Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	4	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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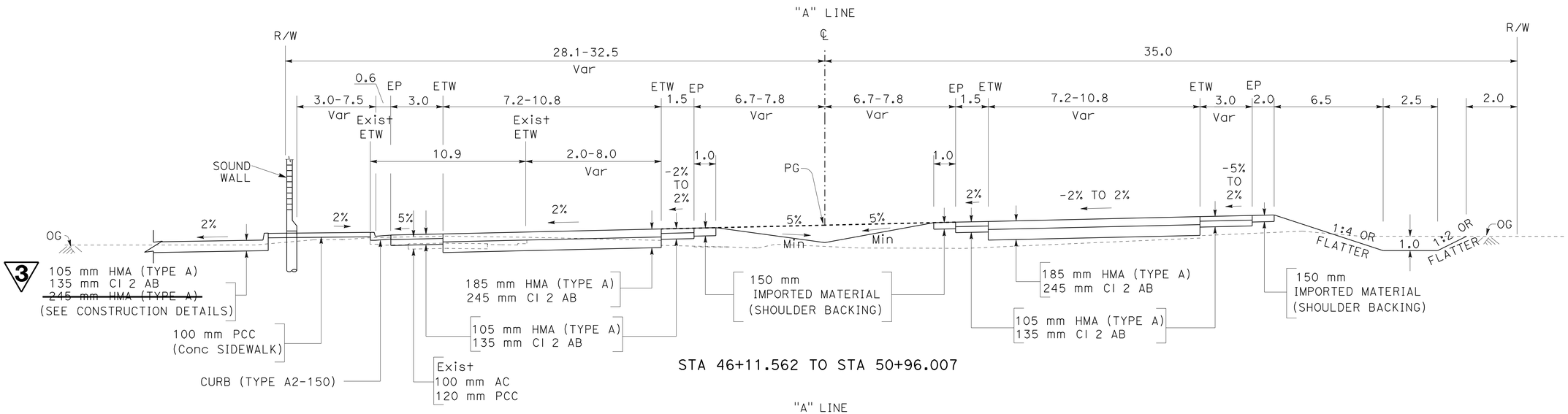
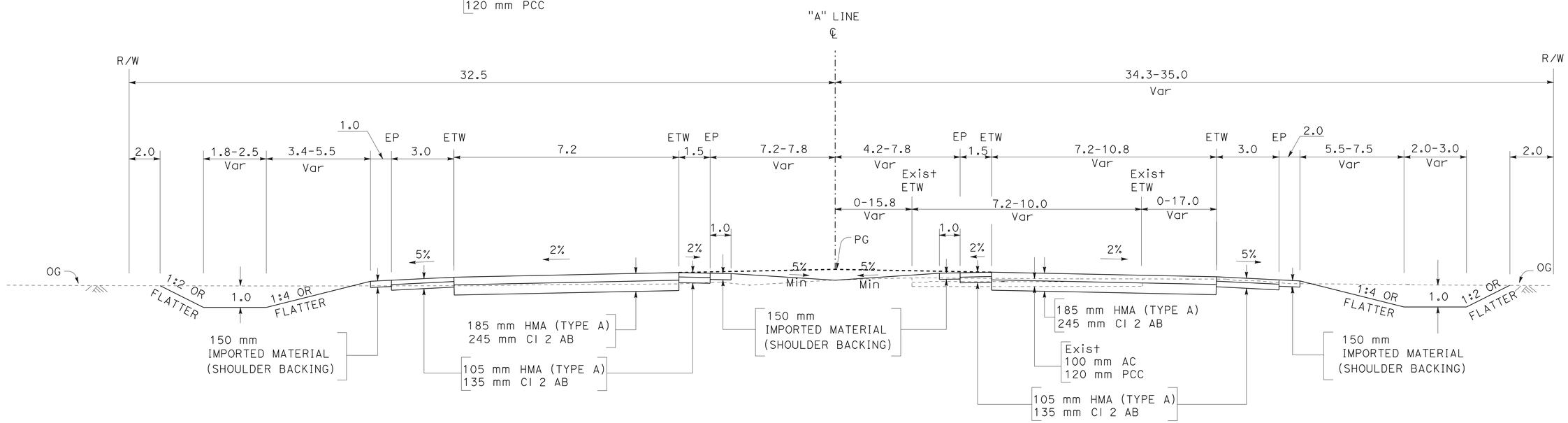
Caltrans Metric



STA 46+11.562 TO STA 50+96.007



STA 44+30.000 TO STA 46+11.562

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ROUTE 219
(KIERNAN AVENUE)

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

TYPICAL CROSS SECTIONS

NO SCALE

X-3

REVISED BY	DATE REVISED
WS	7/9/09

CALCULATED-DESIGNED BY: SARAVUTH PHIN
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	39	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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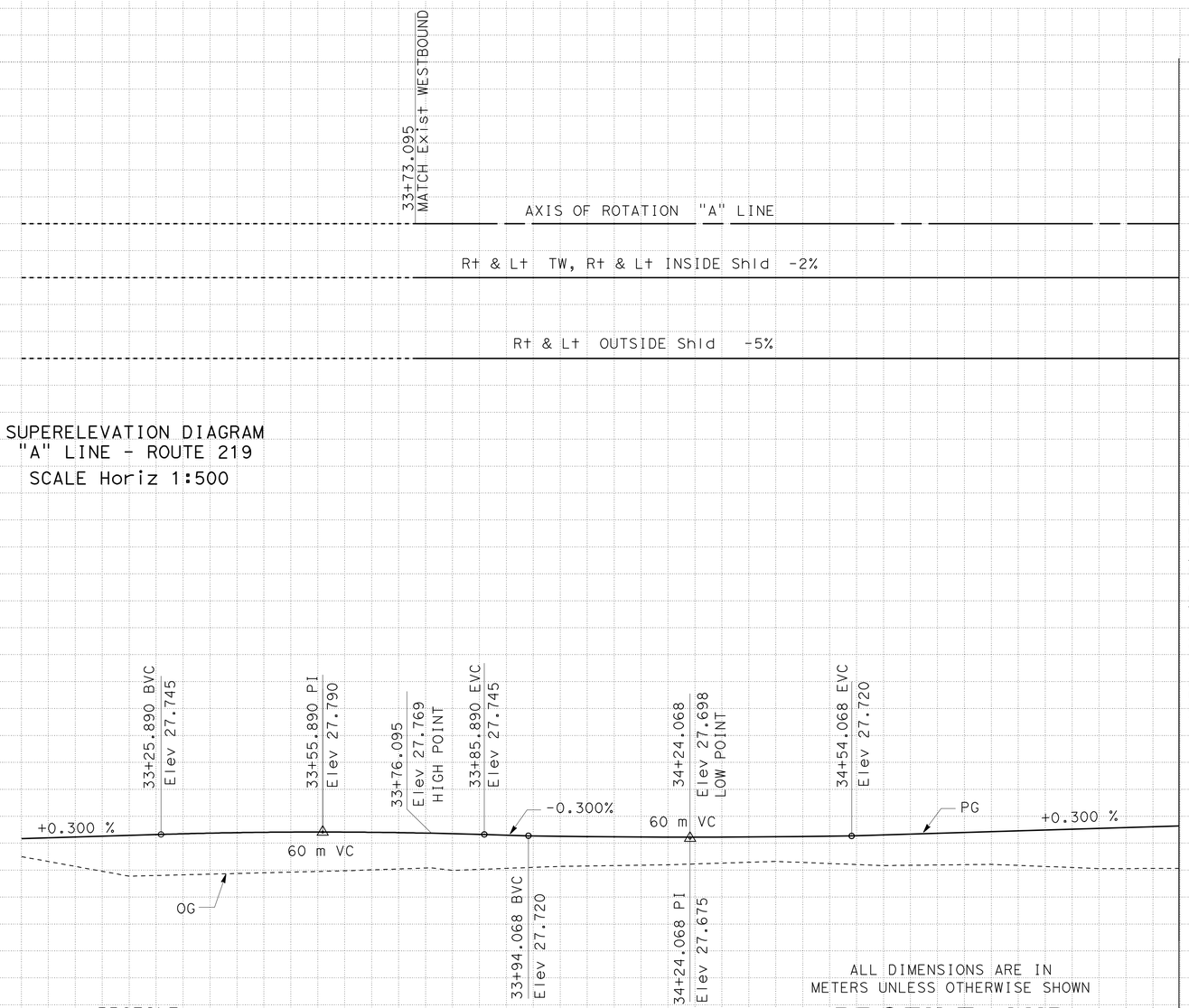
Caltrans Metric

ABBREVIATION

TW = TRAVEL WAY



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219
SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219
SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-1

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	+60	+80	32+00	+20	+40	+60	+80	33+00	+20	+40	+60	+80	34+00	+20	+40	+60	+80	35+00
m^3 Exc															3 ~~249~~ 730			
m^3 Emb															~~34~~ 63			

REVISED BY	DATE REVISED
HL	7/2/09

HUJONG LE — WUTHY SENG

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	40	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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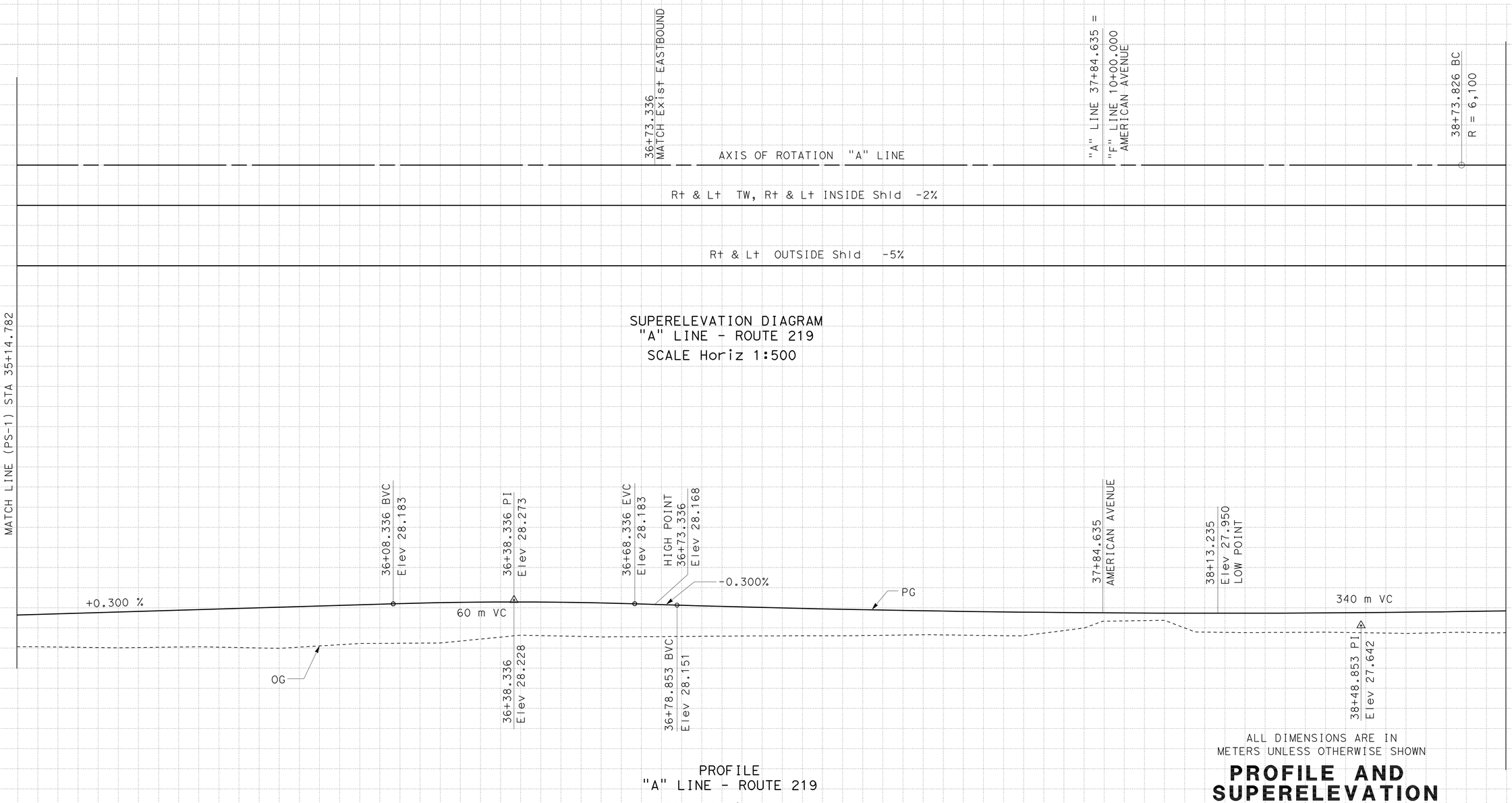

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-2

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

REVISED BY	DATE REVISED
HL	7/2/09

HUJONG LE — CALCULATED-DESIGNED BY
WUTHY SENG — CHECKED BY
JOSE HUERTA — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	41	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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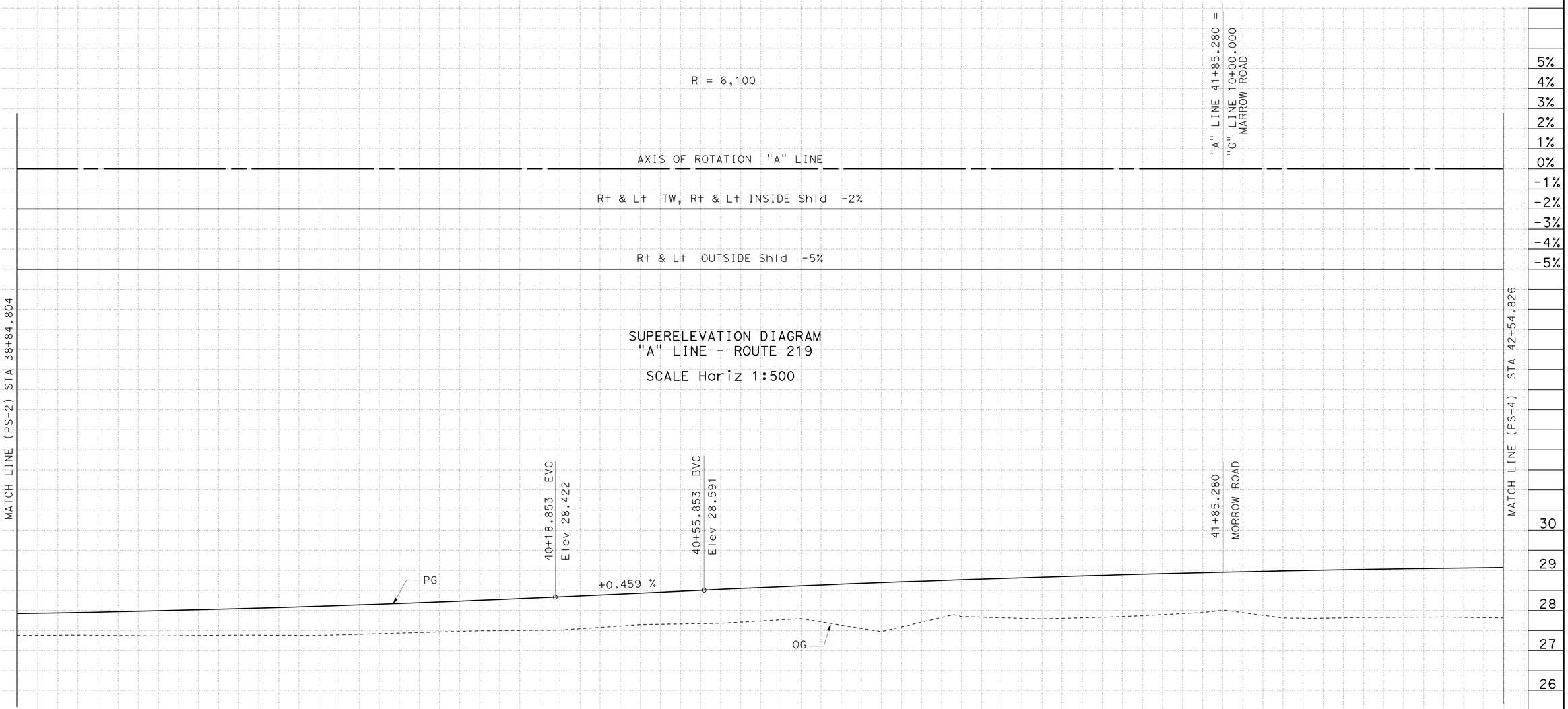
Caltrans Metric



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-3

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	39+00	+20	+40	+60	+80	40+00	+20	+40	+60	+80	41+00	+20	+40	+60	+80	42+00	+20	+40

m^3	
Exc	~~3743~~ 3871
Emb	~~4621~~ 6322

3

REVISED BY	DATE REVISED
HL	7/2/09

HUJONG LE — WUTHY SENG
CALCULATED-DESIGNED BY — CHECKED BY
FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	42	522

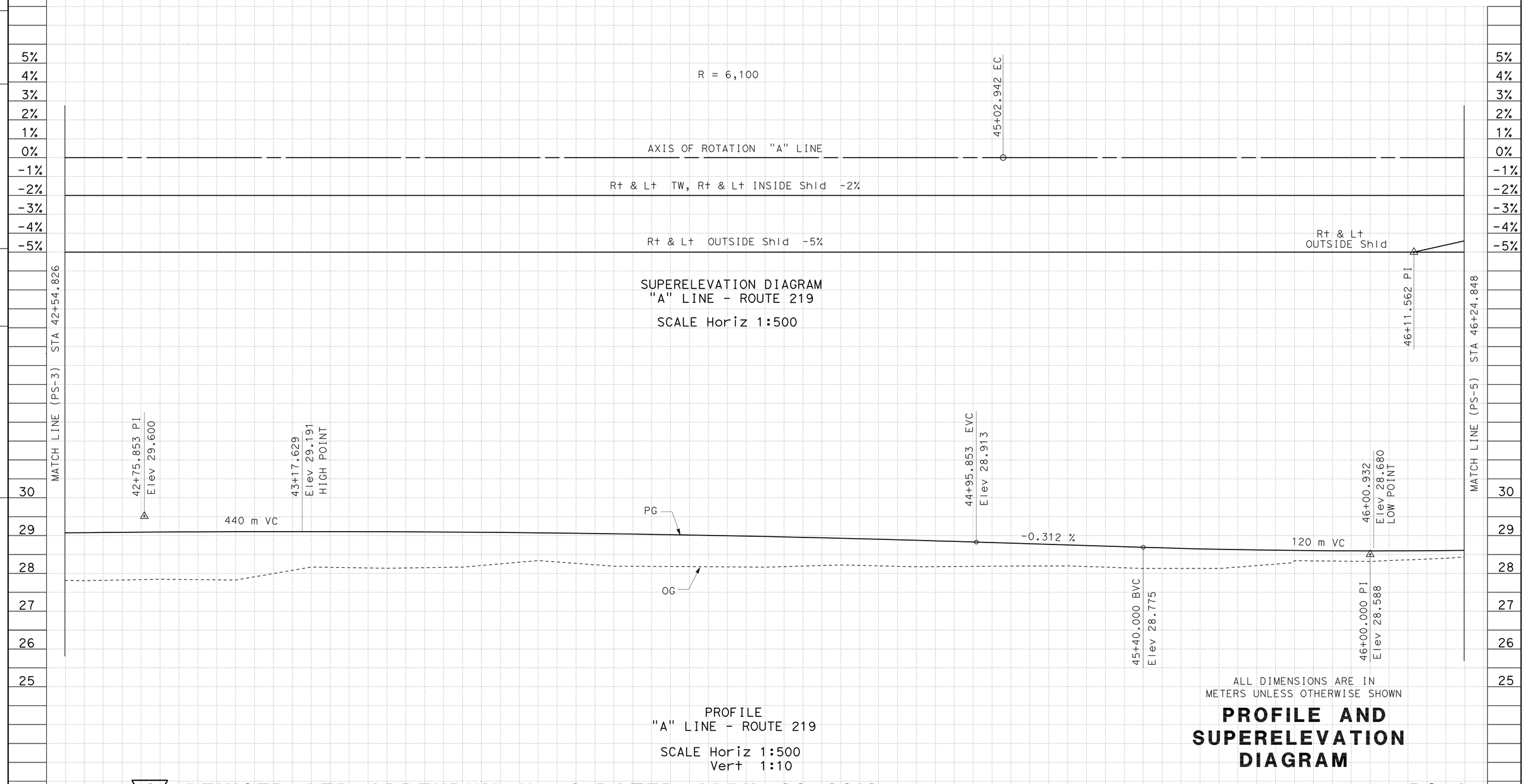
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-4

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

REVISED BY	DATE REVISED
HL	7/2/09

HUJONG LE
WUTHY SENG

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	43	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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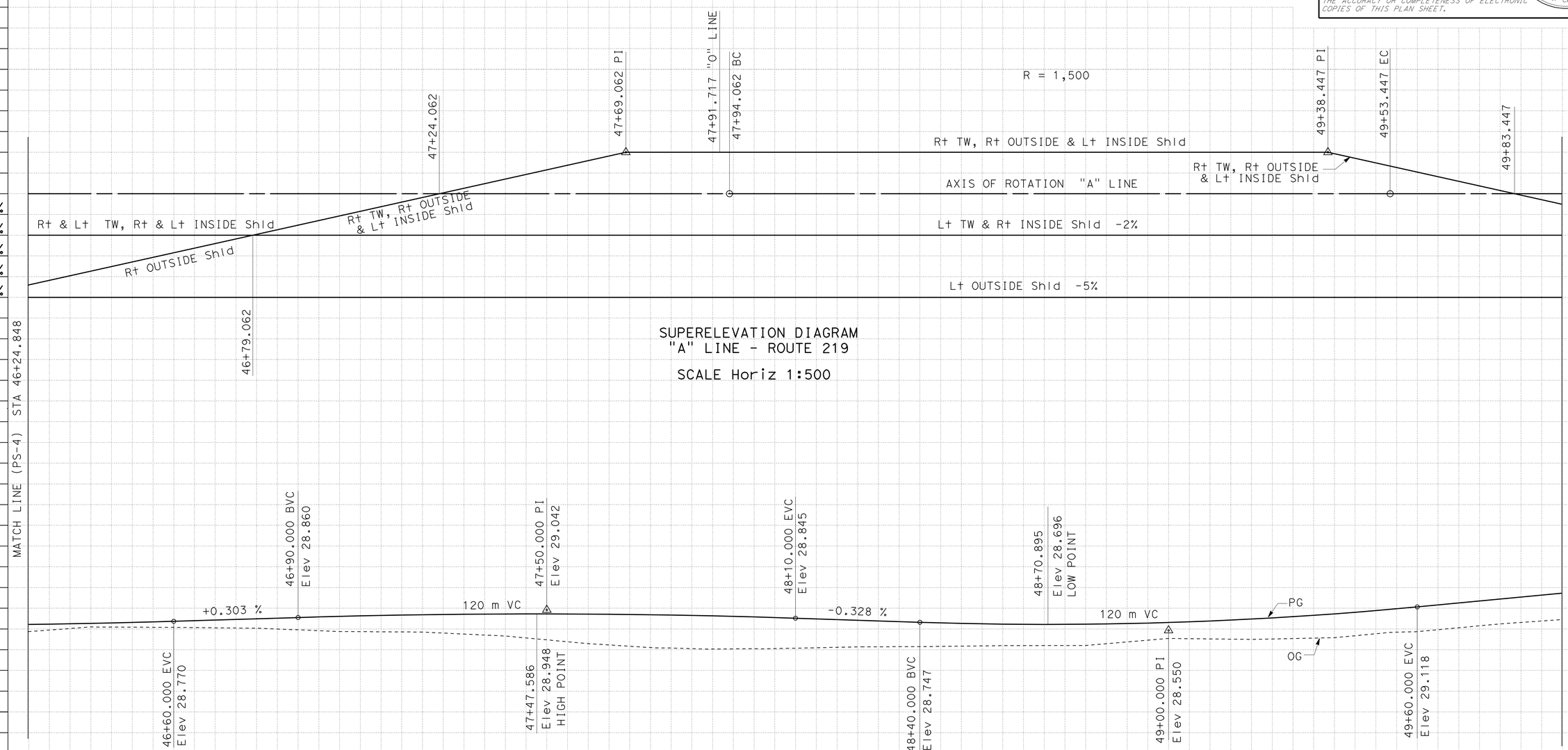
Caltrans Metric



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-5

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	+40	+60	+80	47+00	+20	+40	+60	+80	48+00	+20	+40	+60	+80	49+00	+20	+40	+60	+80

m^3 Exc: ~~5465~~ 5605
m^3 Emb: ~~3251~~ 5699

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
REVISED BY: HL
DATE REVISED: 7/2/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	44	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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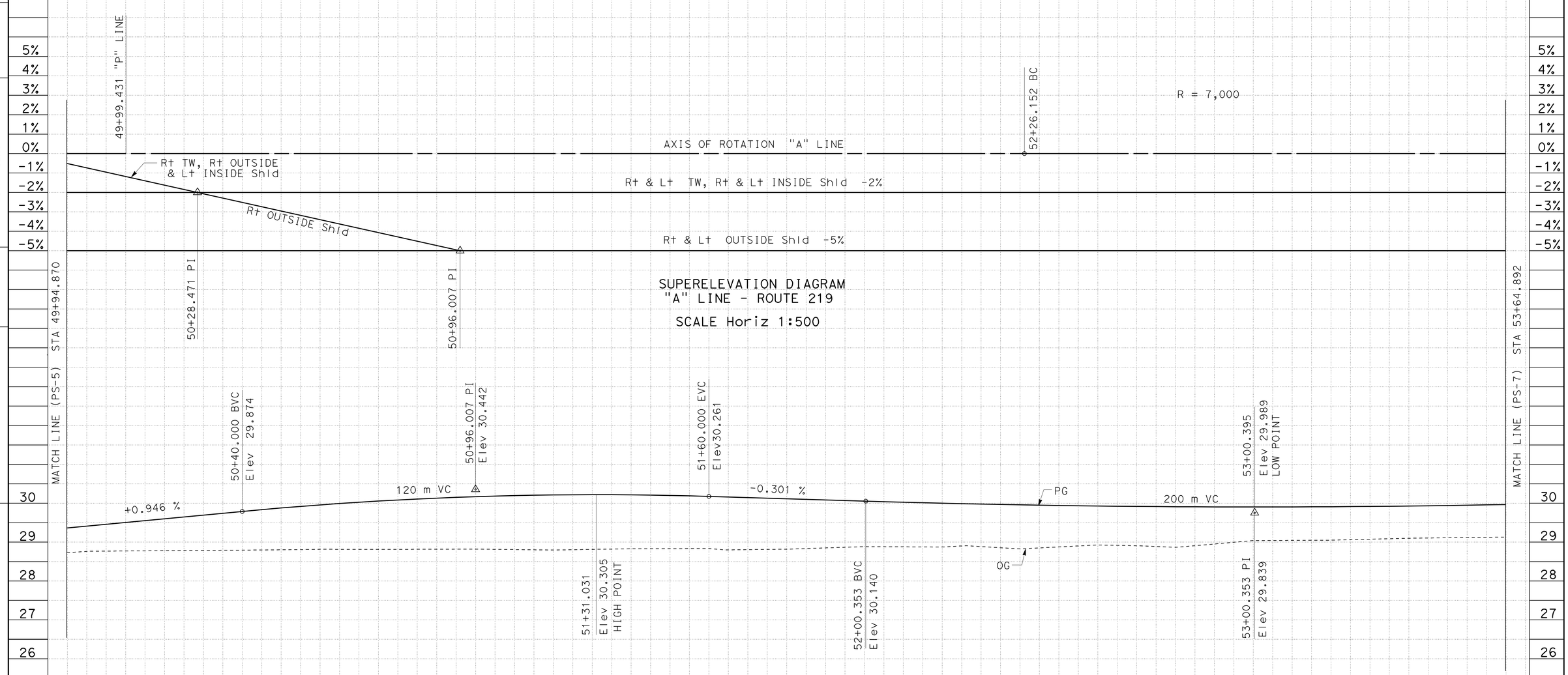
Caltrans Metric



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-6

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	50+00	+20	+40	+60	+80	51+00	+20	+40	+60	+80	52+00	+20	+40	+60	+80	53+00	+20	+40	+60

m^3	
Exc	3 ~~6035~~ 6769
Emb	~~8396~~ 10519

REVISED BY	HL	
DATE REVISED	7/2/09	
CALCULATED-DESIGNED BY	HUJONG LE	
CHECKED BY	WUTHY SENG	
FUNCTIONAL SUPERVISOR	JOSE HUERTA	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 08:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	45	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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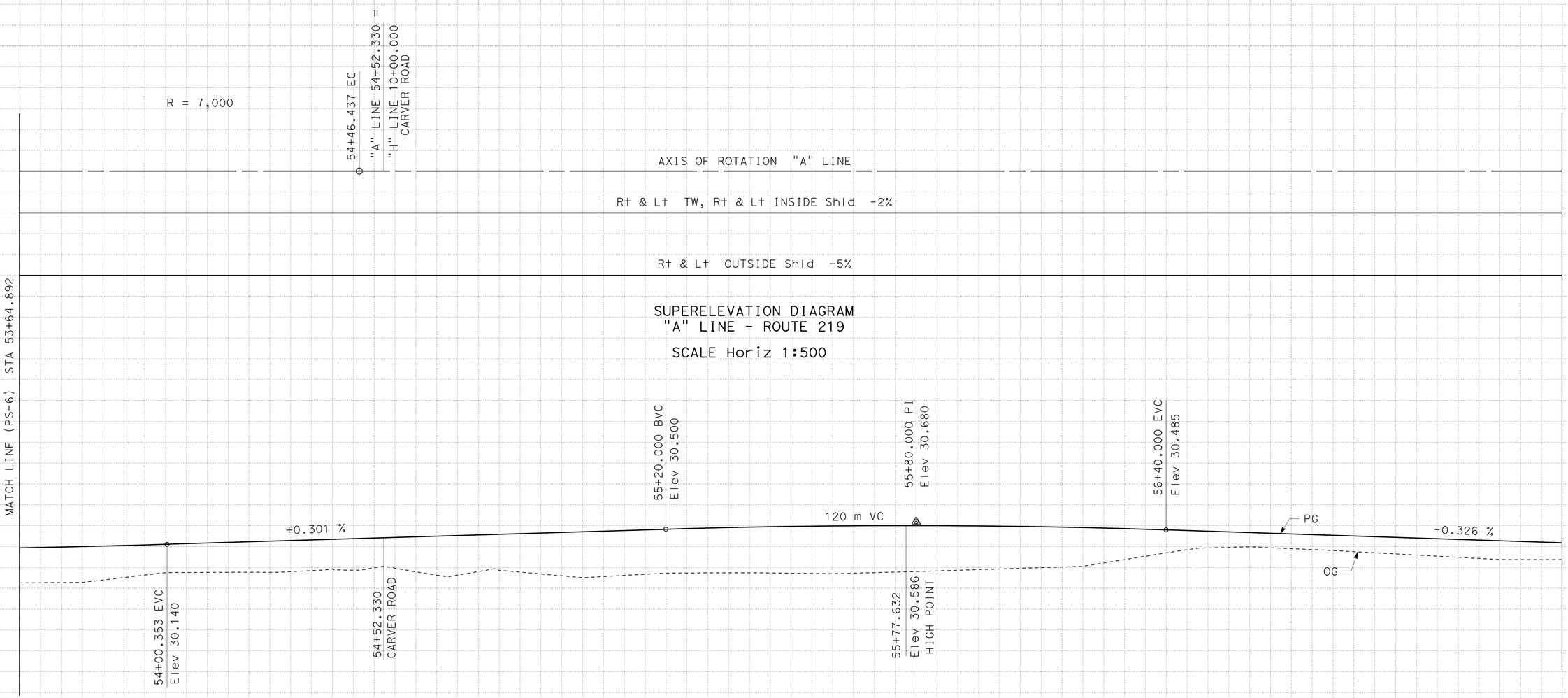
Caltrans Metric



SUPERELEVATION DIAGRAM
"A" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-7

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

Station	+80	54+00	+20	+40	+60	+80	55+00	+20	+40	+60	+80	56+00	+20	+40	+60	+80	57+00	+20

m^3	
Exc	~~2645~~ 3239
Emb	~~5159~~ 6452

3

REVISED BY: HL — DATE REVISED: 7/2/09

CALCULATED-DESIGNED BY: HUONG LE — CHECKED BY: WUTHY SENG

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 19-APR-2012 — TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	46	522

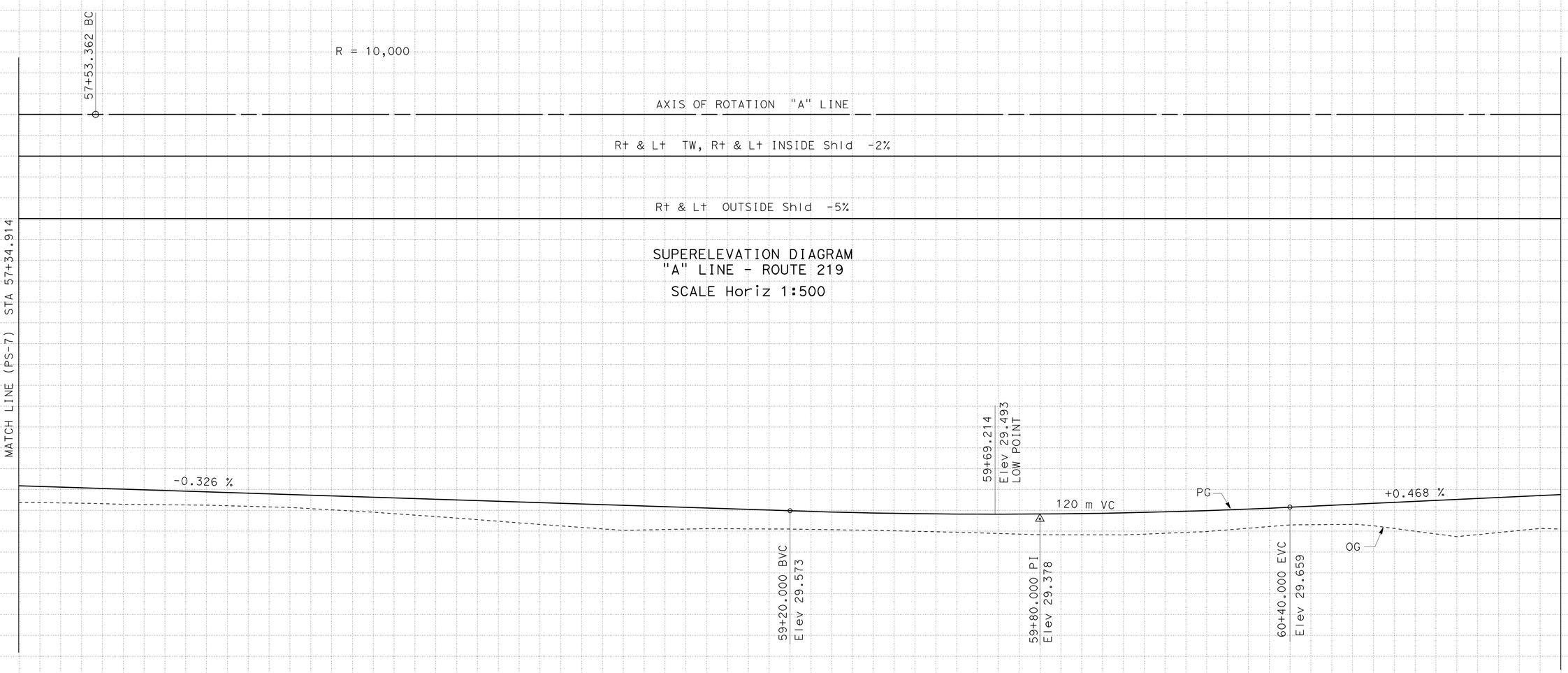
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



PROFILE
"A" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN **PS-8**

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	+40	+60	+80	58+00	+20	+40	+60	+80	59+00	+20	+40	+60	+80	60+00	+20	+40	+60	+80	61+00

m^3	
Exc	3 ~~8815~~ 9884
Emb	~~1128~~ 1543

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE
WUTHY SENG
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 08:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	47	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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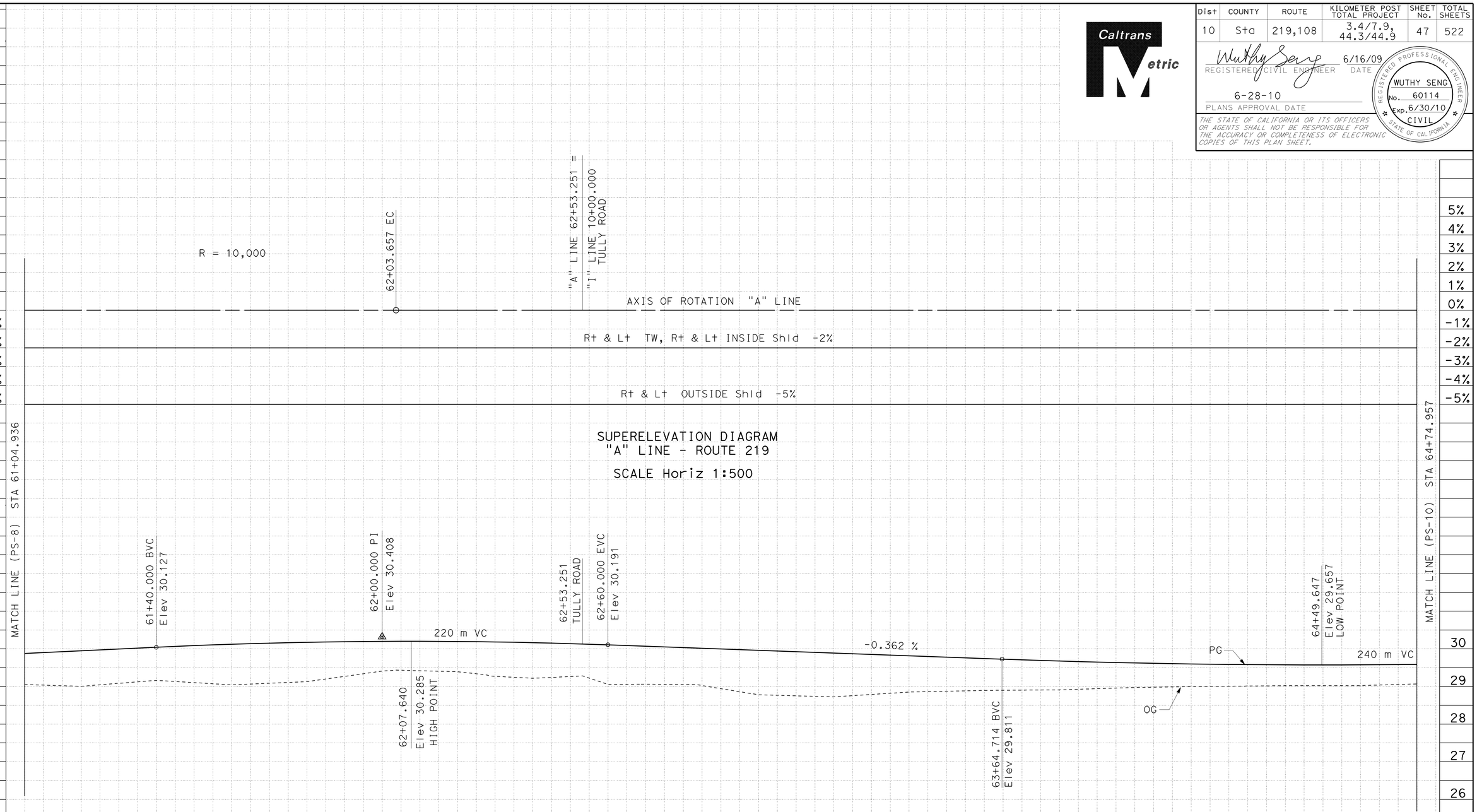
Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-9

