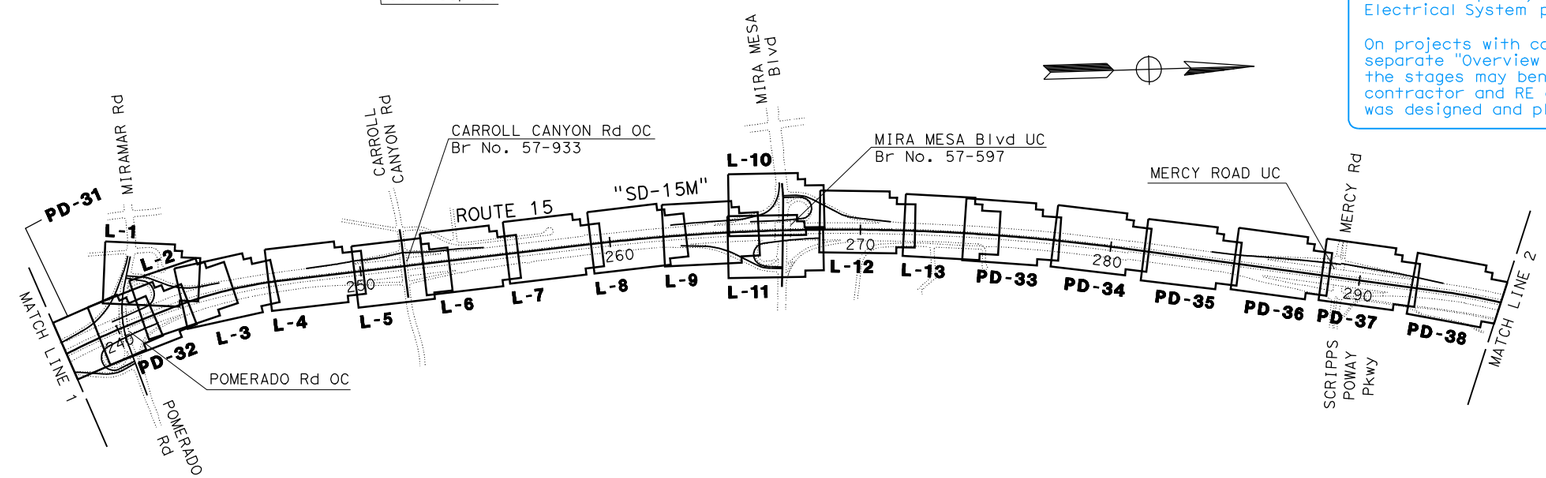
For this example, plan sheets are not in order because this is a design sequence project.

Notice the gaps between PD-46, 47 and 48. This illustrates how important the Key Map can be in showing how the "plan view sheets" are laid out.

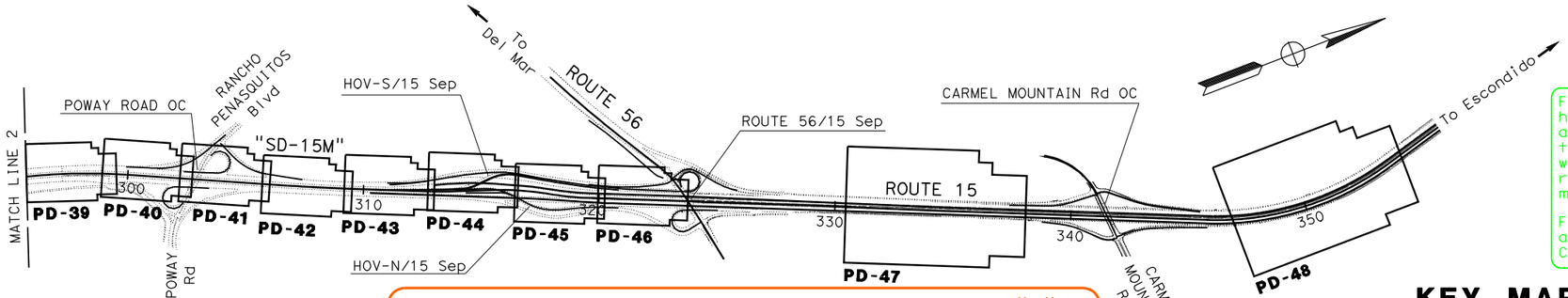
The different size clip frames is not recommended, but may be useful for certain projects in rare occasions.

One purpose of the Key Map is to show how the Layouts, Contour Grading plans, Drainage plans, Utility plans, Pavement Delineation plans, Sign plans and Electrical System plans are arranged.

On projects with complex staging, a separate "Overview Sheet" showing all the stages may benefit the bidders, contractor and RE on how the project was designed and planned to be staged.



On a Key Map or Title Sheet, where a strip map is cut more than once and there are several match lines, the match lines are numbered to eliminate any confusion of how the strip map fits together.



For projects with multiple walls that have continuous architectural texturing, an "Overview Sheet" may be appropriate to show the location of the retaining walls, sound walls and bridge abutments receiving the appropriate texturing motif.

For placement of this overview sheet in a set of plans, see Section 2.1 in the CADD Users Manual.

KEY MAP AND LINE INDEX SHEET, EXAMPLE "B"
PLAN VIEW TYPE SHEETS NOT IN NORMAL SEQUENCE

KEY MAP AND LINE INDEX

NO SCALE

K-1

KEY MAP AND LINE INDEX SHEET, EXAMPLE "B" RELEASED 4/20/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 07-APR-2011 | TIME PLOTTED => 07:10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010

USERNAME => trjck
DGN FILE => Keymap_Example_B.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

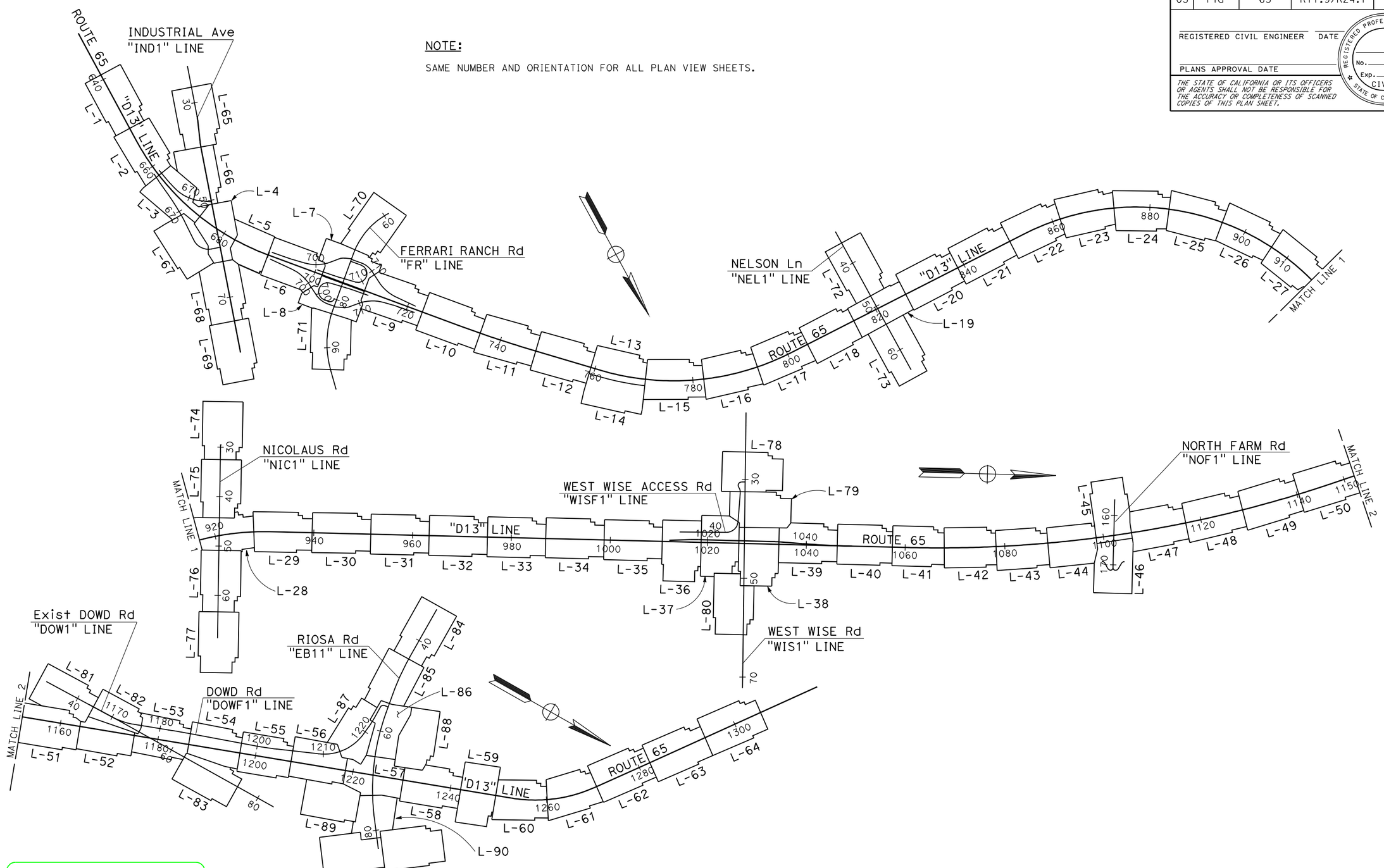
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

SAME NUMBER AND ORIENTATION FOR ALL PLAN VIEW SHEETS.



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

KEY MAP AND LINE INDEX SHEET, EXAMPLE "65 KEY MAP"

KEY MAP AND LINE INDEX

NO SCALE

K-1

KEY MAP AND LINE INDEX SHEET, EXAMPLE "65 KEY MAP" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 08:28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 DGN FILE => da-65_KEY MAP.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 5/4/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	76	7.3/13.1		

PROFESSIONAL LAND SURVEYOR DATE

PLANS APPROVAL DATE

PROFESSIONAL LAND SURVEYOR No. Exp. 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.

NOTES:

1. FOR COMPLETE PROJECT CONTROL DATA, SEE THE SURVEY RECORDS ON FILE IN THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE.
2. BASIS OF BEARINGS AND COORDINATES:

   THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM (CCS), ZONE 6, NAD 83 (2010) EPOCH 2011.00 AS DETERMINED LOCALLY BY A LINE BETWEEN STATION SDGPS 02 (DX5296) AND STATION SDGPS (DX5297), BEING S. 72° 07' 53" E, FROM GEODETIC SURVEY.

   COORDINATES ARE SHOWN IN THE U.S. SURVEY FOOT (1200/3937 METER)

   THIS GPS STATIC SURVEY WAS CONSTRAINED TO NSRS STATIONS: SDGPS 2 (PID DX5296), SDGPS 3 (PID DX5297) AND HPGN CA 11 07 (PID DX5291) PER NGS REFERENCE SYSTEM AND RESULTED IN RESIDUAL ERRORS RANGING FROM 0.5MM TO 1CM HORIZONTALLY AT THE 95% CONFIDENCE LEVEL. THE VALUES REPRESENTED IN THIS SURVEY MEET THE ABOVE-REFERENCED STANDARDS FOR 1CM HORIZONTAL REQUIREMENTS.

   SUBSEQUENT GPS AND CONVENTIONAL SURVEYS ESTABLISHED THE LISTED 2CM ORDER STATIONS.
3. BASIS OF ELEVATIONS:

   THIS PROJECT IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). STATIONS AND RESPECTIVE ELEVATIONS CONSTRAINED TO ARE:
   SDGPS 3 (PID DX5297, ELEVATION 308.26')
   SD 6 41 (PID DX5544, ELEVATION 201.32')

ABBREVIATIONS:

CADT - CALIFORNIA DEPARTMENT OF TRANSPORTATION
CDH - CALIFORNIA DIVISION OF HIGHWAYS
PID - NATIONAL GEODETIC SURVEY PERMANENT IDENTIFIER

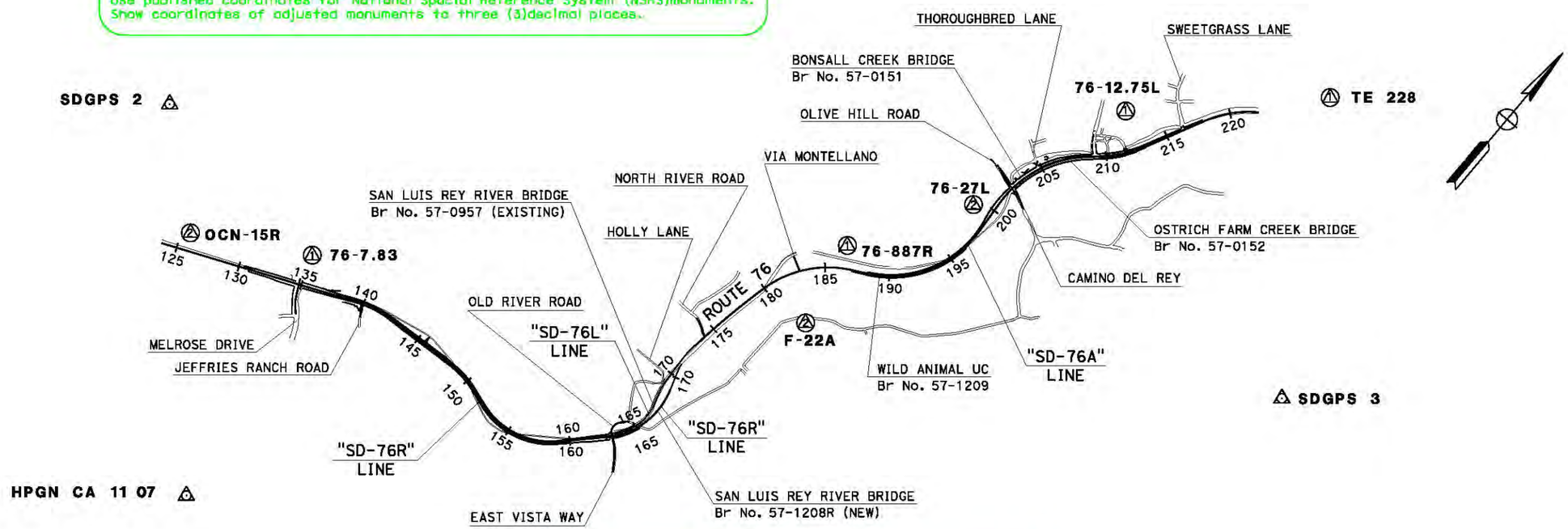
LEGEND:

STATION IN THE NATIONAL SPATIAL REFERENCE SYSTEM
1CM STATION
2CM STATION

CONTROL FOR DESIGN AND CONSTRUCTION

STATION DESIGNATION	ORDER	NORTHING	EASTING	ELEVATION	DESCRIPTION
HPGN CA 11 07	1CM	1,992,291.23	6,247,272.61	311.28	2½" CADT ALUMINUM DISK
SDGPS 2	1CM	2,074,411.29	6,256,591.35	717.18	SD COUNTY 2½" ALUMINUM DISK
SDGPS 3	1CM	2,065,546.37	6,284,088.94	308.26	2¼" CADT DISK
76-7.83	1CM	2,036,828.560	6,251,747.584	154.12	2¼" CADT DISK
76-887R	1CM	2,046,708.891	6,262,652.813	178.55	2¼" CADT DISK
76-12.75L	1CM	2,053,455.052	6,265,098.822	273.92	2¼" CADT DISK
TE 228	1CM	2,056,816.663	6,268,905.801	197.79	SD COUNTY BM DISK
OCN-15R	2CM	2,035,799.814	6,248,716.530	NONE	2¼" CDH DISK
F-22A	2CM	2,044,193.373	6,261,747.731	243.58	2¼" CDH DISK
76-27L	2CM	2,049,699.972	6,263,485.242	266.52	2¼" CADT DISK

Horizontal control points must be 2cm or better network accuracy.
Vertical control points must be 3rd order or better.
Use published coordinates for National Spacial Reference System (NSRS)monuments.
Show coordinates of adjusted monuments to three (3)decimal places.



PROJECT CONTROL SHEET, EXAMPLE "A"

APPROVED FOR PROJECT CONTROL INFORMATION ONLY

PROJECT CONTROL

NO SCALE

PC-1

PROJECT CONTROL, EXAMPLE "A" RELEASED 12/8/2016

LAST REVISION 00-00-00 DATE PLOTTED => 08-DEC-2016 TIME PLOTTED => 14:32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF LAND SURVEYS

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING TREES NOT SHOWN ON ALL LAYOUT SHEETS.
3. FOR OBLITERATE ROADS, SEE STAGE CONSTRUCTION SHEETS.
4. FOR DETAILS FOR MAINTENANCE VEHICLE PULLOUTS AND ISLANDS, SEE CONSTRUCTION DETAILS SHEETS.

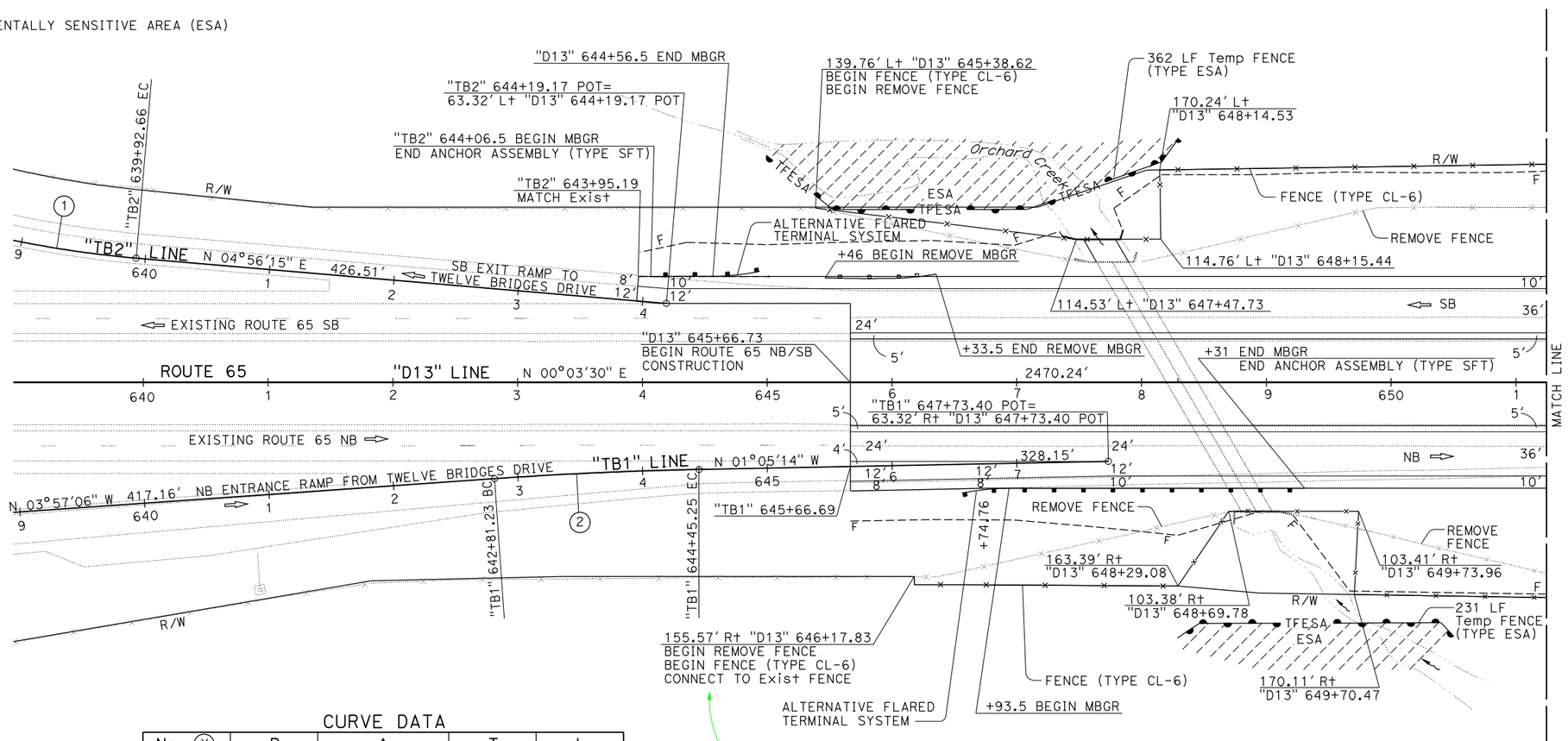
ABBREVIATIONS:

SSWD	SOUTH SUTTER WATER DISTRICT
CHP	CALIFORNIA HIGHWAY PATROL
TCE	TEMPORARY CONSTRUCTION EASEMENT
ICO	IRRIGATION CROSSOVER
MVP	MAINTENANCE VEHICLE PULLOUT
CR	CURB RAMP

LEGEND:

- HMA (TEXTURED PAVING)
- MINOR CONCRETE (STAMPED CONCRETE)
- ROCK BLANKET
- DIRECTION OF TRAFFIC
- T — CONFORM TAPER TYPE (SEE CONSTRUCTION DETAILS)
- ENVIRONMENTALLY SENSITIVE AREA (ESA)

THIS EXAMPLE AND THE OTHER "ROUTE 65 BYPASS PROJECT EXAMPLES" IN THIS MANUAL WERE DEVELOPED BY CONVERTING THE ORIGINAL METRIC UNIT PROJECT TO U.S. CUSTOMARY UNITS. THE LOCATION OF THE SHEET MATCH LINES ARE NOT AT THE RECOMMENDED +50-FOOT STATION CLIP LINE DUE TO THE CONVERSION OF THE BASE UNITS FROM METRIC TO U.S. UNITS AND THE TIMEFRAME AVAILABLE TO CREATE THE EXAMPLES.



With the callout "Remove Fence" it is not necessary to use the word "Exist" as it does not convey additional information to the bidder. However, because the new fence is offset from the existing fence at this location, using the phrase "Connect to Exist Fence" does convey additional information to the bidder (that there is not to be a gap between the existing and new fences).

CURVE DATA

No. (X)	R	Δ	T	L
1	835'	29°05'15"	712.07'	1424.72'
2	3280'	02°51'52"	82.03'	164.02'

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-1"

LAYOUT

SCALE: 1" = 50'

L-1

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 08:32

LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" RELEASED 1/6/2012

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

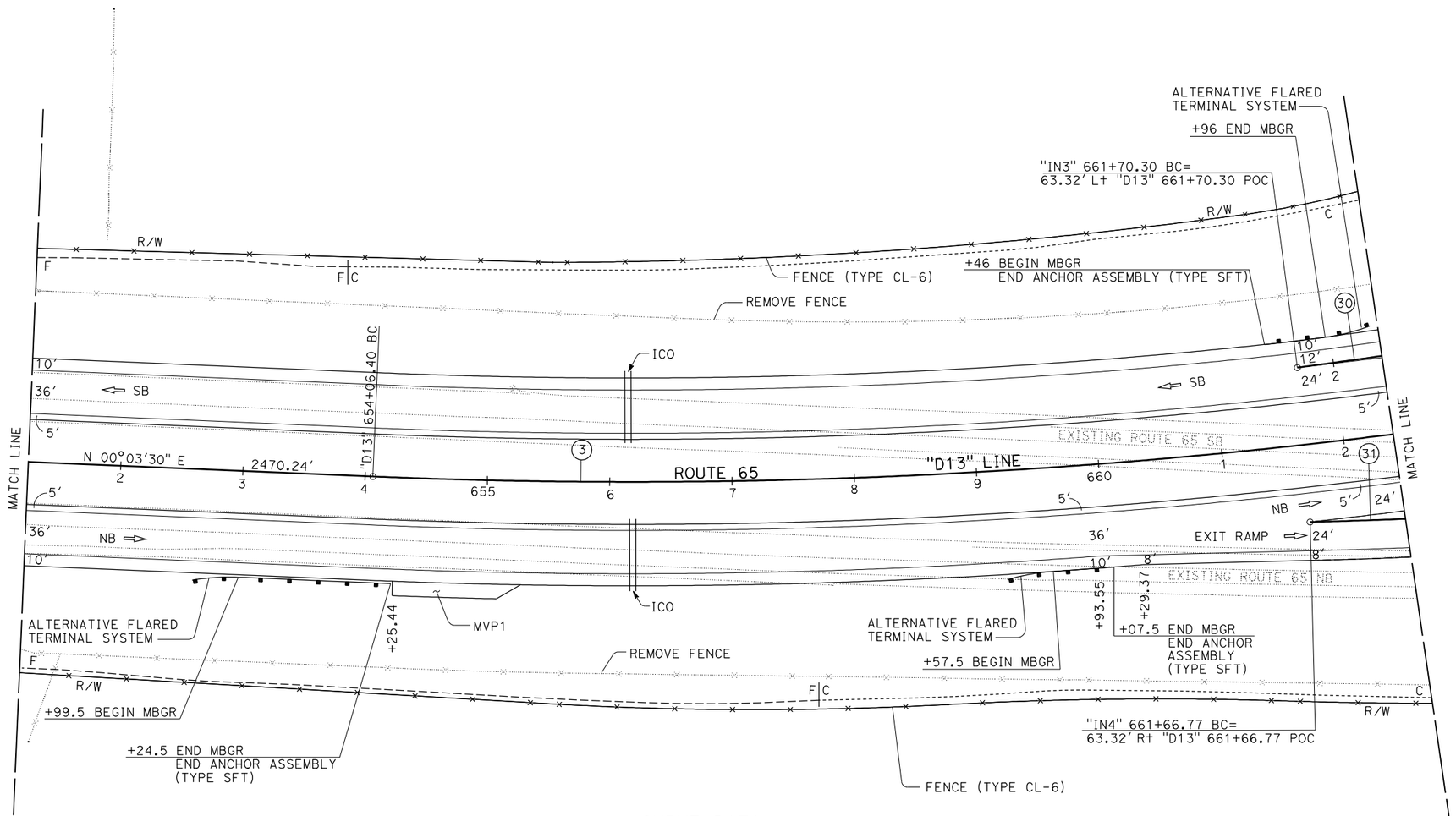
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

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



CURVE DATA

No. (X)	R	Δ	T	L
3	5000'	41°17'58"	1884.32'	3604.04'
30	4935'	03°48'22"	164.03'	327.93'
31	5065'	03°03'45"	135.34'	270.62'

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-2"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50'

L-2

LAYOUT SHEET, EXAMPLE "65 LAYOUT-2" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 08:35

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ea-65 L-002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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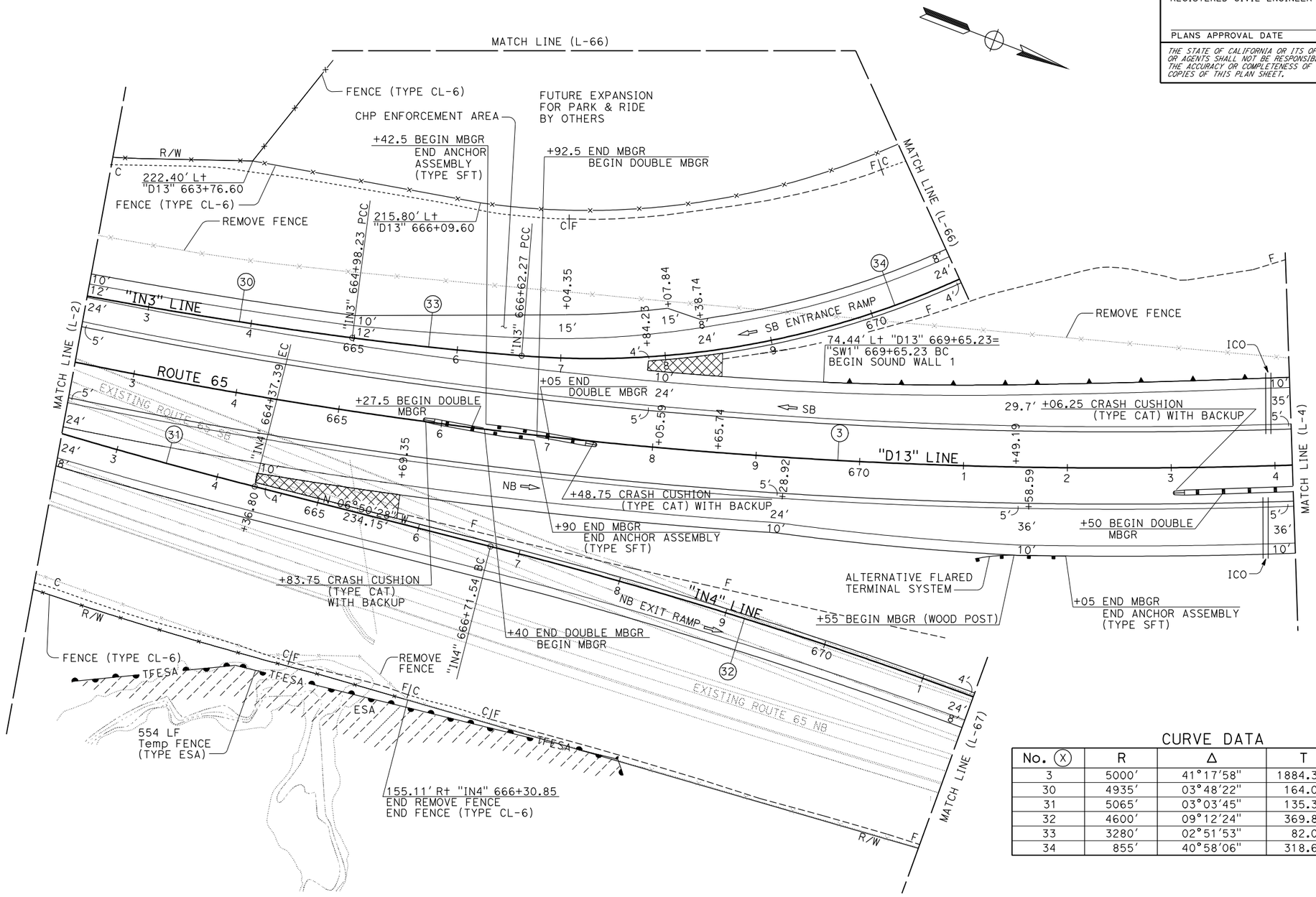
NOTE:

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



CURVE DATA

No. (X)	R	Δ	T	L
3	5000′	41°17′58"	1884.32′	3604.04′
30	4935′	03°48′22"	164.03′	327.93′
31	5065′	03°03′45"	135.34′	270.62′
32	4600′	09°12′24"	369.83′	738.07′
33	3280′	02°51′53"	82.04′	164.04′
34	855′	40°58′06"	318.66′	609.94′

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-3"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50′

L-3

LAYOUT SHEET, EXAMPLE "65 LAYOUT-3" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 08:54

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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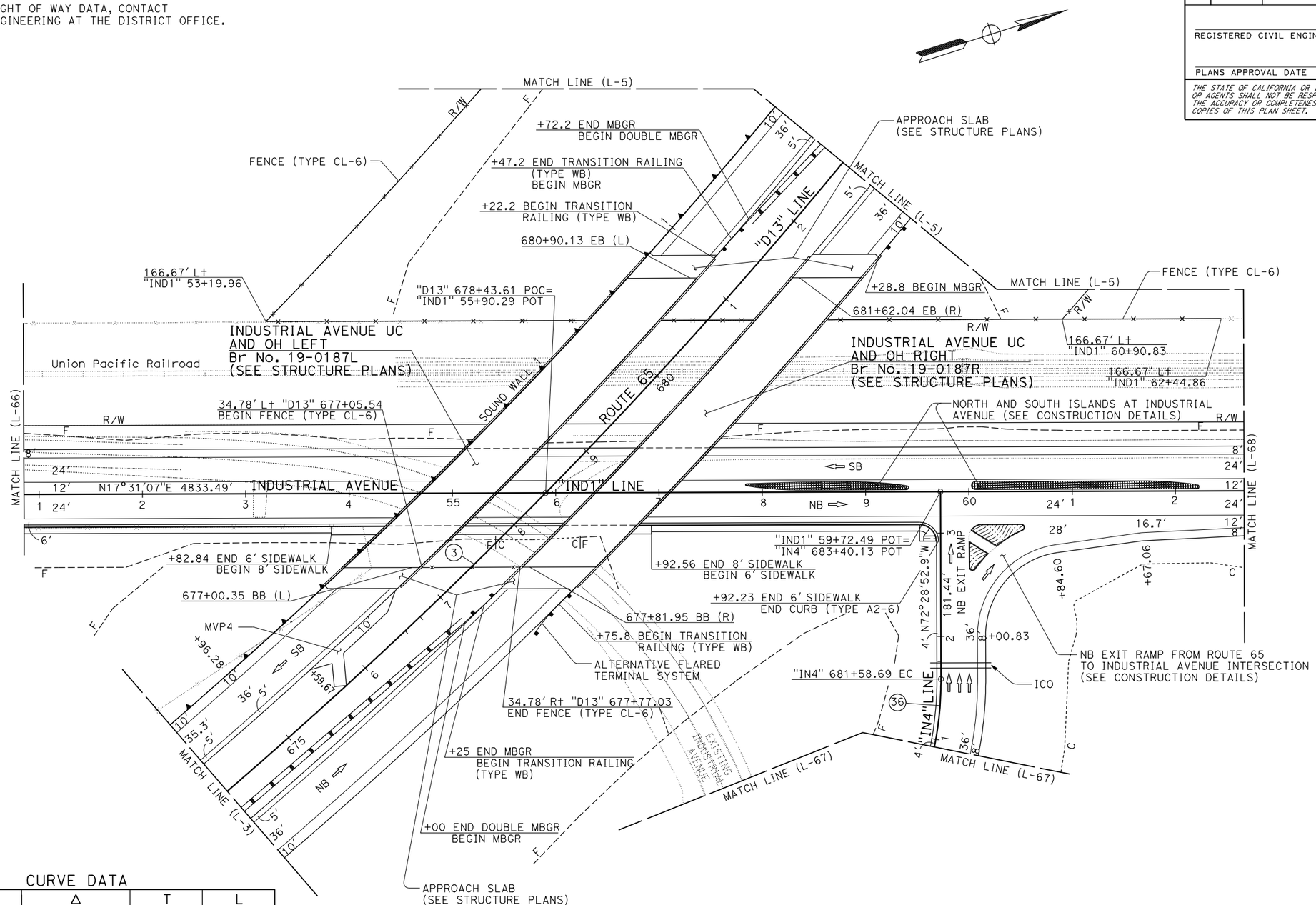
NOTE:

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



CURVE DATA

No. (X)	R	Δ	T	L
3	5000'	41°17'58"	1884.32'	3604.04'
36	330'	74°50'50"	251.05'	428.58'

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-4"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50'

L-4

LAYOUT SHEET, EXAMPLE "65 LAYOUT-4" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 09:13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

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REVISED BY

DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

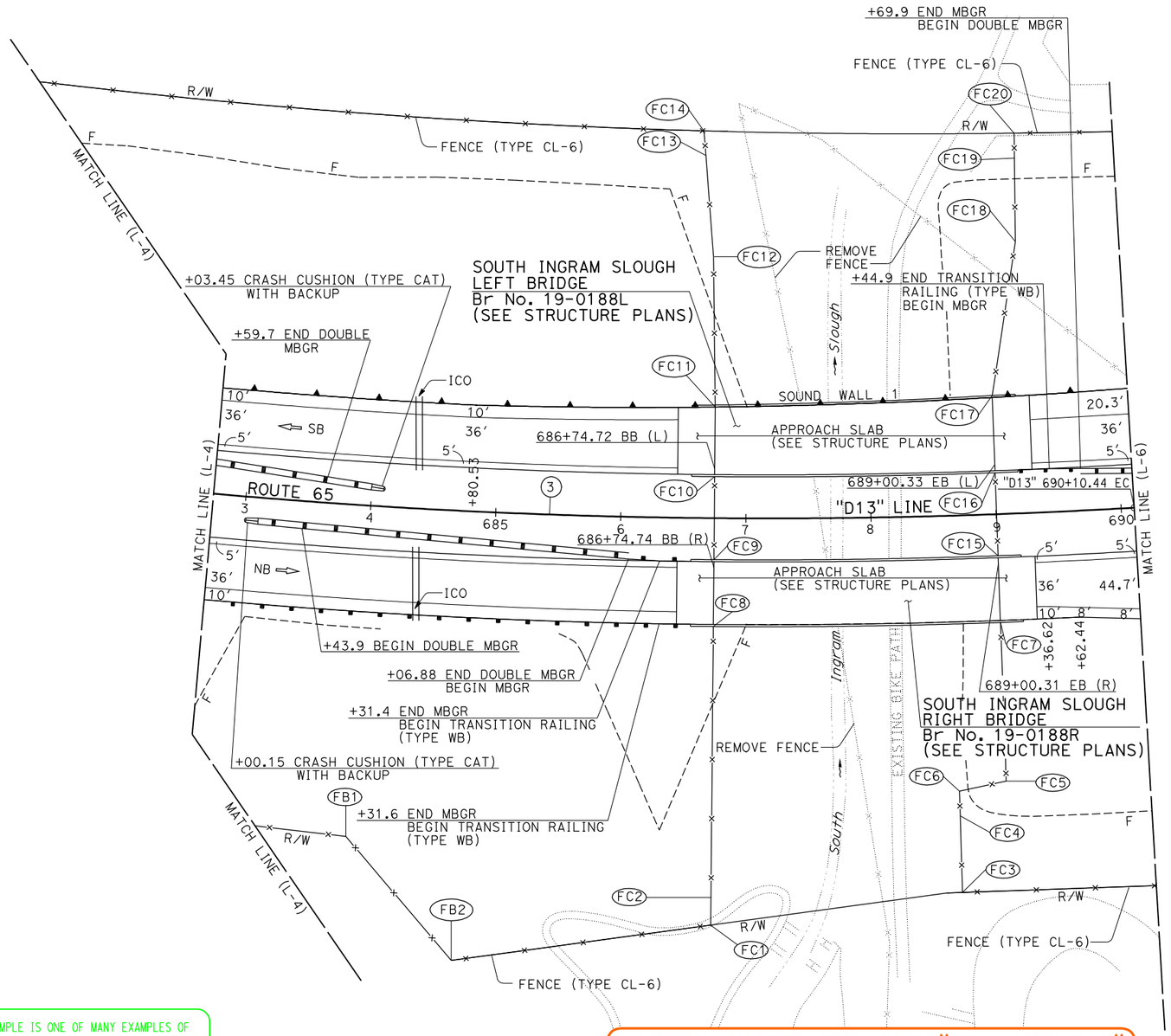
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

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



LAYOUT SHEET, EXAMPLE "65 LAYOUT-5"

CURVE DATA

No. (X)	R	Δ	T	L
3	5000′	41°17′58"	1884.32′	3604.04′

FENCE AND GATES

No. (X)	LOCATION	NOTE
FB1	250.56′ R+ "IND1" 61+64.55	FENCE
FB2	263.71′ R+ "IND1" 62+93.91	FENCE (TYPE CL-6)
FC1	325.20′ R+ "D13" 686+74.73	FENCE (TYPE CL-6)
FC2	303.02′ R+ "D13" 686+74.73	10′ CHAIN LINK GATE
FC3	301.15′ R+ "D13" 688+64.26	FENCE (TYPE CL-6)
FC4	239.93′ R+ "D13" 688+64.26	10′ CHAIN LINK GATE
FC5	213.35′ R+ "D13" 689+00.32	FENCE (TYPE CL-6)
FC6	220.24′ R+ "D13" 688+64.26	FENCE (TYPE CL-6)
FC7	86.58′ R+ "D13" 689+00.32	BEGIN FENCE (TYPE CL-6)
FC8	86.58′ R+ "D13" 686+74.73	END FENCE (TYPE CL-6)
FC9	34.78′ R+ "D13" 686+74.73	BEGIN FENCE (TYPE CL-6)
FC10	34.78′ L+ "D13" 686+74.73	END FENCE (TYPE CL-6)
FC11	88.81′ L+ "D13" 686+74.73	END FENCE (TYPE CL-6)
FC12	208.92′ L+ "D13" 686+72.17	FENCE (TYPE CL-6)
FC13	289.76′ L+ "D13" 686+64.92	10′ CHAIN LINK GATE
FC14	309.35′ L+ "D13" 686+63.11	FENCE (TYPE CL-6)
FC15	34.78′ R+ "D13" 689+00.32	BEGIN FENCE (TYPE CL-6)
FC16	34.78′ L+ "D13" 689+00.32	END FENCE (TYPE CL-6)
FC17	94.95′ L+ "D13" 689+00.32	BEGIN FENCE (TYPE CL-6)
FC18	217.16′ L+ "D13" 689+24.27	FENCE (TYPE CL-6)
FC19	284.05′ L+ "D13" 689+26.40	10′ CHAIN LINK GATE
FC20	303.74′ L+ "D13" 689+27.06	FENCE (TYPE CL-6)

THIS METHOD OF IDENTIFYING FENCE LOCATIONS MAY BE USED WHERE SUFFICIENT SPACE IS NOT AVAILABLE WITHIN THE PLAN VIEW IMAGE AND THE ADDITION OF THIS INFORMATION WITHIN THE PLAN VIEW IMAGE WOULD OBSCURE MORE SIGNIFICANT DESIGN INFORMATION.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50′

L-5

LAYOUT SHEET, EXAMPLE "65 LAYOUT-5" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

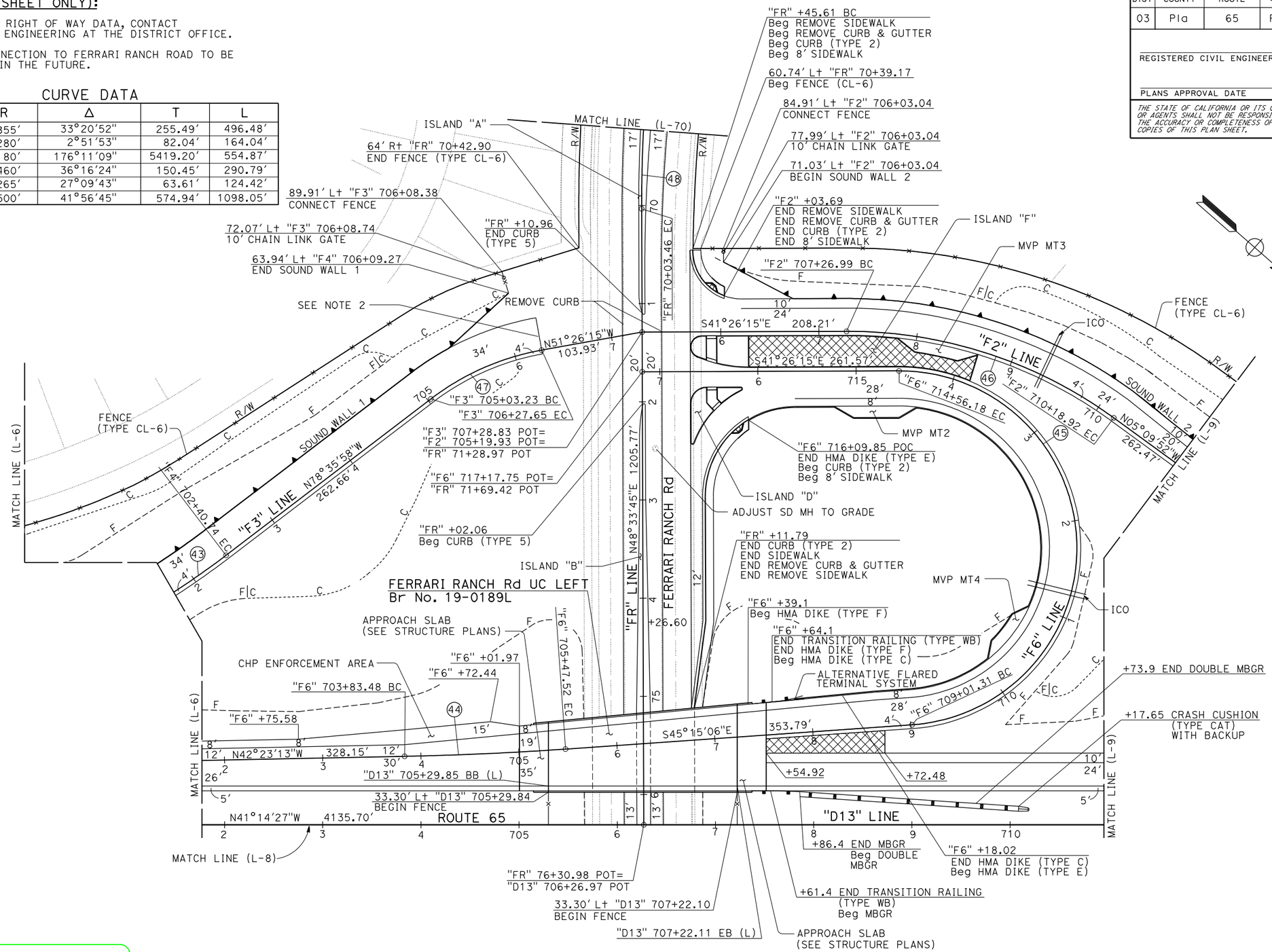
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES (THIS SHEET ONLY):

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. RAMP "F3" CONNECTION TO FERRARI RANCH ROAD TO BE CONSTRUCTED IN THE FUTURE.

CURVE DATA

No. (X)	R	Δ	T	L
43	855′	33°20′52"	255.49′	496.48′
44	3280′	2°51′53"	82.04′	164.04′
45	180′	176°11′09"	5419.20′	554.87′
46	460′	36°16′24"	150.45′	290.79′
47	265′	27°09′43"	63.61′	124.42′
48	1500′	41°56′45"	574.94′	1098.05′



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-7"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT
SCALE: 1" = 50′

L-7

LAYOUT SHEET, EXAMPLE "65 LAYOUT-7" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:16

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ea-65 L-007.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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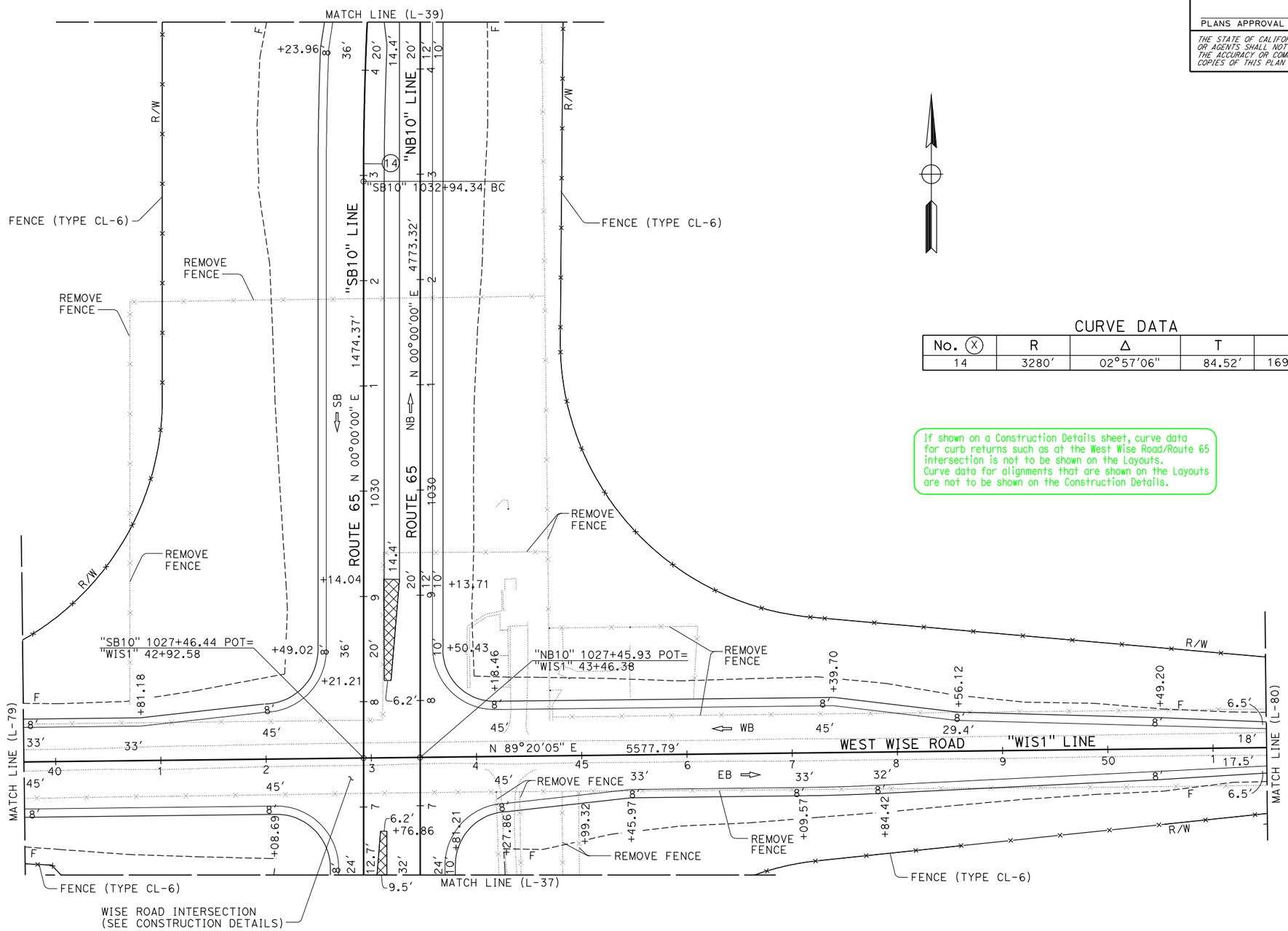
NOTE:

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



CURVE DATA

No. (X)	R	Δ	T	L
14	3280′	02°57′06"	84.52′	169.01′

If shown on a Construction Details sheet, curve data for curb returns such as at the West Wise Road/Route 65 intersection is not to be shown on the Layouts. Curve data for alignments that are shown on the Layouts are not to be shown on the Construction Details.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-38"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT
SCALE: 1" = 50′

L-38

LAYOUT SHEET, EXAMPLE "65 LAYOUT-38" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:18

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

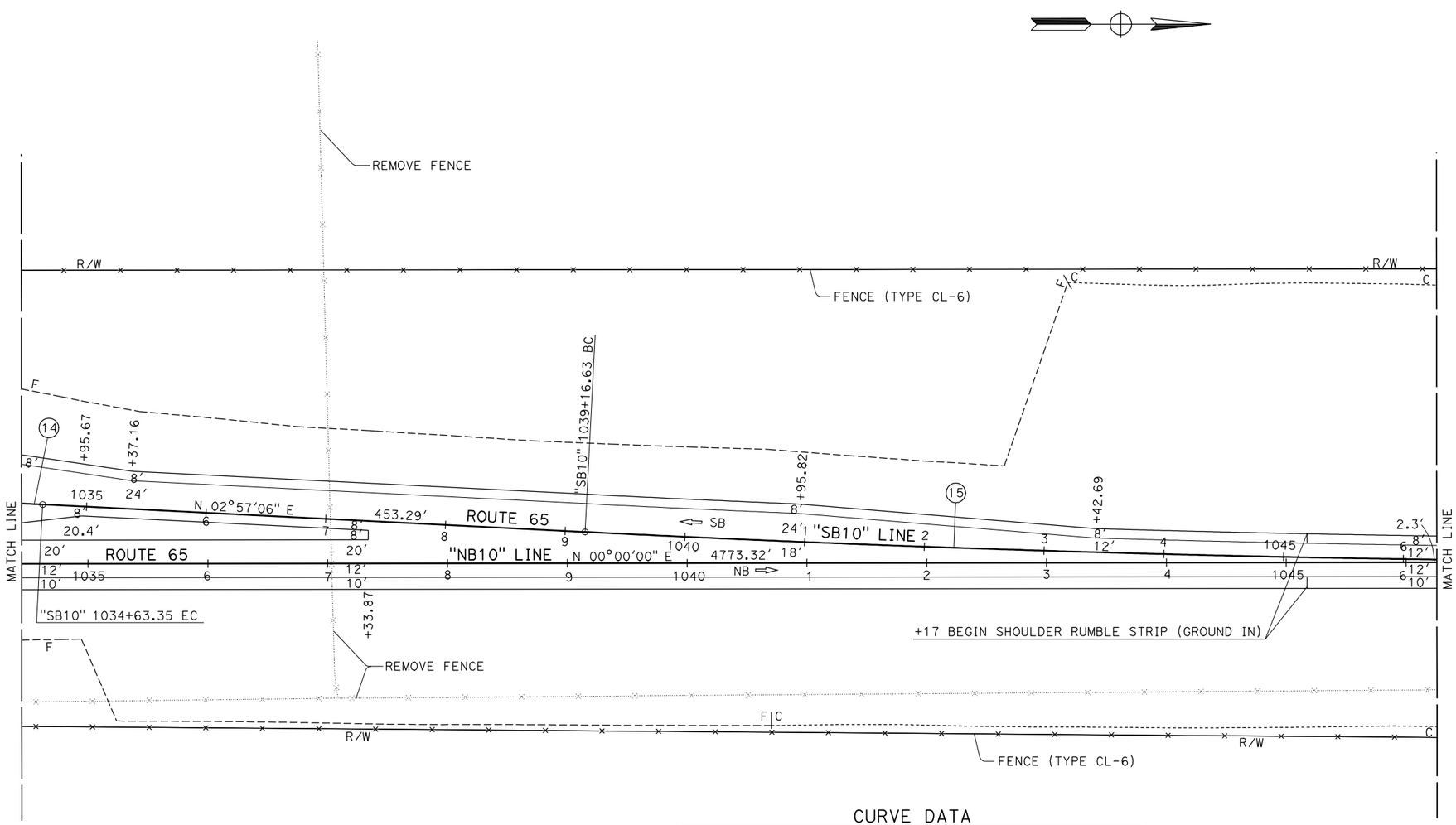
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

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



If matching sheets are sequential and there are no additional match lines, it is not necessary to include the sheet numbers of the adjoining sheets at the match lines.

CURVE DATA

No. (X)	R	Δ	T	L
14	3,280′	02°57′06"	84.52′	169.01′
15	19,685′	02°57′06"	507.16′	1,014.09′

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-39"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50′

L-39

LAYOUT SHEET, EXAMPLE "65 LAYOUT-39" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ea-65 L-039.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

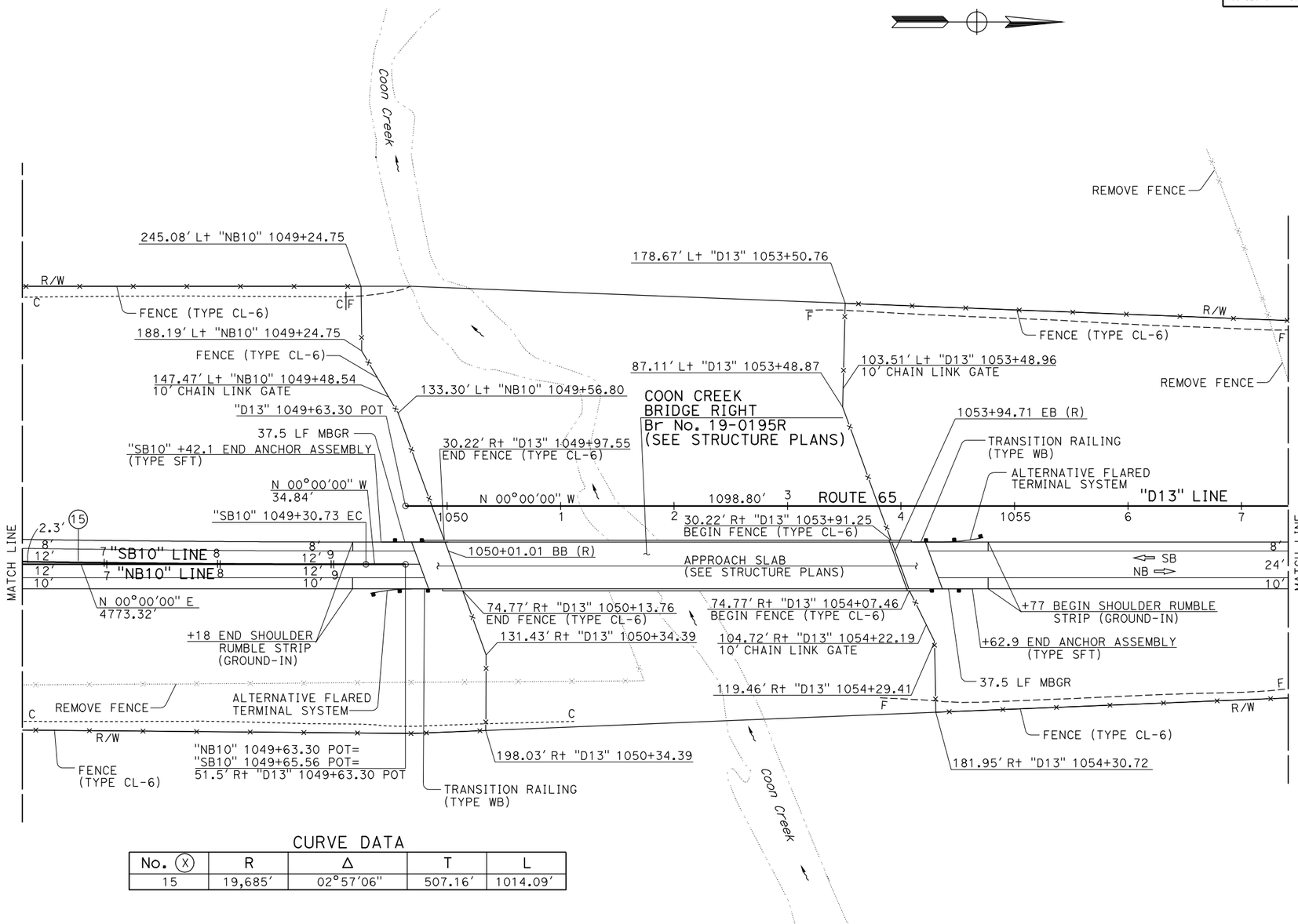
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

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



CURVE DATA

No. (X)	R	Δ	T	L
15	19,685'	02°57'06"	507.16'	1014.09'

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-40"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50'

L-40

LAYOUT SHEET, EXAMPLE "65 LAYOUT-40" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:21

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CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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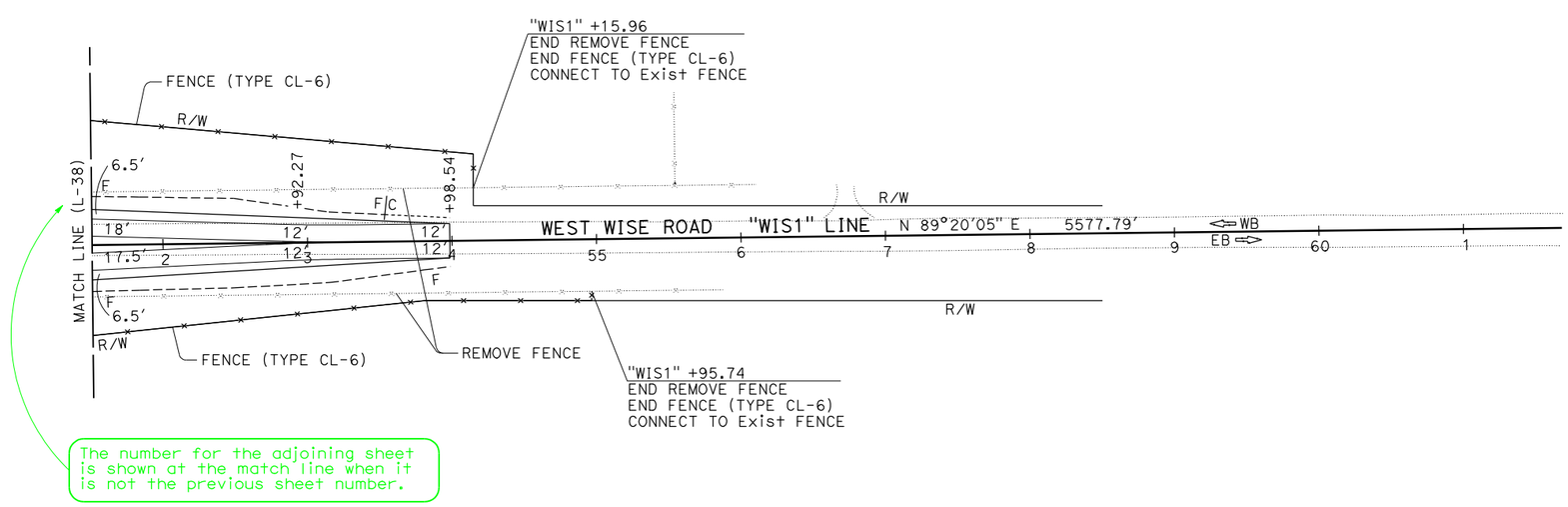
NOTE:

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



The number for the adjoining sheet is shown at the match line when it is not the previous sheet number.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

LAYOUT SHEET, EXAMPLE "65 LAYOUT-80"

SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

LAYOUT

SCALE: 1" = 50'

L-80

LAYOUT SHEET, EXAMPLE "65 LAYOUT-80" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:22

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FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

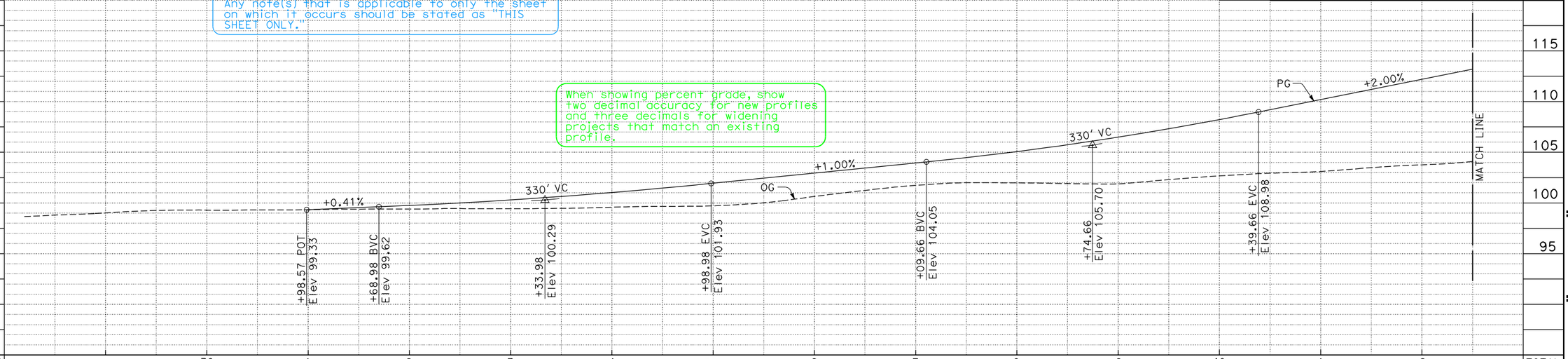
NOTE (THIS SHEET ONLY):

EXCAVATION AND EMBANKMENT QUANTITIES ARE INCLUDED IN THE "NB10" PROFILE SHEETS.

Any note(s) that is applicable to all the sheets within a specific plan sheet series, is to be shown on the first sheet only.

Any note(s) that is applicable to only the sheet on which it occurs should be stated as "THIS SHEET ONLY."

When showing percent grade, show two decimal accuracy for new profiles and three decimals for widening projects that match an existing profile.

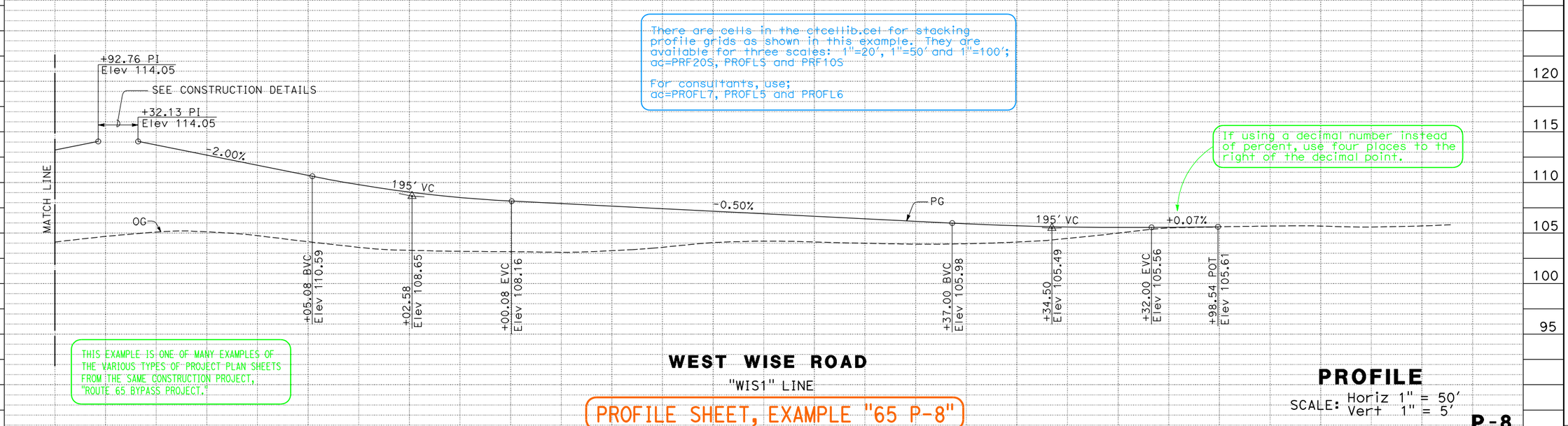


STATION	30	1	2	3	4	35	6	7	8	9	40	1	2	TOTAL
CY Exc		1,215											SEE NOTE	1,215
CY Emb		10,886											SEE NOTE	10,886

There are cells in the circellib.cel for stacking profile grids as shown in this example. They are available for three scales: 1"=20', 1"=50' and 1"=100'; ac=PRF20S, PROFL5 and PRF10S

For consultants, use; ac=PROFL7, PROFL5 and PROFL6

It using a decimal number instead of percent, use four places to the right of the decimal point.



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT.

WEST WISE ROAD

"WIS1" LINE

PROFILE SHEET, EXAMPLE "65 P-8"

PROFILE

SCALE: Horiz 1" = 50'
Vert 1" = 5'

P-8

STATION	3	4	45	6	7	8	9	50	1	2	3	4	55	6	TOTAL
CY Exc		440													440
CY Emb	SEE NOTE	10,197													10,197

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

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PROFILE SHEET, EXAMPLE "65 P-8" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:44

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

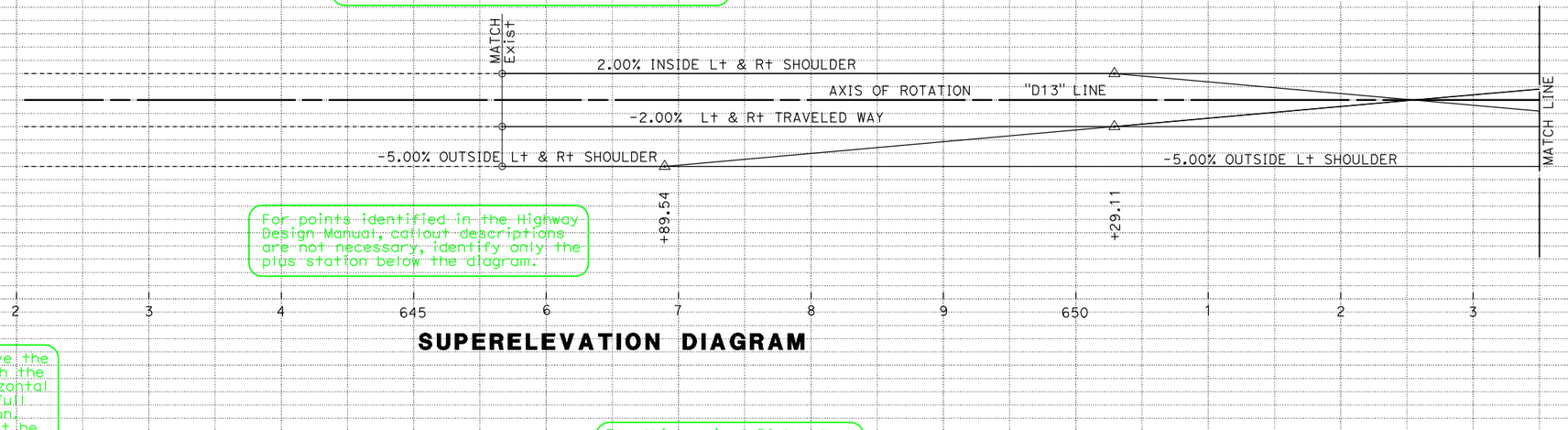
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.

NOTE:

ALL ELEVATIONS ARE BASED ON NGVD 1929.

For the superelevation above the axis of rotation do not include the "+" symbol. Only use the "-" symbol for the super below the axis.

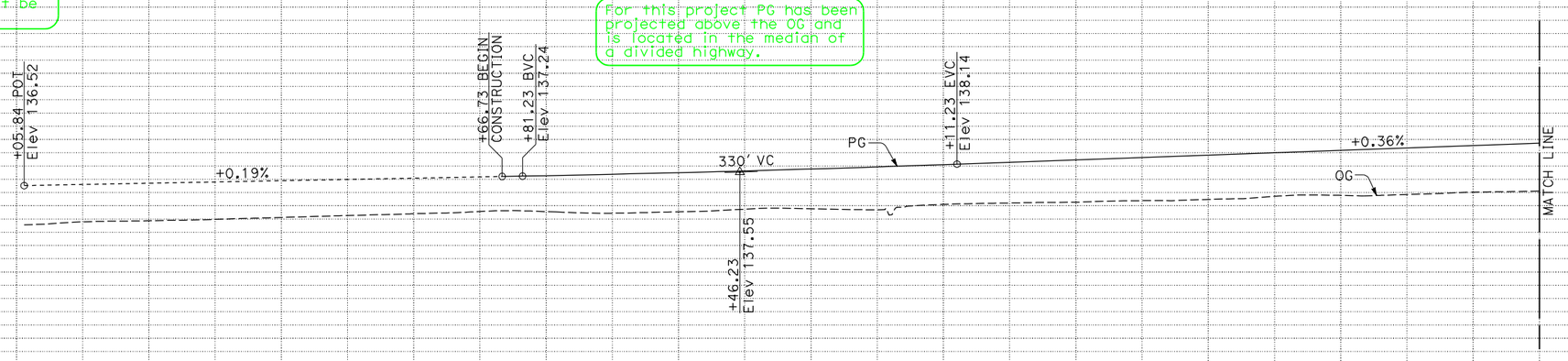


For points identified in the Highway Design Manual, callout descriptions are not necessary, identify only the plus station below the diagram.

SUPERELEVATION DIAGRAM

When a Superelevation Diagram is above the Profile, stationing is to be shown with the station number and tick only, no horizontal line is necessary. Never add +00 at full stations, it is unnecessary information. Stationing for the Superelevation must be the same as the Profile stationing.

For this project PC has been projected above the OG and is located in the median of a divided highway.



PROFILE

ROUTE 65
"D13" LINE

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-1"

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-1

STATION		2	3	4	645	6	7	8	9	650	1	2	3	TOTAL
CY	Exc	3,436								4,544				7,980
	Emb	3,469								6,632				10,101

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CALCULATED-DESIGNED BY | CHECKED BY

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PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 09:49

SUPERSEDES EXAMPLE RELEASED 8/31/09

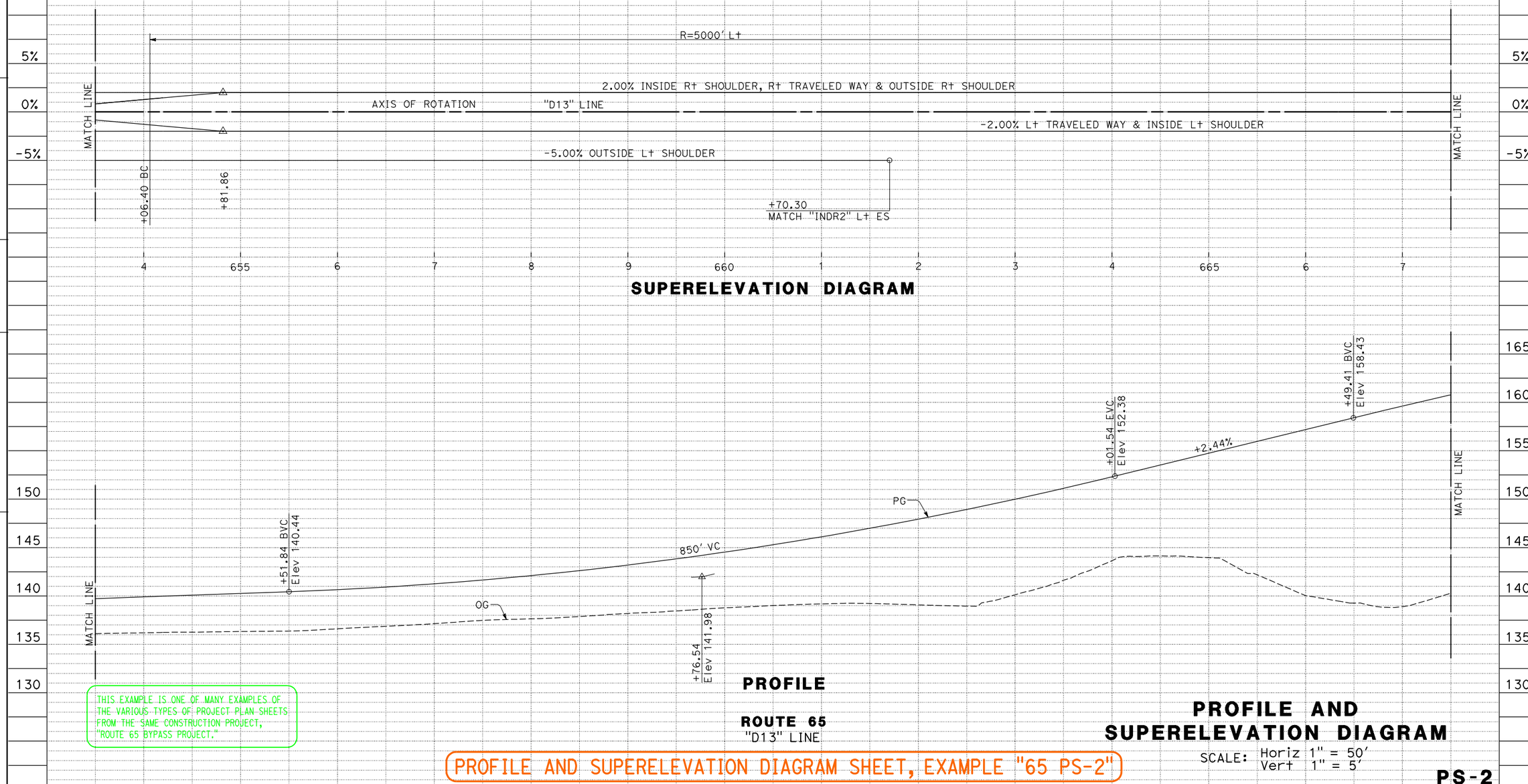
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-2"

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

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PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-2" RELEASED 1/6/2012

DATE PLOTTED => 29-DEC-2011
TIME PLOTTED => 09:53

LAST REVISION 00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => fb-65_PS-002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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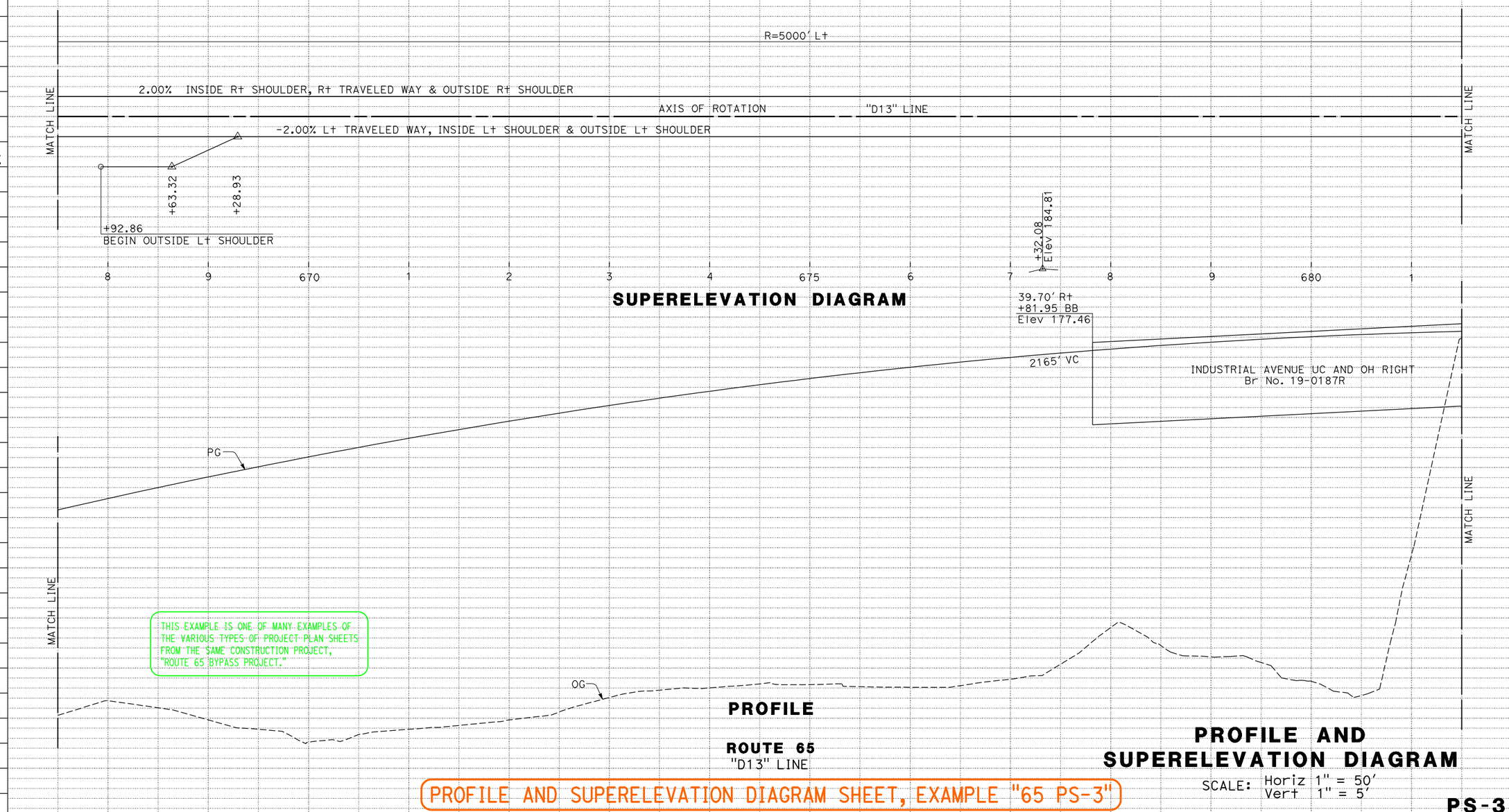

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-3"

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-3" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:01

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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REVISED BY

DATE REVISED

BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => fb-65_PS-003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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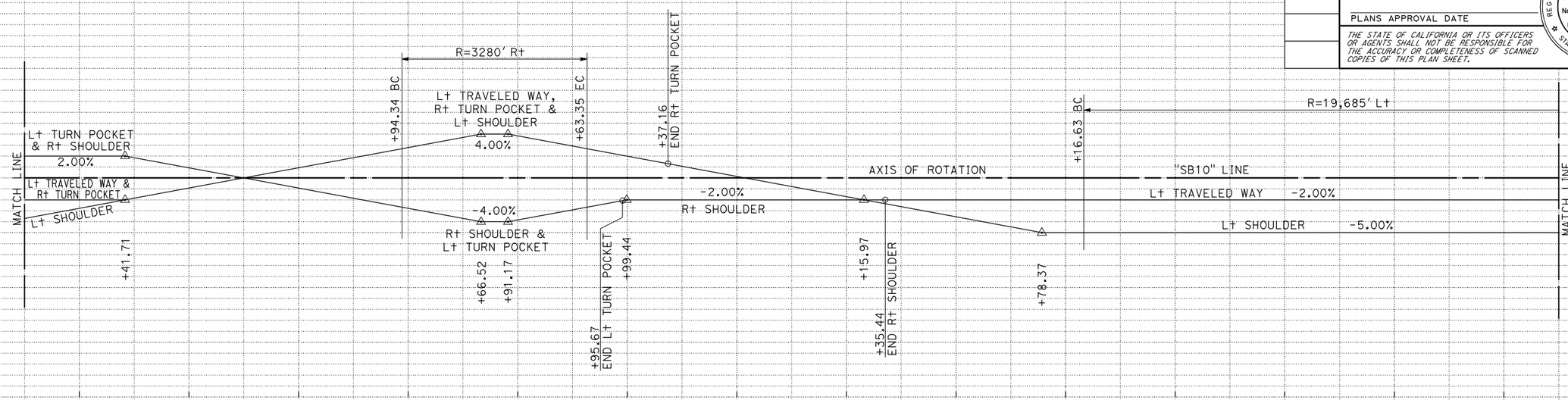
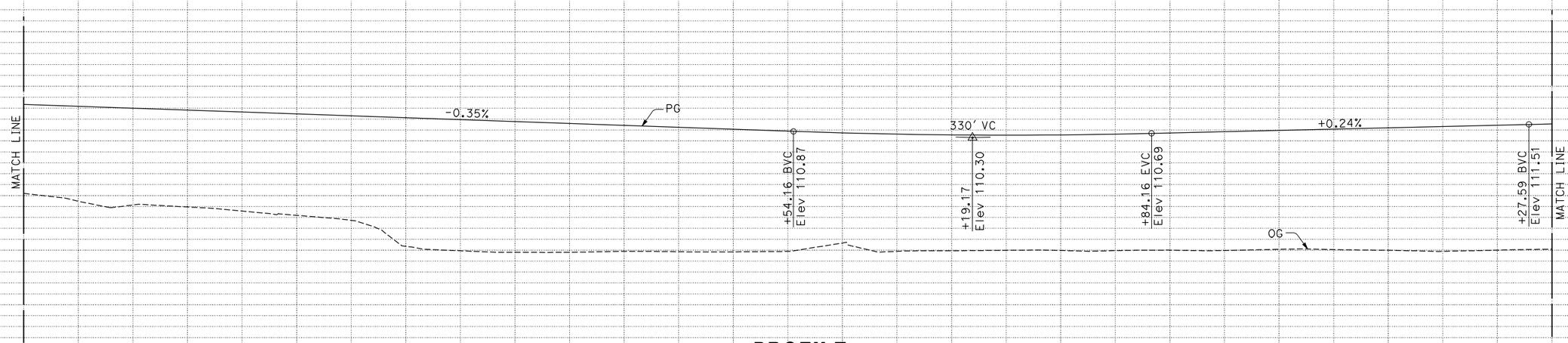
NOTE (THIS SHEET ONLY):

ALL EXCAVATION AND EMBANKMENT QUANTITIES FOR "SB10" ARE INCLUDED IN THE "NB10" PROFILE SHEETS.



SUPERELEVATION DIAGRAM



PROFILE

ROUTE 65
"SB10" LINE

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-46"

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-46

STATION	1030	1	2	3	4	1035	6	7	8	9	1040	1	2	3	TOTAL
CY Exc / Emb	SEE NOTE														

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-46" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:05

SUPERSEDES EXAMPLE RELEASED 8/31/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

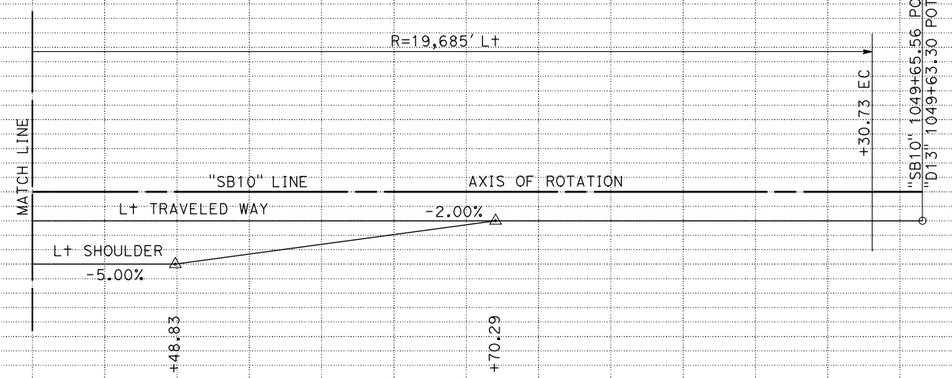
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

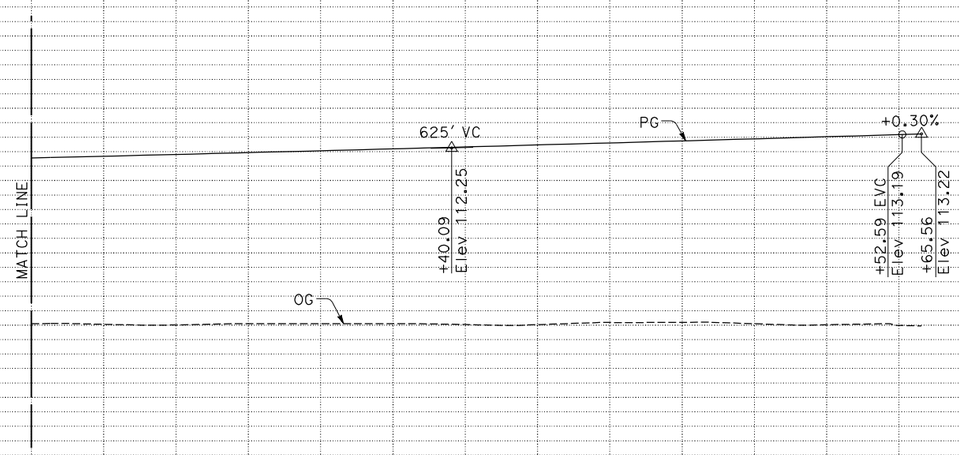
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE (THIS SHEET ONLY):

ALL EXCAVATION AND EMBANKMENT QUANTITIES FOR "SB10" ARE INCLUDED IN THE "NB10" PROFILE SHEETS.



SUPERELEVATION DIAGRAM



PROFILE

ROUTE 65
"SB10" LINE

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-47"

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-47

STATION	4	1045	6	7	8	9	1050	1	TOTAL
CY Exc / Emb	SEE NOTE								

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

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PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-47" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 10:07

SUPERSEDES EXAMPLE RELEASED 8/31/09

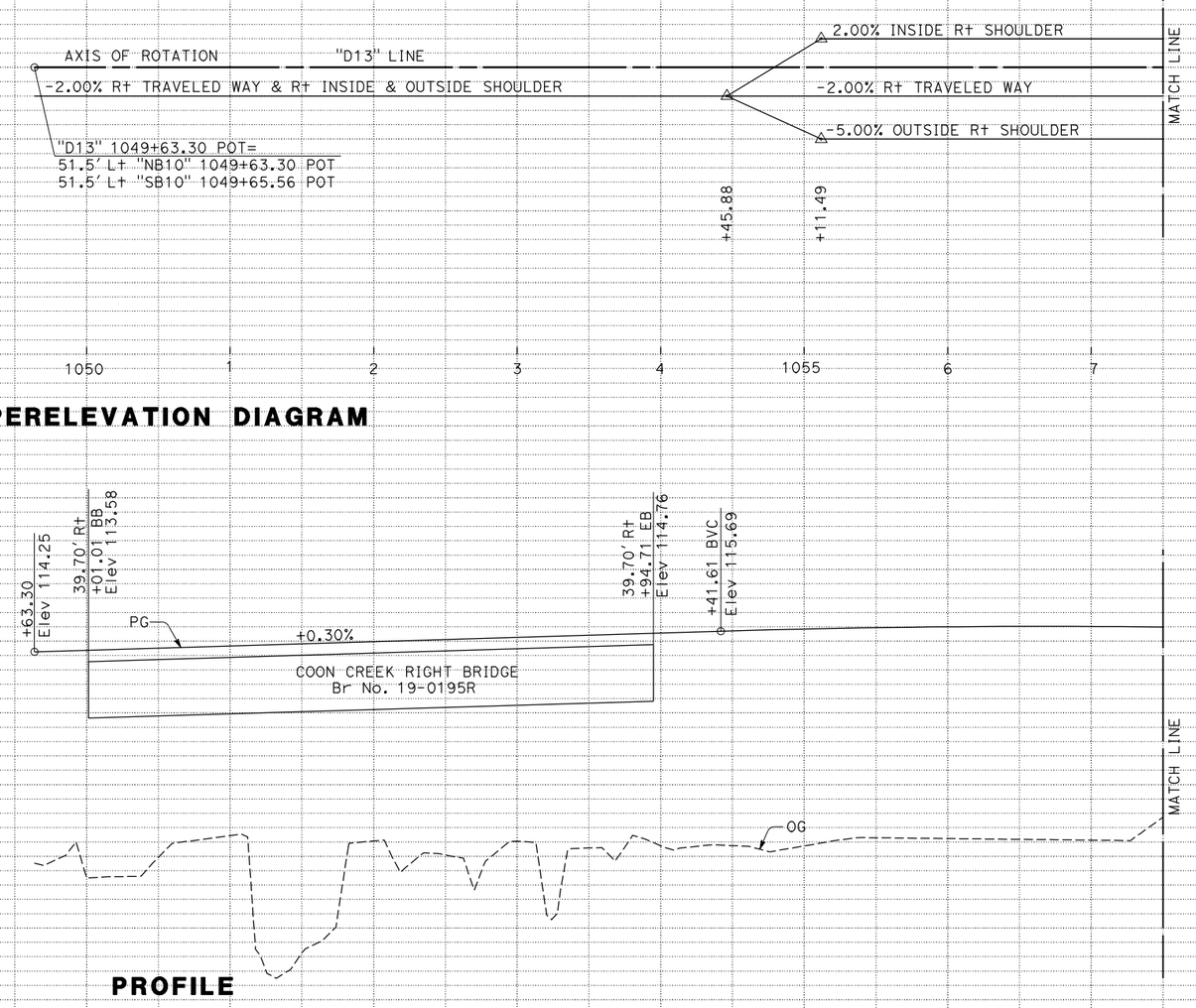
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

ROUTE 65
"D13" LINE

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-48"

PS-48

STATION		9	1050	1	2	3	4	1055	6	7	TOTAL
CY	Exc		59					13			72
	Emb		319					34,929			35,248

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CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 04-JAN-2012
TIME PLOTTED => 10:06

PROFILE AND SUPERELEVATION DIAGRAM SHEET, EXAMPLE "65 PS-48" RELEASED 1/6/2012

BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => fb-65_PS-048.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 5/4/12

GENERIC PROJECT BORDER SHEET RELEASED 12/11/2019

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

ID BLOCK:
FT=3, TX=7, WT=1,
LV=border_PROJ-ID-BLOCK-anno (10),
CO=0.
NOTE: Different than title sheet.

See Notes 1 and 3

REGISTERED CIVIL ENGINEER DATE

See Note 5

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

See Note 6

See Notes 1 and 2

Used by district for tracking design changes after initial "calculated-designed by" and "checked by" has been completed. Used if design changes have been made. Dates are never to be later than Plans Approval Date.
FT=3, TX=6, WT=1,
LV=LV=border_WITHIN-BORDER-anno (10),
CO=0.

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Mandatory printed name, first and last, (middle name or initial may also be included) of persons who performed design/calculations and checking for each individual plan sheet. This verifies Quality Control (QC) of the project. The person signing and sealing the individual plan sheet may be one of the two names shown.

TEXT: FT=3, TX=6, WT=1,
LV=border_WITHIN-BORDER-anno (10), CO=0.

NOTES: (These notes apply to all Contract Plan Sheets except the Title Sheet)

1. Only one seal and signature of the appropriate licensed person who is responsible for the technical content of the plan sheet is to appear on each individual plan sheet. Typically, the person signing the sheet is a licensed Civil Engineer, Landscape Architect, Electrical Engineer, or Land Surveyor. Use the appropriate border sheet cell in the latest Caltrans Named Level Cell Library (CTCELLIB_NamedLevels.cel) or Caltrans Cell Library (CTCELLIB). (See examples on this sheet.)

2. Seal Information:

   Name: TH=7, TW=5 or less, TW can be decreased for long first and last names or 2 lines may be used within the space provided.
   FT=3, WT=1, LV=border_SEAL (10), CO=0.

   Expiration date and License No.:
   FT=3, TH=7, TW=5, WT=1, LV=border_SEAL (10), CO=0.
   Expiration Date: (month-day-year, e.g. 3-31-12, 12-31-12).

3. Signature: WT=1, LV=border_SIGNATURE (63), CO=0.
   Date: FT=3, TX=7, WT=1, LV=border_SIGNATURE (63), CO=0.
   Date Signed (month-day-year, e.g. 10-6-12, 4-10-12).

4. The date of the engineer's signature is never to be later than the plans approval date.

5. Except for AADD projects, the plans approval date will be added by the Division of Engineering Services-Office Engineer. For all projects, use FT=3, TX=7, WT=1, LV=border_SIGNATURE (10), CO=0 Upper/Lower Case Example: March 3, 2012. See Title Sheet, Examples "A" and "C" for explanation of how the plans approval date is determined.

6. Except for AADD projects, the Sheet No. and Total Sheets will be added by the Division of Engineering Services-Office Engineer. For all projects, use: FT=3, TX=7, WT=1, LV=border_PROJ-ID-BLOCK-anno (10), CO=0.

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

If Civil Engineer to sign individual plan sheet, use sheet border cell (AC=FULPLN). Consultants use (AC=FUPLN2).

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT License & License No. Signature Renewal Date Date STATE OF CALIFORNIA

If Landscape Architect to sign individual plan sheet, use sheet border cell (AC=LAND). Consultants use (AC=LAND2).

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

If Electrical Engineer to sign individual plan sheet, use sheet border cell (AC=EPLAN). Consultants use (AC=EPLAN2).

PROFESSIONAL LAND SURVEYOR DATE

PLANS APPROVAL DATE

PROFESSIONAL LAND SURVEYOR No. Exp. STATE OF CALIFORNIA

If Land Surveyor to sign individual plan sheet, use sheet border cell (AC=SPLAN). Consultants use (AC=SPLAN2).

Mandatory printed name, first and last, (middle name or initial may also be included) of person supervising person signing sheet. Assists person signing sheet by providing guidance in developing the sheet and assists to clear project constraints through Ready-to-List process. This verifies Quality Assurance (QA) has been performed for the project.

TEXT: FT=3, TX=6, WT=1,
LV=LV=border_WITHIN-BORDER-anno (10),
CO=0, Upper Case.

Name of the functional area responsible for development of the plan sheet, e.g., Design, Traffic Design, etc. Where one Caltrans district develops the plan sheet for another Caltrans district, the functional area is to be preceded with the preparer's district number, e.g., 01-DESIGN

TEXT: FT=43, TX=10, WT=0,
LV=border_WITHIN-BORDER-anno (10), CO=0, Upper Case.

For Landscape Architecture:
FT=43, TH=10, TW=8, WT=0,
LV=border_WITHIN-BORDER-anno (10), CO=0, Upper Case.

NOTE: IF A CONSULTANT OR LOCAL AGENCY PREPARES THE INDIVIDUAL PLAN SHEET, THIS AREA IS TO BE LEFT BLANK.

GENERIC PROJECT BORDER SHEET,
BASIC BORDER INFORMATION FOR PROJECT SHEETS, EXCEPT TITLE SHEETS

This date is used by district drafting staff to reflect the last drafting change to each sheet. Date is never to be later than Plans Approval Date. (Not required for PS&E submittal.)

BORDER TEXT:
FT=3, TX=7, WT=1,
LV=border_SHEET (10), CO=0

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2019 | TIME PLOTTED => 12:06

SUPERSEDES EXAMPLE RELEASED 5/4/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:

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

Where right of way is shown on a plan view sheet (layout, drainage, electrical), include this note. Typically, the right of way note is placed in the upper left corner of the sheet.

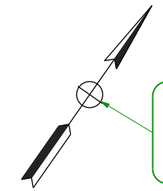
CTCELLIB.cel: AC=NOTE2,
TEXT: FT=3, TX=7, WT=1, LV=rd_RIGHT-OF-WAY-anno (23), Upper Case

Right of way shown on a plan view sheet must be depicted with a solid line.

INFORMATION ON THIS EXAMPLE APPLIES TO ALL PLAN VIEW SHEETS

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.



Use standard North Arrow for orientation.
The preferred location of the North Arrow is the upper right portion of the sheet within the maximum clip frame.
AC=NARR, WT=1, LV=pp_PRESENTATION (10), CO=0, AS=1

NOTES, LEGENDS, SYMBOLS, ACRONYMS AND ABBREVIATIONS:

- Notes, legends, symbols, acronyms and abbreviations applicable to each specific project are to be shown on the first sheet of the grouping of the plan sheet type (layouts, drainage, sign, pavement delineation, etc.). Do not duplicate standard plans acronyms, symbols or abbreviations in these listings.
- If a note(s) is specific to only one sheet of a single plan sheet type, use the heading; NOTE(S) (THIS SHEET ONLY): If the specific note is to appear only on the first sheet of a certain plan sheet type, DO NOT include it with the other notes that apply to all sheets of that plan type.

SCALES:

- For plan view sheets, a horizontal scale of 1" = 50′ (base scale) should typically be used. For projects in rural areas, a horizontal scale of 1" = 100′ may be used.
- A horizontal scale of 1" = 20" should be used where greater detail and clarity is required. These sheets would typically be used for road intersections, signal and lighting plans, etc.

STATIONING:

- For plan view sheets, stationing must be based on 100 feet per station with full annotation at 500 foot stations (multiple of 5). Annotation at 100 foot stations is a single digit number (the ones column). Station tick marks are centered on the alignment line. No minor tick marks. Annotation is placed below the alignment line. Annotation and length of station tick mark (in a MicroStation design file) is 2.8′ at 1" = 20′ scale, 7.0′ at 1" = 50′ scale and 14.0′ at 1" = 100′ scale.
- Do not include "+00" at full stations on any sheets (Layouts, Profiles, Superelevation Diagrams, Drainage, etc.).

ORIENTATION OF SHEETS:

- Plan view sheets are to be oriented to show mainline stationing progressing from left to right with increasing station values.
- Mainline stationing must not overlap from one sheet to another. Match lines must be shown with the callout of "MATCH LINE" on each sheet.
- Match Lines should occur at a +50 station and must be perpendicular to the alignment line where the work is occurring. If a match line occurs at a station other than +50, the station should be identified with the match line callout (i.e. "MATCH LINE +65").
- References to adjoining sheets at the match lines, identified such as "MATCH LINE (L-5)" is optional, but is advisable where many match lines are shown on a sheet (such as multiple sheets to show interchange areas or intersections of roads).
- If arrangement of the mainline alignment is such that "stacking" is necessary (mainline alignment stacked one above the other on the same plan view sheet), the sheet shall be arranged so that the stationing progresses from the top half of the sheet to the bottom half of the sheet using match lines. If stacking of alignment is used on any plan sheet, this configuration applies. Where profiles are "stacked" on full profile plan sheets, they shall be arranged so that the stationing progresses from the top half of the sheet to the bottom half of the sheet. If a plan view and profile or plan view, profile and superelevation diagram are shown on a single sheet, they shall be arranged on the sheet as shown in Figure 2-2J of Section 2-1.5 of the PPM.

COORDINATE VALUES:

- Coordinate values are to be maintained within the plan view sheets. This will allow retrieval of information by other functional units that do not have the base map and for reuse of this information to develop future projects. Sharing files with retained coordinate values allows for a quick positioning of information back to the reference file, base map or aerial photo mapping.

CURVE NUMBERING:

- Curve data numbers must be consecutive for each station line.
- Do not start curve data numbers over when going to the next layout sheet (or plan view sheet).
- Curve data numbers for different station lines should have gaps in the numbering from other station lines, thus allowing for possible last minute changes without having to renumber curve data from any other station line than the one changed.
- With the exception of curve data numbers assigned to curb returns at intersections that are shown on construction detail sheets, curve numbers are not to be duplicated within a project. This includes alignments for walls, temporary alignments for staging, and roadway alignment lines shown on Structures plan sheets.

Use DRAINAGE, SIGN, PAVEMENT DELINEATION, etc., in place of the words "CONTOUR GRADING" as appropriate for the work shown on each sheet.

AC=NOTE4 through AC=NOTE37 in the CTCELLIB_NAMEDLEVELS.cel or CTCELLIB.cel are available for use to specify the different types of work in the statement "APPROVED FOR..."

TEXT: FT=3, TX=8.75, WT=2, LV=border_INSIDE-BORDER-anno (10), Slant=20°, Upper Case.

Place statement as shown, center bottom of the sheet. This statement is not to be used on layout sheets (L-1, L-2, etc.). Layout sheets typically contain several types of work.

The word "APPROVED" in this statement clarifies the type of work (identified as bid items on the sheet) for which the Engineer is taking responsibility.

If subtitle or modifier is used, it must be placed beneath the main sheet title. Parenthesis is not required around subtitle or modifier.

Example:

STAGE CONSTRUCTION
STAGE 3

For subtitle or modifier use the following:
FT=43, TX=10, WT=0, LV=border_INSIDE-BORDER-anno (10), Upper Case

Use appropriate SHEET NAME AND ID CODE for the work shown. See CADD Users Manual Section 2.1.:

FT=43, TX=14.5, WT=0,
LV=border_INSIDE-BORDER-anno (10),
Upper Case. Use "Center Center" justification

Text may be reduced to a minimum of TX=12 for the long sheet names, e.g., STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN or space constraints.

For text sizes see CADD Users Manual Section 2.6.1.

Use appropriate scale for the work involved, see "SCALES" in section 2-1.3 of the PPM.

Use a colon after the word "SCALE"

FT=3, TX=8.75, WT=2,
LV=border_INSIDE-BORDER-anno (10),
Upper Case. Use "Center Center" justification

CONTOUR GRADING

SCALE: 1" = 50′

G-XX

GENERIC PROJECT PLAN VIEW SHEET, BASIC REQUIRED INFORMATION

APPROVED FOR CONTOUR GRADING WORK ONLY

GENERIC PROJECT PLAN VIEW SHEET RELEASED 12/11/2019

LAST REVISION 00-00-00 | DATE PLOTTED => 23-DEC-2019 | TIME PLOTTED => 15:47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | Caltrans | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

INSTRUCTIONS FOR SUPERELEVATION DIAGRAMS

1. Always look "up-station" (direction of increasing stations).
2. The lines above or below the axis of rotation represent the cross slope (plane) of the traveled way or shoulders.
3. The axis of rotation is located at the point defined as the "Profile Grade" (PG), as shown on the Typical Cross Sections. As a best practice, the PG should be the highest elevation point when the roadbed is tangent.
4. For an undivided highway, the PG is usually the crown of the roadbed, see Example 1 on these generic sheets.
5. General rule for tangent sections; ES or ETW should be at or below the PG. An exception would be if the inside shoulder continued the same cross slope of the traveled way. This may occur with on-ramps and off-ramps, approaches to bridges and future inside widening on PCC pavement.
6. For a divided highway, the PG can be located at one of two locations:

   In the median, along with the alignment line, see Example 3 on these generic sheets. The inside shoulders are usually projected to a common point that can be used as the Axis of Rotation by both roadbeds. As a best practice, the PG should be above the highest point of either roadbed in a tangent section. This PG location is used when the entire roadbed supers in the same plane.

   At both inside ETWs (yellow traffic stripe), see Examples 2 and 4 on these generic sheets.

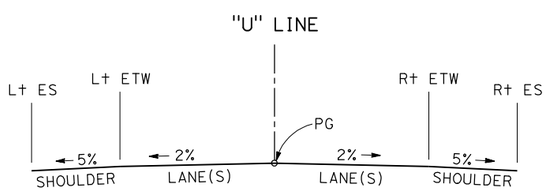
   In Example 2, the two inside ETWs are symmetrical to the same alignment line. Both roadbeds usually change at the same superelevation rate, and may be shown on the same superelevation diagram, but they rotate in parallel planes. Clearly label both roadbeds.

   In Example 4, there are two alignment lines because the inside ETWs are not symmetrical to the center of the roadbed and the superelevation rate may not be the same for both. The elevation for each roadbed, in this case, can be significantly different. The two superelevation diagrams are drawn independently.
7. The on-ramp and off-ramp stationing is to be in the direction of the mainline stationing.
8. As a best practice, the PG for on-ramps and off-ramps is usually the ramp alignment line (inside ETW-yellow traffic stripe).
9. Left and right callouts for ramps are always from the perspective of looking "up-station." DO NOT station ramps with respect to the "flow of traffic."
10. Ramp stationing that ties to the mainline stationing should always be the same station value as the mainline. The offset to the mainline is to be identified.

The examples on these first four generic superelevation diagram instructional sheets only show the basics of transitioning from a tangent section to full super. The key points and stationing normally shown and labeled on a superelevation diagram are shown on the fifth generic superelevation diagram instructional sheet.

The superelevation diagrams shown on these generic examples, DO NOT show the entire diagram.

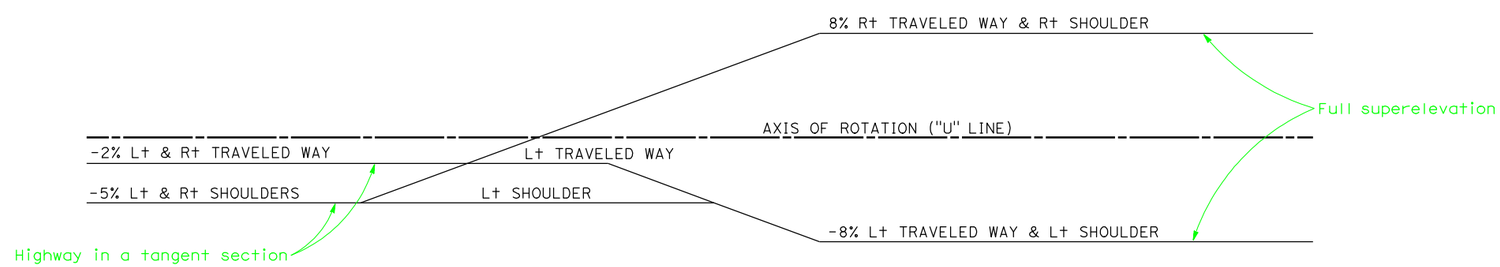
Label the radius and direction (Lt or Rt) above the portion of the diagram in full superelevation.



Example 1

(Cross section only depicts the tangent section)

The placement of typical cross sections on these generic sheets are for instructional purposes only.



Example 1

"U" LINE
TWO LANE ROAD

Use profile grids for superelevation diagrams. Profile grids are cells in the Caltrans cell library "ctcellib." For these first four generic superelevation diagram instructional sheets, profile grids were not used so instructions would be easier to read.

UNDIVIDED HIGHWAY

GENERIC SUPERELEVATION DIAGRAM, INSTRUCTIONAL INFORMATION SHEET 1 OF 5

SUPERELEVATION DIAGRAM

NO SCALE

SE-XX

SUPERELEVATION DIAGRAM SHEET 1 of 5, RELEASED 11/4/2010

LAST REVISION 00-00-00 | DATE PLOTTED => 02-NOV-2010 | TIME PLOTTED => 11:03

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => trjck | DGN FILE => superelevation1.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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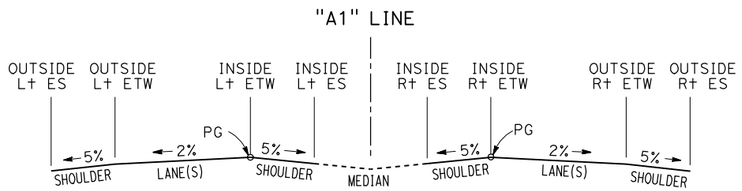
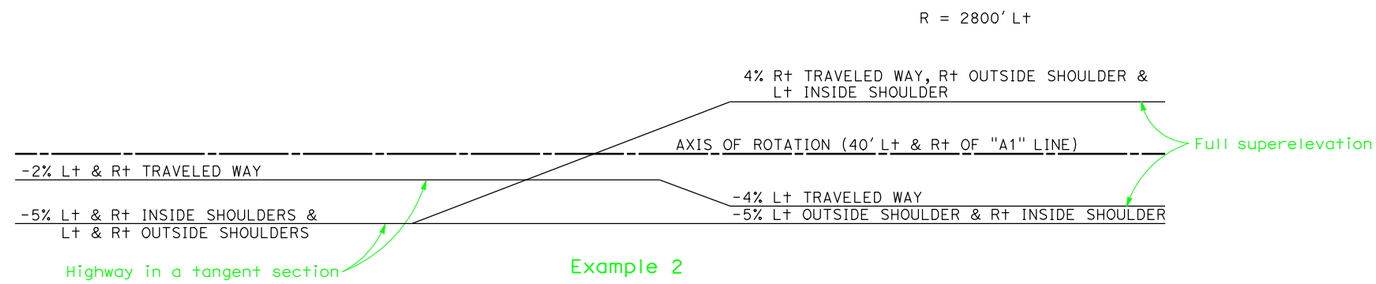


Example 2

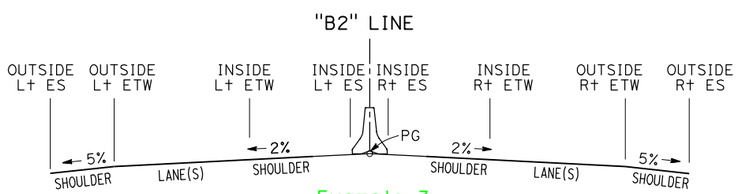
(Cross section only depicts the tangent section)

SOUTHBOUND NORTHBOUND



Example 2

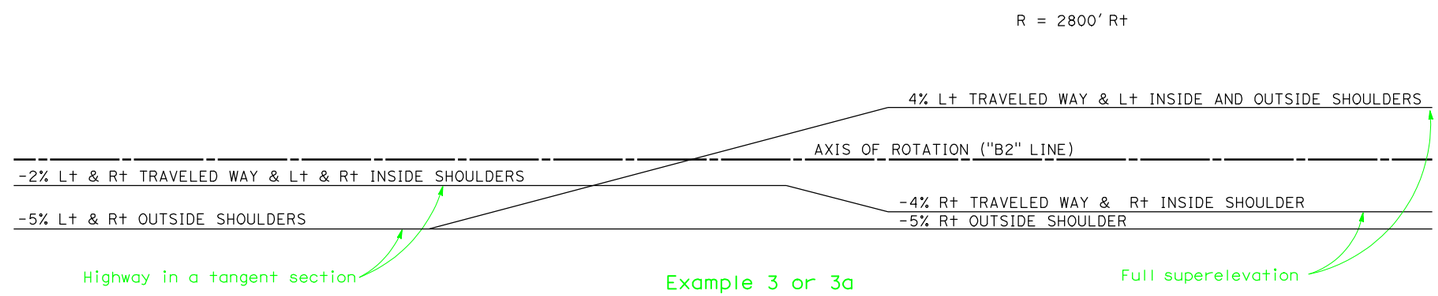
"A1" LINE
DIVIDED ROAD 1



Example 3

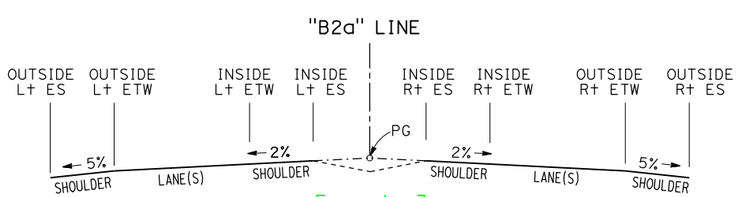
(Cross section only depicts the tangent section)
This example shows the inside ES located at the barrier.

SOUTHBOUND NORTHBOUND



Example 3 or 3a

"B2" LINE (OR "B2a" LINE)
DIVIDED ROAD 2



Example 3a

(Cross section only depicts the tangent section)
This example depicts a median with OG and no barrier.

SOUTHBOUND NORTHBOUND

DIVIDED HIGHWAY

GENERIC SUPERELEVATION DIAGRAM,
INSTRUCTIONAL INFORMATION
SHEET 2 OF 5

SUPERELEVATION DIAGRAM

NO SCALE

SE-XX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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SUPERELEVATION DIAGRAM SHEET 2 of 5, RELEASED 11/4/2010

LAST REVISION 00-00-00 DATE PLOTTED => 02-NOV-2010 TIME PLOTTED => 11:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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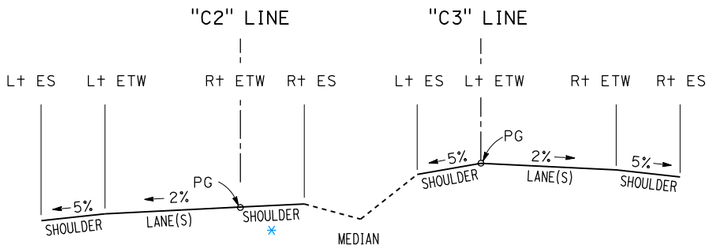
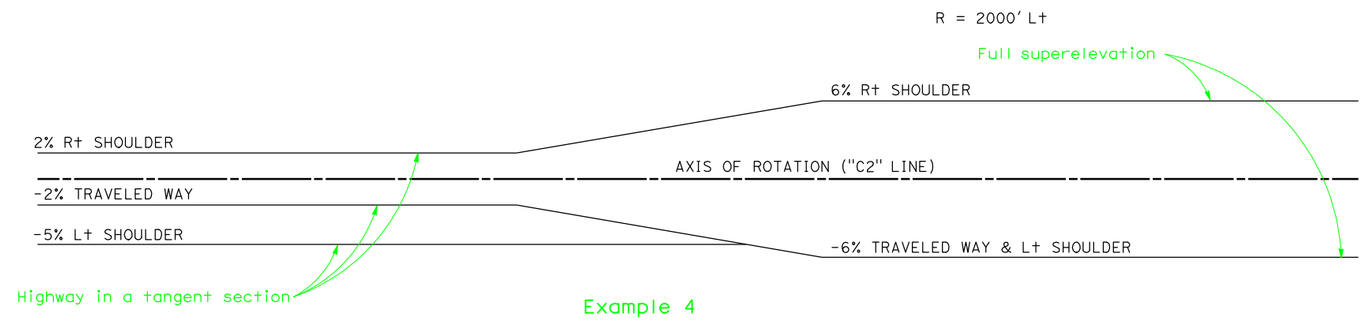
For this type of example, create separate superelevation diagrams for each alignment line.



Example 4
(Cross section only depicts the tangent section)

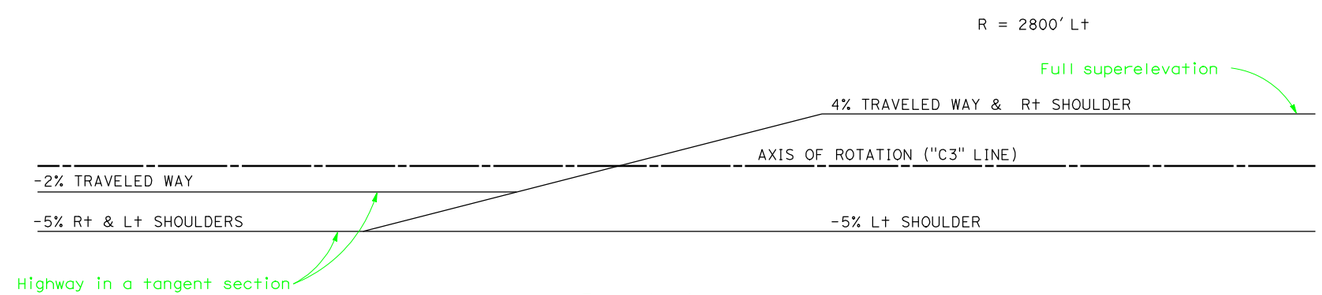
SOUTHBOUND NORTHBOUND

* Right shoulder of the "C2" Line has the same cross slope as the traveled way, in anticipation of future widening.



Example 4

"C2" LINE
DIVIDED ROAD 3



Example 4

"C3" LINE
DIVIDED ROAD 3

DIVIDED HIGHWAY

GENERIC SUPERELEVATION DIAGRAM,
INSTRUCTIONAL INFORMATION
SHEET 3 OF 5

SUPERELEVATION DIAGRAM
NO SCALE

SE-XX

SUPERELEVATION DIAGRAM SHEET 3 of 5, RELEASED 11/4/2010

LAST REVISION 00-00-00 DATE PLOTTED => 02-NOV-2010 TIME PLOTTED => 11:14

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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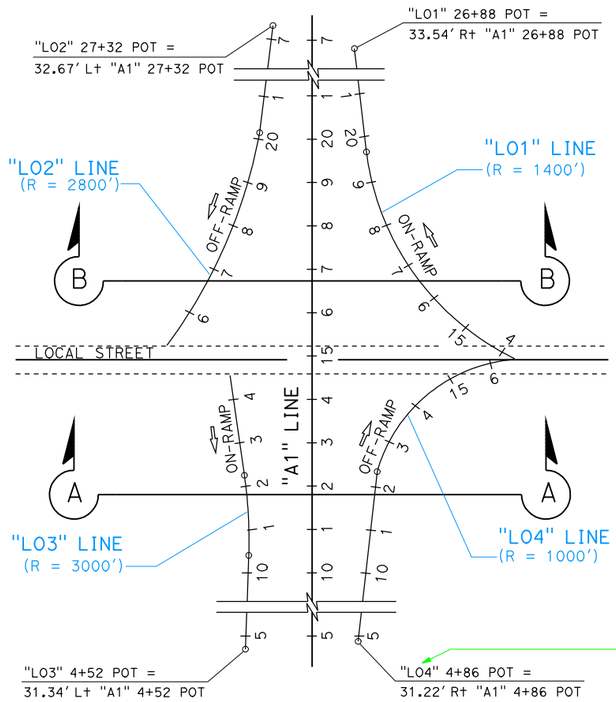
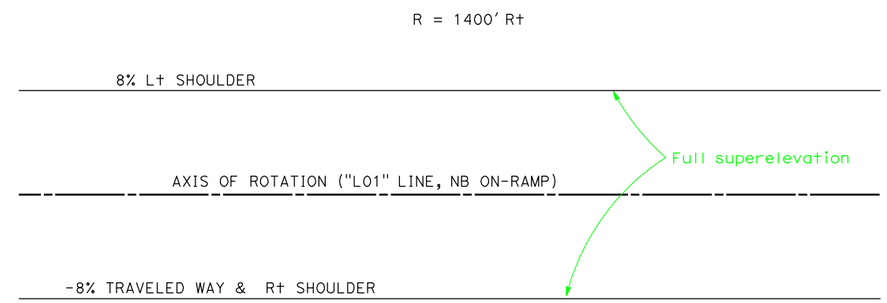


Layout of Ramps

The ramp alignment line terminates and ties to the mainline where it meets the outside ETW of the mainline. If there is a drop lane, the ramp alignment line will terminate at the outside ETW of the furthest outside lane continuing past the off-ramp.

