CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

DRAFT

Merced to Fresno Section
Draft EIR-EIS

Volume III:
Section H – Roadway and Grade Separation Plans

UPRR/SR 99 Alternative with Ave 21 Wye

August 2011

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B4990-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 3
		B4991-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 2 OF 3
		B4992-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 3 OF 3
		B4993-B	UPRR/SR99 - (AVE 21)	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B5000-B	UPRR/SR99 - (AVE 21)		INDEX MAP	SHEET 1 OF 2
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		CB5000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	KEY MAP	SHEET 1 OF 1
		CB5001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	KEY MAP	SHEET 1 OF 1
		CB5002-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	KEY MAP	SHEET 1 OF 1
		CB5003-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	KEY MAP	SHEET 1 OF 1
		CB5004-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	KEY MAP	SHEET 1 OF 1
		CB5005-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 22	KEY MAP	SHEET 1 OF 1
		CB5006-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	KEY MAP	SHEET 1 OF 1
		CT4990-B	UPRR/SR99 - (AVE 21)	GRADE SEPARATIONS	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CT4991-B	UPRR/SR99 - (AVE 21)		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
				LAYOUT		
5		CT5000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	LAYOUT	SHEET 1 OF 4
5		CT5001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	LAYOUT	SHEET 2 OF 4
5		CT5002-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	LAYOUT	SHEET 3 OF 4
5		CT5003-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	LAYOUT	SHEET 4 OF 4
4		CT5004-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 1 OF 4
4		CT5005-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 2 OF 4
4		CT5006-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 3 OF 4
4		CT5007-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 4 OF 4
3		CT5008-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	LAYOUT	SHEET 1 OF 4
3		CT5009-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	LAYOUT	SHEET 2 OF 4
3		CT5010-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	LAYOUT	SHEET 3 OF 4
3		CT5011-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	LAYOUT	SHEET 4 OF 4
2		CT5012-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 1 OF 4
2		CT5013-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 2 OF 4
2		CT5014-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 3 OF 4
2		CT5015-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 4 OF 4
1		CT5016-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 1 OF 3
1		CT5017-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 2 OF 3
1		CT5018-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 3 OF 3
6		CT5019-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 1 OF 4
6		CT5020-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 2 OF 4
6		CT5021-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 3 OF 4
6		CT5022-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 4 OF 4
5		CT5023-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	LAYOUT	SHEET 1 OF 3
5		CT5024-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	LAYOUT	SHEET 2 OF 3
5		CT5025-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	LAYOUT	SHEET 3 OF 3
64		CT0149-A	UPRR MERCED CONNECTION - (AVE 21)	GRADE SEPARATION - G STREET	LAYOUT	SHEET 1 OF 1
				PROFILE		
		CT5700-B	UPRR/SR99 - (AVE 21)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 1 OF 4
		CT5701-B	UPRR/SR99 - (AVE 21)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 2 OF 4
		CT5702-B	UPRR/SR99 - (AVE 21)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 3 OF 4
		CT5703-B	UPRR/SR99 - (AVE 21)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 4 OF 4
5		CT6000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	PROFILE	SHEET 1 OF 4
5		CT6001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	PROFILE	SHEET 2 OF 4
5		CT6002-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	PROFILE	SHEET 3 OF 4
5		CT6003-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALT 1	PROFILE	SHEET 4 OF 4
4		CT6004-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 1 OF 4
4		CT6005-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 2 OF 4
4		CT6006-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 3 OF 4
4		CT6007-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 4 OF 4
3		CT6008-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	PROFILE	SHEET 1 OF 4
3		CT6009-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	PROFILE	SHEET 2 OF 4
3		CT6010-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	PROFILE	SHEET 3 OF 4
3		CT6011-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 19	PROFILE	SHEET 4 OF 4
2		CT6012-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 1 OF 4
2		CT6013-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 2 OF 4
2		CT6014-B	UPRR/SR99 MAINLINE - (AVE 21)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 3 OF 4
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6		CT6019-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 1 OF 5
6		CT6020-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 2 OF 5
6		CT6021-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 3 OF 5
6		CT6022-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 4 OF 5
6		CT6023-B	UPRR/SR99 WYE - (AVE 21)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 5 OF 5
5		CT6024-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	PROFILE	SHEET 1 OF 3
5		CT6025-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	PROFILE	SHEET 2 OF 3

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
UPRR/SR99-(AVE 21)
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 3

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DRAWING NO. B4990-B
SCALE NONE
SHEET NO. ### OF ###

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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
5		CT6026-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2	PROFILE	SHEET 3 OF 3
64		CT1149-A	UPRR MERCED CONNECTION - (AVE 21)	GRADE SEPARATION - G STREET	PROFILE	SHEET 1 OF 1
		T-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TITLE	
		X-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-2	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-3	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-4	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-5	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-6	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-7	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-8	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-9	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-10	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-11	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-12	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-13	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-14	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-15	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-16	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-17	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		X-18	GOLDEN STATE BOULEVARD RE-ALIGNMENT		TYPICAL SECTION	
		K-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		KEYMAP	
		L-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"NB" 75+73 TO "NB" 100+00
		L-2	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 100+00 TO "GSB" 111+50
		L-3	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 111+50 TO "GSB" 138+50
		L-4	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 138+50 TO "GSB" 163+50
		L-5	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 163+50 TO "GSB" 191+00
		L-6	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 191+00 TO "GSB" 216+00
		L-7	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 216+00 TO "GSB" 241+00
		L-8	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 241+00 TO "GSB" 264+00
		L-9	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 264+00 TO "GSB" 289+00
		L-10	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 289+00 TO "GSB" 314+00
		L-11	GOLDEN STATE BOULEVARD RE-ALIGNMENT		LAYOUT	"GSB" 314+00 TO "GSB" 338+77
		L-12	VETERANS BOULEVARD		LAYOUT	"V" 105+00 TO "V" 122+35
		L-13	BULLARD AVENUE		LAYOUT	"BU" 100+00 TO "BU" 132+72
		L-14	SHAW AVENUE RE-ALIGNMENT		LAYOUT	"S" 50+00 TO "S" 66+00
		L-15	SHAW AVENUE RE-ALIGNMENT		LAYOUT	"S" 66+00 TO "S" 80+81
		L-16	CORNELIA AVENUE RE-ALIGNMENT		LAYOUT	"C" 10+00 TO "C" 26+00
		L-17	SANTA ANA AVENUE RE-ALIGNMENT		LAYOUT	"C" 26+00 TO "C" 46+23
		SE-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		SUPERELEVATION DIAGRAM	
		SE-2	GOLDEN STATE BOULEVARD RE-ALIGNMENT		SUPERELEVATION DIAGRAM	
		BR-1	GOLDEN STATE BOULEVARD RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-2	GOLDEN STATE BOULEVARD RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-3	GOLDEN STATE BOULEVARD RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-4	GOLDEN STATE BOULEVARD RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-5	GOLDEN STATE BOULEVARD RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		CT9550-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	W McKINLEY AVE
		CT9551-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	N GOLDEN STATE BLVD
		CT9552-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	W OLIVE AVE
		CT9553-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	BELMONT AVE
		CT9554-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	STANISLAUS ST AND TUOLUMNE ST
		CT9555-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	FRESNO ST
		CT9556-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	TULARE ST (OVERHEAD)
		CT9557-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	TULARE ST (UNDERPASS)
		CT9558-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEPARATION LAYOUT	VENTURA ST
		CT9559-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	W McKINLEY AVE
		CT9560-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	McKINLEY AVE CONNECTOR
		CT9561-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N WEBER AVE
		CT9562-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N WEST AVE
		CT9563-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N GOLDEN STATE BLVD
		CT9564-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N GOLDEN STATE BLVD
		CT9565-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	W OLIVE AVE
		CT9566-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	BELMONT AVE
		CT9567-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N WESLEY AVE
		CT9568-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	N H ST
		CT9569-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	STANISLAUS ST
		CT9570-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	TUOLUMNE ST
		CT9571-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	FRESNO ST
		CT9572-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	H ST (FRESNO ST)
		CT9573-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	G ST (FRESNO ST)
		CT9574-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	TULARE ST (OVERHEAD)
		CT9575-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	TULARE ST (UNDERPASS)
		CT9576-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	G ST (TULARE ST UNDERPASS)
		CT9577-A	FRESNO SUBSECTION	ALIGNMENT F1	GRADE SEP PROFILE & SUPERELEVATION DIAGRAM	VENTURA ST

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		CR9578-A	FRESNO SUBSECTION	ALIGNMENT F1	ROADWAY LAYOUT	N THORNE AVE
		CR9579-A	FRESNO SUBSECTION	ALIGNMENT F1	ROADWAY PROFILE & SUPERELEVATION DIAGRAM	N THORNE AVE
		CT9580-A	FRESNO SUBSECTION	ALIGNMENT F1	ROADWAY / GRADE SEPARATION	TYPICAL CROSS SECTIONS
		CT9581-A	FRESNO SUBSECTION	ALIGNMENT F1	ROADWAY / GRADE SEPARATION	TYPICAL CROSS SECTIONS
		CT9582-A	FRESNO SUBSECTION	ALIGNMENT F1	ROADWAY / GRADE SEPARATION	TYPICAL CROSS SECTIONS
		CT1477-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROAD 11 GRADE SEPARATION	PLAN AND PROFILE
		CT1478-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROAD 11 GRADE SEPARATION	PLAN AND PROFILE
		CT1481-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROBERTSON BLVD GRADE SEPARATION	PLAN AND PROFILE
		CT1482-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROBERTSON BLVD GRADE SEPARATION	PLAN AND PROFILE
		CT1484-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROAD 14 GRADE SEPARATION	PLAN AND PROFILE
		CT1485-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	ROAD 14 GRADE SEPARATION	PLAN AND PROFILE

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SHEET 3 OF 3

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DRAWING NO. B4992-B
SCALE NONE
SHEET NO. ### OF ###

ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B4993-B
SCALE NO SCALE
SHEET NO. ### OF ###

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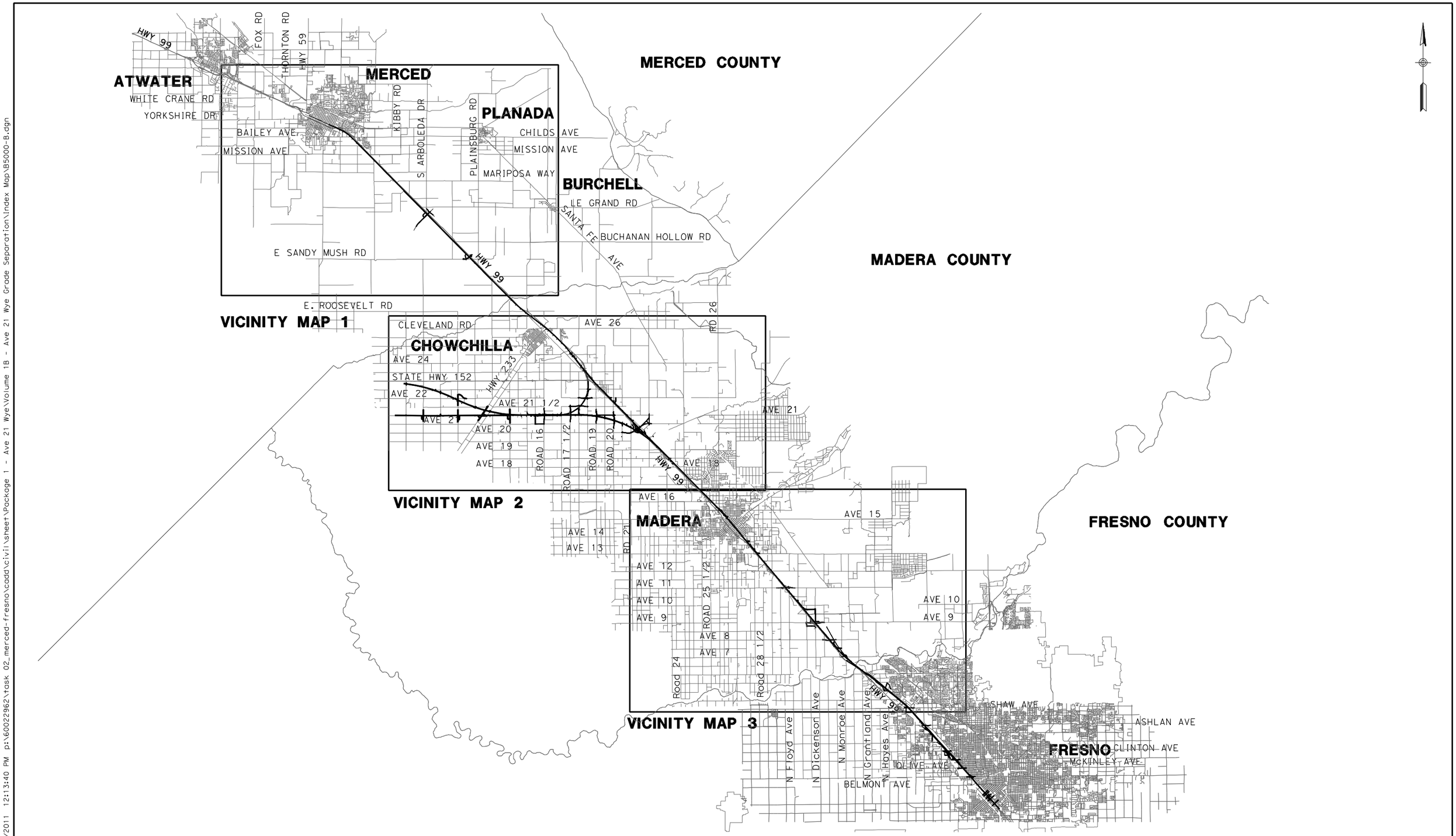

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B5000-B
SCALE NO SCALE
SHEET NO. ### OF ###

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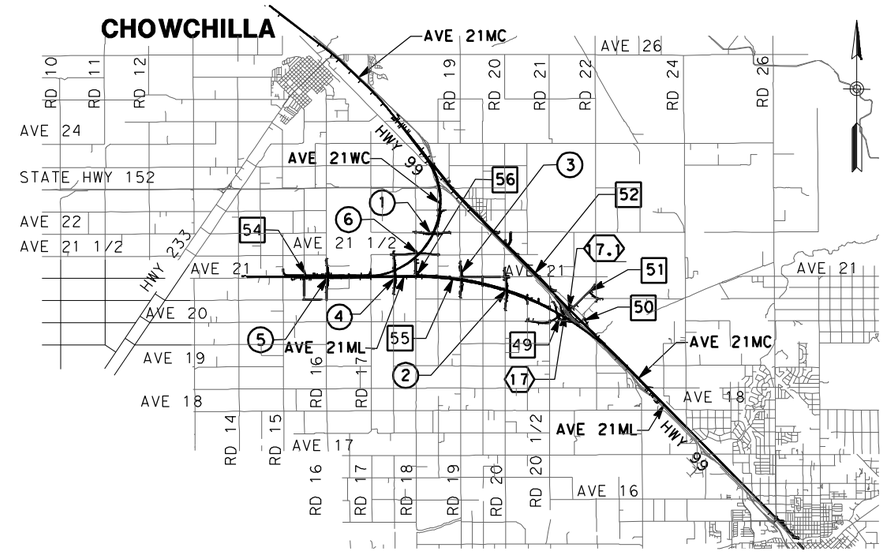
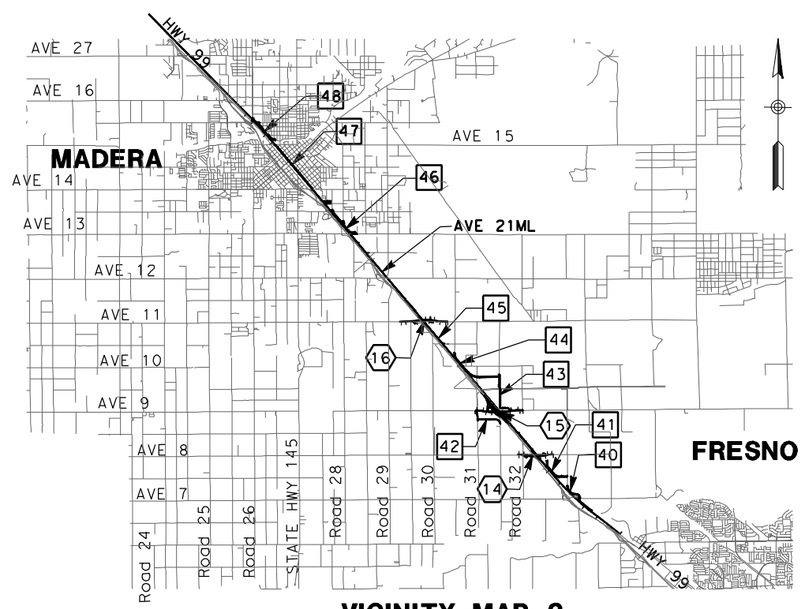
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
2	GRADE SEPARATION - ROAD 20	CT5012-B - CT5015-B	ST1105
3	GRADE SEPARATION - ROAD 19	CT5008-B - CT5011-B	ST1104
4	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
5	GRADE SEPARATION - ROAD 16 ALT 1	CT5000-B - CT5003-B	ST1101
	GRADE SEPARATION -	CT5023-B - CT5025-B	ST1101
	ROAD 16 ALONG EXIST ALT 2		
6	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
14	AVENUE 8 - OVERCROSSING	CT7000-B - CT7002-B	ST1107
15	AVENUE 9 - INTERCHANGE	CT7003-B - CT7009-B	ST1108 - ST1109
16	AVENUE 11 - OVERCROSSING	CT7010-B - CT7014-B	ST1110
17	AVENUE 20 & 20 1/2 -	CT7015-B - CT7022-B	ST1111 - ST1112
	INTERCHANGE ALT 1	CT7031-B - CT7033-B	
7.	AVENUE 20 & 20 1/2 -	CT7023-B - CT7030-B	ST1111 - ST1112
	INTERCHANGE ALT 2		
18	GRADE SEPARATION -	CT7034-B - CT7036-B	ST1113
	SANDY MUSH RD INTERCHANGE		
19	GRADE SEPARATION -	CT7037-B - CT7043-B	ST1114
	LE GRAND RD INTERCHANGE		

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.
40	ROAD 33	CR9000-B
41	PROPOSED ROAD	CR9001-B
42	ROAD 31 & GOLDEN STATE BLVD	CR9002-B
	AT AVENUE 9	
43	ROAD 31 1/2	CR9003-B - CR9004-B
44	ROAD 30 1/2	CR9005-B - CR9006-B
45	ROAD 30 AT AVENUE 11	CR9007-B
	ACCESS ROAD AT AVENUE 11	CR9008-B
46	S. KNOX ST	CR9009-B
47	N. E ST AND S. E ST	CR9010-B
48	SHARON BLVD & E ST	CR9011-B
49	GOLDEN STATE BLVD AT	CR9012-B
	AVENUE 20 AND 20 1/2	
50	ACCESS ROAD	CR9013-B
51	MASA ST AND ROAD 22 - ALT 1	CR9014-B
	MASA ST AND AVENUE 20 1/2 - ALT 2	CR9015-B
52	FAIRMEAD BLVD	CR9016-B - CR9020-B
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B
54	ROAD 15 1/2 & NORTH FRONTAGE ROAD	CR9029-B
	ROAD 15 1/2 & AVENUE 20 1/2	CR9030-B
	NORTH & SOUTH FRONTAGE ROAD	CR9031-B - CR9034-B
55	NORTH AND SOUTH FRONTAGE ROAD	CR9036-B - CR9038-B
	NORTH FRONTAGE ROAD - AVENUE 21	CR9039-B
	AVENUE 21	CR9040-B
56	ROAD 18	CR9035-B
85	HEALY ROAD	CR9041-B
86	GERARD AVENUE/CALTRANS FRONTAGE RD	CR9042-B

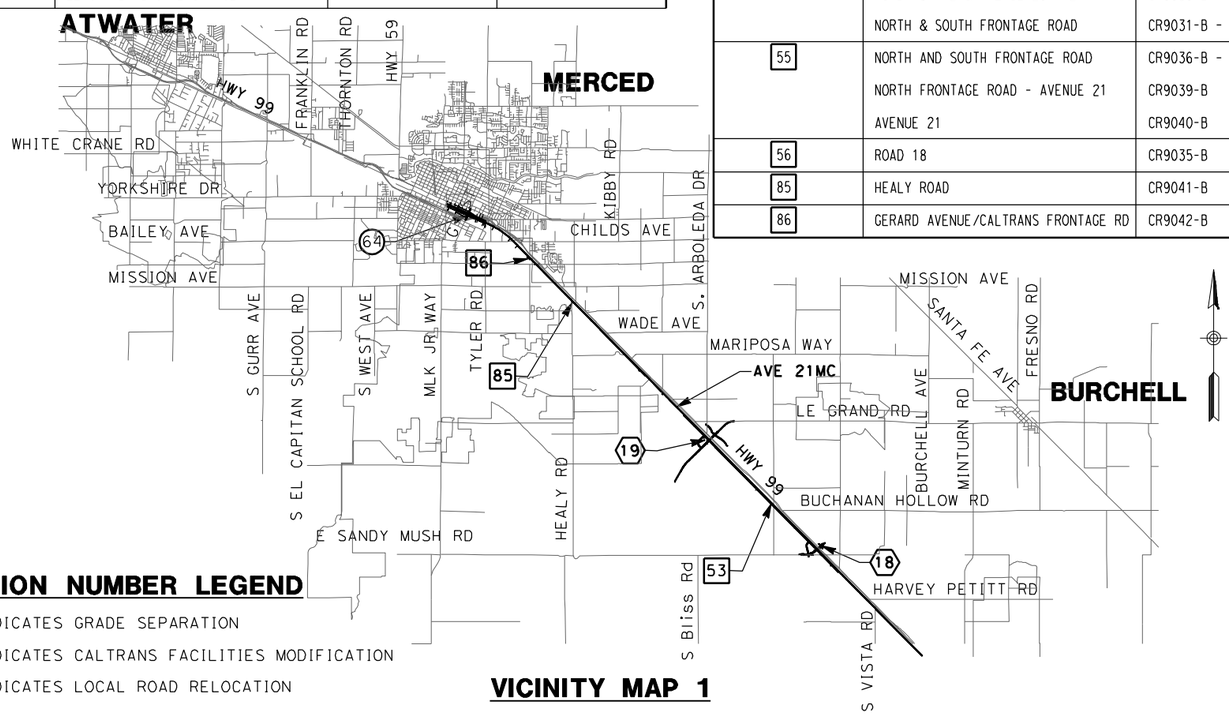


VICINITY MAP 2



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B5001-B
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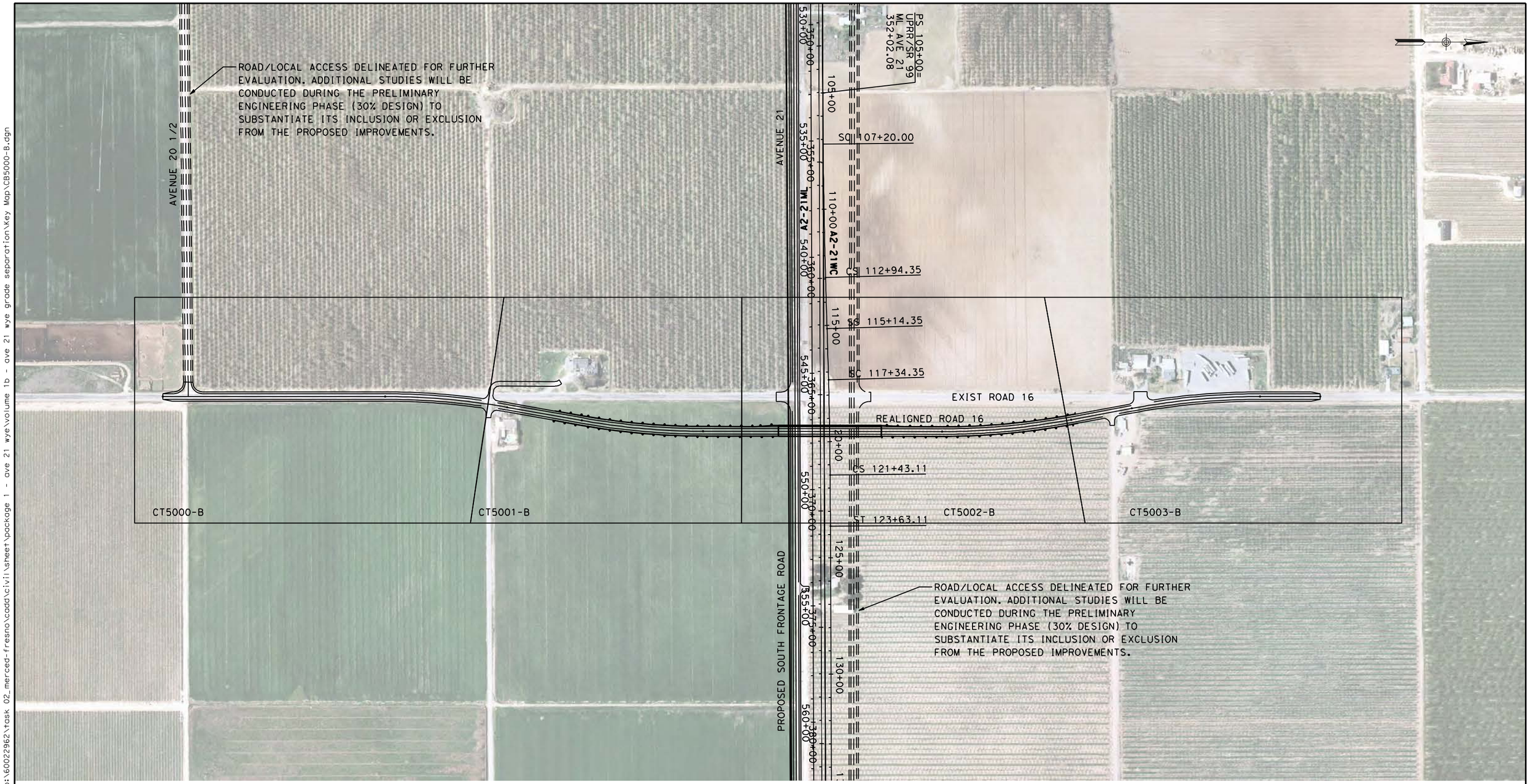

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5000-B
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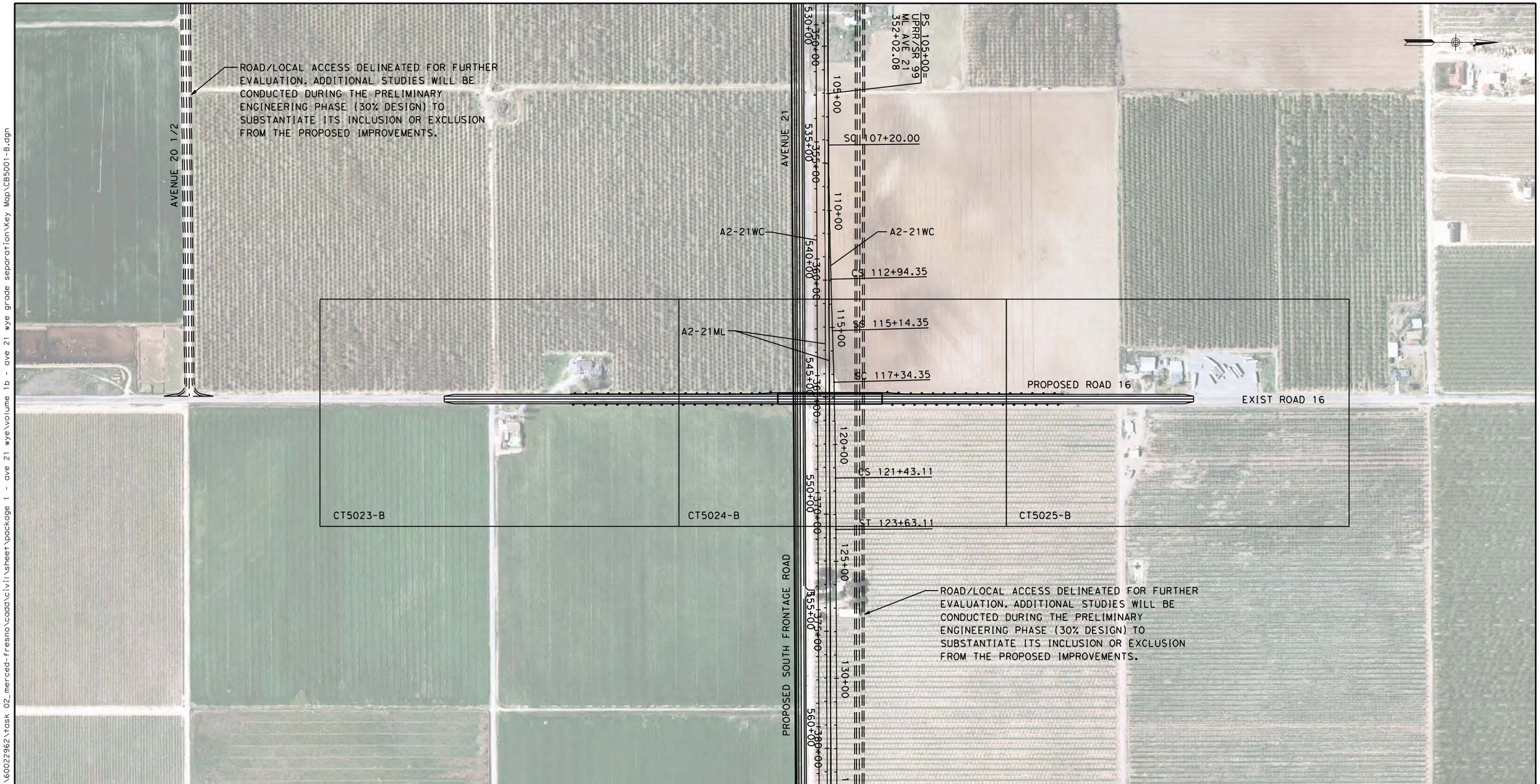

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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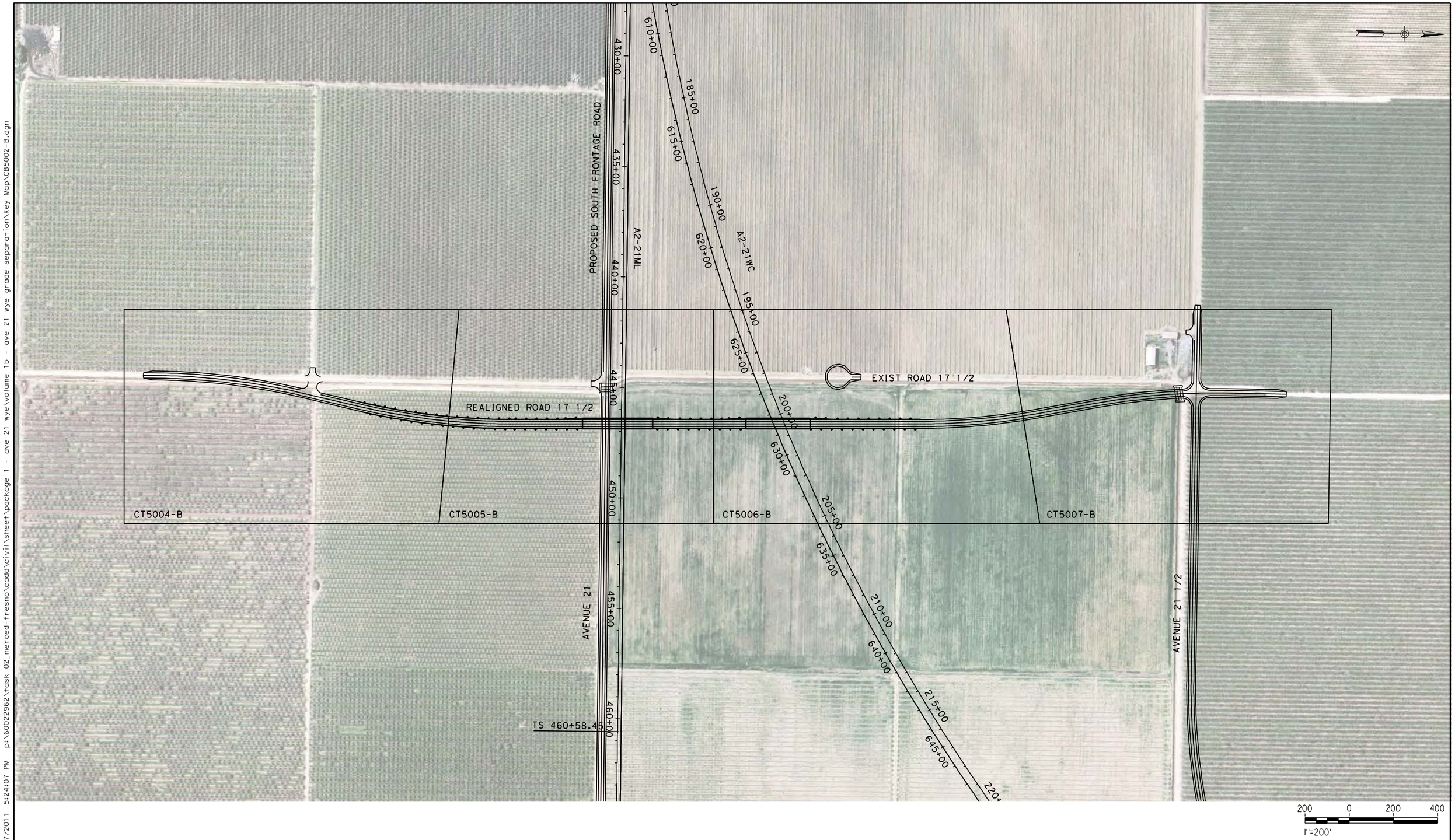

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UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5002-B
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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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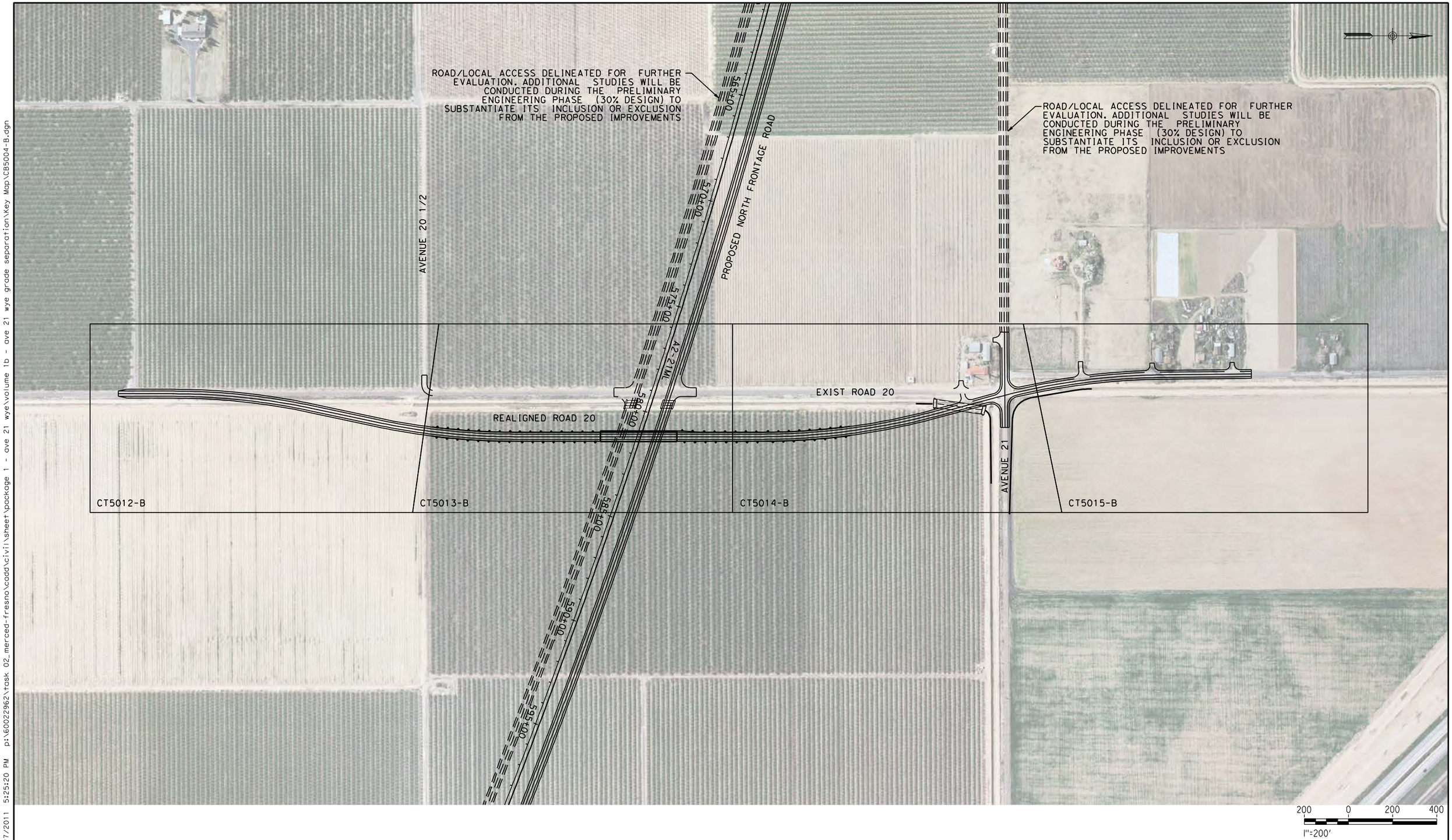

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5005-B
SCALE AS SHOWN
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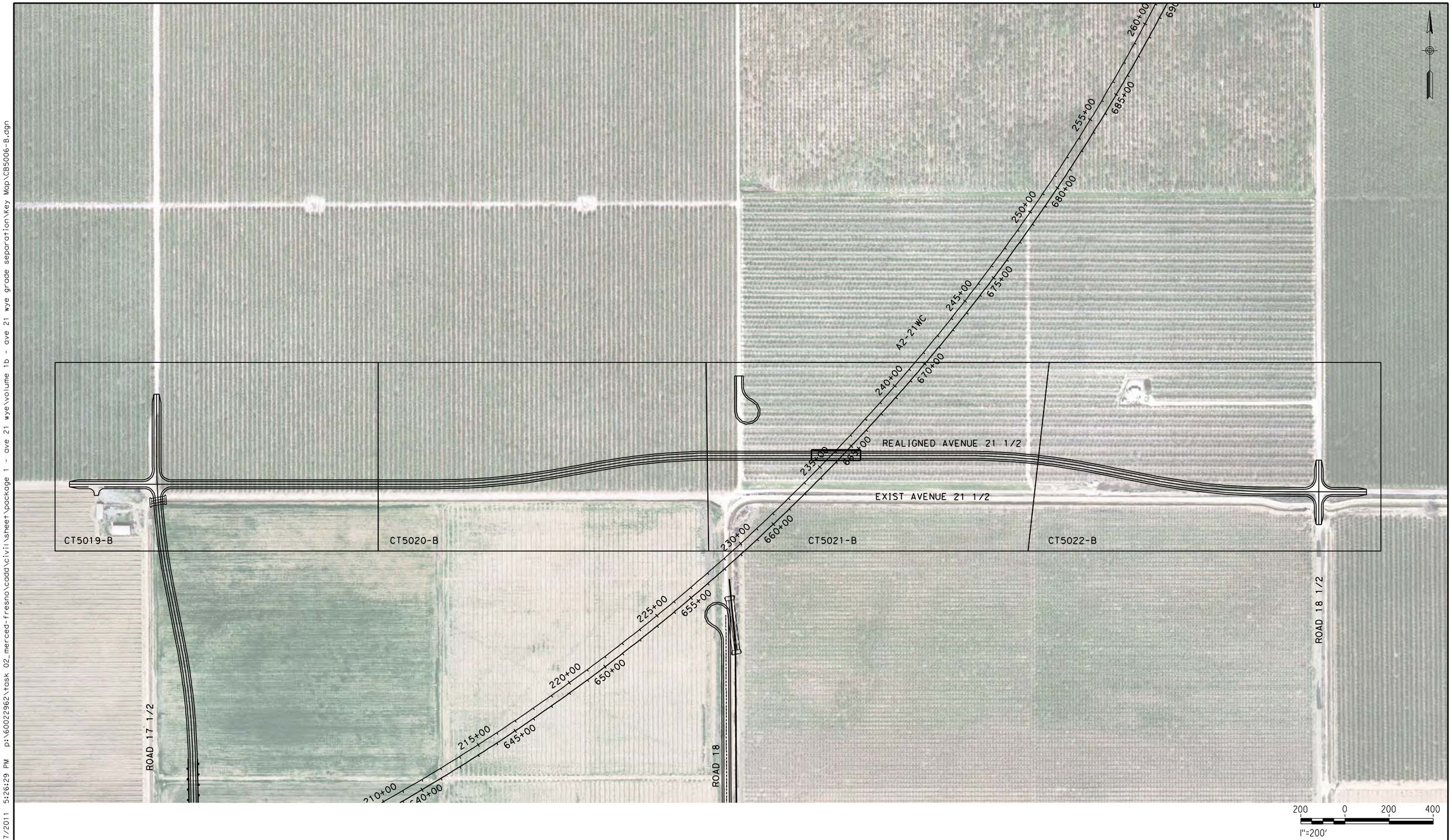

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UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5006-B
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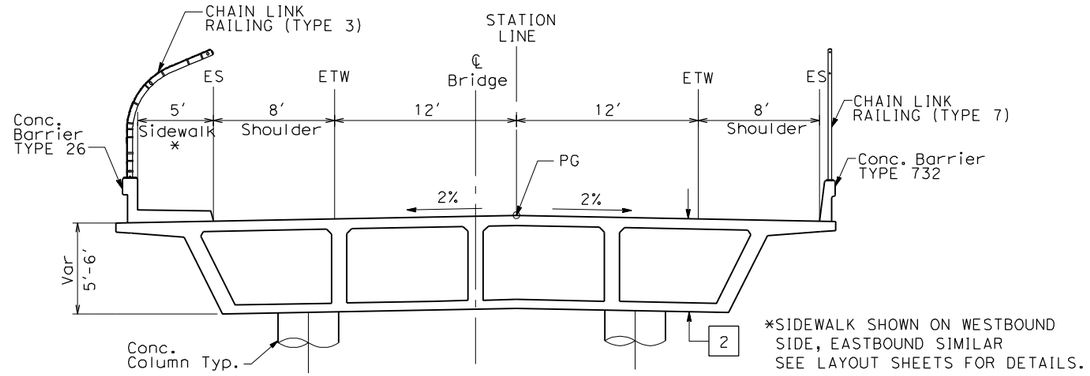
NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



*SIDEWALK SHOWN ON WESTBOUND SIDE, EASTBOUND SIMILAR SEE LAYOUT SHEETS FOR DETAILS.

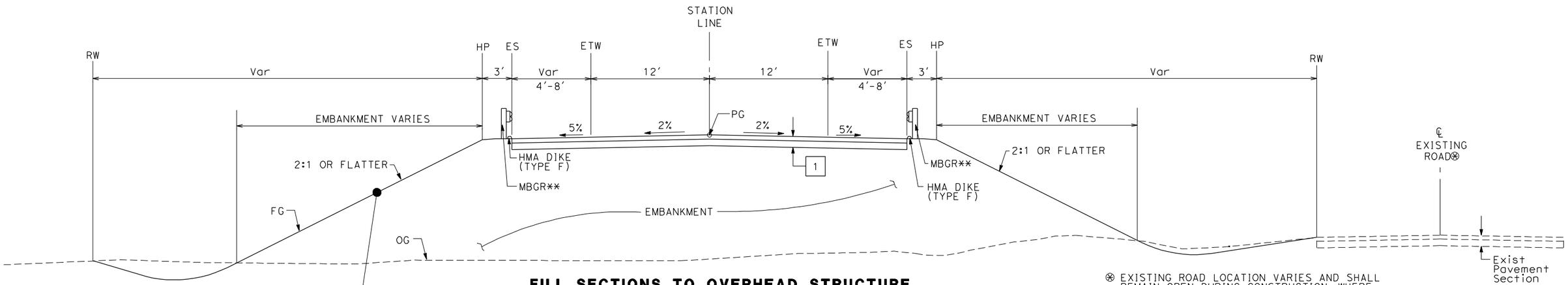
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

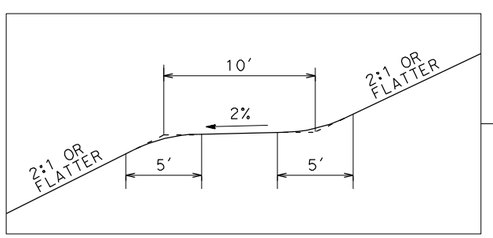


FILL SECTIONS TO OVERHEAD STRUCTURE

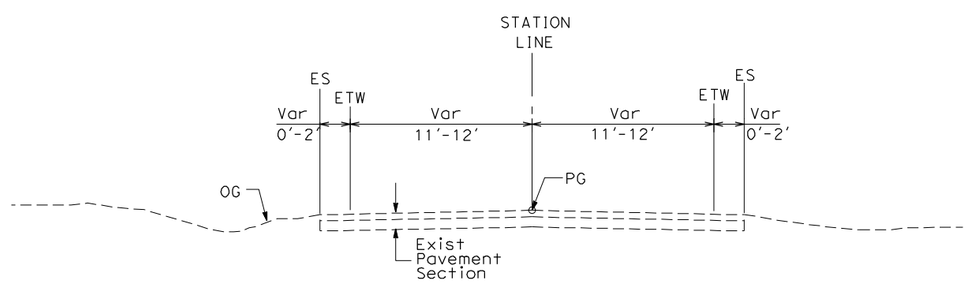
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)
SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 21 WYE:

NO.	STREET NAME
1	ROAD 16
2	ROAD 17-1/2
3	ROAD 19
4	ROAD 20
5	AVENUE 22
6	AVENUE 21 1/2

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GRADE SEPARATIONS
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT4990-B
SCALE NTS
SHEET NO. ### OF ###

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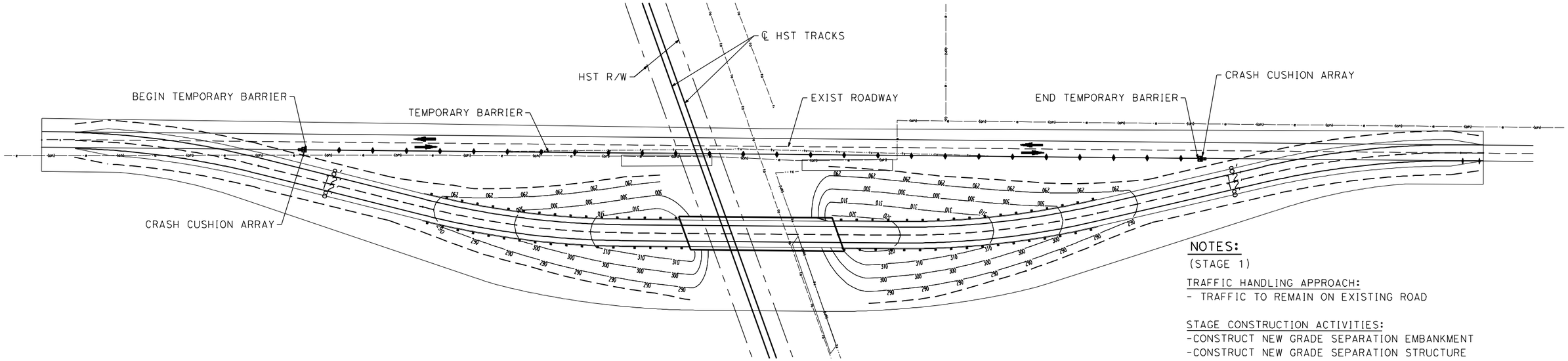
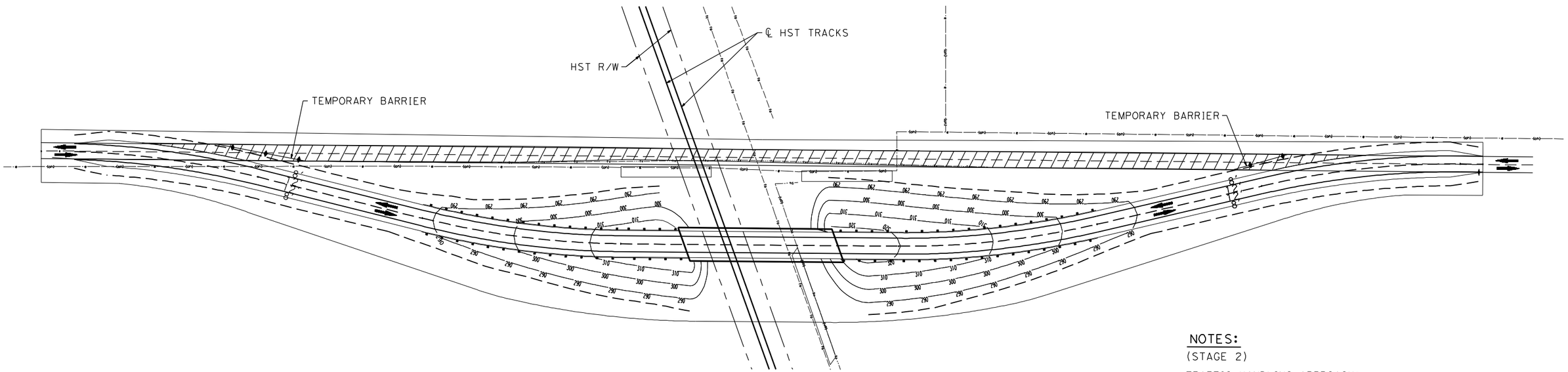


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE SURFACE AND BASE OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (TYPE U11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT4991-B
SCALE NO SCALE
SHEET NO. ### OF ###

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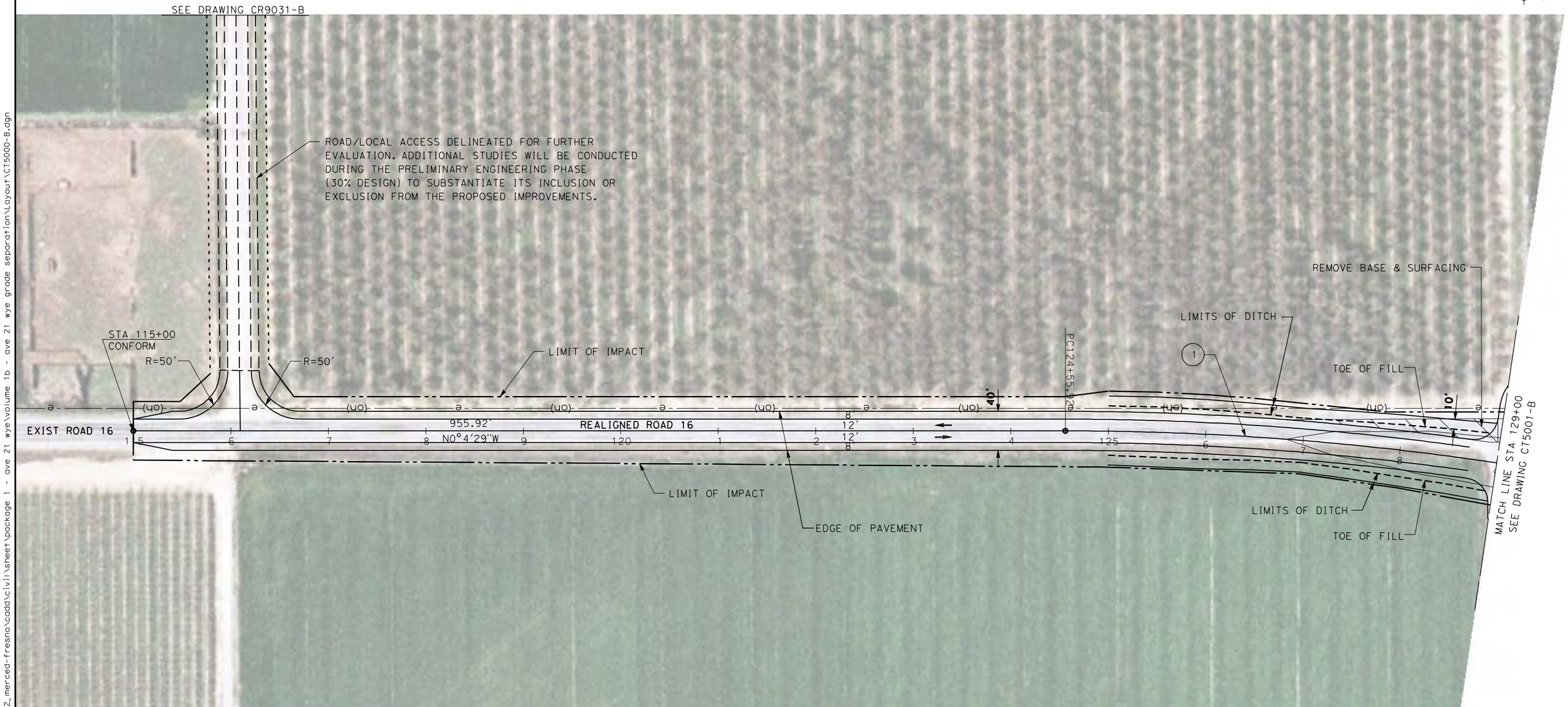
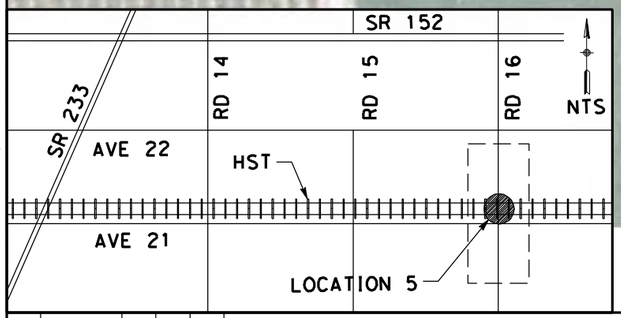




NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	10°4'29"	264.44	527.51	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

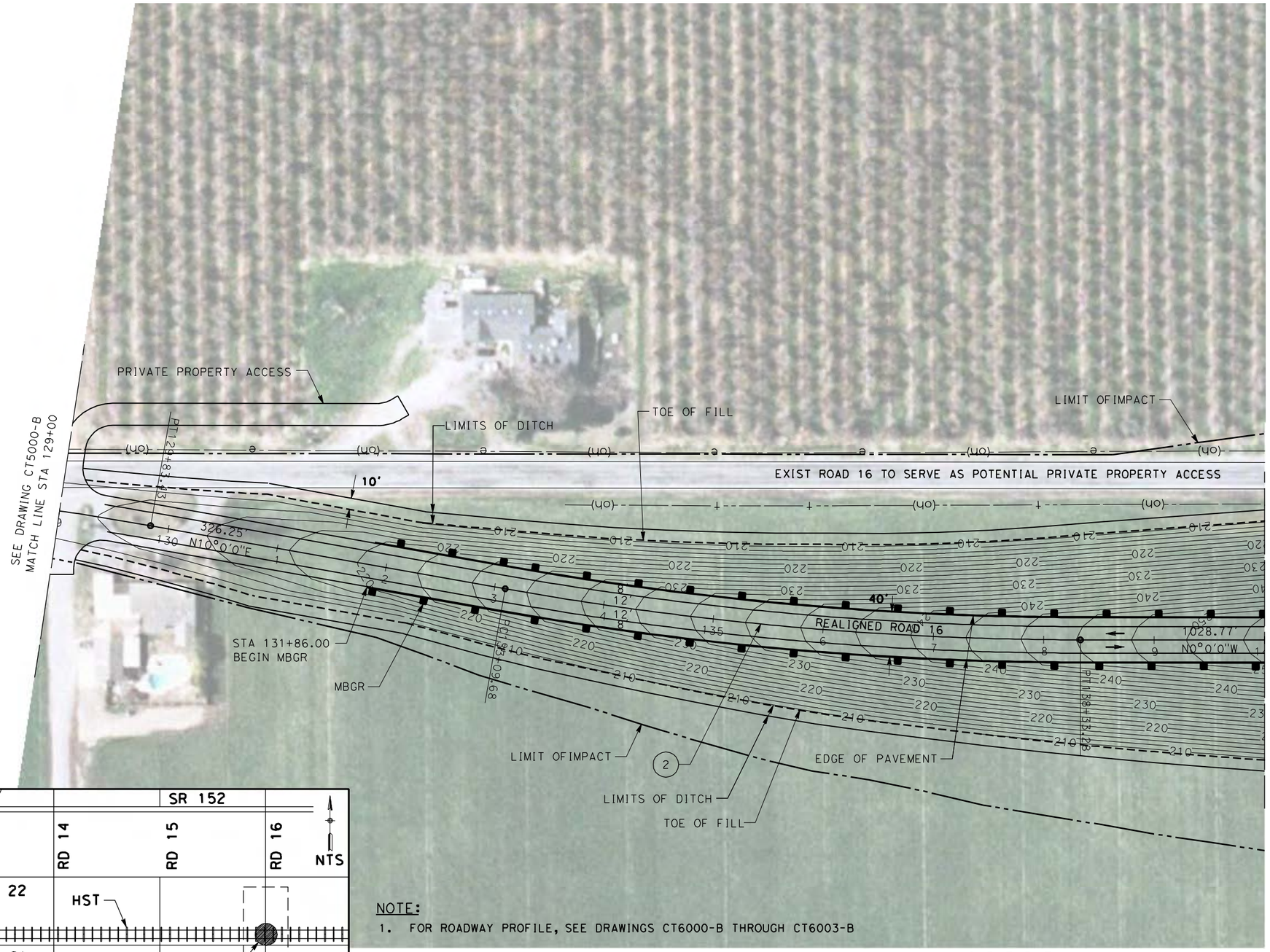
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:26:55 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5000-B.dgn
ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	10°0'00"	262.47	523.60	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:27:03 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye grade separation\Layout\CT5001-B.dgn
ReyesC1

SEE DRAWING CR9032-B

SEE DRAWING CR9032-B

℄ HST TRACKS
A2-21WC(SEE DRAWING T2250-A)

℄ HST TRACKS
A2-21ML(SEE DRAWING T2101-A)

HST R/W

LIMIT OF IMPACT

TOE OF FILL

R=42'

LIMITS OF DITCH

STA 141+57.50
BEGIN BRIDGE

R=42'

40'

1028.77'
N0°0'0"W

STA 141+57.50
END MBGR

MBGR

LIMITS OF DITCH

TOE OF FILL

LIMIT OF IMPACT

SOUTH FRONTAGE ROAD

SEE DRAWING CT5001-B
MATCH LINE STA 140+00

℄ HST TRACKS
A2-21WC(SEE DRAWING T2260-A)

℄ HST TRACKS
A2-21ML(SEE DRAWING T2101-A)

REMOVE BASE
& SURFACING

STA 146+00.40
BEGIN MBGR

LIMIT OF IMPACT

EXIST ROAD 16 TO SERVE AS POTENTIAL PRIVATE PROPERTY ACCESS

TOE OF FILL

3

LIMITS OF DITCH

EDGE OF PAVEMENT

REALIGNED ROAD 16

PC 148+62.06

10'

MBGR

TOE OF FILL

STA 146+00.40
END BRIDGE

LIMITS OF DITCH

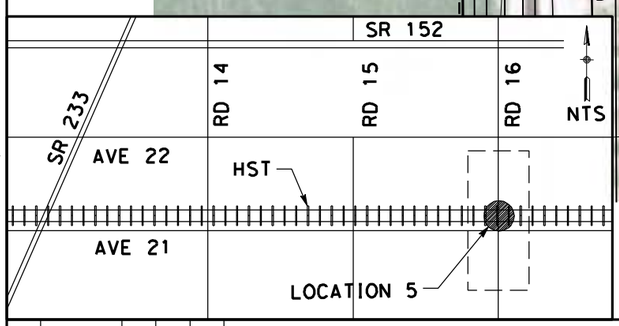
LIMIT OF IMPACT

PROPOSED ROAD 16 OVERHEAD

ROAD/LOCAL ACCESS DELINEATED FOR FURTHER EVALUATION. ADDITIONAL STUDIES WILL BE CONDUCTED DURING THE PRELIMINARY ENGINEERING PHASE (30% DESIGN) TO SUBSTANTIATE ITS INCLUSION OR EXCLUSION FROM THE PROPOSED IMPROVEMENTS.