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE — WUTHY SENG

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:40

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	48	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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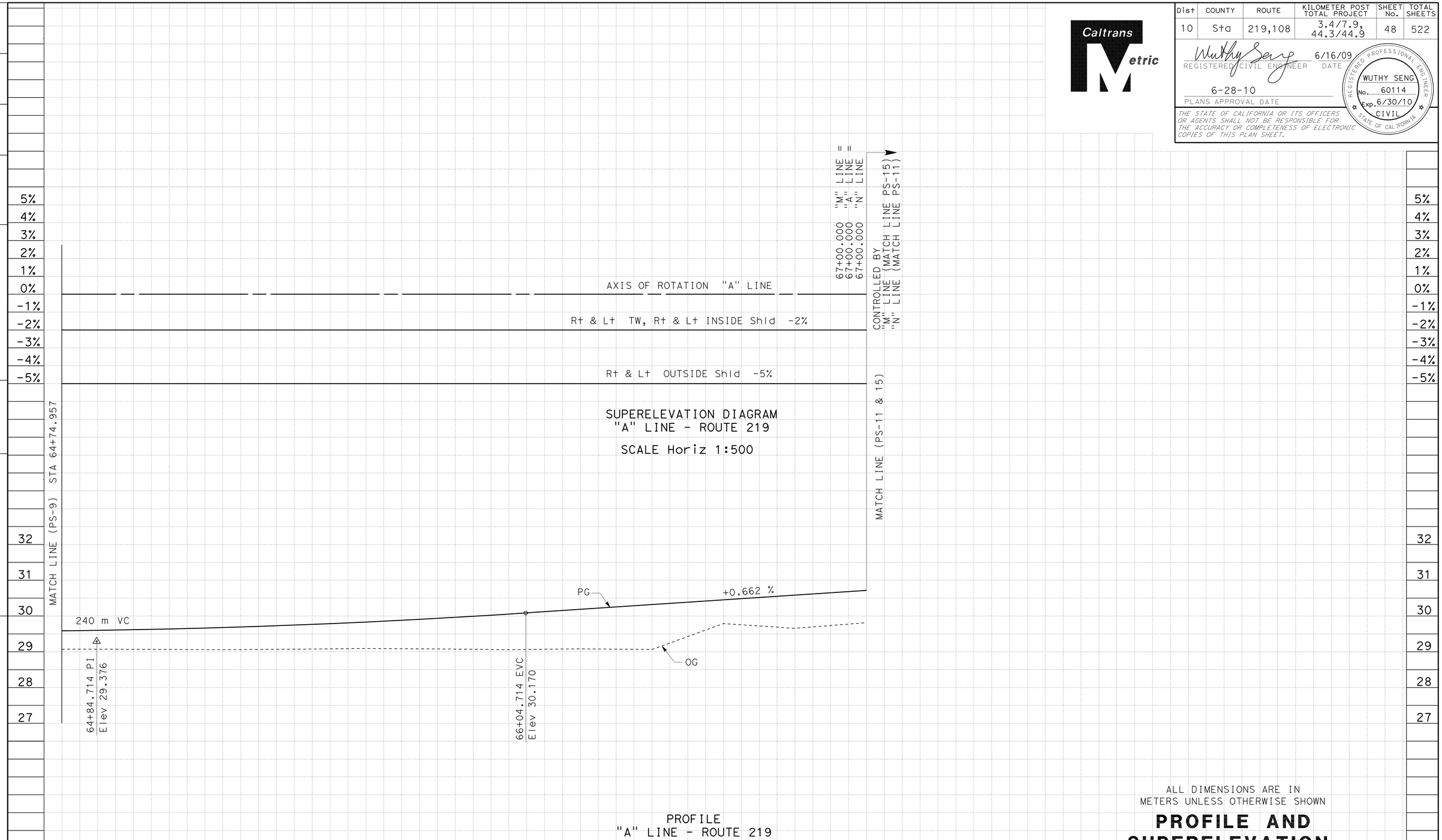

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-10

HL	7/3/09	REVISED BY	DATE REVISED
HUONG LE	WUTHY SENG	CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	49	522

Caltrans Metric

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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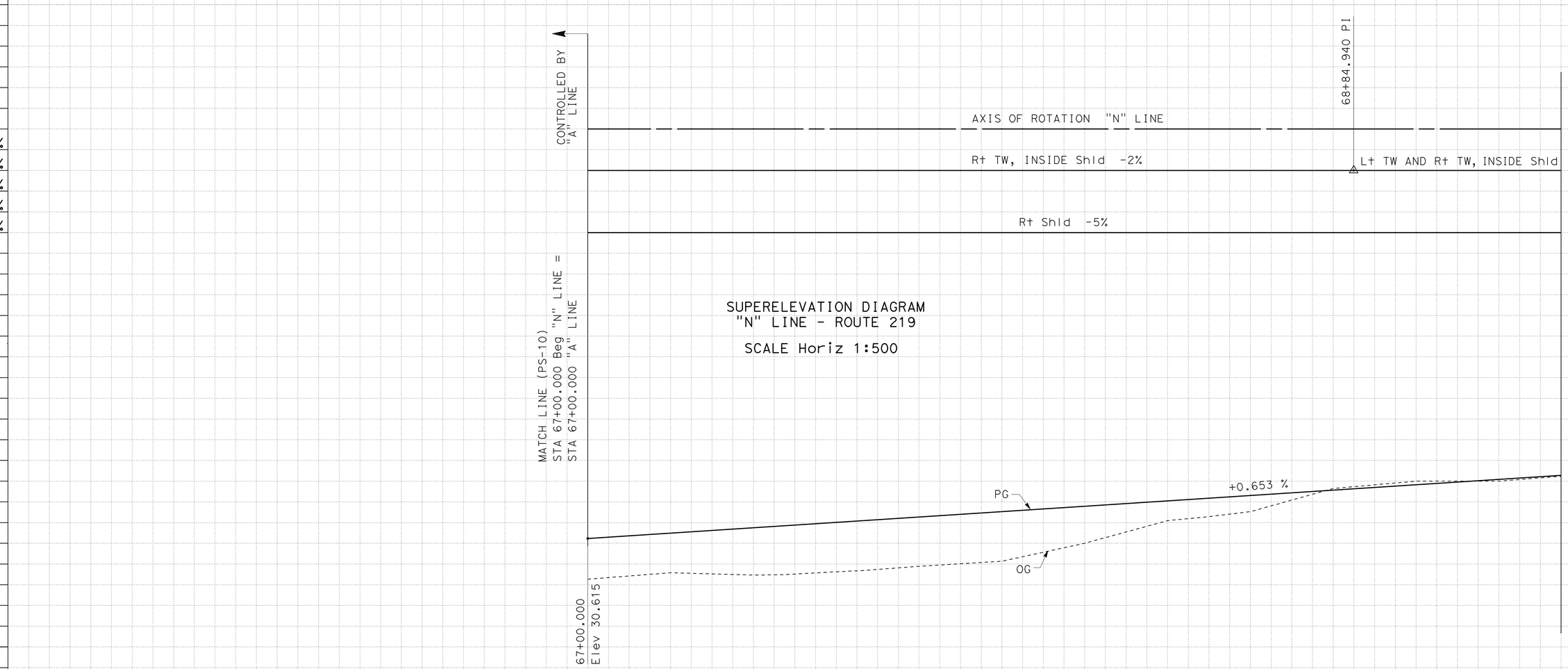

SUPERELEVATION DIAGRAM
"N" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"N" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-11

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	67+00	+20	+40	+60	+80	68+00	+20	+40	+60	+80	69+00	+20
m^3 Exc	756 ~~662~~											
m^3 Emb	2065 ~~1696~~											

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
REVISED BY: HL
DATE REVISED: 7/3/09

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	50	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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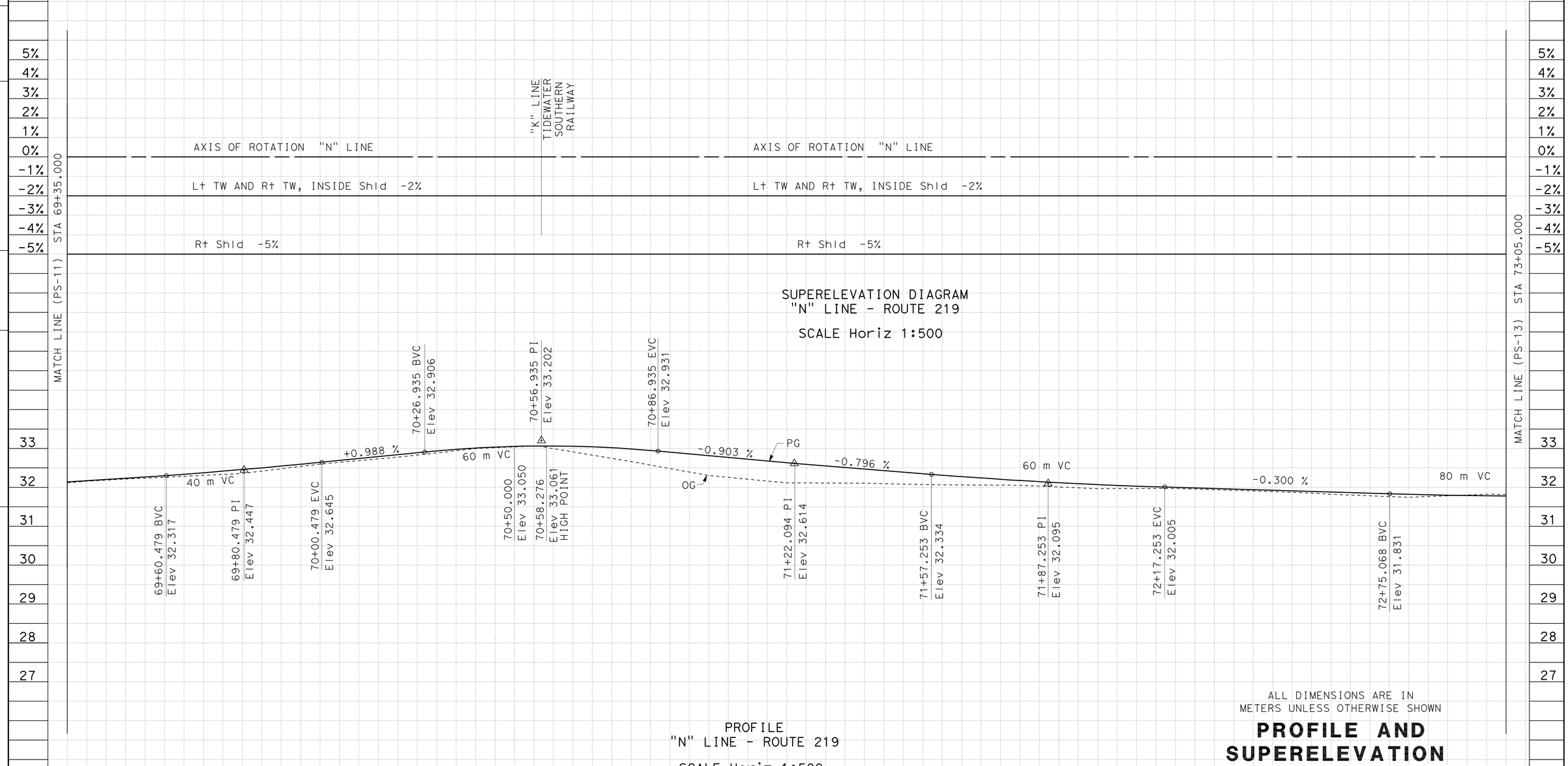
Caltrans Metric



3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-12

HL	7/3/09	REVISED BY	DATE REVISED
HUJONG LE	WUTHY SENG	CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	51	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
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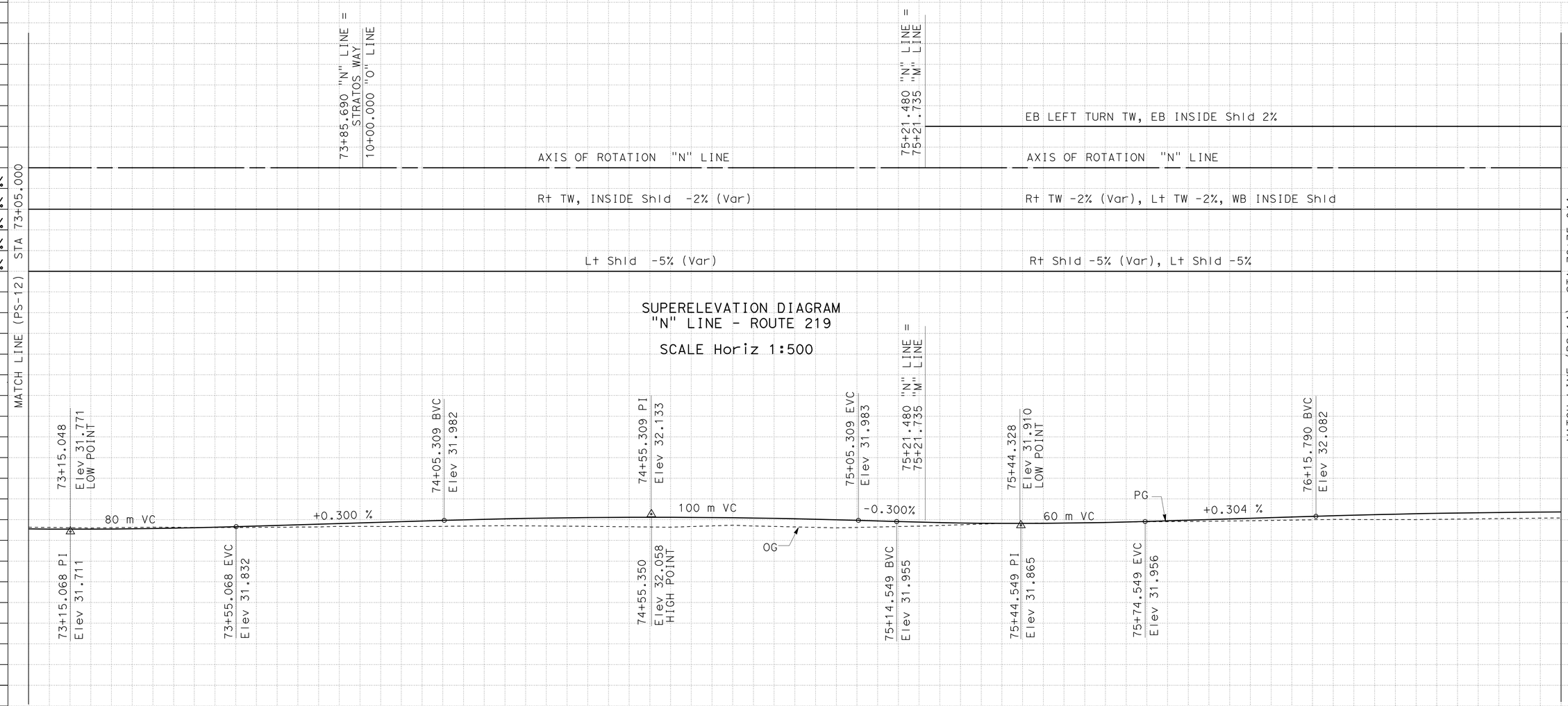
Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-13

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

REVISED BY	DATE REVISED
HL	7/3/09

CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	52	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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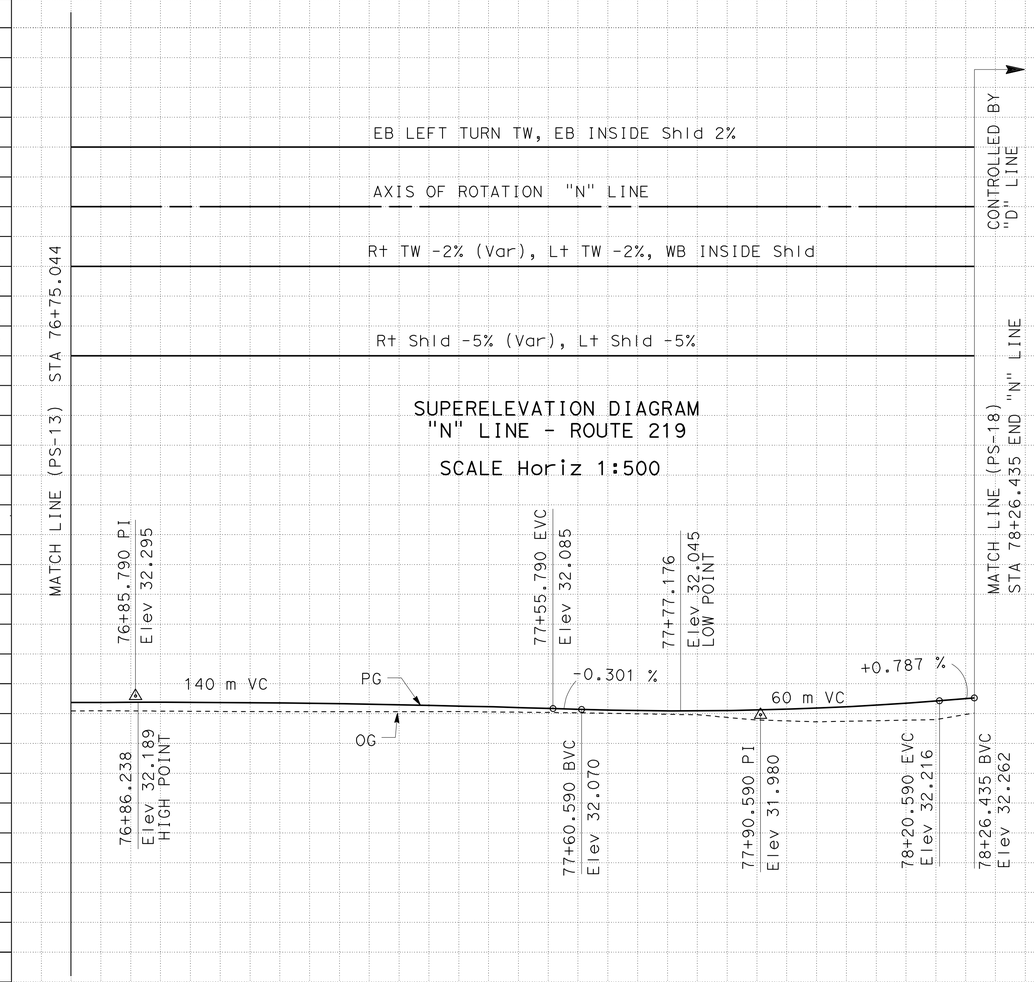

SUPERELEVATION DIAGRAM
"N" LINE - ROUTE 219

SCALE Horiz 1:500

PROFILE
"N" LINE - ROUTE 219

SCALE Horiz 1:500
Vert 1:10

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

Station		+80	77+00	+20	+40	+60	+80	78+00	+20
m^3	Exc	607							
	Emb	7 96							

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-14

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE
WUTHY SENG
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION DATE PLOTTED => 19-APR-2012
00-00-00 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	53	522

Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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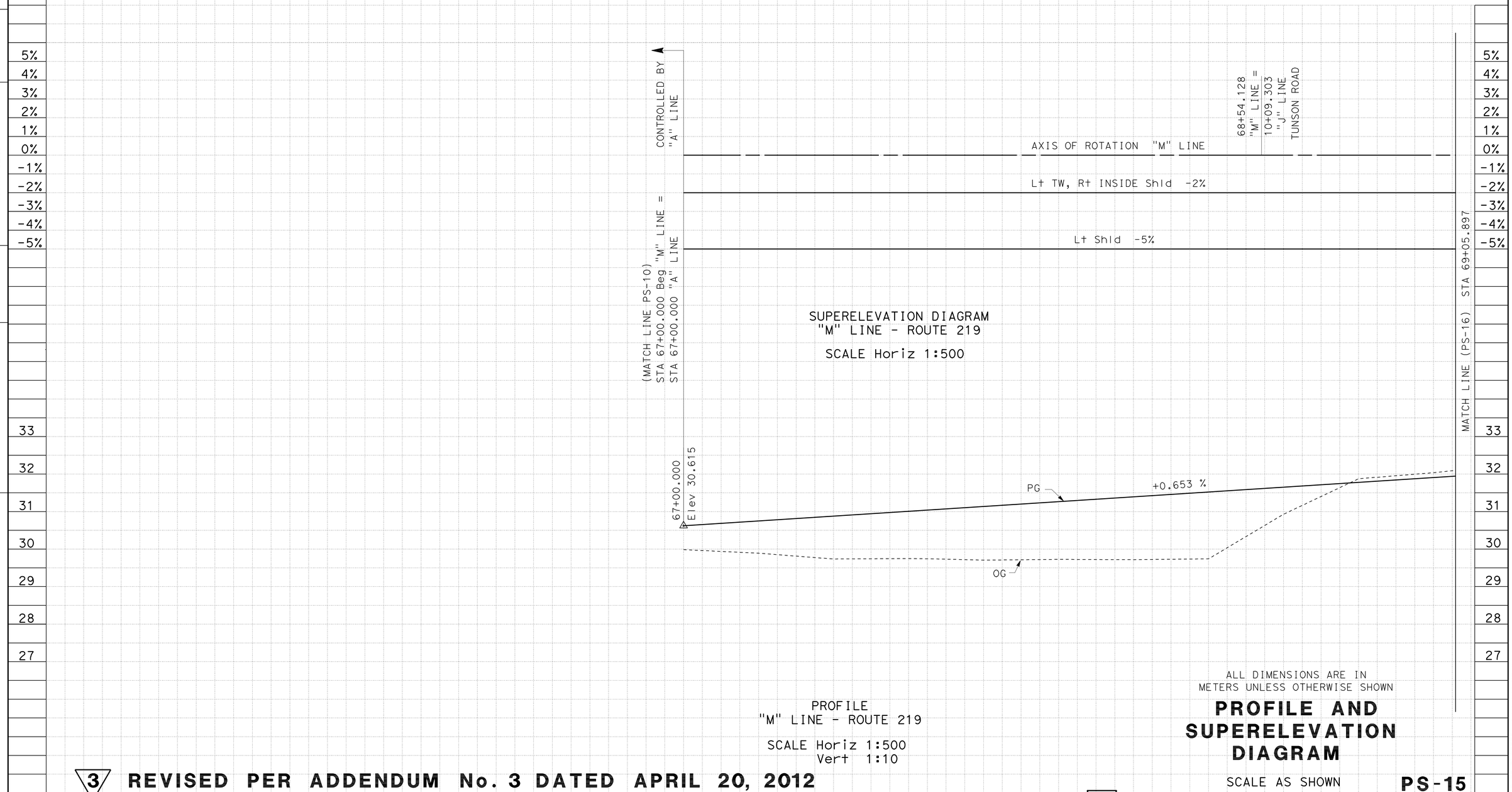

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-15

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

3

REVISED BY	DATE REVISED
HL	7/3/09

CALCULATED-DESIGNED BY: HUONG LE
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FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	54	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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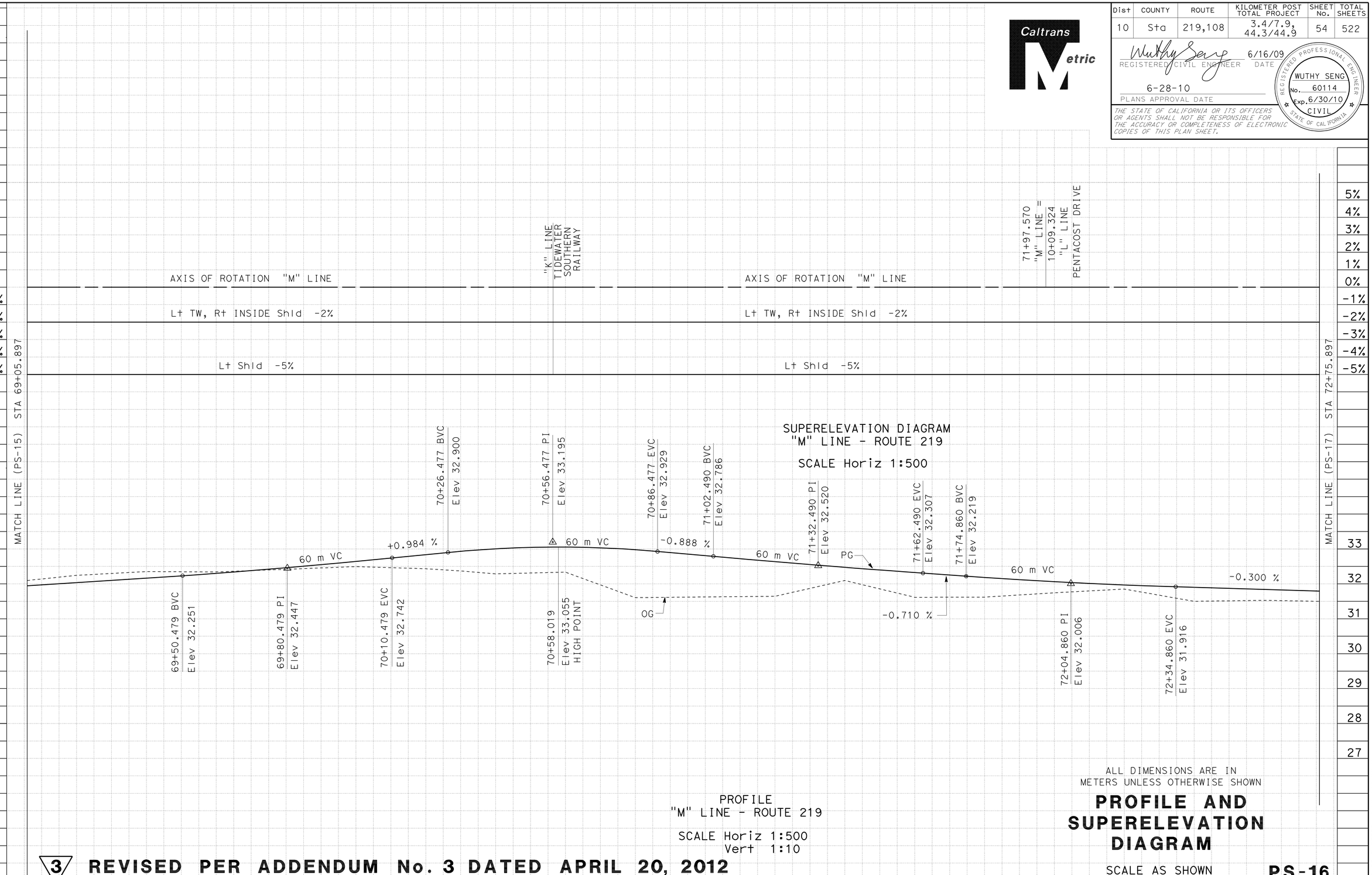

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-16

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE — WUTHY SENG

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FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	55	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
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WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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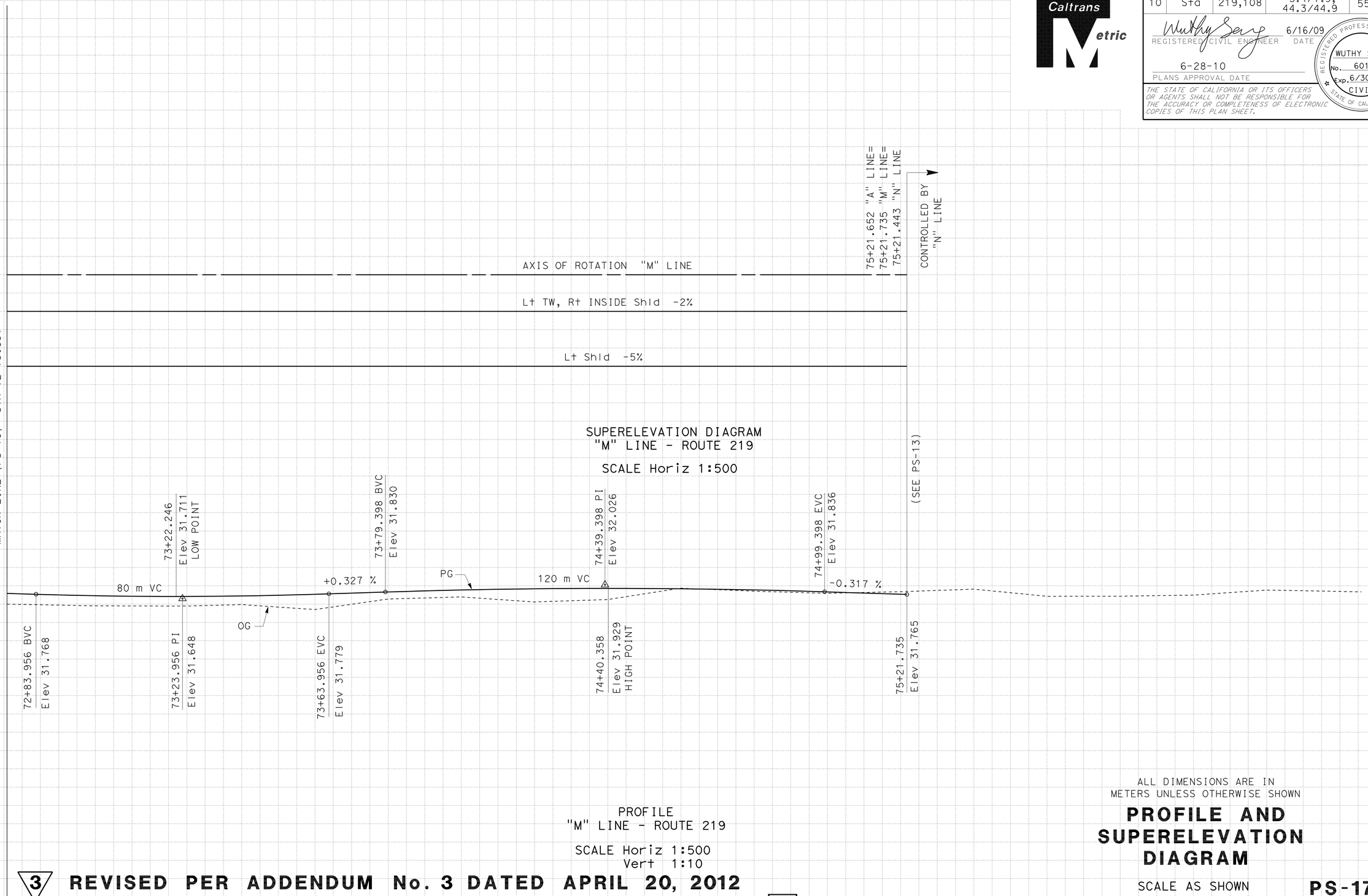
Caltrans Metric



3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-17

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE
WUTHY SENG
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JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:41

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s121614
DGN FILE => a0a872fb017.add
CU 06243
EA 0A8721

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	56	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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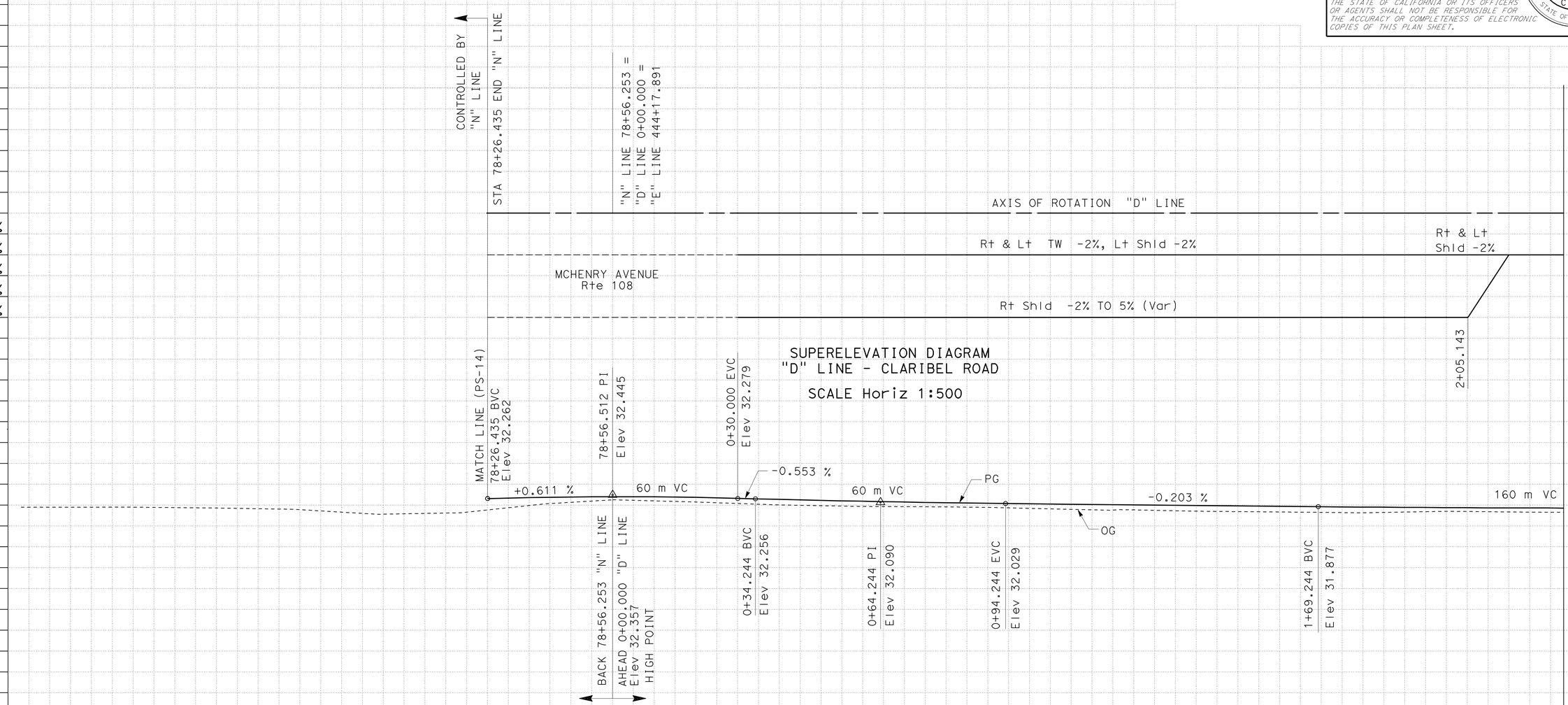
Caltrans Metric



SUPERELEVATION DIAGRAM
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500

PROFILE
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-18

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE — WUTHY SENG

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => s121614 DGN FILE => a0a872fb018.add | CU 06243 | EA 0A8721

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	57	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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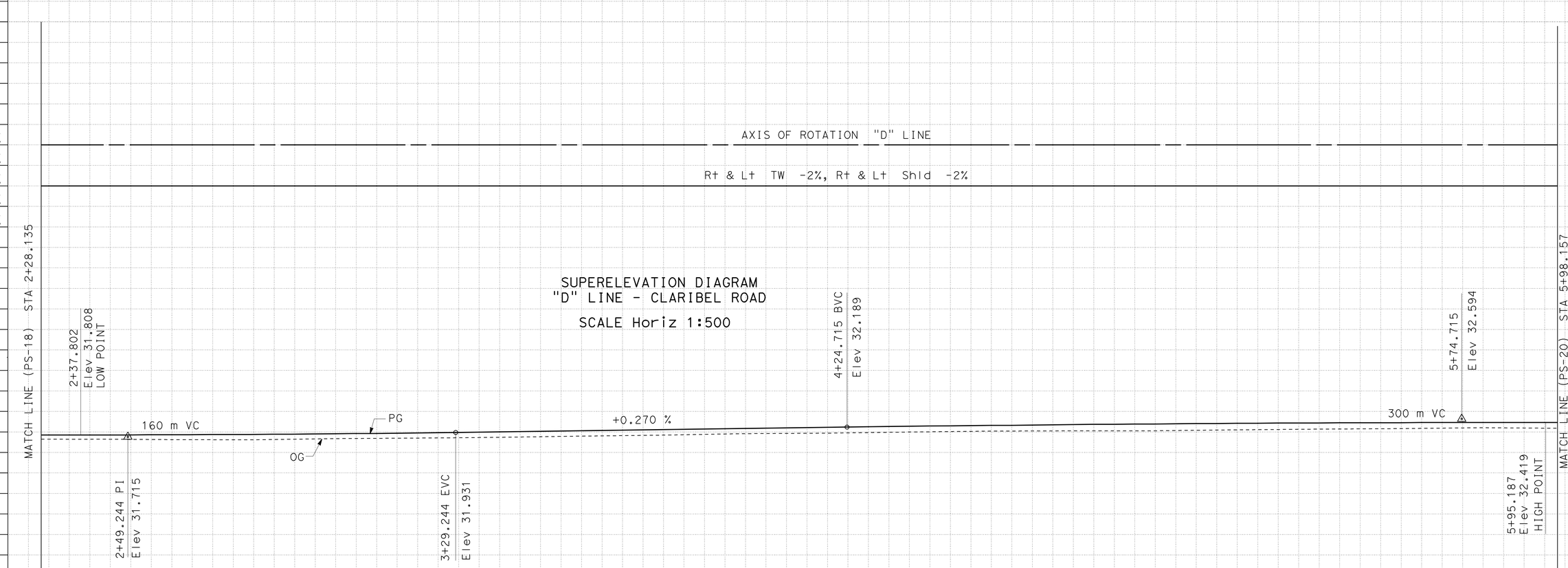
Caltrans Metric