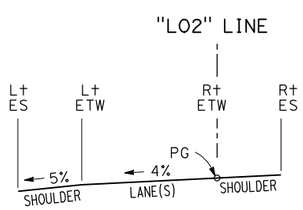
These generic examples show some of the Caltrans labeling conventions (in addition to the superelevation information) for ramps presented on the final contract plans. For any design questions concerning entrance and exit ramps, see the Highway Design Manual.

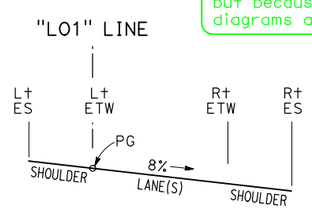
For the station line naming of ramps, see Section 3.6 of the CADD Users Manual.



"LO1" LINE
LOCAL STREET NB ON-RAMP

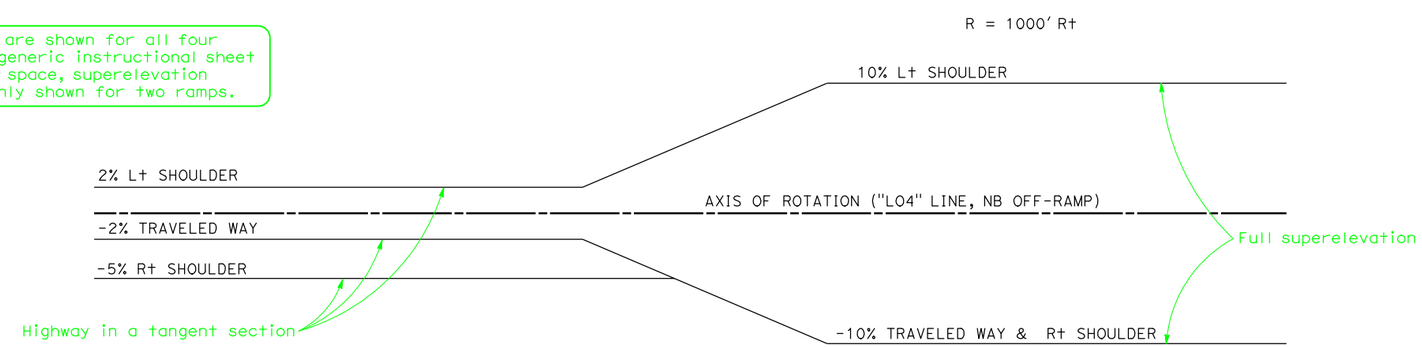
Cross sections are shown for all four ramps on this generic instructional sheet but because of space, superelevation diagrams are only shown for two ramps.



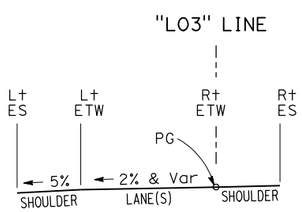


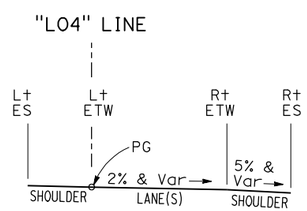
Section B-B

(Cross sections only depict the curve section)



"LO4" LINE
LOCAL STREET NB OFF-RAMP





Section A-A

(Cross sections depict both the tangent and curve sections)

ENTRANCE & EXIT RAMPS

GENERIC SUPERELEVATION DIAGRAM, INSTRUCTIONAL INFORMATION SHEET 4 OF 5

SUPERELEVATION DIAGRAM

NO SCALE

SE-XX

SUPERELEVATION DIAGRAM SHEET 4 of 5, RELEASED 11/4/2010

LAST REVISION 00-00-00 | DATE PLOTTED => 02-NOV-2010 | TIME PLOTTED => 11:12

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => trjck | DGN FILE => superelevation4.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

Transition points are to be identified with a triangle (use cell AC=PI).

Transition points to identify are:

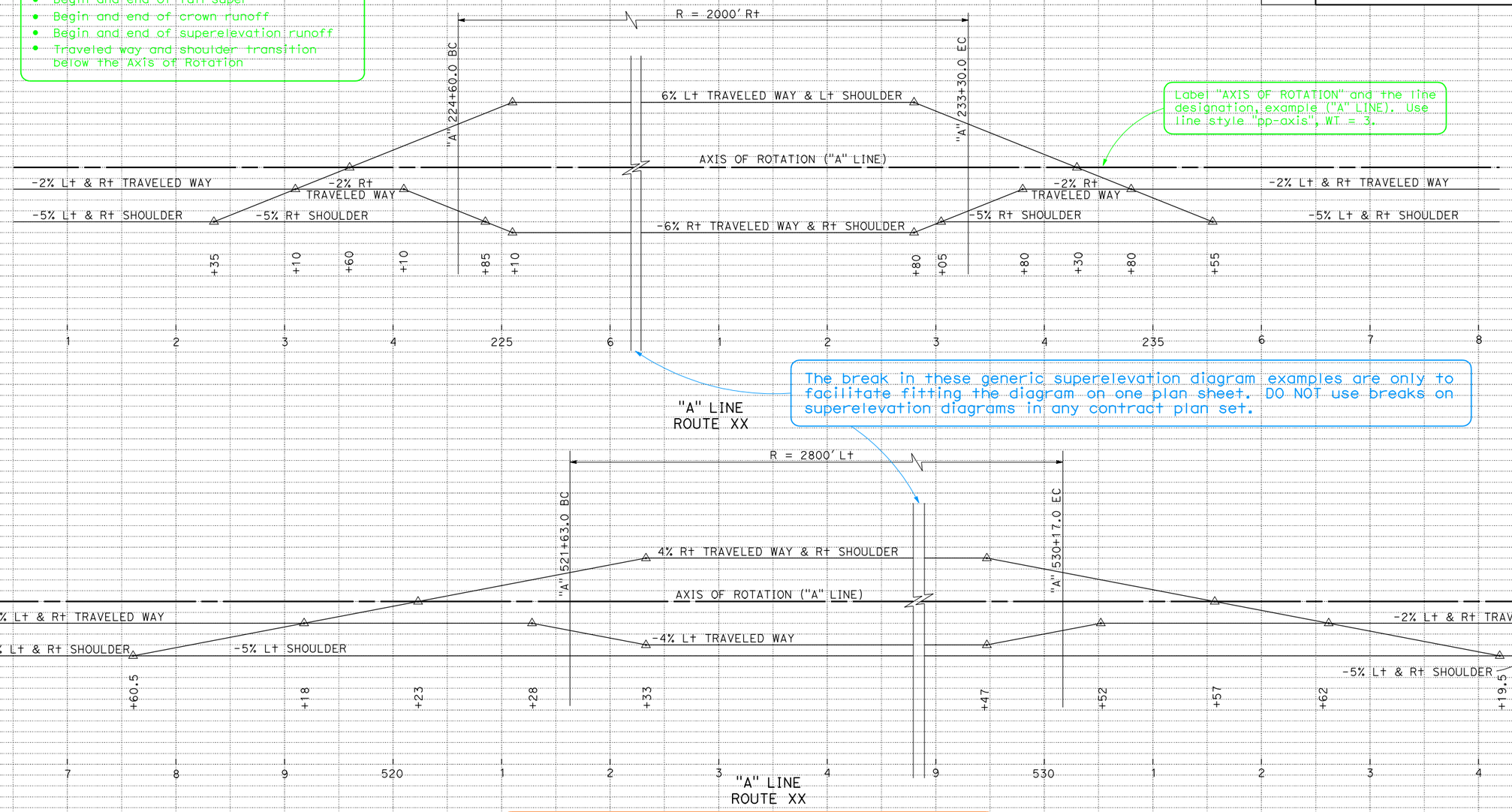
- Begin and end of normal crown
- Begin and end of full super
- Begin and end of crown runoff
- Begin and end of superelevation runoff
- Traveled way and shoulder transition below the Axis of Rotation

Must identify the BC and EC (include an extension line between the BC and EC).

Label stationing below each diagram.

Label plus stations of transition points below diagram.

Labeling positive percent cross slope does not need a (+) sign.



Label "AXIS OF ROTATION" and the line designation, example ("A" LINE). Use line style "pp-axis", WT = 3.

The break in these generic superelevation diagram examples are only to facilitate fitting the diagram on one plan sheet. DO NOT use breaks on superelevation diagrams in any contract plan set.

GENERIC SUPERELEVATION DIAGRAM, INSTRUCTIONAL INFORMATION FOR LABELING SHEET 5 OF 5

SUPERELEVATION DIAGRAM

SCALE: Horiz 1"=50'

SE-5

STATION		TOTAL
CY	Exc	
	Emb	

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SUPERELEVATION DIAGRAM SHEET 5 of 5, RELEASED 12/8/2010

LAST REVISION 00-00-00 | DATE PLOTTED => 02-DEC-2010 TIME PLOTTED => 15:18

On Layouts, Drainage, and Utility Plans, how the roadbeds are shown at grade separations depends on where the work is occurring.

- Always show the roadbed being worked on with solid lines.
- If there is work on both roadbeds, both are shown solid with the lower roadbed clipped out and deleted for that portion directly beneath the upper roadbed but with the EP or ES shown as a dashed line. (Example A)
- If the work is only on the upper roadbed, that roadbed is shown solid and the roadbed underneath is dropped out with the portion that is obscured by the upper clipped out and deleted. (Example B)
- If the work is only on the lower roadbed, drop out the upper roadbed and show only the EP of the lower roadbed as a dashed line where it is obscured by the upper roadbed. (Example C)

For Pavement Delineation Plans, the striping, regardless of whether it's on the under or overcrossing, is shown solid or using the appropriate line style with the EPs of both roadbeds and the alignment lines shown dropped out. (Example D)

Alignment lines are shown solid in all cases except pavement delineation sheets where they may interfere with stripe lines.

If there is pertinent information (utility potholes, transitions or other changes) beneath the upper roadbed it should be shown and not clipped out.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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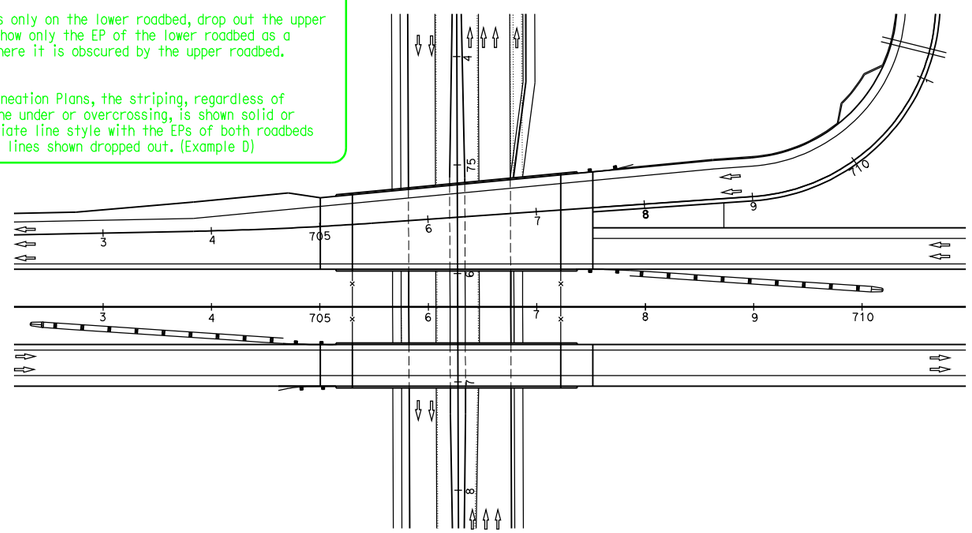
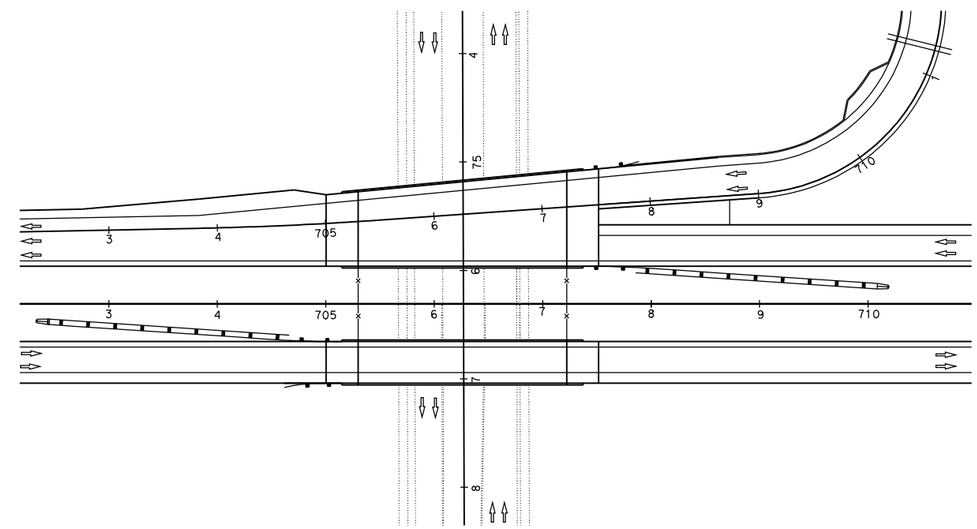
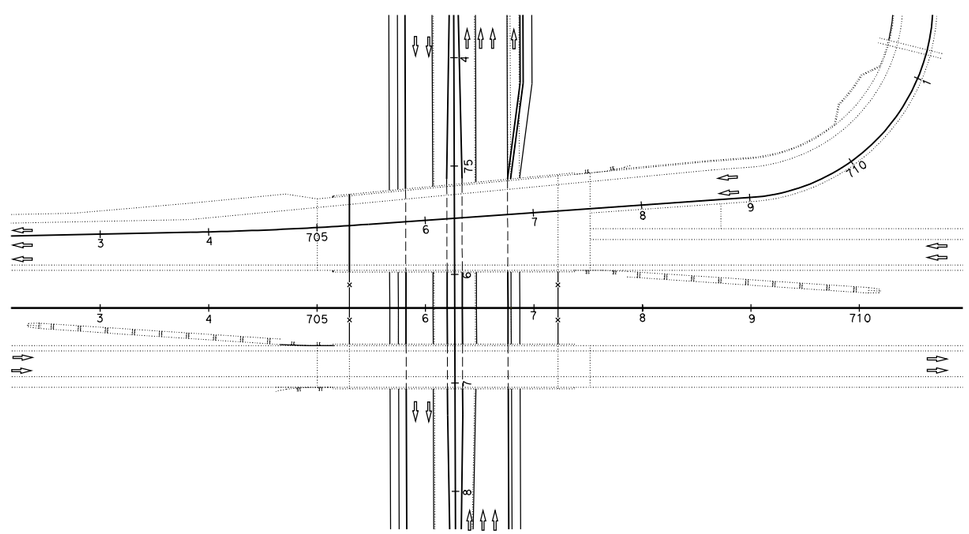


Example A

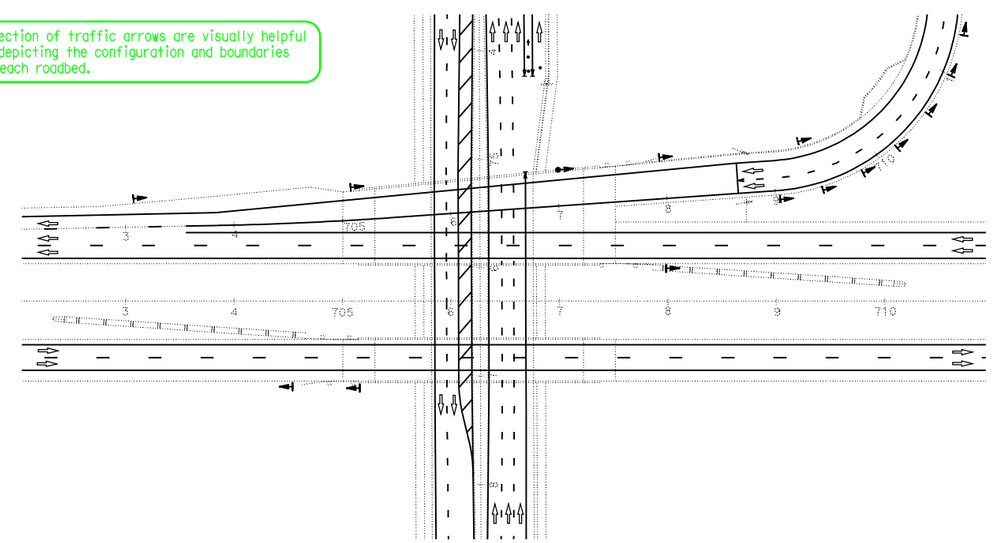


Example B



Example C

Direction of traffic arrows are visually helpful in depicting the configuration and boundaries of each roadbed.



Example D

GENERIC PLAN VIEW SHEET FOR GRADE SEPARATIONS SHEET 1 OF 2

LAYOUT

SCALE: 1" = XX'

L-XX

PLAN VIEW FOR GRADE SEPARATIONS, SHEET 1 OF 2 RELEASED 2/3/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2012 | TIME PLOTTED => 14:56

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => GradeSep1.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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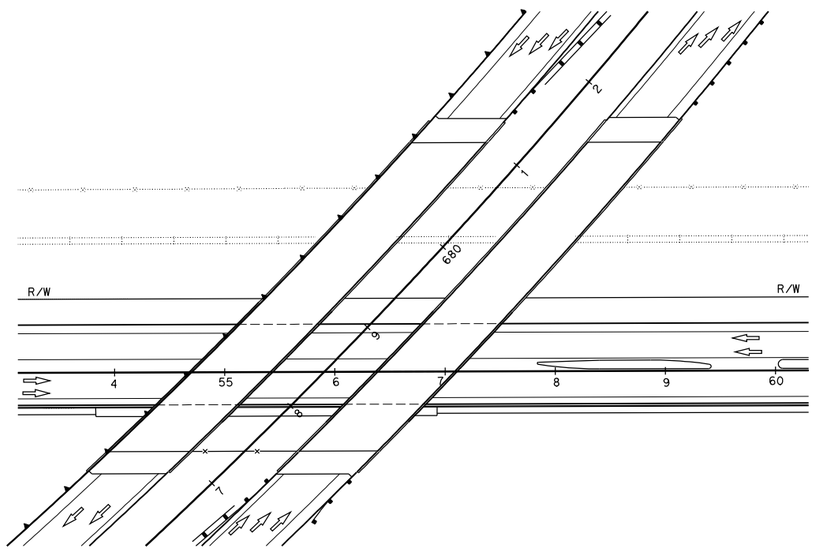
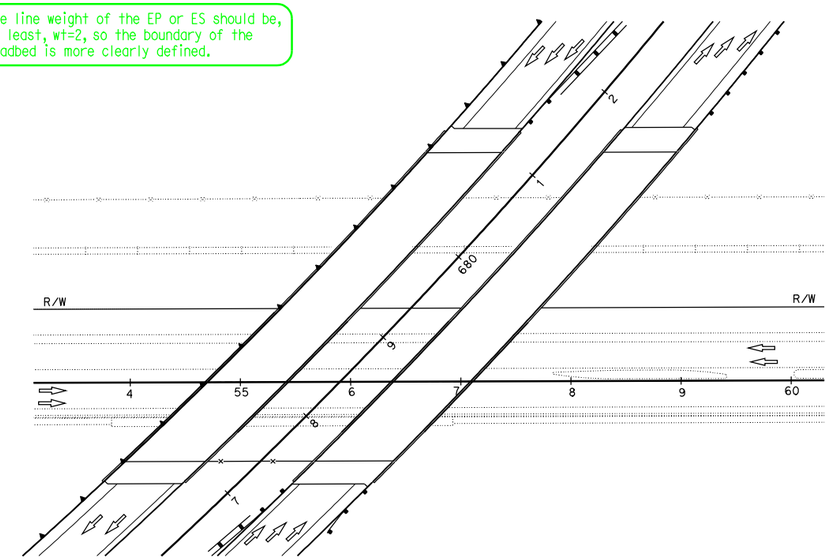
The line weight of the EP or ES should be, at least, wt=2, so the boundary of the roadbed is more clearly defined.

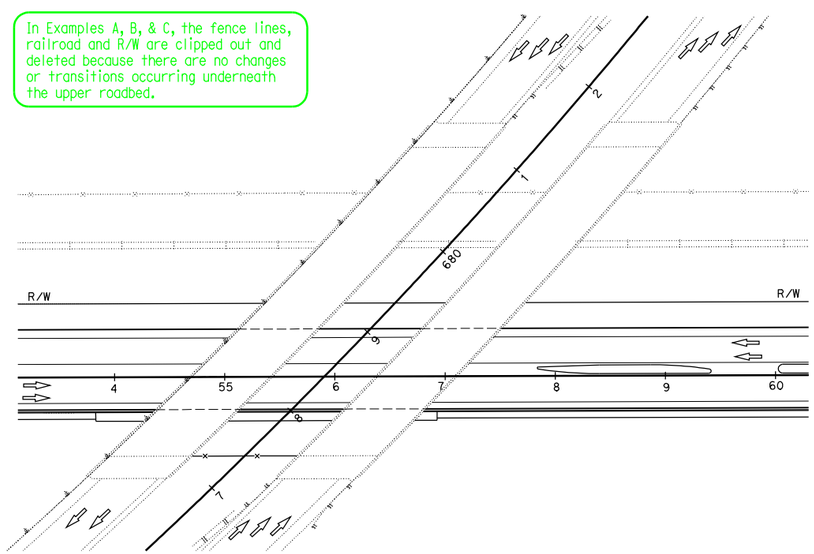


Example A

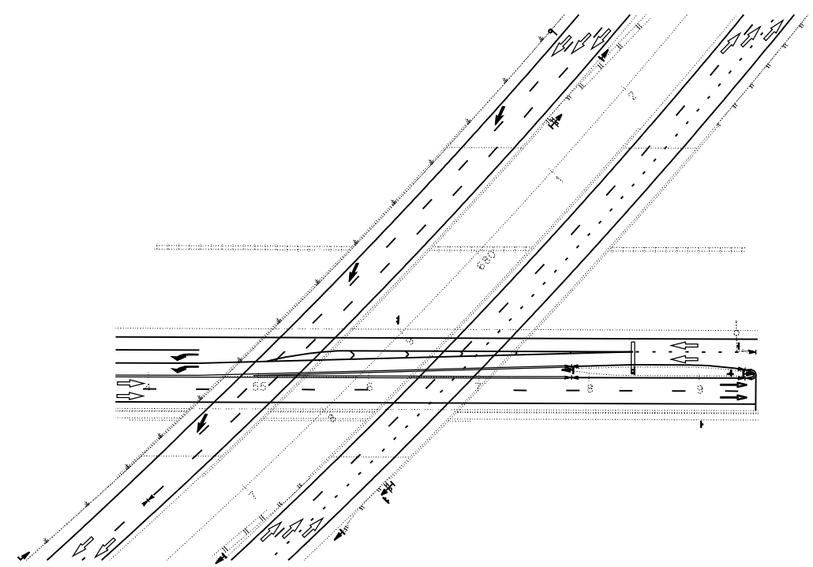


Example B

In Examples A, B, & C, the fence lines, railroad and R/W are clipped out and deleted because there are no changes or transitions occurring underneath the upper roadbed.



Example C



Example D

GENERIC PLAN VIEW SHEET FOR GRADE SEPARATIONS
SHEET 2 OF 2

LAYOUT
SCALE: 1" = XX'

L-XX

PLAN VIEW FOR GRADE SEPARATIONS, SHEET 2 OF 2 RELEASED 2/3/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2012 | TIME PLOTTED => 14:58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => GradeSep2.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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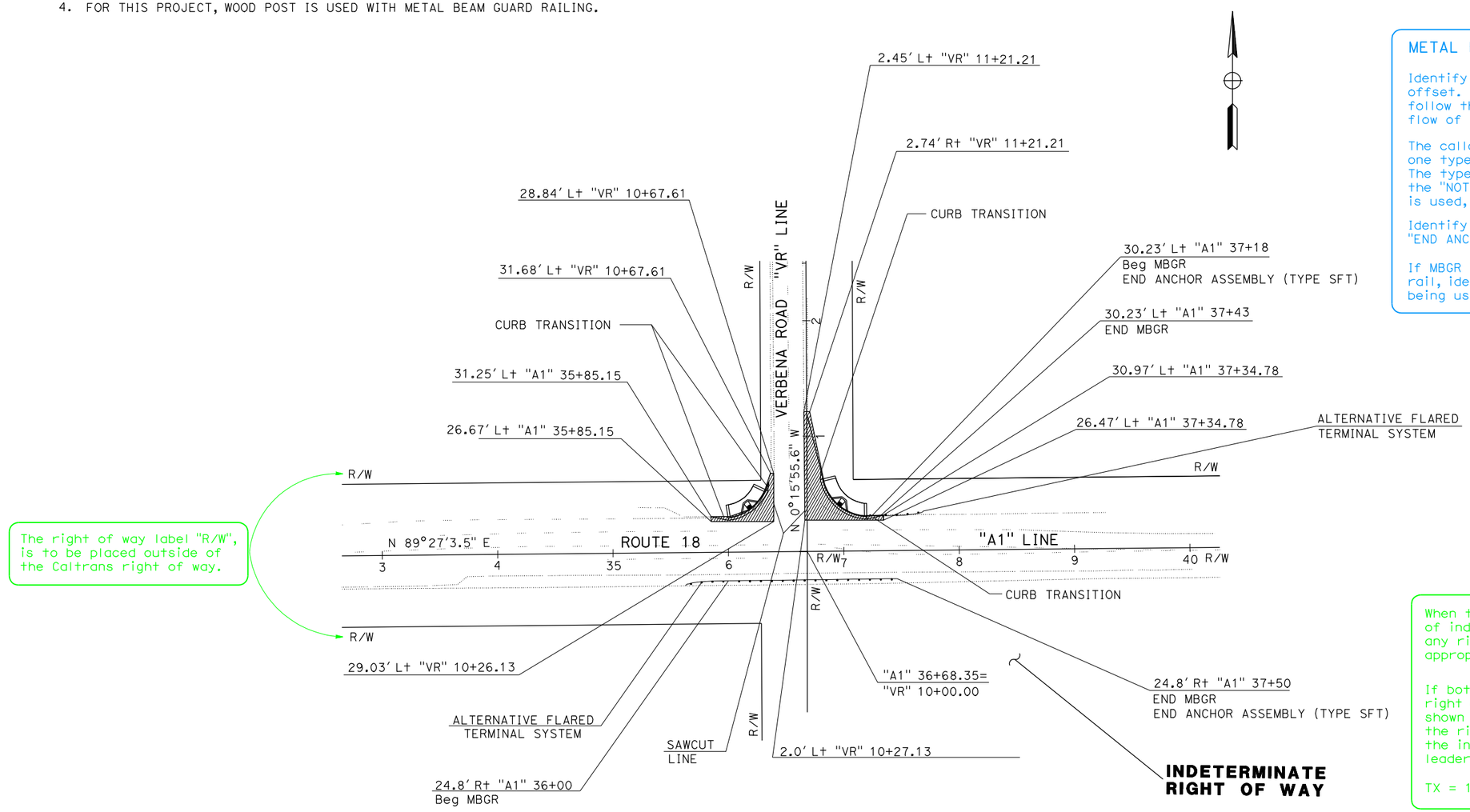
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SOUTHEAST QUADRANT:

   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.
3. FOR CURB TRANSITIONS, SEE CONSTRUCTION DETAILS.
4. FOR THIS PROJECT, WOOD POST IS USED WITH METAL BEAM GUARD RAILING.

LEGEND:

ROADWAY EXCAVATION AREA



The right of way label "R/W", is to be placed outside of the Caltrans right of way.

METAL BEAM GUARD RAILING

Identify location of MBGR by station and offset. "BEGIN" and "END" callouts are to follow the increasing stationing, not the flow of traffic.

The callout "MBGR" is sufficient when only one type of MBGR is used in the project. The type of MBGR can be identified under the "NOTES". If more than one type of MBGR is used, identify the type with each callout.

Identify the type of MBGR end treatments, "END ANCHOR ASSEMBLY" and "TERMINAL SYSTEM".

If MBGR is being attached to a wall or bridge rail, identify when "TRANSITION RAILING" is being used.

When the plan view sheet consist entirely of indeterminate right of way, do not show any right of way line, but use the appropriate note (AC=NOTE35).

If both right of way and indeterminate right of way exists within the area shown on the plan view sheet, identify the right of way line as usual and identify the indeterminate area by using bold text, leader line and a tilde.

TX = 10, FT = 43, WT = 0, LV = 33

LAYOUT SHEET, EXAMPLE "A"
INDETERMINATE RIGHT OF WAY

LAYOUT
SCALE: 1" = 50′

L-1

LAYOUT SHEET, EXAMPLE "A", RELEASED 10/30/2009

LAST REVISION | DATE PLOTTED => 30-OCT-2009 | TIME PLOTTED => 16:47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 4/11/2008 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => trjck | DGN FILE => Layout_Example_A.dgn | CU | EA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

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NOTE:

For details not shown see Standard Plan A88A

DWS - Detectable Warning Surface

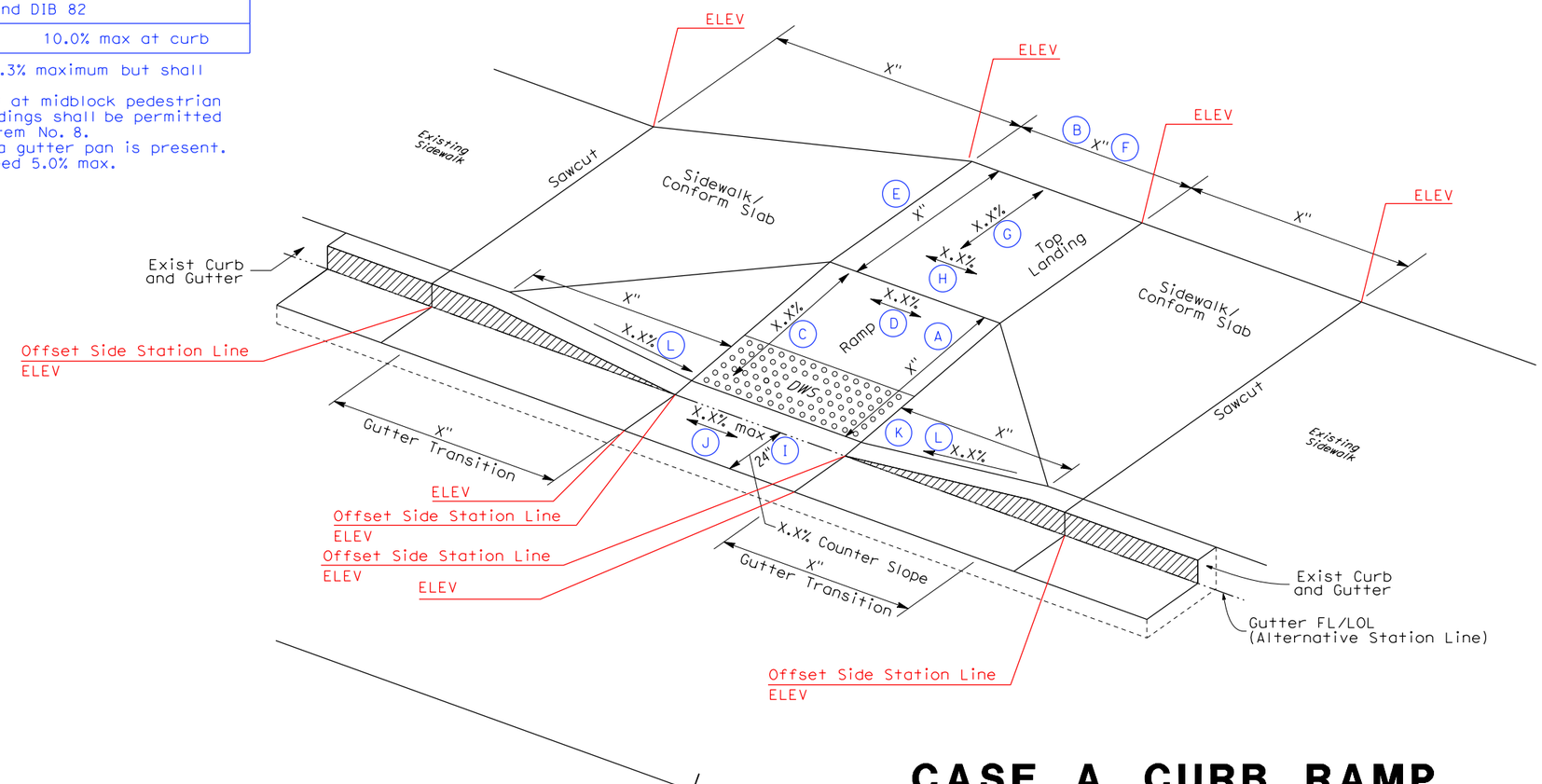
		CALTRANS CONSERVATIVE DESIGN STANDARDS	FEDERAL/CALIFORNIA STANDARDS
A Length of Ramp	(1)	Not required to exceed 15 feet, see DIB 82 4.3.8 #1	
B Width of Ramp		50" min	48" min
C Slope of Ramp		7.5% max	8.3% max (1)
D X Slope of the Ramp	(2)	1.5% max	2.0% max
E Top Landing Length		50" min	48" min
F Top Landing Width		50" min	48" min
G Top Landing Slope		1.5% max	2.0% max
H Top Landing X Slope	(2)	1.5% max	2.0% max
I Counter Slope	(3)	1"(V):24"(H) max	5.0% max
J Flow Line Slope	(2)	1.5% max	2.0% max
K Detectable Warning Surface		See Standard Plan A88A and DIB 82	
L Flare (Right/Left)		9.0% max at curb	10.0% max at curb

(1) Curb ramps shall have a running slope not steeper than 8.3% maximum but shall not require the ramp length to exeed 15 feet.
(2) At pedestrian crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope of curb ramps and landings shall be permitted to equal the street or highway grade. See DIB 82 4.3.8 item No. 8.
(3) Counter slope shall not exceed 1"(V):24"(H) or 4.2% where a gutter pan is present. If no gutter pan is present counter slope shall not exceed 5.0% max.

Items A through L graphically depict standards that are all required for compliance with the 2010 Americans with Disabilities Act or draft Public Rights of Way Accessibility Guidelines.

For each curb ramp location that is not designed to meet the conservative design standards include one (EA) quantity of bid item Pre/Post Construction Surveys in the bid item list. The intent of this bid item is to verify that construction complies with allowable variations from the dimensions and slopes shown on the contract plans required by CPB 14-1.

Location call outs and elevations direct the tie-in of the curb ramp to adjacent roadway, sidewalk, and grade at the project specific location with the compliant slopes and dimensions shown.



CASE A CURB RAMP

NOT TO SCALE

CURB RAMP DESIGN STANDARDS
CASE A

CURB RAMP DESIGN STANDARDS CASE A, RELEASED 03/30/2016

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

USERNAME => $USER
DGN FILE => $REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

CaseA-CurbRamp.dgn 3/24/2016 9:14:56 AM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTE:

For details not shown see Standard Plan A88A

DWS - Detectable Warning Surface

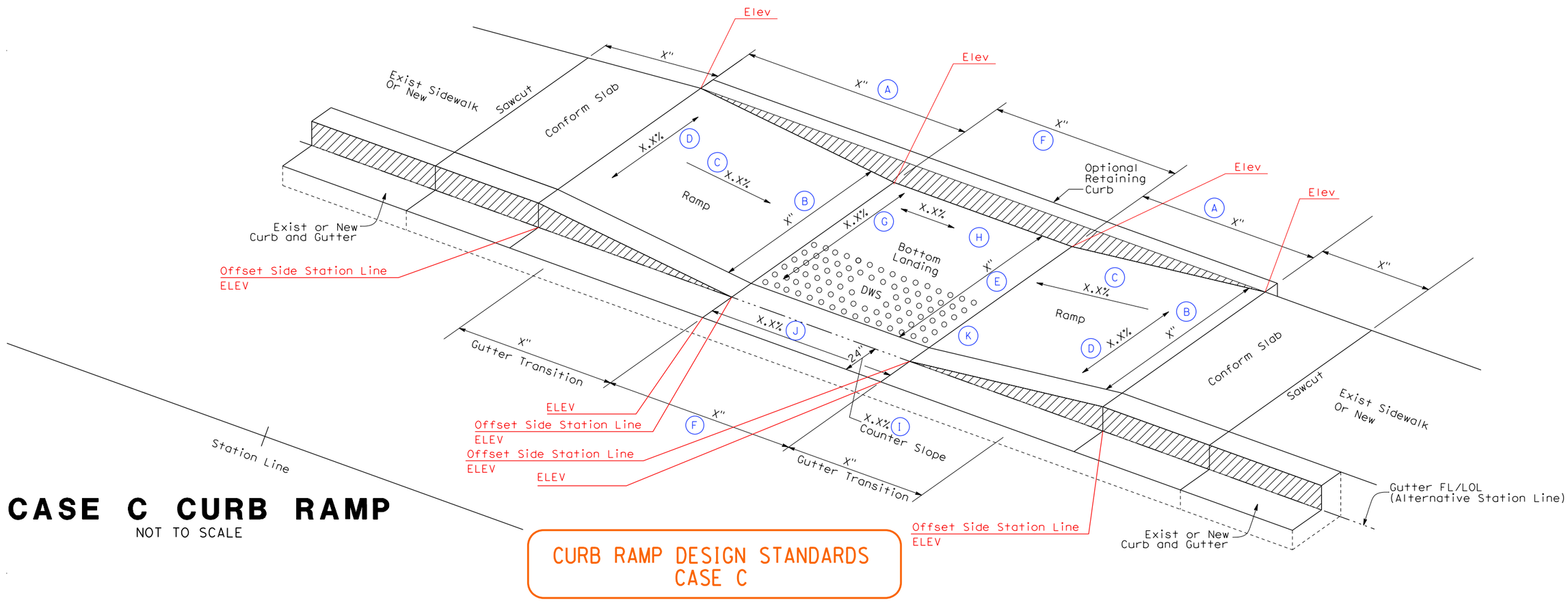
Items A through K graphically depict standards that are all required for compliance with the 2010 Americans with Disabilities Act or draft Public Rights of Way Accessibility Guidelines.

For each curb ramp location that is not designed to meet the conservative design standards include one (EA) quantity of bid item Pre/Post Construction Surveys in the bid item list. The intent of this bid item is to verify that construction complies with allowable variations from the dimensions and slopes shown on the contract plans required by CPB 14-1.

Location call outs and elevations direct the tie-in of the curb ramp to adjacent roadway, sidewalk, and grade at the project specific location with the compliant slopes and dimensions shown.

		CALTRANS CONSERVATIVE DESIGN STANDARDS	FEDERAL/ CALIFORNIA STANDARDS
A	Length of Ramp (1)	Not required to exceed 15 feet, see DIB 82 4.3.8 #1	
B	Width of Ramp	50" min	48" min
C	Slope of Ramp	7.5% max	8.3% max (1)
D	X Slope of the Ramp	1.5% max	2.0% max
E	Bottom Landing Length	50" min	48" min
F	Bottom Landing Width	50" min	48" min
G	Bottom Landing Slope	1.5% max	2.0% max
H	Bottom landing X Slope (2)	1.5% max	2.0% max
I	Counter Slope (3)	1"(V):24"(H) max	5.0% max
J	Flow Line Slope (2)	1.5% max	2.0% max
K	Detectable Warning Surface	See Standard Plan A88A and DIB 82 4.3.14	

(1) Curb ramps shall have a running slope not steeper than 8.33% maximum but shall not require the ramp length to exeed 15 feet.
(2) At pedestrian crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope of curb ramps and landings shall be permitted to equal the street or highway grade. See DIB 82 4.3.8 item No. 8.
(3) Counter slope shall not exceed 1"(V):24"(H) or 4.2% where a gutter pan is present. If no gutter pan is present counter slope shall not exceed 5.0% max.



CASE C CURB RAMP

NOT TO SCALE

CURB RAMP DESIGN STANDARDS
CASE C

CURB RAMP DESIGN STANDARDS CASE C, RELEASED 03/30/2016

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

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DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => $DATE

TIME PLOTTED => $TIME

Note:
For Details not shown, see standard Plan A88A and A88B

DWS - Detectable Warning Surface

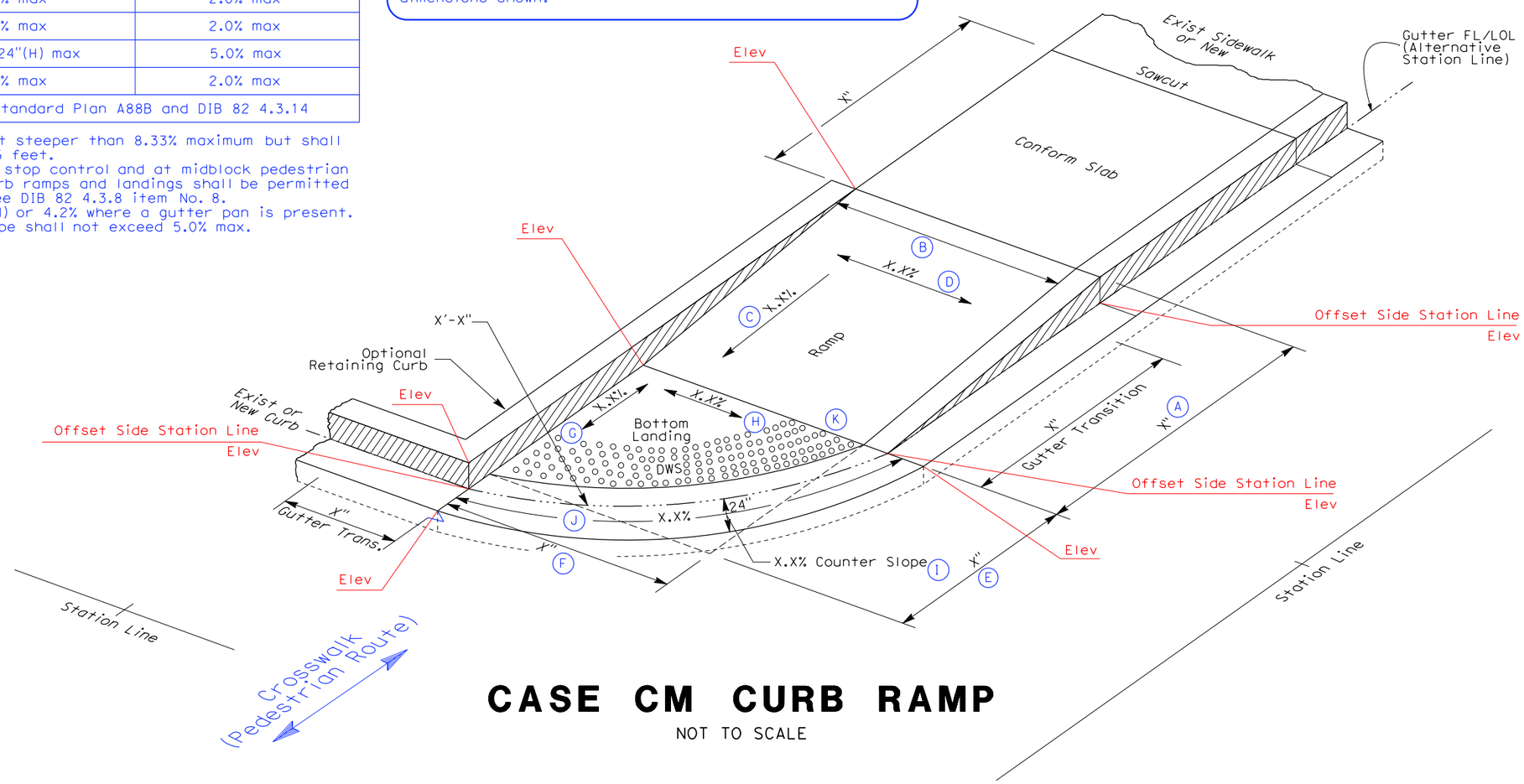
		CALTRANS CONSERVATIVE DESIGN STANDARDS	FEDERAL/CALIFORNIA STANDARDS
(A) Length of Ramp	(1)	Not required to exceed 15 feet, see DIB 82 4.3.8 #1	
(B) Width of Ramp		50" min	48" min
(C) Slope of Ramp		7.5% max	8.3% max (1)
(D) X Slope of the Ramp	(2)	1.5% max	2.0% max
(E) Bottom Landing Length		50" min	48" min
(F) Bottom Landing Width		50" min	48" min
(G) Bottom Landing Slope		1.5% max	2.0% max
(H) Bottom landing X Slope	(2)	1.5% max	2.0% max
(I) Counter Slope	(3)	1"(V):24"(H) max	5.0% max
(J) Flow Line Slope	(2)	1.5% max	2.0% max
(K) Detectable Warning Surface		See Standard Plan A88B and DIB 82 4.3.14	

(1) Curb ramps shall have a running slope not steeper than 8.33% maximum but shall not require the ramp length to exeed 15 feet.
(2) At pedestrian crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope of curb ramps and landings shall be permitted to equal the street or highway grade. See DIB 82 4.3.8 item No. 8.
(3) Counter slope shall not exceed 1"(V):24"(H) or 4.2% where a gutter pan is present. If no gutter pan is present counter slope shall not exceed 5.0% max.

Items A through K graphically depict standards that are all required for compliance with the 2010 Americans with Disabilities Act or draft Public Rights of Way Accessibility Guidelines.

For each curb ramp location that is not designed to meet the conservative design standards include one (EA) quantity of bid item Pre/Post Construction Surveys in the bid item list. The intent of this bid item is to verify that construction complies with allowable variations from the dimensions and slopes shown on the contract plans required by CPB 14-1.

Location call outs and elevations direct the tie-in of the curb ramp to adjacent roadway, sidewalk, and grade at the project specific location with the compliant slopes and dimensions shown.



CASE CM CURB RAMP

NOT TO SCALE

CURB RAMP DESIGN STANDARDS
CASE CM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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CURB RAMP DESIGN STANDARDS CASE CM, RELEASED 03/30/2016

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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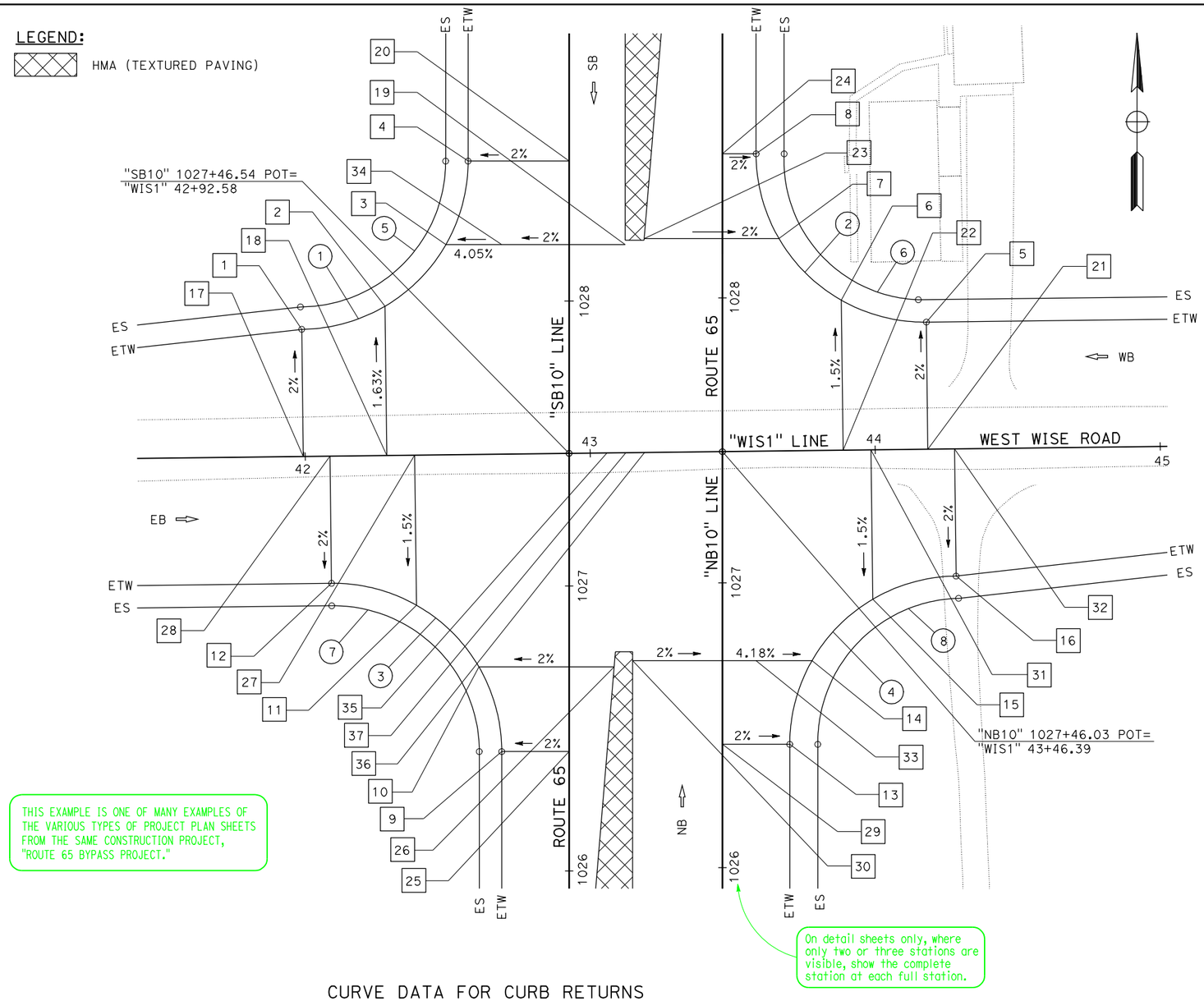
LEGEND:

HMA (TEXTURED PAVING)



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

On detail sheets only, where only two or three stations are visible, show the complete station at each full station.

NOTE:

1. ALL OUTSIDE SHOULDERS ALONG THE RADII HAVE A -5.00% CROSS SLOPE.

PAVEMENT ELEVATIONS

No. X	LOCATION	ELEVATION
1	44.62′ Lt "WIS1" 41+99.29	111.30
2	52.42′ Lt "WIS1" 42+28.62	111.92
3	43.23′ Lt "SB10" 1028+19.80	112.53
4	35.43′ Lt "SB10" 1028+49.13	112.99
5	44.62′ Lt "WIS1" 44+18.46	111.44
6	52.65′ Lt "WIS1" 43+88.73	112.14
7	19.84′ Rt "NB10" 1028+20.81	113.06
8	11.81′ Rt "NB10" 1028+50.54	113.10
9	23.62′ Lt "SB10" 1026+41.90	113.95
10	31.65′ Lt "SB10" 1026+71.63	113.68
11	52.64′ Rt "WIS1" 42+38.42	112.18
12	44.62′ Rt "WIS1" 42+08.69	111.48
13	23.62′ Rt "NB10" 1026+43.32	113.73
14	31.42′ Rt "NB10" 1026+72.64	113.02
15	52.42′ Rt "WIS1" 43+98.54	111.96
16	44.62′ Rt "WIS1" 44+27.87	111.25
17	0′ "WIS1" 41+99.29	112.19
18	0′ "WIS1" 42+28.62	112.78
19	19.69′ Rt "SB10" 1028+19.80	114.19
20	0′ "SB10" 1028+49.13	113.69
21	0′ "WIS1" 44+18.46	112.33
22	0′ "WIS1" 43+88.73	112.92
23	27.46′ Lt "NB10" 1028+20.81	114.01
24	0′ "NB10" 1028+50.54	113.33
25	0′ "SB10" 1026+41.90	114.42
26	15.79′ Rt "SB10" 1026+71.63	114.63
27	0′ "WIS1" 42+38.42	112.97
28	0′ "WIS1" 42+08.69	112.38
29	0′ "NB10" 1026+43.32	114.20
30	31.50′ Lt "NB10" 1026+72.64	114.71
31	0′ "WIS1" 43+98.54	112.73
32	0′ "WIS1" 44+27.87	112.14
33	11.81′ Rt "NB10" 1026+72.64	113.84
34	23.62′ Lt "SB10" 1028+19.80	113.33
35	0′ "WIS1" 43+05.88	114.23
36	0′ "WIS1" 43+19.01	114.23
37	0′ "WIS1" 43+12.45	114.25

CURVE DATA FOR CURB RETURNS

No. X	BC	EC	R	Δ	T	L
1	44.62′ Lt "WIS1" 41+99.29	35.43′ Lt "SB10" 1028+49.13	59.06′	89°20′05"	58.37′	92.08′
2	11.81′ Rt "NB10" 1028+50.54	44.62′ Lt "WIS1" 44+18.46	59.06′	90°39′55"	59.74′	93.45′
3	44.62′ Rt "WIS1" 42+08.69	23.62′ Lt "SB10" 1026+41.90	59.06′	90°39′55"	59.74′	93.45′
4	23.62′ Rt "NB10" 1026+43.32	44.62′ Rt "WIS1" 44+27.87	59.06′	89°20′05"	58.37′	92.08′
5	52.49′ Lt "WIS1" 41+98.91	43.31′ Lt "SB10" 1028+49.13	51.18′	89°45′31"	50.96′	80.18′
6	24.65′ Rt "NB10" 1028+50.54	52.49′ Lt "WIS1" 44+20.41	50.21′	92°53′10"	52.80′	81.39′
7	52.49′ Rt "WIS1" 42+08.69	31.50′ Lt "SB10" 1026+41.90	51.18′	90°39′55"	51.78′	80.99′
8	33.46′ Rt "NB10" 1026+43.32	52.45′ Rt "WIS1" 44+28.65	50.62′	89°20′05"	50.03′	78.92′

If shown on the Construction Details sheets, curve data for curb returns is not to be shown on the Layouts. Curve data for alignments that are shown on the Layouts are not to be shown on the Construction Details.

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-1"

CONSTRUCTION DETAILS
(WEST WISE ROAD AT ROUTE 65)

NO SCALE

C-1

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:12

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 DGN FILE => gg-65 C-001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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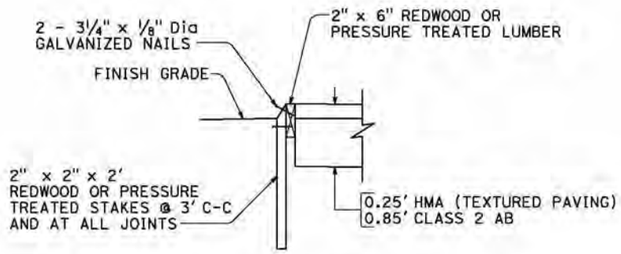
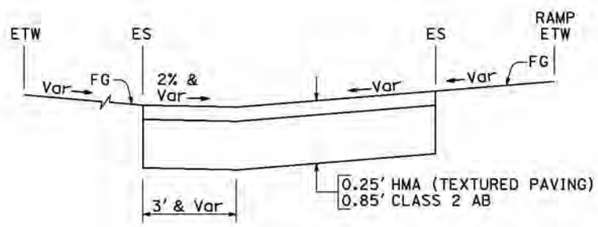


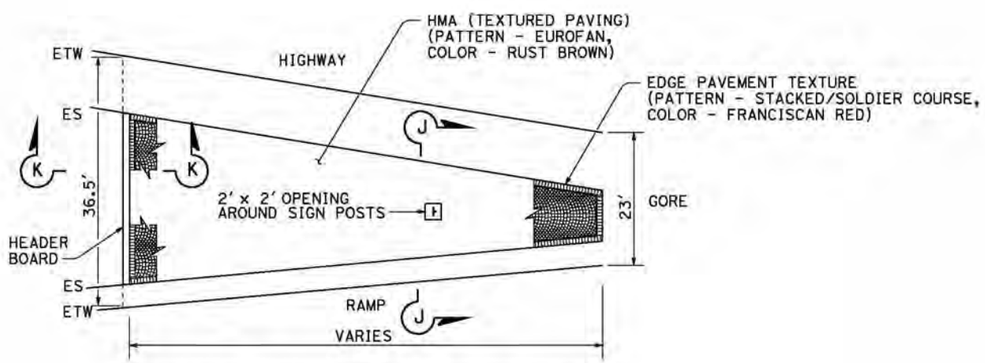
SECTION K-K

HEADER BOARD DETAIL

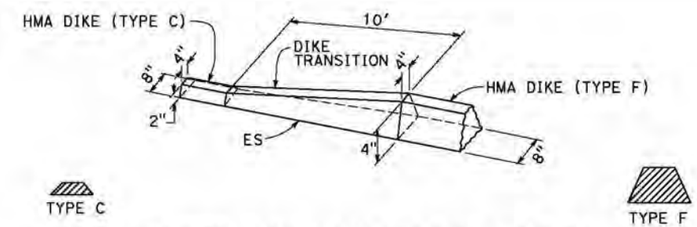
NOTE: TOP OF HEADER 1¾" ABOVE FINISH GRADE



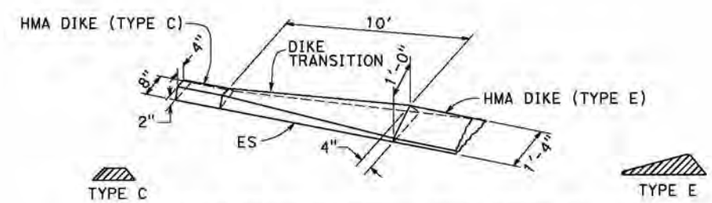
SECTION J-J



EXTEND GORE PAVING DETAIL



HMA DIKE (TYPE C) TO HMA DIKE (TYPE F)



HMA DIKE (TYPE C) TO HMA DIKE (TYPE E)

HMA DIKE TRANSITION DETAILS

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT. "ROUTE 65 BYPASS PROJECT."

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-22"

CONSTRUCTION DETAILS

NO SCALE

C-22

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-22" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:13

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DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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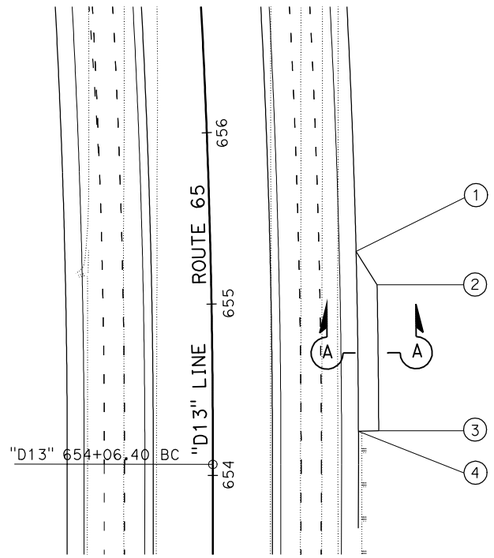
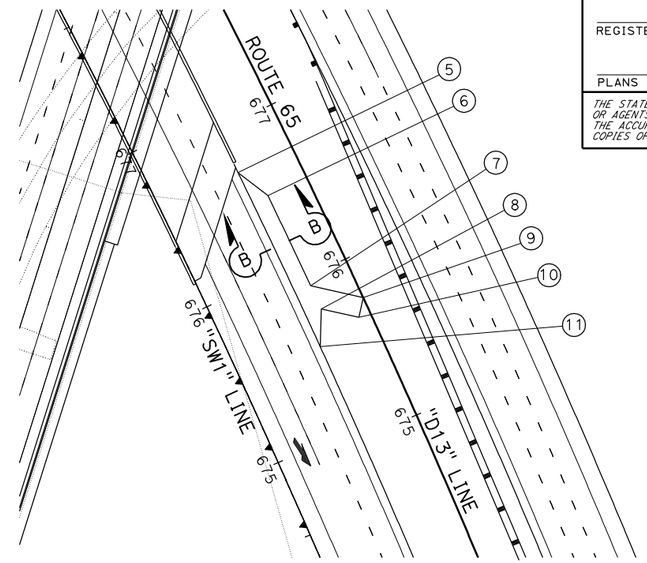


"MVP1"

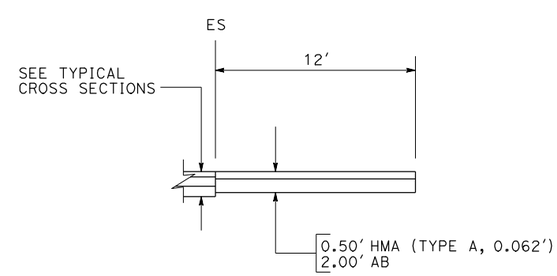
Shown on sheet L-2



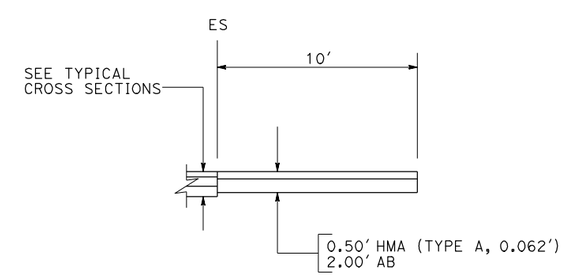
"MVP4"

Shown on sheet L-4

MVP	No. (X)	LOCATION	ELEVATION
1	1	84.97′ Rt "D13" 655+28.74	142.06
	2	96.78′ Rt "D13" 655+09.39	140.41
	3	96.78′ Rt "D13" 654+25.70	139.69
	4	84.79′ Rt "D13" 654+25.44	141.27
4	5	34.78′ Lt "D13" 676+72.80	175.03
	6	24.93′ Lt "D13" 676+52.98	174.35
	7	24.93′ Lt "D13" 675+94.46	173.75
	8	24.93′ Lt "D13" 675+79.50	173.59
	9	"D13" 675+75.29	172.30
	10	7.16′ Lt "D13" 675+65.89	172.55
	11	34.78′ Lt "D13" 675+59.67	170.44



SECTION A-A



SECTION B-B

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

MAINTENANCE VEHICLE PULLOUT DETAILS

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-44"

CONSTRUCTION DETAILS

NO SCALE

C-44

CONSTRUCTION DETAILS SHEET, EXAMPLE "65 C-44" RELEASED 2/3/2012

LAST REVISION 00-00-00 DATE PLOTTED => 25-JAN-2012 TIME PLOTTED => 14:52

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DATE REVISED

SUPERSEDES EXAMPLE RELEASED 5/9/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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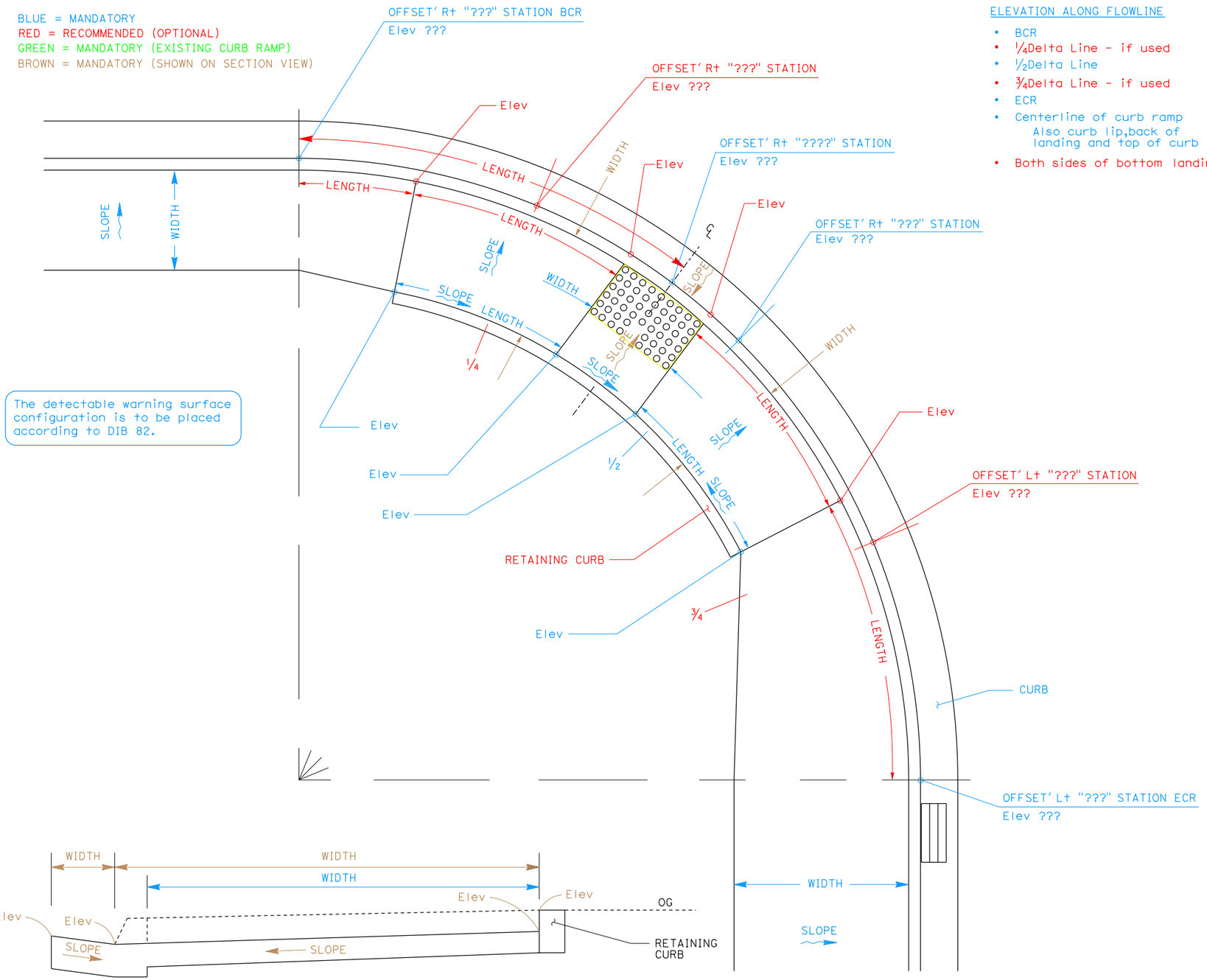
BLUE = MANDATORY
RED = RECOMMENDED (OPTIONAL)
GREEN = MANDATORY (EXISTING CURB RAMP)
BROWN = MANDATORY (SHOWN ON SECTION VIEW)



CENTERLINE OF CURB RAMP

ELEVATION ALONG FLOWLINE

- BCR
- 1/4Delta Line - if used
- 1/2Delta Line
- 3/4Delta Line - if used
- ECR
- Centerline of curb ramp
  Also curb lip,back of landing and top of curb
- Both sides of bottom landing

ELEVATION FOR CURBS

- Top of curb (TC) - both ends of retaining curb (inner radius of curb ramp)
- Top of curb (TC) - both ends of the curb and gutter

DIMENSIONS

- Width of curb camp (optional if same as landing)
- Width of landings
- Length of curb ramps. If there is a radial configuration, the inner radius will be the controlling factor for determining the length and slope.
- If the curb ramp length is 15' or less, the running slope cannot exceed 8.3%
- If the curb ramp length is greater than 15', the running slope may exceed 8.3%
- The length of curb ramp does not have to exceed 15' (see DIB 82 Section 4.3.8 (1)), but may in certain situations where the slope can be held below the 8.3% maximum.
- Length of ramp (outer radius of curb ramp)
- Width of adjacent sidewalk
- Length from BCR or ECR to centerline of curb ramp
- Length from BCR or ECR to begin of curb ramp

SLOPES

- Running slope of curb ramp
- Cross slope of curb ramp
- Slope of bottom landing
- Cross slope of bottom landing (in certain circumstances) shall be permitted to equal the street or highway grade (see DIB 82 Section 4.3.8 (8)). Also see 4.1.2 for further guidance.
- Cross slope of the sidewalk
- Gutter pan slope (show on the "Section View"). Counter slope applies 24" from flowline, along the accessible path for the width of the bottom landing (see DIB 82 Section 4.3.8 (4))

MISCELLANEOUS

- Label type of curb
- Label retaining curb
- Show delta lines when surveys needs to stake a new occurrence of a curb ramp

INFORMATION FOR EXISTING CURB RAMPS

- Length from sawcut (conform) to a known point (e.g., BCR/ECR or begin of curb ramp
- Label sawcut
- Length of conforming transition to match existing sidewalk slope
- Cross slope at conform
- Width of existing sidewalk
- Elevations at conform
- Delta lines are optional

GENERAL GUIDELINES FOR CURB RAMP DESIGN

CONSTRUCTION DETAILS

GENERAL GUIDELINES FOR CURB RAMP DESIGN, RELEASED 07/03/2015

LAST REVISION 00-00-00 | DATE PLOTTED => 29-JUN-2015 | TIME PLOTTED => 12:08

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:

FOR DETAILS NOT SHOWN, SEE REVISED STANDARD PLANS A88A.

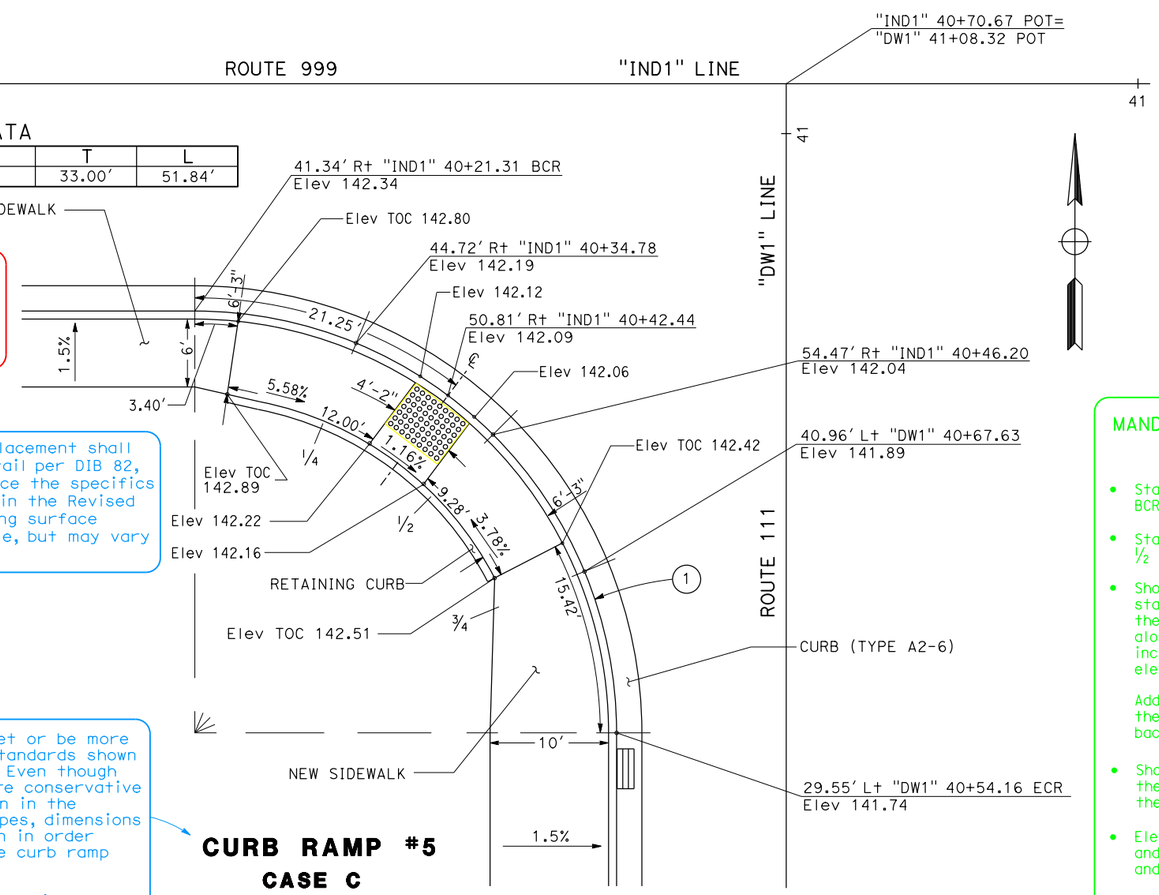
The curb ramps drawn on Construction Details sheets are to show all the information needed to construct the curb ramp. The Layout sheets should only show the location of the curb ramp with its identifying number.

Elevation difference (in feet) between two points for a given distance at percent slopes used when designing to design standards.

SLOPE RUN	ELEVATION DIFFERENCE — PERCENT SLOPE 1.5%	5.0%	7.5%	9.0%
2′	0.03	0.10	0.15	0.18
4′	0.06	0.20	0.30	0.36
6′	0.09	0.30	0.45	0.54
8′	0.12	0.40	0.60	0.72
10′	0.15	0.50	0.75	0.90
12′	0.18	0.60	0.90	1.08
15′	0.22	0.75	1.12	1.35

CURVE DATA

No. ⊛	R	Δ	T	L
1	33.00′	90°0′0"	33.00′	51.84′



Showing a detail for each curb ramp allows the designer and bidder or contractor to determine the various quantities for constructing the curb ramp.

The detectable warning surface placement shall be drawn with each curb ramp detail per DIB 82, but labeling is not necessary since the specifics are clearly shown and identified in the Revised Standard Plans. Detectable warning surface products are typically a rectangle, but may vary according to DIB 82.

The numbering for curb ramp curve data information shown on Construction Details sheet(s) usually starts with the No. 1 for each detail sheet. The numbering for the curve data information for each alignment shown on the Layout sheets, are NOT to be repeated on the Construction Details sheet(s).

This example is designed to meet or be more conservative than the design standards shown in the Revised Standard Plans. Even though this curb ramp meets or is more conservative than the design standards shown in the Revised Standard Plans, the slopes, dimensions and elevations need to be shown in order for the contractor to build the curb ramp per the design.

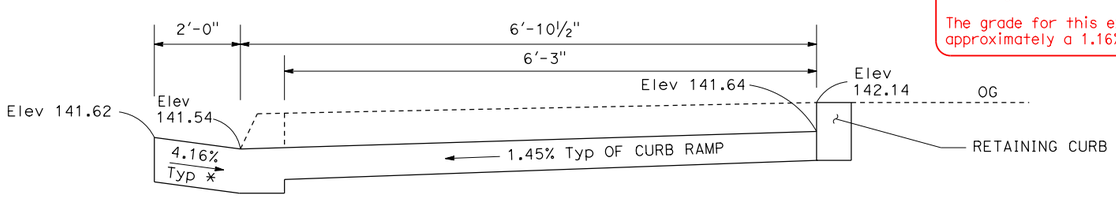
This example is NOT to be included in the "PRE/POST CONSTRUCTION SURVEYS" bid item, as all of the curb ramp slopes and widths meet the design standards shown in the Revised Standard Plans.

CURB RAMP #5
CASE C

The profile of the flowline controls most of the elevations associated with the curb ramp.

The lengths and running slope on each side of the bottom landing will most likely be different slopes and lengths .

The grade for this example is relatively flat, approximately a 1.16% slope from BCR to ECR.



CENTERLINE OF CURB RAMP

* Typical for the width of the bottom landing (accessible pathway). For additional information on Counter Slopes, see Revised Standard Plan A88A (Note 9), or DIB 82 Section 4.3.8 - (4) and (8).

NEW CURB RAMP WHERE CURB, GUTTER AND SIDEWALK DOES NOT CURRENTLY EXIST

MANDATORY FOR CONSTRUCTION OF CURB RAMPS

- Station, offset and elevation of the BCR and ECR at the gutter flowline.
- Station, offset and elevation of the ½ Delta Line at the flowline.
- Show centerline of curb ramp with station, offset and elevation at the gutter flowline. A section view along the curb ramp centerline is included to show slopes and additional elevations.

  Additional elevations should include the curb lip (at roadway surface), the back of landing and the top of curb.
- Showing a section view(s) will assist the contractor to better understand the design slopes for ADA compliance.
- Elevation where the top of the ramp and back of sidewalk meet (or begin and end of retaining curb).
- Length of curb ramp running slope(s).
- Curb ramps shall have a running slope not steeper than 8.3% Max, but shall not require the ramp length to exceed 15 feet (see DIB 82 Section 4.3.8 (1).
- Width of curb ramp, landing (turning space) and adjacent sidewalk.
- Running slope and cross slope of curb ramp. Slope and cross slope of bottom landing. Cross slope of sidewalk. Gutter pan slope (counter slope) within width of landing.
- Alignment line for state highway or ramps, with stationing labeled every full station.
- Alignment line for local street when used for station and offsets.

RECOMMENDED FOR CONSTRUCTION OF CURB RAMPS

- If the gutter flowline is not a constant grade, then additional elevations may need to be shown beyond just the BCR and ECR, such as grade breaks or both sides of the bottom landing.
- Elevation at top of curb (TOC) at both ends of the curb and gutter.
- Showing the radius point and the delta lines.

  Depending on the length of curve, show the ¼ and ¾ Delta Lines for longer length curb returns (see Surveys Manual).
- Showing additional distances to key points will better enable the contractor to achieve the design values for ADA compliance.

  Such as the length from the BCR and ECR to the begin of the curb ramp or centerline of the curb ramp.
- Drainage inlets should not be located within the curb ramp accessible pathway.
- At each curb ramp, check if there is any existing survey monumentation that may be obliterated by the construction of the new curb ramp. If found, contact Right of Way Engineering.
- Provide only those pavement elevations that are directly related to the slopes affecting the construction of the curb ramps and crosswalks.
- Label all slopes, lengths and dimensions of the curb ramp, even if they meet the design standards shown in the Revised Standard Plans. Place a note referring to the Revised Standard Plans for details not shown.
- Label the type of curb and the retaining curb.
- Show symbol for pedestrian push button locations with a reference to see the Electrical Systems plan sheets for further details.
- Utility features (poles and covers) should not be located within the limits of the curb ramp, and should not restrict the pedestrian route.

CONSTRUCTION DETAILS
NO SCALE
C-1

CURB RAMPS WHERE SIDEWALK DOES NOT EXIST, RELEASED 07/03/2015

LAST REVISION 00-00-00 DATE PLOTTED => 03-JUL-2015 TIME PLOTTED => 10:26

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTE:

FOR DETAILS NOT SHOWN, SEE REVISED STANDARD PLAN A88A.

In this example, the roadway alignments were utilized instead of a flow line alignment. For some remove/replace situations, a flow line alignment may be the best practice to follow.

Construction details of curb ramps are to show all the information needed by the contractor to construct the curb ramp from only the project plans. The standard plans shows the design guidance and criteria each curb ramp is based on. Layout sheets only have room to show the location of the curb ramp with its identifying number.

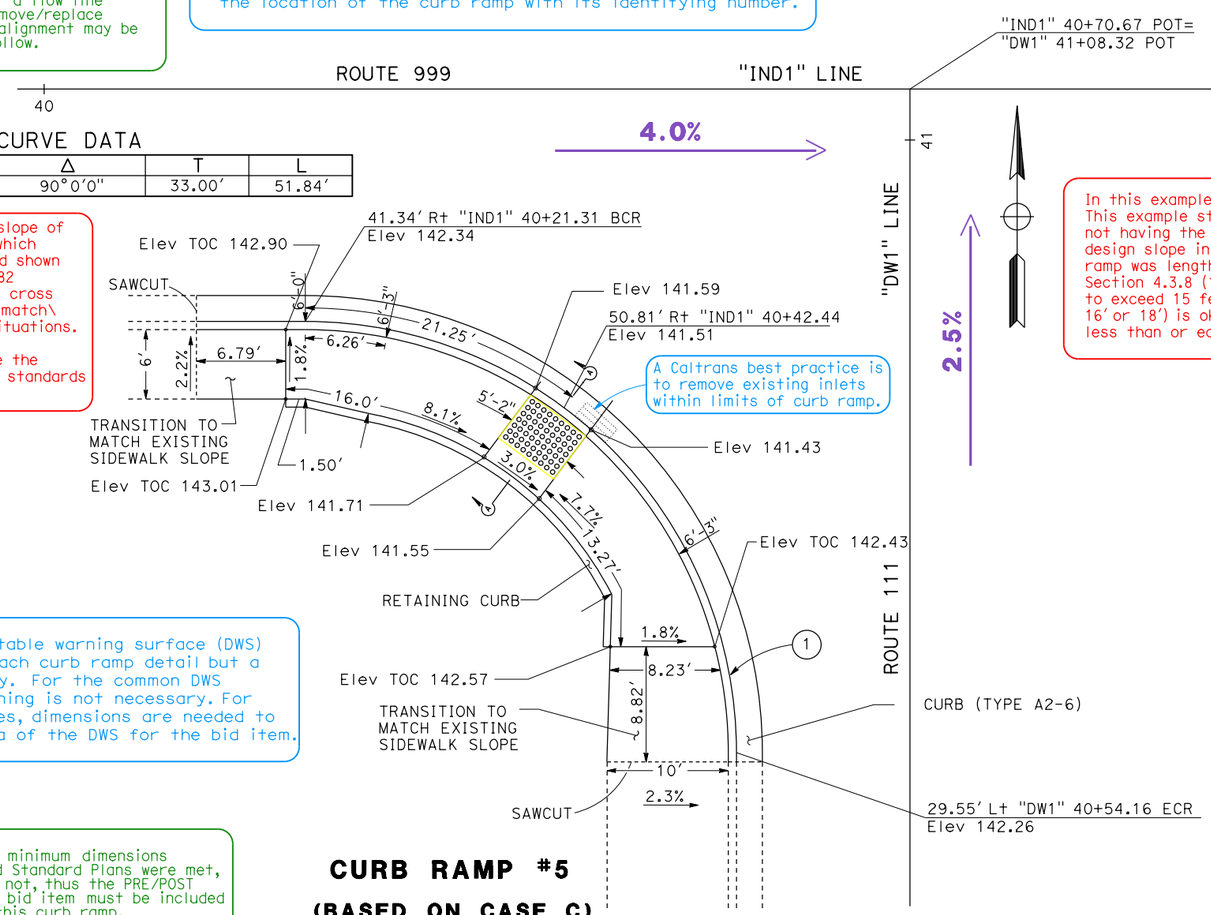
Elevation difference (in feet) between two points for a given distance at percent slopes used when designing to design standards.

SLOPE RUN	ELEVATION DIFFERENCE — PERCENT SLOPE 1.5%	5.0%	7.5%	9.0%
2′	0.03	0.10	0.15	0.18
4′	0.06	0.20	0.30	0.36
6′	0.09	0.30	0.45	0.54
8′	0.12	0.40	0.60	0.72
10′	0.15	0.50	0.75	0.90
12′	0.18	0.60	0.90	1.08
15′	0.22	0.75	1.12	1.35

If a curb ramp length is less than or equal to 15′, the controlling factor is the 8.3% Max slope. But when a ramp length is greater than 15′, the controlling factor is the length and the running slope may exceed 8.3%. This situation occurs when the existing grades are steep and the ramp run will not intercept the sidewalk surface, or will be excessively long before obtaining a slope less than or equal to 8.3%.

If there are questions about what "Best Practice" to apply when the ramp length reaches 15′, contact the Project Delivery Coordinator, or ADA coordinator in HQ Division of Design.

In this example, the design running slope on one side is 8.1%. This example strove to meet the 8.3% constructed slope by not having the design slope exceed 8.1%. To achieve the 8.1% design slope in this example, the length of the parallel curb ramp was lengthened to 16 feet. However, per DIB 82 Section 4.3.8 (1), the ramp length shall not be required to exceed 15 feet. But lengthening the ramp a few feet (to 16′ or 18′) is okay if it allows the constructed slope to be less than or equal to the Max 8.3%.



CURB RAMP #5

(BASED ON CASE C)

CURVE DATA

No. ⊛	R	Δ	T	L
1	33.00′	90°0′0″	33.00′	51.84′

In this example the cross slope of the bottom landing is 3%, which exceeds the design standard shown on RSP A88A. However, DIB 82 Section 4.3.8 (8) allows the cross slope of the curb ramp to match\ roadway grade in certain situations. The application of DIB 82 Section 4.1.2 will determine the necessary scope and design standards that are involved.

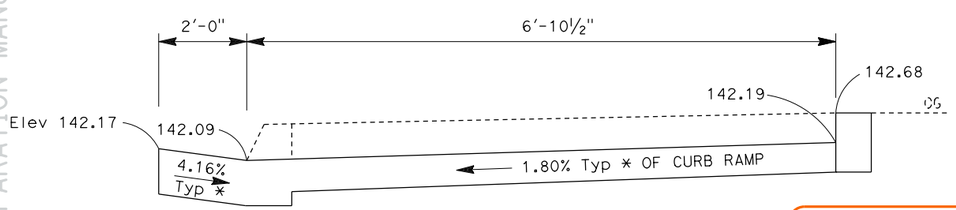
Representative detectable warning surface (DWS) shall be drawn with each curb ramp detail but a label is not necessary. For the common DWS size 3′ x 4′, dimensioning is not necessary. For other shapes and sizes, dimensions are needed to substantiate the area of the DWS for the bid item.

In this example, the minimum dimensions shown in the Revised Standard Plans were met, but the slopes were not, thus the PRE/POST CONSTRUCTON SURVEYS bid item must be included in the project for this curb ramp.

The profile of the flowline controls most of the elevations associated with the curb ramp.

The length and running slope of each ramp on a Case C ramp and of each flare of a Case A ramp are not likely to be identical.

The flow line slope for this example is moderately steep, approximately 4.0% slope from BCR to centerline and 2.5% slope from ECR to centerline. This creates a low point near the centerline. Consideration where best to place inlets must occur during design.



SECTION A-A OF CURB RAMP

* Typical for the width of the bottom landing (accessible pathway). For additional information on Counter Slopes, see Revised Standard Plan A88A (Note 8 and 9), or DIB 82 includig Section 4.3.8-(4).

NEW OR REPLACEMENT CURB RAMP WITHIN EXISTING CURB, GUTTER AND SIDEWALK

MANDATORY AT EXISTING CURB & GUTTER AND SIDEWALK

- For Case C, elevations along flowline at both sides of landing, tops of ramps, and conform points.
  For Case A, elevations along flowline at both sides of ramp, tops of flares and conform points.
- For replacing curb ramps at locations where one already exists, developing an alignment and profile at the flow line may be the best practice. The elevations along the flow line are the basis for designing and constructing curb ramps.
- Elevations at conform at back of sidewalk, at begin/end of retaining curb, both sides back of landing or a constrait such as a fixed object.
- Length of curb ramp running slope(s), at inner radius as its the controlling factor on a radial configuration.
- Length from sawcut (conform) to the begin or end of curb ramp.
- Width of curb ramp, landing (turning space) and adjacent sidewalk.
- Cross slope and width of existing sidewalk at the sawcut (conform point).
- Running slope and cross slope of curb ramp. Running slope and cross slope of bottom landing. Cross slope of sidewalk. Gutter pan slope (counter slope) within width of landing or ramp.
- Label BCR and ECR of curb return with stationing so length can easily be determined. Identify the radius so curb return can be reconstructed. When construction staking is requested BCR and ECR is to be provided per chapter 12 of the survey manual.
- Show detectable warning surface (DWS) but don't label. Only dimenson DWS when it is not the common 3′ x 4′ size.
- Transitions and conform areas

RECOMMENDED FOR CONSTRUCTION OF CURB RAMPS

- If the gutter flowline is not a constant grade, then additional elevations may need to be shown in addition to the conform points and both sides of the bottom landing.

  Elevation at top of curb (TOC) at both ends of the curb and gutter.
- A section view may be included to show slopes and additional elevations needed to meet ADA compliance.

  Additional elevations may include the lip of gutter and the top of curb along "section break."
- Length of curb ramp running slope(s) at outer radius.
- Existing drainage inlets within the limits of the curb ramp should be relocated outside the curb ramp accessible pathway.
- If any existing survey monumentation is obliterated by the construction of the curb ramp, contact Right of Way Engineering.
- Provide only those pavement elevations that are directly related to the slopes affecting the construction of the curb ramps and crosswalks
- Label the type of curb and the retaining curb.
- Show a sidewalk conform slab if necessary, with elevations and slopes at the sawcut line and begin and end curb ramp/landing.
- Locate pedestrian push buttons, and refer to Electrical Systems plan sheets for further details.
- Utility features (poles and covers) should not be located within the limits of the curb ramp, and should not restrict the pedestrian route.
- In addition to the flow line alignment, roadway alignment lines can be shown for establishing control and offsets to existing known locations.

CONSTRUCTION DETAILS

NO SCALE

C-?

NEW CURB RAMP WITHIN EXISTING SIDEWALK, RELEASED 08/30/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 18-NOV-2019 | TIME PLOTTED => 16:12

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

SUPERSEDES EXAMPLE RELEASED 07/03/15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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- A construction detail is to be shown for each curb ramp location. A curb ramp location is not a separate location of construction unless it meets the definition of a location of construction as described in Section 2-2.2 of the Plans Preparation Manual. An intersection with four (4) curb ramps locations is NOT four (4) locations of construction.

  A construction detail for each curb ramp in the project must be included in the advertised contract plans. This includes curb ramps that meet all of the aspects of the conservative design standards and curb ramps with aspects that don't meet the conservative design standards but meet the Federal/California standards. A detail for each curb ramp, whether a remove/replace or new location, conveys to the bidder/contractor that an ADA compliant curb ramp can be constructed per the design shown on the plans.

  Construction details of curb ramps are also for the purpose of estimating minor concrete quantities, showing elevation points for constructing the ramp, key points for construction staking, showing obstacles or constraints, showing unique features such as bulb-outs and showing that the entire perimeter of the curb ramp ties in to existing ground and the adjacent roadway.

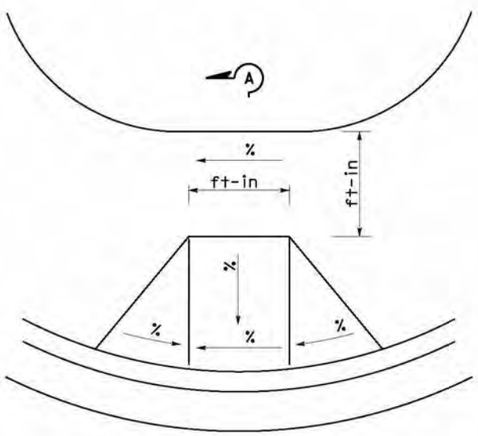
- Design slopes, elevations and dimensions are to be shown for each curb ramp. The terms "maximum" or "minimum" shall not be used on construction details for any curb ramp or driveway. Each construction detail is to provide specific design information for the contractor to construct each curb ramp from the project plans.

- Since the standard plans do not show specific slopes or dimensions, compliant curb ramps are not to be labeled as modified. The case type on which the curb ramp is based may be mentioned as part of the curb ramp number.

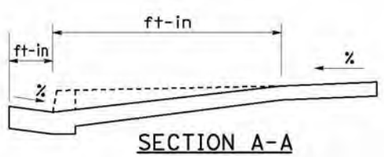
- If any aspect of an individual curb ramp does not meet the conservative design standards, the curb ramp must be included in the quantity and individually identified in the quantity table for the bid item "PRE/POST CONSTRUCTION SURVEYS" in the summary of quantities. A curb ramp where all aspects meet the conservative design standards, is NOT to be included.

- The Division of Construction requires inspection documentation of all completed permanent pedestrian facilities (see Construction Policy Bulletin (CPB) 17-1). For each slope or dimension check, Construction takes and records three readings equally dispersed across the surface to be measured. The readings are not averaged. This is especially important on a radial configuration (where the inner radius is the controlling factor).

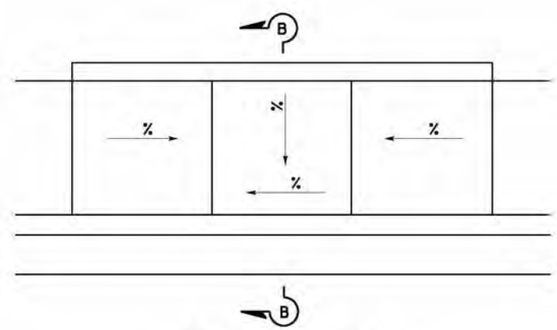
- Components or elements of a curb ramp or driveway include but are not limited to the following:
  - ramp
  - flare
  - landing (turning space)
  - gutter counter slope
  - conforms/transitions



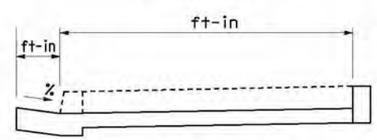
CURB RAMP #?
CASE A



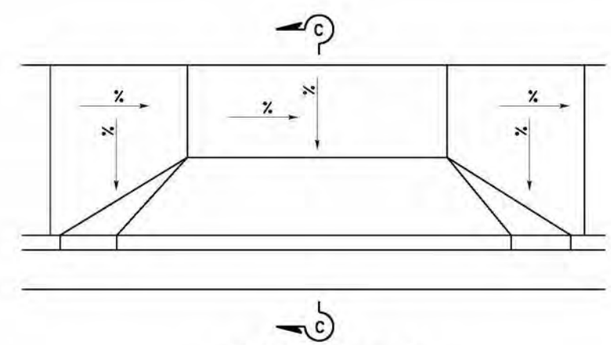
SECTION A-A



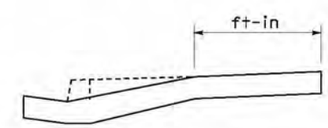
CURB RAMP #?
CASE C



SECTION B-B



DRIVEWAY #?



SECTION C-C

CURB RAMP AND DRIVEWAY
DESIGN CRITERIA

CONSTRUCTION DETAILS

CURB RAMP-DRIVEWAY, DESIGN, RELEASED 08/30/2017

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => 05-SEP-2017 | TIME PLOTTED => 13:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:
FOR DETAILS NOT SHOWN SEE STANDARD PLAN A88A

ABBREVIATIONS:
DWS DETECTABLE WARNING SURFACE
TC TOP OF CURB
TR TOP OF RAMP
TRC TOP OF RETAINING CURB

		CALTRANS CONSERVATIVE DESIGN STANDARDS	FEDERAL/CALIFORNIA STANDARDS
(A) Length of Ramp	(1)	Not required to exceed 15 feet, DIB 82 4.3.8 #1	
(B) Width of Ramp		50" min	48" min
(C) Slope of Ramp		7.5% max	8.3% max (1)
(D) X Slope of the Ramp	(2)	1.5% max	2.0% max
(E) Top Landing Length		50" min	48" min
(F) Top Landing Width		50" min	48" min
(G) Top Landing Slope		1.5% max	2.0% max
(H) Top Landing X Slope	(2)	1.5% max	2.0% max
(I) Counter Slope	(3)	1"(V):24"(H) max	5.0% max
(J) Flow Line Slope	(2)	1.5% max	2.0% max
(K) Detectable Warning Surface		See Standard Plan A88A and DIB 82	
(L) Flare (Right/Left)		9.0% max at curb	10.0% max at curb

(1) Curb ramps shall have a running slope not steeper than 8.3% maximum but shall not require the ramp length to exeed 15 feet.
(2) At pedestrian crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope of curb ramps and landings shall be permitted to equal the street or highway grade. See DIB 82 4.3.8 item No. 8.
(3) Counter slope shall not exceed 1"(V):24"(H) or 4.2% where a gutter pan is present. If no gutter pan is present counter slope shall not exceed 5.0% max.

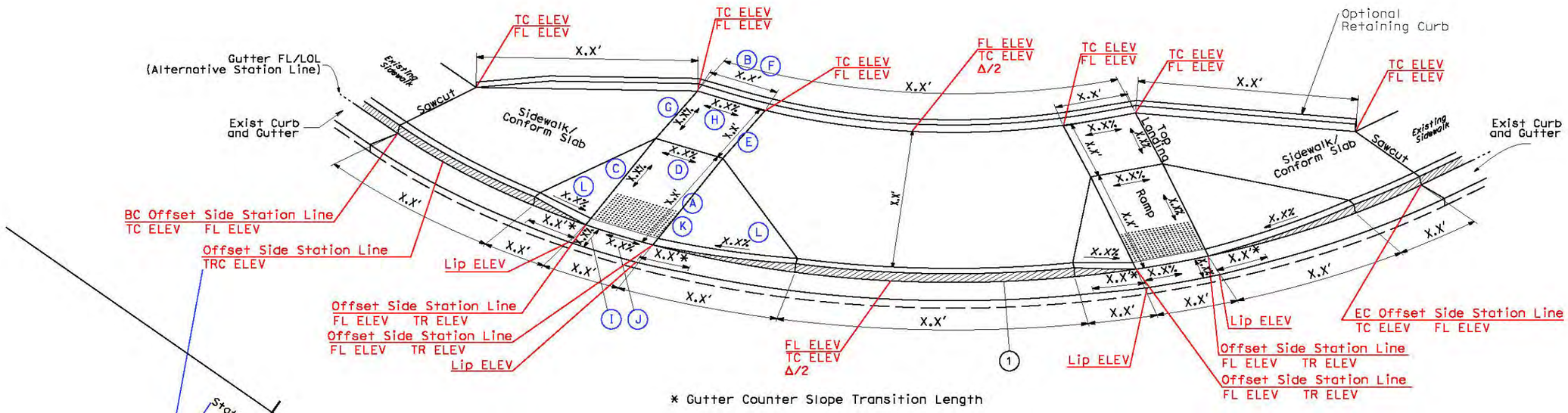
Items A through L graphically depict standards that are all required for compliance with the 2010 Americans with Disabilities Act or draft Public Rights of Way Accessibility Guidelines.

For each curb ramp location that is not designed to meet the conservative design standards include one (EA) quantity of bid item Pre/Post Construction Surveys in the bid item list. The intent of this bid item is to verify that construction complies with allowable variations from the dimensions and slopes shown on the contract plans required by CPB 14-1.

Location call outs and elevations direct the tie-in of the curb ramp to adjacent roadway, sidewalk, and grade at a project specific location with the specific compliant slopes and dimensions shown. Removal and replacement of any existing pavement or other surfacing necessary to tie-in to the proposed curb ramp is not shown in this example.

CURVE DATA

No. ⊕	R	Δ	T	L
1	XX'	00°00'00"	XX'	XX'



* Gutter Counter Slope Transition Length

In this example the curb is located relative to the roadway alignment. The dimensions shown here are needed by the contractor to confirm the field fit of slopes and widths and the perimeter tie-in, as the lengths between the callout points along the curb are different than the length along the roadway alignment due to varying offsets and curvature.

CURB RAMP DESIGN STANDARDS, TWO CASE A RAMPS MAIN ALIGNMENT CALLOUTS WITH DIMENSIONS

1 of 2

This is one of two examples that depict the same curb ramp configuration with alternative ways to present location call outs, dimensions and elevations. No. 1 of 2 is relative to the roadway alignment and No. 2 of 2 is relative to a local alignment on the gutter flow line. Another way to present the callouts, dimensions and elevations is in tabular format.

TWO CASE A CURB RAMPS, 1 OF 2, RELEASED 1/06/2017

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:
FOR DETAILS NOT SHOWN SEE STANDARD PLAN A88A

ABBREVIATIONS:
DWS DETECTABLE WARNING SURFACE
TC TOP OF CURB
TR TOP OF RAMP
TRC TOP OF RETAINING CURB

		CALTRANS CONSERVATIVE DESIGN STANDARDS	FEDERAL/CALIFORNIA STANDARDS
(A) Length of Ramp	(1)	Not required to exceed 15 feet, DIB 82 4.3.8 #1	
(B) Width of Ramp		50" min	48" min
(C) Slope of Ramp		7.5% max	8.3% max (1)
(D) X Slope of the Ramp	(2)	1.5% max	2.0% max
(E) Top Landing Length		50" min	48" min
(F) Top Landing Width		50" min	48" min
(G) Top Landing Slope		1.5% max	2.0% max
(H) Top Landing X Slope	(2)	1.5% max	2.0% max
(I) Counter Slope	(3)	1"(V):24"(H) max	5.0% max
(J) Flow Line Slope	(2)	1.5% max	2.0% max
(K) Detectable Warning Surface		See Standard Plan A88A and DIB 82	
(L) Flare (Right/Left)		9.0% max at curb	10.0% max at curb

(1) Curb ramps shall have a running slope not steeper than 8.3% maximum but shall not require the ramp length to exeed 15 feet.
(2) At pedestrian crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope of curb ramps and landings shall be permitted to equal the street or highway grade. See DIB 82 4.3.8 item No. 8.
(3) Counter slope shall not exceed 1"(V):24"(H) or 4.2% where a gutter pan is present. If no gutter pan is present counter slope shall not exceed 5.0% max.

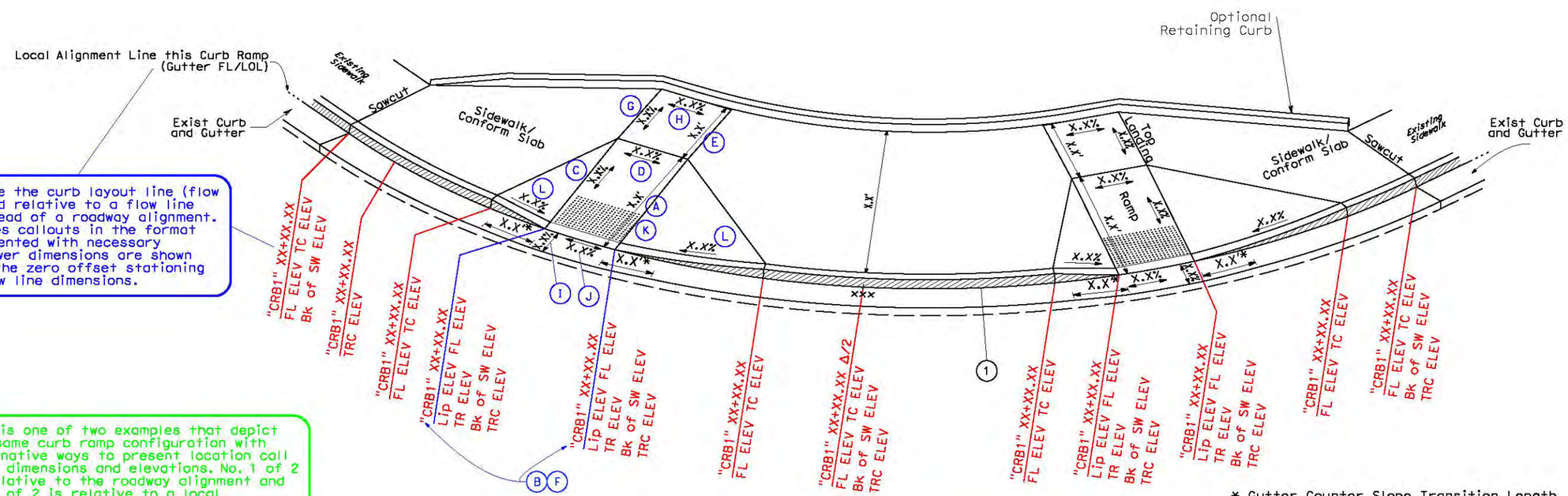
Items A through L graphically depict standards that are all required for compliance with the 2010 Americans with Disabilities Act or draft Public Rights of Way Accessibility Guidelines.

For each curb ramp location that is not designed to meet the conservative design standards include one (EA) quantity of bid item Pre/Post Construction Surveys in the bid item list. The intent of this bid item is to verify that construction complies with allowable variations from the dimensions and slopes shown on the contract plans required by CPB 14-1.

Location call outs and elevations direct the tie-in of the curb ramp to adjacent roadway, sidewalk, and grade at a project specific location with the specific compliant slopes and dimensions shown. Removal and replacement of any existing pavement or other surfacing necessary to tie-in to the proposed curb ramp is not shown in this example.

CURVE DATA

No. ⊕	R	Δ	T	L
1	XX'	00°00'00"	XX'	XX'



In this example the curb layout line (flow line) is located relative to a flow line alignment instead of a roadway alignment. This facilitates callouts in the format shown, supplemented with necessary dimensions. Fewer dimensions are shown here because the zero offset stationing doubles as flow line dimensions.

This is one of two examples that depict the same curb ramp configuration with alternative ways to present location call outs, dimensions and elevations. No. 1 of 2 is relative to the roadway alignment and No. 2 of 2 is relative to a local alignment on the gutter flow line. Another way to present the callouts, dimensions and elevations is in tabular format.

* Gutter Counter Slope Transition Length

CURB RAMP DESIGN STANDARDS, TWO CASE A RAMPS LOCAL FLOW LINE ALIGNMENT AND CALLOUTS

2 of 2

TWO CASE A CURB RAMPS, 2 OF 2, RELEASED 1/06/2017

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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GENERAL

Use for projects with Erosion Control.

The ECL sheet uses tables to specify the erosion control type, items, sequence of application, application rates, seed mixes, and other components.

EROSION CONTROL TYPE 'X' TABLE: Include in all projects with erosion control work shown by Type. Add additional tables for each Erosion Control Type used.

SEQUENCE: Identify the application steps.

ITEM: Identify the applicable bid items. The item description must match the BEES item description, except units are not necessary.

MATERIAL: Identify the applicable materials for each bid item. Refer to the specifications for applicable requirements and options.

MATERIAL TYPE: Identify the applicable type for each material. If there are no applicable types, then leave blank. Refer to the specifications for applicable requirements and options.

APPLICATION RATE: Identify the site specific application rate for each item or material. Rates should be shown in a quantity-per-area format appropriate for the material and bid item unit of measure (i.e. CY/1000 SQFT, CY/ACRE, TON/ACRE, or LB/ACRE). If application rate is not applicable, then leave blank.

DEPTH: Identify the depth in inches for Incorporate Materials. If depth is not applicable, then leave blank or eliminate column.

All items, materials, material types, application rates, and incorporation depths listed for an EC type must be applicable throughout the entire area designated for the EC type.

SEED MIX TABLE: This table must be included when seed is listed as an EC material.

SEED MIX: Identify each seed mix. List botanical and common name for each seed. Show superscript number at end of botanical name if applicable.

CALIFORNIA SOURCED SEED: Do not specify California sourced seed on ALL projects. Use is pursuant to project-specific requirements and/or regulatory permits.

PERCENT GERMINATION: Percent germination shown may be 10 percent less than the published rates. Show as a whole number without "%" symbol.

POUNDS PURE LIVE SEED PER ACRE: Show pounds up to one decimal place. The total pounds for each seed mix must match the LB/ACRE application rate shown in other tables.

SUPERSCRIPT LEGEND: When superscript numbers are required, use only applicable superscript numbers and text. Number superscripts starting with "1." Enter county name and elevation specifications as applicable. Show superscript numbers at end of all botanical names that are to meet requirements shown in legend.

STAND-ALONE EROSION CONTROL ITEM TABLE: This table is used for erosion control items that are not associated with an EC Type, such as Fiber Rolls and Compost Sock. The item may be at a separate location than an EC Type, the item may not be applicable throughout an entire area designated for an EC Type, or there may be other reasons not to include in an EC Type.

REMARKS: A remarks column may be added to any table to provide additional specification or clarification.

FIBER ROLLS

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	REMARKS
IN EC TYPE 1 AREAS, INSTALL FIBER ROLLS AFTER RECP (NETTING) AND BEFORE HYDROSEED	FIBER ROLLS	FIBER ROLL	8" TO 10" Dia	TYPE 1 FIBER ROLL INSTALLATION

EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP 1	COMPOST	COMPOST	MEDIUM/COARSE	130 CY/ACRE
STEP 2	ROLLED EROSION CONTROL PRODUCT (NETTING)	NETTING	TYPE A	
STEP 3	HYDROSEED	SEED	MIX 1	35.7 LB/ACRE
		FIBER	WOOD	500 LB/ACRE
STEP 4	HYDROMULCH	FIBER	WOOD	2,000 LB/ACRE
		TACKIFIER	PSYLLIUM	150 LB/ACRE

EROSION CONTROL TYPE 2

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	DEPTH	REMARKS
STEP 1	COMPOST	COMPOST	FINE	130 CY/ACRE		
STEP 2	INCORPORATE MATERIALS				4"	
STEP 3	FIBER ROLLS	FIBER ROLL	10" TO 12" Dia			TYPE 1 INSTALLATION, PLACE 10 FEET APART ON FACE OF SLOPE
STEP 4	HYDROSEED	SEED	MIX 2	35.5 LB/ACRE		
		FIBER	WOOD	500 LB/ACRE		
STEP 5	HYDROMULCH	FIBER	WOOD	2,000 LB/ACRE		
		TACKIFIER	PSYLLIUM	150 LB/ACRE		

SEED MIX

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX 1	ACHILLEA MILLEFOLIUM (WHITE YARROW)	85	0.7
	BROMUS CARINATUS (CALIFORNIA BROME)	85	20
	ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	80	10
	VULPIA MICROSTACHYS (SMALL FESCUE)	90	5
	TOTAL		35.7
MIX 2	HORDEUM BRACHYANTHERUM (MEADOW BARLEY)	85	20
	STIPA PULCHRA (PURPLE NEEDLEGRASS)	85	10
	VULPIA MICROSTACHYS (SMALL FESCUE)	90	5.5
	TOTAL		35.5

Do not exceed one decimal place

If a project has multiple seed mixes, it is an option to combine tables by adding this column.

EROSION CONTROL LEGEND BASIC INFORMATION — 1 OF 4

EROSION CONTROL LEGEND
ECL-1

EROSION CONTROL LEGEND BASIC INFORMATION - RELEASED 11/18/19

LAST REVISION 11-18-19 | DATE PLOTTED => | TIME PLOTTED =>

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

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PLANS PREPARATION MANUAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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GENERAL

This example illustrates basic erosion control legend information and describes the specifications to be entered by Landscape Architect.

This example shows items used for sequence tables with erosion control "TYPES."

ITEMS

The item description should match the BEES item description.

Price of bid item will include all materials shown. For example, if "SEED" and "FIBER" are shown adjacent to HYDROSEED, then the seed and fiber are paid for as part of the "Hydroseed" item. An exception is the "Incorporate Materials" bid item which pays for the incorporation only. Any materials incorporated are paid for as separate bid items.

APPLICATION RATE

Notice that units used in the application rates may differ from the unit of measure for the item on the bid item list. Conversions are made on the erosion control quantity sheets so that units of measure for the quantities match the bid item list. The application rates shown are examples only, use project specific application rates.

STRAW ITEM

MATERIAL: Enter "STRAW" for material.

MATERIAL TYPE: For straw identify type. Enter "WHEAT," "RICE," "BARLEY," or combination of types with percentages required such as "50% WHEAT 50% BARLEY."

APPLICATION RATE: Show in TON/ACRE format.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	STRAW	STRAW	WHEAT	2 TON/ACRE

DRY SEED ITEM

MATERIAL: Enter "SEED" for material.

MATERIAL TYPE: Identify Mix number shown in Seed Mix table.

APPLICATION RATE: Show in LB/ACRE format. Quantity of LB must match total pounds Pure Live Seed in the Seed Mix table.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	DRY SEED	SEED	MIX 3	30 LB/ACRE

DRILL SEED ITEM

MATERIAL: Enter "SEED" for material.

MATERIAL TYPE: Identify Mix number shown in Seed Mix table.

APPLICATION RATE: Show in LB/ACRE format. Quantity of LB must match total pounds Pure Live Seed in the Seed Mix table.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	DRILL SEED	SEED	MIX 3	30 LB/ACRE

HYDROSEED AND HYDROMULCH ITEMS

MATERIAL: Hydroseed item will always include a "SEED" row. Hydromulch item will never include a "SEED" row. Materials for both may include "FIBER," "TACKIFIER," "FERTILIZER," and other materials.

MATERIAL TYPE (FIBER): If fiber is used, identify the type. Enter "WOOD," "CELLULOSE," "ALTERNATE," or combination of types with percentages required such as "50% WOOD 50% CELLULOSE."

MATERIAL TYPE (TACKIFIER): Enter "POLYMERIC EMULSION BLEND" or "PLANT BASED." If more specific preference for plant based then enter "GUAR," "PSYLLIUM," or "STARCH."

MATERIAL TYPE (FERTILIZER): If fertilizer is used, identify the type. Enter "ORGANIC" or other preferred fertilizer type.

APPLICATION RATE: Show application rate for each material.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	HYDROSEED	SEED	MIX 1	42 LB/ACRE
		FIBER	WOOD	500 LB/ACRE

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	HYDROMULCH	FIBER	WOOD	2,000 LB/ACRE
		TACKIFIER	PSYLLIUM	150 LB/ACRE
		FERTILIZER	ORGANIC	75 LB/ACRE

EROSION CONTROL LEGEND BASIC INFORMATION — 2 OF 4

EROSION CONTROL LEGEND
ECL-1

EROSION CONTROL LEGEND BASIC INFORMATION, RELEASED 11-18-19

LAST REVISION 11-18-19 | DATE PLOTTED => | TIME PLOTTED =>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PLANS PREPARATION MANUAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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GENERAL

This example shows items used for sequence tables with erosion control "TYPES."

BONDED FIBER MATRIX ITEM

MATERIAL: Bonded Fiber Matrix item will always include "FIBER" and "TACKIFIER" that is bonded together. Materials may also include "SEED" and "FERTILIZER."

MATERIAL TYPE: The specification for Bonded Fiber Matrix has no options, therefore leave entry blank. For seed, identify the Mix number shown in the Seed Mix table, if applicable.

APPLICATION RATE: Show the application rates for each material. Per specification, fiber and tackifier are combined by the manufacturer, so the application rate is for fiber and tackifier combined. See manufacturer for recommended rates.

REMARKS: Use the remarks column to clarify the rate is for fiber and tackifier combined.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	REMARKS
STEP X	BONDED FIBER MATRIX	BONDED FIBER AND TACKIFIER		2500 LB/ACRE	APPLICATION RATE IS FOR FIBER AND TACKIFIER COMBINED

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	REMARKS
STEP X	BONDED FIBER MATRIX	BONDED FIBER AND TACKIFIER		500 LB/ACRE	APPLICATION RATE IS FOR FIBER AND TACKIFIER COMBINED
		SEED	MIX	40 LB/ACRE	

DUFF ITEM

Duff includes grinding, chipping, and spreading of existing on-site vegetation collected and stockpiled during clearing and grubbing operations.

MATERIAL: Enter "DUFF."

MATERIAL TYPE: Leave blank.

APPLICATION RATE: Leave blank, unless the on-site quantity allows for a specific rate.

REMARKS: Add site specific requirements or conditions, if applicable.

SHEETS: Duff collection, stockpile, and placement work may be shown on a separate sheet entitled "EROSION CONTROL (SOIL PREPARATION)" to ensure it is not discarded and remains available for use. See "EROSION CONTROL (SOIL PREPARATION)" example sheets.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	REMARKS
STEP X	DUFF	DUFF			COLLECT FROM LOCATIONS SHOWN. SPREAD TO A UNIFORM DEPTH.

COMPOST ITEM

MATERIAL: Materials for Compost item may include both "COMPOST" and "SEED." If "SEED" is shown adjacent to compost, seed is paid for as part of the "COMPOST" item. If seed is used, split the row after Compost Item and add seed material, type, and application rate.

MATERIAL TYPE: Enter "FINE," "MEDIUM," or "COARSE."

APPLICATION RATE: Show rate for in volume-per-area format, not by depth.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	COMPOST	COMPOST	FINE	130 LB/ACRE
		SEED	MIX	42 LB/ACRE

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	COMPOST	COMPOST	MEDIUM	130 LB/ACRE

INCORPORATE MATERIALS ITEM

Incorporate Materials is used to mix topsoil, duff, compost, straw, or mulch to the depth specified.

MATERIAL, MATERIAL TYPE, AND APPLICATION RATE: Leave these blank since they are not applicable. "INCORPORATE MATERIALS" bid item includes payment for incorporation work only. The materials are paid for separately.

DEPTH: When Incorporate Materials is used add a column for "DEPTH." Enter the depth of Incorporation in inches. Note that incorporation methods may differ per standard specifications.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	DEPTH
STEP X	INCORPORATE MATERIALS				4"

EROSION CONTROL LEGEND BASIC INFORMATION — 3 OF 4

EROSION CONTROL LEGEND
ECL-1

EROSION CONTROL LEGEND BASIC INFORMATION, RELEASED 11/18/19

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PLANS PREPARATION MANUAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

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GENERAL

This example shows items used for sequence tables with erosion control "TYPES."

ROLLED EROSION CONTROL PRODUCT (RECP) ITEM

MATERIAL: Match the type of RECP material shown in parentheses. Enter "JUTE MESH," "NETTING," "BLANKET," or "TRM."

MATERIAL TYPE: Identify the type when material is netting, blanket, or TRM. Enter "TYPE A," "TYPE B," or "TYPE C." Leave blank for jute mesh.

APPLICATION RATE: Leave blank, this is not applicable.

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP X	ROLLED EROSION CONTROL PRODUCT (NETTING)	NETTING	TYPE A	

FIBER ROLLS ITEM

Fiber rolls may be included in an "EROSION CONTROL TYPE" table or as a stand-alone table. Each example is shown below.

MATERIAL: If specific fiber roll fill material is required specify "RICE STRAW FIBER ROLL," "WHEAT STRAW FIBER ROLL," "WOOD EXCELSIOR FIBER ROLL," or "COCONUT FIBER ROLL." If the contractor may choose the fiber roll type use "FIBER ROLL."

MATERIAL TYPE: Specify the size of fiber roll required. Select "8" to 10" Dia" or "10" to 12" Dia."

APPLICATION RATE: Leave this blank, it is not applicable.

REMARKS: When using fiber rolls add a column for "REMARKS." Include information necessary for fiber roll installation. Specify "TYPE 1" or "TYPE 2" installation type.

FIBER ROLLS

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	REMARKS
IN EC AREAS FIBER ROLLS MUST BE INSTALLED BEFORE HYDROSEED	FIBER ROLLS	FIBER ROLL	8" TO 10" Dia	TYPE 2 INSTALLATION, PLACE 10 FEET APART ON FACE OF SLOPE
		FIBER ROLL	10" TO 12" Dia	TYPE 2 INSTALLATION, PLACE AT TOE OF SLOPE

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	REMARKS
STEP X	FIBER ROLLS	WHEAT STRAW FIBER ROLL	10" TO 12" Dia		TYPE 1 INSTALLATION, PLACE 10 FEET APART

COMPOST SOCK ITEM

Compost socks may be included in an "EROSION CONTROL TYPE" table or as a stand-alone table. Each example is shown below.

MATERIAL: Leave blank, this is not applicable.

MATERIAL TYPE: Specify 8" or 12" size and if necessary the type of mesh tube desired, possible options include "COTTON," "JUTE," "SISAL," "BURLAP," "WOOD-BASED YARN," or "COIR."

APPLICATION RATE: Leave blank, this is not applicable.

REMARKS: When using compost socks add a column for "REMARKS." Include information necessary for compost sock installation.