MATCH LINE STA 154+00
SEE DRAWING CT5003-B

SEE DRAWING CR9032-B



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	10°39'57"	280.04	558.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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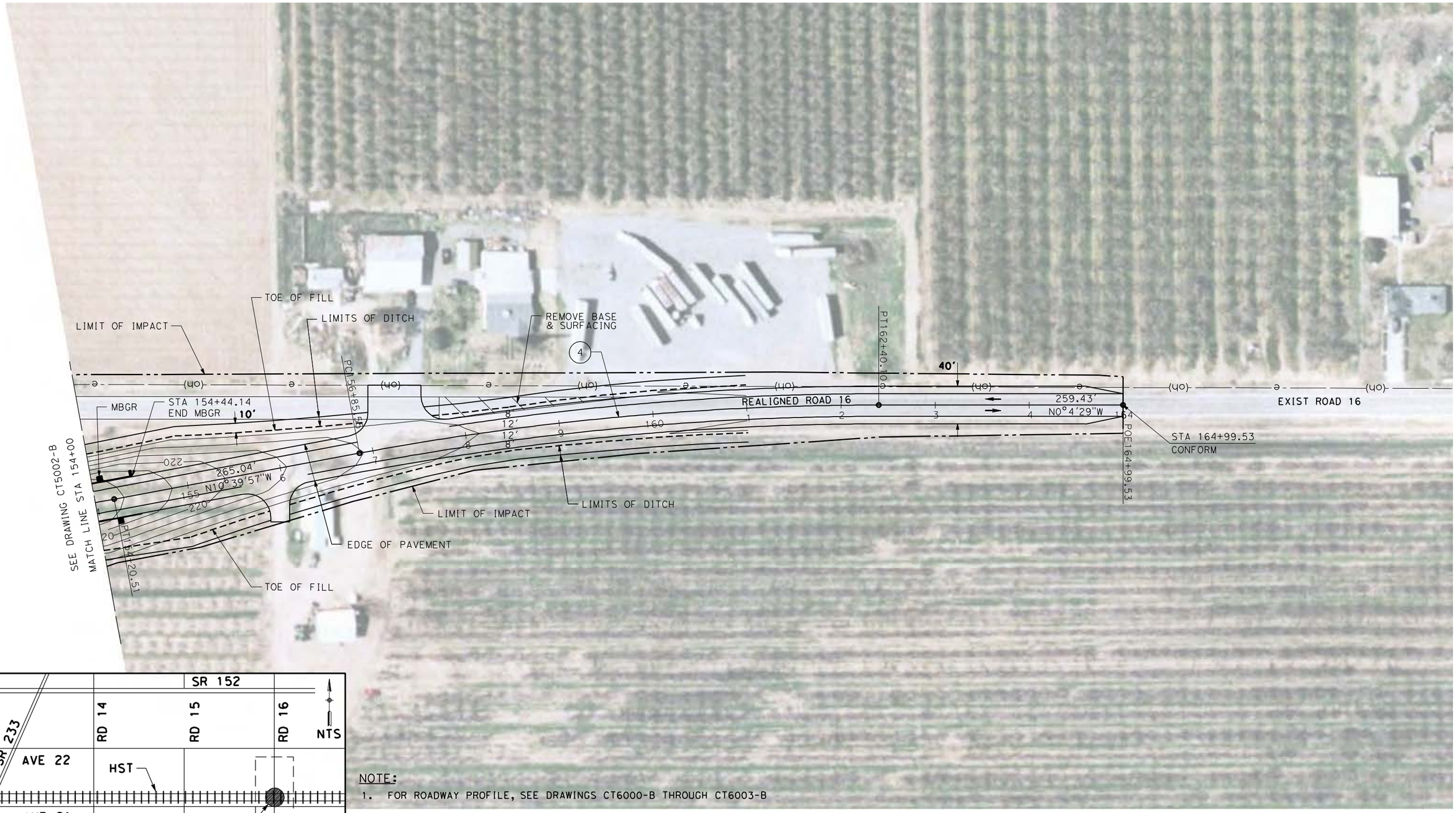

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
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50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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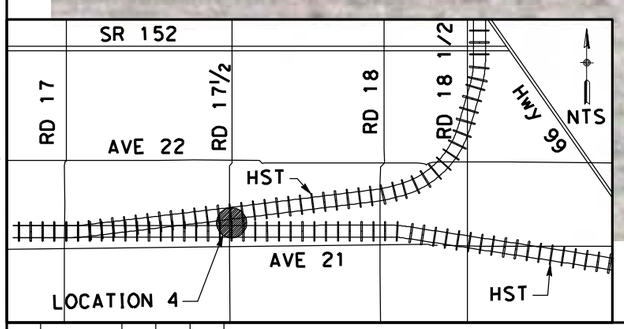

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	12°00'00"	315.31	628.32	45 MPH
2	3000.00	13°16'23"	349.05	694.97	45 MPH

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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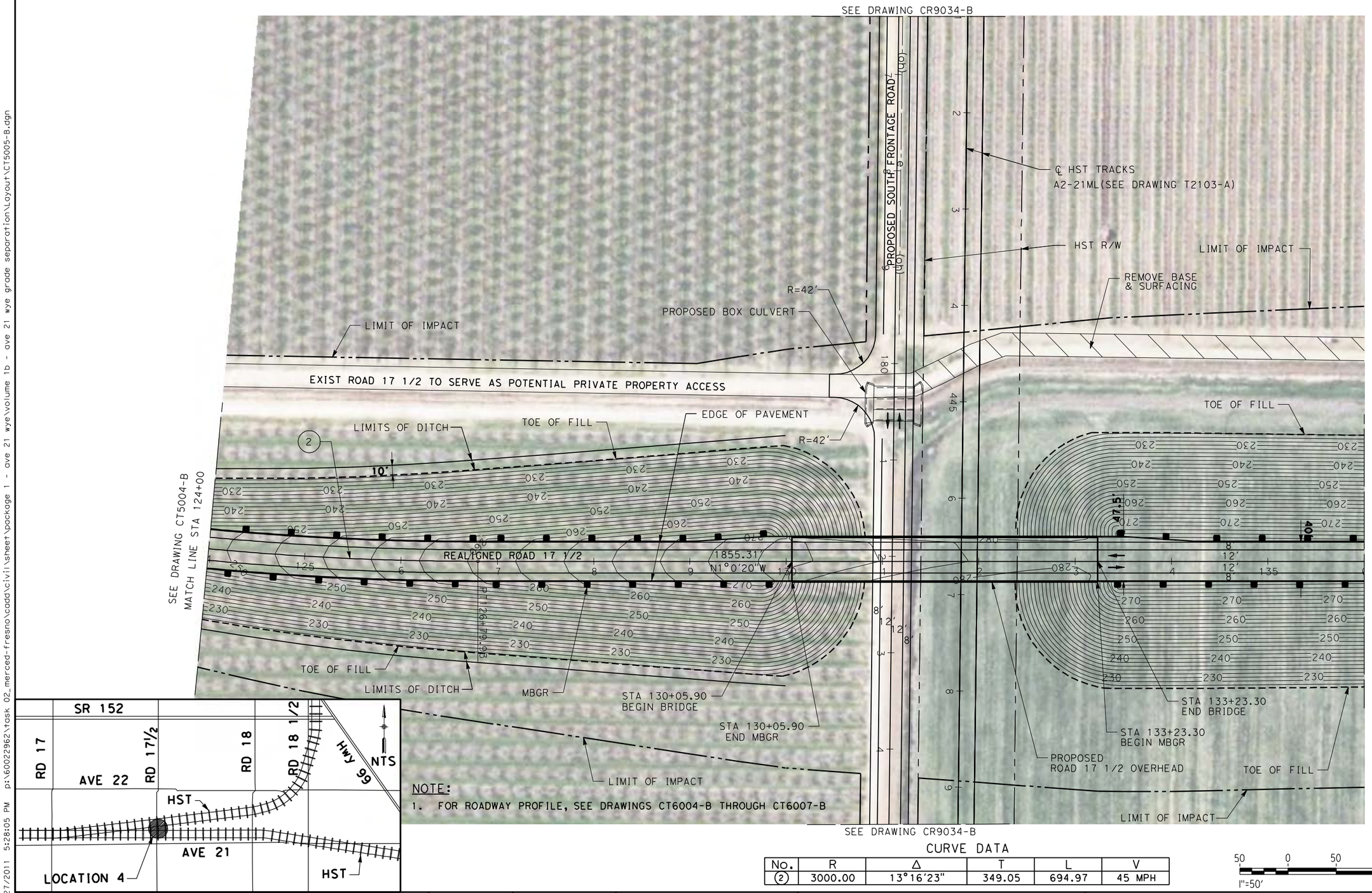

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	13°16'23"	349.05	694.97	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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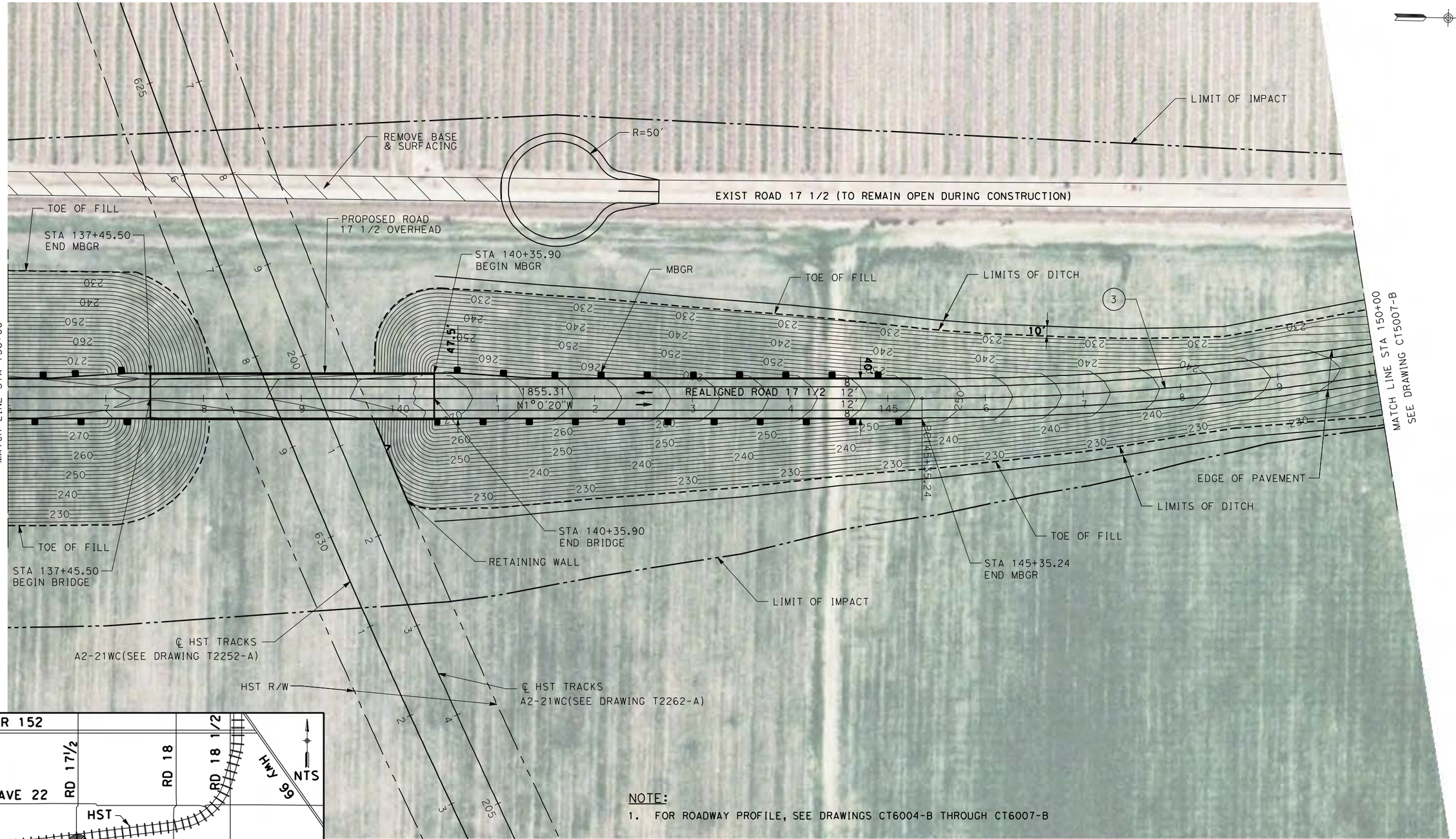
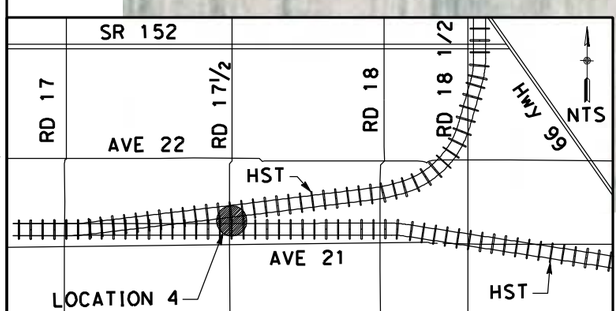
ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	09°59'40"	262.32	523.30	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
4	3000.00	11°00'00"	288.87	575.96	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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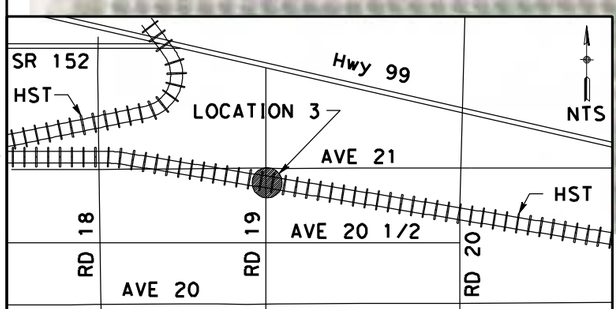

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6008-B THROUGH CT6011-B

CURVE DATA

No.	R	Δ	T	L	V
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2	3000.00	10°31'50"	276.47	551.38	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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Sacramento, CA 95811
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5008-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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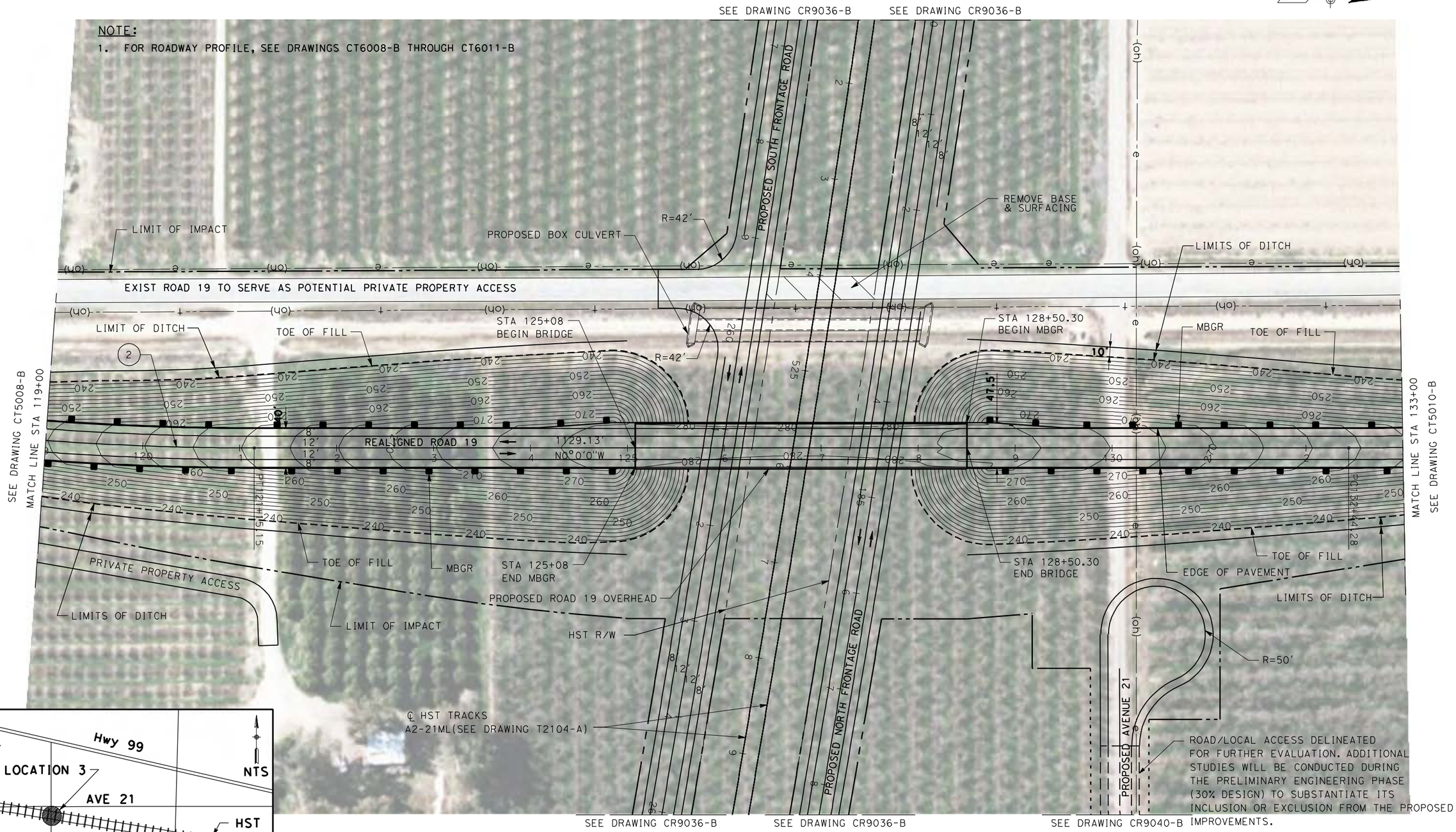
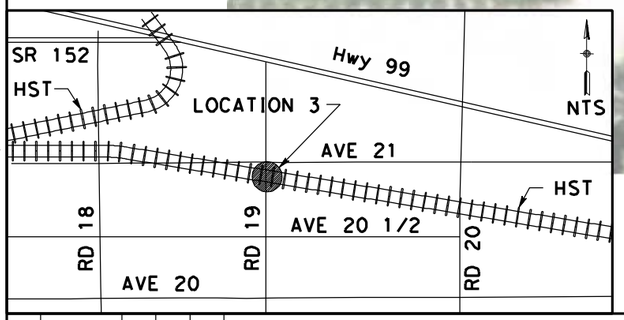
NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6008-B THROUGH CT6011-B





CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	10 33/64 31'50"	276.47	551.38	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5009-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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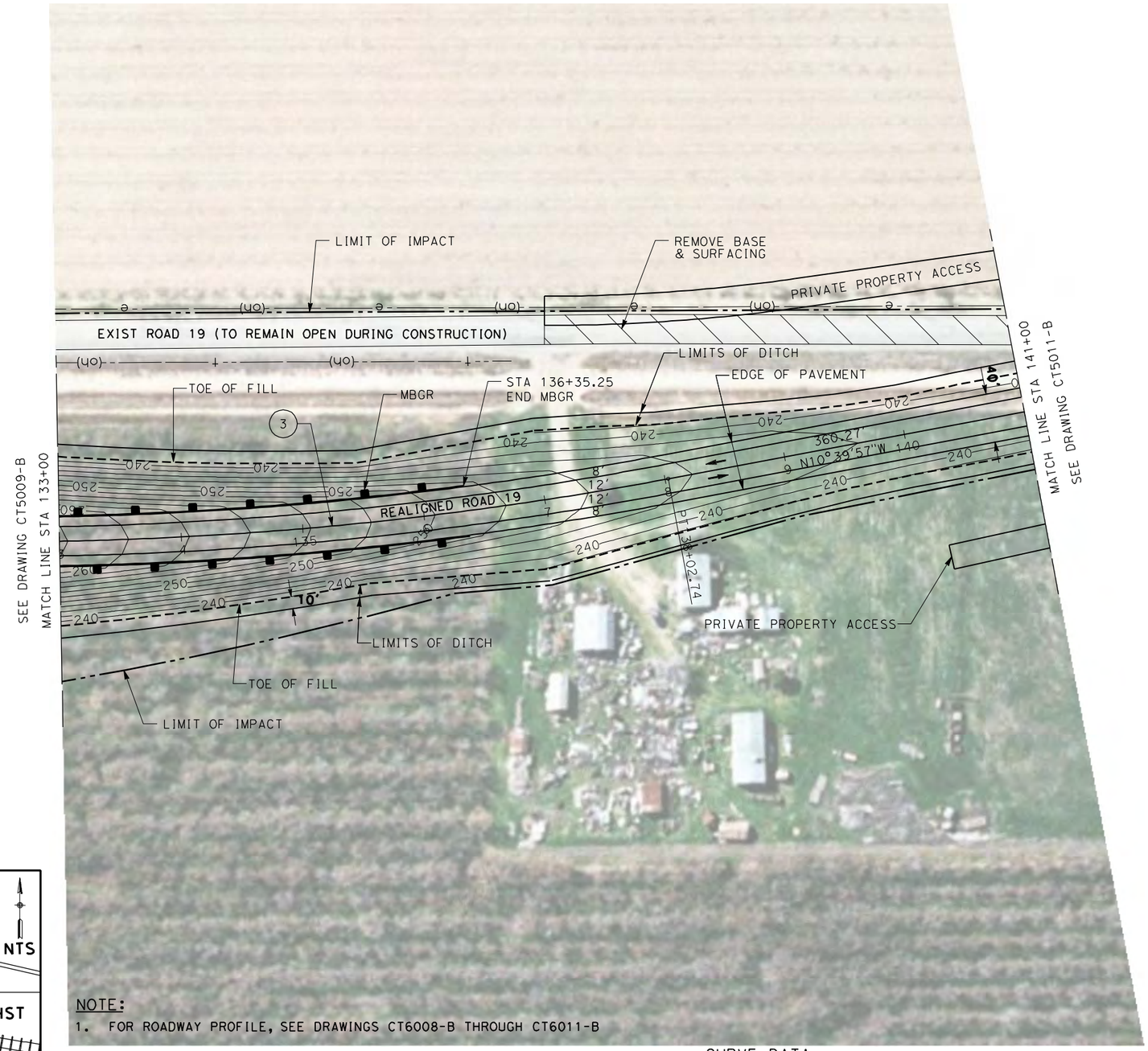
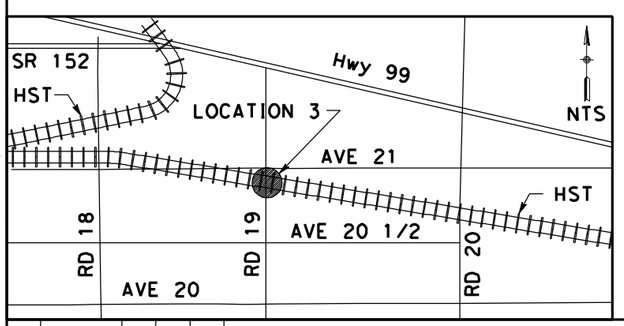
ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5009-B.dgn
ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6008-B THROUGH CT6011-B



CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	10°39'57"	280.04	558.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5010-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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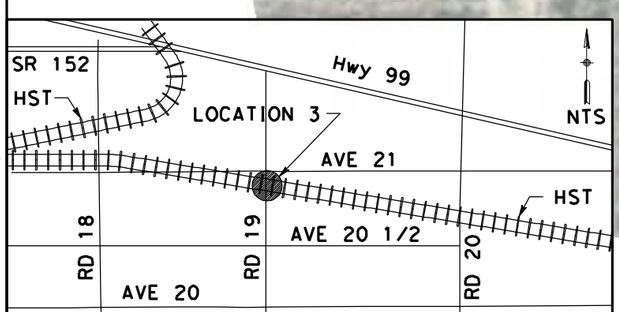
ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6008-B THROUGH CT6011-B

CURVE DATA

No.	R	Δ	T	L	V
4	3000.00	10°05'15"	264.78	528.18	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811
CH2MHILL

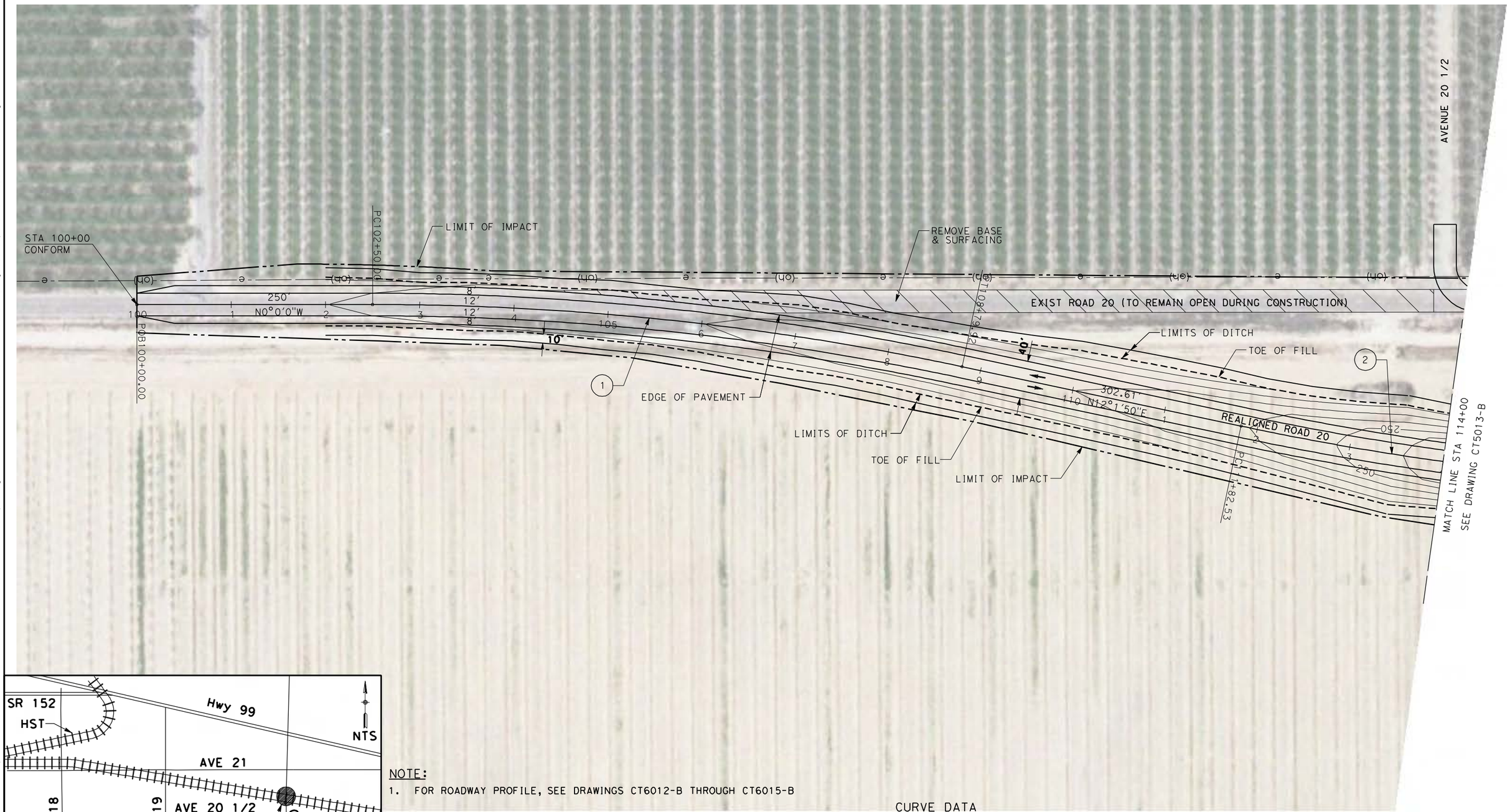
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

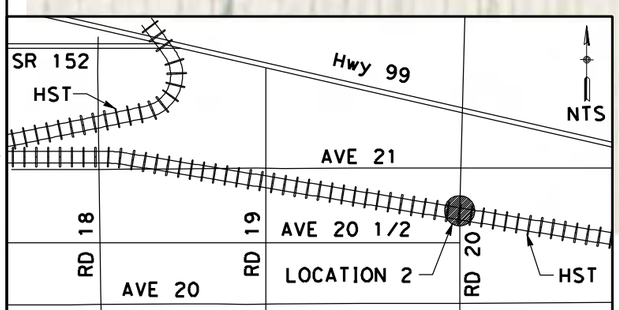
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5011-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:29:34 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5011-B.dgn
ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6012-B THROUGH CT6015-B

CURVE DATA

No.	R	Δ	T	L	V
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2	3000.00	12°01'50"	316.12	629.92	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5012-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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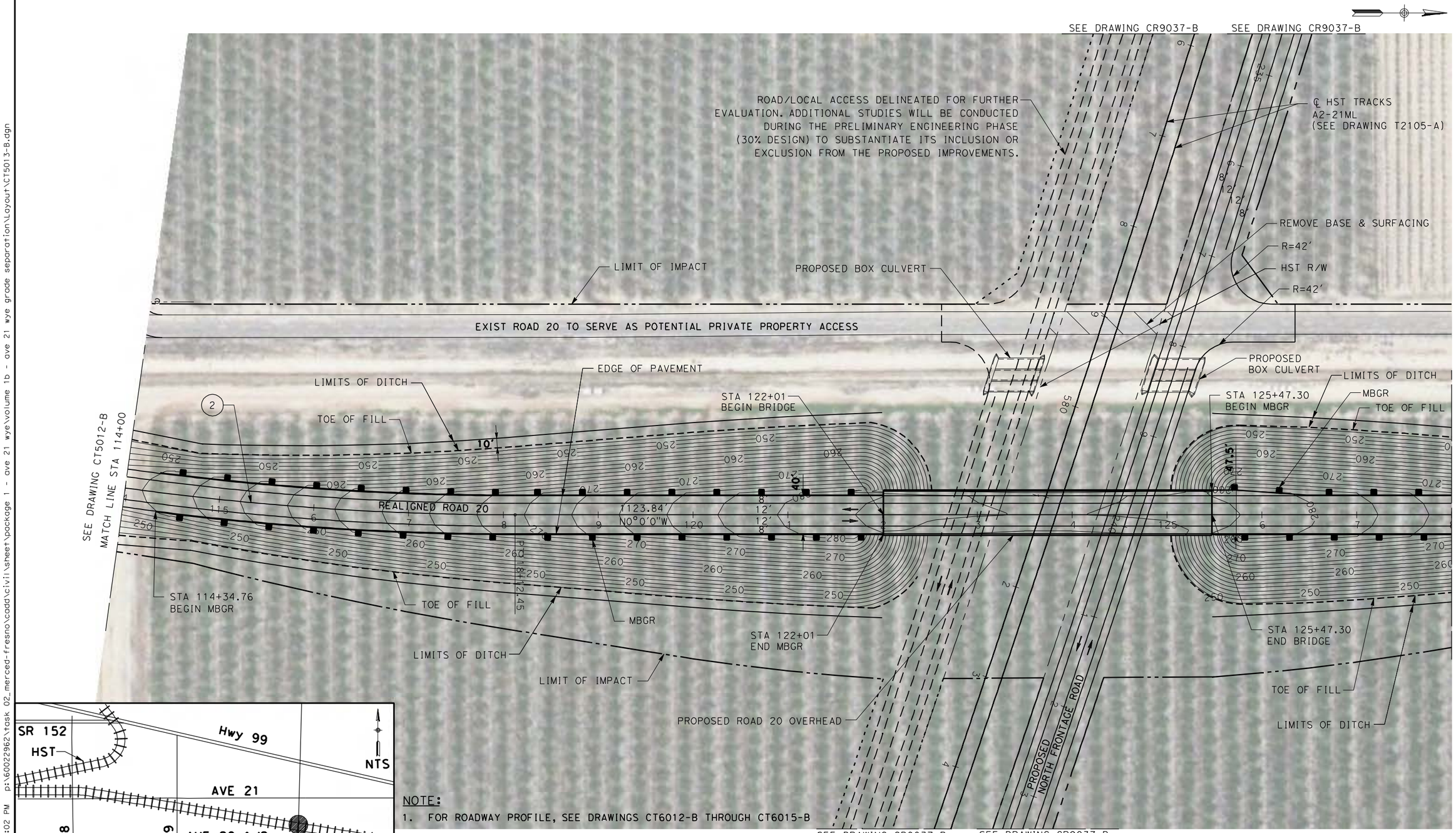
4/27/2011 5:30:02 PM
ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6012-B THROUGH CT6015-B

CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	12°01'50"	316.12	629.92	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

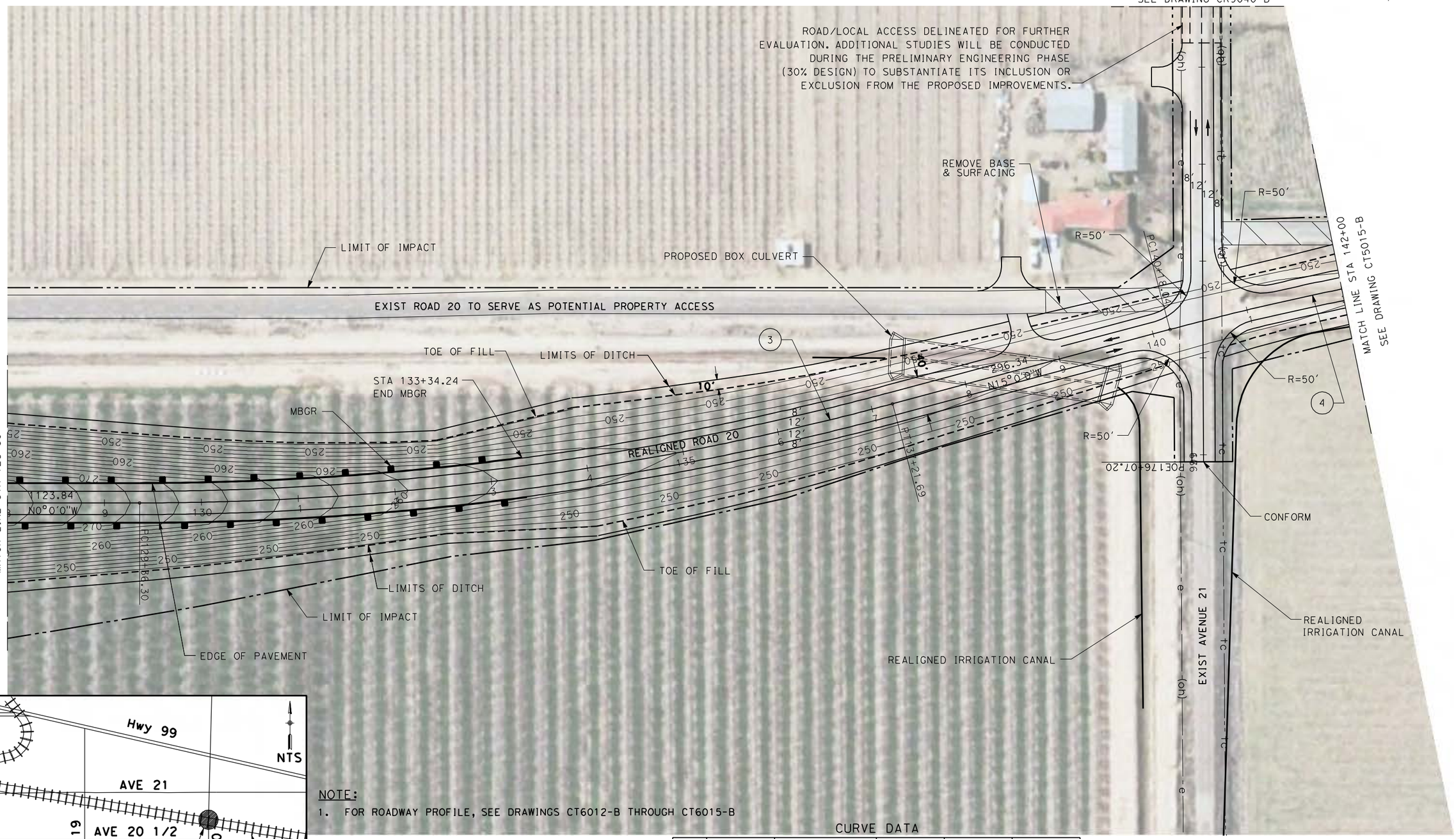
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5013-B
SCALE AS SHOWN
SHEET NO. ### OF ###



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6012-B THROUGH CT6015-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	15°00'00"	394.96	785.40	45 MPH
4	3000.00	14°30'54"	382.05	760.01	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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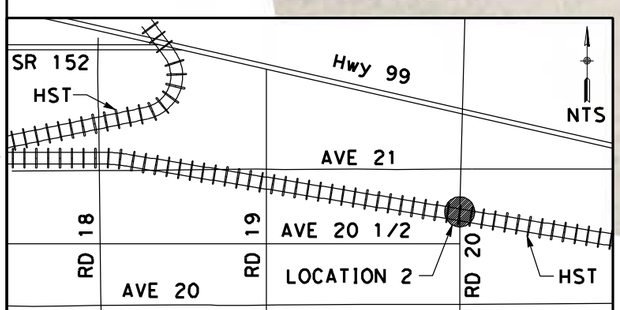
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5014-B
SCALE AS SHOWN
SHEET NO. ### OF ###

p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5014-B.dgn 4/27/2011 5:30:10 PM ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6012-B THROUGH CT6015-B

CURVE DATA

No.	R	Δ	T	L	V
4	3000.00	14°30'54"	382.05	760.01	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

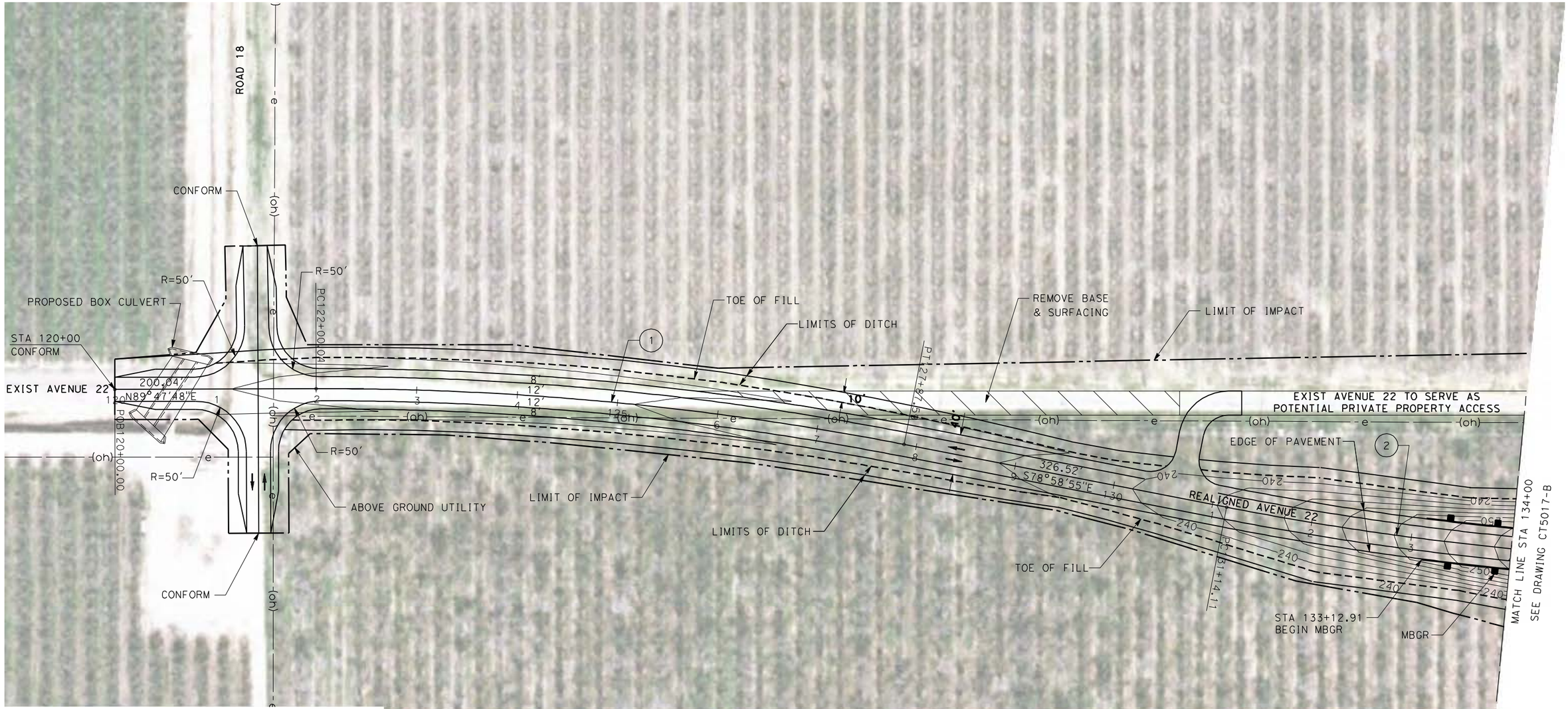
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

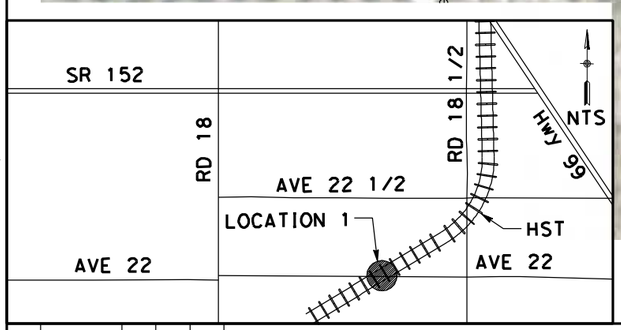
UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5015-B
SCALE AS SHOWN
SHEET NO. ### OF ###

p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5015-B.dgn 4/27/2011 5:30:19 PM ReyesC1

4/27/2011 5:30:28 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5016-B.dgn





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	11°13'17"	294.72	587.55	45 MPH
2	3000.00	11°01'05"	289.34	576.90	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

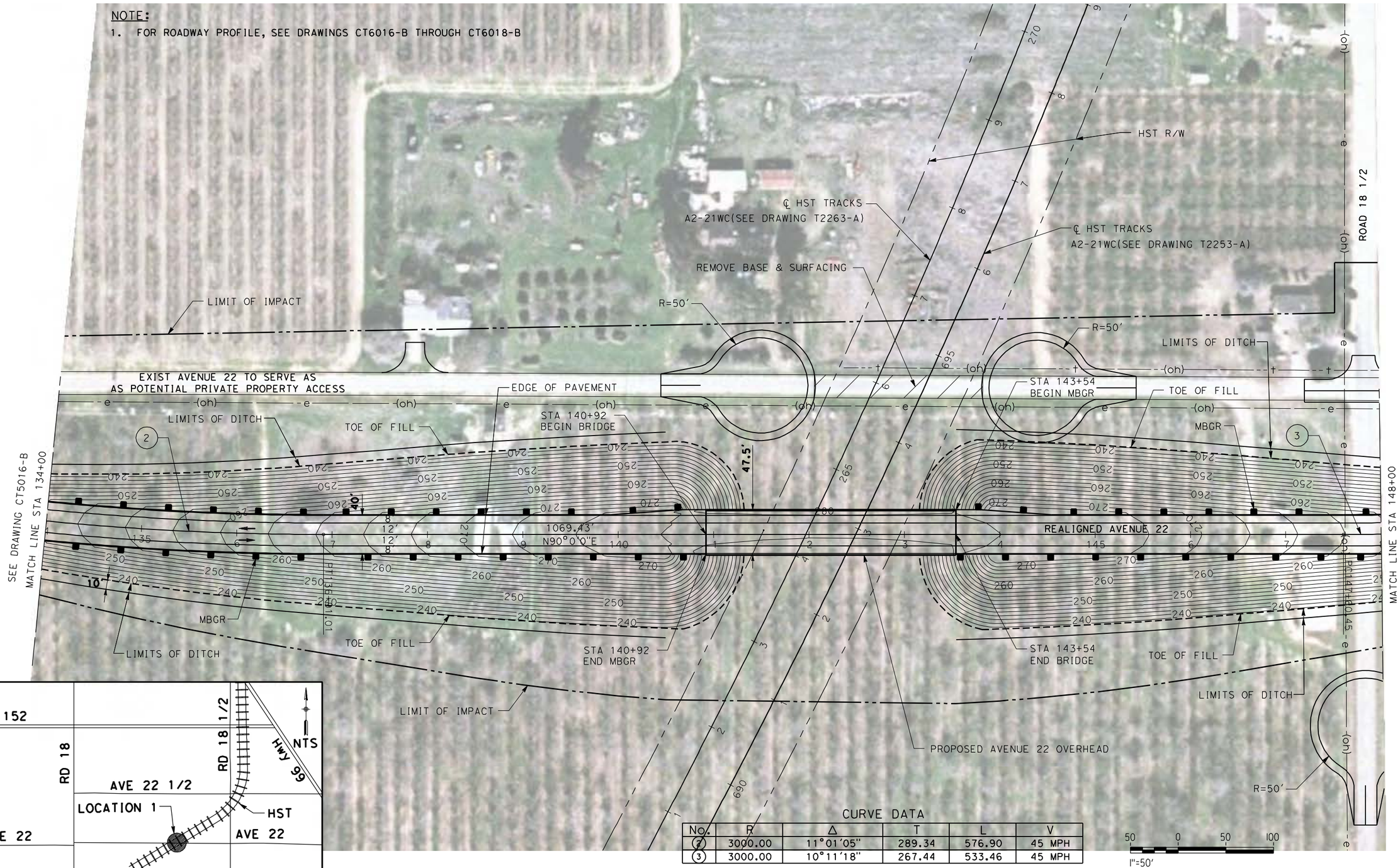
UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ReyesC1

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B



CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	11°01'05"	289.34	576.90	45 MPH
3	3000.00	10°11'18"	267.44	533.46	45 MPH

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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Sacramento, CA 95811
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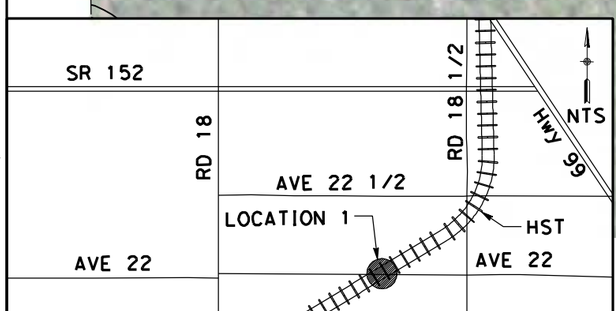
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5017-B.dgn 4/27/2011 5:30:39 PM ReyesC1



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	10°11'18"	267.44	533.46	45 MPH
4	3000.00	10°11'18"	267.44	533.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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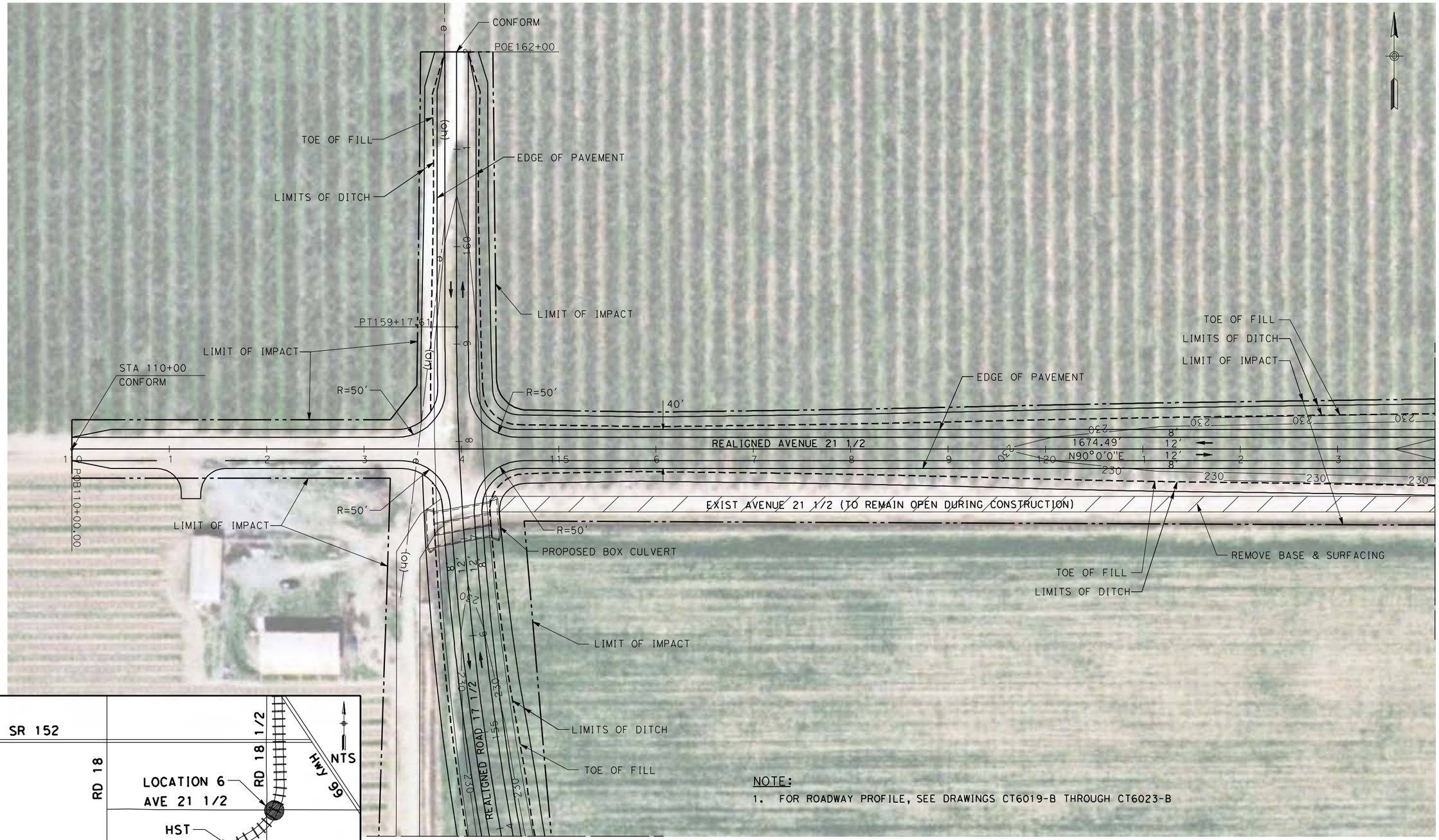
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ReyesC1 4/27/2011 5:30:47 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye grade separation\Layout\CT5018-B.dgn
ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5018-B.dgn



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

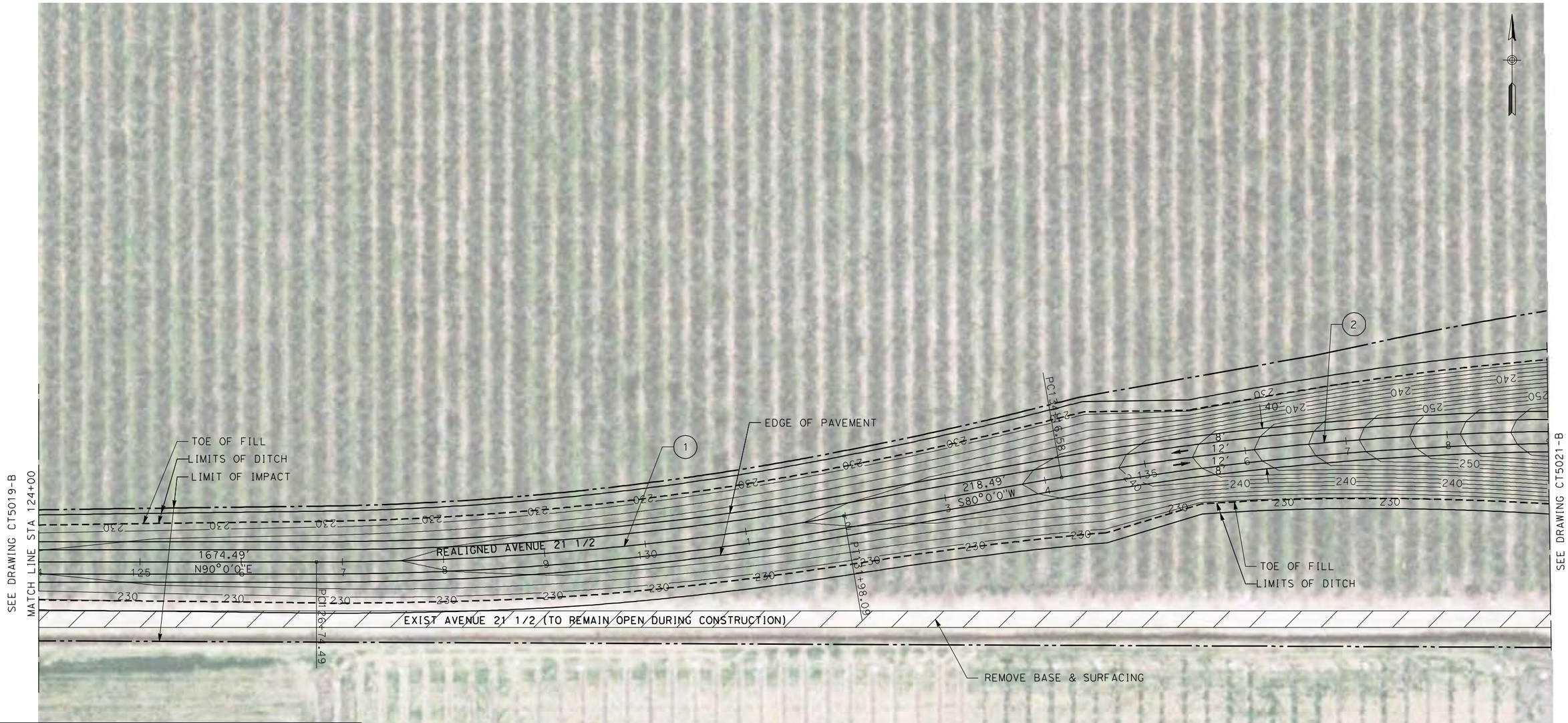
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

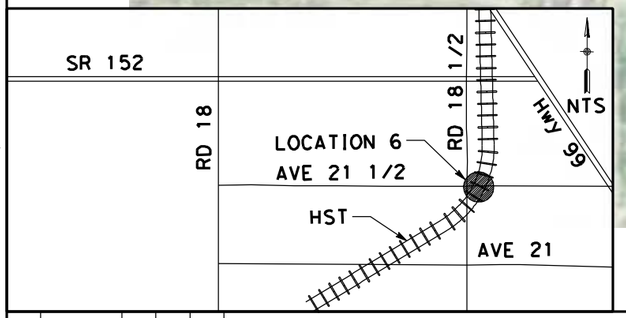
UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:30:55 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5019-B.dgn
ReyesC1

p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5020-B.dgn
4/27/2011 5:31:04 PM
ReyesC1





CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	80°0'0"	262.47	523.60	45 MPH
2	3000.00	80°0'0"	262.47	523.60	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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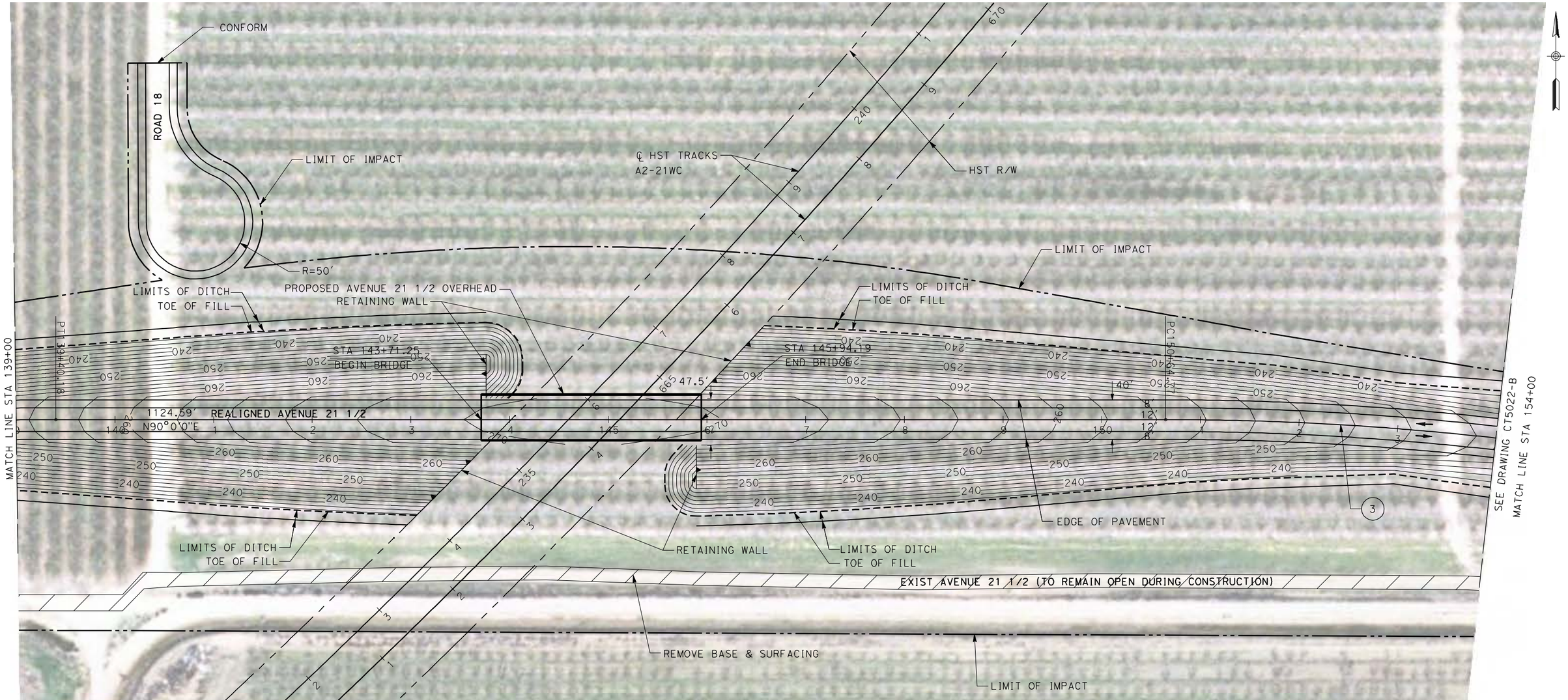

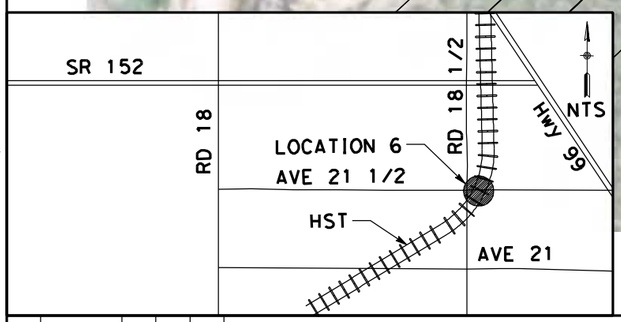

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	78°51'18"	292.70	583.54	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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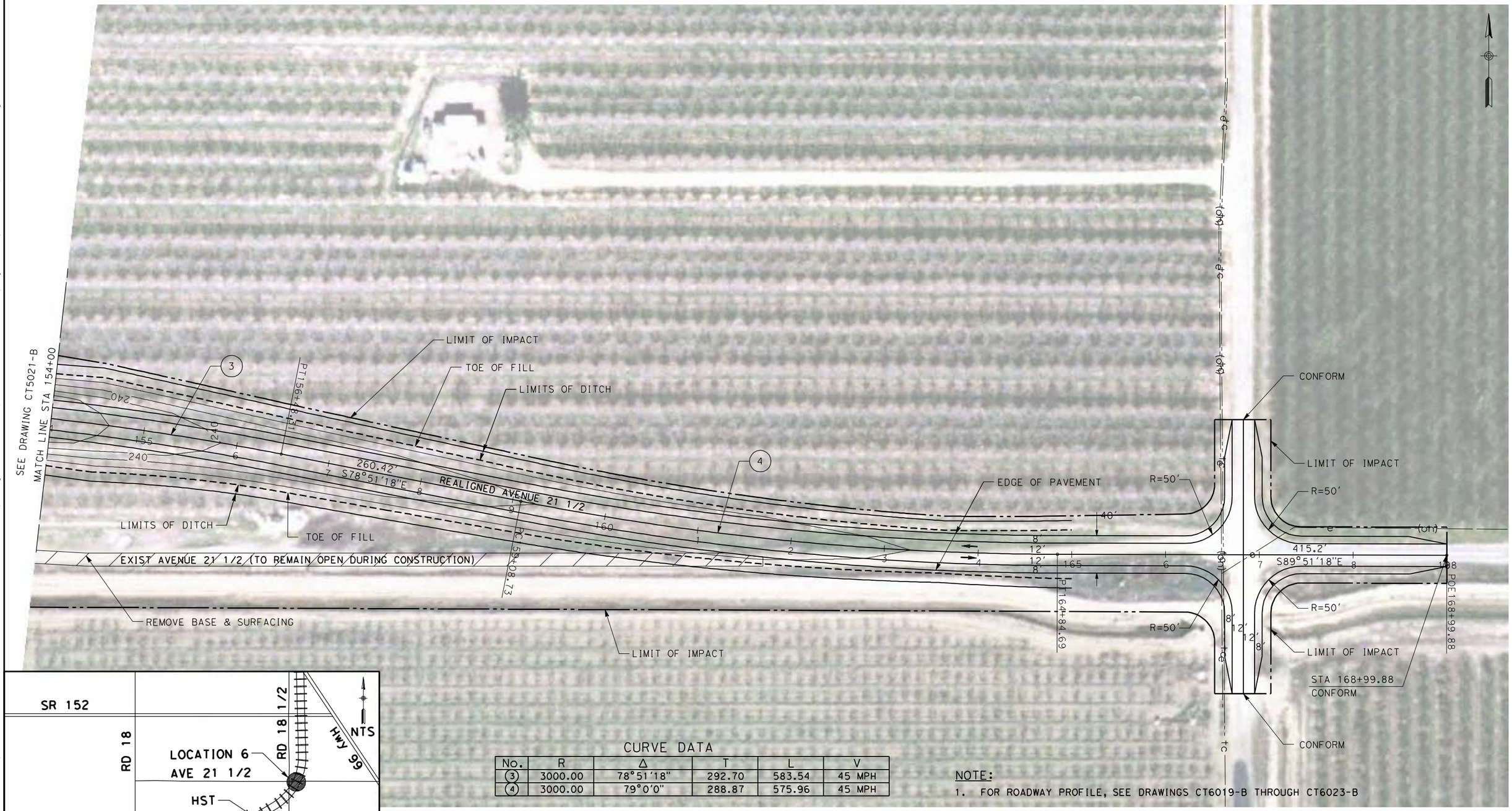
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:31:29 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5022-B.dgn



CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	78°51'18"	292.70	583.54	45 MPH
4	3000.00	79°0'0"	288.87	575.96	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

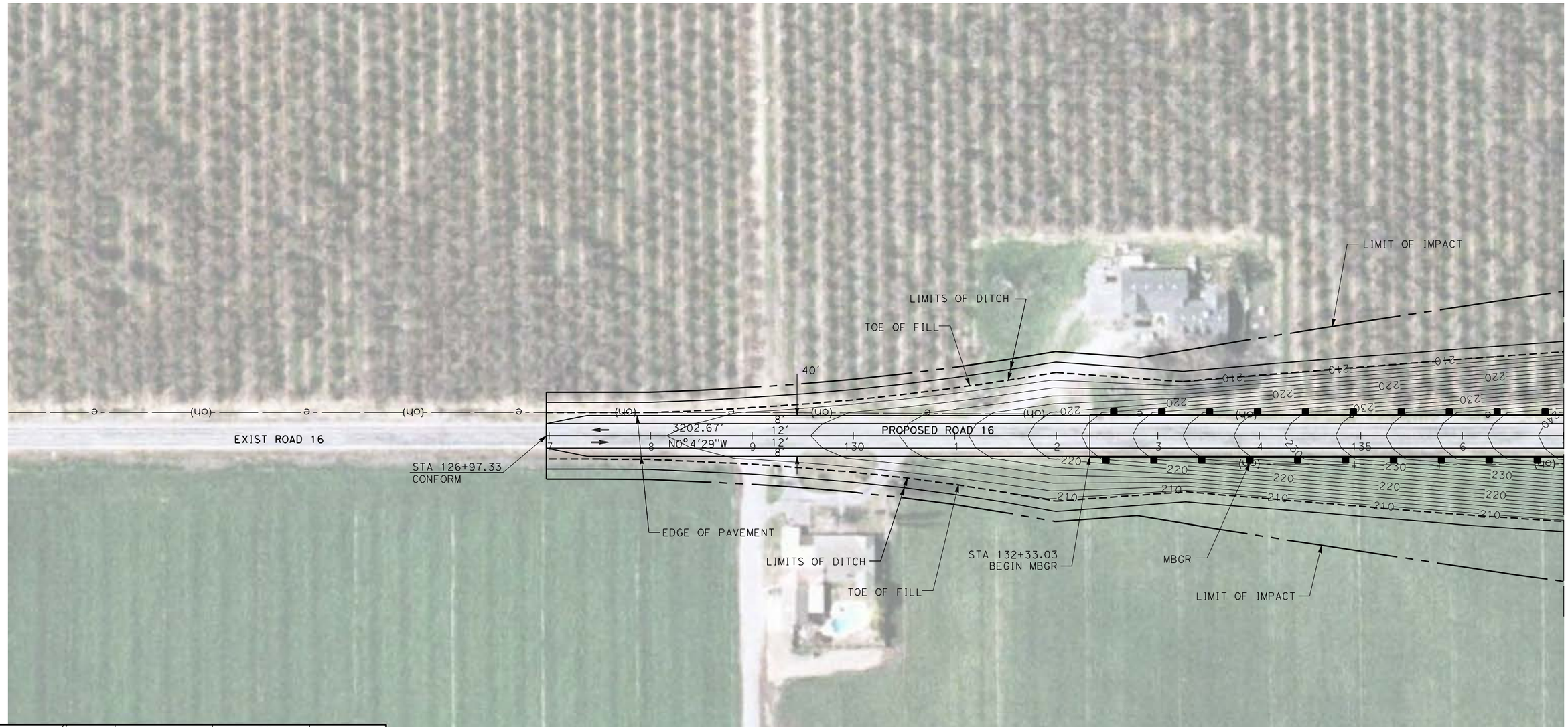
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