SUPERELEVATION DIAGRAM
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500

PROFILE
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-19

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

Station	+40	+60	+80	3+00	+20	+40	+60	+80	4+00	+20	+40	+60	+80	5+00	+20	+40	=60	+80

m^3		
Exc	10054 ~~9123~~	
Emb	547 ~~581~~	

REVISED BY	HL
DATE REVISED	7/3/09
CALCULATED-DESIGNED BY	HUONG LE
CHECKED BY	WUTHY SENG
FUNCTIONAL SUPERVISOR	JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	58	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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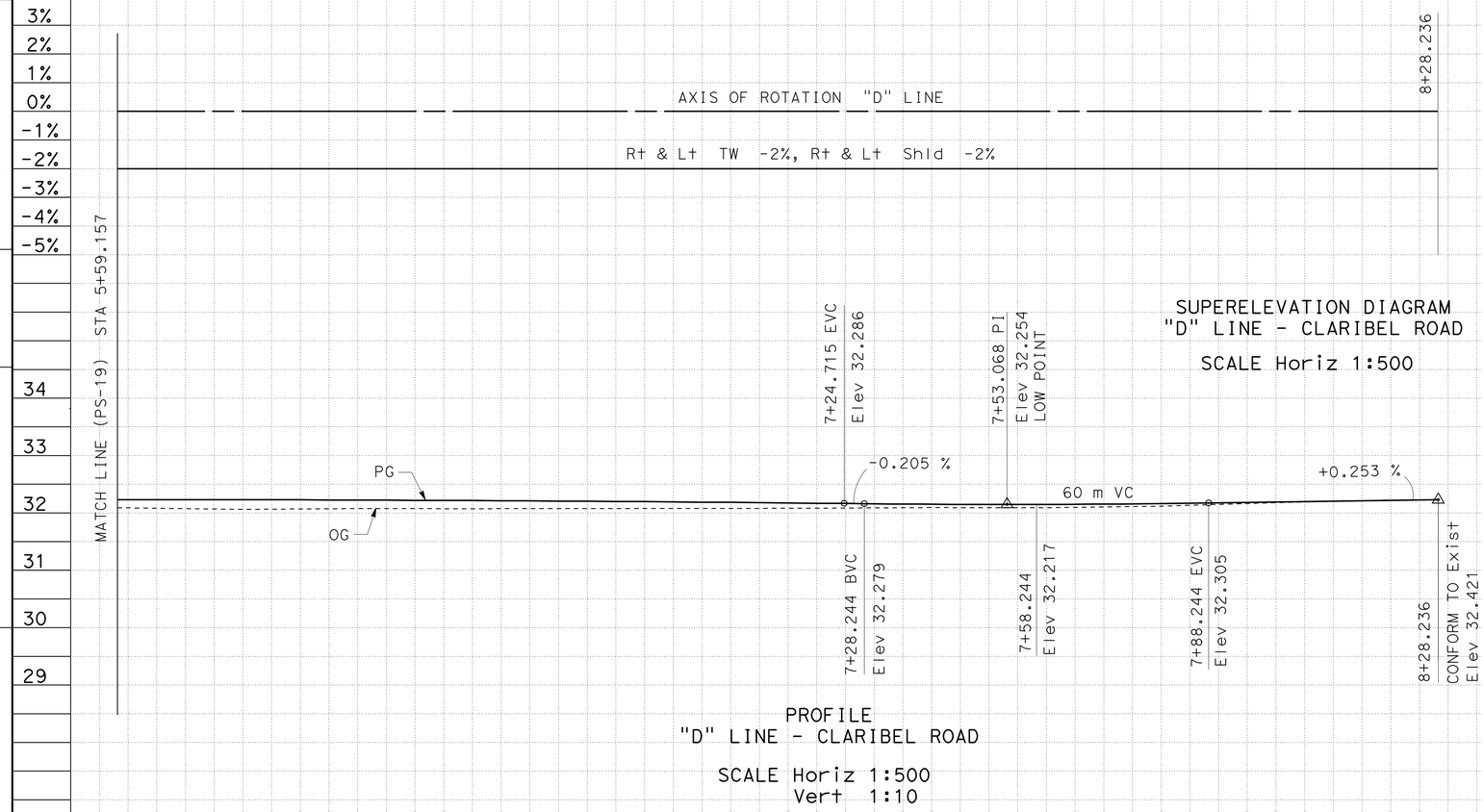

SUPERELEVATION DIAGRAM
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500

PROFILE
"D" LINE - CLARIBEL ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-20

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	6+00	+20	+40	+60	+80	7+00	+20	+40	+60	+80	8+00	+20
m^3 Exc	518 ~~171~~											
m^3 Emb	613 ~~1092~~											

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE — WUTHY SENG

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:41

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	59	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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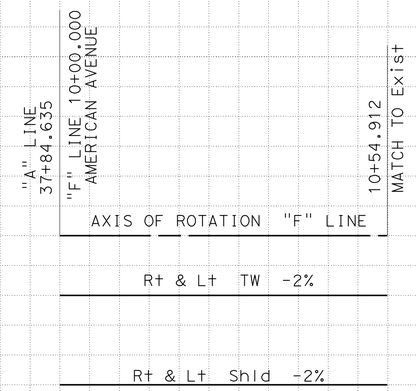
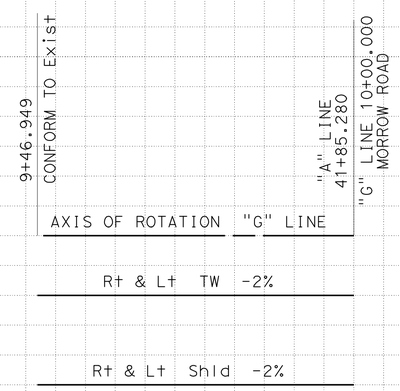
Caltrans Metric



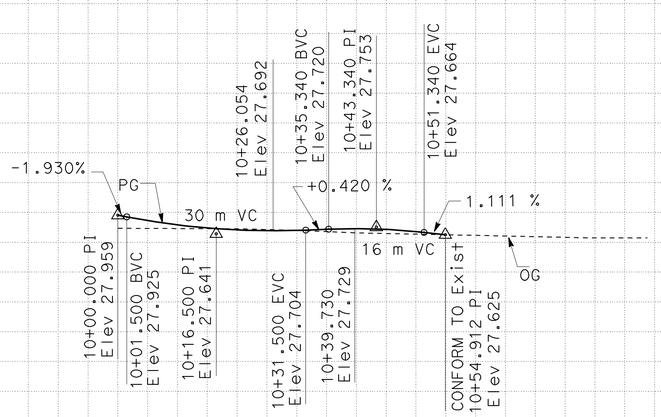
SUPERELEVATION DIAGRAM
"F" LINE - AMERICAN AVENUE

SCALE Horiz 1:500



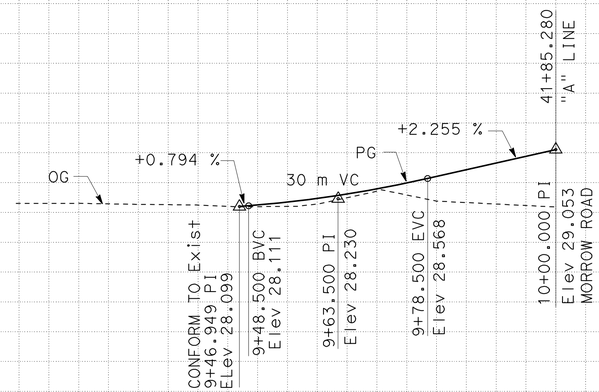
SUPERELEVATION DIAGRAM
"G" LINE - MORROW ROAD

SCALE Horiz 1:500



PROFILE
"F" LINE - AMERICAN AVENUE

SCALE Horiz 1:500
Vert 1:10



PROFILE
"G" LINE - MORROW ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-21

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	10+00	+20	+40	+60	+40	+60	+80	10+00
m^3 Exc	3 ~~272~~ 280				3 ~~79~~ 121			
m^3 Emb	100				~~70~~ 42			

5%	5%
4%	4%
3%	3%
2%	2%
1%	1%
0%	0%
-1%	-1%
-2%	-2%
-3%	-3%
-4%	-4%
-5%	-5%
29	29
28	28
27	27
26	26

HL 7/3/09 REVISED BY DATE REVISED
HUJONG LE WUTHY SENG CALCULATED-DESIGNED BY CHECKED BY
JOSE HUERTA FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	60	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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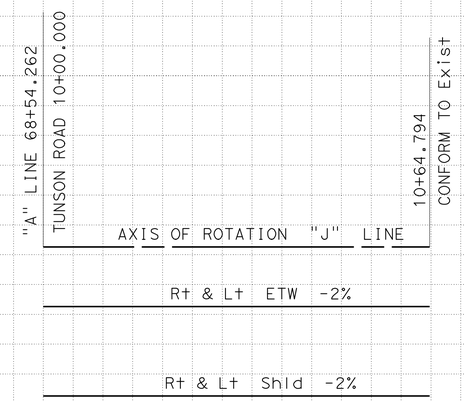
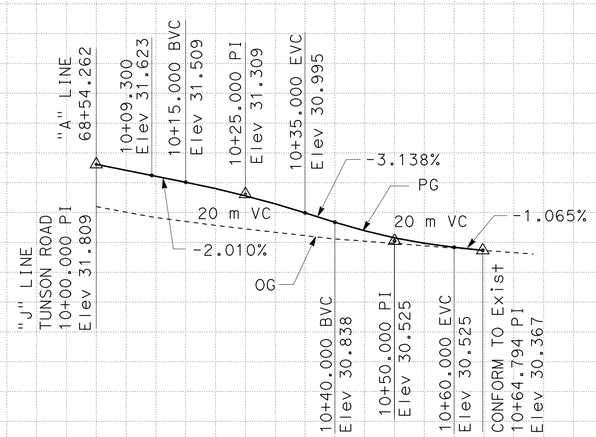


SUPERELEVATION DIAGRAM
"J" LINE - TUNSON ROAD

SCALE Horiz 1:500



PROFILE
"J" LINE - TUNSON ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-22

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	10+00	20	40	60	80
m^3 Exc		3	5 151		
m^3 Emb			0 150		

5%	HL	7/3/09
4%	REVISED BY	DATE REVISED
3%	HUONG LE	WUTHY SENG
2%		
1%		
0%		
-1%		
-2%		
-3%		
-4%		
-5%	CALCULATED-DESIGNED BY	CHECKED BY
33	FUNCTIONAL SUPERVISOR	JOSE HUERTA
32		
31		
30	STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
29		
28		
27		
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LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	61	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
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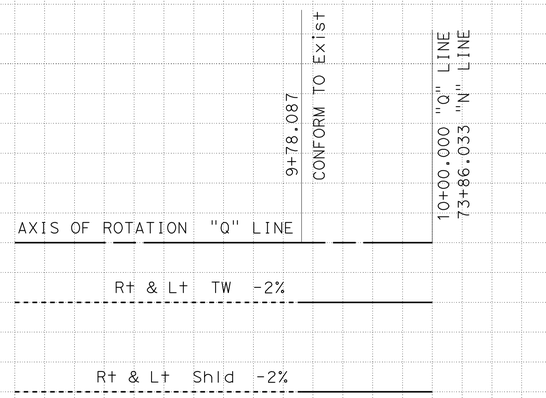
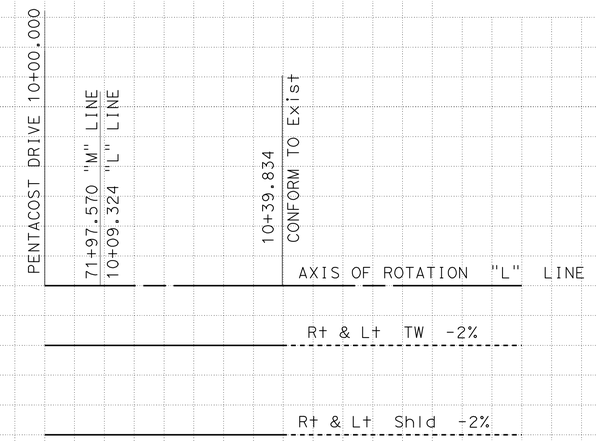


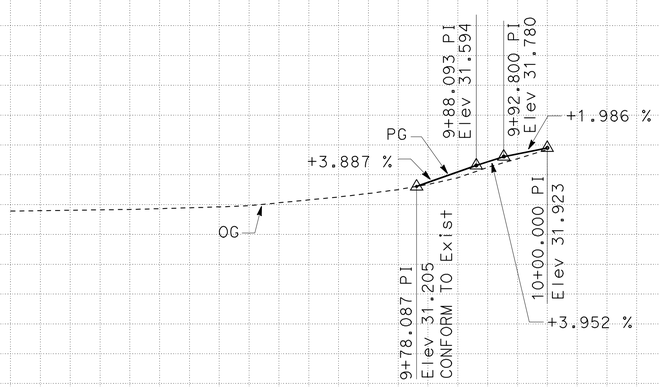
SUPERELEVATION DIAGRAM
"Q" LINE - STRATOS WAY

SCALE Horiz 1:500



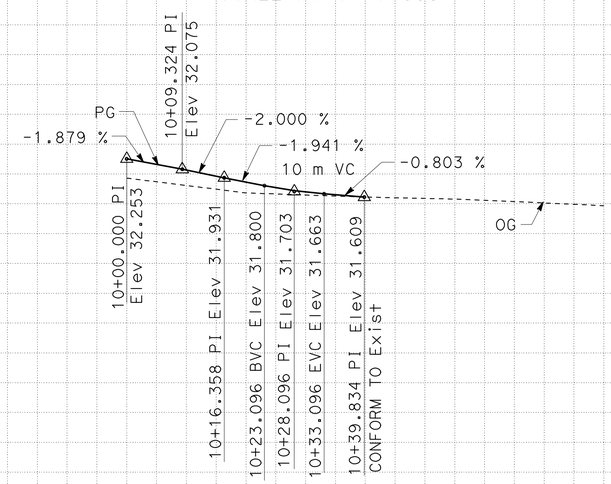
SUPERELEVATION DIAGRAM
"L" LINE - PENTACOST DRIVE

SCALE Horiz 1:500



PROFILE
"Q" LINE - STRATOS WAY

SCALE Horiz 1:500
Vert 1:10



PROFILE
"L" LINE - PENTACOST DRIVE

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-23

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	+60	+80	10+00	10+00	+20	+40	+60
m^3 Exc		~~13~~ 24			~~59~~ 60		
m^3 Emb		0			0		

HL 7/3/09 — REVISED BY / DATE REVISED

HUJONG LE — WUTHY SENG — CALCULATED-DESIGNED BY / CHECKED BY

JOSE HUERTA — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans — DESIGN

LAST REVISION 00-00-00 — DATE PLOTTED => 19-APR-2012 — TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	62	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
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WUTHY SENG
No. 60114
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STATE OF CALIFORNIA

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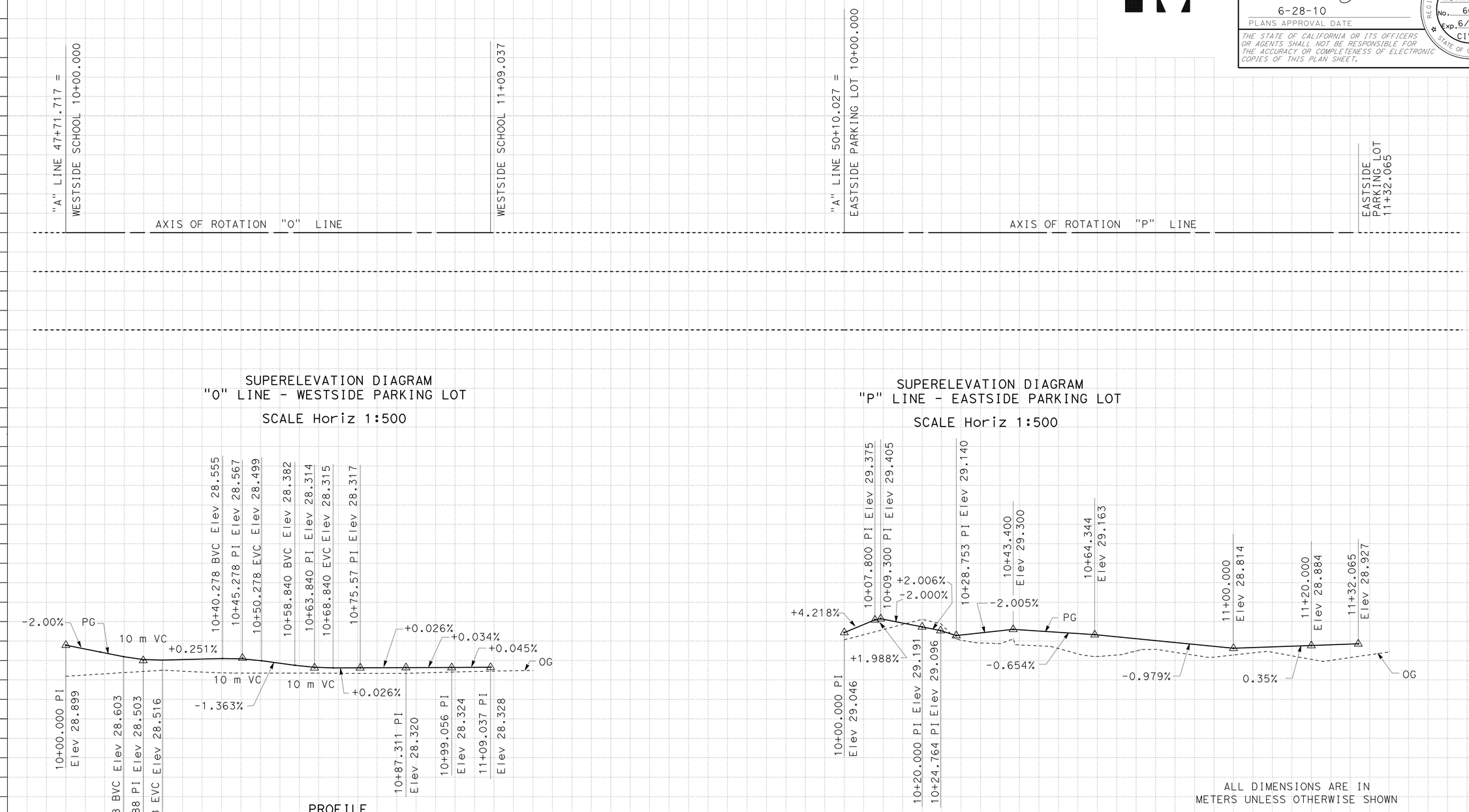
Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-24

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station		10+00	+20	+40	+60	+80	11+00	+20	10+00	+20	+40	+60	+80	11+00	+20	+40
m^3	Exc	983 ~~1146~~ 3											3 ~~0~~1788			
	Emb	57 ~~160~~											~~0~~104			

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE
WUTHY SENG
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION DATE PLOTTED => 19-APR-2012
00-00-00 TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	63	522

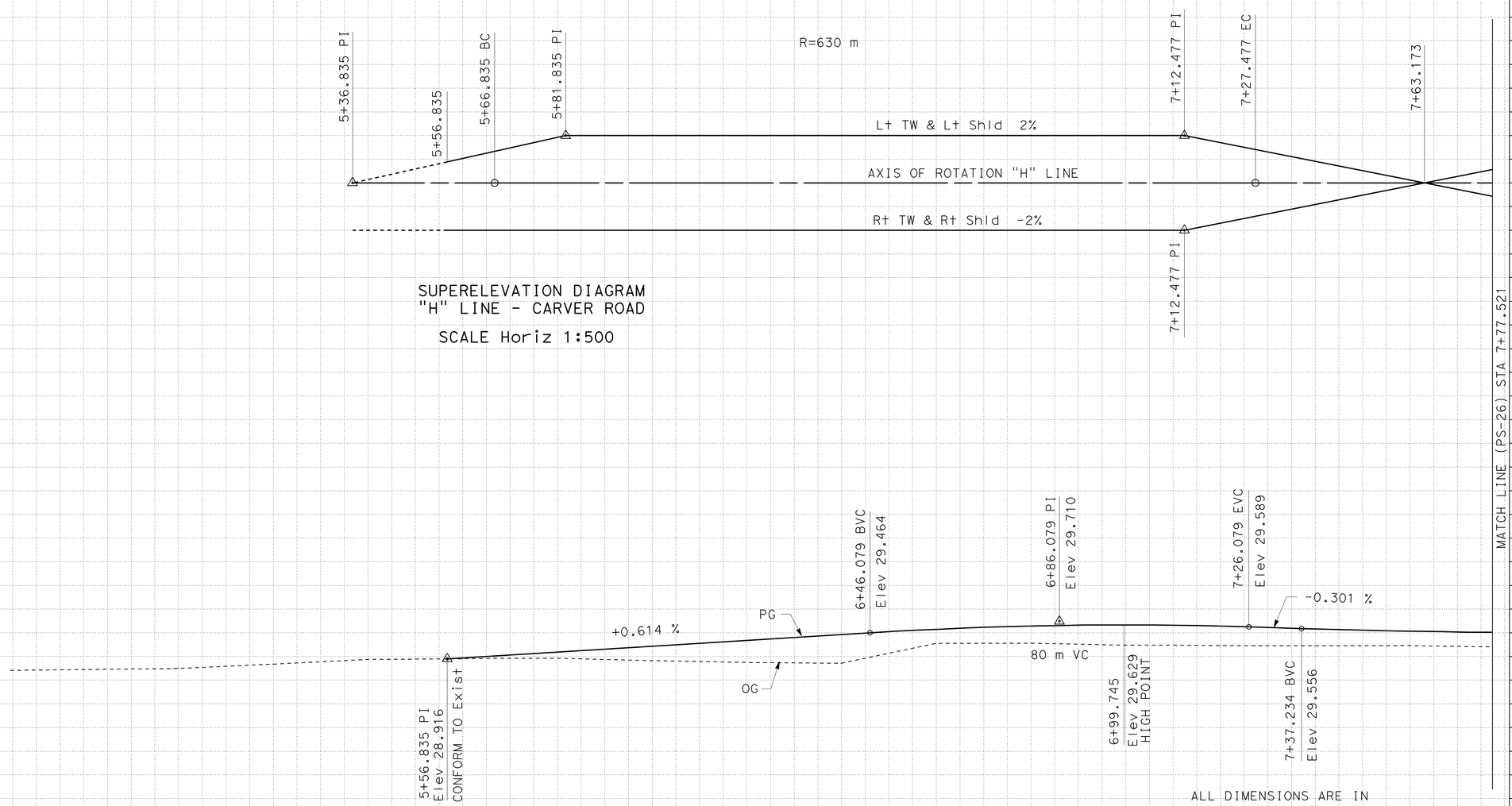
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



SUPERELEVATION DIAGRAM
"H" LINE - CARVER ROAD

SCALE Horiz 1:500

PROFILE
"H" LINE - CARVER ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-25

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station		+40	+60	+80	6+00	+20	+40	+60	+80	7+00	+20	+40	+60
m³ Exc								1063 ~~689~~					
m³ Emb								1092 ~~1035~~					

3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
REVISED BY: HL
DATE REVISED: 7/3/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 0642

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	64	522

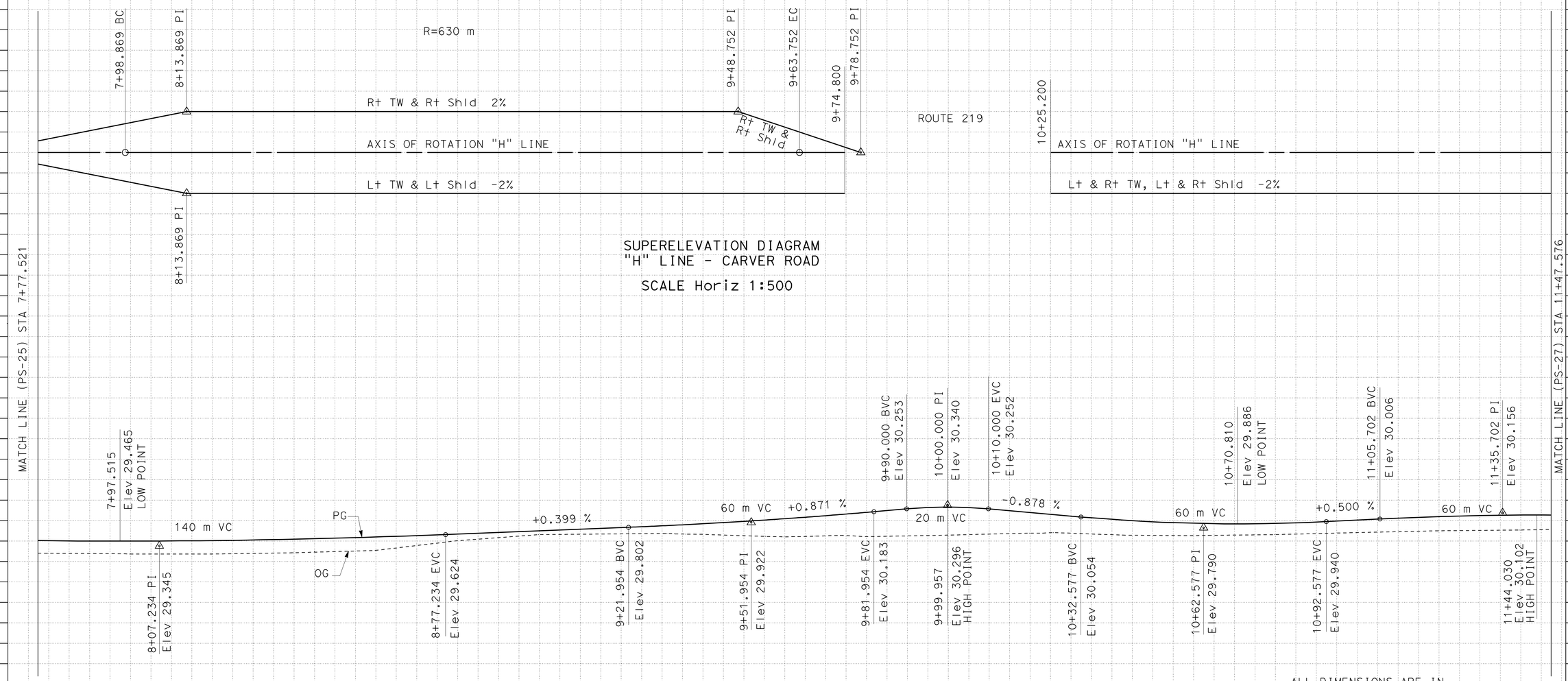
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



SUPERELEVATION DIAGRAM
"H" LINE - CARVER ROAD

SCALE Horiz 1:500

PROFILE
"H" LINE - CARVER ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-26

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	+80	8+00	+20	+40	+60	+80	9+00	+20	+40	+60	+80	10+00	+20	+40	+60	+80	11+00	+20	+40

m^3		
Exc	~~2100~~	1737
Emb	~~1591~~	1431

3

REVISED BY	DATE REVISED
HL	7/3/09

HUJONG LE — WUTHY SENG
CALCULATED-DESIGNED BY — CHECKED BY
FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	65	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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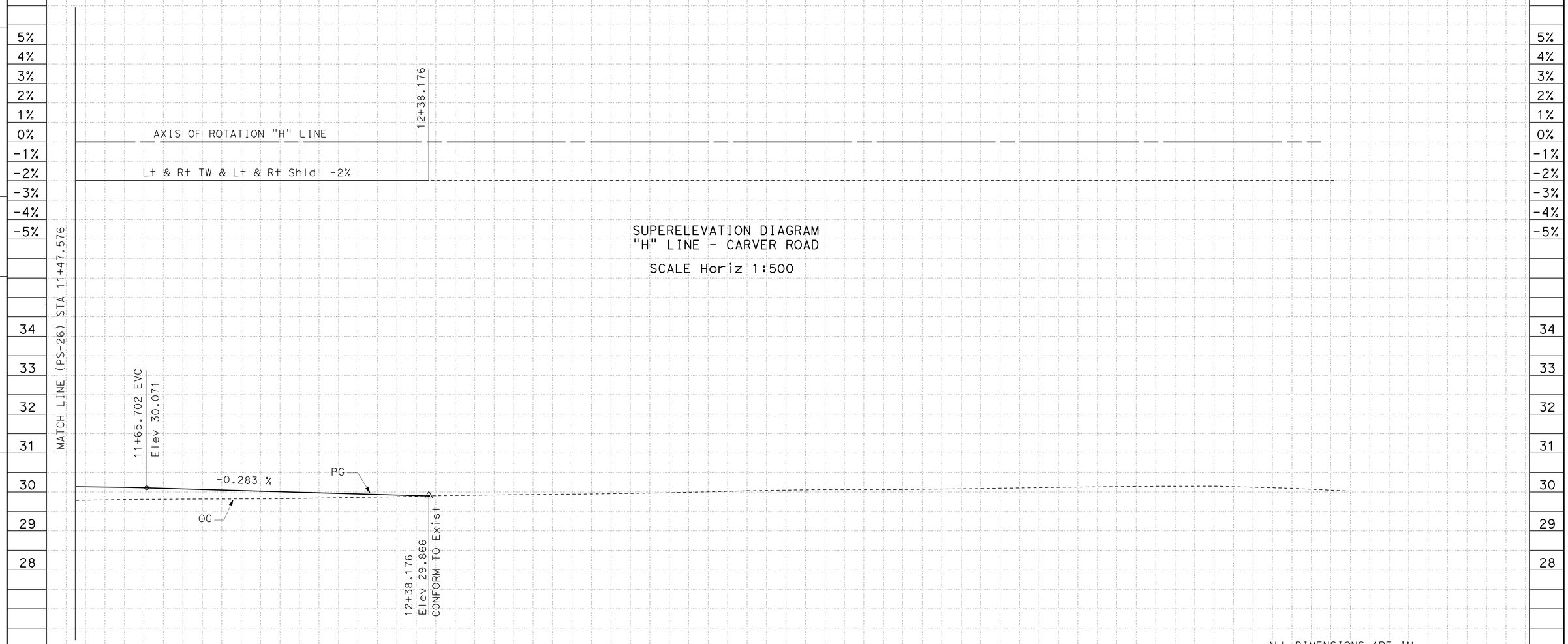
Caltrans Metric



SUPERELEVATION DIAGRAM
"H" LINE - CARVER ROAD

SCALE Horiz 1:500

PROFILE
"H" LINE - CARVER ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-27

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

Station		+60	+80	12+00	+20	+40	+60	+80	20
m^3	Exc	~~152~~ 155							
	Emb	~~121~~ 120							

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: WUTHY SENG
CHECKED BY: HUONG LE
REVISED BY: HL
DATE REVISED: 7/3/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 08:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	66	522

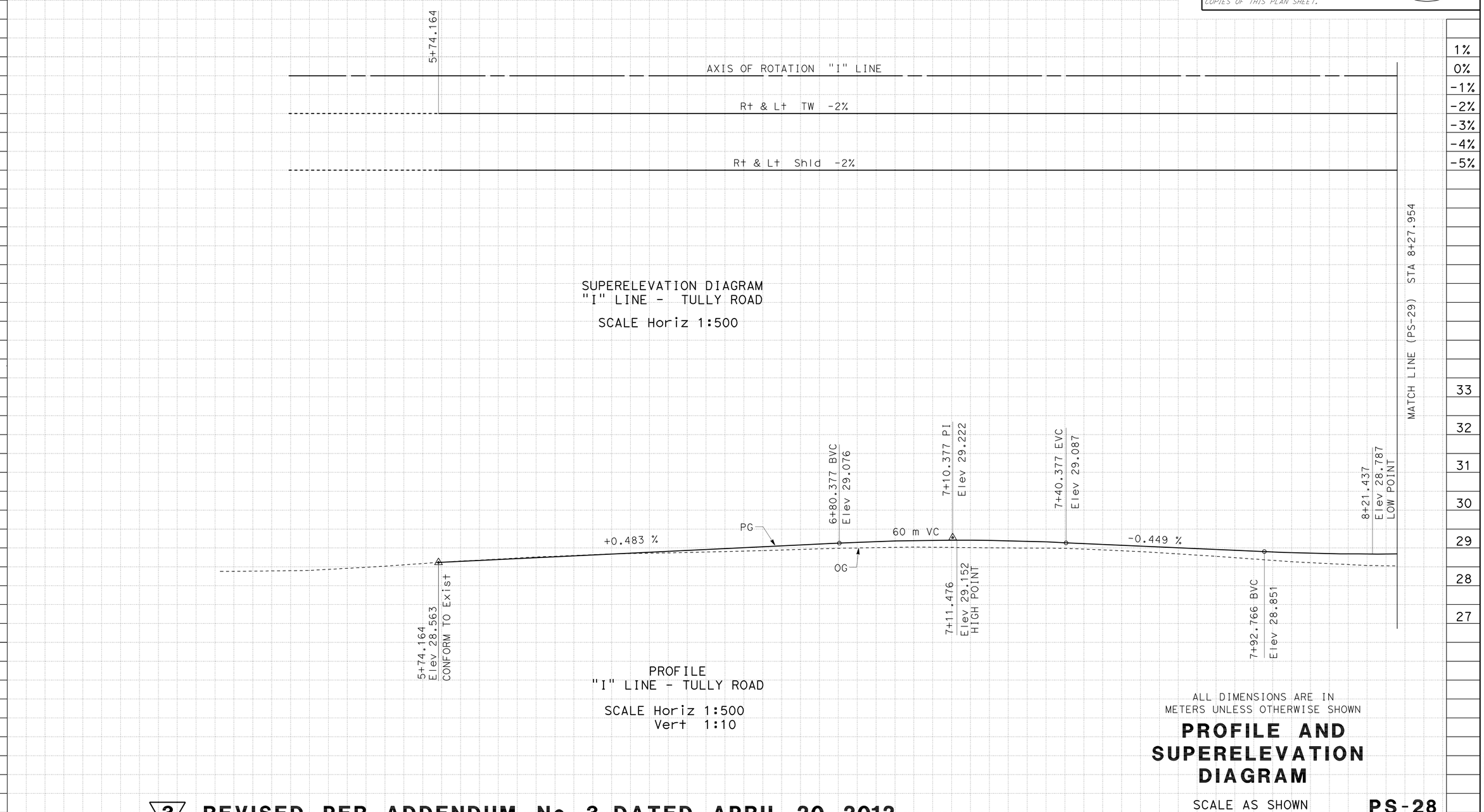
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-28

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

HL	7/3/09	REVISED BY / DATE REVISED
HUJONG LE	WUTHY SENG	CALCULATED-DESIGNED BY / CHECKED BY
JOSE HUERTA		FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	67	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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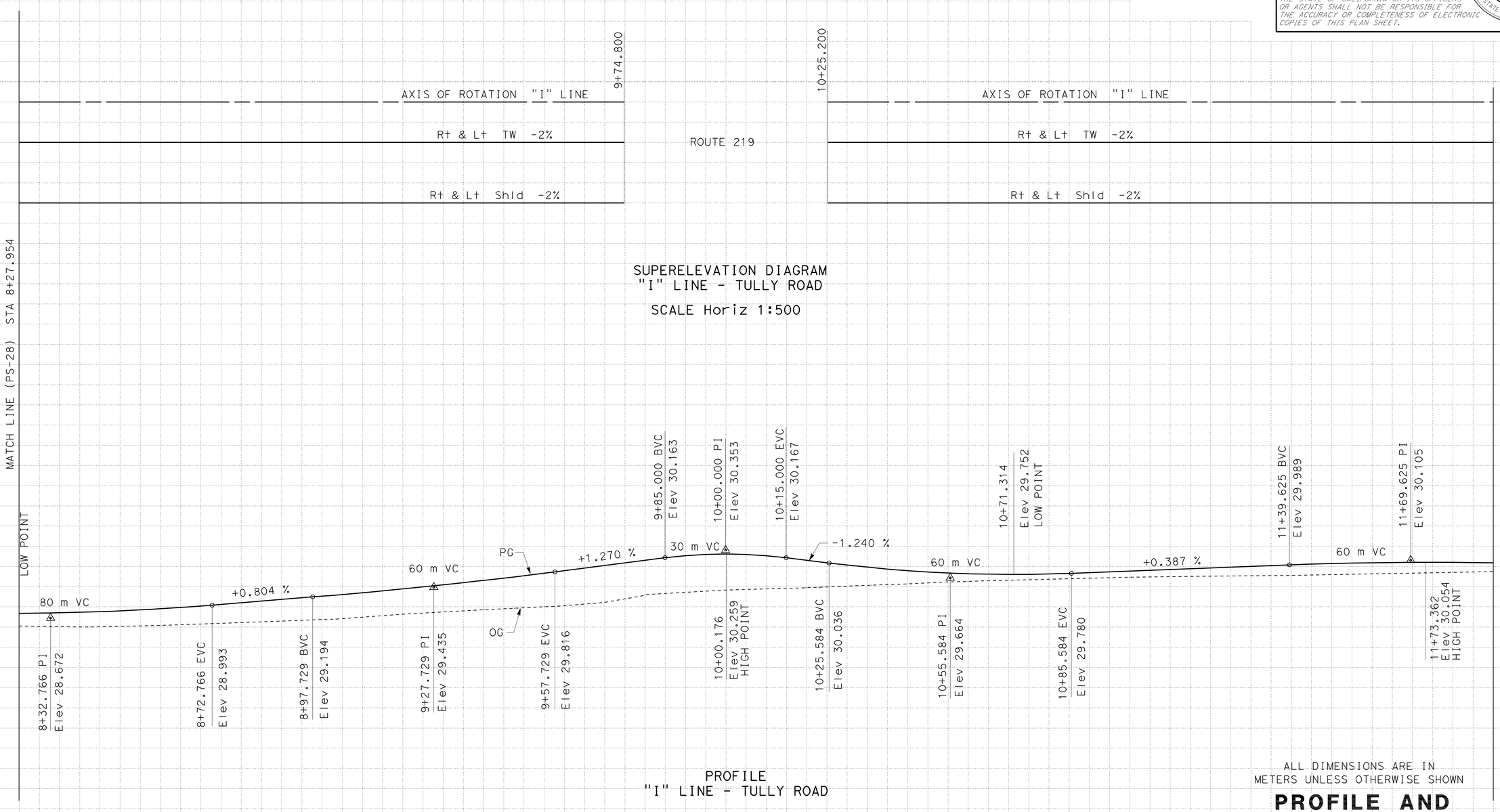
Caltrans Metric