COMPOST SOCK

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	REMARKS
IN EC AREAS COMPOST SOCK MUST BE INSTALLED AFTER RECP (NETTING)	COMPOST SOCK		8" Dia BURLAP	PLACE 10 FEET APART ON FACE OF SLOPE
			12" Dia BURLAP	PLACE AT TOE OF SLOPE

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	REMARKS
STEP X	COMPOST SOCK		12" Dia		PLACE AT TOE OF SLOPE

EROSION CONTROL LEGEND BASIC INFORMATION — 4 OF 4

EROSION CONTROL LEGEND
ECL-1

EROSION CONTROL LEGEND BASIC INFORMATION, RELEASED 11/18/19

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GENERAL

Use for projects that include erosion control (EC) plan sheets and EC area quantities are called out on the EC plan sheets.

NOTE:

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

LEGEND

EROSION CONTROL TYPE 1
CUT SLOPES BETWEEN 2:1 AND 3:1

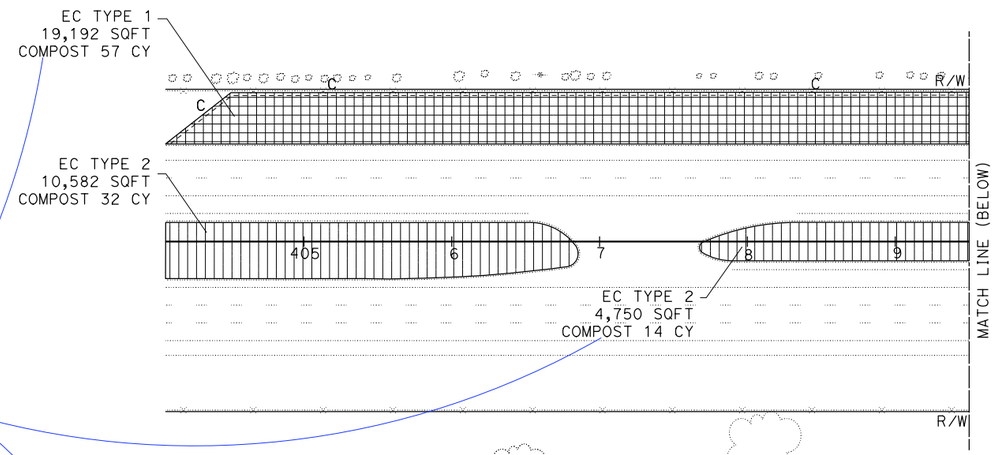
EROSION CONTROL TYPE 2
MEDIAN

LEGEND: Show pattern for each Erosion Control Type. Designer may list the applicable items for each Type as shown on the ECL sheet. Additional information regarding applicable conditions may be included.

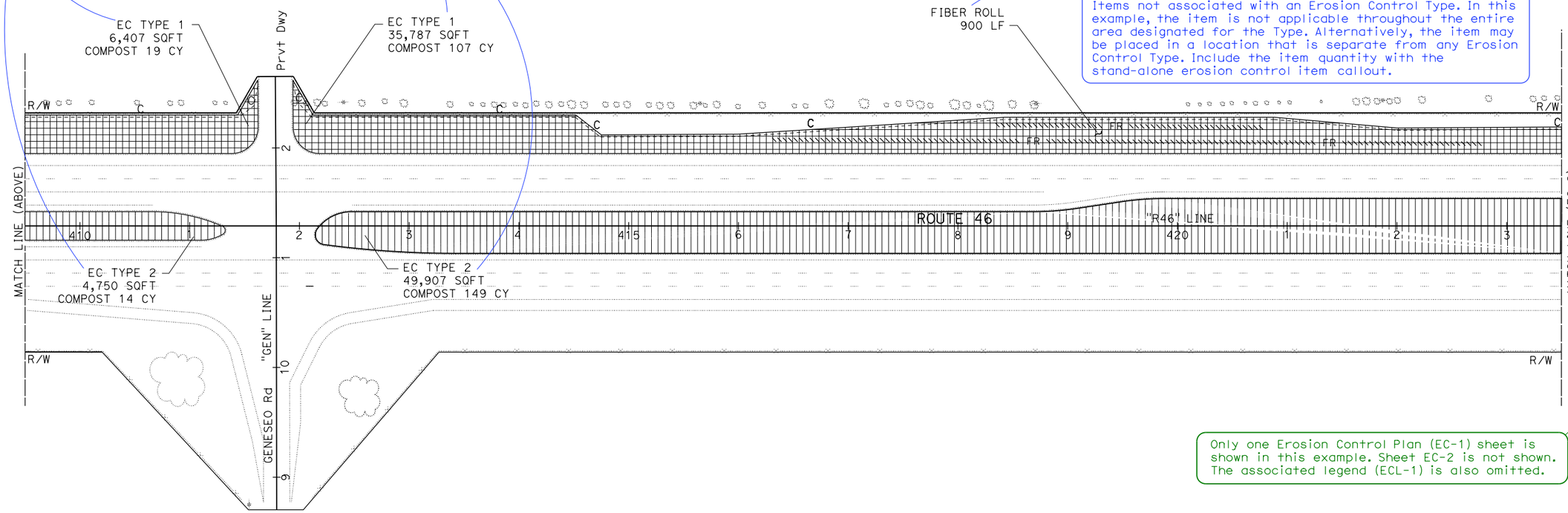
Multiple bid items and their quantities may be included for each Erosion Control Type callout. However, this may result in a great amount of redundancy. For this example, four of five bid items associated with EC Type 2 have SQFT units, so the callout would repeat the same SQFT quantity for each of four bid items listed.

EC TYPE 2
COMPOST 32 CY
STRAW 10,582 SQFT
INCORPORATE MATERIALS 10,582 SQFT
HYDROSEED 10,582 SQFT
HYDROMULCH 10,582 SQFT

EROSION CONTROL AREA/TYPE CALLOUTS: Call out EC type and applicable quantities for each contiguously delineated area. If the delineation of an area is split by a matchline, call out and quantify the portion on each side of the matchline separately.



STAND-ALONE EROSION CONTROL ITEM CALLOUTS: These are items not associated with an Erosion Control Type. In this example, the item is not applicable throughout the entire area designated for the Type. Alternatively, the item may be placed in a location that is separate from any Erosion Control Type. Include the item quantity with the stand-alone erosion control item callout.



Only one Erosion Control Plan (EC-1) sheet is shown in this example. Sheet EC-2 is not shown. The associated legend (ECL-1) is also omitted.

EROSION CONTROL EXAMPLE A, EROSION CONTROL PLAN — 1 OF 2

APPROVED FOR EROSION CONTROL WORK ONLY

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

EROSION CONTROL EXAMPLE A, EROSION CONTROL PLAN - RELEASED 11/18/19

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BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => EC_EX_A, ECPlan_1of2 .dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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GENERAL

Use this Erosion Control Quantity (ECQ) Sheet for projects where area quantities are called out on the EC plan sheets.

For information on table line and text formatting not shown on this sheet see the Plans Preparation Manual Section 2-2.19 "Summary of Quantities."

EROSION CONTROL QUANTITY TABLE: This table shows the specific bid items and associated quantities for each erosion control type and items not associated with a type.

SHEETS: Specific locations are not necessary in this table since the locations and associated quantities have been shown on the Erosion Control Plan (EC) sheets.

DESCRIPTION: List each Erosion Control Type and any items not associated with a Type.

BID ITEM DESCRIPTION: Identify all applicable bid items for all the erosion control types listed and items not associated with a type. The bid item description and unit of measure must match the BEES. Within each bid item column enter quantities adjacent to the applicable erosion control type or item. At the bottom of the bid item column provide the total for the bid item.

This (N) information is for the convenience of the contractor only.

The quantities are included in the bid item quantities.

For example, "Straw" is paid for by SQFT, but the application rate for straw is given in tons, and the contractor will purchase the straw by the ton.

"Hydroseed" and Hydromulch" are paid for via SQFT which includes payment for all components (seed, fiber, tackifier, etc.) included in hydroseed and/or hydromulch.

Item descriptions and unit of measure must match the BEES. Add or delete columns as required.

If an EC material is used in multiple items, list the material for each item separately.

EROSION CONTROL QUANTITIES

SHEET NUMBER	DESCRIPTION	COMPOST	STRAW	INCORPORATE MATERIALS	ROLLED EROSION CONTROL PRODUCT (NETTING)	HYDROSEED	HYDROMULCH	FIBER ROLLS	(N) STRAW	HYDROSEED MATERIALS (N) MIX 1	HYDROSEED MATERIALS (N) MIX 2	HYDROSEED MATERIALS (N) FIBER	HYDROMULCH MATERIALS (N) FIBER	HYDROMULCH MATERIALS (N) TACKIFIER
		CY	SQFT	SQFT	SQFT	SQFT	SQFT	LF	TON	LB	LB	LB	LB	LB
EC-1	EC TYPE 1	183			61,386	61,386	61,386			59.2		705	2,114	176
	EC TYPE 2	209	69,989	69,989		69,989	69,989		3.2		56.2	803	2,410	201
	FIBER ROLLS							900						
EC-2	EC TYPE 1	61			20,500	20,500	20,500			19.8		235	706	59
	EC TYPE 2	73	24,300	24,300		24,300	24,300		1.1		19.5	279	837	70
	FIBER ROLLS							1,100						
TOTAL		526	94,289	94,289	81,886	176,175	176,175	2,000						

(N) - NOT A SEPARATE BID ITEM.

NOTE:
This example table shows quantities for multiple plan sheets, however, plan sheet EC-2 is not included in the Example 'A' series.

If the quantity table contains any items with the (N) designation, place this note (Cell NOTE3 in the cell library) below the lower left corner of the table.

EROSION CONTROL EXAMPLE A, EROSION CONTROL QUANTITY SHEET — 2 OF 2

EROSION CONTROL QUANTITIES
ECQ-1

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EROSION CONTROL EXAMPLE A, EC QUANTITY SHEET - RELEASED 11/18/19

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GENERAL

This example shows the legend and quantities combined on one sheet.

Use this example for small, simple projects that do not include EC plan sheets.
Or for small projects where the legend and quantity table fit on the same page.

For additional information, see the Plans Preparation Manual Section 2-2.8, "Erosion Control."

FIBER ROLLS

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	REMARKS
IN HYDROSEED AREAS FIBER ROLLS MUST BE INSTALLED BEFORE HYDROSEEDING	FIBER ROLLS	FIBER ROLL	WHEAT STRAW FILL 8" TO 10" Dia	TYPE 1 FIBER ROLL INSTALLATION

HYDROSEED

ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
HYDROSEED	SEED	MIX	20 LB/ACRE
	FIBER	WOOD	2,000 LB/ACRE
	TACKIFIER	PSYLLIUM	150 LB/ACRE

For projects without EC plan sheets, where station ranges are provided for the locations, the station ranges must be shown elsewhere in the contract plan set (e.g. Roadway Layout, Drainage, or other plan-view sheets).

SEED MIX

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
CASTILLEJA EXSERTA (PURPLE OWL'S CLOVER)	50	0.4
CLARKIA PURPUREA (WINECUP CLARKIA)	80	0.4
ELYMUS ELYMOIDES (SQUIRRELTAIL)	60	7.8
LASTHENIA CALIFORNICA (DWARF GOLDFIELDS)	50	0.6
LAYIA PLATYGLOSSA (TIDY TIPS)	70	2.7
LOTUS PURSHIANUS (PURSHING)	70	0.4
MELICA IMPERFECTA (COAST RANGE MELIC)	60	2.2
VULPIA MICROSTACHYS (SMALL FESCUE)	80	5.5
TOTAL		20.0

Do not exceed one decimal place

Item descriptions and unit of measure must match the BEES. Add or delete columns as required.

For projects that use Erosion Control "TYPES," add a "DESCRIPTION" column. See Quantity Table on EC Example A

This (N) information is for the convenience of the contractor only. Payment for these quantities is included in the bid item quantities.

EROSION CONTROL QUANTITIES

LOCATION		HYDROSEED	FIBER ROLLS	HYDROSEED MATERIALS (N)			REMARKS
				SEED	FIBER	TACKIFIER	
		SQFT	LF	LB	LB	LB	
"B1" 44+60 TO 126+20	Lt	309,712		142.2	7110	1067	ROADSIDE SHOULDER
"B1" 44+60 TO 126+20	Rt	313,196		143.8	7190	1079	
"B1" 47+20.2	Lt/Rt		60				SIMAS STREET AT TOP OF HEAD WALLS
"B1" 59+42.9	Rt		60				DRIVEWAY ENTRANCE AT TOP OF HEAD WALLS
"B1" 63+16.2	Lt		60				
"B1" 71+67.5	Rt		60				
"B1" 73+36.7	Lt		60				
"B1" 79+89.6	Rt		60				
"B1" 90+99.0	Rt		60				
"B1" 91+59.6	Lt		60				
"B1" 101+90.7	Lt		60				
"B1" 102+05.7	Rt		60				
"B1" 105+08.6	Lt		60				
"B1" 111+84.1	Lt		60				
"B1" 113+03.1	Rt		60				
"B1" 121+68.8	Lt		60				
"B1" 121+75.5	Rt		60				
"B1" 201+51.9	Rt		60				
"B1" 202+00 TO 256+20	Lt	417,740		191.8	9590	1439	ROADSIDE SHOULDER
"B1" 199+50 TO 256+20	Rt	212,137		97.4	4870	731	
"B1" 214+87.6	Lt		100				DRIVEWAY ENTRANCE AT TOP OF HEAD WALLS
"B1" 214+87.6	Rt		60				RAY ROAD AT TOP OF HEADWALLS
"B1" 225+32.4	Rt		60				DRIVEWAY ENTRANCE AT TOP OF HEAD WALLS
"B1" 234+96.7	Lt		60				
"B1" 247+38.1	Lt		60				
"B1" 254+30.2	Lt		60				
"B1" 254+30.2	Rt		60				BLACK ROAD AT TOP OF HEADWALLS
TOTAL		1,252,785	1,420				

(N) - NOT A SEPARATE BID ITEM.

If the quantity table contains any items with the (N) designation, place this note (Cell NOTE3 in the cell library) below the lower left corner of the table.

EC EXAMPLE B, NO EC PLAN SHEETS, NO EC TYPES, EC LEGEND AND QUANTITIES COMBINED

When EC legend and quantity information are combined on a single sheet, use "Erosion Control Legend" for the sheet title and the "ECL" Plan Sheet ID.

EROSION CONTROL LEGEND
ECL-1

EC EXAMPLE B, EC LEGEND AND QUANTITIES - RELEASED 11/18/19

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GENERAL

Use this EC plan sheet example for projects that use location letters to reference quantities on ECQ sheets.

NOTE:

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

LEGEND

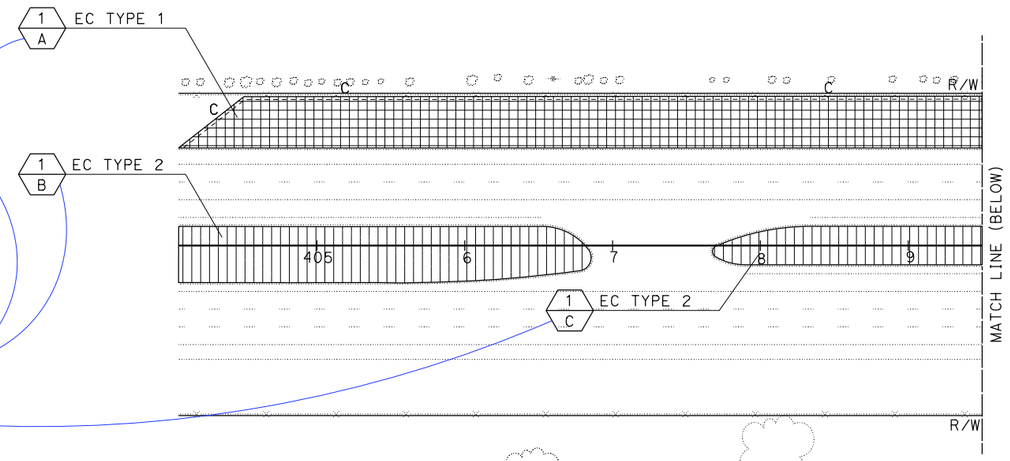
EROSION CONTROL TYPE 1
CUT SLOPES BETWEEN 2:1 AND 3:1

EROSION CONTROL TYPE 2
MEDIAN

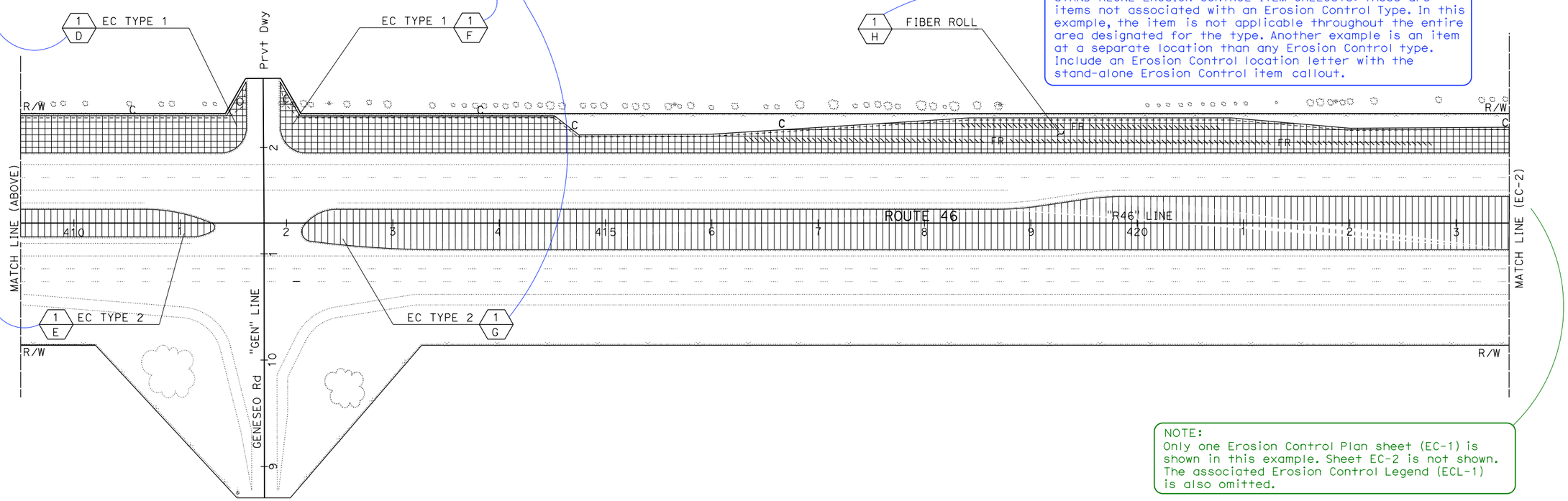
No. / A — EROSION CONTROL SHEET NUMBER / EROSION CONTROL LOCATION

LEGEND: Show pattern for each Erosion Control type. Designer may list the applicable items for each type as shown on the ECL sheet. Additional information regarding applicable conditions may be included.

EROSION CONTROL AREA/TYPE CALLOUTS: Call out the Erosion Control area and type for each contiguously delineated area. If the delineation of an area is split by a match line, call out and quantify the portion on each side of the match line as a separate area. Restart the area lettering at "A" on each "EC" plan sheet. Locations start at the lowest station and progress left to right up station.



STAND-ALONE EROSION CONTROL ITEM CALLOUTS: These are items not associated with an Erosion Control Type. In this example, the item is not applicable throughout the entire area designated for the type. Another example is an item at a separate location than any Erosion Control type. Include an Erosion Control location letter with the stand-alone Erosion Control item callout.



NOTE:
Only one Erosion Control Plan sheet (EC-1) is shown in this example. Sheet EC-2 is not shown. The associated Erosion Control Legend (ECL-1) is also omitted.

EC EXAMPLE C, EROSION CONTROL PLAN WITH EC AREA LETTERS — 1 OF 2

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

EROSION CONTROL EXAMPLE C, EROSION CONTROL PLAN - RELEASED 11/18/19

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GENERAL

Use this Erosion Control Quantity (ECQ) sheet -Example C for projects that use letters to call out EC areas on the EC plan sheets and when quantities are shown on multiple EC quantity tables that include area letters.

For information on table line and text formatting not shown on this sheet see the Plans Preparation Manual Section 2-2.19 "Summary of Quantities."

NOTE:
This example is for a project with 26 erosion control plan sheets and four erosion control quantity tables. Only the last table (table 4 of 4) and last fiber roll table (table 2 of 2) are shown.

For larger projects with many erosion control sheets, the erosion control quantities table may be too long to fit on one quantity sheet. Break up the quantities into multiple tables. Show subtotals on each partial table. On the final table repeat the subtotals of the other tables and include the grand total.

Item descriptions and unit of measure must match the BEES. Add or delete columns as required.

This (N) information is for the convenience of the contractor only. Payment for these quantities is included in the bid item quantities.

For larger projects consider a separate table for stand-alone items such as fiber rolls and compost sock. Consider separate tables for each route if there are multiple routes, each stage of construction if there are stages, and each direction of roadbed.

EROSION CONTROL QUANTITIES (TABLE 4)

EC SHEET NUMBER	LOCATION	EC TYPE	COMPOST	STRAW	INCORPORATE MATERIALS	ROLLED EROSION CONTROL PRODUCT (NETTING)	HYDROSEED	HYDROMULCH	(N) STRAW	HYDROSEED MATERIALS (N)			HYDROMULCH MATERIALS (N)	
										SEED MIX 1	SEED MIX 2	FIBER	FIBER	TACKIFIER
			CY	SQFT	SQFT	SQFT	SQFT	SQFT	TON	LB	LB	LB	LB	LB
23	A	1	10			3287	3287	3287		3.2		38	113	9
	B	2	7	2471	2471		2471	2471	0.1		2.0	28	85	7
	C	2	8	2640	2640		2640	2640	0.1		2.1	30	91	8
	D	1	10			3241	3241	3241		3.1		37	112	9
	E	2	6	1855	1855		1855	1855	0.1		1.5	21	64	5
	F	1	19			6487	6487	6487		6.3		74	223	19
	G	2	22	7356	7356		7356	7356	0.3		5.9	84	253	21
24	A	1	3			1095	1095	1095		1.1		13	38	3
	B	2	13	4350	4350		4350	4350	0.2		3.5	50	150	12
	C	1	5			1576	1576	1576		1.5		18	54	5
	D	1	28			9543	9543	9543		9.2		110	329	27
	E	2	8	2684	2684		2684	2684	0.1		2.2	31	92	8
25	A	1	14			4682	4682	4682		4.5		54	161	13
	B	2	11	3562	3562		3562	3562	0.2		2.9	41	123	10
	C	2	22	7458	7458		7458	7458	0.3		6.0	86	257	21
	D	1	18			5869	5869	5869		5.7		67	202	17
	E	1	16			5421	5421	5421		5.2		62	187	16
	F	1	19			6532	6532	6532		6.3		75	225	19
26	A	1	4			1346	1346	1346		1.3		15	46	4
	B	2	5	1649	1649		1649	1649	0.1		1.3	19	57	5
	C	2	26	8642	8642		8642	8642	0.4		6.9	99	298	25
	D	1	10			3467	3467	3467		3.3		40	119	10
SUBTOTAL TABLE 4			284	42,667	42,667	52,546	95,213	95,213						
SUBTOTAL TABLE 1			73	33,147	33,147	25,364	24,355	24,355						
SUBTOTAL TABLE 2			343	29,741	29,741	19,687	114,867	114,867						
SUBTOTAL TABLE 3			328	16,395	16,395	41,189	109,759	109,759						
TOTAL			1028	121,950	121,950	138,786	344,194	344,194						

(N) - NOT A SEPARATE BID ITEM

If the quantity table contains items with the (N) designation, place this note (Cell NOTE3 in the cell library) below the lower left corner of the table.

FIBER ROLLS (TABLE 2)

EC SHEET NUMBER	LOCATION		FIBER ROLLS LF
2	419+15 TO 421+30	R+	215
3	434+00 TO 436+00	R+	305
6	474+00 TO 474+45	R+	45
6	479+15 TO 479+35	R+	20
7	486+25 TO 488+35	R+	210
10	525+70 TO 526+40	R+	70
10	534+00 TO 535+50	R+	270
11	535+50 TO 536+70	R+	200
15	596+63 TO 597+43	R+	80
19	660+00 TO 661+50	R+	150
20	665+95 TO 667+50	R+	155
20	668+09 TO 668+39	R+	30
26	732+95 TO 735+85	R+	290
SUBTOTAL TABLE 2			2040
SUBTOTAL TABLE 1			2375
TOTAL			4415

EC EXAMPLE C, ECQ SHEET, MULTIPLE EC QUANTITY TABLES WITH EC AREA LETTERS — 2 OF 2

EROSION CONTROL QUANTITIES
ECQ-1

EC EXAMPLE C, EROSION CONTROL QUANTITIES - RELEASED 11/18/19

LAST REVISION 11-18-19 | DATE PLOTTED => | TIME PLOTTED =>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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SENIOR LANDSCAPE ARCHITECT
CALCULATED-DESIGNED BY | CHECKED BY
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PLANS PREPARATION MANUAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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NOTE:

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

GENERAL

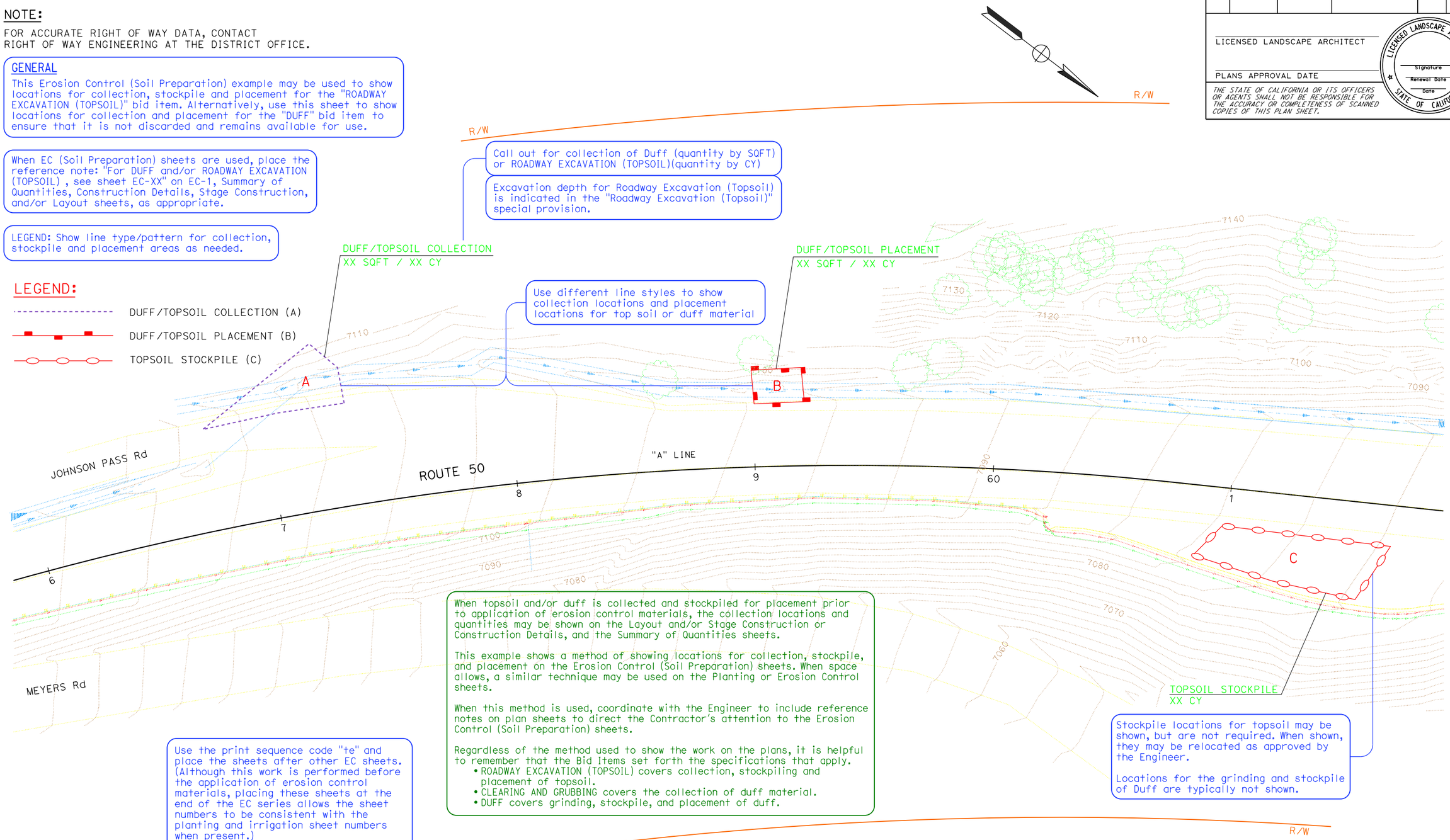
This Erosion Control (Soil Preparation) example may be used to show locations for collection, stockpile and placement for the "ROADWAY EXCAVATION (TOPSOIL)" bid item. Alternatively, use this sheet to show locations for collection and placement for the "DUFF" bid item to ensure that it is not discarded and remains available for use.

When EC (Soil Preparation) sheets are used, place the reference note: "For DUFF and/or ROADWAY EXCAVATION (TOPSOIL) , see sheet EC-XX" on EC-1, Summary of Quantities, Construction Details, Stage Construction, and/or Layout sheets, as appropriate.

LEGEND: Show line type/pattern for collection, stockpile and placement areas as needed.

LEGEND:

- DUFF/TOPSOIL COLLECTION (A)
- DUFF/TOPSOIL PLACEMENT (B)
- TOPSOIL STOCKPILE (C)



When topsoil and/or duff is collected and stockpiled for placement prior to application of erosion control materials, the collection locations and quantities may be shown on the Layout and/or Stage Construction or Construction Details, and the Summary of Quantities sheets.

This example shows a method of showing locations for collection, stockpile, and placement on the Erosion Control (Soil Preparation) sheets. When space allows, a similar technique may be used on the Planting or Erosion Control sheets.

When this method is used, coordinate with the Engineer to include reference notes on plan sheets to direct the Contractor's attention to the Erosion Control (Soil Preparation) sheets.

Regardless of the method used to show the work on the plans, it is helpful to remember that the Bid Items set forth the specifications that apply.

- ROADWAY EXCAVATION (TOPSOIL) covers collection, stockpiling and placement of topsoil.
- CLEARING AND GRUBBING covers the collection of duff material.
- DUFF covers grinding, stockpile, and placement of duff.

Stockpile locations for topsoil may be shown, but are not required. When shown, they may be relocated as approved by the Engineer.

Locations for the grinding and stockpile of Duff are typically not shown.

Use the print sequence code "te" and place the sheets after other EC sheets. (Although this work is performed before the application of erosion control materials, placing these sheets at the end of the EC series allows the sheet numbers to be consistent with the planting and irrigation sheet numbers when present.)

EROSION CONTROL EXAMPLE D - SOIL PREPARATION PLAN — 1 OF 2

APPROVED FOR SOIL PREPARATION WORK ONLY

EROSION CONTROL (SOIL PREPARATION)

SCALE: 1" = 20'

EC-XX

EROSION CONTROL EXAMPLE D, SOIL PREPARATION PLAN - RELEASED 04/16/2020

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PLANS PREPARATION MANUAL

LAST REVISION | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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PLANS APPROVAL DATE

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GENERAL

Use this Erosion Control (Soil Preparation) example to show quantities for collection and placement for the "DUFF" and/or "ROADWAY EXCAVATION (TOPSOIL)" bid items. Stockpile quantities are shown here for Roadway Excavation (Topsoil) only.

ROADWAY EXCAVATION (TOPSOIL) COLLECTION, STOCKPILE AND PLACEMENT

EC SHEET	LOCATION	TOPSOIL COLLECTION (N)	TOPSOIL STOCKPILE AND PLACEMENT (N)	ROADWAY EXCAVATION (TOPSOIL)
		CY	CY	CY
1	A	40		40
1	B		40	40
1	C		40	
SHEET TOTAL				80

(N) - NOT A SEPARATE BID ITEM

NOTE: Under the special provision for ROADWAY EXCAVATION (TOPSOIL), the amount shown in the Engineer's Estimate for ROADWAY EXCAVATION (TOPSOIL) includes the payment to the contractor for collecting the topsoil and moving it to the stockpile, and then moving it again for final placement. (This is called "double handling.") Typically this means collection amount is doubled to determine the total quantity for the ROADWAY EXCAVATION (TOPSOIL) bid item.

If the Resident Engineer orders an additional move, it will be paid as change order work.

Although there is often an amount of material lost during handling, there can also be some expansion of the material at placement. Showing equal amounts in the table for collection and placement is recommended.

DUFF COLLECTION AND PLACEMENT

EC SHEET	LOCATION	DUFF COLLECTION (N)	DUFF PLACEMENT (N)	DUFF
		SQFT	SQFT	SQFT
1	A	725		
1	B		500	500
SHEET TOTAL				500

(N) - NOT A SEPARATE BID ITEM

Generally, stockpiling location of duff is not shown, so no column for it is required.

For larger quantities or areas, "DUFF" may be paid for by ACRE. Do not exceed 1 decimal place. (Notice there is a loss shown for handling of duff.)

Notice that the pay units for Duff are by area (SQFT or ACRES). Volumetric measurments are not used for Duff because of large differences in the amount of collection, chip size, and decomposition.

EROSION CONTROL EXAMPLE D - SOIL PREPARATION QUANTITY SHEET — 2 OF 2

EROSION CONTROL (SOIL PREPARATION) QUANTITIES

ECQ-XX

EROSION CONTROL EXAMPLE D, SOIL PREPARATION QUANTITIES - RELEASED 04/16/2020

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:

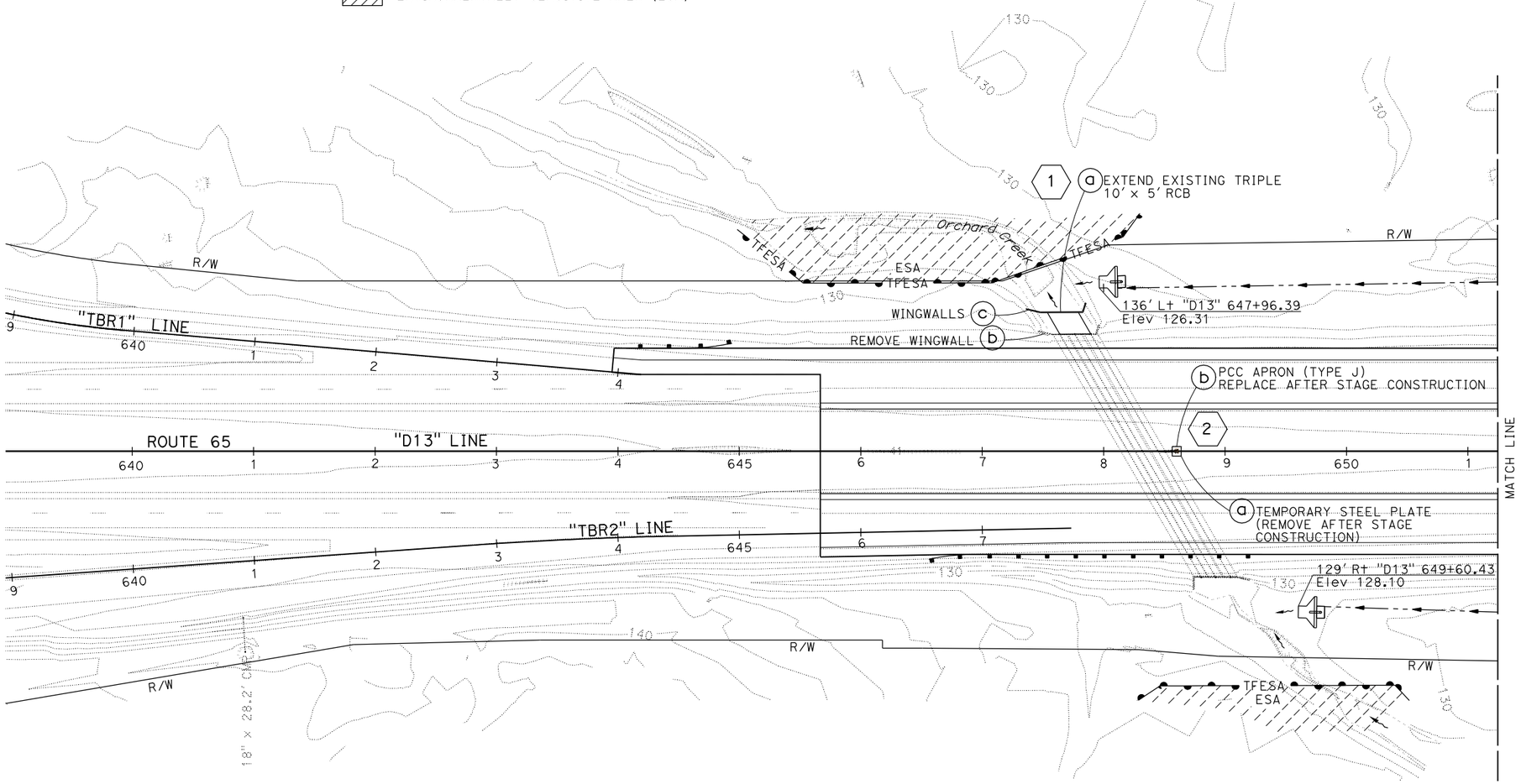
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

- No. — DRAINAGE SYSTEM NUMBER
- XX — DRAINAGE ITEM
- WATER QUALITY/OUTLET CONTROL BERM (SEE DRAINAGE DETAILS)
- DIRECTION OF FLOW
- FLOW LINE OF V-DITCH
- CULVERT MARKER (SEE DRAINAGE DETAILS)
- ROCK SLOPE PROTECTION
- ENVIRONMENTALLY SENSITIVE AREA (ESA)

ABBREVIATIONS:

SSWD	SOUTH SUTTER WATER DISTRICT
DRCB	DOUBLE REINFORCED CONCRETE BOX
HMAOD	HOT MIX ASPHALT OVERSIDE DRAIN
DA	DEPRESSED APRON
TCE	TEMPORARY CONSTRUCTION EASEMENT
CSP DD	CSP DOWNDRAIN



SEE LAYOUT SHEET, EXAMPLE "65 LAYOUT-1" REGARDING LOCATION OF SHEET MATCH LINES

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PLAN SHEET, EXAMPLE "65 D-1"

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-1

DRAINAGE PLAN SHEET, EXAMPLE "65 D-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 10:17

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BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => ia-65 D-001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

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NOTE:

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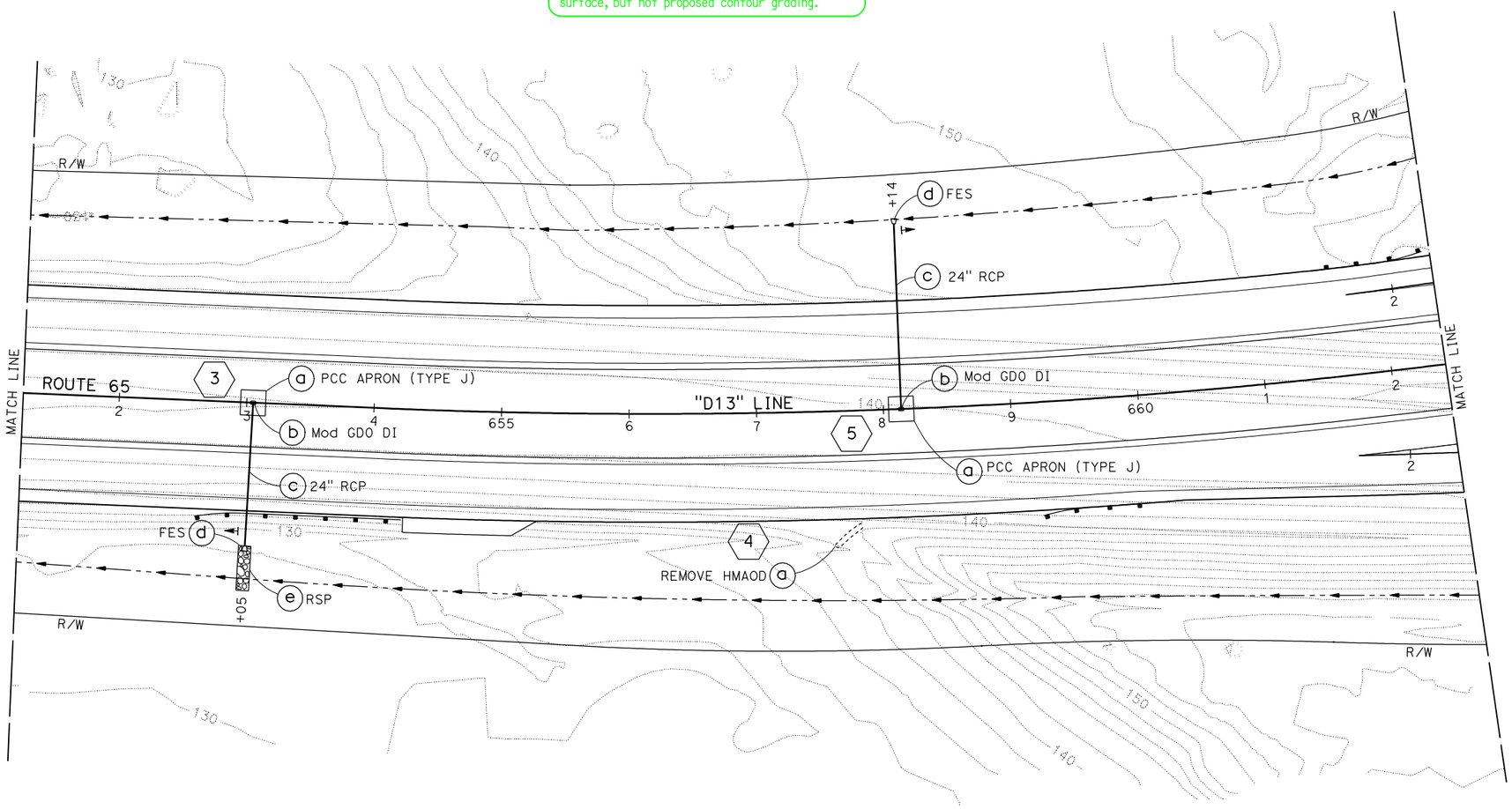
Showing contours is an option on Drainage sheets if it is beneficial to the drainage systems being shown. However, in some cases, they may clutter more than benefit.

Existing contours may be shown on the road surface, but not proposed contour grading.



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PLAN SHEET, EXAMPLE "65 D-2"

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-2

DRAINAGE PLAN SHEET, EXAMPLE "65 D-2" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 10:18

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

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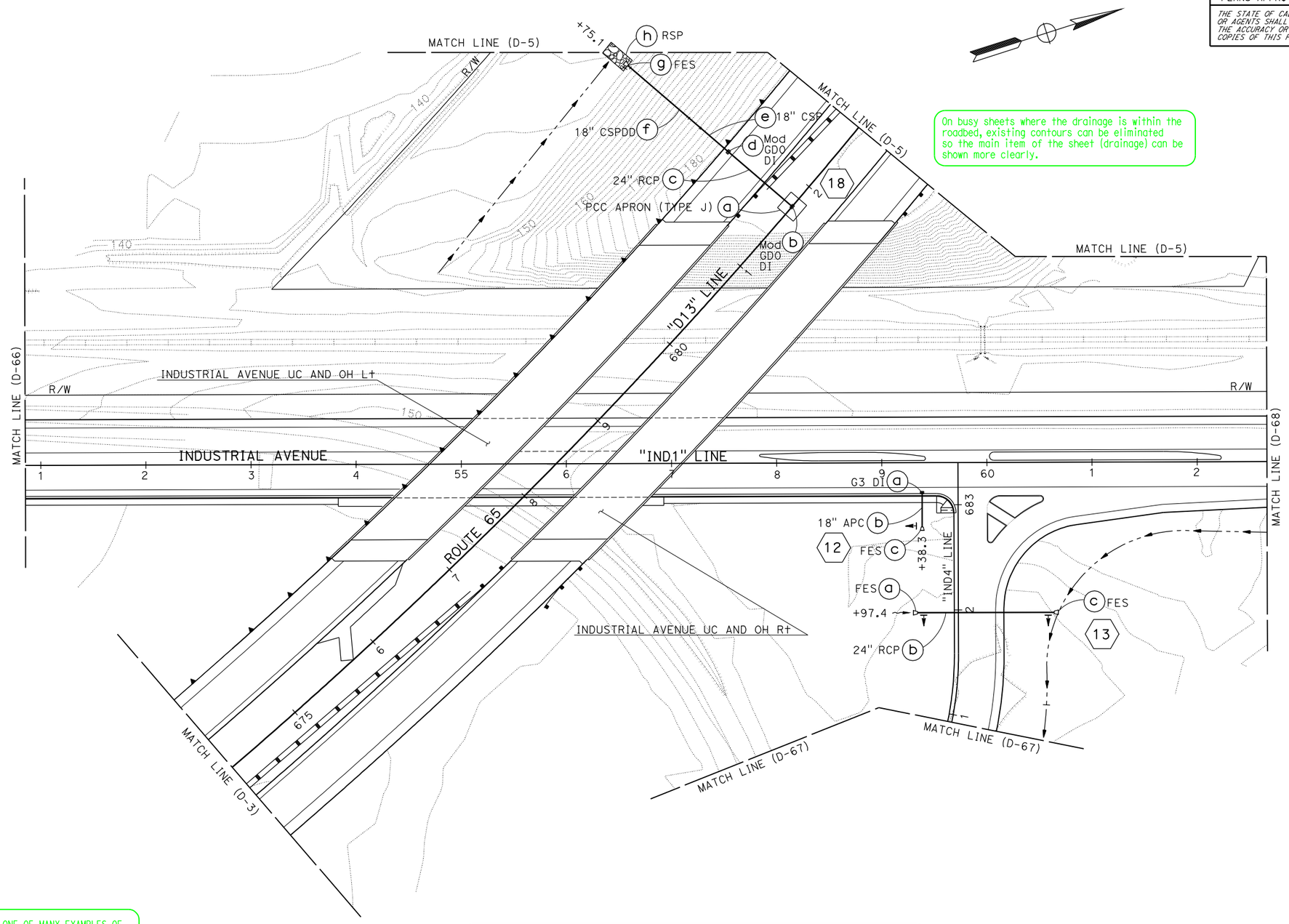

On busy sheets where the drainage is within the roadbed, existing contours can be eliminated so the main item of the sheet (drainage) can be shown more clearly.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PLAN SHEET, EXAMPLE "65 D-4"

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-4

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DRAINAGE PLAN SHEET, EXAMPLE "65 D-4" RELEASED 1/6/2012

LAST REVISION 00-00-00

DATE PLOTTED => 29-DEC-2011

TIME PLOTTED => 10:20

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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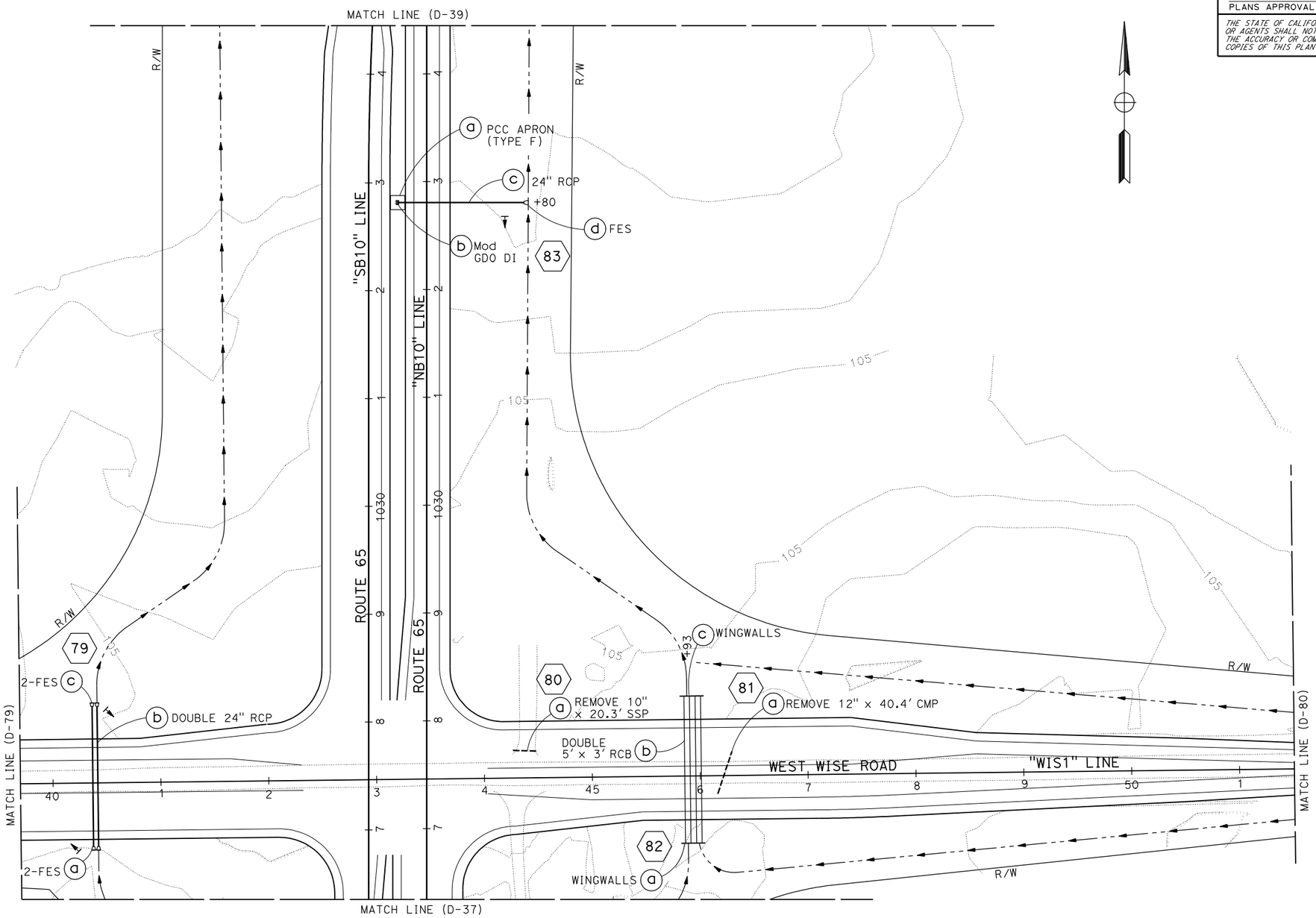
NOTE:

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



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PLAN SHEET, EXAMPLE "65 D-38"

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-38

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DRAINAGE PLAN SHEET, EXAMPLE "65 D-38" RELEASED 1/6/2012

LAST REVISION 00-00-00

DATE PLOTTED => 29-DEC-2011

TIME PLOTTED => 10:21

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

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PLANS APPROVAL DATE

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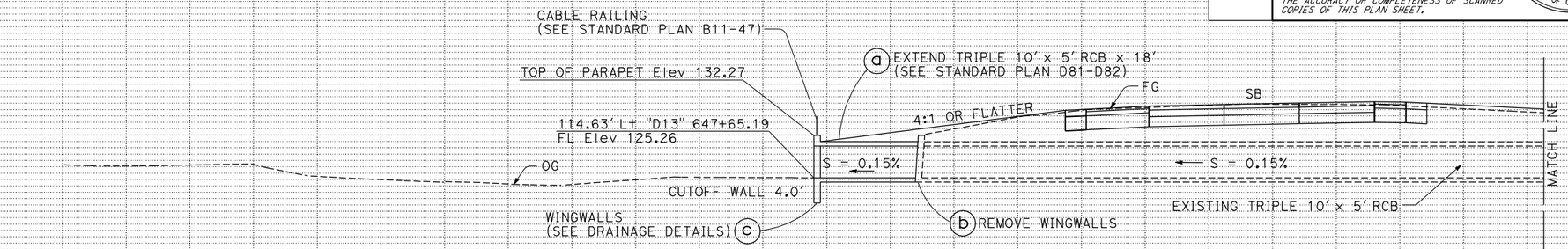
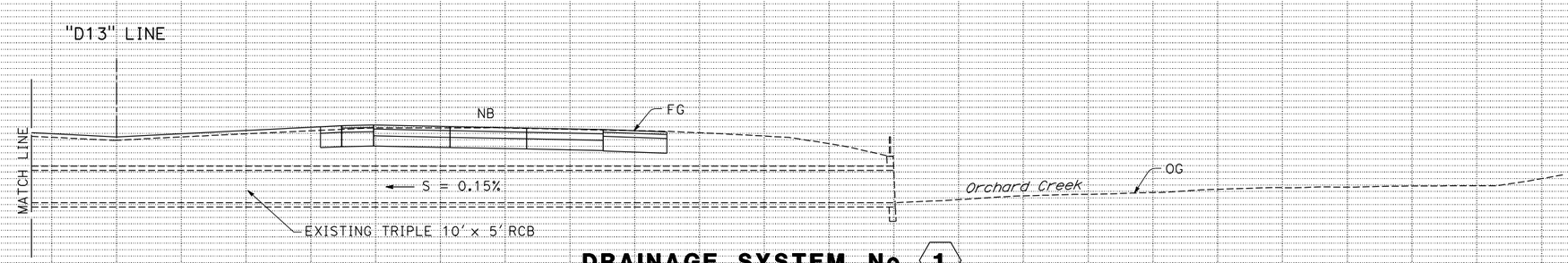
NOTE:

DRAINAGE SYSTEMS WITH "REMOVAL ONLY" ARE NOT SHOWN.
SEE DRAINAGE QUANTITIES SHEETS FOR INFORMATION.



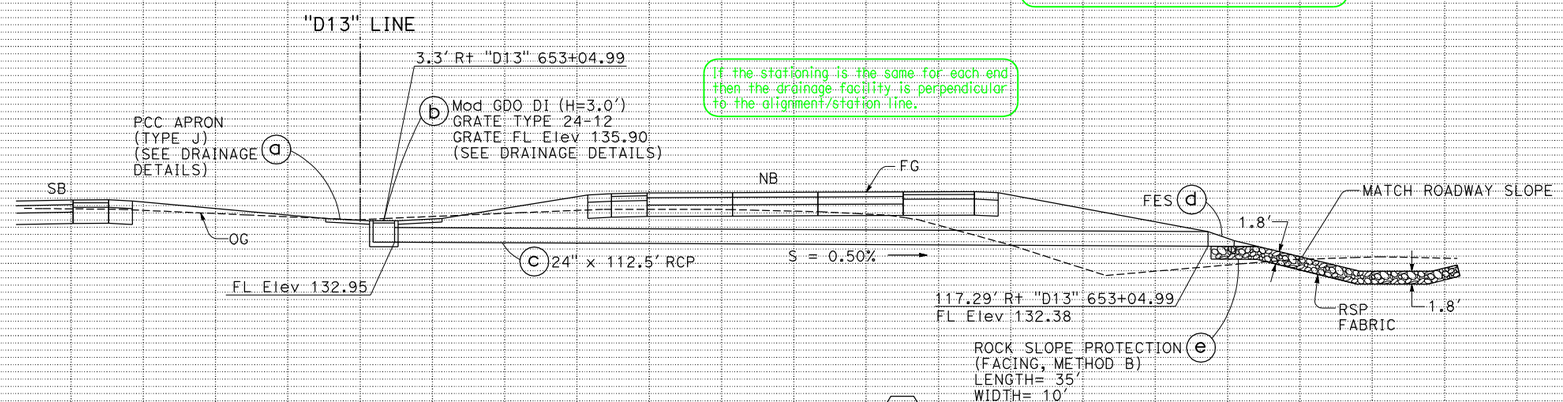


DRAINAGE SYSTEM No. 1

"D13" 648+32.10
SKEW 30°16'27" Lt

The station callout for the drainage system is the point where it crosses the alignment/station line.

If the system runs longitudinally to the alignment, then the beginning and end stations of the system are shown.



DRAINAGE SYSTEM No. 3

"D13" 653+04.99

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-1"

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PROFILES

SCALE: Horiz 1" = 10'
Vert 1" = 10'

DP-1

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-1" RELEASED 1/6/2012

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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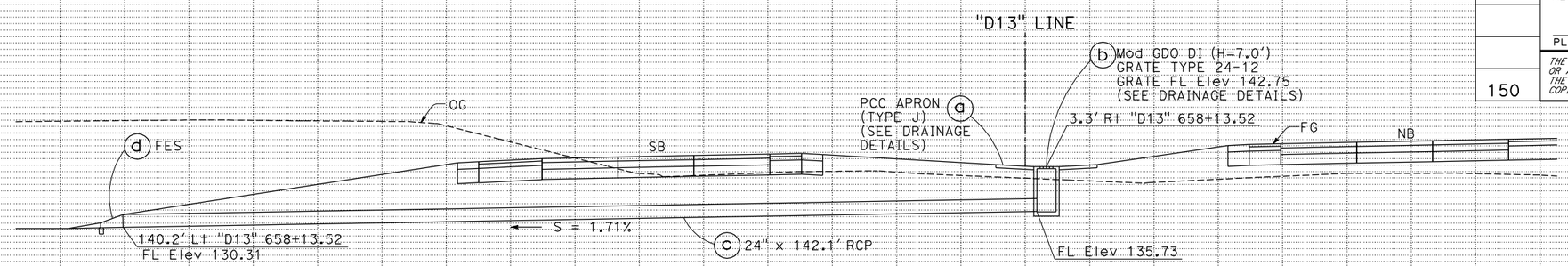
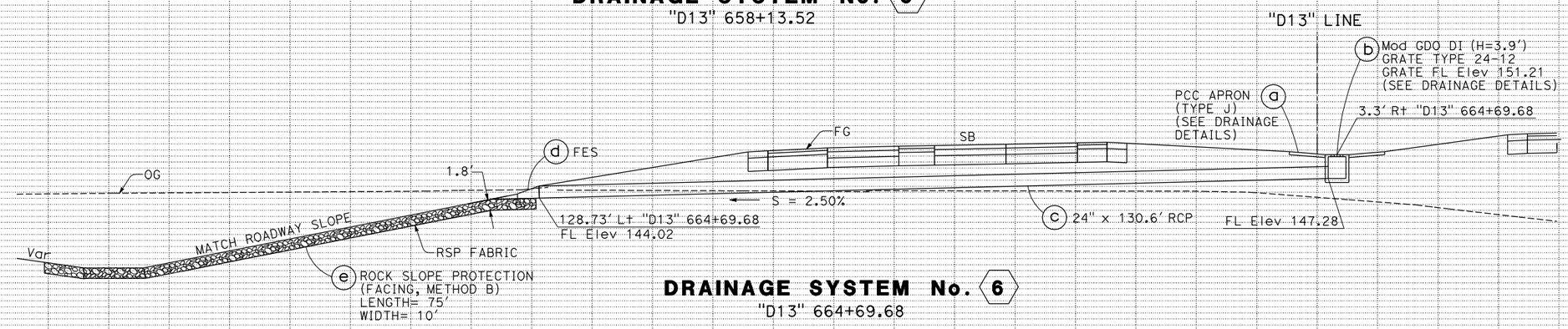
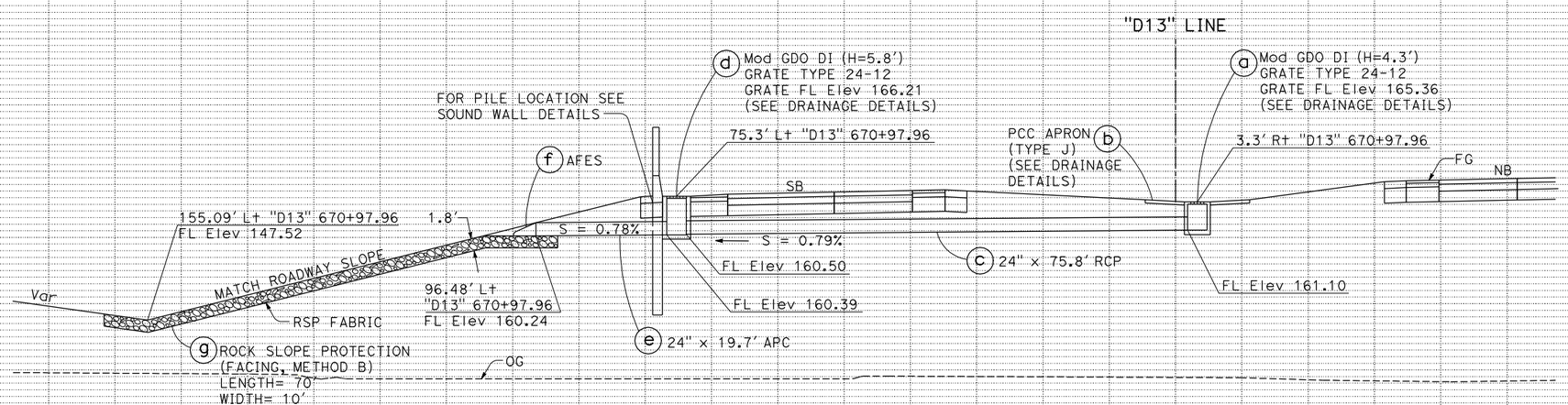


DRAINAGE SYSTEM No. 5
"D13" 658+13.52



DRAINAGE SYSTEM No. 6
"D13" 664+69.68



DRAINAGE SYSTEM No. 8
"D13" 670+97.96

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-2"

DRAINAGE PROFILES

SCALE: Horiz 1" = 10'
Vert 1" = 10'

DP-2

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-2" RELEASED 1/6/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 29-DEC-2011 | TIME PLOTTED => 10:24

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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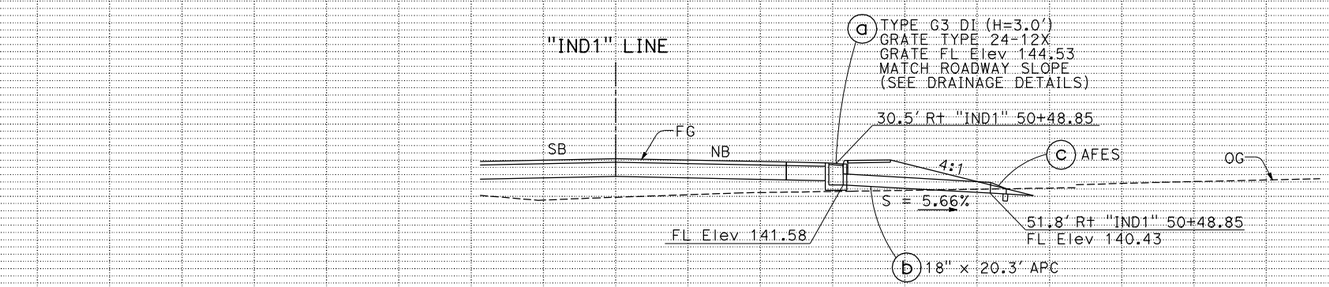
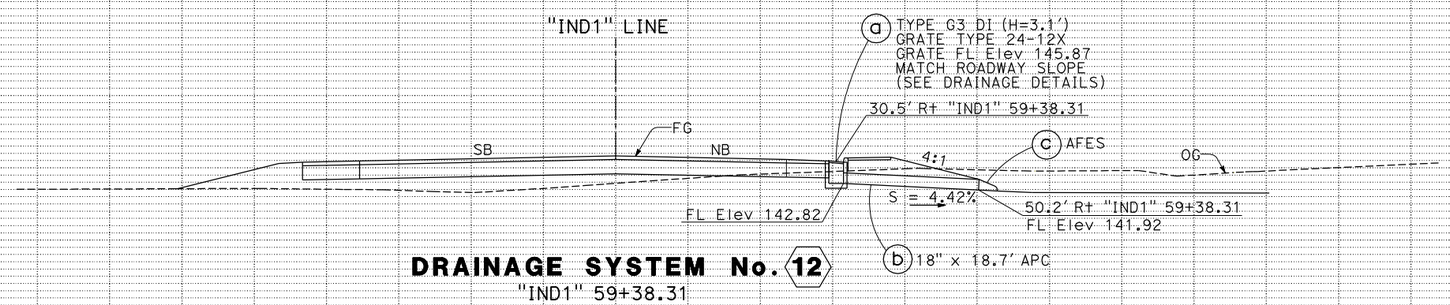


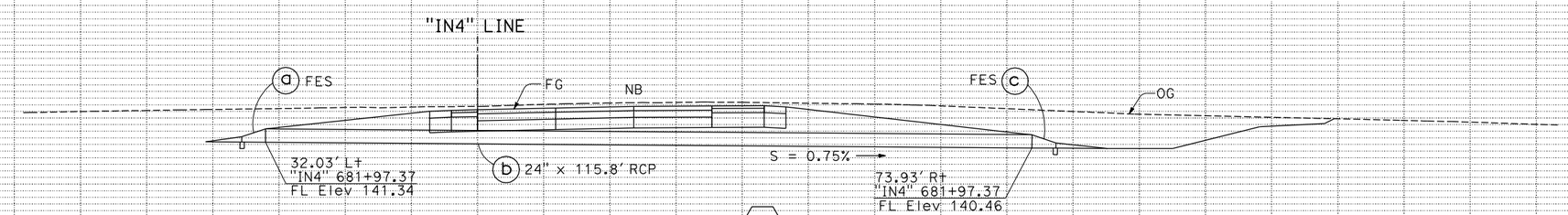
DRAINAGE SYSTEM No. 11

"IND1" 50+48.85



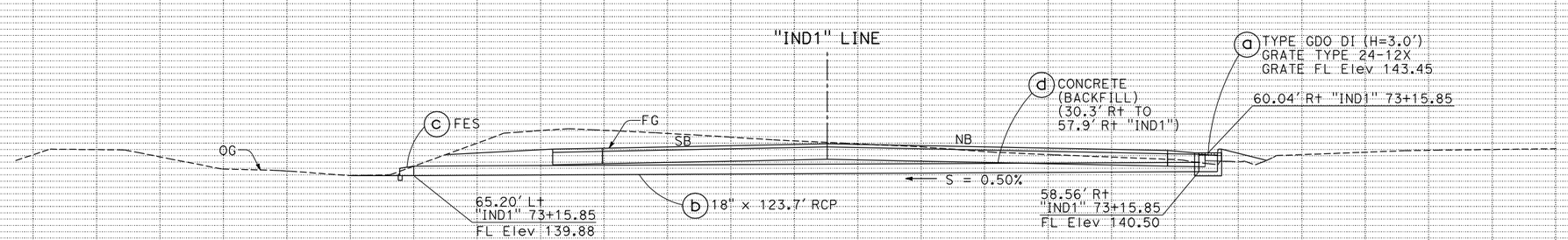
DRAINAGE SYSTEM No. 12

"IND1" 59+38.31



DRAINAGE SYSTEM No. 13

"IN4" 681+97.37 NB OFF-RAMP



DRAINAGE SYSTEM No. 15

"IND1" 73+15.85

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-3"

DRAINAGE PROFILES

SCALE: Horiz 1" = 10'
Vert 1" = 10'

DP-3

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-3" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:26

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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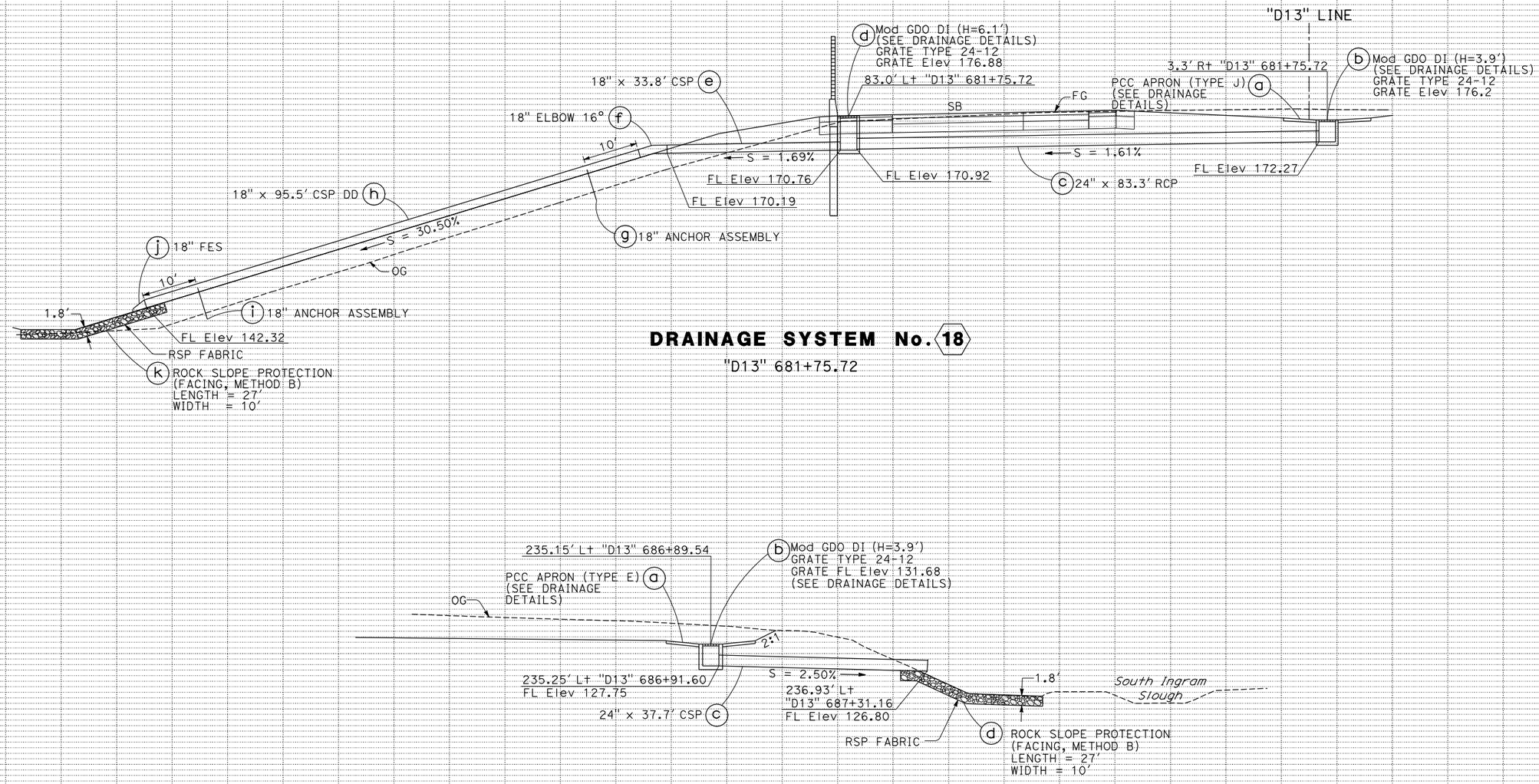

DRAINAGE SYSTEM No. 18

"D13" 681+75.72

DRAINAGE SYSTEM No. 20

"D13" 686+81.22 TO 687+48.30

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-4"

DRAINAGE PROFILES

SCALE: Horiz 1" = 10'
Vert 1" = 10'

DP-4

DRAINAGE PROFILES SHEET, EXAMPLE "65 DP-4" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:29

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

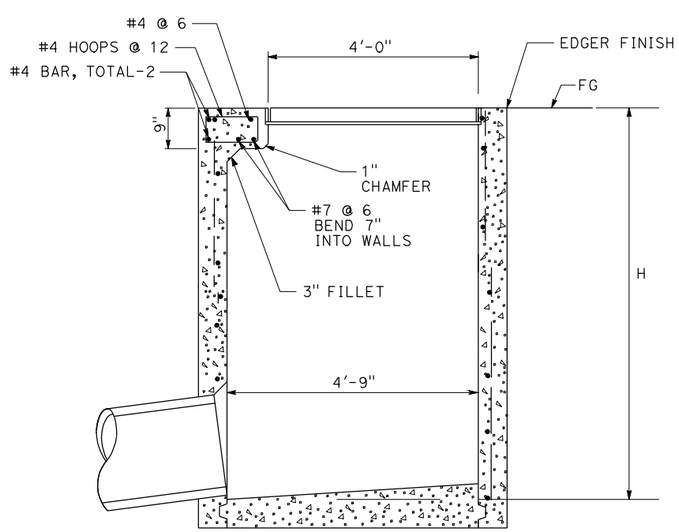
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.

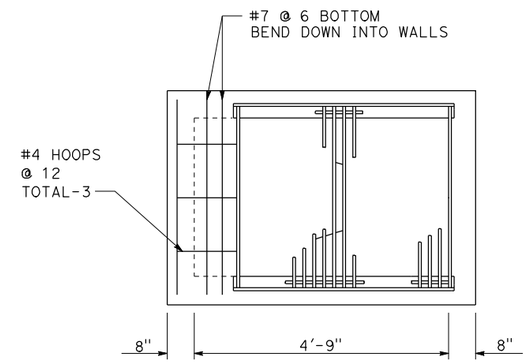
APC ALLOWABLE PIPE MATERIAL

DESCRIPTION	TYPE				
	CSP* (0.138")	RCP CLASS IV	HDPE TYPE C, D OR S	PVC	SSRP* (¾" x ¾") 7.5" PITCH
	SIZE	SIZE	SIZE	SIZE	SIZE
6" APC	6"	6"	6"	6"	6"
18" APC	18"	18"	18"	18"	18"
24" APC	24"	24"	24"	24"	24"

* ALLOWABLE COATINGS:
POLYMERIZED ASPHALT
POLYMERIC SHEET COATING
COMPOSITE STEEL SPIRAL RIB PIPE



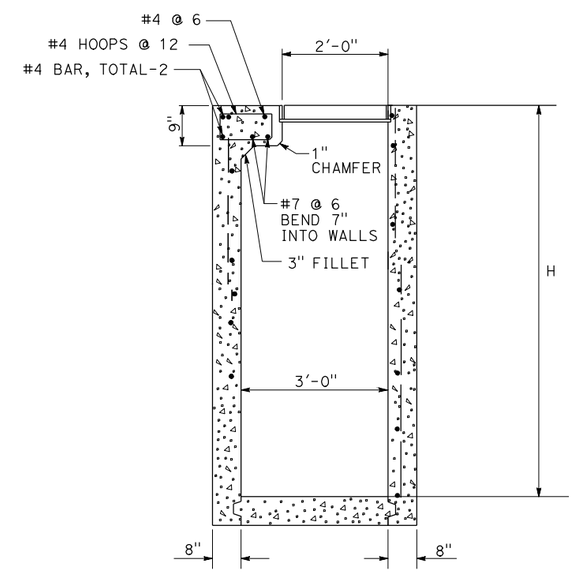
ELEVATION



PLAN

Mod TYPE GDO INLET

(FOR DETAILS NOT SHOWN SEE Std PLAN D74B, D77A, D77B)



ELEVATION

Mod TYPE GT4 INLET

(FOR DETAILS NOT SHOWN SEE Std PLAN D74B, D77A)

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-1"

DRAINAGE DETAILS

NO SCALE

DD-1

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

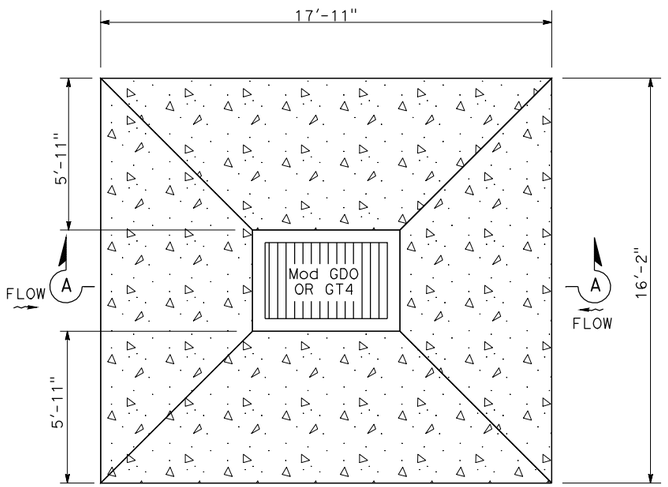
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

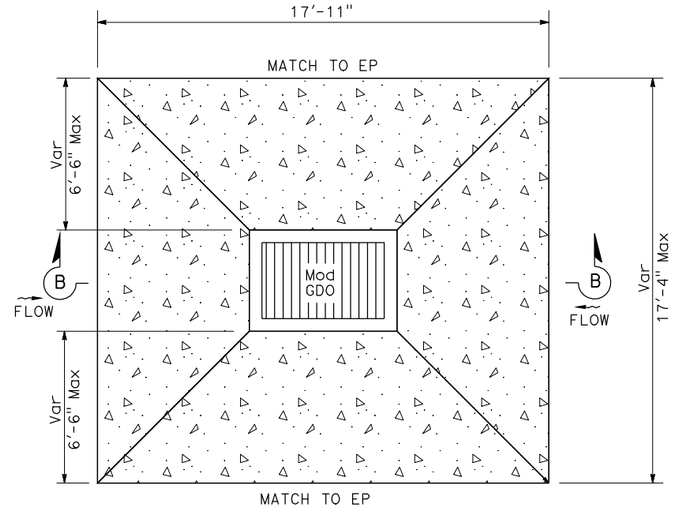
REGISTERED CIVIL ENGINEER DATE

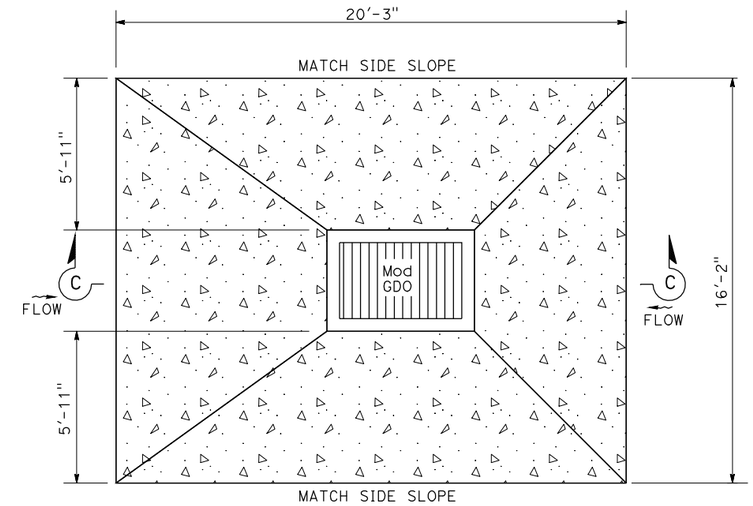
PLANS APPROVAL DATE

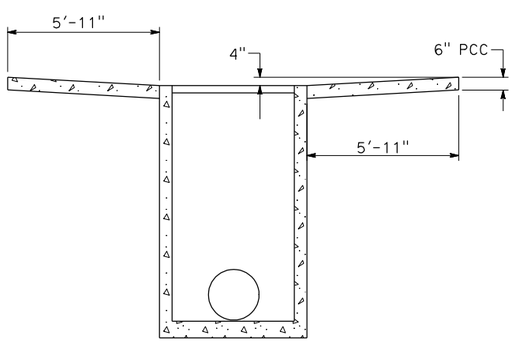
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.



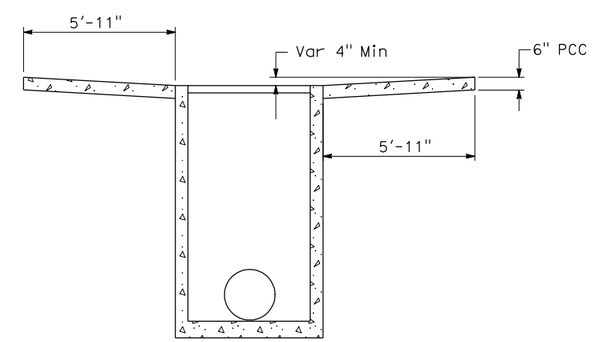






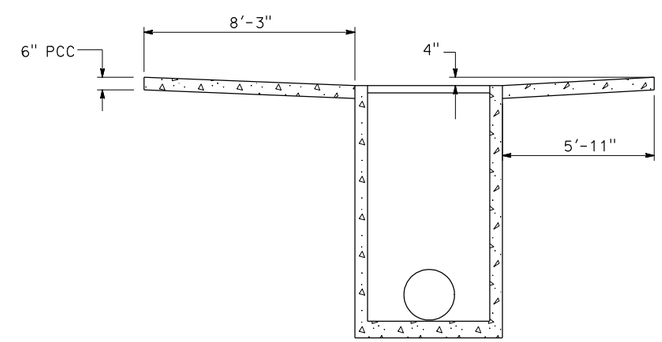
SECTION A-A

PCC APRON (TYPE E)



SECTION B-B

PCC APRON (TYPE F)



SECTION C-C

PCC APRON (TYPE J)

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-2"

DRAINAGE DETAILS

NO SCALE

DD-2

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-2" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:37

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

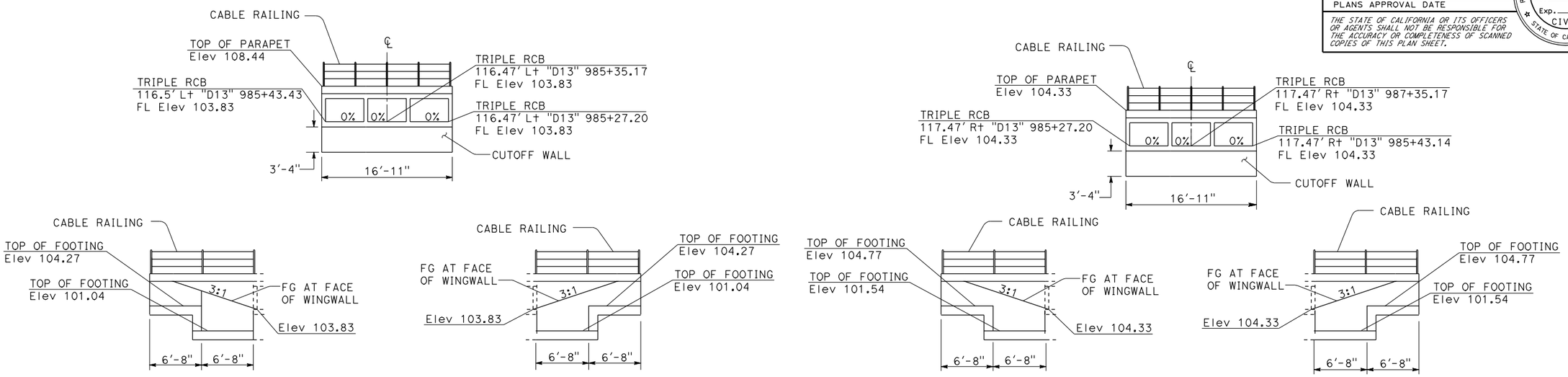
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTES (THIS SHEET ONLY):

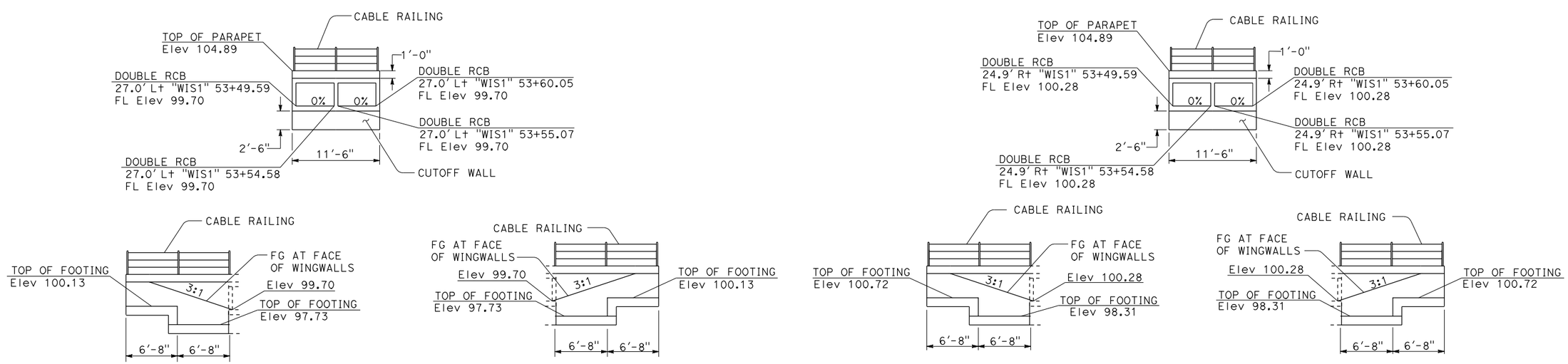
1. USE STANDARD PLAN FOR MULTIPLE CELL CULVERTS WITH MAXIMUM EARTH COVER = 20'.
2. FOR DETAILS NOT SHOWN, SEE STANDARD PLAN D81.
3. FOR CUTOFF WALL, SEE STANDARD PLAN D84.
4. FOR CABLE RAILING, SEE STANDARD PLAN B11-47.



WINGWALLS FOR Lt **WINGWALLS FOR Rt**

DRAINAGE SYSTEM No. 68

"D13" 985+34.51



WINGWALLS FOR Lt **WINGWALLS FOR Rt**

DRAINAGE SYSTEM No. 82

"WIS1" 53+49.59

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-3"

DRAINAGE DETAILS

NO SCALE

DD-3

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-3" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 10:38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

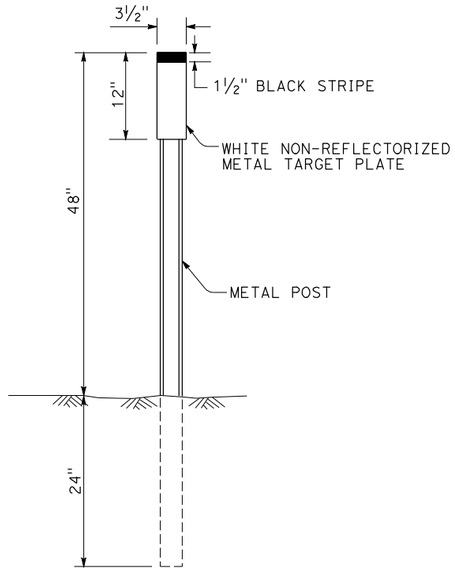
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

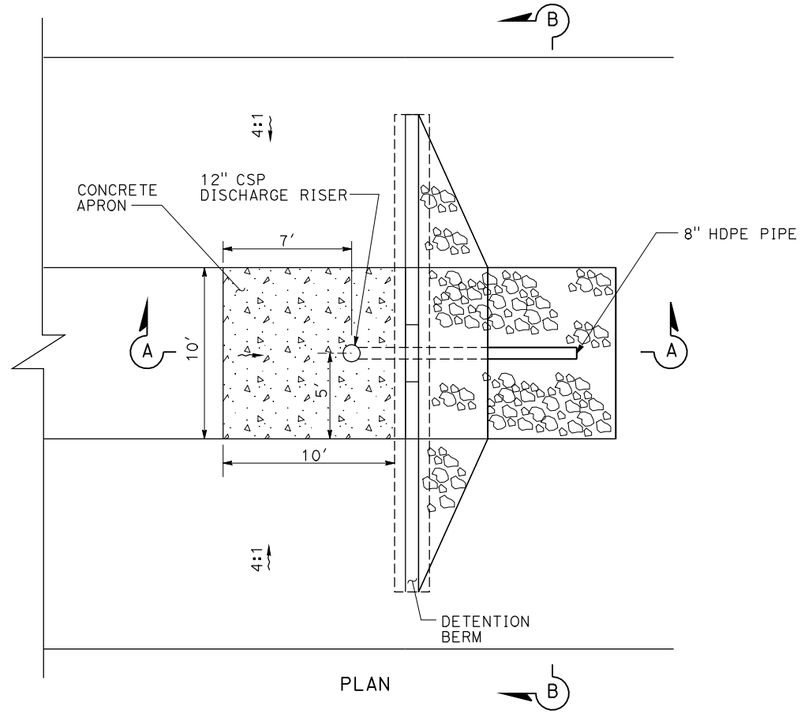
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



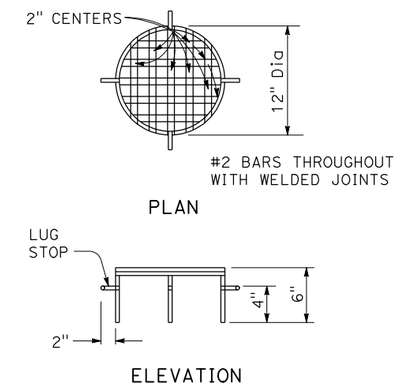
CULVERT MARKER

NOTES:

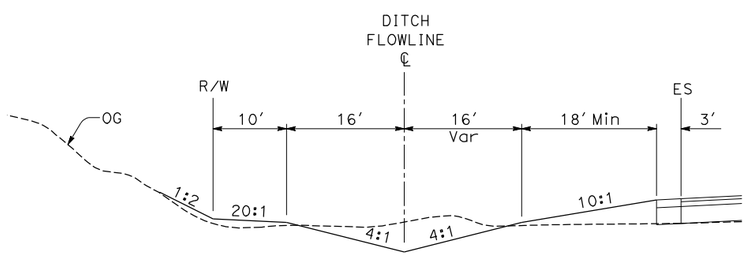
1. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
2. FOR DETAILS NOT SHOWN, SEE Std PLAN A73B.



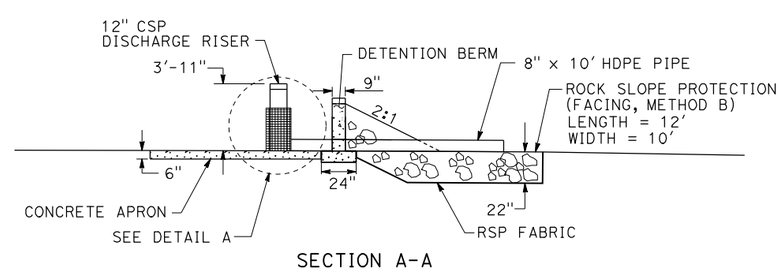
PLAN



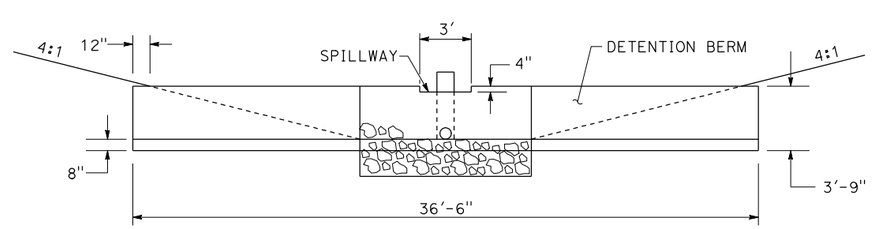
RISER DEBRIS CAP DETAIL



V-DITCH TYPICAL

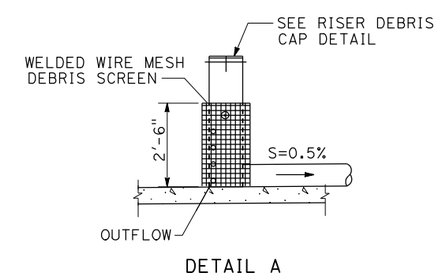


SECTION A-A

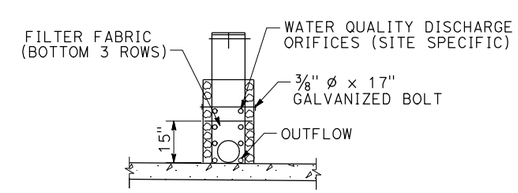


SECTION B-B

WATER QUALITY/DETENTION OUTLET BERM



DETAIL A



SIDE VIEW

DISCHARGE RISER

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-4"

DRAINAGE DETAILS

NO SCALE

DD-4

DRAINAGE DETAILS SHEET, EXAMPLE "65 DD-4" RELEASED 2/3/2012

REVISED BY	DATE REVISED
CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2012 TIME PLOTTED => 14:55

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

ABBREVIATIONS:

APDD ALTERNATIVE PIPE DOWNDRAIN
DA DEPRESSED APRON

NOTES:

1. FOR ALLOWABLE ALTERNATIVES FOR APC, AFES & APDD, SEE DRAINAGE DETAILS SHEET.
2. EXCEPT FOR PIPE DOWNDRAINS WHICH REQUIRE WATER TIGHT JOINTS, ALL JOINTS ARE STANDARD JOINT TYPE.

DRAINAGE QUANTITIES

DRAINAGE SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○	REMOVE HEADWALL/WINGWALL	ABANDON CULVERT	REMOVE CULVERT	REMOVE INLET	SAND BACKFILL	REMOVE OVERSIDE DRAIN	ALTERNATIVE PIPE CULVERT			ALTERNATIVE FLARED END SECTION			REINFORCED CONCRETE PIPE (CLASS 4)			CONCRETE FLARED END SECTION			18" ANCHOR ASSEMBLY	18" CORRUGATED STEEL PIPE DOWNDRAIN (.109" THICK)	(N) PIPE ELBOW	18" CORRUGATED STEEL PIPE (.138" THICK)	MISCELLANEOUS IRON AND STEEL	MINOR CONCRETE (MINOR STRUCTURE)	ROCK SLOPE PROTECTION (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	(N) HEIGHT OF INLET	(N) HEIGHT OF COVER	DESCRIPTION	STATION	DRAINAGE SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○
									12"	18"	24"	12"	18"	24"	18"	24"	36"	18"	24"	36"															
			EA	LF	LF	EA	CY	EA	LF			EA			LF			EA			EA	LF	EA	LF	LB	CY	CY	SQYD	LF	LF				
D-1	1	a																														EXTEND TRIPLE 10′ x 5′ RCB CULVERT BY 18′ (SEE SHEET DQ-18)	"D13" 648+32.17	D-1	1	a
		b	2																													REMOVE WINGWALLS (10′ x 5′)				b
		c																														WINGWALLS (SEE SHEET DQ-18)				c
D-1	2	a																							99							TEMPORARY STEEL PLATE	"D13" 648+62.07	D-1	2	a
		b																								5.28						PCC APRON (TYPE J)				b
D-2	3	a																								5.28						PCC APRON (TYPE J)	"D13" 653+04.99	D-2	3	a
		b																							635	1.58			3.0			Mod GDO DI, GRATE TYPE 24-12				b
		c														112.5																24" RCP				c
		d																	1													24" CONCRETE FES				d
		e																									23	58				RSP (FACING, METHOD B)				e
D-2	4	a						1																								REMOVE OVERSIDE DRAIN (32.8′ x 3.3′)	"D13" 657+64.30	D-2	4	a
D-2	5	a																								5.28						PCC APRON (TYPE J)	"D13" 658+13.52	D-2	5	a
		b																							635	2.94			7.0			Mod GDO DI, GRATE TYPE 24-12				b
		c														142.1																24" RCP				c
		d																	1													24" CONCRETE FES				d
D-3	6	a																								5.28						PCC APRON (TYPE J)	"D13" 664+69.68	D-3	6	a
		b																							635	1.93			4.0			Mod GDO DI, GRATE TYPE 24-12				b
		c														130.6																24" RCP				c
		d																	1													24" CONCRETE FES				d
		e																									50	118				RSP (FACING, METHOD B)				e
D-3	7	a		169.6			2.5																							8.9		ABANDON 9" CULVERT	"D13" 665+18.90	D-3	7	a
		b						1																								REMOVE OVERSIDE DRAIN (44.3′ x 3.3′)				b
D-3	8	a																							635	2.03			4.3			Mod GDO DI, GRATE TYPE 24-12	"D13" 670+97.96	D-3	8	a
		b																								5.28						PCC APRON (TYPE J)				b
		c														75.8																24" RCP				c
		d																							635	2.51			5.8			Mod GDO DI, GRATE TYPE 24-12				d
		e									19.7																					24" APC				e
		f												1																		24" AFES				f
		g																									46	110				RSP (FACING, METHOD B)				g
D-7	9	a	1																													REMOVE HEADWALL (5′-2" x 2′-6")	"IND1" 41+33.85	D-7	9	a
		b			46.9																									2.0		REMOVE 18" CULVERT				b
			3	169.6	46.9		2.5	2			19.7			1		461.0			3						3274	37.39	119	286				TOTAL (THIS SHEET)				

(N) - NOT A SEPARATE BID ITEM

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-1"

DRAINAGE QUANTITIES

DQ-1

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-1" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:30

SUPERSEDES EXAMPLE RELEASED 01/06/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

The drainage systems are to be in numerical order regardless of which drainage plan sheet they are shown.

DRAINAGE QUANTITIES

DRAINAGE SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	REMOVE HEADWALL/WINGWALL	ABANDON CULVERT	REMOVE CULVERT	REMOVE INLET	SAND BACKFILL	REMOVE OVERSIDE DRAIN	ALTERNATIVE PIPE CULVERT			ALTERNATIVE FLARED END SECTION			REINFORCED CONCRETE PIPE (CLASS 4)			CONCRETE FLARED END SECTION			18" ANCHOR ASSEMBLY	18" CORRUGATED STEEL PIPE DOWNDRAIN (.109" THICK)	(N) PIPE ELBOW	18" CORRUGATED STEEL PIPE (.138" THICK)	MISCELLANEOUS IRON AND STEEL	MINOR CONCRETE (MINOR STRUCTURE)	ROCK SLOPE PROTECTION (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	(N) HEIGHT OF INLET	(N) HEIGHT OF COVER	DESCRIPTION	STATION	DRAINAGE SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT
			EA	LF	LF	EA	CY	EA	LF			EA			LF			EA			EA	LF	EA	LF	LB	CY	CY	SQYD	LF	LF					
D-7	10	a																1													24" CONCRETE FES	"IN1" 672+57.08	D-7	10	a
		b														122.0															24" RCP				b
		c																1													24" CONCRETE FES				c
D-7	11	a																							238	0.98			3.0		G3 DI, GRATE TYPE 24-12X	"IND1" 50+48.85	D-7	11	a
		b								20.3																					18" APC				b
		c											1																		18" AFES				c
D-4	12	a																							238	1.01			3.0		G3 DI, GRATE TYPE 24-12X	"IND1" 59+38.31	D-4	12	a
		b								18.7																					18" APC				b
		c											1																		18" AFES				c
D-4	13	a																1													24" CONCRETE FES	"IN4" 681+97.37	D-4	13	a
		b														115.8															24" RCP				b
		c																1													24" CONCRETE FES				c
D-9	14	a	1																												REMOVE HEADWALL (15'-2" x 3'-4")	"IND1" 64+07.47	D-9	14	a
		b			44.9																									2.0	REMOVE 28" CULVERT				b
		c	1																												REMOVE HEADWALL (5'-2" x 3'-4")				c
D-9	15	a																							474	1.58			3.0		Mod GDO DI, GRATE TYPE 24-12X	"IND1" 73+15.85	D-9	15	a
		b													123.7																18" RCP				b
		c																	1												18" CONCRETE FES				c
		d																													CONCRETE BACKFILL (CLASS IV) 4 CY (SEE SHEET DQ-18)				d
D-9	16	a				1																									REMOVE DI	"IND1" 72+99.85	D-9	16	a
		b			52.8																									3.3	REMOVE 12" CULVERT				b
																															SYSTEM No. 17 DELETED				
D-4	18	a																								5.28					PCC APRON (TYPE J)	"D13" 681+75.72	D-4	18	a
		b																							635	1.90			4.0		Mod GDO DI, GRATE TYPE 24-12				b
		c														83.3															24" RCP				c
		d																							635	2.59			6.1		Mod GDO DI, GRATE TYPE 24-12				d
		e																					1	33.8							18" CSP W/ 15° ELBOW				e
		f																			2	95.5									18" CSP DD W/ ANCHOR ASSEMBLY				f
		g											1																		18" FES				g
		h																									18	29			RSP (FACING METHOD B)				h
			2		97.7	1				39.0			3		123.7	321.1		1	4		2	95.5	1	33.8	2220	13.34	18	29			TOTAL (THIS SHEET)				

(N) - NOT A SEPARATE BID ITEM

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-2"

DRAINAGE QUANTITIES

DQ-2

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-2" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:33

SUPERSEDES EXAMPLE RELEASED 01/06/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

In addition to this summary sheet, only DQ-1 and DQ-2 are included in these PPM examples from the Route 65 Bypass project.

This item is not included on the other drainage quantity sheets. It is only on the summary sheet because the quantity is from stage construction. Another option would be to create a separate table if there were additional items from the stage construction sheets.

DRAINAGE QUANTITIES SUMMARY

SHEET No.	REMOVE HEADWALL/WINGWALL	ABANDON CULVERT	REMOVE CULVERT	REMOVE INLET	SAND BACKFILL	REMOVE OVERSIDE DRAIN	ALTERNATIVE PIPE CULVERT			ALTERNATIVE FLARED END SECTION			REINFORCED CONCRETE PIPE (CLASS 4)			CONCRETE FLARED END SECTION			18" ANCHOR ASSEMBLY	18" CORRUGATED STEEL PIPE DOWNDRAIN (.109" THICK)	(N) PIPE ELBOW	12" CORRUGATED STEEL PIPE (.109" THICK)	18" CORRUGATED STEEL PIPE (.138" THICK)	MISCELLANEOUS IRON AND STEEL	MINOR CONCRETE (MINOR STRUCTURE)	ROCK SLOPE PROTECTION (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	DESCRIPTION
							12"	18"	24"	12"	18"	24"	18"	24"	36"	18"	24"	36"										
	EA	LF	LF	EA	CY	EA	LF			EA			LF			EA			EA	LF	EA	LF	LF	LB	CY	CY	SQYD	
DQ-1	3	169.6	46.9		2.5	2			19.7			1		461.0			3							3,274	37.39	119	286	
DQ-2	2		97.7	1				39.0			3		123.7	321.1		1	4		2	95.5	1		33.8	2,220	13.34	18	29	
DQ-3														232.9			2		4	193.9	2			2,558	20.72	76	200	
DQ-4			97.4	2									376.3	209.0			2							1,958	17.13	20	55	
DQ-5			160.4	1									77.4	317.6			2							3,034	27.82	44	116	
DQ-6									186.0			2	352.0	96.5		1	1							4,108	42.54	43	109	
DQ-7			89.9										95.1	392.7		1	3							1,905	25.23	87	211	
DQ-8			118.4				83.3			6				426.2	553.8		4	8						2,540	29.10			
DQ-9			97.8										162.7	419.0		2	4							1,270	14.92	91	224	
DQ-10			137.5					20.0	53.8					356.3			3							635	7.23	58	143	
DQ-11	2		226.7										74.5	585.6		1	5							1,270	14.84	18	47	
DQ-12							27.9			2			80.4	513.5		1	2							635	14.44	259	621	
DQ-13	2		102.0				33.1	22.0		2	2		63.3		470.8	1		4						1,270	16.81	56	137	
DQ-14			202.4										183.4		273.9	3		4						948	17.72			
DQ-15			440.0	5										139.4	661.7		2	6						2,611	46.72			
DQ-16		62.0	147.6	1	4.8								745.4	88.6	181.8	2	4	2						1,905	9.34	18	51	
DQ-17							211.6	533.1			4													2,143	9.34	74	212	
SCQ-27																						156.9						FROM STAGE CONSTRUCTION
DQ-19																									230.44	301	923	FROM OUTLET CONTROL BERM
DQ-19																										23	76	FROM DITCH ROCK SLOPE PROTECTION
TOTAL	9	231.6	1,964.7	12	7.3	2	355.9	614.1	259.5	10	9	3	2,334.2	4,559.4	2,142.0	13	41	24	6	289.4	3	156.9	33.8	34,284	595.43	1,305	3,440	

(N) - NOT A SEPARATE BID ITEM

CONCRETE BACKFILL (CLASS IV)

DRAINAGE SYSTEM No. ⬡	CY
15	3.94
24	4.97
45	2.11
49	6.21
75	11.75
101	3.57
TOTAL	32.55

BOX CULVERT AND WINGWALL QUANTITIES

DRAINAGE SYSTEM No. ⬡	CLASS I CONCRETE (BOX CULVERT)	BAR REINFORCING STEEL (BOX CULVERT)	(N) EXCAVATION	(N) BACKFILL
	CY	LB	CY	CY
1	66.1	12,728	91.5	54.8
68	256.3	40,165	320.5	657.9
82	54.2	6,970	180.5	138.6
FROM C-37 DRCB AT D13 SSWD	784.8	158,083	520.6	898.6
FROM C-39 DRCB AT RIOSA AND SSWD	588.6	121,147	371.3	728.6
TOTAL	1,750	339,093	1,484.4	2,478.5

(N) NOT A SEPARATE BID ITEM

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-18"

DRAINAGE QUANTITIES
DQ-18

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DRAINAGE QUANTITIES SHEET, EXAMPLE "65 DQ-18" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:31

SUPERSEDES EXAMPLE RELEASED 7/20/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE: TEXT: FT=3, TX=8.75, WT=2, LV=23, UPPER CASE, UNDERLINED

USE "NOTE" IF ONLY ONE NOTE USED. USE "NOTES" IF TWO OR MORE NOTES USED.

UNDERLINE HEADINGS SUCH AS "ABBREVIATIONS" AND "LEGEND"

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

See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.

Where right of way is shown on a drainage plan sheet, include this note. Typically, the right of way note is placed in the upper left corner of the sheet.
See subsection titled "Right of Way" in Section 2-1.1 of this manual for instructions regarding indeterminate right of way.

The cell for this note in the Caltrans Cell Library (CTCELLIB.cel) is: AC=NOTE2

TEXT: FT=3, TX=7, WT=1, LV=23, Upper Case

Use a solid line to depict right of way shown on a plan view sheet.

DRAINAGE PLANS:

- Drainage plans provide a visual representation in plan view aspect of the drainage facilities.
- Those elements that are in the Master Topo and Design files and pertinent to all drainage plan view sheets are typically used as background information.
- Drainage plans are not to repeat the roadwork bid items shown on the project plan layouts.
- Existing drainage is shown dropped out with background topography. However, if the existing drainage is being abandoned, removed, or modified, or if new drainage work is tying into the existing, non-dropout may be used.
- If no drainage work is to be performed within the corresponding limits of a project plan layout sheet (road work items), do not include a drainage plan sheet for that area. The number of drainage plan sheets may not be the same as the number of project plan layout sheets. Inclusion of drainage plan sheets with no drainage work in the contract plans is not an acceptable method of developing a district's inventory of drainage facilities.
- For identification purposes, drainage work is to be separated into groupings of interconnected drainage items. Each grouping becomes a drainage system.
- Assign a drainage system number to each drainage system where work is to be performed. Consecutively number the drainage systems throughout the project. This provides ease of locating and identifying drainage systems for the bidder, contractor and construction inspector. System numbering does not start and stop for each individual drainage plan sheet. See Section 2-2.10 of the PPM for additional information concerning system numbering.
- Identify each drainage system by a number and each unit of the system by a letter representing the drainage unit designation. There are cells in the Caltrans cell library (CTCELLIB.cel) of the symbols used for identifying systems and units.
- There are two sets of cells for identifying systems and units, one set is without masking and the other set is with masking. Either set can be used, it depends on how cluttered the plan view sheet is with topo or background information. Labeling drainage features is more important than showing background topography. Keep labeling of the drainage system number and units designations as close as possible to the display of the system. Use minimum clips as defined in Section 3.8 of the CADD Users Manual to allow for open areas for labeling.

  Cells with masking:
  DSN - system number
  DCIR - unit designation
  Cells without masking:
  DRNSYS - system number
  DRNUNT - unit designation
- Labeling of the types of drainage units on the drainage plans may be generic or can be a complete item call out, but the units must be labeled. If generic labeling is used, use terms such as: Culv, DD, DI, FES, Jct Str, OD, RSP, etc. Use a leader line with the labeling of each unit designation.
- Full details and complete item call outs of each drainage system (type, size, length, etc.) must be shown on the drainage profiles, details and quantities.
- If contours are added to the drainage sheets, they are not more important than the drainage items. Final contours are to stop at the edge of the paved surface, which then allows the drainage items to be seen more clearly. Final contour grading is not to be shown on paved surfaces. Eliminate unnecessary spot elevations. Contours or spot elevations should only be shown slightly beyond the right of way line unless it directly affects the drainage items shown on the plan view sheets.
- See "Generic Project Plan View Sheet" for additional information required on plan view sheets.

AC=NOTE4 through AC=NOTE31 and AC=NOTE35 through AC=NOTE37 in the Caltrans Cell Library (CTCELLIB.cel) are available for use to specify the different types of work in the statement "APPROVED FOR....."

One of the following statements is available for use depending on what is shown on the sheet:

NOTE23 - APPROVED FOR DRAINAGE AND UTILITY WORK ONLY
SHEET NAME: DRAINAGE AND UTILITY PLAN
SHEET ID CODE: D-XX

NOTE24 - APPROVED FOR DRAINAGE AND CONTOUR GRADING WORK ONLY
SHEET NAME: DRAINAGE AND CONTOUR GRADING PLAN
SHEET ID CODE: D-XX

NOTE26 - APPROVED FOR DRAINAGE WORK AND UTILITY INFORMATION ONLY
SHEET NAME: DRAINAGE AND UTILITY PLAN
SHEET ID CODE: D-XX

Use this statement (AC=NOTE4) on the drainage plan view sheets when no work other than drainage is shown on the sheet. Place statement as shown, center bottom of the sheet.

TEXT: FT=3, TX=8.75, Slant=20°, WT=2, LV=10, Upper Case

APPROVED FOR DRAINAGE WORK ONLY

PROJECT DRAINAGE SHEETS, BASIC REQUIRED INFORMATION (SHEET 1 OF 2)

Use appropriate SHEET NAME AND ID CODE for the work shown. See CADD Users Manual Section 2.1

FT=13, TX=14.5, WT=0, LV=10, Upper Case

Text may be reduced to a minimum of TX=12 where space constraints are involved.

For all text sizes see CADD Users Manual Section 2.6

Place Sheet Name and Scale centered in the lower right corner of sheet within the area available between the sheet border and the clip frame. Use "CENTER CENTER" justification for each line.

Use appropriate plotting scale for the plan view sheets, see "SCALES" in Section 2-1.3 of the PPM.

Use a colon after the word "SCALE" and insert a space on either side of the "="

FT=3, TX=8.75, WT=2, LV=10, Upper Case

DRAINAGE PLAN

SCALE: 1" = 50'

Place Sheet ID Code and Sheet Number in the extreme lower right corner of sheet

D-XX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

PROJECT DRAINAGE SHEETS, SHEET 1 OF 2 RELEASED 5/4/2012

LAST REVISION 00-00-00 DATE PLOTTED => 27-APR-2012 TIME PLOTTED => 13:21

SUPERSEDES EXAMPLE RELEASED 7/29/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.

DRAINAGE PROFILES:

- Drainage profiles provide a visual representation of the drainage facilities in an elevation view (side view).
- Drainage profiles must show all the information needed (i.e., elevations, slope, type and size of pipe, etc.) to construct the drainage system.
- Place the labeling of each drainage system number under their individual profile.
- Show existing ground line and finished grade on drainage profiles so that the quantities of excavation and backfill needed to install, construct or remove a drainage facility may be determined. Structure excavation and structure backfill is included in the bid item(s) to install, construct or remove a drainage facility.
- Profiles of crossdrains that are perpendicular or at a skewed angle to the alignment line are to be displayed left to right as if the viewer were standing on the alignment line looking up station (direction of increasing stations, similar to the display of typical cross sections). The station reference for these drainage systems is to be the point at which the crossdrain culvert alignment intersects the roadway alignment line or profile grade.
- Display profiles of drains, that are in a longitudinal position in relation to the alignment line, from left to right, as if the viewer were standing on the right of way line on the right side of the route or road alignment. Reference the begin and end points of these culverts and any intervening angle points in the culvert's horizontal alignment to the nearest roadway station line by station offset distances and station pluses.
- A system profile should be shown entirely on one profile sheet. If a profile is long enough to have a match line, stack the profile with the beginning station on top and the next section below that.
- The offset distance and station reference for the location of drainage structures, shown on the drainage profiles, are to be shown to the nearest hundredth of a foot. Show offset distance first, then the station reference.
- Culvert crossdrains are typically constructed on slopes between zero and 5 percent. The slope is based on the gradient of the stream or waterway they are to convey. Crossdrain profiles typically are drawn at a horizontal to vertical scale ratio (H/V) of one. Commonly used scales for drainage profiles are 1"= 5' for both horizontal and vertical or 1"=10' for both horizontal and vertical. The scale ratio of 1:1 produces greater details. There may be some instances where physical conditions of culvert installation will dictate the use of a scale ratio (H/V) other than one. When a horizontal scale of 1"= 20' or more is used, an exaggerated vertical scale typically (1'= 5') will be required to clearly depict the information on the profile. The scale ratio of 1:1 should be used for drainage work to extend existing culverts.
- Storm drains collect highway drainage and are constructed longitudinally to the highway alignment. These storm drains are typically constructed on slopes between zero and 5 percent. Profiles of storm drains may require a scale ratio (H/V) other than one. Due to the typically longer length of storm drains, a horizontal scale of 1"= 20' may be more appropriate with a vertical scale of 1"= 5' or 1"= 1'.
- In steeper terrain, downdrains typically are used to convey highway runoff and require a steeper gradient. The highway side slope dictates the slope of the downdrain. Profiles of downdrains may require a scale ratio (H/V) other than one.
- The slope of a culvert (S=) is most commonly shown by decimal but may also be shown by percentage. Show pipe slopes to 4 decimal places for ft/ft values or 2 decimal places for percent values. The method of identifying slope is to be consistent throughout the profiles.
- The length of a culvert is the slope length, not the horizontal length. The estimated slope length of pipe is the centerline length of the culvert expressed in decimal feet, to the nearest tenth of a foot. Where greater accuracy is dictated by site condition, the slope length of the culvert may need to be shown to the nearest hundredth of a foot.
- The estimated slope length of a pipe culvert that is shown on a drainage profile is to be the same length that is entered in the drainage quantities for that specific pipe culvert.
- Where a pipe is placed between successive drainage structures (inlets, junction boxes, etc.), the slope length of the pipe shown is to be the centerline length between the inside face of each structure (inside face to inside face). Where an end of a pipe is placed in a drainage structure, the pipe length is to be measured from the inside face of the structure along the centerline of the pipe to the other end of the pipe regardless whether it ends within another drainage structure, highway side slope, or other terminus.
- The pay length for each culvert installed during construction will be determined in the field in accordance with the Standard Specifications and the instructions in the Construction manual. This includes determination of the actual length of pipe necessary before cutting when a pipe is to be cut to fit an outlet structure, entrance structure, inlet or highway side slope.
- The quantity for each pipe culvert should not be increased to include the length required to reach the next 2-foot increment of pipe. Construction Surveys will stake the pipe alignment based on the profile of the pipe shown on the drainage profiles and make any field adjustments to fit site conditions. This is why we are not to arbitrarily increase the calculated length for each pipe culvert in Design. Quantities on plans are to be calculated quantities, never rounded quantities.
- Pipe culverts are to be labeled in the following order: diameter of pipe, length of pipe, and type of pipe material. Example of labeling: 24" x 78.5' CSP
- Caution should be exercised for the effect of skewed pipe alignment intersecting the interior wall of a standard drainage inlet. The standard plan inlet may require modification of the interior dimensions to accommodate the pipe opening due to the type, size, and skew of the pipe culvert.
- If a ladder is to be constructed on an inlet wall, it needs to be located under the short end of the grate to have the 2 1/2-foot of clearance from the face of the steps to the nearest obstruction on the climbing side of the ladder. Manholes that require ladders should have a 3-foot opening for the manhole cover to allow access inside the manhole.

DRAINAGE DETAILS:

- Drainage details included in the contract plans are those that are unique to the specific project and those for which there are no standard plans, or they are a detail from a standard plan which must be modified to fit project site conditions.
- Drainage details are drawn proportionally and adjusted to fit within the plan sheet border. Sufficient dimensioning must be shown on the details so the facilities are buildable and the quantities are calculable. Labeling and dimensioning take precedence over the graphics shown. The bidder and contractor are never expected to scale from the hard copy print of any contract plan sheet. Label the sheet "NO SCALE" in the lower right corner below the title of the sheet.
- If a detail is applicable to several systems, draw the detail one time and then list, below the detail, all system numbers for which the detail applies.
- Clearly show by offset and stationing the location of the flow line for each specific system within each project (where necessary). Standard Plans may only show the flow line for general situations. Example: Flow line for an inlet up against median barrier is the face of the barrier not the center of the inlet grate.

DRAINAGE QUANTITIES:

- The table of drainage quantities summarizes those drainage facilities and appurtenances (headwalls, wingwalls, drainage inlets, flared end sections, inlet and outlet structures, etc.), which are to be constructed, installed, removed, reset, remodeled, adjusted, modified, abandoned, reconstructed, or salvaged as shown on the drainage plans, profiles and details or in some instances where shown on the project plan layouts. See Section 2-2.10 of the PPM for more detailed information necessary to be included in the summary of drainage quantities.
- Where all of the drainage quantities can be shown in a table on one quantity sheet, quantity totals for each bid item must appear at the bottom of the table.
- Where more than one sheet is necessary to show drainage quantities, the individual sheet totals for each bid item are to appear at the bottom of the table on each sheet. The row of the table in which the bid item totals appear on each individual sheet, is to be identified as "SHEET TOTAL." Sheet totals for each bid item must appear on the last sheet of the drainage summary of quantities. Sheet totals must be totaled and shown as "GRAND TOTAL" or "TOTAL."
- Where there is not sufficient space on a single border sheet to accommodate the number of columns necessary to list all of the project's drainage bid items, see Section 2-2.10 of the PPM for the Caltrans preferred method to be used to display the listing of bid items.

Use appropriate SHEET NAME AND ID CODE for the work shown. See CADD Users Manual section 2.1

FT=43, TX=14.5, WT=0, LV=10, Upper Case
Use "Center Center" justification

Text may be reduced to a minimum of TX=12 where space constraints are involved.

For text sizes see CADD Users Manual section 2.6

PROJECT DRAINAGE SHEETS, BASIC REQUIRED INFORMATION (SHEET 2 OF 2)

DRAINAGE XXX

D-XX

PROJECT DRAINAGE SHEETS, SHEET 2 OF 2 RELEASED 5/4/2012

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE: ← TEXT: FT=3, TX=8.75, WT=2, LV=rd_RIGHT-OF-WAY-anno(23), UPPER CASE, UNDERLINED

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

Where right of way is shown on a utility plan sheet, include this note (AC=NOTE2). Typically, the right of way note is placed in the upper left corner of the sheet. See subsection titled "Right of Way" in section 2-1.1 of this manual for instructions regarding indeterminate right of way.

TEXT: FT=3, TX=7, WT=1, LV=rd_RIGHT-OF-WAY-anno(23), UPPER CASE.

See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

CALTRANS UTILITY POLICY:

For the Department's policy concerning public or private owned utilities and state owned utilities/facilities, see Chapter 17 of the Project Development Procedures Manual (PDPM) and the Encroachment Permit Manual. Compliance with the Utility Policy is mandatory for all projects.

A Utility Policy Certification must be completed for each project, regardless if high priority subsurface installations (formerly called High Risk utilities) are within the project limits or not.

The Utility Policy Certification and the utility plans must be sealed and signed by a licensed Civil Engineer.