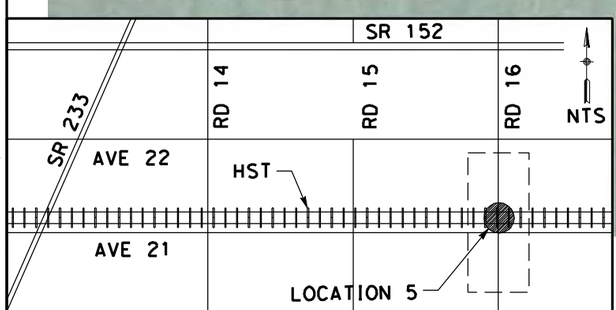
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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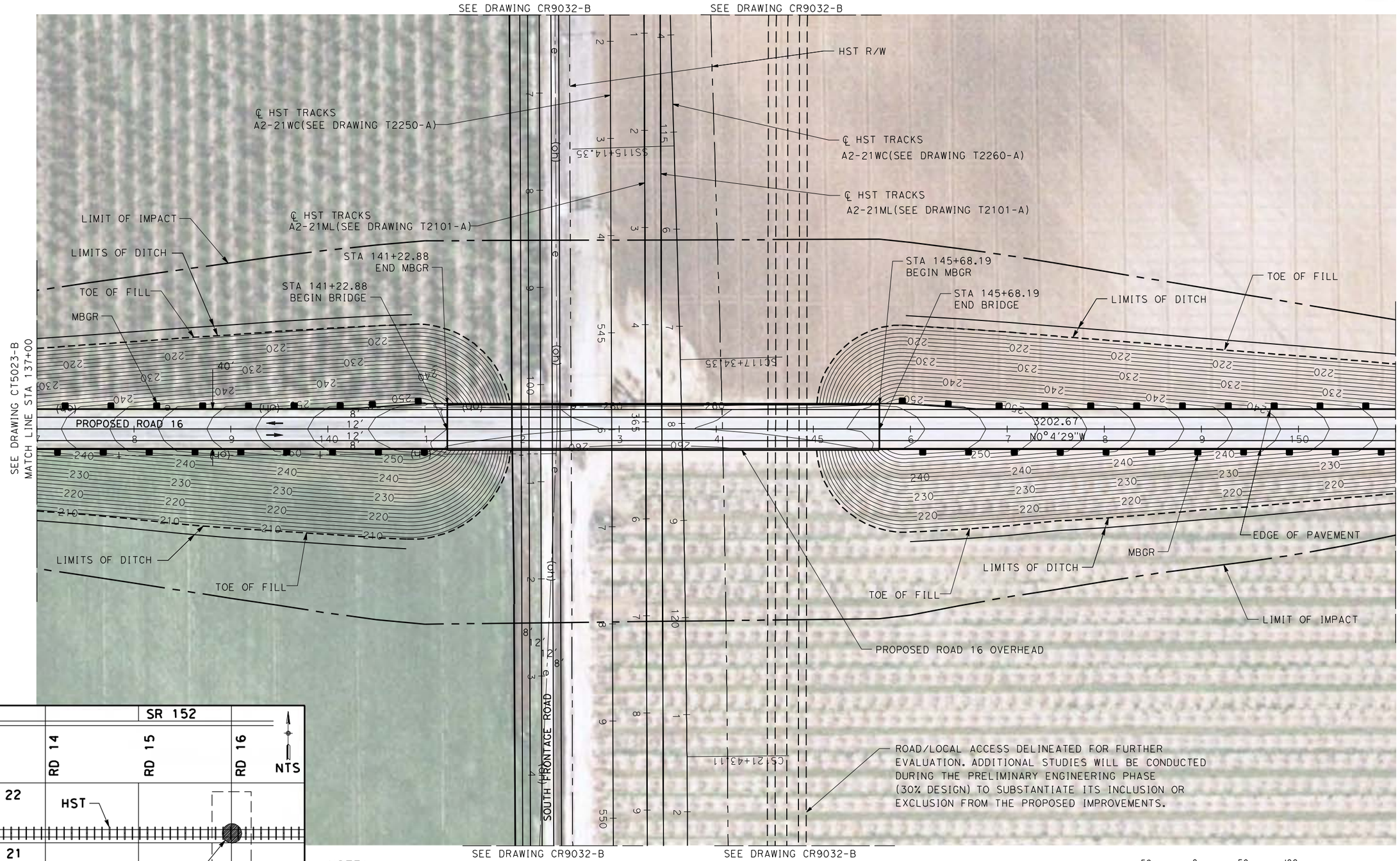
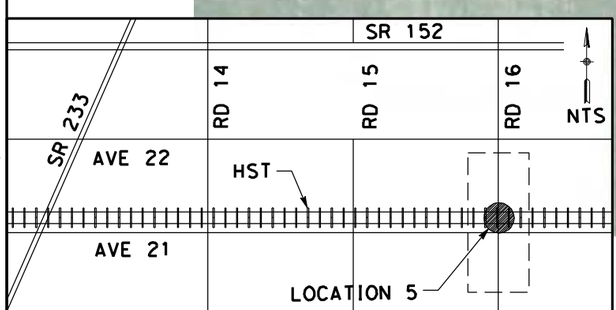
ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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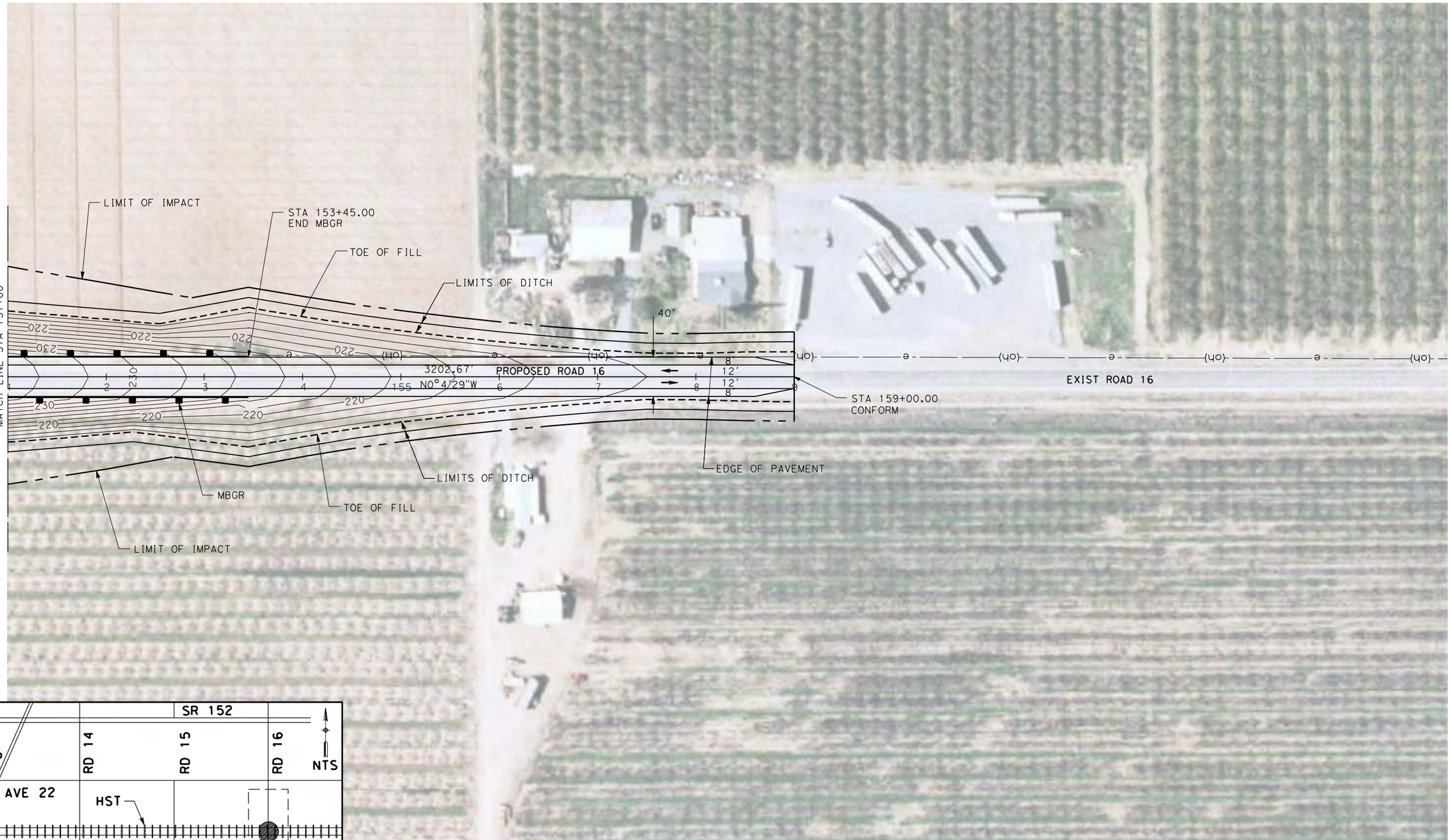
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

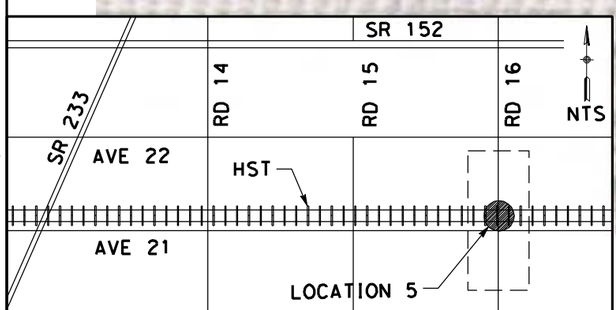
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:32:01 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 1b - ave 21 wye grade separation\Layout\CT5024-B.dgn
ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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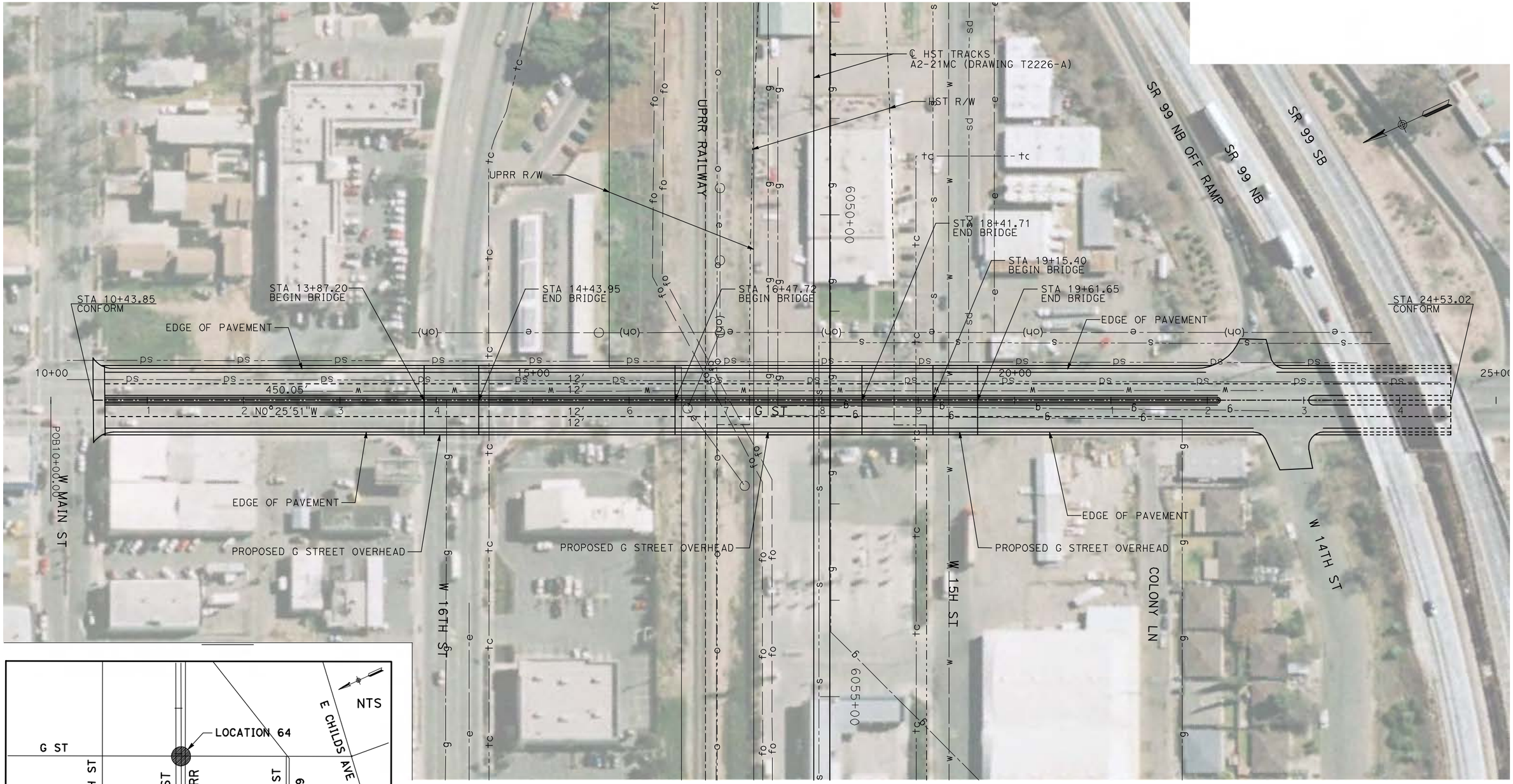
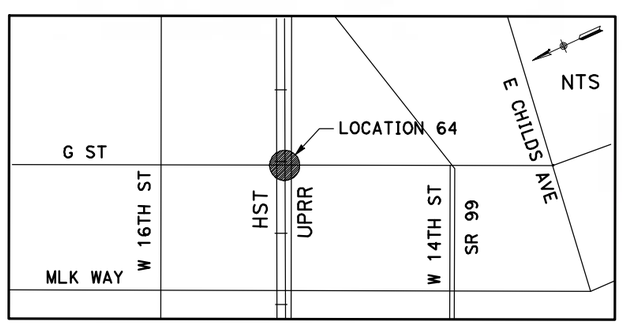
ReyesC1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWING CT1149-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR MERCED CONNECTOR - (AVE 21)
GRADE SEPARATION - G STREET
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CT0149-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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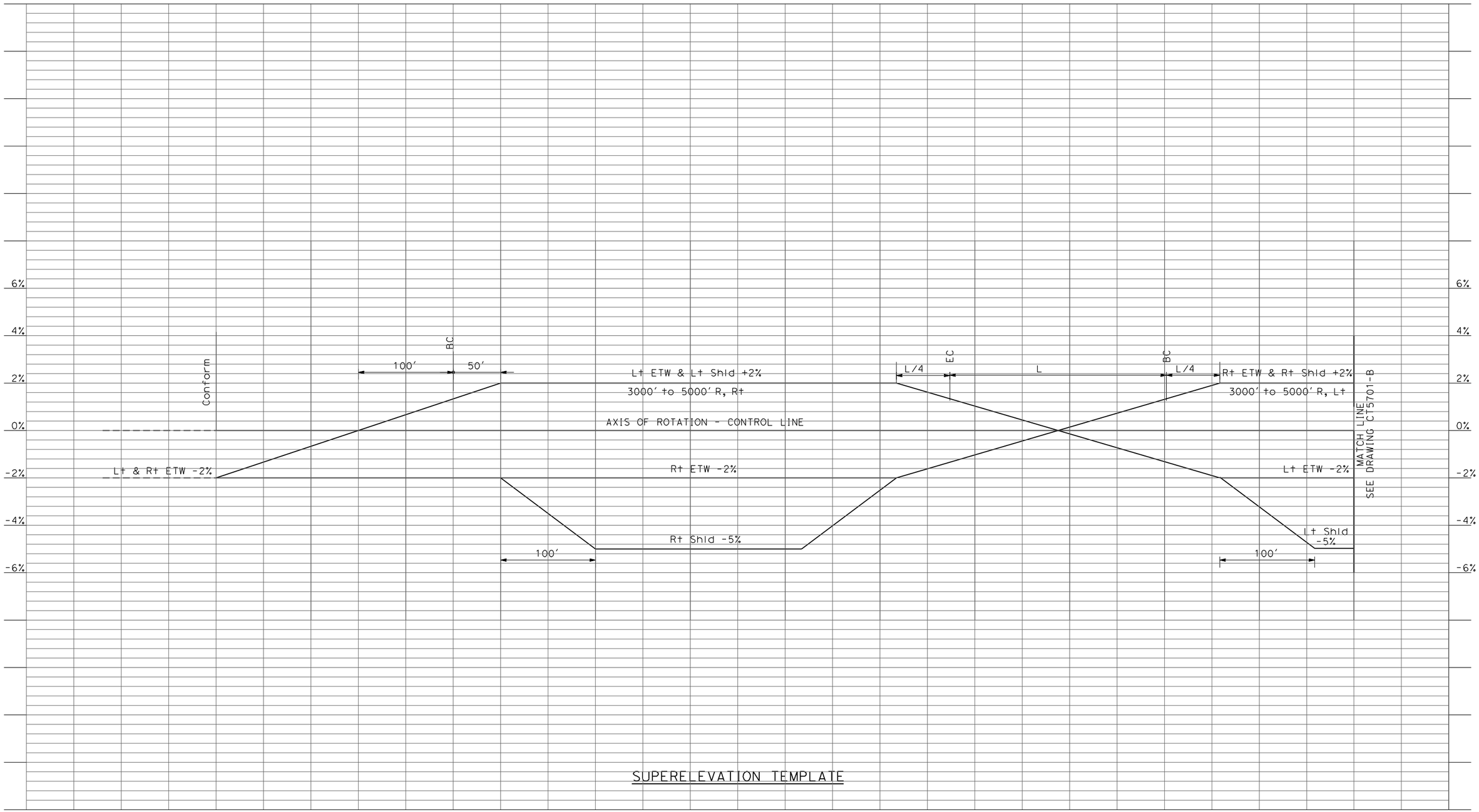

SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5700-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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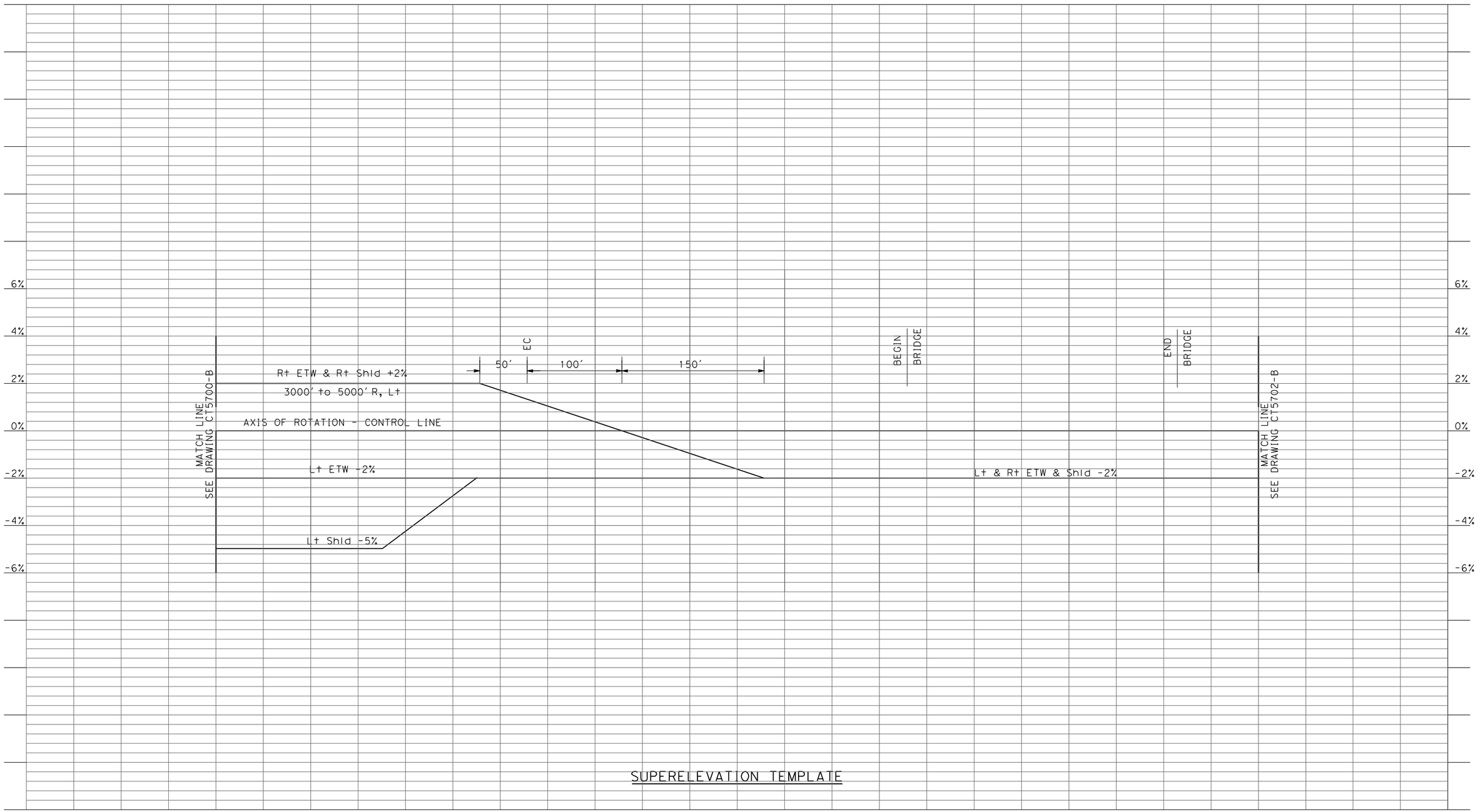
ReyesC1



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5701-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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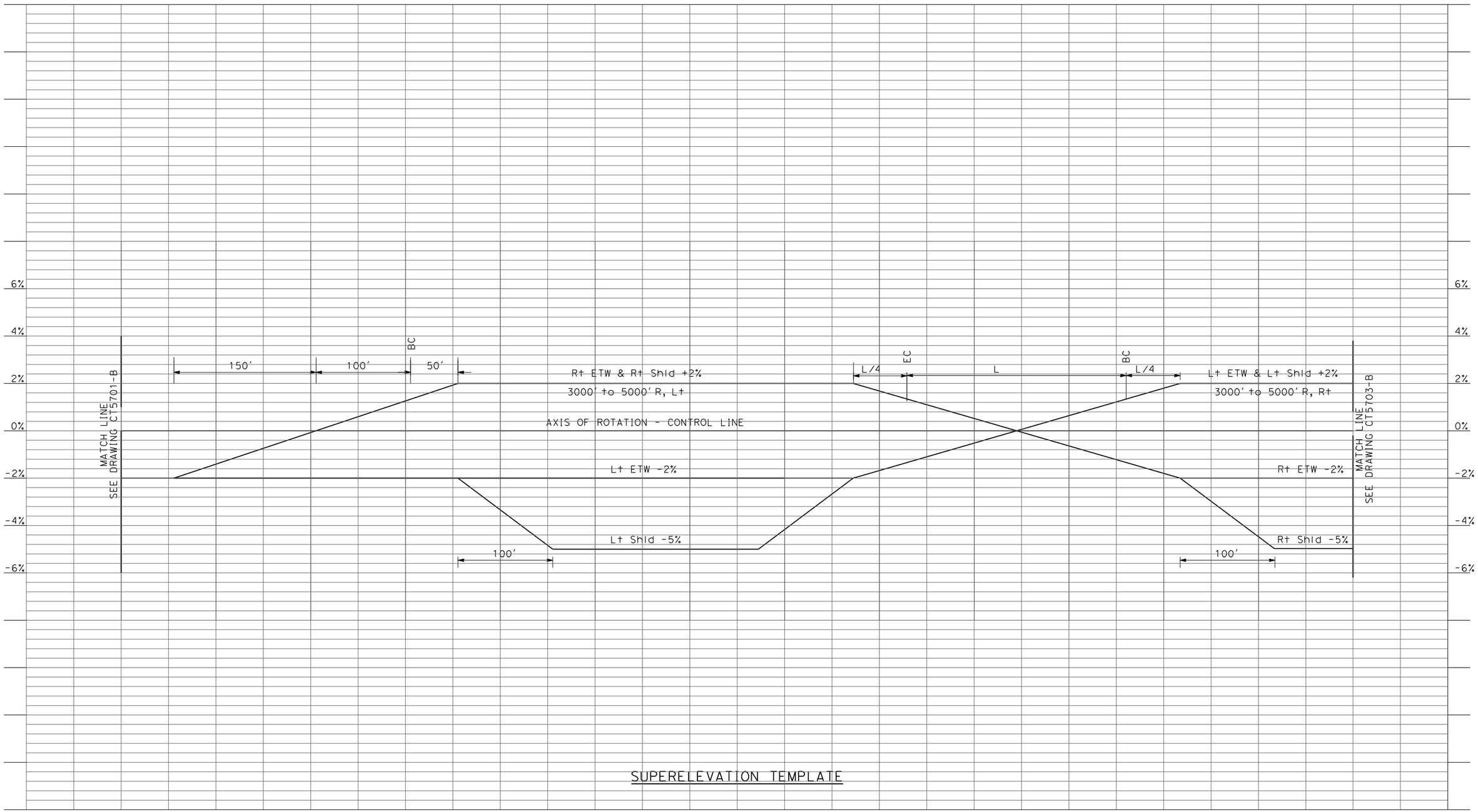

SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5702-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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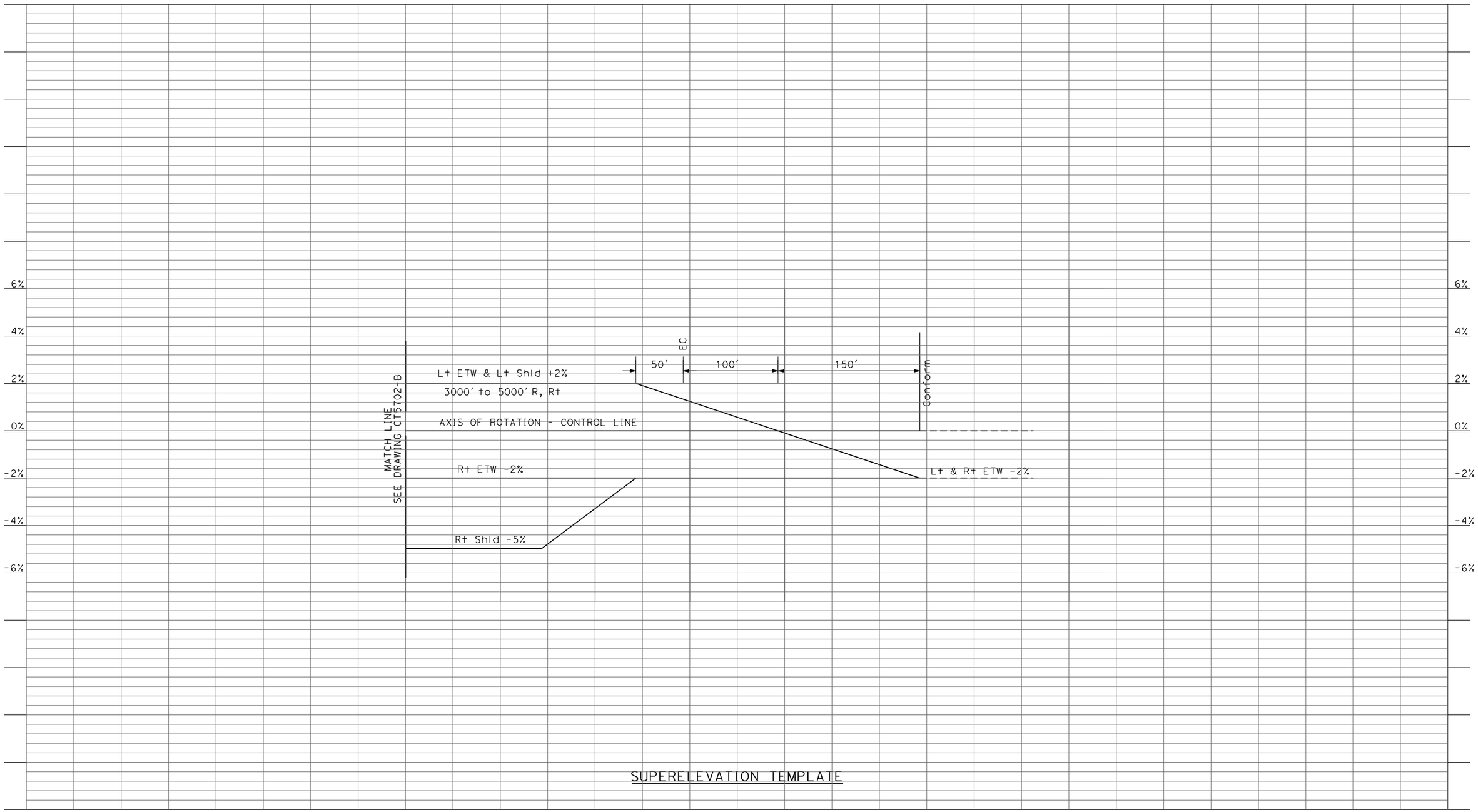

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5703-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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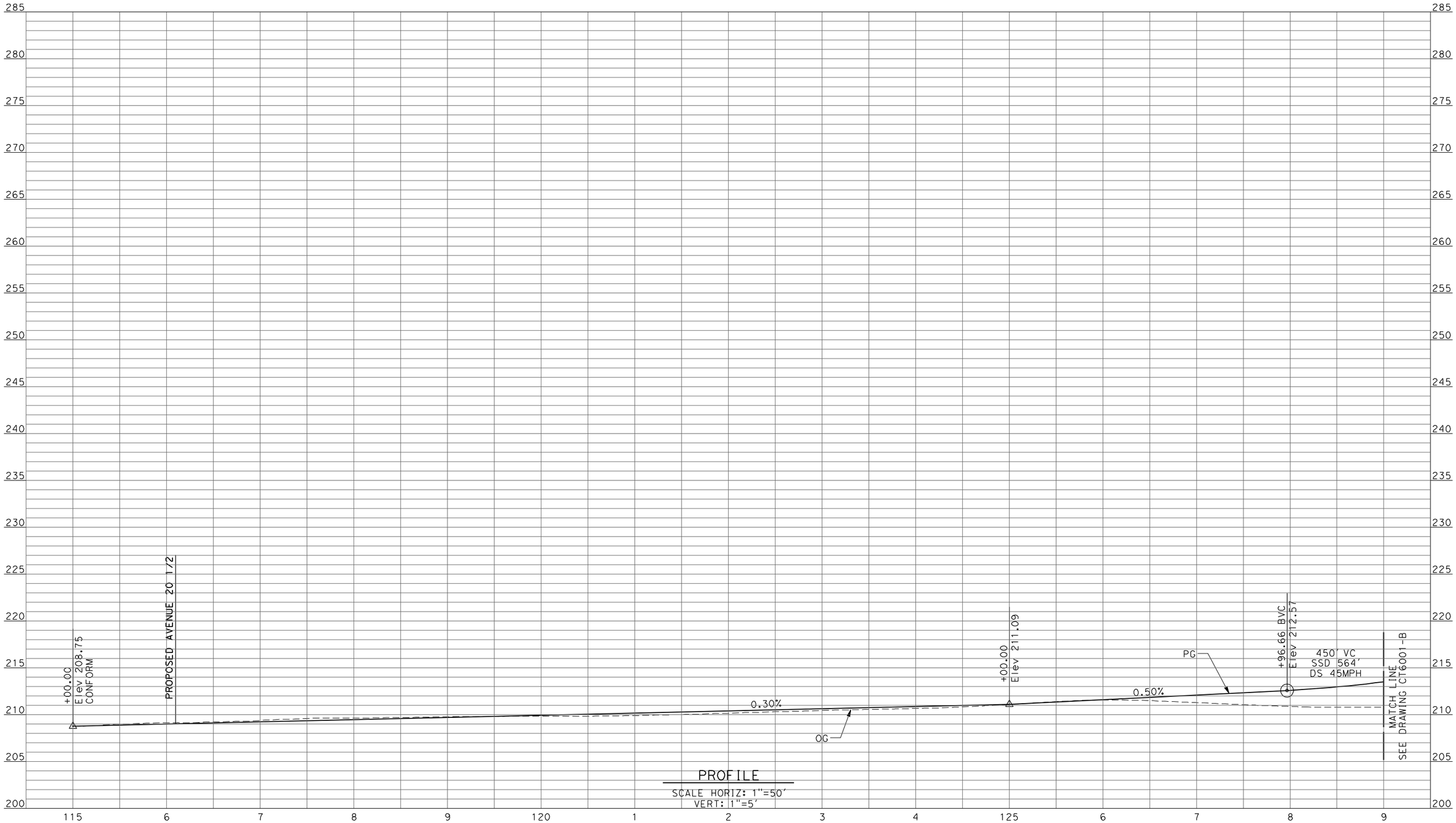

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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IN CHARGE A. BOONE
DATE 04/29/2011

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HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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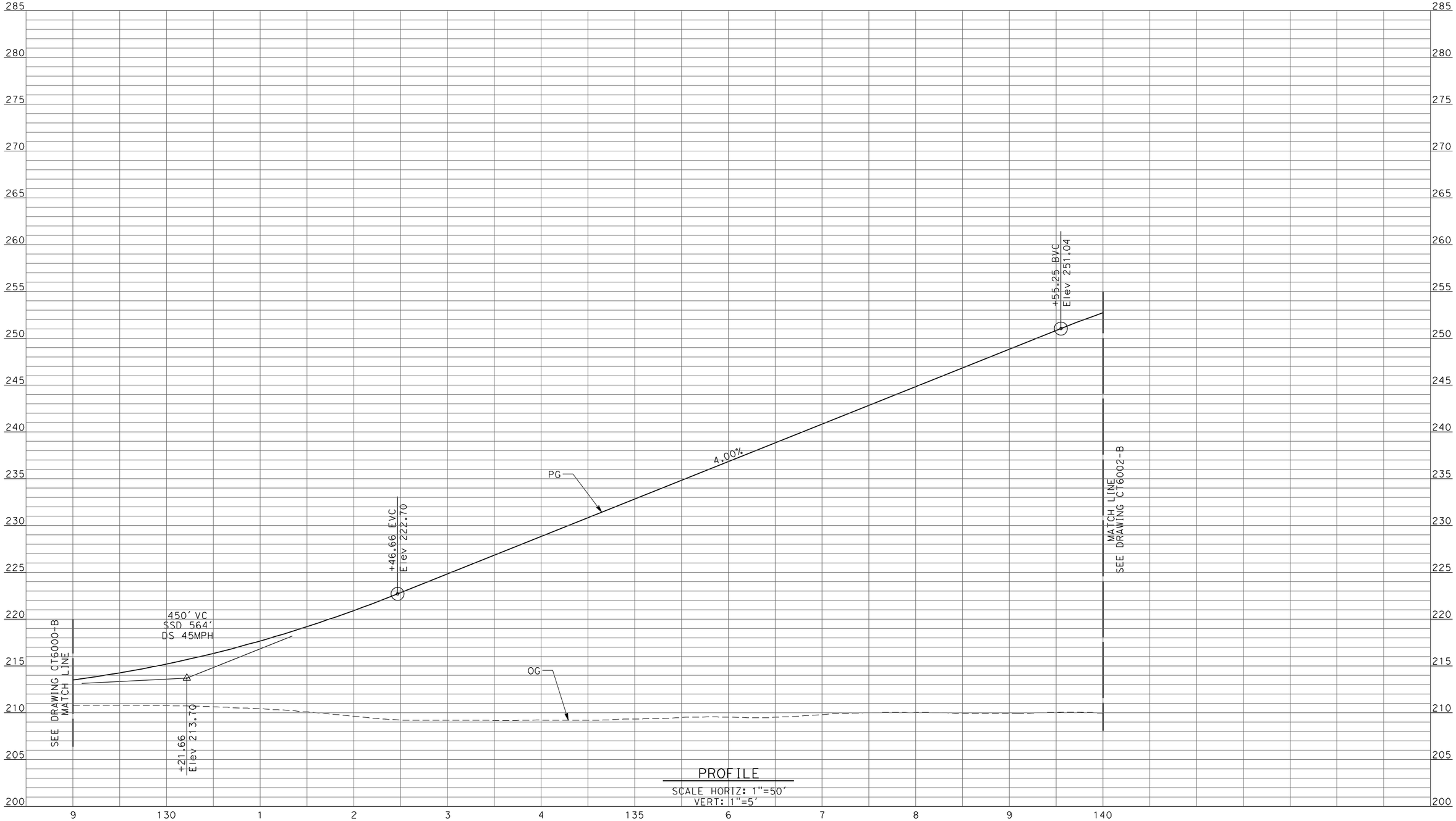

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ReyesC1

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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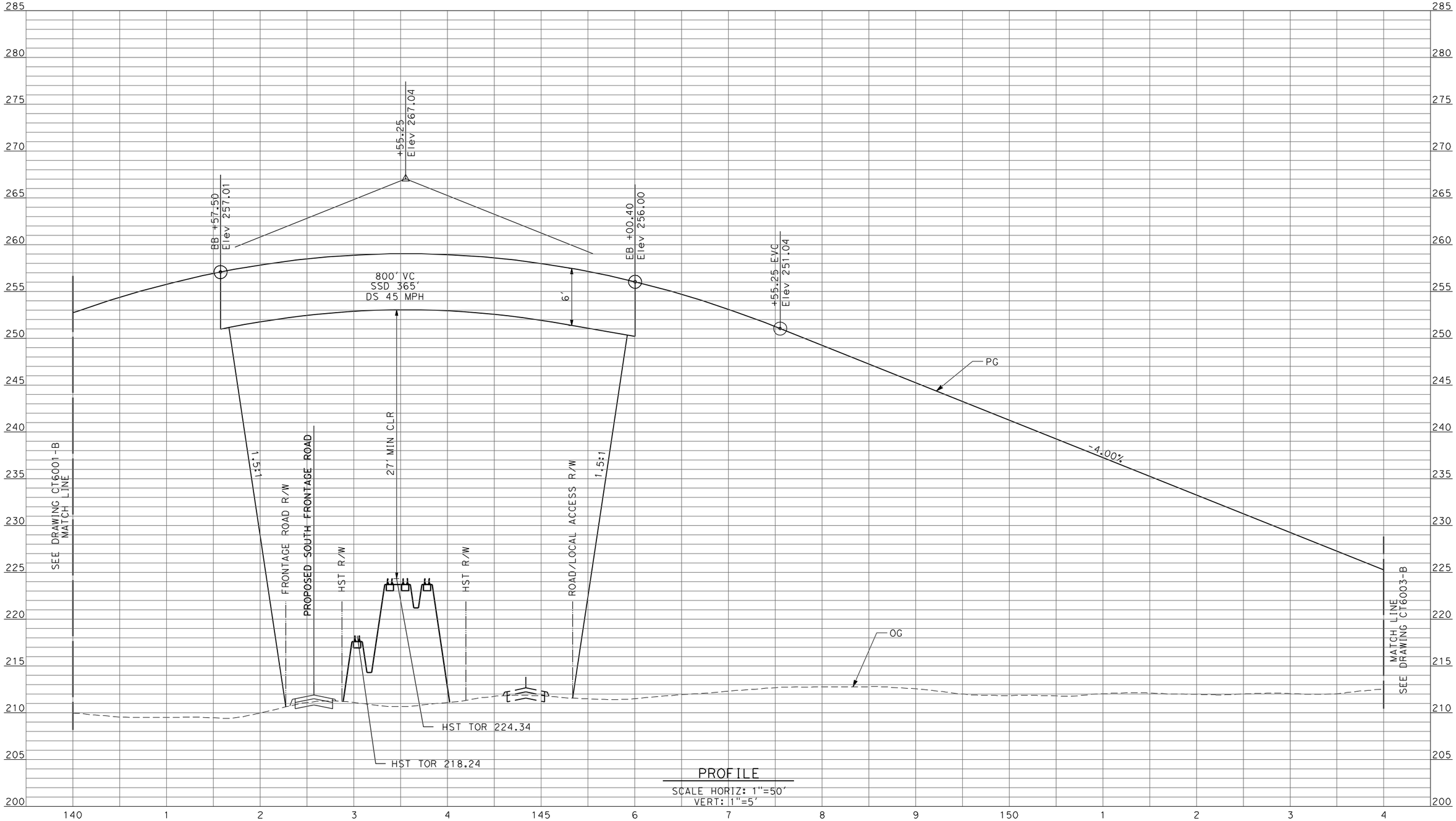
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6001-B
SCALE AS SHOWN
SHEET NO. ### OF ###



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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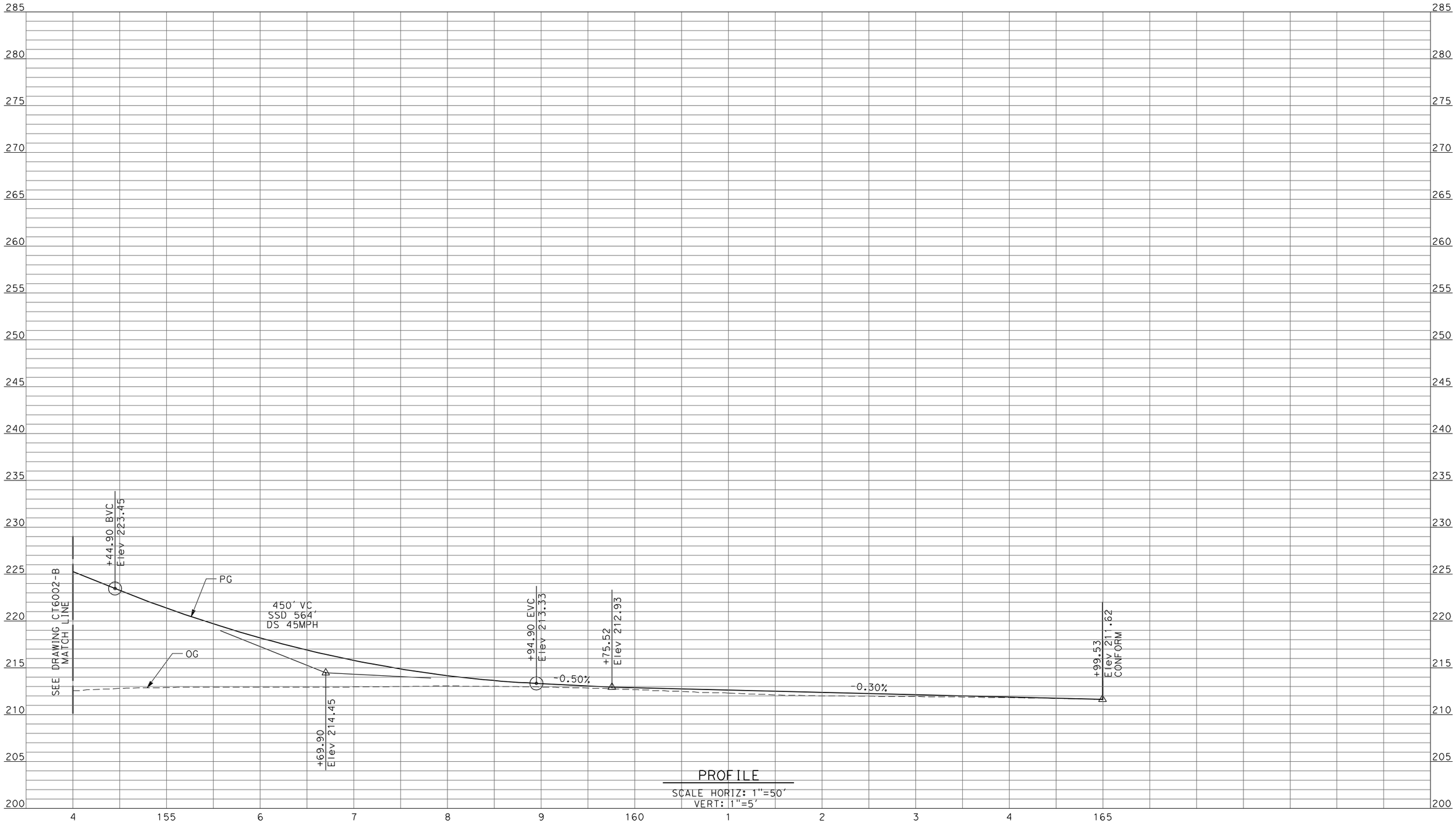
ReyesC1



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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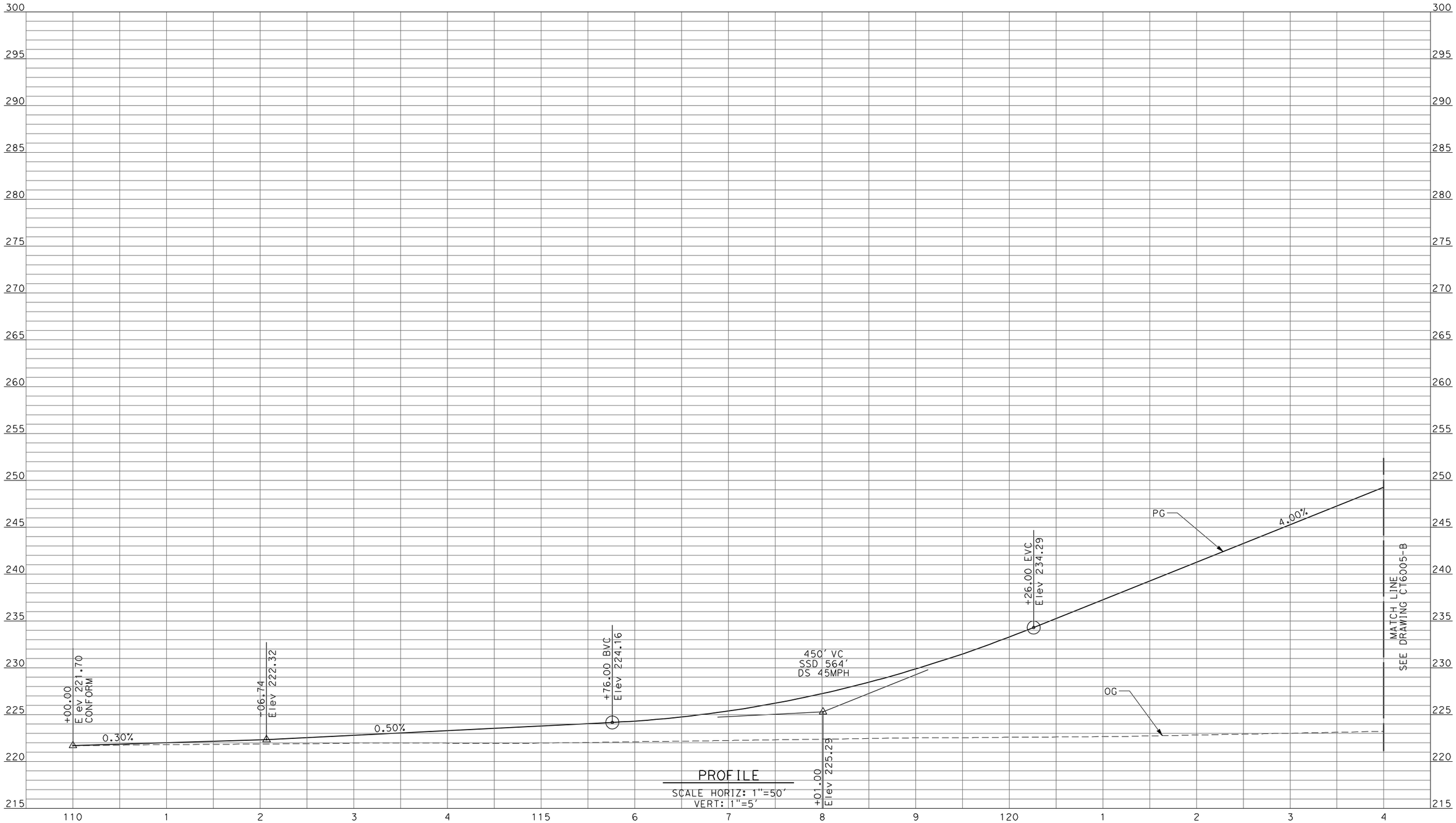

REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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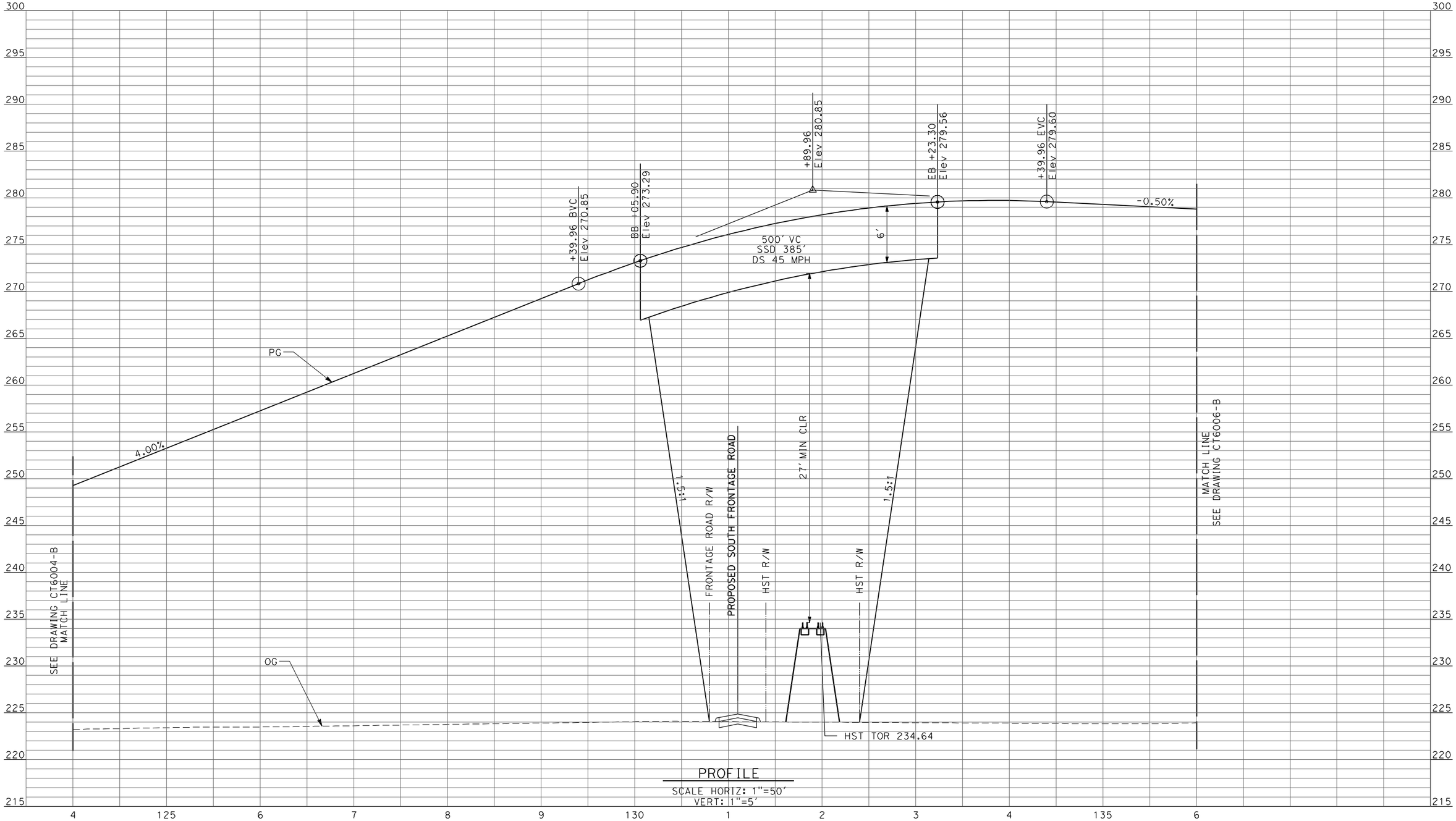

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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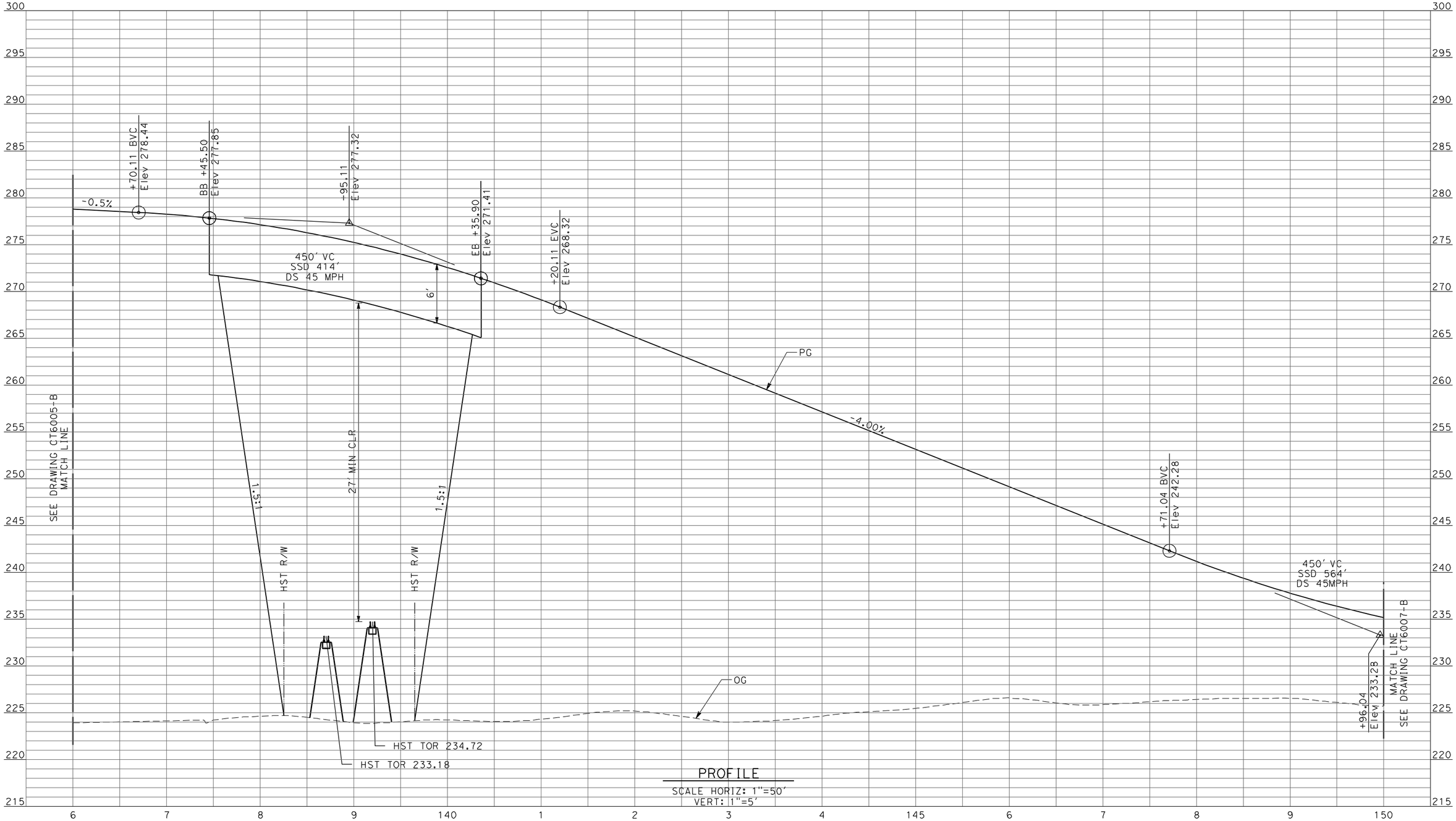

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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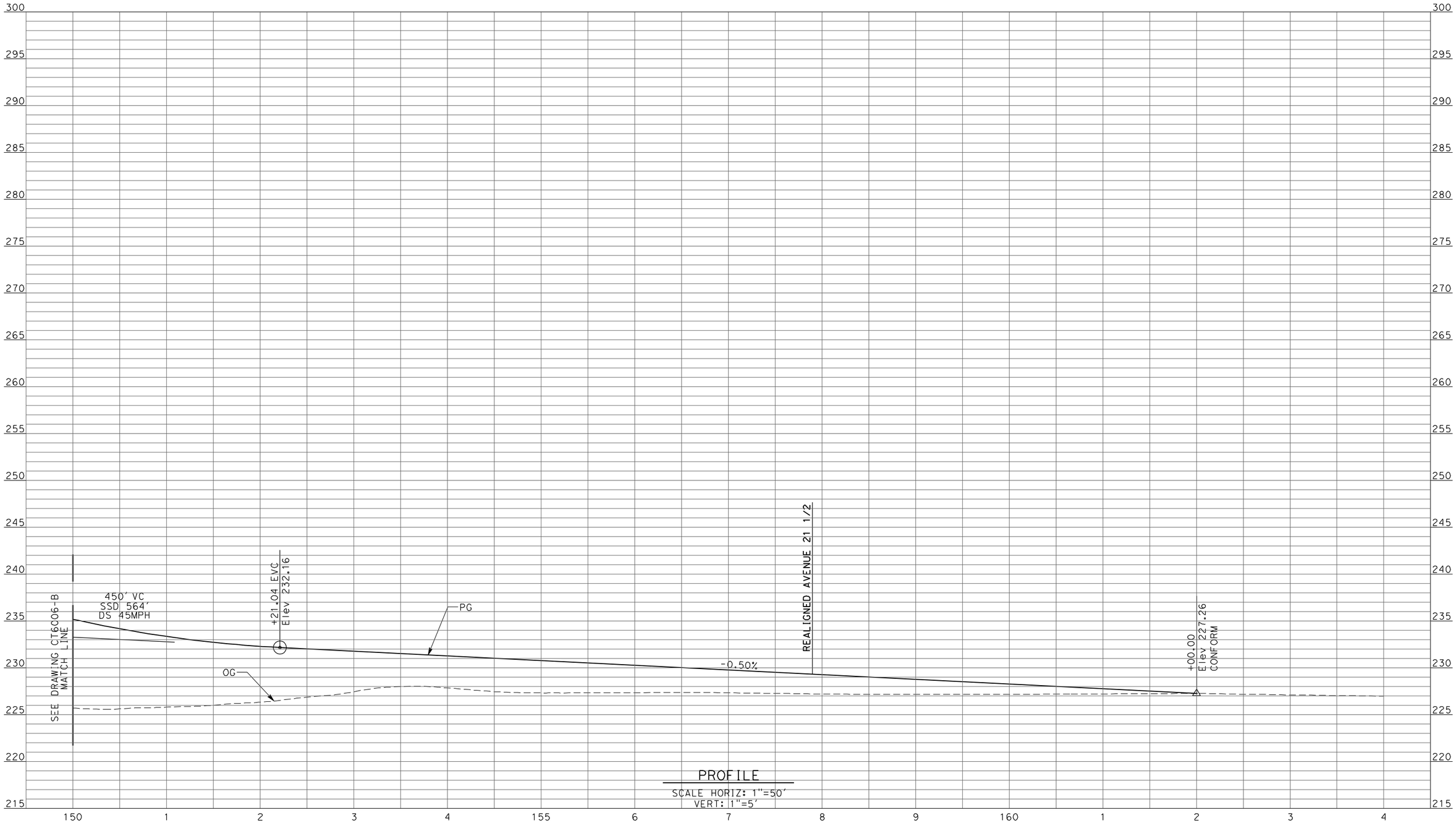

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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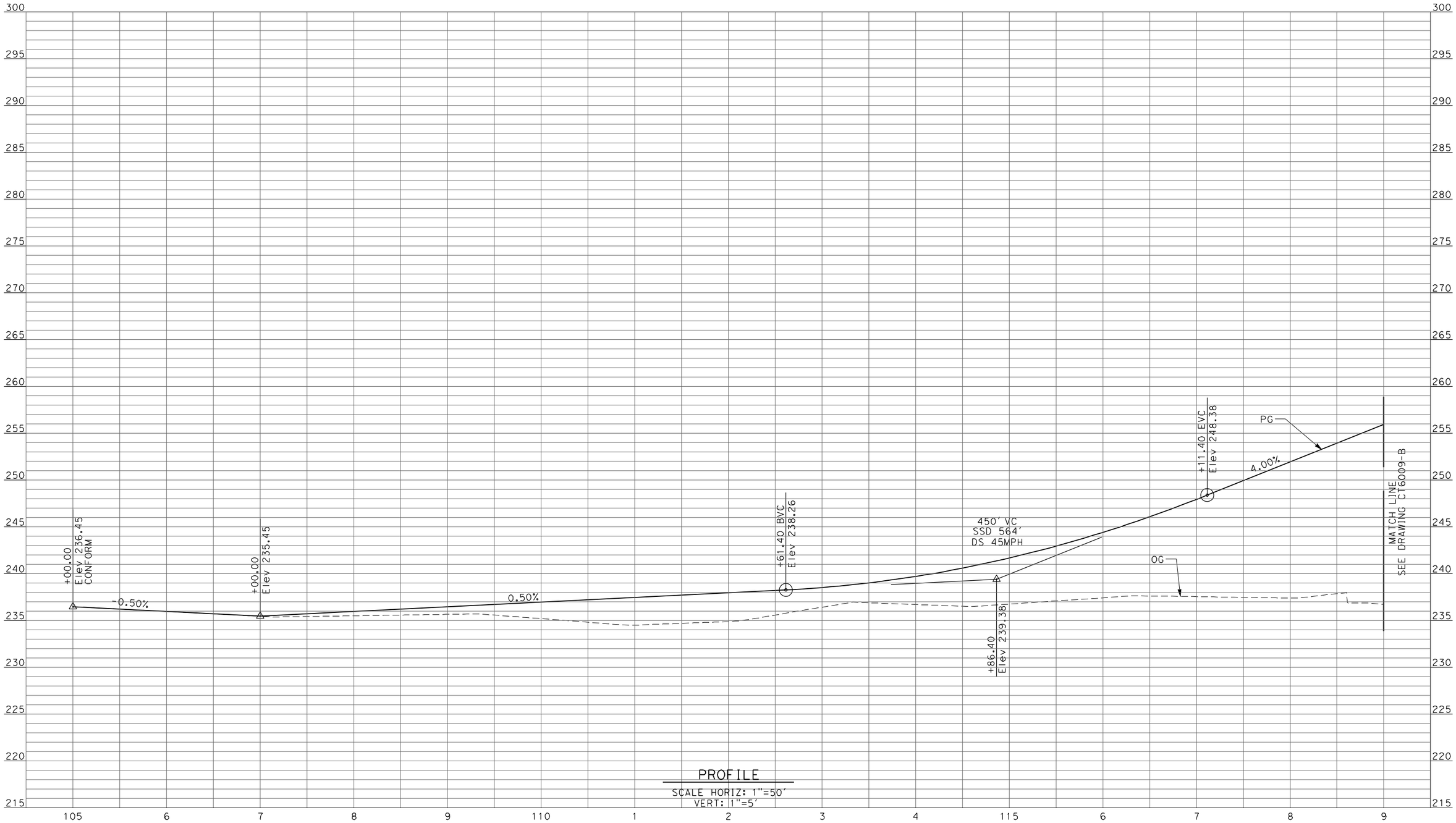