SUPERELEVATION DIAGRAM
"I" LINE - TULLY ROAD

SCALE Horiz 1:500

PROFILE
"I" LINE - TULLY ROAD

SCALE Horiz 1:500
Vert 1:10

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012** 3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN **PS-29**

REVISED BY	DATE REVISED
HL	7/3/09

CALCULATED-DESIGNED BY: HUJONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	68	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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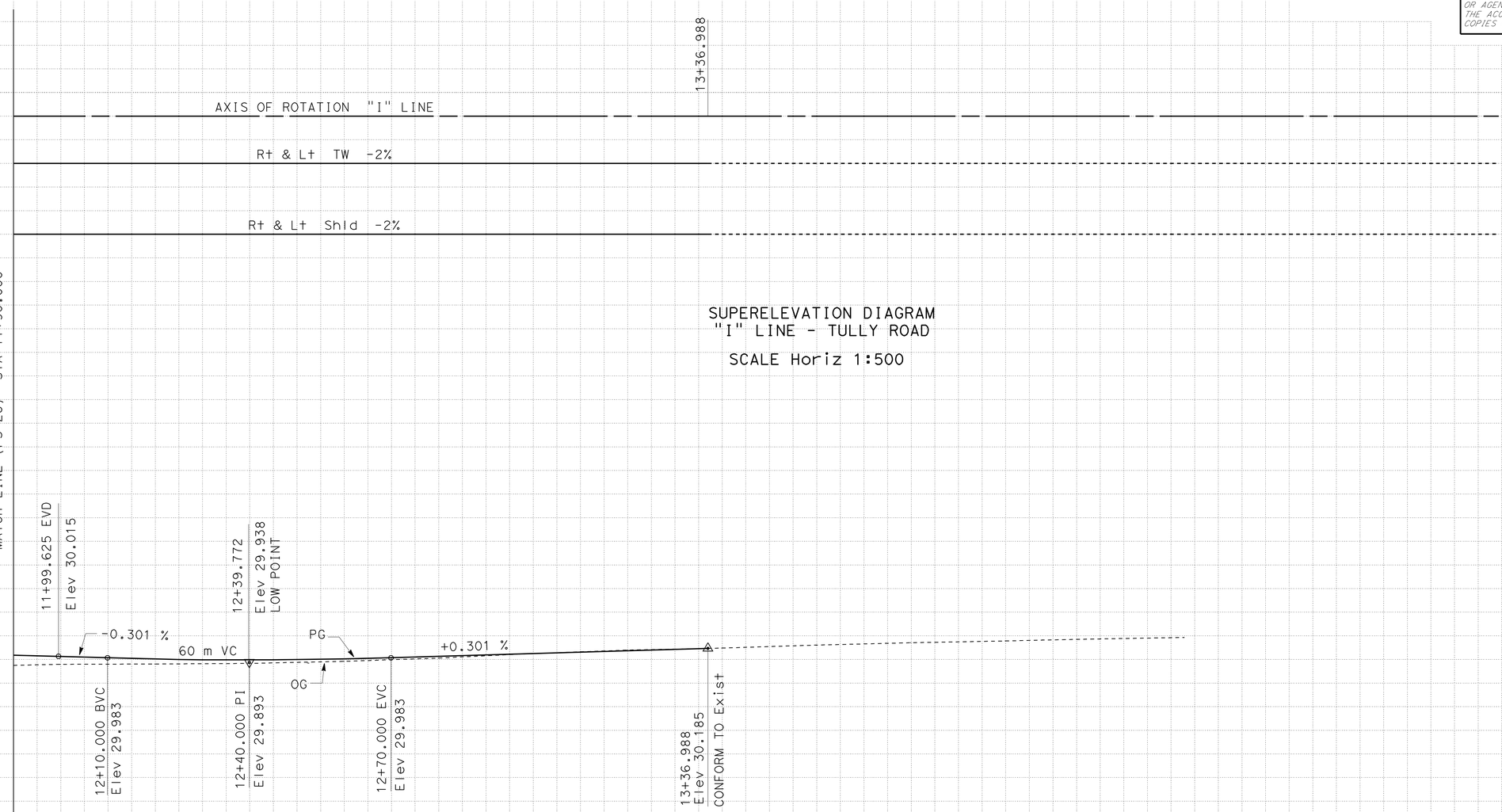
Caltrans Metric



SUPERELEVATION DIAGRAM
"I" LINE - TULLY ROAD

SCALE Horiz 1:500

PROFILE
"I" LINE - TULLY ROAD

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN **PS-30**

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

Station	12+00	+20	+40	+60	+80	13+00	+20	+40	+60
m^3 Exc	233								
m^3 Emb	~~216~~ 251								

REVISED BY: HL — DATE REVISED: 7/3/09
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:42

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	69	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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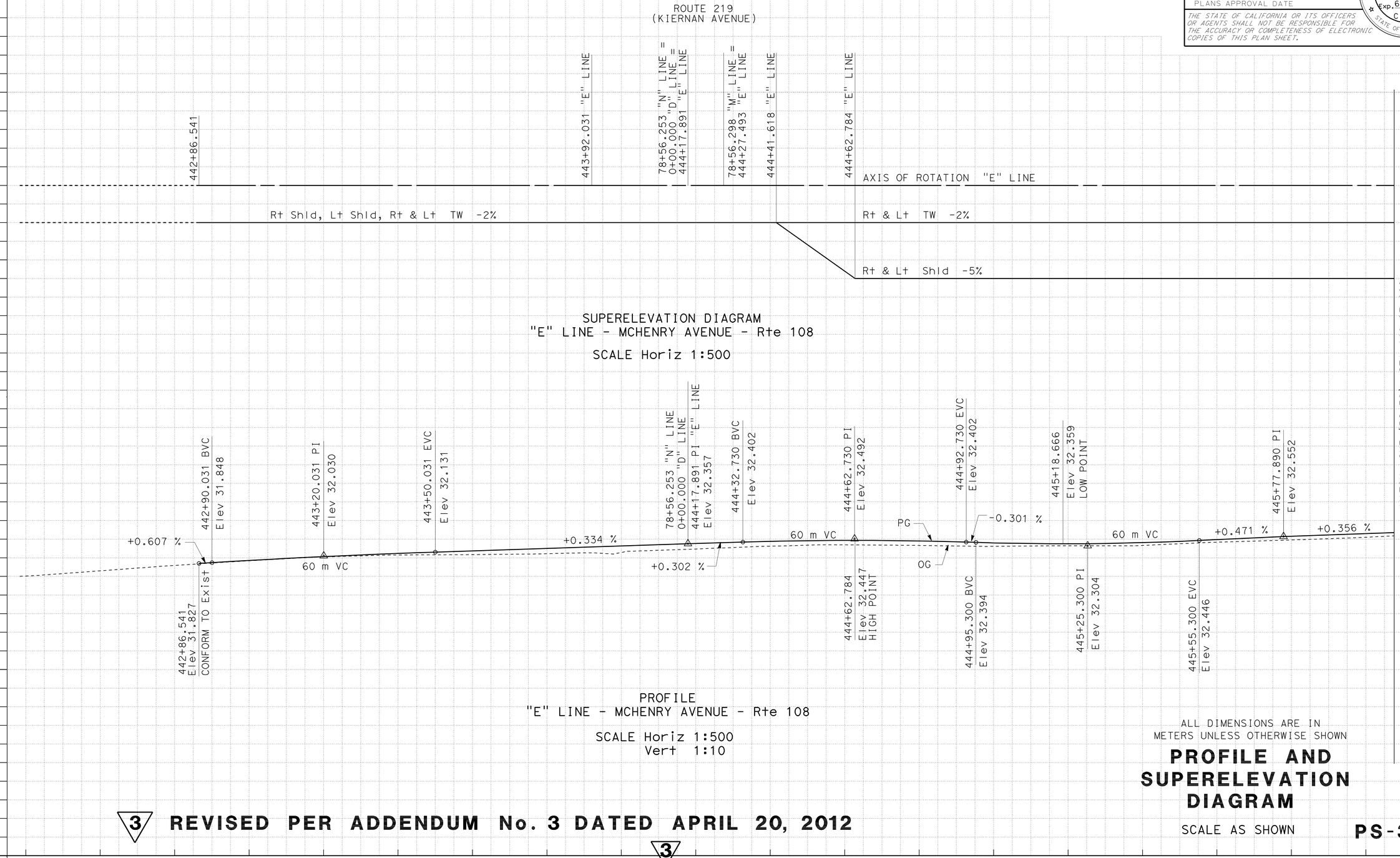
Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-31

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

REVISED BY	DATE REVISED
HL	7/3/09

CALCULATED-DESIGNED BY: HUJONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	70	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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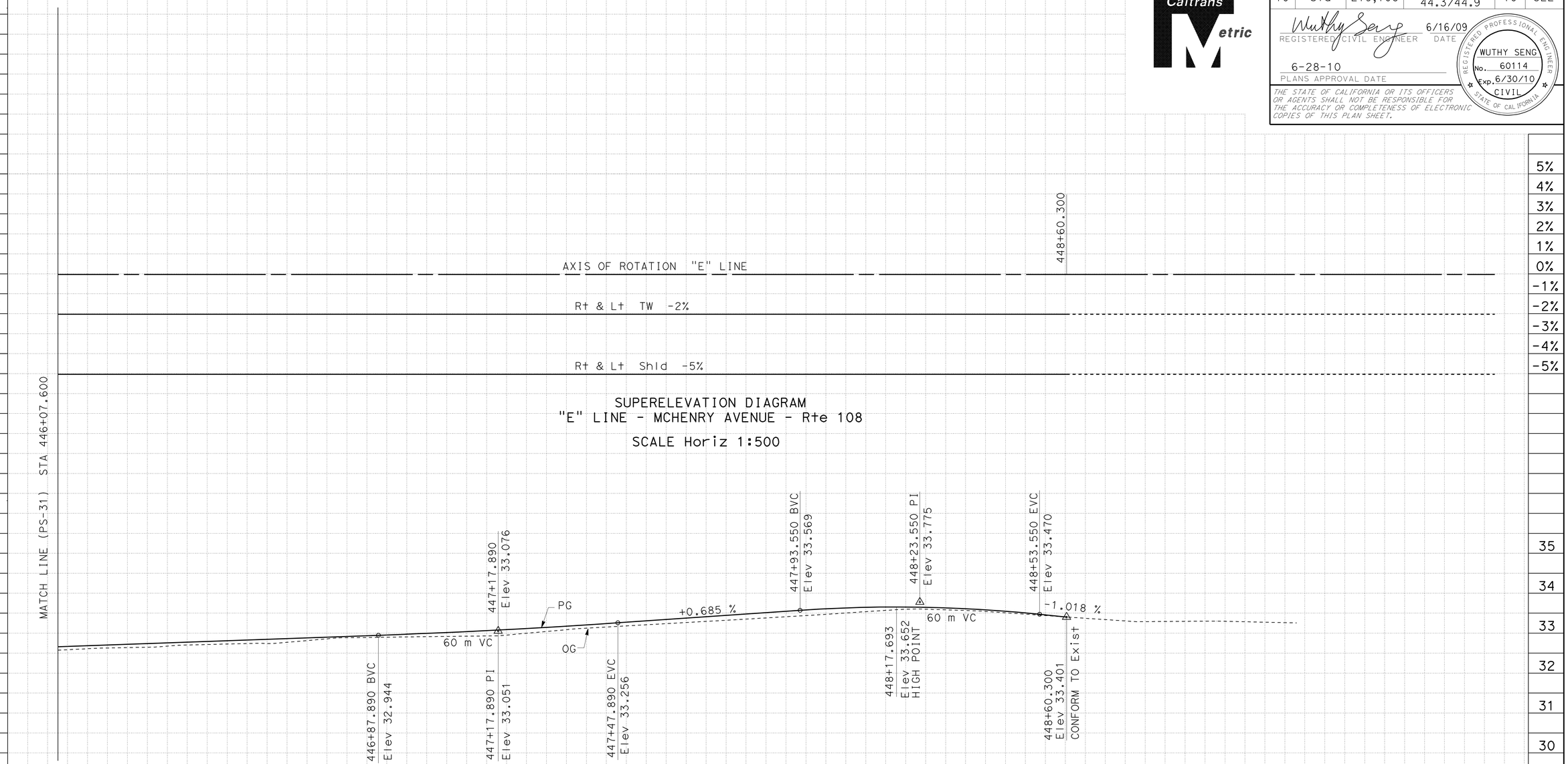
Caltrans Metric



SUPERELEVATION DIAGRAM
"E" LINE - MCHENRY AVENUE - Rte 108

SCALE Horiz 1:500

PROFILE
"E" LINE - MCHENRY AVENUE - Rte 108

SCALE Horiz 1:500
Vert 1:10

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE AND SUPERELEVATION DIAGRAM

SCALE AS SHOWN

PS-32

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

Station		+20	+40	+60	+80	447+00	+20	+40	60	80	448+00	+20	+40	+60	+80	449+00
m^3	Exc					~~434~~ 440										
	Emb					~~984~~ 988										

HL	7/3/09	REVISED BY / DATE REVISED
HUJONG LE	WUTHY SENG	CALCULATED-DESIGNED BY / CHECKED BY
JOSE HUERTA		FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	78	522

REGISTERED CIVIL ENGINEER — DATE 6/16/09

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — WUTHY SENG — No. 60114 — Exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

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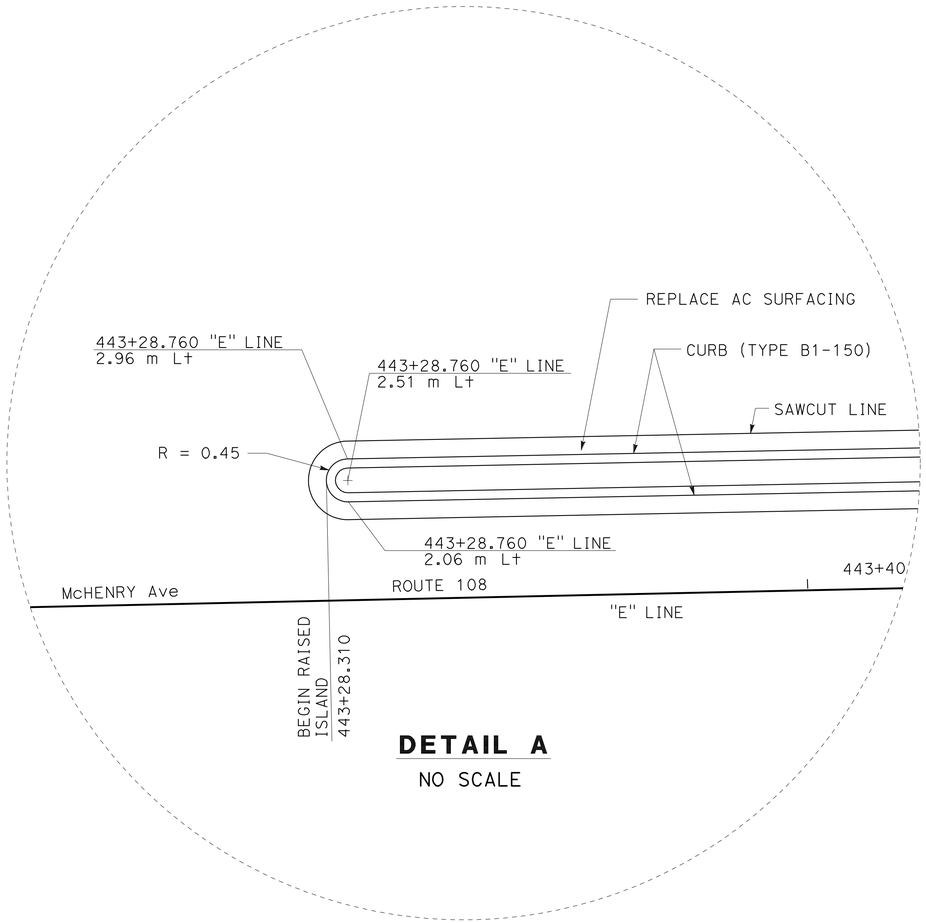
Caltrans Metric

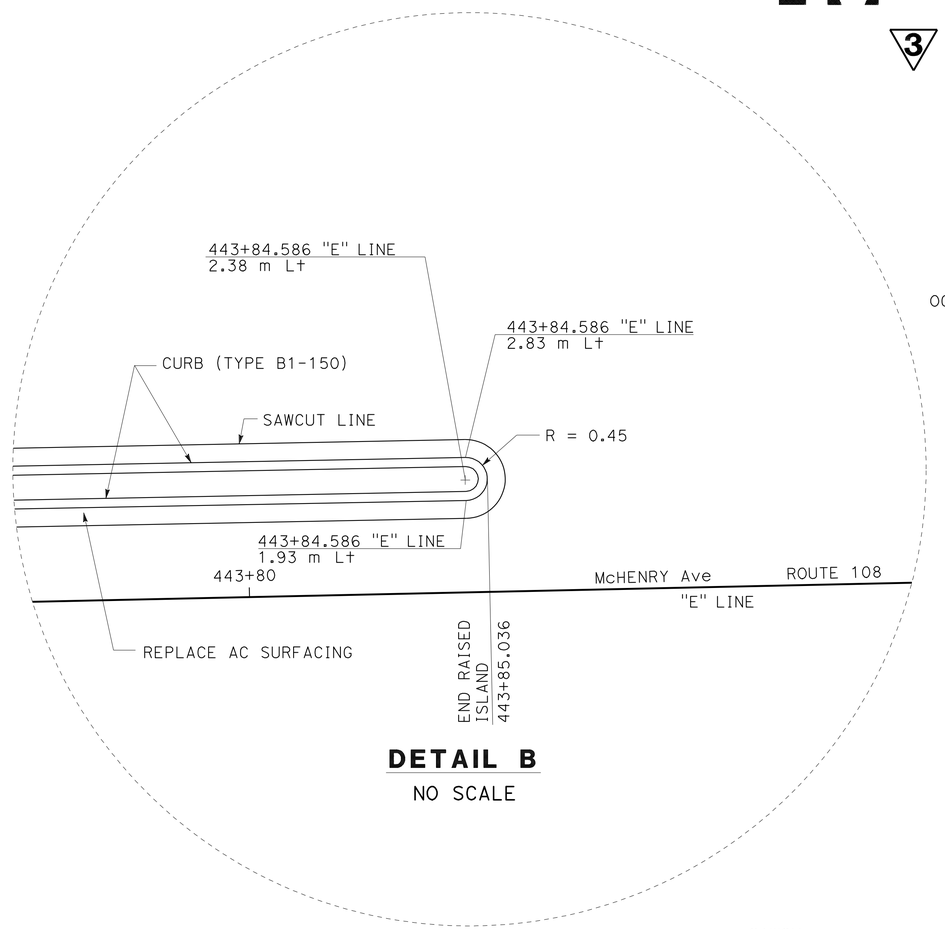
3

NOTE:

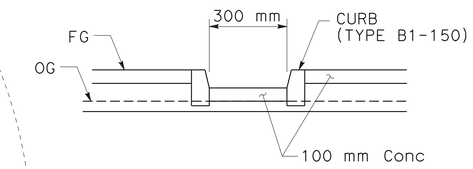
CONSTRUCT 300 mm SCUPPERS AT 15.0 m SPACING, STARTING THE FIRST SCUPPER AT STATION 443+43.310 "E" LINE, SEE DETAIL C.



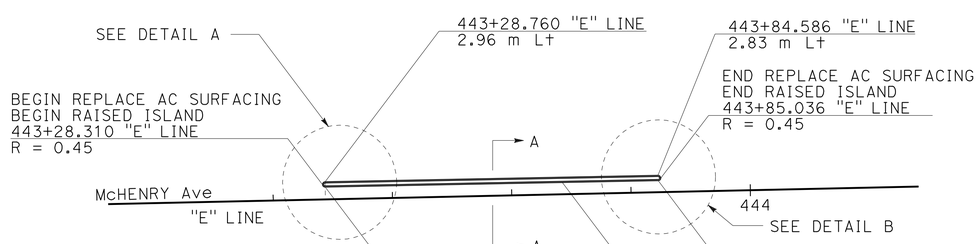
DETAIL A
NO SCALE

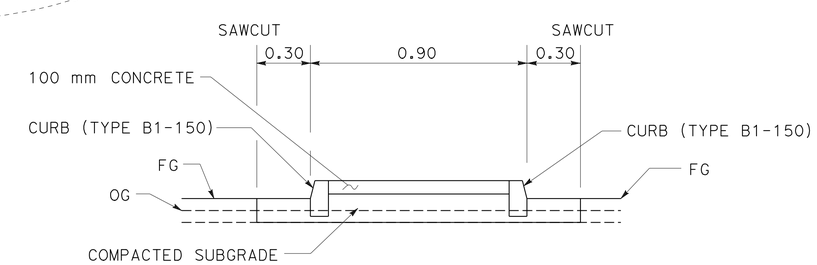


DETAIL B
NO SCALE



DETAIL C
NO SCALE





SECTION A-A
NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

CONSTRUCTION DETAILS

SCALE 1:500

C-8

REVISED BY	DATE REVISED	WS	4/13/10
HUONG LE	WUTHY SENG		
CALCULATED-DESIGNED BY	CHECKED BY		
FUNCTIONAL SUPERVISOR	JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	82	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

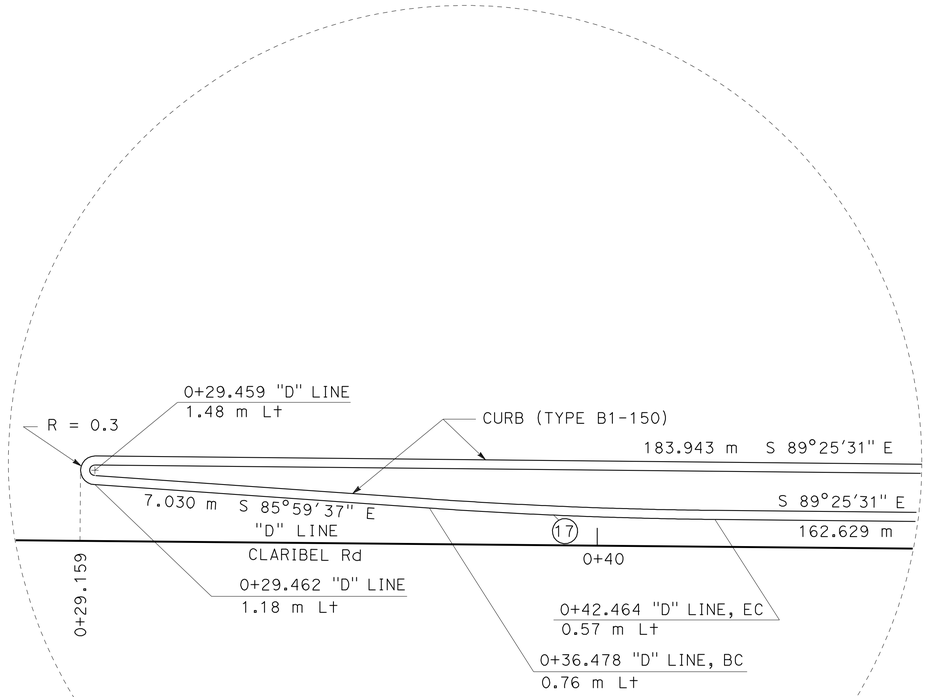
3

NOTE:

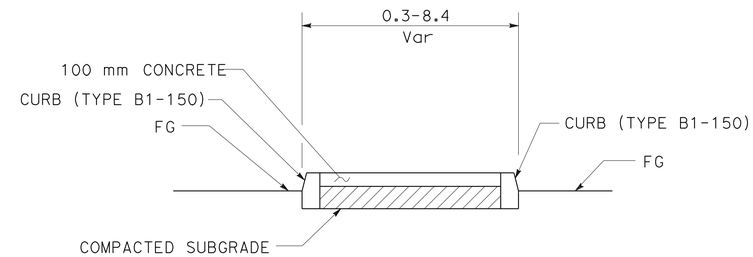
CONSTRUCT 300 mm SCUPPERS AT 15.0 m SPACING, STARTING THE FIRST SCUPPER AT STATION 0+44.159 "D" LINE, (SEE CONSTRUCTION DETAILS, SHEET C-8, DETAIL C).

CURVE DATA

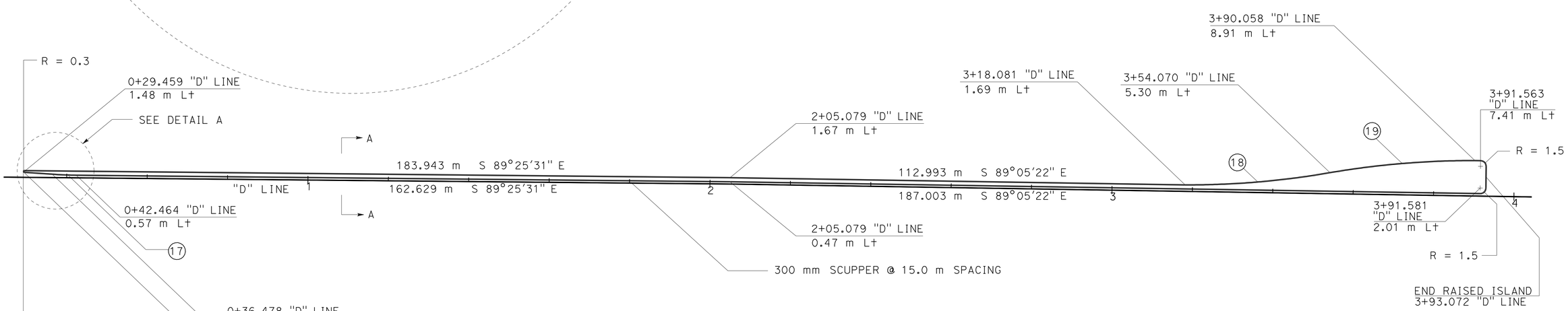
No.	RADIUS	Δ	TANGENT	LENGTH
17	100.00	3°25'53"	2.995	5.989
18	181.82	11°25'21"	18.185	36.248
19	181.40	11°25'21"	18.142	36.164



DETAIL A
NO SCALE



SECTION A-A
NO SCALE



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CONSTRUCTION DETAILS

SCALE 1:500

C-12

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
REVISED BY: WS
DATE REVISED: 7/9/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	212	522

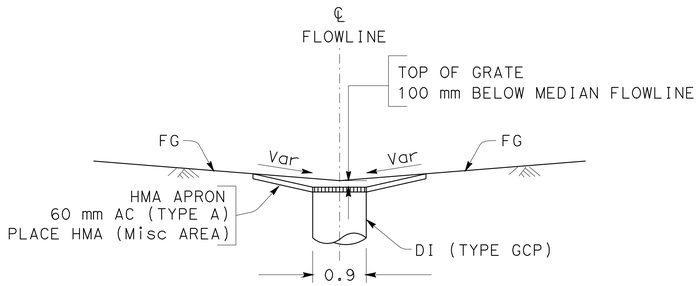
Caltrans Metric

REGISTERED CIVIL ENGINEER — DATE 6/16/09

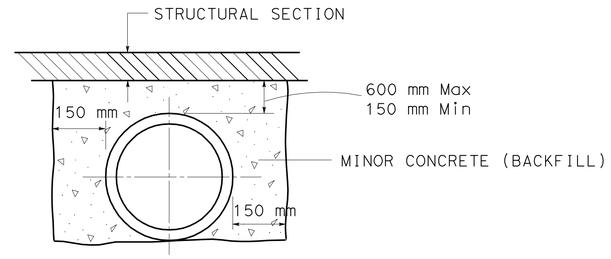
6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL — STATE OF CALIFORNIA

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



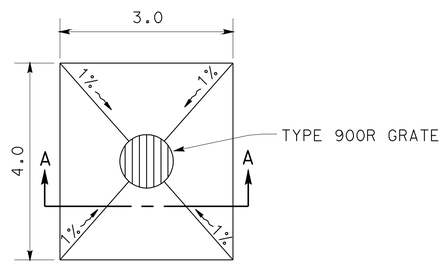
SECTION A-A



MINOR CONCRETE (BACKFILL)

DRAINAGE SYSTEM No.

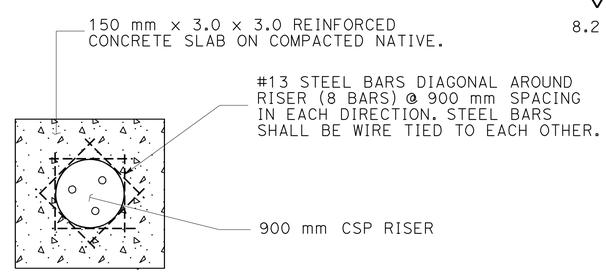
2 8 9 11 12 13 14 24 25 28 S1



APRON DETAIL

DRAINAGE SYSTEM No.

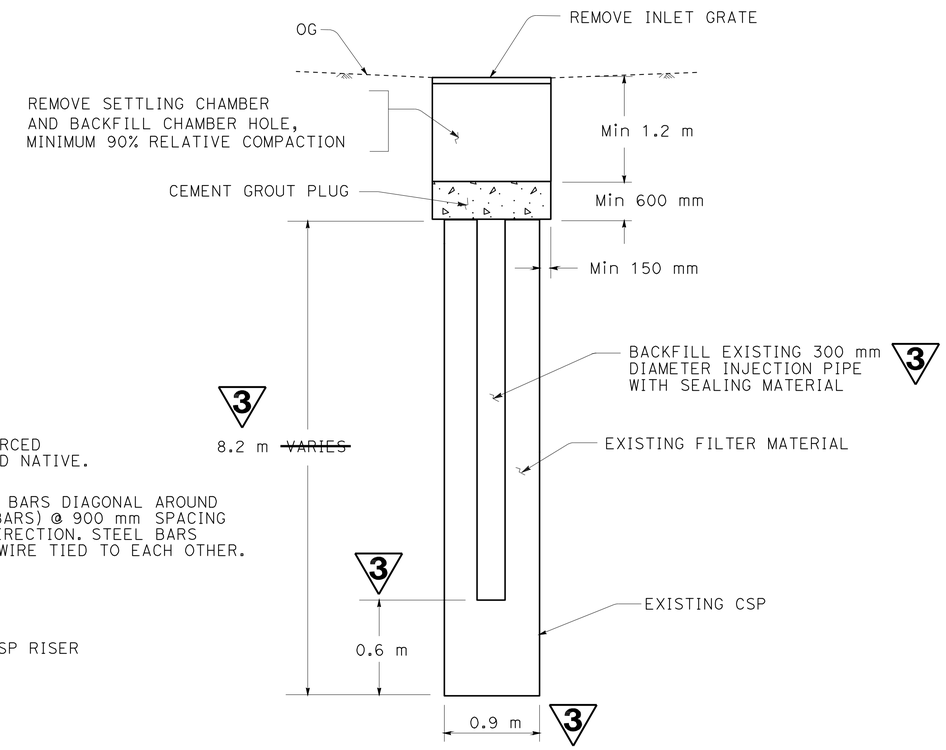
1 2 4 6 7 8 10 12 15 16 17 19 21 22 25 27 31 33 34 37 38 39 41 S1 CL1



PCC Reinf SLAB

DRAINAGE SYSTEM No.

13 20 C1 T1 T2 T3 CL4



ABANDON DRYWELL

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DRAINAGE DETAILS

NO SCALE

DD-1

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: ALLEN LAO
CHECKED BY: WUTHY SENG
REVISED BY: WS
DATE REVISED: 7/9/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	222	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

NOTES: (N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
** REMOVAL OF FLARED END SECTIONS (FES) INCLUDED.

ABBREVIATIONS:
S - STANDARD
RGJ - RUBBER GASKET JOINT

DRAINAGE QUANTITIES

3

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-2	1	a									0.20						107	11.4											1.12	0.97				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	37+40.00 "A" LINE ℄	D-2	1	a
		b																			24.0										S	0.93		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	37+40.0 "A" LINE, 23.60 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-2	2	a									0.20						107	11.4											1.02	0.87				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	38+70.0 "A" LINE ℄	D-2	2	a
		b																			23.5										S	0.93		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	38+70.0 "A" LINE, 23.93 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
		e																			9.1					2.7					S	0.45		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											1.02	0.87				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	38+60.9 "A" LINE ℄			f
		g		** 33.4 ~~** 33.4~~																																		g
D-3	3	a										1																						450 mm CFES	39+53.5 "A" LINE, 26.747 m L+	D-3	3	a
		b																			9.0										S	0.70		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	39+66.5 "A" LINE, 27.747 m L+			c
D-3	4	a									0.20						107	11.4											0.92	0.77				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	41+40.0 "A" LINE ℄	D-3	4	a
		b																			26.5										S	1.29		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	41+40.0 "A" LINE, 26.61 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-3	5	a										1																						450 mm CFES	41+72.4 "A" LINE, 27.63 m L+	D-3	5	a
		b																			23.5										S	0.74		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	41+99.5 "A" LINE, 27.99 m L+			c
D-3	6	a									0.20						107	11.4											1.12	0.96				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	42+40.0 "A" LINE ℄	D-3	6	a
		b																			25.8										S	1.26		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	42+40.0 "A" LINE, 26.10 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
SHEET TOTAL				33.4 ~~33.4~~							1.00	8			8.80	36.40	535	57.0			141.4					2.7			5.20								

3

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-1

ALLEN LAO — REVISED BY — DATE REVISED
WUTHY SENG — WS — 4/13/10
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	223	522

Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-4	7	a									0.20						107	11.4											0.91	0.76				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	44+80.0 "A" LINE ℄	D-4	7	a
		b																			24.7										S	0.96		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	44+80.0 "A" LINE, 24.89 m Lt			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-5	8	a									0.20						107	11.4											0.83	0.68				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	45+91.0 "A" LINE, 1.80 m Lt	D-5	8	a
		b																			9.1										S	0.92		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											0.90	0.74				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	46+01.0 "A" LINE, 1.80 m Lt			c
		d																			27.9					7.6					S	0.30		450 mm RCP (RGJ)				d
		e										1																						450 mm CFES	46+01.0 "A" LINE, 26.20 m Rt			e
		f													2.20	9.10																		RSP WITH FABRIC				f
D-5	9	a										1																						450 mm CFES	45+60.5 "A" LINE, 23.13 m Lt	D-5	9	a
		b																			49.5					14.4					S	0.87		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	46+09.6 "A" LINE, 26.74 m Lt			c
D-5	10	a									0.20						107	11.4											1.02	0.87				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	46+80.0 "A" LINE ℄	D-5	10	a
		b																			23.1										S	0.92		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	46+80.0 "A" LINE, 25.19 m Lt			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-5	11	a										1																						450 mm CFES	46+66.8 "A" LINE, 28.63 m Rt	D-5	11	a
		b																			32.4					8.0					S	0.62		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	26+99.2 "A" LINE, 30.05 m Rt			c
SHEET TOTAL											0.80	7			6.60	27.30	428	45.6			166.7					30.0			3.66									

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

DRAINAGE QUANTITIES

DQ-2

ALLEN LAO | WUTHY SENG | REVISED BY | DATE REVISED | WS | 4/13/10

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	224	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

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Caltrans Metric

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-5	12	a									0.20						107	11.4											1.12	0.97				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	48+60.0 "A" LINE ℄	D-5	12	a
		b																			9.1					2.7					S	0.60		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.12	0.97				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	48+70.9 "A" LINE ℄			c
		d																			27.0										S	1.41		450 mm RCP (RGJ)				d
		e										1																						450 mm CFES	48+70.9 "A" LINE, 27.12 m R+			e
		f													2.20	9.10																		RSP WITH FABRIC				f
D-6	13	a									1.45						108													2.18			1	G3 INLET, TYPE 600-12x GRATE	49+42.0 "A" LINE, 26.95 m L+	D-6	13	a
		b																	1.9												S	0.41		450 mm CSP				b
		c								1	2.70																0.75	2.25						900 mm CSP RISER W/ PCC Reinf SLAB	49+42.0 "A" LINE, 24.15 m L+			c
		d					72.0																								S	1.24		1800 mm PSP UNDERDRAIN				d
D-5		e									1.48						108													2.17			1	G3 INLET, TYPE 600-12x GRATE	48+70.9 "A" LINE, 26.33 m L+	D-5		e
		f																	3.0												S	0.64		450 mm CSP				f
		g								1	2.70																0.75	2.39						900 mm CSP RISER W/ PCC Reinf SLAB	48+70.9 "A" LINE, 22.33 m L+			g
		h																			64.3										S	1.25		450 mm RCP (RGJ)				h
		i									0.94						108													1.24			1	G3 INLET, TYPE 600-12x GRATE	48+05.0 "A" LINE, 19.92 m L+			I
D-6	14	a									0.20						107	11.4											1.02	0.87				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	50+20.0 "A" LINE ℄	D-6	14	a
		b																			26.8										S	0.98		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	50+20.0 "A" LINE, 27.20 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-7	15	a									0.20						107	11.4											1.44	1.29				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	52+58.0 "A" LINE, 1.40 m L+	D-7	15	a
		b																			34.7										S	1.29		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	52+58.0 "A" LINE, 33.91 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
SHEET TOTAL							72.0			2	10.07	3			6.60	27.30	752	45.6	4.9		161.9					2.7	1.50	4.64	4.70								

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

DRAINAGE QUANTITIES

DQ-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: WUTHY SENG
CHECKED BY: ALLEN LAO
REVISED BY: WS
DATE REVISED: 4/13/10