High priority subsurface installations, not mentioned in PDPM Chapter 17 Section 3 Article 7 Exemptions to Utility Policy, must be positively located and the information included on the utility plans. Positive location of these facilities must be shown in a data table labeled ("POSITIVE LOCATION INFORMATION") on the utility plan sheets.

When conducting positive location of a facility, do not exceed 100 feet spacing between location determinations. See PDPM Chapter 17, Section 3, Article 3 for further information.

UTILITY NOTES:

Utility notes are to be used only when an exception to the Department's utility policy has been approved or the project meets the requirements for "exempt work" or "flexible work" or when positive location information for existing utilities is only shown for excavation work area or when no utilities are found within project limits. If there are project utility plans, the note is to be placed on the appropriate utility plan sheet. If there are no utility plans, then place the note on the appropriate plan view sheet. If there are no plan view sheets, then place the note on the appropriate typical cross section sheet. If there are no typical cross section sheets, place the note on the appropriate construction detail sheet.

FLEXIBLE WORK
Examples of contract work that is flexible in nature may include the following:
. An individual post for guardrail or thrie beam barrier (excluding end treatments, transition railings and anchor blocks).
. Foundations for lighting and poles for traffic operation features outside of the intersection (not Including overhead sign structures).

EXEMPT WORK
Examples of contract work that is exempt in nature may include the following:
. Work with no excavation or limited excavation, as defined in Section 1, Definitions in Chapter 17 of the Project Development Procedures Manual.
. Roadside signs and construction area signs.
. Highway planting where the exact location for planting, irrigation lines, controllers or other appurtenances are not shown (does not apply to hardscape, including planter boxes, retaining walls and other infrastructure)
. Fences

When subsurface utilities are not shown on a project plan sheet with "exemption to utility policy" work only, include the following note on the plan sheet:

- WORK ON THIS SHEET REQUIRES LIMITED OR NO EXCAVATION. UTILITIES ARE NOT SHOWN.

When approximate location of existing subsurface utilities is shown on a project plan sheet with exempt work only, include the following note on the plan sheet:

- WORK ON THIS SHEET REQUIRES LIMITED OR NO EXCAVATION. APPROXIMATE LOCATION OF UNDERGROUND UTILITIES IS SHOWN.

When positive location information for existing high priority utities is not shown on project plan sheet with flexible work only, include the following note on the plan sheet:

- WORK ON THIS SHEET CAN BE ADJUSTED TO AVOID CONFLICT WITH EXISTING UTILITIES. EXACT LOCATION OF HIGH PRIORITY UTILITIES IS NOT SHOWN.

When positive location information for existing high priority utities is shown only for the excavation work area, include the following note on the plan sheet:

- EXACT LOCATION OF HIGH PRIORITY UTILITIES IS SHOWN WITHIN EXCAVATION WORK AREAS ONLY.

When no utilities are found within the limits of a plan sheet, include the following note on the sheet:

- A UTILITY INVESTIGATION WAS COMPLETED AND NO UTILITIES WERE FOUND WITHIN THE SHEET LIMITS.

UTILITY PLANS:

- Separate utility plan sheets are to be included in the project plan set. On small projects, utilities may be shown on the roadway layout sheets.
- Utility plans provide a visual representation in plan view of the existing or relocated and new/planned facilities within the project limits.
- All existing utility data known, or discovered during an utility investigation for plan development, should be shown on the utility plans. This includes all public, private and state-owned "main and trunk line" utilities (see California Government Code, Section 4215).
- Work with limited or no excavation may be exempt from having to show utiltites on the project plans. But if there are locations within the project limits.
  that do not meet the Exemptions to utility policy, then the work is not considered exempt. See the Project Development Procedures Manual Chapter 17 Section 3 Article 7.

  For a project granted an exception for "contract work that is flexible in nature," it is recommended to show all utilities to assist the contractor and R.E. in knowing who the utility owners are within the project limits.
- Where a drainage installation will be in conflict with a subsurface utility, the location of the utility in relation to the drainage facility is to be shown on the drainage profile and/or detail sheet that shows the specific drainage facility.
- Irrigation conduits (formerly known as irrigation crossovers) may be shown on the utility plans as they are a State-owned subsurface facility that may conflict with project work.
- Conduits for State-owned electrical systems should be shown on the utility plans as they may conflict with project work.

  The point of demarcation between public and privately owned facilities is typically at the service drop or service point at the highway right of way.
- During the normal course of construction activities, the contractor must protect all existing utilities, as stated in Section 5-1.36 of the Standard Specifications or as shown in utility construction details. For construction activities, the phrase "Protect in Place" is not to be placed on the utility plan sheets. If there is a bid item for the contractor to permanently protect a utility, the work will have a bid item other than "Protect in Place."
- If a utility is to be relocated by the owner of the utility during project construction, use the wording "TO BE RELOCATED BY OTHERS." Use of the word "others" means that the project contractor will not be doing the utility relocation work.

  If the owner (others) is relocating the facility prior to the start of project construction, then just show the final location of the relocated utility. The final location of the relocated utility is to be agreed upon by the utility owner and Caltrans.

  If there is a possibility that the utility will not be relocated before construction starts, then show both the existing location, labeled "TO BE RELOCATED BY OWNER/OTHERS" and the new/planned location, labeled "PLANNED LOCATION OF RELOCATED FACILITY BY OWNER/OTHERS." Use "to and from" leader lines and arrows to graphically show where the existing utility is and where it is to be relocated (see Standard Plan A10C).

UTILITY PROFILES, DETAILS AND QUANTITIES:

- Utility profiles, details and quantities may be required as part of the project plans, if there is utility work to be performed by the project contractor. This would be utility work not performed by the utility owner or others.

  See Section 2-2.13 of the PPM for additional information.

CALTRANS LINE STYLES FOR UTILITY SHEETS:

- There is a distinct line style to depict each utility type (electric, water, gas, etc.) and status (new, existing and abandoned). These line styles are in the Caltrans line style resource file "ctlstyle-SS4.rsc" for subsurface and aerial (overhead) facilities.
- The new and existing utility line styles are graphically different (upper and lower case letters and the thickness of line). See Section 2.4 of the CADD Users Manual. This makes it easy to distinguish the new from the existing utilities when on the same plan sheet.
- The leveling convention for utilities in DGN files, is defined in Section 2.4, Appendix A9 and Appendix A10 of the CADD Users Manual. In files created using V8 Standards and V8 Named Levels, each utility status (new, existing and abandoned) will be placed on its own separate level. These levels are non-dropout levels.

  All utilities shown on the utility plan sheets are NOT to be dropped out. If the need arises to show utilities a second (2nd) time within the project limits (e.g. landscape, drainage or electrical systems plans) as a convenience and reminder to the contractor/sub-contractor of a potenial conflict, the weight of the utility line for the 2nd depiction may be reduced in order to de-emphasize the utility line in comparison to project work.
- There is a generic line style for representing an irrigation conduit within the limits of the roadbed on the utility plan sheets.
- There is a generic line style for representing electrical systems conduit within the limits of the roadbed on the utility plan sheets.
- Permanent utility feature points (e.g. manholes, pullbox, cabinet, power pole, etc.) that are within Caltrans right of way, are to be placed on the correct level for the type of utility it represents (e.g. gas manhole cover on same level as gas line style).

Use appropriate SHEET NAME AND ID CODE. See CADD user's manual section 2.1.:

FT=43, TX=14.5, WT=0, LV=border_INSIDE-BORDER-anno(10), UPPER CASE

Text may be reduced to a minimum of TX=12 where space constraints are involved.

For text sizes see CADD user's manual section 2.6.1.

Use appropriate plotting scale for the plan view sheets, see "SCALES" in section 2-1.3 of the PPM.

Use a colon after the word "SCALE".

FT=3, TX=8.75, WT=2, LV=border_INSIDE-BORDER-anno(10), UPPER CASE

UTILITY PLAN

SCALE: 1" = 50'

U-XX

Use this statement (AC=NOTE25) on each individual utility plan view sheet. Place statement as shown, center bottom of the sheet.

TEXT: FT=3, TX=8.75, WT=2, LV=border_INSIDE-BORDER-anno(10), 20° slant, UPPER CASE

PROJECT UTILITY SHEETS, BASIC REQUIRED INFORMATION

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

PROJECT UTILITY SHEETS, RELEASED 06/19/2020

LAST REVISION 00-00-00 | DATE PLOTTED => 18-JUN-2020 | TIME PLOTTED => 09:32

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

SUPERSEDES EXAMPLE RELEASED 11/16/16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ELEVATIONS SHOWN REFER TO THE TOP OF PIPE OR CONDUIT, UNLESS OTHERWISE STATED.
3. UTILITY OWNERSHIP:

   GAS - PACIFIC GAS & ELECTRIC (PG&E)
   ELECTRICAL - PACIFIC GAS & ELECTRIC (PG&E)
   WATER - CITY OF LINCOLN
   SEWER - CITY OF LINCOLN
   STORM DRAIN - CITY OF LINCOLN
   IRRIGATION CANAL - SOUTH SUTTER WATER DISTRICT
   IRRIGATION LINE - CITY OF LINCOLN
   OIL - KINDER MORGAN
   TELEPHONE - AMERICAN TELEPHONE & TELEGRAPH (AT&T)
   FIBER OPTIC - SUREWEST
   FIBER OPTIC - AMERICAN TELEPHONE & TELEGRAPH (AT&T)
   FIBER OPTIC - QWEST
   COMMUNICATION LINE - UNION PACIFIC RAILROAD

4. AT&T/SUREWEST FIBER OPTIC LINES TO BE LOWERED TO MINIMUM 42" BELOW GRADING PLANE BETWEEN STATIONS "IND1" 53+05 TO "IND1" 55+12 BY OTHERS

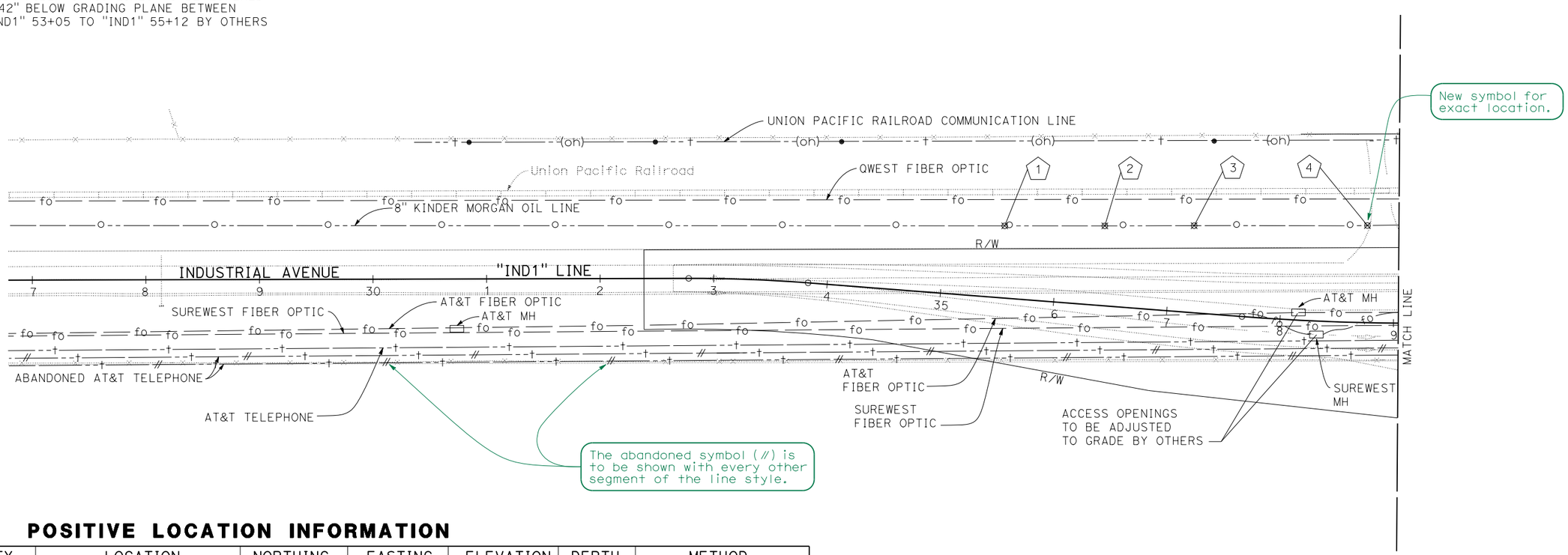
ABBREVIATIONS:

SSFM SANITARY SEWER FORCE MAIN

First sheet of utility plans should contain notes, legends, symbols, and a list of abbreviations (do not include standard plan symbols, abbreviations or acronyms). Utility owners must be identified by labeling each utility line. Full name of owner and associated acronym identifying each owner may be shown in notes (owner acronym can then be used to label the remaining utility sheets).

When a "Joint Trench" or "Joint Overhead" facility is shown on the plans, the specific utilities are to be identified on the individual plan sheets.

See Example "65 U-7"



POSITIVE LOCATION INFORMATION

No. ⬠	UTILITY	LOCATION	NORTHING	EASTING	ELEVATION	DEPTH	METHOD
1	OIL	63.5′ Lt "IND1" 35+51.9	2061357.1	6761823.0	135.0	4.3	TEST HOLE
2	OIL	70.3′ Lt "IND1" 36+39.8	2061442.1	6761850.2	135.3	4.3	ELECTRONIC DETECTION
3	OIL	76.6′ Lt "IND1" 37+18.2	2061518.3	6761875.9	135.8	4.2	ELECTRONIC DETECTION
4	OIL	85.7′ Lt "IND1" 38+75.2	2061654.4	6762112.4	135.7	4.1	ELECTRONIC DETECTION

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

UTILITY PLAN SHEET, EXAMPLE "65 U-1"

TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50′

U-1

UTILITY PLAN SHEET, EXAMPLE "65 U-1" RELEASED 03/19/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 20-MAR-2018 | TIME PLOTTED => 11:29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

SUPERSEDES EXAMPLE RELEASED 1/6/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

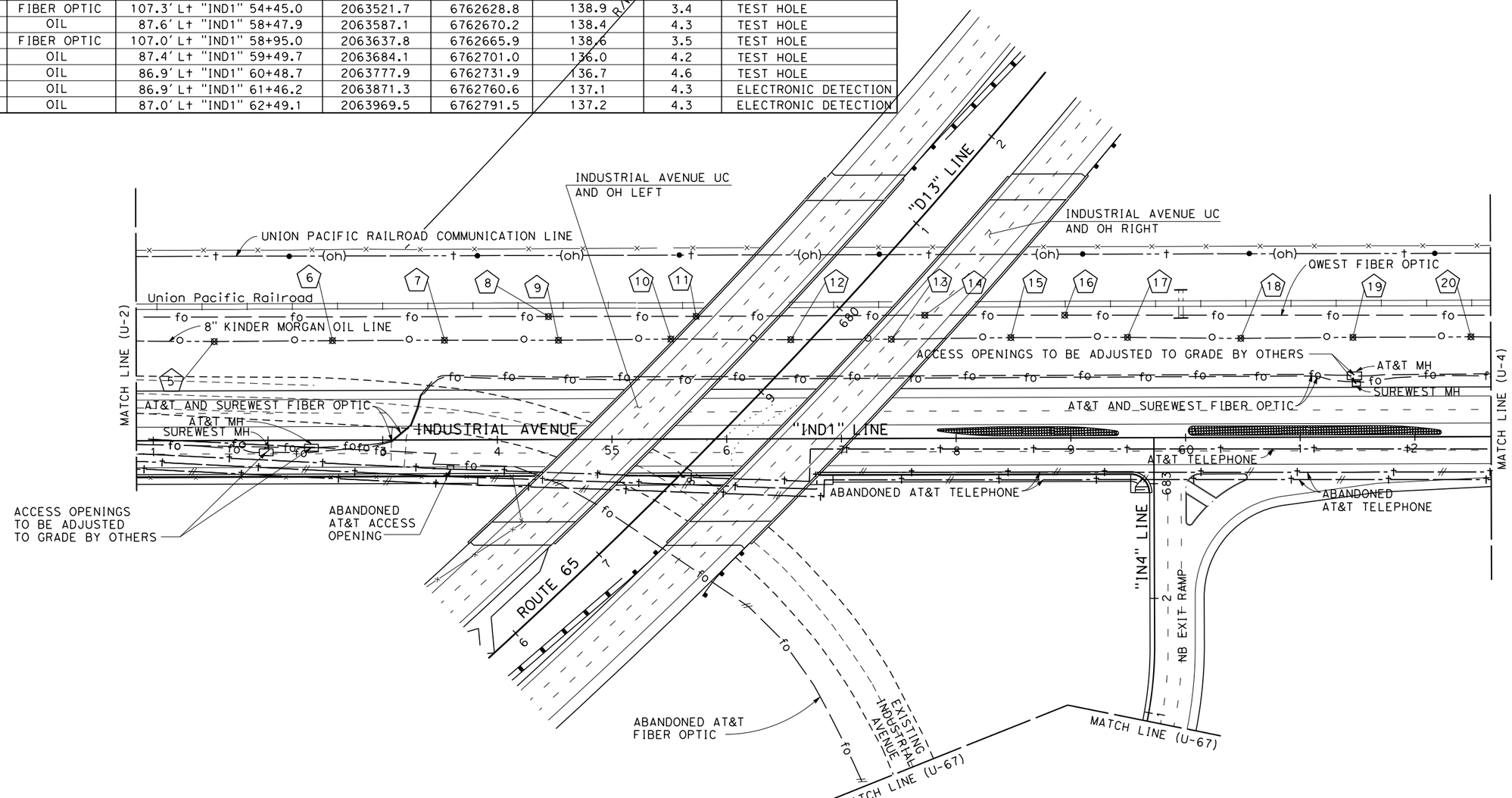
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

POSITIVE LOCATION INFORMATION

No. ⬠	UTILITY	LOCATION	NORTHING	EASTING	ELEVATION	DEPTH	METHOD
5	OIL	86.3' Lt "IND1" 51+53.5	2062924.4	6762462.4	138.0	4.1	ELECTRONIC DETECTION
6	OIL	86.7' Lt "IND1" 52+56.5	2063022.8	6762493.0	139.6	4.3	ELECTRONIC DETECTION
7	OIL	86.8' Lt "IND1" 53+54.1	2063115.9	6762522.3	140.5	4.1	TEST HOLE
8	FIBER OPTIC	107.2' Lt "IND1" 54+44.9	2063208.7	6762530.2	138.6	3.6	TEST HOLE
9	OIL	86.4' Lt "IND1" 54+53.6	2063210.7	6762552.6	140.8	4.4	TEST HOLE
10	OIL	87.2' Lt "IND1" 55+51.6	2063304.4	6762581.4	141.1	4.4	TEST HOLE
11	FIBER OPTIC	107.0' Lt "IND1" 55+73.5	2063331.3	6762569.2	138.7	3.5	TEST HOLE
12	OIL	86.3' Lt "IND1" 56+56.0	2063403.7	6762613.7	141.5	4.4	TEST HOLE
13	OIL	86.5' Lt "IND1" 57+43.7	2063487.4	6762639.9	141.1	4.1	TEST HOLE
14	FIBER OPTIC	107.3' Lt "IND1" 54+45.0	2063521.7	6762628.8	138.9	3.4	TEST HOLE
15	OIL	87.6' Lt "IND1" 58+47.9	2063587.1	6762670.2	138.4	4.3	TEST HOLE
16	FIBER OPTIC	107.0' Lt "IND1" 58+95.0	2063637.8	6762665.9	138.6	3.5	TEST HOLE
17	OIL	87.4' Lt "IND1" 59+49.7	2063684.1	6762701.0	136.0	4.2	TEST HOLE
18	OIL	86.9' Lt "IND1" 60+48.7	2063777.9	6762731.9	136.7	4.6	TEST HOLE
19	OIL	86.9' Lt "IND1" 61+46.2	2063871.3	6762760.6	137.1	4.3	ELECTRONIC DETECTION
20	OIL	87.0' Lt "IND1" 62+49.1	2063969.5	6762791.5	137.2	4.3	ELECTRONIC DETECTION



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

UTILITY PLAN SHEET, EXAMPLE "65 U-3"

TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50'

U-3

UTILITY PLAN SHEET, EXAMPLE "65 U-3" RELEASED 11/16/2016

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 1/6/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

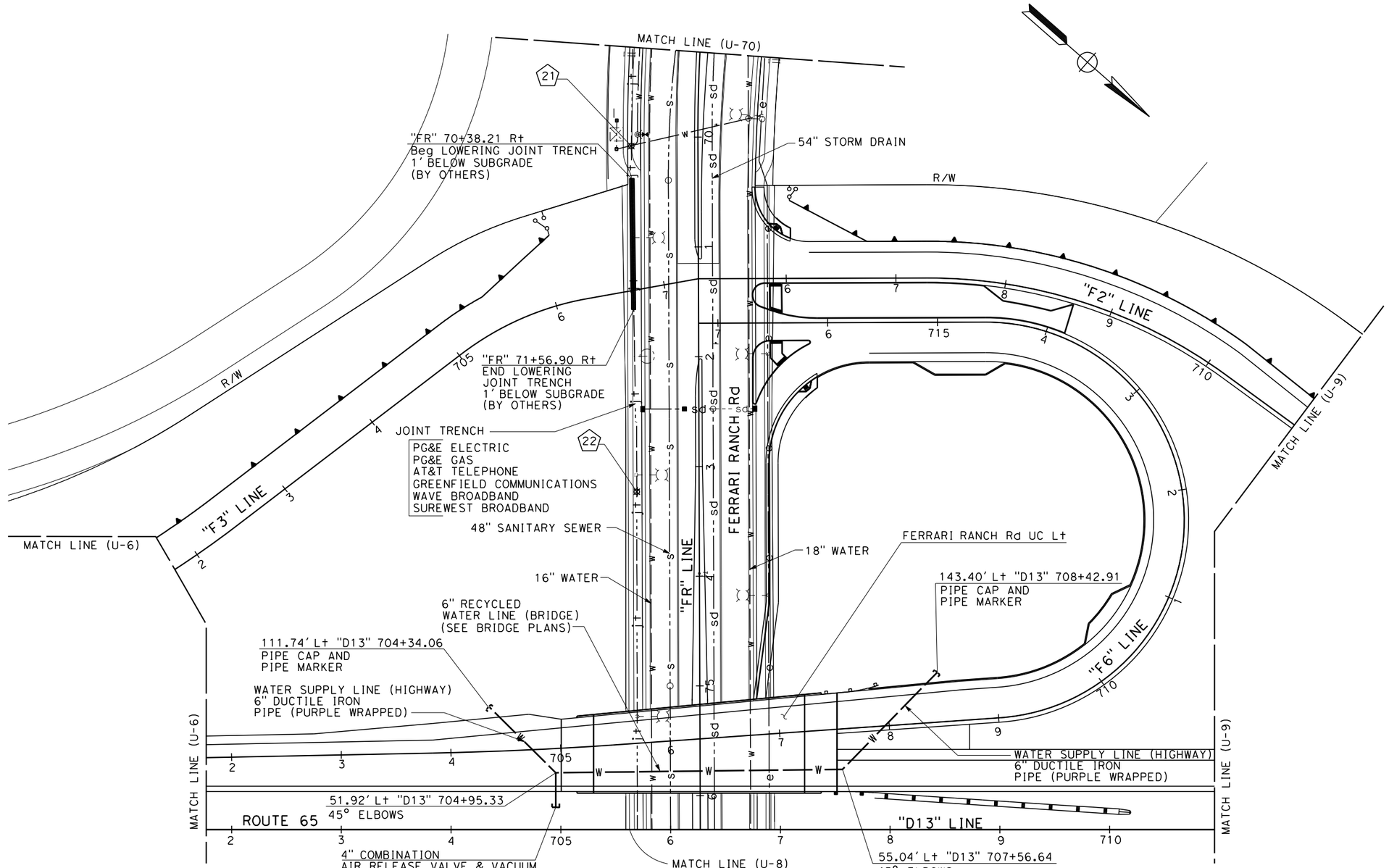
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

POSITIVE LOCATION INFORMATION

No. ⬠	UTILITY	LOCATION	NORTHING	EASTING	ELEVATION	DEPTH	METHOD
21	JOINT TRENCH	60.7′ Rt "FR" 70+07.8	2061145.7	6764425.3	135.6	3.7	TEST HOLE
22	JOINT TRENCH	56.8′ Rt "FR" 73+22.8	2065836.5	6764658.8	135.3	3.8	TEST HOLE



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

UTILITY PLAN SHEET, EXAMPLE "65 U-7"

TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50′

U-7

UTILITY PLAN SHEET, EXAMPLE "65 U-7" RELEASED 11/16/2016

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

SUPERSEDES EXAMPLE RELEASED 1/6/12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

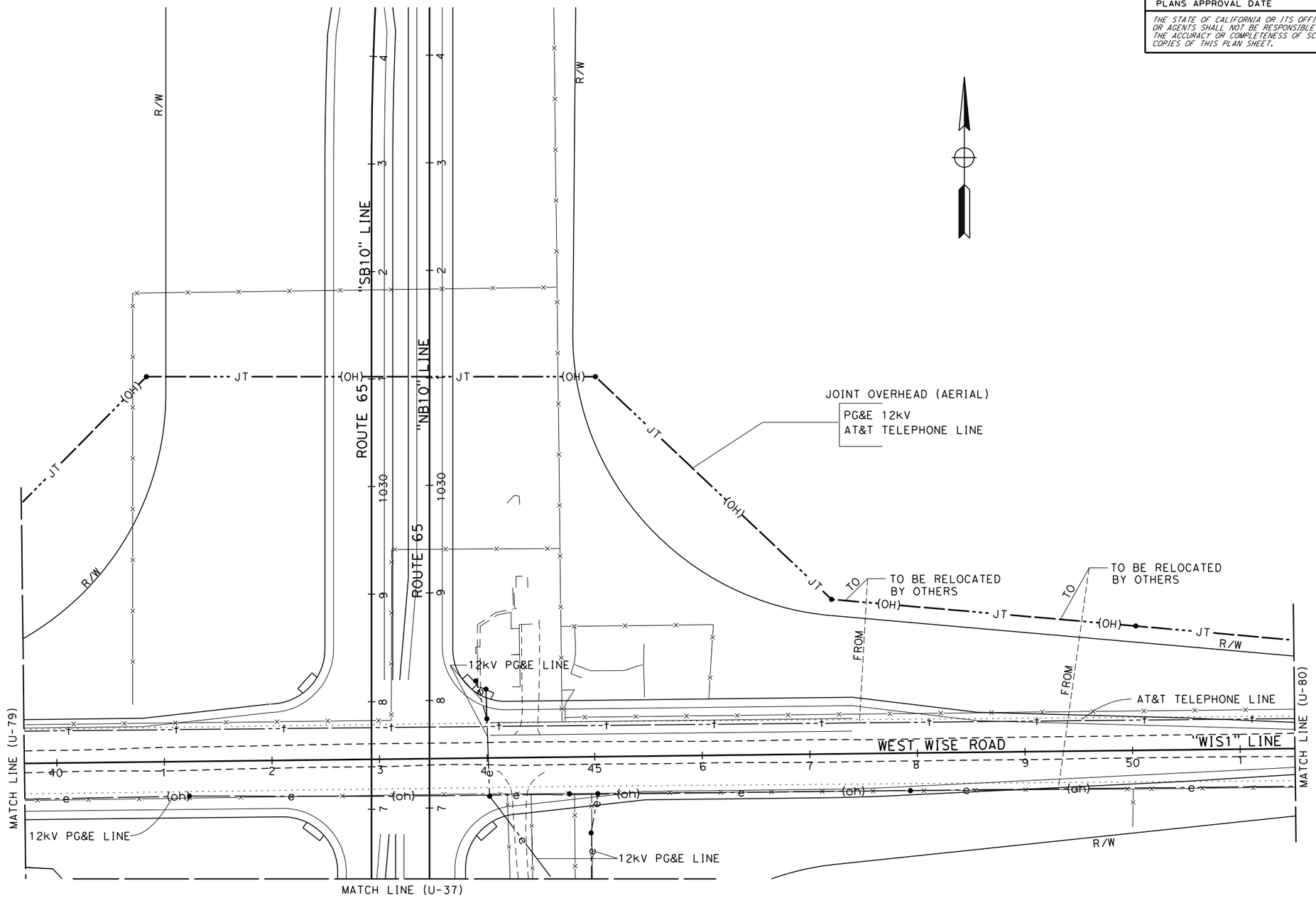
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE:

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



THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

UTILITY PLAN SHEET, EXAMPLE "65 U-38"

TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50'

U-38

UTILITY PLAN SHEET, EXAMPLE "65 U-38" RELEASED 11/16/2016

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

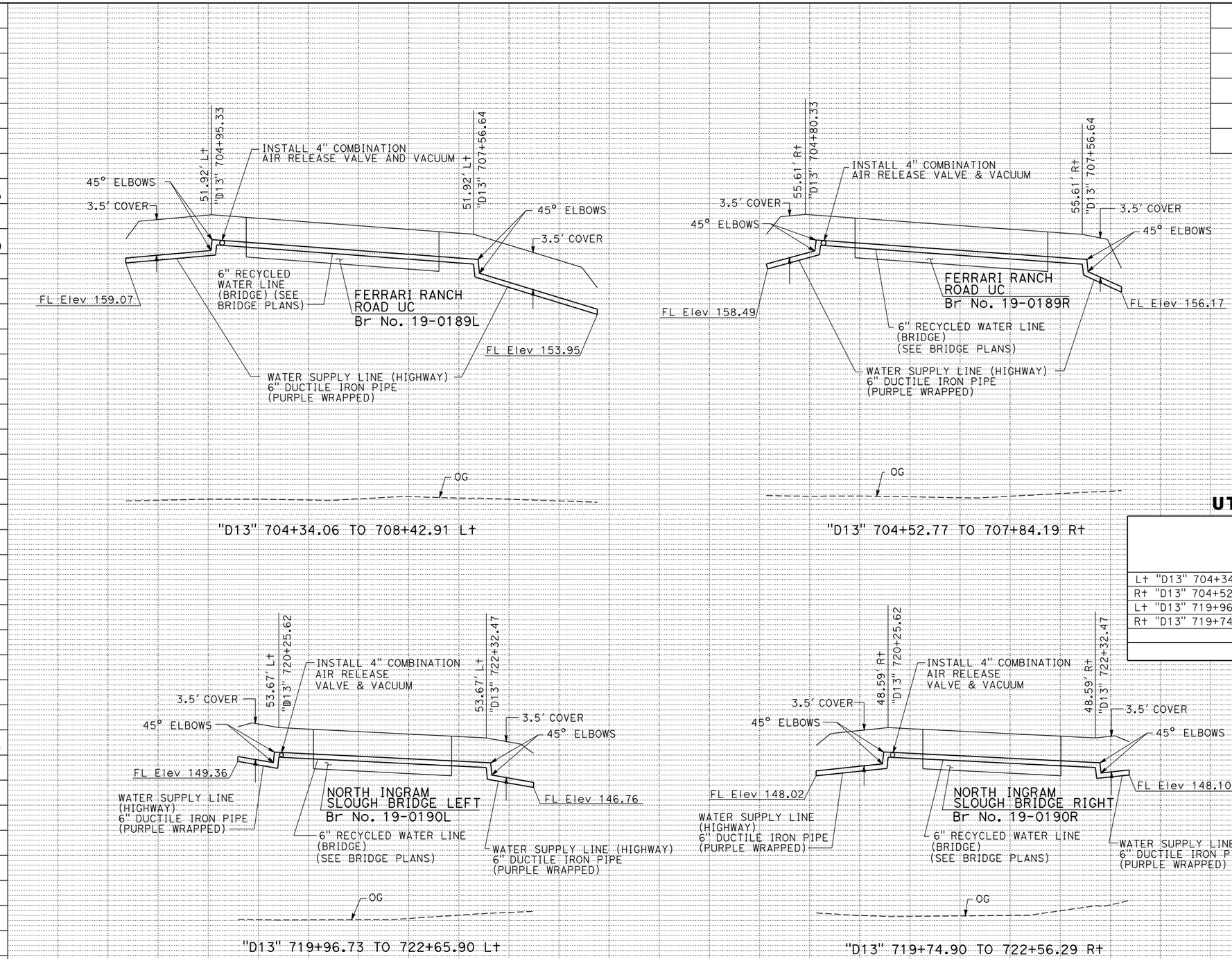
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.



UTILITY QUANTITIES

STATION	6" DUCTILE IRON PIPE
	LF
Lt "D13" 704+34.06 TO Lt "D13" 708+42.91	470.5
Rt "D13" 704+52.77 TO Rt "D13" 707+84.19	354.3
Lt "D13" 719+96.73 TO Lt "D13" 722+65.90	294.9
Rt "D13" 719+74.90 TO Rt "D13" 722+56.29	312.3
TOTAL	1432.0

Masking was applied to the table shape because the information displayed in the table is more important than the grid lines.

6" RECYCLED WATER LINE PROFILES

UTILITY PROFILES SHEET, EXAMPLE "65 UP-1"

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

UTILITY PROFILES

SCALE: Horiz 1" = 50'
Vert 1" = 5'

UP-1

UTILITY PROFILES SHEET, EXAMPLE "65 UP-1" RELEASED 1/6/2012

DATE PLOTTED => 29-DEC-2011
TIME PLOTTED => 10:52

LAST REVISION 00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

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CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

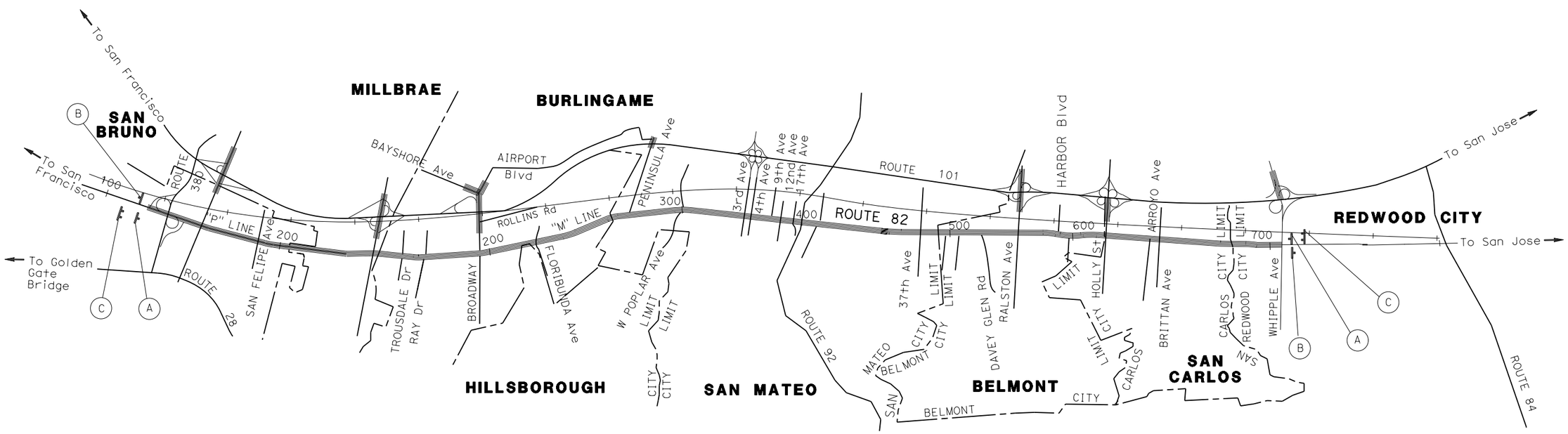
SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	2
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
C	C40 (CA)	72" x 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 4" x 6"	2

FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE MOTORIST INFORMATION SHEETS.

For California only signs, full Sign Designation including the (CA) suffix must be included.

NOTES:

1. EXACT LOCATION AND POSITION OF SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. SIGN POST LENGTH ARE APPROXIMATE, EXACT SIZE AND LENGTH WILL BE DETERMINED BY THE ENGINEER.



Construction Area Signs sheet, example "A-1" is from the same project as Title Sheet example "0" and Motorist Information Plan sheet examples "A-1" through "A-5."

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "A-1"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "A-1" RELEASED 3/19/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 19-MAR-2018 | TIME PLOTTED => 11:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 7/7/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

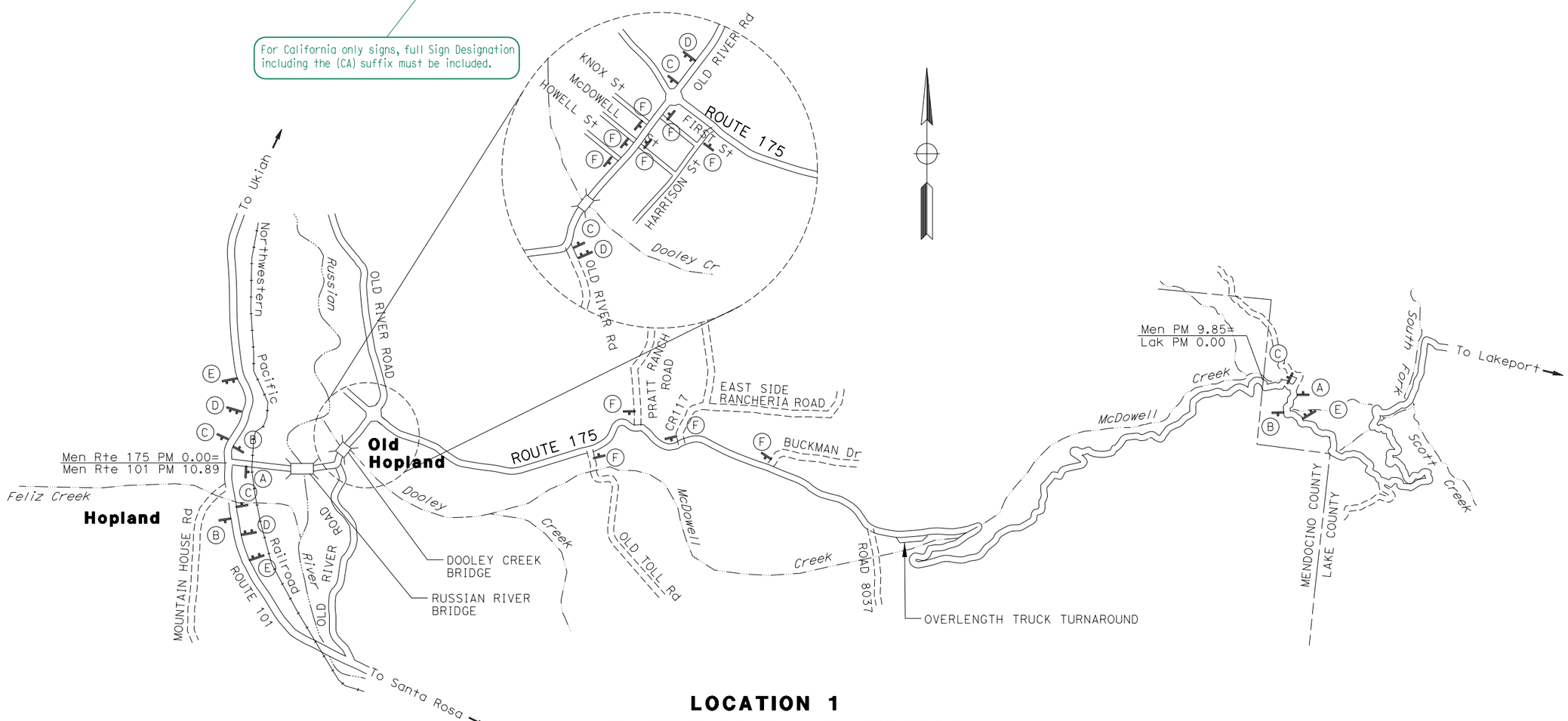
NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-2 THROUGH CS-4.

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	G20-1	60" x 36"	ROAD WORK NEXT 10 MILES	1 - 4" x 6"	2
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	3
C	W16-1	24" x 30"	SHARE THE ROAD	1 - 4" x 4"	5
	W11-1	36" x 36"	BICYCLE SYMBOL		
D	W20-1	48" x 48"	ROAD WORK AHEAD	2 - 4" x 6"	4
E	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE	2 - 4" x 6"	3
F	W20-1	36" x 36"	ROAD WORK AHEAD	MOUNTED ON BARRICADE	10

For California only signs, full Sign Designation including the (CA) suffix must be included.

Construction Area Signs sheet Examples "B-1," "B-2," "B-3," and "B-4" cover the four locations shown on Title Sheet Example "P."



LOCATION 1

Men Rte 175 PM 0.0 TO Lak Rte 175 PM 0.6

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "B-1"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

CONSTRUCTION AREA SIGN SHEET, EXAMPLE "B-1" RELEASED 3/19/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 19-MAR-2018 | TIME PLOTTED => 11:25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

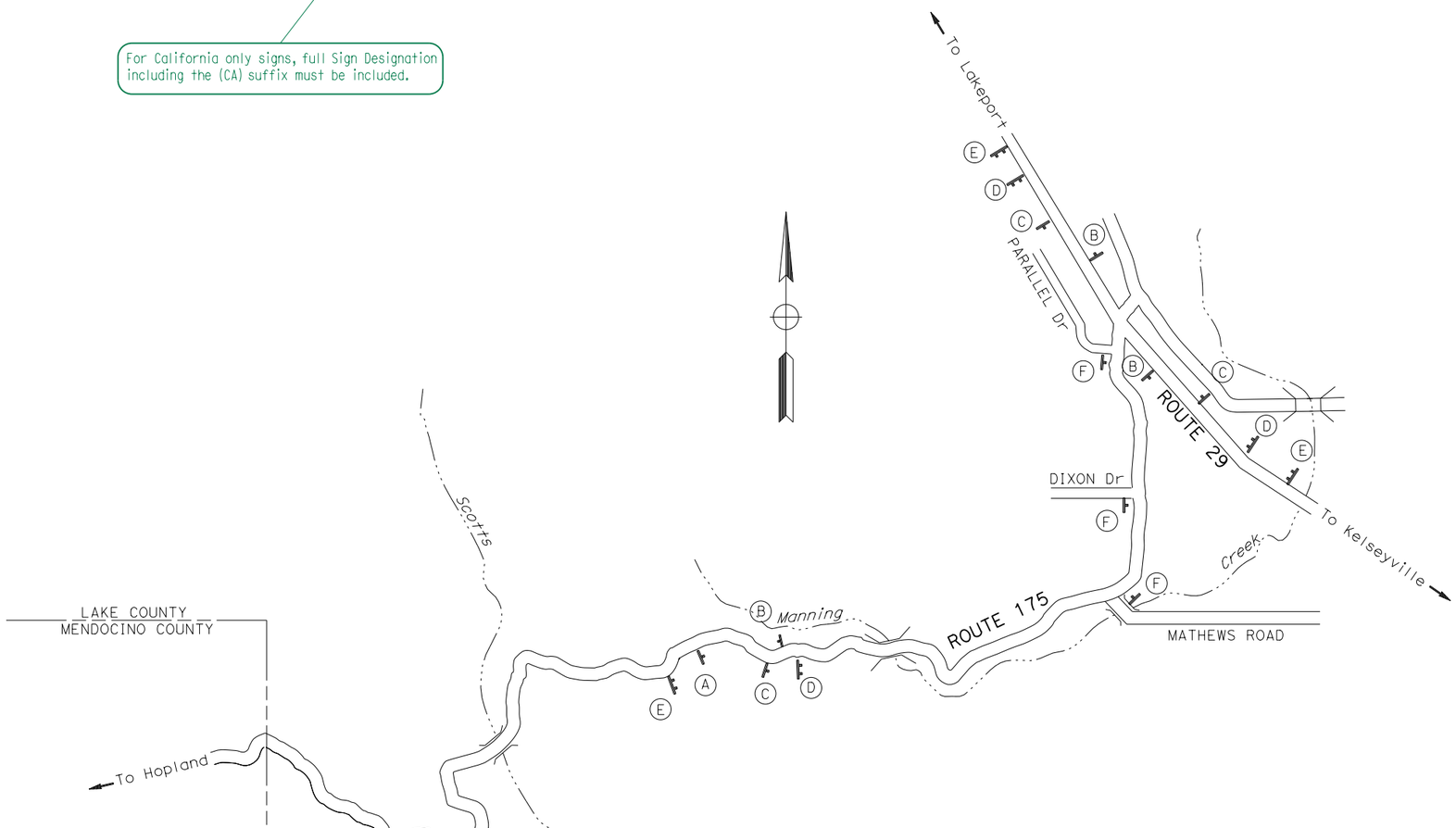
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-1, CS-3, AND CS-4.

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	G20-1	60" x 36"	ROAD WORK NEXT 3 MILES	1 - 4" x 6"	1
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	3
C	W16-1	24" x 30"	SHARE THE ROAD	1 - 4" x 4"	3
	W11-1	36" x 36"	BICYCLE SYMBOL		
D	W20-1	48" x 48"	ROAD WORK AHEAD	2 - 4" x 6"	3
E	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE	2 - 4" x 6"	3
F	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	3

For California only signs, full Sign Designation including the (CA) suffix must be included.



LOCATION 2

Lak Rte 175 PM 4.8/8.3

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "B-2"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

CONSTRUCTION AREA SIGN SHEET, EXAMPLE "B-2" RELEASED 3/19/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 19-MAR-2018 | TIME PLOTTED => 11:22

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REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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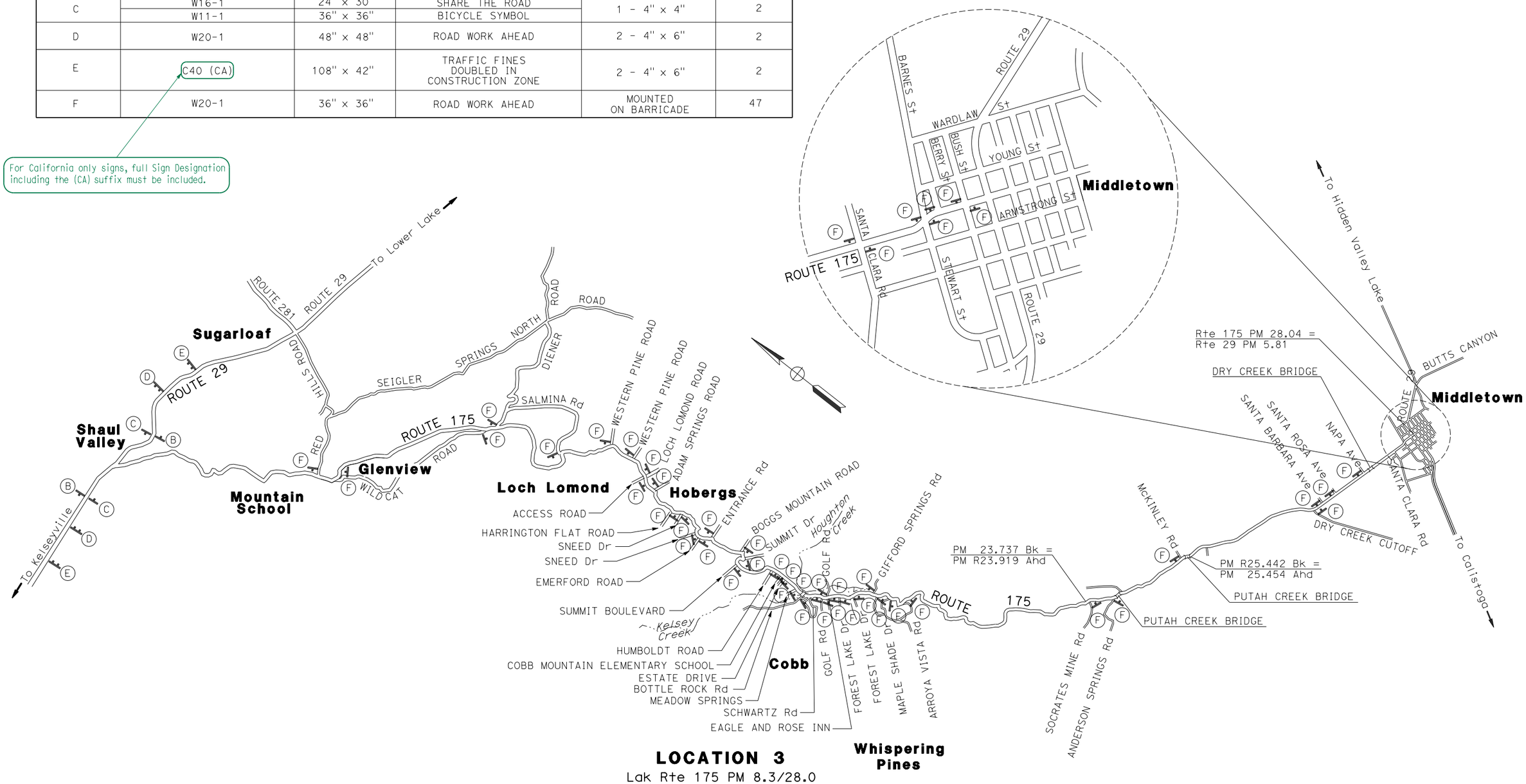
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	G20-1	60" x 36"	ROAD WORK NEXT XX MILES	1 - 4" x 6"	NONE
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
C	W16-1	24" x 30"	SHARE THE ROAD	1 - 4" x 4"	2
	W11-1	36" x 36"	BICYCLE SYMBOL		
D	W20-1	48" x 48"	ROAD WORK AHEAD	2 - 4" x 6"	2
E	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE	2 - 4" x 6"	2
F	W20-1	36" x 36"	ROAD WORK AHEAD	MOUNTED ON BARRICADE	47

For California only signs, full Sign Designation including the (CA) suffix must be included.

NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-1, CS-2, AND CS-4.



LOCATION 3

Lak Rte 175 PM 8.3/28.0

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "B-3"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-3

CONSTRUCTION AREA SIGN SHEET, EXAMPLE "B-3" RELEASED 3/19/2018

LAST REVISION 00-00-00 DATE PLOTTED => 19-MAR-2018 TIME PLOTTED => 11:21

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DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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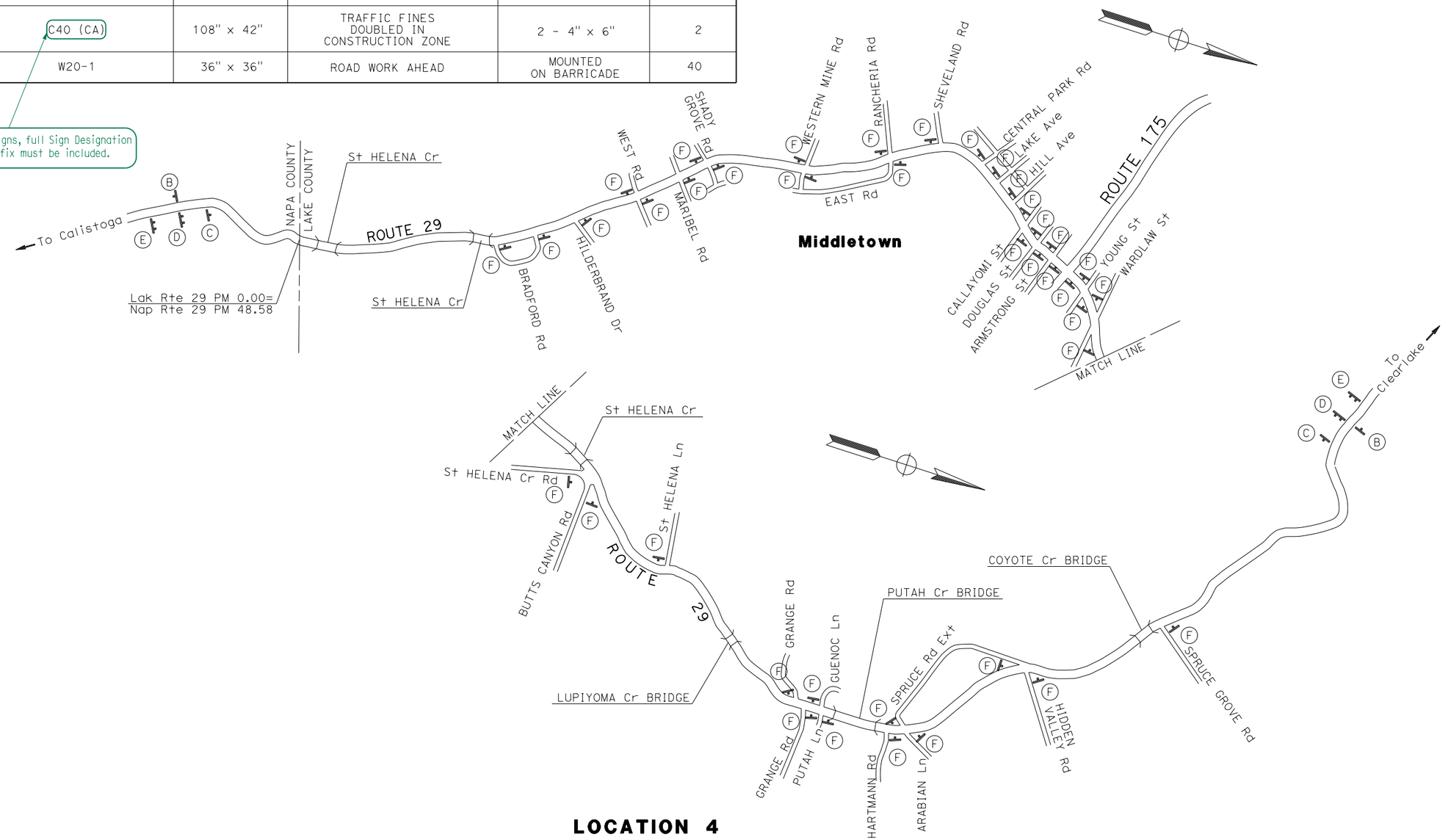
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	G20-1	60" x 36"	ROAD WORK NEXT XX MILES	1 - 4" x 6"	NONE
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
C	W16-1	24" x 30"	SHARE THE ROAD	1 - 4" x 4"	2
	W11-1	36" x 36"	BICYCLE SYMBOL		
D	W20-1	48" x 48"	ROAD WORK AHEAD	2 - 4" x 6"	2
E	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE	2 - 4" x 6"	2
F	W20-1	36" x 36"	ROAD WORK AHEAD	MOUNTED ON BARRICADE	40

For California only signs, full Sign Designation including the (CA) suffix must be included.

NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-1 THROUGH CS-3.



LOCATION 4
Lak Rte 29 PM 0.0/11.9

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "B-4"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS
NO SCALE

CS-4

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CONSTRUCTION AREA SIGN SHEET, EXAMPLE "B-4" RELEASED 3/19/2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	18
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	15
C	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 4" x 6"	4
D	W20-1	60" x 60"	ROAD WORK AHEAD	2 - 4" x 6"	4
E	C14 (CA)	48" x 24"	END ROAD WORK	2 - 4" x 6"	4

A cell is available in the Caltrans Cell Library for the table for Construction Area Signs; AC=CAS

For California only signs, full Sign Designation including the (CA) suffix must be included.

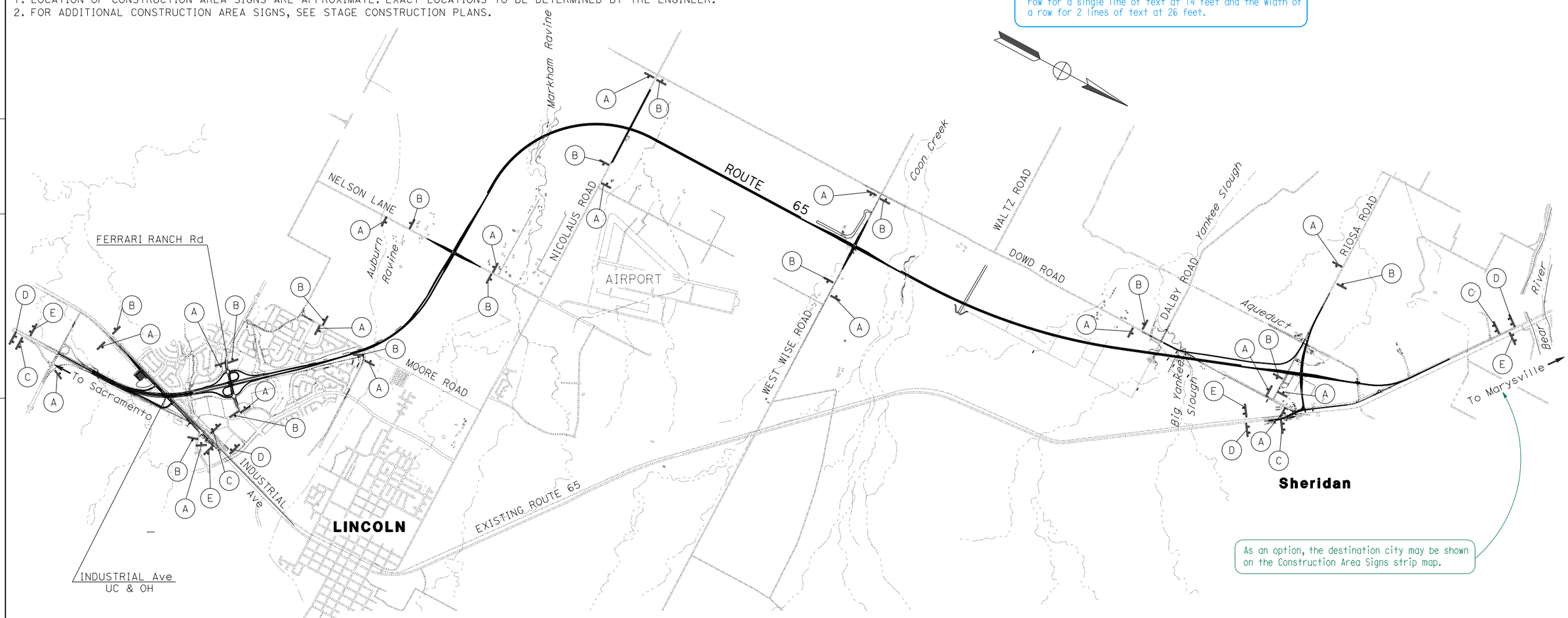
The width of a row containing 2 lines of text should be at a minimum of 26 feet. If more room is necessary, increase by intervals of 2 feet.

Example: 7′ + 7′ + (3.5′)x3 = 24.5′ (round to 26′).
(the 3.5′ represents half the height of the text above, below and in between the text)

If there is room on the sheet, keep all the rows at the same width. But if room is tight, keep the width of a row for a single line of text at 14 feet and the width of a row for 2 lines of text at 26 feet.

NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE STAGE CONSTRUCTION PLANS.



As an option, the destination city may be shown on the Construction Area Signs strip map.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

CONSTRUCTION AREA SIGNS SHEET, EXAMPLE "65 CS-1"

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

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CONSTRUCTION AREA SIGN SHEET, EXAMPLE "65 CS-1" RELEASED 3/19/2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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PLANS APPROVAL DATE

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Motorist Information Plan sheet examples "A-1" through "A-5" are from the same project as Title Sheet example "Q" and Construction Area Signs sheet example "A-1."

*STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (#)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
1	W20-2	48" x 48"	DETOUR AHEAD	1 - 4" x 6"	8
2	M4-8a	24" x 18"	END DETOUR	1 - 4" x 4"	8
3	SC6-4(CA)	48" x 60"	RAMP CLOSED	1 - 6" x 6"	8
4	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	2
	M3-4	24" x 12"	WEST		
	G27-2(380)(CA)	30" x 25"	ROUTE SHIELD 380		
	M6-3(↑)	21" x 15"	UP ARROW		
5	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	M3-4	24" x 12"	WEST		
	G27-2(380)(CA)	30" x 25"	ROUTE SHIELD 380		
	M6-3(→)	21" x 15"	RIGHT ARROW		
6	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	1
	M3-4	24" x 12"	WEST		
	G27-2(380)(CA)	30" x 25"	ROUTE SHIELD 380		
	M6-1(←)	21" x 15"	LEFT ARROW		
7	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	2
	G28-2(82)(CA)	24" x 25"	ROUTE SHIELD 82		
	M6-3(↑)	21" x 15"	UP ARROW		
8	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	4
	G28-2(82)(CA)	24" x 25"	ROUTE SHIELD 82		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		
9	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	2
	G28-2(82)(CA)	24" x 25"	ROUTE SHIELD 82		
	M6-1(←)	21" x 15"	LEFT ARROW		
10	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	1
	Spec 1	54" x 18"	E 3RD AVE		
	M6-3(↑)	21" x 15"	UP ARROW		
11	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 1	54" x 18"	E 3RD AVE		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		
12	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	6
	Spec 2	54" x 24"	SAN BRUNO AVENUE		
	M6-3(↑)	21" x 15"	UP ARROW		
13	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 2	54" x 24"	SAN BRUNO AVENUE		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		
14	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 2	54" x 24"	SAN BRUNO AVENUE		
	M6-1(←)	21" x 15"	LEFT ARROW		
15	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	1
	Spec 5	54" x 24"	E HILLSDALE BLVD		
	M6-3(↑)	21" x 15"	UP ARROW		

*For California only signs, full Sign Designation including the (CA) suffix must be included.

*STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (#)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
16	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 5	54" x 24"	E HILLSDALE BLVD		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		
17	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	1
	Spec 5	54" x 24"	E HILLSDALE BLVD		
	M6-1(←)	21" x 15"	LEFT ARROW		
18	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	2
	Spec 3	54" x 18"	DELAWARE ST		
	M6-3(↑)	21" x 15"	UP ARROW		
19	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 3	54" x 18"	DELAWARE ST		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		
20	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	2
	Spec 4	54" x 24"	MILLBRAE AVENUE		
	M6-3(↑)	21" x 15"	UP ARROW		
21	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	3
	Spec 4	54" x 24"	MILLBRAE AVENUE		
	M6-1(←)	21" x 15"	LEFT ARROW		
22	M4-8	30" x 15"	DETOUR	1 - 4" x 6"	1
	Spec 4	54" x 24"	MILLBRAE AVENUE		
	M6-2(↗)	21" x 15"	UP RIGHT ARROW		

*For California only signs, full Sign Designation including the (CA) suffix must be included.

Spec 1
E. 3RD AVE — 5" CAPS BLACK/ORANGE
54" x 18"

Spec 2
SAN BRUNO AVENUE — 5" CAPS BLACK/ORANGE
54" x 24"

Spec 3
DELAWARE ST — 5" CAPS BLACK/ORANGE
54" x 18"

Spec 4
MILLBRAE AVENUE — 5" CAPS BLACK/ORANGE
54" x 24"

Spec 5
E. HILLSDALE BLVD — 5" CAPS BLACK/ORANGE
54" x 24"

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-1"

MOTORIST INFORMATION PLAN
NO SCALE

MI-1

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-1" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 10-SEP-2018 | TIME PLOTTED => 17:40

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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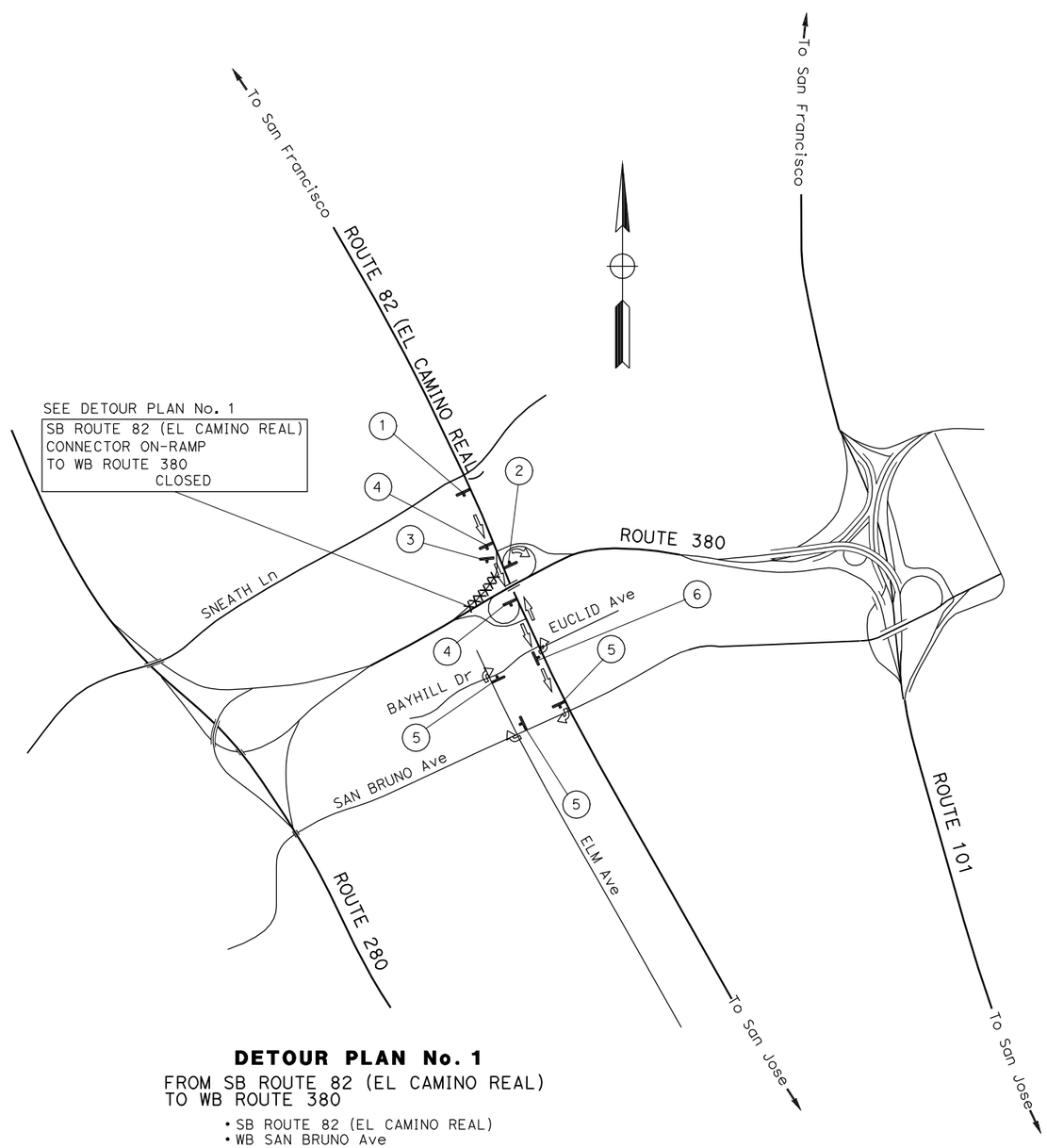
LEGEND:

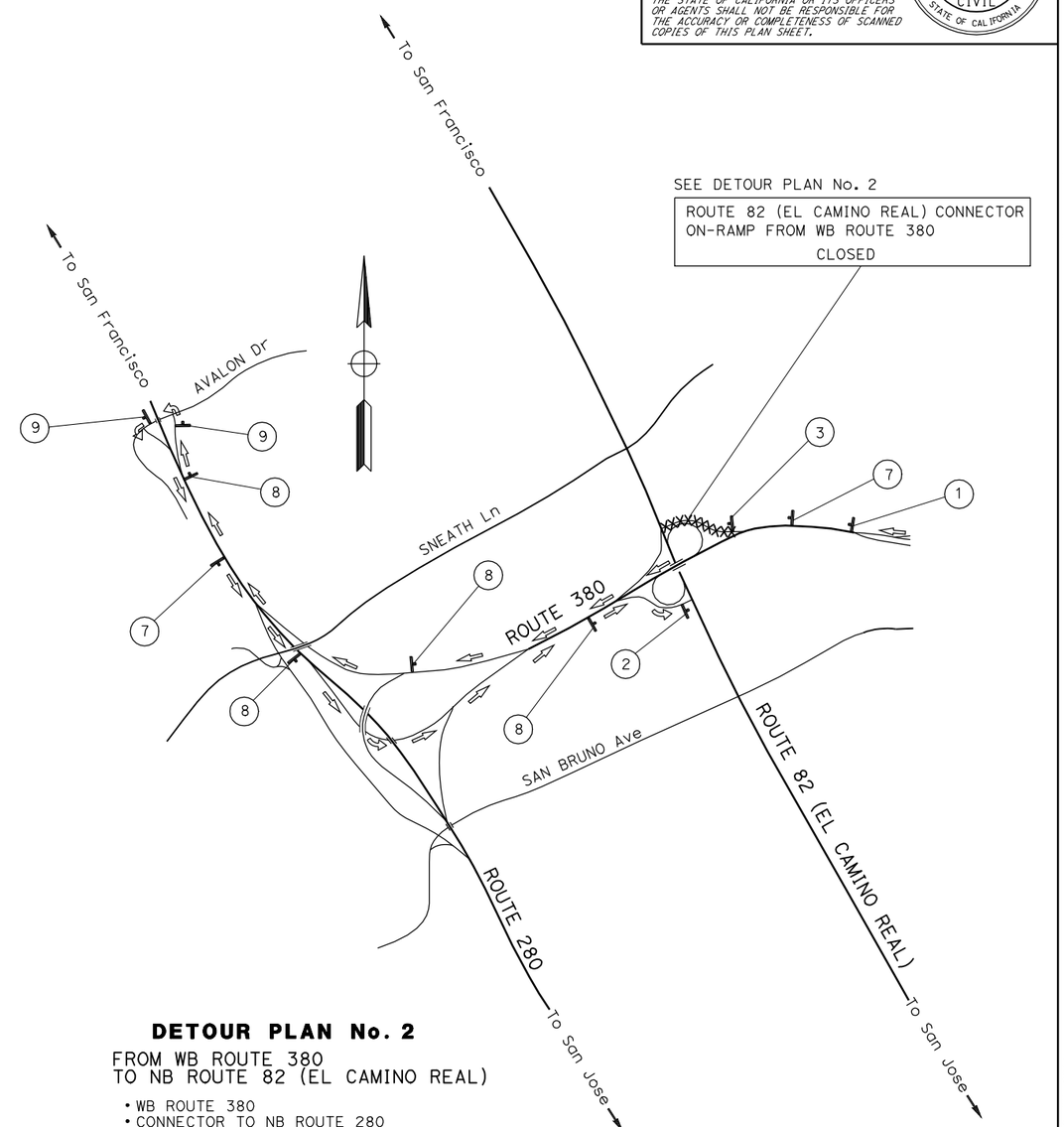
(#) CONSTRUCTION AREA SIGN



DETOUR PLAN No. 1

FROM SB ROUTE 82 (EL CAMINO REAL)
TO WB ROUTE 380

- SB ROUTE 82 (EL CAMINO REAL)
- WB SAN BRUNO Ave
- NB ELM Ave
- EB BAYHILL Dr
- NB EL CAMINO REAL
- WB ROUTE 380 LOOP ON-RAMP



DETOUR PLAN No. 2

FROM WB ROUTE 380
TO NB ROUTE 82 (EL CAMINO REAL)

- WB ROUTE 380
- CONNECTOR TO NB ROUTE 280
- OFF-RAMP TO WB AVALON Dr
- ON-RAMP TO SB ROUTE 280
- CONNECTOR TO EB ROUTE 380
- OFF-RAMP TO NB ROUTE 82 (EL CAMINO REAL)

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-2"

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-2

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-2" RELEASED 7/7/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 06-JUL-2011 | TIME PLOTTED => 12:55

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BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => MotorInfo_Example_A2.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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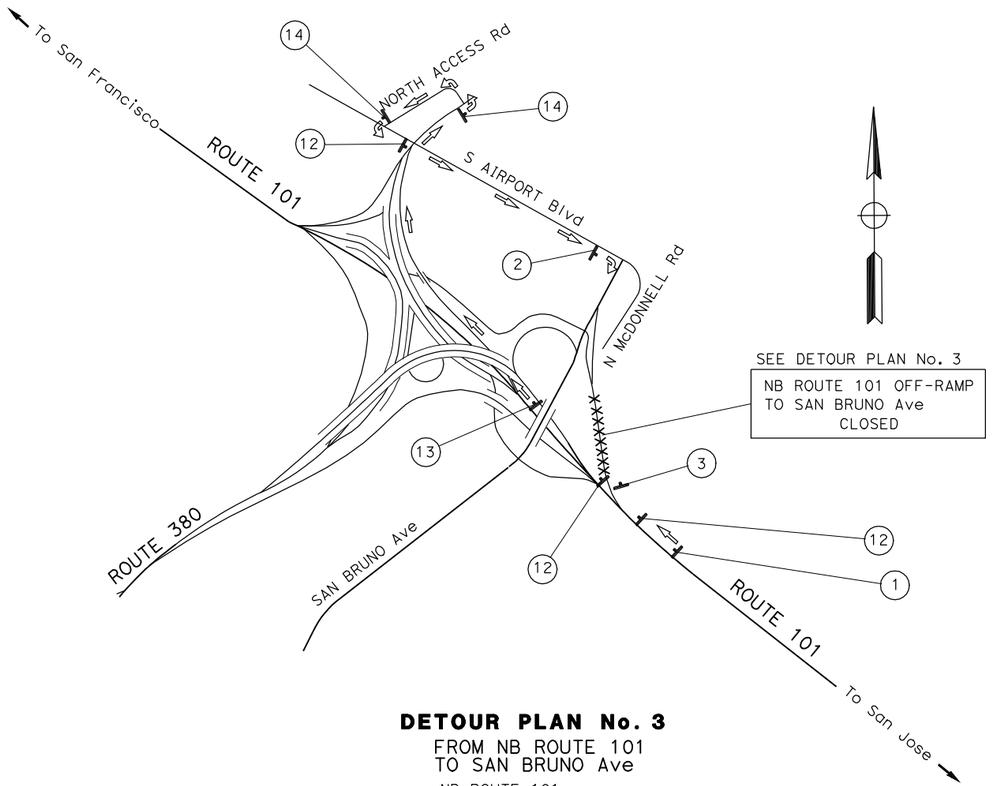
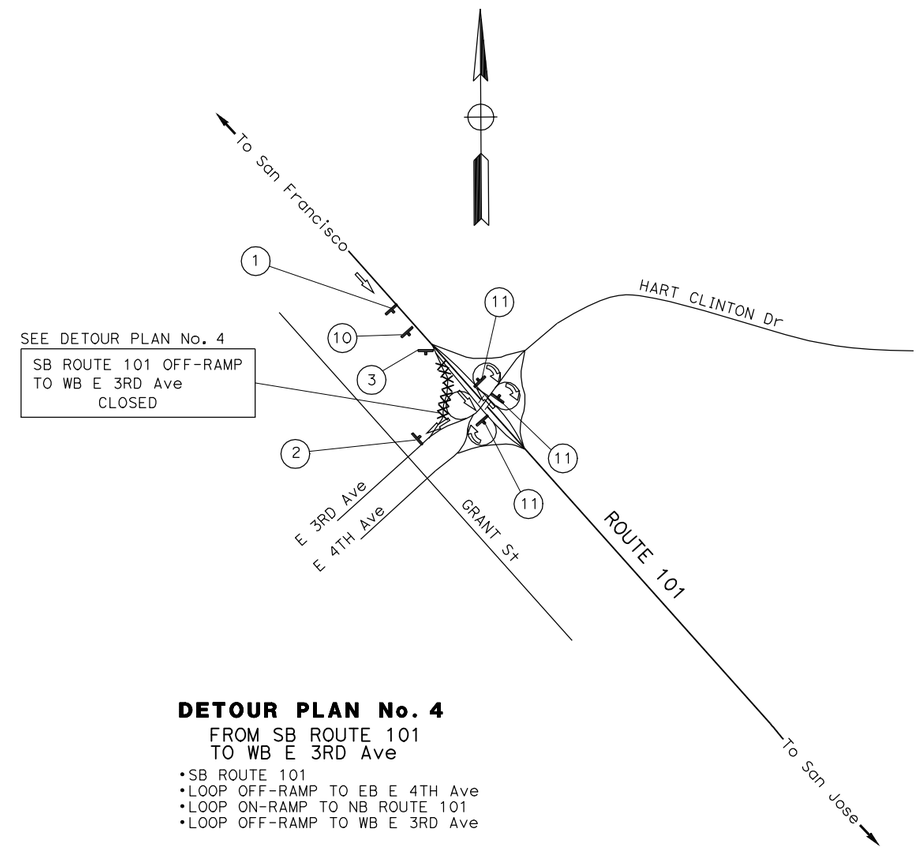


DETOUR PLAN No. 3

FROM NB ROUTE 101
TO SAN BRUNO Ave

- NB ROUTE 101
- OFF-RAMP TO EB ROUTE 380
- EB NORTH ACCESS Rd
- NB/WB NORTH ACCESS Rd
- SB S AIRPORT Blvd
- SAN BRUNO Ave



DETOUR PLAN No. 4

FROM SB ROUTE 101
TO WB E 3RD Ave

- SB ROUTE 101
- LOOP OFF-RAMP TO EB E 4TH Ave
- LOOP ON-RAMP TO NB ROUTE 101
- LOOP OFF-RAMP TO WB E 3RD Ave

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-3"

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-3

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-3" RELEASED 7/7/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 06-JUL-2011 | TIME PLOTTED => 12:56

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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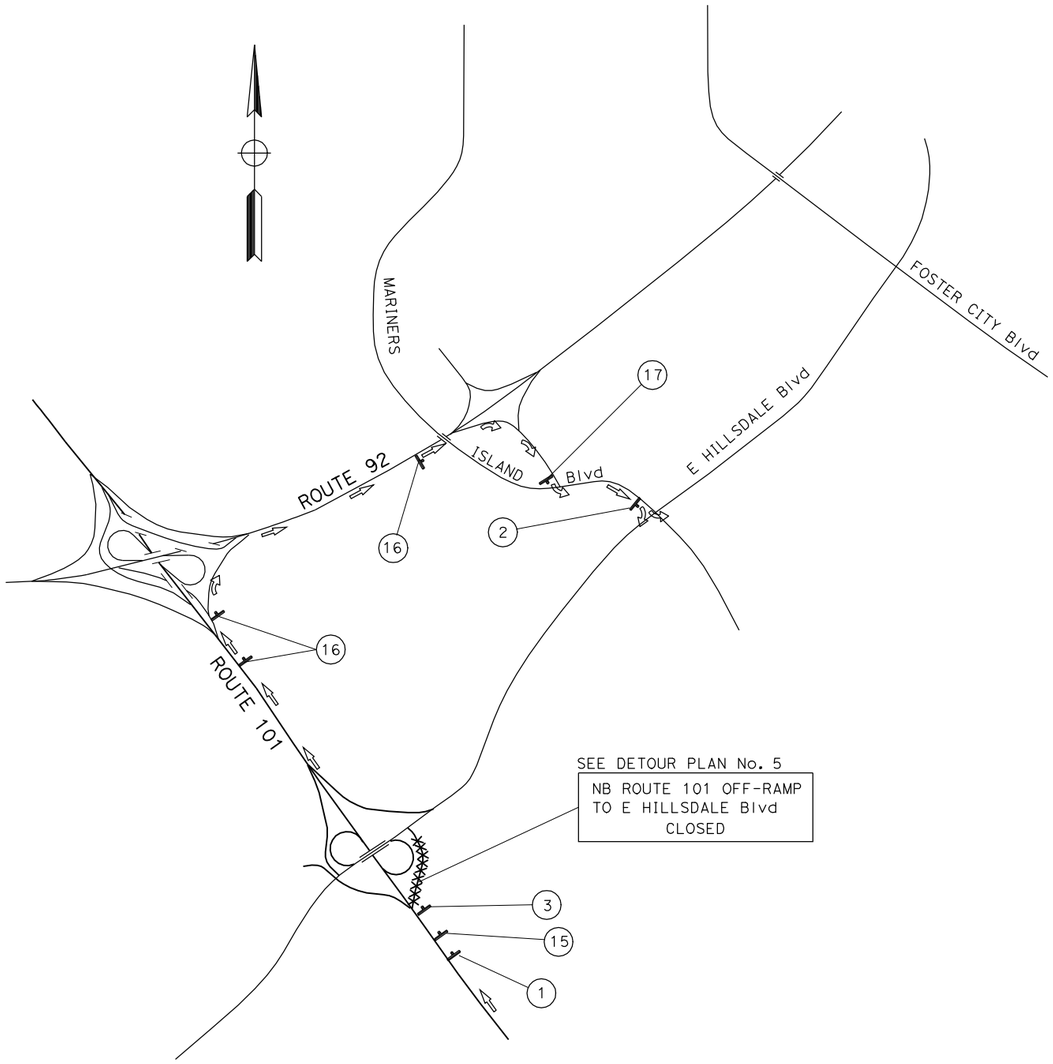
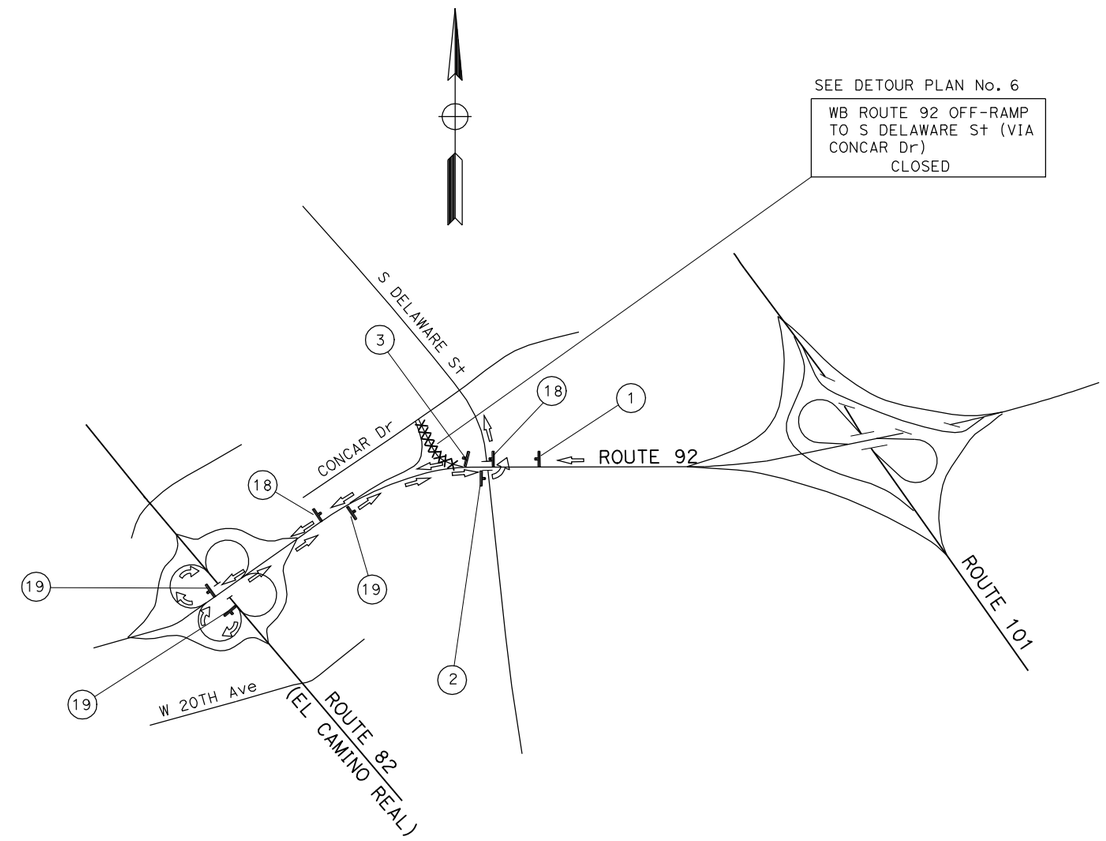


DETOUR PLAN No. 5

FROM NB ROUTE 101
TO E HILLSDALE Blvd

- NB ROUTE 101
- CONNECTOR TO EB ROUTE 92
- OFF-RAMP TO MARINERS ISLAND Blvd
- SB MARINERS ISLAND Blvd
- E HILLSDALE Blvd



DETOUR PLAN No. 6

FROM WB ROUTE 92
TO S DELAWARE St

- WB ROUTE 92
- LOOP OFF-RAMP TO SB ROUTE 82
- LOOP ON-RAMP TO EB ROUTE 92
- OFF-RAMP TO S DELAWARE St

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-4"

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-4

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-4" RELEASED 7/7/2011

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USERNAME => s116122
DGN FILE => MotorInfo_Example_A4.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

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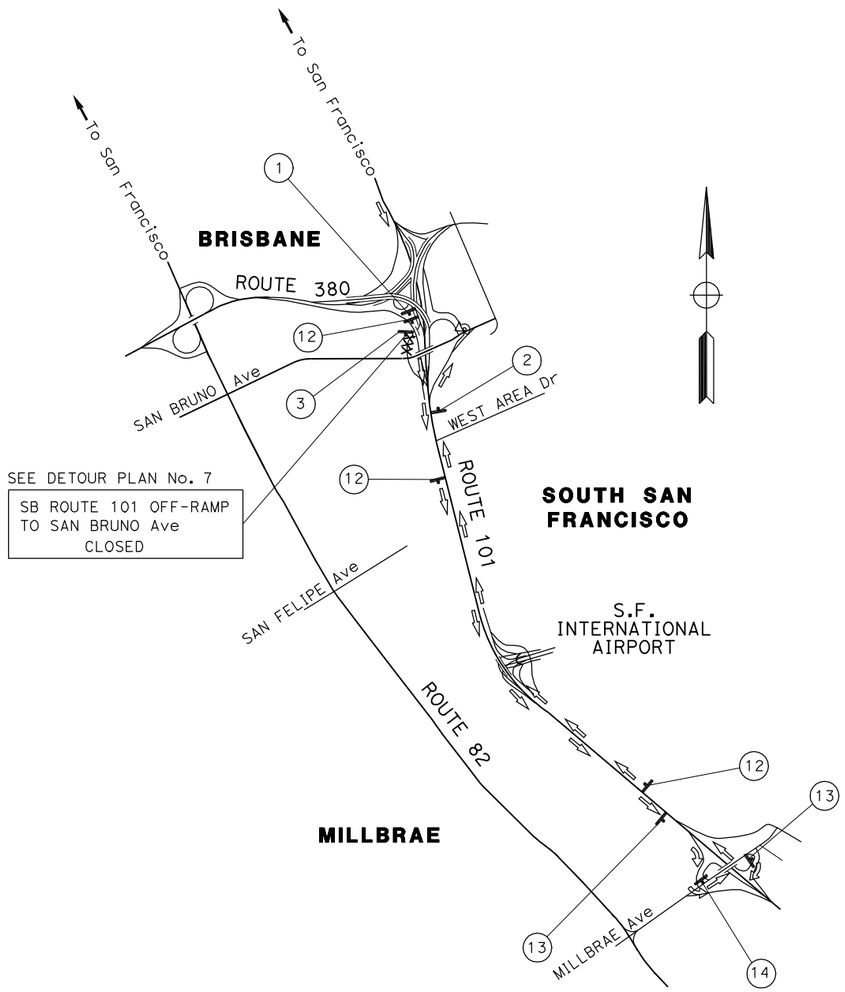
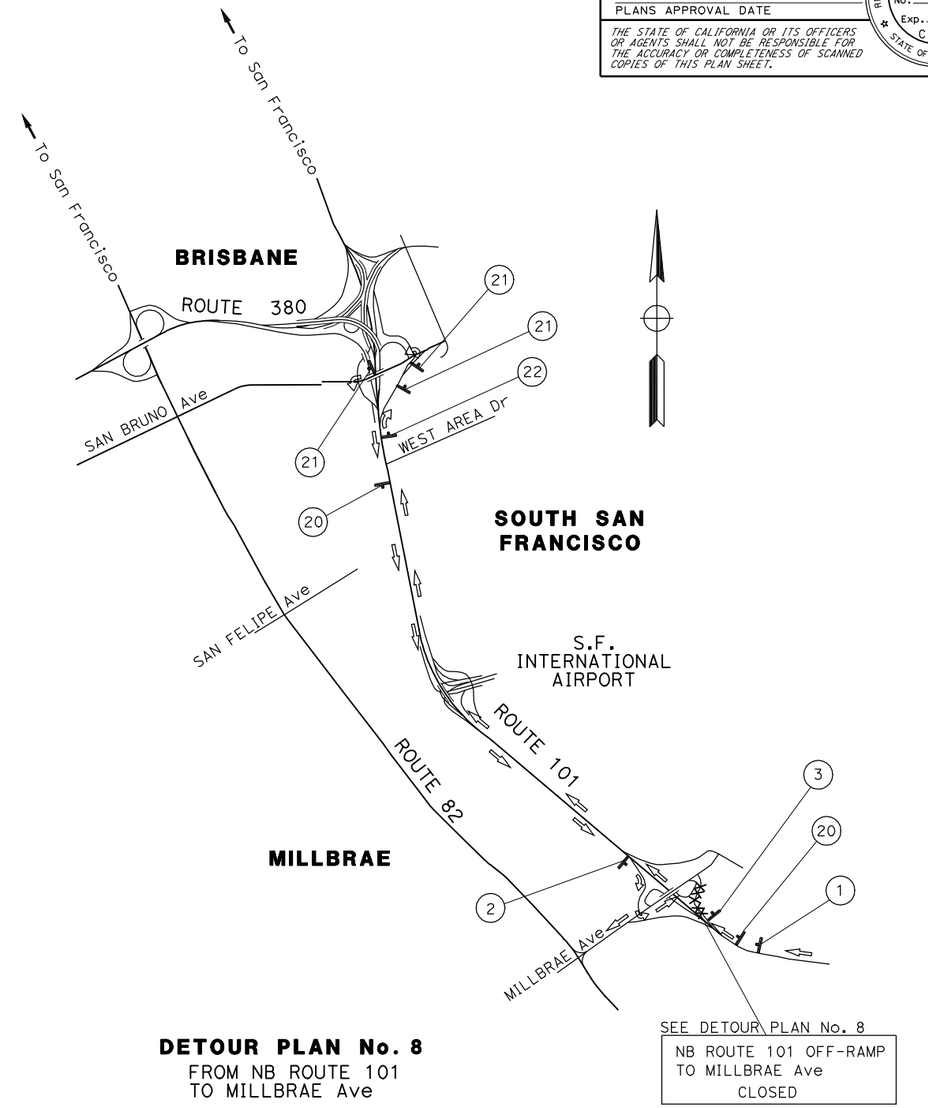


DETOUR PLAN No. 7

FROM SB ROUTE 101
TO SAN BRUNO Ave

- SB ROUTE 101
- OFF-RAMP TO EB MILLBRAE Ave
- LOOP ON-RAMP TO NB ROUTE 101
- OFF-RAMP TO SAN BRUNO Ave



DETOUR PLAN No. 8

FROM NB ROUTE 101
TO MILLBRAE Ave

- NB ROUTE 101
- OFF-RAMP TO WB SAN BRUNO Ave
- ON-RAMP TO SB ROUTE 101
- OFF-RAMP TO MILLBRAE Ave

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-5"

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-5

MOTORIST INFORMATION PLAN SHEET, EXAMPLE "A-5" RELEASED 7/7/2011

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BORDER LAST REVISED 7/2/2010 | USERNAME => s116122 | DGN FILE => MotorInfo_Example_A5.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTES:

1. ALL DELINEATORS (CLASS 1) SHALL BE PLACED ON 200′ CENTERS UNLESS OTHERWISE SHOWN.
2. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING SHALL REMAIN IN PLACE.
3. FEDERAL SIGN DESIGNATIONS ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA SIGN DESIGNATION.

Topographic features are not necessary on pavement delineation or sign plan sheets. The roadbed with ETW and EP must be shown. The existing traffic striping and markings may be shown if pertinent to the project.

It is not usually necessary to show the right of way line on the pavement delineation plan sheets. The right of way line may be necessary to show on the sign plan sheets when the location of a sign is near the right of way line.

LEGEND

- BEGIN/END OF TRAFFIC STRIPE DETAIL
- CHANGE OF TRAFFIC STRIPE DETAIL
- (No.) TRAFFIC STRIPE DETAIL NUMBER
- CONCRETE BARRIER DELINEATOR (16")
- DELINEATOR (CLASS 1) OR OBJECT MARKER
- S= DELINEATOR SPACING
- TYPE I (24′) ARROW
- TYPE II ARROW
- TYPE III ARROW
- TYPE V ARROW
- TYPE VI ARROW
- BIKE LANE ARROW
- BICYCLE LOOP DETECTOR SYMBOL PAVEMENT MARKING
- (SIGN-No.) ROADSIDE SIGN NUMBER
- (No.) OVERHEAD SIGN NUMBER
- (CA) CALIFORNIA SIGN DESIGNATION SUFFIX
- ROADSIDE SIGN (SOUND WALL MOUNTED)
- OVERHEAD SIGN
- REMOVE ROADSIDE SIGN
- REMOVE ROADSIDE SIGN (SSBM)
- RELOCATE ROADSIDE SIGN
- RESET ROADSIDE SIGN
- SNS STREET NAME SIGN

Showing the direction of traffic NB/SB or WB/EB is an option on complex plan sheets if it helps clarify the movement of the traffic. The direction of traffic does not need to be shown on every plan sheet, just the first plan sheet and then any other plan sheet that needs the clarification.

Arrows for showing direction of traffic are to be hollow. There are three cells for showing direction of traffic:

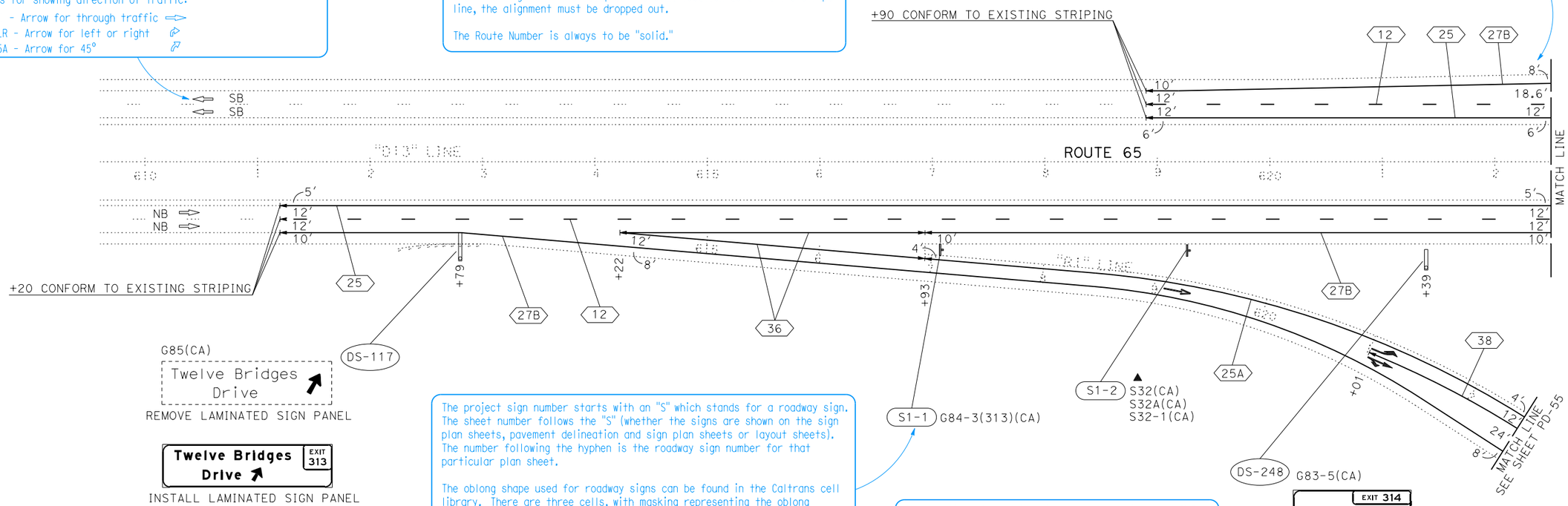
- TRFDI - Arrow for through traffic
- TRFALR - Arrow for left or right
- TRF45A - Arrow for 45°

As a Caltrans "Best Practice" for presenting pavement delineation information, the alignment line, station annotation and line designation should be dropped out.

When the alignment line occupies the same location as a traffic stripe line, the alignment must be dropped out.

The Route Number is always to be "solid."

Lane and shoulder widths are to be identified (in stacked format) at transition points and match lines. Shoulder widths are shown to provide the striping contractor with a clear overall picture of the lane and shoulder widths. If the width cannot clearly be displayed for narrow shoulders, use an arc to point to the shoulder.



The project sign number starts with an "S" which stands for a roadway sign. The sheet number follows the "S" (whether the signs are shown on the sign plan sheets, pavement delineation and sign plan sheets or layout sheets). The number following the hyphen is the roadway sign number for that particular plan sheet.

The oblong shape used for roadway signs can be found in the Caltrans cell library. There are three cells, with masking representing the oblong shape depending on the number of characters in the roadway sign number:

- Symbol for roadside sign (4 characters) --- SIGN4S
- Symbol for roadside sign (5 characters) --- SIGN5S
- Symbol for roadside sign (6 characters) --- SIGN6S

The location of roadside signs, overhead signs and CMS are to be shown on either the "combined" pavement delineation and sign plan sheets or "separate" sign plan sheets. Within the same project, DO NOT have a mixture of "combined" pavement delineation and sign plan sheets and "separate" sign plan sheets.

Pavement delineation details and quantities are to be on separate sheets from the sign details and quantities in both cases.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-1"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-1

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-1" RELEASED 9/17/2018

LAST REVISION 00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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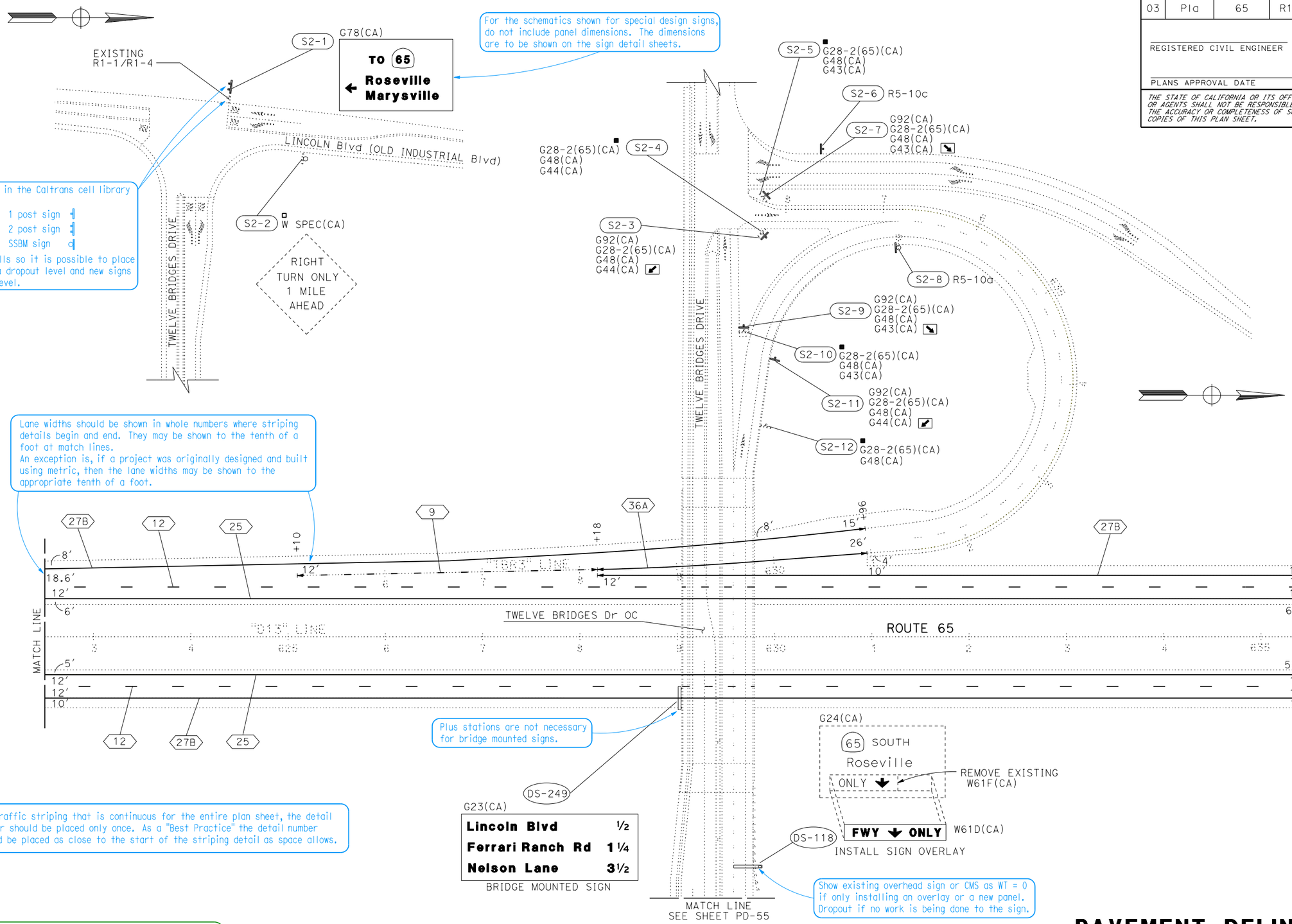

For traffic striping that is continuous for the entire plan sheet, the detail number should be placed only once. As a "Best Practice" the detail number should be placed as close to the start of the striping detail as space allows.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-2"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-2

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-2" RELEASED 9/17/2018

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SUPERSEDES EXAMPLE RELEASED 07/07/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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There are two elongated hexagon symbols available in the Caltrans cell library for showing the traffic stripe detail number;

- Traffic stripe detail number with "masking" --- STRPSY
- Traffic stripe detail number without "masking" --- TRASTR

Showing a schematic of the sign panel is an option for special design signs (i.e. guide signs). It is not necessary to show schematics of standard sign panels. The Federal or the California sign number is sufficient.

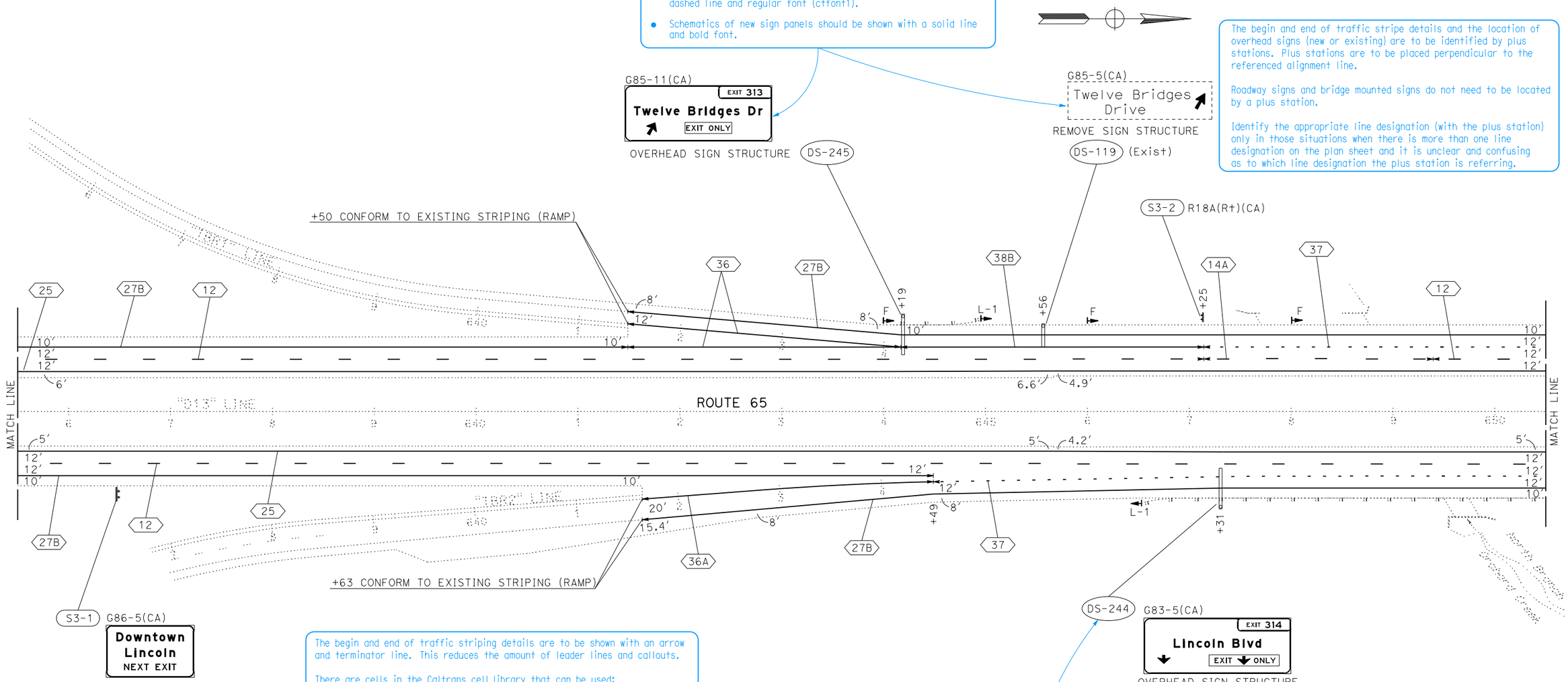
For identifying the overhead sign number, see the "Project Sign Sheets" example under Section 2-2.18. As a "Best Practice" the oval is the most practical geometric shape to use for identifying overhead signs.

- Schematics of existing sign panels should be shown with a dashed line and regular font (ctfont1).
- Schematics of new sign panels should be shown with a solid line and bold font.

The begin and end of traffic stripe details and the location of overhead signs (new or existing) are to be identified by plus stations. Plus stations are to be placed perpendicular to the referenced alignment line.

Roadway signs and bridge mounted signs do not need to be located by a plus station.

Identify the appropriate line designation (with the plus station) only in those situations when there is more than one line designation on the plan sheet and it is unclear and confusing as to which line designation the plus station is referring.



The begin and end of traffic striping details are to be shown with an arrow and terminator line. This reduces the amount of leader lines and callouts.

There are cells in the Caltrans cell library that can be used;

- For a single arrow with terminator use SRPAR1
- For a double arrow with terminator use SRPAR2

The overhead sign numbers used in this project are for inventory purposes and are based on electrical service provided within a county.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-3"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50'

PD-3

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-3" RELEASED 9/17/2018

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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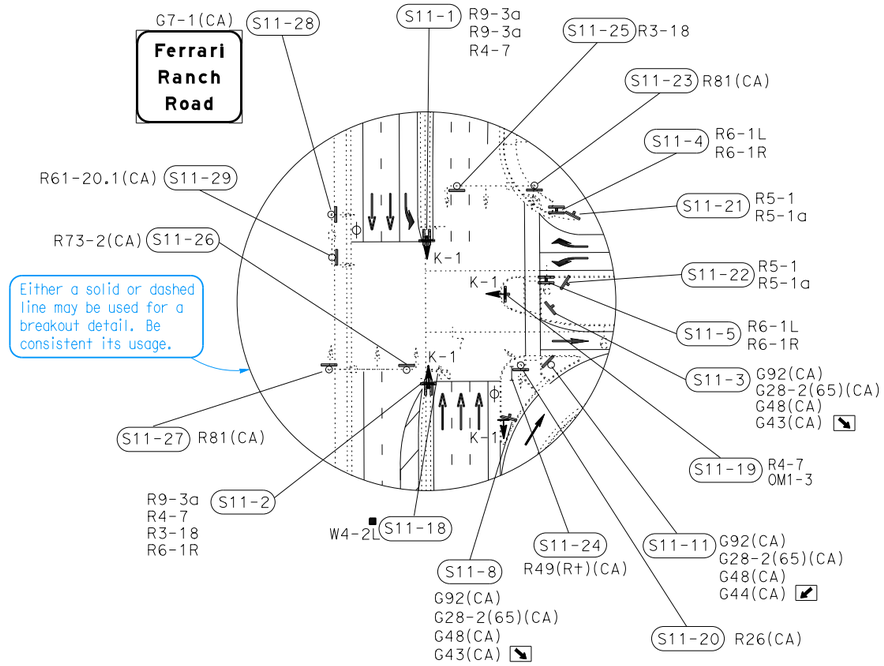
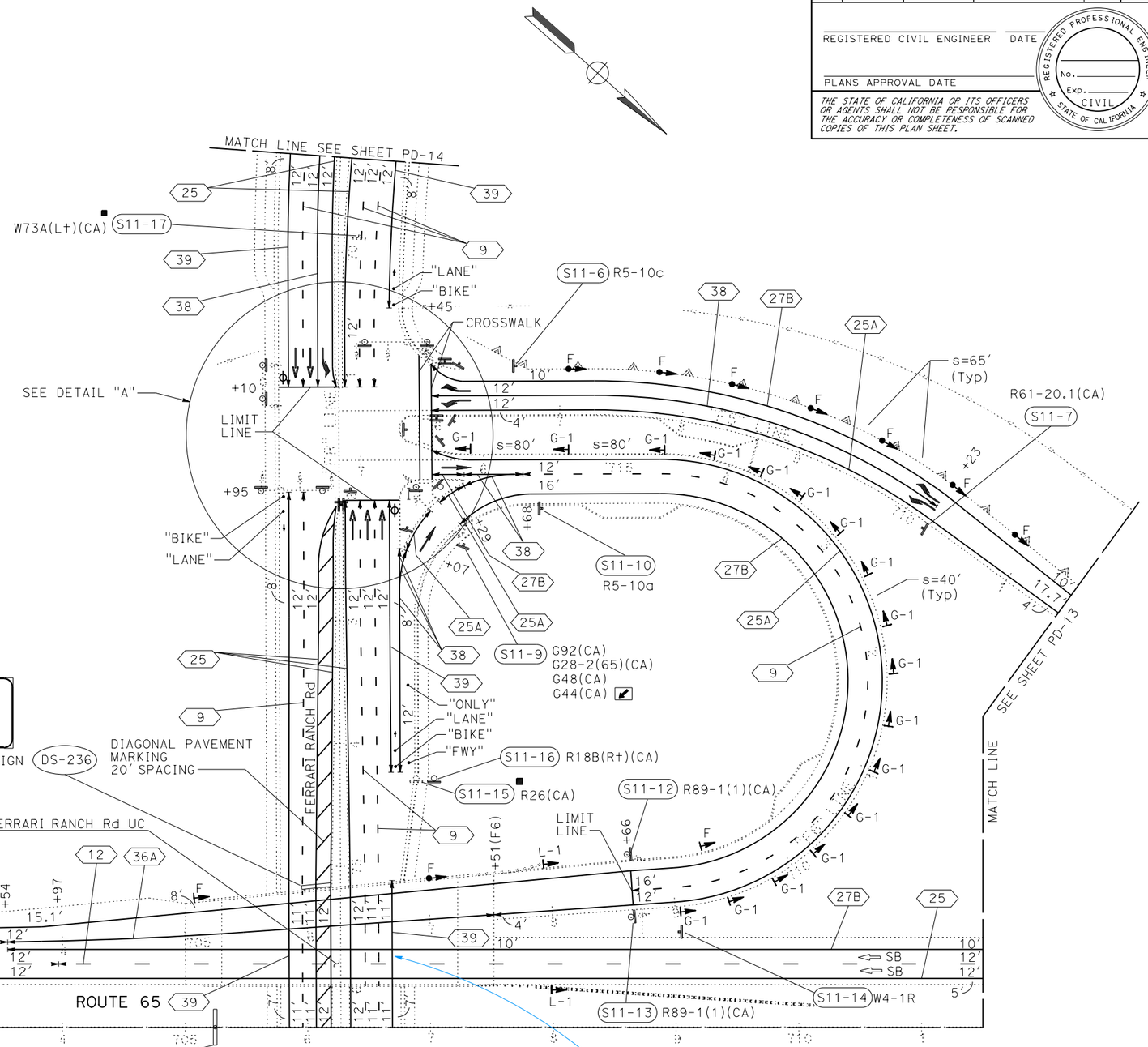


Either a solid or dashed line may be used for a breakout detail. Be consistent its usage.

DETAIL "A"

A breakout detail can be very effective to use at an intersection, especially when there are too many items of work to clearly label and identify.

A breakout detail shows the identical features (both proposed and existing information) from the main drawing on the sheet. The purpose of this breakout detail is for identifying and labeling roadway signs. The labeling within the breakout detail must be confined to the purpose of the detail. There must not be duplication of labeling items of work.



At locations where there are overcrossings (OC) or undercrossings (UC), and both routes or roads have proposed striping, lines showing existing features should be clipped. This will allow the proposed striping to be seen more clearly. If it is still too cluttered to show the striping clearly, a breakout detail may be used.

G5(CA)

Sheridan	10
Wheatland	14
Marysville	26

(FNBT)

G83-5(CA)

EXIT 313
Twelve Bridges Dr
1 MILE

(FSBT)

OVERHEAD SIGN STRUCTURE DS-241

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-11"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-11

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-11" RELEASED 9/17/2018

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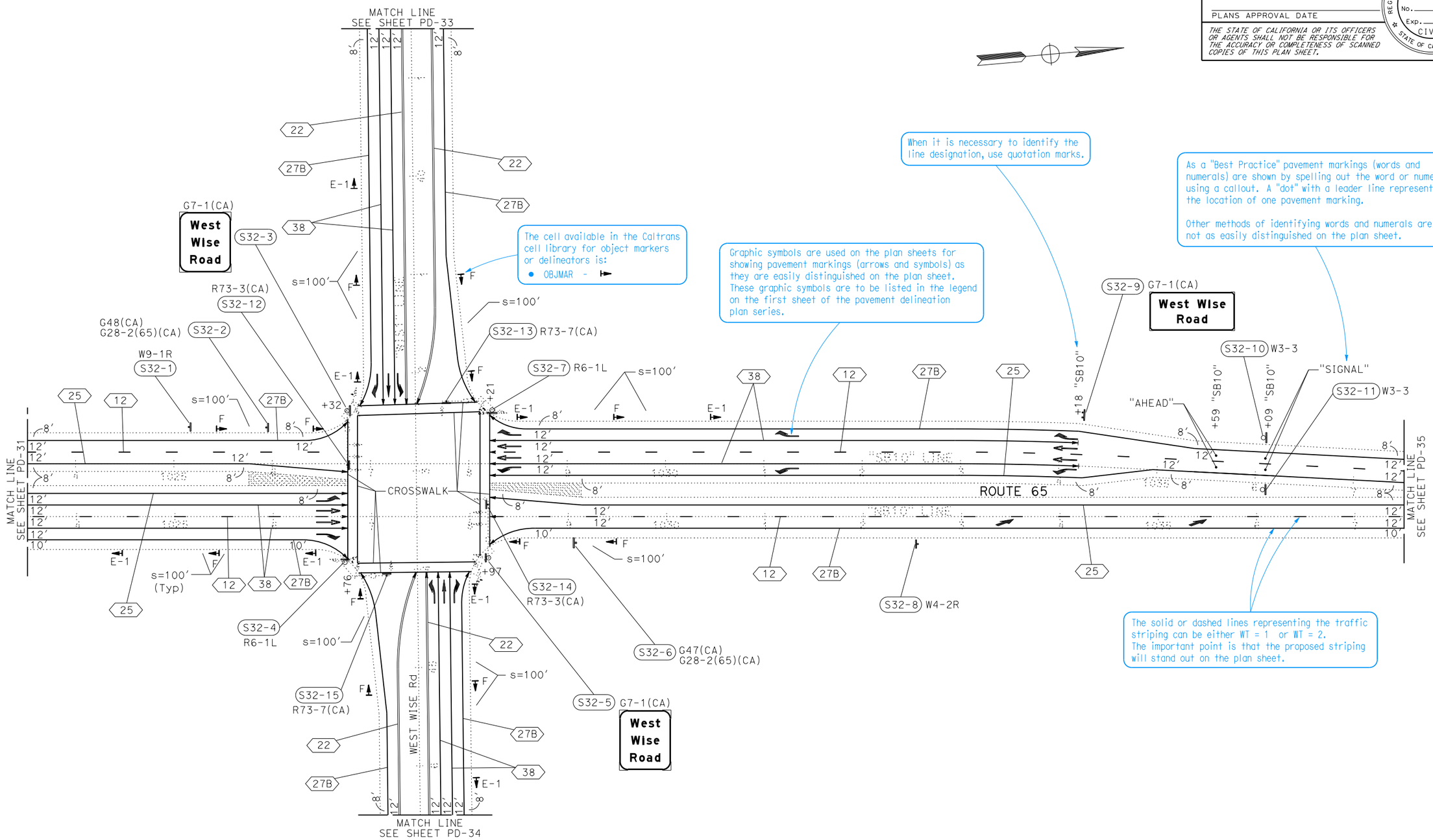

The cell available in the Caltrans cell library for object markers or delineators is:
- OBJMAR -

Graphic symbols are used on the plan sheets for showing pavement markings (arrows and symbols) as they are easily distinguished on the plan sheet. These graphic symbols are to be listed in the legend on the first sheet of the pavement delineation plan series.

When it is necessary to identify the line designation, use quotation marks.

As a "Best Practice" pavement markings (words and numerals) are shown by spelling out the word or numeral using a callout. A "dot" with a leader line represents the location of one pavement marking.

Other methods of identifying words and numerals are not as easily distinguished on the plan sheet.

The solid or dashed lines representing the traffic striping can be either WT = 1 or WT = 2. The important point is that the proposed striping will stand out on the plan sheet.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-32"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-32

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "65 PD-32" RELEASED 9/17/2018

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

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This quantity sheet reflects the values from the three examples sheets, "65 PD-1", "65 PD-2" and "65 PD-3." Some of the traffic striping details extend beyond the 3rd plan sheet example, but for the purpose of this quantity sheet example, all striping details end at the match line 650+50 for the "D13" line.

If it takes more than one quantity sheet to show a quantity table, the table headings must be identical on each successive quantity sheet.

Object markers or delineators can be included in the pavement delineation quantity table if there is room. Otherwise, create a separate quantity table.

On multilane highways, when there is more than one instance of the same striping detail between the same station limits, show the total linear feet of that detail but in the "DESCRIPTION/COMMENTS" column, state the number of traffic stripes comprising the quantity for that row. This will make it easier for the bidders to verify the quantities.