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6008-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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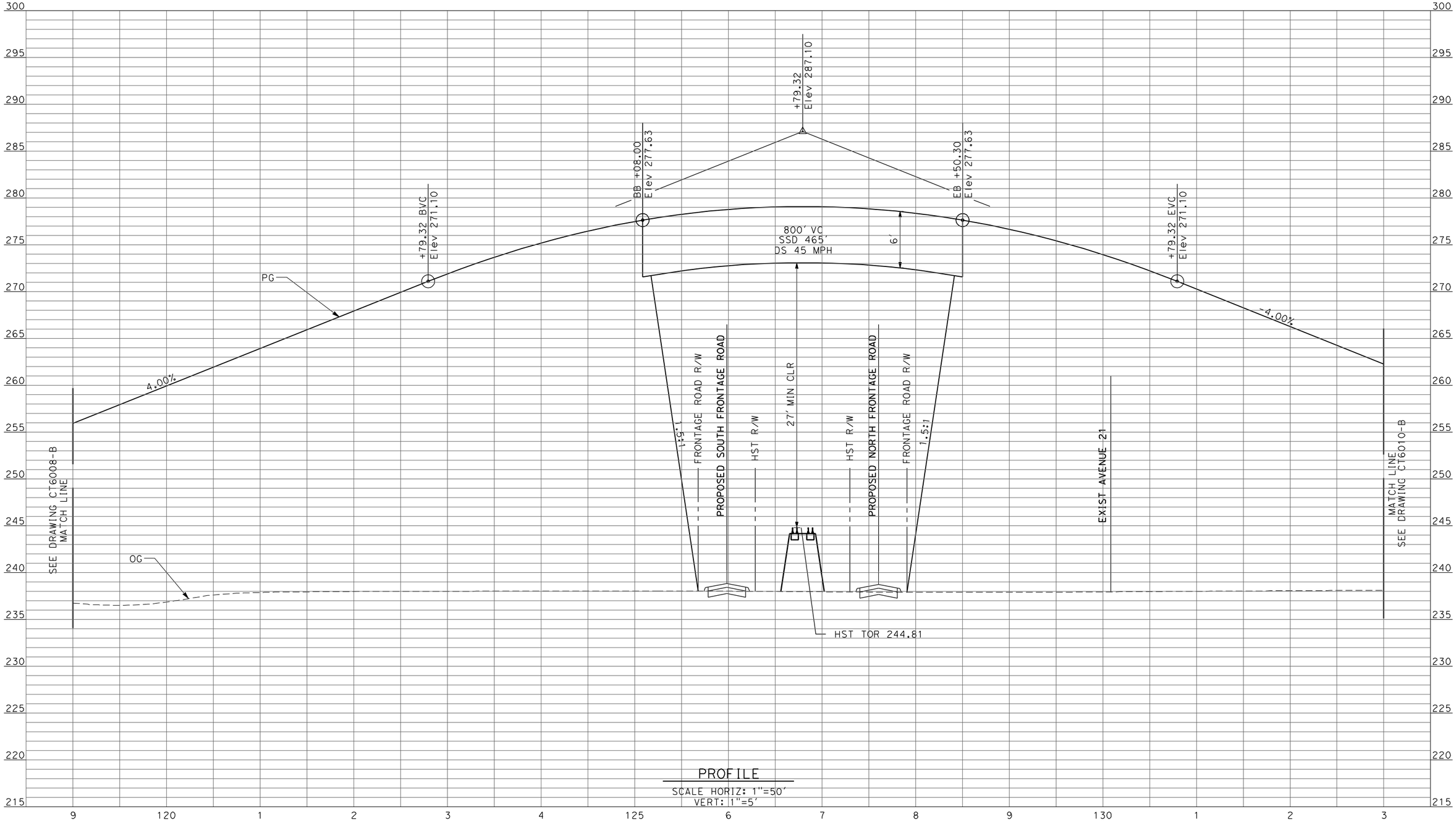

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6009-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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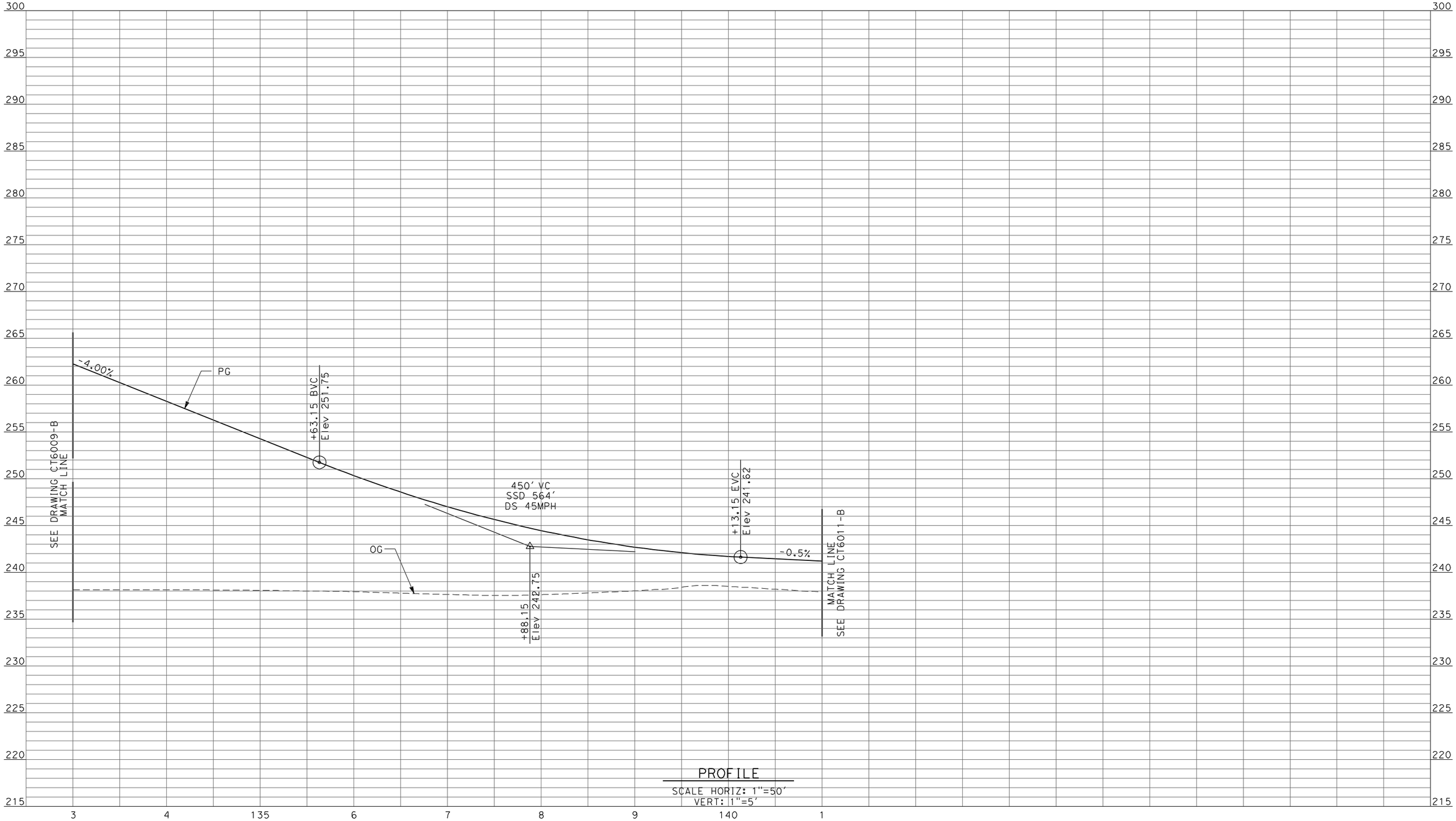

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY A. SILVER
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6010-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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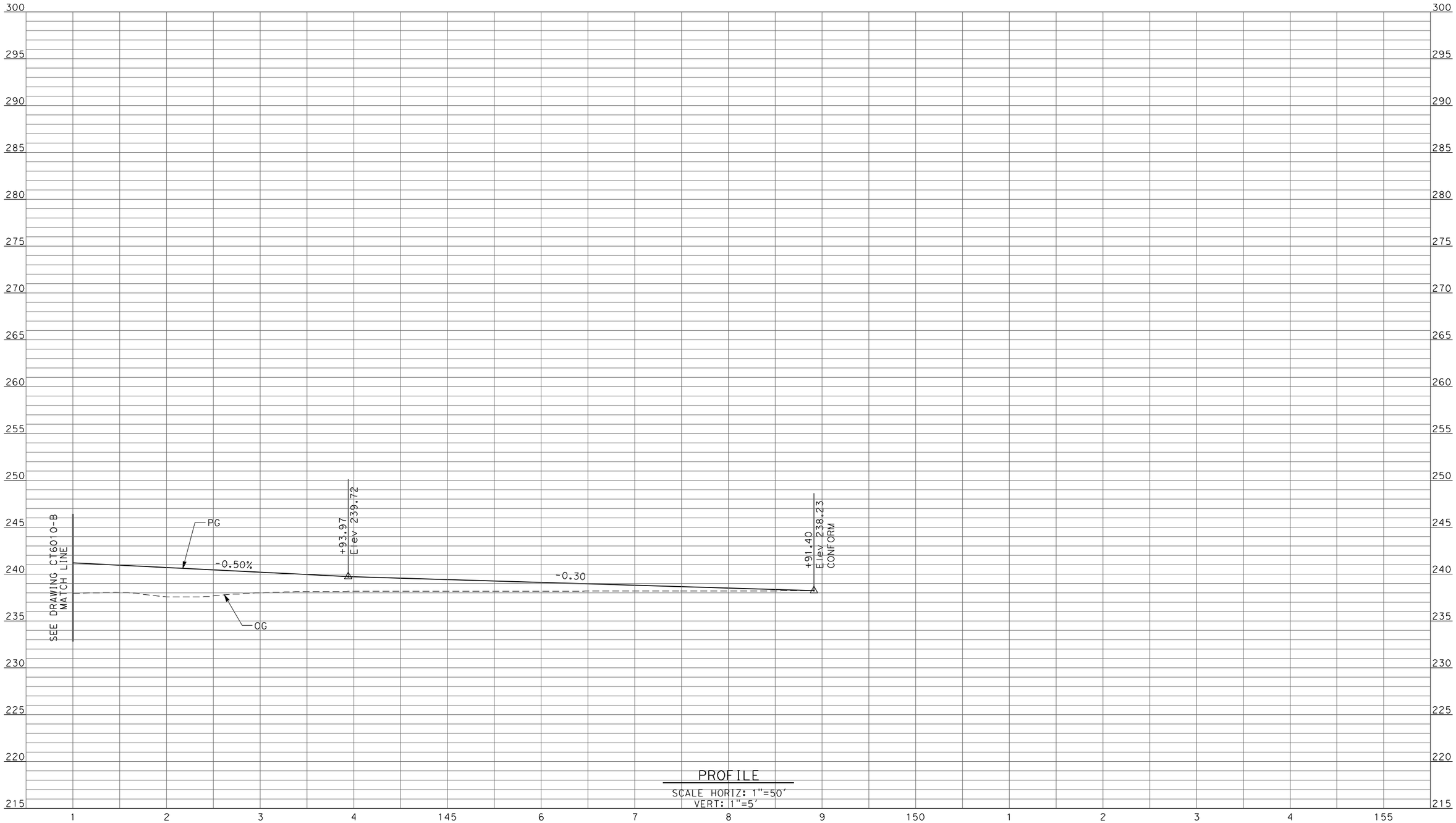

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 19
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6011-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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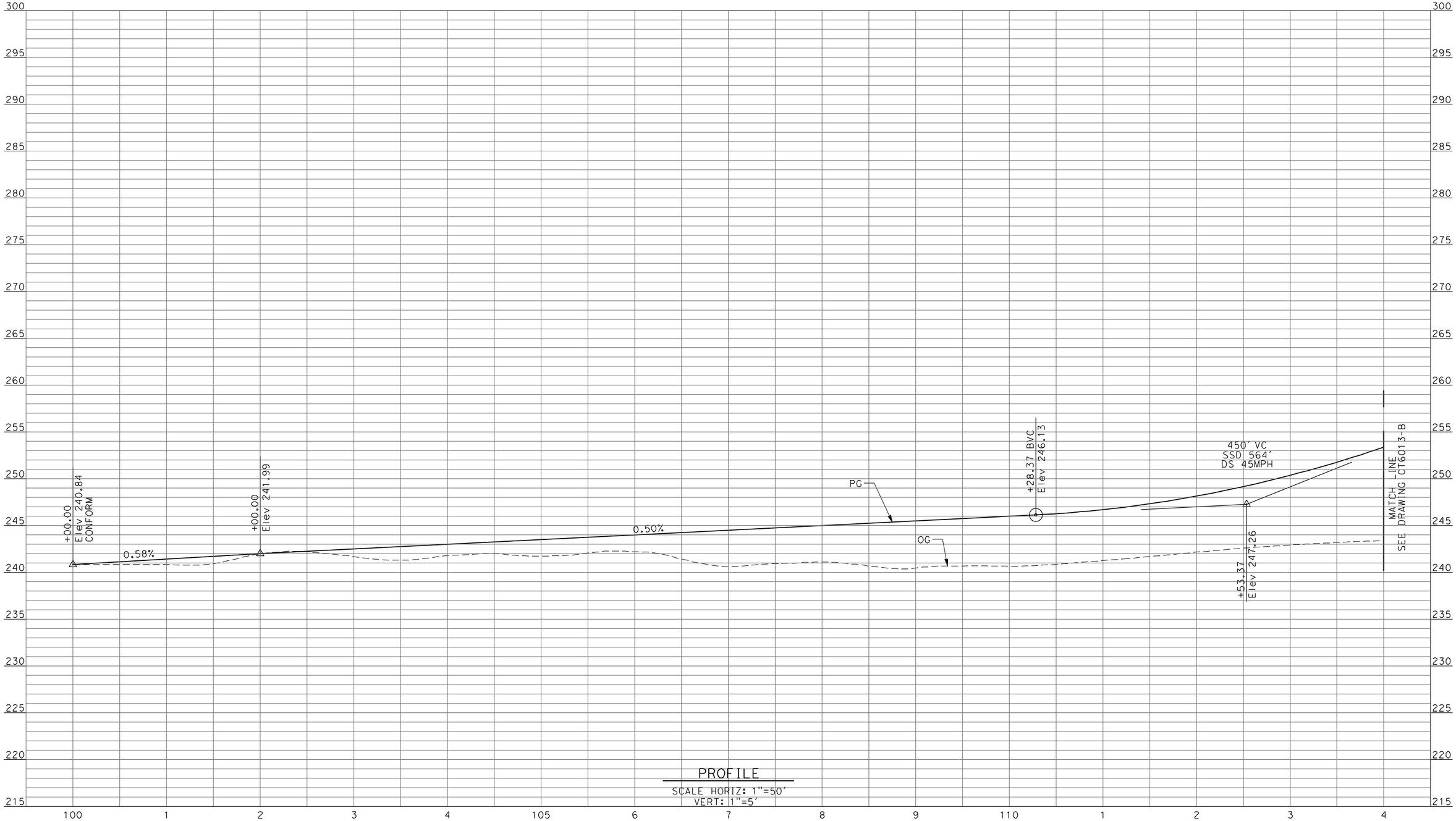

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6012-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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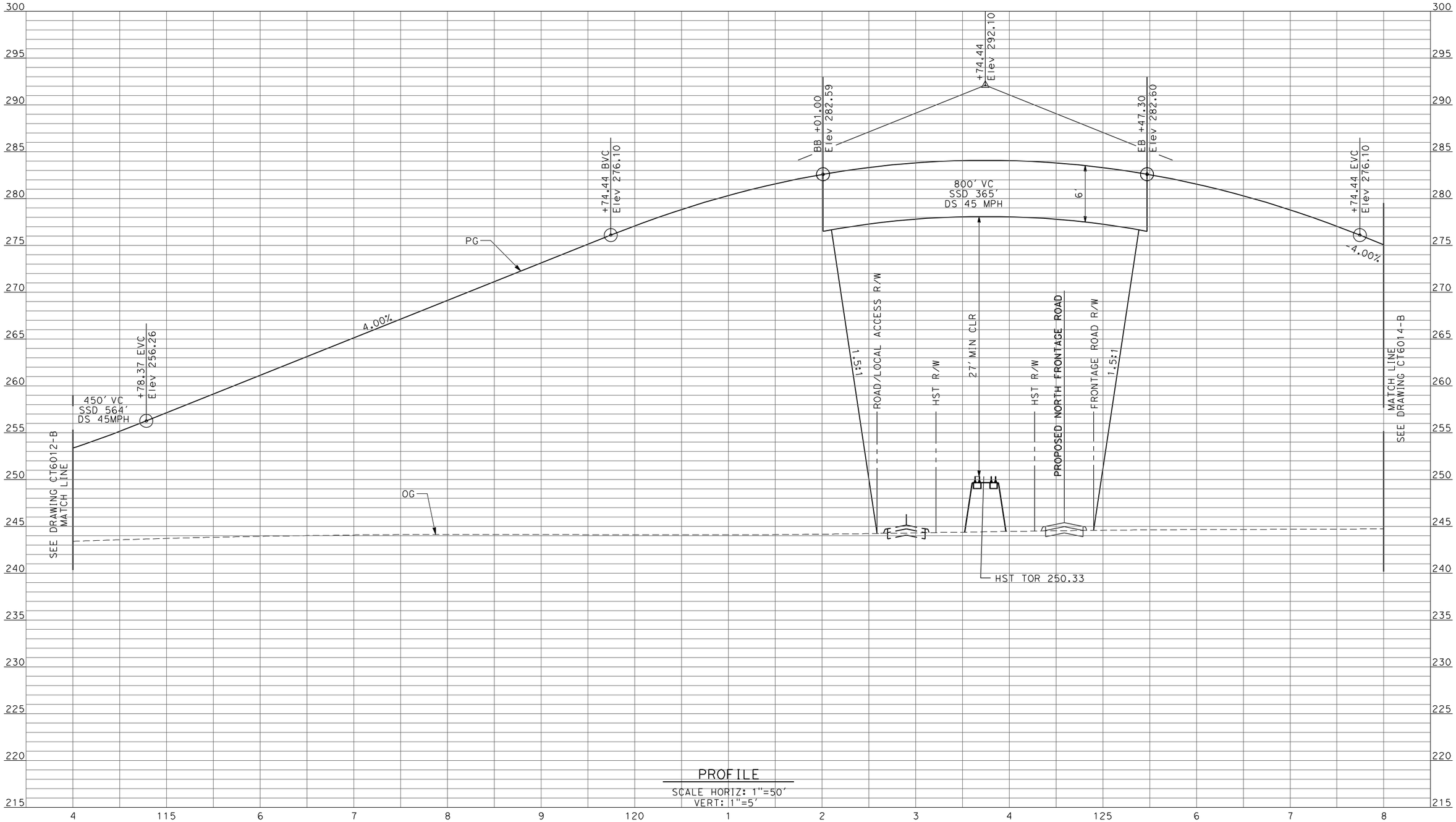

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6013-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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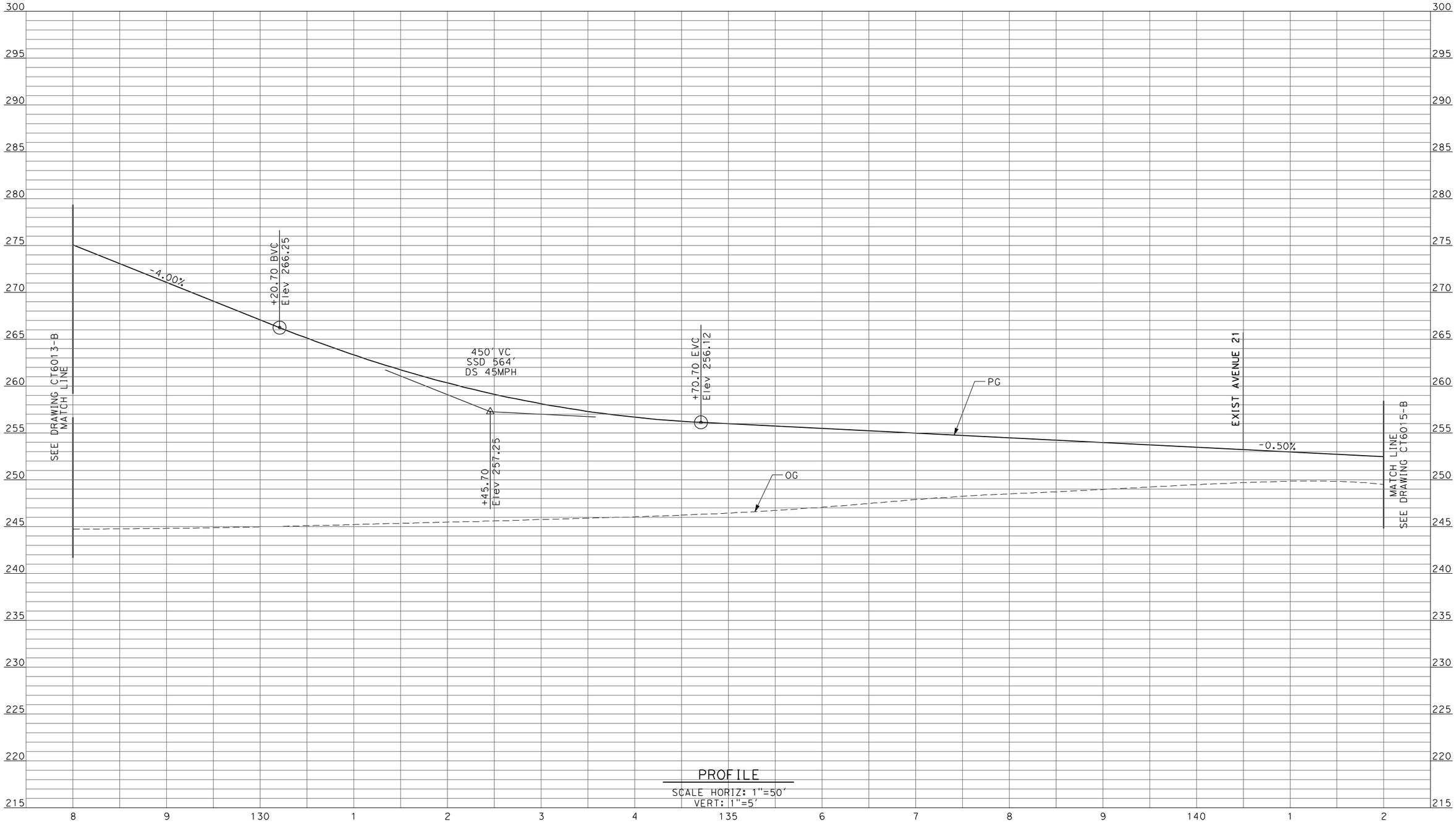

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6014-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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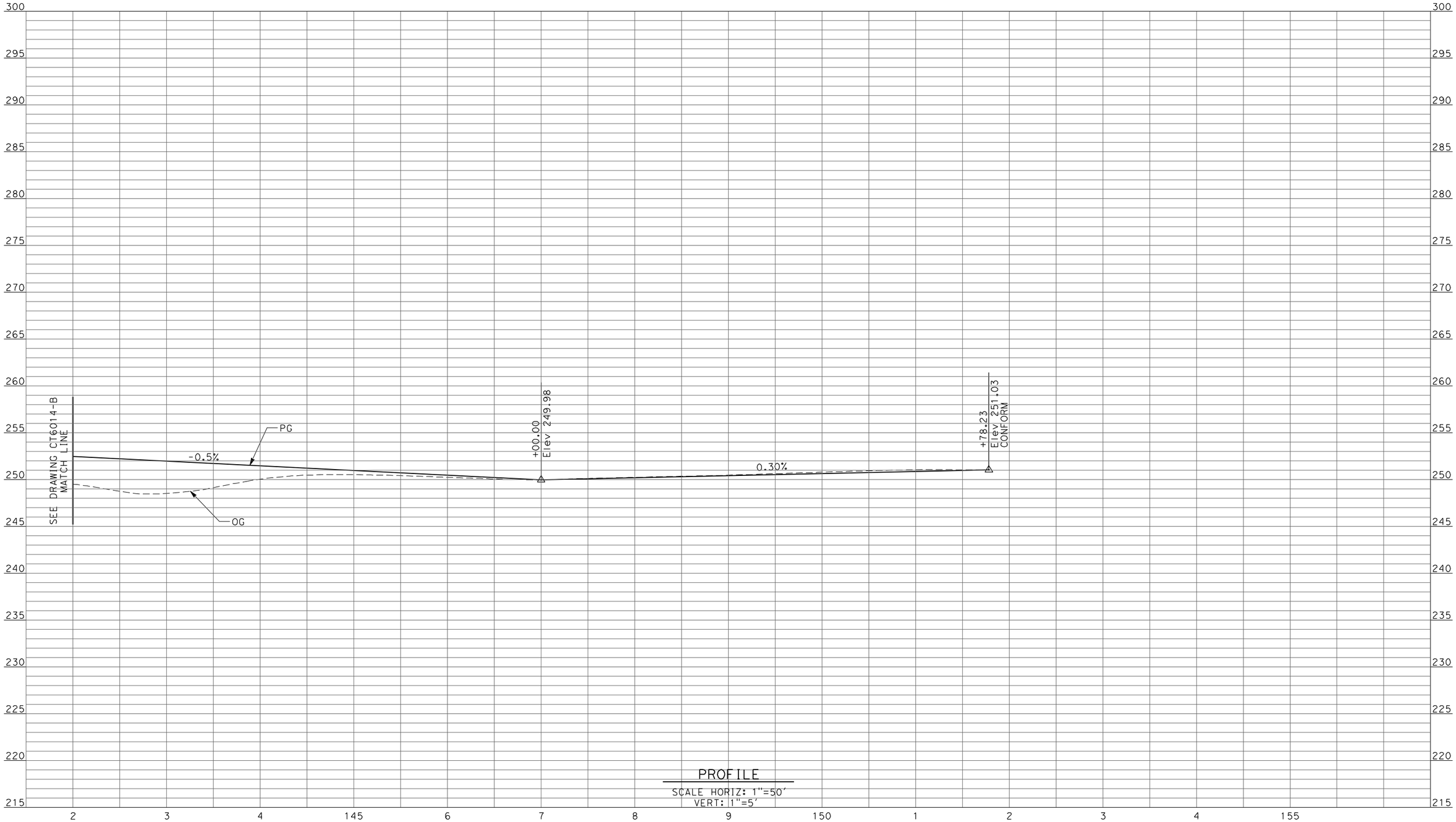

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6015-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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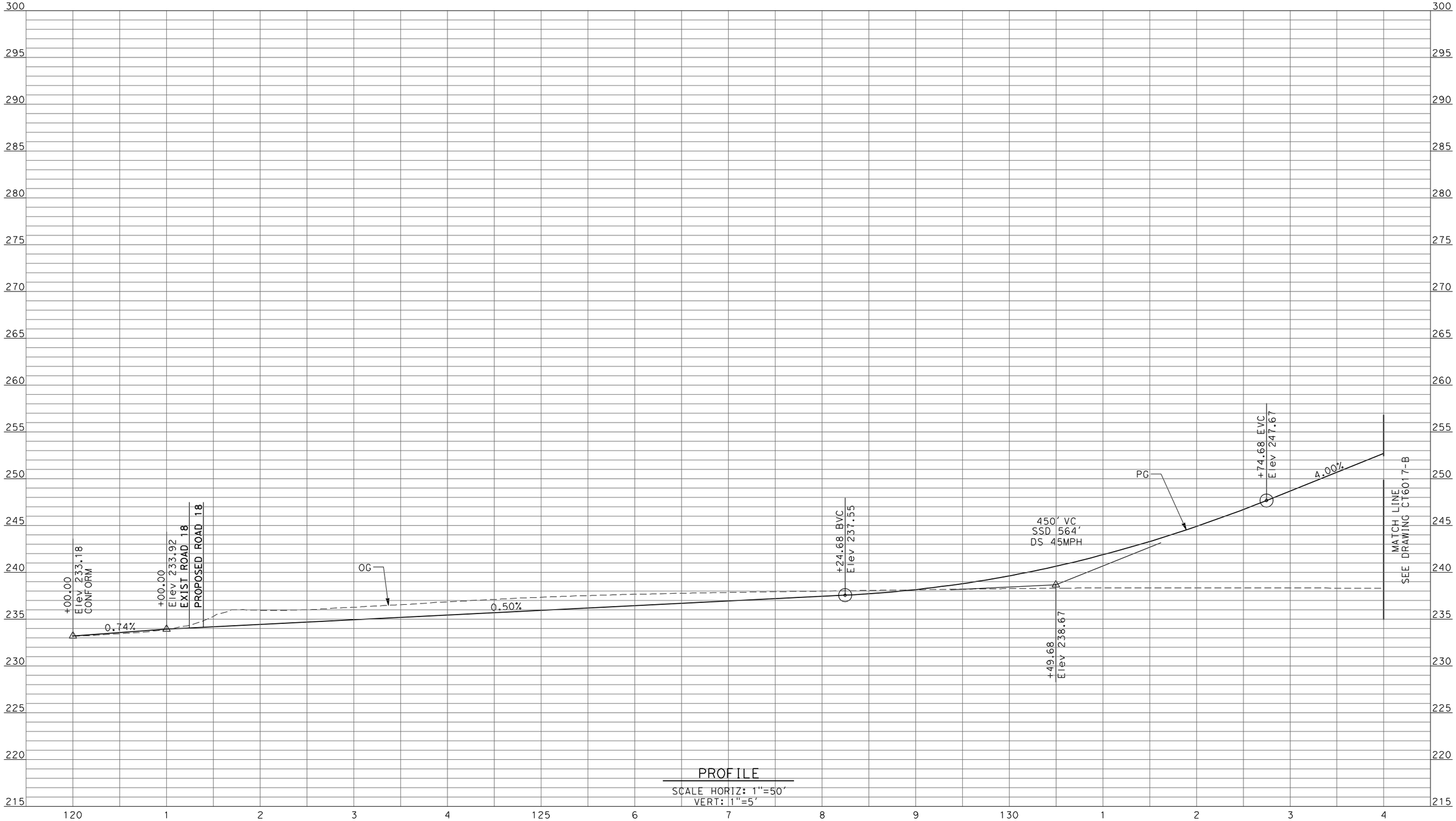

PROFILE

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VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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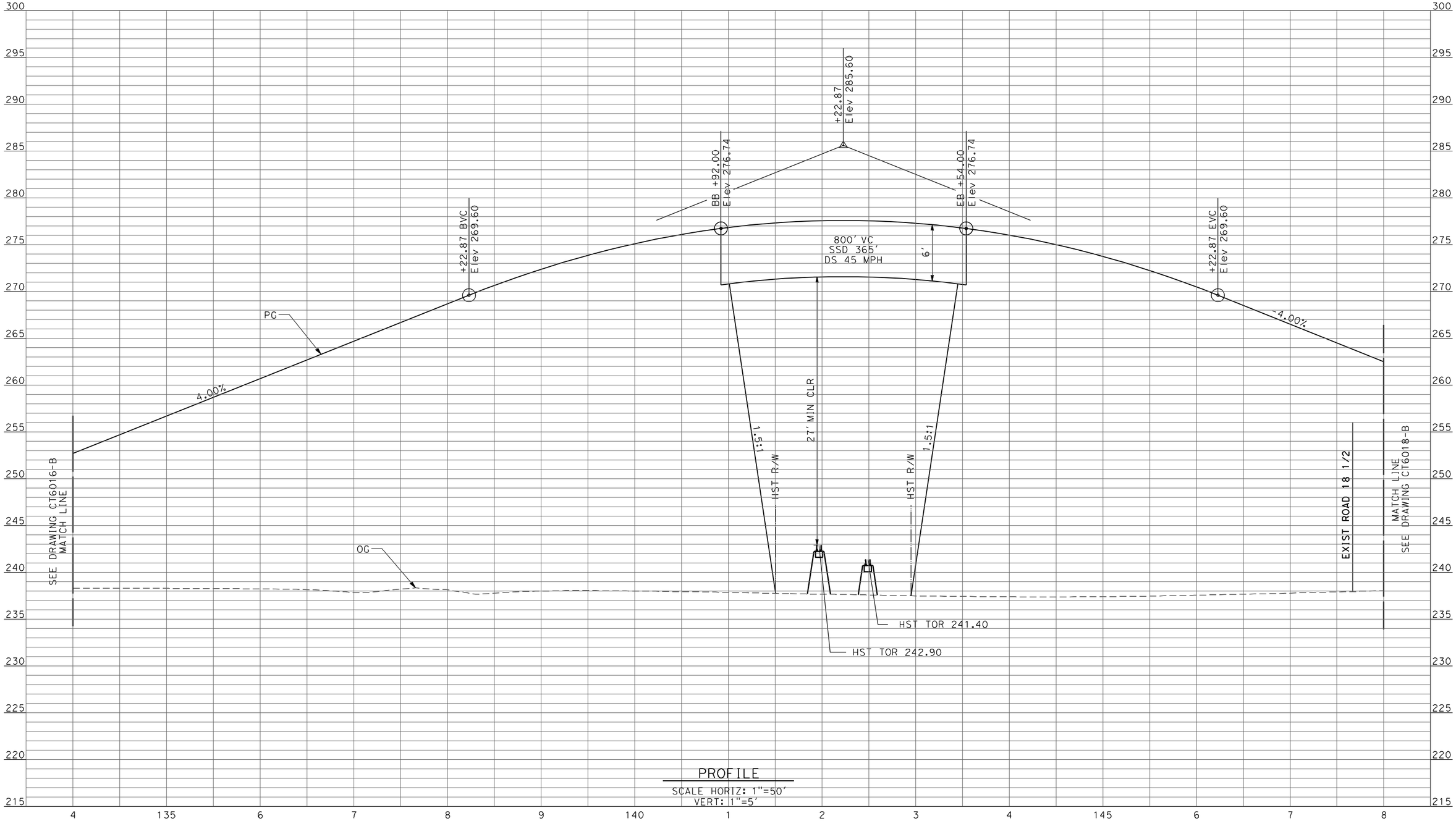

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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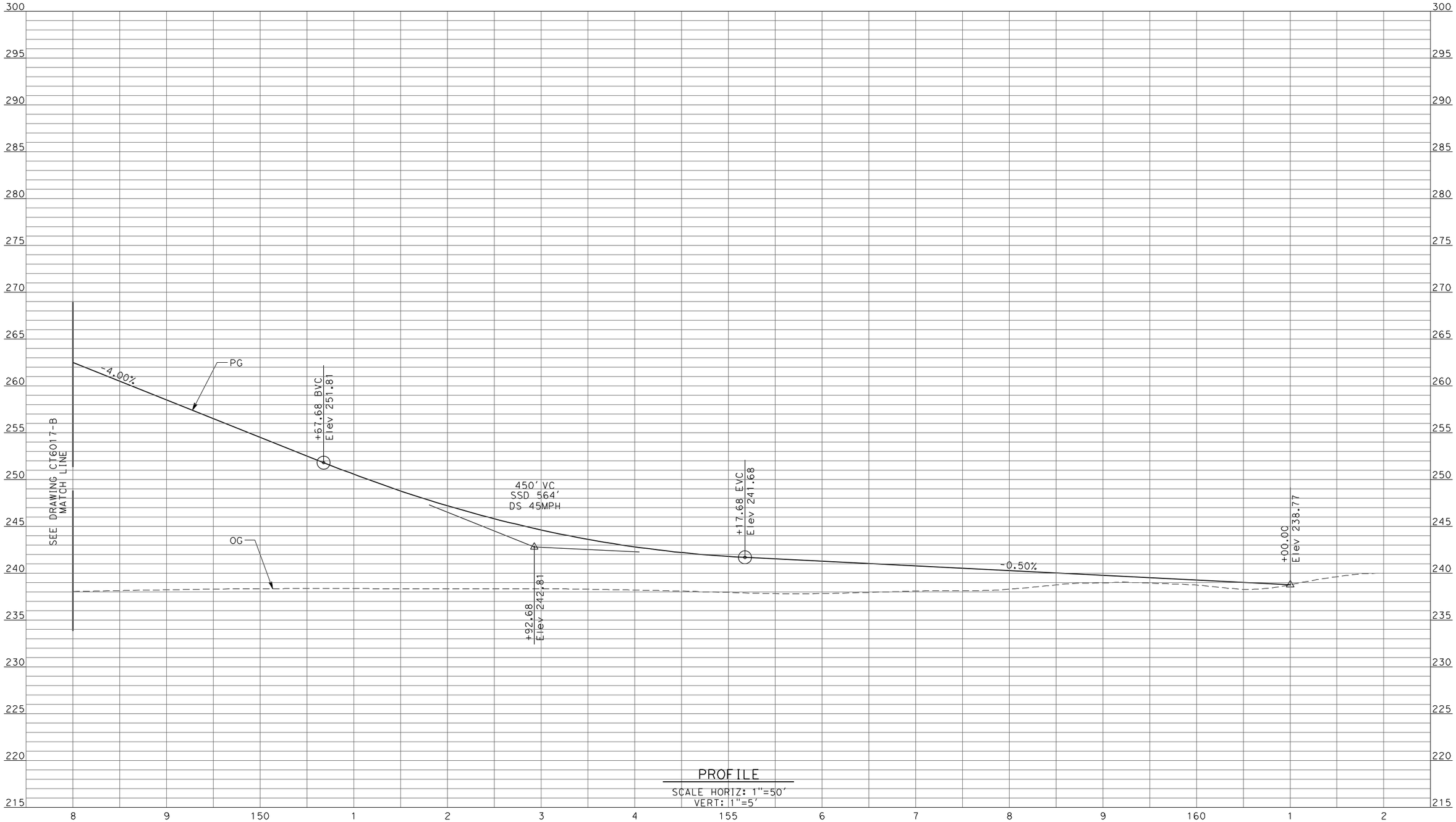
UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6017-B
SCALE AS SHOWN
SHEET NO. ### OF ###



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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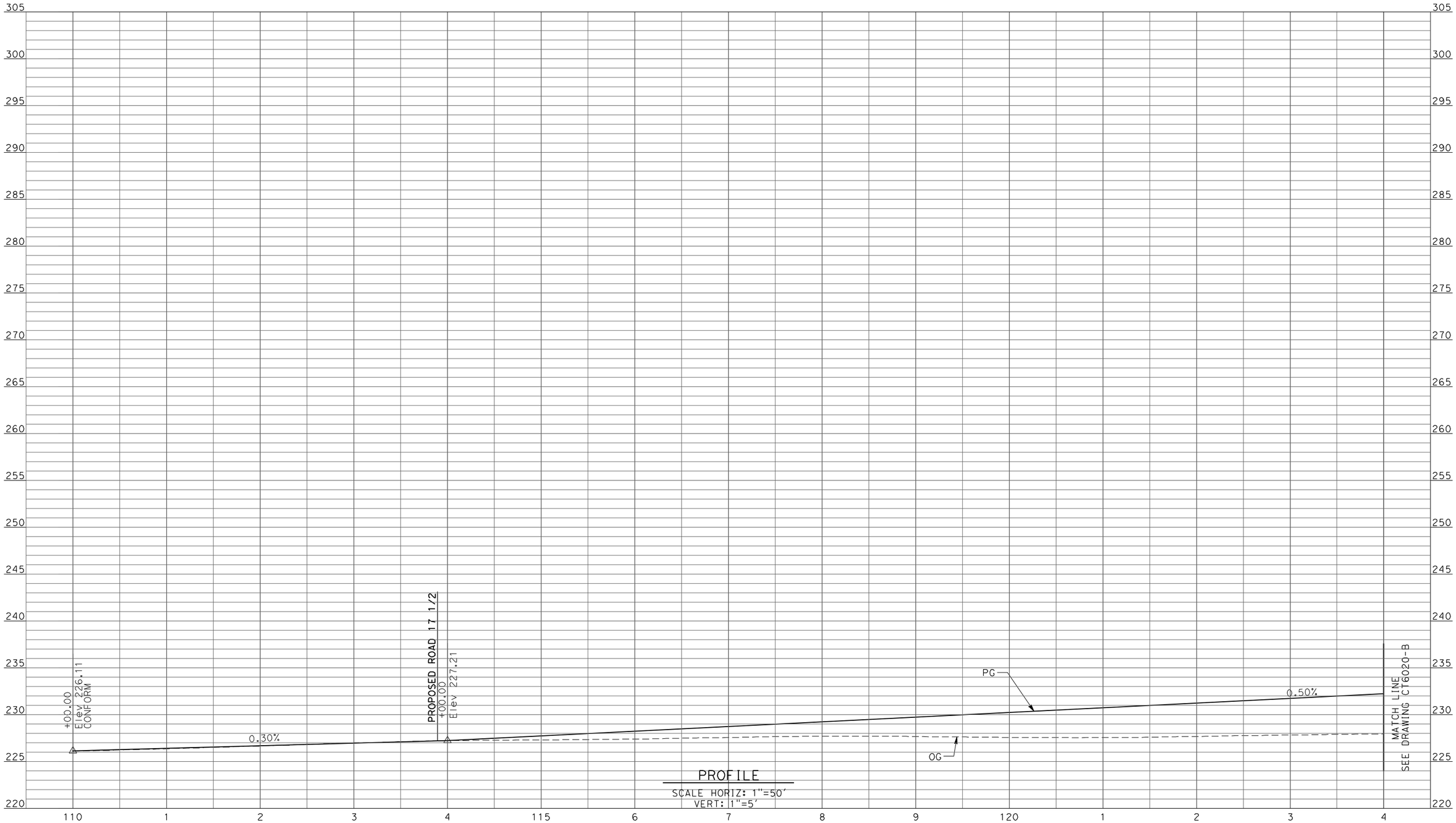

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
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UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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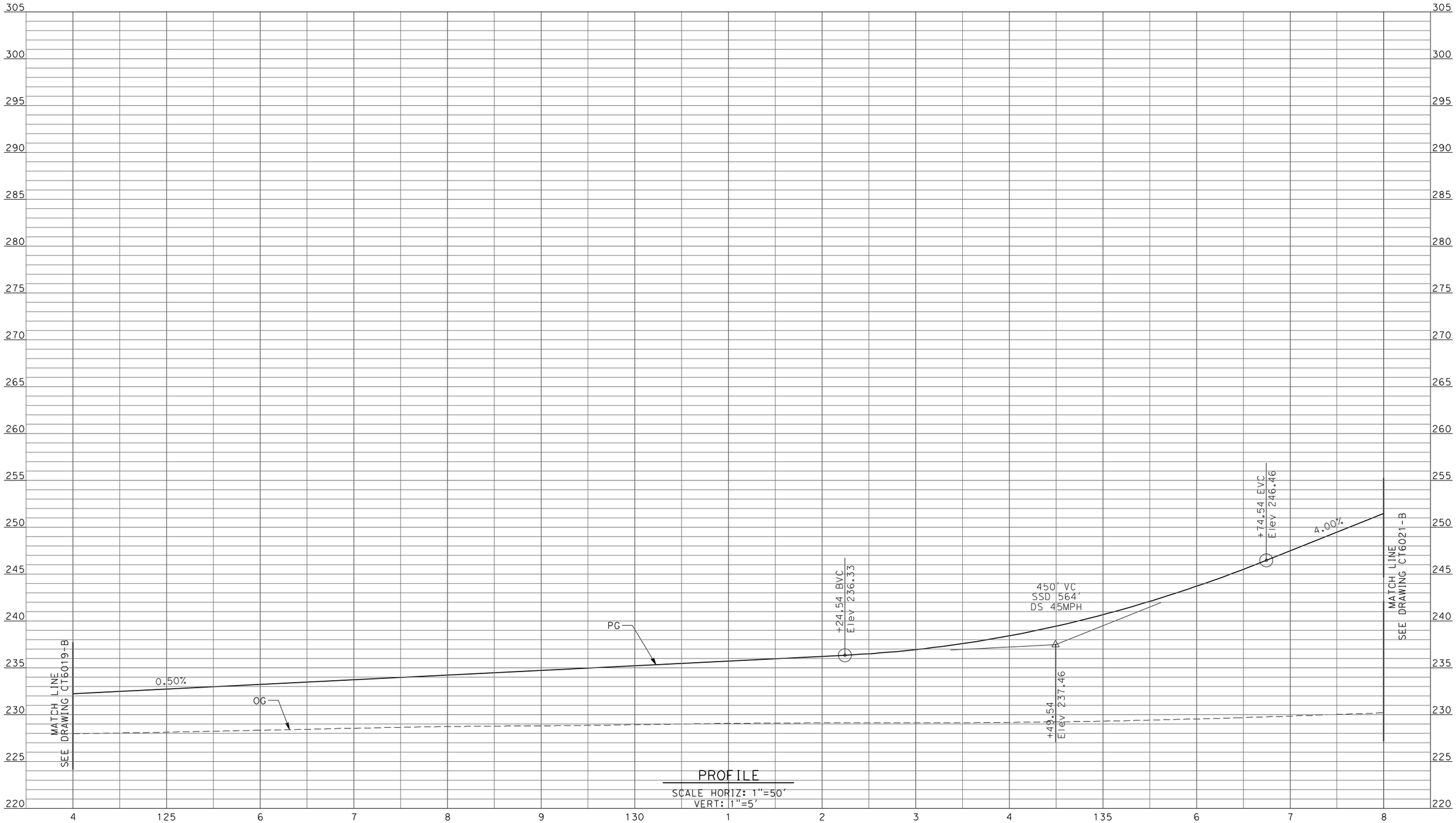

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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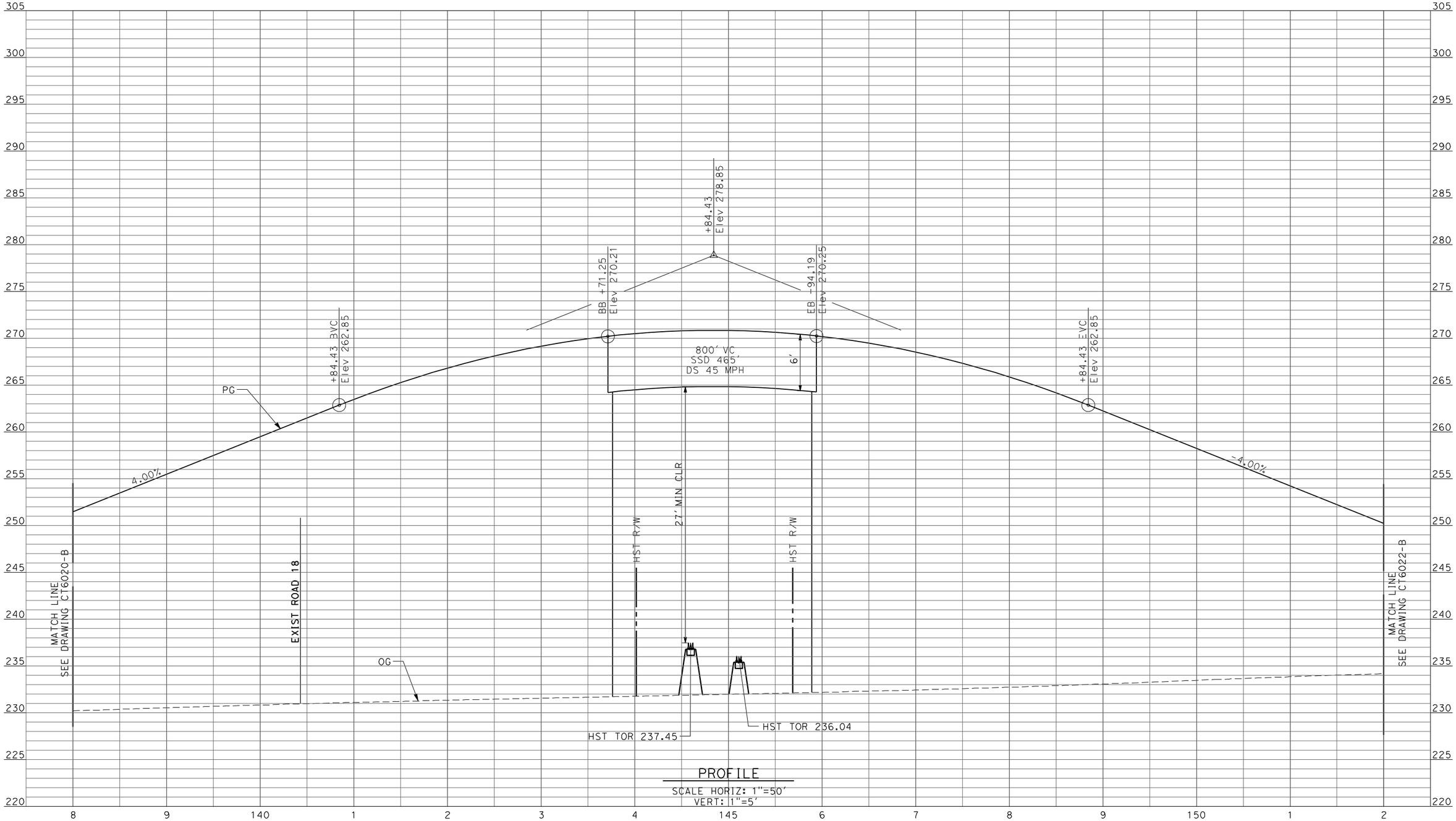
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6020-B
SCALE AS SHOWN
SHEET NO. ### OF ###



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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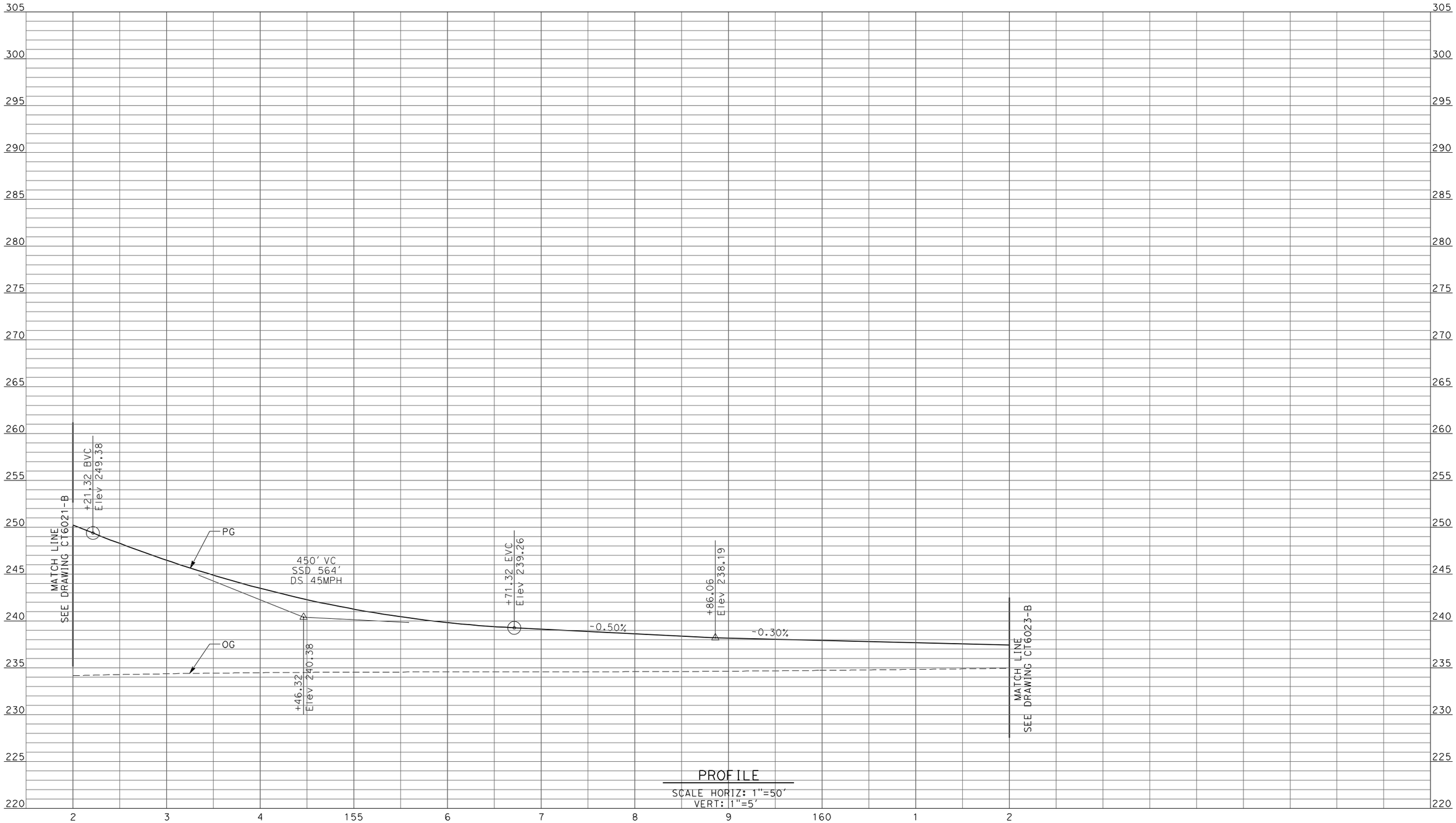

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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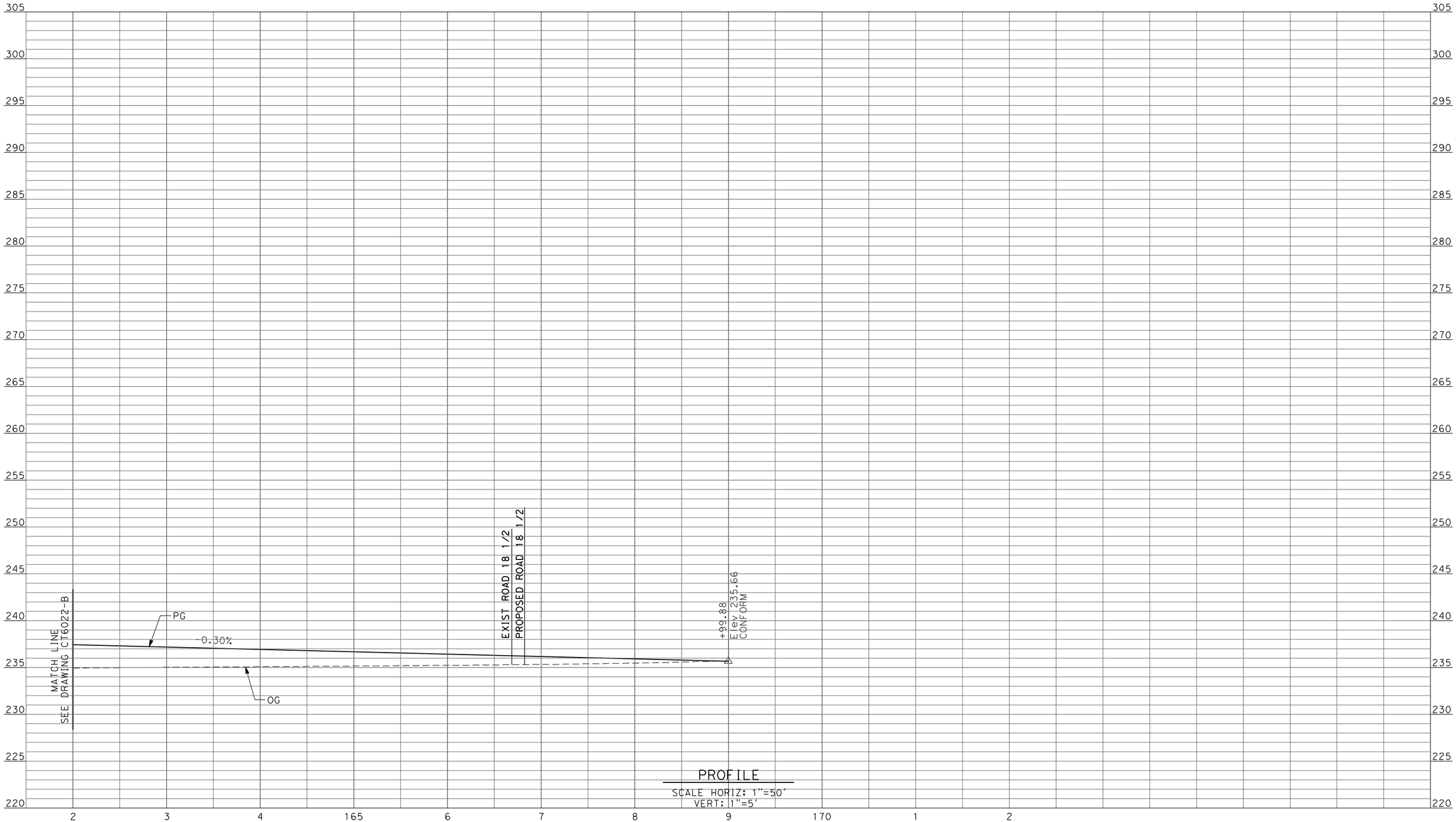

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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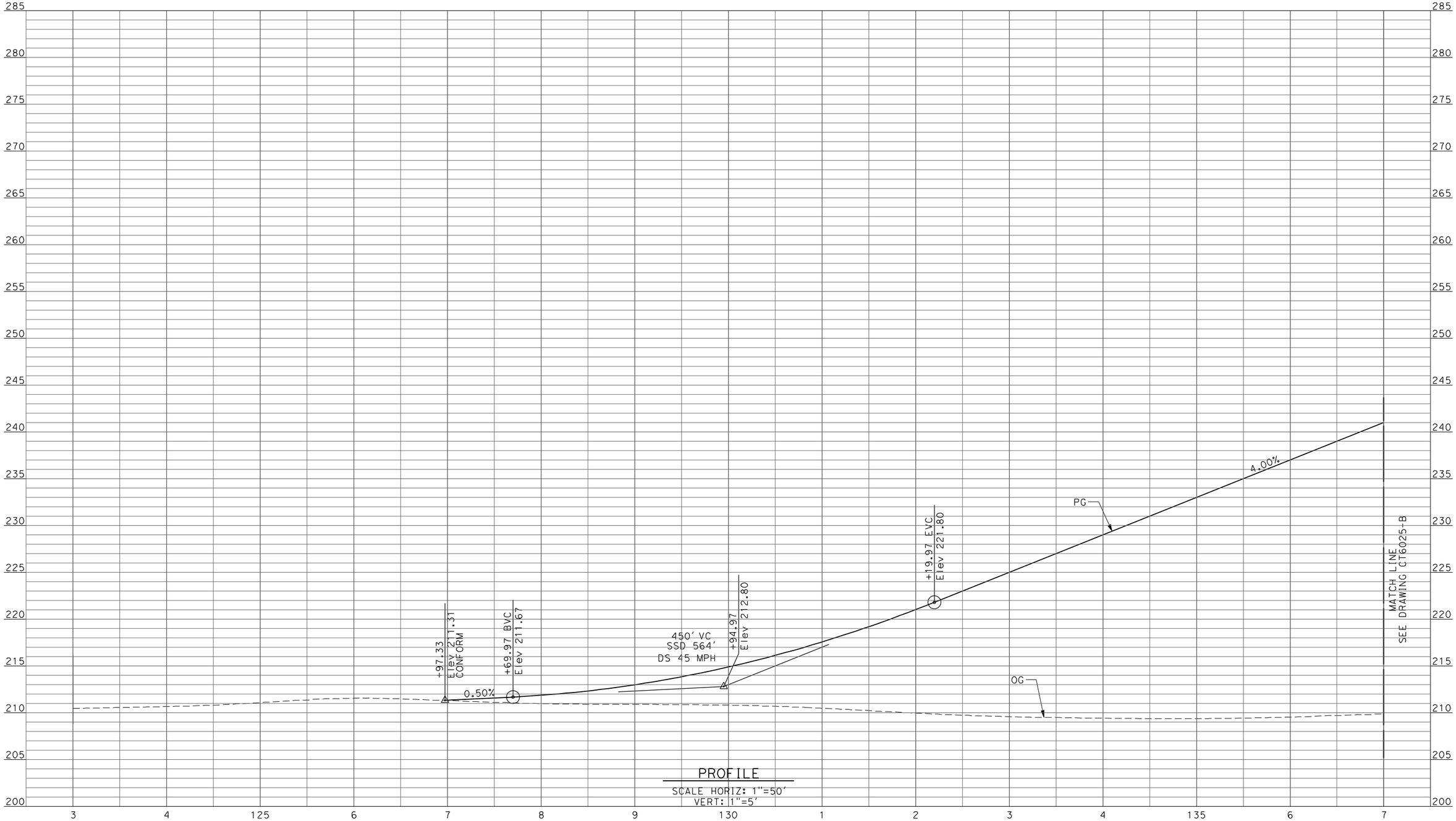