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:43

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	225	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	200 mm PP 90° ELBOW (N)	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	CONCRETE PLUG (N)	CONCRETE COLLAR (N)	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	HEIGHT OF INLET (H) (N)	PIPE JOINT CLASSIFICATION (N)	MAXIMUM COVER (N)	DRAINAGE INLET MARKER (N)	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-7	16	a									0.20						107	11.4											1.25	1.10				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	53+00.4 "A" LINE, 1.80 m L+	D-7	16	a
		b																			30.8										S	1.19		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	53+00.4 "A" LINE, 32.84 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
		e																			9.1										S	0.55		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											1.22	1.07				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	53+10.4 "A" LINE, 1.82 m L+			f
D-7	17	a										1																						450 mm CFES	52+76.9 "A" LINE, 38.12 m R+	D-7	17	a
		b																			29.5										S	0.87		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	53+06.4 "A" LINE, 37.75 m R+			c
D-7	18	a									0.20						107	11.4											1.35	1.20				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	55+00.0 "A" LINE, 1.50 m R+	D-7	18	a
		b																			28.0										S	1.24		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	55+00.0 "A" LINE, 29.81 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
		e																			8.6										S	0.75		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											1.25	1.10				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	55+09.5 "A" LINE, 1.50 m R+			f
D-7	19	a									0.86						108													1.20			1	G1 INLET, TYPE 600-12x GRATE	54+41.7 "A" LINE, 38.13 m L+	D-7	19	a
		b																			24.6										S	1.47		450 mm RCP (RGJ)				b
		c									1.37						108													2.13			1	G1 INLET, TYPE 600-12x GRATE	54+68.7 "A" LINE, 37.07 m L+			C
		d																			12.4										S	0.75		450 mm CSP				d
		e								1	2.70																0.75	2.15						900 mm CSP RISER W/ PCC Reinf SLAB	54+83.0 "A" LINE, 36.62 m L+			e
		f					60.0																								S	1.36		1800 mm PSP UNDERDRAIN				f
		g								1	2.70																0.75	2.00						900 mm CSP RISER W/ PCC Reinf SLAB	55+39.9 "A" LINE, 34.39 m L+			g
SHEET TOTAL							60.0			2	8.43	4			4.40	18.20	644	45.6			143.0						1.50	4.15	5.07									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-4

ALLEN LAO — WUTHY SENG — REVISED BY — DATE REVISED — WS — 4/13/10

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR — JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN — Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 19-APR-2012 — TIME PLOTTED => 06:44

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Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

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DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-8	20	a									0.20						107	11.4											0.85	0.70				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	7+97.5 "H" LINE, 16.19 m R+	D-8	20	a
		b																			29.5										S	1.08		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	7+97.5 "H" LINE, 13.48 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-10	21	a									0.20						107	11.4											1.32	1.17				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	57+20.0 "A" LINE ℄	D-10	21	a
		b																			28.5										S	1.50		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	57+20.0 "A" LINE, 29.00 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-10	22	a									0.20						107	11.4											0.92	0.77				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	59+31.0 "A" LINE ℄	D-10	22	a
		b																			29.7										S	1.04		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	59+31.0 "A" LINE, 29.80 m R+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-10	23	a										1																						450 mm CFES	58+74.5 "A" LINE, 31.50 m L+	D-10	23	a
		b																			50.8										S	0.63		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	59+25.3 "A" LINE, 30.85 m L+			c
D-11	24	a										1																						450 mm CFES	59+70.4 "A" LINE, 32.79 m R+	D-11	24	a
		b																			26.9					7.0					S	0.62		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	59+97.3 "A" LINE, 33.10 m R+			c
D-11	25	a									0.20						107	11.4											0.95	0.80				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	59+69.2 "A" LINE ℄	D-11	25	a
		b																			28.3										S	1.09		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	59+69.2 "A" LINE, 28.80 m L+			c
		d													2.20	9.10																		RSP WITH FABRIC				d
		e																			9.1					2.7					S	0.35		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											0.95	0.80				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	59+79.2 "A" LINE ℄			f
SHEET TOTAL											1.00	8			8.80	36.40	535	57.0			202.8					9.7			4.99									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-5

ALLEN LAO — REVISED BY
WUTHY SENG — DATE REVISED 4/13/10
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	227	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(2.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-11	26	a										1																						450 mm CFES	60+43.8 "A" LINE, 30.85 m Lt	D-11	26	a
		b																			51.3										S	0.97		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	60+94.9 "A" LINE, 34.00 m Lt			c
D-11	27	a									0.20						107	11.4											1.15	1.00				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	61+00.0 "A" LINE, 1.80 m Lt	D-10	27	a
		b																			33.2										S	1.06		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	61+00.0 "A" LINE, 35.09 m Lt			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-11	28	a										1																						450 mm CFES	60+64.2 "A" LINE, 33.66 m Rt	D-11	28	a
		b																			26.9					6.8					S	0.64		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	60+91.1 "A" LINE, 38.07 m Rt			c
D-11	29	a											1																					600 mm CFES	62+25.4 "A" LINE, 41.19 m Lt	D-11	29	a
		b																				57.0									S	1.47		600 mm RCP (RGJ)				b
		c											1																					600 mm CFES	62+85.2 "A" LINE, 36.23 m Lt			c
D-14	30	a										1																						450 mm CFES	63+59.2 "A" LINE, 33.60 m Rt	D-14	30	a
		b																			26.5										S	0.91		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	63+84.6 "A" LINE, 32.80 m Rt			c
D-14	31	a									0.20						107	11.4											1.15	1.00				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	64+49.7 "A" LINE, 3.52 m Rt	D-14	31	a
		b																			25.0										S	1.08		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	64+49.6 "A" LINE, 28.72 m Rt			c
		d													2.20	9.10																		RSP WITH FABRIC				d
		e																			11.5										S	0.56		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											1.15	1.00				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	64+39.7 "A" LINE, 3.41 m Rt			f
SHEET TOTAL											0.60	8	2		4.40	18.20	321	34.2			174.40	57.0				6.8			3.45									

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

DRAINAGE QUANTITIES

DQ-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: ALLEN LAO
CHECKED BY: WUTHY SENG
REVISED BY: WS
DATE REVISED: 4/13/10

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	228	522

Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-14	32	a										1																						450 mm CFES	64+40.8 "A" LINE, 37.20 m Lt	D-14	32	a
		b																			37.2										S	0.88		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	64+67.4 "A" LINE, 36.90 m Lt			c
D-15	33	a									0.20						107	11.4											1.15	1.00				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	66+27.2 "A" LINE ℄	D-15	33	a
		b																			30.4										S	1.22		450 mm RCP (RGJ)				b
		c										1																						450 mm CFES	66+27.2 "A" LINE, 30.40 m Lt			c
		d													2.20	9.10																		RSP WITH FABRIC				d
D-15	34	a									0.75						108													1.00			1	G1 INLET, TYPE 600-12x GRATE	68+11.9 "N" LINE, 9.90 m Rt	D-15	34	a
		b																			18.5										S	1.03		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.45	1.30				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	68+12.0 "N" LINE, 9.30 m Rt			c
		d																			29.5										S	1.71		450 mm RCP (RGJ)				d
		e										1																						450 mm CFES	68+12.0 "A" LINE, 19.82 m Lt			e
		f													2.20	9.10																		RSP WITH FABRIC				f
D-15	35	a									0.88						127													1.17			1	G1 INLET, TYPE 600-12x GRATE	69+10.0 "N" LINE, 10.20 m Lt	D-15	35	a
		b																			35.3										S	0.69		450 mm RCP (RGJ)				b
		c									1.29						215													1.00			1	GDO INLET, TYPE 600-12x GRATE	10+21.9 "J" LINE, 22.58 m Rt			c
		d																			43.6										S	1.43		450 mm RCP (RGJ)				d
		e										1																						450 mm CFES	68+27.3 "M" LINE, 21.59 m Lt			e
		f													2.20	9.10																		RSP WITH FABRIC				f
D-16	36	a									1.44						217													1.10			1	GT3 INLET, TYPE 600-12x GRATE	71+80.0 "N" LINE, 10.20 m Rt	D-16	36	a
		b																			70.1										S	0.67		450 mm RCP (RGJ)				b
		c									1.46						217													1.12			1	GT3 INLET, TYPE 600-12x GRATE	72+51.0 "N" LINE, 10.20 m Rt			c
		d																			63.0										S	1.00		450 mm RCP (RGJ)				d
SHEET TOTAL											6.22	5			6.60	27.30	1098	22.8			327.6								2.60									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: WUTHY SENG
CHECKED BY: ALLEN LAO
REVISED BY: WS
DATE REVISED: 4/13/10

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	229	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

DRAINAGE QUANTITIES

3

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-16	37	a									0.20						107	11.4											1.05	0.90				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	71+80.0 "M" LINE, 7.31 m R+	D-16	37	a
		b																			20.2										S	0.99		450 mm RCP (RGJ)				b
		c									1.45						215													1.20			1	GDO INLET, TYPE 600-12x GRATE	71+80.0 "M" LINE, 13.93 m L+			c
		d																			70.3										S	0.93		450 mm RCP (RGJ)				d
		e									0.91						108													1.30			1	G1 INLET, TYPE 600-12x GRATE	72+51.4 "M" LINE, 11.30 m L+			e
		f																			48.2										S	0.83		450 mm RCP (RGJ)				f
D-17		g									0.97						108													1.40			1	G1 INLET, TYPE 600-12x GRATE	73+22.2 "M" LINE, 9.90 m L+			g
		h																				41.8									S	0.93		600 mm RCP (RGJ)				h
		i									1.68						108													1.97			1	G2 INLET, TYPE 600-12x GRATE	73+65.0 "M" LINE, 10.20 m L+			i
		j																				17.5									S	1.00		600 mm RCP (RGJ)				j
		k											1																					600 mm CFES	73+65.0 "M" LINE, 27.69 m L+			k
		l													2.20	9.10																		RSP WITH FABRIC				l
D-17	38	a									0.86						108													1.20				G1 INLET, TYPE 600-12x GRATE	73+15.0 "N" LINE, 11.61 m R+	D-17	38	a
		b																			18.2										S	0.98		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.49	1.34				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	73+15.0 "N" LINE, 7.38 m L+			c
		d																			18.0										S	0.69		450 mm RCP (RGJ)				d
		e																			9.1										S	0.75		450 mm RCP (RGJ)				e
		f									0.20						107	11.4											1.52	1.37				GCP INLET, TYPE 600-12x GRATE	73+25.0 "N" LINE, 7.28 m L+			f
D-17	39	a									0.20						107	11.4											1.24	1.09				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	75+17.0 "N" LINE, 4.80 m L+	D-17	39	a
		b																			26.3										S	0.89		450 mm RCP (RGJ)				b
		c							1	1																				2.60				MANHOLE (TYPE B)	75+44.3 "N" LINE, 4.80 m L+			c
		d																				13.8									S	1.63		450 mm RCP (RGJ)				d
SHEET TOTAL									1	1	6.67		1		2.20	9.10	1075	45.6			210.3	73.1							5.30									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-8

ALLEN LAO | WUTHY SENG | REVISED BY WS | DATE REVISED 4/13/10
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	230	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-17	40	a													2.20	9.10																		RSP WITH FABRIC	74+40.0 "M" LINE, 25.78 m Lt	D-17	40	a
		b												1																				750 mm CFES				b
		c																					15.5								S	1.19		750 mm RCP (RGJ)				c
		d							1	1																				2.68				MANHOLE (TYPE B)	74+40.0 "M" LINE, 9.59 m Lt			d
		e																					83.2								S	1.46		750 mm RCP (RGJ)				e
		f									1.43						108													2.24			1	G1 INLET, TYPE 600-12x GRATE	75+24.4 "N" LINE, 19.65 m Lt			f
		g																					19.2								S	1.32		750 mm RCP (RGJ)				g
		h									1.36						108													2.11			1	G1 INLET, TYPE 600-12x GRATE	75+44.3 "N" LINE, 19.54 m Lt			h
		i																				74.4									S	0.91		600 mm RCP (RGJ)				i
		j									1.38						108													2.16			1	G1 INLET, TYPE 600-12x GRATE	76+20.0 "N" LINE, 19.43 m Lt			j
D-18	40	k																				131.5									S	1.04		600 mm RCP (RGJ)		D-18	40	k
		l									1.23						108													1.77			1	G3 INLET, TYPE 600-12x GRATE	77+52.5 "N" LINE, 19.50 m Lt			l
		m																			23.9										S	1.14		450 mm RCP (RGJ)				m
		n									1.36						108													1.65			1	G0 INLET, TYPE 600-12x GRATE	77+77.0 "N" LINE, 19.60 m Lt			n
		o																			22.8										S	1.19		450 mm RCP (RGJ)				o
		p									1.16						108													1.64			1	G3 INLET, TYPE 600-12x GRATE	78+00.8 "N" LINE, 19.50 m Lt			p
		q																			26.8										S	0.80		450 mm RCP (RGJ)				q
		r							1	1																				1.80			1	MANHOLE (TYPE B)	78+28.7 "N" LINE, 19.50 m Lt			r
		s																			13.7										S	0.88		450 mm RCP (RGJ)				s
		t							1	1																				1.70				MANHOLE (TYPE B)	444+48.5 "E" LINE, 16.59 m Lt			t
		u																			69.0										S	0.86		450 mm RCP (RGJ)				u
D-19	40	v									1.18						108													1.35			1	G0 INLET, TYPE 600-12x GRATE	445+18.7 "E" LINE, 16.70 m Lt	D-19	40	v
		x																																ABANDON DRYWELL (SEE DQ-15)				x
		y		1.5																														CULVERT				y
		z			1																													DRAINAGE INLET				z
D-18	40			91.0	2	2																												CULVERT, DRAINAGE, INLET & MANHOLE	76+70.0 TO 77+80.0 "N" LINE, Lt	D-18	40	
				22.0	3	3																												REMOVE CULVERT, DRAINAGE, & MANHOLE (SEE DETAIL "A", DRAINAGE PLAN PAGE D-18) ABANDON DRYWELL (SEE DQ-15)	77+80.0 TO 78+50.0 "N" LINE, Lt			
D-17	40			10.0																				1										CULVERT & CONCRETE PLUG	76+60.0 TO 76+70.0 "N" LINE, Lt	D-17	40	
D-17	41	a																						1										CONCRETE PLUG	75+31.1 "N" LINE, 19.00 m Rt	D-17	41	a
		b		13.5																														REMOVE CULVERT				b
		c									0.20						107	11.4											1.91	1.76				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	75+44.3 "N" LINE, 18.92 m Rt			c
		d																				22.7									S	1.97		600 mm RCP (RGJ)				d
SHEET TOTAL			138.0	6	5				3	3	9.30			1	2.20	9.10	863	11.4			156.2	228.6	117.9						1.91									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-9

ALLEN LAO | WUTHY SENG | REVISED BY WS | DATE REVISED 4/13/10 | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	231	522

REGISTERED CIVIL ENGINEER Wuthy Seng DATE 6/16/09

PLANS APPROVAL DATE 6-28-10

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-5	S1	a									0.82						108													1.03			1	G3 INLET, TYPE 600-12x GRATE	48+93.4 "A" LINE, 28.12 m L†	D-5	S1	a
		b																			20.9										S	0.98		450 mm RCP (RGJ)				b
		c									0.20						108													1.06				GCP INLET, TYPE 900R GRATE	48+70.9 "A" LINE, 28.53 m L†			c
		d																			42.6										S	0.96		450 mm RCP (RGJ)				d
		e									0.20						98	11.4											1.43	1.28				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	10+45.0 "O" LINE, 36.61 m R†			e
		f																			27.1										S	0.90		450 mm RCP (RGJ)				f
		g							1	1																				1.96				MANHOLE (TYPE B)	10+53.9 "O" LINE, 10.07 m R†			g
		h																			9.4										S	0.90		450 mm RCP (RGJ)				h
		i									0.20						98												2.49	2.34				GCP INLET, TYPE 900RX GRATE	10+64.2 "O" LINE, 8.97 m R†			i
		j																	9.40													0.60		450 mm CSP				j
		k								1																	0.75	2.98						900 mm CSP RISER	10+65.1 "O" LINE, 19.08 m R†			k
		l						26																										2400 mm PSP UNDERDRAIN				l
		m								1	1.35																0.75	2.71						900 mm CSP RISER W/ PCC Reinf SLAB	10+89.5 "O" LINE, 16.69 m R†			m
		n																	9.20												S	0.60		450 mm CSP				n
		o									0.20						108												2.15	2.00				GCP INLET, TYPE 900RX GRATE	10+88.5 "O" LINE, 6.66 m R†			o
		p																	9.20												S	0.60		450 mm CSP				p
		q								1	1.35																0.75	2.71						900 mm CSP RISER	10+89.5 "O" LINE, 16.69 m R†			q
		r						26																										2400 mm PSP UNDERDRAIN				r
		s								1	1.35																0.75	2.81						900 mm CSP RISER W/ PCC Reinf SLAB	10+63.1 "O" LINE, 0.95 m L†			s
		t																	9.20												S	0.60		450 mm CSP				t
D-6	S2	a									0.20						108												1.35	1.20				GCP INLET, TYPE 900RX GRATE	49+63.6 "A" LINE, 35.95 m L†	D-6	S2	a
		b																			12.8										S	0.60		450 mm RCP (RGJ)				b
		c							1	1																			1.54					MANHOLE (TYPE B)	49+77.1 "A" LINE, 39.10 m L†			c
		d																			46.5										S	0.60		450 mm RCP (RGJ)				d
		e									0.20																		2.76	2.61				GCP INLET, TYPE 900RX GRATE	10+76.7 "P" LINE, 3.90 m L†			e
		f																	4.80												S	0.60		450 mm CSP				f
		g								1	1.35																0.75	2.65						900 mm CSP RISER W/ PCC Reinf SLAB	10+76.7 "P" LINE, 1.80 m R†			g
		h						38																										2400 mm PSP UNDERDRAIN				h
		i								1	1.35																0.75	2.58						900 mm CSP RISER W/ PCC Reinf SLAB	10+05.7 "P" LINE, 1.80 m R†			i
		j																	4.60												S	0.60		450 mm CSP				j
		k									0.20																		2.13	1.98				GCP INLET, TYPE 900RX GRATE	11+05.7 "P" LINE, 3.68 m L†			k
		l																		3.00											S	0.60		200 mm PLASTIC PIPE				l
		m	1																															200 mm PLASTIC PIPE 90° ELBOW				m
SHEET TOTAL								90	2	8	8.97						628	11.4	46.4	3.00	159.3						4.50	16.44	13.85								

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

DRAINAGE QUANTITIES

DQ-10

ALLEN LAO | WUTHY SENG | REVISED BY WS | DATE REVISED 4/13/10 | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	232	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	2400 mm PSP UNDERDRAIN (3.51 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-6	S2	n			1																													REMOVE DRAINAGE INLET		D-6	S2	n
		o		1.5																														REMOVE CULVERT				o
		p																																ABANDON DRYWELL (SEE DQ-15)				p
		q		61.2																														REMOVE CULVERT				q
		r			1																													REMOVE DRAINAGE INLET				r
		s		1.5																														REMOVE CULVERT				s
		t																																ABANDON DRYWELL (SEE DQ-15)				t
		u			1																													REMOVE DRAINAGE INLET				u
		v		1.5																														REMOVE CULVERT				v
		w			1																													ABANDON DRYWELL (SEE DQ-15)				w
D-7	C1	a									1.07						108													1.59			1	G1 INLET, TYPE 600-12x GRATE	10+70.8 "H" LINE, 8.00 m Lt	D-7	C1	a
		b																			15.1										S	0.60		450 mm CSP				b
		c									1.47						108													2.32			1	G1 INLET, TYPE 600-12x GRATE	10+70.8 "N" LINE, 8.00 m Rt			c
		d																	2.7												S	0.60		450 mm CSP				d
		e								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	10+70.8 "I" LINE, 11.42 m Rt			e
		f					25.0																											1800 mm PSP UNDERDRAIN	49+77.1 "A" LINE, 39.10 m Lt			f
		g								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	10+93.8 "I" LINE, 11.80 m Rt			g
SHEET TOTAL				65.7	4		25.0			2	7.94	0					216		2.7		15.1						1.50	4.68										

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES
DQ-11

ALLEN LAO | REVISED BY | WS
WUTHY SENG | DATE REVISED | 4/13/10
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	233	522

Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	CFES 600 mm	CFES 750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	RGJ 600 mm	RGJ 750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-12	T1	a									0.95						108													1.38			1	G1 INLET, TYPE 600-12x GRATE	8+21.4 "H" LINE, 11.11 m L+	D-12	T1	a
		b																			19.5										S	0.60		450 mm RCP (RGJ)				b
		c									1.47						108													2.32			1	G1 INLET, TYPE 600-12x GRATE	8+21.4 "H" LINE, 9.34 m R+			c
		d																	5.5												S	0.60		450 mm CSP				d
		e								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	8+21.4 "I" LINE, 15.71 m R+			e
		f					92.0																											1800 mm PSP UNDERDRAIN	8+21.4 "I" LINE, 15.71 m R+			f
		g								1	2.70																0.75	2.77						900 mm CSP RISER W/ PCC Reinf SLAB	9+01.9 "I" LINE, 15.71 m R+			g
		h																	2.9												S	0.60		450 mm CSP				h
		i									1.47						108													2.32			1	G1 INLET, TYPE 600-12x GRATE	9+01.9 "I" LINE, 12.10 m R+			i
		j																			23.6										S	1.19		450 mm RCP (RGJ)				j
		k									0.95						108													1.39			1	G1 INLET, TYPE 600-12x GRATE	9+01.9 "I" LINE, 12.43 m L+			k
D-11	T2	a									0.75						108													1.59			1	G1 INLET, TYPE 600-12x GRATE	10+71.3 "H" LINE, 8.26 m R+	D-11	T2	a
		b																			16.0										S	1.19		450 mm RCP (RGJ)				b
		c									0.75						108													2.32			1	G1 INLET, TYPE 600-12x GRATE	10+71.3 "H" LINE, 8.35 m L+			c
		d																	2.5												S	0.60		450 mm CSP				d
		e								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	10+71.3 "I" LINE, 11.79 m L+			e
		f					25.0																											1800 mm PSP UNDERDRAIN	10+71.3 "I" LINE, 12.78 m L+			f
D-13	T3	a									0.97						108													1.20			1	G1 INLET, TYPE 600-12x GRATE	12+39.7 "I" LINE, 7.77 m L+	D-13	T3	a
		b																			15.4										S	1.19		450 mm RCP (RGJ)				b
		c									1.23						108													1.88			1	G1 INLET, TYPE 600-12x GRATE	12+39.7 "I" LINE, 8.80 m R+			c
		d																	23.5												S	0.60		450 mm CSP				d
		e								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	12+14.3 "I" LINE, 10.8 m R+			e
		f					30.0																											1800 mm PSP UNDERDRAIN	12+14.3 "I" LINE, 10.8 m R+			f
		g								1	2.70																0.75	2.34						900 mm CSP RISER W/ PCC Reinf SLAB	12+14.3 "I" LINE, 10.8 m R+			g
SHEET TOTAL							147			5	22.04						864		34.4		74.5						3.75	12.13										

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES
DQ-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: WUTHY SENG
CHECKED BY: ALLEN LAO
REVISED BY: WS
DATE REVISED: 4/13/10

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:44

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	234	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

3

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA				
D-18	MH1	a									0.98						108													1.32			1	G3 INLET, TYPE 600-12x GRATE	443+70.0 "E" LINE, 15.14 m Rt	D-18	MH1	a
		b																			29.1										S	0.86		450 mm RCP (RGJ)				b
		c									0.97						108													1.92			1	G3 INLET, TYPE 600-12x GRATE	443+30.0 "E" LINE, 14.96 m Rt			c
		d																	2.8												S	0.82		450 mm CSP				d
		e								1							108										0.75	2.38						900 mm CSP RISER	443+36.5 "E" LINE, 16.0 m Rt			e
		f					34.0																								S	1.15		1800 mm PSP UNDERDRAIN				f
		g								1																	0.75	1.76						900 mm CSP RISER	443+03.4 "E" LINE, 14.88 m Rt			g
		h																	2.5												S	0.82		450 mm CSP				h
		i							1	1																				1.76				MANHOLE (TYPE B)	443+00.0 "E" LINE, 14.95 m Rt			i
		j																	0.5												S	0.82		450 mm CSP				j
		k									1.17						108													1.66			1	G3 INLET, TYPE 600-12x GRATE	443+00.0 "E" LINE, 13.5 m Rt			k
		l																							1									CONCRETE COLLAR				l
D-18	MH2	a																			34.0										S	1.07		450 mm RCP (RGJ)		D-18	MH2	a
		b									1.02						108													1.39			1	G3 INLET, TYPE 600-12x GRATE	444+48.5 "E" LINE, 18.60 m Rt			b
		c																			58.5										S	0.47		450 mm RCP (RGJ)				c
		d									0.87						108													1.23			1	G1 INLET, TYPE 600-12x GRATE	445+07.5 "E" LINE, 11.85 m Rt			d
		e																			51.5										S	0.47		450 mm RCP (RGJ)				e
		f									0.81						108													1.12			1	G1 INLET, TYPE 600-12x GRATE	445+60.0 "E" LINE, 11.14 m Rt			f
		g																			89.0										S	0.47		450 mm RCP (RGJ)				g
		h									0.79						108													1.09			1	G1 INLET, TYPE 600-12x GRATE	446+50.0 "E" LINE, 9.91 m Rt			h
		i																			89.0										S	0.49		450 mm RCP (RGJ)				i
		j									0.80						108													1.10			1	G1 INLET, TYPE 600-12x GRATE	447+40.0 "E" LINE, 8.29 m Rt			j
D-20	CL1	a									1.41						217													1.06			1	GT3 INLET, TYPE 600-12x GRATE	0+95.0 "D" LINE, 15.66 m Rt	D-20	CL1	a
		b																			1.8										S	0.45		450 mm RCP (RGJ)				b
		c							1	1																				1.18				MANHOLE (TYPE B)	1+40.0 "D" LINE, 15.91 m Rt			c
		d																			43.8										S	1.01		450 mm RCP (RGJ)				d
		e									1.41						217													1.06			1	GT3 INLET, TYPE 600-12x GRATE	1+40.0 "D" LINE, 15.70 m Rt			e
		f																			1.8										S	1.01		450 mm RCP (RGJ)				f
		g							1	1																				1.61				MANHOLE (TYPE B)	1+40.0 "D" LINE, 12.97 m Rt			g
		h																			38.2										S	1.01		450 mm RCP (RGJ)				h
SHEET TOTAL							34.0		3	5	10.23						1406		5.8		436.7						1.50	4.14									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES
DQ-13

ALLEN LAO | WUTHY SENG | REVISED BY WS | DATE REVISED 4/13/10
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 0645

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	235	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

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DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	REINFORCED CONCRETE PIPE (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ○
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
D-20	CL2	a									0.20						107	11.4											1.42	1.27				GCP INLET, TYPE 900R GRATE W/ HMA APRON	2+37.8 "D" LINE, 15.61 m R†	D-20	CL2	a
		b																			41.0										S	0.95		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.70	1.65				GCP INLET, TYPE 900R GRATE W/ HMA APRON	2+37.8 "D" LINE, 26.47 m L†			c
D-20	CL3	a									0.20						107	11.4											1.63	1.48				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	1+40.0 "D" LINE, 26.31 m L†	D-20	CL3	a
		b																			97.2										S	0.62		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.80	1.65				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	2+37.8 "D" LINE, 26.47 m L†			c
		d																			61.5										S	1.19		450 mm RCP (RGJ)				d
		e									0.20						107	11.4											2.03	1.96				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	3+00.0 "D" LINE, 26.84 m L†			e
		f																				70.2									S	1.39		600 mm RCP (RGJ)				f
		g							1	1																				2.20				MANHOLE (TYPE B)	3+74.2 "D" LINE, 27.21 m L†			g
		h																				40.5									S	1.73		600 mm RCP (RGJ)				h
		i							1	1																				2.13				MANHOLE (TYPE B)	4+16.0 "D" LINE, 27.56 m L†			i
		j																				12.8									S	1.17		600 mm RCP (RGJ)				j
		k											1																					600 mm CFES	4+16.0 "D" LINE, 38.57 m L†			k
		l													2.20	9.10																		RSP WITH FABRIC				l
D-20	CL4	a									0.83						108													1.15			1	G1 INLET, TYPE 900R GRATE, W/ HMA APRON	3+74.3 "D" LINE, 10.25 m R†	D-20	CL4	a
		b																			41.6										S	1.25		450 mm RCP (RGJ)				b
D-21	CL5	a									0.20						107	11.4											1.27	1.12				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	7+14.3 "D" LINE, 12.45 m R†	D-21	CL5	a
		b																			22.1										S	1.83		450 mm RCP (RGJ)				b
		c									0.20						107	11.4											1.71	1.53				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	7+14.3 "D" LINE, 10.58 m L†			c
		d																			73.1										S	1.38		450 mm RCP (RGJ)				d
		e							1	1																				1.77				MANHOLE (TYPE B)	6+40.0 "D" LINE, 10.56 m L†			e
		f																			79.2										S	1.77		450 mm RCP (RGJ)				f
		g									0.20						107	11.4											2.15	2.00				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	5+60.0 "D" LINE, 12.55 m L†			g
		h																			84.2										S	2.27		450 mm RCP (RGJ)				h
		i									0.20						107	11.4											2.71	2.56				GCP INLET, TYPE 900R GRATE, W/ HMA APRON	4+75.0 "D" LINE, 12.55 m L†			i
		j																			59.0													450 mm RCP (RGJ)				j
SHEET TOTAL									3	3	2.63		1		2.20	9.10	1071	102.6			558.9	123.5							16.42									

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES
DQ-14

ALLEN LAO | WUTHY SENG | REVISED BY | DATE REVISED | WS | 4/13/10
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 0645

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	236	522

Caltrans Metric

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER WUTHY SENG No. 60114 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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DRAINAGE QUANTITIES

3

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯	(N) 200 mm PP 90° ELBOW	REMOVE CULVERT	REMOVE INLET	REMOVE MANHOLE	1800 mm PSP UNDERDRAIN (3.51 mm THICK)	2400 mm PSP UNDERDRAIN ~~(3.51 mm THICK)~~ (4.27 mm THICK)	DRAINAGE MANHOLE (TYPE B)	FRAME & COVER	MINOR CONCRETE (MINOR STRUCTURE & PCC Reinf SLAB)	CONCRETE FLARED END SECTION (CFES) 450 mm	600 mm	750 mm	ROCK SLOPE PROTECTION (RSP) (FACING, METHOD B)	ROCK SLOPE PROTECTION FABRIC	MISCELLANEOUS IRON & STEEL	PLACE HMA (Misc AREA)	450 mm CSP (2.01 mm THICK)	200 mm PLASTIC PIPE	RCP (RGJ) LENGTH 450 mm	600 mm	750 mm	(N) CONCRETE PLUG	(N) CONCRETE COLLAR	MINOR CONCRETE (BACKFILL)	900 mm CSP (3.51 mm THICK)	900 mm CSP RISER (3.51 mm THICK)	900 mm PRECAST Conc PIPE INLET	(N) HEIGHT OF INLET (H)	(N) PIPE JOINT CLASSIFICATION	(N) MAXIMUM COVER	(N) DRAINAGE INLET MARKER	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT No. ◯
			EA	m	EA	EA	m	m	EA	EA	m^3	EA	EA	EA	m^3	m^2	kg	m^2	m	m	m	m	m	EA	EA	m^3	m	m	m	m		m	EA					
DQ-1				33.4							1.00	8			8.80	36.40	535	57.0			141.4					2.7			5.20					SHEET TOTAL DQ-1				
DQ-2											0.80	7			6.60	27.30	428	45.6			166.7					30.0			3.66					SHEET TOTAL DQ-2				
DQ-3							72.0			2	10.07	3			6.60	27.30	752	45.6	4.9		161.9					2.7	1.50	4.64	4.70					SHEET TOTAL DQ-3				
DQ-4							60.0			2	8.43	4			4.40	18.20	644	45.6			143.0						1.50	4.15	5.07					SHEET TOTAL DQ-4				
DQ-5											1.00	8			8.80	36.40	535	57.0			202.8					9.7			4.99					SHEET TOTAL DQ-5				
DQ-6											0.60	8	2		4.40	18.20	321	34.2			174.4	57.0				6.8			3.45					SHEET TOTAL DQ-6				
DQ-7											6.22	5			6.60	27.30	1098	22.8			327.6								2.60					SHEET TOTAL DQ-7				
DQ-8									1	1	6.67		1		2.20	9.10	1075	45.6			210.3	73.1							5.30					SHEET TOTAL DQ-8				
DQ-9				138.0	6	5			3	3	9.30			1	2.20	9.10	863	11.4			156.2	228.6	117.9	2					1.91					SHEET TOTAL DQ-9				
DQ-10			1					90	2	8	8.97						628	11.4	46.4	3.00	159.3						4.50	16.44	13.85					SHEET TOTAL DQ-10				
DQ-11				65.7	4		25.0			2	7.94						216		2.7		15.1						1.50	4.68						SHEET TOTAL DQ-11				
DQ-12							147.0			5	22.04						864		34.4		74.5						3.75	12.13						SHEET TOTAL DQ-12				
DQ-13							34.0		3	5	10.23						1406		5.8		436.7				1		1.50	4.14						SHEET TOTAL DQ-13				
DQ-14									3	3	2.63		1		2.20	9.10	1071	102.6			558.9	123.5							16.42					SHEET TOTAL DQ-14				
				*794.6					3	*8	*62.81						*2848						*161.6											SHEET UQ-1				
				74.3(R)											5.0(R)	27.3(R)																		SHEET DD-7				
										3																												
TOTAL				1106.0	10	5	338.0	90	12	~~31~~ 39	158.71	43	4	1	57.80	245.70	13284	### 478.8	94.2	3.00	2928.8	482.2	279.5			52.0	14.25	46.18	67.15									

SEE SUMMARY OF QUANTITIES SHEET, Q-6, FOR TOTAL QUANTITIES.
* SEE UTILITY QUANTITIES SHEET, UQ-1, FOR DETAILED INFORMATION.
(R) SEE DRAINAGE DETAILS SHEET, DD-7, FOR DETAILED INFORMATION.
(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

ABANDON DRYWELL

LOCATION	QUANTITY (EA)	LOCATION	QUANTITY (EA)
47+91.0 "A" LINE 19.50 m L+	1	10+46.6 "P" LINE 7.83 m L+	1
47+98.0 "A" LINE 20.00 m L+	1	10+76.3 "P" LINE 7.55 m L+	1
10+43.0 "O" LINE 36.50 m R+	1	11+05.6 "P" LINE 7.39 m L+	1
54+44.0 "A" LINE 4.00 m R+	1	77+90.0 "M" LINE 0.50 m R+	1
54+60.0 "A" LINE 5.00 m R+	1	78+07.5 "M" LINE 0.50 m R+	1
62+35.0 "A" LINE 31.50 m R+	1	78+25.0 "M" LINE 0.50 m R+	1
63+10.0 "A" LINE 9.50 m R+	1	443+20.5 "E" LINE 14.50 m R+	1
63+16.0 "A" LINE 9.30 m R+	1	444+40.0 "E" LINE 14.50 m L+	1
63+19.5 "A" LINE 28.0 m R+	1	444+77.5 "E" LINE 15.00 m R+	1
66+39.0 "A" LINE 11.70 m R+	1	445+35.3 "E" LINE 14.73 m L+	1
66+39.5 "A" LINE 25.00 m R+	1		
TOTAL	11		10
GRAND TOTAL	21		

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

DRAINAGE QUANTITIES

DQ-15

ALLEN LAO | REVISED BY | WS
WUTHY SENG | DATE REVISED | 4/13/10
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR: JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	258	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

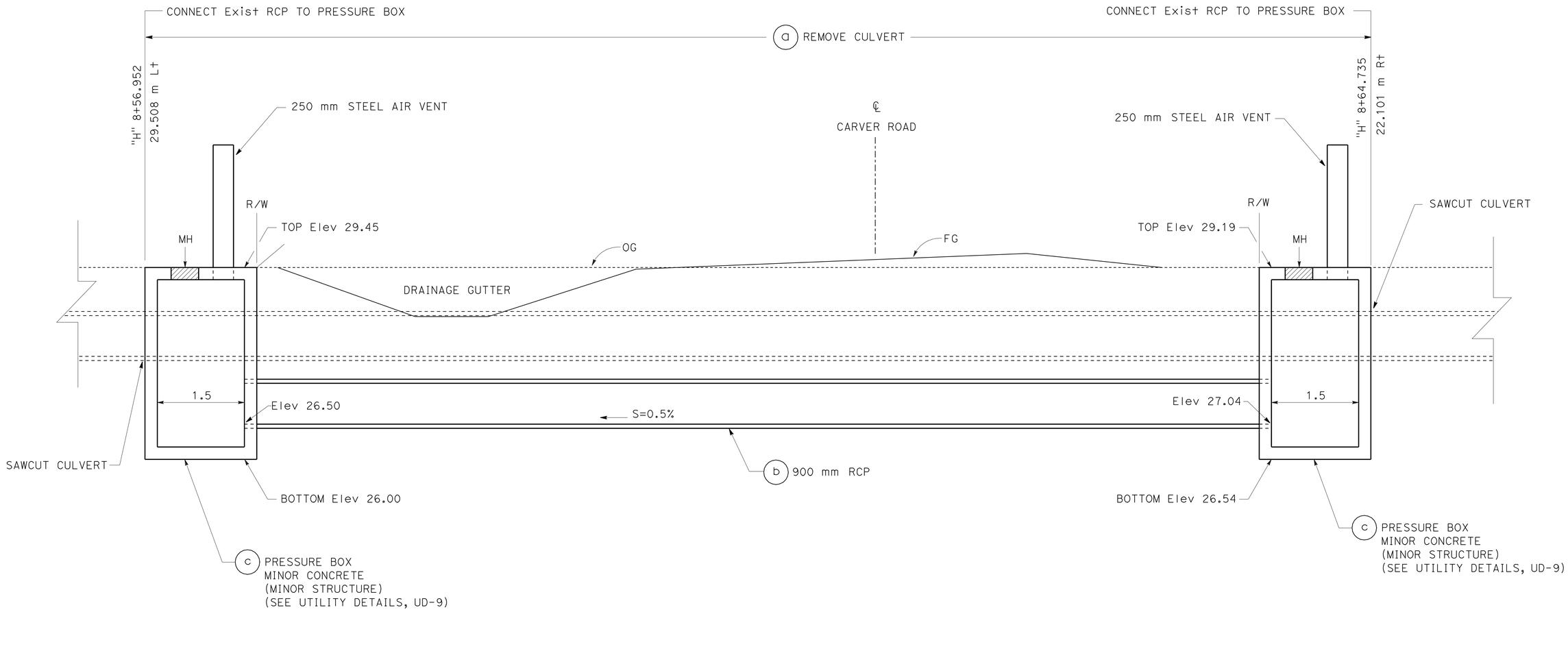
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