When station limits refer to the same line designation, only show the line designation with the first station limits.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION/STATION	DIRECTION	DETAIL No.	4" THERMOPLASTIC TRAFFIC STRIPE			8" THERMOPLASTIC TRAFFIC STRIPE		THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER (RETROREFLECTIVE)			OBJECT MARKER	DELINEATOR (CLASS 1)	DESCRIPTION/ COMMENTS
				WHITE SOLID	WHITE BROKEN	YELLOW SOLID	WHITE SOLID	WHITE BROKEN		TYPE C	TYPE G	TYPE H	TYPE L-1	TYPE F	
				LF	LF	LF	LF	LF	SQFT	EA	EA	EA	EA	EA	
PD-1 - PD-3	"D13" 611+20 TO 650+50	NB	25			3,930						89			
PD-1 - PD-3	"D13" 611+20 TO 650+50	NB	12		3,930						89				
PD-1	"D13" 611+20 TO "R1" 622+50	NB	27B	1,130											
PD-1	"D13" 614+22 TO 616+93	NB	36				542				24				2 TRAFFIC STRIPES
PD-1 - PD-3	"D13" 616+93 TO 644+49	NB	27B	2,756											
PD-1	"R1" 617+93 TO 622+50	NB	25A			457						20			
PD-1	"R1" 619+10	NB							33						TYPE V ARROW
PD-1	"R1" 621+01 TO 622+50	NB	38				149				7				
PD-1	"R1" 621+01	NB							42						TYPE III (L) ARROW
PD-1	"R1" 621+01	NB							45						TYPE II (R) ARROW
PD-1 - PD-2	"D13" 618+90 TO "TBR3" 630+96	SB	27B	1,206											
PD-1 - PD-3	"D13" 618+90 TO 647+25	SB	12		2,835						60				
PD-1 - PD-3	"D13" 618+90 TO 650+50	SB	25			3,160						66			
PD-2	"TBR3" 625+10 TO 628+18	SB	9		308										
PD-2	"TBR3" 628+18 TO 630+96	SB	36A				278				12				
PD-2 - PD-3	"D13" 628+18 TO 641+50	SB	27B	1,332											
PD-3	"TBR1" 641+50 TO 650+50	SB	27B	900											
PD-3	"TBR1" 641+50 TO 644+19	SB	36				538				24				2 TRAFFIC STRIPES
PD-3	"TBR2" 641+63 TO 650+50	NB	27B	887											
PD-3	"TBR2" 641+63 TO 644+49	NB	36A				286				12				
PD-3	"D13" 644+00 TO 647+75	SB											1	3	
PD-3	"D13" 644+19 TO 647+25	SB	38B				306				26				
PD-3	"D13" 644+49 TO 650+50	NB	37					601		8	36				
PD-3	"D13" 646+50	NB											1		
PD-3	"D13" 647+25 TO 650+50	SB	37					325		8	16				
PD-3	"D13" 647+25 TO 649+35	SB	14A		210					5					
PD-3	"D13" 649+35 TO 650+50	SB	12		115										
SUBTOTAL				8,211	7,398	7,547	2,099	926		21	306	175			
TOTAL				23,156			3,025		120	502			2	3	

Identifying the striping details from begin of detail to end of detail, even if it spans multiple plan sheets, reduces the number of rows needed within the quantity table. It also makes it easy to determine the total number of pavement markers needed for each segment of any particular striping detail.

If there is only one column for an item and there are rows for "SUBTOTAL" and "TOTAL," show the quantity in the "TOTAL" row only. "SHEET TOTAL" would be used if a quantity table was shown on more than one quantity sheet.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

PAVEMENT DELINEATION QUANTITY SHEET, EXAMPLE "65 PDQ-1"

PAVEMENT DELINEATION QUANTITIES

PDQ-1

PAVEMENT DELINEATION QUANTITY SHEET, EXAMPLE "65 PDQ-1" RELEASED 7/7/2011

LAST REVISION 00-00-00

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FEDERAL SIGN DESIGNATIONS ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA SIGN DESIGNATION.

Combining two standard traffic stripe details (without modifying either detail) is not the same as modifying a standard traffic stripe from how it is shown in the Standard Plans.

When two standard traffic stripe details are combined, a drawing of the two details is not necessary to be shown in the contract plans.

A drawing of a modified traffic stripe detail must be shown on a pavement delineation detail sheet. Label the modified detail with the original traffic stripe number and with the abbreviation "Mod."

LEGEND:

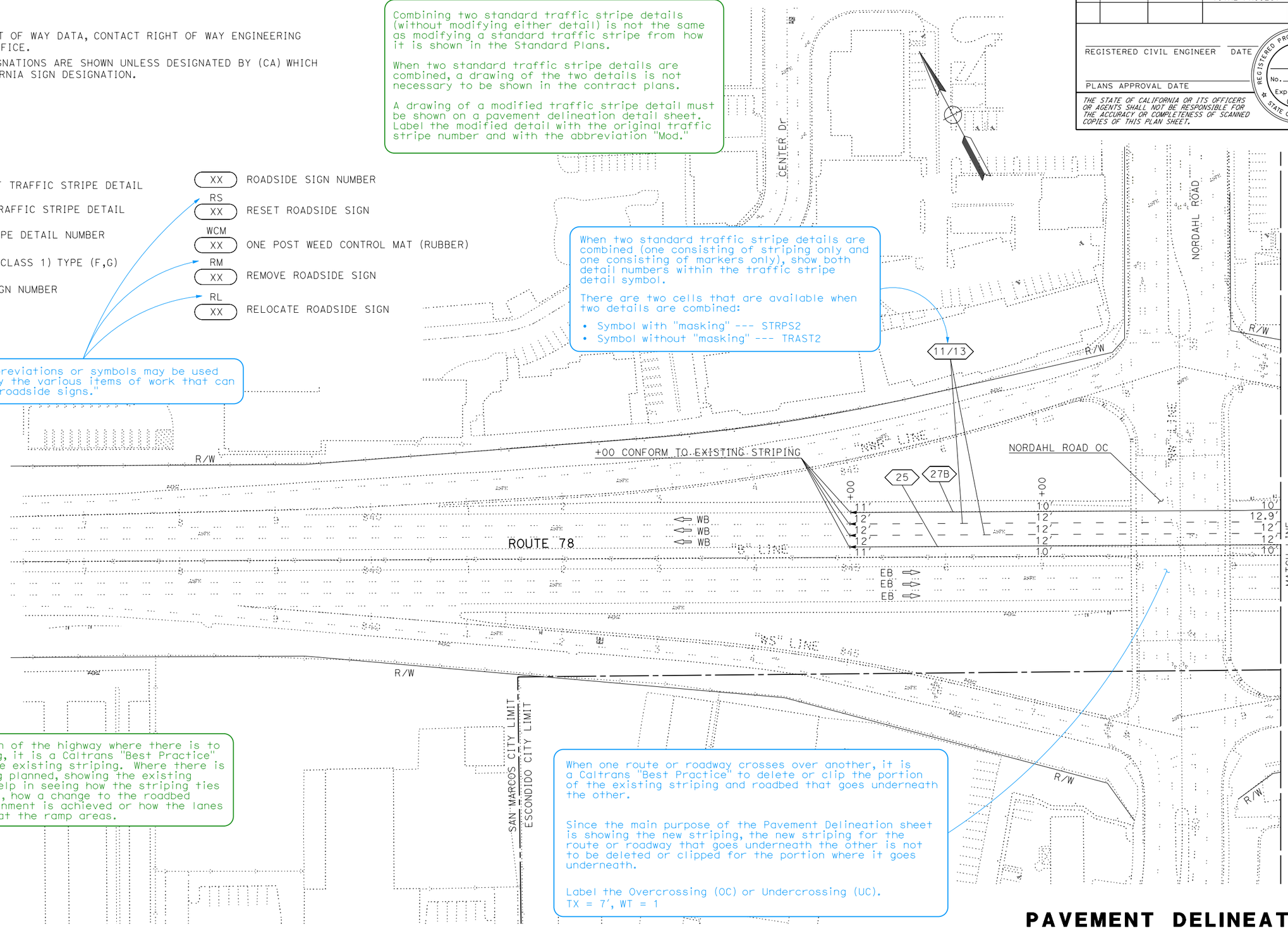
- BEGIN/END OF TRAFFIC STRIPE DETAIL
- CHANGE OF TRAFFIC STRIPE DETAIL
- No. TRAFFIC STRIPE DETAIL NUMBER
- DELINEATOR (CLASS 1) TYPE (F,G)
- No. OVERHEAD SIGN NUMBER
- XX ROADSIDE SIGN NUMBER
- RS XX RESET ROADSIDE SIGN
- WCM XX ONE POST WEED CONTROL MAT (RUBBER)
- RM XX REMOVE ROADSIDE SIGN
- RL XX RELOCATE ROADSIDE SIGN

Letter abbreviations or symbols may be used to identify the various items of work that can occur to "roadside signs."

When two standard traffic stripe details are combined (one consisting of striping only and one consisting of markers only), show both detail numbers within the traffic stripe detail symbol.

There are two cells that are available when two details are combined:

- Symbol with "masking" --- STRPS2
- Symbol without "masking" --- TRAST2



For the portion of the highway where there is to be new striping, it is a Caltrans "Best Practice" not to show the existing striping. Where there is no new striping planned, showing the existing striping may help in seeing how the striping ties at the conform, how a change to the roadbed width or realignment is achieved or how the lanes enter or exit at the ramp areas.

When one route or roadway crosses over another, it is a Caltrans "Best Practice" to delete or clip the portion of the existing striping and roadbed that goes underneath the other.

Since the main purpose of the Pavement Delineation sheet is showing the new striping, the new striping for the route or roadway that goes underneath the other is not to be deleted or clipped for the portion where it goes underneath.

Label the Overcrossing (OC) or Undercrossing (UC).
TX = 7', WT = 1

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50'

PD-1

PAVEMENT DELINEATION AND SIGN PLAN SHEET, EXAMPLE "A-1"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "A-1" RELEASED 9/17/2018

LAST REVISION 11-09-10

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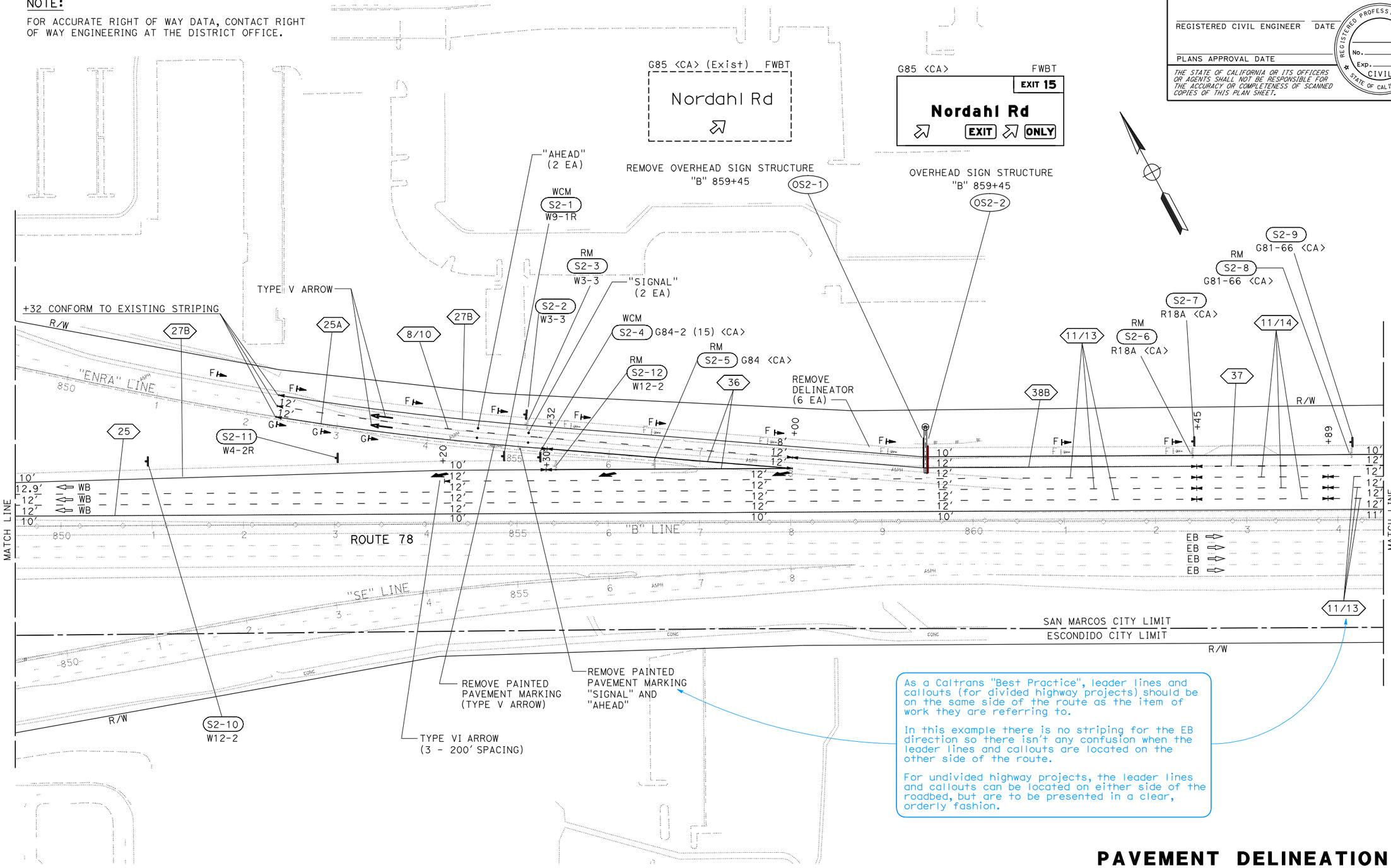
NOTE:

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



As a Caltrans "Best Practice", leader lines and callouts (for divided highway projects) should be on the same side of the route as the item of work they are referring to.

In this example there is no striping for the EB direction so there isn't any confusion when the leader lines and callouts are located on the other side of the route.

For undivided highway projects, the leader lines and callouts can be located on either side of the roadbed, but are to be presented in a clear, orderly fashion.

PAVEMENT DELINEATION AND SIGN PLAN SHEET, EXAMPLE "A-2"

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50'

PD-2

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

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PAVEMENT DELINEATION PLAN

LAST REVISION 11-09-10

PAVEMENT DELINEATION PLAN SHEET, EXAMPLE "A-2" RELEASED 4/20/2011

BORDER LAST REVISED 7/2/2010 | USERNAME => trjck | DGN FILE => PDandSignPlan_Example_A-2.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

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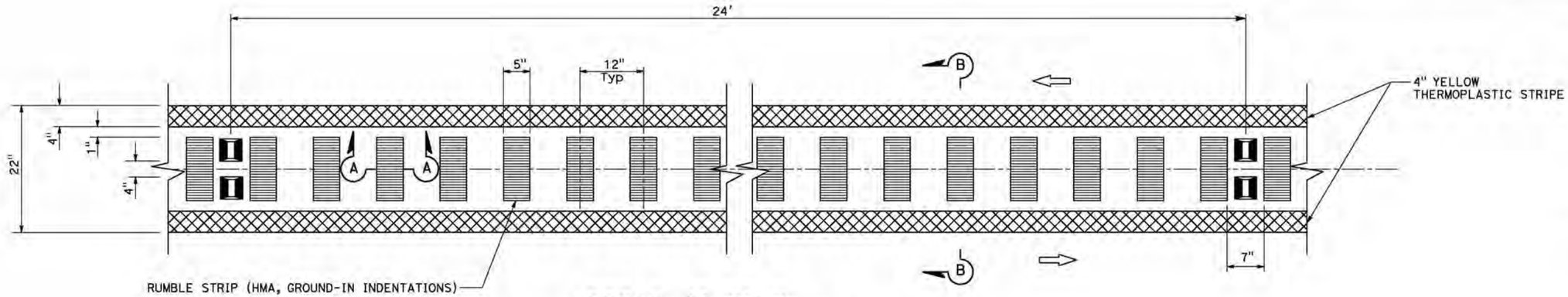
Show modifications made to a traffic striping detail from the Standard Plans on a Pavement Delineation Details sheet.

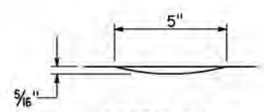
On detail sheets, the legend shown on the first detail sheet applies to all the detail sheets of that type (e.g. pavement delineation details).

LEGEND:

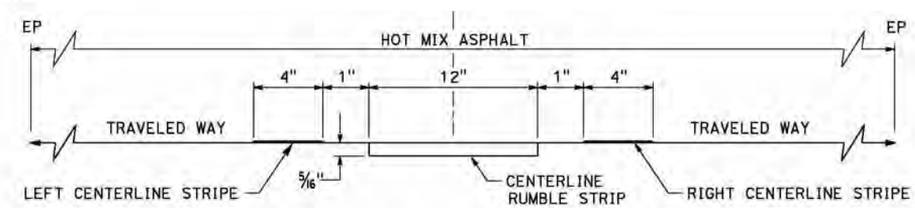
TYPE D TWO-WAY YELLOW PAVEMENT MARKER (RETROREFLECTIVE)



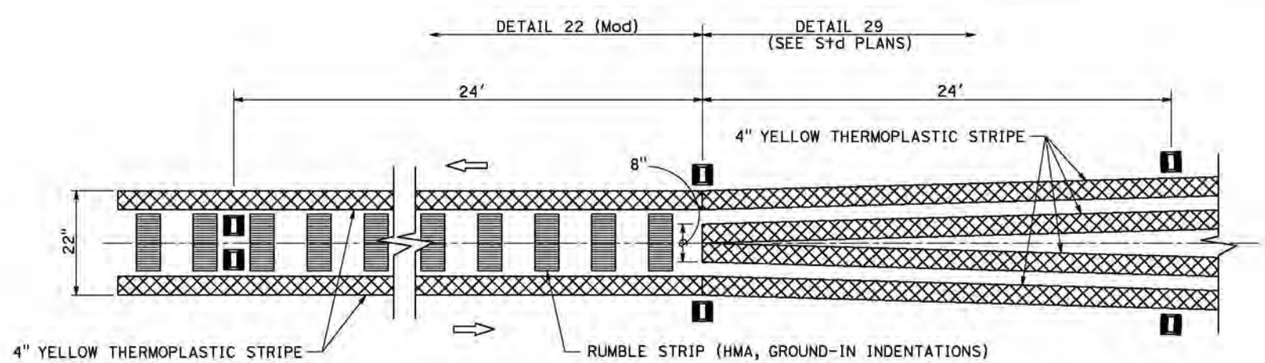
DETAIL 22 (Mod)
ROADWAY CENTERLINE DETAIL
(TYPICAL)



SECTION A-A



SECTION B-B



If there could possibly be an uncertainty how a modified striping detail transitions to another striping detail, show a detail of the transition.

DETAIL 22 (Mod) TRANSITION TO/FROM DETAIL 29
(TYPICAL)

When modifying a standard traffic striping detail, use the abbreviation (Mod) after the detail number.

PAVEMENT DELINEATION DETAILS SHEET, EXAMPLE "B-1"

PAVEMENT DELINEATION DETAILS
NO SCALE

PDD-1

PAVEMENT DELINEATION DETAILS SHEET, EXAMPLE "B-1" RELEASED 7/7/2011

LAST REVISION 00-00-00

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

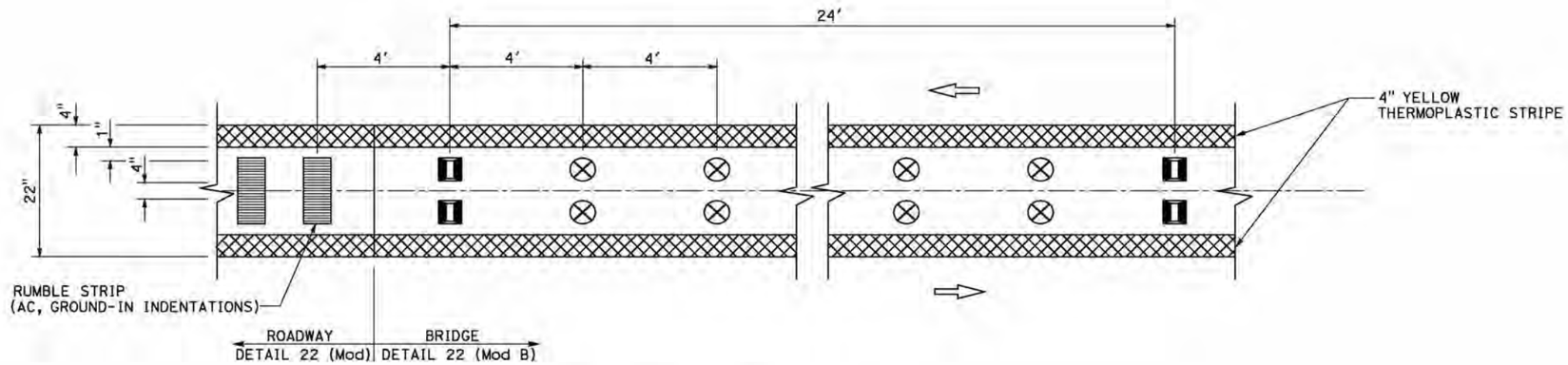
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.

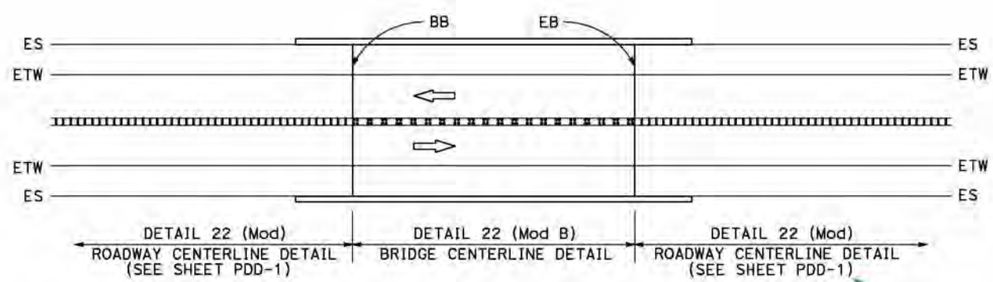
Legends (symbols) or notes shown on detail sheets other than the first sheet of that type, apply only to that specific detail sheet. If symbols or notes are used on more than one detail sheet, they are to be shown only on the first detail sheet of that type.

LEGEND:

⊗ TYPE A BLACK PAVEMENT MARKER (NON-REFLECTIVE)



DETAIL 22 (Mod B)
BRIDGE CENTERLINE DETAIL
(TYPICAL)



See Pavement Delineation Details Sheet, Example "A-1."

CENTERLINE RUMBLE STRIPS
AT BRIDGE APPROACH
(TYPICAL)

PAVEMENT DELINEATION DETAILS SHEET, EXAMPLE "B-2"

PAVEMENT DELINEATION DETAILS
NO SCALE

PDD-2

PAVEMENT DELINEATION DETAILS SHEET, EXAMPLE "B-2" RELEASED 7/7/2011

LAST REVISION 00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => PDDetails_Example_B2.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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The quantities shown in this quantity table come from Examples "A-1" and "A-2."

In this example, the Traffic Stripe Detail Numbers are listed within the "header" of the quantity table.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION/STATION	DIRECTION	THERMOPLASTIC TRAFFIC STRIPE									THERMOPLASTIC PAVEMENT MARKING				REMOVE PAINTED PAVEMENT MARKING	PAVEMENT MARKER				DELINEATOR (CLASS 1)		DESCRIPTION/ COMMENTS
			4" WHITE					4" YELLOW	8" WHITE								NON-REFLECTIVE	RETROREFLECTIVE					
			DETAIL 8/10	DETAIL 11/13	DETAIL 11/14	DETAIL 25	DETAIL 25A	DETAIL 27B	DETAIL 36	DETAIL 37	DETAIL 38B	TYPE V ARROW	TYPE VI ARROW	"SIGNAL"	"AHEAD"		TYPE A	TYPE C	TYPE G	TYPE H	TYPE F	TYPE G	
			LF	LF	LF	LF	LF	LF	LF	LF	LF	SQFT	SQFT	SQFT	SQFT	SQFT	EA	EA	EA	EA	EA	EA	
PD-1 - PD-2	"B" 845+00 TO 855+30	WB						1,030															
PD-1 - PD-2	"B" 845+00 TO 862+45	WB		3,490													296		74				2 TRAFFIC STRIPES
PD-1 - PD-2	"B" 845+00 TO 864+50	WB				1,950														42			
PD-2	"B" 854+20 TO 858+00	WB											126										3 EACH
PD-2	"B" 854+20 TO 862+45	WB		825													72		18				
PD-2	"ENRA" 851+50 TO "B" 862+00	WB																			10		
PD-2	"ENRA" 852+32 TO "B" 864+50	WB						1,218															
PD-2	"ENRA" 852+32 TO 853+32	WB																				3	
PD-2	"ENRA" 852+32 TO 858+00	WB	568														72		13				
PD-2	"ENRA" 852+32 TO 855+32	WB					300													14			
PD-2	"ENRA" 853+54	WB										66											2 EACH
PD-2	"ENRA" 854+55	WB													62								2 EACH
PD-2	"ENRA" 854+67	WB														33							TYPE V ARROW
PD-2	"ENRA" 855+02	WB														31							"AHEAD"
PD-2	"ENRA" 855+10	WB												64									2 EACH
PD-2	"ENRA" 855+22	WB														32							"SIGNAL"
PD-2	"ENRA" 855+32 TO 858+00	WB							268										12				
PD-2	"B" 855+30 TO 858+00	WB							270										12				
PD-2	"ENRA" 858+00 TO "B" 862+45	WB									445								40				
PD-2	"B" 862+45 TO 864+50	WB								205								8	10				
PD-2	"B" 862+45 TO 863+89	WB			432												36	12					3 TRAFFIC STRIPES
PD-2	"B" 863+89 TO 864+50	WB		183													24		9				3 TRAFFIC STRIPES
SUBTOTAL			568	4,498	432	1,950	300	2,248	538	205	445	66	126	64	62			20	188	56	10	3	
TOTAL			9,996						1,188			318				96	500	264			13		

PAVEMENT DELINEATION QUANTITIES SHEET, EXAMPLE "A-3"

PAVEMENT DELINEATION QUANTITIES

PDQ-2

PAVEMENT DELINEATION QUANTITIES SHEET, EXAMPLE "A-3" RELEASED 4/20/2011

LAST REVISION 00-00-00

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010

USERNAME => trjck
DGN FILE => PDQuantities_Example_A-3.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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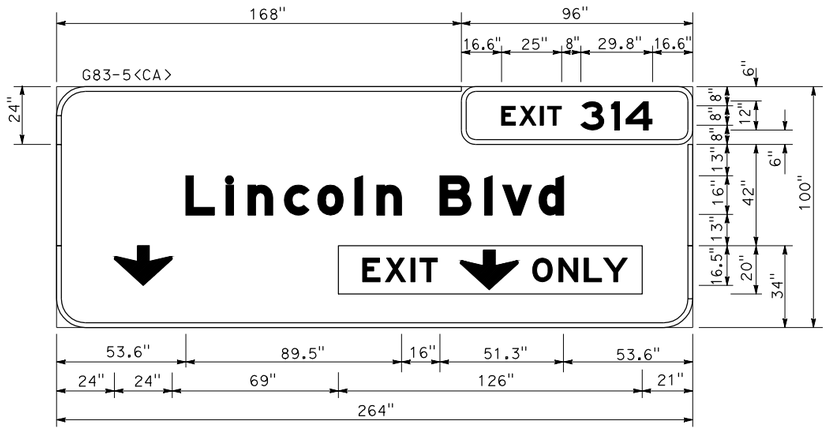
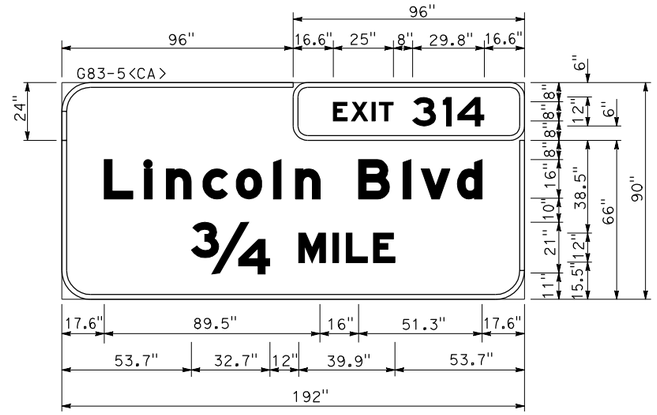


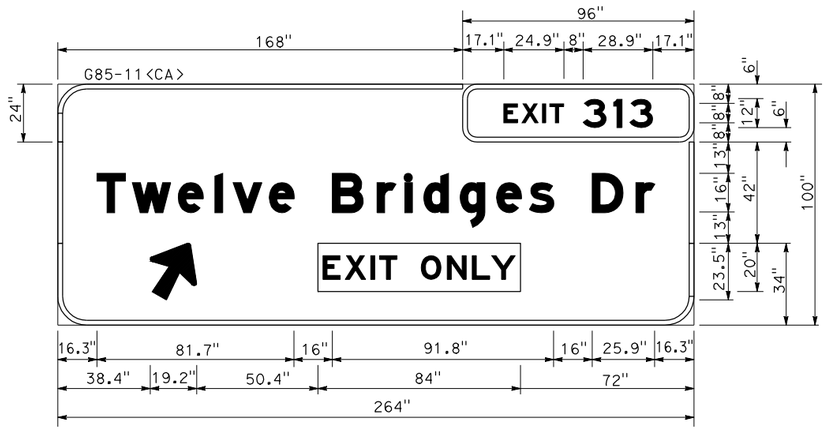
DS-244

2.0" BORDER WITH 12.0" RADIUS
2.0" BORDER WITH 6.0" RADIUS
DOWN ARROW 16.0" 270°



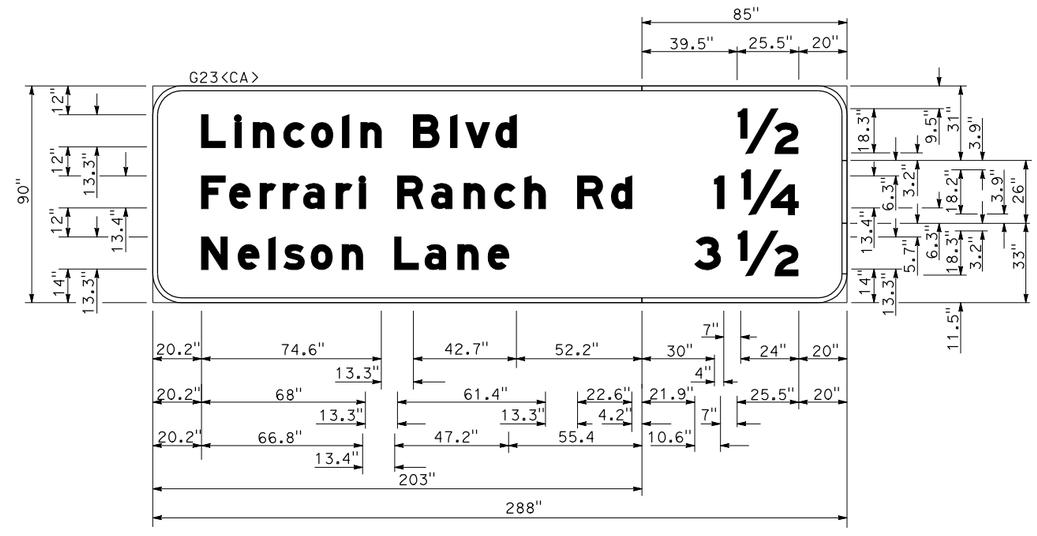
DS-248

2.0" BORDER WITH 12.0" RADIUS
2.0" BORDER WITH 6.0" RADIUS



DS-245

2.0" BORDER WITH 12.0" RADIUS
2.0" BORDER WITH 6.0" RADIUS
ARROW CUSTOM - 25.0" 60°



DS-249

2.0" BORDER WITH 12.0" RADIUS

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN DETAILS SHEET, EXAMPLE "65 SD-1"

SIGN DETAILS

NO SCALE

SD-1

SIGN DETAILS SHEET, EXAMPLE "65 SD-1" RELEASED 7/7/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 06-JUL-2011 | TIME PLOTTED => 13:08

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTES:

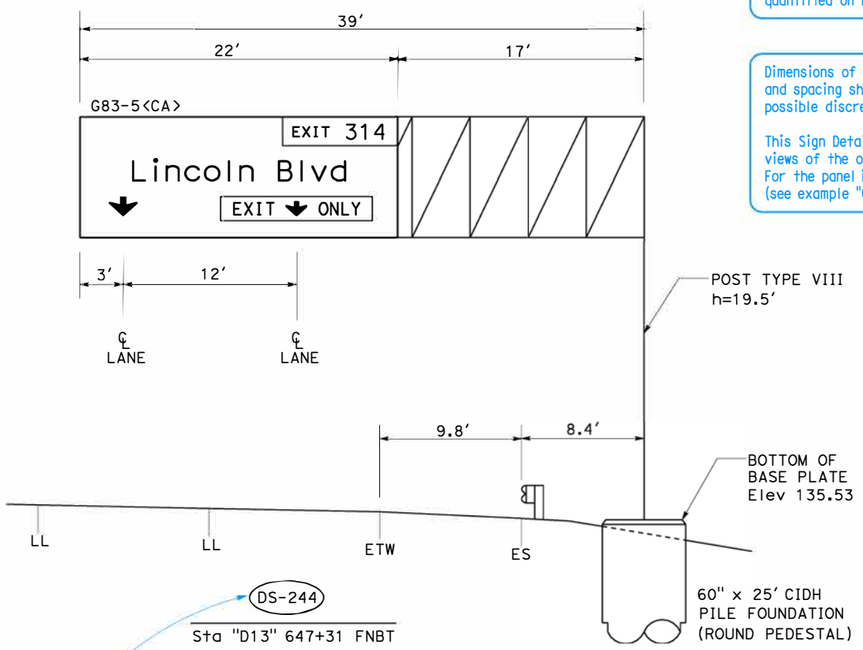
1. LL = LANELINE
2. h = DISTANCE FROM BOTTOM OF FRAME TO BOTTOM OF BASE PLATE.
3. OVERHEAD SIGN PANELS SHALL BE LAMINATED PANELS TYPE A.

This detail sheet shows the height of the overhead sign, length of the truss, type of post, type of pile foundations and where the overhead sign is positioned over the traveled way.

Quantities for CIDH pile foundation concrete and truss steel are quantified on Example "65-SQ-6."

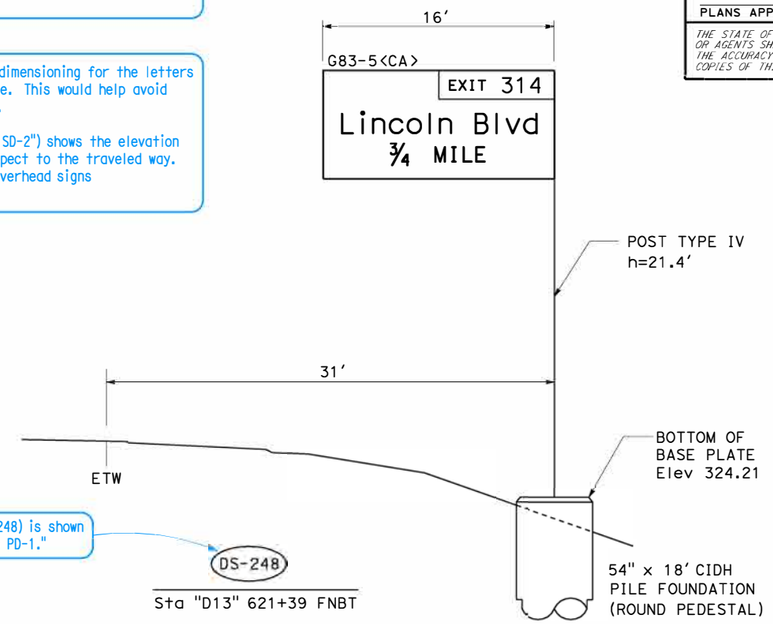
Dimensions of the sign panel or the dimensioning for the letters and spacing should only be shown once. This would help avoid possible discrepancies and confusion.

This Sign Details sheet (example "65 SD-2") shows the elevation views of the overhead signs with respect to the traveled way. For the panel information of these overhead signs (see example "65 SD-1").



DS-244

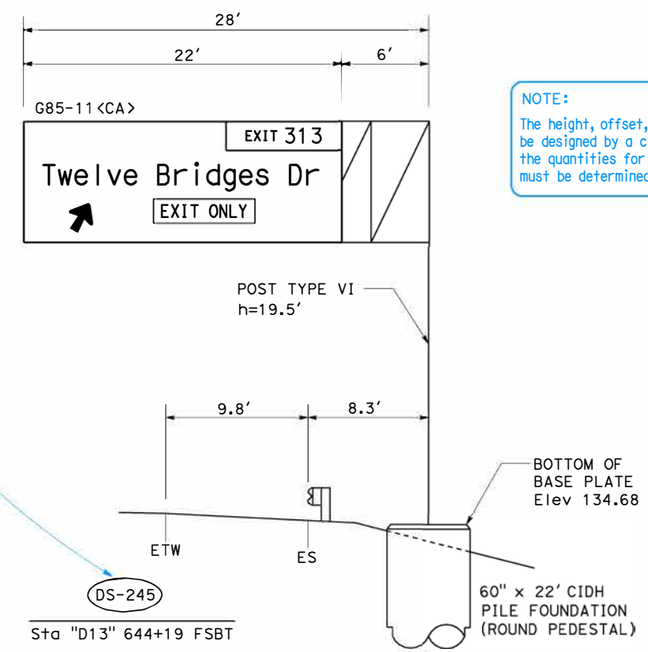
Sta "D13" 647+31 FNBT



This sign (DS-248) is shown on Example "65 PD-1."

DS-248

Sta "D13" 621+39 FNBT



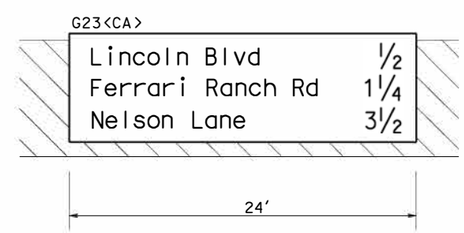
These two signs (DS-244 and DS-245) are shown on Example "65 PD-3."

DS-245

Sta "D13" 644+19 FSBT

NOTE:

The height, offset, and positioning of the overhead sign must be designed by a civil engineer, not an electrical engineer. Also, the quantities for CIDH pile foundation concrete and truss steel must be determined by a civil engineer, not an electrical engineer.



This sign (DS-249) is shown on Example "65 PD-2."

DS-249

BRIDGE MOUNTED SIGN (FNBT)
"D13" 629+03

TWELVE BRIDGES DRIVE OC (Exist)
Br No. 19-0173

(SEE SHEETS SDS-1 THROUGH SDS-3 FOR MOUNTING DETAILS)

See examples "65 SDS-1," "65 SDS-2," and "65 SDS-3."

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN DETAILS SHEET, EXAMPLE "65 SD-2"

SIGN DETAILS

NO SCALE

SD-2

SIGN DETAILS SHEET, EXAMPLE "65 SD-2" RELEASED 7/7/2011

LAST REVISION 00-00-00 | DATE PLOTTED => 06-JUL-2011 | TIME PLOTTED => 13:09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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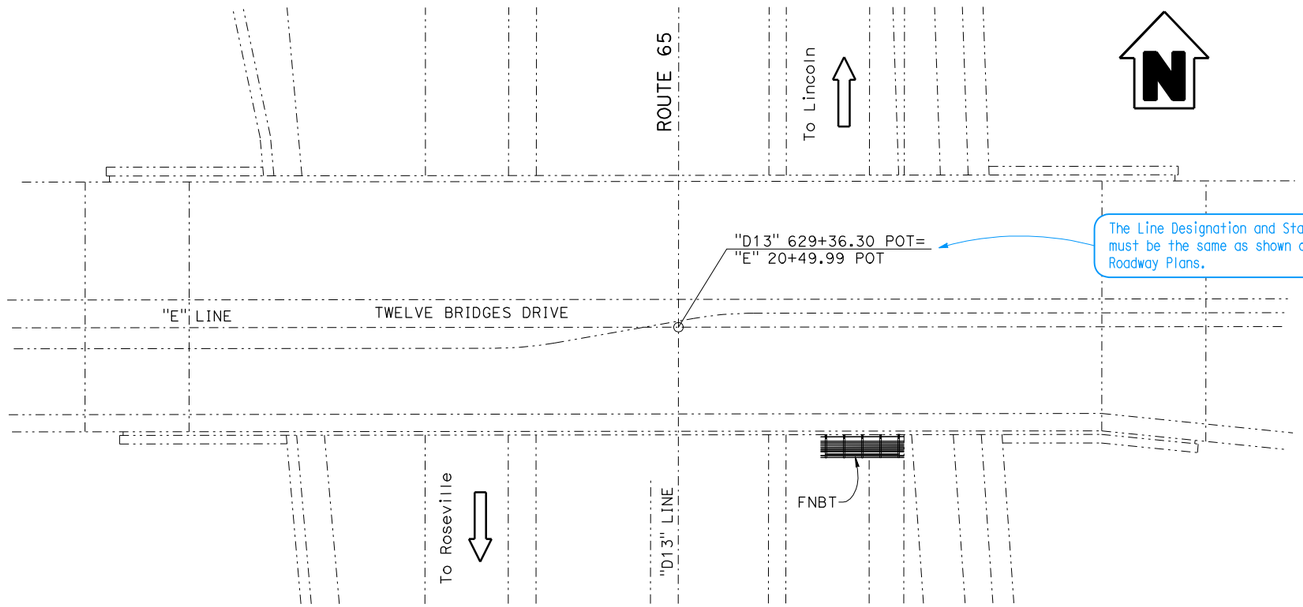
SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-1" RELEASED 7/7/2011



The Line Designation and Stationing must be the same as shown on the Roadway Plans.

The Special Design Signs sheets must be signed by a licensed Civil Engineer with structural experience.

TWELVE BRIDGES DRIVE OVERCROSSING LOCATION PLAN

NOTES:

1. FOR DETAIL A, DETAIL B, DETAIL C, SECTION A-A, AND SECTION B-B SEE DETAILS No. 1 SHEET.
2. FOR DETAILS NOT SHOWN, SEE 2010 STANDARD PLANS.
3. ALL HIGH STRENGTH (HS) BOLTS SHALL BE SNUG TIGHTENED.
4. Min SIZE FILLET WELD IS 1/4" OR THICKNESS OF THINNER PART UNLESS NOTED OTHERWISE.
5. STRUCTURE SHALL BE GALVANIZED AFTER FABRICATION.
6. FOR SIGN LOCATION, SEE "PAVEMENT DELINEATION AND SIGN PLANS."

The quantities for the sign panel and the Bridge Mounted Sign (BMS) sign frame are to be shown on the "SQ" sheets.

LEGEND:

STANDARD PLAN SHEET No.

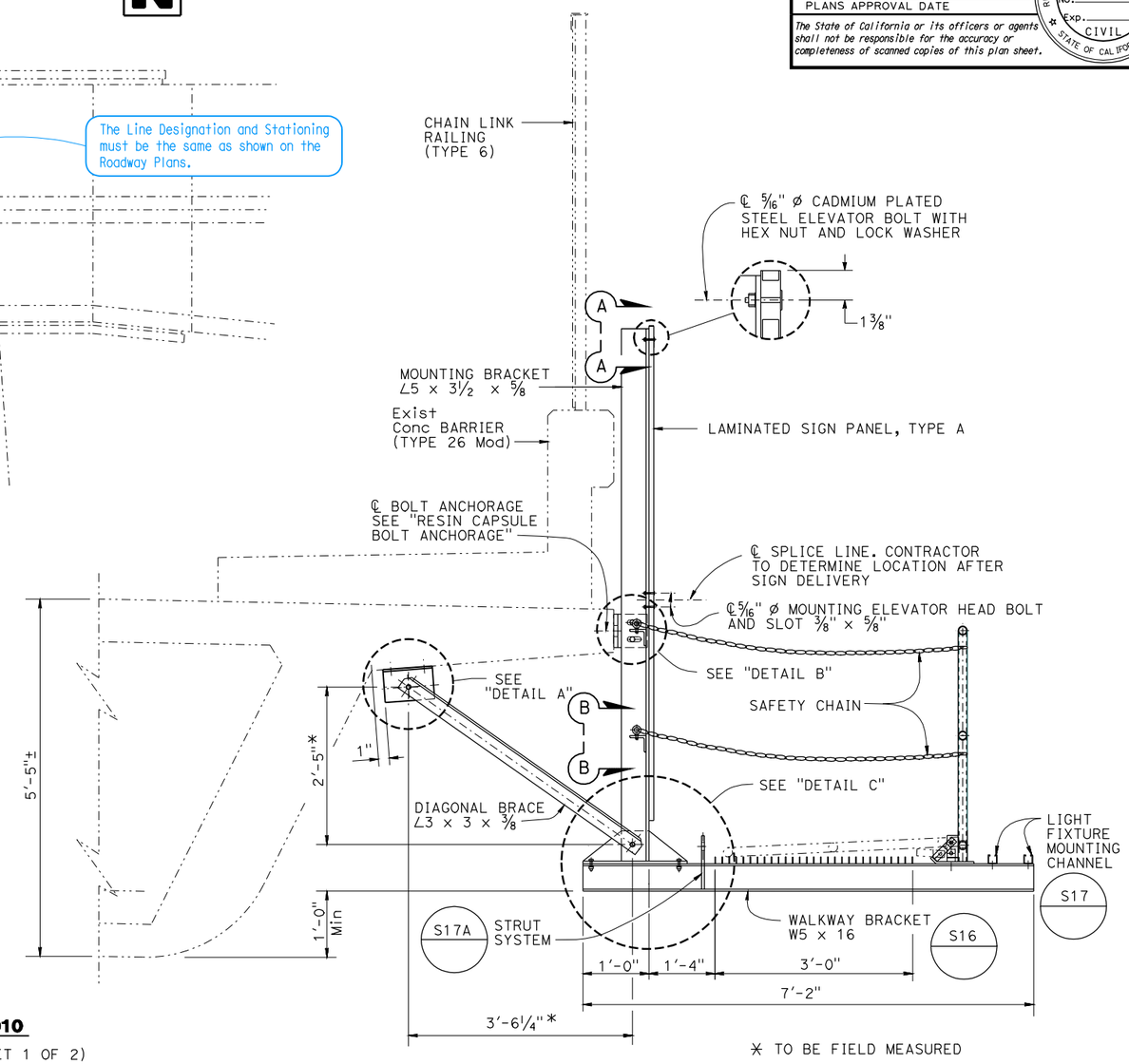
DETAIL No.

Design criteria for overhead sign structures must conform to 5th edition of AASHTO's "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."

STANDARD PLANS DATED 2010

A10A ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)

A10B ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)



* TO BE FIELD MEASURED

END VIEW

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

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-1"

SPECIAL DESIGN SIGNS

NO SCALE

BRANCH CHIEF	DESIGN	BY	CHECKED
	DETAILS	BY	CHECKED
	QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A

BRIDGE NO. 19-0173 POST MILE

TWELVE BRIDGES DRIVE OVERCROSSING

BRIDGE MOUNTED SIGN LOCATION PLAN

SDS-1

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0000

PROJECT NUMBER & PHASE: 00000000001

CONTRACT NO.: 00-000004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET 1 OF 3

FILE => spec_des_br_prj/2011sd/XX-XXXXXX/oc-65_SDS-001.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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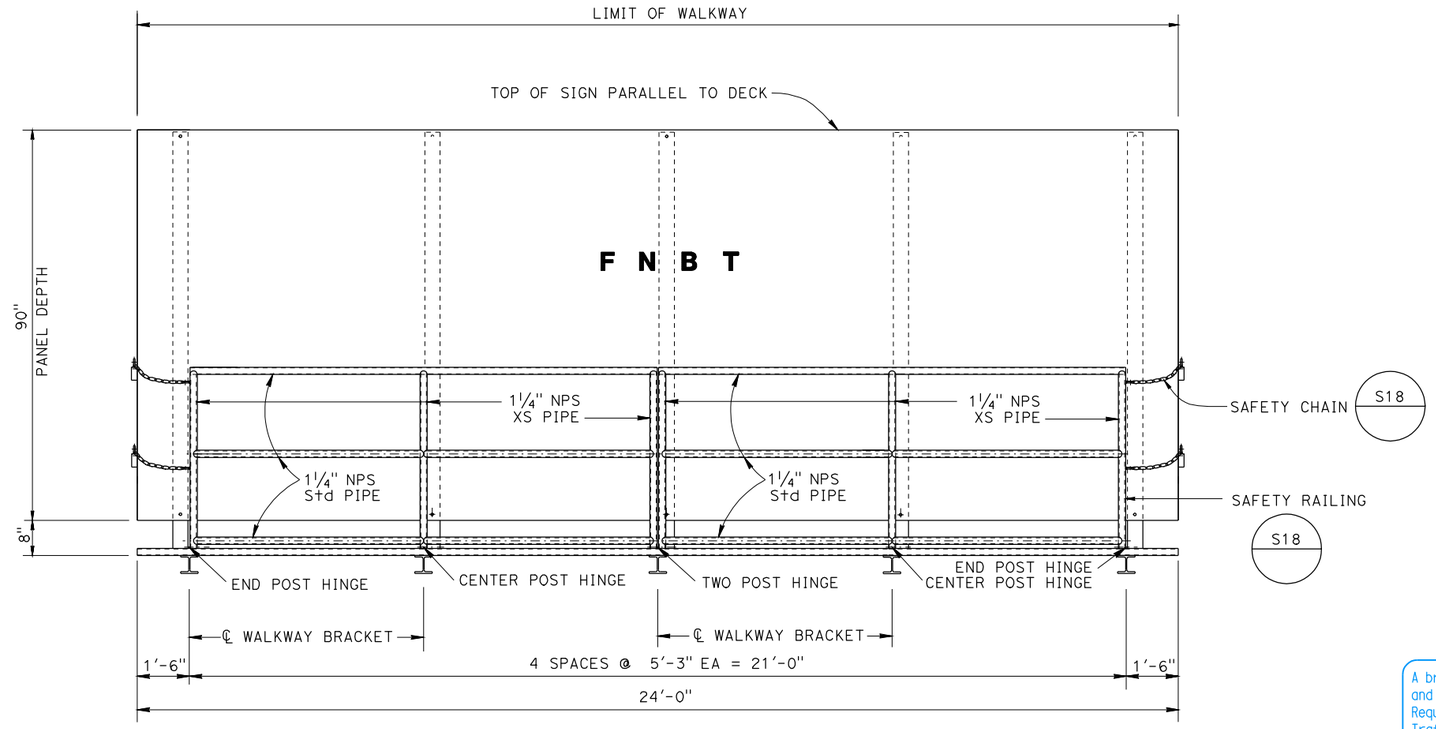

FRONT VIEW

When an overhead sign structure is located such that the sign post falls on a bridge, the sign support will be shown with the Structure Plans.

When an overhead sign structure is located such that it requires being attached to a retaining or sound wall, the sign support will be shown on the Special Design Signs sheets.

A bridge mounted sign is mounted on the outside of a bridge and faces traffic passing under the bridge structure. Requests for sign mounting details are initiated by the District Traffic departments and are routed to Office of Design and Technical Services, Special Designs Branch.

Requests for bridge mounted signs should include the following:

- Sign size
- Location of the mounted sign
- Type of sign panel to be mounted (e.g., Laminated Panel Type A, Removable Sign Panel Frame, etc.)
- Lighting and walkway requirements
- Skew requirement (skewed bridge mounted sign will need special details)

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

This statement is to be placed in the lower left corner of the sheet.

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

SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-2"

SPECIAL DESIGN SIGNS

NO SCALE

SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-2" RELEASED 7/7/2011

BRANCH CHIEF

	BY	CHECKED
DESIGN		
DETAILS		
QUANTITIES		

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A

BRIDGE NO. 19-0173

POST MILE

TWELVE BRIDGES DRIVE OVERCROSSING

BRIDGE MOUNTED SIGN ELEVATION DETAILS

SDS-2

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0000
PROJECT NUMBER & PHASE: 0000000001
CONTRACT NO.: 00-000004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET 2 OF 3

FILE => spec_des_br_prj/2011sd/XX-XXXXXX/oc-65_SDS-002.dgn

SUPERSEDES EXAMPLE RELEASED 7/7/11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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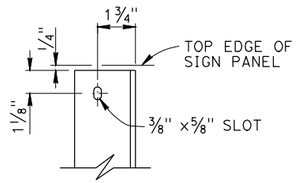
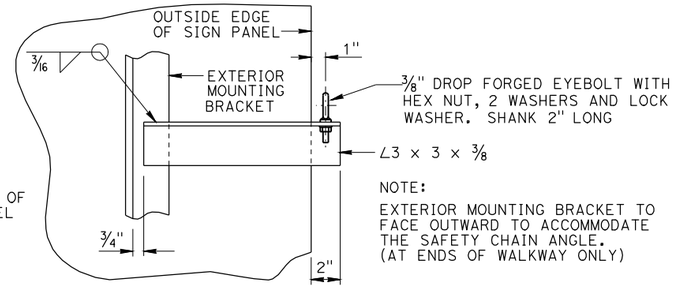
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



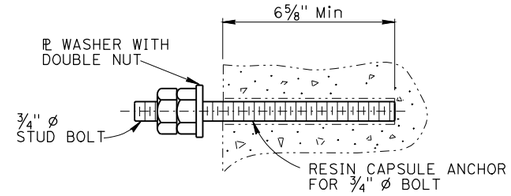
SECTION A-A



NOTE:

EXTERIOR MOUNTING BRACKET TO FACE OUTWARD TO ACCOMMODATE THE SAFETY CHAIN ANGLE. (AT ENDS OF WALKWAY ONLY)

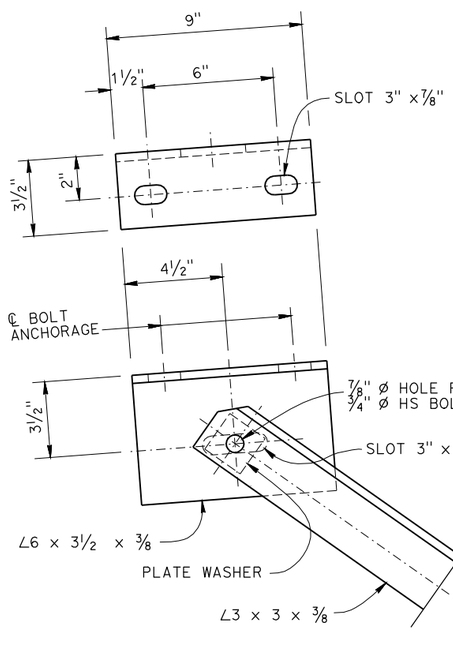
SECTION B-B



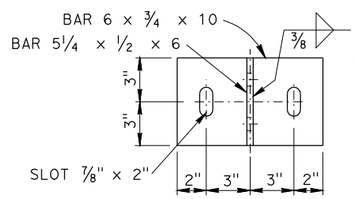
RESIN CAPSULE BOLT ANCHORAGE

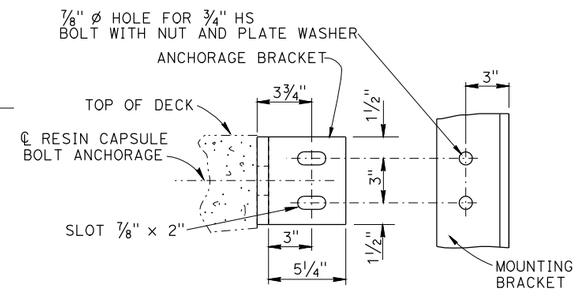
NOTES (THIS SHEET ONLY):

1. RESIN CAPSULE BOLT ANCHORS SHALL BE INSTALLED IN SOUND CONCRETE FREE OF CRACKS OR DELAMINATION
2. RESIN CAPSULE ANCHORAGE IS SUBJECT TO APPROVAL OF ENGINEER. INSTALLATION PROCEDURE SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS.



DETAIL A





DETAIL B

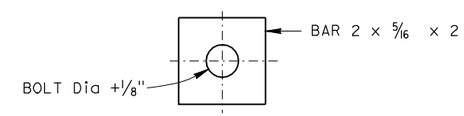
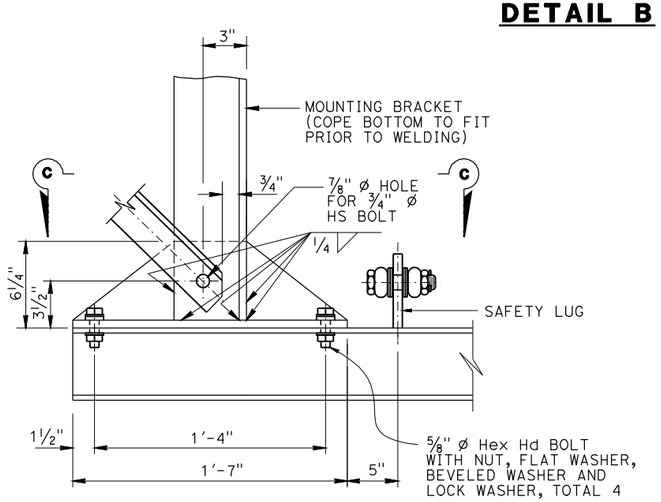
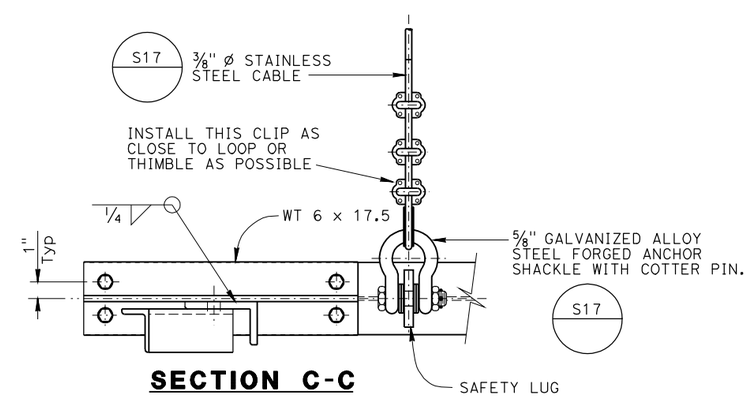


PLATE WASHER

FOR ALL SLOTTED HOLES



DETAIL C



SECTION C-C

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

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-3"

SPECIAL DESIGN SIGNS

NO SCALE

SPECIAL DESIGN SIGNS SHEET, EXAMPLE "65 SDS-3" RELEASED 1/6/2012

BRANCH CHIEF

DESIGN	BY	CHECKED
DETAILS	BY	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A

BRIDGE NO. 19-0173

POST MILE

TWELVE BRIDGES DRIVE OVERCROSSING

BRIDGE MOUNTED SIGN DETAILS No. 1

SDS-3

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0000

PROJECT NUMBER & PHASE: 0000000001

CONTRACT NO.: 00-000004

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET 3 OF 3

FILE => spec_des_br_prj/2011sd/XX-XXXXXX/oc-65_SDS-003.dgn

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTES:

1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
2. POST LENGTHS GIVEN ARE APPROXIMATE.
3. "C" DIM = VERTICAL CLEARANCE EP TO BOTTOM OF SIGN PANEL.
4. (N) - NOT A SEPARATE BID ITEM.
5. SIGN PANEL TO BE MOUNTED ON TYPE I PEDESTRIAN BARRICADE.
6. SIGN PANEL TO BE MOUNTED ON SIGNAL MAST ARM.
7. SIGN PANEL TO BE MOUNTED ON SIGNAL STANDARD.
8. SIGN PANEL TO BE MOUNTED ON SIGNAL STANDARD DIRECTLY ABOVE THE SIGNAL MAST ARM CONNECTION.
9. SIGN PANEL TO BE MOUNTED ON ELECTROLIER.
10. SIGN PANEL TO BE MOUNTED ON ADVANCE FLASHING BEACON STANDARD. SEE ELECTRICAL PLANS FOR DETAILS.

The cost of installing a sign panel is typically handled as a separate pay item but can (in certain circumstances) be included in the cost of a related item. The cost of a sign panel (contractor furnished as a "bid item") is to be paid for separately from the installation of the roadside sign or overhead sign.

The "C" dimension represents the vertical distance from the bottom of the sign panel to the elevation at ETW (see Standard Plans RS1). This is a very important column to include in the roadside sign quantity table. This dimension greatly assists the Contractor and the Resident Engineer when it comes to placing the sign panel at the appropriate height.

ROADSIDE SIGN QUANTITIES

SHEET NUMBER	SIGN NUMBER (SIGN-No.)	SIGN DESIGNATION	SIGN PANEL SIZE INCHES	"C" DIM IN FEET	POST SIZE AND LENGTH 4"x4"	4"x6"	6"x6"	6"x8"	ROADSIDE SIGN ONE POST EACH	TWO POST EACH	INSTALL SIGN (SSBM) EACH	REMOVE ROADSIDE SIGN EACH	REMOVE ROADSIDE SIGN (SSBM) EACH	RESET ROADSIDE SIGN EACH	REMARKS
PD-1	S1-1	G84-3(313)(CA)	48 x 60	7			18′		1						
	S1-2	S32(CA) S32A(CA) S32-1(CA)												1	
PD-2	S2-1	G78(CA)	78 x 42	5		14′				1					
	S2-2	W SPEC											1		
	S2-3	G92(CA) G28-2(65)(CA) G48(CA) G44(CA)	48 x 30 24 x 25 21 x 9 21 x 15	2		14′			1						
	S2-4	G28-2(65)(CA) G48(CA) G44(CA)										1			
	S2-5	G28-2(65)(CA) G48(CA) G43(CA)										1			
	S2-6	R5-10c(CA)	24 x 12	5	10′				1						
	S2-7	G92(CA) G28-2(65)(CA) G48(CA) G43(CA)	48 x 30 24 x 25 21 x 9 21 x 15	2		14′			1						
	S2-8	R5-10a(CA)	30 x 36	5							1				SEE NOTE 9
	S2-9	G92(CA) G28-2(65)(CA) G48(CA) G43(CA)	48 x 30 24 x 25 21 x 9 21 x 15	2		14′			1						
	S2-10	G28-2(65)(CA) G48(CA) G43(CA)										1			
	S2-11	G92(CA) G28-2(65)(CA) G48(CA) G44(CA)	48 x 30 24 x 25 21 x 9 21 x 15	2		14′			1						
	S2-12	G28-2(65)(CA) G48(CA)										1			
PD-3	S3-1	G86-5(CA)	132 x 78	7				20′		1					
	S3-2	R18A(R†)(CA)	66 x 48	7		16′				1					
						SHEET TOTAL			6	3	1	4	1	1	

The display of the sign panel size values should be centered on the "x" for a consistent look.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-1"

SIGN QUANTITIES

SQ-1

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-1" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

ROADSIDE SIGN QUANTITIES

SHEET NUMBER	SIGN NUMBER (SIGN-No.)	SIGN DESIGNATION	SIGN PANEL SIZE INCHES	"C" DIM IN FEET	POST SIZE AND LENGTH 4"x4"	4"x6"	6"x6"	6"x8"	ROADSIDE SIGN ONE POST EACH	TWO POST EACH	INSTALL SIGN (SSBM) EACH	REMOVE ROADSIDE SIGN EACH	REMOVE ROADSIDE SIGN (SSBM) EACH	RESET ROADSIDE SIGN EACH	REMARKS
PD-11	S11-1	R9-3a R9-3a R4-7	24 x 24 24 x 24 24 x 30	5		14′			1						
	S11-2	R9-3a R4-7 R3-18 R6-1R	24 x 24 24 x 30 24 x 24 54 x 18	5 1.5		14′			1						
	S11-3	G92(CA) G28-2(65)(CA) G48(CA) G43(CA)	48 x 30 24 x 25 26 x 12 21 x 15	2		14′			1						
	S11-4	R6-1L R6-1R	54 x 18 54 x 18	1.5	8′				1						
	S11-5	R6-1L R6-1R	54 x 18 54 x 18	1.5	8′				1						
	S11-6	R5-10c	24 x 12	5	10′				1						
	S11-7	R61-20.1(CA)	36 x 30	5	12′				1						
	S11-8	G92(CA) G28-2(65)(CA) G48(CA) G43(CA)	48 x 30 24 x 25 26 x 12 21 x 15	2		14′			1						
	S11-9	G92(CA) G28-2(65)(CA) G48(CA) G44(CA)	48 x 30 24 x 25 26 x 12 21 x 15	2		14′			1						
	S11-10	R5-10a	30 x 36	5	12′				1						
	S11-11	G92(CA) G28-2(65)(CA) G48(CA) G44(CA)	48 x 30 24 x 25 26 x 12 21 x 15	2							1 1 1 1				SEE NOTE 7
	S11-12	R89-1(1)(CA)	36 x 16								1				SEE NOTE 7
	S11-13	R89-1(1)(CA)	36 x 16								1				SEE NOTE 7
	S11-14	W4-1R	48 x 48	7			18′		1						
	S11-15	R26(CA)											1		
	S11-16	R18B(R+)(CA)	36 x 36	7							1				SEE NOTE 9
	S11-17	W73A(L+)(CA)										1			
	S11-18	W4-2L										1			
	S11-19	R4-7 OM1-3	24 x 30 18 x 18	4	12′				1						
	S11-20	R26(CA)											1		
	S11-21	R5-1 R5-1a	36 x 36 36 x 24	2		12′			1						
	S11-22	R5-1 R5-1a	36 x 36 36 x 24	2		12′			1						
	S11-23	R81(CA)	24 x 24	7							1				SEE NOTE 7
	S11-24	R49(R+)(CA)	42 x 18												SEE NOTES 4 AND 5
	S11-25	R3-18	36 x 36												SEE NOTES 4 AND 6
	S11-26	R73-2(CA)	36 x 36												SEE NOTES 4 AND 6
	S11-27	R81(CA)	24 x 18	7							1				SEE NOTE 7
	S11-28	G7-1(CA)	48 x 42								1				SEE NOTE 8
	S11-29	R61-20.1(CA)	36 x 30												SEE NOTES 4 AND 6
					SHEET TOTAL				14		10	2	2		

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-2"

SIGN QUANTITIES

SQ-2

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-2" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:51

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

Whether the cost of the installation of the sign panel is paid for as a separate bid item or lumped in with the Electrical System lump sum item covering the mast arm or Type 1 pedestrian barricade, it must be clearly identified in the Sign Quantity sheet, Electrical System sheets, and in the Special Provisions.

For this project, the installation of the sign panels mounted on a signal standard or electrolier is paid for under the item "Install Sign (SSMB)." The installation of sign panels mounted on a signal mast arm is paid for under the Electrical Systems lump sum pay item covering the mast arm. The sign panel installed on the Type 1 pedestrian barricade is included under the cost of construction of the new barricade.

ROADSIDE SIGN QUANTITIES

SHEET NUMBER	SIGN NUMBER (SIGN-No.)	SIGN DESIGNATION	SIGN PANEL SIZE INCHES	"C" DIM IN FEET	POST SIZE AND LENGTH 4"x4"	4"x6"	6"x6"	6"x8"	ROADSIDE SIGN ONE POST EACH	TWO POST EACH	INSTALL SIGN (SSBM) EACH	REMOVE ROADSIDE SIGN EACH	REMOVE ROADSIDE SIGN (SSBM) EACH	RESET ROADSIDE SIGN EACH	REMARKS
PD-32	S32-1	W9-1R	48 x 48	5		16′			1						
	S32-2	G48(CA) G28-2(65)(CA)	21 x 9 24 x 25	4	12′				1						
	S32-3	G7-1(CA)	36 x 42								1				SEE NOTE 8
	S32-4	R6-1L	54 x 24	1.5							1				SEE NOTE 7
	S32-5	G7-1(CA)	36 x 42								1				SEE NOTE 8
	S32-6	G47(CA) G28-2(65)(CA)	21 x 9 24 x 25	4	12′				1						
	S32-7	R6-1L	54 x 24	1.5							1				SEE NOTE 7
	S32-8	W4-2R	48 x 48	5		16′			1						
	S32-9	G7-1(CA)	132 x 60	5			16′			1					
	S32-10	W3-3	48 x 48								1				SEE NOTE 10
	S32-11	W3-3	48 x 48								1				SEE NOTE 10
	S32-12	R73-3(CA)	36 x 36												SEE NOTES 4 AND 6
	S32-13	R73-7(CA)	36 x 36												SEE NOTES 4 AND 6
	S32-14	R73-3(CA)	36 x 36												SEE NOTES 4 AND 6
	S32-15	R73-7(CA)	36 x 36												SEE NOTES 4 AND 6
SHEET TOTAL									4	1	6				
SHEET SQ-1 TOTAL									6	3	1	4	1	1	
SHEET SQ-2 TOTAL									14		10	2	2		
GRAND TOTAL									24	4	17	6	3	1	

Note 4 states "(N) - Not a separate bid item." Another option is to place an asterisk in the column and place the note below the table making it unnecessary to look back to a previous sheet for the note.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-3"

SIGN QUANTITIES

SQ-3

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-3" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 TIME PLOTTED => 13:49

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

ROADSIDE SIGN PANEL QUANTITIES

SHEET NUMBER	SIGN NUMBER (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/ DESCRIPTION	PANEL SIZE L x D INCHES	PANEL AREA SQFT	BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH SINGLE SHEET ALUMINUM SIGN UNFRAMED 0.063" SQFT	UNFRAMED 0.080" SQFT	FRAMED 0.063" SQFT	FRAMED 0.080" SQFT
PD-1	S1-1	G84-3(313)(CA)	EXIT 313 WITH ARROW	48 x 60	20.00	GREEN	III	WHITE	III	X			20.00	
PD-2	S2-1	G78(CA)	TO 65 ROSEVILLE MARYSVILLE	78 x 42	22.75	GREEN		WHITE					22.75	
	S2-3	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G44(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
	S2-6	R5-10c	PEDESTRIANS PROHIBITED	24 x 12	2.00	WHITE	IX	BLACK		X	2.00			
	S2-7	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G43(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
	S2-8	R5-10a	PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES PROHIBITED	30 x 36	7.50	WHITE	IX	BLACK		X	7.50			
	S2-11	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G44(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
PD-3	S3-1	G86-5	DOWNTOWN LINCOLN NEXT EXIT	132 x 78	71.50	GREEN	IV	WHITE	IX	X				71.50
	S3-2	R18A(Rt)	RIGHT LANE MUST EXIT	66 x 48	22.00	WHITE	III	BLACK		X			22.00	
PD-11	S11-1	R9-3a	NO PEDESTRIAN CROSSING	24 x 24	4.00	WHITE	III	RED / BLACK	III	X	4.00			
		R9-3a	NO PEDESTRIAN CROSSING	24 x 24	4.00	WHITE	III	RED / BLACK	III	X	4.00			
		R4-7	KEEP RIGHT	24 x 30	5.00	WHITE	III	BLACK		X	5.00			
	S11-2	R9-3a	NO PEDESTRIAN CROSSING	24 x 24	4.00	WHITE	III	RED / BLACK	III	X	4.00			
		R4-7	KEEP RIGHT	24 x 30	5.00	WHITE	III	BLACK		X	5.00			
		R3-18	NO U-TURN/NO LEFT TURN	24 x 24	4.00	WHITE	III	RED / BLACK	III	X	4.00			
		R6-1R	ONE WAY (RIGHT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
	S11-3	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	26 x 12	2.17	GREEN	III	WHITE	III	X	2.17			
		G43(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
	S11-4	R6-1L	ONE WAY (LEFT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
		R6-1R	ONE WAY (RIGHT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
	S11-5	R6-1L	ONE WAY (LEFT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
		R6-1R	ONE WAY (RIGHT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
	S11-6	R5-10c	PEDESTRIANS PROHIBITED	24 x 12	2.00	WHITE	IX	BLACK		X	2.00			
	S11-7	R61-20.1(CA)	INTERSECTION LANE CONTROL	36 x 30	7.50	WHITE	III	BLACK		X	7.50			
	S11-8	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G43(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
										SUBTOTAL	84.21	83.75	64.75	71.50

Note:

The Panel information shown for either roadside or overhead signs is predominantly used by the sign panel manufacturer.

Sign panels that are contractor furnished (and not Department furnished), are required to show the panel information on Sign Quantities sheets.

Sign Quantities sheets SQ-4, SQ-5, and SQ-5a show two ways the Roadside Sign Panel Quantities table can be presented.

- OPTION A (Examples "65 SQ-4" and "65 SQ-5") has each sign listed on a separate row with the sheet number and sign number shown.
- OPTION B (Example "65 SQ-5a") lists each sign designation once (in a single row) with a column added for the number of sign panels needed for each sign designation in the entire project. A Comments column is included to identify which plan sheets the sign panels are located on within the project.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-4"

OPTION - A

SIGN QUANTITIES

SQ-4

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-4" RELEASED 9/17/2018

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:47

SUPERSEDES EXAMPLE RELEASED 07/07/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

ROADSIDE SIGN PANEL QUANTITIES

SHEET NUMBER	SIGN NUMBER (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/ DESCRIPTION	PANEL SIZE L x D INCHES	PANEL AREA SQFT	BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH SINGLE SHEET ALUMINUM SIGN UNFRAMED 0.063" SQFT	UNFRAMED 0.080" SQFT	FRAMED 0.063" SQFT	FRAMED 0.080" SQFT
PD-11	S11-9	G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G44(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
	S11-10	R5-10a	PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES PROHIBITED	30 x 36	7.50	WHITE	IX	BLACK		X	7.50			
	S11-11		FREEWAY ENTRANCE	48 x 30	10.00	GREEN	III	WHITE	III	X		10.00		
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
		G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G44(CA)	DIRECTIONAL ARROW	21 x 15	2.19	GREEN	III	WHITE	III	X	2.19			
	S11-12	R89-1(1)(CA)	1 CAR PER GREEN EACH LANE	36 x 16	4.00	WHITE	III	BLACK		X	4.00			
	S11-13	R89-1(1)(CA)	1 CAR PER GREEN EACH LANE	36 x 16	4.00	WHITE	III	BLACK		X	4.00			
	S11-14	W4-1R	MERGE (RIGHT)	48 x 48	16.00	YELLOW	IX	BLACK	IX	X		16.00		
	S11-16	R18B(R†)(CA)	RIGHT LANE FREEWAY ONLY	36 x 36	9.00	WHITE	III	BLACK		X	9.00			
	S11-19	R4-7	KEEP RIGHT	24 x 30	5.00	WHITE	III	BLACK		X	5.00			
		OM1-3	OBJECT MARKER	18 x 18	2.25	YELLOW	III	BLACK		X	2.25			
	S11-21	R5-1	DO NOT ENTER	36 x 36	9.00	RED	IX	WHITE	IX	X	9.00			
		R5-1a	WRONG WAY	36 x 24	6.00	RED	IX	WHITE	IX	X	6.00			
	S11-22	R5-1	DO NOT ENTER	36 x 36	9.00	RED	IX	WHITE	IX	X	9.00			
		R5-1a	WRONG WAY	36 x 24	6.00	RED	IX	WHITE	IX	X	6.00			
	S11-23	R81(CA)	BIKE LANE	24 x 24	4.00	WHITE	III	BLACK			4.00			
	S11-24	R49(R†)(CA)	NO PED CROSSING USE CROSSWALK	42 x 18	5.25	WHITE	III	BLACK			5.25			
	S11-25	R3-18	NO U-TURN/NO LEFT TURN	36 x 36	9.00	WHITE	III	RED BLACK	III	X	9.00			
	S11-26	R73-2(CA)	INTERSECTION LANE CONTROL	36 x 36	9.00	WHITE	III	BLACK		X	9.00			
	S11-27	R81(CA)	BIKE LANE	24 x 18	3.00	WHITE	III	BLACK			3.00			
	S11-28	G7-1(CA)	FERRARI RANCH ROAD	48 x 42	14.00	GREEN	III	WHITE	IX	X		14.00		
	S11-29	R61-20.1(CA)	INTERSECTION LANE CONTROL	36 x 30	7.50	WHITE	III	BLACK		X	7.50			
PD-32	S32-1	W9-1R	RIGHT LANE ENDS	48 x 48	16.00	YELLOW	III	BLACK	III	X		16.00		
	S32-2	G48(CA)	SOUTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
	S32-3	G7-1(CA)	WEST WISE ROAD	36 x 42	10.50	GREEN	III	WHITE	IX	X	10.50			
	S32-4	R6-1L	ONE WAY (LEFT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
	S32-5	G7-1(CA)	WEST WISE ROAD	36 x 42	10.50	GREEN	III	WHITE	IX	X	10.50			
	S32-6	G47(CA)	NORTH	21 x 9	1.31	GREEN	III	WHITE	III	X	1.31			
		G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	GREEN	III	WHITE	III	X	4.17			
	S32-7	R6-1L	ONE WAY (LEFT)	54 x 18	6.75	WHITE	III	BLACK		X		6.75		
	S32-8	W4-2R	LANE ENDS (RIGHT)	48 x 48	16.00	YELLOW	IX	BLACK	IX	X		16.00		
	S32-9	G7-1(CA)	WEST WISE ROAD	132 x 60	55.00	GREEN	III	WHITE	IX	X				55.00
	S32-10	W3-3	SIGNAL AHEAD	48 x 48	16.00	YELLOW	IX	RED GREEN BLACK	IX			16.00		
	S32-11	W3-3	SIGNAL AHEAD	48 x 48	16.00	YELLOW	IX	RED, GREEN BLACK	IX			16.00		
	S32-12	R73-3(CA)	INTERSECTION LANE CONTROL	36 x 36	9.00	WHITE	III	BLACK		X	9.00			
	S32-13	R73-7(CA)	LEFT TURN YIELD ON GREEN	36 x 45	11.25	WHITE	III	BLACK GREEN	III	X	11.25			
	S32-14	R73-3(CA)	INTERSECTION LANE CONTROL	36 x 36	9.00	WHITE	III	BLACK		X	9.00			
	S32-15	R73-7(CA)	LEFT TURN YIELD ON GREEN	36 x 45	11.25	WHITE	III	BLACK GREEN	III	X	11.25			
										SUBTOTAL SHEET SQ-4	84.21	83.75	64.75	71.50
										TOTAL	271.51	211.25	64.75	126.50

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-5"

OPTION - A

SIGN QUANTITIES

SQ-5

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-5" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2018 | TIME PLOTTED => 13:45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

This column lists the various plan sheets that each sign panel is located on.

ROADSIDE SIGN PANEL QUANTITIES

SIGN DESIGNATION	SIGN MESSAGE/ DESCRIPTION	PANEL SIZE L x D INCHES	PANEL AREA SQFT	NUMBER OF PANELS	BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH SINGLE SHEET ALUMINUM SIGN UNFRAMED 0.063" SQFT	UNFRAMED 0.080" SQFT	FRAMED 0.063" SQFT	FRAMED 0.080" SQFT	COMMENTS
G7-1(CA)	FERRARI RANCH ROAD	48 x 42	14.00	1	GREEN	III	WHITE	IX	X		14.00			PD-11
G7-1(CA)	WEST WISE ROAD	36 x 42	10.50	2	GREEN	III	WHITE	IX	X	21.00				PD-32
G7-1(CA)	WEST WISE ROAD	132 x 60	55.00	1	GREEN	III	WHITE	IX	X				55.00	PD-32
G28-2(65)(CA)	CALIFORNIA 65 (ROUTE MARKER)	24 x 25	4.17	9	GREEN	III	WHITE	III	X	37.53				PD-2, -11, -32
G43(CA)	DIRECTIONAL ARROW	21 x 15	2.19	3	GREEN	III	WHITE	III	X	6.57				PD-2, -11
G44(CA)	DIRECTIONAL ARROW	21 x 15	2.19	4	GREEN	III	WHITE	III	X	8.76				PD-2, -11
G47(CA)	NORTH	21 x 9	1.31	1	GREEN	III	WHITE	III	X	1.31				PD-32
G48(CA)	SOUTH	21 x 9	1.31	7	GREEN	III	WHITE	III	X	9.17				PD-2, -11, -32
G48(CA)	SOUTH	26 x 12	2.17	1	GREEN	III	WHITE	III	X	2.17				PD-11
G78(CA)	TO 65 ROSEVILLE MARYSVILLE	78 x 42	22.75	1	GREEN		WHITE					22.75		PD-2
G84-3(313)(CA)	EXIT 313 WITH ARROW	48 x 60	20.00	1	GREEN	III	WHITE	III	X			20.00		PD-1
G86-5(CA)	DOWNTOWN LINCOLN NEXT EXIT	132 x 78	71.50	1	GREEN	IV	WHITE	IX	X				71.50	PD-3
G92(CA)	FREEWAY ENTRANCE	48 x 30	10.00	7	GREEN	III	WHITE	III	X		70.00			PD-2, -11
R18A(R†)(CA)	RIGHT LANE MUST EXIT	66 x 48	22.00	1	WHITE	III	BLACK		X			22.00		PD-3
R18B(R†)(CA)	RIGHT LANE FREEWAY ONLY	36 x 36	9.00	1	WHITE	III	BLACK		X	9.00				PD-11
R49(R†)(CA)	NO PED CROSSING USE CROSSWALK	42 x 18	5.25	1	WHITE	III	BLACK			5.25				PD-11
R61-20.1(CA)	INTERSECTION LANE CONTROL	36 x 30	7.50	2	WHITE	III	BLACK		X	15.00				PD-11
R73-2(CA)	INTERSECTION LANE CONTROL	36 x 36	9.00	1	WHITE	III	BLACK		X	9.00				PD-11
R73-3(CA)	INTERSECTION LANE CONTROL	36 x 36	9.00	2	WHITE	III	BLACK		X	18.00				PD-32
R73-7(CA)	LEFT TURN YIELD ON GREEN	36 x 45	11.25	2	WHITE	III	BLACK GREEN	 III	X	22.50				PD-32
R81(CA)	BIKE LANE	24 x 24	4.00	1	WHITE	III	BLACK			4.00				PD-11
R81(CA)	BIKE LANE	24 x 18	3.00	1	WHITE	III	BLACK			3.00				PD-11
R89-1(1)(CA)	1 CAR PER GREEN EACH LANE	36 x 16	4.00	2	WHITE	III	BLACK		X	8.00				PD-11
R3-18	NO U-TURN/NO LEFT TURN	24 x 24	4.00	1	WHITE	III	RED BLACK	III 	X	4.00				PD-11
R3-18	NO U-TURN/NO LEFT TURN	36 x 36	9.00	1	WHITE	III	RED BLACK	III 	X	9.00				PD-11
R4-7	KEEP RIGHT	24 x 30	5.00	3	WHITE	III	BLACK		X	15.00				PD-11
R5-1	DO NOT ENTER	36 x 36	9.00	2	RED	IX	WHITE	IX	X	18.00				PD-11
R5-1a	WRONG WAY	36 x 24	6.00	2	RED	IX	WHITE	IX	X	12.00				PD-11
R5-10a	PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES PROHIBITED	30 x 36	7.50	2	WHITE	IX	BLACK		X	15.00				PD-2, -11
R5-10c	PEDESTRIANS PROHIBITED	24 x 12	2.00	2	WHITE	IX	BLACK		X	4.00				PD-2, -11
R6-1L	ONE WAY (LEFT)	54 x 18	6.75	4	WHITE	III	BLACK		X		27.00			PD-11, -32
R6-1R	ONE WAY (RIGHT)	54 x 18	6.75	3	WHITE	III	BLACK		X		20.25			PD-11
R9-3a	NO PEDESTRIAN CROSSING	24 x 24	4.00	3	WHITE	III	RED BLACK	III 	X	12.00				PD-11
W3-3	SIGNAL AHEAD	48 x 48	16.00	2	YELLOW	IX	RED, GREEN BLACK	IX 			32.00			PD-32
W4-1R	MERGE (RIGHT)	48 x 48	16.00	1	YELLOW	IX	BLACK	IX	X		16.00			PD-11
W4-2R	LANE ENDS (RIGHT)	48 x 48	16.00	1	YELLOW	IX	BLACK	IX	X		16.00			PD-32
W9-1R	RIGHT LANE ENDS	48 x 48	16.00	1	YELLOW	III	BLACK	III	X		16.00			PD-32
OM1-3	OBJECT MARKER	18 x 18	2.25	1	YELLOW	III	BLACK		X	2.25				PD-11
									TOTAL	271.51	211.25	64.75	126.50	

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-5a"

OPTION - B

SIGN QUANTITIES

SQ-5a

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-5a" RELEASED 9/17/2018

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

This column identifies which plan sheet shows the location for each sign.

This column identifies the plan sheets that contain the details where the quantities can be determined.

OVERHEAD SIGN QUANTITIES

SHEET NUMBER	SIGN NUMBER (No.)	FURNISH SIGN STRUCTURE (TRUSS)	INSTALL SIGN STRUCTURE (TRUSS)	54" CIDH CONCRETE PILE (SIGN FOUNDATION)	60" CIDH CONCRETE PILE (SIGN FOUNDATION)	FURNISH SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	INSTALL SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	REMOVE SIGN STRUCTURE	MODIFY SIGN STRUCTURE (SAFETY CABLE RETROFIT)	INSTALL SIGN OVERLAY	INSTALL SIGN PANEL ON EXISTING FRAME			COMMENTS
											SIGN PANEL TYPE	SIGN PANEL SIZE (INCHES)	SIGN PANEL AREA	
		LB	LB	LF	LF	LB	LB	EA	EA	SQFT			SQFT	
PD-1	DS-117	377							1		LAMINATED	276 x 70	134.1	
PD-2	DS-118	408							1	17.5				
PD-3	DS-119 (Exist)							1						
PD-11	DS-236					2,359	2,359							
PD-11	DS-241	14,176	14,176	19										
PD-3	DS-244	21,731	21,731		25									SEE SHEETS SD-1 AND SD-2 FOR DETAILS
PD-3	DS-245	14,859	14,859		22									
PD-1	DS-248	9,989	9,989	18										
PD-2	DS-249					3,051	3,051							SEE SHEETS SD-1, SD-2 AND SDS-1 FOR DETAILS
TOTAL		61,540	60,755	37	47	5,410	5,410	1	2	17.5			134.1	

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-6"

SIGN QUANTITIES
SQ-6

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-6" RELEASED 7/7/2011

LAST REVISION 00-00-00 DATE PLOTTED => TIME PLOTTED => 13:30

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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BORDER LAST REVISED 7/2/2010

USERNAME => s116122
DGN FILE => od-65_SQ-006.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

SUPERSEDES EXAMPLE RELEASED 07/07/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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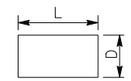
NOTE:

1. FEDERAL SIGN DESIGNATIONS ARE SHOWN UNLESS DESIGNATED BY (CA) SUFFIX WHICH INDICATES A CALIFORNIA SIGN DESIGNATION.



L = LENGTH OF SIGN
D = DEPTH OF SIGN

OVERHEAD SIGN PANEL QUANTITIES

SHEET NUMBER	SIGN NUMBER (No.)	SIGN DESIGNATION	SIGN MESSAGE/DESCRIPTION	PANEL SIZE L x D (INCHES)	PANEL AREA (SQFT)	BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH LAMINATED SIGN PANEL (1"-TYPE A) (SQFT)	REMARKS
PD-1	DS-117	G85(CA)	EXIT 313 Twelve Bridges Drive, 60° ARROW	276 x 70	134.16	GREEN	III	WHITE	IX	X	134.16	
PD-2	DS-118	W61D(CA)	FWY, 270° ARROW, ONLY	126 x 20	17.50	YELLOW	III	BLACK		X	17.50	INSTALL OVERLAY ON SIGN G24(CA)
PD-11	DS-236	G78-6.1(CA)	LEFT ARROW, (65), NORTH Marysville	132 x 70	64.16	GREEN	III	WHITE	IX	X	64.16	
PD-11	DS-241	G83-5(CA)	EXIT 313 Twelve Bridges Dr 1 MILE	288 x 90	180.00	GREEN	III	WHITE	IX	X	180.00	FSBT
		G5(CA)	Sheridan 10 Wheatland 14 Marysville 26	288 x 90	180.00	GREEN	III	WHITE	IX	X	180.00	FNBT
PD-3	DS-244	G83-5(CA)	EXIT 314 Lincoln Blvd 270° ARROW, EXIT, 270° ARROW, ONLY	264 x 100	183.33	GREEN	III	WHITE	IX	X	183.33	
PD-3	DS-245	G85-11(CA)	EXIT 313 Twelve Bridges Dr 60° ARROW, EXIT, ONLY	264 x 100	183.33	GREEN	III	WHITE	IX	X	183.33	
PD-1	DS-248	G83-5(CA)	EXIT 314 Lincoln Blvd ¾ MILE	192 x 90	120.00	GREEN	III	WHITE	IX	X	120.00	
PD-2	DS-249	G23(CA)	Lincoln Blvd ½ Ferrari Ranch Rd 1¼ Nelson Lane 3½	288 x 90	180.00	GREEN	III	WHITE	IX	X	180.00	
TOTAL											1242.48	

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-7"

SIGN QUANTITIES
SQ-7

SIGN QUANTITIES SHEET, EXAMPLE "65 SQ-7" RELEASED 9/17/2018

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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SUPERSEDES EXAMPLE RELEASED 7/29/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

NOTE: TEXT: FT=3, TX=8.75, WT=2, LV=23, Upper Case, Underlined

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

Where right of way is shown on a sign plan sheet, include the above note. The right of way note has been slightly reworded. Use this new wording on all plan view sheets where right of way is shown. Do not use the words "AND ACCESS" any longer within the right of way note.

Typically, the right of way note is placed in the upper left corner of the sheet. See subsection titled "Right of Way" in section 2-1.1 of this manual for instructions regarding indeterminate right of way.

The cell for the right of way note is in the Caltrans Cell Library (CTCELLIB.cel) AC=NOTE2

Text size for the right of way note is:
FT=3, TX=7, WT=1, LV=23, Upper Case
(TX=7 is based on the Caltrans scale of 1" = 50')

Use a solid line to depict right of way shown on a plan view sheet.

The cells for roadside signs available in the Caltrans Cell Library (CTCELLIB.cel) are:

SGN1P, SGN2P — New one or two post signs

SGN3P, SGN4P — Hollow filled--used for work on existing signs (usually a new panel or adding to a panel)

SGNATT — Sign attached to electrolier, signal standard, or sign structure post using strap and saddle bracket method

AC=NOTE4 through AC=NOTE31 and AC=NOTE35 through AC=NOTE37 in the Caltrans Cell Library (CTCELLIB.cel) are available for use to specify the different types of work in the statement "APPROVED FOR....."

When roadside signs or overhead signs are shown on pavement delineation plan sheets or sign plan sheets use one of the following statements:

NOTE11 - APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY
SHEET NAME: PAVEMENT DELINEATION AND SIGN PLAN
SHEET ID CODE: PD-XX

NOTE12 - APPROVED FOR SIGN WORK ONLY
SHEET NAME: SIGN PLAN
SHEET ID CODE: S-XX

Use this statement (AC=NOTE12) on the sign plan view sheets when only proposed signing work is shown on the sheet. Place statement as shown, center bottom of the sheet. Do not place a period at the end of this statement. Do not include it under NOTES:

TEXT: FT=3, TX=8.75, WT=2, LV=10, SLANT=20°, Upper Case

APPROVED FOR SIGN WORK ONLY

GENERAL:

- Sign panels for permanent signs (whether roadside or overhead), installed or constructed as part of project construction work, are in most instances, contractor furnished. In the past, sign panels for permanent signs installed or constructed as part of project construction work, were state furnished.
- Furnishing each sign panel is paid for by square foot area of panel. Installation of the sign panel is a separate cost.
- More information needs to be provided to the winning contractor (than in the past) so that the sign panels are manufactured to the quality and standards expected by Caltrans. The bidders also need enough information about the panel in order to get an accurate cost of sign panels from the manufacturer.
- The individual project sign number must be shown on the sign plan sheets. Schematics of standardized sign panels on plan view sheets are not to be shown. Schematics of special designed sign panels (usually guide signs) can be a benefit to the bidders and contractors when shown on the sign plan sheets.

See "Generic Project Border Sheet" for basic border sheet information not shown on this sheet.

SIGN PLANS:

- Sign plans provide a visual representation in plan view aspect of the final project roadside signs and overhead signs.
- The roadbed must be shown on the sign plan sheets. Only topographic information that is pertinent to the sign plan sheet should be shown. The right of way may be shown when placement of signs are near the right of way line.
- If no signing work is to be performed within the corresponding limits of a project plan layout sheet (road work items), do not include a sign plan sheet for that area. The number of sign plan sheets may not be the same as the number of project plan layout sheets.
- Each roadside sign or overhead sign structure must be assigned an individual project sign number (alpha/numeric designation) enclosed in a distinct geometric shape, typically an oblong for a roadside sign. The Caltrans preferred way of identifying a roadside sign is to use the letter "S" (which stands for sign) and the plan sheet number as a prefix before a hyphen and a number that represents each sign shown on that specific sheet.
- ROADSIDE SIGNS: S3-15

  Example: The sign number(s) for roadside signs on the first plan view sheet showing proposed sign work would be S1-1, S1-2, S1-3, etc. The sign numbers for roadside signs that are displayed on the second plan view sheet would be S2-1, S2-2, S2-3, etc. This preferred method of identifying roadside signs is to be used on all plan view sheets showing proposed sign work and must be consistent with the sign identification shown on the sign detail and quantity sheets.

  There are 3 cells in the Caltrans Cell Library (CTCELLIB.cel) for use with roadside signs. There are 3 different size oblongs, with masking, that can accommodate roadside sign numbers for lengths of 4 to 6 characters. The 3 cells are: SIGN4S, SIGN5S and SIGN6S.
- OVERHEAD SIGNS: DS-244

  A different sign number (alpha/numeric designation) enclosed in a distinct geometric shape (typically an oval) is to be used to represent overhead sign structures so they can easily be distinguished from roadside signs. The cell in the Caltrans Cell Library (CTCELLIB.cel) to label overhead signs is AC=OHSIGN. Each district may number overhead sign structures by two basic methods, either inventory number (based on electrical service provided) or by the plan sheet number/sign number. Check with each district's traffic sign unit.

  If inventory numbering or electrical service point numbering is not used to identify overhead sign structures, the overhead sign numbering is to follow the same logic used for roadside sign numbering.

  Example 1: The method for designating overhead sign structure numbers (based on the plan sheet number/sign number) is OS1-1, OS1-2, OS1-3, etc. on the first plan view sheet. On the second plan view sheet it would be OS2-1, OS2-2, OS2-3, etc. The "OS" stands for overhead sign structure, while the number to the left of the hyphen represents the plan sheet number. The number to the right of the hyphen represents the sign number on that specific sheet.

  Example 2: A method for designating overhead sign structure numbers for inventory purposes (based on electrical service provided per county) is AS-191, AS-192, AS-193, etc. The "AS" represents a county, while the number is a specific service point connection. The sign designation can either contain a hyphen or not.

SIGN DETAILS:

- The same information (sign/installation order) previously furnished to a sign manufacturer for "state furnished signs" must now be included in the project plans for "contractor furnished signs." The details sent to a sign manufacturer for sign panels are to be dimensioned in inches only. See Section 2-2.18 of the PPM for more detailed information necessary to be included for contractor furnished signs.
- The winning contractor will need all the controlling dimensions (letter sizes, spacing, type of font, etc.) in order to construct the panels. This information is in addition to the overall size of the panels that bidders need to determine their bids.
- Dimensions that show how an overhead sign is mounted to a pole are to be in feet. Panel dimensions should not be duplicated. Identify the detail with the sign number and stationing.

SIGN QUANTITIES:

- The table for sign quantities summarizes sign facilities which are to be constructed, installed, removed, reset, modified, reconstructed, or salvaged as shown on the sign plans. See Section 2-2.18 of the PPM for more detailed information necessary to be included in the summary of sign quantities.
- There should be separate quantity tables for roadway signs, overhead sign structures and sign panels. If a particular sign number appears in more than one quantity table, avoid duplicating information except for identifying the plan sheet and sign number.

  Sign panel information may, as an option, be included with roadside signs quantities or overhead sign quantities if all the information can clearly be shown on one table.
- Where all of the sign quantities can be shown in a table on one quantity sheet, quantity totals for each bid item must appear at the bottom of the table.
- Where more than one sheet is necessary to show sign quantities, the total for each bid item is to appear at the bottom of the table on each individual sheet. The totals for the bid items must be identified as "SHEET TOTAL." Sheet totals for each bid item must appear on the last sheet of the sign summary of quantities and must be totaled and shown as "GRAND TOTAL" or "TOTAL."

Use appropriate SHEET NAME AND ID CODE for the work shown. See CADD Users Manual Section 2.1

FT=43, TX=14.5, WT=0, LV=10, Upper Case
Use "Center Center" justification

Text may be reduced to a minimum of TX=12 where space constraints are involved.

For text sizes see CADD Users Manual Section 2.6

Use appropriate plotting scale for the plan view sheets, see "SCALES" in Section 2-1.3 of the PPM.

Use a colon after the word "SCALE"

FT=3, TX=8.75, WT=2, LV=10, Upper Case
Use "Center Center" justification

SIGN PLAN

SCALE: 1" = 50'

S-XX

PROJECT SIGN SHEETS, BASIC REQUIRED INFORMATION

PROJECT SIGN SHEETS, RELEASED 5/4/2012

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 27-APR-2012 | TIME PLOTTED => 13:25

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

A recommended option is to include the plan sheet number where the item appears as well as the line designation and station to make the locations more clear for the bidder.

PAVEMENT STRUCTURE QUANTITIES

SHEET No.	LINE DESIGNATION	STATION	DIRECTION	RUBBERIZED HOT MIX ASPHALT (GAP GRADED) TON	HOT MIX ASPHALT (TYPE A) TON	CLASS 2 AGGREGATE BASE CY	CLASS 2 AGGREGATE SUBBASE CY	TACK COAT TON
L-1	"D13"	643+96.13 TO 645+66.73	SB	54.2	121.0	175.3	216.1	0.33
L-1 TO L-2	"D13"	645+66.73 TO 661+66.76	NB	1,199.4	3,549.7	3,725.0	4,634.8	7.48
L-1 TO L-3	"D13"	645+66.73 TO 667+92.65	SB	1,449.0	4,315.1	4,539.8	5,656.0	9.04
L-2 TO L-3	"D13"	661+66.76 TO 669+28.93	NB	392.2	1,147.9	1,327.8	1,612.4	2.44
L-3 TO L-4	"D13"	667+92.65 TO 676+40.64	SB	565.2	1,650.0	1,815.8	2,243.3	3.52
L-3 TO L-4	"D13"	669+28.93 TO 677+71.38	NB	603.3	1,772.4	1,908.6	2,370.1	3.76
L-4 TO L-5	"D13"	682+06.49 TO 686+45.20	NB	324.7	959.9	1,090.6	1,357.0	2.03
L-4 TO L-5	"D13"	681+14.62 TO 686+45.20	SB	392.7	1,160.9	1,360.9	1,693.4	2.45
L-5	"D13"	689+29.84 TO 690+10.45	SB	63.1	187.7	196.7	245.5	0.40
L-5 TO L-8	"D13"	689+29.84 TO 705+00.31	NB	953.1	2,199.0	2,432.8	3,227.0	5.76
L-5 TO L-7	"D13"	690+10.45 TO 705+00.31	SB	1,277.8	2,875.0	3,209.7	4,279.6	7.72
L-8 TO L-9	"D13"	707+51.62 TO 720+30.62	NB	717.3	1,630.9	1,801.7	2,402.3	4.33
L-7 TO L-9	"D13"	707+51.62 TO 720+30.62	SB	755.3	1,699.5	1,897.3	2,529.8	4.56
L-9	"D13"	722+27.47 TO 723+42.30	NB	84.5	190.3	212.4	283.2	0.51
L-9	"D13"	722+27.47 TO 723+42.30	SB	71.7	161.5	180.2	240.3	0.43
L-9 TO L-10	"D13"	723+42.30 TO 731+46.10	NB	455.0	1,023.7	1,507.8	1,843.8	2.83
L-9 TO L-10	"D13"	723+42.30 TO 731+46.10	SB	455.0	1,023.7	1,507.8	1,843.8	2.83
L-10 TO L-14	"D13"	731+46.10 TO 764+48.56	NB	1,869.4	4,206.1	6,195.0	7,575.5	11.66
L-10 TO L-13	"D13"	731+46.10 TO 764.48.56	SB	1,869.4	4,206.1	6,195.0	7,575.5	11.66
L-14 TO L-18	"D13"	769+94.22 TO 807+08.42	NB	2,102.4	4,730.6	6,967.5	8,520.0	13.12
L-13 TO L-18	"D13"	769+94.22 TO 807+08.42	SB	2,102.4	4,730.6	6,967.5	8,520.0	13.12
L-21 TO L-25	"D13"	849+49.71 TO 882+54.32	NB/SB	2,014.5	4,532.7	7,016.4	7,525.2	12.57
L-25	"D13"	881+37.86 TO 883+03.54	NB/SB			149.8		
L-26	"D13"	885+09.25 TO 885+47.86	NB/SB			127.7		
L-26 TO L-29	"D13"	885+47.86 TO 933+47.42	NB/SB	2,925.8	6,583.2	10,192.9	10,929.4	18.25
L-28 TO L-35	"D13"	923+26.95 TO 1001+89.99	NB/SB	4,122.8	9,276.3	13,451.2	15,400.6	25.72
L-40 TO L-55	"D13"	1049+63.30 TO 1199+02.30	NB/SB	9,106.9	20,490.7	29,712.7	36,520.0	56.80
L-59	"D13"	1247+19.11 TO 1249+34.01	NB/SB	131.0	294.7	427.4	525.3	0.82
SUBTOTAL				36,058.1	84,719.2	116,293.3	139,769.9	224.14

PAVEMENT STRUCTURE QUANTITIES

SHEET No.	LINE DESIGNATION	STATION	DIRECTION	RUBBERIZED HOT MIX ASPHALT (GAP GRADED) TON	HOT MIX ASPHALT (TYPE A) TON	CLASS 2 AGGREGATE BASE CY	CLASS 2 AGGREGATE SUBBASE CY	TACK COAT TON
L-18	"NB9"	808+69.21 TO 814+00.67	NB	376.2	846.3	1,192.4	1,479.7	2.34
L-18 TO L-19	"SB9"	808+47.59 TO 819+10.42	SB	755.1	1,699.0	2,392.1	2,969.7	4.70
L-18 TO L-19	"NB9"	814+00.67 TO 819+09.73	NB	554.1	1,246.8	1,645.3	2,088.2	3.46
L-19	"NB9/SB9"	819+10.42 TO 822+44.70	NB/SB	640.9	1,442.1	1,663.6	2,218.1	4.00
L-19 TO L-20	"NB9"	822+65.80 TO 833+15.76	NB	594.3	1,337.2	1,969.6	2,408.5	3.70
L-19 TO L-20	"SB9"	822+44.70 TO 830+11.50	SB	750.9	1,689.6	2,260.9	2,855.6	4.69
L-20	"NB9"	833+15.76 TO 838+30.78	NB	267.8	602.7	904.7	1,099.5	1.68
L-20	"SB9"	830+11.50 TO 836+69.73	SB	332.0	747.1	1,129.5	1,369.3	2.07
L-20 TO L-21	"NB9"	838+30.78 TO 841+04.50	NB	101.9	229.4	375.9	444.5	0.64
L-20 TO L-21	"SB9"	836+69.73 TO 846+45.41	SB	293.5	660.3	1,158.5	1,342.4	1.83
L-21	"NB9"	841+04.50 TO 849+79.27	NB	279.3	628.3	1,012.8	1,203.7	2.59
L-21	"SB9"	846+45.41 TO 849+59.26	SB	91.1	205.9	300.2	367.8	0.57
SUBTOTAL				5,037.1	11,334.7	16,005.5	19,847.0	32.27
L-35	"NB10"	1001+89.99 TO 1007+21.48	NB	169.7	381.8	548.5	676.3	1.06
L-35	"SB10"	1001+89.99 TO 1007+21.48	SB	154.2	347.1	508.5	622.9	0.96
L-35 TO L-36	"NB10"	1007+21.48 TO 1012+13.97	NB	157.2	353.8	608.4	709.1	0.98
L-35 TO L-36	"SB10"	1007+21.48 TO 1012+68.89	SB	210.4	473.4	768.7	911.5	1.31
L-36	"NB10"	1012+13.97 TO 1012+68.89	NB	23.1	52.1	82.6	98.6	0.14
L-36	"SB10"	1012+68.89 TO 1013+94.41	SB	144.8	325.8	482.8	589.2	0.90
L-36 TO L-37	"NB10"	1012+69.15 TO 1019+52.32	NB	411.0	924.8	1,344.6	1,651.2	2.56
L-36 TO L-37	"SB10"	1015+31.71 TO 1025+76.66	SB	606.6	1,365.0	1,999.5	2,449.5	3.78
L-37 TO L-38	"NB10"	1019+52.32 TO 1026+89.98	NB	686.1	1,543.7	2,080.7	2,621.4	4.27
L-37 TO L-38	"SB10"	1025+76.66 TO 1026+89.98	SB	52.6	118.4	182.6	220.1	0.33
L-38	"NB10"	1026+89.98 TO 1028+21.21	NB	87.6	197.1	280.7	347.1	0.55
L-38	"SB10"	1026+89.98 TO 1028+21.21	SB	83.8	188.5	270.9	334.0	0.52
L-38 TO L-39	"NB10"	1028+21.21 TO 1037+33.87	NB	556.3	1,251.8	1,815.2	2,231.1	3.47
L-38	"SB10"	1028+21.21 TO 1034+18.78	SB	555.1	1,248.9	1,683.8	2,121.2	3.46
L-38 TO L-39	"SB10"	1034+18.78 TO 1035+37.15	SB	85.4	192.1	269.8	335.1	0.52
L-39 TO L-40	"SB10"	1035+37.15 TO 1049+65.56	SB	556.5	1,252.2	1,915.7	2,404.4	3.47
L-39 TO L-40	"NB10"	1037+33.87 TO 1049+63.30	NB	499.64	1,124.21	1,722.07	2,140.88	3.12
SUBTOTAL				5,040.0	11,340.7	16,565.1	20,463.6	31.40

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-1"

SUMMARY OF QUANTITIES

Q-1

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-1" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 11:18

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

PAVEMENT STRUCTURE QUANTITIES SUMMARY

LOCATION	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	HOT MIX ASPHALT (TYPE A)	CLASS 2 AGGREGATE BASE	CLASS 2 AGGREGATE SUBBASE	TACK COAT	SLURRY SEAL	COLD PLANE ASPHALT CONCRETE PAVEMENT
	TON	TON	CY	CY	TON	TON	SQYD
"D13"	36,058.1	84,719.2	116,293.3	139,769.9	224.14		
"NB9/SB9"	5,037.1	11,334.7	16,005.5	19,847.0	32.27		
"NB10/SB10"	5,040.0	11,340.7	16,565.1	20,463.6	31.40		
"NB11/SB11"	5,399.7	12,160.8	17,186.6	21,305.5	30.60		
"D16"	916.5	3,609.0	8,359.3	9,747.0	9.08		
"IND1"		11,782.4	22,069.7		28.43		
"FR"		3,054.7	4,126.7			125.6	
"NEL1"		6,775.5	12,435.3		13.93		
"NIC1"		3,307.7	5,723.7		4.67		
"NOF1"		1,007.3	1,707.5		1.63		
"NOF2"		163.6	277.3		0.26		
"WIS1"		4,311.0	7,296.7		6.09		
"WISF1"		971.1	1,633.0		2.20		
"DOWF1"		5,224.7	8,856.3		8.44		
"WB11/EB11"		8,395.6	15,357.8		9.52		
"IN4"	1,339.1	2,297.7	3,710.1	4,415.9	3.90		
"IN3"	635.0	1,097.7	1,884.4	2,163.2	1.69		
"F1"	1,087.5	2,186.6	2,656.5	3,642.3	5.96		
"F2"	784.0	1,579.7	1,930.8	2,625.7	4.29		
"F4"			2,470.0	3,458.1			
"F5"	685.4	1,382.2	1,693.8	2,295.6	3.75		
"F6"	537.3	1,095.1	1,382.9	1,799.5	2.94		
"ROD1"		215.7	394.6		0.49		
"DR11"		23.2	60.6		0.04		
"DRI2"		94.4	266.8		0.15		
"MOR1"		1,269.5	2,510.5		2.78		
"DOW1"		324.8	1,284.7		0.74		
"CULR1"		286.1	485.0		0.46		
"EX65N2"		799.3	1,676.5		1.64		
INDUSTRIAL PARK AND RIDE		1,053.7	3,159.6				
RETENTION BASIN		330.1	646.1				
HMA (TEXTURED PAVING)		413.6	695.3				
MINOR CONCRETE (SIDEWALK)			595.1				
MINOR CONCRETE (STAMPED CONCRETE)			120.0				
HMA DIKE		68.8					
Misc DRAINAGE QUANTITIES		23.8	146.0				
STAGE CONSTRUCTION QUANTITIES	493.0	9,009.6	15,249.2			125.7	16,898
TOTAL	58,012.7	191,709.6	296,912.3	231,533.3	431.49	251.3	16,898

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-5"

SUMMARY OF QUANTITIES

Q-5

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-5" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-2011 TIME PLOTTED => 11:20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

The bid item is Imported Borrow not Embankment (thus the need for the (N) not a separate bid item symbol).

EARTHWORK QUANTITIES SUMMARY

LOCATION	STATION	ROADWAY EXCAVATION	(N) EMBANKMENT	IMPORTED BORROW
		CY	CY	CY
"D13"	643+96.95 TO 686+74.74	60,533	373,539	
"D13"	690+10.44 TO 705+29.85		183,533	
"D13"	707+22.11 TO 720+60.15		106,273	
"D13"	721+97.94 TO 723+42.30		14,900	
"D13"	723+42.30 TO 808+39.65	71,568	371,316	
"NB9"	808+69.22 TO 849+79.26	101,524	16,807	
"D13"	849+49.70 TO 1001+89.99	92,053	430,833	
"NB10"	1001+89.99 TO 1049+63.30	16,902	279,027	
"D13"	1049+63.30 TO 1199+02.29	299,319	444,076	
"NB11"	1199+02.29 TO 1247+19.10	140,957	153,542	
"D13"	1247+19.10 TO 1249+34.01	3	7,893	
"D16"	1249+34.01 TO 1275+65.23	6,338	68,270	
"IND1"	32+64.43 TO 76+27.93	17,750	30,312	
"IN4"	661+66.77 TO 683+08.63	25,516	60,682	
"IN3"	661+70.30 TO 674+28.73	15,005	32,559	
"ROD1"	70+13.60 TO 71+33.25	171	51	
"FR"	62+67.02 TO 88+91.05	2,926		
"F4"	694+76.97 TO 706+44.64	10,880	58,496	
"F1"	706+44.64 TO 715+70.88	4,696	24,900	
"F3"	693+99.23 TO 696+92.00	10,046	58,493	
"F2"	706+19.64 TO 708+96.84	3,074	18,992	
"F6"	707+19.55 TO 715+13.76	6,338	2,746	
"NEL1"	39+48.81 TO 61+95.29	32,920	55	
"NIC1"	31+49.60 TO 63+05.73	4,411	192,595	
"WIS1"	30+98.57 TO 53+98.54	1,655	21,063	
"WISF1"	32+80.83 TO 54+97.18	4,442	3,571	
"NOF1"	156+30.04 TO 174+06.08	232	47,113	
"NOF2"	170+60.32 TO 174+01.48	67	546	
"NYS1"	33+09.07 TO 43+84.79	12,868	91	
"DOWF1"	1165+16.86 TO 1229+09.36	146,978	48,005	
"EB11"	39+21.82 TO 84+05.08	40,684	88,429	
"EX65N2"	1219+91.10 TO 1226+70.23	1,483	232	
INDUSTRIAL PARK AND RIDE	40+02.61 TO 45+60.35	441	20,115	
RETENTION BASIN	BEGIN RETENTION BASIN TO END RETENTION BASIN	1,390,240		
RETENTION BASIN (BERM CONSTRUCTION)	BEGIN RETENTION BASIN TO END RETENTION BASIN		70,106	
RETENTION BASIN (KEYWAY CONSTRUCTION)	BEGIN RETENTION BASIN TO END RETENTION BASIN		12,607	
RETENTION BASIN (TOP SOIL)	BEGIN RETENTION BASIN TO END RETENTION BASIN		99,999	
"DRI1"	10+08.24 TO 10+19.70	*	*	
"DRI2"	20+00.00 TO 20+40.03	129	258	
"MOR1"	233+13.46 TO 234+00.00	65	65	
"DOW1"	20+69.58 TO 20+73.63	3,038	13	
"CULR1"	10+00.00 TO 10+68.81	569	190	
"SW5"	9+93.66 TO 19+75.93		1,247	
FERRARI RANCH INTERCHANGE GRADING	CONTOUR GRADING BETWEEN THE MAINLINE AND RAMPS	104,341		
STAGE CONSTRUCTION QUANTITIES		8,374	27,209	
SUBTOTAL		2,638,536	3,370,749	
ADJUSTMENT FOR SUBSIDENCE OF EMBANKMENTS			18,180	
GRADING FACTOR ADJUSTMENT FOR ROADWAY EXCAVATION			396,309	
GRAND TOTAL		2,638,536	3,785,238	1,146,702

(N) - NOT A SEPARATE BID ITEM

* "DRI1" QUANTITY INCLUDED IN "DOWF1" EARTHWORK.

Quantity of Imported Borrow is the difference between the volume for Embankment and Roadway Excavation. The bid item Imported Borrow is not needed if Roadway Excavation exceeds the Embankment volume.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-6"

SUMMARY OF QUANTITIES

Q-6

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-6" RELEASED 9/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 10-SEP-2018 | TIME PLOTTED => 17:56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

PLACE HOT MIX ASPHALT DIKE

LOCATION	STATION	TYPE C	TYPE E	TYPE F	HOT MIX ASPHALT (TYPE A)
		LF	LF	LF	TON
ROUTE 65 "D13" - R+	677+00.48 TO 677+25.26	24.9			0.2
ROUTE 65 "D13" - R+	677+25.26 TO 677+49.99			24.9	0.3
ROUTE 65 "D13" - L+	707+36.14 TO "F6" 716+09+36	54.1	792.0	24.9	11.7
ROUTE 65 "D13" - R+	704+61.80 TO 705+14.68	38.1		24.9	0.6
ROUTE 65 "D13" - R+	719+90.04 TO 720+42.86	38.1		24.9	0.6
ROUTE 65 "D13" - L+	729+62.28 TO 729+87.21			24.9	0.3
ROUTE 65 "D13" - L+	729+87.21 TO 730+24.71	37.4			0.2
ROUTE 65 "D13" - R+	763+67.85 TO 763+92.62	24.9			0.2
ROUTE 65 "D13" - R+	763+92.62 TO 764+17.42			24.9	0.3
ROUTE 65 "D13" - R+	881+79.69 TO 882+18.17	37.4			0.2
ROUTE 65 "D13" - R+	882+18.17 TO 882+43.11			24.9	0.3
ROUTE 65 "D13" - R+	934+26.95 TO 934+64.45			37.4	0.3
ROUTE 65 "D13" - R+	"NB10" 1049+33.41 TO 1049+70.91	37.4			0.2
ROUTE 65 "D13" - R+	1049+70.91 TO 1049+95.84			24.9	0.3
ROUTE 65 "D13" - R+	1117+40.94 TO 1117+78.24	37.4			0.2
ROUTE 65 "D13" - R+	1117+78.24 TO 1118+03.17			24.9	0.3
ROUTE 65 "D13" - R+	1163+60.71 TO 1163+98.21			37.4	0.4
ROUTE 65 "D13" - R+	1173+94.50 TO 1174+31.99	37.4			0.2
ROUTE 65 "D13" - R+	1174+30.99 TO 1174+56.93			24.9	0.3
DOWD ROAD "DOWF1" - L+	1171+41.35 TO 1171+79.70	37.4			0.2
DOWD ROAD "DOWF1" - L+	1171+79.70 TO 1172+04.63			24.9	0.3
NICOLAUS ROAD "NIC1" - R+	39+46.84 TO 45+62.49		615.5		13.4
NICOLAUS ROAD "NIC1" - R+	45+62.49 TO 46+49.85	87.3			0.7
NICOLAUS ROAD "NIC1" - R+	49+42.93 TO 50+05.37	62.3			0.4
NICOLAUS ROAD "NIC1" - R+	50+05.37 TO 54+69.14		463.9		10.1
NICOLAUS ROAD "NIC1" - L+	39+46.84 TO 45+77.15		630.2		13.7
NICOLAUS ROAD "NIC1" - L+	45+77.15 TO 46+39.59	62.3			0.4
NICOLAUS ROAD "NIC1" - L+	49+32.66 TO 50+20.03	87.3			0.7
NICOLAUS ROAD "NIC1" - L+	50+20.03 TO 54+69.14		449.1		9.8
NORTH FARM ROAD "NOF1" - R+	162+08.78 TO 162+46.18	37.4			0.3
NORTH FARM ROAD "NOF1" - R+	162+46.18 TO 162+71.21			24.9	0.2
NORTH FARM ROAD "NOF1" - R+	165+41.88 TO 165+66.81				0.2
NORTH FARM ROAD "NOF1" - R+	165+66.81 TO 166+01.03	37.4			0.3
NORTH FARM ROAD "NOF1" - L+	162+07.83 TO 162+32.86	37.4			0.3
NORTH FARM ROAD "NOF1" - L+	162+32.86 TO 162+70.26			24.9	0.2
NORTH FARM ROAD "NOF1" - L+	162+09.01 TO 162+46.41			24.9	0.2
NORTH FARM ROAD "NOF1" - L+	162+46.41 TO 162+71.44	37.4			0.3
TOTAL		853.3	2950.7	423.4	68.8*

* QUANTITY INCLUDED IN PAVEMENT STRUCTURE QUANTITIES SUMMARY.