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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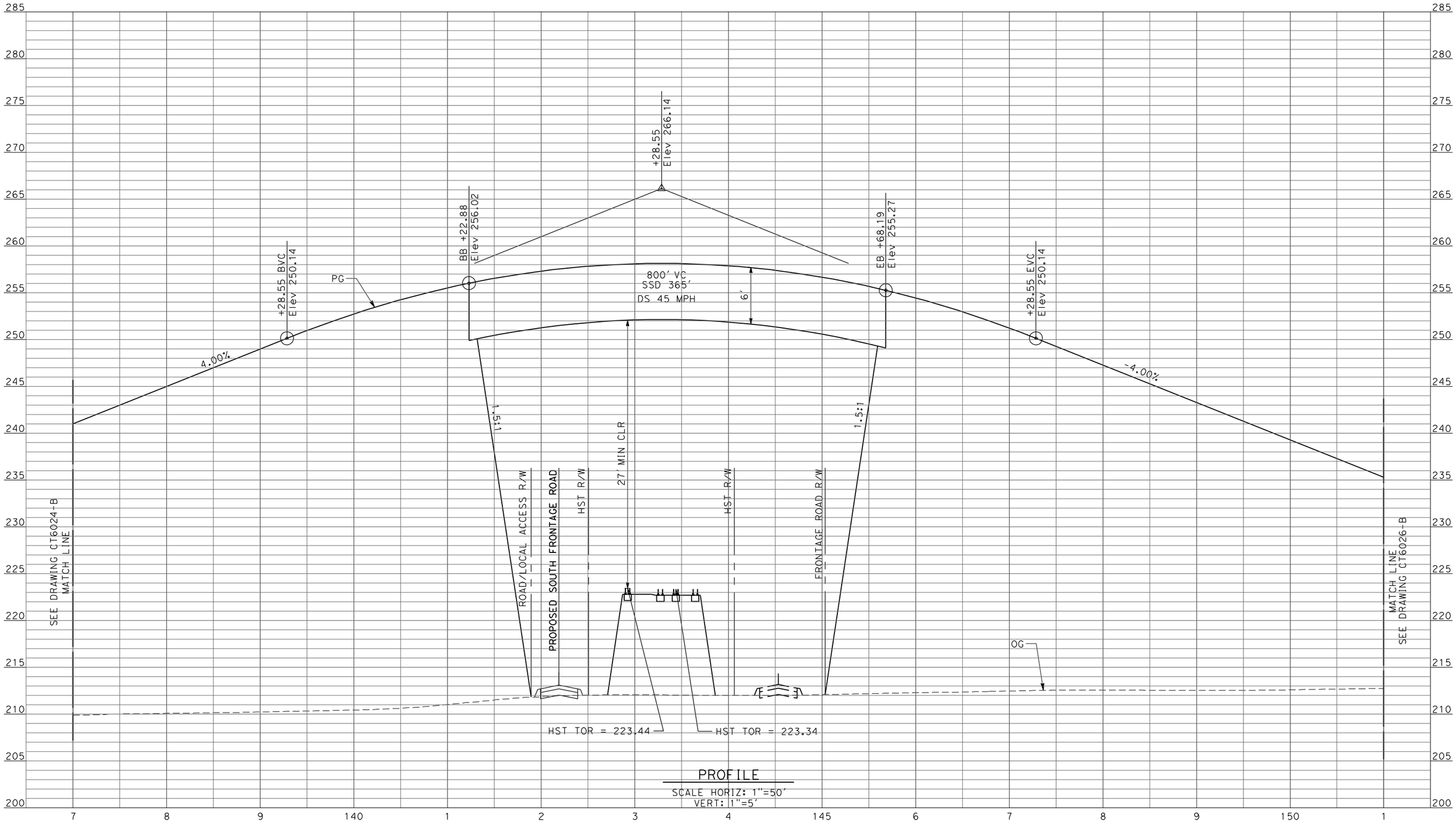

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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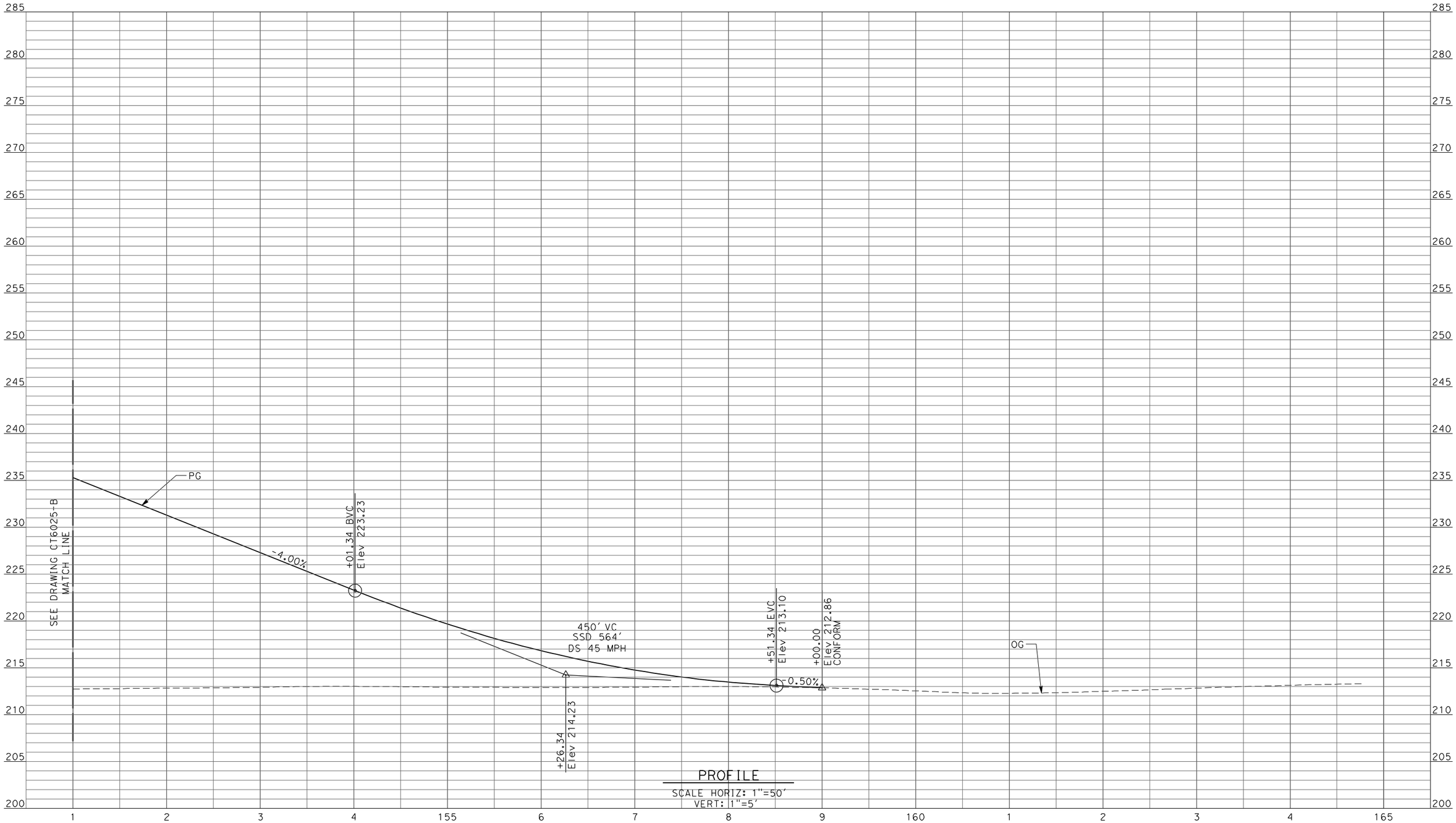
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6025-B
SCALE AS SHOWN
SHEET NO. ### OF ###



PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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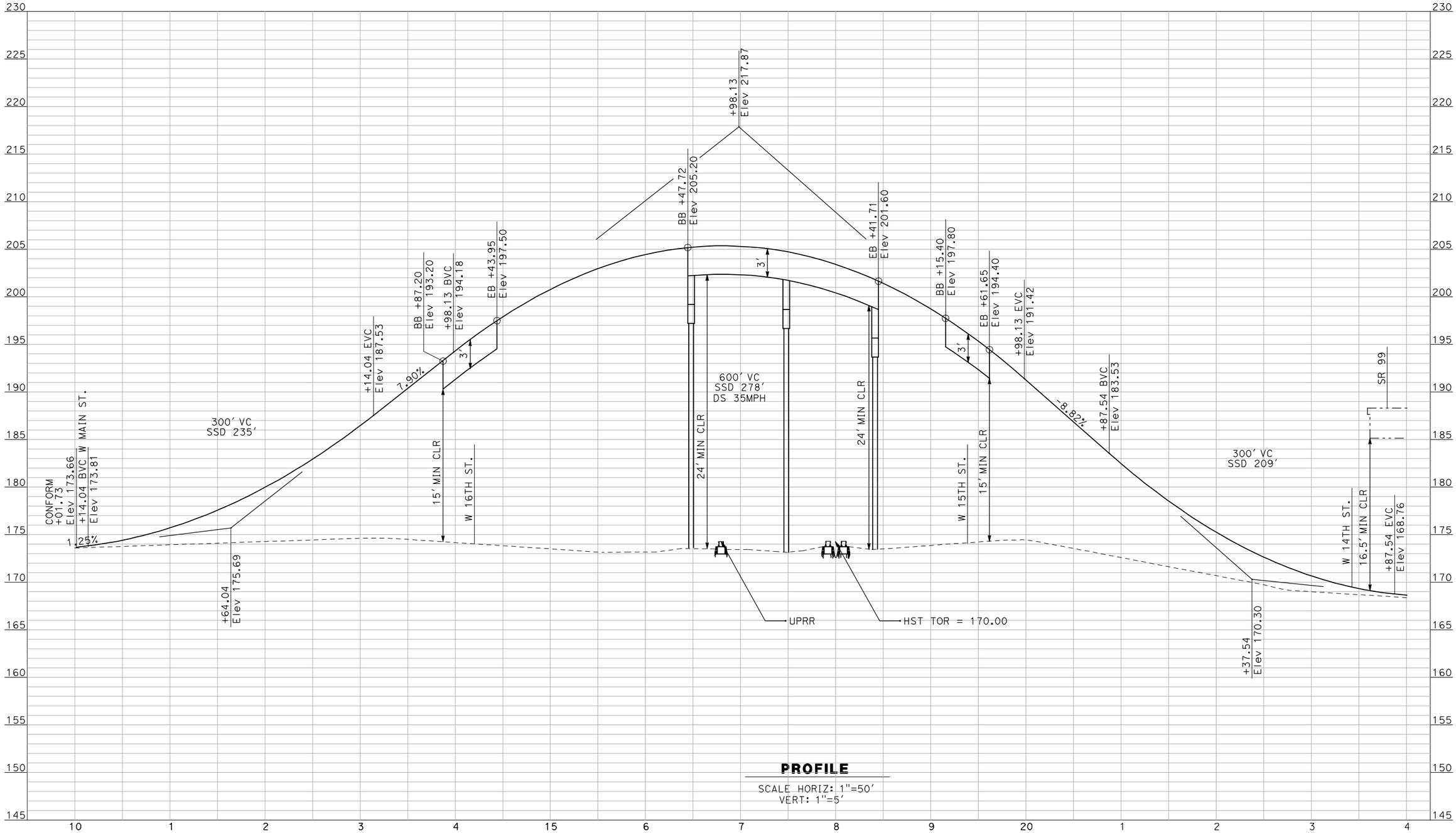

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR MERCED CONNECTION - (AVE 21)
GRADE SEPARATION - G Street
PROFILE
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT1149-A
SCALE AS SHOWN
SHEET NO. OF ###

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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
ROADWAY BRIDGE STRUCTURE PLANS UPRR/SR 99 AVENUE 21 ALTERNATIVE					
GENERAL					
	SB1101	UPRR/SR 99 ALTERNATIVE	AVENUE 21	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1102	UPRR/SR 99 ALTERNATIVE	AVENUE 21	STRUCTURE INDEX MAP	SHEET 1 OF 1
OVERHEAD BRIDGES					
	ST1101	UPRR/SR 99 MAIN LINE/ WYE CONNECTION	AVENUE 21	ROAD 16 OVERHEAD	PLANNING STUDY
	ST1102	UPRR/SR 99 MAIN LINE	AVENUE 21	ROAD 17½ OVERHEAD	PLANNING STUDY SHEET 1 OF 2
	ST1103	UPRR/SR 99 WYE CONNECTION	AVENUE 21	ROAD 17½ OVERHEAD	PLANNING STUDY SHEET 2 OF 2
	ST1104	UPRR/SR 99 MAIN LINE	AVENUE 21	ROAD 19 OVERHEAD	PLANNING STUDY
	ST1105	UPRR/SR 99 MAIN LINE	AVENUE 21	ROAD 20 OVERHEAD	PLANNING STUDY
	ST1106	UPRR/SR 99 WYE CONNECTION	AVENUE 21	AVENUE 22 OVERHEAD	PLANNING STUDY
	ST1115	UPRR/SR 99 WYE CONNECTION	AVENUE 21	AVENUE 21½ OVERHEAD	PLANNING STUDY
	ST1180	UPRR/SR 99 MERCED CONNECTION	AVENUE 21	G STREET OVERHEAD	PLANNING STUDY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. RENTERIA
CHECKED BY B. DOLAN
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALTERNATIVE
AVENUE 21
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1101
SCALE No scale
SHEET NO. OF

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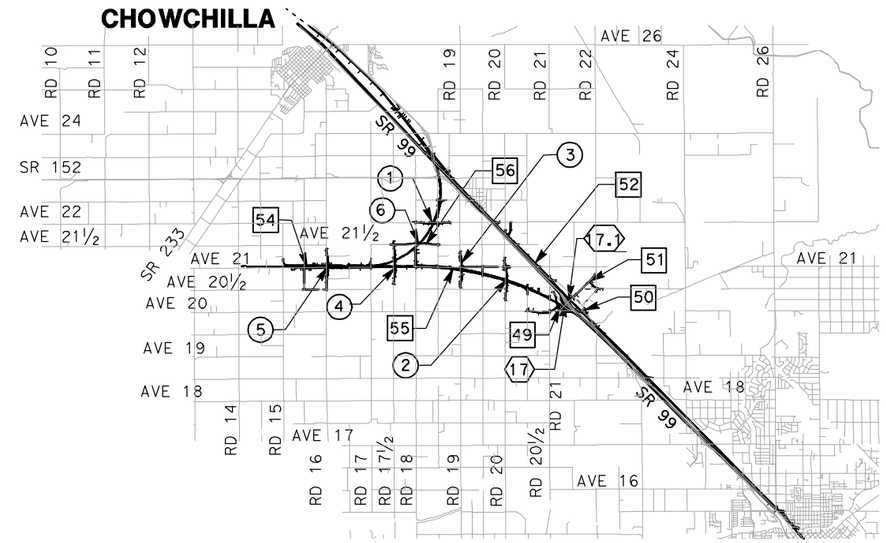
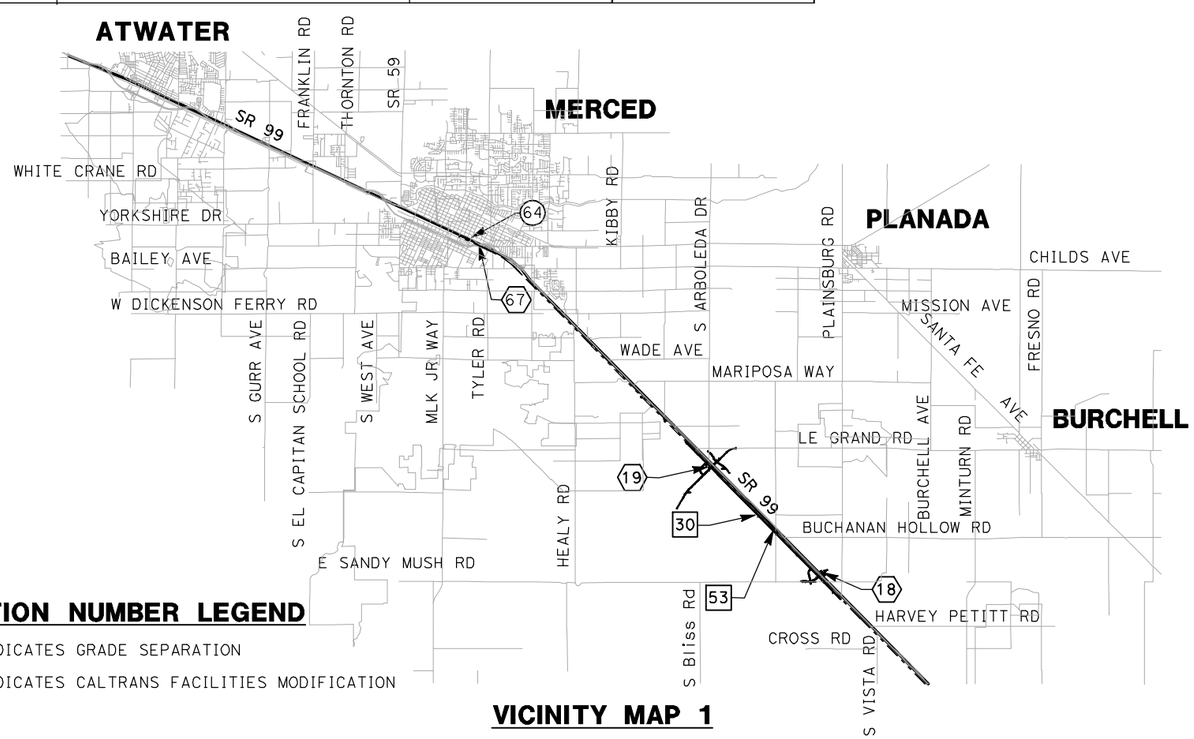
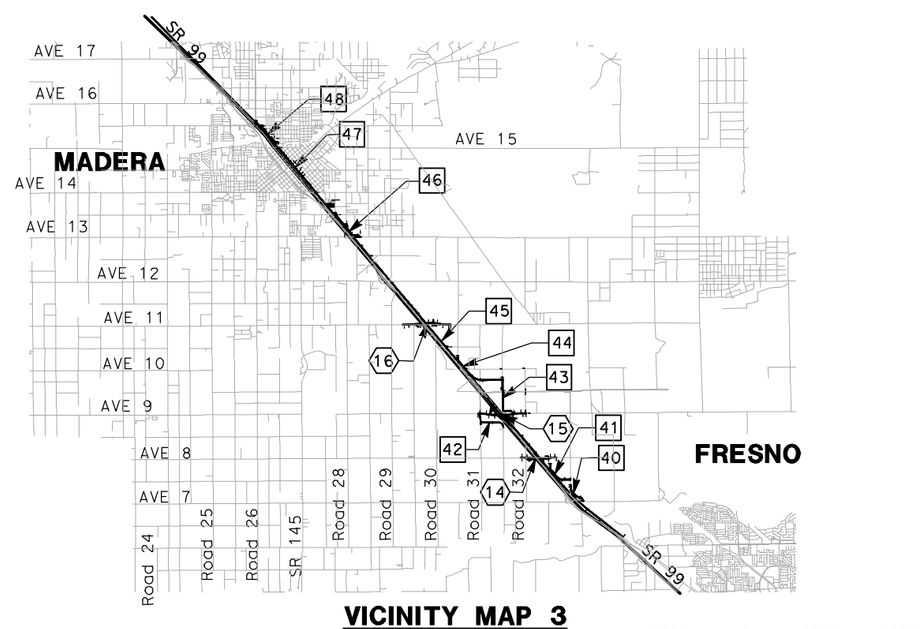
LOCATION NO.	SHEET TITLE	STRUCTURE DRAWING NO.	ROADWAY DRAWING NO.
1	AVENUE 22 OVERHEAD	ST1106	CT5016-B - CT5018-B
2	ROAD 20 OVERHEAD	ST1105	CT5012-B - CT5015-B
3	ROAD 19 OVERHEAD	ST1104	CT5008-B - CT5011-B
4	ROAD 17½ OVERHEAD	ST1102 & ST1103	CT5004-B - CT5007-B
5	ROAD 16 OVERHEAD	ST1101	CT5000-B - CT5003-B
6	AVENUE 21½ OVERHEAD	ST1115	CT5019-B - CT5022-B
64	G STREET OVERHEADS	ST1180	CT0149-A
14	AVENUE 8 - OVERCROSSING	-	
15	AVENUE 9 - INTERCHANGE	-	
16	AVENUE 11 - OVERCROSSING	-	
17	AVENUE 20 & 20½ - INTERCHANGE ALT 1	-	
7.1	AVENUE 20 & 20½ - INTERCHANGE ALT 2	-	
18	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	-	
19	GRADE SEPARATION - LE GRAND RD INTERCHANGE	-	
67	SR 99 SOUTHBOUND OVERHEAD	-	
40	ROAD 33	-	
41	PROPOSED ROAD	-	
42	ROAD 31 & GOLDEN STATE BLVD AT AVENUE 9	-	
43	ROAD 30½	-	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

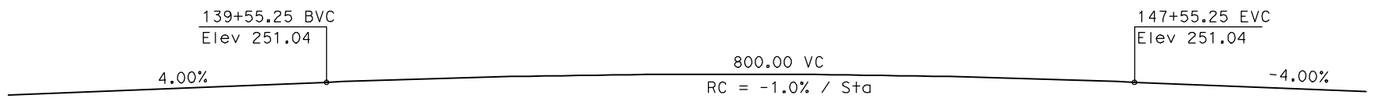
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 ALTERNATIVE
AVENUE 21
STRUCTURE INDEX MAP
SHEET 1 OF 1

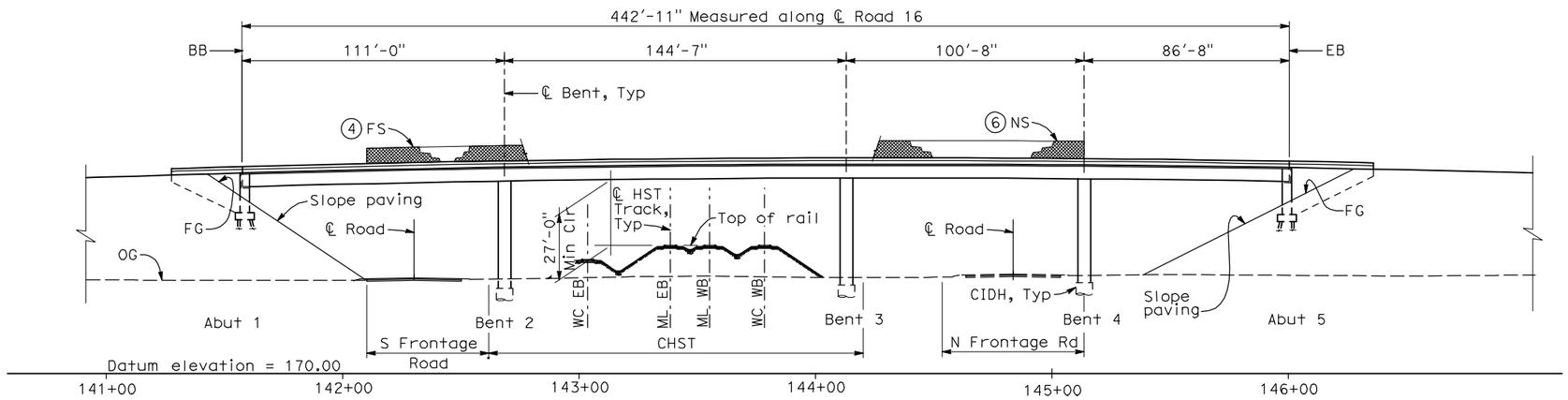
CONTRACT NO. HSR06-007
DRAWING NO. SB1102
SCALE No scale
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\MF-SB-1102.dgn 4/30/2011 5:02:48 PM DolanR



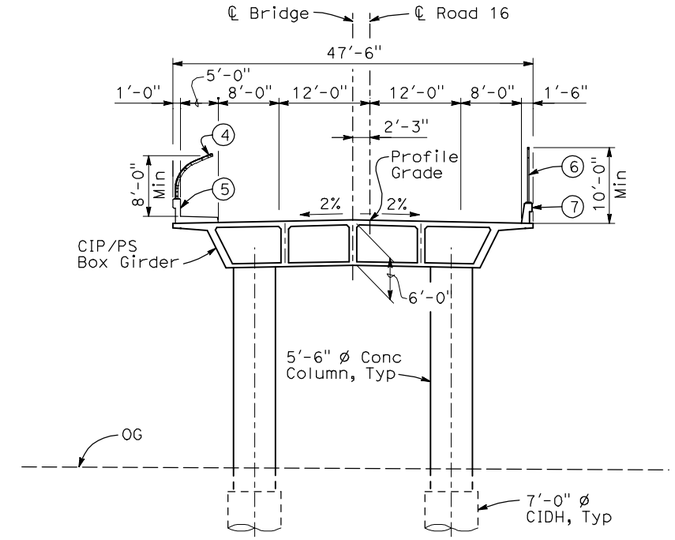
PROFILE GRADE

NTS



ELEVATION

1" = 30'-0"

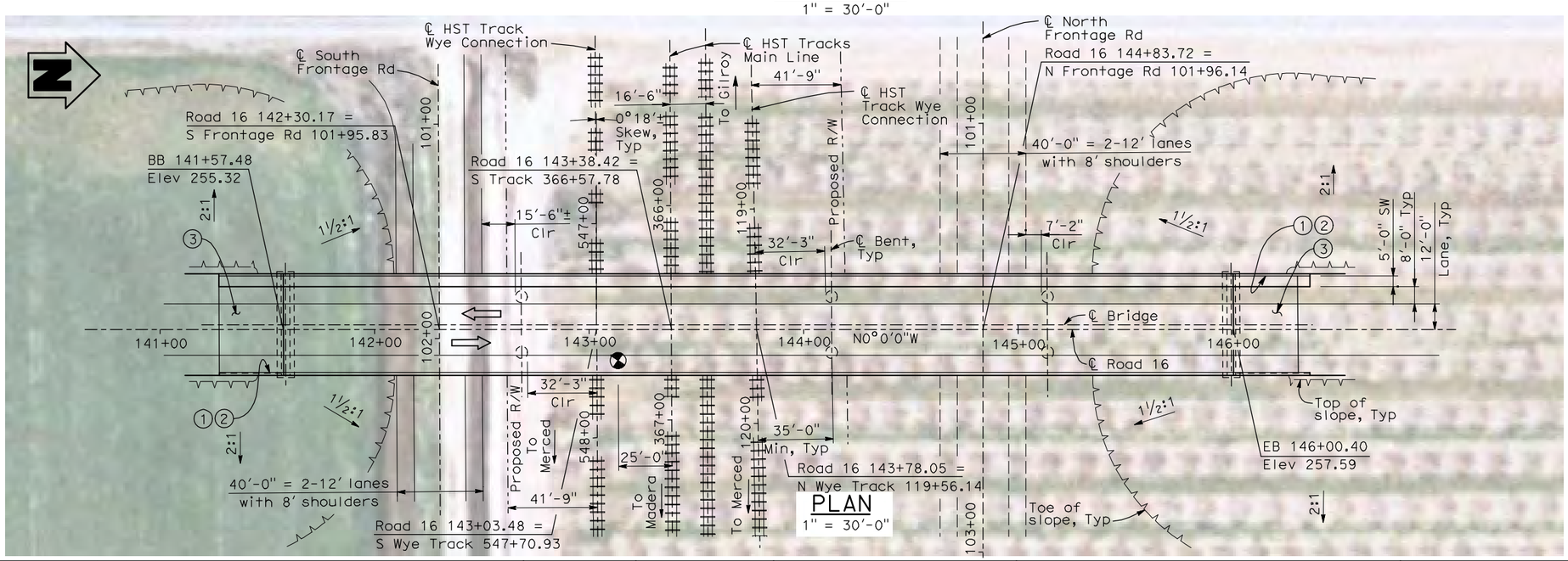


TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. WW-WX"
2. Paint "Road 16 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.



PLAN

1" = 30'-0"

LEGEND/ABBREVIATIONS:

⇦ Direction of traffic

Point of minimum vertical clearance

ML = Main Line
WC = Wye Connection

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	442'-11"
WIDTH	=	47'-6"
AREA	=	21,050 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 5

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

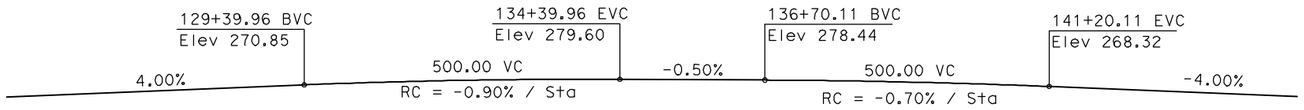
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE / WYE CONNECTION
AVENUE 21
ROAD 16 OVERHEAD
PLANNING STUDY

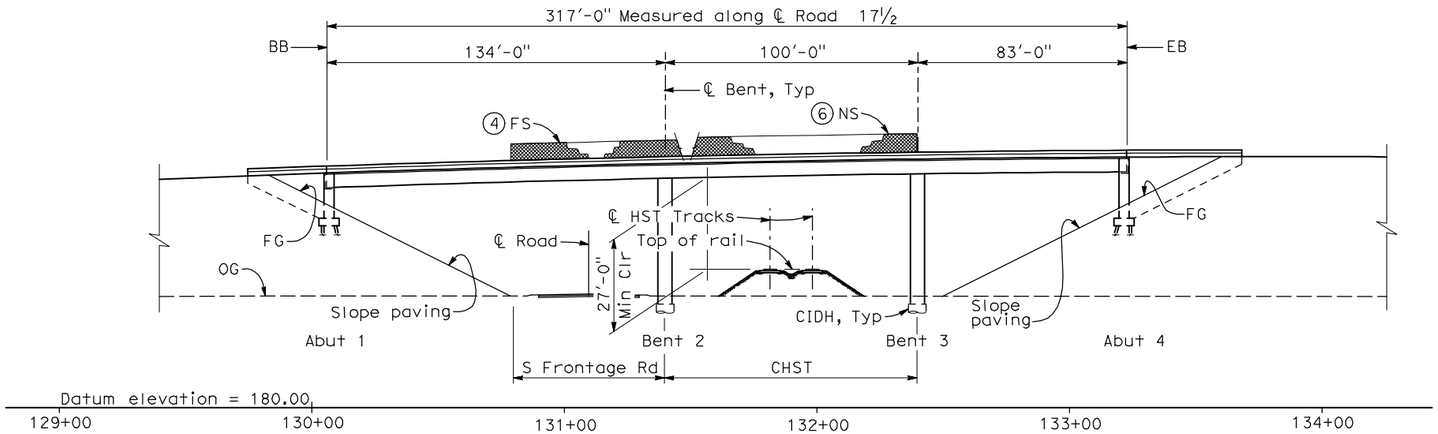
CONTRACT NO. HSR06-007
DRAWING NO. ST1101
SCALE As shown
SHEET NO. OF

I:\CHSR\60029962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Road 16-Loc 5.dgn 4/30/2011 5:06:32 PM DolanR



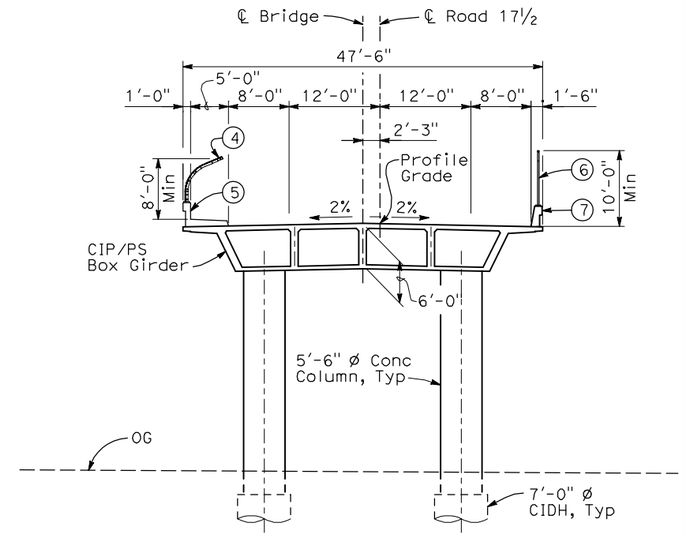
PROFILE GRADE

NTS



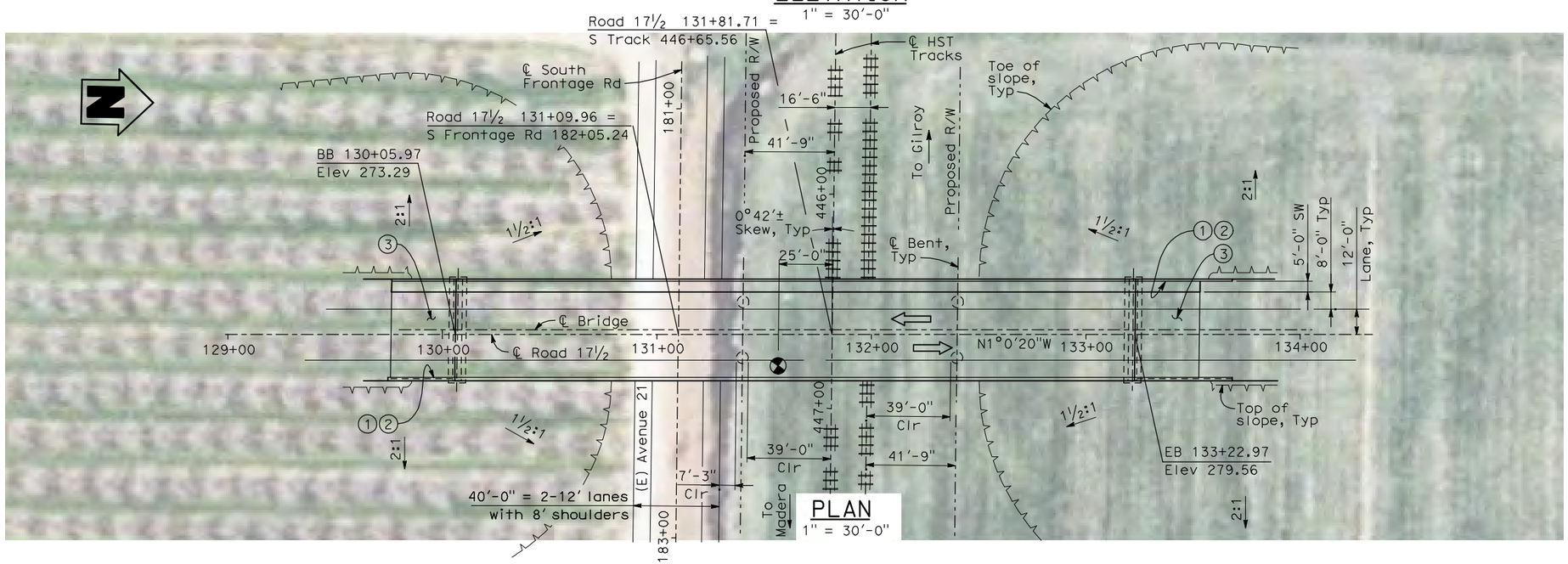
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. WW-XX"
2. Paint "Road 17½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	317'-0"
WIDTH	=	47'-6"
AREA	=	15,100 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 4

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

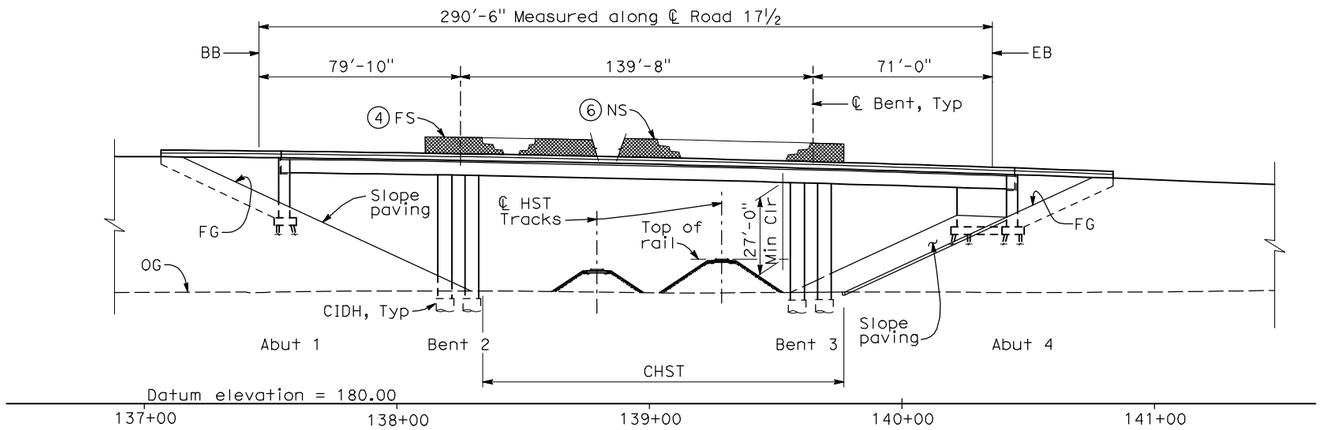
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
ROAD 17½ OVERHEAD
PLANNING STUDY - SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. ST1102
SCALE As shown
SHEET NO. OF

DolanR 4/30/2011 5:08:09 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Road 17.5-Loc 4.dgn

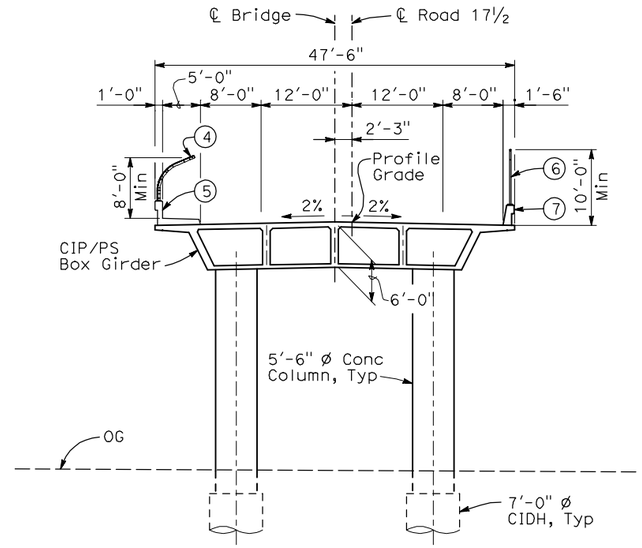
PROFILE GRADE

NTS



ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

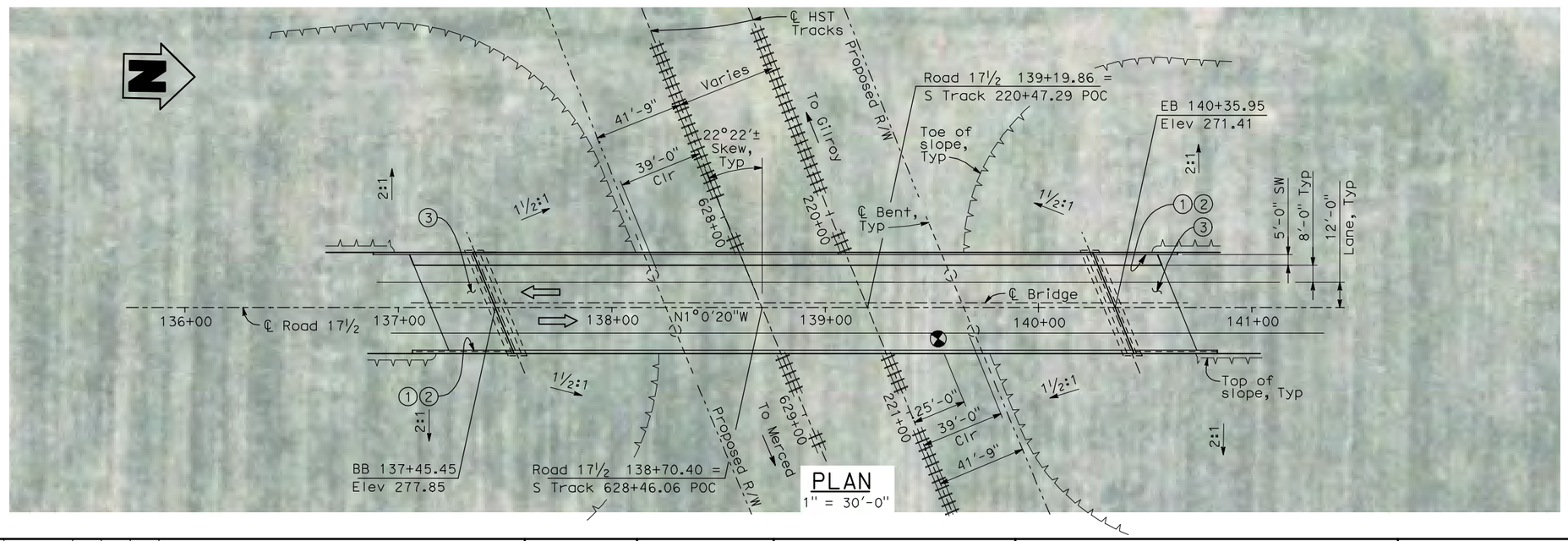
NOTES:

1. Paint "Bridge No. WW-WW"
2. Paint "Road 17½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance



PLAN

1" = 30'-0"

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 6'-0"
LENGTH	= 290'-6"
WIDTH	= 47'-6"
AREA	= 13,800 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

LOCATION 4

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

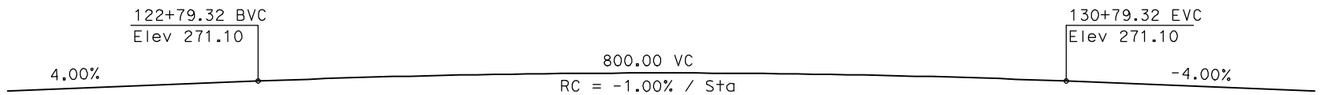
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION
AVENUE 21
ROAD 17½ OVERHEAD
PLANNING STUDY - SHEET 2 OF 2

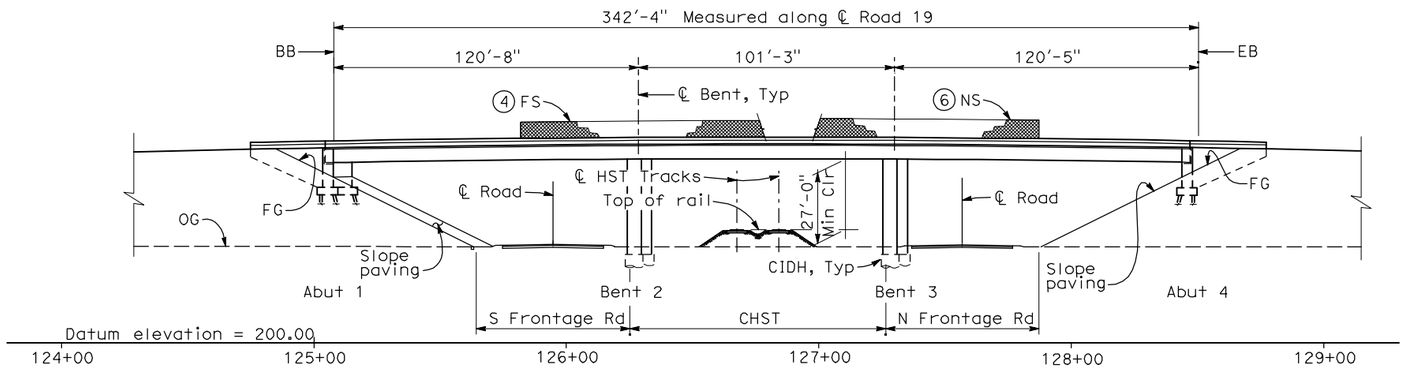
CONTRACT NO. HSR06-007
DRAWING NO. ST1103
SCALE As shown
SHEET NO. OF

DolanR 4/30/2011 5:09:16 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Road 17.5WC-Loc 4.dgn



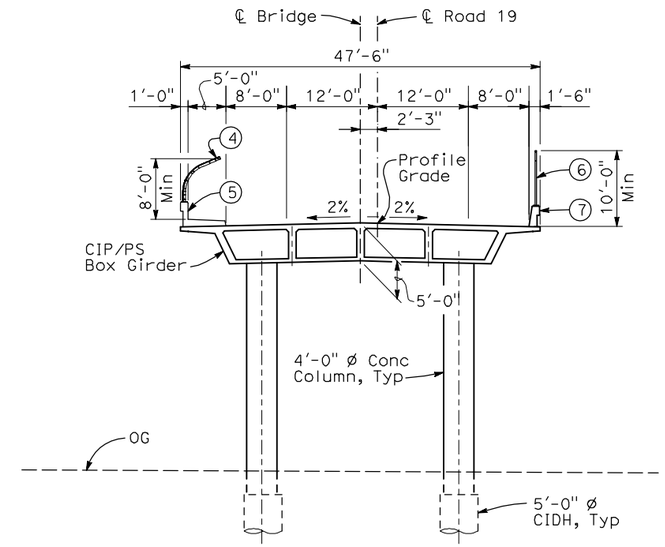
PROFILE GRADE

NTS



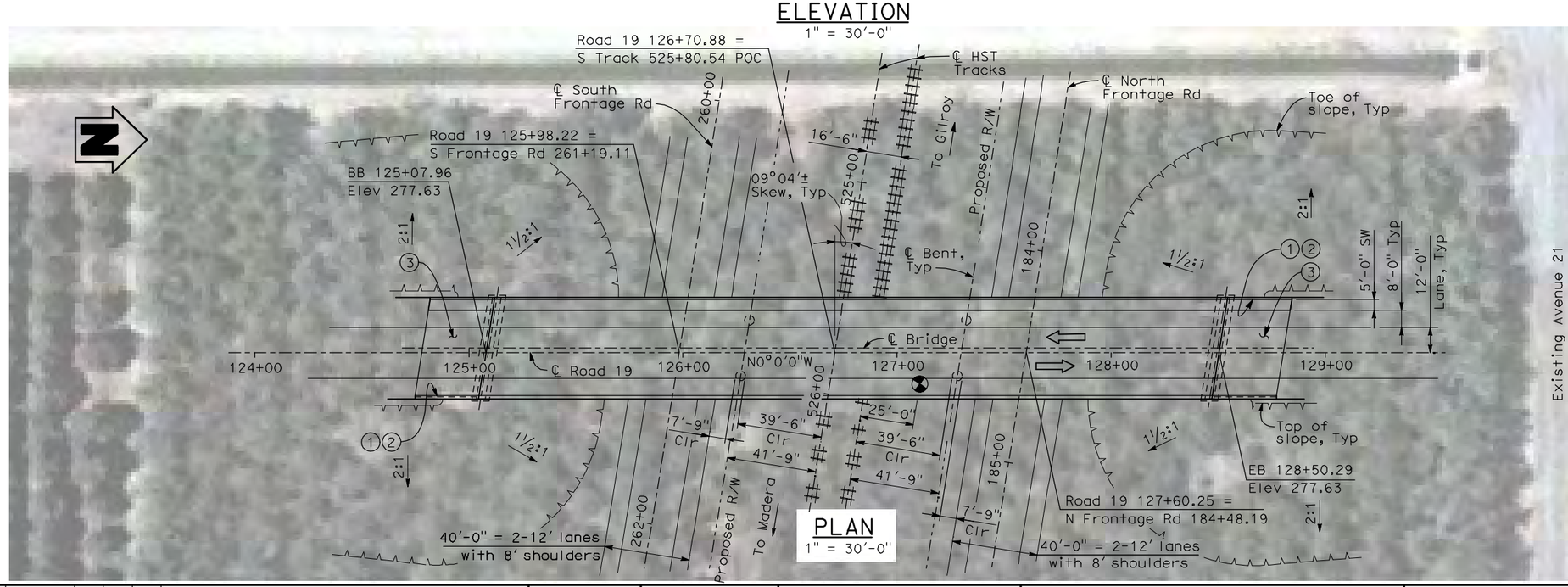
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



NOTES:

1. Paint "Bridge No. WX-XX"
2. Paint "Road 19 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◓ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	342'-4"
WIDTH	=	47'-6"
AREA	=	16,260 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 3

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

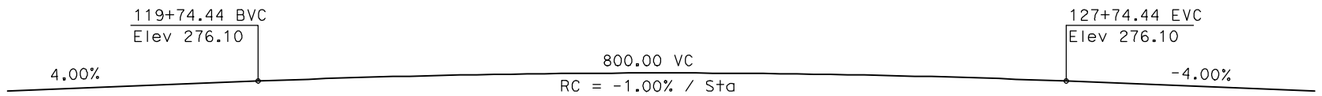
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

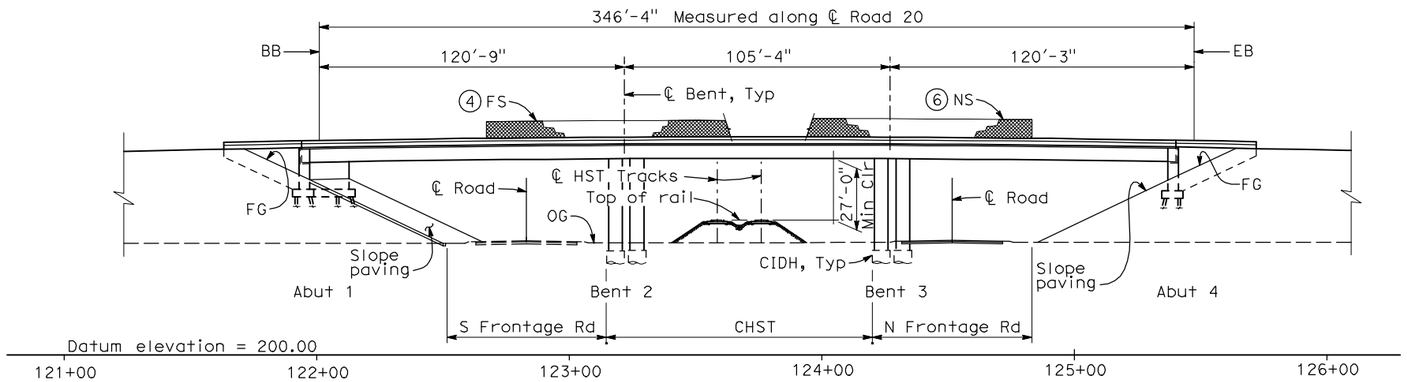
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
ROAD 19 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1104
SCALE As shown
SHEET NO. OF

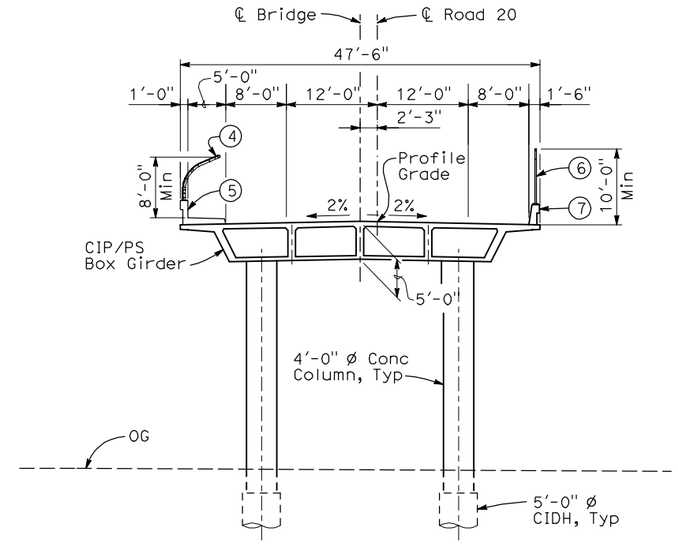
I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Road 19-Loc 3.dgn 4/30/2011 5:10:02 PM DolanR



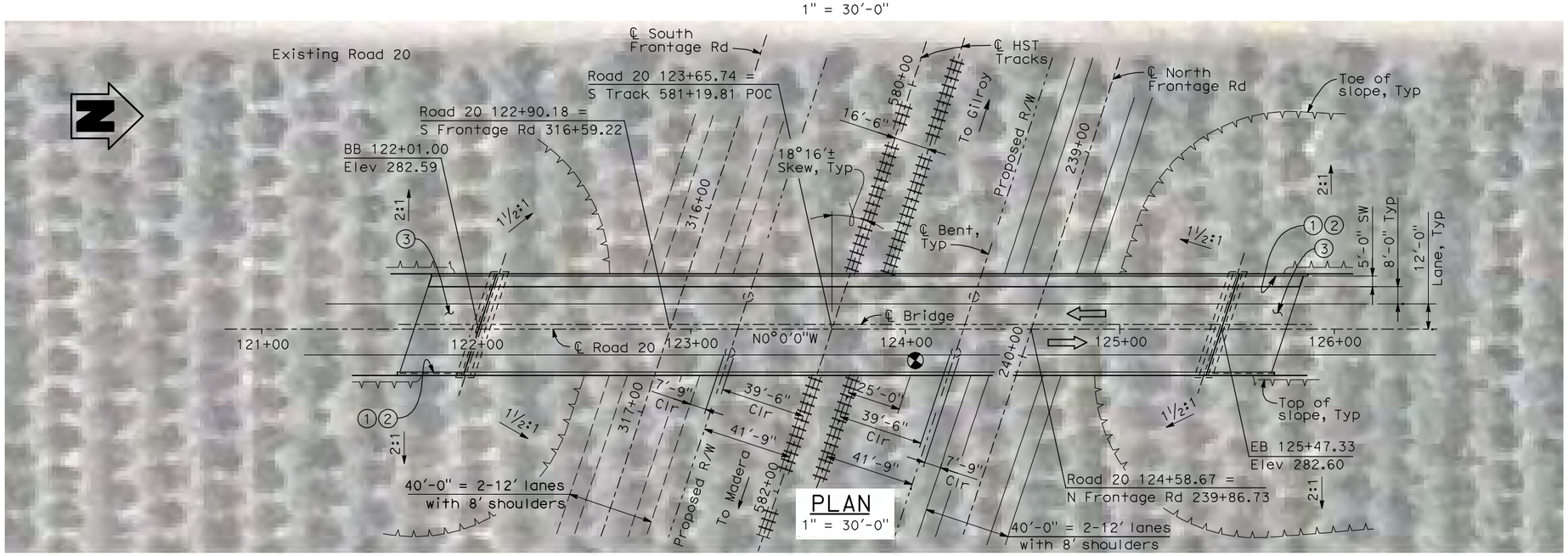
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. WX-XY"
2. Paint "Road 20 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	346'-4"
WIDTH	=	47'-6"
AREA	=	16,450 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 2

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

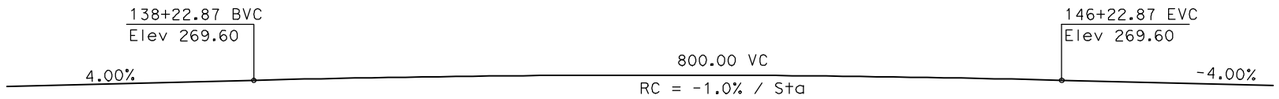
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
ROAD 20 OVERHEAD
PLANNING STUDY

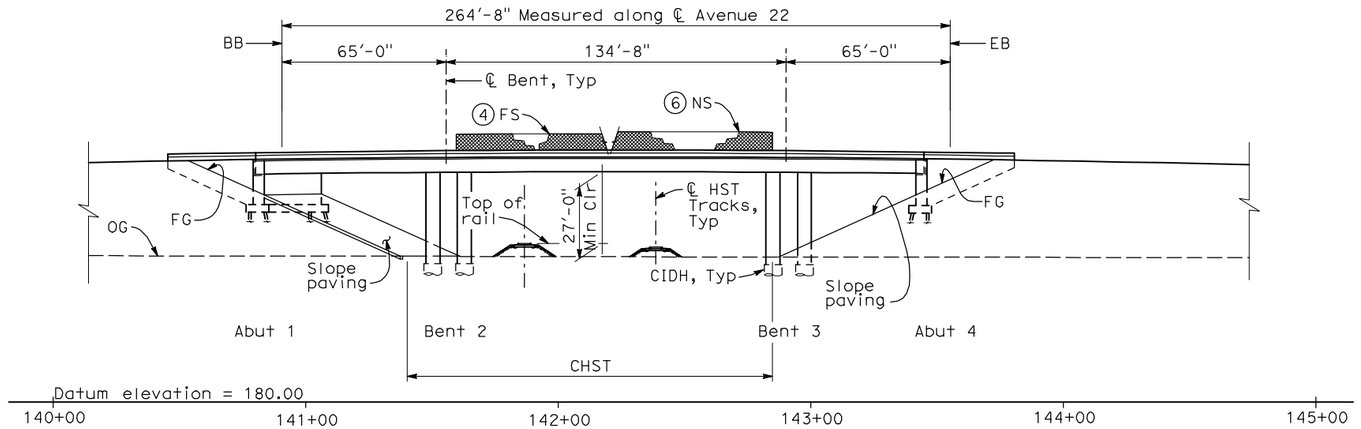
CONTRACT NO. HSR06-007
DRAWING NO. ST1105
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Road 20-Loc 2.dgn 4/30/2011 5:11:03 PM DolanR



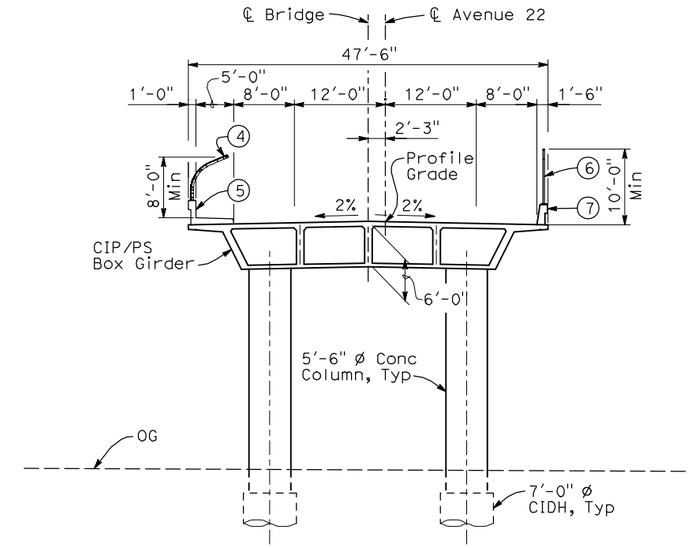
PROFILE GRADE

NTS



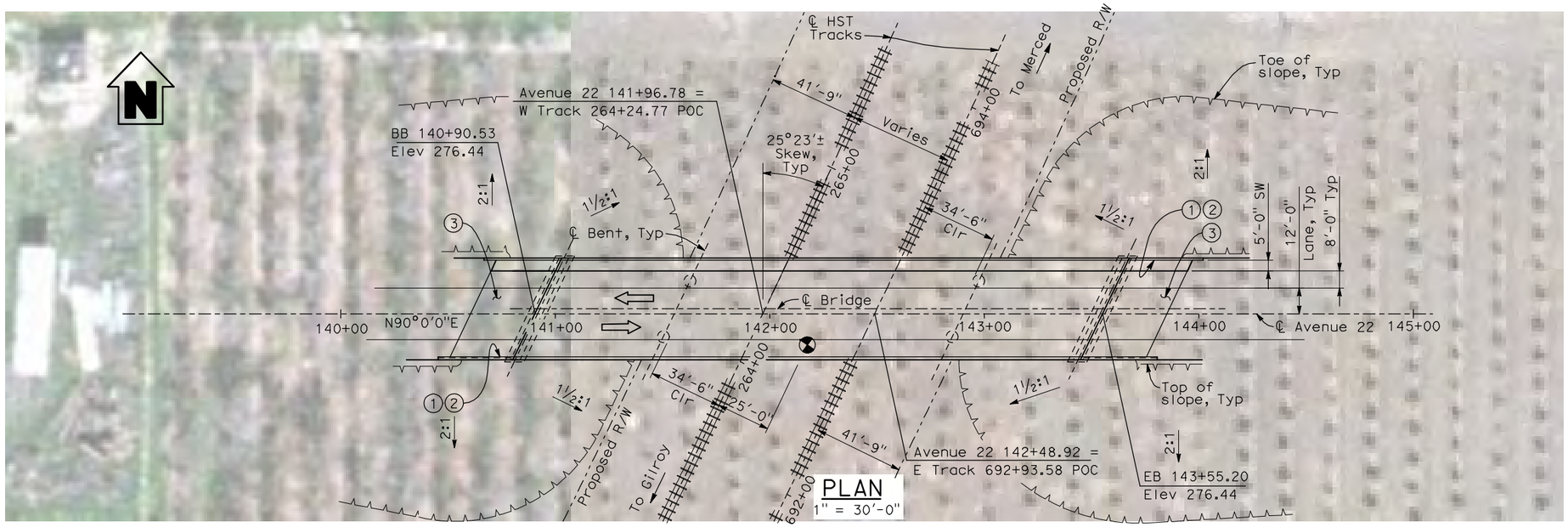
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. AW-AW"
2. Paint "Avenue 22 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	264'-8"
WIDTH	=	47'-6"
AREA	=	12,600 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 1

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

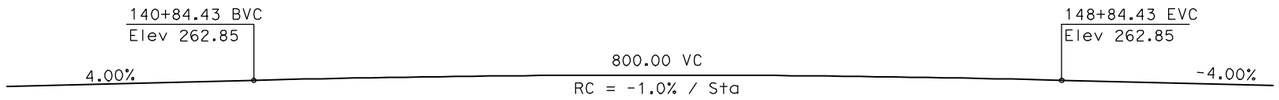
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION
AVENUE 21
AVENUE 22 OVERHEAD
PLANNING STUDY

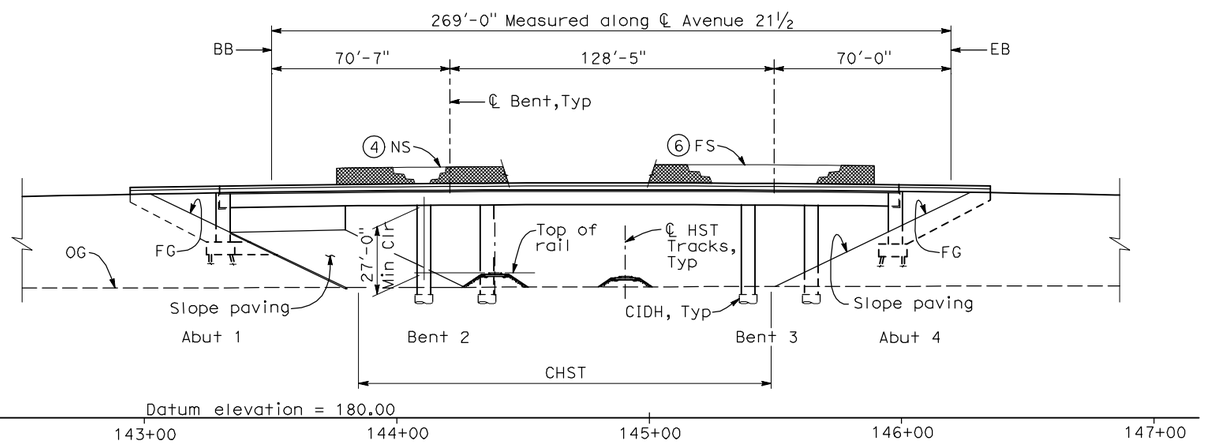
CONTRACT NO. HSR06-007
DRAWING NO. ST1106
SCALE As shown
SHEET NO. OF

DolanR 4/30/2011 5:12:17 PM I:\CHSR\60029962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 22-Loc 1.dgn