3

ABBREVIATION

MID - MODESTO IRRIGATION DISTRICT



MODESTO IRRIGATION DISTRICT FACILITY No. 1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

UTILITY DETAILS

NO SCALE **UD-1**

REVISED BY	EC
DATE REVISED	6/20/09
ERIC CHIN	
WUTHY SENG	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
JOSE HUERTA	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 05-22-09 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	259	522

Caltrans Metric

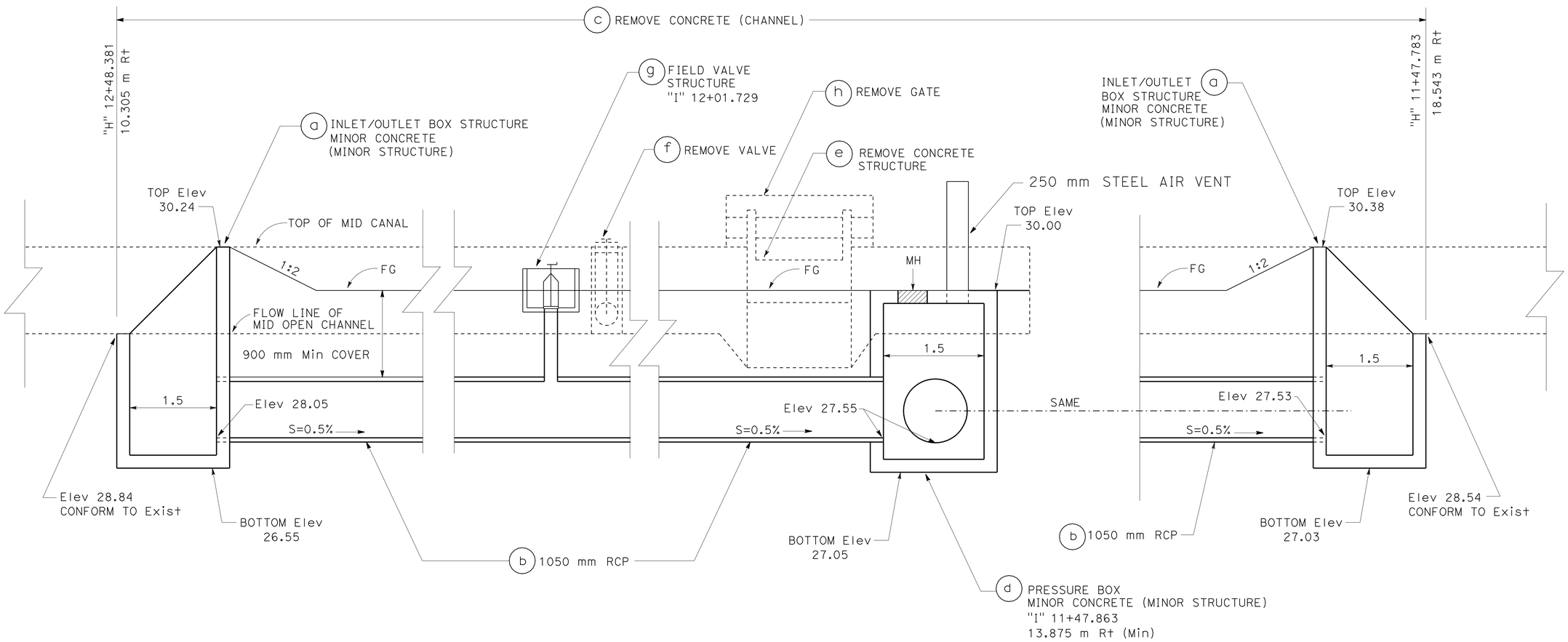
3

6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ERIC C-S CHIN
No. 71272
Exp. 12/31/09
CIVIL
STATE OF CALIFORNIA

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



MODESTO IRRIGATION DISTRICT FACILITY No. 2

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

UTILITY DETAILS

NO SCALE **UD-2**

REVISED BY	DATE REVISED
EC	6/20/09

ERIC CHIN — WUTHY SENG

CALCULATED-DESIGNED BY — CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans — DESIGN

LAST REVISION 00-00-00 — DATE PLOTTED => 19-APR-2012 — TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	260	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

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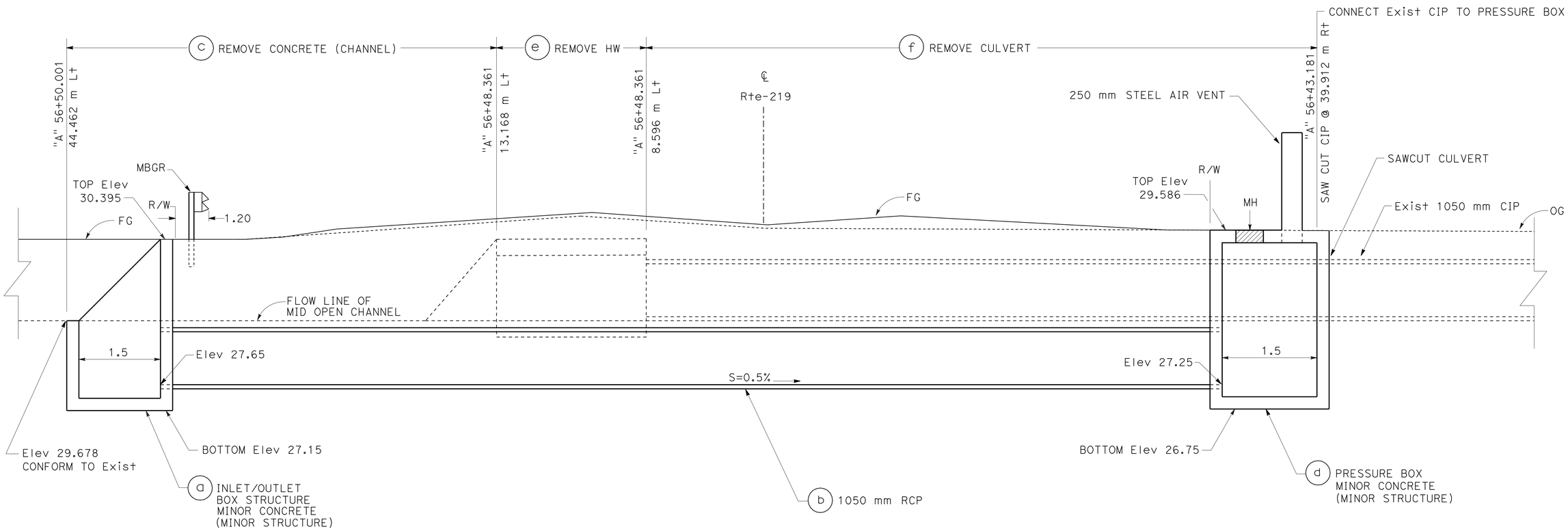

MODESTO IRRIGATION DISTRICT FACILITY No. 3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

UTILITY DETAILS

NO SCALE

UD-3

ERIC CHIN	EC
WUTHY SENG	6/20/09
REVISED BY	DATE REVISED
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
JOSE HUERTA	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	261	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

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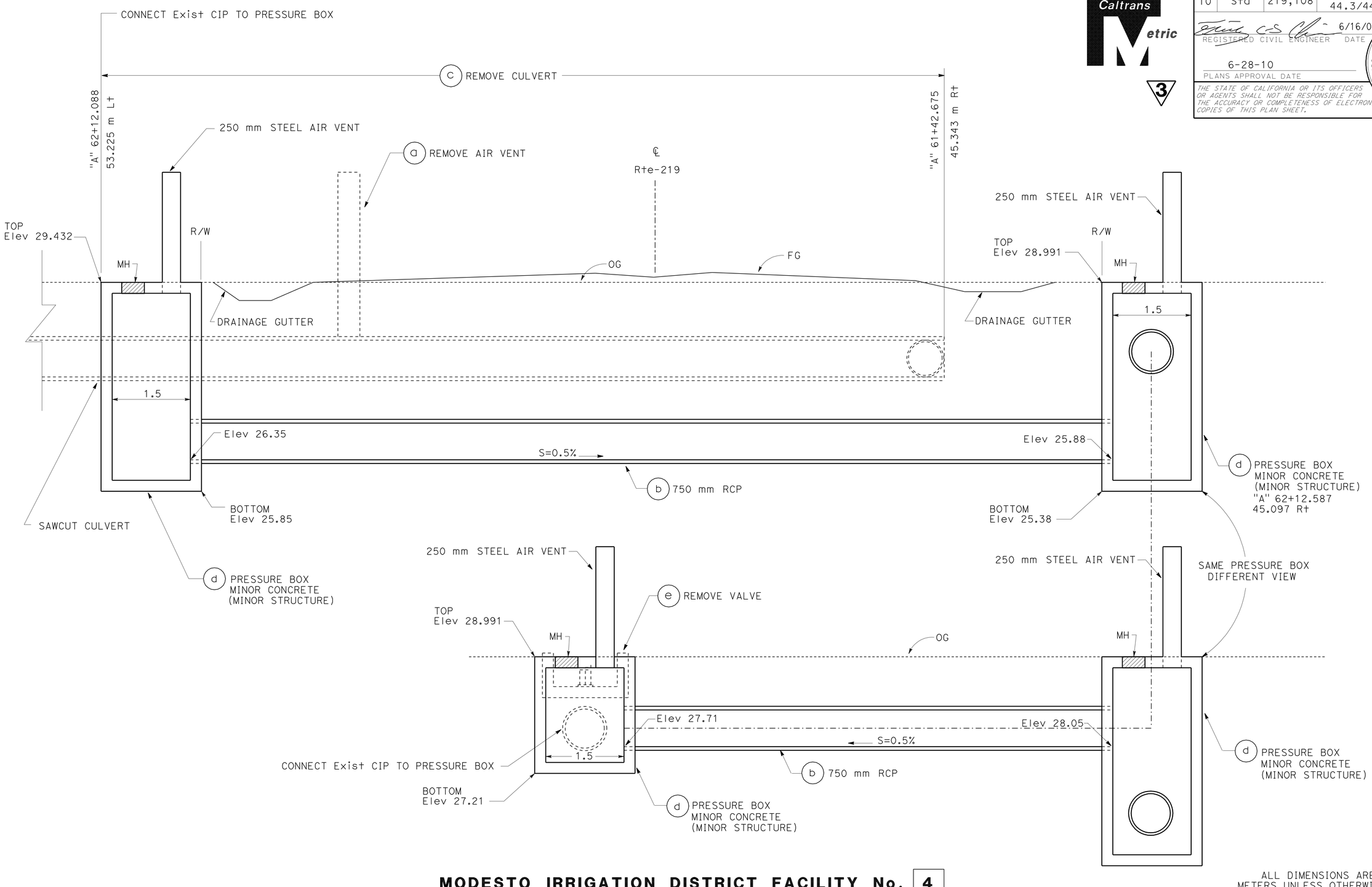

MODESTO IRRIGATION DISTRICT FACILITY No. 4

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

UTILITY DETAILS

NO SCALE

UD-4

		EC	6/20/09
		REVISED BY	DATE REVISED
		ERIC CHIN	WUTHY SENG
		CALCULATED-DESIGNED BY	CHECKED BY
		FUNCTIONAL SUPERVISOR	JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	262	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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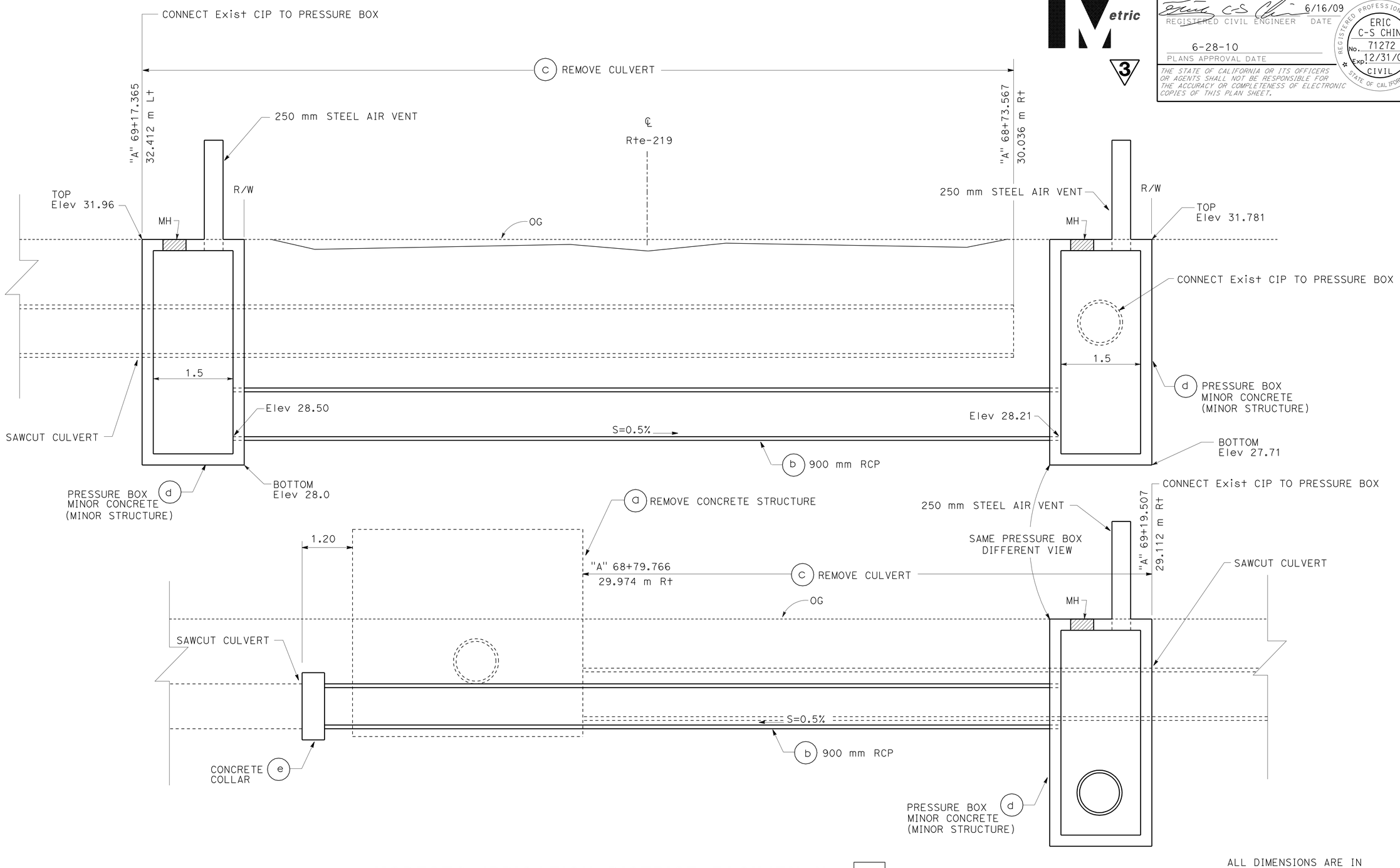

MODESTO IRRIGATION DISTRICT FACILITY No. 5

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

UTILITY DETAILS

NO SCALE **UD-5**

EC	6/20/09		
REVISED BY	DATE REVISED		
ERIC CHIN	WUTHY SENG		
CALCULATED-DESIGNED BY	CHECKED BY		
FUNCTIONAL SUPERVISOR	JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:46

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	266	522

REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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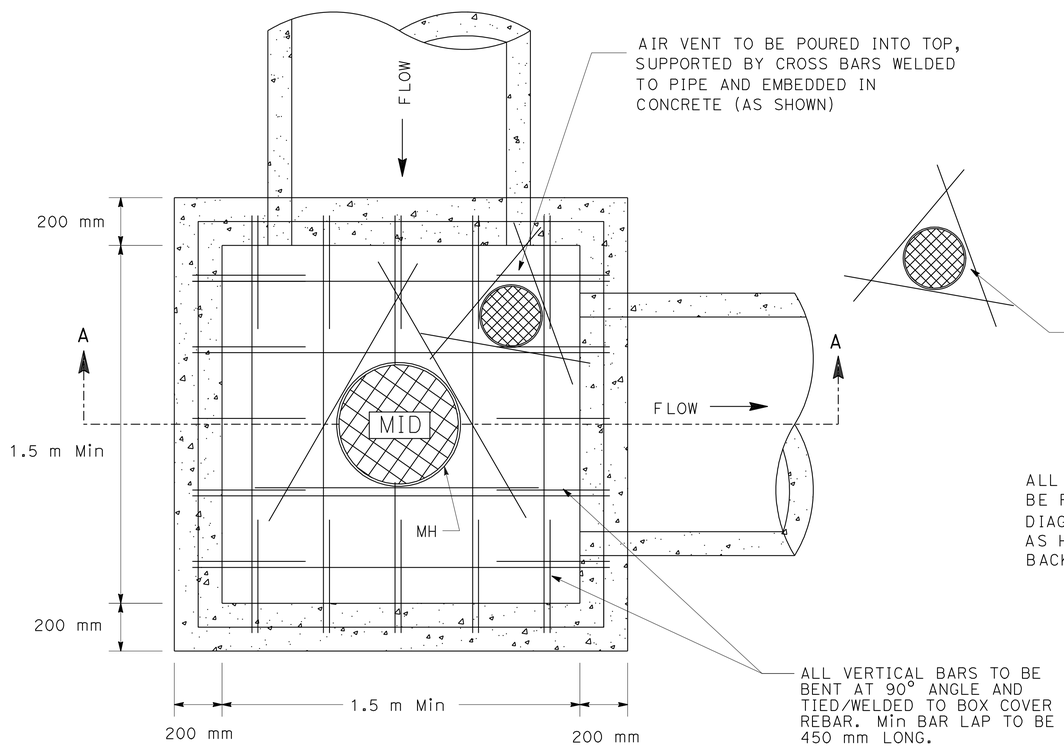
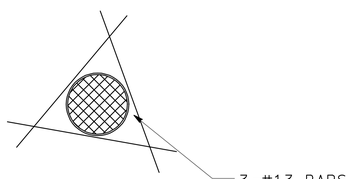
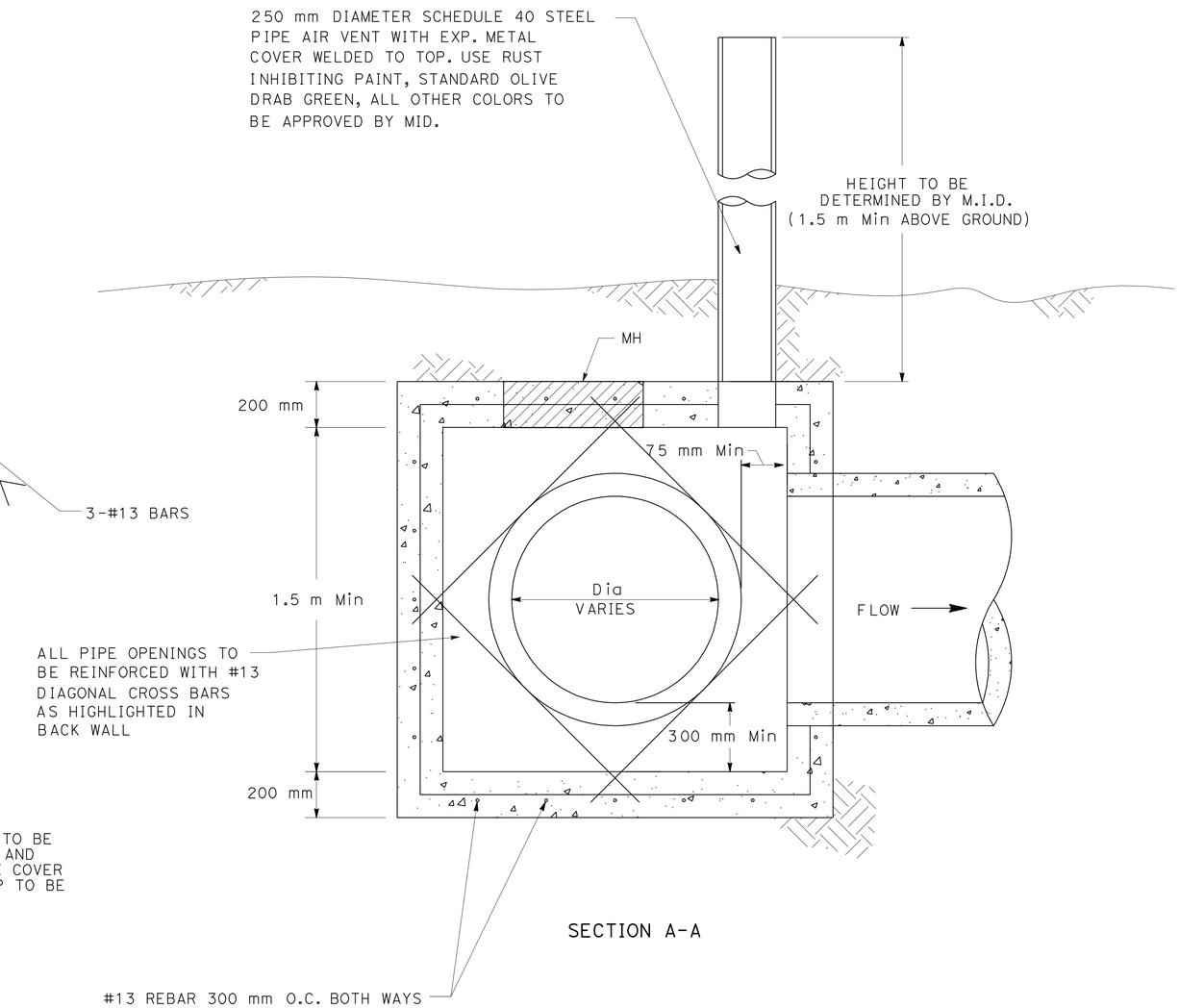
NOTES:

1. CONCRETE STRENGTH TO BE 20,500 Kpa @ 28 DAYS. NO ADMIXTURES SHALL BE INCORPORATED INTO CONCRETE MIX UNLESS PRIOR APPROVAL FROM M.I.D. IS OBTAINED.
2. ALL PIPE SHALL ENTER BOX AT OR NEAR PERPENDICULAR ANGLES TO THE BOX.
3. ALL COLD JOINTS REQUIRE 150 mm RUBBER WATER STOP EMBEDDED IN CENTER OF WALL AT COLD JOINT LOCATION PER MANUFACTURERS RECOMMENDATIONS.
4. CONSULT WITH MID FOR THE TOP ELEVATIONS OF ALL AIR VENTS.
5. STANDARD 600 mm HEAVY DUTY PRESSURE TYPE MANHOLE FRAME AND COVER WITH FOUR OF 15 mm DIAMETER S.S BOLTS-PHOENIX IRON WORKS, OAKLAND, CALIFORNIA No. P-1090 WITH 7 mm ROUND NEOPRENE GASKET AND "MID" CAST IN COVER. MANHOLE FRAME AND COVER SHALL BE PLACED AT THE CENTER ON TOP OF THE PRESSURE BOX.



PLAN VIEW





SECTION A-A

PRESSURE BOX
FOR CONCRETE PIPELINE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

UTILITY DETAILS

NO SCALE **UD-9**

REVISED BY	DATE REVISED
EC	6/23/09

CALCULATED-DESIGNED BY: ERIC CHIN
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	267	522

REGISTERED CIVIL ENGINEER DATE 6/16/09

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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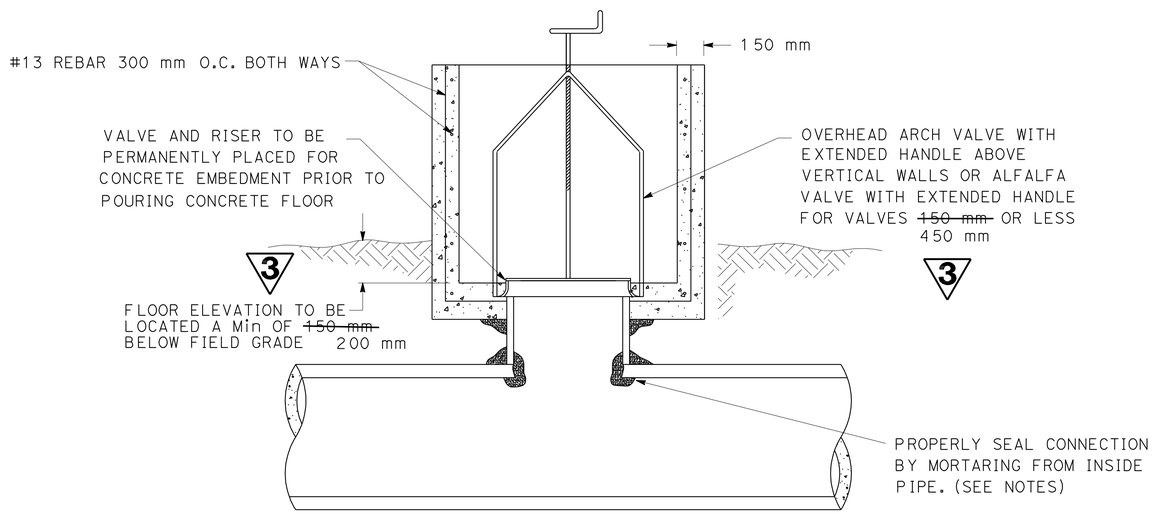
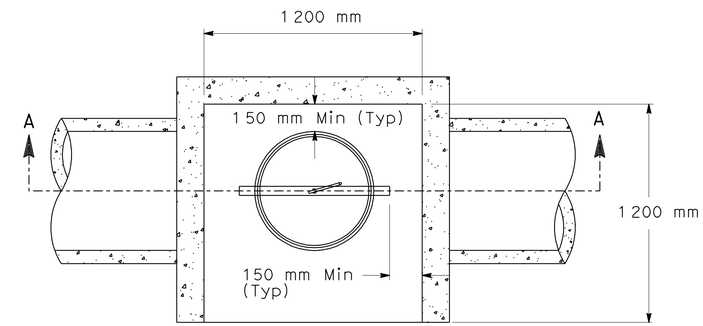
NOTES:

1. CONCRETE STRENGTH TO BE 20,500 Kpa @ 28 DAYS. NO ADMIXTURES SHALL BE INCORPORATED INTO CONCRETE MIX UNLESS PRIOR APPROVAL FROM M.I.D. IS OBTAINED.
2. PROPERLY SEAL CONNECTION BY MORTARING FROM INSIDE PIPELINE AFTER PERMANENT PLACEMENT OF FIELD VALVE OPENING. USE SOFT BRISTLE BRUSH TO BLEND MORTAR AND CONCRETE TOGETHER. USE MID STANDARD MORTAR MIX OR EQUIVALENT.



SECTION A-A



TOP VIEW

FIELD VALVE STRUCTURE FOR CONCRETE PIPELINE

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

UTILITY DETAILS

NO SCALE **UD-10**

CALCULATED-DESIGNED BY	ERIC CHIN	EC
CHECKED BY	WUTHY SENG	6/23/09
FUNCTIONAL SUPERVISOR	JOSE HUERTA	REVISED BY / DATE REVISED

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REGISTERED CIVIL ENGINEER 6/16/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC C-S CHIN No. 71272 Exp. 12/31/09 CIVIL STATE OF CALIFORNIA

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UTILITY QUANTITIES

FACILITY No. X	STATION	REMOVE CULVERT	REMOVE HEADWALL	REMOVE VALVE	REMOVE GATE	REMOVE AIR VENT	REMOVE Conc (STRUCTURE)	REMOVE CONCRETE (CHANNEL)	MINOR Conc (MINOR Struc)	Misc IRON AND STEEL	CONCRETE COLLAR (N)	250 mm STEEL AIR VENT	CONCRETE PLUG (N)	FIELD VALVE STRUCTURE	1050 mm RCP	900 mm RCP	750 mm RCP (RGJ)	MANHOLE FRAME COVER
		m	EA	EA	EA	EA	m^3	m	m^3	kg	EA	m	EA	EA	m	m	m	EA
1	"H" 8+56.952 TO "H" 8+64.735	52.2							11.53	458.4						47.8		2
2	"H" 11+47.783 TO "H" 12+48.381			1	1		10.95	108.1	14.39	922.4				1	101.2			1
3	"A" 56+43.181 TO "A" 56+49.045	49.3	1					31.3	9.58	381.1					62.9			1
4	"A" 61+42.675 TO "A" 62+12.088	166.3		1		1			16.77	666.9							161.6	3
5	"A" 69+17.365 TO "A" 69+19.507	115.2					2.70		10.54	419.2	1					101.1		2
6	"A" 75+85.622 TO "A" 77+34.670	194.5											2					
P1	"A" 43+86.330 L+	44.1		1								1.5	1					
P2	"A" 48+24.544 L+	81.5		2								1.5	1					
P3	"A" 52+67.644 L+	5.6										1.5	1					
P4	"H" 9+33.222 L+												4					
P5	"A" 58+22.990 L+	18.1		1								1.5	1					
P6	"A" 58+52.789 L+	10.3										1.5	1					
P7	"A" 66+52.766 L+	37.4		1								1.5	1					
P8	"A" 70+62.986 R+						0.90					1.5						
P9	"D" 2+36.550 L+	20.0										1.5	1					
TOTAL		* 794.6	1	7	1	1	14.55	139.4	* 62.81	* 2848.0		12.0		1	164.1	148.9	161.6 *	8 *

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

NOTES:

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

* SEE DRAINAGE QUANTITIES SHEET, DQ-15, FOR TOTAL QUANTITIES.

UTILITY QUANTITIES
UQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: ERIC CHIN
CHECKED BY: WUTHY SENG
REVISED BY: EC
DATE REVISED: 6/23/09

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:46

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	273	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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LEGEND

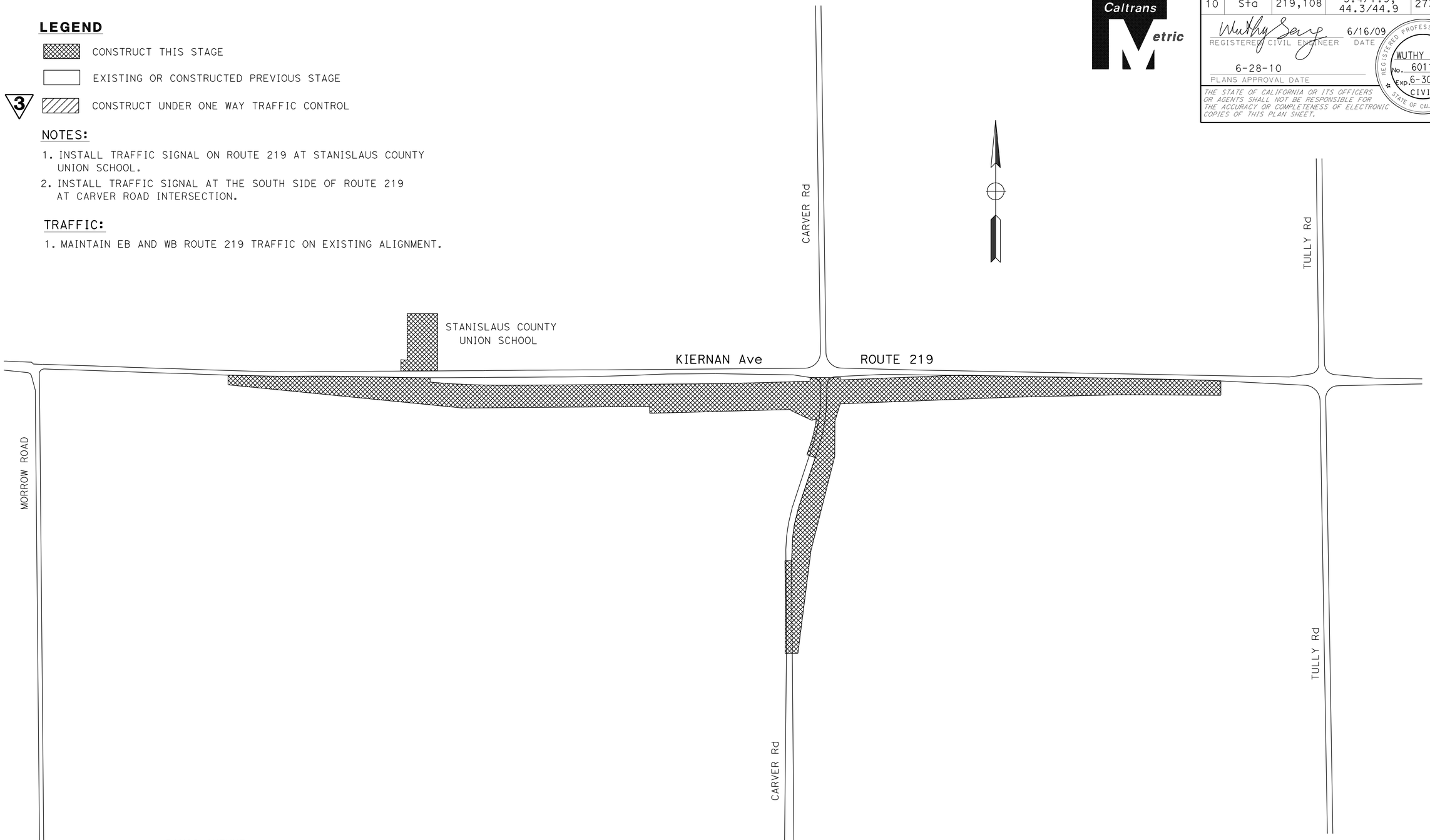
- CONSTRUCT THIS STAGE
- EXISTING OR CONSTRUCTED PREVIOUS STAGE
- (3) CONSTRUCT UNDER ONE WAY TRAFFIC CONTROL

NOTES:

1. INSTALL TRAFFIC SIGNAL ON ROUTE 219 AT STANISLAUS COUNTY UNION SCHOOL.
2. INSTALL TRAFFIC SIGNAL AT THE SOUTH SIDE OF ROUTE 219 AT CARVER ROAD INTERSECTION.

TRAFFIC:

1. MAINTAIN EB AND WB ROUTE 219 TRAFFIC ON EXISTING ALIGNMENT.



(3) **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION
(STAGE 1)

NO SCALE

SC-1

THIS PLAN ACCURATE FOR STA.GE CONSTRUCTION WORK ONLY.

HUONG LE	HL		
WUTHY SENG	6/23/09		
CALCULATED-DESIGNED BY	REVISED BY		
CHECKED BY	DATE REVISED		
FUNCTIONAL SUPERVISOR			
JOSE HUERTA			

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Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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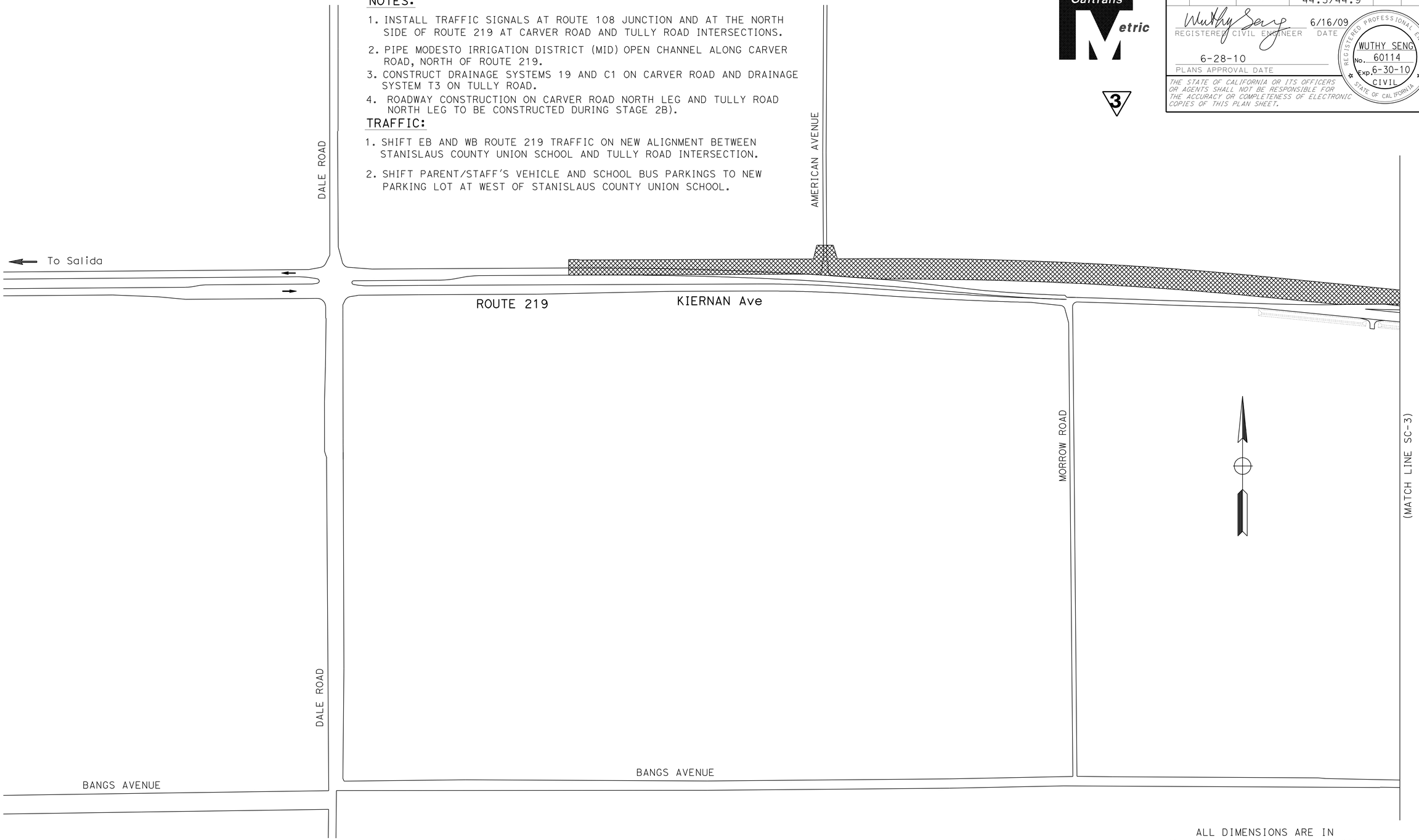
NOTES:

1. INSTALL TRAFFIC SIGNALS AT ROUTE 108 JUNCTION AND AT THE NORTH SIDE OF ROUTE 219 AT CARVER ROAD AND TULLY ROAD INTERSECTIONS.
2. PIPE MODESTO IRRIGATION DISTRICT (MID) OPEN CHANNEL ALONG CARVER ROAD, NORTH OF ROUTE 219.
3. CONSTRUCT DRAINAGE SYSTEMS 19 AND C1 ON CARVER ROAD AND DRAINAGE SYSTEM T3 ON TULLY ROAD.
4. ROADWAY CONSTRUCTION ON CARVER ROAD NORTH LEG AND TULLY ROAD NORTH LEG TO BE CONSTRUCTED DURING STAGE 2B).