CURB RAMPS

LOCATION	STATION	MINOR CONCRETE (CURB RAMP)
		CY
INDUSTRIAL Ave "IND1" - R+	40+41.33	2.90
INDUSTRIAL Ave "IND1" - R+	41+46.96	5.18
INDUSTRIAL Ave "IND1" - R+	44+51.43	2.12
INDUSTRIAL PARK AND RIDE PERIMETER	44+94.73	2.80
CURB RAMPS AT PARK AND RIDE	RAMP #1	0.76
CURB RAMPS AT PARK AND RIDE	RAMP #2	0.76
CURB RAMPS AT PARK AND RIDE	RAMP #3	0.76
CURB RAMPS AT PARK AND RIDE	RAMP #4	0.55
CURB RAMPS AT PARK AND RIDE	RAMP #5	3.94
INDUSTRIAL Ave "IND1" - R+	49+38.43 TO 49+70.89	3.90
INDUSTRIAL Ave "IND1" - R+	50+22.20 TO 50+41.02	2.18
INDUSTRIAL Ave "IND1" - R+	59+52.14 TO 59+68.55	3.57
INDUSTRIAL Ave "IND1" - R+	71+37.81 TO 71+50.63	1.75
FERRARI RANCH ROAD "FR" - L+	70+78.56 TO 70+88.91	2.22
FERRARI RANCH ROAD "FR" - L+	71+32.90 TO 71+61.21	4.80
FERRARI RANCH ROAD "FR" - L+	71+85.16 TO 72+09.13	4.11
FERRARI RANCH ROAD "FR" - L+	72+21.97 TO 72+32.72	2.34
FERRARI RANCH ROAD "FR" - L+	80+99.16 TO 81+17.20	2.47
FERRARI RANCH ROAD "FR" - L+	81+20.00 TO 81+31.74	2.03
FERRARI RANCH ROAD "FR" - L+	81+70.26 TO 81+87.35	2.62
FERRARI RANCH ROAD "FR" - L+	81+89.90 TO 82+03.25	2.33
FERRARI RANCH ROAD "FR" - R+	80+98.39 TO 81+21.55	3.37
FERRARI RANCH ROAD "FR" - R+	81+24.73 TO 81+36.32	1.78
FERRARI RANCH ROAD "FR" - R+	82+10.82 TO 82+23.83	2.15
NICOLAUS ROAD "NIC1" - L+	46+14.65 TO 46+39.58	2.24
NICOLAUS ROAD "NIC1" - R+	46+24.92 TO 46+49.85	2.24
NICOLAUS ROAD "NIC1" - L+	49+32.66 TO 49+57.59	2.24
NICOLAUS ROAD "NIC1" - R+	49+42.93 TO 49+67.86	2.24
TOTAL		70.35

(N) - NOT A SEPARATE BID ITEM

SIDEWALK QUANTITIES

LOCATION	STATION	MINOR CONCRETE (SIDEWALK)	CLASS 2 AGGREGATE BASE	REMOVE SIDEWALK
		CY	CY	SQYD
INDUSTRIAL Ave "IND1" - R+	39+24.22 TO 40+27.94	9.9	9.9	
INDUSTRIAL Ave "IND1" - R+	41+60.35 TO 44+49.38	47.2	47.2	
INDUSTRIAL Ave "IND1" - R+	44+98.80 TO 49+32.08	47.0	47.0	
INDUSTRIAL PARK AND RIDE PERIMETER	61.4' R+ 40+50.24 TO 328.1' R+ 42+07.78 328.1' R+ 42+07.78 TO 328.1' R+ 44+15.34	102.8	102.8	
INDUSTRIAL PARK AND RIDE INTERIOR	76.1' R+ 41+34.46 TO 299.5' R+ 42+11.72	32.0	32.0	
INDUSTRIAL Ave "IND1" - R+	49+22.19 TO 49+74.91	5.8	7.6	
INDUSTRIAL Ave "IND1" - R+	50+17.02 TO 59+70.84	113.8	151.7	
INDUSTRIAL Ave "IND1" - R+	71+35.33 TO 72+32.54	10.6	14.1	
FERRARI RANCH ROAD "FR" - L+	70+43.94 TO 70+96.43	7.7	10.3	
FERRARI RANCH ROAD "FR" - L+	72+17.82 TO 75+13.10	44.1	58.7	
FERRARI RANCH ROAD "FR" - L+	81+03.65 TO 81+36.45	5.5	7.5	
FERRARI RANCH ROAD "FR" - L+	81+85.67 TO 86+61.39	67.9	90.6	
FERRARI RANCH ROAD "FR" - R+	81+20.05 TO 81+39.73	6.3	8.2	
FERRARI RANCH ROAD "FR" - R+	82+02.07 TO 82+44.72	5.6	7.5	
FERRARI RANCH ROAD "FR" - L+	85+79.37 TO 86+58.11			23.88
TOTAL		506.2	595.1*	23.88

* QUANTITY INCLUDED IN PAVEMENT STRUCTURE QUANTITIES SUMMARY.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITY SHEET, EXAMPLE "65 Q-11"

SUMMARY OF QUANTITIES

Q-11

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-11" RELEASED 9/17/2018

LAST REVISION 00-00-00 DATE PLOTTED => 10-SEP-2018 TIME PLOTTED => 17:58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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CURB AND GUTTER QUANTITIES

LOCATION	STATION	MINOR CONCRETE (CURB AND GUTTER) TYPE A2 CURB AND GUTTER	TYPE A1 CURB	TYPE 2 CURB	TYPE 5 CURB	REMOVE CURB AND GUTTER
		CY	CY	CY	CY	LF
INDUSTRIAL Ave "IND1" - R†	39+24.22 TO 40+27.94	6.0				
INDUSTRIAL Ave "IND1" - R†	40+27.94 TO 40+52.54	1.6				
INDUSTRIAL Ave "IND1" - R†	40+70.13 TO 41+60.35	1.6				
INDUSTRIAL Ave "IND1" - R†	41+60.35 TO 44+49.38	16.9				
INDUSTRIAL Ave "IND1" - R†	44+49.38 TO 44+50.32	1.0				
INDUSTRIAL Ave "IND1" - R†	44+78.33 TO 49+32.08	24.2				
INDUSTRIAL Ave "IND1" - R† BACK CURB	41+58.45 TO 43+06.56	8.5				
INDUSTRIAL Ave "IND1" - R† PARK & RIDE	61.4′ R† 40+50.24 TO 328.1′ R† 44+15.34	35.6				
INDUSTRIAL Ave "IND1" - R† PARK & RIDE	76.1′ R† 41+34.46 TO 287.4′ R† 41+34.46	13.1				
INDUSTRIAL Ave "IND1" - R†	43+06.46 TO 44+49.06		6.1			
INDUSTRIAL Ave "IND1" - R† ISLAND	44+62.35 TO 44+78.45		1.2			
INDUSTRIAL Ave "IND1" - R† Bk OF SW	44+94.73 TO 48+45.19		19.4			
INDUSTRIAL PARK & RIDE CURB ISLANDS	ISLAND CURB #1		12.3			
INDUSTRIAL PARK & RIDE CURB ISLANDS	ISLAND CURB #2		9.2			
INDUSTRIAL PARK & RIDE CURB ISLANDS	ISLAND CURB #3		11.6			
INDUSTRIAL PARK & RIDE CURB ISLANDS	ISLAND CURB #4		11.2			
INDUSTRIAL PARK & RIDE CURB ISLANDS	ISLAND CURB #5		1.8			
INDUSTRIAL PARK & RIDE INTERIOR CURBS	81.0′ R† 41+40.40 TO 298.9′ R† 42+22.87		17.1			
INDUSTRIAL Ave "IND1" - R†	49+22.19 TO 49+74.91	2.6				
INDUSTRIAL Ave "IND1" - R†	50+17.02 TO 59+70.84	45.1				
INDUSTRIAL Ave "IND1" - Med	57+84.58 TO 59+39.82		8.1			
INDUSTRIAL Ave "IND1" - Med	59+70.51 TO 59+99.38		5.0			
INDUSTRIAL Ave "IND1" - Med	60+06.38 TO 62+21.26		11.5			
INDUSTRIAL Ave "IND1" - Med	70+99.86 TO 71+29.13		2.1			
INDUSTRIAL Ave "IND1" - R†	71+35.33 TO 75+81.99	21.1				
FERRARI RANCH ROAD "FR" - Med	62+66.38 TO 71+16.12				45.9	
FERRARI RANCH ROAD "FR" - Med	71+85.01 TO 80+83.96				48.1	
FERRARI RANCH ROAD "FR" - Med	82+02.07 TO 88+91.04				37.5	
FERRARI RANCH ROAD "FR" - L†	70+43.94 TO 70+96.43			4.3		
FERRARI RANCH ROAD "FR" - L†	71+85.01 TO 72+44.07				5.8	
FERRARI RANCH ROAD "FR" - L†	72+17.82 TO 75+13.10			20.8		
FERRARI RANCH ROAD "FR" - L†	81+03.65 TO 81+36.45			3.0		
FERRARI RANCH ROAD "FR" - L†	81+69.26 TO 82+05.35				2.9	
FERRARI RANCH ROAD "FR" - L†	81+85.67 TO 86+61.39			30.9		
FERRARI RANCH ROAD "FR" - R†	81+20.05 TO 81+39.73			3.3		
FERRARI RANCH ROAD "FR" - R†	82+02.07 TO 82+44.72			3.4		
FERRARI RANCH ROAD "FR" - Med	62+66.38 TO 88+91.04					6250
RIOSA ROAD "EB11" - Med	83+30.96 TO 84+05.08		6.4			
SUBTOTAL		177.3	123.0	65.7	140.2	6250
TOTAL		506.2				6250

MINOR CONCRETE (STAMPED STONE PATTERN)

LOCATION	STATION	ISLAND (N)	CONCRETE	CLASS 2 AGGREGATE BASE	(N) REMOVE ISLAND
		SQYD	CY	CY	CY
INDUSTRIAL Ave "IND1"	59+70.51 TO 60+00.04	108	17.66	29.4	
INDUSTRIAL Ave "IND1"	70+99.86 TO 71+29.13	42	6.87	11.5	
RIOSA ROAD "EB11"	83+27.76 TO 84+08.35	289	47.48	79.1	
RODEO ROAD "ROD1"	70+92.64 TO 71+13.83				32.4
TOTAL		439	72.01	120.0*	32.4

(N) - NOT A SEPARATE BID ITEM
*QUANTITY INCLUDED IN PAVEMENT STRUCTURE QUANTITIES SUMMARY.

PLACE HOT MIX ASPHALT (TEXTURED PAVING)

LOCATION	STATION	(N)	HMA (TYPE A)	CLASS 2 AGGREGATE BASE
		SQYD	TON	CY
"ISLAND F" "F2"	36.52′ R† 706+27.97 TO 3.94′ R† 708+65.25	667	110.7	186.0
FERRARI RANCH INTERSECTION "D13"	73.16′ R† 693+14.30 TO 73.16′ R† 694+75.73	288	47.8	80.3
FERRARI RANCH INTERSECTION "D13"	73.16′ L† 707+52.79 TO 73.16′ L† 708+72.48	251	41.7	70.1
FERRARI RANCH INTERSECTION "D13"	73.16′ R† 714+59.68 TO 73.16′ R† 715+71.16	189	31.4	52.9
FERRARI RANCH INTERSECTION "D13"	73.16′ L† 717+42.08 TO 73.16′ L† 719+03.31	287	47.7	80.2
NELSON LANE INTERSECTION "NB9"	35.43′ L† 819+31.27 TO 35.43′ L† 820+20.75	88	14.7	24.8
NELSON LANE INTERSECTION "NB9"	11.81′ L† 821+84.82 TO 11.81′ L† 822+66.28	76	12.7	21.4
WISE ROAD INTERSECTION "NB10"	31.50′ L† 1025+75.19 TO 31.50′ L† 1026+74.21	114	19.0	31.9
WISE ROAD INTERSECTION "NB10"	27.43′ L† 1028+21.21 TO 19.68′ L† 1029+14.03	108	18.1	30.4
RIOSA ROAD INTERSECTION "NB11"	31.50′ L† 1222+83.00 TO 31.50′ L† 1223+64.68	99	16.6	27.9
RIOSA ROAD INTERSECTION "WB11"	15.75′ L† 71+06.19 TO 15.75′ L† 71+90.40	171	28.4	47.8
RIOSA ROAD INTERSECTION "WB11"	11.32′ L† 70+20.17 TO 3.94′ L† 70+92.99	149	24.8	41.6
TOTAL		2487	413.6*	695.3*

(N) - NOT A SEPARATE BID ITEM
*QUANTITY INCLUDED IN PAVEMENT STRUCTURE QUANTITIES SUMMARY.

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITY SHEET, EXAMPLE "65 Q-12"

SUMMARY OF QUANTITIES

Q-12

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-12" RELEASED 9/17/2018

LAST REVISION 00-00-00 DATE PLOTTED => 10-SEP-2018 TIME PLOTTED => 17:59

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

RUMBLE STRIP (GROUND-IN)

SHEET No.	STATION	SIDE	SHOULDER LENGTH	CENTERLINE LENGTH
			LF	LF
L-20 TO L-24	"D13" 847+89 TO "D13" 881+71	L†	3,382	
	"D13" 847+89 TO "D13" 881+71	R†	3,382	
L-25 TO L-29	"D13" 886+33 TO "D13" 932+96	L†	4,663	
	"D13" 886+33 TO "D13" 932+96	R†	4,663	
L-29 TO L-35	"NB10" 935+04 TO "NB10" 1003+80	L†	6,876	
	"NB10" 935+04 TO "NB10" 1003+80	R†	6,876	
L-39 TO L-40	"NB10" 1045+17 TO "NB10" 1049+18	L†	401	
	"NB10" 1045+17 TO "NB10" 1049+18	R†	401	
L-40 TO L-47	"D13" 1054+77 TO "D13" 1117+45	L†	6,268	
	"D13" 1054+77 TO "D13" 1117+45	R†	6,268	
L-48 TO L-51	"D13" 1119+74 TO "D13" 1161+50	L†	4,176	
	"D13" 1119+74 TO "D13" 1161+50	R†	4,176	
L-51 TO L-52	"D13" 1164+63 TO "D13" 1173+89	L†	926	
	"D13" 1164+63 TO "D13" 1173+89	R†	926	
L-53 TO L-55	"D13" 1177+11 TO "D13" 1200+90	L†	2,379	
	"D13" 1177+11 TO "D13" 1200+90	R†	2,379	
L-59 TO L-62	"NB11"/"D13"/"D16" 1242+54 TO "D16" 1270+06	L†	2,752	
	"NB11"/"D13"/"D16" 1242+54 TO "D16" 1270+06	R†	2,752	
	CENTERLINE RUMBLE STRIP FROM PAVEMENT DELINEATION SHEETS			68,425
	TOTAL		63,646	68,425

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

SHEET No.	STATION	TEMPORARY COVER	TEMPORARY SILT FENCE	TEMPORARY STRAW BALE BARRIER	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY CHECK DAMS (FIBER ROLL)	TEMPORARY FIBER ROLLS	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY CONCRETE WASHOUTS
		SQYD	LF	LF	EA	LF	LF	SQYD	EA	EA
L-1 TO L-13	"D13" 645+66 TO "D13" 764+31	57,109	1,476	1,476	21	2,461	93,504	16,325	14	18
L-13 TO L-24	"D13" 769+71 TO "D13" 882+96	38,092	853	853		2,247	22,310	10,884	7	5
L-25 TO L-35	"D13" 885+35 TO "D13" 1000+65	49,335	2,854	2,854		2,133	38,058	14,113	7	7
L-35 TO L-47	"D13" 1000+65 TO "D13" 1117+97	40,185	984	984		2,231	34,613	11,482	7	5
L-47 TO L-64	"D13" 1118+84 TO "D13" 1296+58	85,812	8,760	8,760		4,134	30,676	24,578	14	11
	TOTAL	270,533	14,927	14,927	21	13,206	219,161	77,382	49	46

ROCK BLANKET

SHEET No.	LOCATION	SQYD
L-66	"PARK & RIDE NORTH ENTRANCE ISLAND"	12
L-7	"ISLAND D"	103
L-8	"ISLAND E"	20
L-7	"ISLAND F"	137
L-4	"INDUSTRIAL ISLANDS" SOUTH	225
L-4	"INDUSTRIAL ISLANDS" NORTH	360
	TOTAL	857

ADJUST MANHOLE TO GRADE

SHEET No.	LOCATION	EA
D-70	14' R† "FR" 67+47.60	1
D-7	13' L† "FR" 72+47.56	1
D-8	13' L† "FR" 76+97.52	1
	TOTAL	3

TEMPORARY FENCE (TYPE ESA)

SHEET No.	LF
L-1	568
L-3	579
L-17	371
L-18	330
L-19	566
L-20	699
L-21	179
L-24	510
L-25	298
L-33	723
L-34	237
TOTAL	5060

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITY SHEET, EXAMPLE "65 Q-13"

SUMMARY OF QUANTITIES

Q-13

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-13" RELEASED 1/6/2012

LAST REVISION 00-00-00 DATE PLOTTED => 29-DEC-20 TIME PLOTTED => 11:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R11.9/R24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

FENCE AND GATE SUMMARY

SHEET No.	STATION	CHAIN LINK FENCE (TYPE CL-6)	CHAIN LINK FENCE (TYPE CL-4)	WROUGHT IRON FENCE	10' CHAIN LINK GATE (TYPE CL-6)	14' CHAIN LINK GATE (TYPE CL-6)	20' CHAIN LINK GATE (TYPE CL-6)	FENCE (TYPE WM, METAL POST)	REMOVE FENCE	TEMPORARY FENCE
		LF	LF	LF	EA	EA	EA	LF	LF	LF
L-1 TO L-4	"D13" 646+14.83 TO 678+43.60	5,399						16	4,652	3,117
L-2, L-3, & L-67	"INDR1" 661+65.70 TO 679+23.10	1,063							1,183	
L-3, L-65 TO L-69	"IND1" 32+33.66 TO 83+51.55	2,561						27	1,958	2,789
L-4 TO L-6	"D13" 678+43.60 TO 690+10.44	2,298			4				1,053	1,476
L-6 TO L-9	"D13" 690+10.44 TO 723+58.70	701								984
L-6 TO L-8	"F1" 690+45.45 TO 706+85.34	1,655								
L-8 TO L-9	"F2" 705+59.73 TO 721+01.87			1,635	1					
L-6 TO L-7	"F4" 690+71.08 TO 706+08.38	1,644			1					
L-7 TO L-9	"F5" 706+03.04 TO 720+67.31	1,302								
L-9 TO L-10	"D13" 723+58.70 TO 730+60.46	1,833			2			74	1,896	656
L-13 TO L-18	"D13" 760+57.87 TO 807+08.41	2,345			4			746	1,885	984
L-18 TO L-19	"D13" 808+69.21 TO 818+83.90	9,492						234	3,676	8,202
L-72 TO L-73	"NEL1" 32+80.83 TO 65+61.66	3,496						150	5,210	4,950
L-19 TO L-21	"NB9" 823+33.51 TO 849+79.26	5,289						9	152	5,906
L-21 TO L-24	"D13" 849+79.26 TO 883+03.95	6,963								2,625
L-25 TO L-28	"D13" 885+07.88 TO 918+63.24	7,417			2					4,593
L-74 TO L-77	"NIC1" 23+62.19 TO 72+17.82	6,518						2,422	9,027	8,761
L-28 TO L-29	"D13" 921+91.32 TO 933+85.86	2,858								328
L-29 TO L-33	"D13" 933+85.86 TO 985+32.90	10,690			2					3,609
L-33 TO L-35	"D13" 985+32.90 TO 1001+89.98	3,273								1,640
L-35 TO L-37	"NB10" 1001+89.98 TO 1025+15.61	4,952						10	470	2,789
L-78 TO L-80	"WIS1" 16+40.41 TO 72+18.20	4,592						1,073	4,907	6,234
L-38 TO L-40	"NB10" 1030+85.64 TO 1049+63.3	3,799			1			134	6,286	2,133
L-40	"D13" 1049+63.30 TO 1050+34.39	298							2,664	
L-40 TO L-45	"D13" 1053+48.55 TO 1102+35.88	9,998			2				294	5,250
L-45 TO L-47	"D13" 1102+35.88 TO 1118+10.68	3,347			1					1,312
L-47 TO L-51	"D13" 1118+10.68 TO 1163+38.23	9,558			4			76	2,208	3,937
L-51 TO L-52	"D13" 1163+38.23 TO 1175+19.33	2,985	1,314			2		76	2,313	984
L-81 TO L-83	"DOWD1" 32+80.83 TO 85+29.32							755	4,883	481
L-52 TO L-55	"D13" 1175+19.33 TO 1199+02.28	4,852	2,417		2					2,461
L-55 TO L-57	"NB11" 1199+02.28 TO 1222+42.63	5,567	2,822							4,757
L-86 TO L-91	"EB11" 62+80.83 TO 84+39.59	1,013	1,662					47	5,088	363
L-57 TO L-59	"NB11" 1225+30.38 TO 1247+19.10	6,189					1		3,129	2,789
L-59	"D13" 1247+19.10 TO 1249+34.00	420						11	7,348	98
L-59 TO L-64	"D16" 1249+34.00 TO 1319+54.98	5,657						22	3,937	2,789
	TOTAL	140,024	8,215	1,635	26	2	1	5,882	74,219	86,997

THIS EXAMPLE IS ONE OF MANY EXAMPLES OF THE VARIOUS TYPES OF PROJECT PLAN SHEETS FROM THE SAME CONSTRUCTION PROJECT, "ROUTE 65 BYPASS PROJECT."

SUMMARY OF QUANTITY SHEET, EXAMPLE "65 Q-14"

SUMMARY OF QUANTITIES

Q-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

SUMMARY OF QUANTITIES SHEET, EXAMPLE "65 Q-14" RELEASED 1/6/2012

LAST REVISION 00-00-00

DATE PLOTTED => 29-DEC-2012
TIME PLOTTED => 11:27

SUPERSEDES EXAMPLE RELEASED 10/30/09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

THE SUMMARY OF QUANTITIES HAS TWO MAIN FUNCTIONS:

1. Summarizes items that are generally shown on the Layout sheets or Construction Detail sheets.
2. Summarizes totals from some of the various other quantity sheets.

GENERAL INSTRUCTIONS:

1. As much as possible group similiar type items together. Items included on the Summary of Quantities sheets are usually grouped by the type of work or the location of work.
2. If the same bid item is shown on different types of plan sheets (i.e. Layouts, Drainage, Stage Construction, Structure plans, etc.), the "Grand Total" is usually summarized on the Summary of Quantities sheets.
3. If a bid item is shown on different sheets, then the quantity total is to be on a separate row, labeled as "Subtotal." The "Grand Total" for that bid item should then be shown on the Summary of Quantities.
4. Headings for all "Bid Items" must match the description for the bid item shown in the Bid Item List. The total project quantity for an item needs to correspond to the quantity shown in the Bid Item List.
5. Use the same number of decimals for the same bid item (same degree of accuracy for entire column). The decimal point (period) is to line up within the column, making it quick and easy to see the quantities.

   For quantities that total into the ten-thousands, use a comma. A comma may be used for quantities that total into the thousands. If a comma is used, apply it to all columns within that specific table.
6. "Speciality Item" is no longer to be used to identify a bid item.

   "Final Pay" is only to be identified on the Bid Item List. Final Pay is not to be mentioned anywhere within the contract plans.
7. Excavation and Embankment quantities are to be summarized in the same manner on the Profile Sheets and the Summary of Quantities sheets. These quantities are the actual unadjusted values.

   The Grand Total for Embankment should account for any shrinkage or swelling of the Roadway Excavation. Use a separate row in the earthwork quantity table to identify any Subsidence quantity, if it is applicable to the project.
8. For retaining walls or sound walls, the quantities for each wall is to be listed with the sheets for each wall. If there is more than one wall of the same type within the project (common bid items), then summarize the bid items for the walls on the Summary of Quantities sheets.

   If some walls are included in the Structures portion of the PS&E submittal, in addition to the roadway submittal, include a cross reference note saying there are additional walls in the structures plans.

The cell AC=QSHEET in the CTCELLIB.cel is available to use as a template to set up quantity tables.

TABLE TITLE:

FT=43, TX=12, WT=0, LV=60, CO=0

Table Title is to be placed outside and above the table (not enclosed in the table).

The title of a table should encompass similar items of work (i.e. ROADWAY ITEMS or DRAINAGE QUANTITIES). Specific items of work should be avoided in the title of a table.

COLUMN TITLES AND UNITS OF MEASUREMENT:

FT=3, TX=8.75, WT=2, LV=60, Upper Case except for Std abbreviations

QUANTITY TABLE TEMPLATE

STATION	DIRECTION		EA	LF		
FROM HERE TO THERE	NB		1	24.6		
FROM THERE TO HERE	SB		1	104.7		
SUBTOTAL				129.3		
TOTAL			2			

ALL TEXT IN TABLE:

FT=3, TX=7, WT=1, LV=60, CO=0
Upper Case except for standard abbreviations

SUBTOTAL, GRAND TOTAL OR TOTAL:

FT=3, TX=8.75, WT=2, LV=60,

LINE WIDTHS FOR THE TABLE:

Exterior border; WT=2, LV=60, CO=0

Horizontal line separating headings or unit callouts; WT=1, LV=60, CO=0

Horizontal lines separating rows; WT=0, LV=60, CO=0

Vertical lines separating columns; WT=1, LV=60, CO=0

Horizontal line separating Totals, Grand Totals or Subtotals; WT=1, LV=60, CO=0

SPACING BETWEEN ROWS: (for single line of text)

Use 14 feet between rows so half the height of the text is above and below the text for each row.

SPACING OF ROW: (for Total or Subtotal and Units of Measure)

For rows showing totals and units of measure, use 18 feet. Text size for summary heading is 8.75 feet. Instead of making row 17.5 feet, round to 18 feet.

TEXT JUSTIFICATION:

Left-Center (LC) for location or description column

Center-Center (CC) for units of measure

Right-Center (RC) for quantity values (so the decimal or comma will line up)

SPACING OF ROWS: (with 2 or more lines)

For 2 lines: calculate 7 feet twice, plus half the height above and below, and half the height in between lines.

Total would be 24.5 feet. Round up to the nearest 2 foot increment (26 feet).

GENERIC SUMMARY OF QUANTITIES SHEET, BASIC INFORMATION FOR TABLES ON Q-SHEET

SUMMARY OF QUANTITIES

Q-1

GENERIC SUMMARY OF QUANTITIES SHEET RELEASED 5/4/2012

LAST REVISION 00-00-00 | DATE PLOTTED => 27-APR-2012 | TIME PLOTTED => 13:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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Since the multiplying factor is per side, showing the direction of traffic helps to clarify the location of the tapered edge and in determining the tons of HMA or cubic yards of PCC.

Refer to Standard Plan P75 for multiplying factors based on the total thickness (TT) of the tapered edge.

TAPERED EDGE

SHEET No.	STATION	DIRECTION	(N) TOTAL THICKNESS OF TAPERED EDGE	(N) LENGTH TAPERED EDGE	HOT MIX ASPHALT (TYPE A)
			FT	LF	TON
L-1 TO L-7	"A1" 179+58 TO 279+58	SB	0.40	10,000	104.0
L-21 TO L-23	"B2" 432+56 TO 462+56	NB	0.40	3,000	31.2
L-32	"C3" 79+33 TO 85+33	SB	0.45	600	7.9
		SUBTOTAL			143.1*

(N) NOT A SEPARATE BID ITEM

* QUANTITY INCLUDED IN PAVEMENT STRUCTURE QUANTITIES SUMMARY

The quantity table for tapered edge is to include the total thickness of the tapered edge (ft) and length (LF) of the tapered edge to make it easy to calculate the tons of HMA (or PCC). See Standard Plan P75 for the correct multiplying factor for converting length of tapered edge (miles) to tons of HMA or cubic yards of PCC.

NOTE: Remember to convert the lineal feet of tapered edge to miles before applying the multiplying factor.

The columns for total thickness and length of tapered edge is to be identified with a (N) - NOT A SEPARATE BID ITEM.

This subtotal is to be added as a separate row in the Roadway Items quantity table.

The quantity table for tapered edge is to be handled similar to HMA dike. But there is one difference; constructing of dike is a bid item, but the constructing of tapered edge is not.

The bid item for tapered edge is either added to the project's quantity for tons of HMA or cubic yards of concrete.

The subtotal of HMA for tapered edge is to be included as a row in the pavement structure quantity table (usually called "Roadway Items") on the summary of quantities.

GENERIC SUMMARY OF QUANTITIES SHEET 2, FOR TAPERED EDGE QUANTITY TABLE

SUMMARY OF QUANTITIES

Q-2

GENERIC SUMMARY OF QUANTITIES SHEET 2, RELEASED 09/17/2018

LAST REVISION 00-00-00 | DATE PLOTTED => 10-SEP-2018 | TIME PLOTTED => 17:52

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. 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.

This column is recommended when curb ramps and driveways are identified on the layouts and construction details.

Additional columns (or more information in the description column) can be added to help clarify which curb ramps or driveways are being paid under the "PRE/POST CONSTRUCTION SURVEYS" bid item.

PRE/POST CONSTRUCTION SURVEYS

SHEET No.	LOCATION	STATION	CURB RAMP-DRIVEWAY IDENTIFICATION	NUMBER OF CONSTRUCTION SURVEYS	DESCRIPTION
				EA	
C1	ROUTE 999 "B1" - NB OFF RAMP	134+51.43	CR #1, CR #4	2	CURB RAMPS
C2	ROUTE 999 "B2" - NB ON RAMP	135+94.73	CR #7, CR #13	2	CURB RAMPS
C3	ROUTE 999 "B4" - SB ON RAMP	134+39.77	CR #14, CR #17	2	CURB RAMPS
C4	ROUTE 999 "B3" - SB OFF RAMP	135+98.65	CR #19	1	CURB RAMP
C5 AND C6	ROUTE 999 "B1" PARK AND RIDE (NB)	129+17.62	CR #21 TO CR #23	3	CURB RAMPS
C7	ROUTE 1 "D1" (NB)	89+17.62	CR #27	1	CURB RAMP
C8	ROUTE 1 "D1" (NB)	91+56.34 TO 91+91.22	DW #9	1	DRIVEWAY
C8	ROUTE 1 "D1" (NB)	93+08.22 TO 93+48.22	DW #17	1	DRIVEWAY
C8	ROUTE 1 "D1" (NB)	98+68.93 TO 99+06.47	DW #27	1	DRIVEWAY
C7	ROUTE 1 "D1" (NB)	104+67.31	CR #31	1	CURB RAMP
			TOTAL	15	

NOTE:

The name of the quantity table must be the same as the bid item name.

GENERIC SUMMARY OF QUANTITIES SHEET 3, FOR PRE/POST CONSTRUCTION SURVEYS QUANTITY TABLE

SUMMARY OF QUANTITIES

Q-3

GENERIC SUMMARY OF QUANTITIES SHEET 3 - PRE/POST, RELEASED 9/10/2013

LAST REVISION 00-00-00 DATE PLOTTED => 09-SEP-2013 TIME PLOTTED => 11:23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY CHECKED BY

REVISED BY DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

GENERIC LANDSCAPE PLAN SHEET RELEASED 06/19/2020

NOTE: FT=3, TX=8.75, WT=2, LV=rd_RIGHT-OF-WAY-anno(23), Upper Case, Underlined

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

Where right of way is shown on a landscape, irrigation, planting, erosion control, etc., plan view sheet, include this note. Typically, the right of way note is placed in the upper left corner of the sheet.

See subsection "Right of Way" in Section 2-1.1

CTCELLIB_NamedLevels.cel: AC=NOTE2,
TEXT: FT=3, TX=7, WT=1, LV=rd_RIGHT-OF-WAY-anno(23), Upper Case

Right of way shown on a plan view sheet must be depicted with a solid line. Place the label "R/W" above or below the line (not within Caltrans Right of Way) with no leader line and arrow. Typically, the Right of Way line is shown on all landscape sheets.

INFORMATION ON THIS EXAMPLE APPLIES TO ALL LANDSCAPE, IRRIGATION, AND PLANTING PLAN SHEETS

See "Generic Landscape Border Sheet" for basic landscape plan border sheet information not shown on this example.

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

Use standard North Arrow for orientation. The preferred location of the North Arrow is the upper right portion of the sheet within the maximum clip frame.
AC=NARR, WT=1, LV=pp_PRESENTATION(10), CO=0, AS=1

NOTES, LEGENDS, SYMBOLS, ACRONYMS AND ABBREVIATIONS:

- Notes, legends, symbols, acronyms and abbreviations applicable to each specific project are to be shown on the first sheet of the grouping of the plan sheet type (roadside clearing, removal plans, maintain/establish planting, landscape, irrigation, planting, etc.). Do not duplicate Standard Plans acronyms, symbols or abbreviations in these listings.
- If a note(s) is specific to only one sheet of a single plan sheet type, use the heading; NOTE(S) (THIS SHEET ONLY): If the specific note is to appear only on the first sheet of a certain plan sheet type, DO NOT include it with the other notes that apply to all sheets of that plan type.

SCALES:

- For plan view sheets, a horizontal scale of 1" = 50′ (base scale) should typically be used. For projects in rural areas, a horizontal scale of 1" = 100′ may be used.
- A horizontal scale of 1" = 20" should be used where greater detail and clarity is required.

STATIONING:

- For plan view sheets, stationing must be based on 100 feet per station with full annotation at 500 foot stations (multiple of 5). Annotation at 100 foot stations is a single digit number (the ones column). Station tick marks are centered on the alignment line. No minor tick marks. Annotation is placed below the alignment line. Annotation and length of station tick mark (in a MicroStation design file) is 2.8′ at 1" = 20′ scale, 7.0′ at 1" = 50′ scale and 14.0′ at 1" = 100′ scale.
- Do not include "+00" at full stations on any sheets.

COORDINATE VALUES:

- Coordinate values are to be maintained within the plan view sheets. This will allow retrieval of information by other functional units that do not have the base map and for reuse of this information to develop future projects. Sharing files with retained coordinate values allows for quick positioning of information back to the reference file, base map or aerial photo mapping.

PLAN VIEW SHEETS:

- Plan view sheets are to be oriented to show mainline stationing progressing from left to right with increasing station values.
- Mainline stationing must not overlap from one sheet to another. Match lines must be shown with the callout of "MATCH LINE" on each sheet.
- Match lines are to be placed when a route is shown on more than one sheet. The match line break is to be located halfway between station tick marks (i.e. +50) and is to be perpendicular to the alignment line. If a match line occurs at a station other than +50, the station should be identified with the match line callout (i.e. "MATCH LINE +65").
- References to adjoining sheets at the match lines, identified such as "MATCH LINE (PP-5)" is optional, but is advisable where many match lines are shown on a sheet (such as multiple sheets to show interchange areas or intersections of roads).
- If arrangement of the mainline alignment is such that "stacking" is necessary (mainline alignment stacked one above the other on the same plan view sheet), the sheet shall be arranged so that the stationing progresses from the top half of the sheet to the bottom half of the sheet using match lines. If stacking of alignment is used on any plan sheet, this configuration applies.
- Show offsets and distances/lengths in decimal feet with a single quote mark.

STANDARDS:

- Text should be placed above or below the line work if leaders and arrowheads are not used. Placement of text should not break line work or shapes.
- Use leaders and arrowheads consistently.
- Caltrans line weights, line styles, and graphical representations of features must conform to the CADD Users Manual, Plans Preparation Manual, and Standard Plans
- Abbreviations, symbols, and symbology must conform to the Standard Plans.
- Level Symbology is NOT a substitute for adhering to Caltrans standards. Level Symbology redefines attributes (color, style and weight) of elements on selected levels for clarity of viewing a design file on the monitor.

DETAILS AND QUANTITIES:

- Not every advertised contract plan set includes project specific details as the Standard Plans include the majority of details often needed.
- Quantities must be included as part of the project plans.
- When appropriate, show dimensions and sizes in feet and inches with a single quote mark for feet and a double quote mark for inches.
- Each bid item identified on plan sheets must be called out (labeled) exactly the same as it appears in the quantity tables, bid item list and special provisions.
- PPM **RULE** regarding the use of commas in quantities: Use the same amount of decimal places on the plan and the quantity summaries (same degree of accuracy). Commas are not used for thousands, if all entries in the item column have four or fewer digits left of the decimal point. Commas are used for thousands, if any individual entry in the item column has five or more digits left of the decimal point. In numbers of five digits or more, use a comma after every third digit left of the decimal point.
- Engineer's estimate **RULE** regarding decimal places in quantities: Round totals in quantity tables on the plans to 1 decimal point. This is because the total quantities shown on the plans must match the quantities on the Engineer's Estimate. The software used to process payment from the BEES (Engineer's Estimate) can accommodate 1 decimal place only.

SHEET CONTENT:

- All projects must have at least two sheets (a title sheet and one other showing proposed work). It is recommended that separate utility sheets be included for each project. The layouts are the base plan sheets and all plan sheet information can be shown on them. If the layouts become too crowded or cluttered, other plan sheets should be used to clearly show the proposed work (i.e. landscape, irrigation, planting, etc).
- Some projects do not need plan view sheets to show the proposed work. If the detail and quantity sheets (along with the special provisions) can clearly and concisely show and explain the proposed work, then plan view sheets may not be necessary.
- When combining different types of work (bid items) on one plan sheet, the majority of the work on that plan sheet will determine the selected sheet name. For example, plant removal may be on the roadside clearing plan or planting plan, or maintain existing planted area may be shown on the planting plan, if there is room.
- Eliminate extraneous information NOT directly related to that specific plan sheet.
- Background topography should not generally be shown outside the right of way unless the design of the project (or specific sheet) requires it.
- If the number of details or the number of quantity tables do not warrant an entire sheet, and if there is room, details or quantity tables may be shown on a schedule sheet or plan view sheet that they support (i.e., show an irrigation detail or irrigation quantity table on a sprinkler schedule sheet or on an irrigation plan sheet, and show a planting detail or planting quantity table on a plant legend sheet or on a planting plan sheet). Do not combine irrigation details or planting details on landscape (hardscape) details sheets. Do not combine irrigation quantity tables or planting quantity tables on landscape (hardscape) quantity sheets.

The word "APPROVED" in this statement clarifies the type of work (identified as bid items on the sheet) for which the Landscape Architect is taking responsibility.

On each plan view sheet that shows one type of work, use approved for "PLANTING," "IRRIGATION," "EROSION CONTROL," or "HARDSCAPE" to correspond to the sheet name and ID.

Cells NOTE15, NOTE16, NOTE19, and NOTE37 in the cell library (CTCELLIB_NamedLevels.cel) are available to use for the above APPROVED FOR... statements, respectively.

Place statement as shown at the sheet bottom center.

TEXT:
FT=3, TX=8.75, WT=1, LV=border_INSIDE-BORDER-anno(10), Slant=20° Upper Case

APPROVED FOR PLANTING WORK ONLY

GENERIC LANDSCAPE PLAN SHEET, BASIC REQUIRED INFORMATION

Use only drawing names and plan sheet IDs listed in Section 2.1 of the CADD Users Manual.

FT=43, TX=14.5, WT=0, LV=border_INSIDE-BORDER-anno(10), Upper Case. Use "Center Center" justification

Text may be reduced to a minimum of TX=12 for space constraints.

For text sizes see CADD Users Manual Section 2.6

Use appropriate scale for the work involved, see "SCALES" in section 2-1.3 of the PPM.

Use a colon after the word "SCALE" and insert a space on either side of the "="

FT=3, TX=8.75, WT=2, LV=border_INSIDE-BORDER-anno(10), Upper Case. Use "Center Center" justification

PLANTING PLAN
SCALE: 1" = 50′
PP-XX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE
SENIOR LANDSCAPE ARCHITECT
CALCULATED-DESIGNED BY | CHECKED BY
REVISED BY | DATE REVISED
PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => TIME PLOTTED =>

SUPERSEDES EXAMPLE RELEASED 03/19/2018

Used by district for tracking design changes after initial "calculated-designed by" and "checked by" has been completed. Used if design changes have been made. Dates are never to be later than Plans Approval Date.
FT=3, TX=6, WT=1,
LV=LV=border_WITHIN-BORDER-anno (10),
CO=0.

GENERAL:
Both the named level and numbered level information are shown on this sheet
There is no direct one to one conversion for all cases between named levels and numbered levels
Numbered Level information is shown in parenthesis after the named level
e.g. LV = border_PROJ-ID-BLOCK-anno (10)

ID BLOCK:
FT=3, TX=7, WT=1,
LV=border_PROJ-ID-BLOCK-anno (10),
CO=0.
NOTE: Different than title sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

See Note 1

LICENSED LANDSCAPE ARCHITECT

See Note 3

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.

LICENSED LANDSCAPE ARCHITECT
(Name & License No.)
See Note 1
Signature
Renewal Date
Date
STATE OF CALIFORNIA

See Note 2

If Caltrans Landscape Architect to sign individual plan sheet, use the cell sheet border (AC=LAND). Consultants use (AC=LAND2).

Mandatory printed name, first and last, (middle name or initial may also be included) of persons who performed design/calculations and checking for each individual plan sheet. This verifies Quality Control (QC) of the project. The same person cannot be entered for both. Either person may or may not be licensed. The person signing and sealing the individual plan sheet may or may not be either of the two names shown.

TEXT: FT=3, TX=6, WT=1,
LV=border_WITHIN-BORDER-anno (10), CO=0.

NOTES: (These notes apply to all Contract Plan Sheets)

1. The signature of the appropriate licensed Landscape Architect who is in responsible charge for developing the content of the plan sheet is to appear on each individual plan sheet. The border shown here is border sheet cell "LAND" found in the latest Caltrans Cell Library (CTCELLIB_NamedLevels.cel). A second signature of the same licensed Landscape Architect is to be inside the seal, resized to fit. For title information about title sheet sealed by a Landscape Architect, see Title Sheet Example A-1.

2. Text Inside the Seal:

   Use FT =3, TH = 5, TW = 5, LV=border_SEAL (10) and WT = 1 for date of renewal and date of signature.
   Use FT = 3, TH = 3, TW = 3, LV=border_SEAL (10) and WT = 0 for printed name and license number that is arched above the signature within the seal.

3. Use FT=3, TX=7, WT=1, LV=border_SIGNATURE (10), CO=0. Example: March 3, 2012. The date of the landscape architect's signature is never to be later than the plans approval date. See Title Sheet, Examples "A" and "C" for explanation of how the plans approval date is determined.

Mandatory printed name, first and last, (middle name or initial may also be included) of person supervising person signing sheet. Oversees person signing sheet by providing instruction in developing the sheet and assists to clear project constraints through the Construction Contract Development process. This verifies Quality Assurance (QA) has been performed for the project.

TEXT: FT=3, TX=6, WT=1,
LV=border_WITHIN-BORDER-anno (10), CO=0.

Name of the functional unit responsible for development of the plan sheet, e.g., Design, Traffic Design, etc. Where one Caltrans district develops the plan sheet for another Caltrans district, the functional unit is to be preceded with the preparer's district number, e.g., 01-DESIGN

TEXT: FT=43, TX=10, WT=0, LV=border_WITHIN-BORDER-anno (10),
CO=0, Upper Case

For Landscape Architecture - FT=43,
TH=10, TW=8, WT=0, LV=border_WITHIN-BORDER-anno (10),
CO=0 Upper Case

NOTE: IF A CONSULTANT OR LOCAL AGENCY PREPARES THE INDIVIDUAL PLAN SHEET, THIS AREA IS TO BE LEFT BLANK.

GENERIC LANDSCAPE SHEET BORDER, BASIC BORDER INFORMATION FOR PROJECT SHEETS, EXCEPT TITLE SHEETS

This date is used by district drafting staff to reflect the last drafting change to each sheet. Date is never to be later than Plans Approval Date. (Not required for PS&E submittal.)

BORDER TEXT:
FT=3, TX=7, WT=1,
LV=border_SHEET (10), CO=0

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
PLANS PREPARATION MANUAL

GENERIC LANDSCAPE SHEET BORDER RELEASED 04/16/2020

LAST REVISION 00-00-00 | DATE PLOTTED => 16-APR-2020 | TIME PLOTTED => 12:56

BORDER LAST REVISED 7/2/2010 | USERNAME => s111271 | DGN FILE => Sht13-Example-A01-GenericLandscapeSheetBorder.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT Name & License No. Signature Renewal Date Date 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.

IRRIGATION SPRINKLER SCHEDULE

The irrigation sprinkler schedule identifies sprinkler types and specifies item components. Sprinkler symbols are identified on the sprinkler schedule, not on the irrigation quantity table.

See "Summary of Quantities" narrative in Section 2-2.19 and Generic Summary of Quantities example sheet for additional information about standards for tables, e.g. text, line weight, etc.

Resize symbols used on the Irrigation Plan as needed to fit in the table. The Caltrans cell SPRSCH includes standard sprinkler symbols, placed outside the sheet border, that are already resized to copy and paste into the irrigation sprinkler schedule table as needed.

Use the cell from the Cell Library and add or delete rows and columns as required

REPEATED INFORMATION

Identical entries listed multiple times under the same heading should be repeated in each applicable box or can be merged if they are adjacent. Down arrows or ditto marks are not allowed.

BLANK BOXES

If no entry is needed, leave a box blank, don't enter a dash. If an entire row or column has no entries, delete the row or column; don't leave it empty.

The precipitation rates of the sprinklers connected to the same valve must not vary by more than 10 percent.

Enter PI or FH

See Standard Plan H4

IRRIGATION SPRINKLER SCHEDULE

SYMBOL	ITEM DESCRIPTION	SPRAY PATTERN	RADIUS	LENGTH X WIDTH	OPERATING PRESSURE	DISCHARGE RATE (+/- 5%)		PRECIPITATION RATE (+/- 5%)	INLET CONNECTION DIAMETER	SWING JOINT TYPE	RISER SPRINKLER ASSEMBLY			POP-UP SPRINKLER ASSEMBLY		TREE WELL DRAINPIPE LENGTH	REMARKS
											TYPE	HEIGHT	MATERIAL	HEIGHT	SPRINKLER PROTECTOR TYPE		
	The entries in this column should match the descriptions in the Bid Item List, verbatim.		ft	ft	psi	GPM	GPH	INCH/hr	INCH			INCH		INCH		INCH	additional remarks or notes

SPRINKLER SYMBOLS

Use standard sprinkler symbols from the current Caltrans cell library. The symbols on the irrigation sprinkler schedule must be consistent with the project irrigation plans.

○ Circle symbol is typically used for part circle spray pattern.

□ Square symbol is typically used for full circle spray pattern.

Circle and square symbols are used for gear driven sprinklers and they include a number within the symbol. Use an odd number for a riser assembly and an even number for a pop-up assembly.

△ ▲ ○ ◉ Typically used for shrub spray, stream spray or bubblers with O/C spacing and spray pattern.

SPRAY PATTERN ABBREVIATIONS

F/P	Full/Part Circle	TT	Two-Thirds Circle	CS	Center Strip
F	Full Circle	H	Half Circle	SST	Side Strip
P	Part Circle	T	Third Circle	EST	End Strip
TQ	Three-Quarter Circle	Q	Quarter Circle		

OPERATING PRESSURE, DISCHARGE RATE AND PRECIPITATION RATE

Operating pressure and discharge and precipitation rates should reflect manufacturer's catalogue specification, not necessarily the field performance of the sprinkler.

INLET CONNECTION

Show the National Pipe Thread (NPT) size expressed in inches. It is not necessary to indicate male or female threads.

SWING JOINT TYPE

See Standard Plan H5. Indicate detail type.
Type I or II: Use adjacent to shoulders, dikes, curbs and sidewalks.
Type III: Use on slopes. Allows for adjusting risers perpendicular to the plane of the slope.

RISER SPRINKLER ASSEMBLY TYPE

See Standard Plan H4. Indicate detail type.

Riser Type I
Use on full circle and half circle sprinkler heads which are less likely to get broken but may suffer damage from dragging spray hoses, string trimmers and other maintenance activities. It is recommended to specify GSP riser material to ensure the coupling is in the weak point in the riser.

Riser Type II
Use where heads are not located in an area subject to disturbance by vehicles or pedestrians, i.e., immediately adjacent to walls.

Riser Type III
This is a flexible riser to be installed where risers have a moderate potential to get broken.

Riser Type IV
Use where risers are likely to get broken, i.e.: adjacent to shoulders where vehicles may run over them or in pedestrian areas where pop-up sprinklers are not practical. Riser Type IV is intended to be used with a standard PVC coupling or a device that breaks upon impact and automatically stops the flow of water depending on the circumstances. Riser material should be GSP. Do not callout for a riser support when using Type IV as it comes with the support.

Riser Type V
Use where flood bubblers are placed in plant basins. No swing joint is specified when this riser is used.

ROW SPACING

Use 26 feet between rows for single or double line of text so that there is room for the sprinkler symbol. Use 36 feet between rows for triple line of text.

HEIGHT

Indicate the height of the riser above the finish grade in inches. See Standard Plan H4 that illustrates what is considered the riser height.

SPRINKLER PROTECTOR TYPE

See Standard Plan H5. Indicate sprinkler protector detail Type I or Type II. Sprinkler protectors are used adjacent to curbs, dikes, shoulders, edge of travelled way, toe of slope, or as needed where sprinklers or quick couplers are likely to be driven on.

When the ISS sheet includes the Irrigation Quantity Tables (no IQ sheets), do not change the ISS sheet name.

NOTES:

① NOTE
② NOTE
③ NOTE
④ NOTE
⑤ NOTE
⑥ NOTE

Make notes project specific. Circle the note number and show the number circled in the column heading for the applicable item or in the applicable cell for the plant species.

Common example notes include:

DRIP TUBING TO HAVE A NON-ADJUSTABLE DISCHARGE RATE
FLOW SHUT-OFF FEATURE NOT REQUIRED
SPRINKLER BODY TO INCLUDE PRE-INSTALLED FLOW SHUT-OFF FEATURE
SPRINKLER BODY TO INCLUDE PRE-INSTALLED PRESSURE REDUCING FEATURE
INCLUDE CHECK VALVE (SPRING CHECK) ON RISER
SPRINKLER BODY TO INCLUDE PRE-INSTALLED CHECK VALVE

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE A1, IRRIGATION SPRINKLER SCHEDULE INSTRUCTIONS

IRRIGATION SPRINKLER SCHEDULE

ISS-1

EXAMPLE A1 IRRIGATION SPRINKLER SCHEDULE INSTRUCTIONS - RELEASED 05/05/2020

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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This example shows a completed irrigation sprinkler schedule plan sheet.

Use generic values for performance data in table that can be met by a variety of products.

IRRIGATION SPRINKLER SCHEDULE

SYMBOL	ITEM DESCRIPTION	SPRAY PATTERN	RADIUS ft	OPERATING PRESSURE psi	DISCHARGE RATE (+/- 5%) ① GPM	PRECIPITATION RATE (+/- 5%) INCH/hr	INLET CONNECTION DIAMETER INCH	SWING JOINT TYPE	RISER SPRINKLER ASSEMBLY TYPE	RISER SPRINKLER ASSEMBLY HEIGHT INCH	RISER SPRINKLER ASSEMBLY MATERIAL	POP-UP SPRINKLER ASSEMBLY HEIGHT INCH	POP-UP SPRINKLER ASSEMBLY SPRINKLER PROTECTOR TYPE	TREE WELL DRAINPIPE LENGTH INCH	REMARKS
⑤	RISER SPRINKLER ASSEMBLY (GEAR DRIVEN)	P	35	35	2.1	0.38	¾	I	I	12	PI				② ④ ⑤
⑥	POP-UP SPRINKLER ASSEMBLY (GEAR DRIVEN)	P	25	30	1.7	0.60	¾	I			PI	12	I		② ④ ⑤
7	RISER SPRINKLER ASSEMBLY (GEAR DRIVEN)	F	30	45	1.5	0.30	¾	I	I	12	PI				② ④
⑦	RISER SPRINKLER ASSEMBLY (GEAR DRIVEN)	P	15	30	0.42	0.41	¾	I	I	12	PI				② ④ ⑤
⑧	POP-UP SPRINKLER ASSEMBLY (GEAR DRIVEN)	P	30	35	2.15	0.64	¾	I			PI	12	I		② ④ ⑤
•	TREE WELL SPRINKLER ASSEMBLY			30	1.7		½	II			PI			12	FLOOD BUBBLER ③

Add rows as required

Do not use arrows or "ditto" marks for repeated information in table.

Notice, unused columns from excel spreadsheet or cell (in this case, "Length x Width" and "GPH") are deleted.

NOTES:

① - IF A PRESSURE COMPENSATING DEVICE IS SPECIFIED, THE DISCHARGE AND RADII SHOWN REFLECT ITS USE
② - INCLUDE AN INTERNAL OR EXTERNAL CHECK VALVE
③ - NON-ADJUSTABLE DISCHARGE RATE
④ - ADJUSTABLE ARC
⑤ - MATCHED PRECIPITATION RATE NOZZLES

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE A2, SAMPLE IRRIGATION SPRINKLER SCHEDULE

IRRIGATION SPRINKLER SCHEDULE

ISS-1

EXAMPLE A2 IRRIGATION SPRINKLER SCHEDULE SAMPLE - RELEASED 04/16/2020

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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IRRIGATION QUANTITIES

Irrigation quantity tables show the irrigation bid items and quantities used on the project. Tables do not include pipe fittings or control and neutral conductors because pipe fittings are included in supply line bid items and control and neutral conductors are a lump sum bid item.

Irrigation quantity tables are divided into two parts. The first part consists of tables that quantify all of the irrigation bid items that are installed on the "Lateral Supply Side of the Control Valve". There is one table for each irrigation controller. Irrigation bid items are quantified by their respective valve number (station) and subtotaled for all the valve numbers for each irrigation controller.

See "Summary of Quantities" narrative in Section 2-2.19 and Generic Summary of Quantities example sheet for additional information about standards for tables, e.g. text, line weight, etc.

Use Excel spreadsheet or cell from Cell Library to generate quantity tables.

If using Excel files, place the completed electronic files in the Resident Engineer's file for use during construction.

ROWS

Do not include rows for valve numbers (stations) that are not used on a specific irrigation controller.

COLUMNS

Edit the column headings to match the bid items used on the project, including sizes. Split the column for each kind of item into as many sizes as are used on the project. Omit columns that are not used by any of the irrigation controllers. Make the column headings identical for each irrigation controller table, even if there isn't an entry for one of the controllers in a given column. This makes all tables consistent and therefore easier to read.

Note that remote control valve quantities are shown on IQ-2, Irrigation Quantities (main supply side).

A column for CHECK VALVE is required only if there are additional check valves beyond those included in the sprinkler assemblies.

IRRIGATION QUANTITY (LATERAL SUPPLY SIDE OF CONTROL VALVE)

CONTROLLER LETTER	VALVE NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)			DRIP IRRIGATION TUBING	CHECK VALVE	SPRINKLER ASSEMBLY				
		X"	X"	X"	X"		TREE WELL	RISER (GEAR DRIVEN)	POP-UP (GEAR DRIVEN)	RISER	POP-UP
		LF	LF	LF	LF	EA	EA	EA	EA	EA	EA
A	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
SUBTOTAL A											

CONTROLLER LETTER	VALVE NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)			DRIP IRRIGATION TUBING	CHECK VALVE	SPRINKLER ASSEMBLY				
		X"	X"	X"	X"		TREE WELL	RISER (GEAR DRIVEN)	POP-UP (GEAR DRIVEN)	RISER	POP-UP
		LF	LF	LF	LF	EA	EA	EA	EA	EA	EA
B	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
SUBTOTAL B											
SUBTOTAL A											
TOTAL											

BID ITEMS

The column headings are the descriptions and pay units from the Bid Item List. Portions of bid item decriptions common to multiple bid items can be combined as shown here (i.e., "Plastic Pipe (Schedule 40) (Supply Line)" in various sizes and "Sprinkler Assembly."

If there is no entry in a cell, leave it blank, do not enter a dash.

IRRIGATION CONTROLLER LETTER

Include one table for each irrigation controller on the project. Edit the controller letter under the first column and after Subtotal at the bottom of the table. Use the same controller letters as shown on the irrigation plans. If more than 26 controllers are used, begin the alphabet again with double letters, i.e. AA,BB, etc.

SUBTOTAL

Unless there is only one irrigation controller on the project, use subtotal instead of total for each table. The subtotal represents the quantity only for the irrigation controler identified in the individual table.

On the final table, the top subtotal is for that table (the final controller).

On the final table add a row for each of the other irrigation controllers (by letter) and transfer the subtotals from the other tables.

The combined subtotals for all "Lateral Supply Side of Control Valve" tables are totaled here. The quantities typically match the Bid Item List (before rounding). Items that are installed on both the lateral supply side of the control valve and the main supply side of the control valve (e.g. supply line of the same size and material) should be shown as follows:

1. Place an asterisk in the cell with the total quantity used on the lateral supply side of the control valve.
2. Place the following note below the table: "* INCLUDED ON IQ-2" Irrigation Quantity (Main Supply Side of Control Valve) (sheet number as required).

   (See Example B3, sample).

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE B1, IRRIGATION QUANTITIES (LATERAL SIDE)

IRRIGATION QUANTITIES
IQ-1

EXAMPLE B1 IRRIGATION QUANTITIES (LATERAL SIDE) INSTRUCTIONS - RELEASED 04/23/2020

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => | TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date 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.

IRRIGATION QUANTITIES

Irrigation quantity tables show the irrigation bid items and quantities used on the project. Tables do not include pipe fittings or control and neutral conductors because pipe fittings are included in supply line bid items and control and neutral conductors are a lump sum bid item.

Irrigation quantity tables are divided into two parts. The second part consists of a table that quantifies all of the irrigation bid items that are installed on the "Main Supply Side of the Control Valve" (including control valves) organized by irrigation plan sheet. The total quantites are to match the project Bid Item List (before rounding).

See "Summary of Quantities" narrative in Section 2-2.19 and Generic Summary of Quantities example sheet for additional information about standards for tables, e.g. text, line weight, etc.

Use Excel spreadsheet or cell from Cell Library to generate quantity tables.

If using Excel files, place the completed electronic files in the Resident Engineer's file for use during construction.

COLUMNS

Edit the column headings to match the bid items used on the project, including sizes. Split the column for each kind of item into as many sizes as are used on the project. Delete unused columns.

VALVES

GATE VALVES are to be used to divide large irrigation systems into smaller sections so that if there is a malfunction in a section, may be isolated while the other sections remain functional.

GATE VALVES are typically installed at each end of an Irrigation Conduit.

BALL VALVES are used upstream of electric remote control valves connected to a manifold. Do not use ball valves at an Irrigation Conduit.

IRRIGATION QUANTITY (MAIN SUPPLY SIDE OF CONTROL VALVE)

SHEET No.	IRRIGATION CONTROLLER		COPPER PIPE (SUPPLY LINE)		BACKFLOW PREVENTER ASSEMBLY	FLOW SENSOR	WYE STRAINER ASSEMBLY	VALVE							CAM COUPLER ASSEMBLY	(SUPPLY LINE)		
	16-18 STATION (PEDESTAL MOUNTED)	24-32 STATION (WALL MOUNTED)						PRESSURE REGULATING	REMOTE CONTROL		DRIP ASSEMBLY	BALL	GATE			PLASTIC PIPE (CLASS 315)		GALVANIZED STEEL PIPE
	X"		X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"	X"
	EA	EA	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF
IP-1																		
TOTAL																		

BID ITEMS

The column headings are the descriptions and pay units from the Bid Item List. Portions of bid item description common to multiple bid items can be combined as shown here (i.e., "(Supply Line)" or "Valve" in various types and sizes.

If there is no entry in a cell, leave it blank, do not enter a dash.

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

When there are items that are installed on <u>both</u> the lateral supply side and the main supply side (e.g. 2½" class 315 plastic pipe), the quantities for those items are carried forward from the lateral supply quantity table to the main supply table as follows:

1. On the lateral supply side quantity table, show the quantity used on the lateral side of the valve and mark it with an asterisk. Place the note "* Included on IQ-2" (sheet number as required) below the table.

2. On the main supply side quantity table on IQ-2, quantities of items used on the main side of the valve are listed in rows by sheet number. Insert a SUBTOTAL row for the sums of the quantities used on the main supply side of the valve.

3. Insert an additional row below the subtotal row. Label it "FROM IQ-1" (sheet number as required). Use this row to carry over the quantities used on the lateral supply side of the valve (which were marked with an asterisk on IQ-1). Leave unused cells blank, do not enter a dash.

4. Use the "TOTAL" row to show the sum of the items used on the supply side of the valve <u>including the quantities</u> of those items which are used on both the lateral and the main supply sides. Show this quantity on the Bid Item List. Do not create a separate "Total Quantities" table duplicating all the items from the lateral supply side.

(See Example B4, sample).

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE B2, IRRIGATION QUANTITIES (MAIN SIDE)

IRRIGATION QUANTITIES

IQ-2

EXAMPLE B2 IRRIGATION QUANTITIES (MAIN SIDE) INSTRUCTIONS - RELEASED 04/23/2020

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

LAST REVISION 00-00-00 | DATE PLOTTED => 23-APR-2020 | TIME PLOTTED => 11:41

SUPERSEDES EXAMPLE RELEASED 07/21/2017

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Signature — Renewal Date — Date — STATE OF CALIFORNIA

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IRRIGATION QUANTITY (LATERAL SUPPLY SIDE OF CONTROL VALVE)

CONTROLLER LETTER	VALVE NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE) 1"	1¼"	1½"	2"	PLASTIC PIPE (CLASS 315) (SUPPLY LINE) 2½"	SPRINKLER ASSEMBLY TREE WELL	RISER (GEAR DRIVEN)	POP-UP (GEAR DRIVEN)
		LF	LF	LF	LF	EA	EA	EA	EA
E	1	96	192					3	4
	2	96	192					7	
	3	420	340				43		
	4	96	144		100			6	
	5	96	144		109			6	
	6	720	140		110		37		
	7	96	144		190			6	
	8	96	192			130		7	
	9	96	192			12		7	
	10	96	96		160			5	
	11	96	144		140			6	
	12	96	192			16		7	
	13	96	192			115		7	
	14	220	270	144		180	116		
	15	96	192			16		7	
	16	96	192			110		7	
	17	650	480		80		46		
	18	96	192			100		7	
	19	80	130		220			6	
	20	90	140		230			6	
	21	224	24					12	
	22	385	255	160		130	33		
	23	280		55				12	
	24								
SUBTOTAL E		4413	4179	359	1339	809	275	124	4

CONTROLLER LETTER	VALVE NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE) 1"	1¼"	1½"	2"	PLASTIC PIPE (CLASS 315) (SUPPLY LINE) 2½"	SPRINKLER ASSEMBLY TREE WELL	RISER (GEAR DRIVEN)	POP-UP (GEAR DRIVEN)
		LF	LF	LF	LF	EA	EA	EA	EA
F	1	100	75	20	220			7	
	2	240	160		16			11	
	3		90				18		
	4	850	110		40		51		
	5				110				
	6	240	160		46			11	
	7	240	40	160				8	
	8	120	160	240				7	
	9								
	10								
	11								
	12								
	13								
	14								
	15								
	16								
	17								
	18								
SUBTOTAL F		1790	795	420	432		69	44	
SUBTOTAL E		4413	4179	359	1339	809	275	124	4
SUBTOTAL D		2800	1907	772	806		279	54	18
SUBTOTAL C		3546	1900	340	975		121	73	
SUBTOTAL B		1676	1336	135	752		173	56	
SUBTOTAL A		2136	1586	380	1469		268	37	
TOTAL		16361	11703	2406	5773	809*	1185	388	22

* INCLUDED ON IQ-4 IRRIGATION QUANTITY (MAIN SUPPLY SIDE OF CONTROL VALVE)

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

In this example, 2½" class 315 plastic pipe is used on both the lateral supply side and the main supply side of the valve. The quantity is carried forward to the main supply side table. (See Example B4, sample).

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE B3, IRRIGATION QUANTITIES (LATERAL SIDE) SAMPLE

IRRIGATION QUANTITIES
IQ-3

EXAMPLE B3 IRRIGATION QUANTITIES SAMPLE - RELEASED 04/16/2020

LAST REVISION 00-00-00 | DATE PLOTTED => 16-APR-2020 | TIME PLOTTED => 12:57

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

PLANS PREPARATION MANUAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Signature — Renewal Date — Date — STATE OF CALIFORNIA

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IRRIGATION QUANTITY
(MAIN SUPPLY SIDE OF CONTROL VALVE)

SHEET No.	IRRIGATION CONTROLLER		BACKFLOW PREVENTER ASSEMBLY	FLOW SENSOR	VALVE						(SUPPLY LINE)	
	16-18 STATION (PEDESTAL MOUNTED)	24-32 STATION (WALL MOUNTED)			REMOTE CONTROL			BALL	GATE		PLASTIC PIPE (CLASS 315)	
			3"	2"	1"	1½"	2"	2"	2"	3"	2½"	3"
	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF
IP-1		1										
IP-2						4		2			15	960
IP-3						4		1			15	1100
IP-4	1		1	1	1	8	1	2	2	2	30	530
IP-5						4		1	1		50	970
IP-6												
IP-7						6		1			84	16
IP-8		4	2	2	1	8	2	2	4	2	30	470
IP-9						21		5			80	1220
SUBTOTAL	1	5	3	3	2	55	3	14	7	4	304	5266
FROM IQ-3											809	
TOTAL	1	5	3	3	2	55	3	14	7	4	1113	5266

When there are items used on both the lateral supply side (see Example B3, sample), and the main supply side, insert a row and include the quantity from the lateral supply side in the final total.

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE B4, IRRIGATION QUANTITIES (MAIN SIDE) SAMPLE

IRRIGATION QUANTITIES
IQ-4

EXAMPLE B4 IRRIGATION QUANTITIES SAMPLE - RELEASED 04/16/2020

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
PLANS PREPARATION MANUAL

SENIOR LANDSCAPE ARCHITECT | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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NOTE:

UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATION USED ON PLANTING PLAN.

See "Summary of Quantities" narrative in Section 2-2.19 and Generic Summary of Quantities example sheet for additional information about standards for tables, e.g. text, line weight, etc.

Sort plants alphabetically by botanical name in each plant group. Underline the first three letters of both genus and species. Underline the first letter of the variety name if used.

Edit the number of rows in the table to match the number of plant types used on the project. Don't include empty rows. If there are multiple plants in a plant group, merge the cell under the plant group column.

A row may be added for SOD as an exception to the "Plant Group" column heading.

Each plant species must have a reference number.

Resize symbols used on the Planting Plan as needed to fit in the table. There is no compulsory convention for the plant symbols for each plant species on all projects. Shrub and tree symbols are available in the Caltrans cell library. The Caltrans cell PLTLST includes shrub and tree symbols, placed outside the sheet border, that are already resized to copy and paste into the plant legend table as needed.

PLANT GROUPS F, H, M and SOD

Include the proposed area for plant groups F, H, M and Sod so that bidders and the contractor can verify the quantity of plants, soil amendment, and granular fertilizers in the bid item list and change orders.

Delete columns not used on the project. Do not include empty columns. If there is no entry in a cell, leave it blank, do not enter a dash.

Refer to the "Points of Measurement" detail in the Standard Plans and consider local growing expectations when determining minimum planting distances.

Indicate basin type I, II, or III per Standard Plan H2.

Wood mulch types are included in the Standard Specifications.

It is an option to add a column for root protector or foliage protector for projects that include these bid items. A column can be added for staking or staking can be indicated in the remarks column as necessary. See Landscape Example C2, Sample Plant Legend.

Describe type of plant and other special requirements such as standard, natural, or multi-trunked forms or specimen height or size.

PLANT LEGEND

PLANT GROUP (SIZE)	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	HOLE SIZE DIAMETER INCH	HOLE SIZE DEPTH INCH	BASIN TYPE	PLANT AREA GROUP F/H/M/SOD SQFT	WOOD MULCH BASIN CF	APPLICATION RATES PACKET FERTILIZER EA	SOIL AMENDMENT CF	IRON SULFATE oz	SLOW-RELEASE FERTILIZER Pit oz	SLOW-RELEASE FERTILIZER (N) Pit Estb oz	ORGANIC FERTILIZER Pit oz	ORGANIC FERTILIZER (N) Pit Estb oz	ON CENTER SPACING ft	MINIMUM PLANTING DISTANCE FROM: ETW ft	EP ft	FENCE ft	WALL ft	PAVED DITCH ft	EARTH DITCH ft	REMARKS
A (No. 1)	1																							
	2																							
	3																							
B (No. 5)	4																							
	5																							
F (FLATS)	6																							
H (CUTTING)	7																							
U (No. 15)	8																							
	9																							

(N) - NOT A SEPARATE BID ITEM

Use CF and oz on Plant Legend. Convert to CY and LB for Bid Items on the Quantity Table.

Note that although the quantity of fertilizer applied during PE is shown on the legend, that quantity is NOT included in the Bid item shown on the planting quantities sheet.

ROW SPACING

Use 26 feet between rows for single or double line of text so that there is room for the plant symbol. Use 36 feet between rows for triple line of text.

PLANTING REQUIREMENTS

1. NOTE
2. NOTE
3. NOTE
4. NOTE
5. NOTE
6. NOTE

Planting requirement notes are project specific. Show the number circled in the column heading for the applicable item or in the applicable cell for the plant species.

Common example notes include:

WOOD MULCH MUST BE XXX
SOIL AMENDMENT MUST BE XXX
SEE SPECIAL PROVISIONS
AS SHOWN ON PROJECT PLANS
SUFFICIENT TO RECEIVE ROOTBALL
STAKING [or ROOT PROTECTOR or FOLIAGE PROTECTOR] REQUIRED, SEE PROJECT PLANS
DEPARTMENT FURNISHED
APPLICATION RATES FOR PLANT GROUPS F/H/M/SOD ARE POUNDS PER 1,000 SQFT INSTEAD OF PER PLANT

A legend that shows project-specific area patterns and symbols (e.g. existing plants, plants to be removed, pruned, etc.) may be shown EITHER on the Plant Legend OR in the upper left corner of the first Planting sheet (PP-1), not both.

Do not list abbreviations that are already included in the Standard Plans.
Do not redefine a standard abbreviation on the project plans.

LEGEND:

- Exist TREE TO REMAIN
- MAINTAIN Exist PLANTED AREA
- CULTIVATION AREA

When the PL sheet includes the planting quantity tables (no PQ sheets), do not change the PL sheet name.

PLANT LEGEND
PL-1

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE C1, PLANT LEGEND INSTRUCTIONS

EXAMPLE C1 PLANT LEGEND INSTRUCTIONS - RELEASED 06/19/2020

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

SUPERSEDES EXAMPLE RELEASED 04/16/2020

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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NOTE:

UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATION USED ON PLANTING PLAN.

PLANT LEGEND

PLANT GROUP (SIZE)	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	HOLE SIZE DIAMETER INCH	HOLE SIZE DEPTH INCH	BASIN TYPE	PLANT AREA (GROUP F/H/M/SOD) SQFT	① WOOD MULCH BASIN CF	APPLICATION RATES PACKET FERTILIZER EA	SOIL AMENDMENT CF	SLOW RELEASE FERTILIZER ⑦ Pit oz	SLOW RELEASE FERTILIZER ⑦ (N) Pit Estb oz	ORGANIC FERTILIZER (N) Pit Estb oz	ROOT PROTECTOR	FOLIAGE PROTECTOR	STAKING	ON CENTER SPACING ft	MINIMUM PLANTING DISTANCE FROM: ETW ft	EP ft	FENCE ft	WALL ft	PAVED DITCH ft	EARTH DITCH ft	REMARKS
A (No. 1)	1		ACACIA REDOLENS 'LOW BOY'	PROSTRATE ACACIA	⑤	⑤	II		1.5	1								8	12	10	10	10	10	12	SHRUB
	2		BACCHARIS PILULARIS 'PIGEON POINT'	DWARF COYOTE BRUSH	⑤	⑤	II		1.5	1								6		10	10	10	10	12	GROUND COVER
	3		MALEPHORA LUTEA	ROCKY POINT ICE PLANT	⑤	⑤	II		1.5	1								3		10	10	10	10	12	GROUND COVER
	4		PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	⑤	⑤	III		1.5	1			4				④	12							② VINE
	5		PHORMIUM TENAX	NEW ZEALAND FLAX	⑤	⑤	II				0.25							3		8	6	6	6	8	SHRUB
	6		RHAPHIOLEPIS INDICA	INDIAN HAWTHORNE	⑤	⑤	II				0.25							3		8	10	10	8	10	SHRUB
B (No. 5)	7		ALOE STRIATA	CORAL ALOE	⑤	⑤	II		1.5	3								1.5		4	3	6	3	4	SUCCULENT
	8		CRASSULA ARGENTEA	JADE PLANT	⑤	⑤	II		5	3								5		6	4	8	6	4	SHRUB
	9		HETEROMELES ARBUTIFOLIA	TOYON	⑤	⑤	II		5	3								6		6	4	12	10	6	SHRUB
F (FLATS)	10		SEDUM DENDROIDEUM	BUSH SEDUM				2,500				6 LB	3 LB					2		4	2	2	2	2	② GROUND COVER
	11		SENECIO MANDRALISCAE	BLUE CHALK STICKS				10,000				6 LB	3 LB					0.7		4	1	1	1	1	② GROUND COVER
H (CUTTING)	12		CARPOBROTUS EDULIS	ICE PLANT				15,000				8 LB/ 1000 SQFT	4 LB/ 1000 SQFT					1		8	3	3	3	8	GROUND COVER
K (24" BOX)	13		CASSIA LEPTOPHYLLA	GOLD MEDALLION TREE	⑥	⑤	II		8	12				8			④	③	30		30	20	18	18	TREE
	14		TIPUANA TIPU	TIPU TREE	⑥	⑤	II		8	12				8			④	③	30						TREE
M (LINER)	15		ANEMOPSIS CALIFORNICA	YERBA MANSA	⑤	⑤	II	36										6		4	3	3	3	4	SHRUB
	16		IVA HAYESIANA	SAN DIEGO MARSH ELDER	⑤	⑤	II	36										6		4	3	3	3	4	SHRUB
	17		JUNCUS ACUTUS SSP. 'LEOPOLDII"	SPINY RUSH	⑤	⑤	II	36										6		4.0	3	3	3	4	SHRUB
	18		QUERCUS LOBATA	VALLEY OAK	⑥	⑤	II		1.5	1			4		④	④		③	30		12	10	10	10	TREE
U No. 15)	19		CUPRESSUS SEMPERVIRENS	ITALIAN CYPRESS	⑥	⑤	II		5	5			8				④	③	30		12	10	10	10	TREE
	20		EUCALYPTUS CLADOCALYX	SUGAR GUM	⑥	⑤	II		5	5			8				④	③	30		20	20	20	17	TREE
	21		EUCALYPTUS FICIFOLIA	RED FLOWERING GUM	⑥	⑤	II		5	5			8				④	10	30	15.0	15	10	10	12	TREE
	22		TIPUANA TIPU	TIPU TREE	⑥	⑤	II		5	5			8				④	③	30		30	25	20	22	TREE

(N) - NOT A SEPARATE BID ITEM

PLANTING REQUIREMENTS

① WOOD MULCH MUST BE WOOD CHIP
② SOIL AMENDMENT MUST BE PERLITE
③ AS SHOWN ON PROJECT PLANS
④ REQUIRED, SEE PROJECT PLANS
⑤ SUFFICIENT TO RECEIVE ROOT BALL
⑥ 2X ROOT BALL WIDTH
⑦ APPLICATION RATES FOR PLANT GROUPS F/H/M/SOD ARE POUNDS PER 1,000 SQFT INSTEAD OF PER PLANT

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE C2, SAMPLE PLANT LEGEND

PLANT LEGEND
PL-1

EXAMPLE C2 PLANT LEGEND SAMPLE - RELEASED 04/23/2020

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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PLANS PREPARATION MANUAL

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LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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PLANTING QUANTITIES

Planting quantity tables show the planting bid items and quantities used on the project. Units and totals shown on the planting quantity tables must match the Engineer's Estimate.

Planting quantity tables are divided into two parts. The first table quantifies plants by botanical/common name. The second table is used when the project has bid items quantified by area. Use one or both tables as required.

If both tables are used, the plant basin subtotals for
- Wood mulch
- Soil amendment
- Iron sulfate
- Slow-release fertilizer
- Organic fertilizer

are added to the area quantities resulting in the sums shown on the Engineer's Estimate.

See "Summary of Quantities" narrative in Section 2-2.19 and Generic Summary of Quantities example sheet for additional information about standards for tables, e.g. text, line weight, etc.

Use Excel spreadsheet or cell from Cell Library to generate quantity tables.

If using Excel files, place the completed electronic files in the Resident Engineer's file for use during construction.

On this table, edit the number of rows to match the number of rows in the Plant Legend. List the plant species in the same order.

Edit the number of columns in the table and the column names to match the plant groups and other bid items used on the project. Do not include empty columns. If there is no entry in a cell, leave it blank, do not enter a dash.

PLANT QUANTITIES

BOTANICAL NAME	COMMON NAME	PLANT GROUP A	B	C	F	H	K	M	U	SOD	TRANSPLANT TREE	PACKET FERTILIZER	PLANT BASIN SOIL AMENDMENT	IRON SULFATE	SLOW-RELEASE FERTILIZER	ORGANIC FERTILIZER	WOOD MULCH	ROOT PROTECTOR	FOLIAGE PROTECTOR
		EA	EA	EA	EA	EA	EA	EA	EA	SQYD	EA	EA	CY	LB	LB	LB	CY	EA	EA
PLANT BASIN SUBTOTAL																			
TOTAL																			

Use the pay units listed in the Bid Item List on the quantity table. Values for cubic foot and ounce used for application rates on the Plant Legend, must be converted to totals in cubic yards and pounds on the quantity tables. This may result in amounts with more than 1 decimal place in the body of the table for summation purposes but totals must be rounded to 1 decimal place.

The quantity entries for plant basin bid items, packet fertilizer, and root and foliage protectors are the plant group quantities multiplied by the application rates from the plant legend.

Payment for plant stakes/tree stakes is included in the plant group bid items and is not shown in the plant quantities table.

Enter a subtotal (leave total blank) for the plant basin portion of soil amendment, granular fertilizers, and wood mulch bid items if they are also used in cultivation areas on the project. If not, enter a total and leave subtotal blank. Leave subtotal blank for all other bid items on this "Plant Quantities" table.

Include this table if the project has planting areas with the bid items shown here. Otherwise omit this table.

PLANTING AREA QUANTITIES

SHEET No.	WEED GERMINATION	CULTIVATION	CULTIVATION AREA SOIL AMENDMENT	IRON SULFATE	SLOW-RELEASE FERTILIZER	ORGANIC FERTILIZER	WOOD MULCH	ROOT BARRIER
	SQYD	SQYD	CY	LB	LB	LB	CY	LF
PLANTING AREA SUBTOTAL								
PLANT BASIN SUBTOTAL								
TOTAL								

Bid items for fertilizers are for the quantities applied at the time of planting only. (Payment for fertilizer applied during Plant Establishment (PE) is included in the lump sum Plant Establishment bid item and is not included in the total shown on the plant quantities table.)

When there are plant basins, place the quantities of the items used in the basins from the Plant Quantities Table above in the subtotal row of the Planting Area Quantities Table. Add the quantities of Soil Amendment, Iron Sulfate, Slow-release Fertilizer, Organic fertilizer and Wood Mulch used in the basins to the quantities used in the Planting Areas for a grand total that will match the quantities shown in the Engineer's Estimate.

If there are no items used in the plant basins, delete both subtotal rows.

If the material for soil amendment or wood mulch for cultivation area is different from that in the plant basins, add notes and corresponding circled numbers in the table in the matching column heading.

Example:
NOTES:

① Soil amendment for cultivation area is xxx
② Wood mulch for cultivation area is xxx

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE D1, PLANTING QUANTITIES INSTRUCTIONS

PLANTING QUANTITIES
PQ-1

EXAMPLE D1 PLANTING QUANTITIES INSTRUCTIONS - RELEASED 04/16/2020

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANS PREPARATION MANUAL

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SUPERSEDES EXAMPLE RELEASED 07/21/2017

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT (Name & License No.) Signature Renewal Date Date STATE OF CALIFORNIA

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PLANT QUANTITIES

BOTANICAL NAME	COMMON NAME	PLANT GROUP A	B	F	H	K	M	U	PACKET FERTILIZER	PLANT BASIN SOIL AMENDMENT	SLOW-RELEASE FERTILIZER	WOOD MULCH	ROOT PROTECTOR	FOLIAGE PROTECTOR
		EA	EA	EA		EA	EA	EA	EA	CY	LB	CY	EA	EA
ACACIA REDOLENS 'LOW BOY'	PROSTRATE ACACIA	8,210							8,210			492.60		
BACCHARIS PILULARIS 'PIGEON POINT'	DWARF COYOTE BRUSH	3,350							3,350			201.00		
MALEPHORA LUTEA	ROCKY POINT ICE PLANT	3,840							3,840			230.40		
PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	1,542							1,542			92.52		
PHORMIUM TENAX	NEW ZEALAND FLAX	60								0.60				
RHAPHIOLEPIS INDICA	INDIAN HAWTHORNE	135								1.35				
ALOE STRIATA	CORAL ALOE		405						1,215			24.30		
CRASSULA ARGENTEA	JADE PLANT		224						672			44.80		
HETEROMELES ARBUTIFOLIA	TOYON		197						591			39.40		
SEDUM DENDROIDEUM	BUSH SEDUM			30,340							20			
SENECIO MANDRALISCAE	BLUE CHALK STICKS			125,790							80			
CARPOBROTUS EDULIS	ICE PLANT				17,440						120			
CASSIA LEPTOPHYLLA	GOLD MEDALLION TREE					2			24			0.60		
TIPUANA TIPU	TIPU TREE					4			48			1.20		
ANEMOPSIS CALIFORNICA	YERBA MANSA						666							
IVA HAYESIANA	SAN DIEGO MARSH ELDER						666							
JUNCUS ACUTUS SSP. 'LEOPOLDII"	SPINY RUSH						666							
QUERCUS LOBATA	VALLEY OAK						12		12				12	12
CUPRESSUS SEMPERVIRENS	ITALIAN CYPRESS							36	180			7.20		
EUCALYPTUS CLADOCALYX	SUGAR GUM							10	50			2.00		
EUCALYPTUS FICIFOLIA	RED FLOWERING GUM							35	175			7.00		
TIPUANA TIPU	TIPU TREE							92	460			18.40		
PLANT BASIN SUBTOTAL										1.98	220	1161.42		
TOTAL		17,137	826	156,130	17,440	6	2,010	173	20,369				12	12

PLANTING AREA QUANTITIES

SHEET NUMBER	WEED GERMINATION	CULTIVATION AREA SOIL AMENDMENT	SLOW-RELEASE FERTILIZER	WOOD MULCH
	SQYD	CY	LB	CY
PP-1	6,193			188
PP-2	15,971			4
PP-3	15,928			
PP-4	2,556	6	75	83
PP-5	5,479	4	50	78
PP-6	2,011			26
PP-7	3,494			140
PP-8	2,838			
PP-9		6	80	292
PP-10				177
PP-11	1,353			
PLANTING AREA SUBTOTAL	55,823	16	205	988
PLANT BASIN SUBTOTAL		1.98	220	1161.42
TOTAL	55,823	18	425	2149.4

Notice that converting cubic feet and ounces from the Plant Legend to cubic yards and pounds on the Plant Quantities Tables can result in amounts with 2 decimal places in the body of the tables. Total sums must be rounded to no more than 1 decimal place and match the Bid Item quantity in the Engineer's Estimate.

See "Generic Landscape Plan sheet, Basic Required Information" for notes regarding commas and decimals in quantity tables.

LANDSCAPE, IRRIGATION AND PLANTING EXAMPLE D2, PLANTING QUANTITIES SAMPLE

PLANTING QUANTITIES

PQ-1

EXAMPLE D2 PLANTING QUANTITIES SAMPLE - RELEASED 04/16/2020

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PLANS PREPARATION MANUAL

DATE PLOTTED => | TIME PLOTTED => | LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Signature — Renewal Date — Date — STATE OF CALIFORNIA

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NOTE:

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

Place project-specific notes and legend for symbols and abbreviations that are not included in the standard plans in the upper left hand corner of the first sheet in a series, (e.g., IR-1, PR-1, IP-1, PP-1)

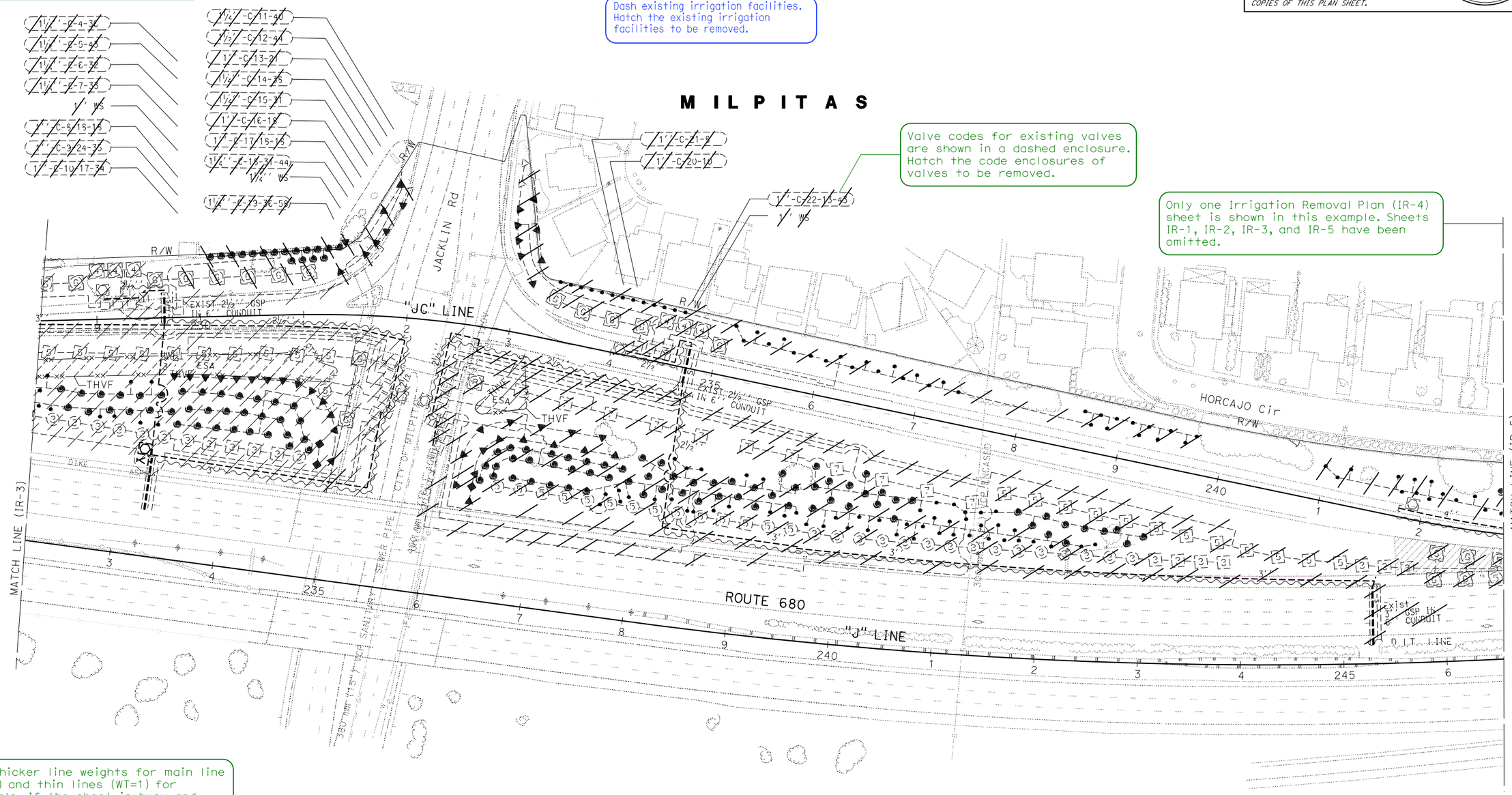
GENERAL

Use this series of sheets as an example for a project with replacement of planting and irrigation.

Dash existing irrigation facilities. Hatch the existing irrigation facilities to be removed.

Valve codes for existing valves are shown in a dashed enclosure. Hatch the code enclosures of valves to be removed.

Only one Irrigation Removal Plan (IR-4) sheet is shown in this example. Sheets IR-1, IR-2, IR-3, and IR-5 have been omitted.



Use thicker line weights for main line (WT=3) and thin lines (WT=1) for laterals. If the sheet is busy and crowded, thinner line weights can be used as an option when adding linework to the sheets.

LANDSCAPE EXAMPLE E1, HIGHWAY PLANTING REPLACEMENT — SHEET 1 OF 4

APPROVED FOR IRRIGATION WORK ONLY

IRRIGATION REMOVAL PLAN

SCALE: 1" = 50'

IR-4

EXAMPLE E1 HIGHWAY PLANTING REPLACEMENT - RELEASED 06/19/2020

LAST REVISION 12-10-19 | DATE PLOTTED => 19-JUN-2020 | TIME PLOTTED => 18:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT

CALCULATED-DESIGNED BY

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DATE REVISED

PLANS PREPARATION MANUAL

BORDER LAST REVISED 7/2/2010 | USERNAME => s111271 | DGN FILE => Example-E1_HighwayPlantingReplacement.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Signature — Renewal Date — Date — STATE OF CALIFORNIA

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NOTE:

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

Place project-specific notes and legend for symbols and abbreviations that are not included in the standard plans in the upper left hand corner of the first sheet in a series, (e.g., IR-1, PR-1, IP-1, PP-1)

GENERAL

Use this series of sheets as an example for a project with replacement of planting and irrigation.

LEGEND:

- Exist TREES TO BE REMOVED
- Exist GROUNDCOVER TO BE REMOVED
- PRUNE AND MAINTAIN EXISTING PLANTED AREA

ABBREVIATIONS:

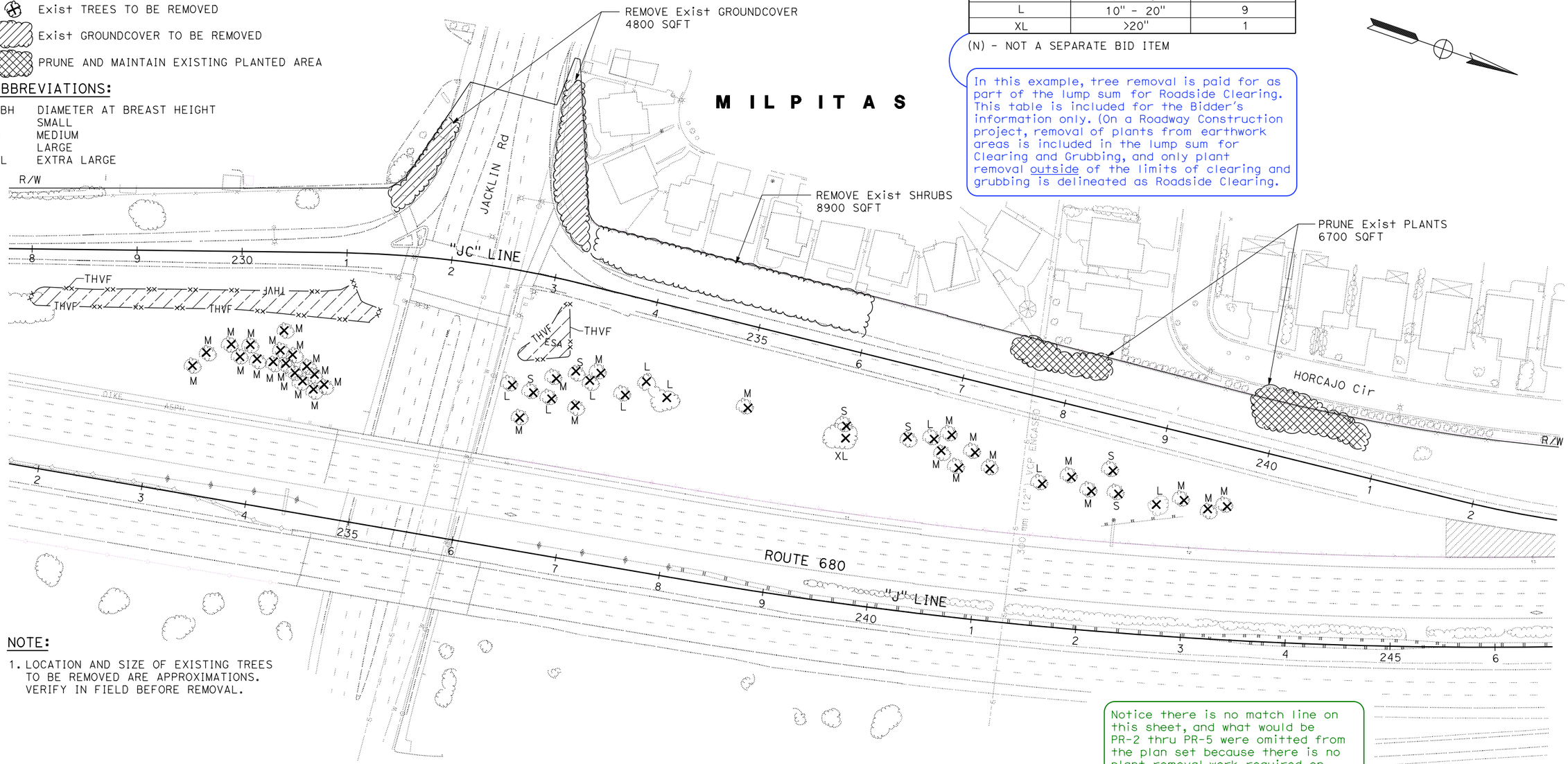
DBH	DIAMETER AT BREAST HEIGHT
S	SMALL
M	MEDIUM
L	LARGE
XL	EXTRA LARGE

REMOVE TREE (ROADSIDE CLEARING)

APPROXIMATE SIZE GROUP	APPROXIMATE DBH RANGE (INCHES)	REMOVE TREE (N)
		EA
S	<4"	6
M	4" - 10"	32
L	10" - 20"	9
XL	>20"	1

(N) - NOT A SEPARATE BID ITEM

In this example, tree removal is paid for as part of the lump sum for Roadside Clearing. This table is included for the Bidder's information only. (On a Roadway Construction project, removal of plants from earthwork areas is included in the lump sum for Clearing and Grubbing, and only plant removal outside of the limits of clearing and grubbing is delineated as Roadside Clearing.



NOTE:

1. LOCATION AND SIZE OF EXISTING TREES TO BE REMOVED ARE APPROXIMATIONS. VERIFY IN FIELD BEFORE REMOVAL.

Notice there is no match line on this sheet, and what would be PR-2 thru PR-5 were omitted from the plan set because there is no plant removal work required on those sheets. Do not include sheets unless work is shown on them.

LANDSCAPE EXAMPLE E2, HIGHWAY PLANTING REPLACEMENT — SHEET 2 OF 4

APPROVED FOR PLANTING WORK ONLY

PLANT REMOVAL PLAN

SCALE: 1" = 50'

PR-1

EXAMPLE E2 HIGHWAY PLANTING REPLACEMENT - RELEASED 06/19/2020

LAST REVISION 12-10-19 | DATE PLOTTED => 19-JUN-2020 | TIME PLOTTED => 10:47

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PLANS PREPARATION MANUAL

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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Place a standard north arrow and title block on every sheet

NOTE:

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

"Right of way" note goes on every sheet

GENERAL
Use this series of sheets as an example for a project with replacement of planting and irrigation.

Place project-specific notes and legend for symbols and abbreviations that are not included in the standard plans in the upper left hand corner of the first sheet in the series, e.g. IP-1.

Verify clearance for operation if installing WSP by jacking and drilling.

Locate Irrigation Controller Enclosure Cabinets away from the traveled way with the symbol oriented such that the door opens away from traffic.

Verify that locations for electrical service on the Electrical sheets match Controller locations on the Irrigation sheets.

Place call out for R/W outside the Caltrans property line.

Group valves together in safe, accessible locations

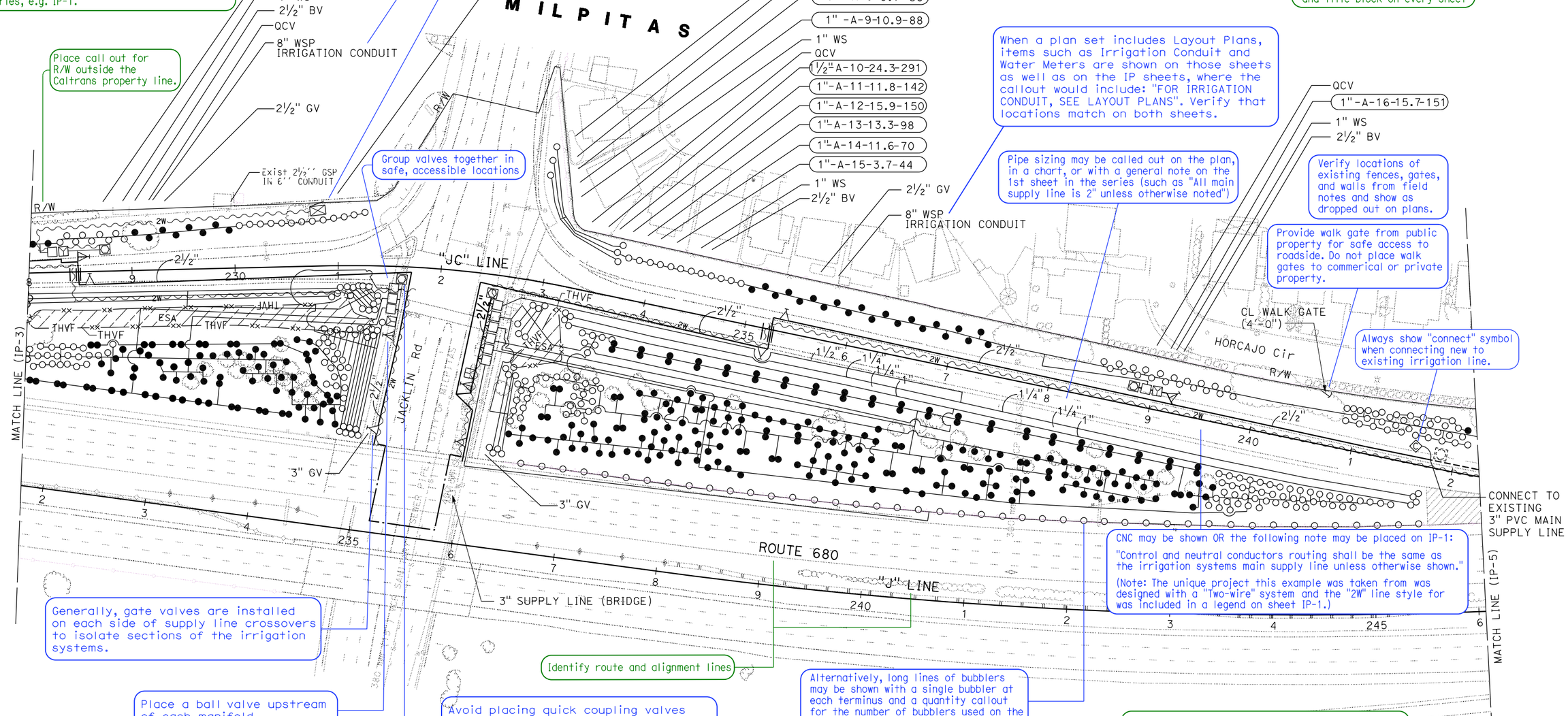
When a plan set includes Layout Plans, items such as Irrigation Conduit and Water Meters are shown on those sheets as well as on the IP sheets, where the callout would include: "FOR IRRIGATION CONDUIT, SEE LAYOUT PLANS". Verify that locations match on both sheets.

Pipe sizing may be called out on the plan, in a chart, or with a general note on the 1st sheet in the series (such as "All main supply line is 2" unless otherwise noted")

Verify locations of existing fences, gates, and walls from field notes and show as dropped out on plans.

Provide walk gate from public property for safe access to roadside. Do not place walk gates to commerical or private property.

Always show "connect" symbol when connecting new to existing irrigation line.



CNC may be shown OR the following note may be placed on IP-1:
"Control and neutral conductors routing shall be the same as the irrigation systems main supply line unless otherwise shown."
(Note: The unique project this example was taken from was designed with a "Two-wire" system and the "2W" line style for was included in a legend on sheet IP-1.)

Generally, gate valves are installed on each side of supply line crossovers to isolate sections of the irrigation systems.

Identify route and alignment lines

Alternatively, long lines of bubblers may be shown with a single bubbler at each terminus and a quantity callout for the number of bubblers used on the valve.

Place a ball valve upstream of each manifold.

Avoid placing quick coupling valves in vulnerable locations when possible. Use sprinkler protectors with QCV's when appropriate.

Only one Irrigation Plan (IP-4) sheet is shown in this example. Sheets IP-1 thru IP-3 and IP-5 as well as the associated Irrigation Sprinkler Schedule and Irrigation Quantities have been omitted.

LANDSCAPE EXAMPLE E3, HIGHWAY PLANTING REPLACEMENT — SHEET 3 OF 4

APPROVED FOR IRRIGATION WORK ONLY

"Approved for" note goes on every sheet

IRRIGATION PLAN

SCALE: 1" = 50'

IP-4

EXAMPLE E3 HIGHWAY PLANTING REPLACEMENT RELEASED 06/19/2020

LAST REVISION 05-18-20 | DATE PLOTTED => 19-JUN-2020 | TIME PLOTTED => 10:47

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | SENIOR LANDSCAPE ARCHITECT

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PLANS PREPARATION MANUAL

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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NOTE:

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

Place project-specific notes and legend for symbols and abbreviations that are not included in the standard plans in the upper left hand corner of PP-1 or on the Planting Legend sheet, provide a legend that applies to all the planting sheets such as this:

LEGEND:

- LIMIT OF WOOD MULCH AREA
- PRUNE AND MAINTAIN EXISTING PLANTED AREA

GENERAL
Use this series of sheets as an example for a project with replacement of planting and irrigation.

Callout environmentally sensitive areas and show protective fencing as required.

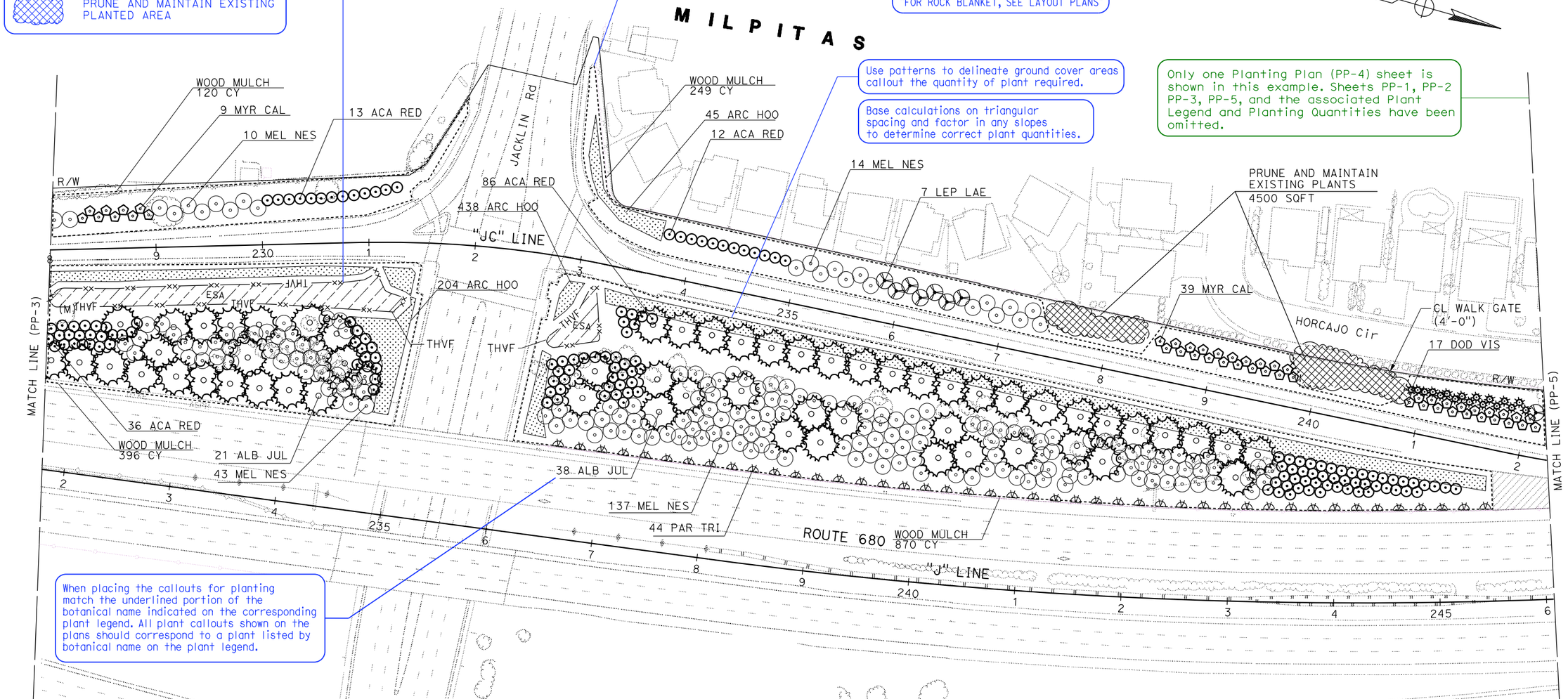
Delineate the limits of mulch and callout the quantity for each area.

When items such as Rock Blanket or Minor Concrete are used, they are shown on the Layout sheets. On the Landscape plans, the callout should include (for example): "FOR ROCK BLANKET, SEE LAYOUT PLANS"

Use patterns to delineate ground cover areas callout the quantity of plant required.

Base calculations on triangular spacing and factor in any slopes to determine correct plant quantities.

Only one Planting Plan (PP-4) sheet is shown in this example. Sheets PP-1, PP-2 PP-3, PP-5, and the associated Plant Legend and Planting Quantities have been omitted.



When placing the callouts for planting match the underlined portion of the botanical name indicated on the corresponding plant legend. All plant callouts shown on the plans should correspond to a plant listed by botanical name on the plant legend.

LANDSCAPE EXAMPLE E4, HIGHWAY PLANTING REPLACEMENT

SHEET 4 OF 4

APPROVED FOR PLANTING WORK ONLY

PLANTING PLAN

SCALE: 1" = 50'

PP-4

EXAMPLE E4 HIGHWAY PLANTING REPLACEMENT RELEASED 06/19/2020

LAST REVISION 12-10-19 | DATE PLOTTED => 19-JUN-2020 | TIME PLOTTED => 10:48

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PLANS PREPARATION MANUAL

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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LEGEND: (THIS SHEET ONLY)

1. INSTALL STATE FURNISHED MODEL 2070L CONTROLLER ASSEMBLY, BATTERY BACKUP SYSTEM AND FOUNDATION AS PER E-3.

2. INSTALL 120/240 V, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE AS PER RSP ES-2C AND RSP ES-2F.

   METER A: 100 A, 240 V, 2P, CB. MAIN BREAKER (TC-1)
   50 A, 120 V, 1P, CB. (SIGNAL)
   CTID 08-54-018-0-102.480-M

   METER B: 100 A, 240 V, 2P, CB. MAIN BREAKER (LS-3)
   15 A, 240 V, 2P, CB. (INTERSECTION LIGHTING)
   15 A, 120 V, 1P, CB. (LIGHTING CONTROL)
   15 A, 1P, TEST SWITCH. (LIGHTING CONTROL)
   CTID 08-54-018-0-102.481-M

3. SEE DETAIL A.

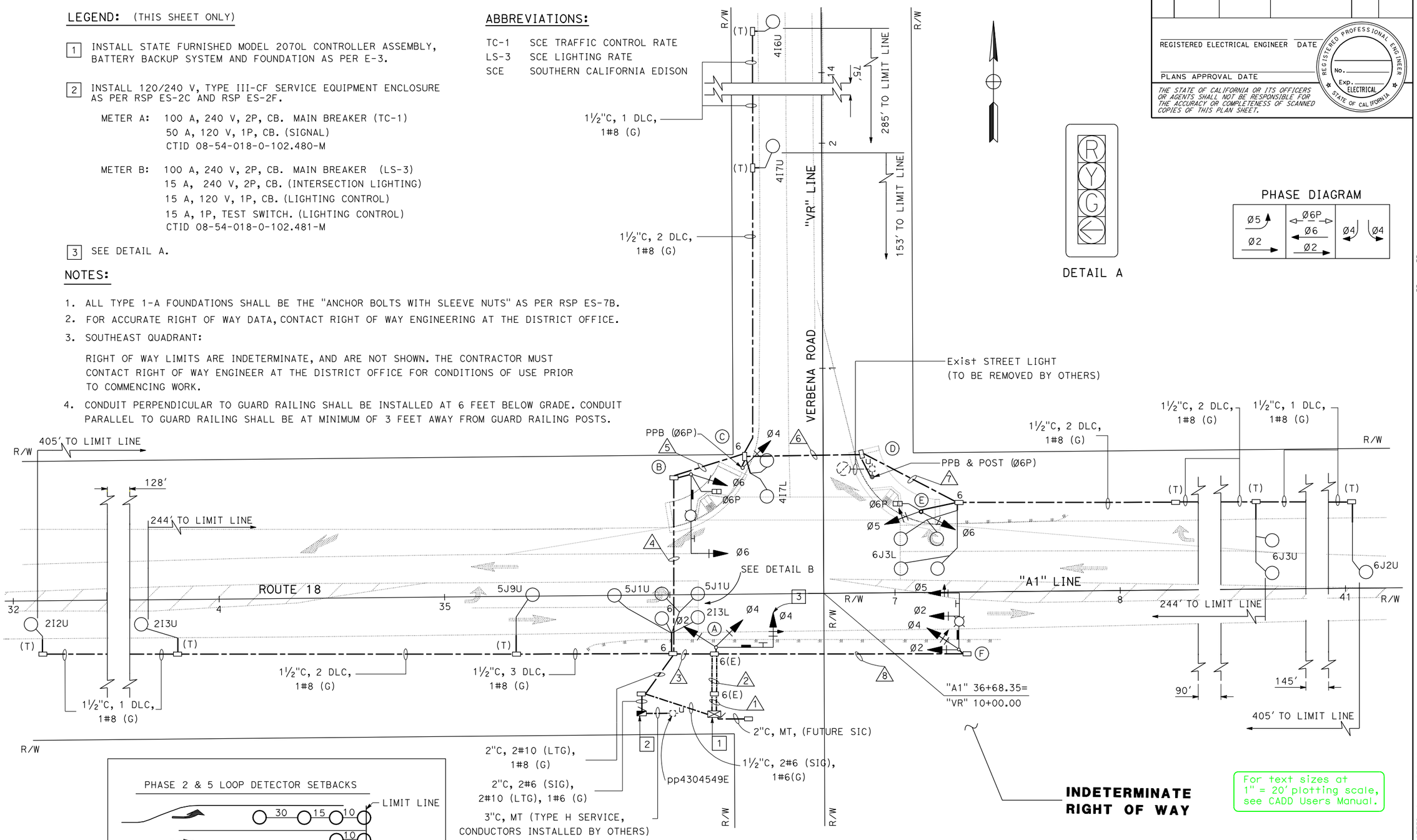
ABBREVIATIONS:

TC-1	SCE TRAFFIC CONTROL RATE
LS-3	SCE LIGHTING RATE
SCE	SOUTHERN CALIFORNIA EDISON

NOTES:

1. ALL TYPE 1-A FOUNDATIONS SHALL BE THE "ANCHOR BOLTS WITH SLEEVE NUTS" AS PER RSP ES-7B.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. SOUTHEAST QUADRANT:

   RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN. THE CONTRACTOR MUST CONTACT RIGHT OF WAY ENGINEER AT THE DISTRICT OFFICE FOR CONDITIONS OF USE PRIOR TO COMMENCING WORK.
4. CONDUIT PERPENDICULAR TO GUARD RAILING SHALL BE INSTALLED AT 6 FEET BELOW GRADE. CONDUIT PARALLEL TO GUARD RAILING SHALL BE AT MINIMUM OF 3 FEET AWAY FROM GUARD RAILING POSTS.



For text sizes at 1" = 20' plotting scale, see CADD Users Manual.

ELECTRICAL SYSTEMS SHEET, EXAMPLE "A"
INDETERMINATE R/W-SAME LOCATION AS LAYOUT EXAMPLE "A"

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SIGNAL AND LIGHTING
(VERBENA ROAD)

SCALE: 1" = 20'

E-1

ELECTRICAL SYSTEMS SHEET, EXAMPLE "A", RELEASED 10/30/2009

DATE PLOTTED => 30-OCT-2009
TIME PLOTTED => 17:0

LAST REVISION

REVISED BY | DATE REVISED

CALCULATED- DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trjck
DGN FILE => ElectricalSystems_Example_A.dgn

CU | EA

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PLANS APPROVAL DATE

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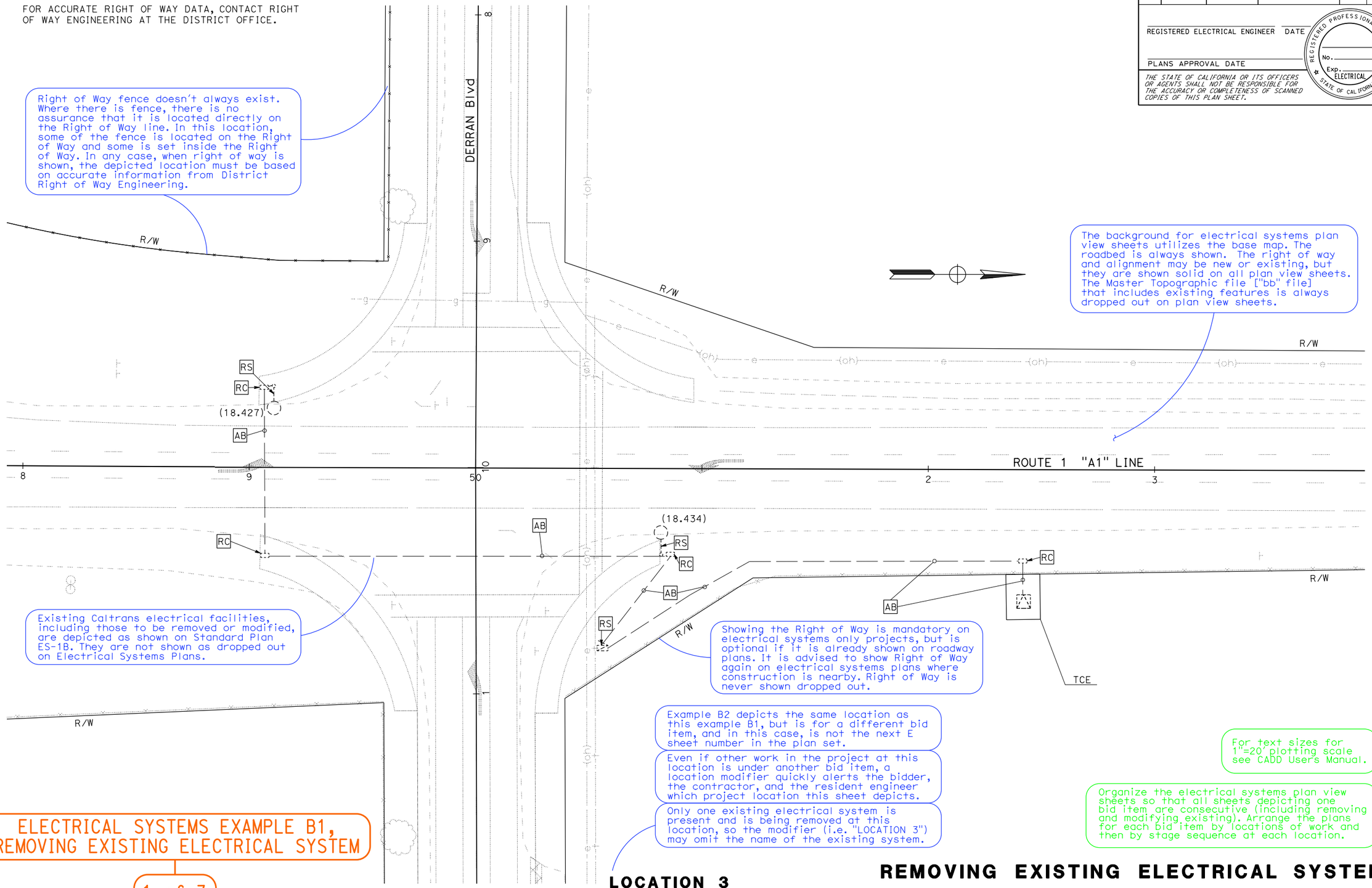
NOTE:

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

Right of Way fence doesn't always exist. Where there is fence, there is no assurance that it is located directly on the Right of Way line. In this location, some of the fence is located on the Right of Way and some is set inside the Right of Way. In any case, when right of way is shown, the depicted location must be based on accurate information from District Right of Way Engineering.

The background for electrical systems plan view sheets utilizes the base map. The roadbed is always shown. The right of way and alignment may be new or existing, but they are shown solid on all plan view sheets. The Master Topographic file ["bb" file] that includes existing features is always dropped out on plan view sheets.



Existing Caltrans electrical facilities, including those to be removed or modified, are depicted as shown on Standard Plan ES-1B. They are not shown as dropped out on Electrical Systems Plans.

Showing the Right of Way is mandatory on electrical systems only projects, but is optional if it is already shown on roadway plans. It is advised to show Right of Way again on electrical systems plans where construction is nearby. Right of Way is never shown dropped out.

Example B2 depicts the same location as this example B1, but is for a different bid item, and in this case, is not the next E sheet number in the plan set.

Even if other work in the project at this location is under another bid item, a location modifier quickly alerts the bidder, the contractor, and the resident engineer which project location this sheet depicts.

Only one existing electrical system is present and is being removed at this location, so the modifier (i.e. "LOCATION 3") may omit the name of the existing system.

For text sizes for 1"=20' plotting scale see CADD Users Manual.

Organize the electrical systems plan view sheets so that all sheets depicting one bid item are consecutive (including removing and modifying existing). Arrange the plans for each bid item by locations of work and then by stage sequence at each location.