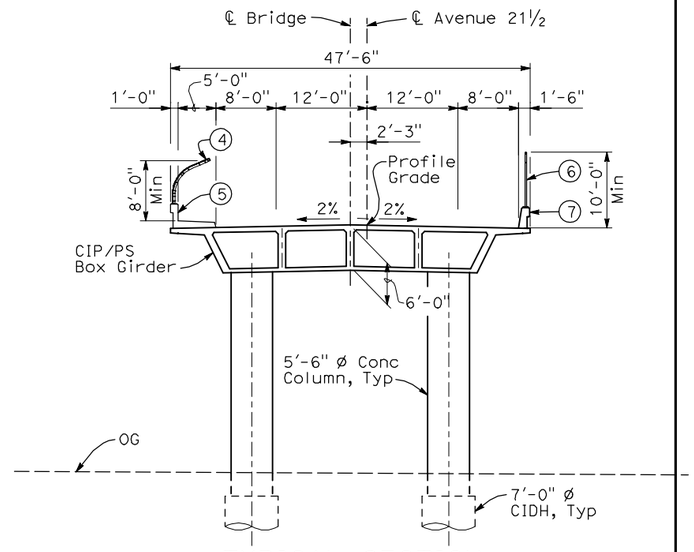
PROFILE GRADE

NTS



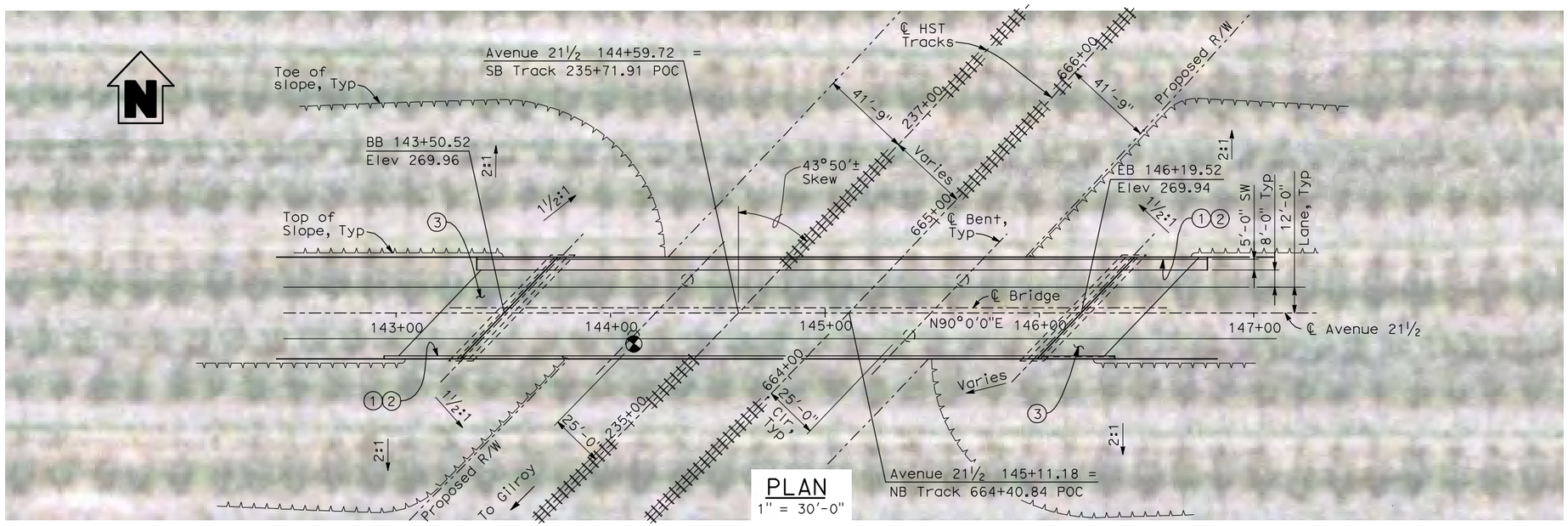
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. AW-AW"
2. Paint "Avenue 21½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	269'-0"
WIDTH	=	47'-6"
AREA	=	12,800 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 6

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION
AVENUE 21
AVENUE 21½ OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1115
SCALE As shown
SHEET NO. OF

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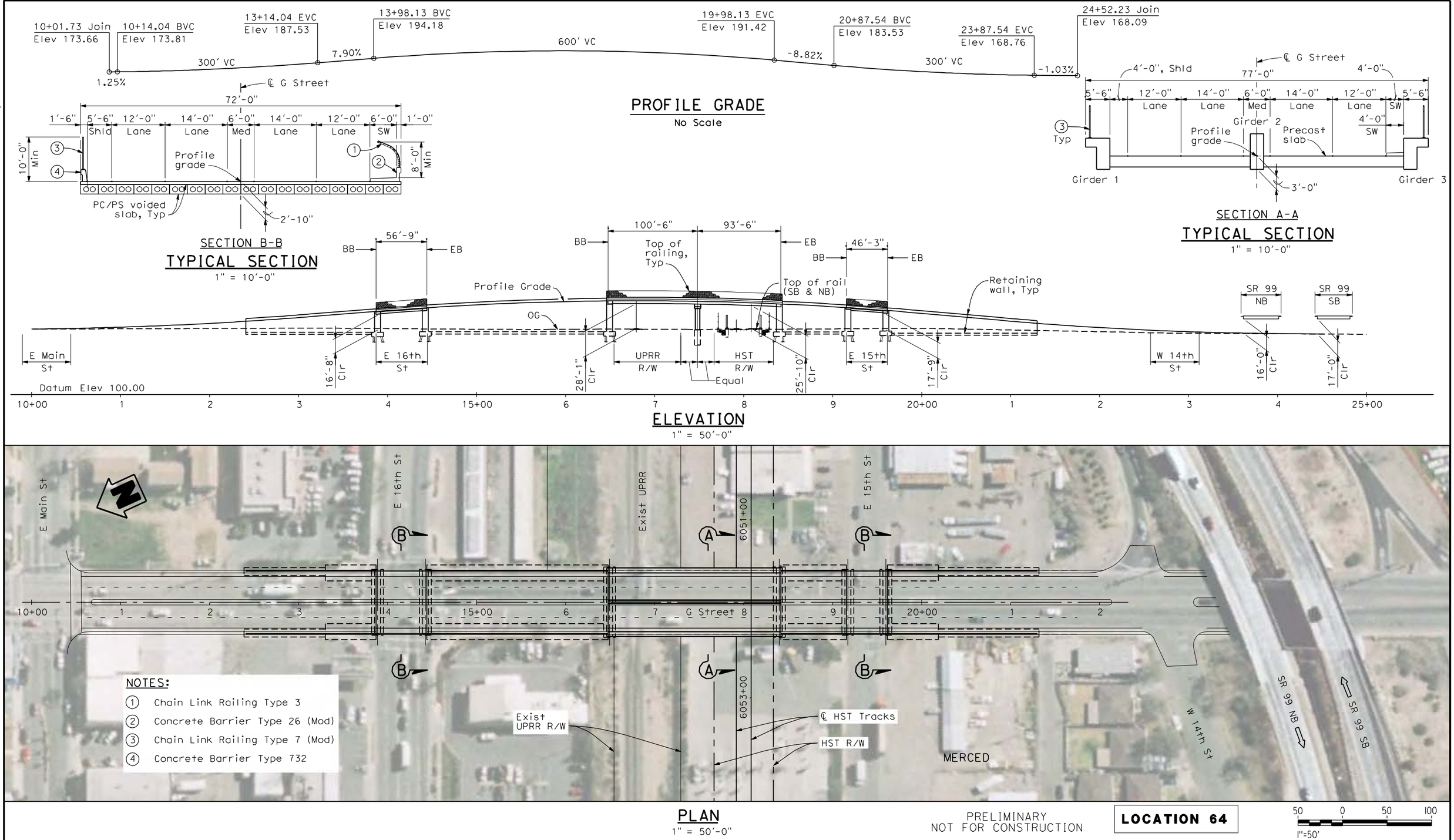

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
G STREET OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1180
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SHEET NO. OF

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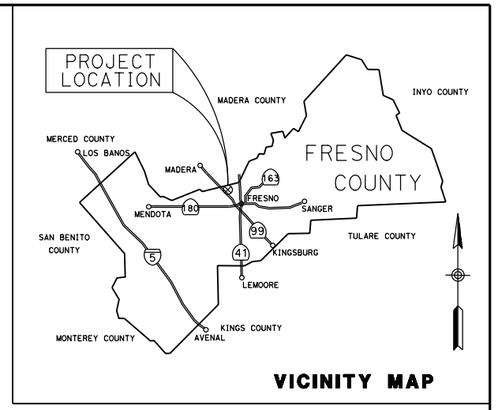
CALIFORNIA HIGH SPEED RAIL AUTHORITY

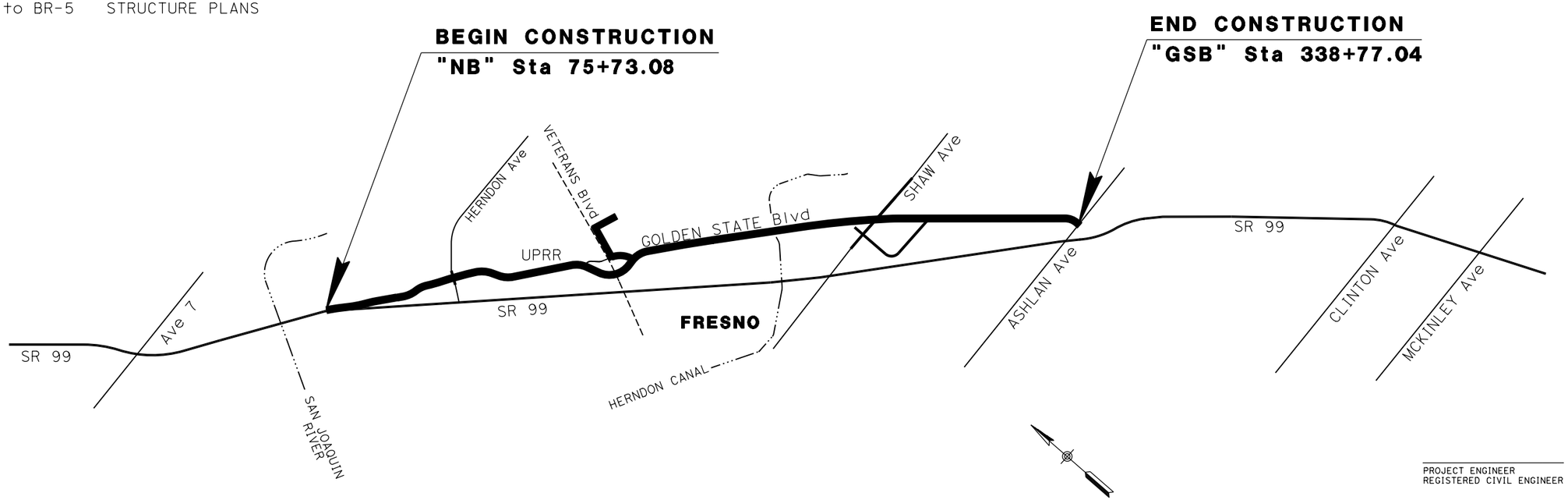
CITY OF FRESNO
DEPARTMENT OF PUBLIC WORKS
CONSTRUCTION PLANS FOR

GOLDEN STATE BOULEVARD



INDEX OF PLANS

T-1	TITLE SHEET
X-1 TO X-18	TYPICAL CROSS SECTIONS
K-1	KEYMAP
L-1 TO L-17	LAYOUT AND PROFILE
SE-1 TO SE-2	SUPERELEVATION
BR-1 to BR-5	STRUCTURE PLANS



PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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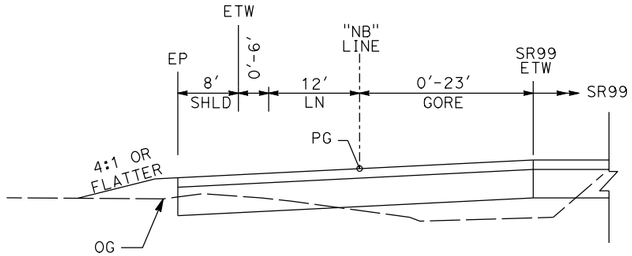
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TITLE

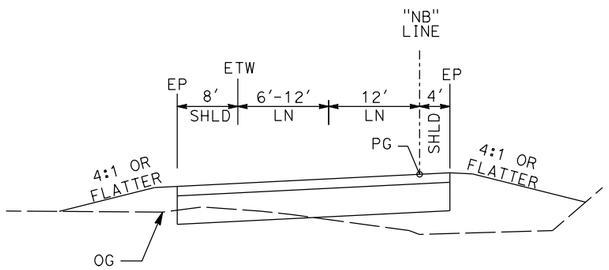
CONTRACT NO. HSR06-007
DRAWING NO. T-1
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011

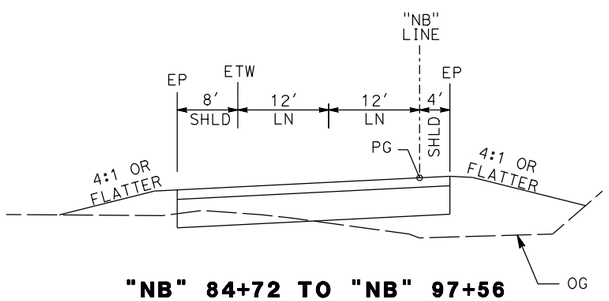
USERNAME => lros



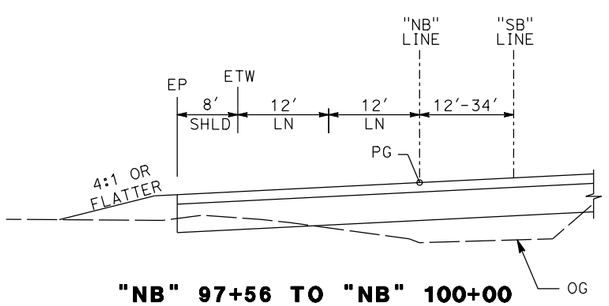
"NB" 75+73 TO "NB" 82+17



"NB" 82+17 TO "NB" 84+72

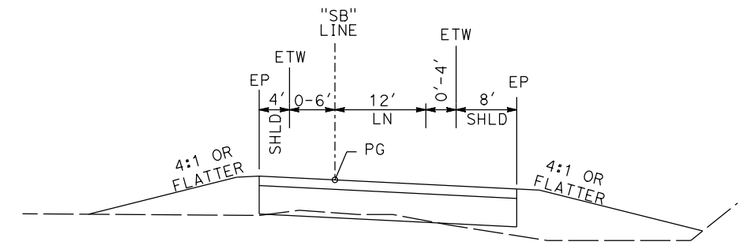


"NB" 84+72 TO "NB" 97+56

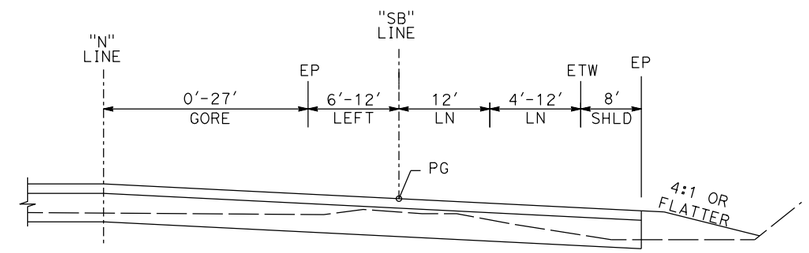


"NB" 97+56 TO "NB" 100+00

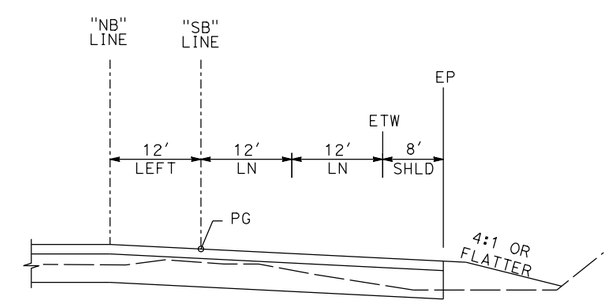
NORTHBOUND ONRAMP



"SB" 95+47 TO "SB" 97+61



"SB" 97+61 TO "SB" 99+51



"SB" 99+51 TO "SB" 100+00

SOUTHBOUND OFFRAMP

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

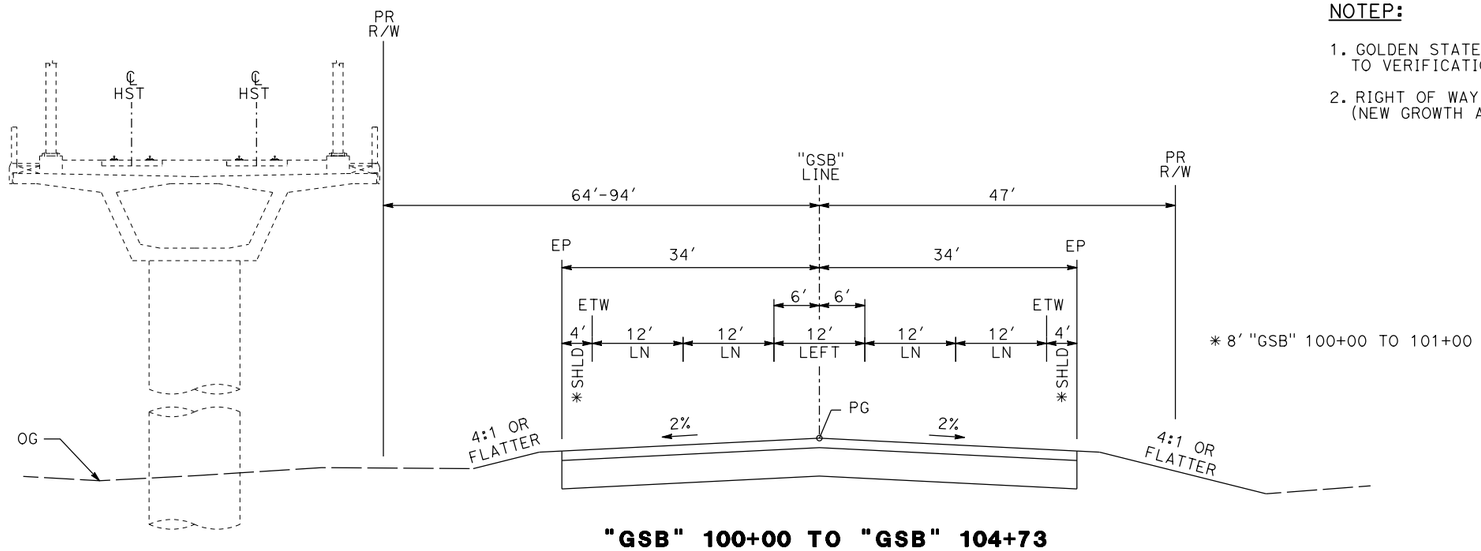
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-1**
SCALE
SHEET NO.

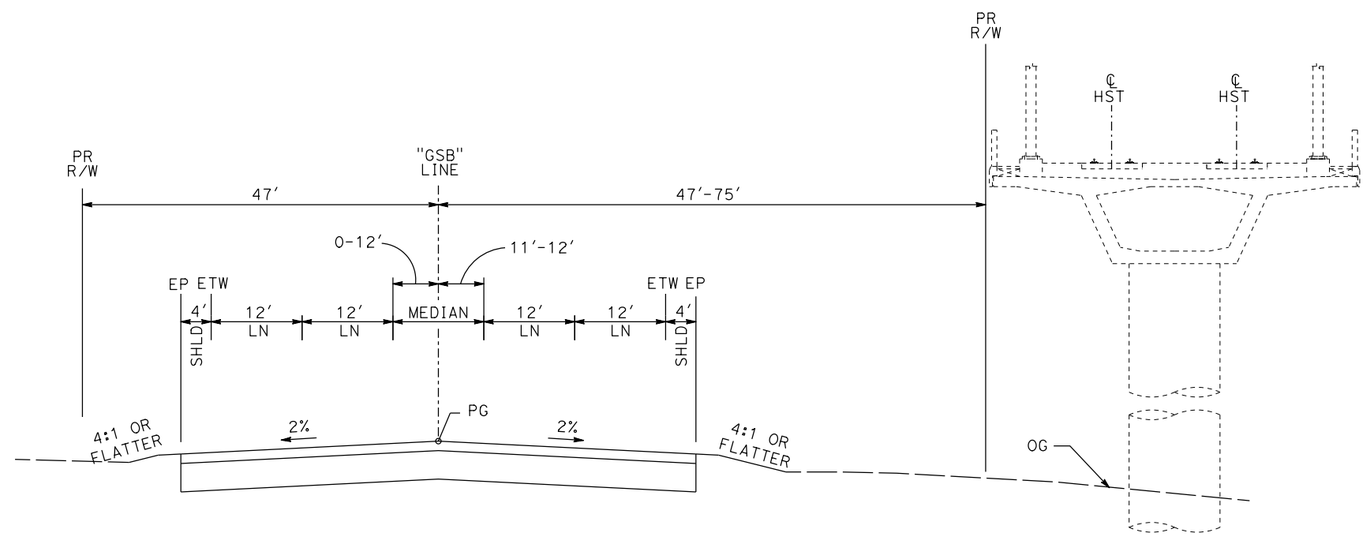
DATE PLOTTED => 27-APR-2011
USERNAME => lros

NOTEP:

1. GOLDEN STATE BLVD ULTIMATE STREET WIDTH/CLASSIFICATION SUBJECT TO VERIFICATION.
2. RIGHT OF WAY WIDTH BASED ON CITY OF FRESNO UNDIVIDED COLLECTORS (NEW GROWTH AREA) TYPICAL STREET CROSS-SECTION.



"GSB" 100+00 TO "GSB" 104+73



"GSB" 104+73 TO "GSB" 110+65

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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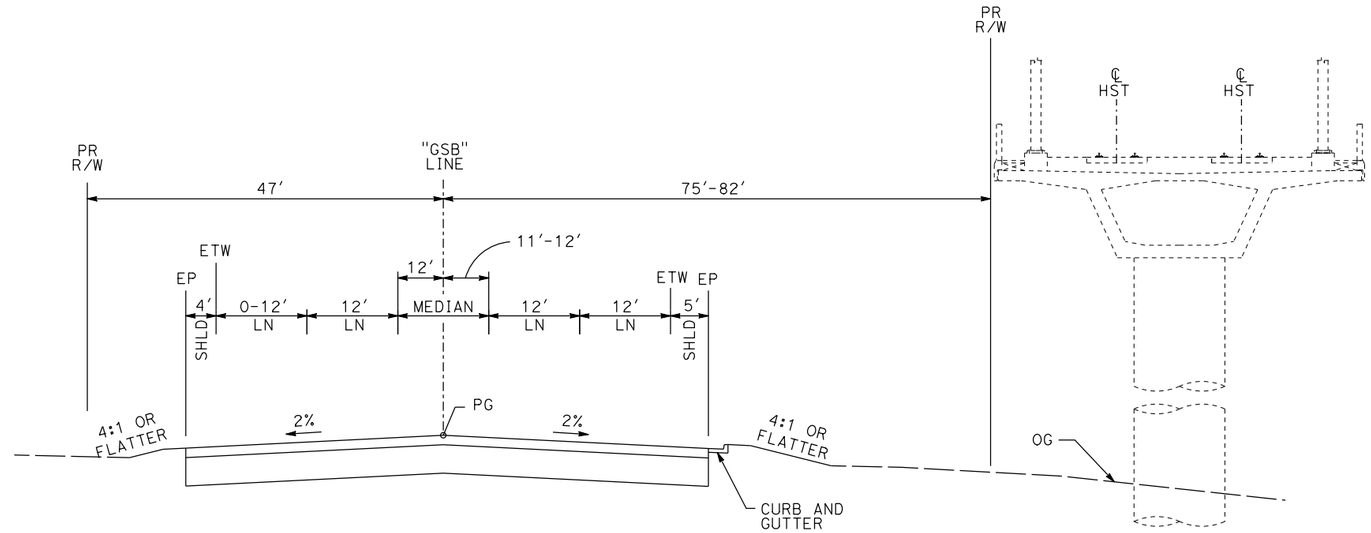
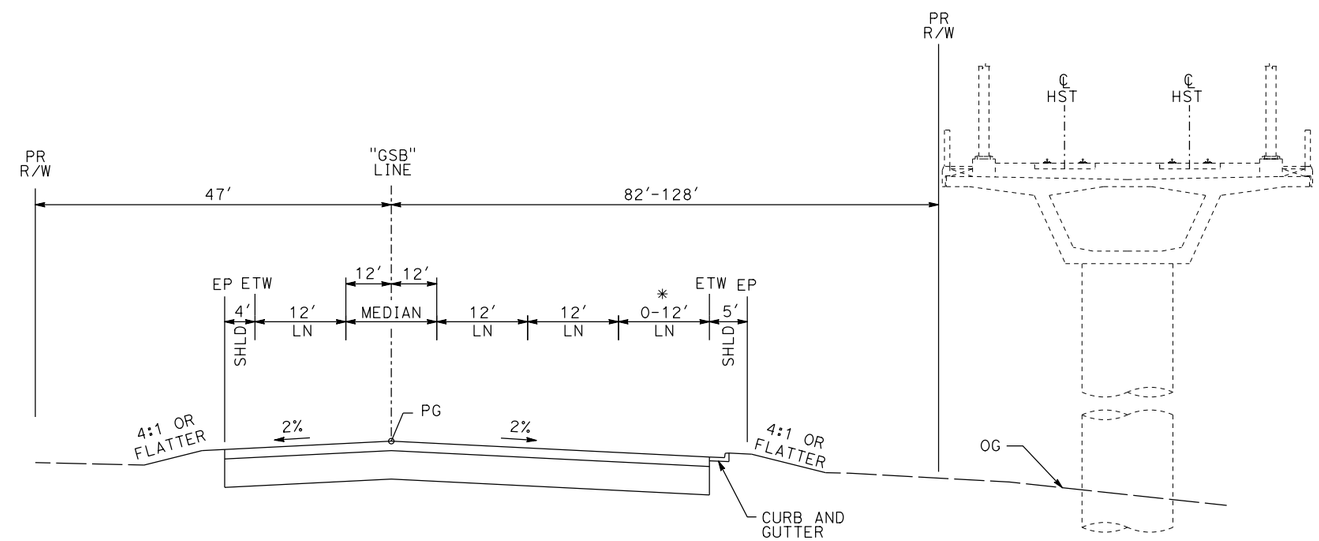
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. X-2
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros



"GSB" 110+65 TO "GSB" 111+96



"GSB" 111+96 TO "GSB" 116+57

* 114+59 TO 116+57

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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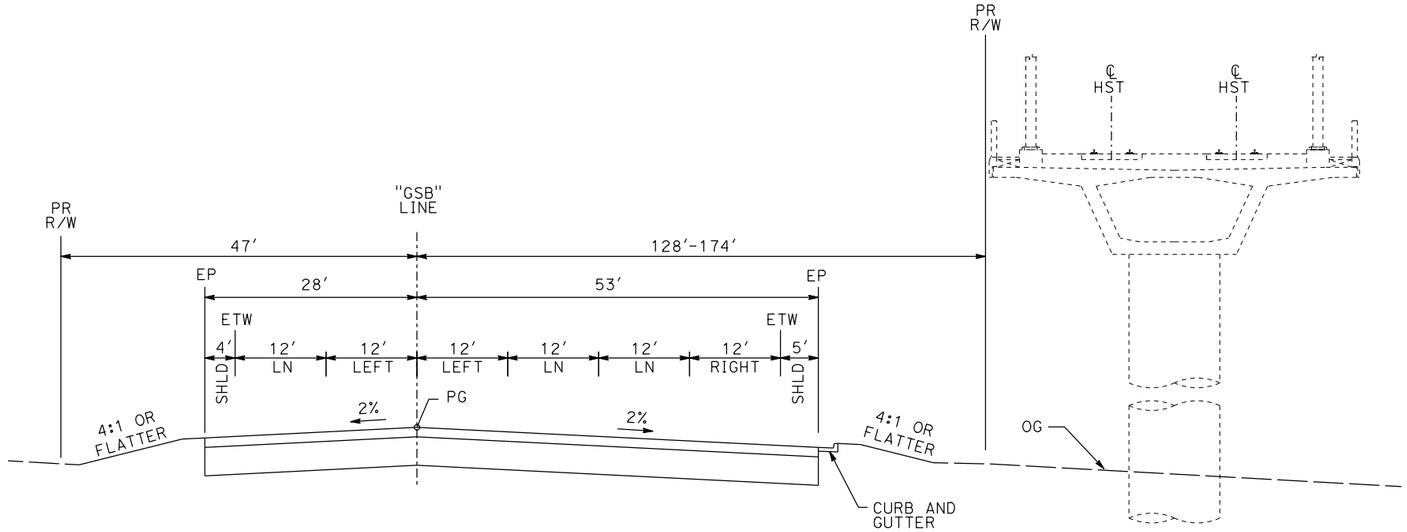
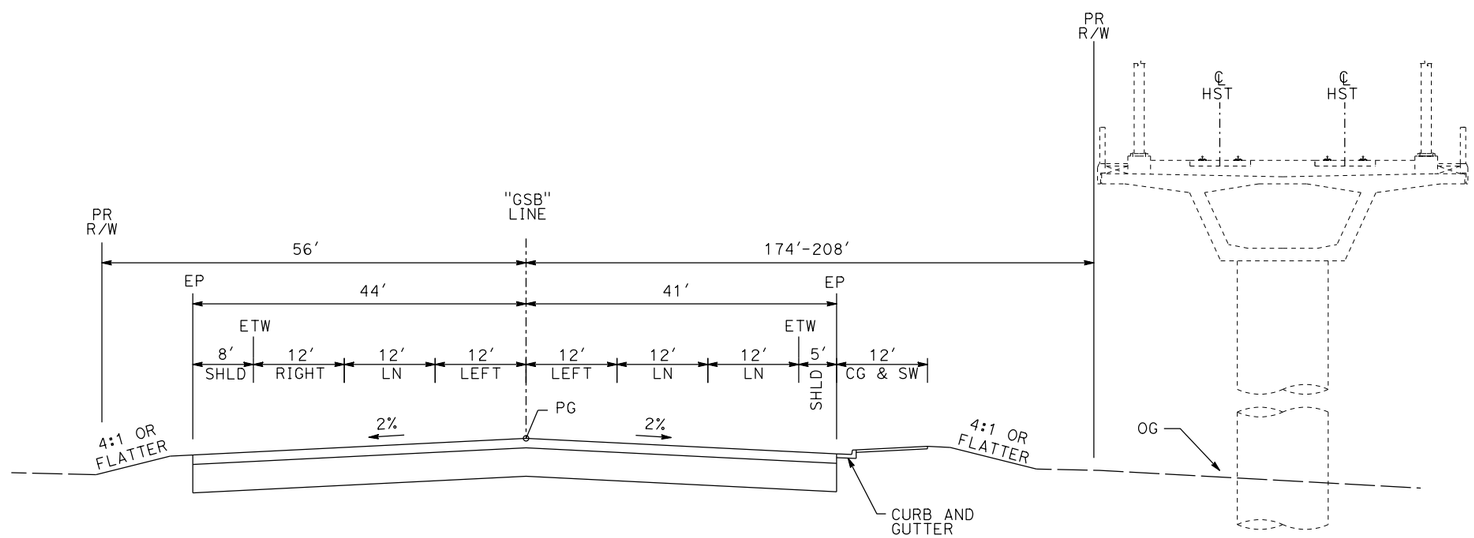
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-3**
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros



"GSB" 116+57 TO "GSB" 120+50



"GSB" 120+50 TO "GSB" 124+47

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 04/29/11

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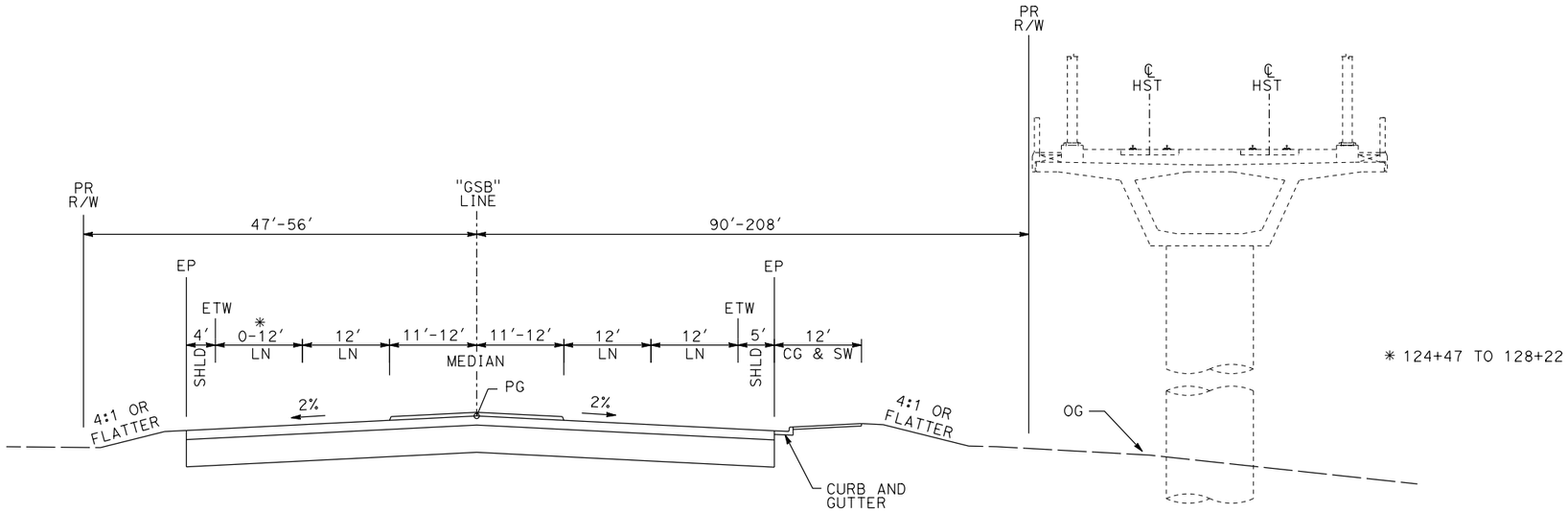
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

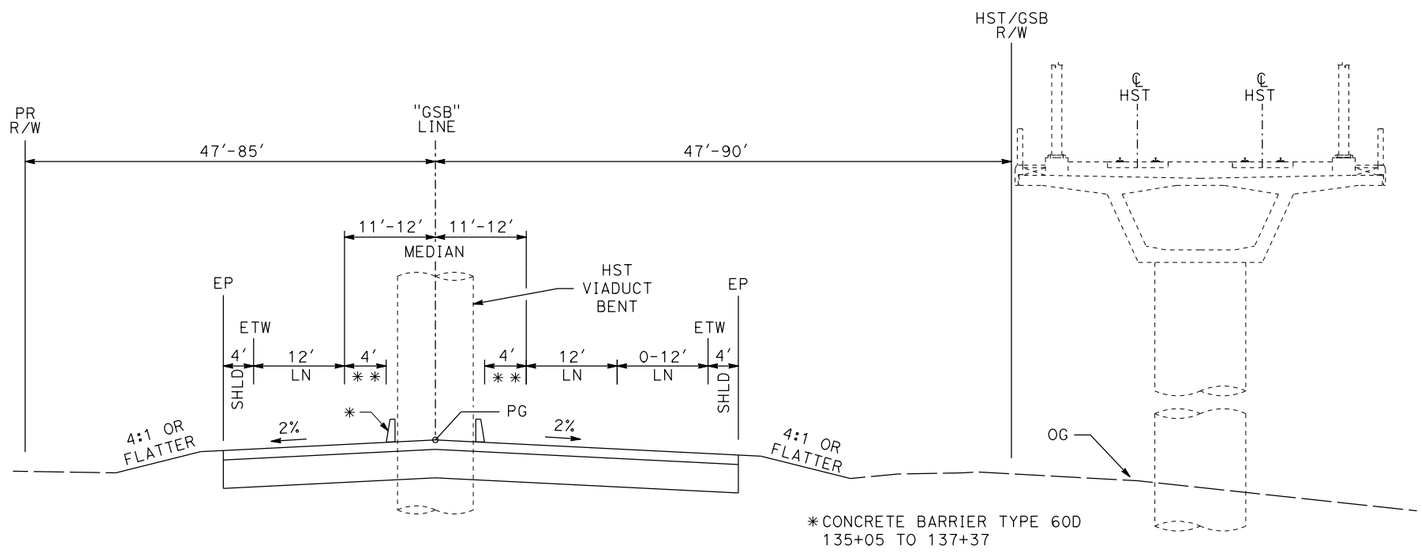
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-4**
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros



"GSB" 124+47 TO "GSB" 134+16



"GSB" 134+16 TO "GSB" 141+36

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
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IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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AECOM Technical Services, Inc.
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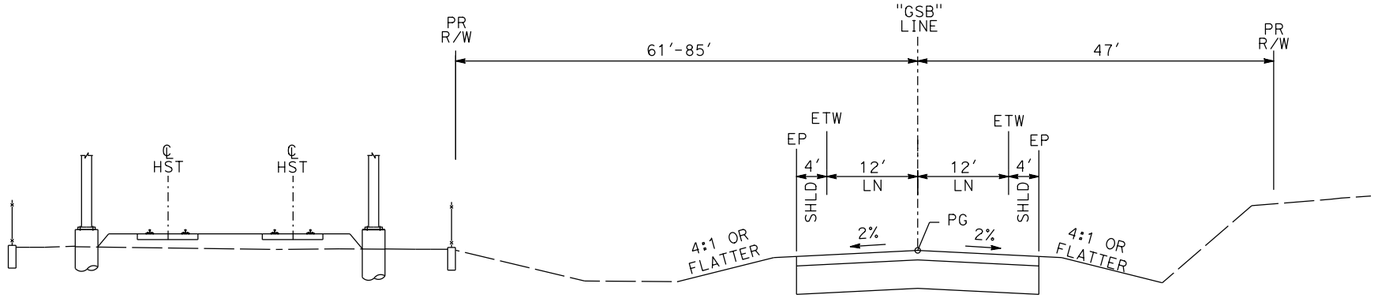
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

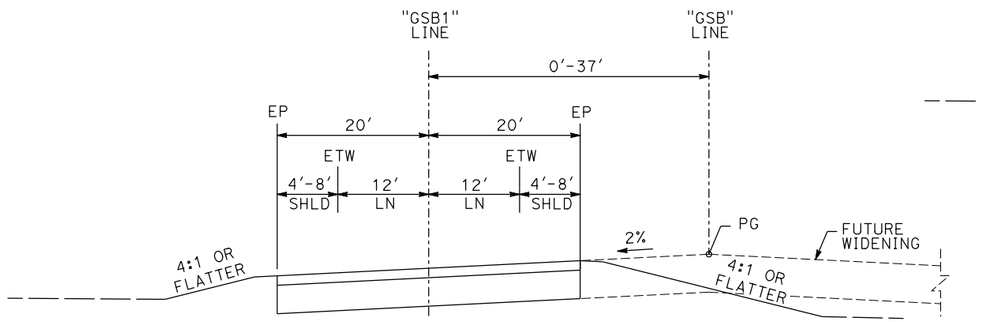
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-5**
SCALE
SHEET NO.

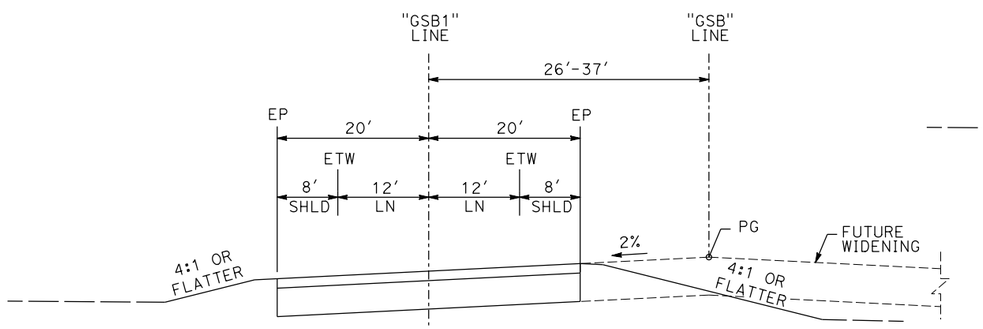
DATE PLOTTED => 27-APR-2011
USERNAME => lros



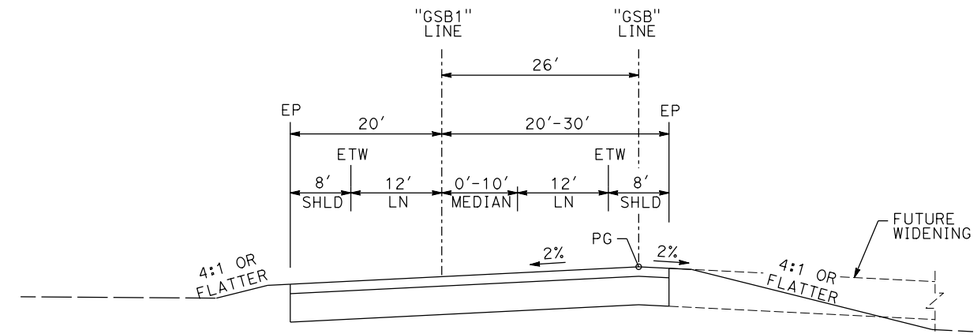
"GSB" 141+36 TO "GSB" 161+45



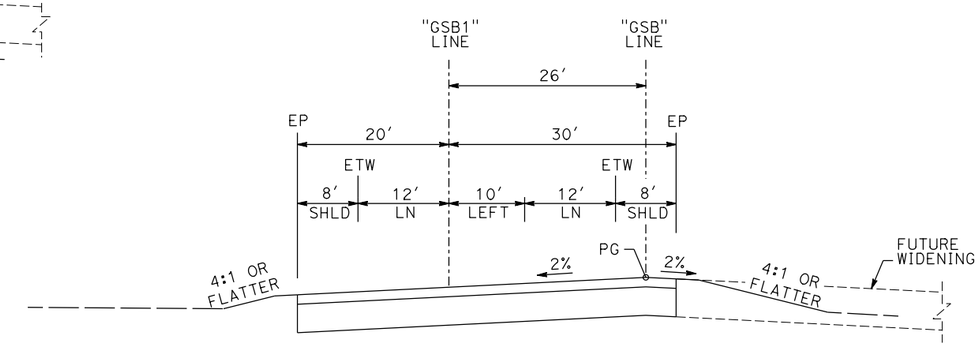
"GSB" 161+45 TO "GSB" 167+38



"GSB" 167+38 TO "GSB" 176+62



"GSB" 176+62 TO "GSB" 182+26



"GSB" 182+26 TO "GSB" 184+25

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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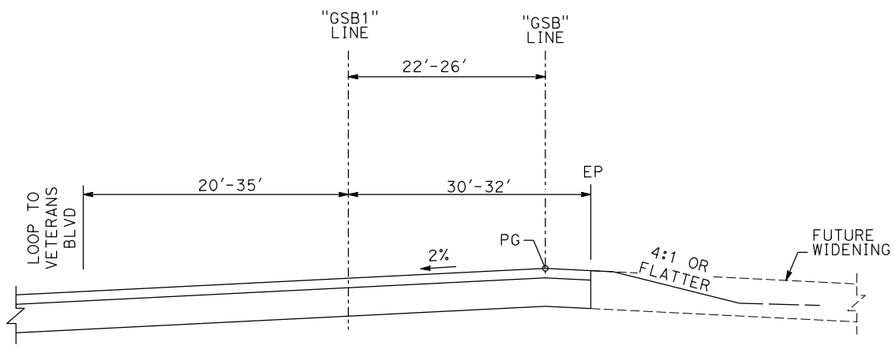
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

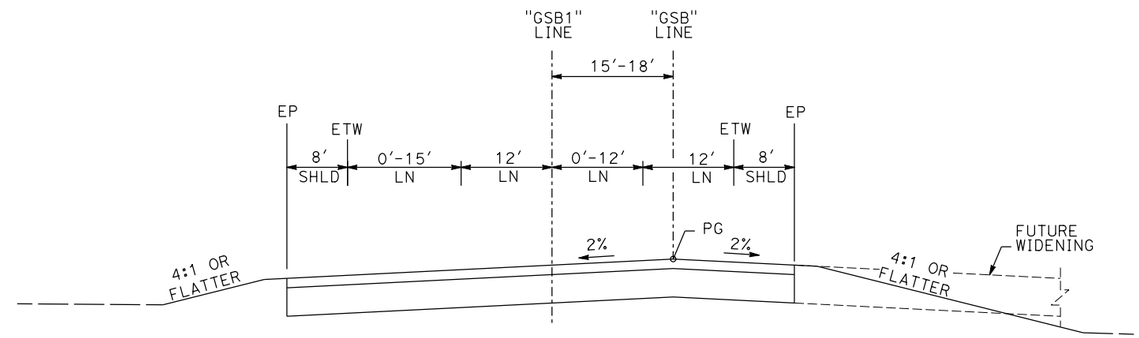
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. X-6
SCALE
SHEET NO.

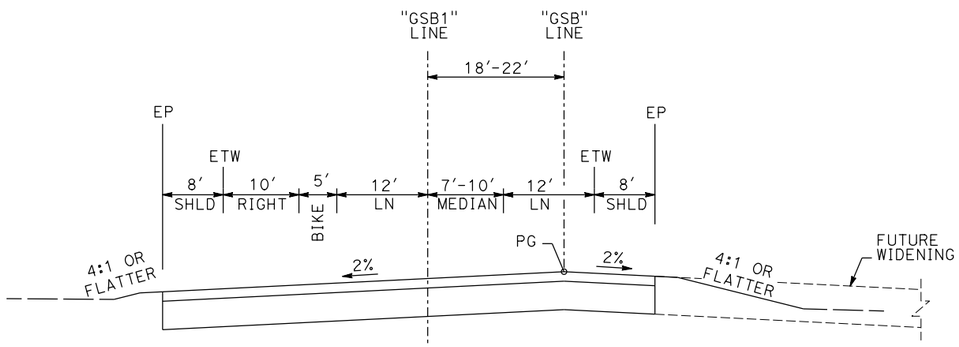
DATE PLOTTED => 28-APR-2011
USERNAME => lros



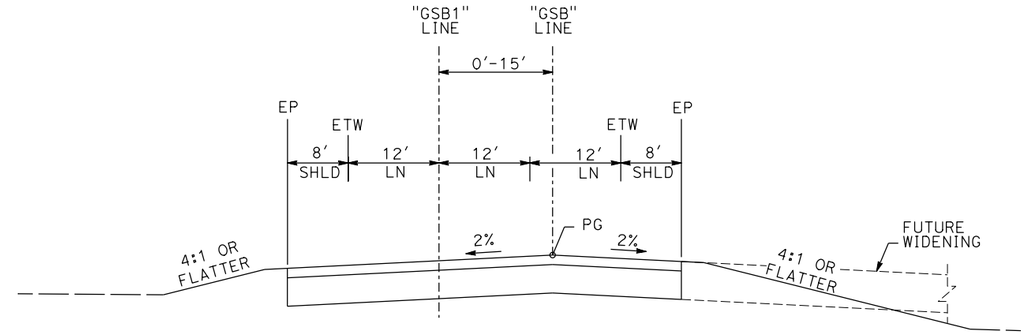
"GSB" 184+25 TO "GSB" 185+41



"GSB" 186+42 TO "GSB" 187+23



"GSB" 185+41 TO "GSB" 186+42



"GSB" 187+23 TO "GSB" 190+86

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
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DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-7**
SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011
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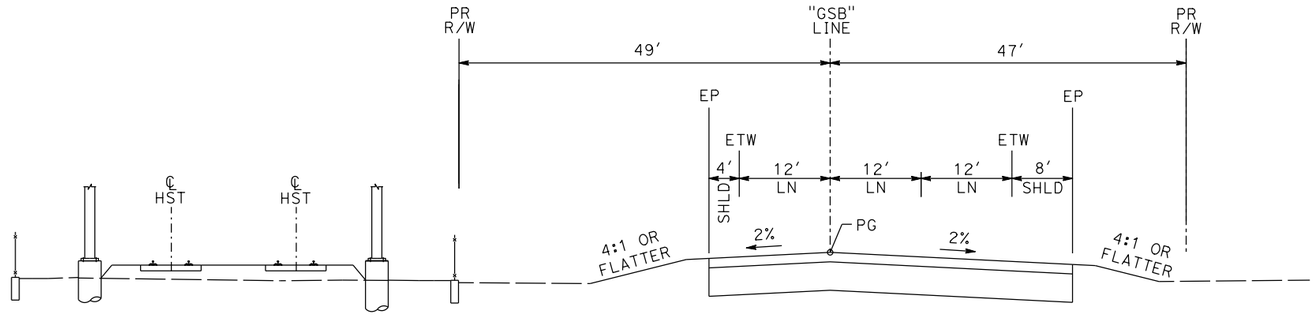
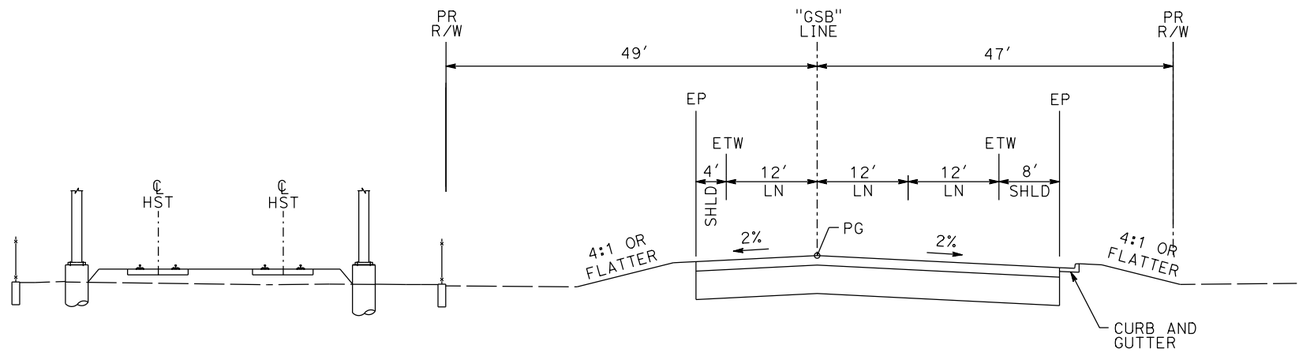
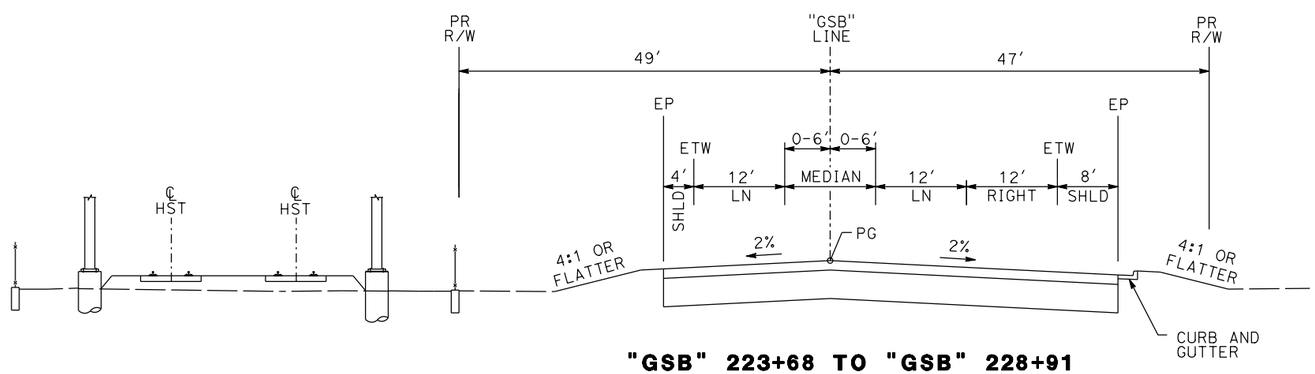


"GSB" 190+86 TO "GSB" 197+48



"GSB" 197+48 TO "GSB" 223+68



"GSB" 223+68 TO "GSB" 228+91

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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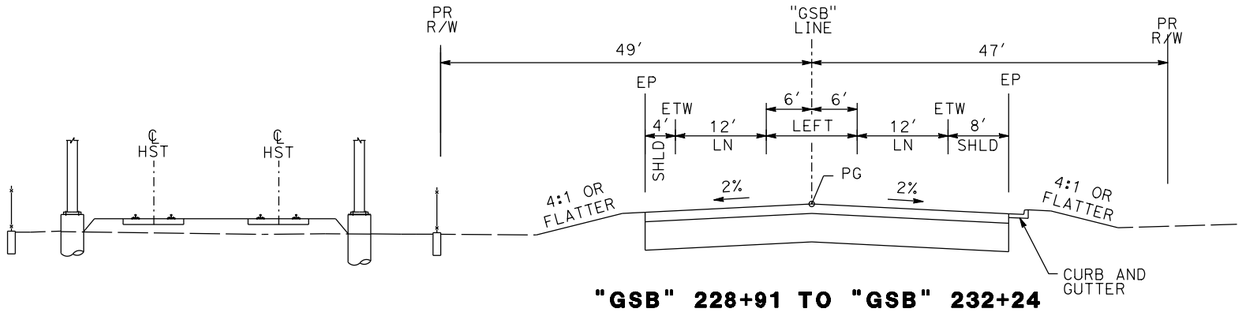
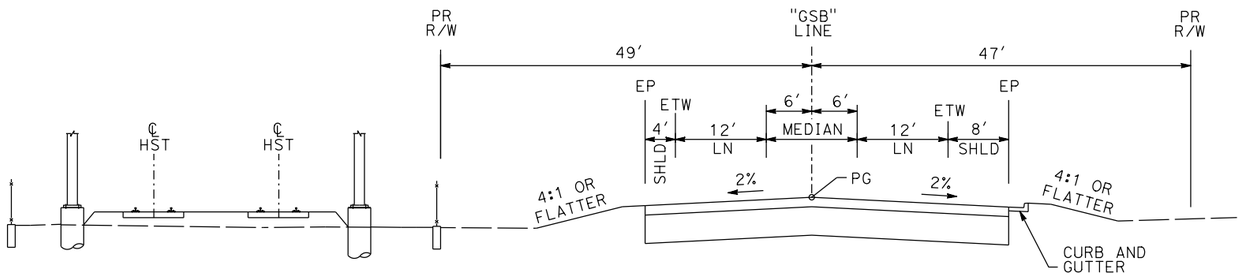
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-8**
SCALE
SHEET NO.

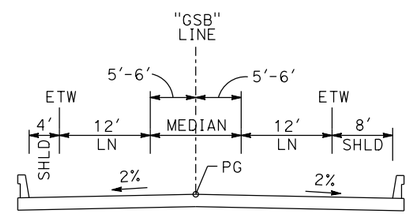
DATE PLOTTED => 28-APR-2011
USERNAME => lros



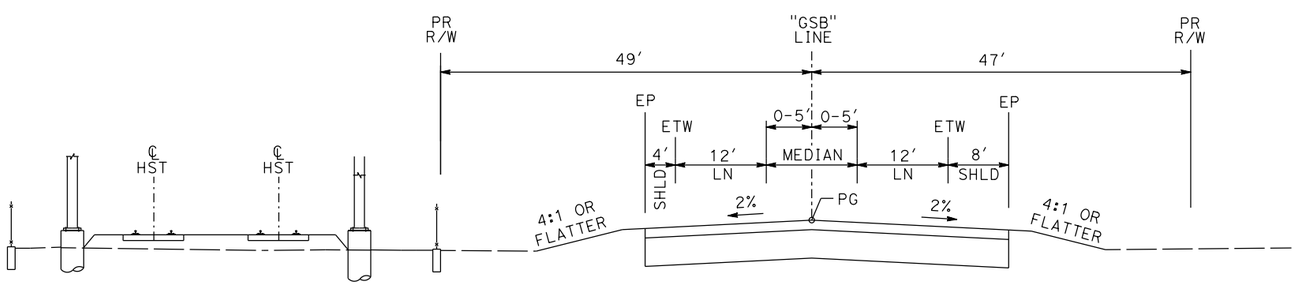
"GSB" 228+91 TO "GSB" 232+24



"GSB" 232+24 TO "GSB" 233+47



"GSB" 233+47 TO "GSB" 234+09



"GSB" 234+09 TO "GSB" 236+37

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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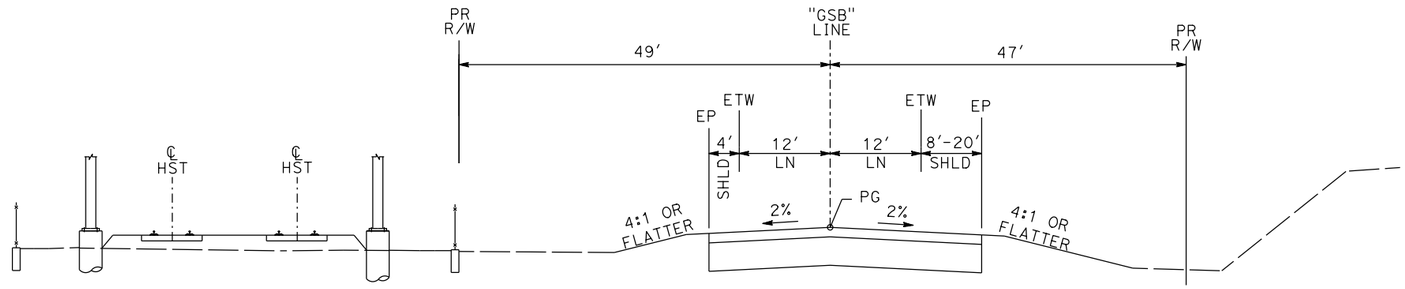
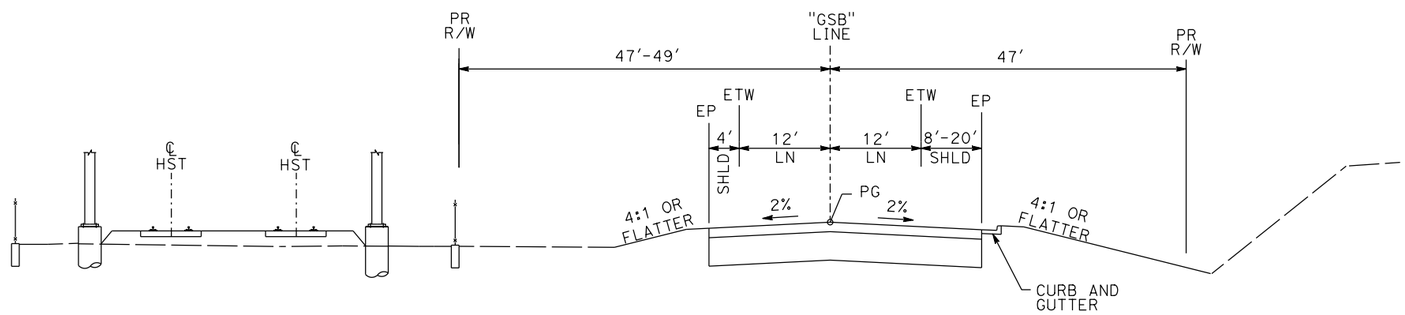
CONTRACT NO. HSR06-007
DRAWING NO. **X-9**
SCALE
SHEET NO.

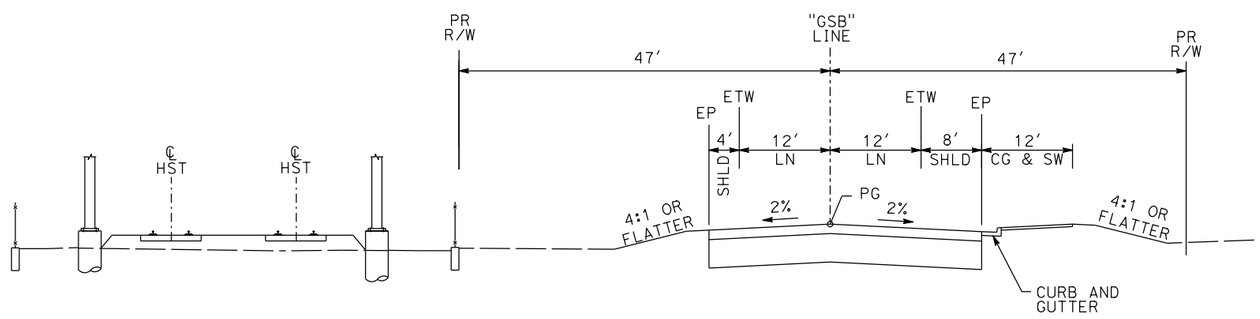
DATE PLOTTED => 28-APR-2011
USERNAME => lros



"GSB" 236+37 TO "GSB" 239+13



"GSB" 239+13 TO "GSB" 249+22



"GSB" 249+22 TO "GSB" 254+26

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

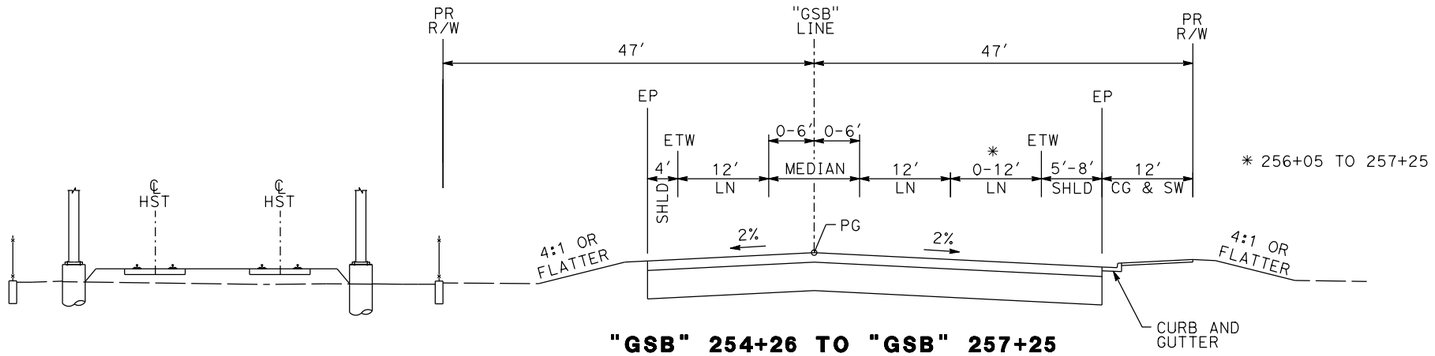
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

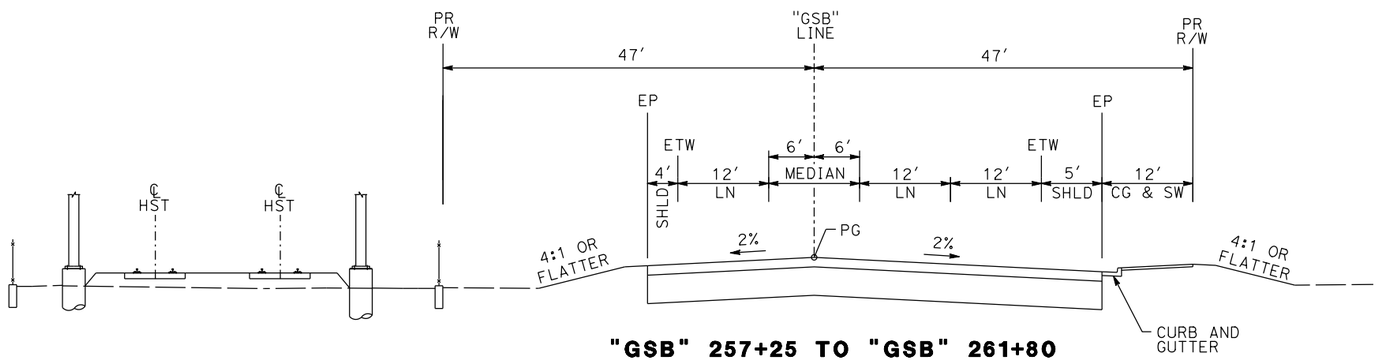
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-10**
SCALE
SHEET NO.