TRAFFIC:

1. SHIFT EB AND WB ROUTE 219 TRAFFIC ON NEW ALIGNMENT BETWEEN STANISLAUS COUNTY UNION SCHOOL AND TULLY ROAD INTERSECTION.
2. SHIFT PARENT/STAFF'S VEHICLE AND SCHOOL BUS PARKINGS TO NEW PARKING LOT AT WEST OF STANISLAUS COUNTY UNION SCHOOL.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION (STAGE 2A)

NO SCALE

SC-2

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

REVISED BY	DATE REVISED
HL	6/23/09

HUONG LE — CALCULATED-DESIGNED BY
WUTHY SENG — CHECKED BY
FUNCTIONAL SUPERVISOR: JOSE HUERTA

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Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	277	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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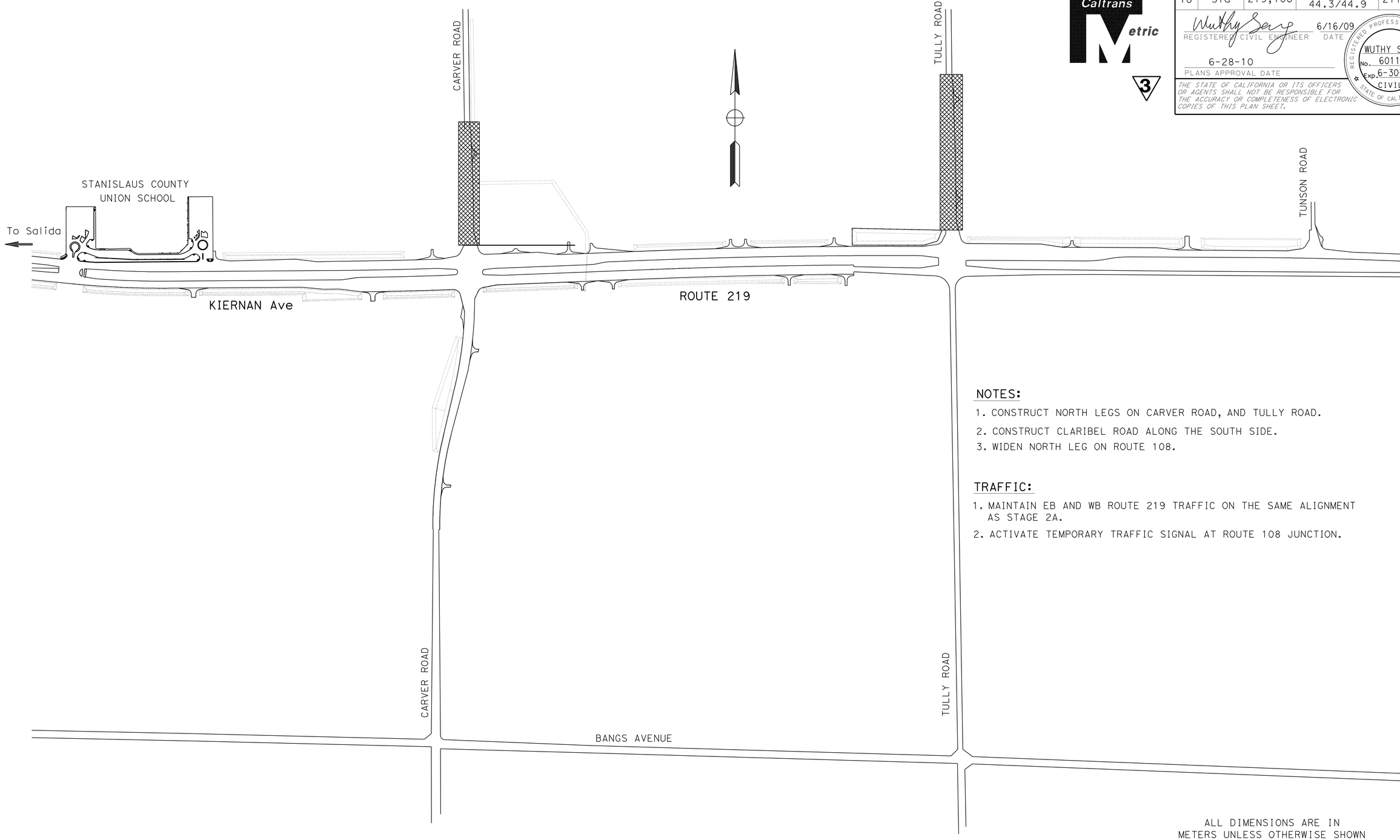

NOTES:

1. CONSTRUCT NORTH LEGS ON CARVER ROAD, AND TULLY ROAD.
2. CONSTRUCT CLARIBEL ROAD ALONG THE SOUTH SIDE.
3. WIDEN NORTH LEG ON ROUTE 108.

TRAFFIC:

1. MAINTAIN EB AND WB ROUTE 219 TRAFFIC ON THE SAME ALIGNMENT AS STAGE 2A.
2. ACTIVATE TEMPORARY TRAFFIC SIGNAL AT ROUTE 108 JUNCTION.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

STAGE CONSTRUCTION
(STAGE 2B)

NO SCALE

SC-5

REVISED BY	DATE REVISED
HL	6/23/09

CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	278	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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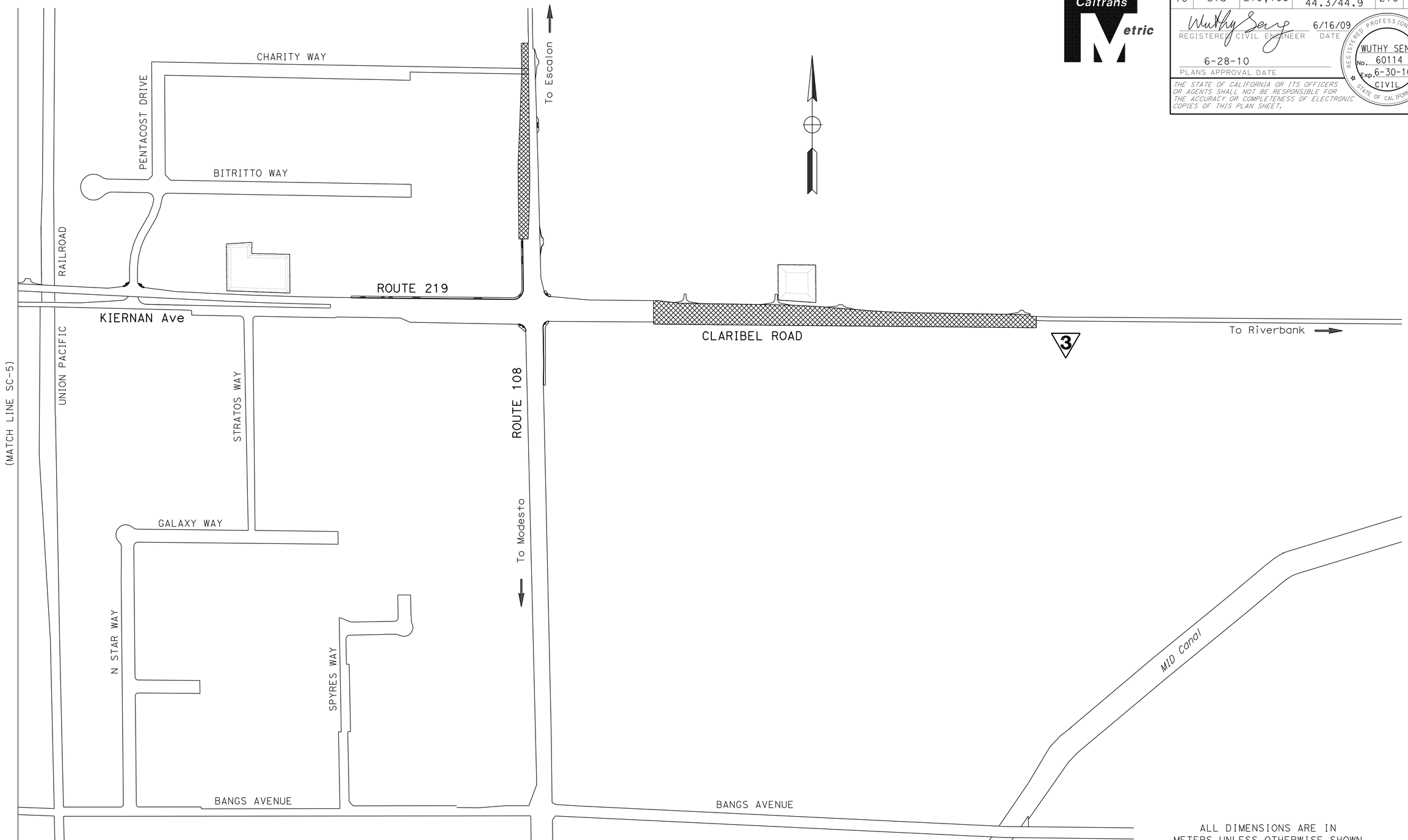

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION (STAGE 2B)

NO SCALE

SC-6

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

HUONG LE	REVISED BY	HL	
WUTHY SENG	DATE REVISED	6/23/09	
CALCULATED-DESIGNED BY			
CHECKED BY			
FUNCTIONAL SUPERVISOR			
JOSE HUERTA			

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Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	279	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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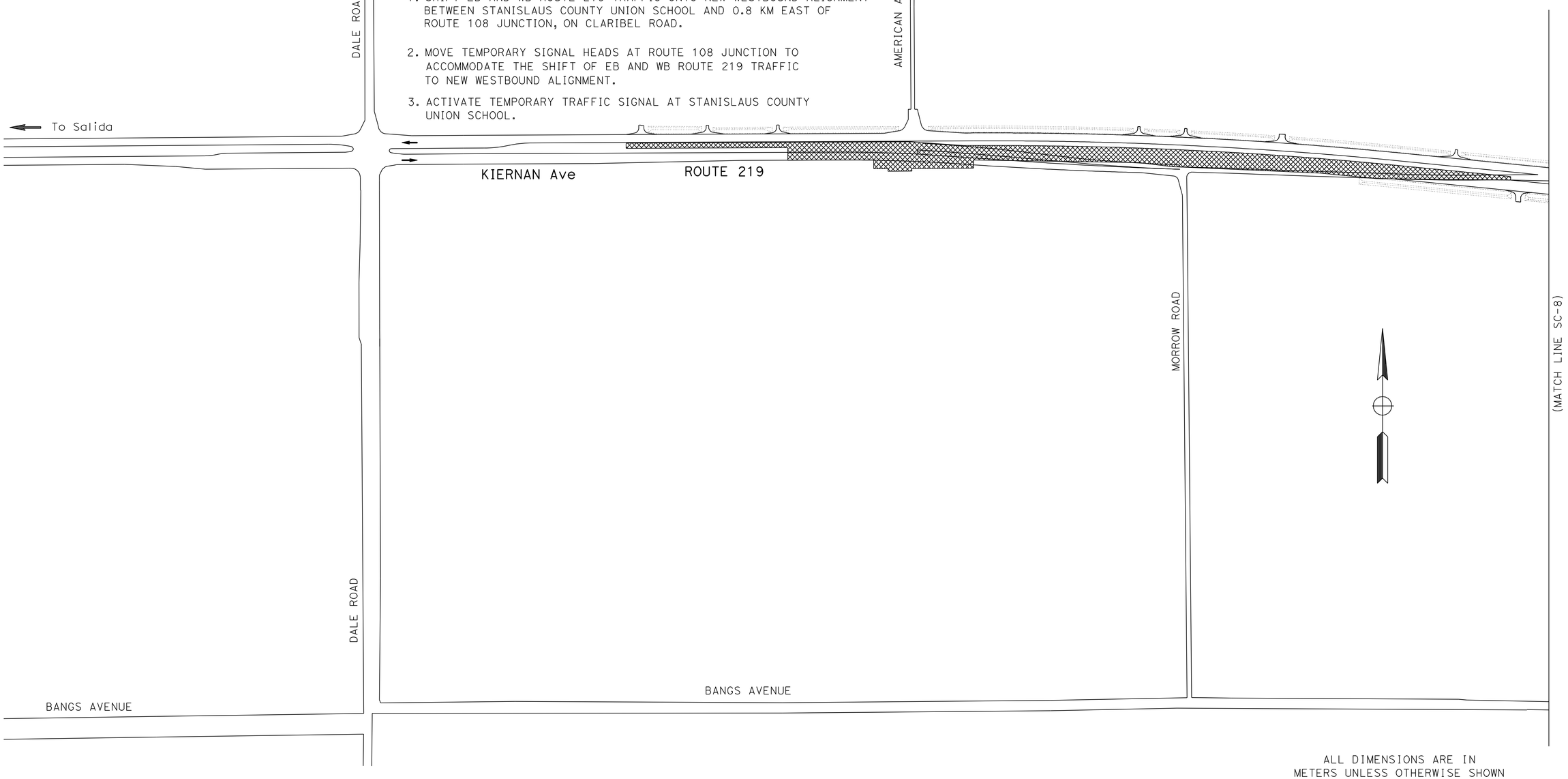
3 NOTES:

1. INSTALL TRAFFIC SIGNAL AT THE SOUTH SIDE OF ROUTE 219 AT TULLY ROAD INTERSECTION,
2. CONSTRUCT DRAINAGE SYSTEM T1 ON TULLY ROAD.
3. ROADWAY CONSTRUCTION ON TULLY ROAD SOUTH LEG TO BE CONSTRUCTED DURING STAGE 3B.

TRAFFIC:

1. SHIFT EB AND WB ROUTE 219 TRAFFIC ONTO NEW WESTBOUND ALIGNMENT BETWEEN STANISLAUS COUNTY UNION SCHOOL AND 0.8 KM EAST OF ROUTE 108 JUNCTION, ON CLARIBEL ROAD.
2. MOVE TEMPORARY SIGNAL HEADS AT ROUTE 108 JUNCTION TO ACCOMMODATE THE SHIFT OF EB AND WB ROUTE 219 TRAFFIC TO NEW WESTBOUND ALIGNMENT.
3. ACTIVATE TEMPORARY TRAFFIC SIGNAL AT STANISLAUS COUNTY UNION SCHOOL.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION (STAGE 3A)

NO SCALE

SC-7

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

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	REVISED BY	DATE REVISED
	HL	6/23/09

CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:46

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	282	522

Wuthy Seng 6/16/09
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WUTHY SENG
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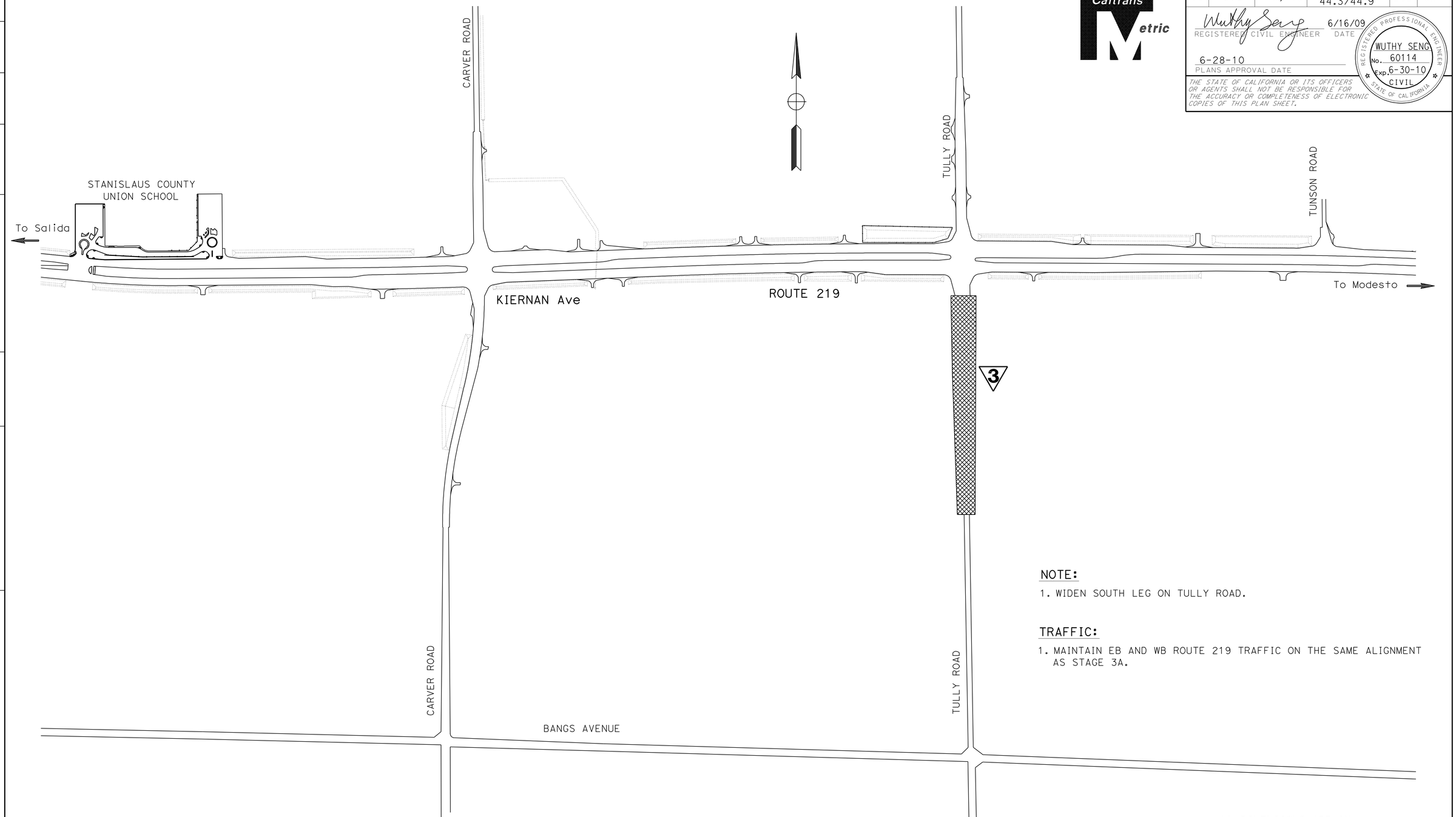

NOTE:

1. WIDEN SOUTH LEG ON TULLY ROAD.

TRAFFIC:

1. MAINTAIN EB AND WB ROUTE 219 TRAFFIC ON THE SAME ALIGNMENT AS STAGE 3A.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION (STAGE 3B)

NO SCALE

SC-10

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

REVISED BY	HL
DATE REVISED	6/23/09
CALCULATED-DESIGNED BY	HUONG LE
CHECKED BY	WUTHY SENG
FUNCTIONAL SUPERVISOR	JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DESIGN

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Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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Caltrans Metric

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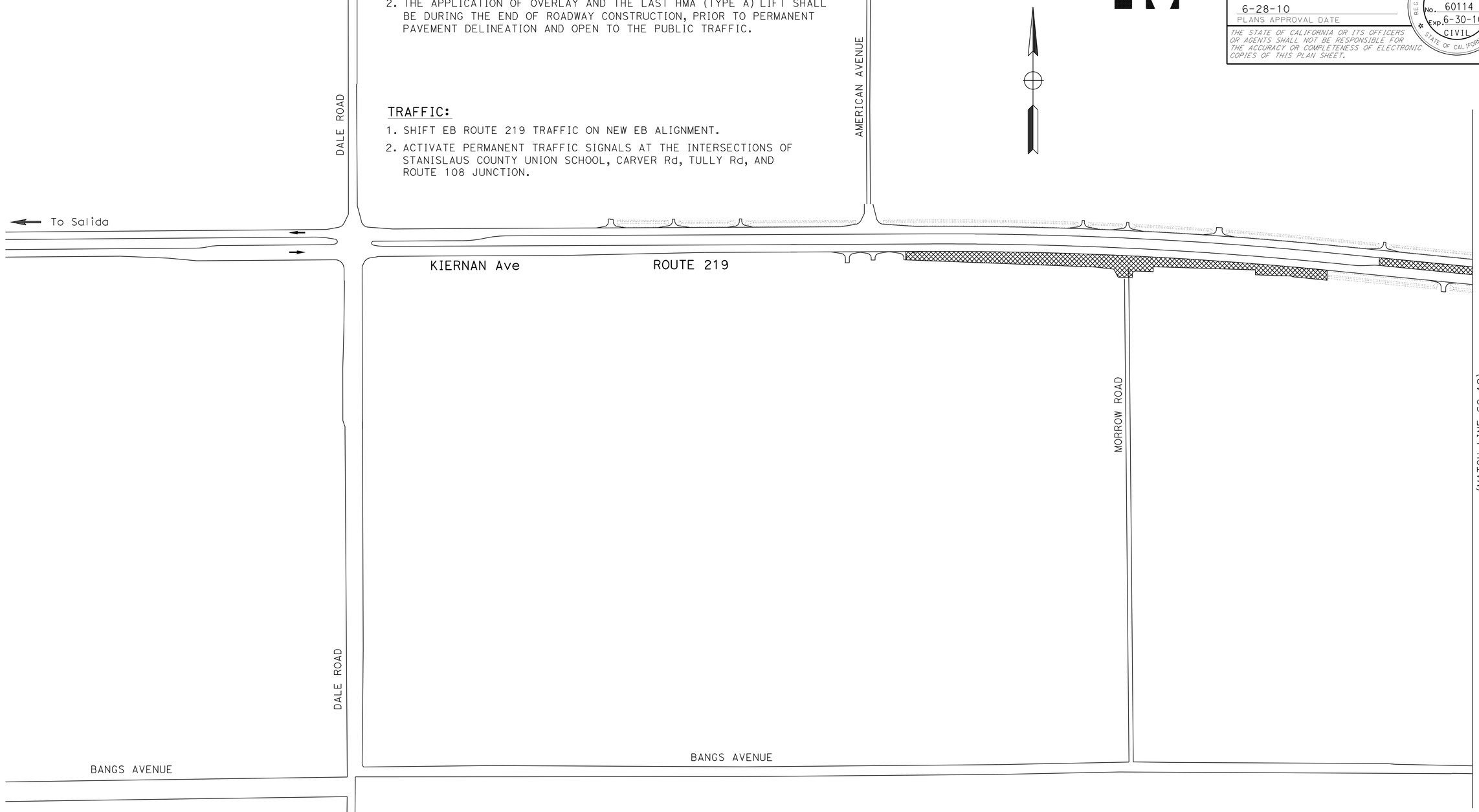
NOTES:

1. CONSTRUCT RAISED ISLANDS AT SIGNAL INTERSECTIONS AT STANISLAUS COUNTY UNION SCHOOL AND ROUTE 108 JUNCTION.
2. THE APPLICATION OF OVERLAY AND THE LAST HMA (TYPE A) LIFT SHALL BE DURING THE END OF ROADWAY CONSTRUCTION, PRIOR TO PERMANENT PAVEMENT DELINEATION AND OPEN TO THE PUBLIC TRAFFIC.

TRAFFIC:

1. SHIFT EB ROUTE 219 TRAFFIC ON NEW EB ALIGNMENT.
2. ACTIVATE PERMANENT TRAFFIC SIGNALS AT THE INTERSECTIONS OF STANISLAUS COUNTY UNION SCHOOL, CARVER Rd, TULLY Rd, AND ROUTE 108 JUNCTION.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION (STAGE 4)

NO SCALE

SC-11

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA
CALCULATED-DESIGNED BY: HUONG LE
CHECKED BY: WUTHY SENG
REVISED BY: HL
DATE REVISED: 6/23/09

LAST REVISION 00-00-00
DATE PLOTTED => 20-APR-2012
TIME PLOTTED => 08:26

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	285	522

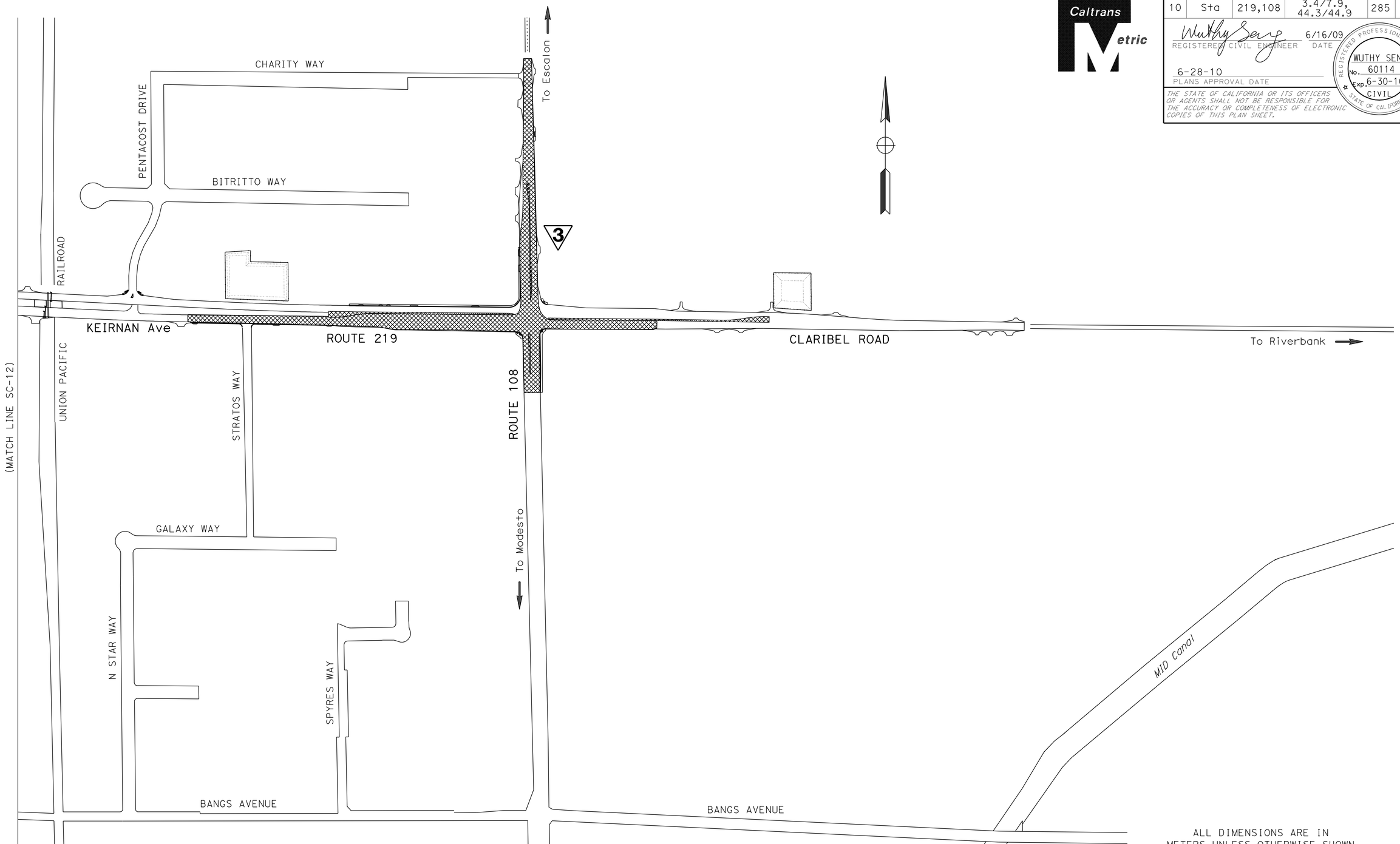
Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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

Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION
(STAGE 4)

NO SCALE

SC-13

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

HUONG LE	REVISED BY	HL	
WUTHY SENG	DATE REVISED	6/23/09	
CALCULATED-DESIGNED BY	FUNCTIONAL SUPERVISOR		
CHECKED BY	JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	307	522

REGISTERED CIVIL ENGINEER — DATE 6/12/09

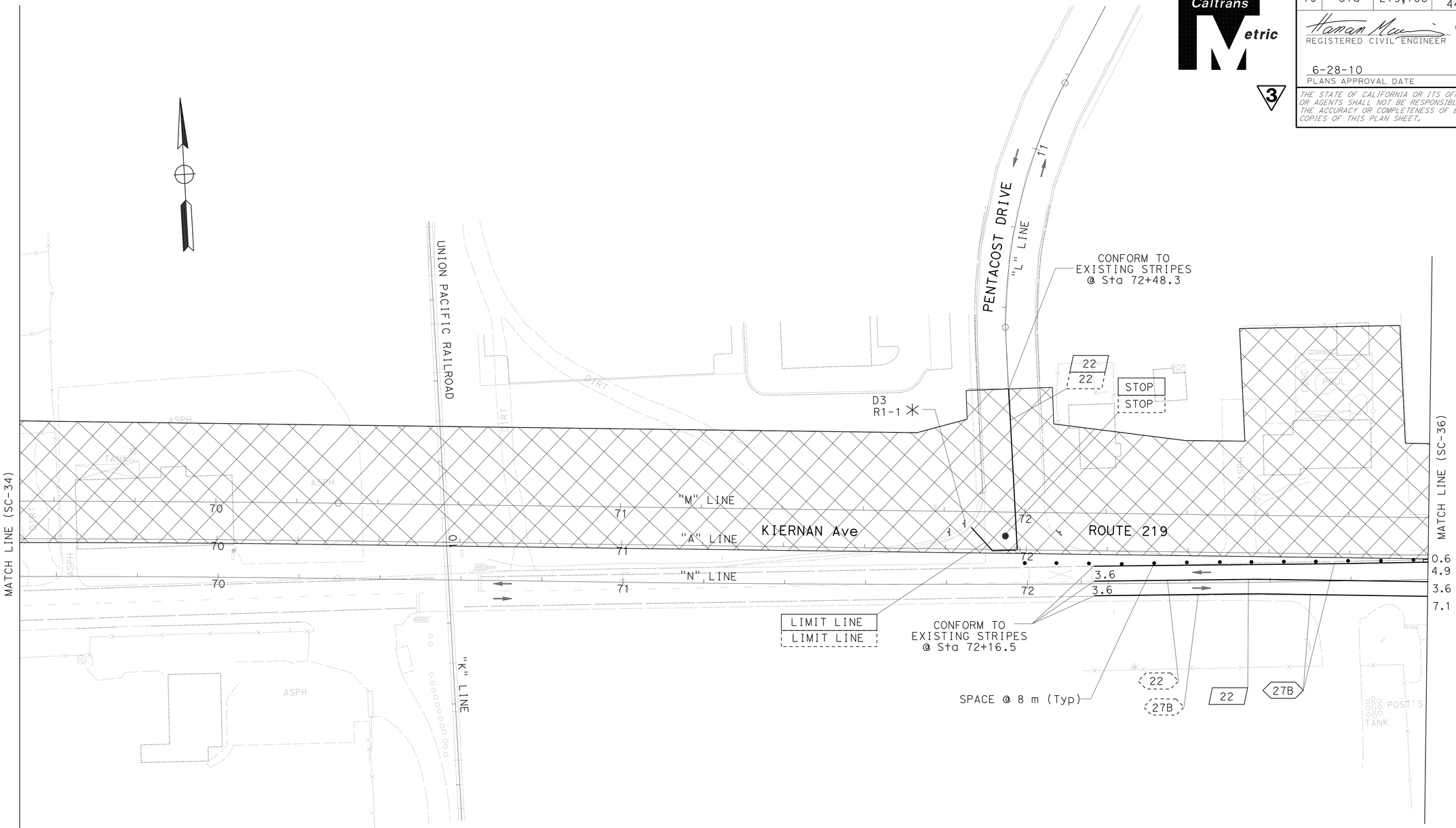
6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

3



ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2A)

SCALE 1:500

SC-35

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**
THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

CALCULATED-DESIGNED BY	CECILE NGUYEN	REVISED BY CN
CHECKED BY	QUAN H TRINH	DATE REVISED 7/3/09
FUNCTIONAL SUPERVISOR	HASSAN MAREI	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	313	522

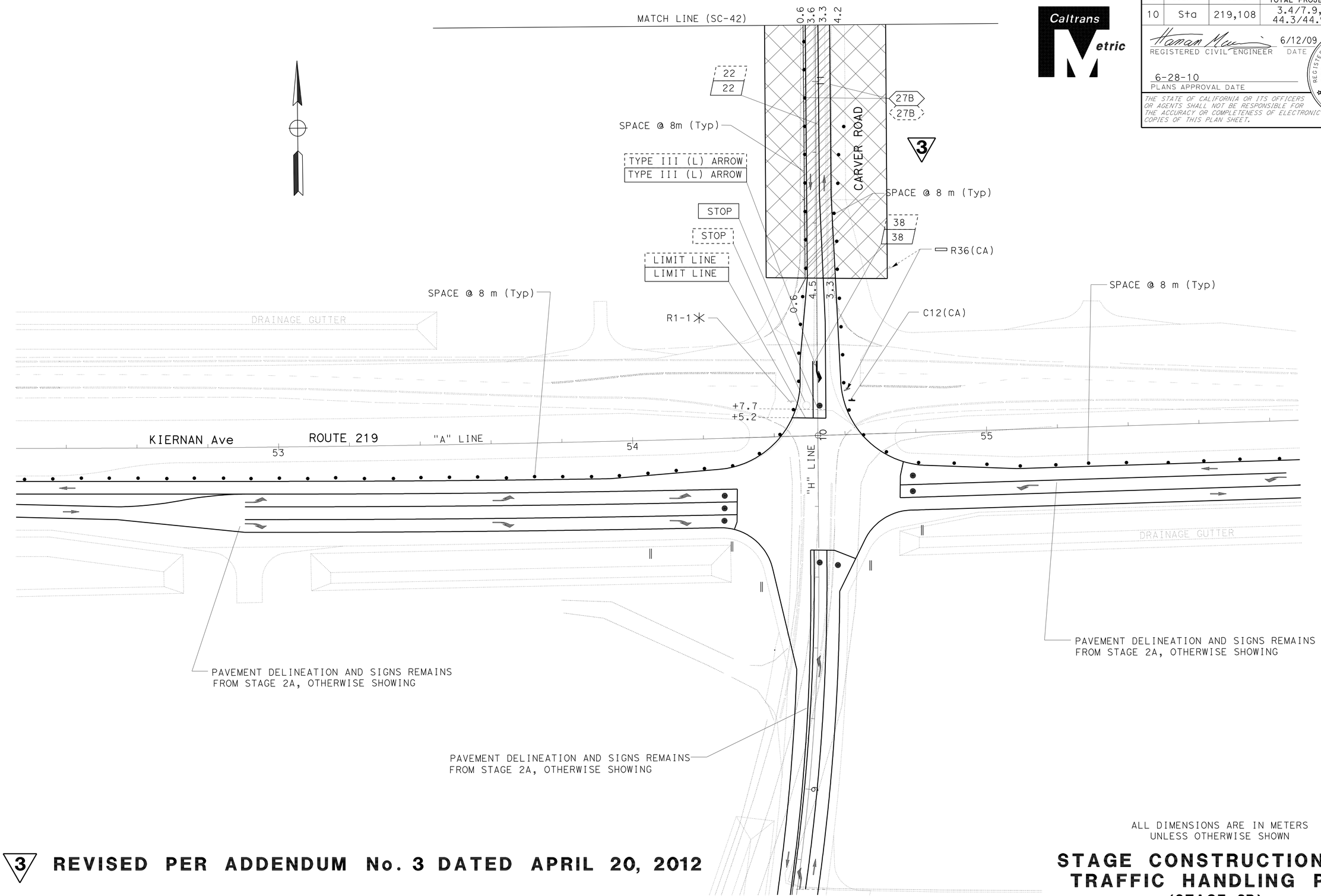
Caltrans Metric

Hassan Marei 6/12/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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



3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-41

CN	7/3/09
REVISED BY	DATE REVISED
CECILE NGUYEN	
QUAN H TRINH	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
HASSAN MAREI	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	314	522

Caltrans Metric

REGISTERED CIVIL ENGINEER 6/12/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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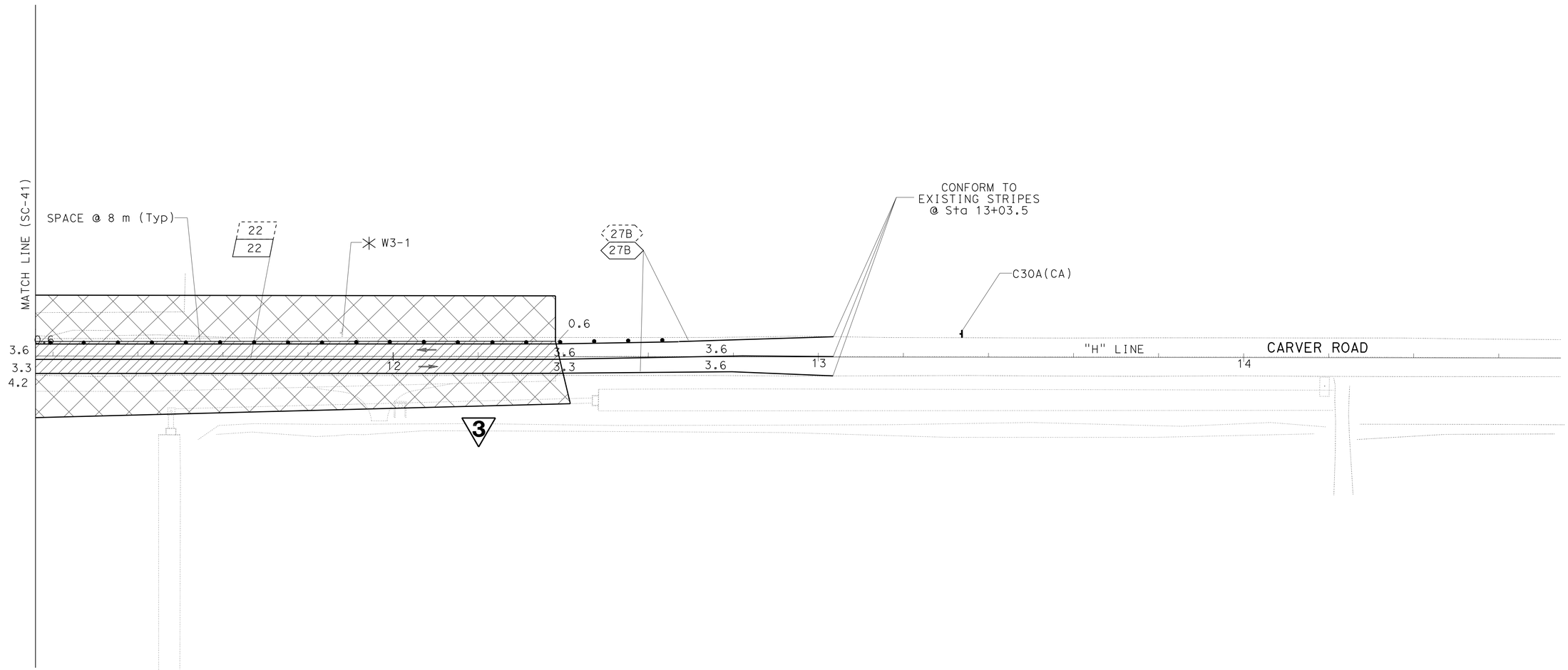