ELECTRICAL SYSTEMS EXAMPLE B1, REMOVING EXISTING ELECTRICAL SYSTEM

1 of 3

LOCATION 3

APPROVED FOR ELECTRICAL WORK ONLY

REMOVING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 20'

E-1

EXAMPLE B1 REMOVING EXISTING ELECTRICAL SYSTEM - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 01-FEB-2017 | TIME PLOTTED => 16:23

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PLANS APPROVAL DATE

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NOTES:

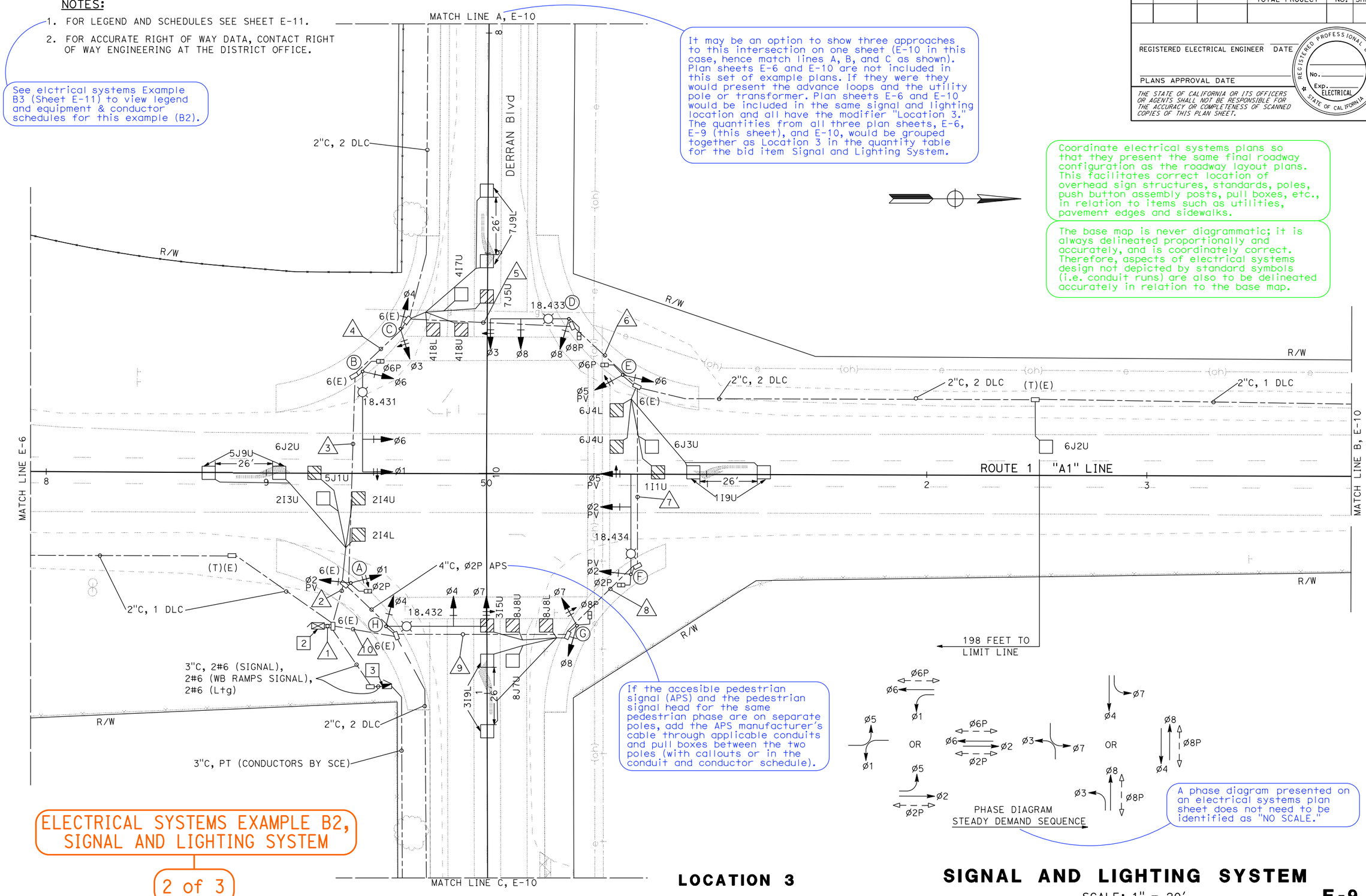
1. FOR LEGEND AND SCHEDULES SEE SHEET E-11.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

See elctrical systems Example B3 (Sheet E-11) to view legend and equipment & conductor schedules for this example (B2).

It may be an option to show three approaches to this intersection on one sheet (E-10 in this case, hence match lines A, B, and C as shown). Plan sheets E-6 and E-10 are not included in this set of example plans. If they were they would present the advance loops and the utility pole or transformer. Plan sheets E-6 and E-10 would be included in the same signal and lighting location and all have the modifier "Location 3." The quantities from all three plan sheets, E-6, E-9 (this sheet), and E-10, would be grouped together as Location 3 in the quantity table for the bid item Signal and Lighting System.

Coordinate electrical systems plans so that they present the same final roadway configuration as the roadway layout plans. This facilitates correct location of overhead sign structures, standards, poles, push button assembly posts, pull boxes, etc., in relation to items such as utilities, pavement edges and sidewalks.

The base map is never diagrammatic; it is always delineated proportionally and accurately, and is coordinately correct. Therefore, aspects of electrical systems design not depicted by standard symbols (i.e. conduit runs) are also to be delineated accurately in relation to the base map.



If the accesible pedestrian signal (APS) and the pedestrian signal head for the same pedestrian phase are on separate poles, add the APS manufacturer's cable through applicable conduits and pull boxes between the two poles (with callouts or in the conduit and conductor schedule).

A phase diagram presented on an electrical systems plan sheet does not need to be identified as "NO SCALE."

ELECTRICAL SYSTEMS EXAMPLE B2, SIGNAL AND LIGHTING SYSTEM

2 of 3

LOCATION 3

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING SYSTEM

SCALE: 1" = 20'

E-9

EXAMPLE B2 SIGNAL AND LIGHTING SYSTEM - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 08:44

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BORDER LAST REVISED 7/2/2010 | USERNAME => s136641 | DGN FILE => example B2-ua_009.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1313 | PROJECT NUMBER & PHASE 13000101101

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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LEGEND: (FOR SHEET E-9)

On a sheet that includes only legend and schedules, identify all the electrical systems plan sheets that it supports. In this case, sheet E-9 is on example plan B2.

1. REFER TO SIGN PLANS FOR SIGN DETAILS.
2. DEPARTMENT-FURNISHED MODEL 2070E CONTROLLER ASSEMBLY. INSTALL BBS.
3. 120/240 V, 1Ø, 3-WIRE, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13450010021106T

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER
100	240	2	MAIN BREAKER	YES
50	120	1	TRAFFIC SIGNAL (DERRAN)	YES
50	120	1	TRAFFIC SIGNAL (WB RAMP)	YES
20	120	1	SPARE	YES
		6	SPACE	

CTID No. 13450010021106L

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER	PHOTOELECTRIC CONTROL TYPE
100	240	2	MAIN BREAKER	YES	
20	120	1	STREET LIGHTING	YES	IV
15	120	1	SPARE	YES	
		6	SPACE		

The conductor and conduit schedule table refers to conduit run numbers designated on the electrical system plan (this schedule is for Example B2), and provides concise information for cables and conductors inside the various conduits and their sizes. Various modifications of this schedule have been used by the districts depending on the preference of using individual conductors or cables for signal standards.

These two schedules and referenced layout provide the majority of information needed to order and install the electrical equipment at a given location and should be designed and reviewed carefully.

The standard and equipment schedule table refers to standards designated with a letter on the electrical system plan and provides concise information for electrical standards as defined in the ES series of Standard Plans, Revised Standard Plans and Special Electrical Structures (SES) project plans. The schedule identifies standard type, signal mast arm, luminaire mast arm, signal and pedestrian heads, accessible pedestrian signal with push button assembly, luminaire, and special requirements as needed.

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION			RUN NUMBER									
CABLE TYPE	Std (X)	PHASE	NUMBER OF CONDUCTORS									
			1	2	3	4	5	6	7	8	9	10
Veh-Ped 12CSC	A	1,2,2P	1	1								
	B	1,6,6P	1	1	1							
	C	3,4 / 6	1 1	1 1	1 1	1 1						
	D	3,8,8P / 6	1 1	1 1	1 1	1 1	1 1					
PBA 3CSC	E	5,6,6P / 8	1 1	1 1	1 1	1 1	1 1	1 1				
	F	2,5,2P / 8	1 1							1 1	1 1	1 1
	G	7,8,8P / 2	1 1								1 1	1 1
	H	4,7 / 2	1 1									1 1
TOTAL CABLES 12/3 CONDUCTORS			8 6	5 3	4 3	3 3	2 2	1 1		1 1	2 2	3 3
#6		SIGNAL	2									
#6		LIGHTING		2	2			2	2	2	2	2
APS Manufacturer's Cable		Ø2P								1		
		Ø6P				1		1				
		Ø8P						1		1		
TYPE B DLC		Ø1	2						2	2	2	2
		Ø2	3	3								
		Ø2 MID	1									
		Ø2 ADVANCE	1									
		Ø3	2								2	2
		Ø4	3	3	3	3						
		Ø4 MID	1	1	1	1						
		Ø4 ADVANCE	1	1	1	1						
		Ø5	2	2								
		Ø6	3						3	3	3	3
		Ø6 MID	1						1	1	1	1
		Ø6 ADVANCE	1						1	1	1	1
		Ø7	2	2	2	2						
		Ø8	3								3	3
		Ø8 MID	1									1
		Ø8 ADVANCE	1									1
TOTAL DLCs PER RUN			28	12	7	7			7	7	12	14
CONDUIT SIZE			4"(2)	4"	4"	4"	4"	4"	4"	4"	4"	4"

If the accesible pedestrian signal (APS) and the pedestrian signal head for the same pedestrian phase are on separate poles, add the APS manufacturer cable through applicable conduits and pull boxes between the two poles (with callouts or in the conduit and conductor schedule).

This note is optional

NOTE:
EXACT LOCATIONS OF APS SHOWN ON CONSTRUCTION DETAILS.

STANDARD AND EQUIPMENT SCHEDULE

STANDARD				Veh Sig Mtg				Ped SIGNAL		APS		LUMINAIRE	POLE LOC.		SPECIAL REQUIREMENTS
(X)	TYPE	SMA	LMA	Ø	MAST ARM	Ø	POLE	Ø	Mtg	Ø	ARROW		A	B	
A	1-A					1,2	TV-2-T	2	SP-1-T						
B	26-4-100	45′	12′	1,6	MAS MAS	6	SV-1-T	6	SP-1-T			165 W			F = 15′, INSTALL R73-3 SIGN ON SMA AND D3-1 SIGN ON SIGNAL POLE [1]
C	1-A					3,4	TV-2-T			6	→		9′	3′	
D	24-4-100	35′	12′	3,8	MAS MAS	8	SV-1-T	8	SP-1-T	6	←	165 W	12′	3′	F = 14′, INSTALL R73-3 SIGN ON SMA AND D3-1 SIGN ON SIGNAL POLE [1]
E	1-A					5,6	TV-2-T	6	SP-1-T	8	→		11′	3′	
F	26-4-100	45′	12′	2,5	MAS MAS	2	SV-1-T	2	SP-1-T	8	←	165 W	10′	3′	F = 15′, INSTALL R73-3 SIGN ON SMA AND D3-1 SIGN ON SIGNAL POLE [1]
G	1-A					7,8	TV-2-T	8	SP-1-T	2	→		9′	3′	
H	26-4-100	45′	12′	4,7	MAS MAS	4	SV-1-T			2	←	165 W	12′	3′	F = 15′, INSTALL R73-3 SIGN ON SMA AND D3-1 SIGN ON SIGNAL POLE [1]

Show either:
1. The note above
2. Location of Standards for Posts for APS and PBA in a column in the "STANDARD AND EQUIPMENT SCHEDULE"

A - DISTANCE FROM BEGIN OR END OF CURB RETURN
B - DISTANCE FROM CURB OR BERM FLOWLINE OR EDGE OF THE SHOULDER

Organize sheets that include only legend and schedules in the plan set to follow the sheets they support.

ELECTRICAL EXAMPLE B3, LEGEND AND SCHEDULES — 3 of 3

LOCATION 3

Even though this is not a plan view sheet, repeating this modifier quickly informs the bidder and contractor of the applicable location for the legend and schedules.

SIGNAL AND LIGHTING SYSTEM

E-11

EXAMPLE B3 SIGNAL AND LIGHTING SYSTEM - RELEASED 12/11/2019

LAST REVISION 10-30-19 | DATE PLOTTED => 10-DEC-2019 | TIME PLOTTED => 10:35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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

LEGEND (FOR THIS SHEET ONLY):

1 Exist 120/240 V, 1Ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13451980010020T

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER
100	240	2	MAIN BREAKER	YES
40	240	2	HIGHWAY LIGHTING	YES
20	120	1	SPARE	YES
30	240	2	CMS*	YES
15	120	1	CMS CABINET*	YES
		6	SPACE	

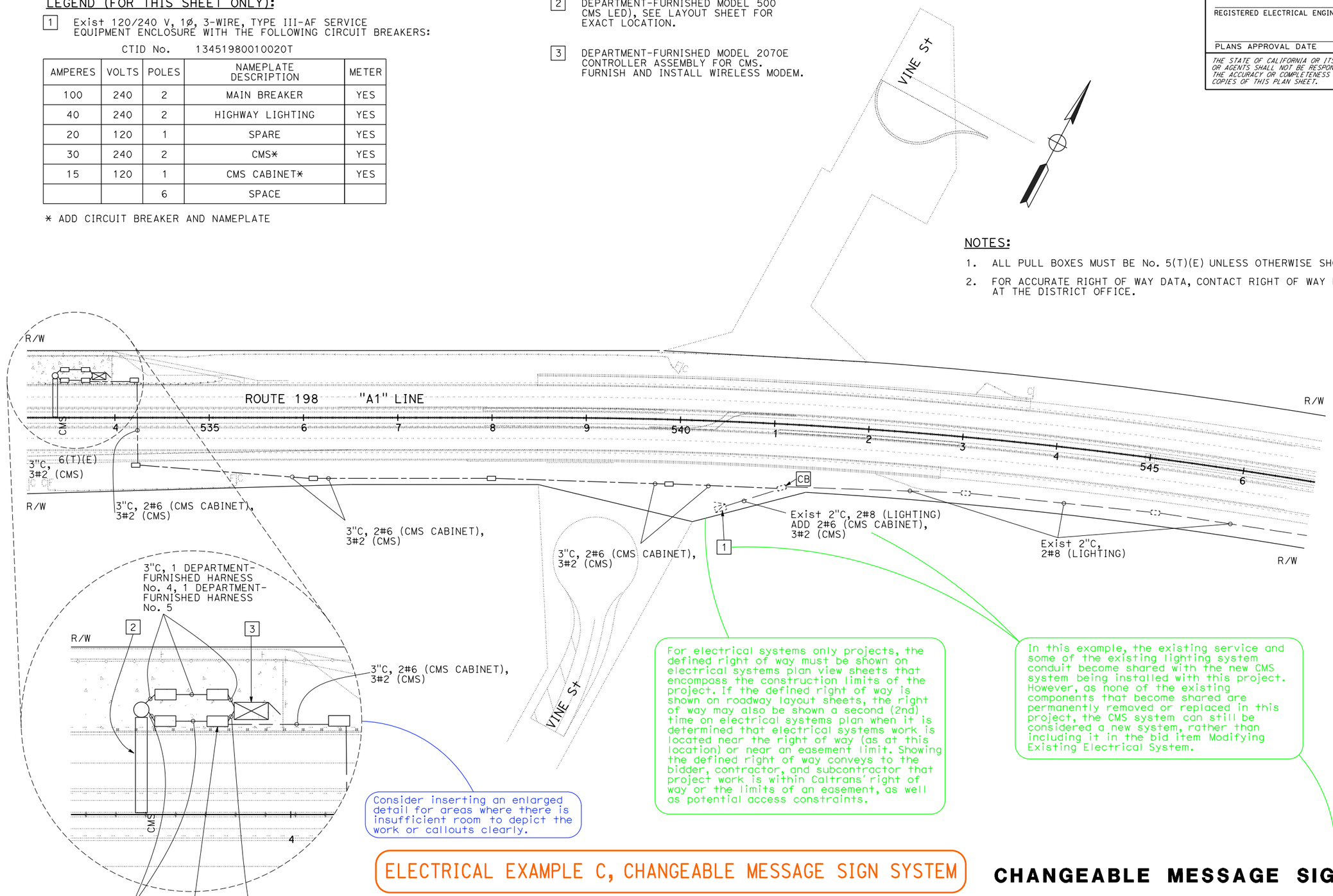
* ADD CIRCUIT BREAKER AND NAMEPLATE

2 DEPARTMENT-FURNISHED MODEL 500 CMS LED), SEE LAYOUT SHEET FOR EXACT LOCATION.

3 DEPARTMENT-FURNISHED MODEL 2070E CONTROLLER ASSEMBLY FOR CMS. FURNISH AND INSTALL WIRELESS MODEM.

NOTES:

1. ALL PULL BOXES MUST BE No. 5(T)(E) UNLESS OTHERWISE SHOWN.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Consider inserting an enlarged detail for areas where there is insufficient room to depict the work or callouts clearly.

For electrical systems only projects, the defined right of way must be shown on electrical systems plan view sheets that encompass the construction limits of the project. If the defined right of way is shown on roadway layout sheets, the right of way may also be shown a second (2nd) time on electrical systems plan when it is determined that electrical systems work is located near the right of way (as at this location) or near an easement limit. Showing the defined right of way conveys to the bidder, contractor, and subcontractor that project work is within Caltrans' right of way or the limits of an easement, as well as potential access constraints.

In this example, the existing service and some of the existing lighting system conduit become shared with the new CMS system being installed with this project. However, as none of the existing components that become shared are permanently removed or replaced in this project, the CMS system can still be considered a new system, rather than including it in the bid item Modifying Existing Electrical System.

ELECTRICAL EXAMPLE C, CHANGEABLE MESSAGE SIGN SYSTEM

CHANGEABLE MESSAGE SIGN SYSTEM
E-3

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 50'

EXAMPLE C, CHANGEABLE MESSAGE SIGN SYSTEM - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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EXAMPLE D1, CLOSED CIRCUIT TELEVISION SYSTEM - RELEASED 2/02/2017

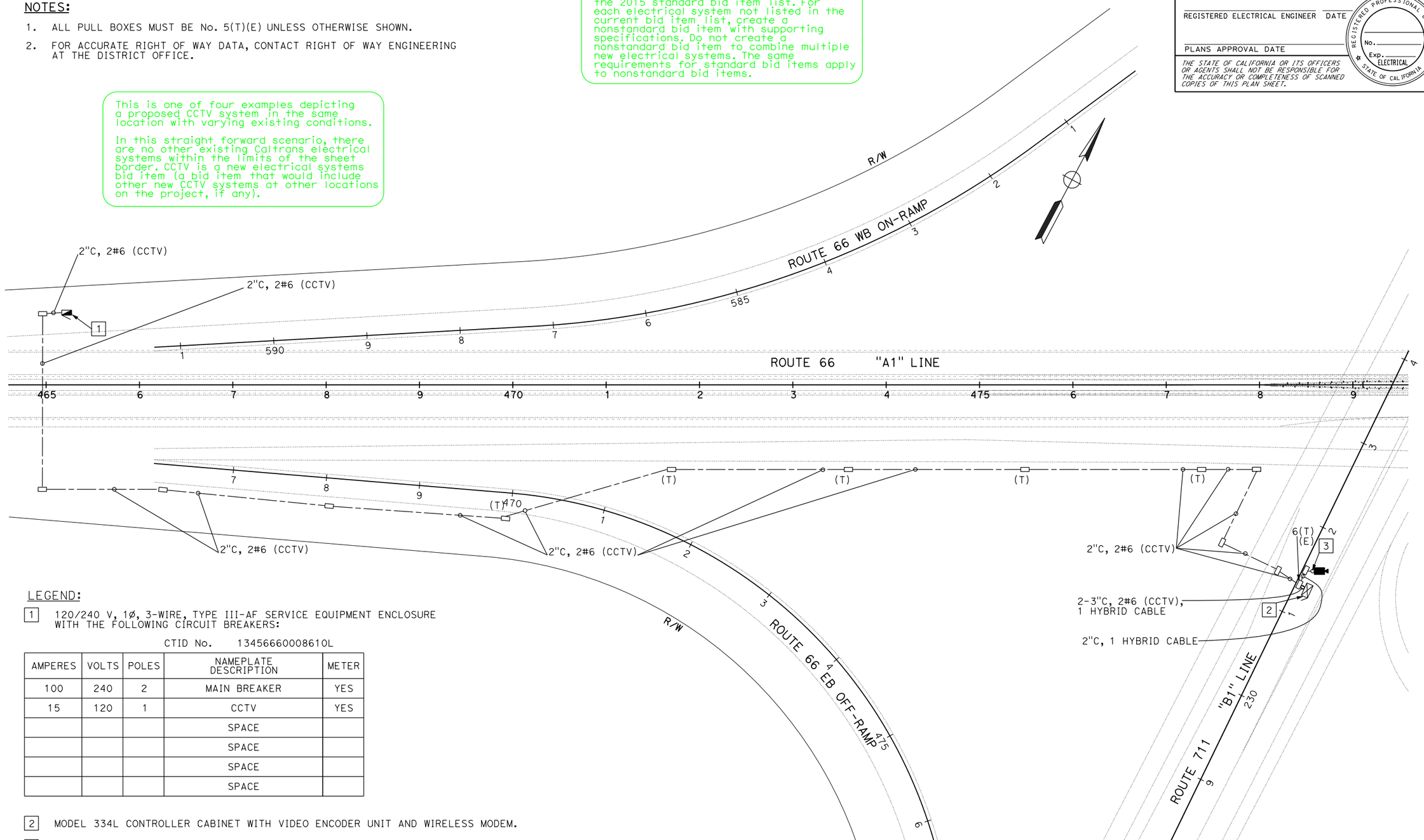
Closed Circuit Television is an example of an electrical system not listed in the 2015 standard bid item list. For each electrical system not listed in the current bid item list, create a nonstandard bid item with supporting specifications. Do not create a nonstandard bid item to combine multiple new electrical systems. The same requirements for standard bid items apply to nonstandard bid items.

This is one of four examples depicting a proposed CCTV system in the same location with varying existing conditions.

In this straight forward scenario, there are no other existing Caltrans electrical systems within the limits of the sheet border. CCTV is a new electrical systems bid item (a bid item that would include other new CCTV systems at other locations on the project, if any).

NOTES:

1. ALL PULL BOXES MUST BE No. 5(T)(E) UNLESS OTHERWISE SHOWN.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LEGEND:

1 120/240 V, 1Ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13456660008610L

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER
100	240	2	MAIN BREAKER	YES
15	120	1	CCTV	YES
			SPACE	
			SPACE	
			SPACE	
			SPACE	

2 MODEL 334L CONTROLLER CABINET WITH VIDEO ENCODER UNIT AND WIRELESS MODEM.

3 TYPE VDS 35 POLE WITH CAMERA ASSEMBLY.

ELECTRICAL SYSTEMS EXAMPLE D1, NEW CCTV — 1 of 4

LOCATION 4

APPROVED FOR ELECTRICAL WORK ONLY

CLOSED CIRCUIT TELEVISION SYSTEM

E-1

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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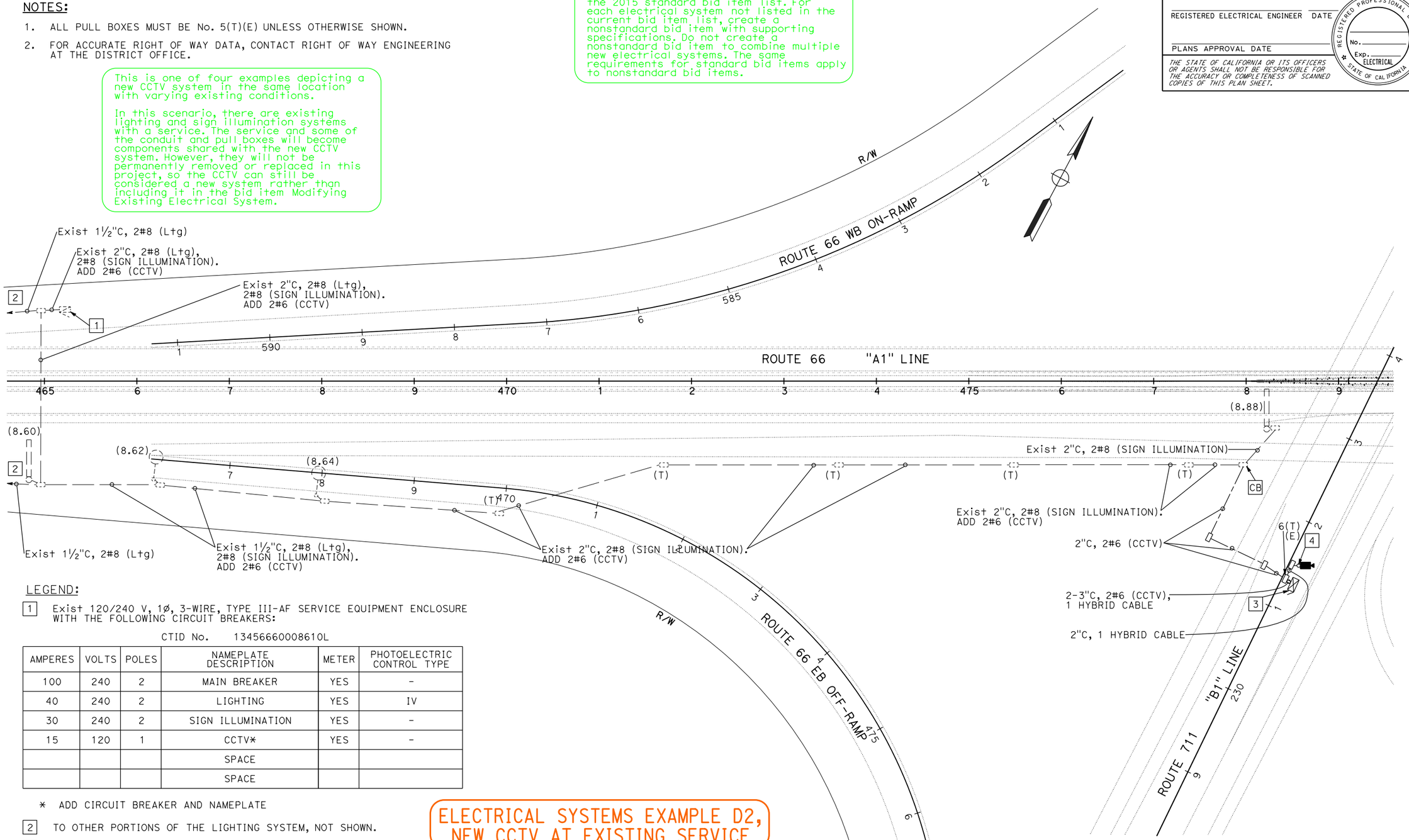
Closed Circuit Television is an example of an electrical system not listed in the 2015 standard bid item list. For each electrical system not listed in the current bid item list, create a nonstandard bid item with supporting specifications. Do not create a nonstandard bid item to combine multiple new electrical systems. The same requirements for standard bid items apply to nonstandard bid items.

NOTES:

1. ALL PULL BOXES MUST BE No. 5(T)(E) UNLESS OTHERWISE SHOWN.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

This is one of four examples depicting a new CCTV system in the same location with varying existing conditions.

In this scenario, there are existing lighting and sign illumination systems with a service. The service and some of the conduit and pull boxes will become components shared with the new CCTV system. However, they will not be permanently removed or replaced in this project, so the CCTV can still be considered a new system rather than including it in the bid item Modifying Existing Electrical System.



LEGEND:

1 Exist 120/240 V, 1ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13456660008610L

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER	PHOTOELECTRIC CONTROL TYPE
100	240	2	MAIN BREAKER	YES	-
40	240	2	LIGHTING	YES	IV
30	240	2	SIGN ILLUMINATION	YES	-
15	120	1	CCTV*	YES	-
			SPACE		
			SPACE		

* ADD CIRCUIT BREAKER AND NAMEPLATE

2 TO OTHER PORTIONS OF THE LIGHTING SYSTEM, NOT SHOWN.

3 MODEL 334L CONTROLLER CABINET WITH VIDEO ENCODER UNIT AND WIRELESS MODEM.

4 TYPE VDS 35 POLE WITH CAMERA ASSEMBLY.

ELECTRICAL SYSTEMS EXAMPLE D2, NEW CCTV AT EXISTING SERVICE

2 of 4

LOCATION 4

APPROVED FOR ELECTRICAL WORK ONLY

CLOSED CIRCUIT TELEVISION SYSTEM

E-1

SCALE: 1" = 50'

EXAMPLE D2, CLOSED CIRCUIT TELEVISION SYSTEM - RELEASED 2/02/2017

LAST REVISION 03-14-16 DATE PLOTTED => 02-FEB-2017 TIME PLOTTED => 09:04

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DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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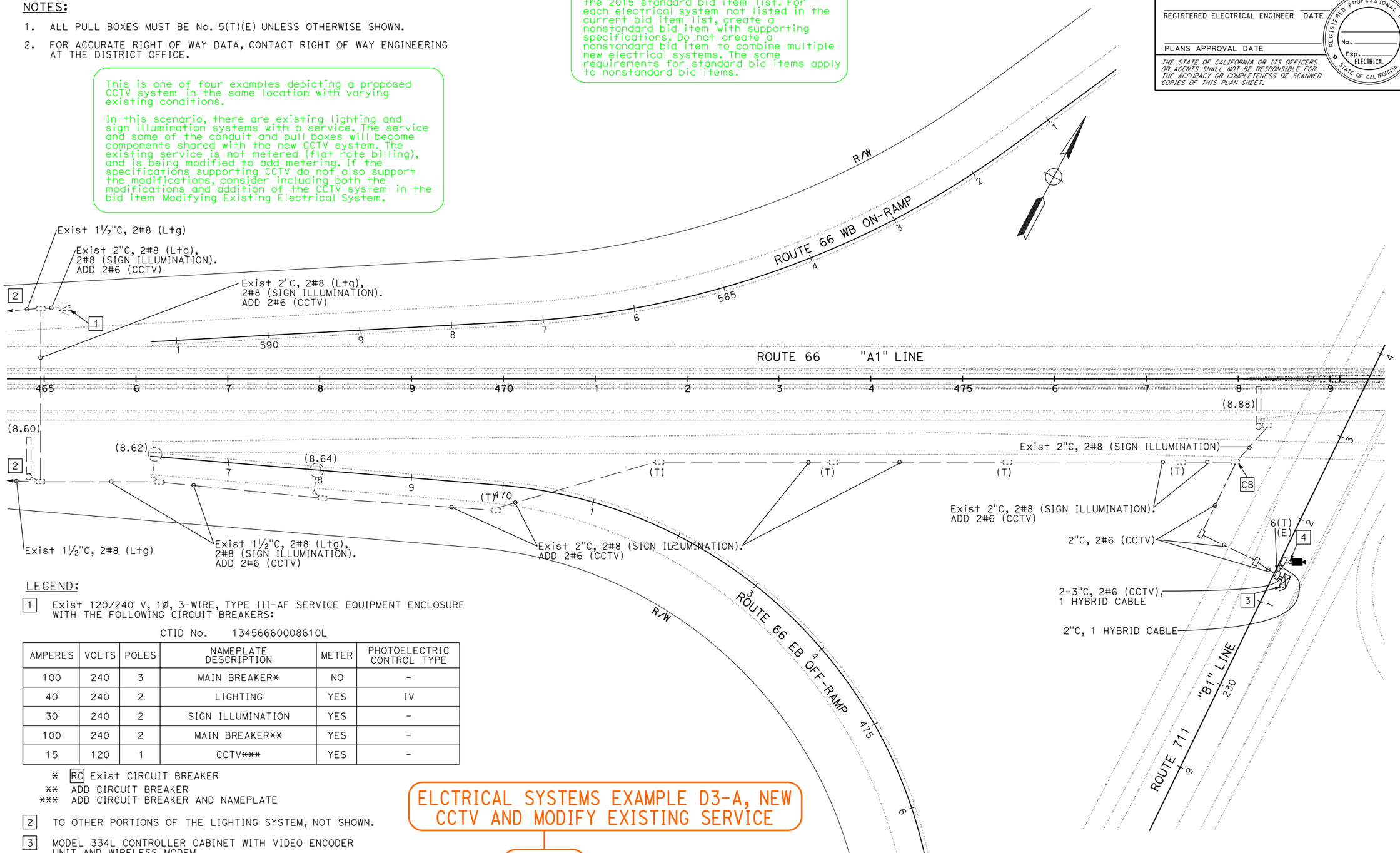
NOTES:

1. ALL PULL BOXES MUST BE No. 5(T)(E) UNLESS OTHERWISE SHOWN.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

This is one of four examples depicting a proposed CCTV system in the same location with varying existing conditions.

In this scenario, there are existing lighting and sign illumination systems with a service. The service and some of the conduit and pull boxes will become components shared with the new CCTV system. The existing service is not metered (flat rate billing), and is being modified to add metering. If the specifications supporting CCTV do not also support the modifications, consider including both the modifications and addition of the CCTV system in the bid item Modifying Existing Electrical System.

Closed Circuit Television is an example of an electrical system not listed in the 2015 standard bid item list. For each electrical system not listed in the current bid item list, create a nonstandard bid item with supporting specifications. Do not create a nonstandard bid item to combine multiple new electrical systems. The same requirements for standard bid items apply to nonstandard bid items.



LEGEND:

1 Exist 120/240 V, 1ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13456660008610L

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER	PHOTOELECTRIC CONTROL TYPE
100	240	3	MAIN BREAKER*	NO	-
40	240	2	LIGHTING	YES	IV
30	240	2	SIGN ILLUMINATION	YES	-
100	240	2	MAIN BREAKER**	YES	-
15	120	1	CCTV***	YES	-

* RC Exist CIRCUIT BREAKER
** ADD CIRCUIT BREAKER
*** ADD CIRCUIT BREAKER AND NAMEPLATE

2 TO OTHER PORTIONS OF THE LIGHTING SYSTEM, NOT SHOWN.

3 MODEL 334L CONTROLLER CABINET WITH VIDEO ENCODER UNIT AND WIRELESS MODEM.

4 TYPE VDS 35 POLE WITH CAMERA ASSEMBLY.

ELCTRICAL SYSTEMS EXAMPLE D3-A, NEW CCTV AND MODIFY EXISTING SERVICE

3 of 4

ADD CCTV LOCATION 4

MODIFYING EXISTING ELECTRICAL SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 50'

E-1

EXAMPLE D3-A, CLOSED CIRCUIT TELEVISION SYSTEM - RELEASED 2/02/2017

LAST REVISION 03-14-16 DATE PLOTTED => 02-FEB-2017 TIME PLOTTED => 09:06

REVISED BY | DATE REVISED

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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EXAMPLE D3-B, CLOSED CIRCUIT TELEVISION SYSTEM - RELEASED 2/02/2017

NOTES:

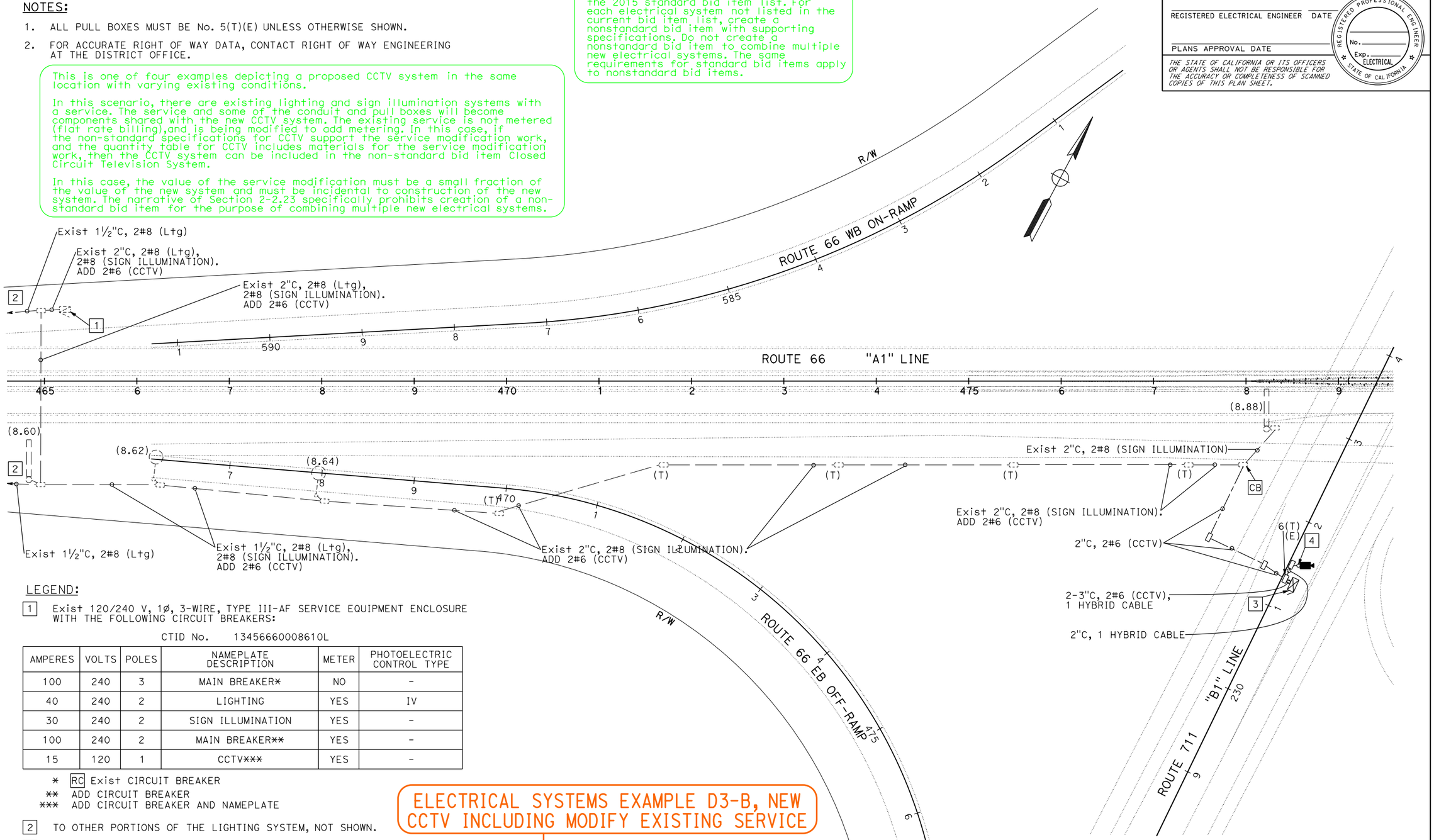
1. ALL PULL BOXES MUST BE No. 5(T)(E) UNLESS OTHERWISE SHOWN.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

This is one of four examples depicting a proposed CCTV system in the same location with varying existing conditions.

In this scenario, there are existing lighting and sign illumination systems with a service. The service and some of the conduit and pull boxes will become components shared with the new CCTV system. The existing service is not metered (flat rate billing),and is being modified to add metering. In this case, if the non-standard specifications for CCTV support the service modification work, and the quantity table for CCTV includes materials for the service modification work, then the CCTV system can be included in the non-standard bid item Closed Circuit Television System.

In this case, the value of the service modification must be a small fraction of the value of the new system and must be incidental to construction of the new system. The narrative of Section 2-2.23 specifically prohibits creation of a non-standard bid item for the purpose of combining multiple new electrical systems.

Closed Circuit Television is an example of an electrical system not listed in the 2015 standard bid item list. For each electrical system not listed in the current bid item list, create a nonstandard bid item with supporting specifications. Do not create a nonstandard bid item to combine multiple new electrical systems. The same requirements for standard bid items apply to nonstandard bid items.



LEGEND:

1 Exist 120/240 V, 1ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 13456660008610L

AMPERES	VOLTS	POLES	NAMEPLATE DESCRIPTION	METER	PHOTOELECTRIC CONTROL TYPE
100	240	3	MAIN BREAKER*	NO	-
40	240	2	LIGHTING	YES	IV
30	240	2	SIGN ILLUMINATION	YES	-
100	240	2	MAIN BREAKER**	YES	-
15	120	1	CCTV***	YES	-

* RC Exist CIRCUIT BREAKER
** ADD CIRCUIT BREAKER
*** ADD CIRCUIT BREAKER AND NAMEPLATE

2 TO OTHER PORTIONS OF THE LIGHTING SYSTEM, NOT SHOWN.

3 MODEL 334L CONTROLLER CABINET WITH VIDEO ENCODER UNIT AND WIRELESS MODEM.

4 TYPE VDS 35 POLE WITH CAMERA ASSEMBLY.

ELECTRICAL SYSTEMS EXAMPLE D3-B, NEW CCTV INCLUDING MODIFY EXISTING SERVICE

4 of 4

LOCATION 4

APPROVED FOR ELECTRICAL WORK ONLY

CLOSED CIRCUIT TELEVISION SYSTEM

E-1

SCALE: 1" = 50'

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LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTE:

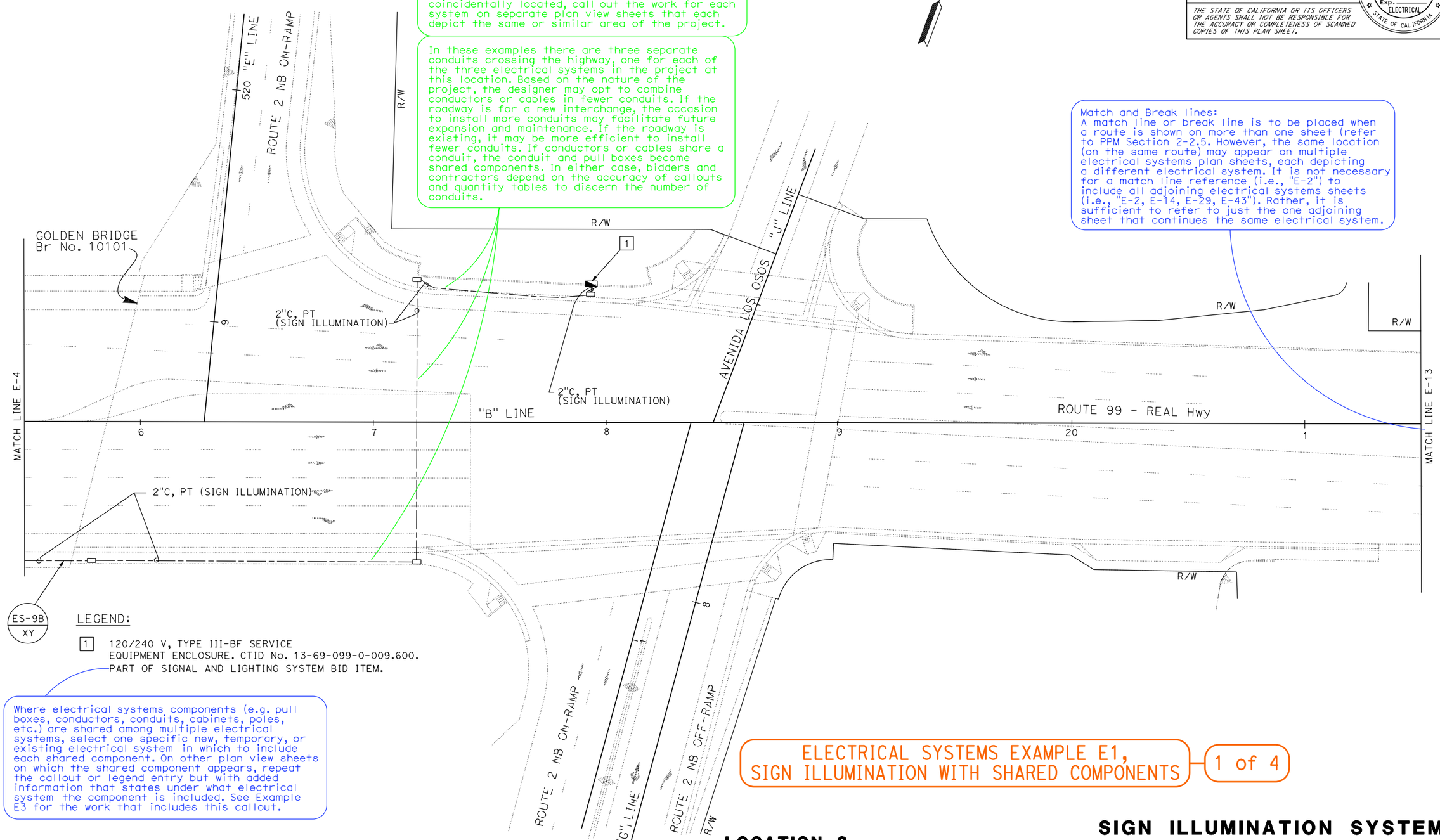
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

This is one of four example plan sheets that depict construction of three new electrical systems at the same location.

Call out work for only one electrical system or service (irrigation/booster pump) on each plan view sheet. If multiple electrical systems are coincidentally located, call out the work for each system on separate plan view sheets that each depict the same or similar area of the project.

In these examples there are three separate conduits crossing the highway, one for each of the three electrical systems in the project at this location. Based on the nature of the project, the designer may opt to combine conductors or cables in fewer conduits. If the roadway is for a new interchange, the occasion to install more conduits may facilitate future expansion and maintenance. If the roadway is existing, it may be more efficient to install fewer conduits. If conductors or cables share a conduit, the conduit and pull boxes become shared components. In either case, bidders and contractors depend on the accuracy of callouts and quantity tables to discern the number of conduits.

Match and Break lines:
A match line or break line is to be placed when a route is shown on more than one sheet (refer to PPM Section 2-2.5. However, the same location (on the same route) may appear on multiple electrical systems plan sheets, each depicting a different electrical system. It is not necessary for a match line reference (i.e., "E-2") to include all adjoining electrical systems sheets (i.e., "E-2, E-14, E-29, E-43"). Rather, it is sufficient to refer to just the one adjoining sheet that continues the same electrical system.



LEGEND:

1 120/240 V, TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. CTID No. 13-69-099-0-009.600. PART OF SIGNAL AND LIGHTING SYSTEM BID ITEM.

Where electrical systems components (e.g. pull boxes, conductors, conduits, cabinets, poles, etc.) are shared among multiple electrical systems, select one specific new, temporary, or existing electrical system in which to include each shared component. On other plan view sheets on which the shared component appears, repeat the callout or legend entry but with added information that states under what electrical system the component is included. See Example E3 for the work that includes this callout.

ELECTRICAL SYSTEMS EXAMPLE E1,
SIGN ILLUMINATION WITH SHARED COMPONENTS

1 of 4

LOCATION 2

APPROVED FOR ELECTRICAL WORK ONLY

SIGN ILLUMINATION SYSTEM

SCALE: 1" = 20'

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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DATE REVISED

EXAMPLE E1 SIGN ILLUMINATION W/ SHARED COMPONENTS - RELEASED 2/02/2017

DATE PLOTTED => 02-FEB-2017
TIME PLOTTED => 09:11

LAST REVISION 03-14-16

BORDER LAST REVISED 7/2/2010

USERNAME => s136641
DGN FILE => example E1-ug_05.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1313

PROJECT NUMBER & PHASE 13000101101

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTE:

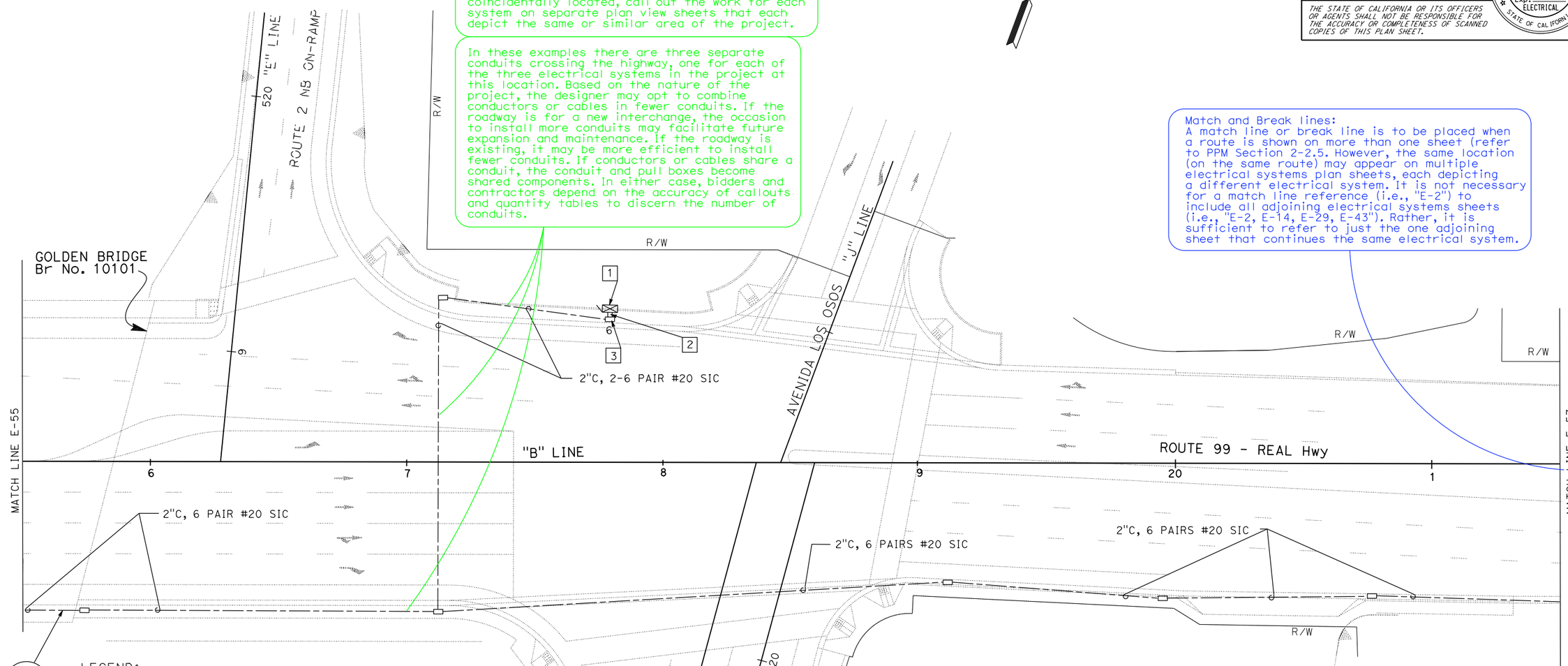
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

This is one of four example plan sheets that depict construction of three new electrical systems at the same location.

Call out work for only one electrical system or service (irrigation/booster pump) on each plan view sheet. If multiple electrical systems are coincidentally located, call out the work for each system on separate plan view sheets that each depict the same or similar area of the project.

In these examples there are three separate conduits crossing the highway, one for each of the three electrical systems in the project at this location. Based on the nature of the project, the designer may opt to combine conductors or cables in fewer conduits. If the roadway is for a new interchange, the occasion to install more conduits may facilitate future expansion and maintenance. If the roadway is existing, it may be more efficient to install fewer conduits. If conductors or cables share a conduit, the conduit and pull boxes become shared components. In either case, bidders and contractors depend on the accuracy of callouts and quantity tables to discern the number of conduits.

Match and Break lines:
A match line or break line is to be placed when a route is shown on more than one sheet (refer to PPM Section 2-2.5. However, the same location (on the same route) may appear on multiple electrical systems plan sheets, each depicting a different electrical system. It is not necessary for a match line reference (i.e., "E-2") to include all adjoining electrical systems sheets (i.e., "E-2, E-14, E-29, E-43"). Rather, it is sufficient to refer to just the one adjoining sheet that continues the same electrical system.



LEGEND:

1. DEPARTMENT-FURNISHED MODEL 2070L CONTROLLER WITH MODEL 332 CABINET AND BBS. PART OF SIGNAL AND LIGHTING SYSTEM
2. 2-4"C, PART OF SIGNAL AND LIGHTING SYSTEM
   2-6 PAIRS #20 SIC
3. PART OF SIGNAL AND LIGHTING SYSTEM

Where electrical systems components (e.g. pull boxes, conductors, conduits, cabinets, poles, etc.) are shared among multiple electrical systems, select one specific new, temporary, or existing electrical system in which to include each shared component. On other plan view sheets on which the shared component appears, repeat the callout or legend entry but with added information that states under what electrical system the component is included. See Example E3 for the work that includes this callout.

ELECTRICAL SYSTEMS EXAMPLE E2,
INTERCONNECTION CONDUIT CABLE W/ SHARED COMPONENTS

2 of 4

LOCATION 2

APPROVED FOR ELECTRICAL WORK ONLY

INTERCONNECTION CONDUIT AND CABLE

SCALE: 1" = 20'

E-56

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REVISED BY | DATE REVISED

EXAMPLE E2 INTERCONNECTION W/ SHARED COMPONENTS - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:12

BORDER LAST REVISED 7/2/2010 | USERNAME => s136641 | DGN FILE => example E2-ua_056.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1313 | PROJECT NUMBER & PHASE 13000101101

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTES:

1. FOR LEGEND AND SCHEDULES SEE SHEET E-21.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

See Example E4 to view legend and equipment/ conductor schedules for this example (E3).

This is one of four example plan sheets that depict construction of three new electrical systems at the same location.

Call out work for only one electrical system or service (irrigation/booster pump) on each plan view sheet. If multiple electrical systems are coincidentally located, call out the work for each system on separate plan view sheets that each depict the same or similar area of the project.

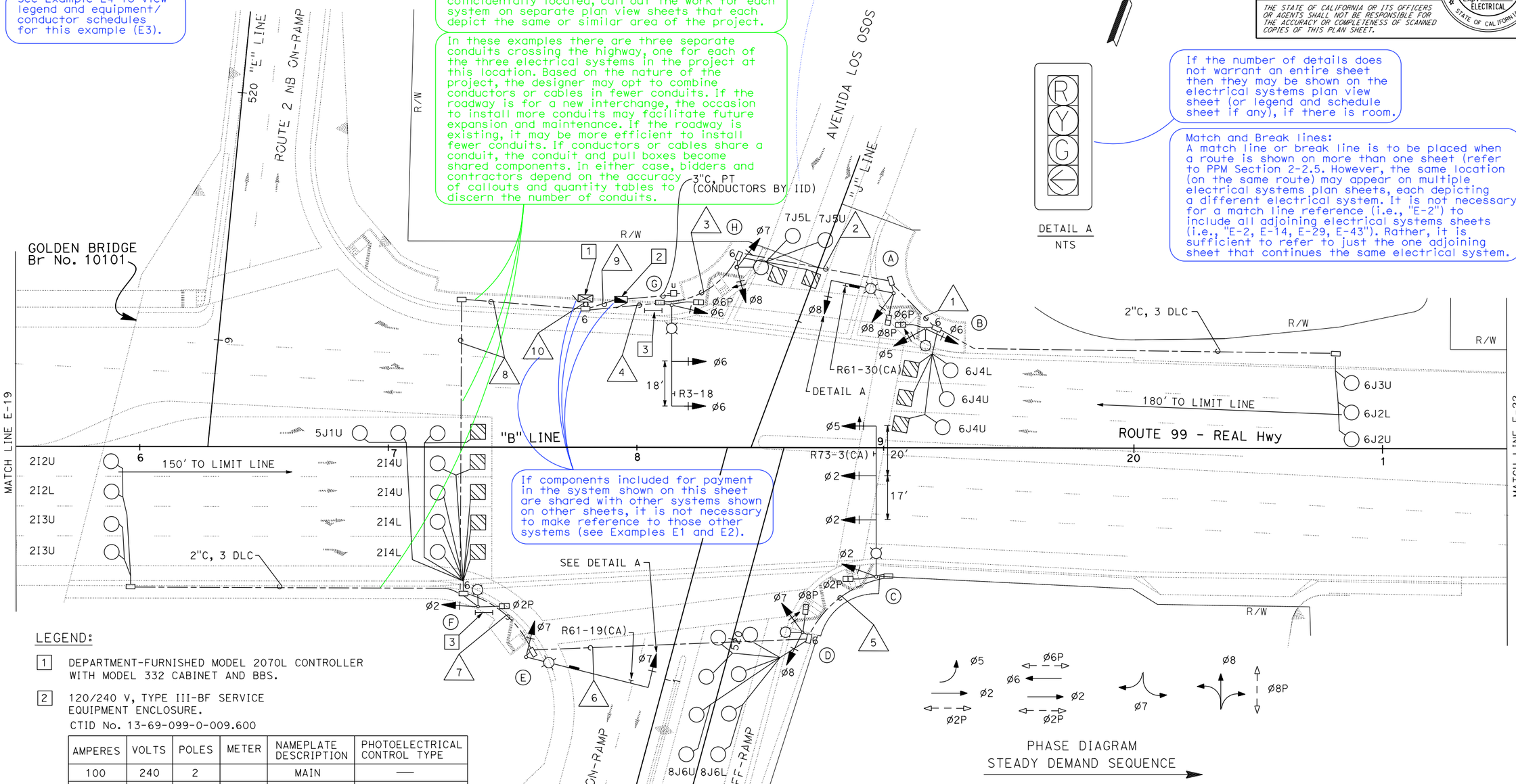
In these examples there are three separate conduits crossing the highway, one for each of the three electrical systems in the project at this location. Based on the nature of the project, the designer may opt to combine conductors or cables in fewer conduits. If the roadway is for a new interchange, the occasion to install more conduits may facilitate future expansion and maintenance. If the roadway is existing, it may be more efficient to install fewer conduits. If conductors or cables share a conduit, the conduit and pull boxes become shared components. In either case, bidders and contractors depend on the accuracy of callouts and quantity tables to discern the number of conduits.

If an abbreviation is used for the name of the local utility in a callout, you must identify the full name elsewhere on the same sheet or on a previous sheet.

If the number of details does not warrant an entire sheet then they may be shown on the electrical systems plan view sheet (or legend and schedule sheet if any), if there is room.

Match and Break lines:
A match line or break line is to be placed when a route is shown on more than one sheet (refer to PPM Section 2-2.5. However, the same location (on the same route) may appear on multiple electrical systems plan sheets, each depicting a different electrical system. It is not necessary for a match line reference (i.e., "E-2") to include all adjoining electrical systems sheets (i.e., "E-2, E-14, E-29, E-43"). Rather, it is sufficient to refer to just the one adjoining sheet that continues the same electrical system.

If components included for payment in the system shown on this sheet are shared with other systems shown on other sheets, it is not necessary to make reference to those other systems (see Examples E1 and E2).



LEGEND:

1. DEPARTMENT-FURNISHED MODEL 2070L CONTROLLER WITH MODEL 332 CABINET AND BBS.
2. 120/240 V, TYPE III-BF SERVICE EQUIPMENT ENCLOSURE.
   CTID No. 13-69-099-0-009.600

AMPERES	VOLTS	POLES	METER	NAMEPLATE DESCRIPTION	PHOTOELECTRICAL CONTROL TYPE
100	240	2		MAIN	—
40	120	1		SIGNAL	—
30	120	1		LIGHTING	—
15	120	1		IISNS	—
15	120	1		PEC	V

3. TYPE I PEDESTRIAN BARRICADE WITH 2-SIGN R9-3A AND 2-SIGN R9-3B BACK TO BACK.

ELECTRICAL SYSTEMS EXAMPLE E3,
SIGNAL AND LIGHTING W/ SHARED COMPONENTS

3 of 4

LOCATION 2

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING SYSTEM

SCALE: 1" = 20'

E-20

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EXAMPLE E3 SIGNAL&LIGHTING W/ SHARED COMPONENTS - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2 | TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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On a sheet that includes only legend and schedules, identify all the electrical systems plan sheets that it supports. In this case, sheet E-20 is on example plan E3.

LEGEND FOR SHEET E-20

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION			RUN NUMBER									
			NUMBER OF CONDUCTORS									
CABLE TYPE	Std (X)	PHASE	1	2	3	4	5	6	7	8	9	10
Veh-Ped 12CSC / PBA 3CSC	A	8 / 8P		1 / 1	1 / 1	1 / 1						1 / 1
	B	5,6 / 6P	1 / 1	1 / 1	1 / 1	1 / 1						1 / 1
	C	2,5 / 2P					1 / 1	1 / 1	1 / 1	1 / 1		1 / 1
	D	7,8 / 8P						1 / 1	1 / 1	1 / 1		1 / 1
	E	7							1	1		1
	F	2 / 2P								1 / 1		1 / 1
	G	6 / 6P				1 / 1						1 / 1
	H	7,8			1	1						1
TOTAL CABLES 12/3 CONDUCTORS			1 / 1	2 / 2	3 / 2	4 / 3	1 / 1	2 / 2	3 / 2	4 / 3	1 / 1	8 / 6
6 PAIR #20	SIC											2*
#10	STREET LIGHTING		2	2	2	2	2	2	2	2	2	
#6	CONTROLLER POWER										2	2
#12	IISNS			2	2	2			2	2	2	
Manufacturer's APS Cable	Ø2P						1		1			
	Ø6P		1		1							
	Ø8P		1				1					
TYPE B DLC	Ø2									5		5
	Ø5									1		1
	Ø6		5	5	5	5						5
	Ø7				2	2						2
	Ø8							2	2	2		2
TOTAL DLCs PER RUN			5	5	7	7		2	2	8		15
CONDUIT SIZE			3	3	4	4	3	3	4	4	2	4(2)

*PART OF INTERCONNECTION CONDUIT AND CABLE

The signal interconnect cable itself is NOT a shared component, but in this example the conduit run it is in IS shared. If the SIC is repeated here for clarity, inform the bidder, contractor, and RE what bid item the SIC is a part of, so that it is not misunderstood to be part of Signal and Lighting System. The SIC is called out on the Interconnection Conduit and Cable plan sheets.

STANDARD AND EQUIPMENT SCHEDULE

STANDARD				Veh Sig Mtg				Ped SIGNAL		APS		LUMINAIRE	IISNS
(X)	TYPE	SMA	LMA	Ø	MAST ARM	Ø	POLE	Ø	Mtg	Ø	ARROW		
A	19-4-100	25′	15′	8	MAS	8	SV-1-T	8	SP-1-T	6	←	165 W	REAL Hwy
B	15TS		15′			5,6	SV-2-TA	6	SP-1-T	3	→	165 W	
C	61-5-100	60′	15′	2,5	MAT 2-MAS	2	SV-1-T	2	SP-1-T	3	←	165 W	
D	15TS		15′			7,8	SV-2-TA	8	SP-1-T	2	→	165 W	
E	29-5-100	50′	15′	7	MAT	7	SV-1-T			2	←	165 W	REAL Hwy
F	15TS		15′			2	SV-1-T	2	SP-1-T	2	→	165 W	
G	26-4-100	40′	15′	6	MAT MAS	6	SV-1-T	6	SP-1-T	6	←	165 W	
H	15TS					7,8	SV-2-T			6	→	165 W	

This is one of four example plan sheets that depict construction of three new electrical systems at the same location.

ELECTRICAL SYSTEMS EXAMPLE E4, SIGNAL AND LIGHTING SCHEDULES — 4 of 4

Even though this is not a plan view sheet, repeating this modifier quickly informs the bidder and contractor of the applicable location for the legend and schedules.

Organize sheets that include only legend and schedules in the plan set to follow the sheets they support.

LOCATION 2

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING SYSTEM

E-21

EXAMPLE E4 SIGNAL&LIGHTING SCHEDULES - RELEASED 2/02/2017

DATE PLOTTED => 02-FEB-2017
TIME PLOTTED => 09:36
LAST REVISION 03-14-16

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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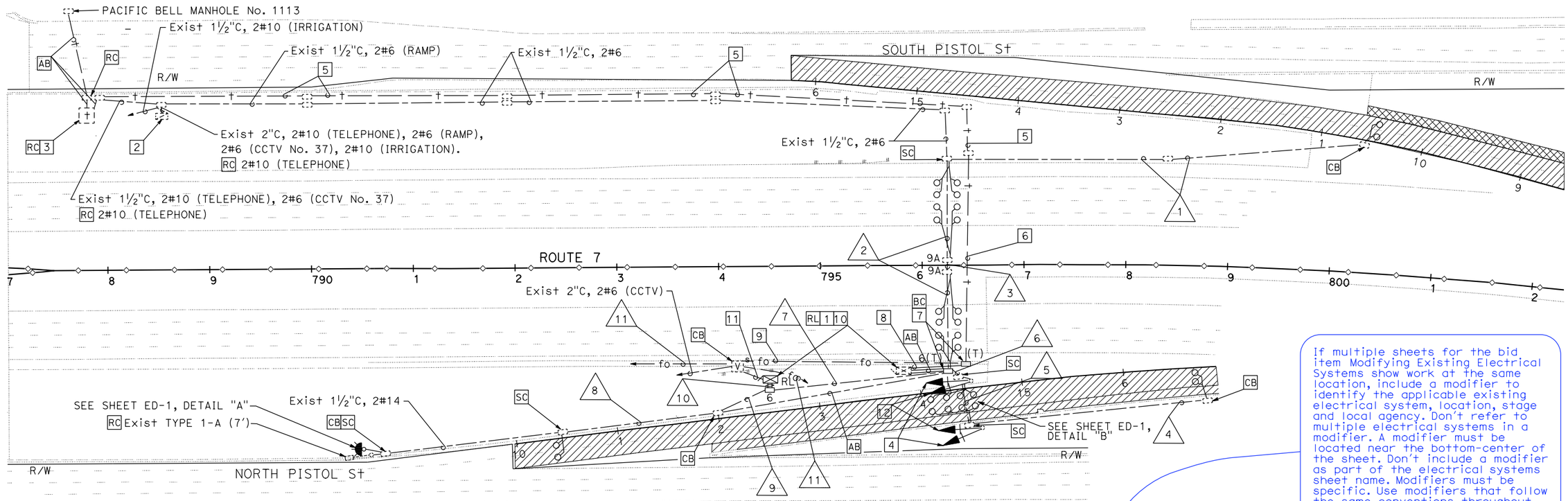
NOTES: (THIS SHEET)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. AB Exist LOOPS WHERE NEW LOOPS ARE CUT.
3. SPACING FOR MAINLINE DOUBLE LOOPS IS 20' LEADING EDGE TO LEADING EDGE.
4. INSTALL NEW LOOP CONDUIT STUB OUT. NO SPLICING ALLOW IN MEDIAN.

All work for modifying various existing electrical systems at various locations throughout the project is included in one bid item. Call out work for only one electrical system or service (irrigation/booster pump) on each plan view sheet. If multiple electrical systems that are being modified are coincidentally located, call out the work for each system on separate plan view sheets that each depict the same or similar area of the project.

ELECTRICAL SYSTEMS EXAMPLE F, MODIFYING EXISTING ELECTRICAL SYSTEM



If multiple sheets for the bid item Modifying Existing Electrical Systems show work at the same location, include a modifier to identify the applicable existing electrical system, location, stage and local agency. Don't refer to multiple electrical systems in a modifier. A modifier must be located near the bottom-center of the sheet. Don't include a modifier as part of the electrical systems sheet name. Modifiers must be specific. Use modifiers that follow the same conventions throughout the project plans.

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION		RUN NUMBER										
		NUMBER OF CONDUCTORS										
		1	2	3	4	5	6	7	8	9	10	11
#6	SERVICE (RAMP)		2	2				2			2	
TYPE B DLC	SURVEILLANCE		8	8				16			16	
	DEMAND					1	2	2			2	
	PASSAGE					1	2	2			2	
	QUEUE								2	2	2	
	COUNT	2	2	2	2	2	2	4			4	
TOTAL DLCs PER RUN												
#10	RAMP SIGNAL					3	6	6			6	
	METER ON								2	2	2	
	LOOP WIRE		8									
	SIGNAL COMMON					1	2	2			2	
Exist 72 SINGLE MODE FIBER OPTIC CABLE												2
Exist CONDUIT SIZE		1½"	2"	2"	1½"	2"	2½"		1½"			2-4"
NEW CONDUIT SIZE								3½"		2"	2-3"	

RC ALL EXISTING CONDUCTORS. INSTALL NEW CONDUCTORS, UNLESS OTHERWISE NOTED.

LEGEND: (THIS SHEET)

1. EXISTING MODEL 170 CONTROLLER ASSEMBLY.
2. EXISTING 120/240 V, SERVICE EQUIPMENT ENCLOSURE. CTID No. 1369007001818 ADDRESS 3382 PISTOL.

AMPERES	VOLTS	POLES	METER	NAMEPLATE DESCRIPTION
30	120	1	YES	NB RAMP
20	120	1	YES	IRRIGATION
20	120	1	YES	TELEPHONE *
20	120	1	YES	IRRIGATION *
30	120	1	YES	CCTV No. 37

* RC

3. EXISTING TELEPHONE DEMARCATION CABINET.
4. RC EXISTING 3-8" SECTION SIGNAL HEAD. INSTALL 3-12" SECTION SIGNAL HEAD WITH BACKPLATE, TV-1-T.
5. EXISTING 1½"C, 2#6 (CCTV), 4#18 TELEPHONE CABLE RC 4#18 TELEPHONE CABLE.
6. EXISTING 2"C, 2#6 (CCTV), 4#18 TELEPHONE CABLE RC 4#18 TELEPHONE CABLE.
7. RC EXISTING PULL BOX. INSTALL NEW PULL BOX.
8. EXISTING 2"C, 4#18, 12 SINGLEMODE FIBER OPTIC CABLE. RR 12 SINGLEMODE FIBER OPTIC CABLE FOR RELOCATED CONTROLLER CABINET. RC 4#18 TELEPHONE CABLE.
9. EXISTING 2"C, 2#6 (CCTV), 12 SINGLEMODE FIBER OPTIC CABLE. RR 12 SINGLEMODE FIBER OPTIC CABLE FOR RELOCATED CONTROLLER CABINET AND STORE AT SPLICE VAULT.
10. TERMINATE 12 SINGLEMODE FIBER OPTIC CABLE IN EXISTING FIBER DISTRIBUTION UNIT FOR RELOCATED CONTROLLER CABINET.
11. INSTALL 2"C, REUSE EXISTING 12 SINGLEMODE FIBER OPTIC CABLE.
12. RC EXISTING 2-8" SECTION SIGNAL HEAD. INSTALL 3-8" SECTION SIGNAL HEAD WITH BACKPLATE, SV-1-T, SIGN 89-2 (24"x10").

V:s EXISTING FIBER OPTIC SPLICE VAULT WITH SPLICE ENCLOSURE.

MODIFYING EXISTING ELECTRICAL SYSTEM

RAMP METERING AT PISTOL STREET ON-RAMP

SCALE: 1" = 50'

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E-9

EXAMPLE F, MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 2/02/2017

DATE PLOTTED => 02-FEB-2017
TIME PLOTTED => 09:38

LAST REVISION 03-14-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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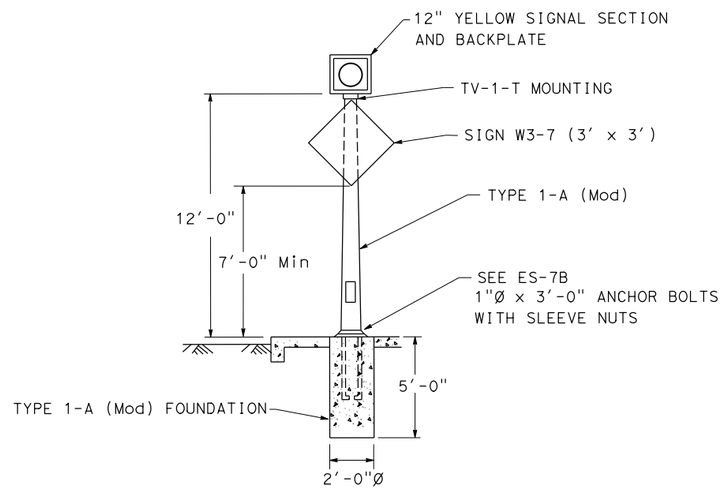
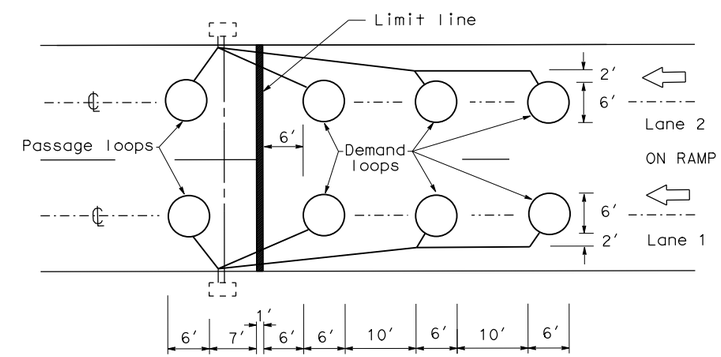
Each detail must have a name or a designation (or both, e.g., "Typical Loop Spacing for 2-Lane Ramp," or "Detail B"). If a callout or legend entry invokes an electrical detail that is not on the same plan sheet, the callout or legend entry must include the sheet identification and number on which the detail is shown (e.g., "Detail B, See sheet E-1" or "Detail B, See sheet ED-1").

Standard drawings from other agencies, when applicable to the project, shall be included as part of the project plan set. Referring to a standard drawing number from another agency is not acceptable. Identify which bid item includes payment for the work involved. Refer to Section 2-1.6 "Standard Drawings from Other Agencies" for further information.

Put fiber assignment tables on electrical systems details sheets and do not identify them as "NO SCALE."



TYPE 1-A (Mod) FLASHING BEACON DETAIL A



TYPICAL LOOP SPACING FOR 2-LANE RAMP DETAIL B

Electrical details are project specific details for work shown on the electrical systems sheets that are not included in the Standard Plans, or are modified from the Standard Plans. Refer to Section 2-2.6 "Construction Details" for further information. A modified standard plan detail or a combination of standard plan details must be shown and labeled as a modified detail. Provide sufficient dimensioning and callouts for the modified detail so that quantities involved are calculable. See Section 2-1.4 "Use of Standard Plans."

If a detail includes dimensions, the statement "NO SCALE" is typically added below the name of the detail (unless a scale is desired). If a detail has no dimensions (e.g. a schematic wiring diagram), the statement "NO SCALE" is not necessary. If all details on one electrical systems details plan sheet all comply with either of the aforementioned cases, inclusion or absence of the statement "NO SCALE" applies to the entire electrical details sheet.

ELECTRICAL SYSTEMS EXAMPLE G, ELECTRICAL SYSTEMS DETAILS

ELECTRICAL SYSTEMS DETAILS

NO SCALE

ED-10

EXAMPLE G, ELECTRICAL SYSTEMS DETAILS - RELEASED 2/02/2017

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

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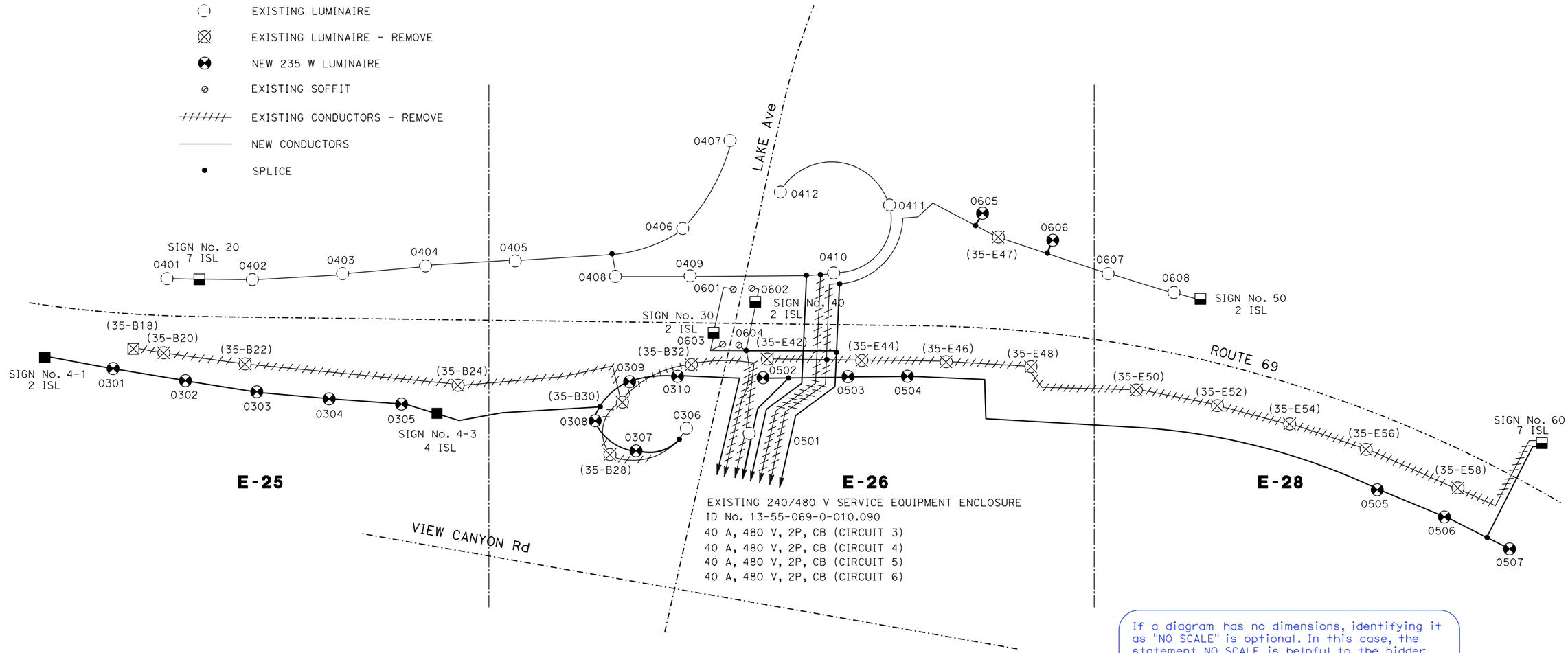
LEGEND:

- MODIFIED SIGN ILLUMINATION FIXTURE
- NEW SIGN ILLUMINATION FIXTURE
- EXISTING SIGN ILLUMINATION FIXTURE - REMOVE
- EXISTING LUMINAIRE
- EXISTING LUMINAIRE - REMOVE
- NEW 235 W LUMINAIRE
- EXISTING SOFFIT
- EXISTING CONDUCTORS - REMOVE
- NEW CONDUCTORS
- SPLICE



If a diagram has no dimensions, identifying it as "NO SCALE" is optional. In this case, the statement NO SCALE is helpful to the bidder and contractor to alert them that the detail is not the same proportion as the Electrical Systems sheets, despite that it is delineated accurately and proportionally in relation to the base map.

ELECTRICAL SYSTEMS EXAMPLE H, ELECTRICAL SYSTEMS DETAILS

LIGHTING AND SIGN ILLUMINATION WIRING DIAGRAM

ELECTRICAL SYSTEMS DETAILS

NO SCALE

ED-170

EXAMPLE H, ELECTRICAL SYSTEMS DETAILS - RELEASED 2/02/2017

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:42

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

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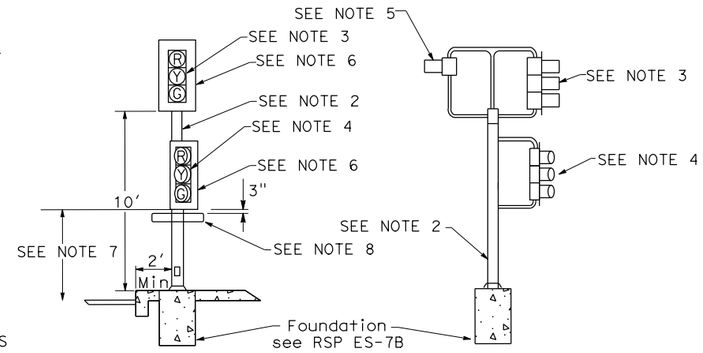
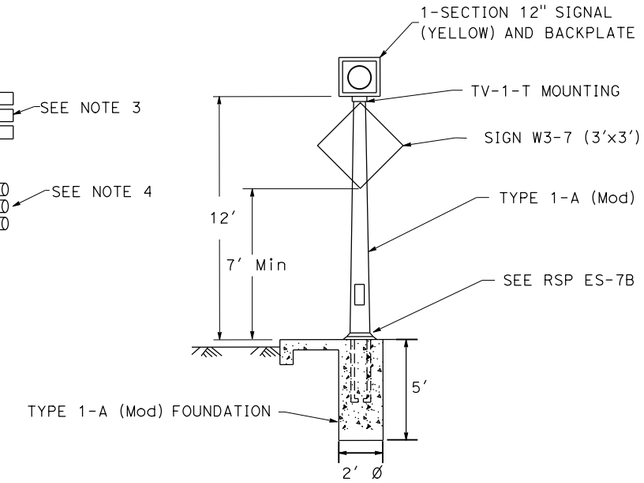
NOTES: (THIS SHEET ONLY)

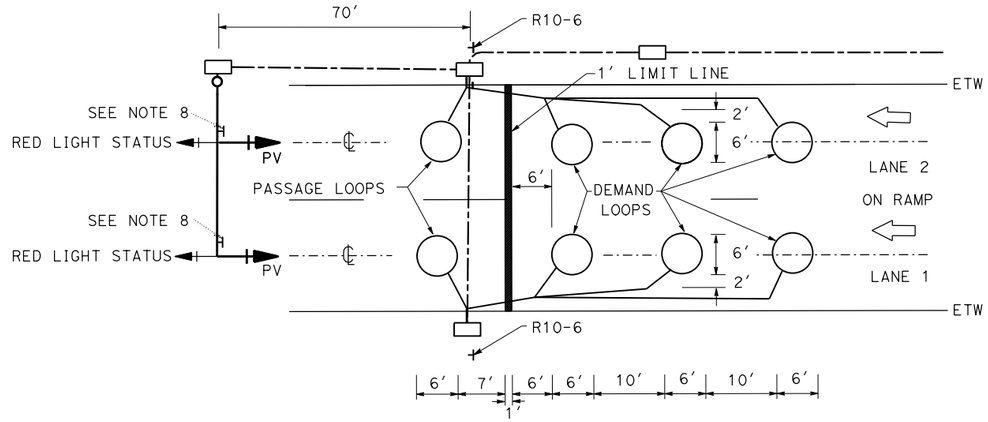
1. SEE RSP ES-5A, RSP ES-5B AND RSP ES-5D FOR ADDITIONAL LOOP DETECTOR INFORMATION NOT SHOWN
2. TYPE 1-A STANDARD, INSTALL ANCHOR BOLTS WITH SLEEVE NUTS (SEE RSP ES-7B)
3. 3-SECTION 12" SIGNAL HEAD (RED, YELLOW, GREEN), 18" X 12" ANGLED VISORS REQUIRED WHERE SHOWN, TYPE TV-1-T POST-TOP MOUNT
4. 3-SECTION 8" SIGNAL HEAD (RED, YELLOW, GREEN), 8" FULL CIRCLE VISORS, TYPE SV-1-T BRACKET MOUNT ON SIDE OF STANDARD AWAY FROM TRAFFIC
5. 1-SECTION 12" SIGNAL HEAD (RED), 12" FULL CIRCLE VISOR, RED STATUS LIGHT TYPE TV-1-T POST-TOP MOUNT
6. BACKPLATE
7. 4'-6" ABOVE LANE CENTER LINE
8. FURNISHING ALL SIGNS ON THIS SHEET IS INCLUDED IN FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED). SEE SIGN QUANTITIES.
   R89 22" X 6" (1 CAR PER GREEN) FOR ONE LANE AND HOV
   R89-2 22" X 10" (1 CAR PER GREEN THIS LANE) FOR TWO LANES
   R89-2 22" X 10" (2 CARS PER GREEN THIS LANE) FOR TWO LANES
   R89-2 36" X 16" (1 CAR PER GREEN THIS LANE) FOR ONE LANE ON MAST ARM
   R89-2 36" X 16" (2 CARS PER GREEN THIS LANE) FOR TWO LANES ON MAST ARM



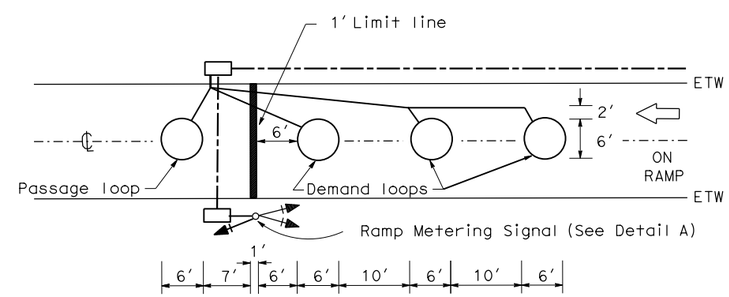
RAMP METERING SIGNAL
DETAIL A



TYPE 1-A (Mod)
FLASHING BEACON
DETAIL E



TYPICAL 2-LANE RAMP
METERING INSTALLATION
DETAIL B



TYPICAL 1-LANE RAMP
METERING INSTALLATION
DETAIL C

ELECTRICAL EXAMPLE K12, MODIFYING EXISTING ELECTRICAL SYSTEMS, MODIFYING RAMP METERING DETAILS

ELECTRICAL SYSTEMS DETAILS
NO SCALE

(MODIFYING RAMP METERING SYSTEM DETAILS)

ED-49

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

EXAMPLE K12 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-AUG-201 | TIME PLOTTED => 14:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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NOTE:

ELECTRICAL SYSTEMS QUANTITIY TABLES SUMMARIZE SIGNIFICANT COMPONENTS. SEE ELECTRICAL SYSTEMS PLANS AND SPECIFICATIONS TO DETERMINE ALL MATERIALS NEEDED FOR EACH SYSTEM.

CLOSED CIRCUIT TELEVISION SYSTEM

SHEET No.	100 A, 2P, CB	No. 5(T)(E) PB	No. 6(T)(E) PB	15 A, 1P, CB	MODEL 334L CABINET FOUNDATION	MODEL 334L CABINET	WIRELESS MODEM	TYPE VDS 35 POLE	TYPE VDS 35 POLE FOUNDATION	CAMERA ASSEMBLY	VIDEO ENCODER UNIT	3"C, TYPE 1	2"C, TYPE 3	No. 8 CONDUCTOR G	No. 6 CONDUCTOR	HYBRID CABLE
	EA											LF				
E-1	1	3	1	1	1	1	1	1	1	1	1	20	170	200	3400	75

This quantity table example corresponds with the work shown on example D4.

VEHICLE CLASSIFICATION STATION

SHEET No.	No. 5(T)(E) PB	No. 6(T)(E) PB	DETECTOR LOOP, TYPE A	15 A, 1P, CB	MODEL 334 CABINET FOUNDATION	MODEL 334 CABINET	WIRELESS MODEM	AUTOMATED TRAFFIC COUNTER	PIEZO AXLE SENSOR WITH STC	3"C, TYPE 1	3"C, TYPE 3	No. 8 CONDUCTOR G	No. 6 CONDUCTOR	DLC
	EA									LF				
E-2	7	1	14	1	1	1	1	1	7	20	1100	1000	2800	2400

The quantities in these tables are not shown in the example plans.

Words are preferred over abbreviations where there is room, including non-standard abbreviations defined in the project plans. Refer to components with the same verbiage found in the specifications that support them. Abbreviating names of less common components is not recommended.

TRAFFIC COUNT STATION

SHEET No.	No. 5(T)(E) PB	INDUCTIVE LOOP DETECTOR, TYPE A	MODIFIED TYPE B TDC FOUNDATION	MODIFIED TYPE B TDC	PORTABLE AUTOMATED TRAFFIC COUNTER	2"C, TYPE 1	2"C, TYPE 3	DLC
	EA					LF		
E-4	5	4	2	2	2	20	270	350
E-5	5	8	3	3	3	30	100	250
E-6	3	2	2	2	2	20	30	40

CHANGEABLE MESSAGE SIGN SYSTEM

SHEET No.	No. 5(T)(E) PB	No. 6(T)(E) PB	100 A, 2P, CB	15 A, 1P, CB	30 A, 2P, CB	MODEL 334L CABINET FOUNDATION	MODEL 334L CABINET	WIRELESS MODEM	3"C, TYPE 1	3"C, TYPE 3	No. 6 CONDUCTOR	No. 2 CONDUCTOR
	EA								LF			
E-3	8	1	1	1	1	1	1	1	60	850	3600	3000

This quantity table example corresponds with the work shown on example C.

Multiple quantity tables can be shown on one quantity sheet.

ELECTRICAL SYSTEMS EXAMPLE J, ELECTRICAL SYSTEMS QUANTITIES

ELECTRICAL SYSTEMS QUANTITIES

EQ-9

EXAMPLE J, ELECTRICAL SYSTEMS QUANTITIES - RELEASED 2/02/2017

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 03-14-16 | DATE PLOTTED => 02-FEB-2017 | TIME PLOTTED => 09:57

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

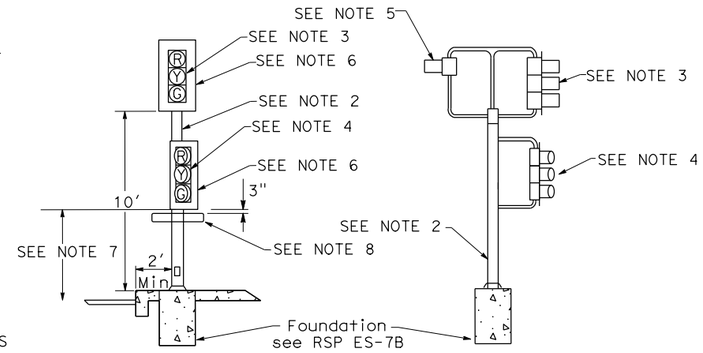
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

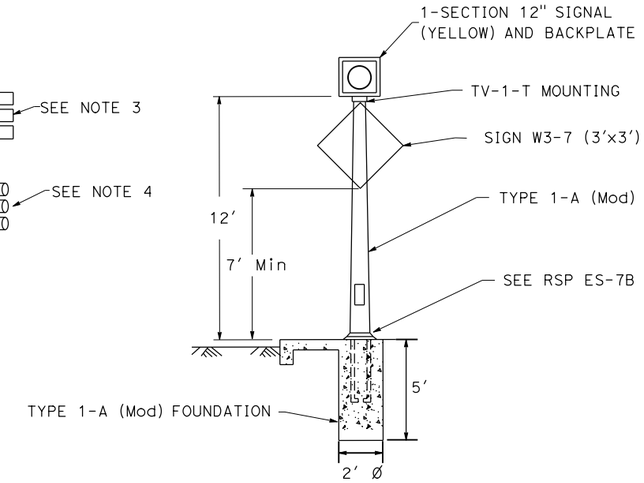
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

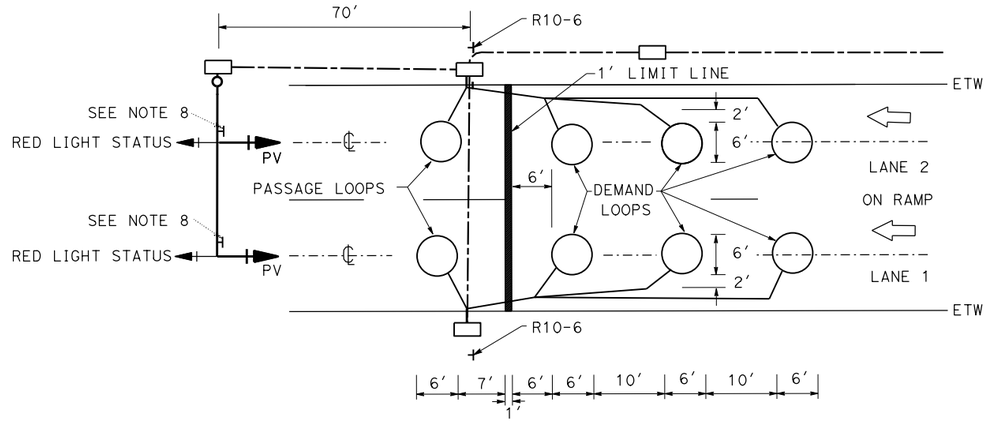
1. SEE RSP ES-5A, RSP ES-5B AND RSP ES-5D FOR ADDITIONAL LOOP DETECTOR INFORMATION NOT SHOWN
2. TYPE 1-A STANDARD, INSTALL ANCHOR BOLTS WITH SLEEVE NUTS (SEE RSP ES-7B)
3. 3-SECTION 12" SIGNAL HEAD (RED, YELLOW, GREEN), 18" X 12" ANGLED VISORS REQUIRED WHERE SHOWN, TYPE TV-1-T POST-TOP MOUNT
4. 3-SECTION 8" SIGNAL HEAD (RED, YELLOW, GREEN), 8" FULL CIRCLE VISORS, TYPE SV-1-T BRACKET MOUNT ON SIDE OF STANDARD AWAY FROM TRAFFIC
5. 1-SECTION 12" SIGNAL HEAD (RED), 12" FULL CIRCLE VISOR, RED STATUS LIGHT TYPE TV-1-T POST-TOP MOUNT
6. BACKPLATE
7. 4'-6" ABOVE LANE CENTER LINE
8. FURNISHING ALL SIGNS ON THIS SHEET IS INCLUDED IN FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED). SEE SIGN QUANTITIES.
   R89 22" X 6" (1 CAR PER GREEN) FOR ONE LANE AND HOV
   R89-2 22" X 10" (1 CAR PER GREEN THIS LANE) FOR TWO LANES
   R89-2 22" X 10" (2 CARS PER GREEN THIS LANE) FOR TWO LANES
   R89-2 36" X 16" (1 CAR PER GREEN THIS LANE) FOR ONE LANE ON MAST ARM
   R89-2 36" X 16" (2 CARS PER GREEN THIS LANE) FOR TWO LANES ON MAST ARM



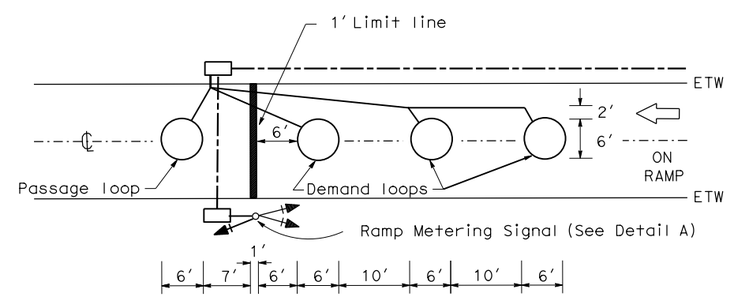
RAMP METERING SIGNAL
DETAIL A



TYPE 1-A (Mod)
FLASHING BEACON
DETAIL E



TYPICAL 2-LANE RAMP
METERING INSTALLATION
DETAIL B



TYPICAL 1-LANE RAMP
METERING INSTALLATION
DETAIL C

ELECTRICAL EXAMPLE K12, MODIFYING EXISTING ELECTRICAL SYSTEMS, MODIFYING RAMP METERING DETAILS

ELECTRICAL SYSTEMS DETAILS
NO SCALE

(MODIFYING RAMP METERING SYSTEM DETAILS)

ED-49

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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EXAMPLE K12 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-AUG-201 | TIME PLOTTED => 14:30

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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NOTE:

ELECTRICAL SYSTEMS QUANTITY TABLES SUMMARIZE SIGNIFICANT COMPONENTS. SEE ELECTRICAL SYSTEMS PLANS AND SPECIFICATIONS TO DETERMINE ALL MATERIALS NEEDED FOR EACH SYSTEM.

MODIFYING EXISTING ELECTRICAL SYSTEM INTERIM MICROWAVE VEHICLE DETECTION SYSTEM

SHEET No.	(N) WOOD POLE	(N) MVDS
	EA	EA
E-2	2	2

(N) - NOT A SEPARATE BID ITEM

The table on the left and the tables on the right are two alternative ways to show the SAME INFORMATION (do not use both on the same project). While the quantities shown here are relatively simple, one or the other may be more clear based on the character of the work.

MODIFYING EXISTING ELECTRICAL SYSTEM MODIFYING COMMUNICATION SYSTEM

SHEET No.	(N) 2" CONDUIT	(N) 4" CONDUIT	(N) TRACER WIRE & WARNING TAPE	(N) 1" INNERDUCT	(N) PULL TAPE	(N) TYPE A CABLE	(N) TYPE B CABLE	(N) TYPE C CABLE	(N) TYPE D CABLE	(N) REMOVE Exist FO	(N) REMOVE Exist INNERDUCT	(N) REMOVE Exist FO CONDUIT	(N) SPLICE VAULT	(N) PULL BOX No. 5	(N) PULL BOX (C)	(N) REMOVE PULL BOX
	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA
E-9				400	100	100	100	100								
E-10				6,000	1500	1500	1500	1500								
E-11		550	550	7,700	1920	1920	1920	1920								
E-12		1400	1400	11,200	2800	2800	2800	2800	35	850	800	400	1		1	1
E-13		1400	1400	11,200	2800	2800	2800	2800	35	1000	900	450	1		1	1
E-14		1300	1300	10,400	2600	2600	2600	2600		1000	1100	550			1	1
E-15	1050	3150	1600	12,800	3800	1600	3150	3150	5400	4700	6200	3100		5	4	8
E-16		1250	1250	11,000	2750	2750	2750	2750							1	1
E-17				3,700	920	920	920	920								

(N) - NOT A SEPARATE BID ITEM

MODIFYING EXISTING ELECTRICAL SYSTEM INTERIM COMMUNICATION SYSTEM

SHEET No.	(N) WOOD POLE	(N) TYPE H RISER	(N) OVERHEAD 48 SMFO	(N) 2" CONDUIT	(N) 4" CONDUIT	(N) 1" INNERDUCT	(N) SPLICE VAULT
	EA	EA	LF	LF	LF	LF	EA
E-3	4	1	650	30	100	800	1
E-4	8		1400				
E-5	8		1400				
E-6	8		1300				
E-7	9		1600				
E-8	8	1	1250	30	100	800	2

(N) - NOT A SEPARATE BID ITEM

MODIFYING EXISTING ELECTRICAL SYSTEM MODIFYING CLOSED CIRCUIT TELEVISION SYSTEM

SHEET No.	(N) 45' CCTV POLE AND FOUNDATION	(N) MODEL 334 CABINET RL	(N) CCTV ASSEMBLY RL	(N) 2" CONDUIT	(N) 3" CONDUIT	(N) #8 AWG	(N) BARE #8 AWG	(N) CAT 5E CABLE	(N) PULL BOX No. 5 (TR)	(N) PULL BOX No. 6 (TR)	(N) REMOVE PULL BOX
	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	EA
E-18	1	1	1	120	20	2500	200	125	1	1	3

(N) - NOT A SEPARATE BID ITEM

Do not show totals of components at the bottom of the quantity table for a lump sum item.

ELECTRICAL EXAMPLE K14, MODIFYING EXISTING ELECTRICAL SYSTEMS QUANTITIES

ELECTRICAL SYSTEMS QUANTITIES

EQ-51

EXAMPLE K14 ELECTRICAL SYSTEMS QUANTITIES - RELEASED 12/11/2019

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2019 TIME PLOTTED => 10:35

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SUPERSEDES EXAMPLE RELEASED 07/21/17

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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NOTE:

ELECTRICAL SYSTEMS QUANTITY TABLES SUMMARIZE SIGNIFICANT COMPONENTS. SEE ELECTRICAL SYSTEMS PLANS AND SPECIFICATIONS TO DETERMINE ALL MATERIALS NEEDED FOR EACH SYSTEM.

MODIFYING EXISTING ELECTRICAL SYSTEM
MODIFYING RAMP METERING SYSTEM

SHEET No.	(N) MODEL 334 CABINET RL	27-4-100 (Mod) STANDARD & FOUNDATION	3-SECTION 12" PROGRAMMED VISIBILITY SIGNAL HEAD	RED STATUS LIGHT & MOUNTING	MAST ARM MOUNTING TOP ATTACHMENT	1-A POLE & FOUNDATION, RM SIGNAL HEADS & MOUNTINGS	3-SECTION 12" SIGNAL HEADS	INDUCTIVE LOOP DETECTOR	1 ½" CONDUIT	2" CONDUIT	2 ½" CONDUIT	3" CONDUIT	4" CONDUIT	DLC	BARE #8 AWG	#8 AWG	#10 AWG	#12 AWG	#14 AWG	PULL BOX No. 9A	PULL BOX No. 5	PULL BOX (TR) No. 5	PULL BOX (TR) No. 6	PULL BOX No. 3(T)	REMOVE PULL BOX	REMOVE POLE
	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA
E-19	2	1	2	3	4	1	2	41	400	1050	600	650	700	14500	2650	2600	950	1850	10150	1	5	15	2	2	23	3
E-20								2	700					1400								3				

(N) - NOT A SEPARATE BID ITEM

Do not show totals of components at the bottom of the quantity table for a lump sum item.

ELECTRICAL EXAMPLE K15, MODIFYING EXISTING ELECTRICAL SYSTEMS QUANTITIES

ELECTRICAL SYSTEMS QUANTITIES

EQ-52

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EXAMPLE K15 ELECTRICAL SYSTEMS QUANTITIES - RELEASED 12/11/2019

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2019 | TIME PLOTTED => 10:35

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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Use the sheet name ELECTRICAL SYSTEMS on the plan sheet if it contains only notes, legends, abbreviations, etc., that apply to all of the electrical systems plans. Do not make multiple sets of notes with various names (e.g. "CONSTRUCTION NOTES," "UTILITY NOTES," etc.), use a single list labeled "NOTES."

INDEX OF ELECTRICAL SYSTEMS PLANS

ELECTRICAL SYSTEMS PLAN SHEET	DESCRIPTION
E-1	INDEX OF ELECTRICAL SYSTEMS PLANS, NOTES, LEGEND, ABBREVIATIONS
E-2	MODIFYING EXISTING ELECTRICAL SYSTEM, INTERIM MICROWAVE VEHICLE DETECTION SYSTEM
E-3 TO E-8	MODIFYING EXISTING ELECTRICAL SYSTEM, INTERIM COMMUNICATION SYSTEM
E-9 TO E-17	MODIFYING EXISTING ELECTRICAL SYSTEM, MODIFYING COMMUNICATION SYSTEM
E-18	MODIFYING EXISTING ELECTRICAL SYSTEM, MODIFYING CLOSED CIRCUIT TELEVISION SYSTEM
E-19 TO E-20	MODIFYING EXISTING ELECTRICAL SYSTEM, MODIFYING RAMP METERING SYSTEM
E-21 TO E-27	MODIFYING EXISTING ELECTRICAL SYSTEM, INDUCTIVE LOOP DETECTOR
E-28 TO E-29	TEMPORARY LIGHTING SYSTEM
E-30	SIGN ILLUMINATION SYSTEM
E-31 TO E-37	MODIFYING EXISTING ELECTRICAL SYSTEM, SIGN ILLUMINATION SYSTEM
E-38 TO E-39	MODIFYING EXISTING ELECTRICAL SYSTEM, LIGHTING SYSTEM
E-40	MODIFYING EXISTING ELECTRICAL SYSTEM, ELECTRIC SERVICE FOR IRRIGATION
E-41 TO E-42	ELECTRICAL SYSTEMS DETAILS, INTERIM MICROWAVE VEHICLE DETECTION SYSTEM
E-43	ELECTRICAL SYSTEMS DETAILS, MODIFYING COMMUNICATION SYSTEM FIBER ASSIGNMENT TABLE
E-44 TO E-48	ELECTRICAL SYSTEMS DETAILS, COMMUNICATION SYSTEM
E-49	ELECTRICAL SYSTEMS DETAILS, RAMP METERING SYSTEM
E-50	ELECTRICAL SYSTEMS DETAILS, LIGTHING AND SIGN ILLUMINATION WIRING DIAGRAM
E-51 TO E-52	ELECTRICAL SYSTEMS QUANTITIES

NOTES:

1. EACH 4" COMMUNICATION AND FIBER OPTIC CONDUIT SHALL HAVE FOUR 1" INNERDUCTS
2. LOCATIONS OF TEMPORARY WOOD POLES TO SUPPORT AERIAL FIBER OPTIC CABLES, OVERHEAD ELECTRIC CONDUCTORS, AND TEMPORARY MVDS AS SHOWN ARE APPROXIMATE. THE CONTRACTOR MAY REARRANGE THE LOCATIONS OF TEMPORARY WOOD POLES AS NECESSARY TO FACILITATE CONSTRUCTION.
3. SEE ADDITIONAL DETAILS FOR TEMPORARY WOOD POLES ON SES SHEETS.

LEGEND

[V]S	EXISTING SPLICE VAULT WITH SPLICE CLOSURE
[V]S	NEW SPLICE VAULT WITH SPLICE CLOSURE (SEE SHEET E-47 FOR DETAILS)
←	GUY WIRE, 17' HORIZONTAL OFFSET
▭(TR)	TAMPER RESISTANT TRAFFIC-RATED PULL BOX WITH 4 SECURITY SCREWS

ABBREVIATIONS

FDU	FIBER DISTRIBUTION UNIT
Iden	IDENTIFICATION
PV	PHOTOVOLTAIC
SMFO	SINGLEMODE FIBER OPTIC CABLE
TYPE A CABLE	36 SINGLEMODE FIBER OPTIC CABLE
TYPE B and C CABLE	72 SINGLEMODE FIBER OPTIC CABLE
TYPE D CABLE	12 SINGLEMODE FIBER OPTIC CABLE

ELECTRICAL EXAMPLE K1, NOTES, LEGEND AND ABBREVIATIONS

INDEX OF ELECTRICAL SYSTEMS PLANS, NOTES, LEGEND, ABBREVIATIONS

ELECTRICAL SYSTEMS
E-1

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

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EXAMPLE K1 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-JUL-2017 | TIME PLOTTED => 15:20

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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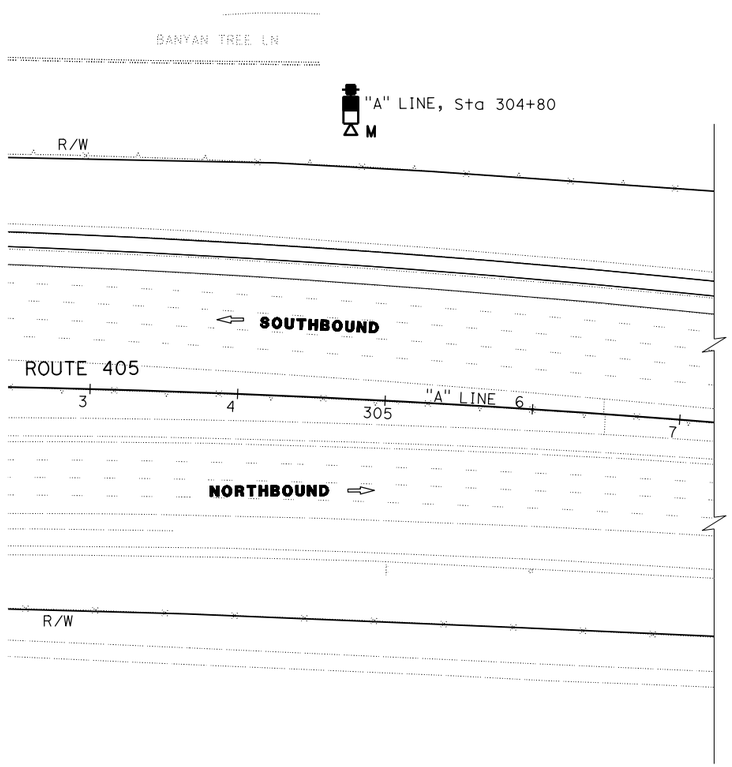
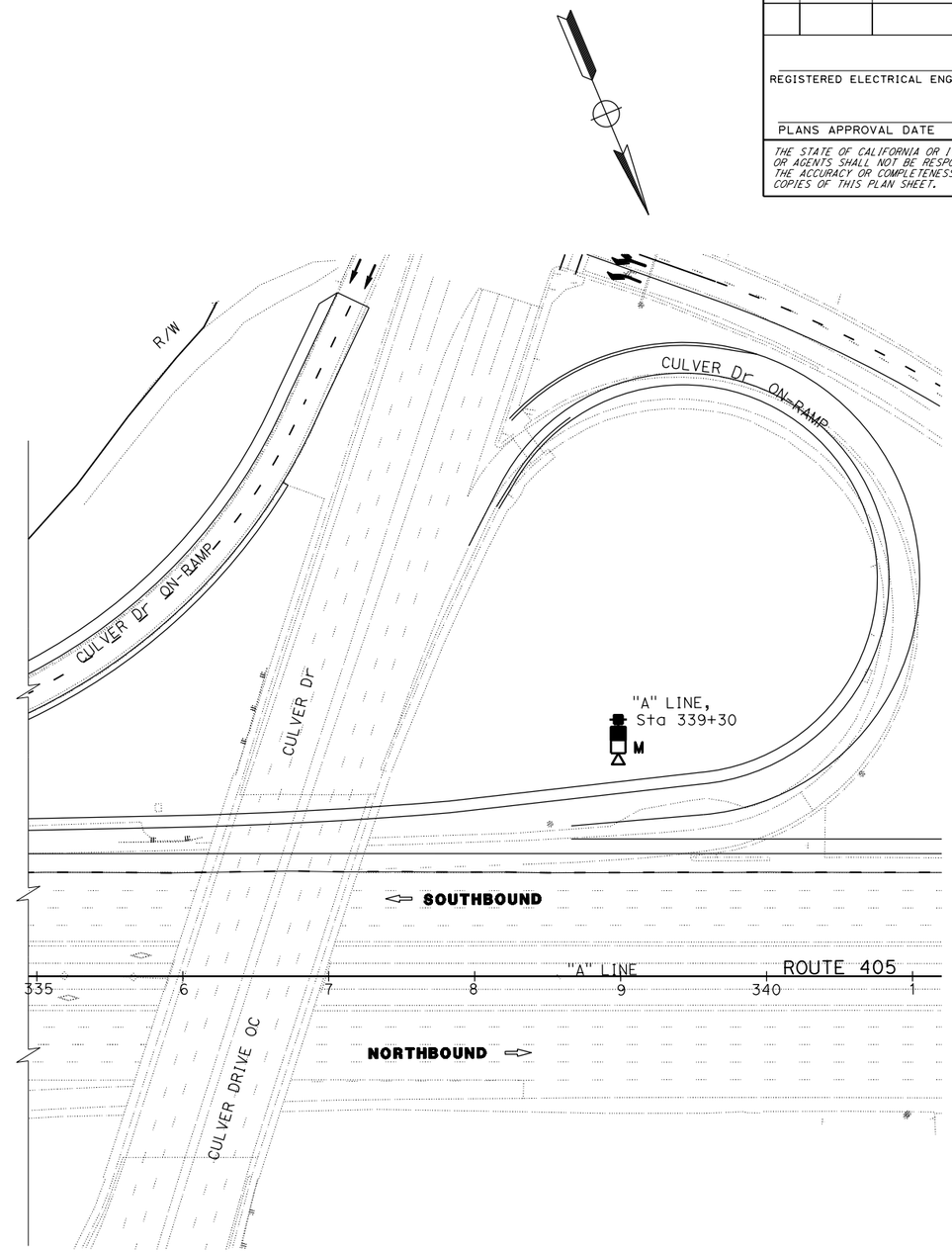
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. MVDS LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER. SEE SHEET E-41, E-42 FOR MVDS DETAILS.

In the project this plan was part of, the temporary MVDS are solar powered. The details mentioned here in turn refer to additional details for poles on SES sheets. The details are not included in this set of PPM examples.





ELECTRICAL EXAMPLE K2, MODIFYING EXISTING ELECTRICAL SYSTEMS, INTERIM MVDS

MODIFYING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 50'

INTERIM MICROWAVE VEHICLE DETECTION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

E-2

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DATE REVISED

EXAMPLE K2 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00

DATE PLOTTED => 18-JUL-2017
TIME PLOTTED => 12:48

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

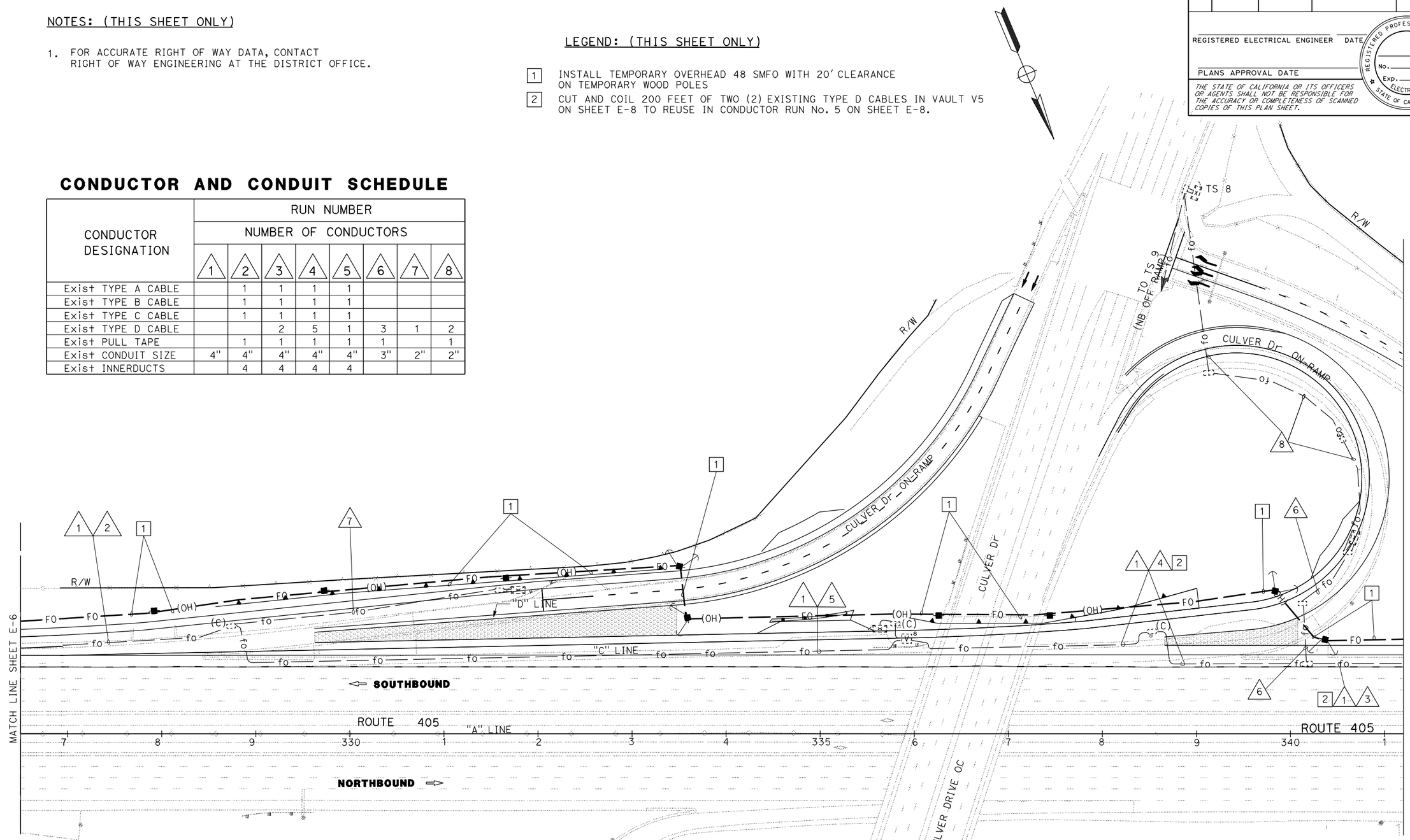
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. INSTALL TEMPORARY OVERHEAD 48 SMFO WITH 20′ CLEARANCE ON TEMPORARY WOOD POLES
2. CUT AND COIL 200 FEET OF TWO (2) EXISTING TYPE D CABLES IN VAULT V5 ON SHEET E-8 TO REUSE IN CONDUCTOR RUN No. 5 ON SHEET E-8.

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION	RUN NUMBER / NUMBER OF CONDUCTORS							
	1	2	3	4	5	6	7	8
Exist TYPE A CABLE		1	1	1	1			
Exist TYPE B CABLE		1	1	1	1			
Exist TYPE C CABLE		1	1	1	1			
Exist TYPE D CABLE			2	5	1	3	1	2
Exist PULL TAPE		1	1	1	1	1		1
Exist CONDUIT SIZE	4"	4"	4"	4"	4"	3"	2"	2"
Exist INNERDUCTS		4	4	4	4			



ELECTRICAL EXAMPLE K3, MODIFYING EXISTING ELECTRICAL SYSTEMS, INTERIM COMMUNICATION SYSTEM

INTERIM COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 50′

E-7

EXAMPLE K3 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-JUL-2017 TIME PLOTTED => 15:55

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NOTES: (THIS SHEET ONLY)

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

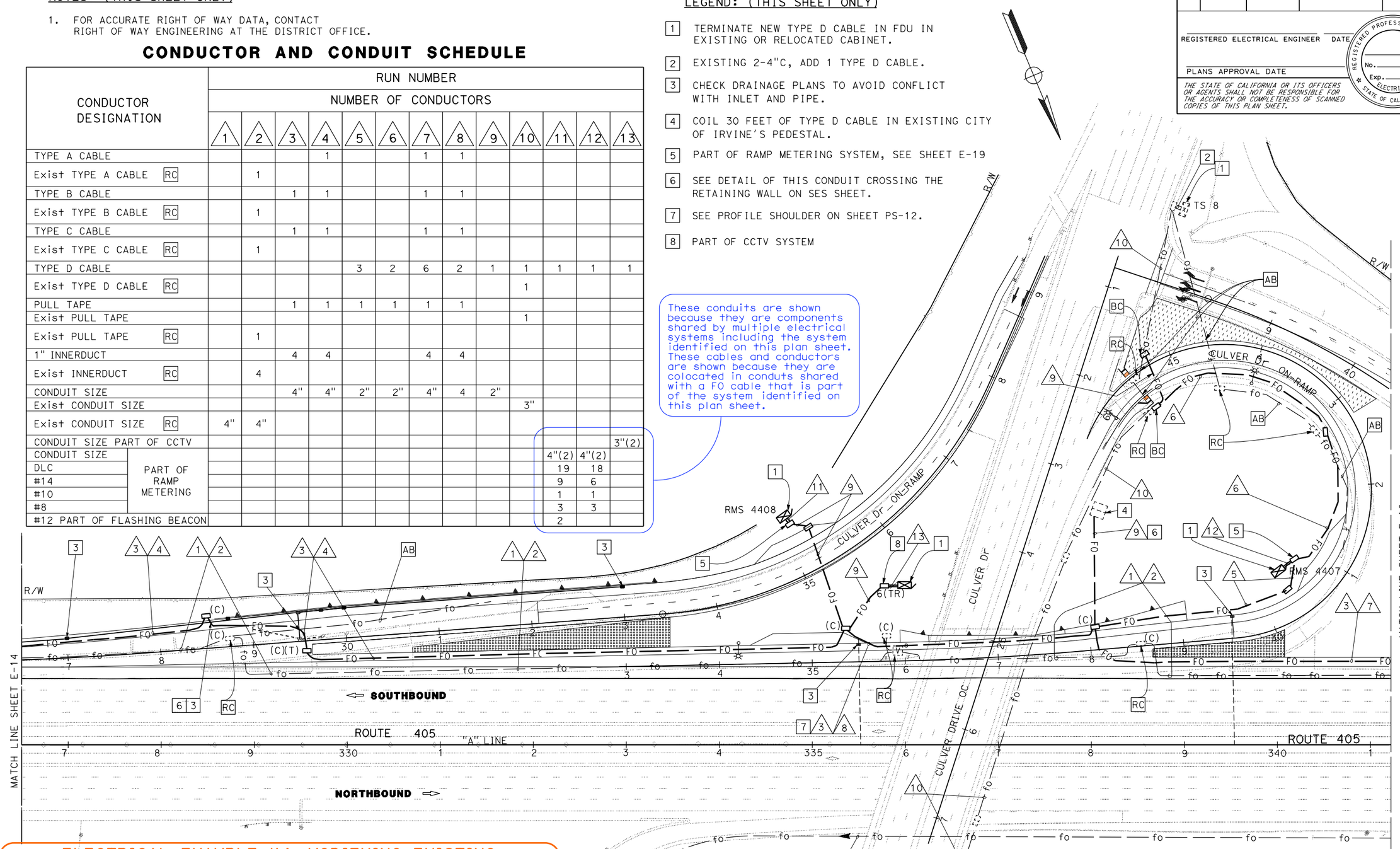
CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION	RUN NUMBER / NUMBER OF CONDUCTORS 1	2	3	4	5	6	7	8	9	10	11	12	13
TYPE A CABLE				1			1	1					
Exist TYPE A CABLE RC		1											
TYPE B CABLE			1	1			1	1					
Exist TYPE B CABLE RC		1											
TYPE C CABLE			1	1			1	1					
Exist TYPE C CABLE RC		1											
TYPE D CABLE					3	2	6	2	1	1	1	1	1
Exist TYPE D CABLE RC										1			
PULL TAPE			1	1	1	1	1	1					
Exist PULL TAPE										1			
Exist PULL TAPE RC		1											
1" INNERDUCT			4	4			4	4					
Exist INNERDUCT RC		4											
CONDUIT SIZE			4"	4"	2"	2"	4"	4	2"				
Exist CONDUIT SIZE										3"			
Exist CONDUIT SIZE RC	4"	4"											
CONDUIT SIZE PART OF CCTV													3"(2)
CONDUIT SIZE (PART OF RAMP METERING)											4"(2)	4"(2)	
DLC (PART OF RAMP METERING)											19	18	
#14 (PART OF RAMP METERING)											9	6	
#10 (PART OF RAMP METERING)											1	1	
#8 (PART OF RAMP METERING)											3	3	
#12 PART OF FLASHING BEACON											2		

These conduits are shown because they are components shared by multiple electrical systems including the system identified on this plan sheet. These cables and conductors are shown because they are colocated in conduts shared with a FO cable that is part of the system identified on this plan sheet.