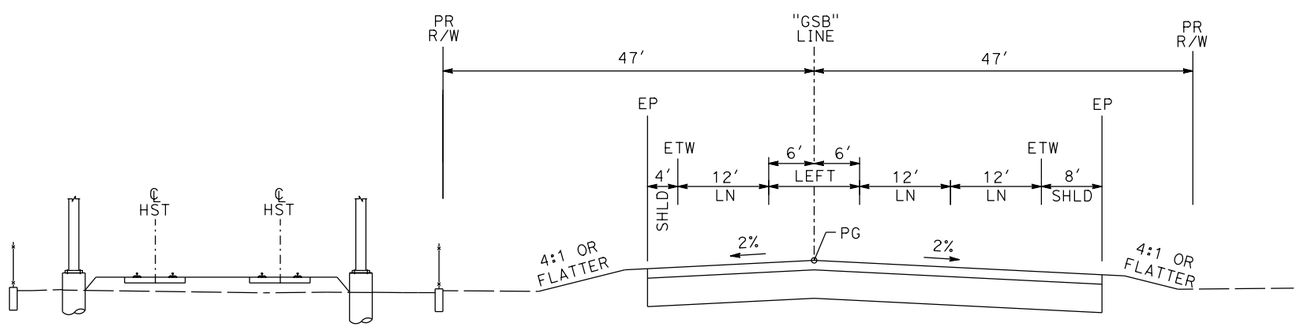
DATE PLOTTED => 28-APR-2011
USERNAME => lros



"GSB" 254+26 TO "GSB" 257+25



"GSB" 257+25 TO "GSB" 261+80



"GSB" 261+80 TO "GSB" 264+30

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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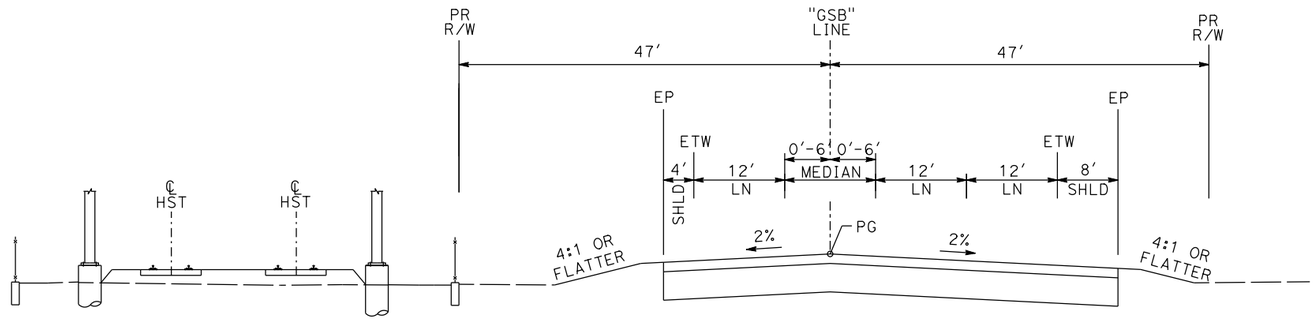
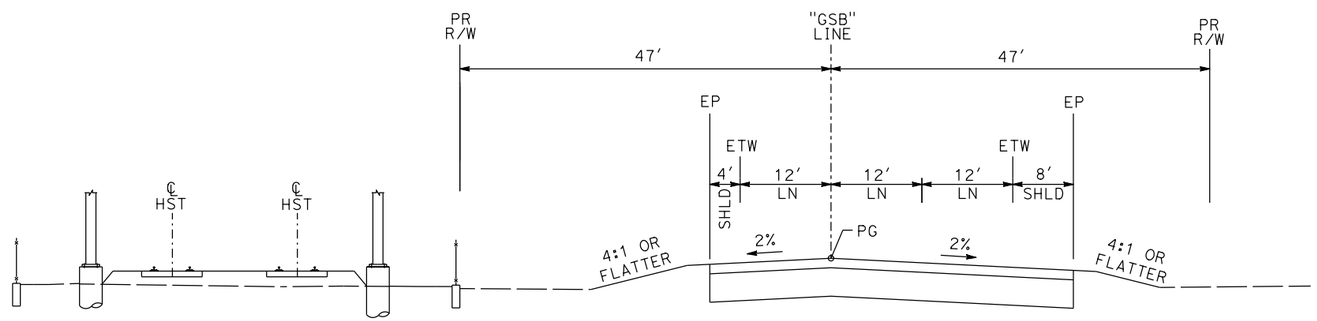
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-11**
SCALE
SHEET NO.

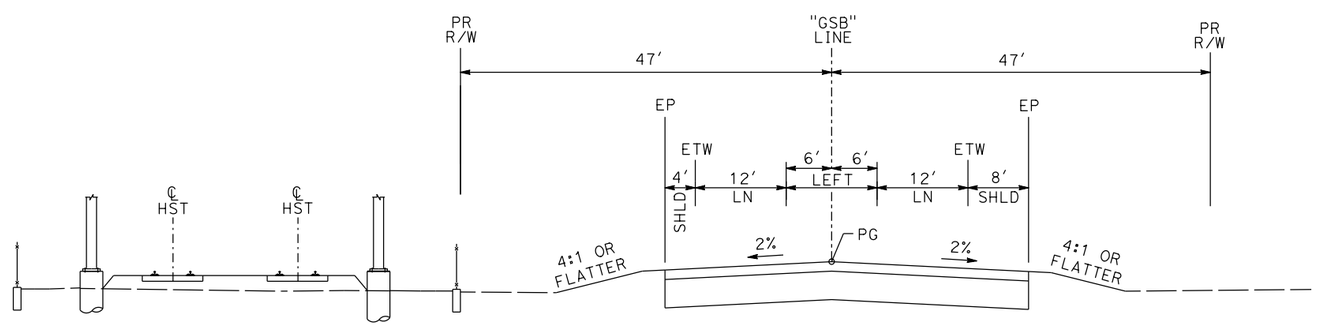
DATE PLOTTED => 28-APR-2011
USERNAME => lros



"GSB" 264+30 TO "GSB" 268+49
"GSB" 280+18 TO "GSB" 286+76



"GSB" 268+49 TO "GSB" 280+18



"GSB" 286+76 TO "GSB" 289+26

GOLDEN STATE BOULEVARD

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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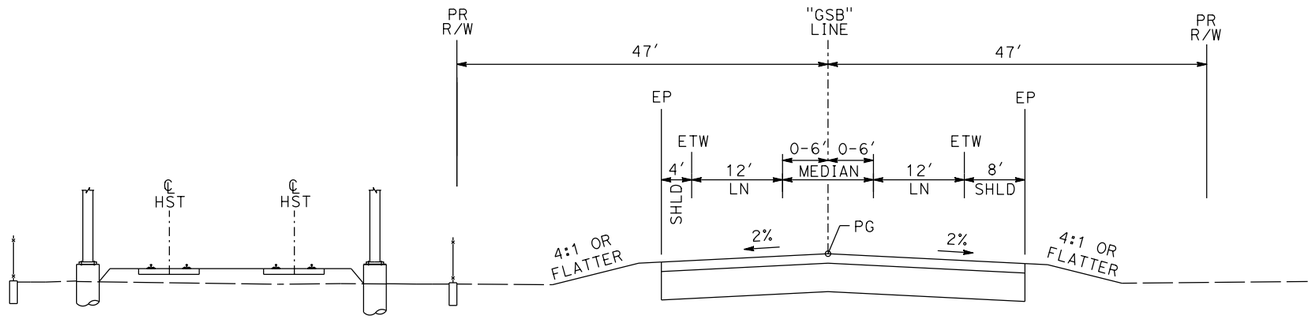
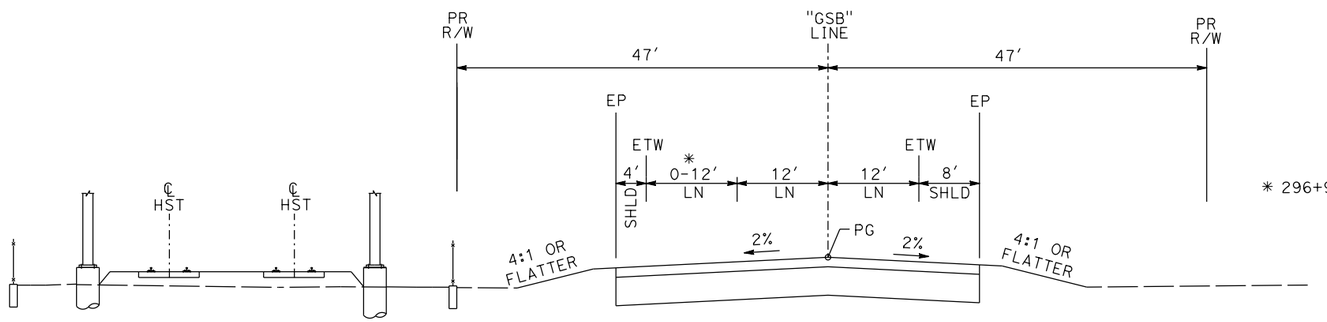
GOLDEN STATE BOULEVARD RE-ALIGNMENT
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-12**
SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => lros

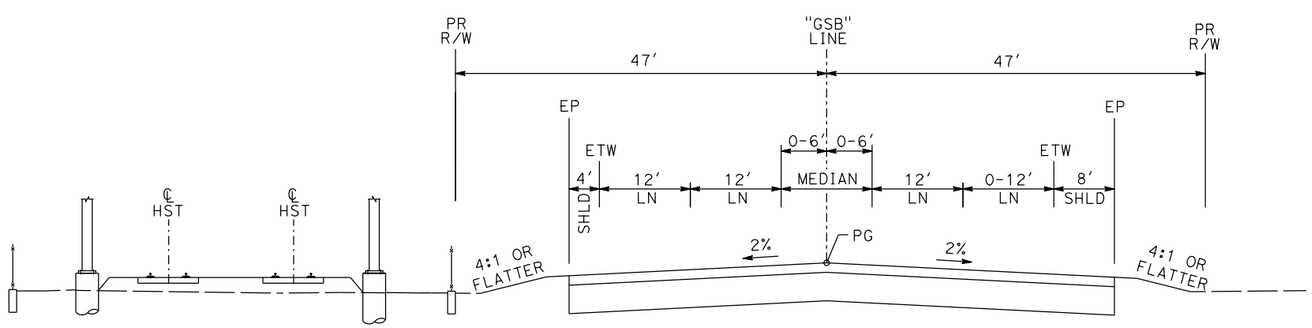


"GSB" 289+26 TO "GSB" 293+46



* 296+92 TO 302+92

"GSB" 293+46 TO "GSB" 302+92



"GSB" 302+92 TO "GSB" 305+92

GOLDEN STATE BOULEVARD

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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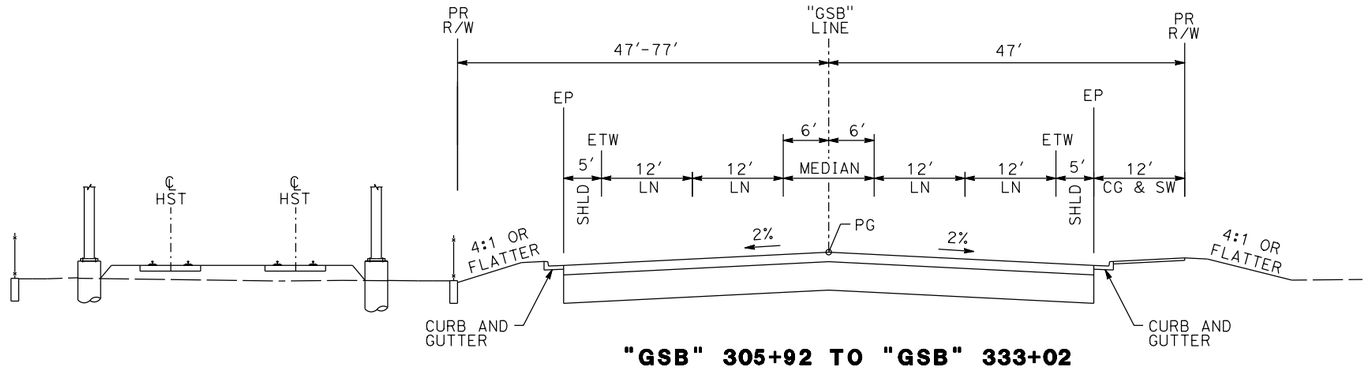
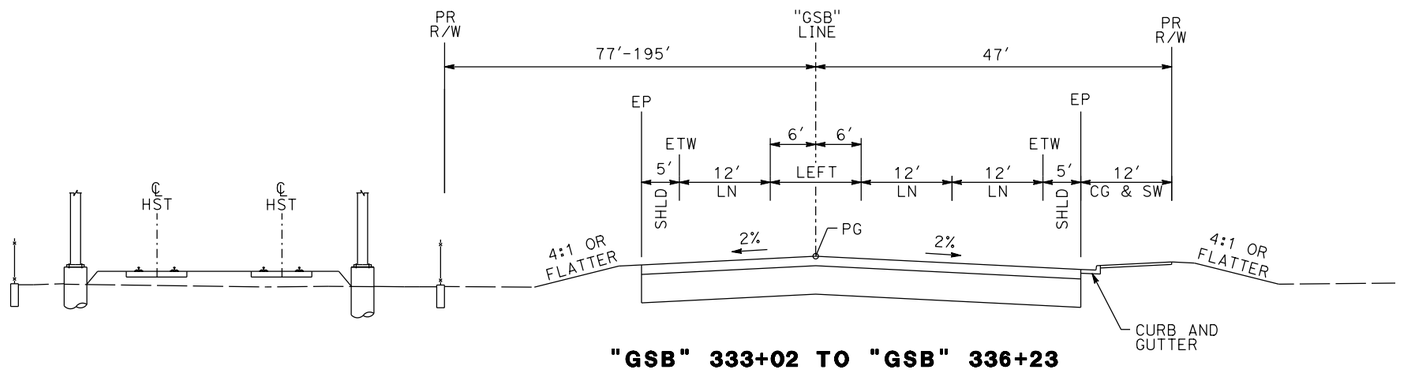
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. X-13
SCALE
SHEET NO.

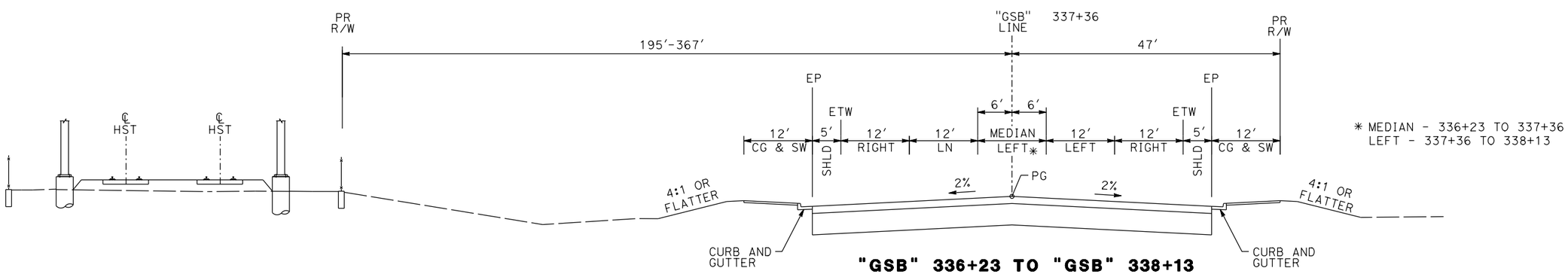
DATE PLOTTED => 28-APR-2011
USERNAME => lros



"GSB" 305+92 TO "GSB" 333+02



"GSB" 333+02 TO "GSB" 336+23



* MEDIAN - 336+23 TO 337+36
LEFT - 337+36 TO 338+13

"GSB" 336+23 TO "GSB" 338+13

GOLDEN STATE BOULEVARD

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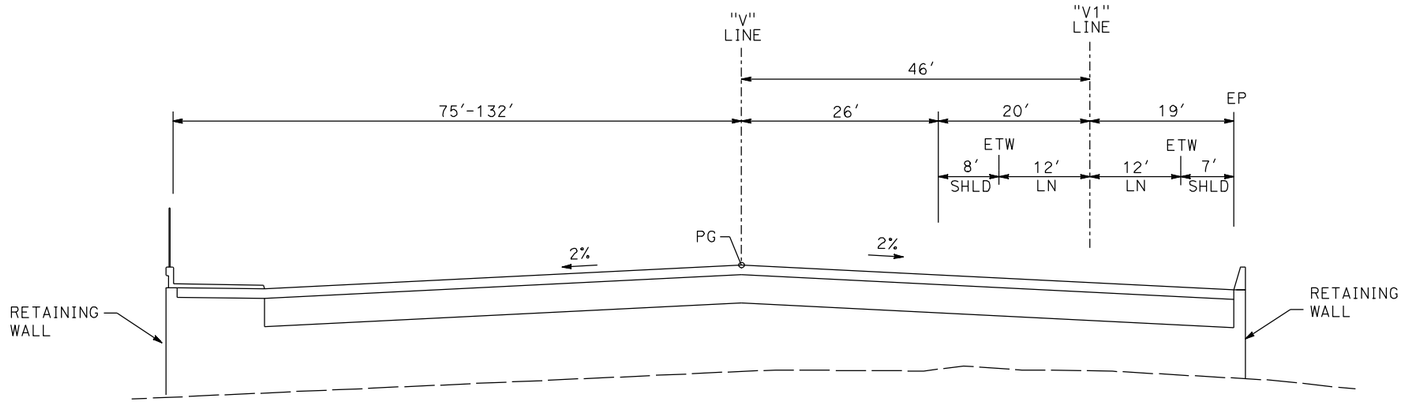
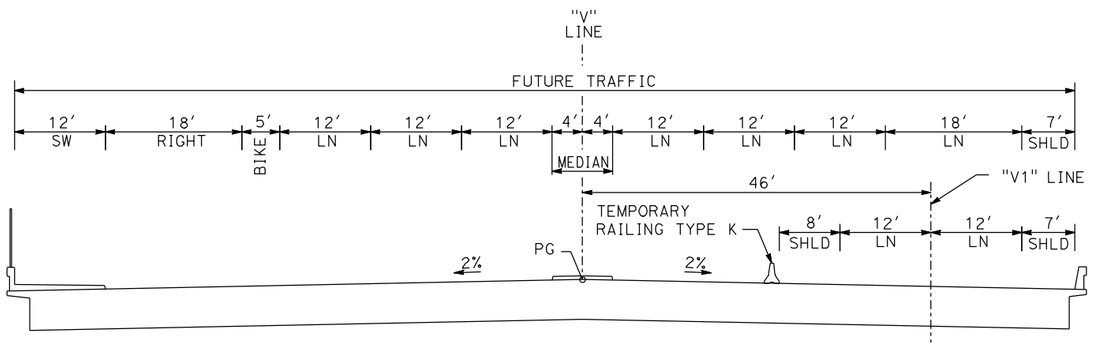
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-14**
SCALE
SHEET NO.

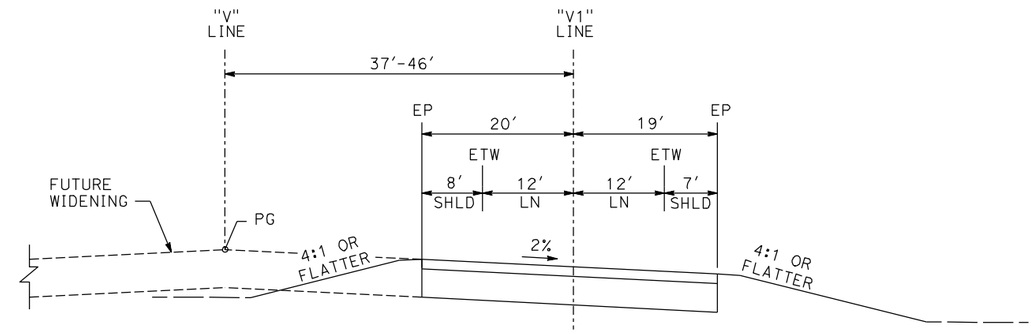
DATE PLOTTED => 28-APR-2011
USERNAME => lros



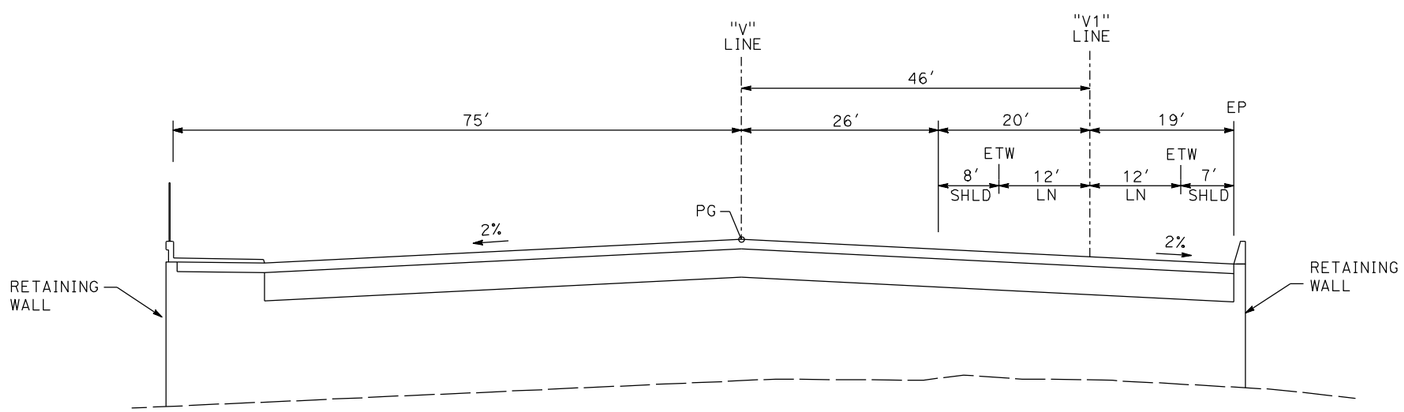
"V" 105+00 TO "V" 105+63



"V" 105+63 TO "V" 109+79



"V" 110+32 TO "V" 122+35



"V" 109+79 TO "V" 110+32

VETERANS BLVD

REV	DATE	BY	CHK	APP	DESCRIPTION

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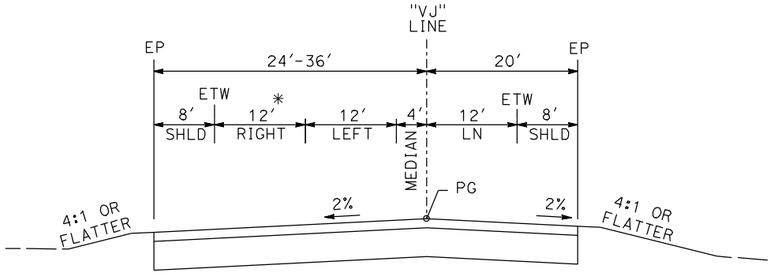
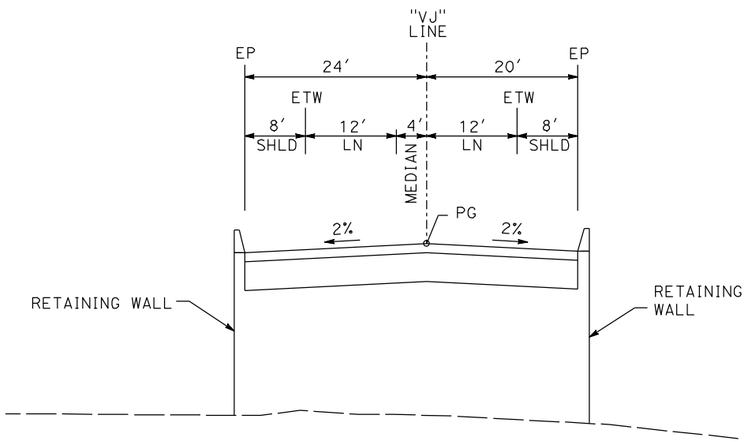
CONTRACT NO. HSR06-007
DRAWING NO. **X-15**
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros

* 0'-12' - FROM 12+61 TO 13+21

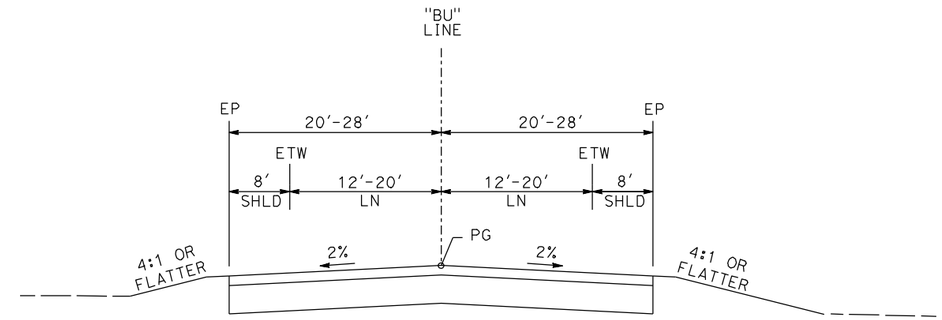


"VJ" 10+44 TO "VJ" 13+21

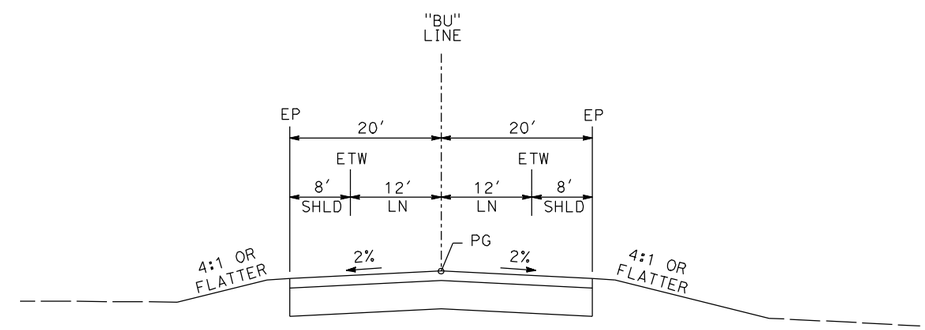


"VJ" 13+21 TO "VJ" 18+37

LOOP - VETERANS BLVD



"BU" 110+00 TO "BU" 113+67



"BU" 113+67 TO "BU" 132+26

BULLARD AVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
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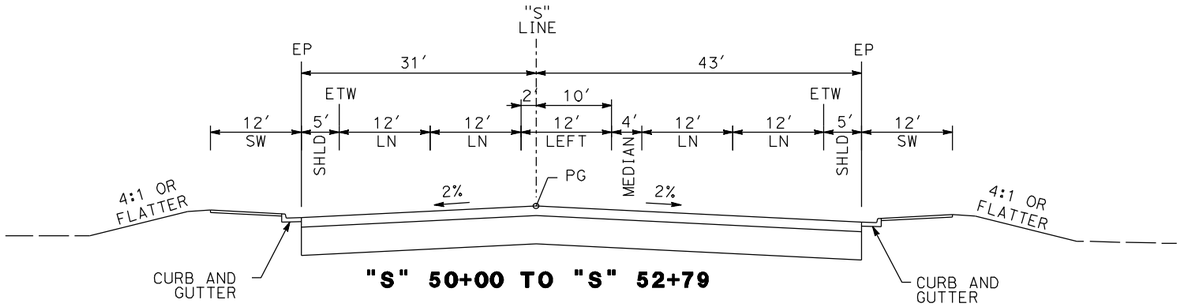
TYPICAL SECTION

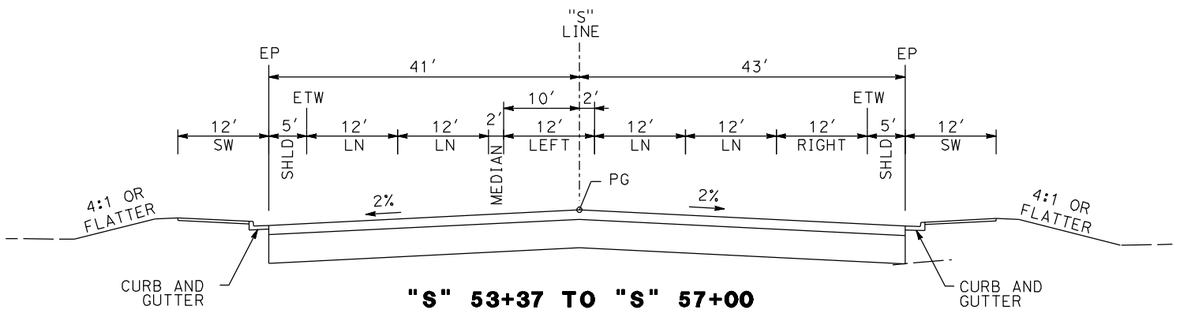
CONTRACT NO. HSR06-007
DRAWING NO. **X-16**
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011

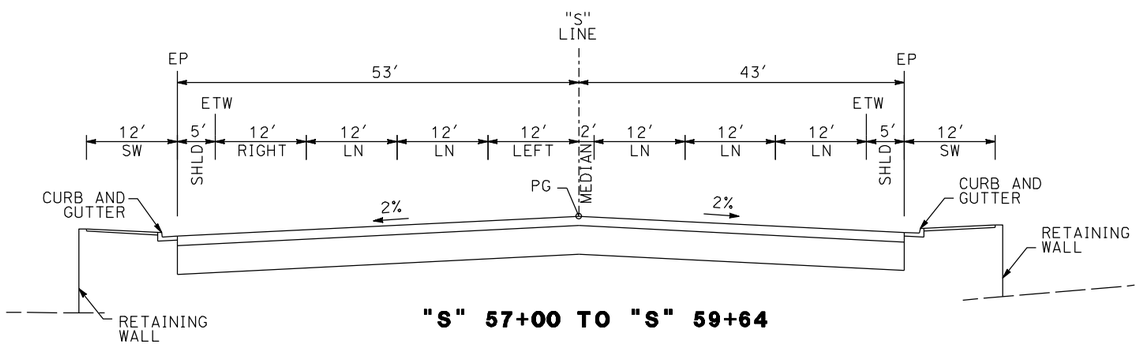
USERNAME => lros



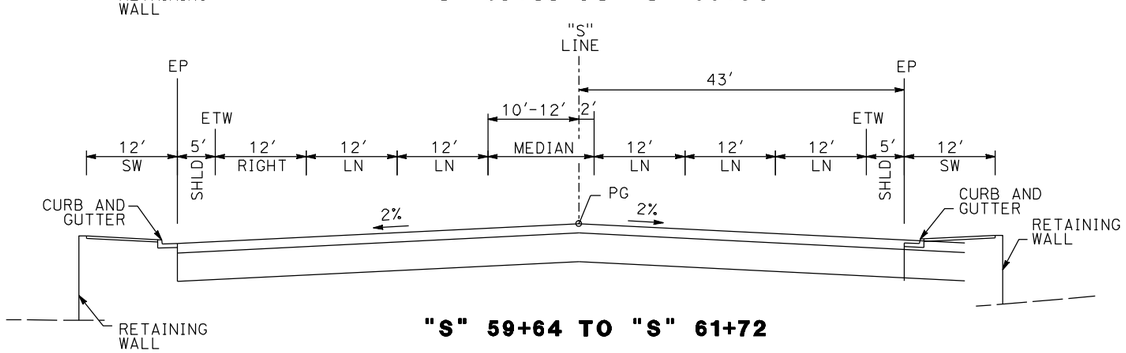
"S" 50+00 TO "S" 52+79



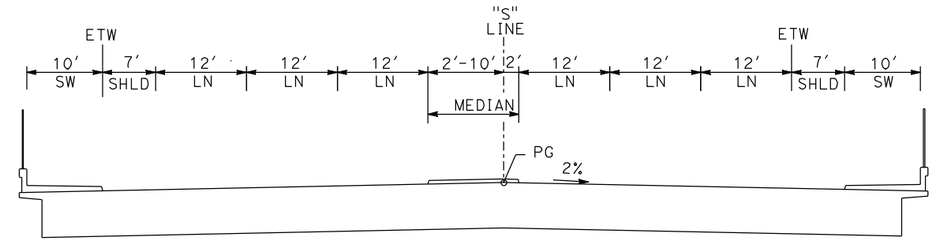
"S" 53+37 TO "S" 57+00



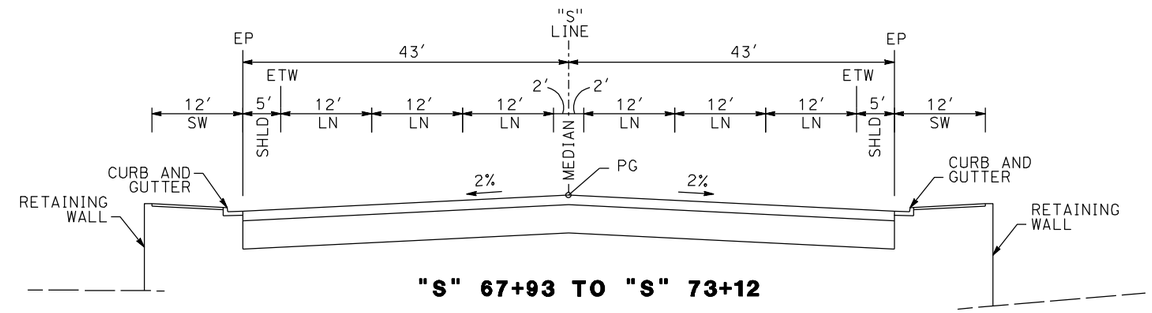
"S" 57+00 TO "S" 59+64



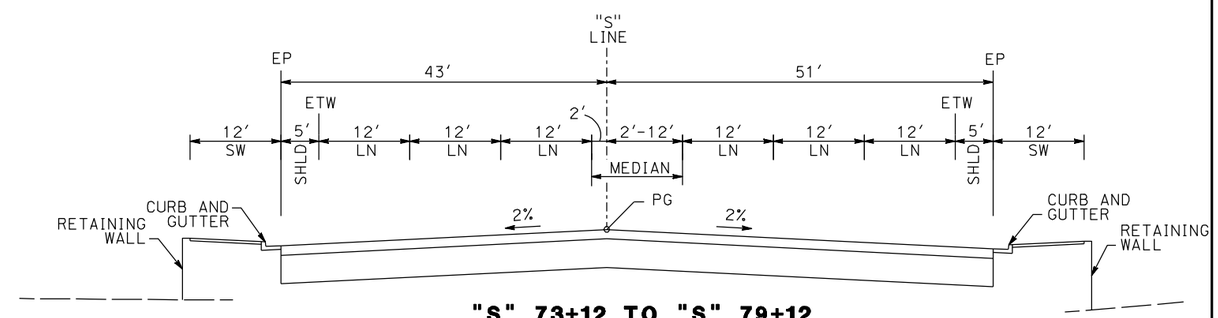
"S" 59+64 TO "S" 61+72



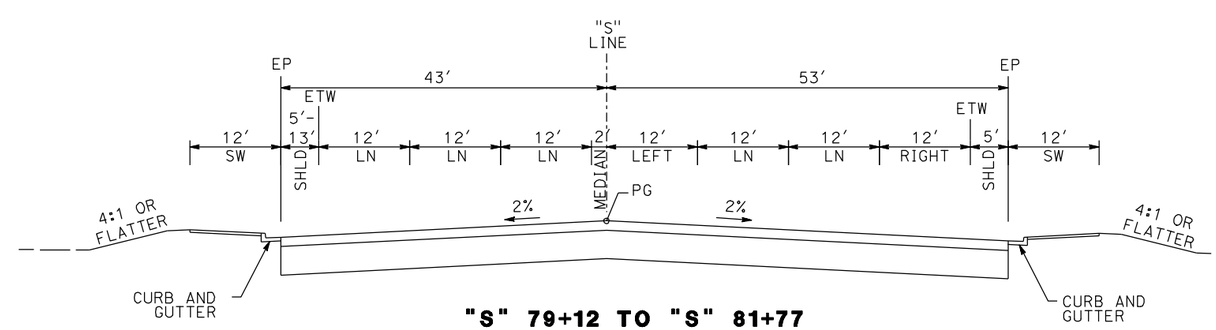
"S" 61+72 TO "S" 67+93



"S" 67+93 TO "S" 73+12



"S" 73+12 TO "S" 79+12



"S" 79+12 TO "S" 81+77

SHAW AVE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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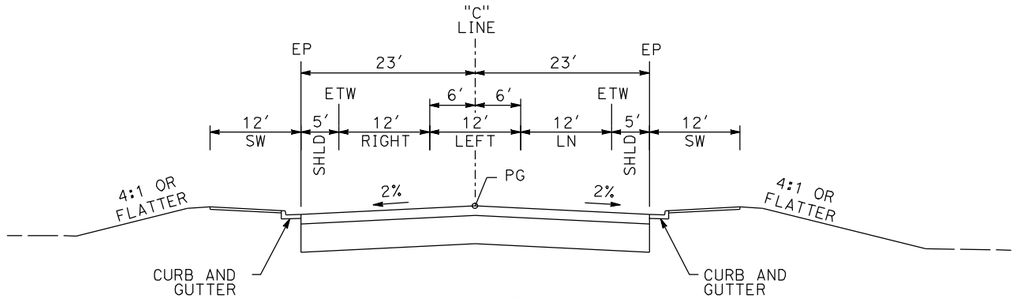
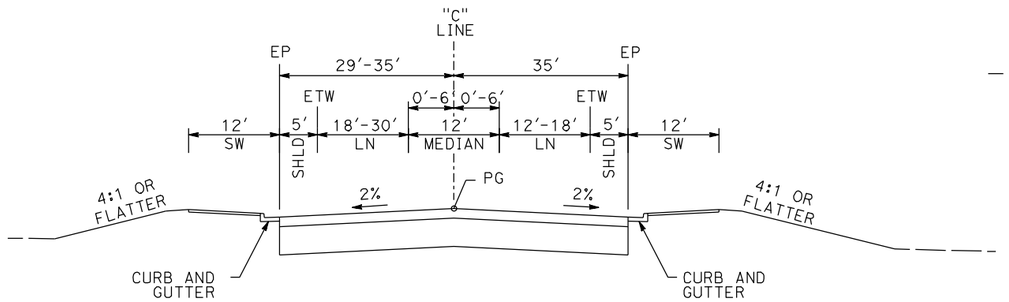
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-17**
SCALE
SHEET NO.

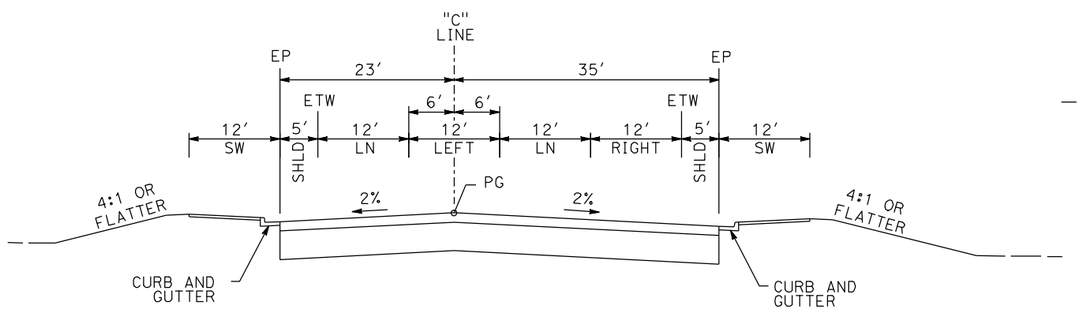
DATE PLOTTED => 27-APR-2011
USERNAME => lros



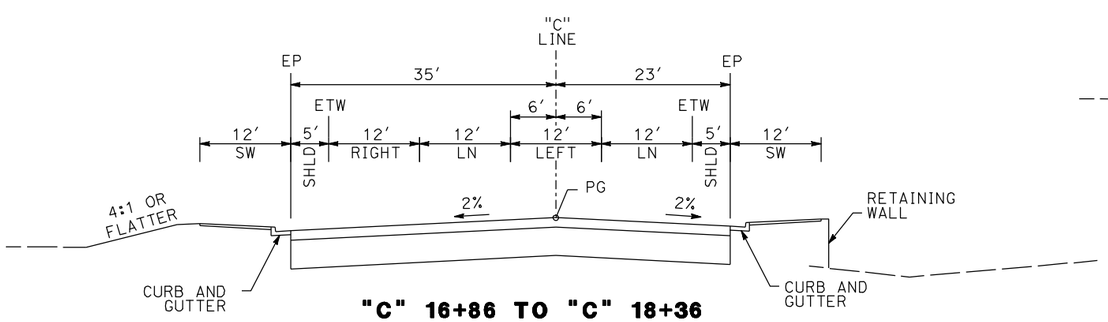
"C" 10+89 TO "C" 12+25



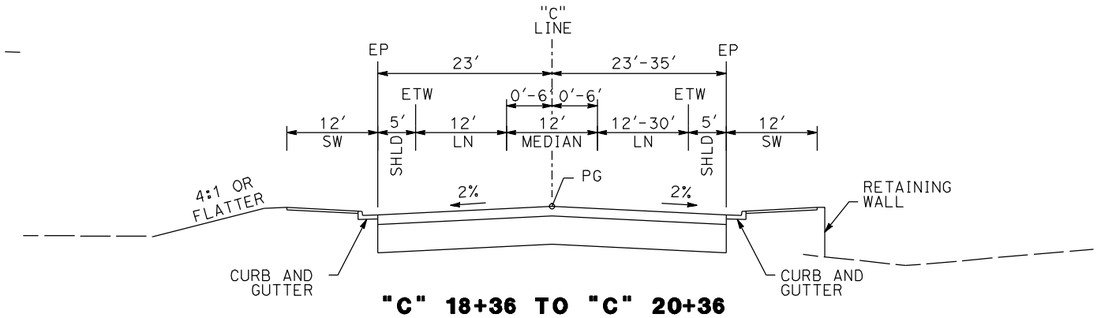
"C" 12+25 TO "C" 13+88



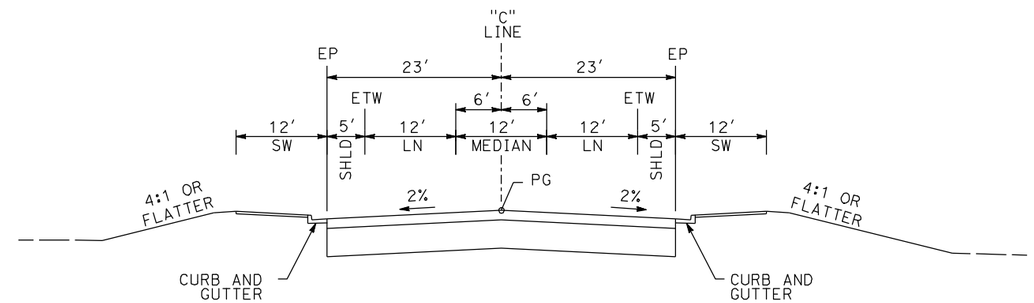
"C" 13+88 TO "C" 14+99



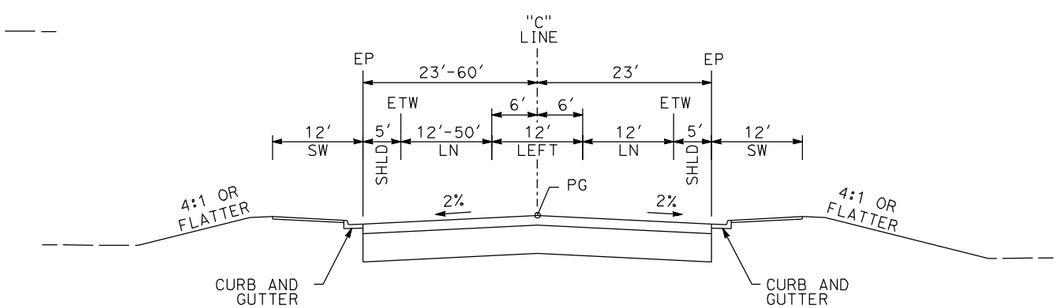
"C" 16+86 TO "C" 18+36



"C" 18+36 TO "C" 20+36



"C" 20+36 TO "C" 44+35



"C" 44+35 TO "C" 45+70

CORNELIA AVE & SANTA ANA AVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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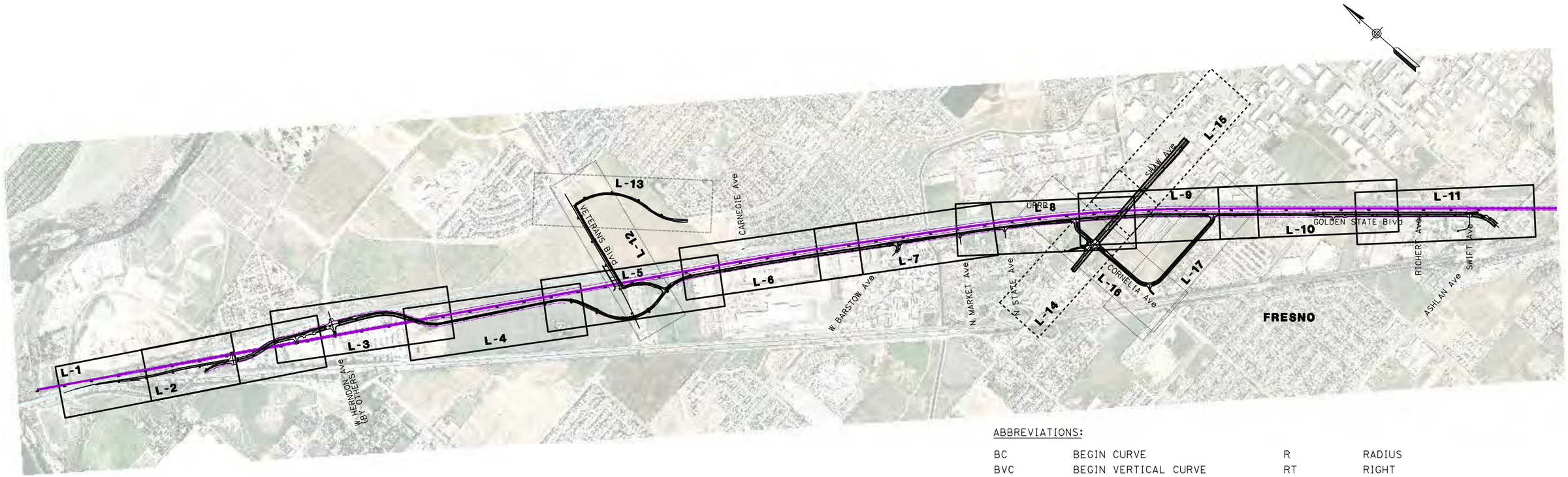
TYPICAL SECTION

CONTRACT NO. HSR06-007
DRAWING NO. **X-18**
SCALE
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros



ABBREVIATIONS:

BC	BEGIN CURVE	R	RADIUS
BVC	BEGIN VERTICAL CURVE	RT	RIGHT
CG	CURB AND GUTTER	R/W	RIGHT OF WAY
CL	CENTERLINE	SB	SOUTHBOUND
EC	END CURVE	SHLD	SHOULDER
ELEV	ELEVATION	SW	SIDEWALK
EP	EDGE OF PAVEMENT	T	TANGENT
ES	EDGE OF SHOULDER	UPRR	UNION PACIFIC RAILROAD
ETW	EDGE OF TRAVELLED WAY	VAR	VARIES
EVC	END VERTICAL CURVE		
GSB	GOLDEN STATE BLVD		
HST	HIGH SPEED TRAIN		
L	LENGTH		
LN	LANE		
LT	LEFT		
NB	NORTHBOUND		
OG	ORIGINAL GROUND		
PCC	POINT OF COMPOUND CURVE		
PI	POINT OF INTERSECTION		
POB	POINT OF BEGINNING		
POC	POINT ON CURVE		
POE	POINT OF END		
POT	POINT ON TANGENT		
PG	PROFILE GRADE		
PR	PROPOSED		
PRC	POINT OF REVERSE CURVE		
PVI	POINT OF VERTICAL INTERSECTION		
PRVC	POINT OF REVERSE VERTICAL CURVE		

LEGEND:

- EXIST / PROPOSED RIGHT OF WAY
- HIGH SPEED TRAIN TRACK CENTERLINES
- PETROLEUM GAS LINE
- RETAINING WALL

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

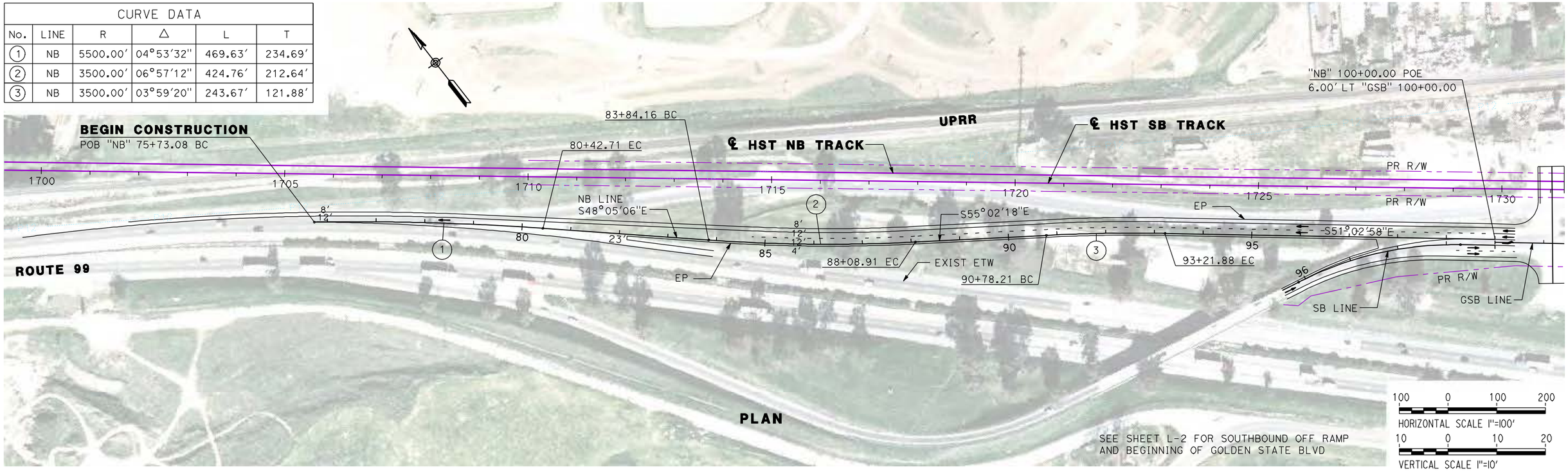
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
KEYMAP

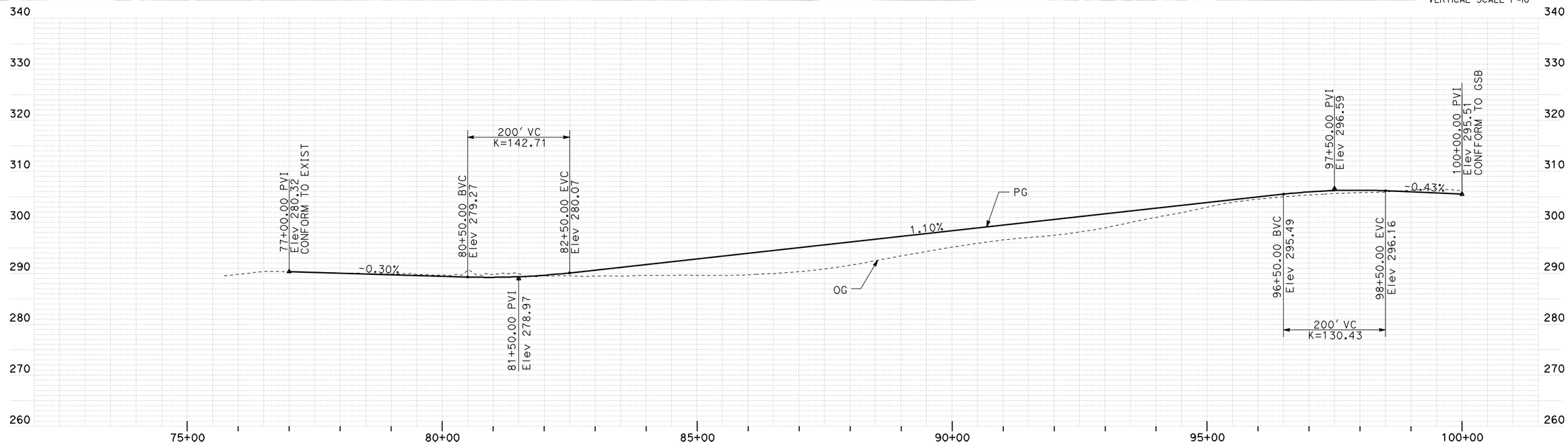
CONTRACT NO. HSR06-007
DRAWING NO. K-1
SCALE NTS
SHEET NO.

DATE PLOTTED => 26-APR-2011

USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
1	NB	5500.00′	04°53′32"	469.63′	234.69′
2	NB	3500.00′	06°57′12"	424.76′	212.64′
3	NB	3500.00′	03°59′20"	243.67′	121.88′





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

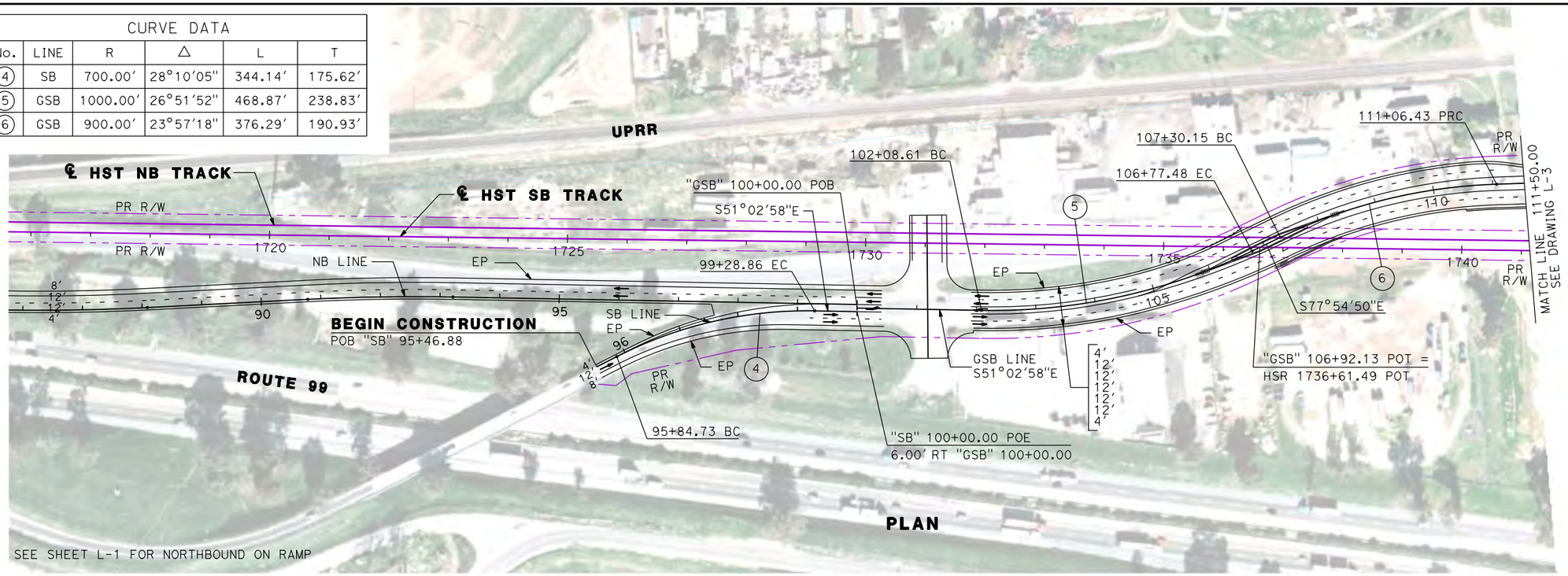
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"NB" 75+73 TO "NB" 100+00

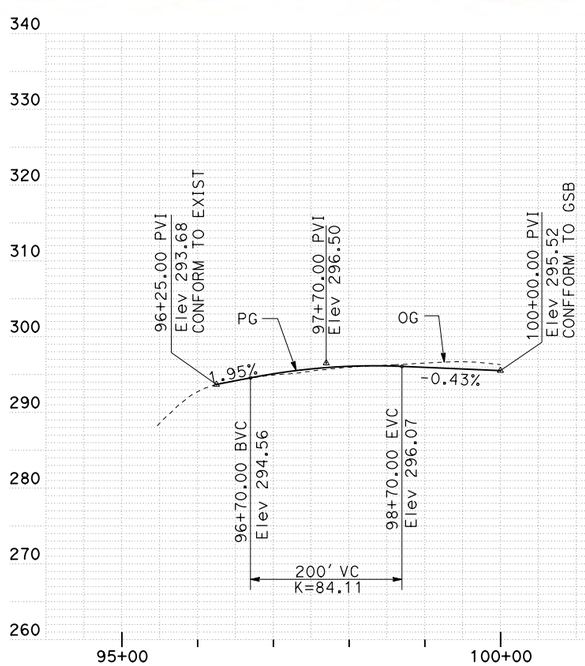
CONTRACT NO. HSR06-007
DRAWING NO. L-1
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

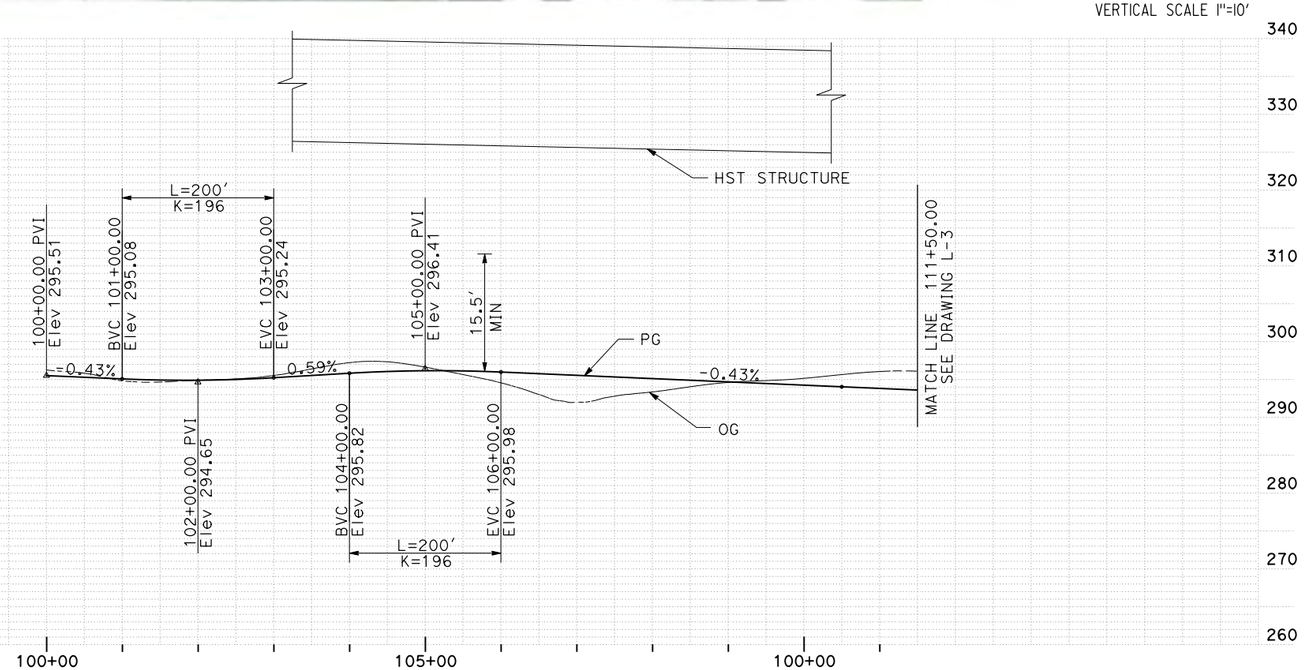
CURVE DATA					
No.	LINE	R	Δ	L	T
4	SB	700.00′	28°10′05"	344.14′	175.62′
5	GSB	1000.00′	26°51′52"	468.87′	238.83′
6	GSB	900.00′	23°57′18"	376.29′	190.93′



100 0 100 200
HORIZONTAL SCALE 1"=100′
10 0 10 20
VERTICAL SCALE 1"=10′



SB LINE PROFILE



GSB LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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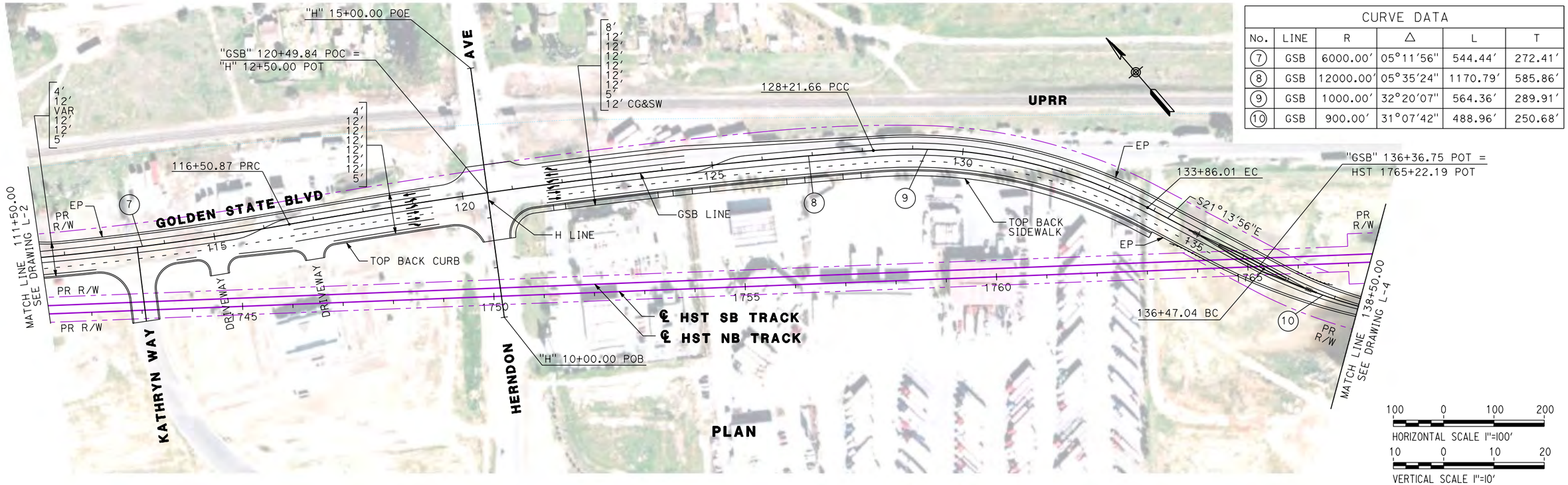
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