3 REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-42

CN	7/3/09		
REVISED BY	DATE REVISED		
CECILE NGUYEN			
QUAN H TRINH			
CALCULATED-DESIGNED BY			
CHECKED BY			
FUNCTIONAL SUPERVISOR			
HASSAN MAREI			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 19-APR-2012 TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	315	522

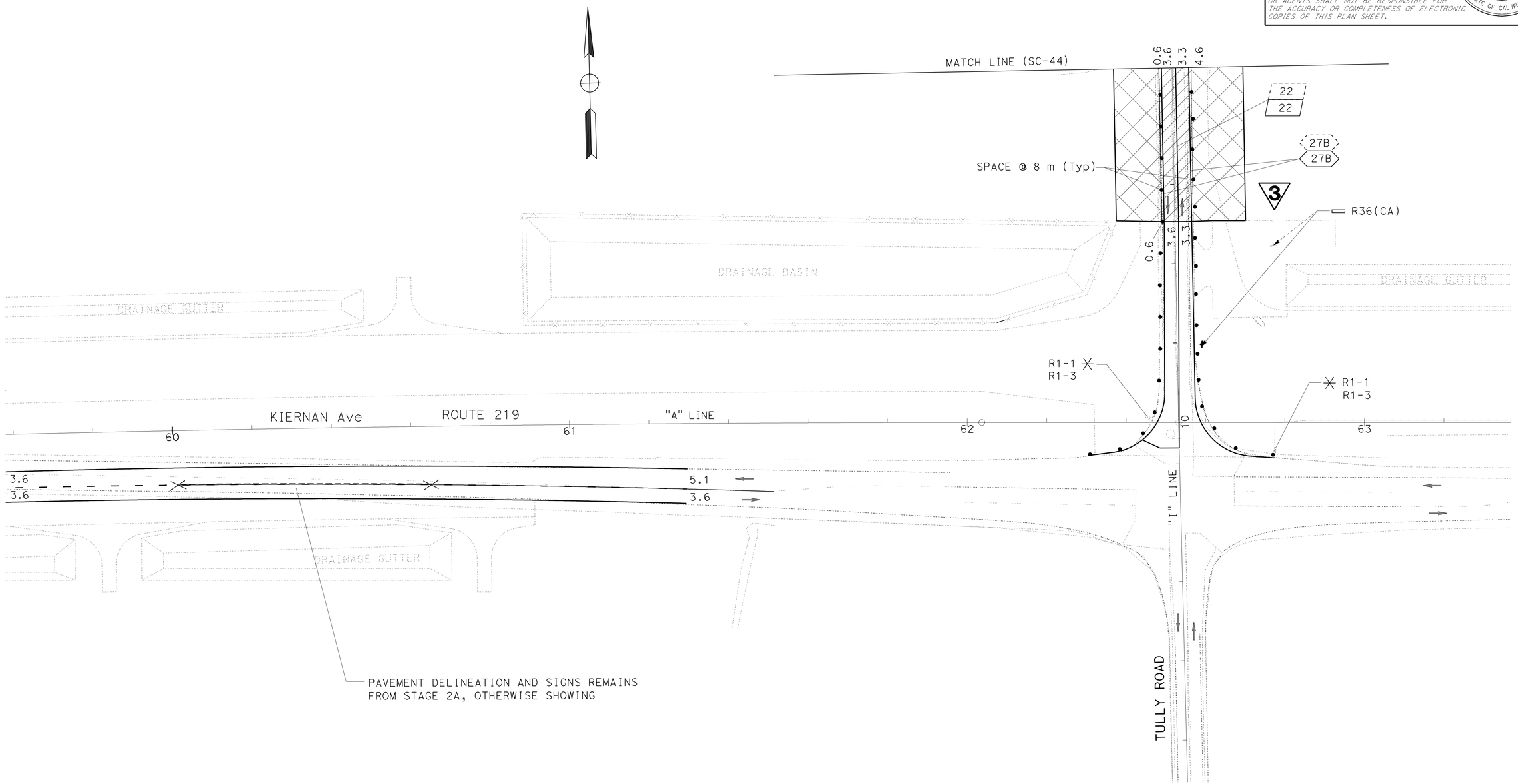
Hassan Marei 6/12/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric



PAVEMENT DELINEATION AND SIGNS REMAINS FROM STAGE 2A, OTHERWISE SHOWING

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-43

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

CALCULATED-DESIGNED BY	CECILE NGUYEN
CHECKED BY	QUAN H TRINH
REVISED BY	CN
DATE REVISED	7/3/09
FUNCTIONAL SUPERVISOR	HASSAN MAREI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	316	522

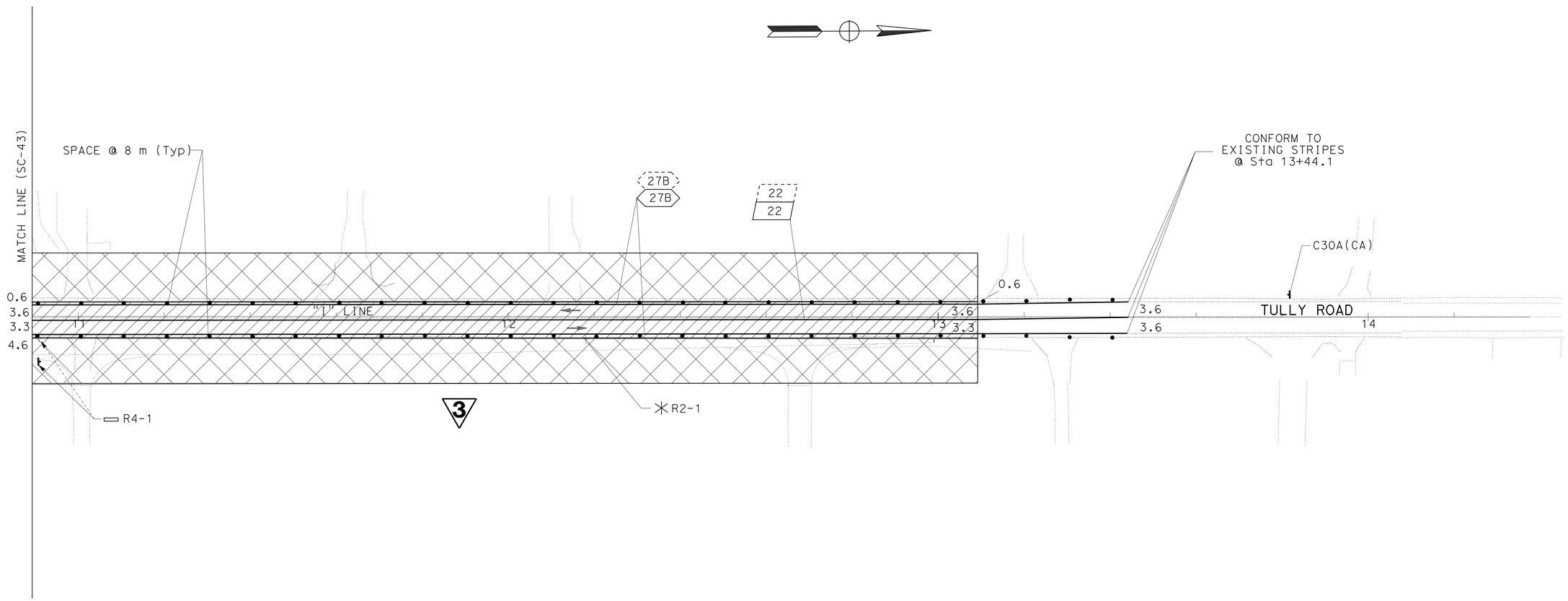
Caltrans Metric

REGISTERED CIVIL ENGINEER 6/12/09 DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-44

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: HASSAN MAREI
CALCULATED-DESIGNED BY: CECILE NGUYEN
CHECKED BY: QUAN H TRINH
REVISED BY: CN
DATE REVISED: 7/3/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	318	522

Caltrans Metric

Hassan Marei 6/12/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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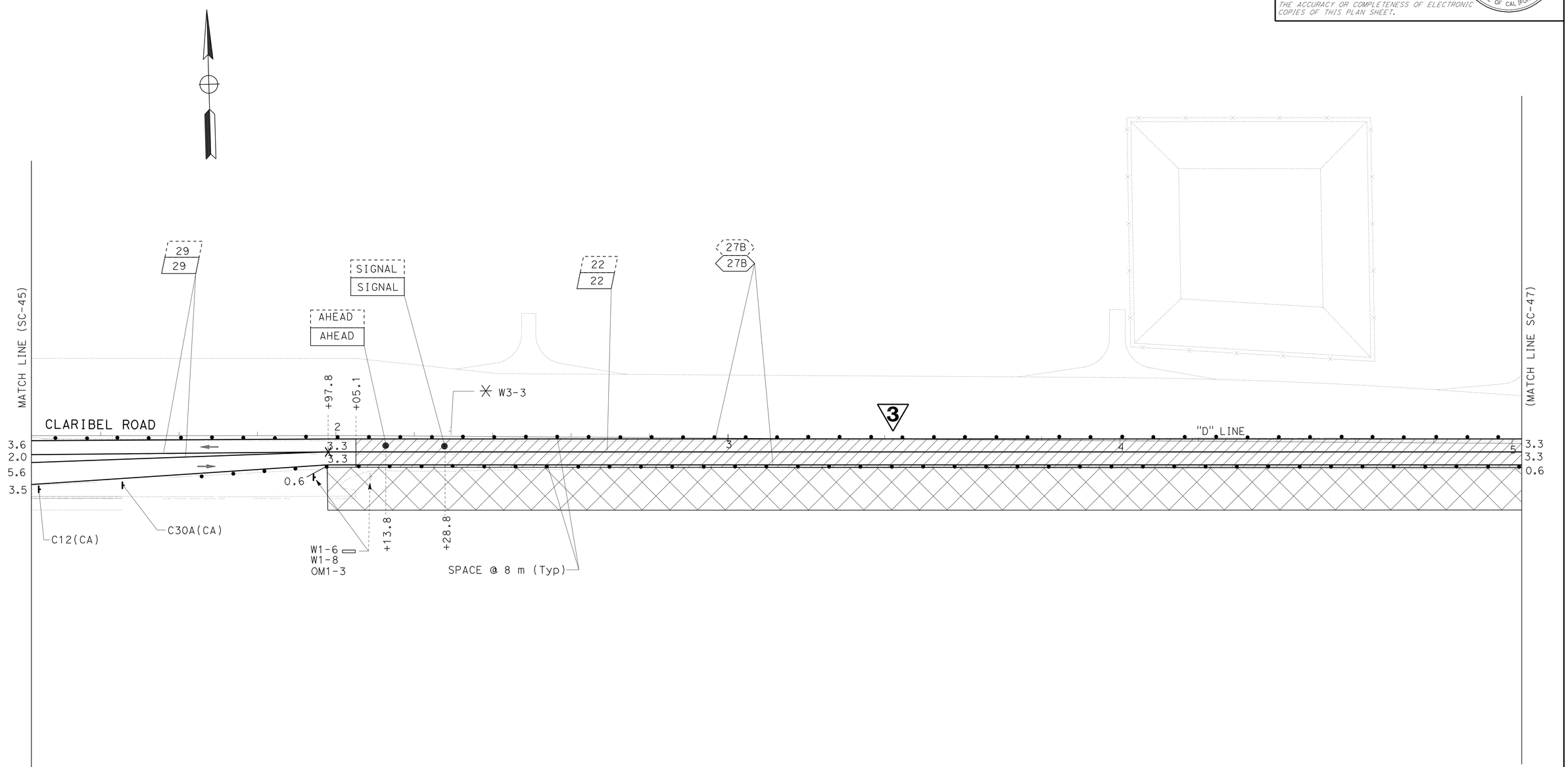

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-46

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

CALCULATED-DESIGNED BY	CECILE NGUYEN	REVISED BY CN
CHECKED BY	QUAN H TRINH	DATE REVISED 7/3/09
FUNCTIONAL SUPERVISOR	HASSAN MAREI	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	319	522

Caltrans Metric

Hassan Marei 6/12/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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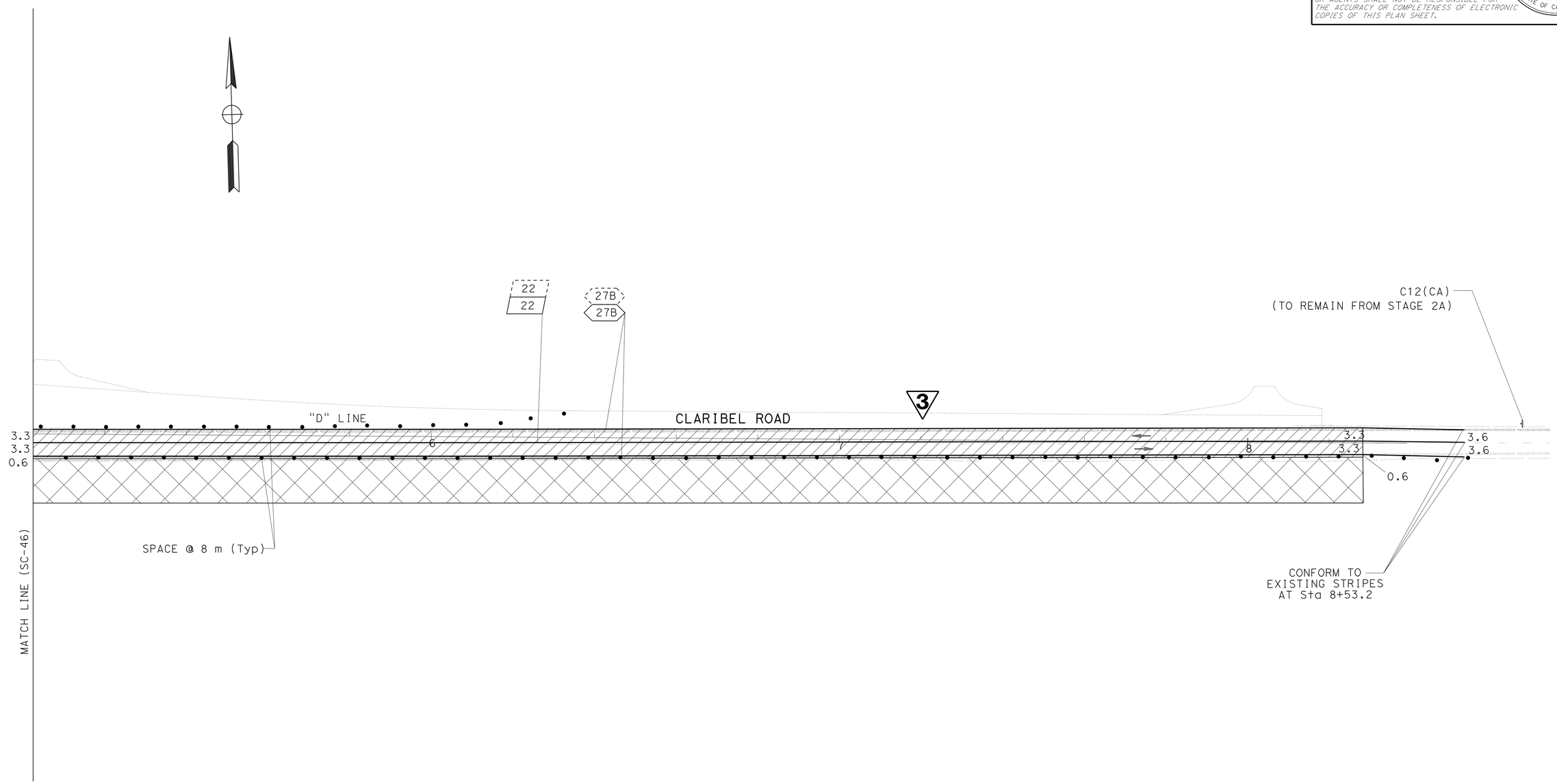


ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2B)

SCALE 1:500

SC-47

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: HASSAN MAREI
CALCULATED-DESIGNED BY: CECILE NGUYEN
CHECKED BY: QUAN H TRINH
REVISED BY: CN
DATE REVISED: 7/3/09

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	336	522

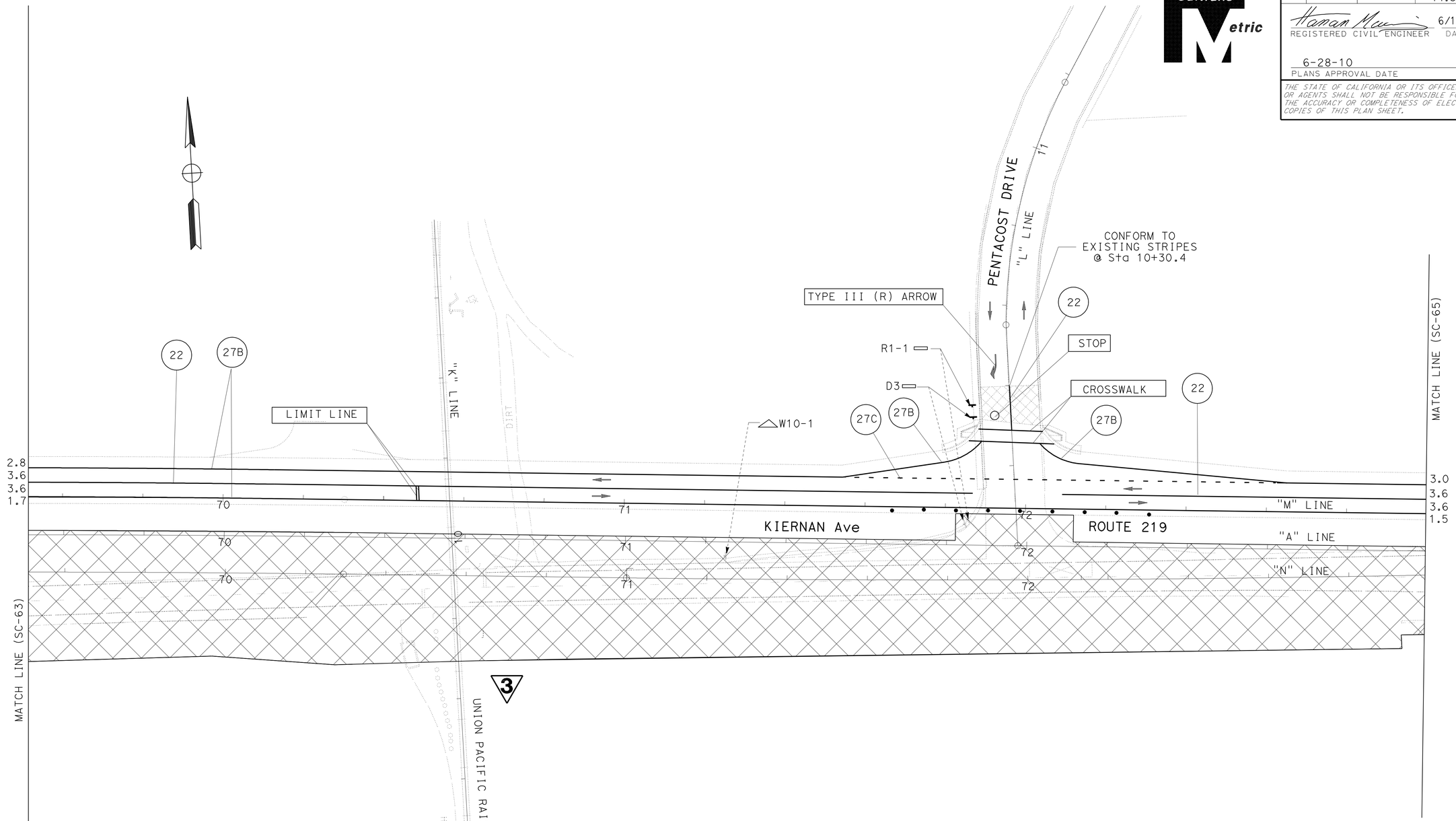
Caltrans Metric

REGISTERED CIVIL ENGINEER — DATE 6/12/09

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — HASSAN MAREI — No. 35068 — Exp. 9/30/10 — CIVIL — STATE OF CALIFORNIA

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



ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 3A)

SCALE 1:500

SC-64

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: HASSAN MAREI
CALCULATED-DESIGNED BY: CECILE NGUYEN
CHECKED BY: QUAN H TRINH
REVISED BY: CN
DATE REVISED: 7/3/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	342	522

Caltrans Metric

REGISTERED CIVIL ENGINEER — DATE 6/12/09

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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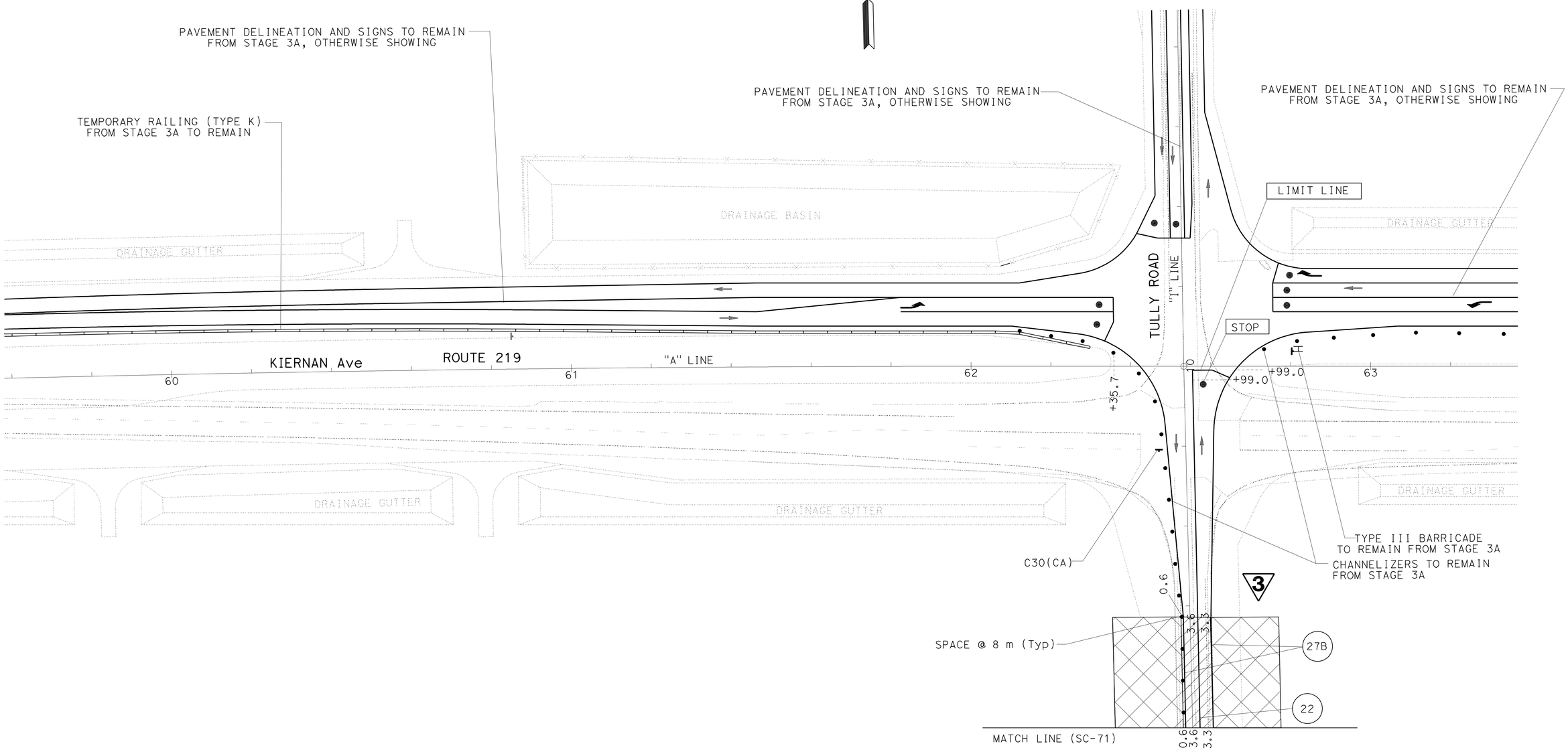

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 3B)

SCALE 1:500

SC-70

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

CALCULATED-DESIGNED BY	CECILE NGUYEN
CHECKED BY	QUAN H TRINH
REVISED BY	CN
DATE REVISED	7/3/09
FUNCTIONAL SUPERVISOR	HASSAN MAREI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

LAST REVISION 00-00-00 | DATE PLOTTED => 19-APR-2012 | TIME PLOTTED => 06:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	343	522

Caltrans Metric

Hassan Marei 6/12/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HASSAN MAREI No. 35068 Exp. 9/30/10 CIVIL STATE OF CALIFORNIA

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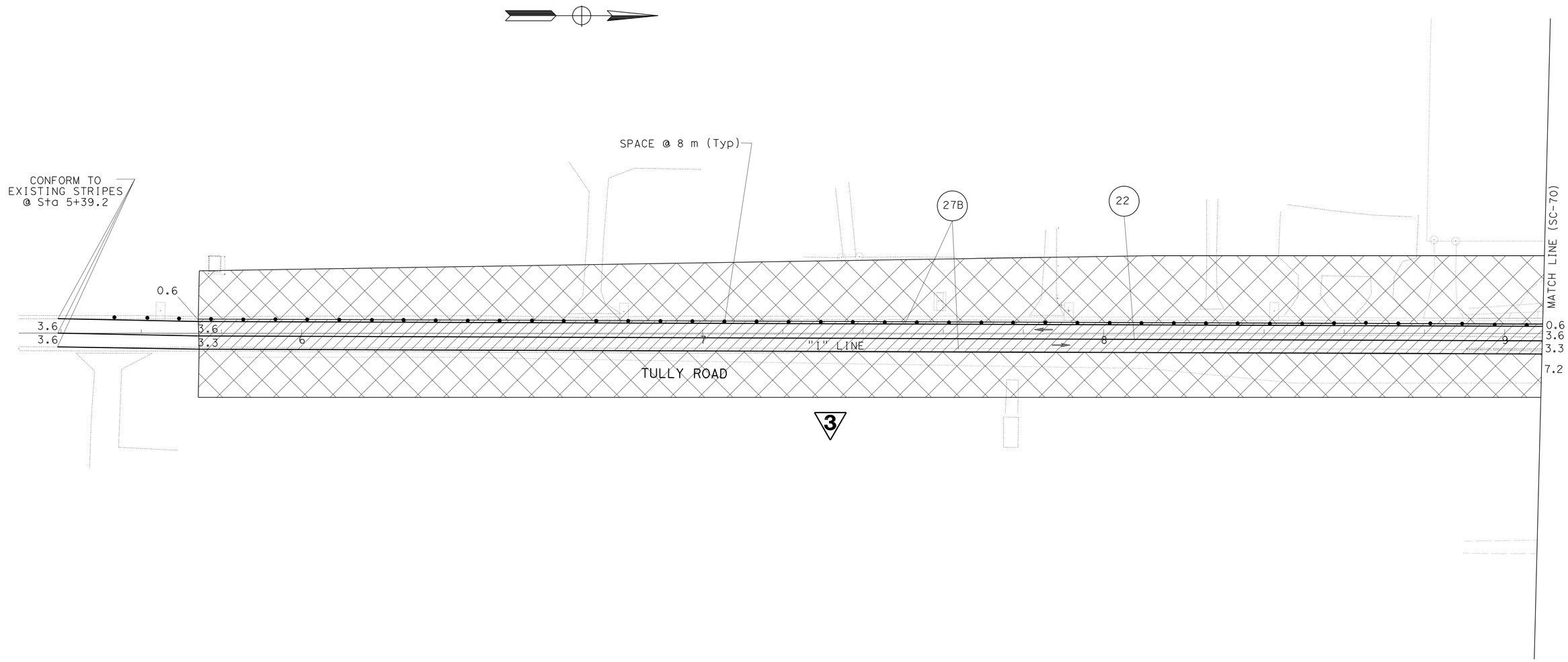


ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 3B)

SCALE 1:500

SC-71

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: HASSAN MAREI
CALCULATED-DESIGNED BY: CECILE NGUYEN
CHECKED BY: QUAN H TRINH
REVISED BY: CN
DATE REVISED: 7/3/09

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	426	522

Wuthy Seng 6/16/09
REGISTERED CIVIL ENGINEER DATE

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
WUTHY SENG
No. 60114
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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

3

COLD PLANE AC PAVEMENT

ALIGNMENT	STATION BEGIN	STATION END	AREA m^2
"A" LINE L+	33+66.095	33+76.095	117.0
"A" LINE R+	36+63.336	36+73.336	117.0
"F" LINE R+	10+44.912	10+54.912	145.4
"G" LINE	9+46.949	9+56.766	117.5
"H" LINE	5+56.835	5+66.835	91.4
"H" LINE	12+28.176	12+38.176	123.2
"I" LINE	5+74.164	5+84.164	86.1
"I" LINE	13+26.988	13+36.988	89.8
"J" LINE	10+54.794	10+64.794	65.6
"L" LINE	10+29.711	10+39.834	131.2
"Q" LINE	9+78.081	9+88.088	160.9
"N" LINE	73+00.000	78+56.253	6942.9
"D" LINE	0+00.000	2+05.143	2172.6
"E" LINE	442+86.541	443+60.000	1931.6
"E" LINE	444+17.891	445+60.000	2846.5
		TOTAL	15 138.7

MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)

LOCATION	DESCRIPTION	QUANTITY m^3
STA 47+69.980 TO STA 47+72.980 "A" LINE	MEDIAN ISLAND AND CURB	5.7
STA 47+75.980 TO STA 47+79.946 "A" LINE	MEDIAN ISLAND AND CURB	5.3
STA 48+04.799 TO STA 48+09.464 "A" LINE	MEDIAN ISLAND AND CURB	7.9
STA 48+12.494 TO STA 48+15.494 "A" LINE	MEDIAN ISLAND AND CURB	7.4
STA 10+24.758 TO STA 10+31.848 L+ "L" LINE	RAMP AND CURB	5.1
STA 10+22.528 TO STA 10+29.571 L+ "L" LINE	RAMP AND CURB	4.9
STA 72+93.748 TO STA 75+29.595 R+ "A" LINE	CURB	38.5
STA 75+21.735 TO STA 78+27.408 L+ "A" LINE	MEDIAN ISLAND AND CURB	98.2
STA 75+55.877 R+ "A" LINE TO STA 445+37.726 L+ "E" LINE	SIDEWALK, RAMP AND CURB	187.4
STA 444+53.905 TO STA 446+10.000 R+ "E" LINE	MEDIAN ISLAND AND CURB	37.1
STA 443+28.294 TO STA 443+85.488 L+ "E" LINE	MEDIAN ISLAND AND CURB	11.7
STA 442+96.541 TO STA 444+01.127 R+ "E" LINE	SIDEWALK, RAMP AND CURB	47.5
STA 444+42.214 TO STA 444+54.346 R+ "E" LINE	RAMP AND CURB	7.6
VARIES	DRIVEWAYS	18.9 ***
STA 0+29.159 TO STA 3+93.072 "D" LINE	MEDIAN ISLAND AND CURB	117.1
STA 443+85.674 TO STA 443+97.479 R+ "E" LINE	RAMP AND CURB	11.6
STANISLAUS COUNTY UNION SCHOOL	RAISED ISLANDS,CURB, GUTTER, AND SIDEWALK	379.9
	CONCRETE PILE CAP (SOUND WALL)	68.5 ##
	TOTAL	1060.3

*** QUANTITY FROM SHEET Q-5.
QUANTITY FROM SHEET Q-8.

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

SUMMARY OF QUANTITIES

Q-7

HUONG LE	REVISED BY	WS
WUTHY SENG	DATE REVISED	7/14/09
CALCULATED-DESIGNED BY		
CHECKED BY		
FUNCTIONAL SUPERVISOR		
JOSE HUERTA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 19-APR-2012
TIME PLOTTED => 06:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Sta	219,108	3.4/7.9, 44.3/44.9	462	522

REGISTERED ELECTRICAL ENGINEER 6/16/09

6-28-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jaspal Singh No. 16657 Exp. 6/30/10 ELECTRICAL STATE OF CALIFORNIA

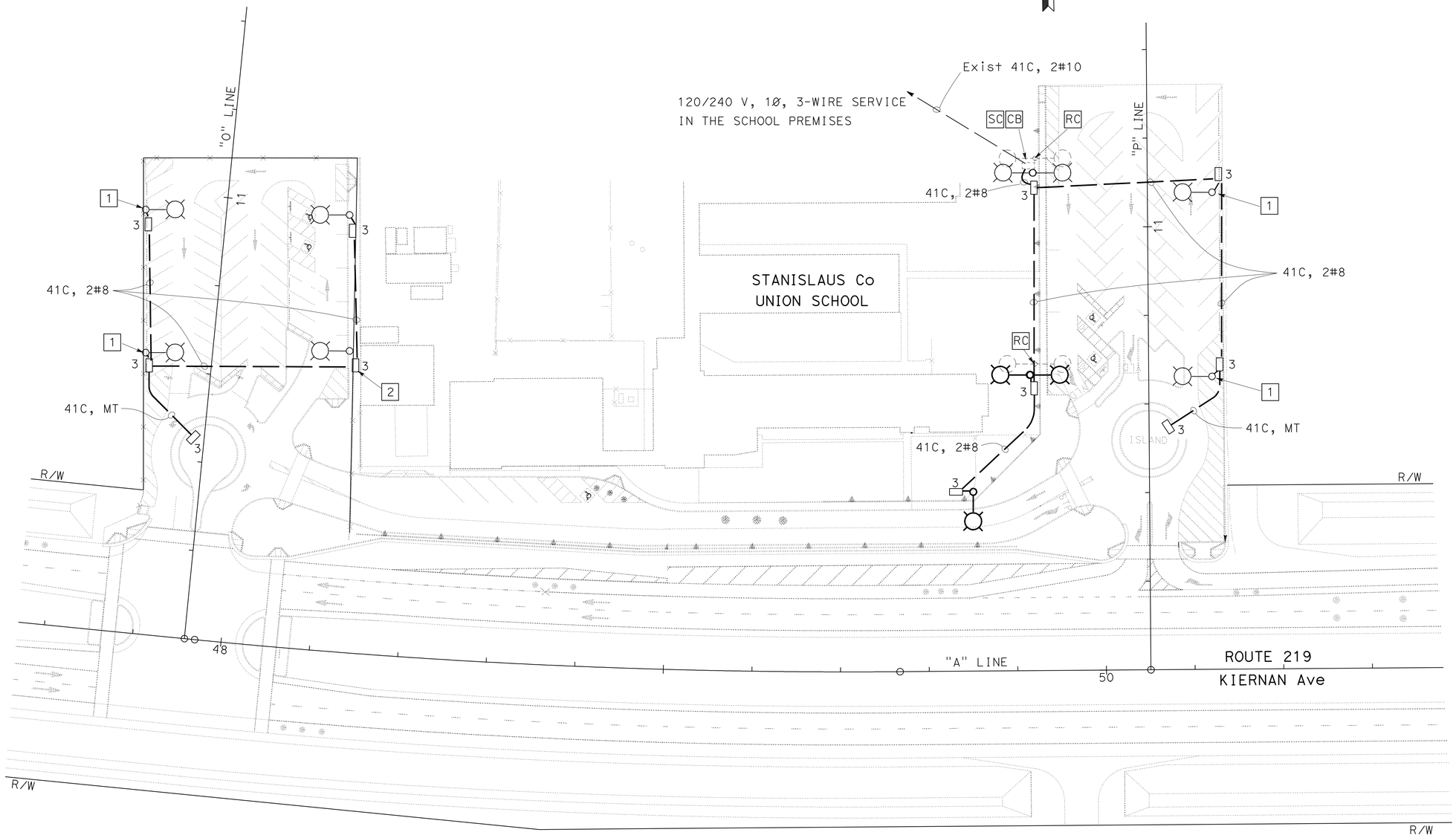
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

3

NOTES: (FOR THIS SHEET ONLY)

1. ELECTROLIER SHALL HAVE AN ADDITIONAL RAISED FOUNDATION OF 1 m ABOVE FINISHED GRADE.
2. SERVICE FROM Exist SERVICE TO THE PULL BOX SHALL BE PROVIDED AND SPLICED BY THE OWNER.
3. LUMINAIRES SHALL BE 240 V, 200 W HPS WITH TYPE IV PEC.
4. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



STANISLAUS Co UNION SCHOOL LIGHTING

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LIGHTING (PARKING LOT)

SCALE 1:500

E-16

3 **REVISED PER ADDENDUM No. 3 DATED APRIL 20, 2012**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: JASPAL SINGH
CHECKED BY: JORGE RAMIREZ
REVISED BY: JR
DATE REVISED: 7/2/09

LAST REVISION 00-00-00
DATE PLOTTED => 20-APR-2012
TIME PLOTTED => 08:26