LEGEND: (THIS SHEET ONLY)

1. TERMINATE NEW TYPE D CABLE IN FDU IN EXISTING OR RELOCATED CABINET.
2. EXISTING 2-4"C, ADD 1 TYPE D CABLE.
3. CHECK DRAINAGE PLANS TO AVOID CONFLICT WITH INLET AND PIPE.
4. COIL 30 FEET OF TYPE D CABLE IN EXISTING CITY OF IRVINE'S PEDESTAL.
5. PART OF RAMP METERING SYSTEM, SEE SHEET E-19
6. SEE DETAIL OF THIS CONDUIT CROSSING THE RETAINING WALL ON SES SHEET.
7. SEE PROFILE SHOULDER ON SHEET PS-12.
8. PART OF CCTV SYSTEM



ELECTRICAL EXAMPLE K4, MODIFYING EXISTING ELECTRICAL SYSTEMS, MODIFYING COMMUNICATION SYSTEM

MODIFYING COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 50'

E-15

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

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EXAMPLE K4 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

DATE PLOTTED => 17-JUL-2017
TIME PLOTTED => 16:09

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REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

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NOTES: (THIS SHEET ONLY)

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

LEGEND: (THIS SHEET ONLY)

1 RL EXISTING MODEL 334 CCTV EQUIPMENT ENCLOSURE COMPLETE ON NEW FOUNDATION. PROVIDE MINIMUM 30′ SETBACK FROM ETW.

2 EXISTING 120/240 V TYPE III-BR METERED SERVICE EQUIPMENT ENCLOSURE.
Iden No. 12-55-405-5.62

100 A, 240 V, 2P, CB (MAIN)	40 A, 120 V, 1P, CB (SIGNAL)
30 A, 120 V, 1P, CB (CCTV)	30 A, 120 V, 1P, CB (LIGHTING)
30 A, 120 V, 1P, CB (RMS 1 E 4407 CIRCLE)	15 A, 120 V, 1P, CB (SPARE)
30 A, 120 V, 1P, CB (RMS 2 SB)	20 A, 120 V, 1P, CB (PEC)

3 RL EXISTING CCTV ASSEMBLY AND ADD NEW CAT5E CABLES ON NEW TYPE 45 CCTV POLE (OFFSET FROM NEW MWG 4′). ID No.TV027405S00562. SEE DETAIL A THIS SHEET. RC EXISTING CCTV POLE.

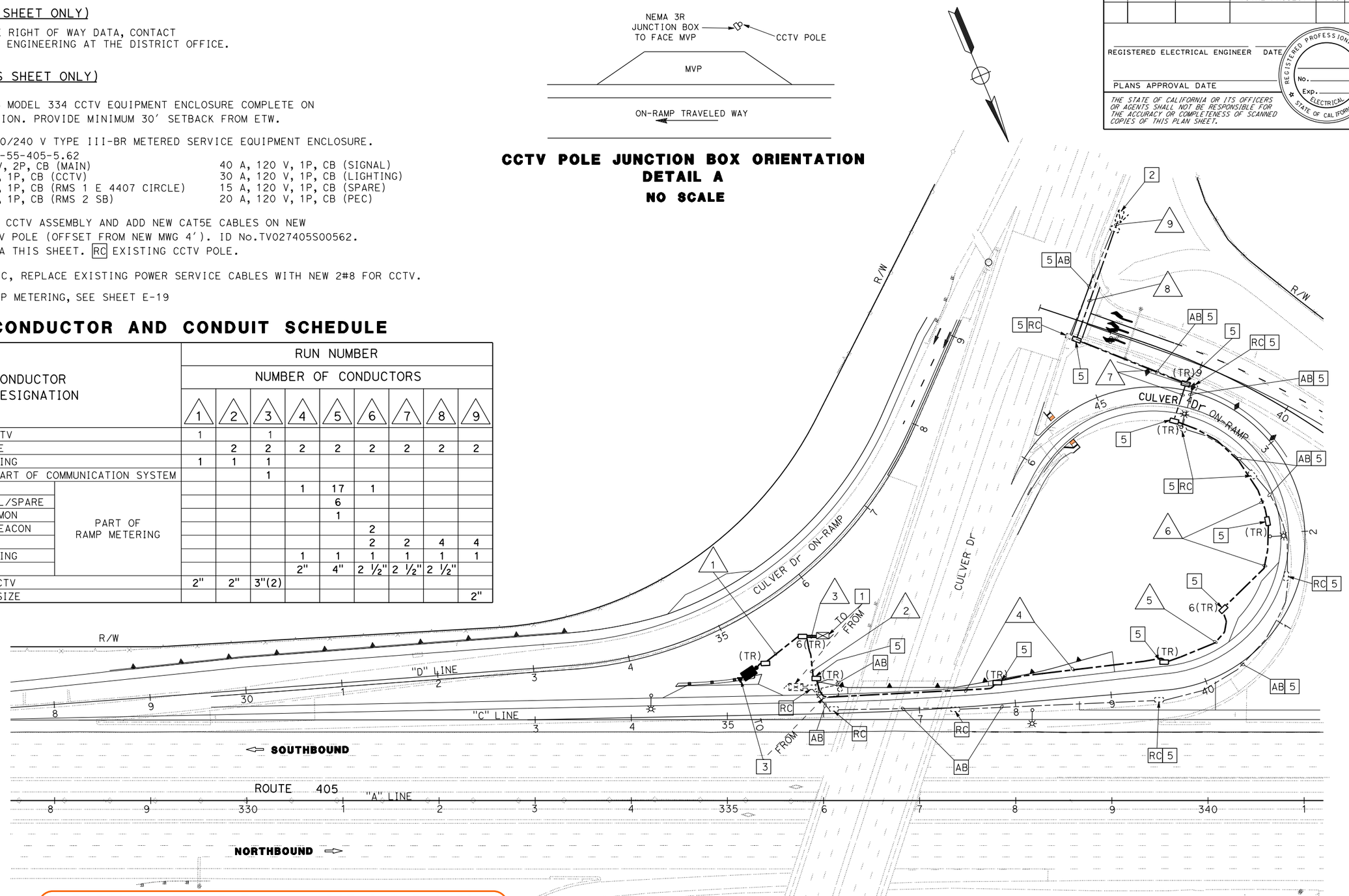
4 EXISTING 2"C, REPLACE EXISTING POWER SERVICE CABLES WITH NEW 2#8 FOR CCTV.

5 PART OF RAMP METERING, SEE SHEET E-19

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION		RUN NUMBER / NUMBER OF CONDUCTORS 1	2	3	4	5	6	7	8	9
CAT5E CABLE CCTV		1		1						
#8 CCTV SERVICE			2	2	2	2	2	2	2	2
#8 BARE GROUNDING		1	1	1						
TYPE D CABLE PART OF COMMUNICATION SYSTEM				1						
DLC	PART OF RAMP METERING				1	17	1			
#14 RAMP SIGNAL/SPARE	PART OF RAMP METERING					6				
#10 SIGNAL COMMON	PART OF RAMP METERING					1				
#12 FLASHING BEACON	PART OF RAMP METERING						2			
#8 SERVICE	PART OF RAMP METERING						2	2	4	4
#8 BARE GROUNDING	PART OF RAMP METERING				1	1	1	1	1	1
CONDUIT SIZE	PART OF RAMP METERING				2"	4"	2 ½"	2 ½"	2 ½"	
CONDUIT SIZE CCTV		2"	2"	3"(2)						
Exist CONDUIT SIZE										2"

CCTV POLE JUNCTION BOX ORIENTATION DETAIL A
NO SCALE



ELECTRICAL EXAMPLE K5, MODIFYING EXISTING ELECTRICAL SYSTEMS, MODIFYING CCTV

MODIFYING CLOSED CIRCUIT TELEVISION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING EXISTING ELECTRICAL SYSTEM
SCALE: 1" = 50′

E-18

EXAMPLE K5 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-JUL-2017 TIME PLOTTED => 16:13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR DESIGNATION		RUN NUMBER / NUMBER OF CONDUCTORS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TYPE B DLC	SURVEILLANCE				12		12	12										12	12	12		
	DEMAND				1		2	2										1	1	1		
	PASSAGE				1		2	2										1	1	1		
	COUNT	1		1			1	1										3	3	2	2	1
	QUEUE							2	2						1		1	1				
#14 LOOP WIRE						12																
#14 RAMP SIGNAL			6	6			6	6										3	3	3		
#14 SPARE			3	3			3	3										3	3	3		
#12 FLASHING BEACON								2	2	2					2	2	2	2				
#10 SIGNAL COMMON			1	1			1	1										1	1	1		
#8 RAMP SERVICE								2	2		2	4	4	2			2	2				
#8 BARE GROUNDING			1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1		1
#8 EXISTING SERVICE CONDUCTORS RC													7									
#8 CCTV SERVICE PART OF CCTV SYSTEM												2	2	2			2		2			2
TYPE D CABLE PART OF COMMUNICATION SYSTEM								1										1				
CONDUIT SIZE		1 ½"	2"	2"	3"	3"	4"	4"(2)	3"	2"	2"	2 ½"		2 ½"	2"	2"	2 ½"	4"(2)	4"	4"	1 ½"	2"
EXISTING CONDUIT SIZE													2"									

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ABANDON ALL EXISTING LOOPS
3. FOR RMS DETAILS, SEE SHEET E-49.
4. SPACING FOR MAINLINE DOUBLE LOOP IS 20′ LEADING EDGE TO LEADING EDGE.

LEGEND: (THIS SHEET)

1 RL EXISTING MODEL 170 CONTROLLER IN MODEL 334 CABINET ON NEW FOUNDATION (PROVIDE A MINIMUM SETBACK OF 30′ TO THE ETW).

2 EXISTING 120/240 V TYPE III-BR METERED SERVICE EQUIPMENT ENCLOSURE.
Iden No. 12-55-405-5.62
100 A, 240 V, 2P, CB (MAIN)
30 A, 120 V, 1P, CB (CCTV)
30 A, 120 V, 1P, CB (RMS 1 E 4407 CIRCLE)
30 A, 120 V, 1P, CB (RMS 2 SB)
40 A, 120 V, 1P, CB (SIGNAL)
30 A, 120 V, 1P, CB (LIGHTING)
15 A, 120 V, 1P, CB (SPARE)
20 A, 120 V, 1P, CB (PEC)

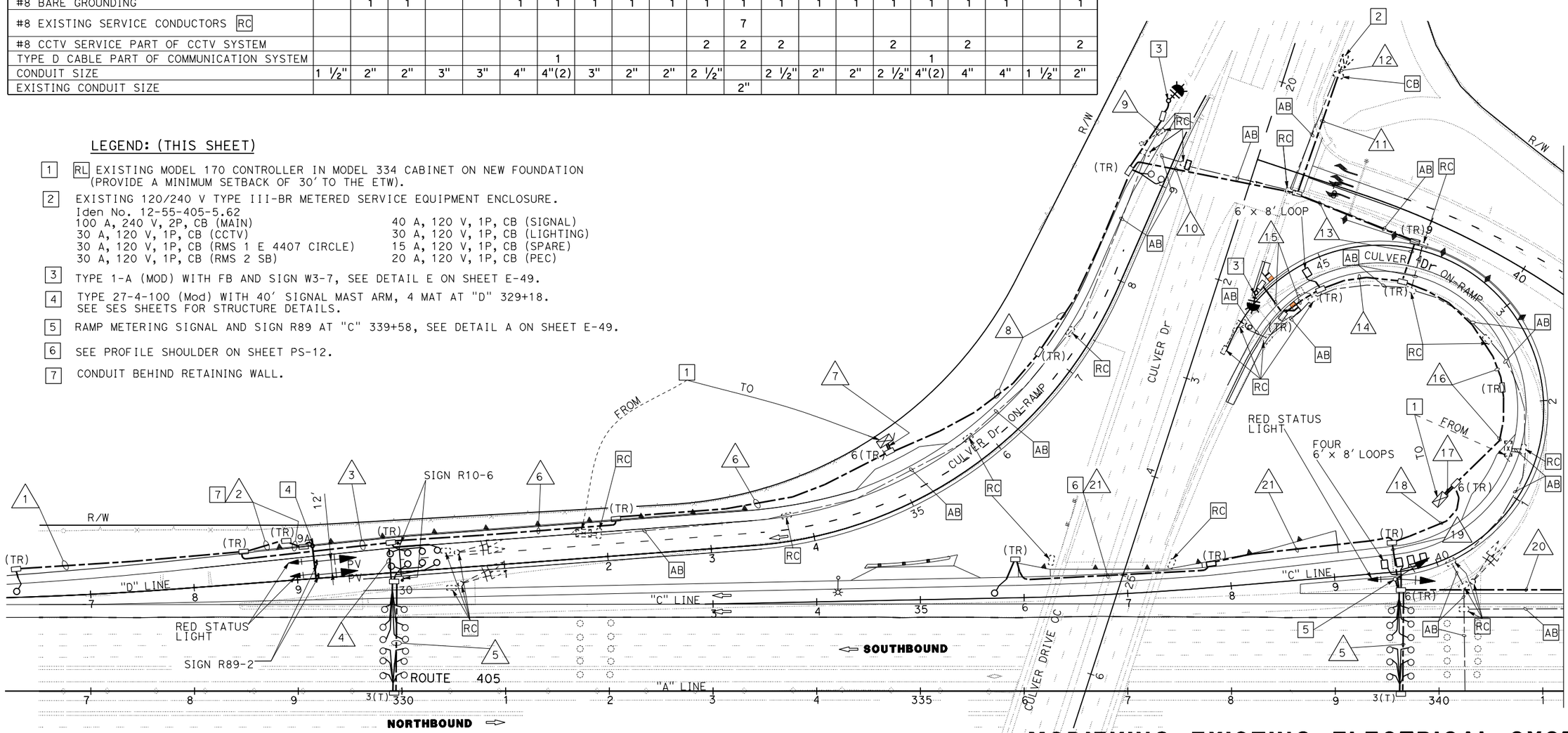
3 TYPE 1-A (MOD) WITH FB AND SIGN W3-7, SEE DETAIL E ON SHEET E-49.

4 TYPE 27-4-100 (Mod) WITH 40′ SIGNAL MAST ARM, 4 MAT AT "D" 329+18. SEE SES SHEETS FOR STRUCTURE DETAILS.

5 RAMP METERING SIGNAL AND SIGN R89 AT "C" 339+58, SEE DETAIL A ON SHEET E-49.

6 SEE PROFILE SHOULDER ON SHEET PS-12.

7 CONDUIT BEHIND RETAINING WALL.



ELECTRICAL EXAMPLE K6, MODIFYING EXISTING ELECTRICAL SYSTEMS, MODIFYING RAMP METERING

MODIFYING RAMP METERING SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 50′

E-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® **ELECTRICAL DESIGN**

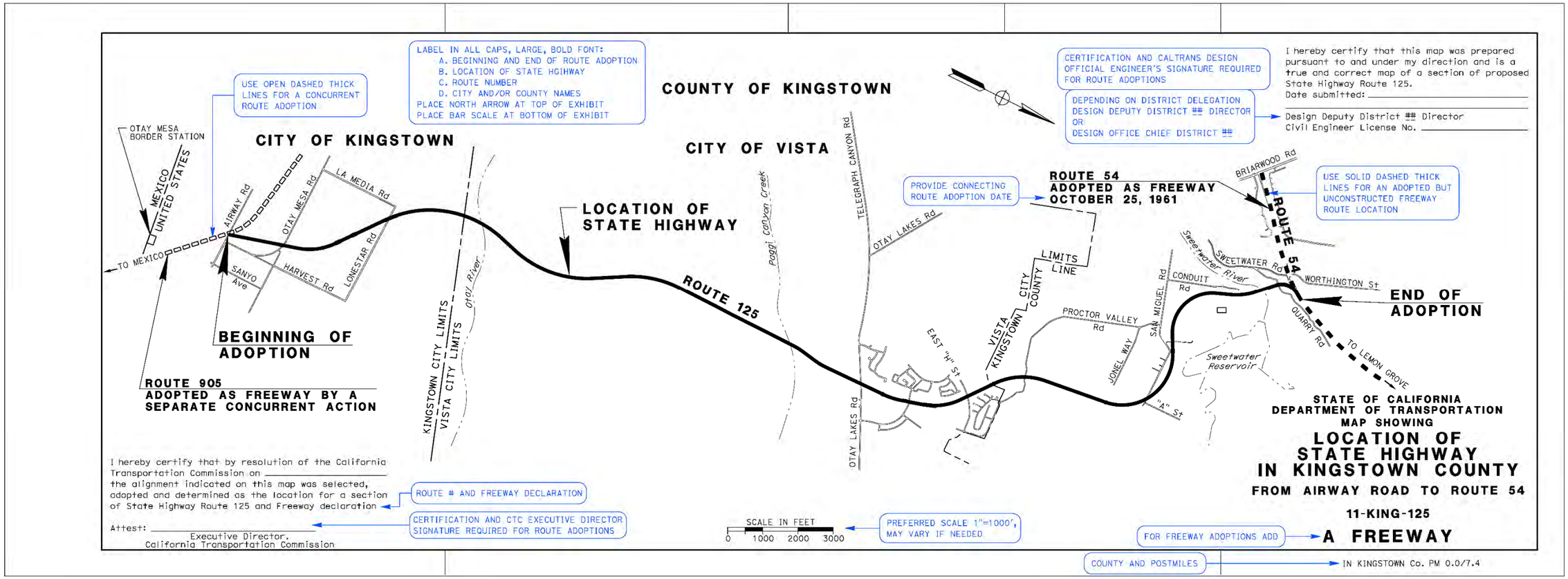
FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

EXAMPLE K6 MODIFYING EXISTING ELECTRICAL SYSTEM - RELEASED 7/21/2017

LAST REVISION 00-00-00 | DATE PLOTTED => 17-JUL-2017 | TIME PLOTTED => 16:15

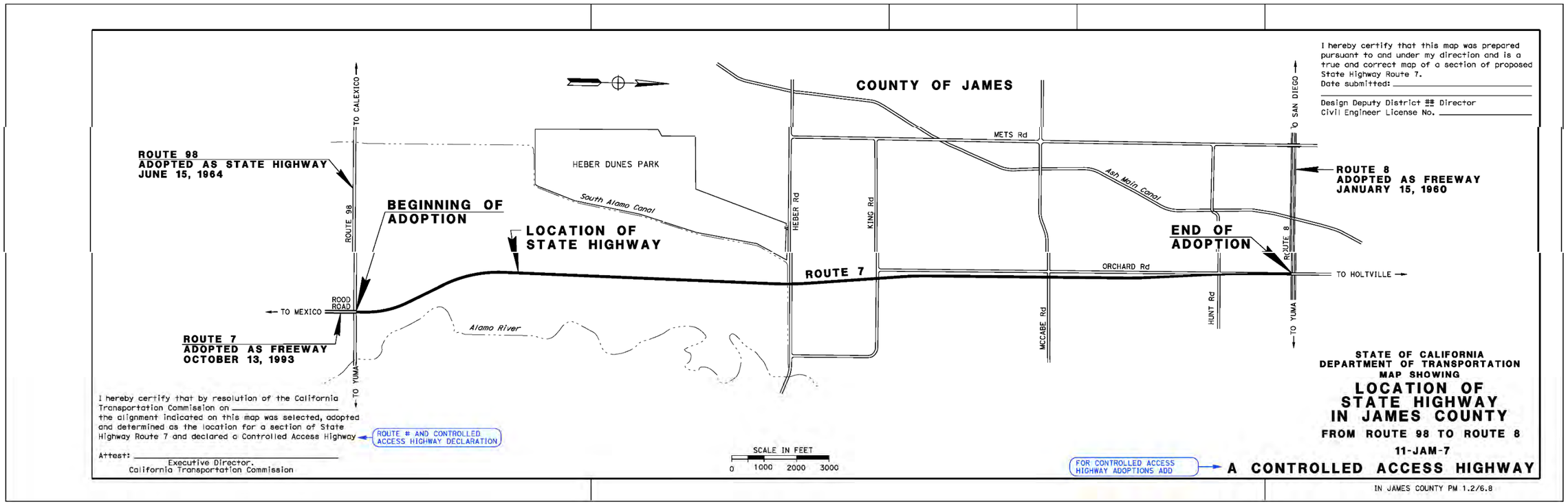


ROUTE ADOPTION – FREEWAY

FIGURE 3-2.3A

Note:

The blue text within the bubbles are directions to the reader and apply to most Route Adoption maps. See all other examples before completing the project specific map.

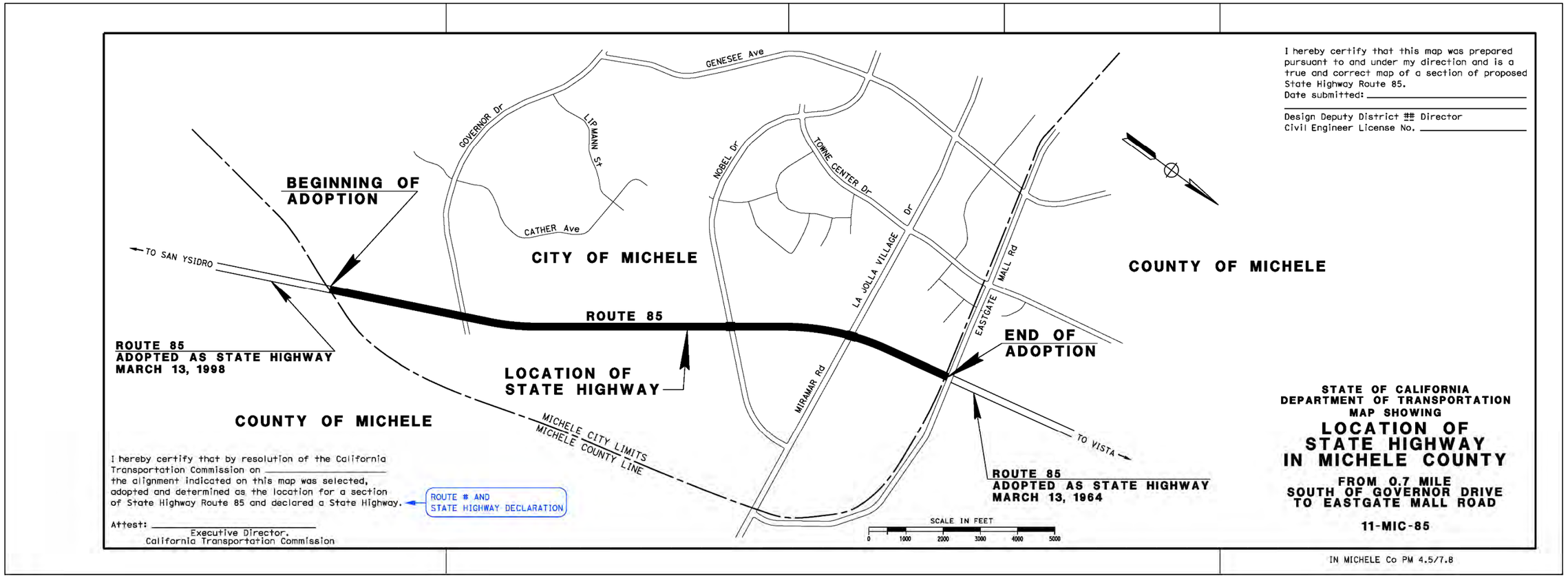


ROUTE ADOPTION – CONTROLLED ACCESS HIGHWAY

FIGURE 3-2.3B

Note:

The blue text within the bubbles are directions to the reader and apply to most Route Adoption maps. See all other examples before completing the project specific map.

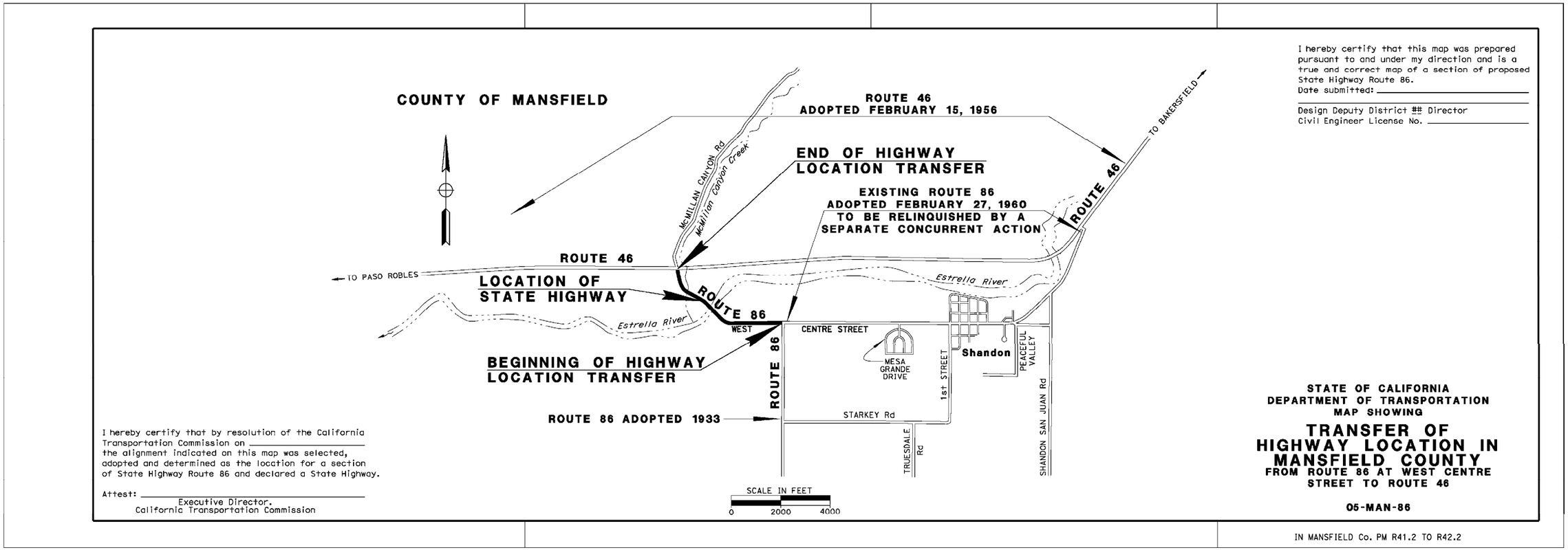


ROUTE ADOPTION – CONVENTIONAL HIGHWAY

FIGURE 3-2.3C

Note:

The blue text within the bubbles are directions to the reader and apply to most Route Adoption maps. See all other examples before completing the project specific map.

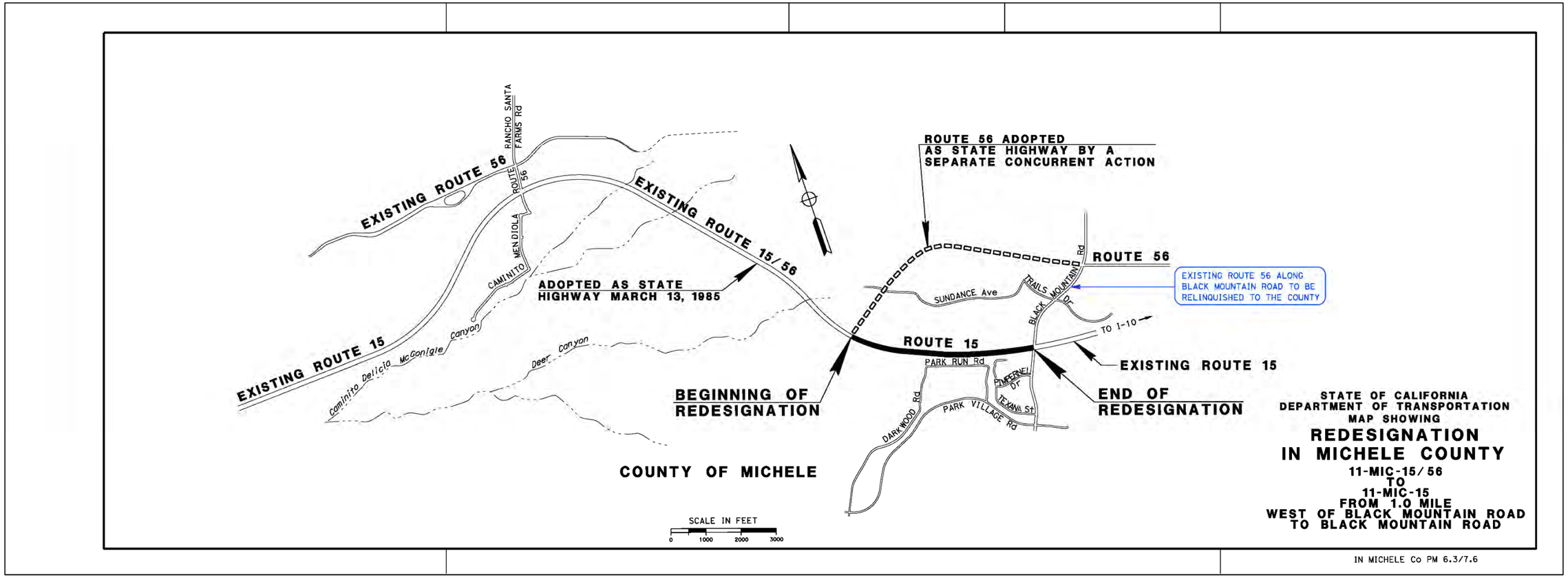


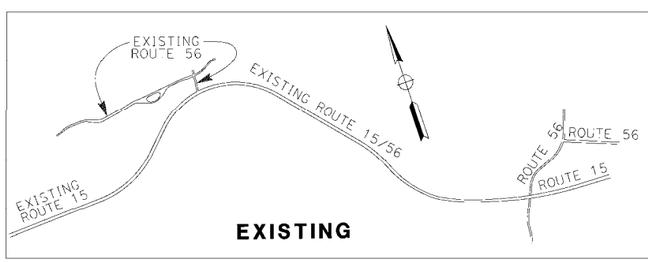
TRANSFER OF HIGHWAY LOCATION

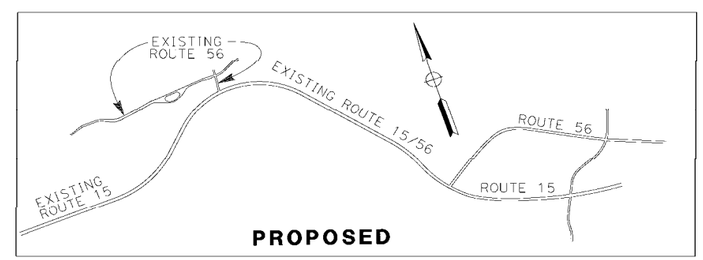
FIGURE 3-2.3D

Note:

The blue text within the bubbles are directions to the reader and apply to most Route Adoption maps. See all other examples before completing the project specific map.





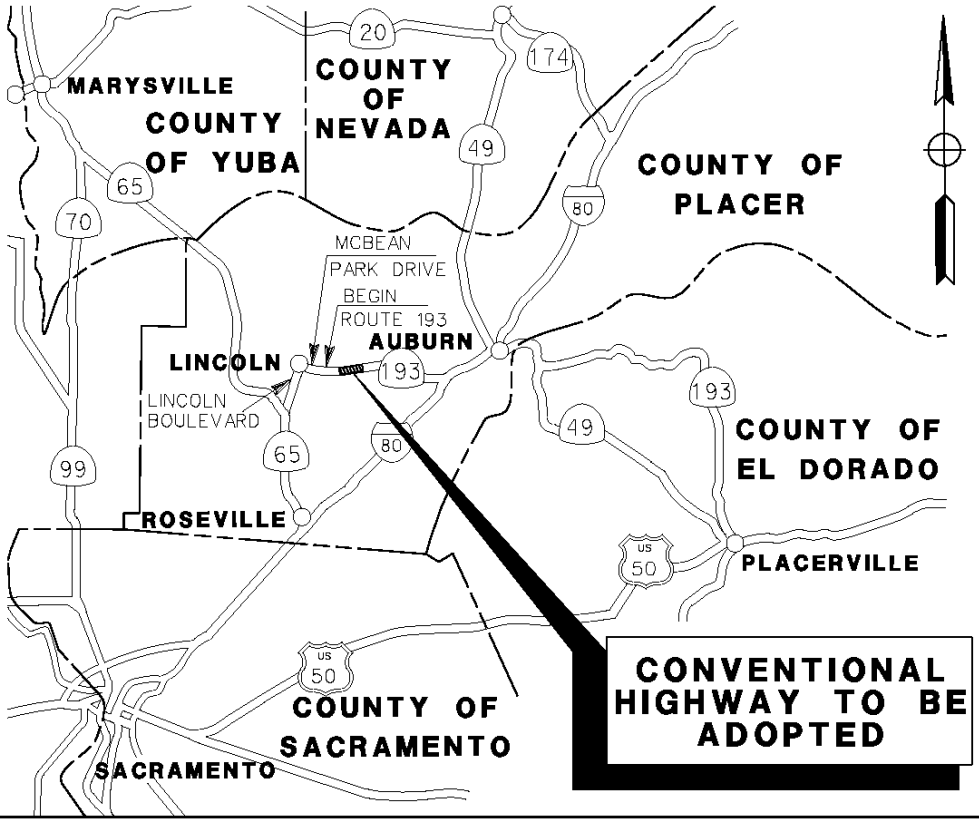


ROUTE ADOPTION – REDESIGNATION

FIGURE 3-2.3E

Explanation of this Example Re-designation: Route 56 currently joins Route 15 at Caminito Mendiola Road. It is designated as Route 15/56 from Caminito Mendiola Road to Black Mountain Road. At this point existing Route 56 branches from Route 15 in a northerly direction along Black Mountain Road. A new alignment is proposed for Route 56 where it will branch to the north approximately 1.0 Mile west of the existing connection of Black Mountain Road and Route 15/56. The exhibit shows the re-designation of this section of Route 15/56 to Route 15 from 1.0 Mile west of Black Mountain Road to the Black Mountain Road/Route 15 connection.

ROUTE ADOPTION
03-PLA-193-PM 4.4/5.5



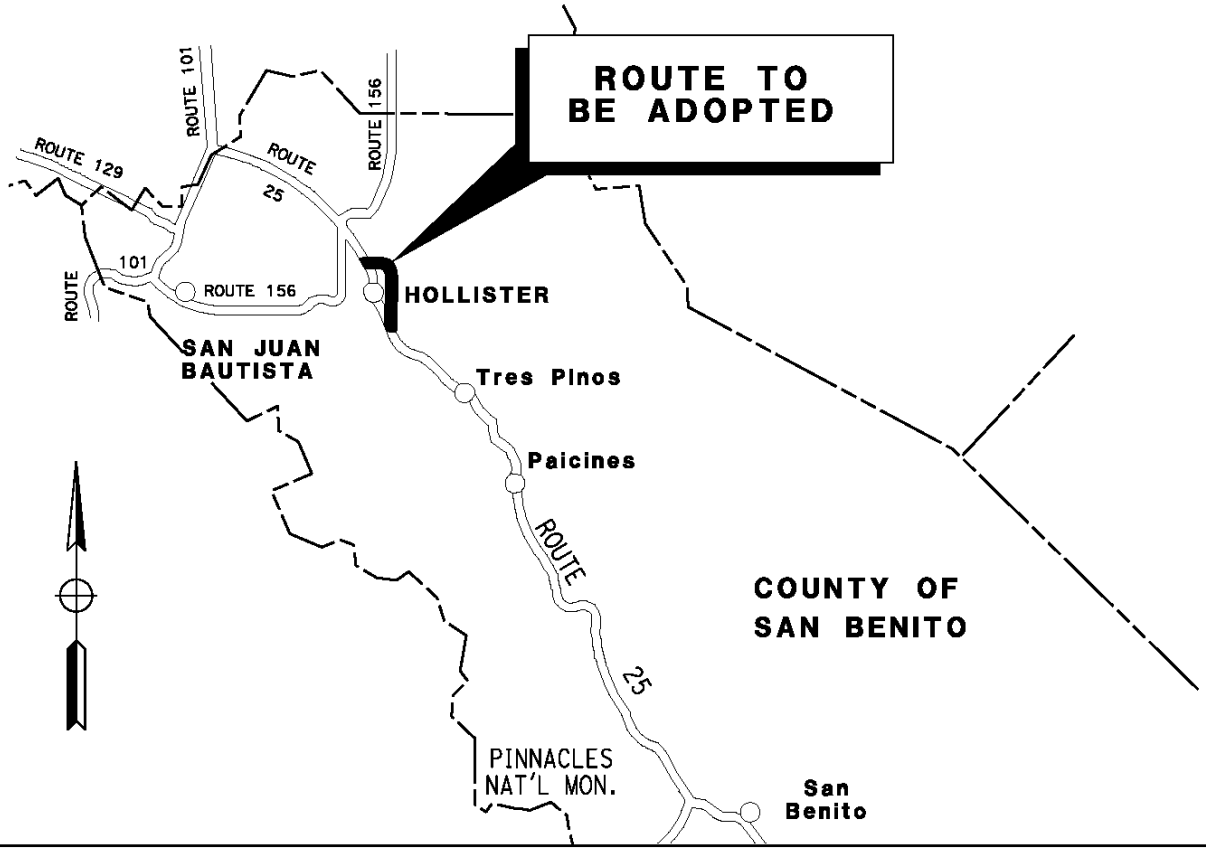
Caltrans

LOCATION MAP

FIGURE 3-2.3F

ROUTE ADOPTION

05-SBT-25-PM 49.7/52.4



NOTE:
IF ADDITIONAL DETAILS NEED TO BE SHOWN TO CLARIFY THE ROUTE ADOPTION LOCATION, ALSO INCLUDE A VICINITY MAP, SEE FIGURE 3-2.3H

Caltrans®

LOCATION MAP

FIGURE 3-2.3G

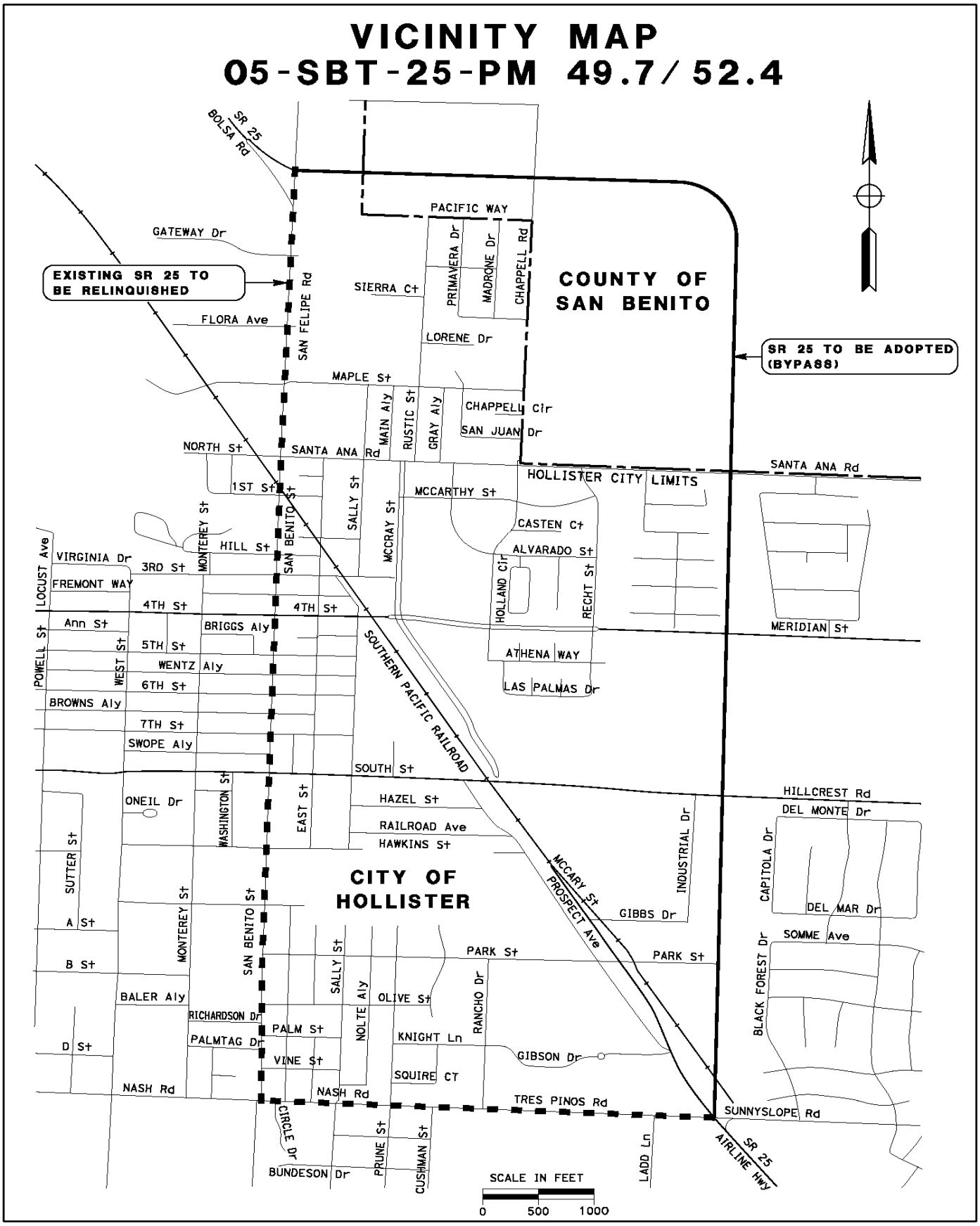
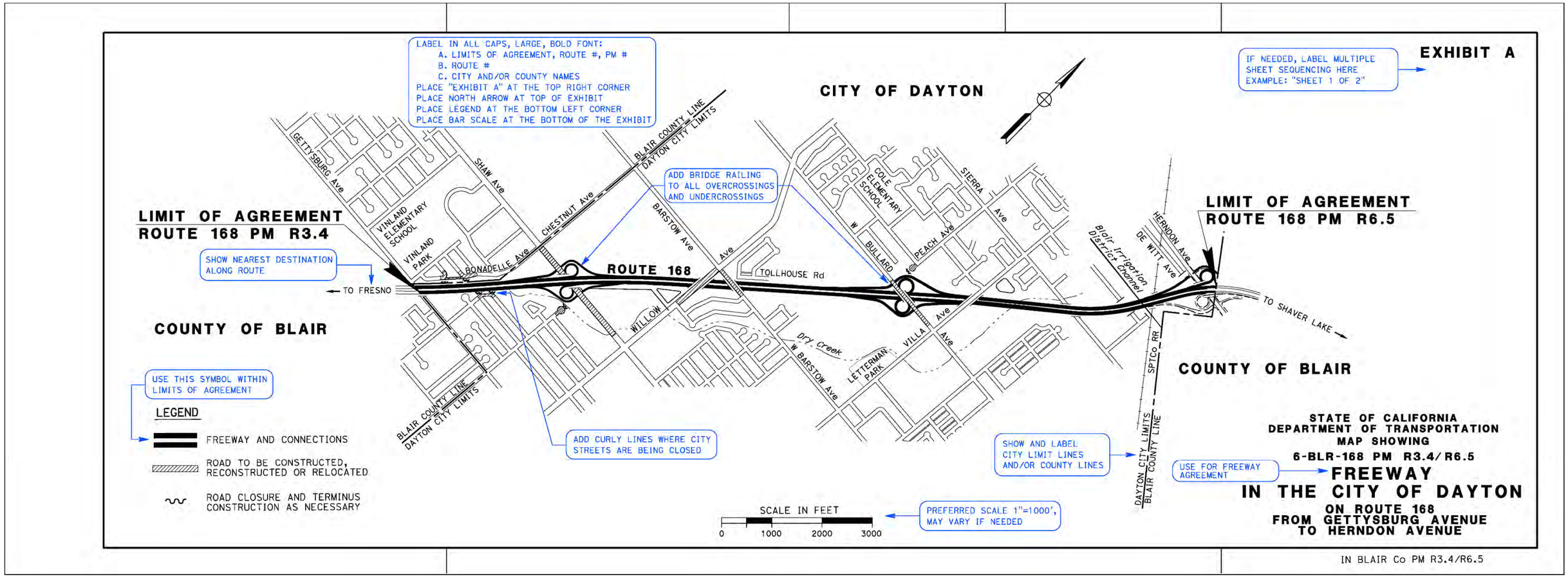

VICINITY MAP
05-SBT-25-PM 49.7/52.4
SR 25
BOLSA Rd
PACIFIC WAY
GATEWAY Dr
EXISTING SR 25 TO BE RELINQUISHED
SIERRA Ct
PRIMAVERA Dr
MADRONE Dr
CHAPPELL Rd
COUNTY OF SAN BENITO
FLORA Ave
SAN FELIPE Rd
LORENE Dr
SR 25 TO BE ADOPTED (BYPASS)
MAPLE St
MAIN Aly
RUSTIC St
GRAY Aly
CHAPPELL Cir
SAN JUAN Dr
NORTH St
SANTA ANA Rd
HOLLISTER CITY LIMITS
SANTA ANA Rd
1ST St
SALLY St
MCCARTHY St
MONTEREY St
SAN BENITO St
MCCRAY St
CASTEN Ct
HILL St
ALVARADO St
LOCUST Ave
VIRGINIA Dr
3RD St
HOLLAND Cir
RECHT St
FREMONT WAY
4TH St
4TH St
MERIDIAN St
Ann St
BRIGGS Aly
POWELL St
WEST St
5TH St
SOUTHERN PACIFIC RAILROAD
ATHENA WAY
WENTZ Aly
6TH St
LAS PALMAS Dr
BROWNS Aly
7TH St
SWOPE Aly
SOUTH St
HILLCREST Rd
ONEIL Dr
WASHINGTON St
EAST St
HAZEL St
DEL MONTE Dr
RAILROAD Ave
HAWKINS St
INDUSTRIAL Dr
CAPITOLA Dr
SUTTER St
CITY OF HOLLISTER
MCCARY St
PROSPECT Ave
GIBBS Dr
DEL MAR Dr
A St
MONTEREY St
SAN BENITO St
SOMME Ave
PARK St
PARK St
B St
SALLY St
BLACK FOREST Dr
BALER Aly
NOLTE Aly
OLIVE St
RANCHO Dr
RICHARDSON Dr
PALM St
KNIGHT Ln
D St
PALMTAG Dr
GIBSON Dr
VINE St
SQUIRE CT
NASH Rd
NASH Rd
TRES PINOS Rd
SUNNYSLOPE Rd
CIRCLE Dr
PRUNE St
CUSHMAN St
LADD Ln
SR 25
AIRLINE Hwy
BUNDESON Dr
SCALE IN FEET
0
500
1000

FIGURE 3-2.3H

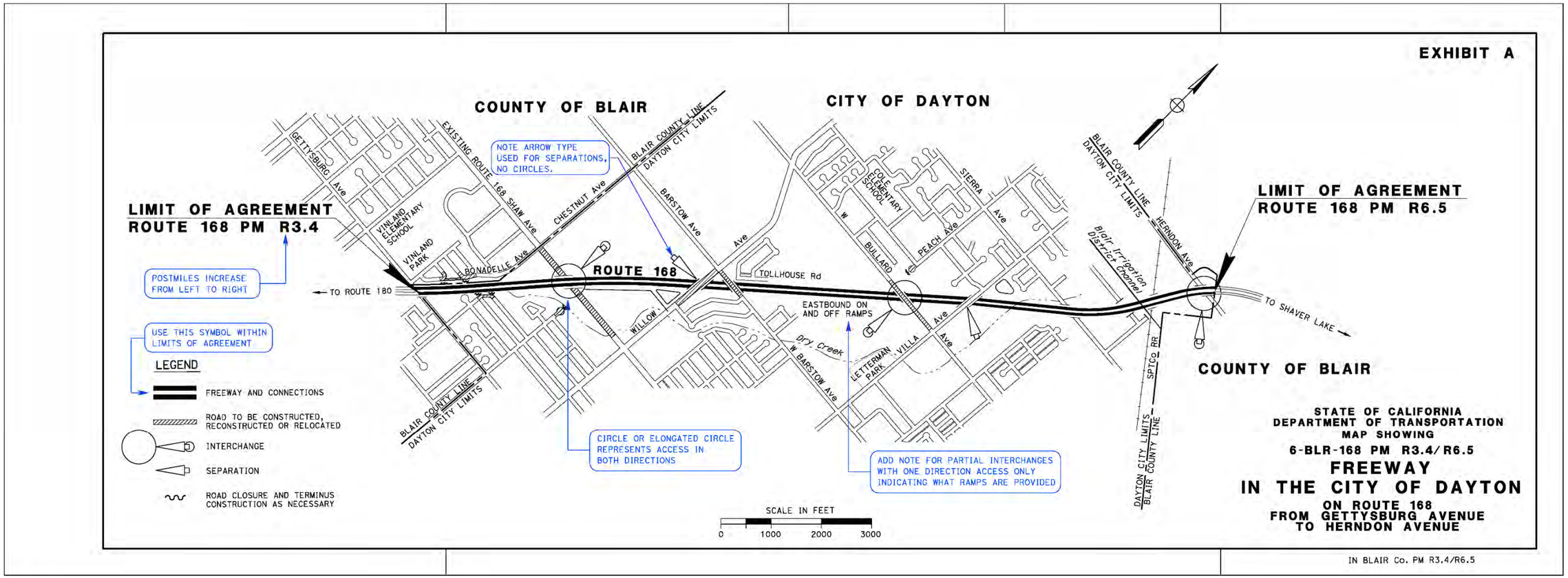


FREEWAY AGREEMENT – GEOMETRIC

FIGURE 3-2.4A

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.

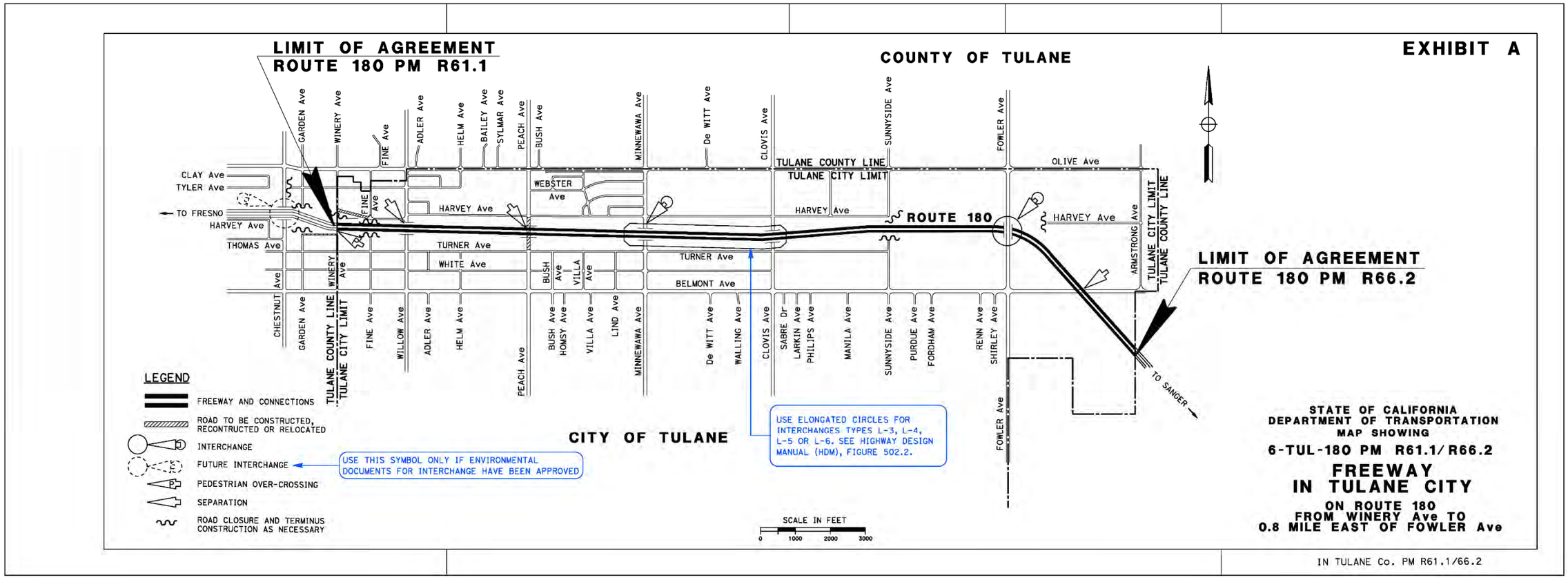


FREEWAY AGREEMENT – SYMBOLIC

FIGURE 3-2.4B

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.

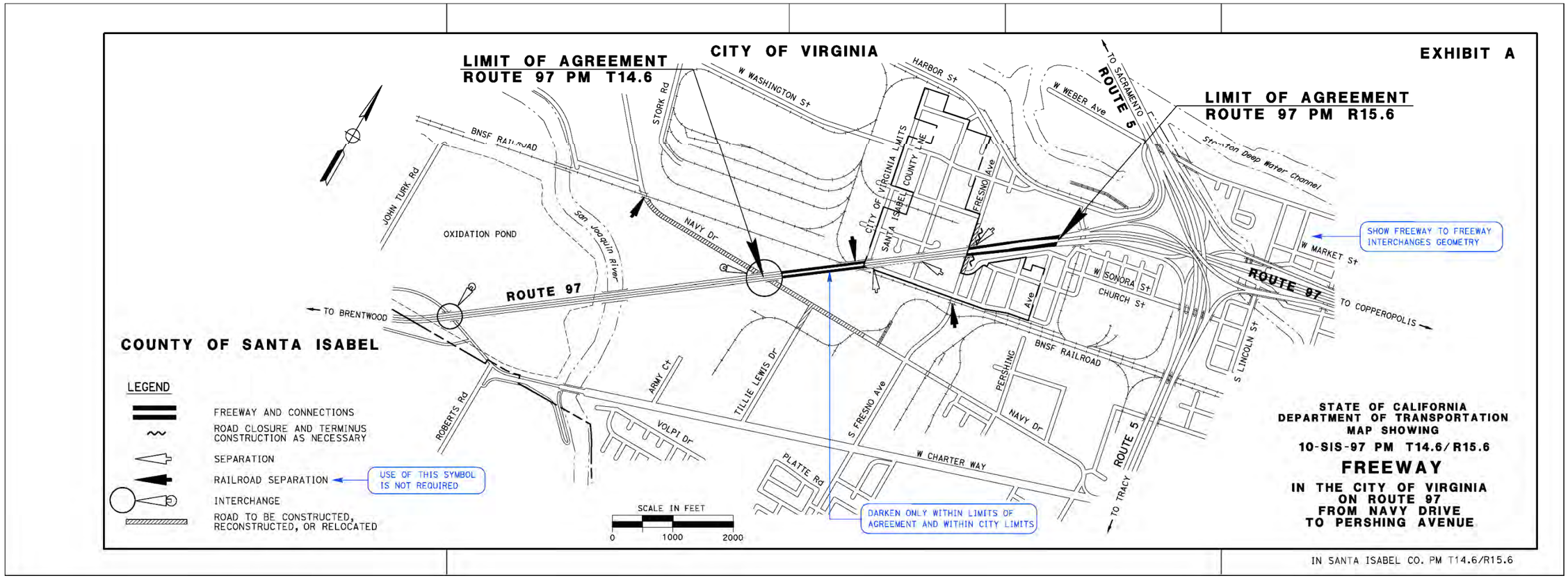


FREEWAY AGREEMENT – SYMBOLIC

FIGURE 3-2.4C

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.

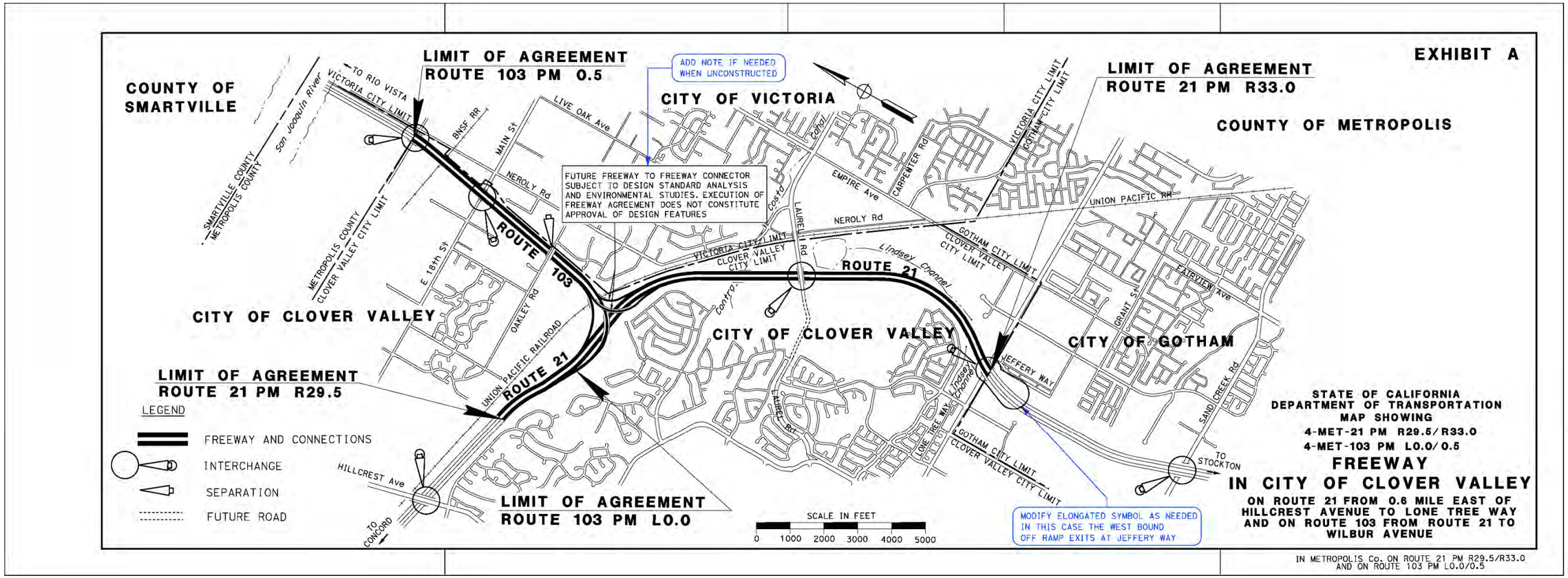


FREEWAY AGREEMENT – SYMBOLIC

FIGURE 3-2.4D

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.

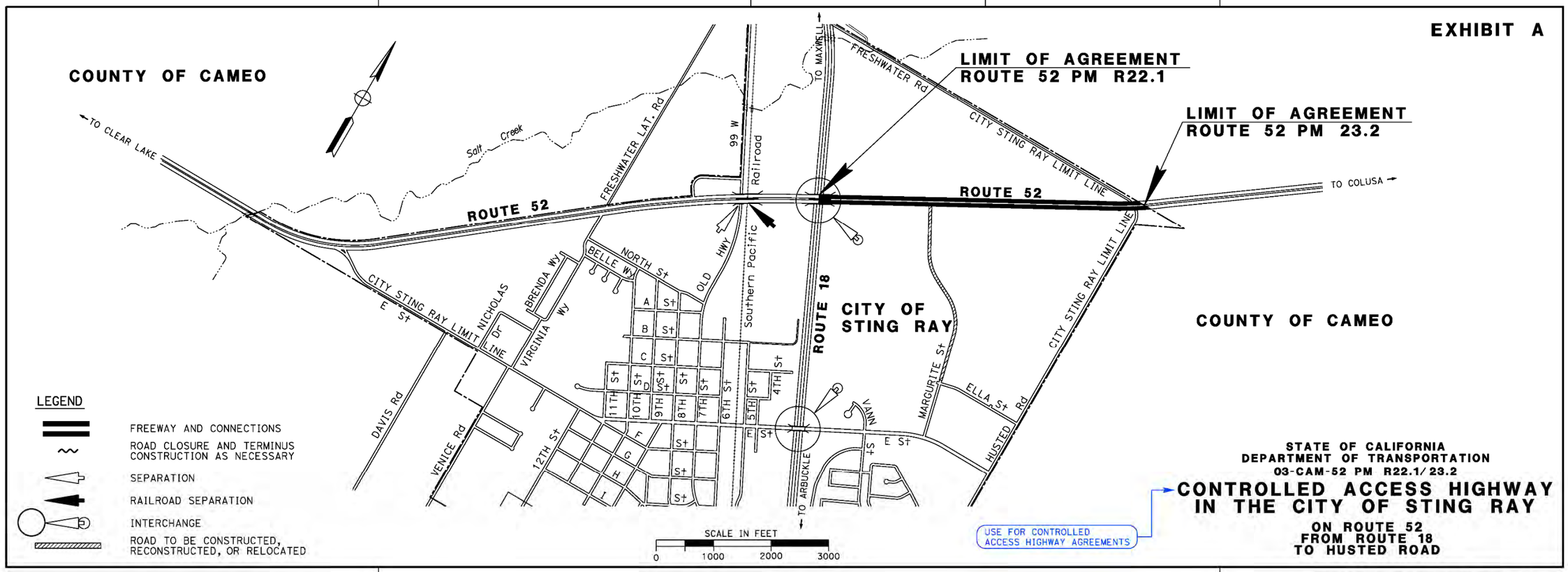


FREEWAY AGREEMENT – SYMBOLIC

FIGURE 3-2.4E

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.



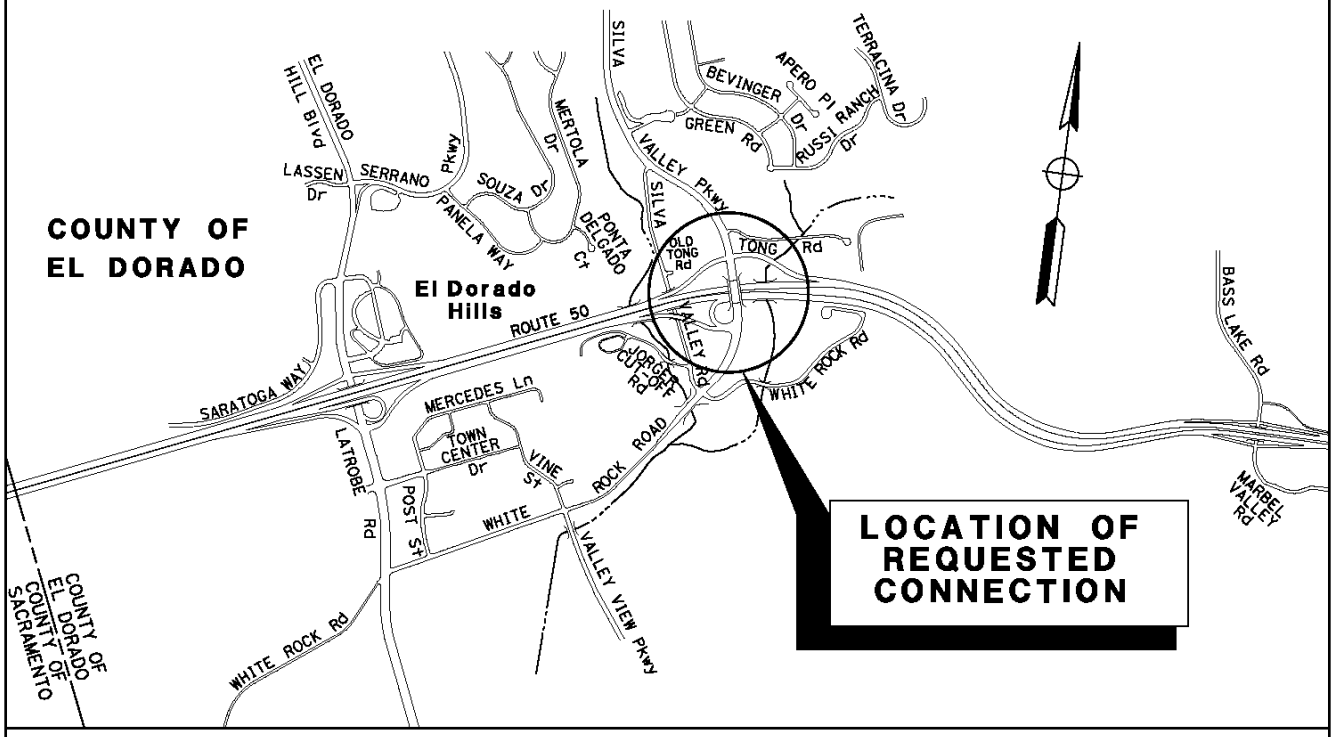
CONTROLLED ACCESS HIGHWAY AGREEMENT – SYMBOLIC

FIGURE 3-2.4F

Note:

The blue text within the bubbles are directions to the reader and apply to most Freeway or Controlled Access Highway agreement exhibits. See all other examples before completing the project specific exhibit.

NEW PUBLIC ROAD CONNECTION
03-ED-50-PM 1.8

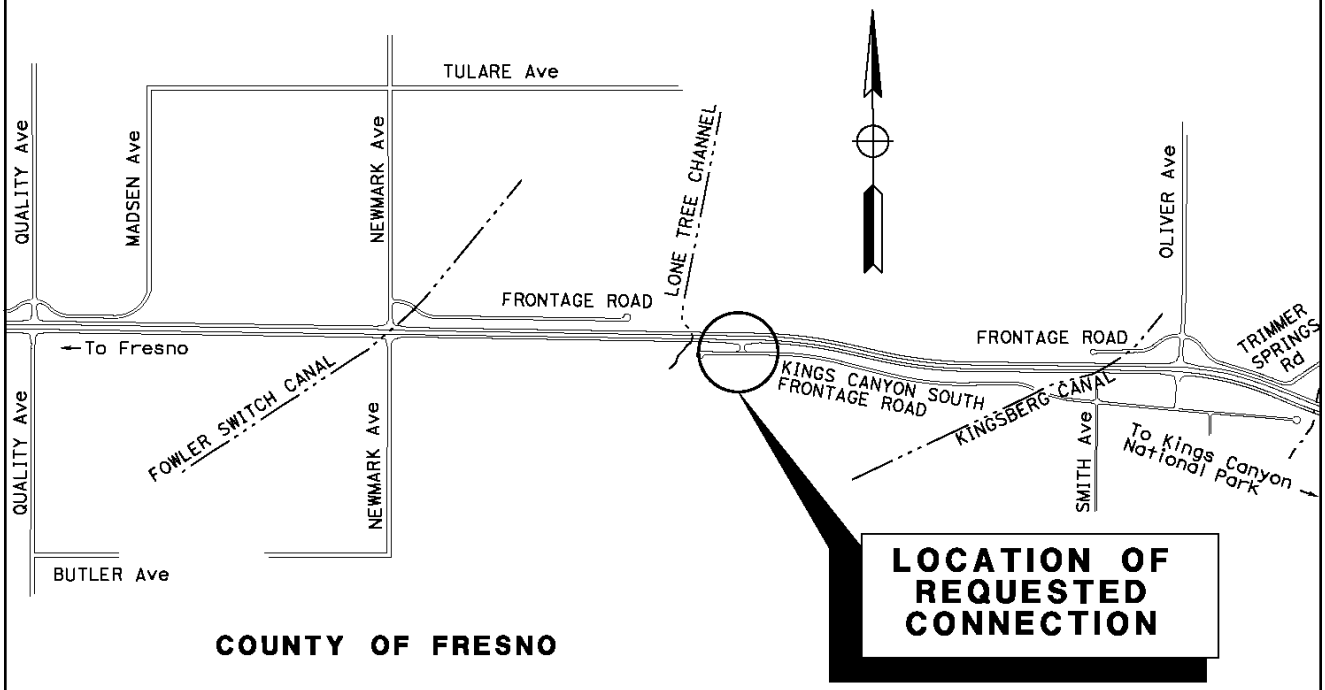


LOCATION MAP

Caltrans

FIGURE 3-2.5A

NEW PUBLIC ROAD CONNECTION
06-FRE-180-PM 73.8



LOCATION MAP

FIGURE 3-2.5B

REQUEST TO CPUC STAFF FOR AUTHORIZATION TO ALTER HIGHWAY-RAIL CROSSING PURSUANT TO GENERAL ORDER 88-B

1. Date Submitted: September 9, 2010

2. Applicant Info

Organization Name:	California Department of Transportation
Contact Person:	Denny Fong, P.E.
Title:	Senior Transportation Engineer
Street Address:	1120 N Street, MS-37
City:	Sacramento, CA
Zip:	95814
Phone:	(916) 654-3070
Email:	Denny_fong@dot.ca.gov

3. Crossing proposed to be altered

PUC Crossing Number:	001BM-513.40-A
U.S. DOT Crossing Number:	761634W
Street Name:	Orange FWY (SR 57) OH, known as Douglass OH
City:	Anaheim
County:	Orange
Railroad Responsible for Crossing:	Union Pacific Railroad
Other Railroads Operating on Tracks:	N/A

4. Describe Proposed Alterations (including any temporary reduced clearance variance requests):

The California Department of Transportation, in cooperation with the Orange County Transportation Authority (OCTA), proposes to widen the northbound State Route (SR) 57, between 0.31 miles south of Katella Avenue and 0.31 miles north of Lincoln Avenue within the city of Anaheim in Orange County, California. Douglass Overhead (OH) is within the project limits and will be widened approximately 20'6" to accommodate the widening of the SR 57. Douglass OH crosses over the single track mainline of the Union Pacific Railroad (UPRR) and Cerritos Avenue.

A CPUC G.O. 26-D variance is required for this location for the temporary construction vertical clearance of 21'0" in order to construct temporary falsework.

EXAMPLE A

Permanent vertical clearance is 23'0", which is in compliance with CPUC G.O. 26-D requirements.

UPRR is in agreement with the temporary horizontal and vertical clearances.

OCTA/Metrolink, Stadium (SR 57) OH, CPUC 1010R-170.80-A, US DOT 026976W, is within the project limits but there will be no involvement.

5. Describe the public benefits to be achieved by the proposed alterations:

The project is needed to relieve congestion. Existing northbound daily traffic conditions experience substantial congestion in the peak hour period and is forecasted to get worse. Projected northbound daily traffic volumes within the project limits for the design year of 2035 are expected to increase by more than 25 percent with the peak hour volumes expected to increase by nearly 75 percent. This project will reduce corridor delay, thereby providing a substantial benefit to the corridor and regional traffic circulation.

6. Explain why a separation of grades is not practicable:

N/A – This is an existing grade separated crossing.

7. Describe crossing warning devices

Current:	N/A – this is an existing grade separation
Proposed:	N/A – the crossing is to remain grade separated

8. Temporary Traffic Controls - Include a statement of temporary traffic controls to be provided during construction:

The temporary traffic controls shall be in accordance with the California Manual of Uniform Traffic Control Devices. UPRR will provide flagging for rail traffic during construction.

9. Signature

I, Denny Fong, P.E., am an employee of the State of California, Department of Transportation and authorized to sign this GO 88-B authorization request letter on its behalf.

Denny Fong 9/9/10

Denny Fong, P.E. Signature and date
Senior Transportation Engineer

EXAMPLE B

Attachments:

1. Exhibit A – Vicinity Map and Title Sheet
2. Exhibit B – Structure General Plan
3. Exhibit C – Negative Declaration

EXAMPLE C

10. Evidence of Agreement:

I, Freddy Cheung, P.E., am an employee of Union Pacific Railroad Company and authorized to sign this letter of agreement on its behalf, hereby declare that Union Pacific Railroad Company concurs with the proposed project described above as the SR 57 northbound widening project between Katella Avenue and Lincoln Avenue in Orange County, CA.

Freddy Cheung 9/10/2010

Freddy Cheung, P.E. Signature and date

2015 South Willow Avenue
Bloomington, CA 92316
Address

EXAMPLE D

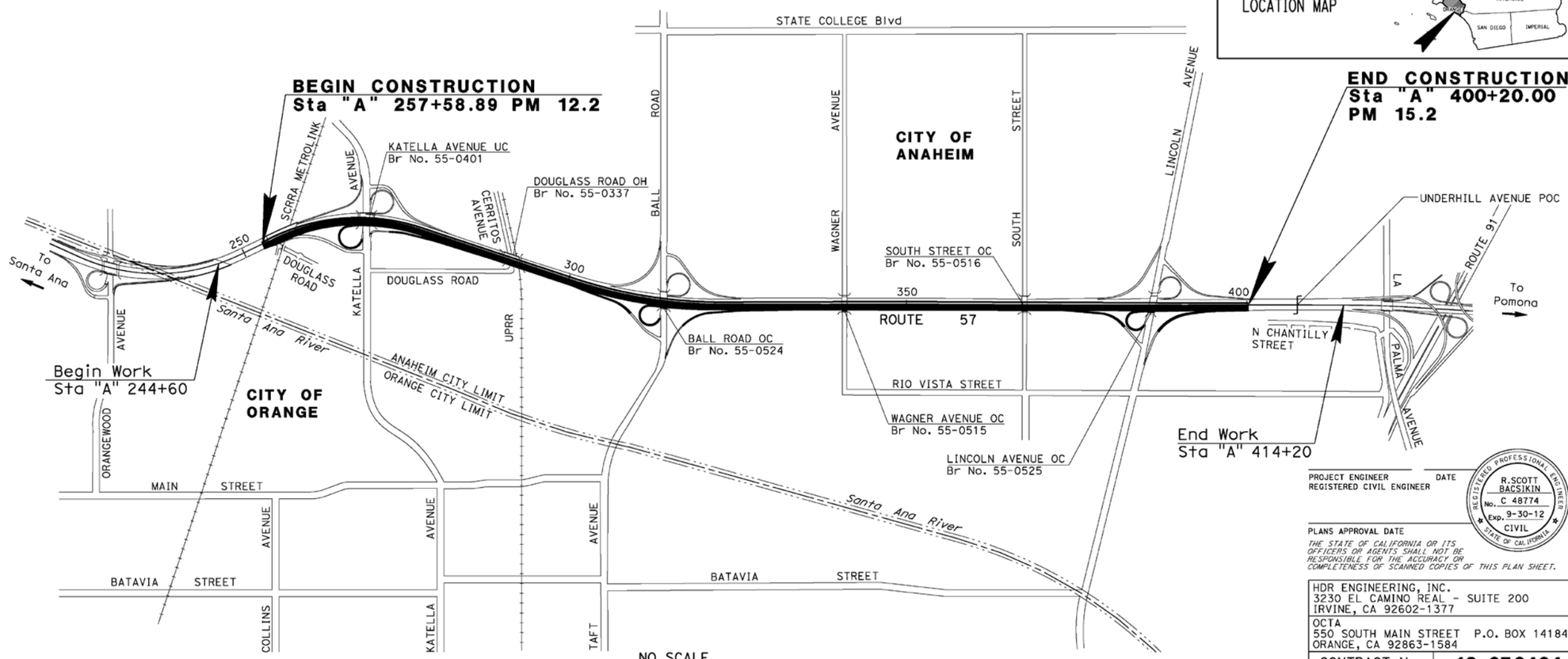
INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ORANGE COUNTY
IN ANAHEIM
FROM 0.3 MILE SOUTH OF KATELLA AVENUE UNDERCROSSING TO 0.3 MILE NORTH OF LINCOLN AVENUE OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	12.2/15.2		



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

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.

CONSULTANT DESIGN ENGINEER	CALTRANS DESIGN OVERSIGHT APPROVAL	REGISTRATION No.	LICENSE Exp DATE	DATE SIGNED
R. SCOTT BACSIKIN	KAMRAN MAZHAR	C 48436	6-30-12	

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — R.SCOTT BACSIKIN — No. C 48774 — Exp. 9-30-12 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

HDR ENGINEERING, INC.
3230 EL CAMINO REAL - SUITE 200
IRVINE, CA 92602-1377

OCTA
550 SOUTH MAIN STREET P.O. BOX 14184
ORANGE, CA 92863-1584

CONTRACT No.	12-0F0404
PROJECT ID	1200000109

LAST REVISION 10-11-10 | DATE PLOTTED => 23-APR-2015 | TIME PLOTTED => 10:11

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s121614 DGN FILE => c0f040ab001.dgn | UNIT 12-2998 | PROJECT NUMBER & PHASE 12000001091

EXHIBIT A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

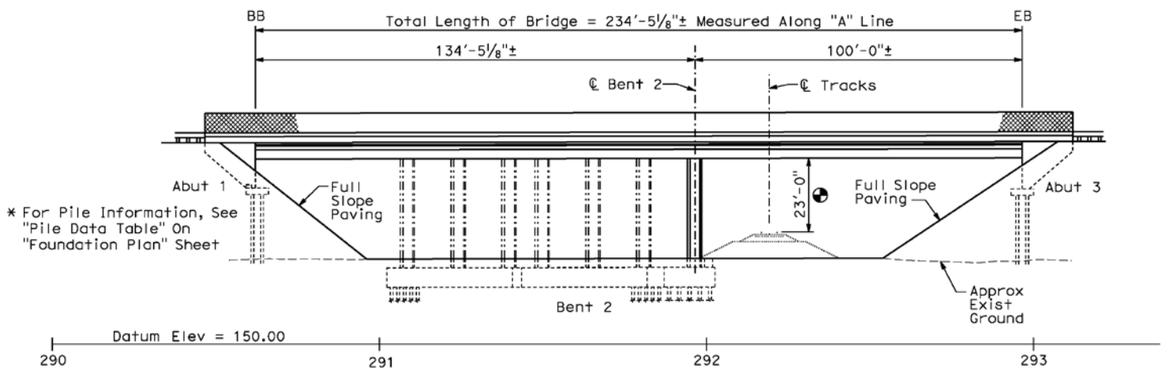
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC A. JOHNSON No. C57355 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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

OCTA
550 S. MAIN STREET
ORANGE, CA 92863

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CA 92602-1377



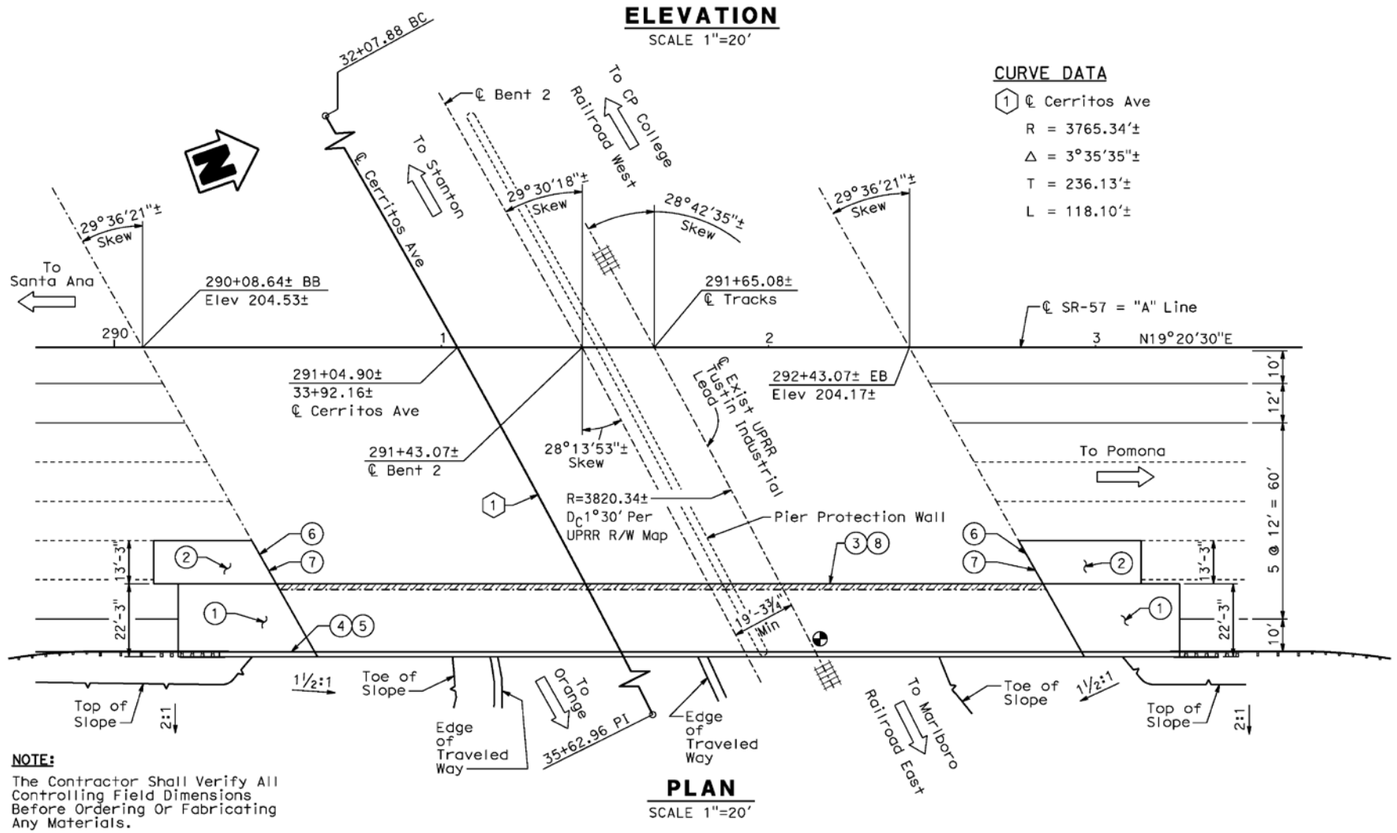
ELEVATION

SCALE 1"=20'

LEGEND

1. Structure Approach Slab Type N(30D)
2. Structure Approach Slab Type R(30D)
3. Remove Exist Type 9 Barrier And Salvage Metal Railing
4. Paint "DOUGLASS OVERHEAD"
5. Paint "BRIDGE No. 55-0337" And Year Constructed
6. Joint Seal Replacement (Exist)
7. Paving Notch Extension

Indicates Bridge Removal (Portion)
Indicates New Construction
Indicates Foundation or Hidden Lines
Indicates Existing Structure
Min Vert Clearance 23'-0" (Structure)



CURVE DATA

(1) ℄ Cerritos Ave
R = 3765.34'±
Δ = 3°35'35"±
T = 236.13'±
L = 118.10'±

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

PLAN

SCALE 1"=20'

Vehicular Traffic

1. ___ New alignment. No traffic at the site.
2. ___ Traffic will be detoured away from the site.
3. X Traffic will be carried on the structure. Stage construction will/will not be required.
4. X Traffic will pass under the structure on Douglass Rd
   A. ___ No falsework allowed over traffic.
   B. X Falsework opening(s) required:

		Temporary Vertical Clearance	Width of Traffic Opening
___	Bnd	___	___
___	Bnd	___	___
X	Two-way	15'-0"	48'-0"

   C. ___ Temporary traffic lane reduction needed for footing excavation.

Pedestrian Traffic

Falsework opening required on Cerritos Ave

Location	Height	Width
EB	7'-0"	5'-0"

Railroad Traffic

Falsework opening required over UPRR

Vertical Clearance	Horizontal Clear Width
21'-0"	12'-0"

DESIGN OVERSIGHT	DESIGN	BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
SIGN OFF DATE	DETAILS	BY E. Gray	CHECKED W. Chu	LAYOUT	BY J. Ramirez / CHECKED W. Chu
	QUANTITIES	BY J. Ramirez	CHECKED Z. Daniel	SPECIFICATIONS	BY E. Johnson / PLANS AND SPECS COMPARED

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 06-01-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

ERIC A. JOHNSON
PROJECT ENGINEER

CU 12231
EA 0F0401

FILE => 55-0337r-a-gp01.dgn

BRIDGE NO. 55-0337
POST MILES 13.0

DOUGLASS OH (WIDEN)
GENERAL PLAN NO. 1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 12/09 2/10 3/10 5/10 8/10

SHEET 1 OF 27

USERNAME => s12614 DATE PLOTTED => 23-APR-2015 TIME PLOTTED => 10:12

EXHIBIT B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC A. JOHNSON No. C57355 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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OCTA
550 S. MAIN STREET
ORANGE, CA 92863

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CA 92602-1377

LEGEND

(3) Remove Exist Type 9 Barrier And Salvage Metal Railing

(4) Paint "DOUGLASS OVERHEAD"

(5) Paint "BRIDGE No. 55-0337" And Year Constructed

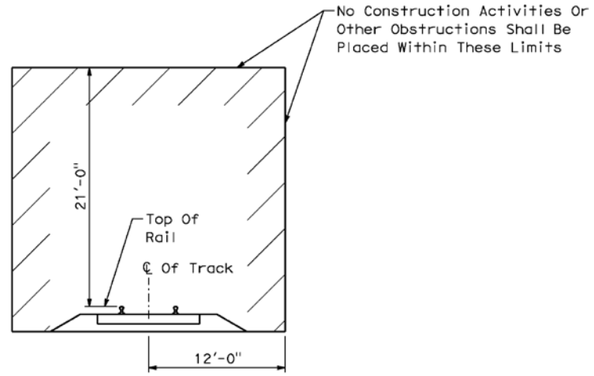
Indicates Bridge Removal (Portion)

Indicates New Construction

Indicates Foundation or Hidden Lines

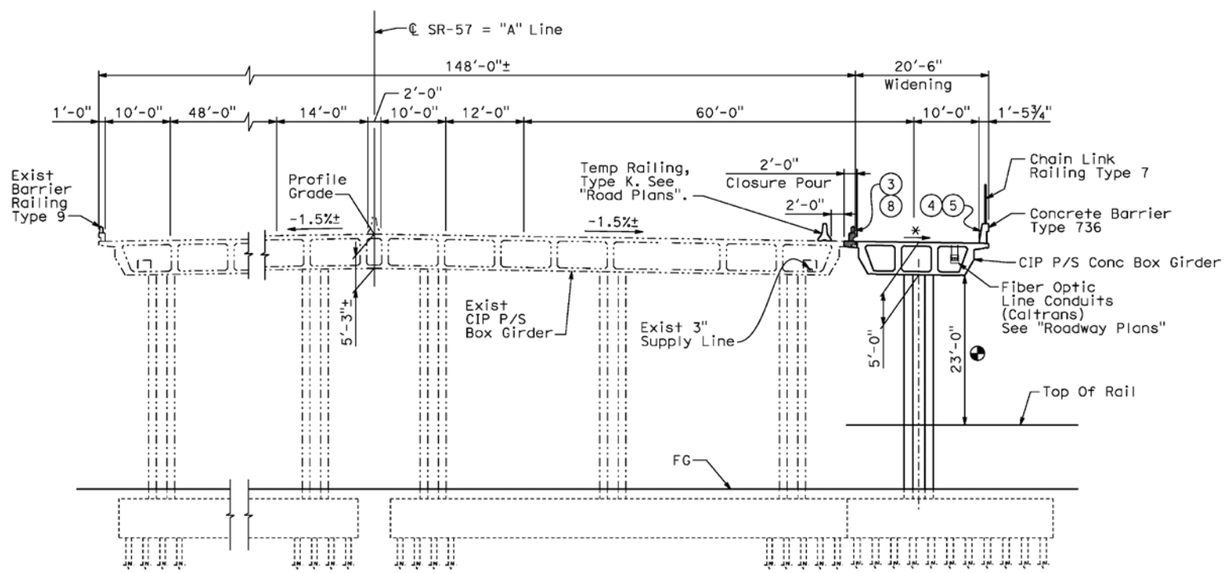
Indicates Existing Structure

Min Vert Clearance 23'-0" (Structure)



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

NTS



TYPICAL SECTION

SCALE 1"=10'

* Match Existing

NOTE:

The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

FINAL PAY QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	239	CY
STRUCTURE BACKFILL (BRIDGE)	148	CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	70	CY
STRUCTURAL CONCRETE, BRIDGE	394	CY
STRUCTURAL CONCRETE, APPROACH SLAB N(TYPE 30D)	46	CY
STRUCTURAL CONCRETE, APPROACH SLAB R(TYPE 30D)	33	CY
PAVING NOTCH EXTENSION	1	CY
BAR REINFORCING STEEL (BRIDGE)	118,458	LB
SLOPE PAVING (CONCRETE)	22	CY
CONCRETE BARRIER (TYPE 736)	195	LF
CHAIN LINK RAILING (TYPE 7)	267	LF

APPROXIMATE QUANTITIES

TEMPORARY RAILING (TYPE K)	520	LF
SALVAGE METAL BRIDGE RAILING	267	LF
REMOVE CONCRETE (WINGWALL)	4	CY
BRIDGE REMOVAL (PORTION),	LUMP	SUM
FURNISH STEEL PILING (HP 10 X 42)	564	LF
DRIVE STEEL PILE (HP 10 X 42)	11	EA
FURNISH PILING (CLASS 90)	1,212	LF
DRIVE PILE (CLASS 90)	33	EA
PRESTRESSING STEEL	23,617	LB
DRILL AND BOND DOWEL	47	LF
JOINT SEAL (MR 2")	82	LF
SHORING	2,760	SF
WELDED STEEL PIPE CASING	79	LF

DESIGN OVERSIGHT	DESIGN	BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
	DETAILS	BY E. Gray	CHECKED W. Chu	LAYOUT BY J. Ramirez	CHECKED W. Chu
SIGN OFF DATE	QUANTITIES	BY J. Ramirez	CHECKED Z. Daniel	SPECIFICATIONS BY E. Johnson	PLANS AND SPECS COMPARED

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

ERIC A. JOHNSON
PROJECT ENGINEER

BRIDGE NO. 55-0337
POST MILES 13.0

DOUGLASS OH (WIDEN)
GENERAL PLAN NO. 2

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 06-01-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 12231
EA 0F0401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 11/09 2/10 5/10 6/10 8/10

SHEET 2 OF 27

FILE => 55-0337r-a-gp02.dgn

USERNAME => s121614 DATE PLOTTED => 23-APR-2015 TIME PLOTTED => 10:12

EXHIBIT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.SCOTT BACSIKIN No. C 48774 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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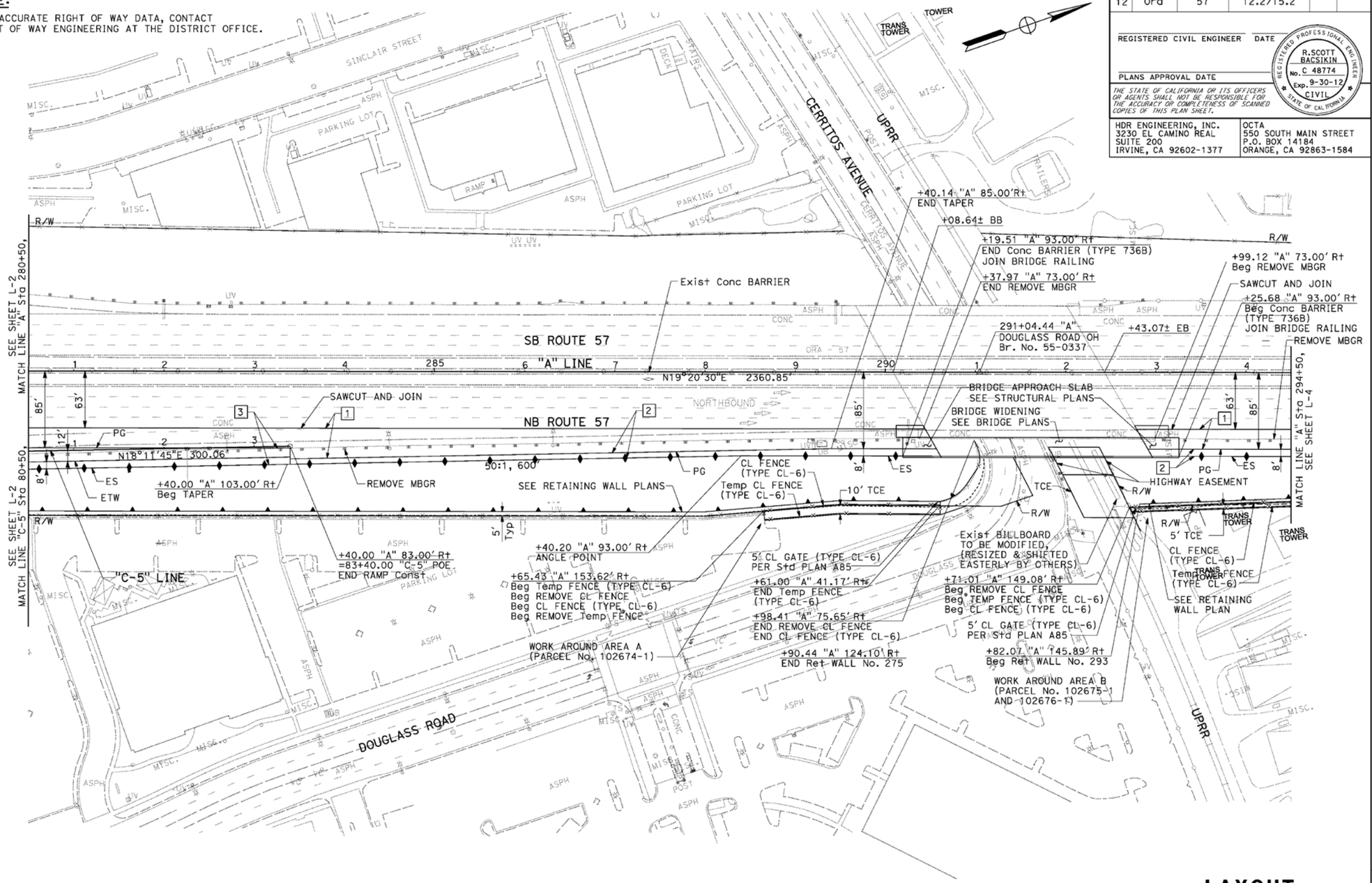
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

OCTA
550 SOUTH MAIN STREET
P.O. BOX 14184
ORANGE, CA 92863-1584

NOTE:

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



NOT FOR CONSTRUCTION

LAYOUT
SCALE: 1" = 50' **L-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: R. SCOTT BACSIKIN
CALCULATED-DESIGNED BY: SHIVA BOUSTANI
CHECKED BY: LIEM A. NGUYEN
REVISED BY
DATE REVISED

LAST REVISION 3-14-11
DATE PLOTTED => 23-APR-2015
TIME PLOTTED => 10:11

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => c0F040ea003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 12-2998
PROJECT NUMBER & PHASE 12000001091

EXHIBIT B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC A. JOHNSON No. C57355 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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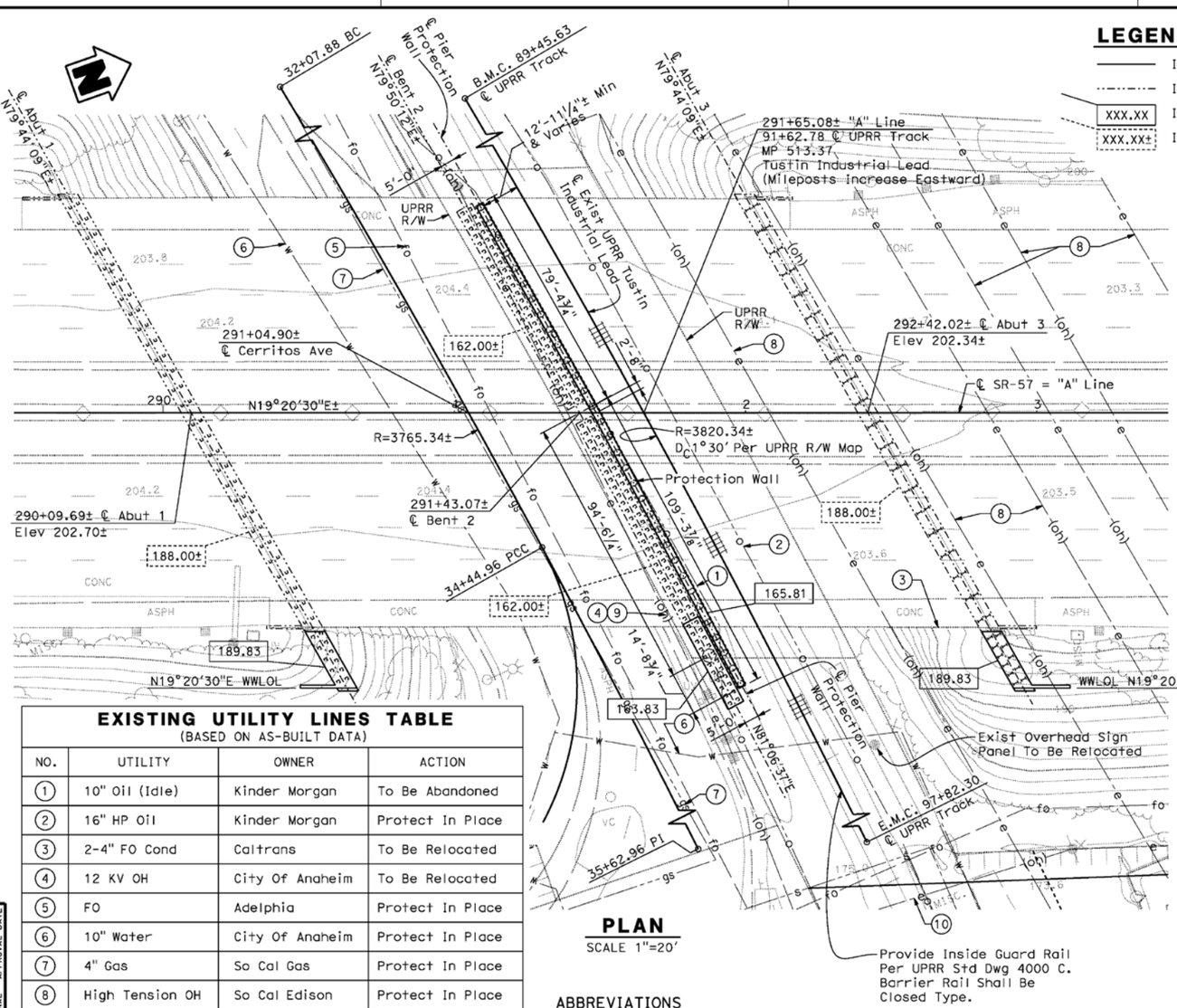
OCTA
550 S. MAIN STREET
ORANGE, CA 92863

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CA 92602-1377

LEGEND

- Indicates New Construction
- Indicates Existing
- XXX.XX Indicates Bottom Of Footing Elevation
- XXX.XX± Indicates Bottom Of Exist Footing Elevation



PLAN

SCALE 1"=20'

EXISTING UTILITY LINES TABLE

(BASED ON AS-BUILT DATA)

NO.	UTILITY	OWNER	ACTION
1	10" Oil (Idle)	Kinder Morgan	To Be Abandoned
2	16" HP Oil	Kinder Morgan	Protect In Place
3	2-4" FO Cond	Caltrans	To Be Relocated
4	12 KV OH	City Of Anaheim	To Be Relocated
5	FO	Adelphia	Protect In Place
6	10" Water	City Of Anaheim	Protect In Place
7	4" Gas	So Cal Gas	Protect In Place
8	High Tension OH	So Cal Edison	Protect In Place
9	CATV OH	Adelphia	To Be Relocated
10	12 KV OH	City Of Anaheim	Protect In Place

NOTE:

The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

ABBREVIATIONS

HP = High Pressure
FO = Fiber Optic
KV = Kilovolts

PILE DATA TABLE (DRIVEN PILES)

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut 1	Conc Pile, Class 90 Alt X	170	-	141.0(a) 144.0(c) 169.0(d)	141.0	170
Bent 2	Conc Pile, Class 90 Alt X	180	-	122.0(a) 132.0(c) 143.0(d)	122.0	180
Abut 3	HP 10x42 Steel Pile	140	-	134.0(a) 139.0(c) 169.0(d)	134.0	140

Notes:
1. Design Tip Elevations Are Controlled By:
   (a) Compression; (c) Settlement; (d) Lateral Load.
2. The Specified Tip Elevation Shall Not Be Raised Above The Design Tip Elevations For Lateral And Tolerable Settlement.

PILE DATA TABLE (CIDH PILES)

Location	Pile Type	Cut-off Elevation (ft)	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension		
Protection Wall	24" Dia CIDH	166.06	35	-	159.0(a) 159.0(c) 139.0(d)	139.0

Notes:
1. Design Tip Elevations Are Controlled By:
   (a) Compression; (c) Settlement; (d) Lateral Load.
2. The Specified Tip Elevation Shall Not Be Raised Above The Design Tip Elevations For Compression, Lateral, And Tolerable Settlement.

GEOTECHNICAL PROFESSIONAL APPROVAL DATE

DESIGN OVERSIGHT	SCALE: 1"=20'	VERT.DATUM	HORZ.DATUM	DESIGN BY J. Ramirez	CHECKED W. Chu
	PHOTOGRAMMETRY AS OF:	ALIGNMENT TIES		DETAILS BY E. Gray	CHECKED W. Chu
	SURVEYED BY E. Martinez	DRAFTED BY		QUANTITIES BY J. Ramirez	CHECKED Z. Daniel
SIGN OFF DATE	FIELD CHECKED BY D. Williams	CHECKED BY			

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

ERIC A. JOHNSON
PROJECT ENGINEER

BRIDGE NO. 55-0337
POST MILE 13.0

DOUGLASS OH (WIDEN)
FOUNDATION PLAN

FOUNDATION PLAN SHEET (ENGLISH) (REV. 06-01-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

EA 0F0404

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 10/05 2/10 3/10 5/10 8/10

SHEET 4 OF 27

FILE => 55-0337r-e-fp101.dgn

USERNAME => s121614 DATE PLOTTED => 23-APR-2015 TIME PLOTTED => 10:12

EXHIBIT B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC A. JOHNSON No. C57355 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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OCTA
550 S. MAIN STREET
ORANGE, CA 92863

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CA 92602-1377

FINAL PAY QUANTITIES

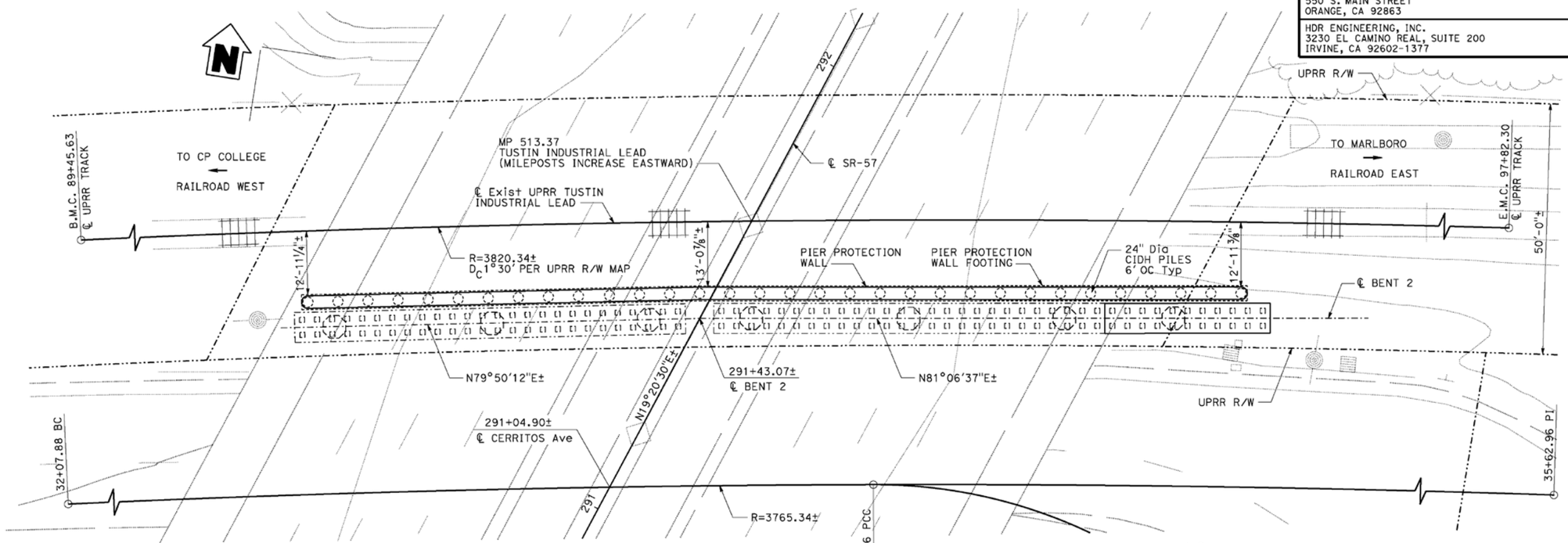
STRUCTURE EXCAVATION (RETAINING WALL)	410 CY
STRUCTURE BACKFILL (RETAINING WALL)	190 CY
STRUCTURE CONCRETE (RETAINING WALL)	362 CY
BAR REINFORCING STEEL (RETAINING WALL)	135,561 LB

APPROXIMATE QUANTITIES

SHORING	2,723 SF

INDEX TO PLANS

SHEET No.	DESCRIPTION	SHEET No.	DESCRIPTION
1	GENERAL PLAN	6	SHORING DETAIL
2	FOUNDATION PLAN	7	LOG OF TEST BORINGS - SHEET 1 OF 4
3	PARTIAL PLAN AND ELEVATION	8	LOG OF TEST BORINGS - SHEET 2 OF 4
4	TYPICAL SECTION	9	LOG OF TEST BORINGS - SHEET 3 OF 4
5	TYPICAL WALL DETAILS	10	LOG OF TEST BORINGS (AS-BUILT) - SHEET 4 OF 4



PLAN

DESIGN CRITERIA

DESIGN: UPRR GUIDELINES FOR DESIGN OF HIGHWAY SEPARATION STRUCTURES OVER RAILROAD, 1999; AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2007

SEISMIC DESIGN: MANUAL FOR RAILWAY ENGINEERING, 2009; AND CALTRANS SEISMIC DESIGN CRITERIA (SDC), VERSION 1.4, JUNE 2006

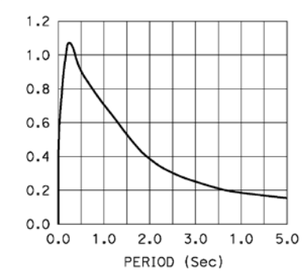
LIVE LOAD: LOAD OF 400 kips-[AASHTO 3.6.5.2]

SEISMIC LOADING:
CALTRANS MTD 20-1, SDC APPENDIX B (SEPTEMBER, 2009)
ARS: AS SHOWN
SOIL PROFILE: INITIAL V_{S30} = 880 (ft/sec), LIQUEFACTION: ___YES, _X_NO
NON-LIQUEFACTION CASE: PGA = 0.48 (in g), M (FOR PGA) = 6.6 (M_{mode})

REINFORCED CONCRETE: f'c = 4,000 psi
fy = 60,000 psi

PILES: 24" CIDH CONCRETE PILES

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



ARS CURVE FOR SAFETY EARTHQUAKE EVENTS (NON-LIQUEFACTION CASE)

DESIGN OVERSIGHT	DESIGN	BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
	DETAILS	BY E. Gray	CHECKED W. Chu	LAYOUT BY J. Ramirez	CHECKED W. Chu
SIGN OFF DATE	QUANTITIES	BY J. Ramirez	CHECKED Z. Daniel	SPECIFICATIONS BY E. Johnson	PLANS AND SPECS COMPARED

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

ERIC A. JOHNSON
PROJECT ENGINEER

BRIDGE NO. 55-0337
POST MILES 13.0

DOUGLASS OH (WIDEN)
GENERAL PLAN NO. 1

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 08-01-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 12231
EA 0F0401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 12/09 3/10 5/10 6/10 8/10

SHEET 1 OF 27

FILE => 55-0337r-s-gp01.dgn

USERNAME => s121614 DATE PLOTTED => 28-APR-2015 TIME PLOTTED => 08:05

EXHIBIT B

EXHIBIT C

12-ORA-57-PM 12.2/15.2
EA No.: 0F0400
SCH No. 2009031085

State Route 57 (SR-57), widen the northbound side between 0.31 mile south of Katella Avenue to 0.31 mile north of Lincoln Avenue (Post Mile [PM] 12.2 to PM 15.2) within the City of Anaheim in Orange County, California.

INITIAL STUDY WITH NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Nov 24, 2009
Date of Approval

CINDY QUON
District Director, District 12
California Department of Transportation

EXHIBIT C

NEGATIVE DECLARATION

SCH No. 2009031085

STATE OF CALIFORNIA
DEPARTMENT OF
TRANSPORTATION

12-ORA-57-PM 12.2/15.2
EA No.: 0F0400

NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Description

The California Department of Transportation District 12 (the Department), in cooperation with the Orange County Transportation Authority (OCTA), proposes to widen northbound State Route 57 (SR-57) between Katella Avenue and Lincoln Avenue within the City of Anaheim in Orange County, California. This project would reduce traffic congestion and maximize mainline mobility.

Determination

An Initial Study and Supplemental Initial Study have been prepared by the Department, District 12. On the basis of these studies it is determined that the proposed action will not have a significant effect upon the environment for the following reasons:

The Proposed Project would have no effect on: Farmland/Timberlands, Relocations, Floodplains, Paleontological Resources, Natural Communities, Plant Species, Threatened and Endangered Species, and Invasive Species.

In addition, the Proposed Project would have no significant effect on: Land Use, Growth, Community Character and Cohesion, Environmental Justice, Utilities/Emergency Services, Traffic/Transportation/Pedestrian and Bicycle Facilities, Visual/Aesthetics, Cultural Resources, Water Quality and Storm Water Runoff, Geology/Soils/Seismicity/Topography, Hazardous Waste/Materials, Air Quality, Noise, Wetlands and Other Waters, and Animal Species.

Cindy Quon
District Director
District 12
California Department of Transportation

Nov 24 2009
Date

T. 2 S. R. 10 E. Z.M.

COUNTY OF BLISS

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

PROFESSIONAL LAND SURVEYOR

DATE

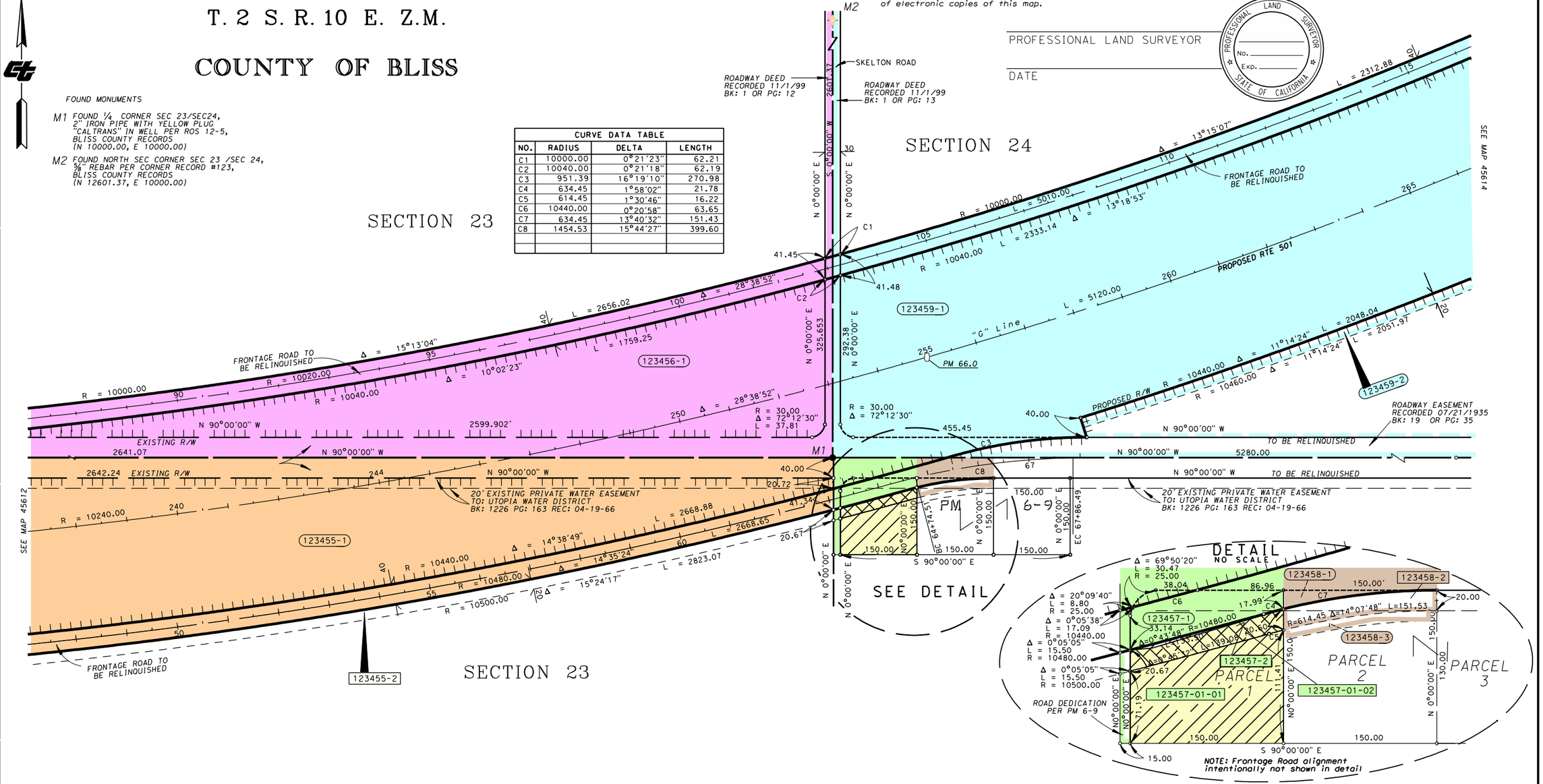
PROFESSIONAL LAND SURVEYOR — No. — Exp. — STATE OF CALIFORNIA

FOUND MONUMENTS

M1 FOUND ¼ CORNER SEC 23/SEC24, 2" IRON PIPE WITH YELLOW PLUG "CALTRANS" IN WELL PER ROS 12-5, BLISS COUNTY RECORDS (N 10000.00, E 10000.00)

M2 FOUND NORTH SEC CORNER SEC 23 /SEC 24, ⅝" REBAR PER CORNER RECORD #123, BLISS COUNTY RECORDS (N 12601.37, E 10000.00)

CURVE DATA TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	10000.00	0°21'23"	62.21
C2	10040.00	0°21'18"	62.19
C3	951.39	16°19'10"	270.98
C4	634.45	1°58'02"	21.78
C5	614.45	1°30'46"	16.22
C6	10440.00	0°20'58"	63.65
C7	634.45	13°40'32"	151.43
C8	1454.53	15°44'27"	399.60



PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
123455-1	F	R. KRAMDEN, ET UX	75.94 AC	17.47 AC [2.43]		58.47 AC		GD	4/1/07	2007-123456
123455-2	E	R. KRAMDEN, ET UX	75.94 AC	1.23 AC			WATER DELIVERY ESMT TO UTOPIA WATER DISTRICT	ED	4/1/07	2007-123457
123456-1	F	ADDAMS FAMILY TRUST	151.88 AC	6.99 AC [2.5]		144.89 AC		GD	3/15/07	2007-123454
123457-1	F	BERNARD A. FIFE	0.51 AC	1.3 AC [0.18]	0.39 AC	0.39 AC	TOTAL TAKE	GD	2/14/07	2007-123443
123457-2	E	BERNARD A. FIFE	0.51 AC	3105.85 [310.0]			WATER DELIVERY ESMT TO UTOPIA WATER DISTRICT	ED	2/14/07	2007-123444
123458-1	F	CAIN AND ABEL INC	1.02 AC	8941.77 [0.14]		0.97 AC		GD	1/21/07	2007-123342
123458-2	E	CAIN AND ABEL INC	1.02 AC	3029.66			WATER DELIVERY ESMT TO UTOPIA WATER DISTRICT	ED	1/21/07	2007-123343
123458-3	T	CAIN AND ABEL INC	1.02 AC	1515.57			TCE TO CONSTRUCT WATER DELIVERY ENDS 2010	ED	1/21/07	2007-123344
123459-1	F	MARGARET KETTLE, ET VIR	LARGE	22.02 AC [0.58]		LARGE		GD	5/15/07	2007-123554
123459-2	E	MARGARET KETTLE, ET VIR	LARGE	0.94 AC		LARGE	DRAINAGE EASEMENT	GD	5/15/07	2007-123554
~~123457-01-02~~	~~E~~	~~STATE OF CALIFORNIA~~	~~3829.66~~				~~DEED TO UTOPIA WATER DISTRICT~~	~~QD~~	~~8/01/07~~	~~2007-123621~~
~~123457-01-01~~	~~F~~	~~STATE OF CALIFORNIA~~	~~0.87 AC~~				~~DEED TO CAIN AND ABEL INC~~	~~QD~~	~~8/29/07~~	~~2007-123684~~

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way. Acreages
[ ] Indicates Underlying Fee (UF) Area
[Y] Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)
③ TYPE:
GD=Grant deed
ED=Easement deed
QC=Quitclaim
DD=Director's deed
DE=Director's easement deed
DK=Director's quitclaim deed
FOC=Final Order of Condemnation
HE=Highway easement deed
REL=Relinquishment
VAC=Vacation
JUA=Joint use agreement
CCUA=Consent to common use agreement
④ Document or Instrument number

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 9. Distances and stationing are grid distances. Divide by 0.9999999 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

- Access Prohibited
- Access Superseded
- Existing R/W Superseded
- Access Opening (Private)
- Indicates Radial Bearing
- Indicates Found Monument as noted
- Indicates calculated point. (Does not imply monument set)
- Title to State
- Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY RECORD MAP MAP NO. DRAFT

FOR PREVIOUS R/W INFORMATION SEE MAP(S) 45613

FEET 0 50 100 200 300

TO DESIGN: 06/14/07 EA(s): 123452 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
20	BLI	501	66.0	3	5

R/W PROJECT SURVEYOR:

DATE	REVISIONS	BY
09-15-07	ADDED HATCHING FOR DD	XYZ

DATE	REVISIONS	BY