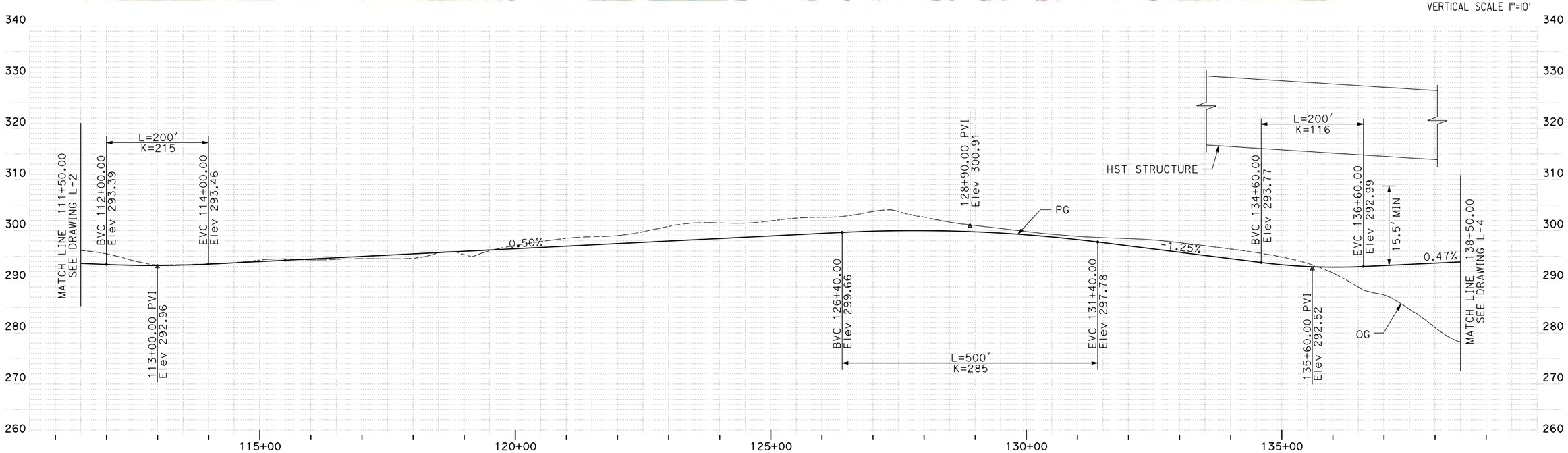
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 100+00 TO "GSB" 111+50

CONTRACT NO. HSR06-007
DRAWING NO. L-2
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
7	GSB	6000.00′	05°11′56"	544.44′	272.41′
8	GSB	12000.00′	05°35′24"	1170.79′	585.86′
9	GSB	1000.00′	32°20′07"	564.36′	289.91′
10	GSB	900.00′	31°07′42"	488.96′	250.68′





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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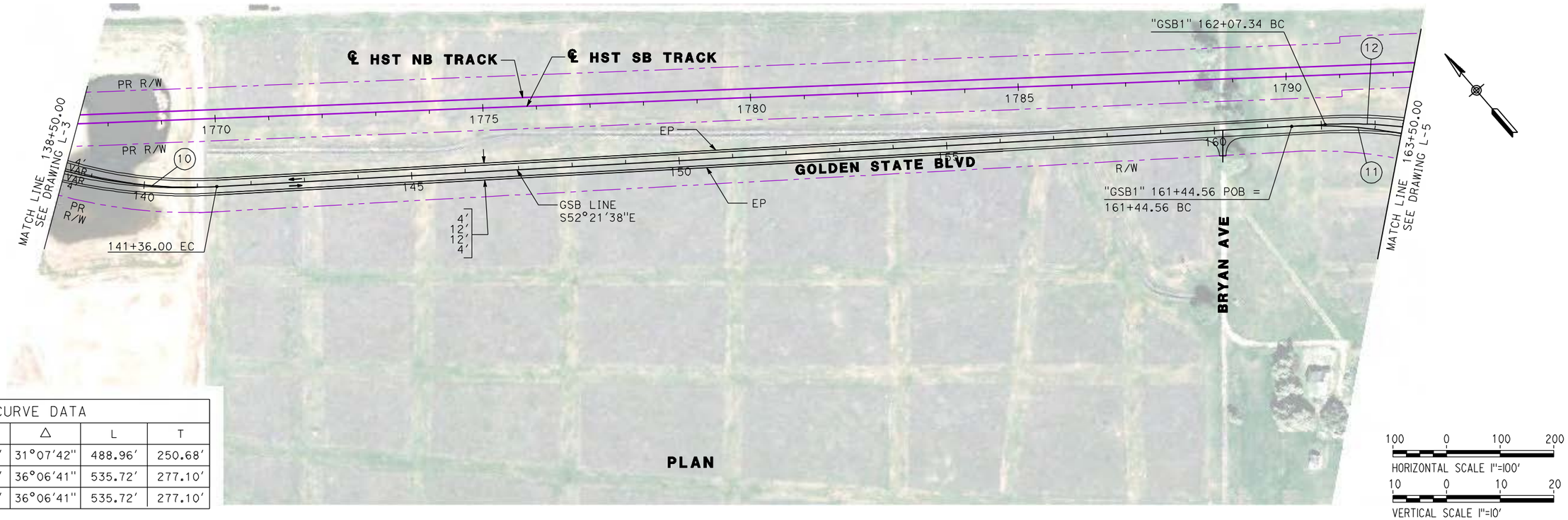
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

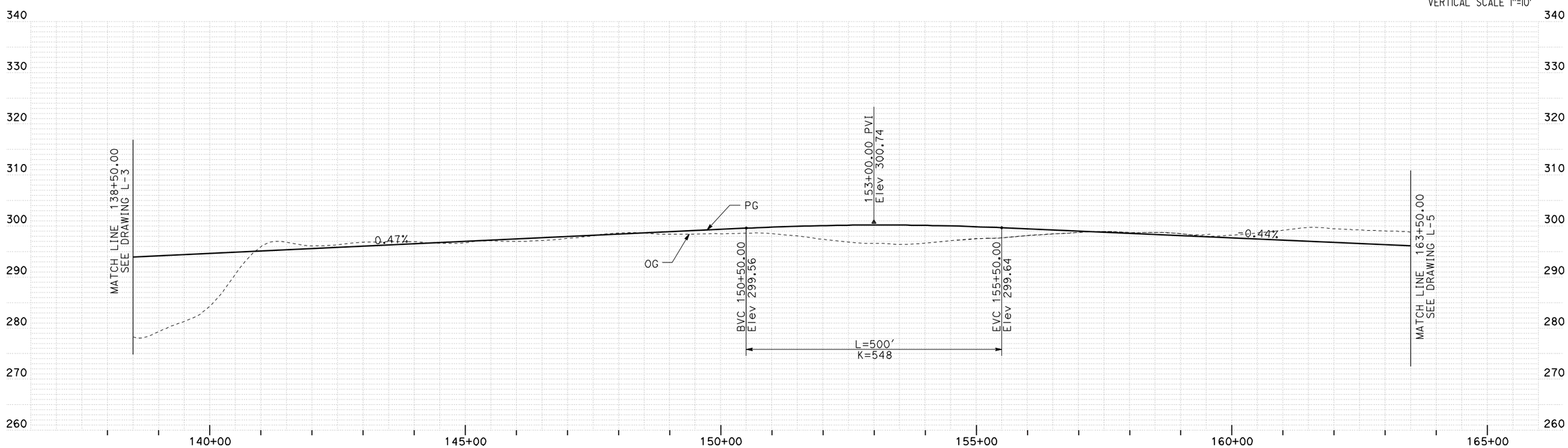
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 111+50 TO "GSB" 138+50

CONTRACT NO. HSR06-007
DRAWING NO. **L-3**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros



CURVE DATA					
No.	LINE	R	Δ	L	T
10	GSB	900.00'	31°07'42"	488.96'	250.68'
11	GSB	850.00'	36°06'41"	535.72'	277.10'
12	GSB1	850.00'	36°06'41"	535.72'	277.10'



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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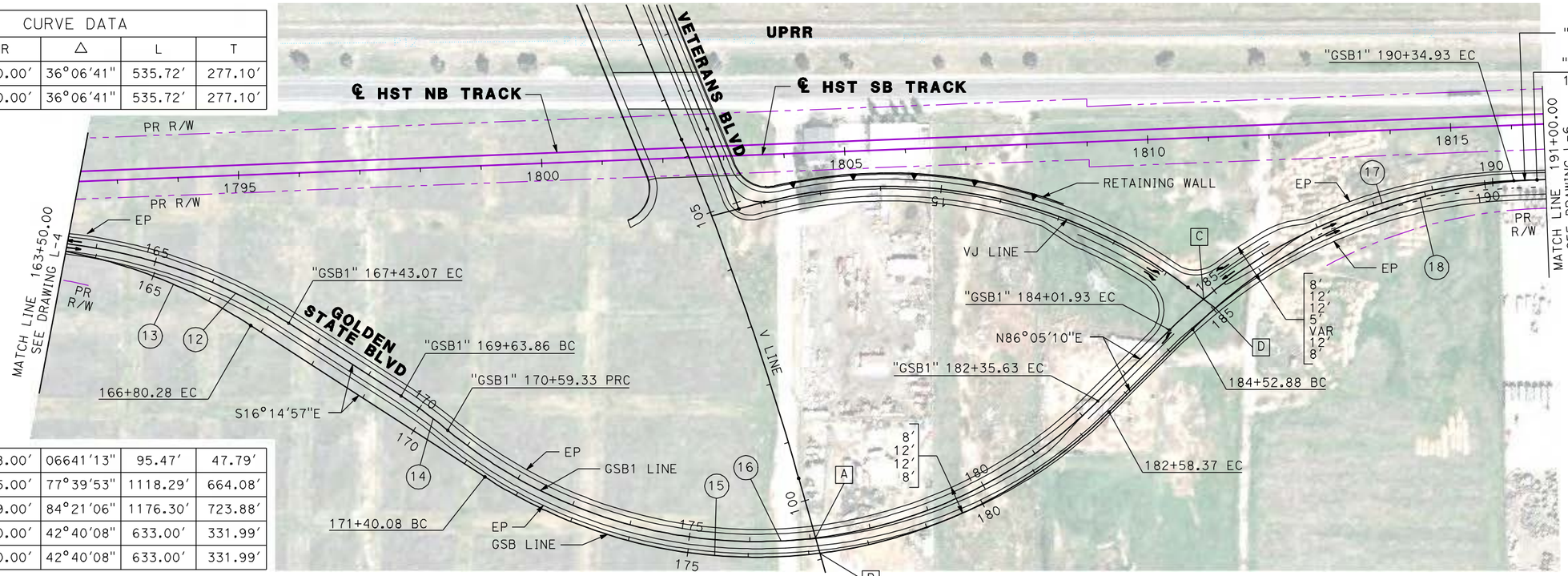
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 138+50 TO "GSB" 163+50

CONTRACT NO. HSR06-007
DRAWING NO. L-4
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
12	GSB1	850.00′	36°06′41"	535.72′	277.10′
13	GSB	850.00′	36°06′41"	535.72′	277.10′
14	GSB1	818.00′	06641′13"	95.47′	47.79′
15	GSB	825.00′	77°39′53"	1118.29′	664.08′
16	GSB1	799.00′	84°21′06"	1176.30′	723.88′
17	GSB1	850.00′	42°40′08"	633.00′	331.99′
18	GSB	850.00′	42°40′08"	633.00′	331.99′



A "GSB1" 177+08.63 POC = "V" 99+36.15 POT

B "GSB" 177+18.28 POC = "V" 99+09.84 POT

C "GSB1" 184+77.58 POC = "VJ" 10+24.39 POT

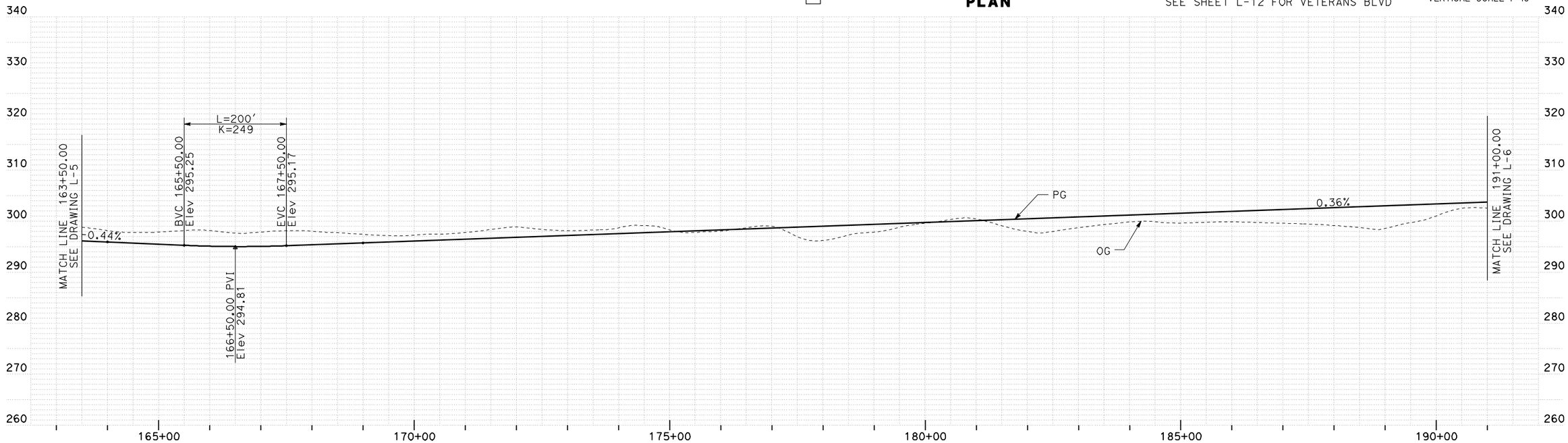
D "GSB" 185+03.65 POC = "VJ" 10+00.00 POT

100 0 100 200
HORIZONTAL SCALE 1"=100′

10 0 10 20
VERTICAL SCALE 1"=10′

PLAN

SEE SHEET L-12 FOR VETERANS BLVD



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

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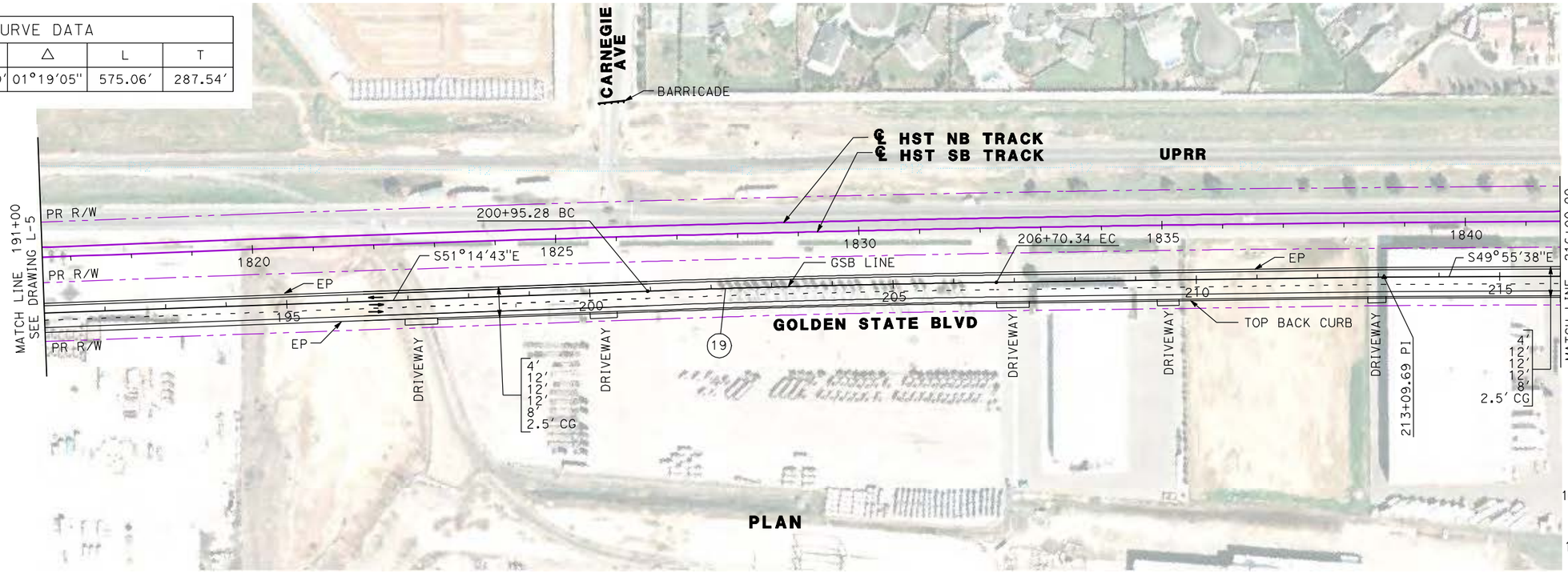
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 163+50 TO "GSB" 191+00

CONTRACT NO. HSR06-007
DRAWING NO. **L-5**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

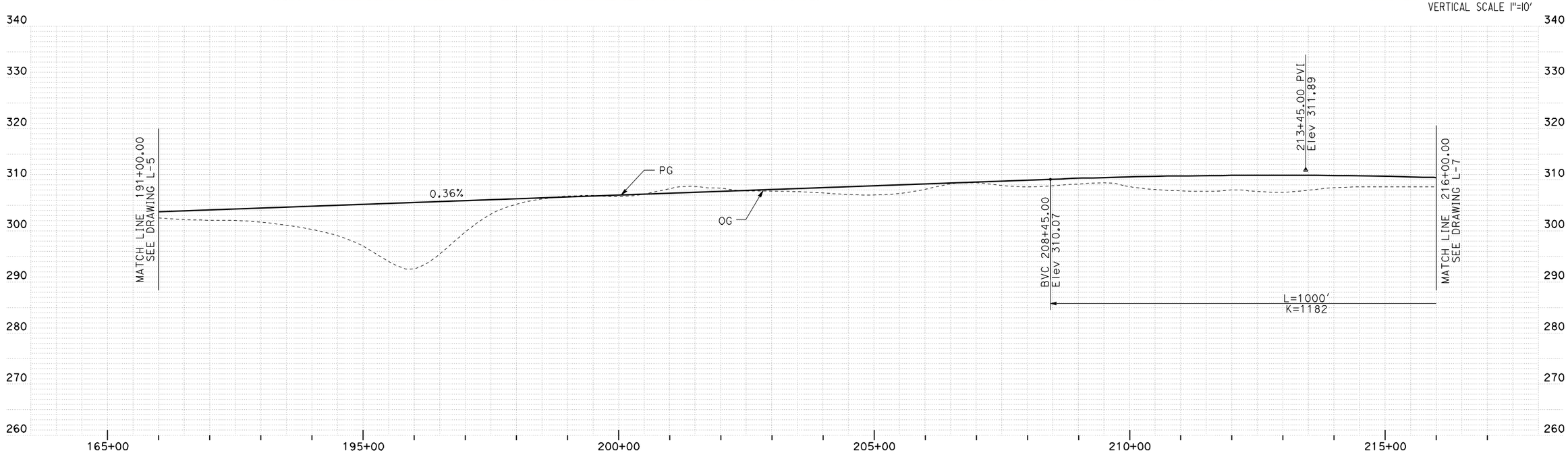
CURVE DATA					
No.	LINE	R	Δ	L	T
19	GSB	25000.00′	01°19′05″	575.06′	287.54′



PLAN

HORIZONTAL SCALE 1"=100′

VERTICAL SCALE 1"=10′



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
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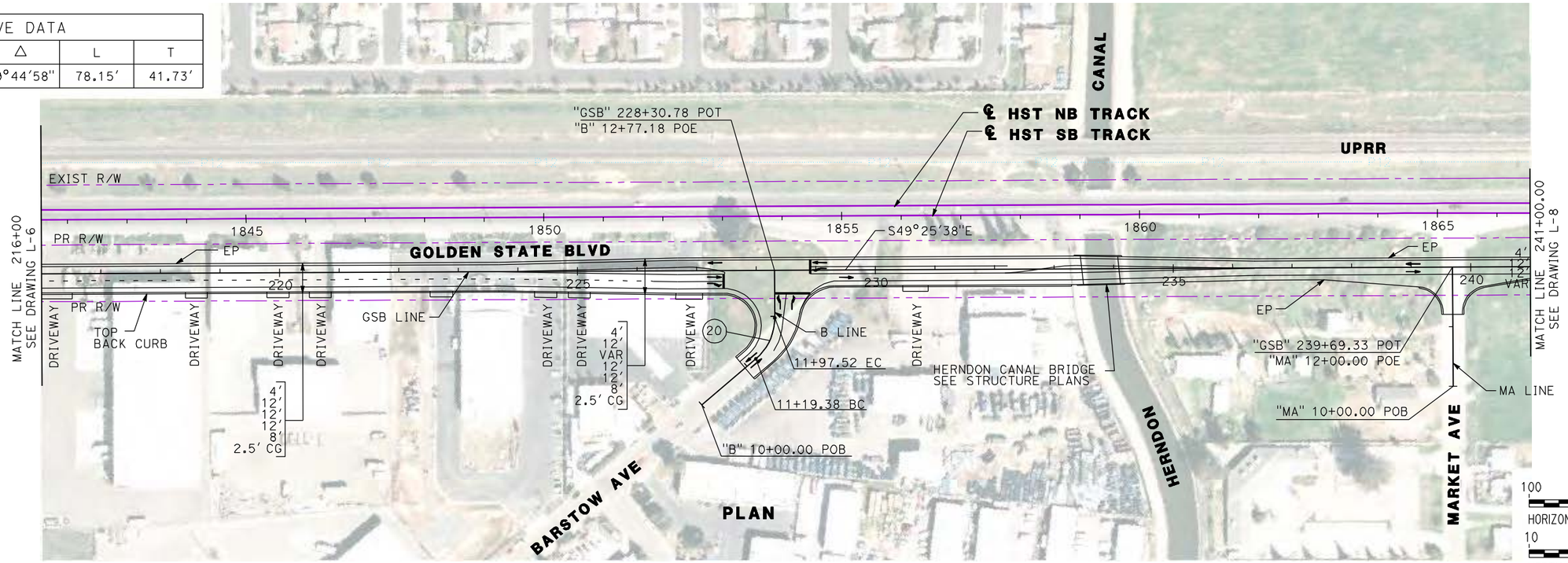
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

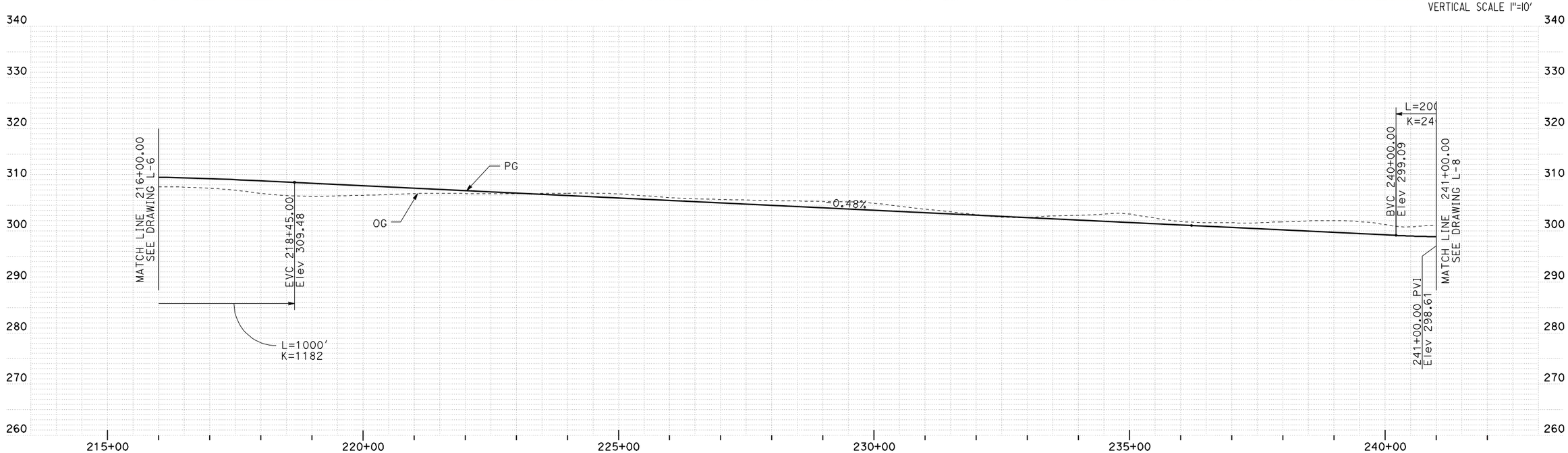
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 191+00 TO "GSB" 216+00

CONTRACT NO. HSR06-007
DRAWING NO. L-6
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
20	B	90.00′	49°44′58″	78.15′	41.73′





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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Sacramento, CA 95811
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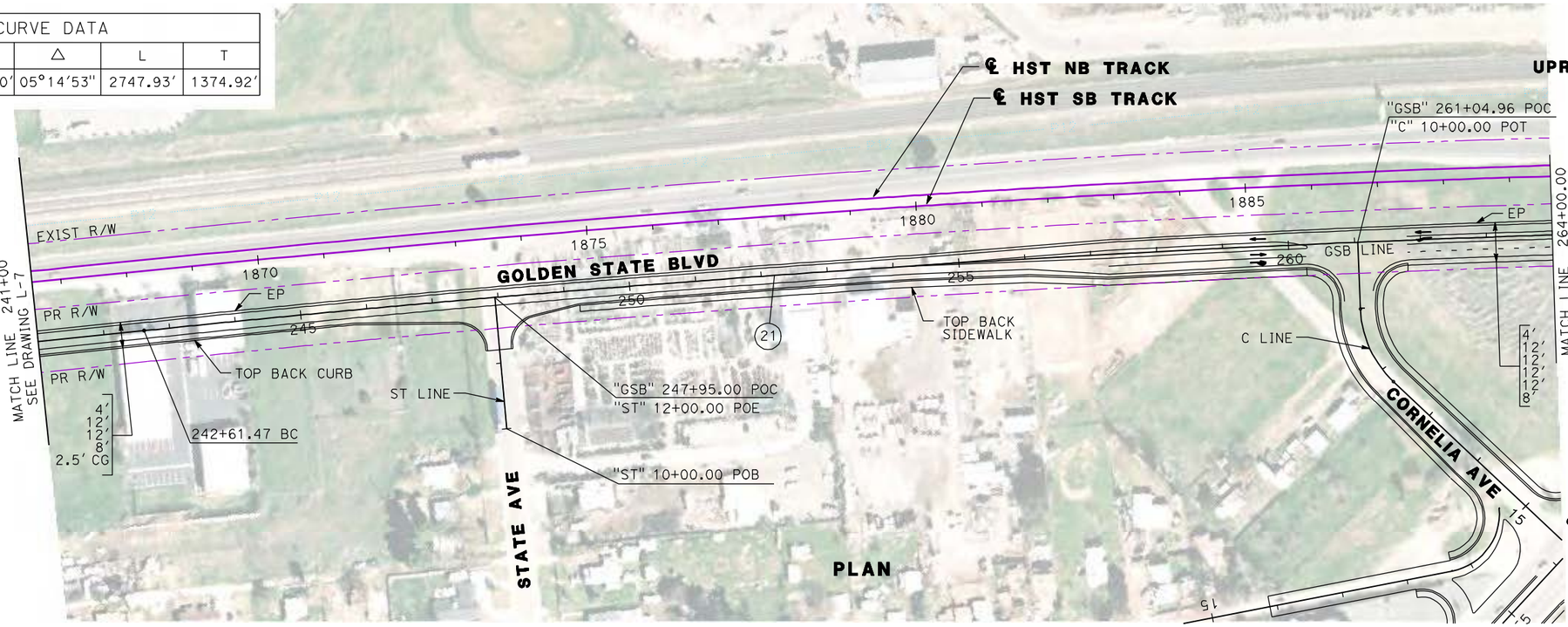
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 216+00 TO "GSB" 241+00

CONTRACT NO. HSR06-007
DRAWING NO. **L-7**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

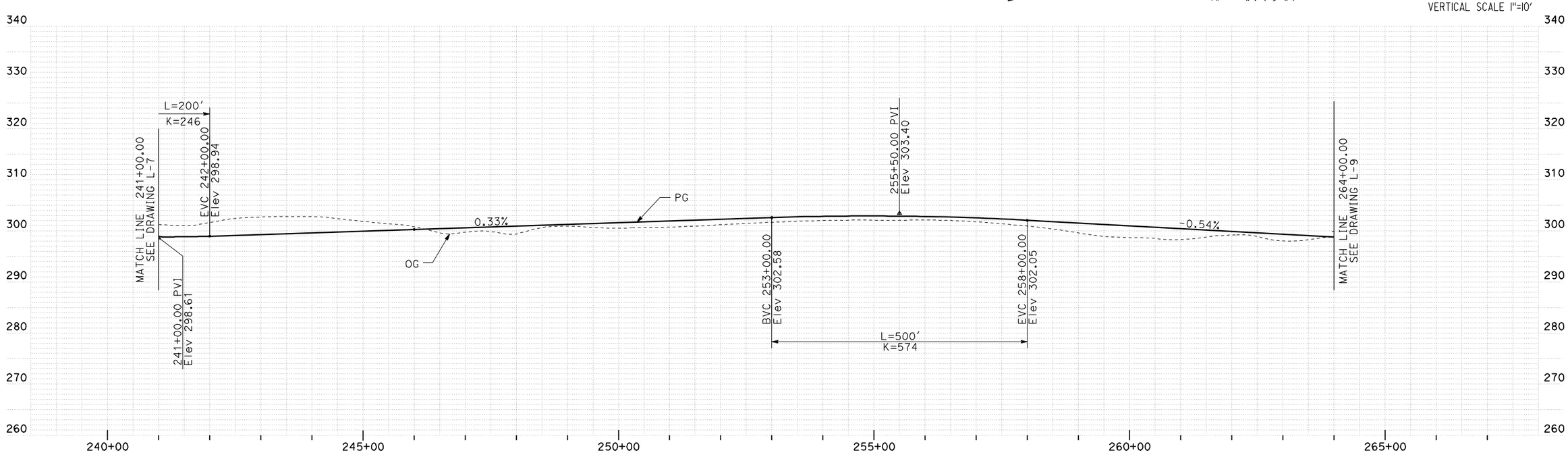
CURVE DATA					
No.	LINE	R	Δ	L	T
21	GSB	30000.00'	05°14'53"	2747.93'	1374.92'



SEE SHEETS L-14 AND L-15 FOR SHAW AVE

SEE SHEETS L-16 AND L-17 FOR CORNELIA AND SANTA ANA AVE

100 0 100 200
HORIZONTAL SCALE 1"=100'
10 0 10 20
VERTICAL SCALE 1"=10'



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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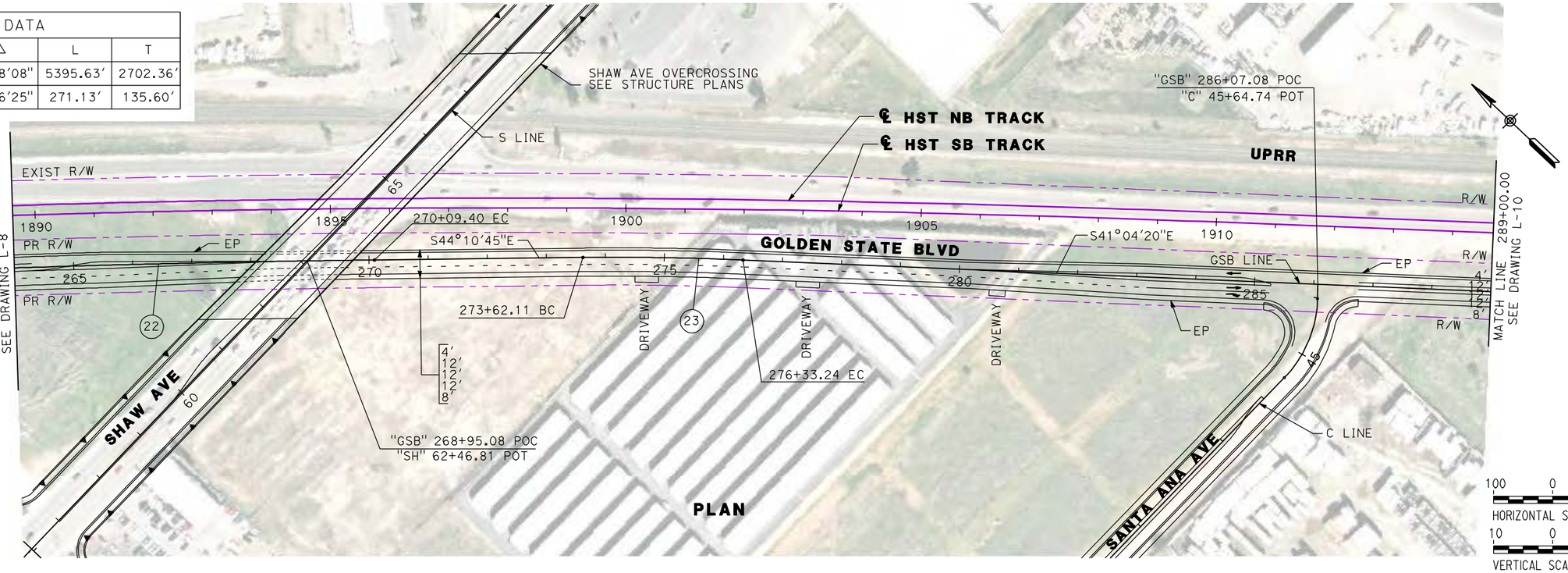
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 241+00 TO "GSB" 264+00

CONTRACT NO. HSR06-007
DRAWING NO. L-8
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
22	GSB	38000.00′	08°08′08″	5395.63′	2702.36′
23	GSB	5000.00′	03°06′25″	271.13′	135.60′

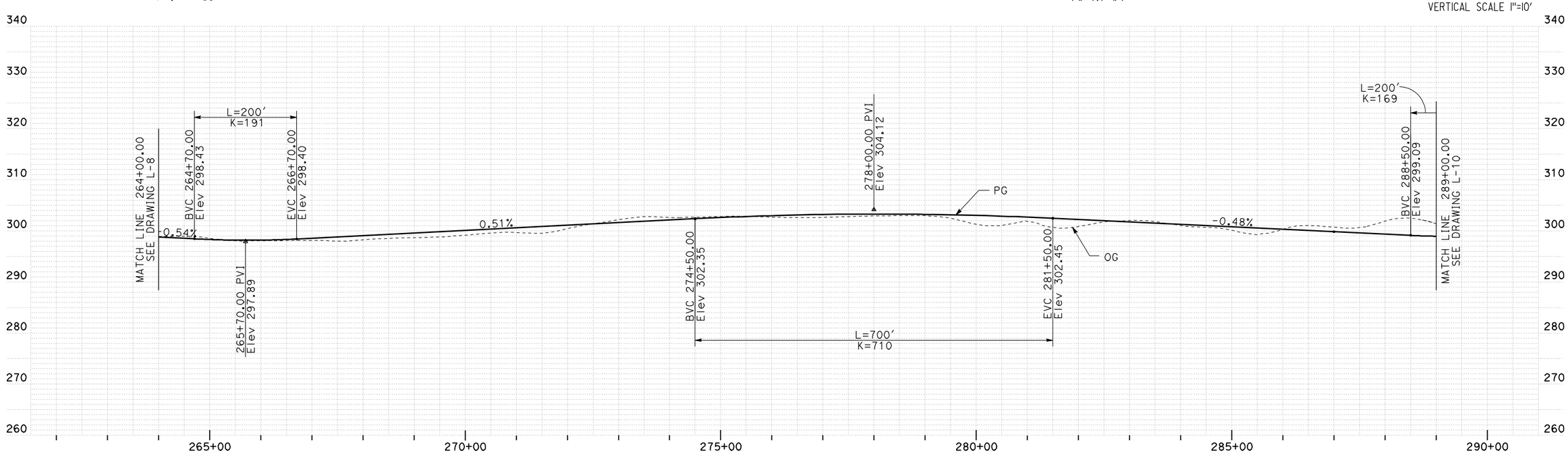


SEE SHEETS L-14 AND L-15 FOR SHAW AVE

SEE SHEETS L-16 AND L-17 FOR CORNELIA AND SANTA ANA AVE

HORIZONTAL SCALE 1"=100′

VERTICAL SCALE 1"=10′



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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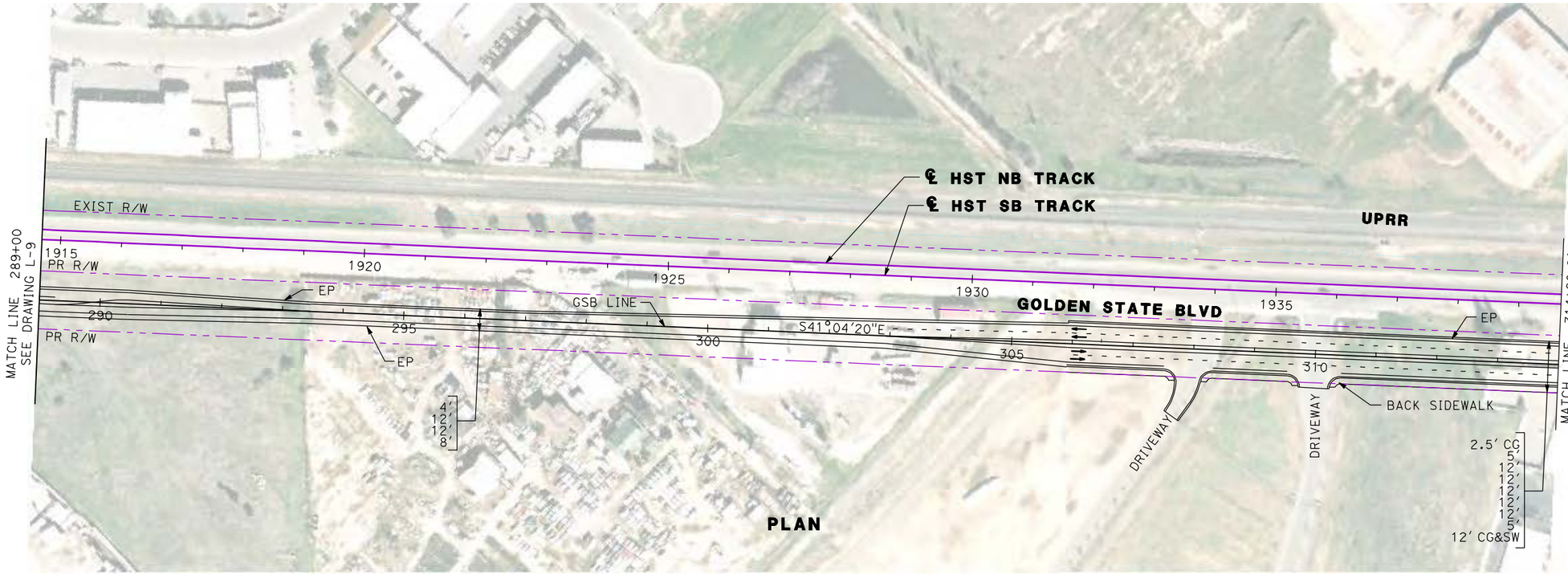
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 264+00 TO "GSB" 289+00

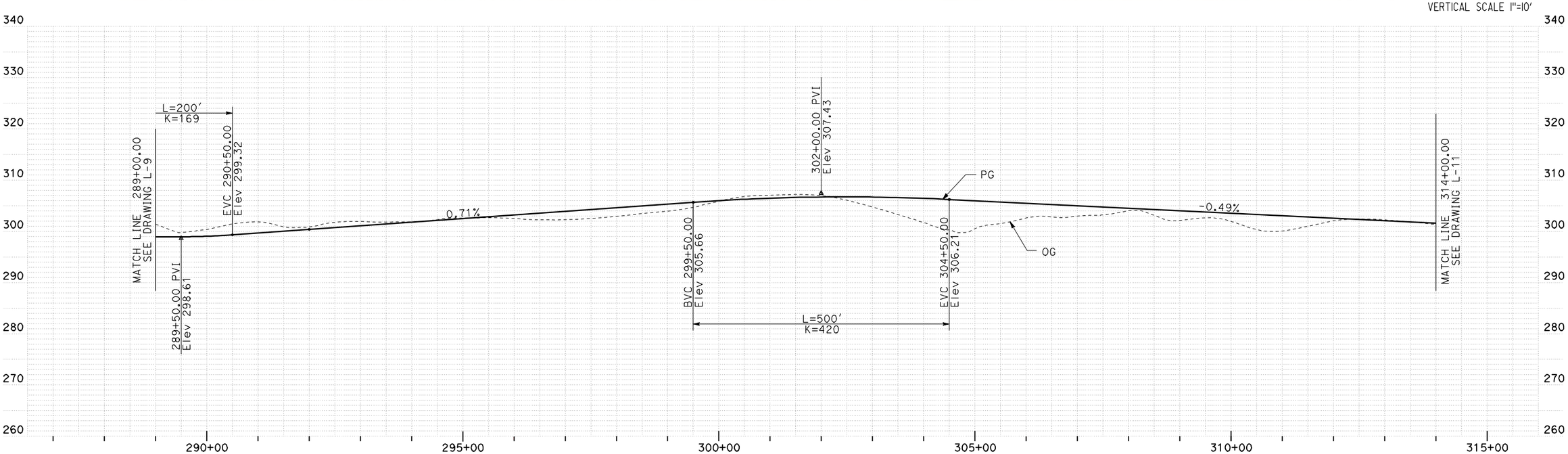
CONTRACT NO. HSR06-007
DRAWING NO. L-9
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

USERNAME => lros



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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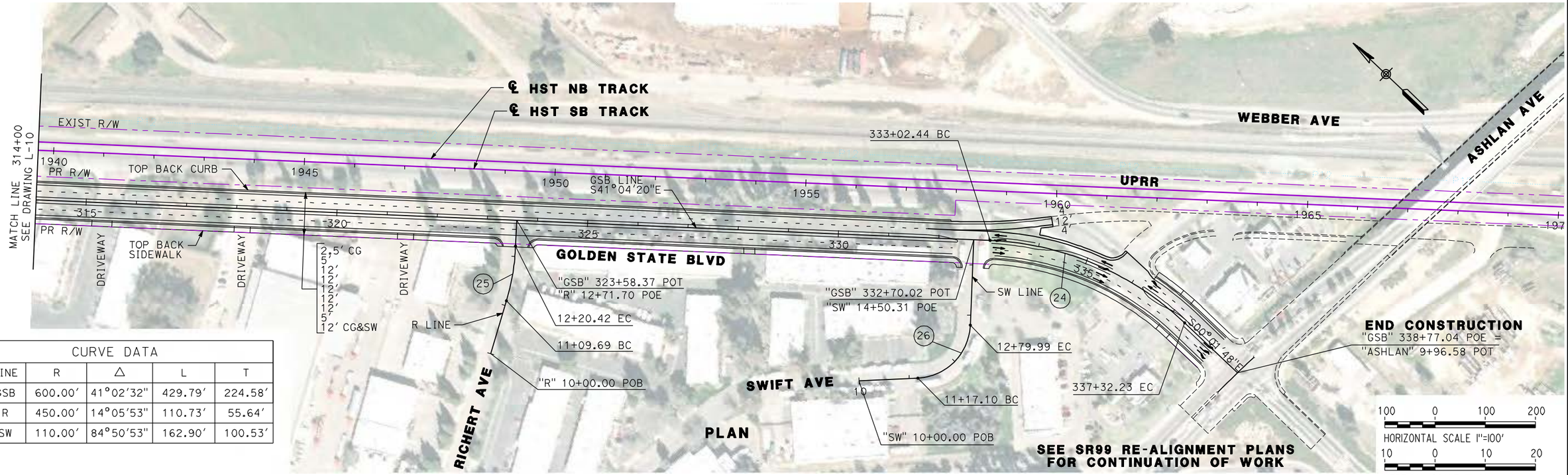
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

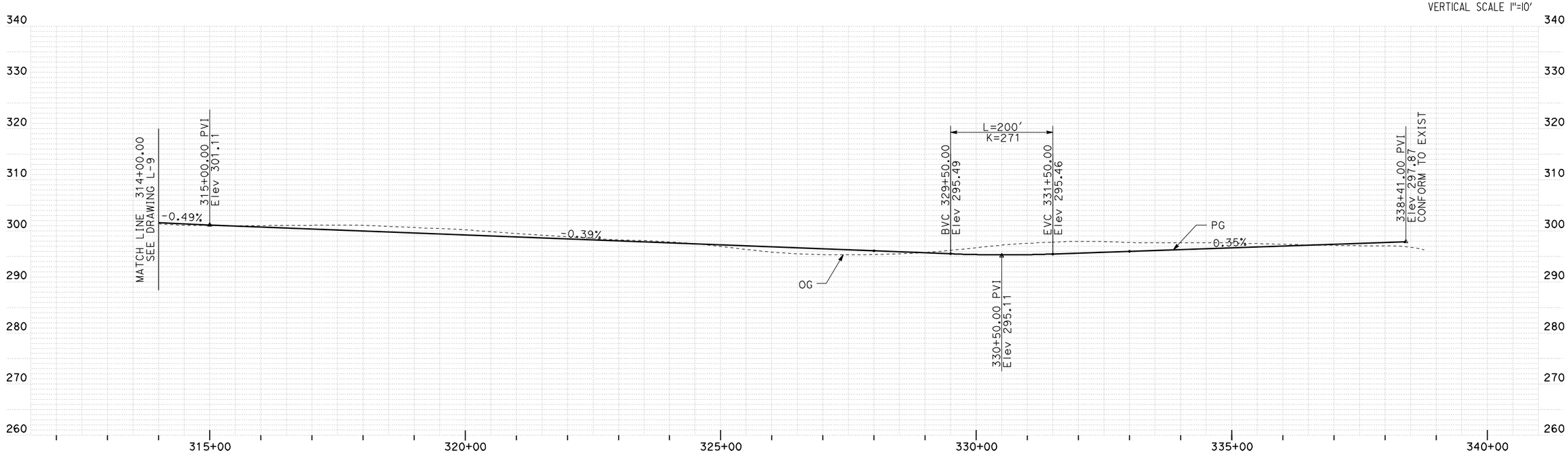
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
LAYOUT
"GSB" 289+00 TO "GSB" 314+00

CONTRACT NO. HSR06-007
DRAWING NO. L-10
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros



CURVE DATA					
No.	LINE	R	Δ	L	T
24	GSB	600.00'	41°02'32"	429.79'	224.58'
25	R	450.00'	14°05'53"	110.73'	55.64'
26	SW	110.00'	84°50'53"	162.90'	100.53'



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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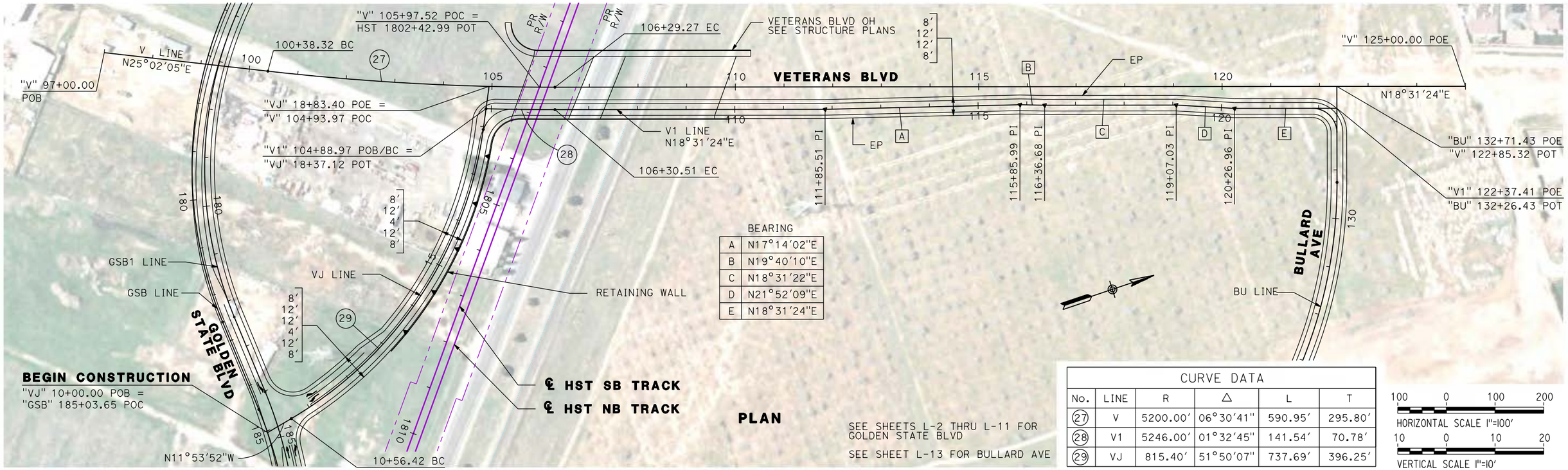
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT LAYOUT
"GSB" 314+00 TO "GSB" 338+77

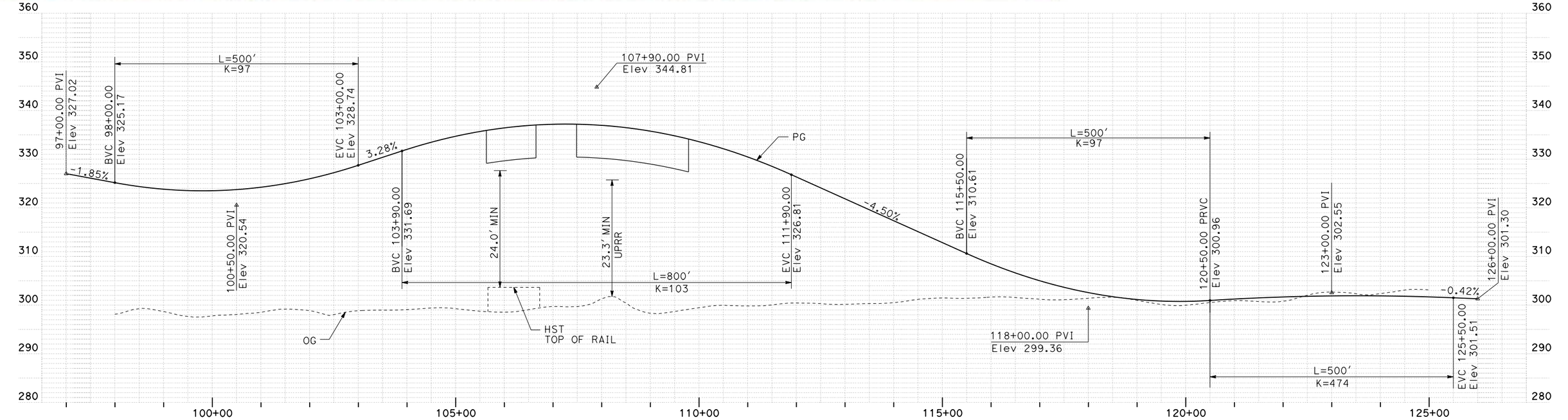
CONTRACT NO. HSR06-007
DRAWING NO. L-11
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros



BEARING	
A	N17°14′02"E
B	N19°40′10"E
C	N18°31′22"E
D	N21°52′09"E
E	N18°31′24"E

CURVE DATA					
No.	LINE	R	Δ	L	T
27	V	5200.00′	06°30′41"	590.95′	295.80′
28	V1	5246.00′	01°32′45"	141.54′	70.78′
29	VJ	815.40′	51°50′07"	737.69′	396.25′



SEE SHEET L-13 FOR VJ PROFILE

V LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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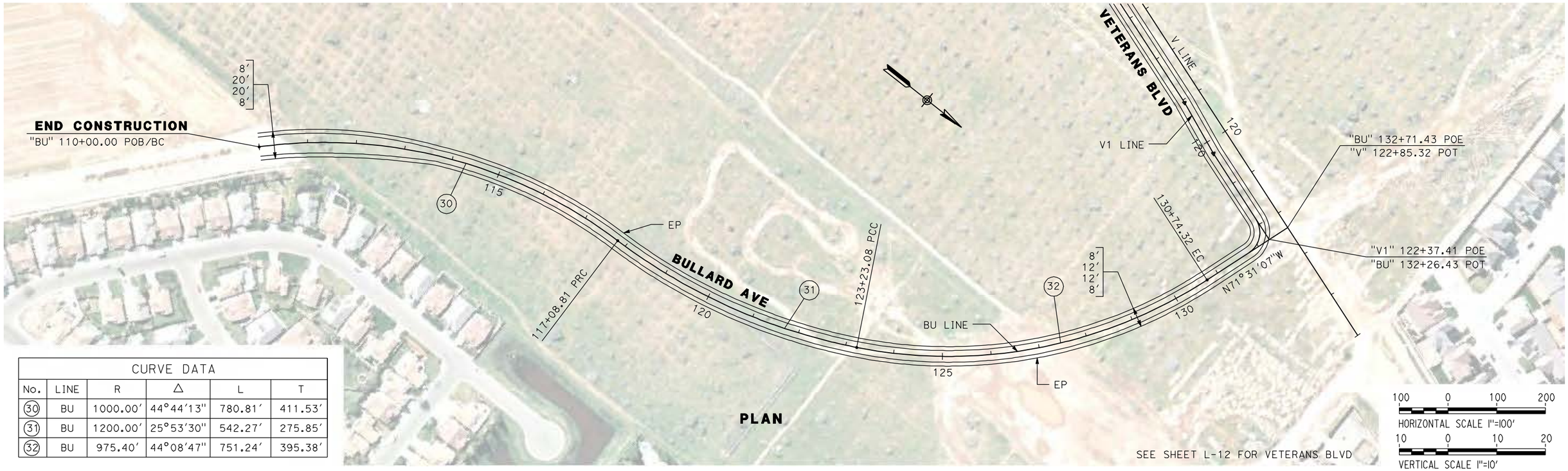
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

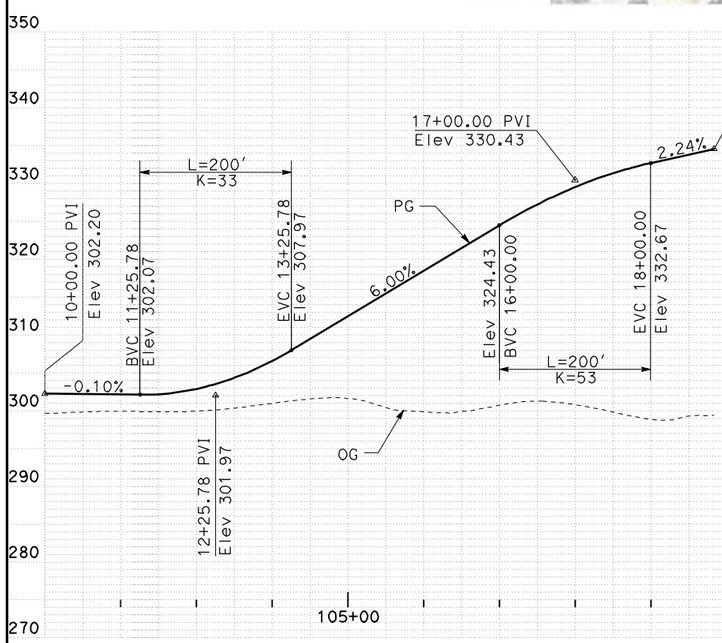
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
VETERANS BOULEVARD
LAYOUT
"V" 105+00 TO "V" 122+35

CONTRACT NO. HSR06-007
DRAWING NO. L-12
SCALE AS SHOWN
SHEET NO.

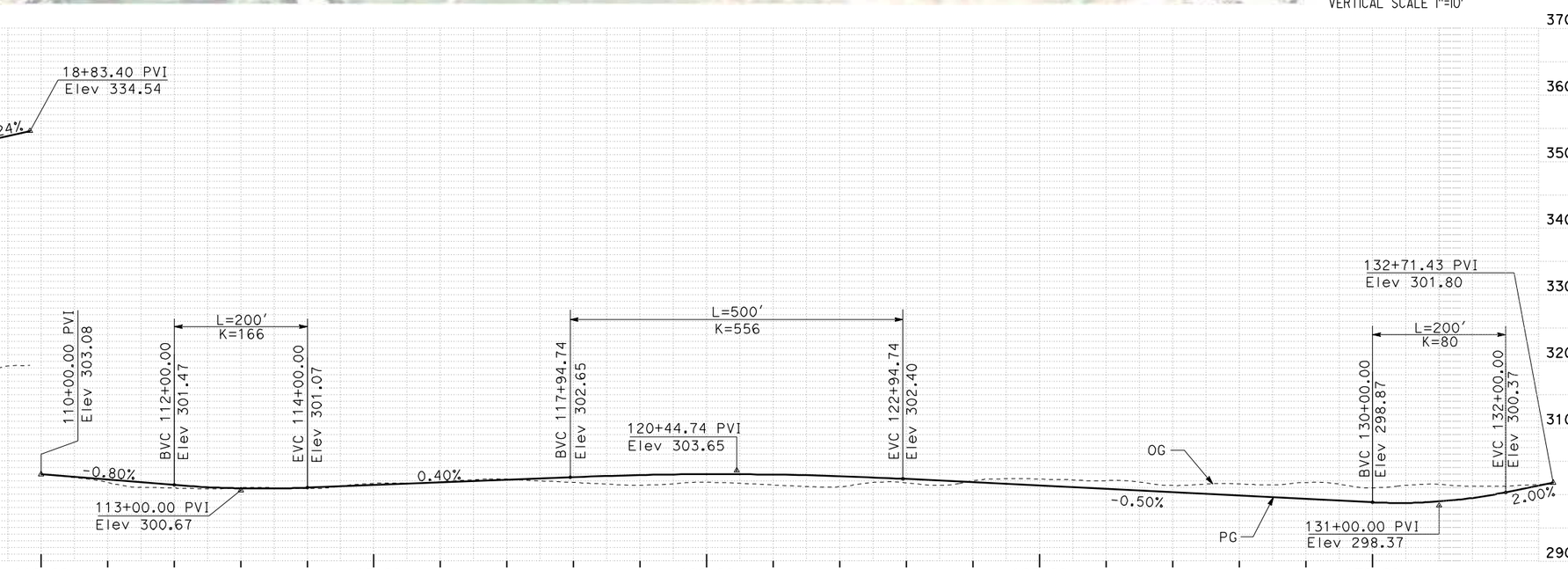
DATE PLOTTED => 26-APR-2011
USERNAME => lros



CURVE DATA					
No.	LINE	R	Δ	L	T
30	BU	1000.00′	44°44′13″	780.81′	411.53′
31	BU	1200.00′	25°53′30″	542.27′	275.85′
32	BU	975.40′	44°08′47″	751.24′	395.38′



VJ PROFILE



BU PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

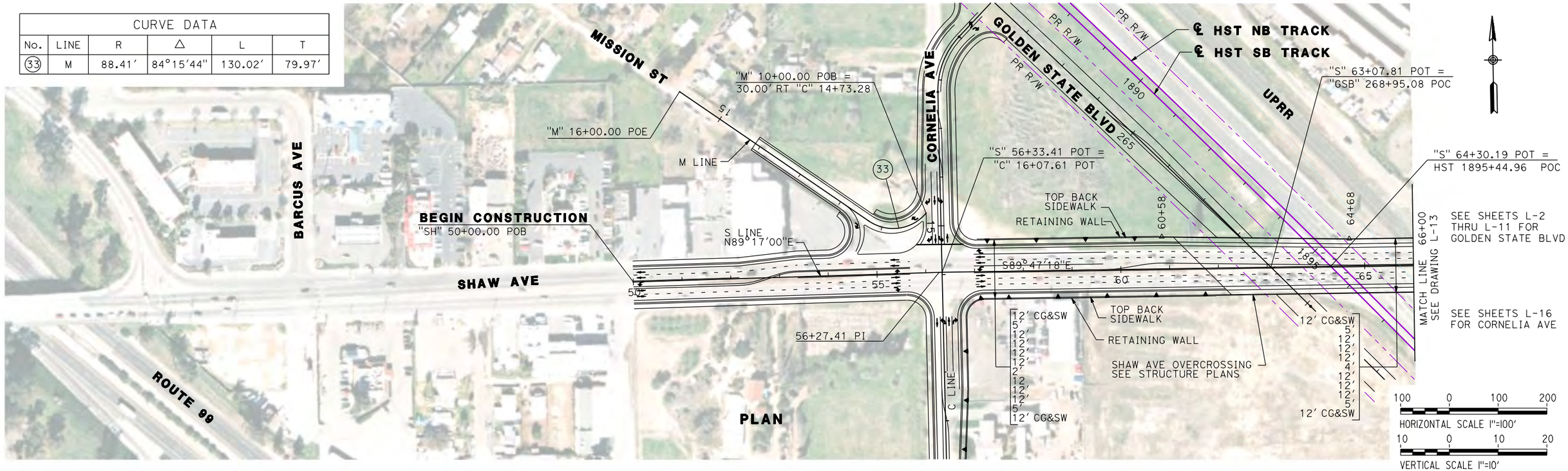
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

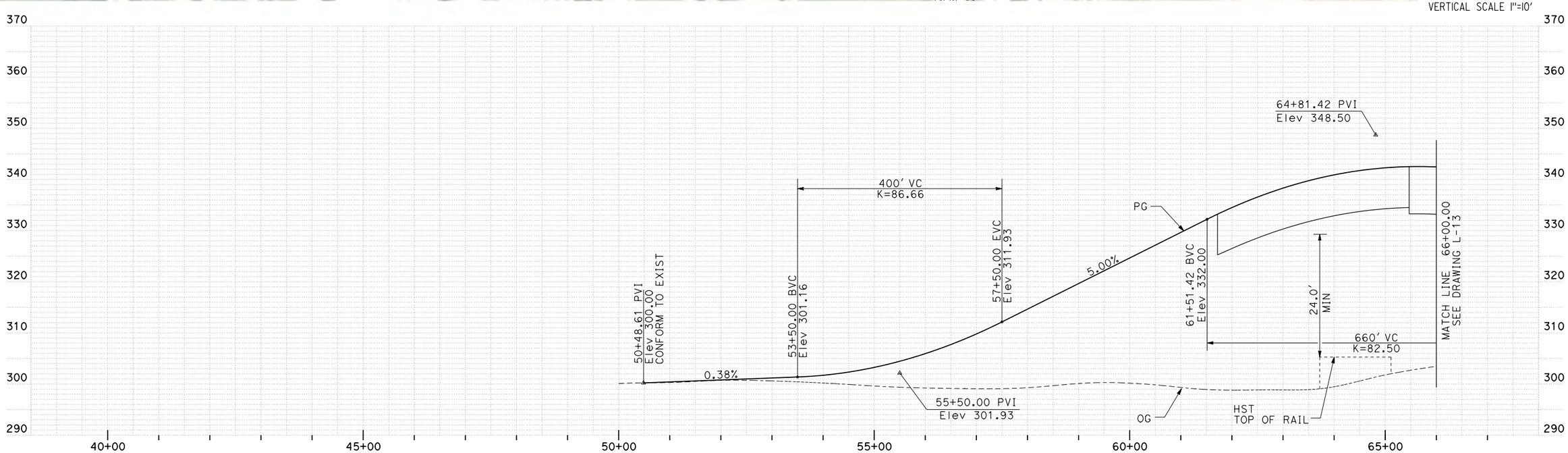
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BULLARD AVENUE
LAYOUT
"BU" 100+00 TO "BU" 132+72

CONTRACT NO. HSR06-007
DRAWING NO. L-13
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

CURVE DATA					
No.	LINE	R	Δ	L	T
33	M	88.41′	84°15′44"	130.02′	79.97′





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

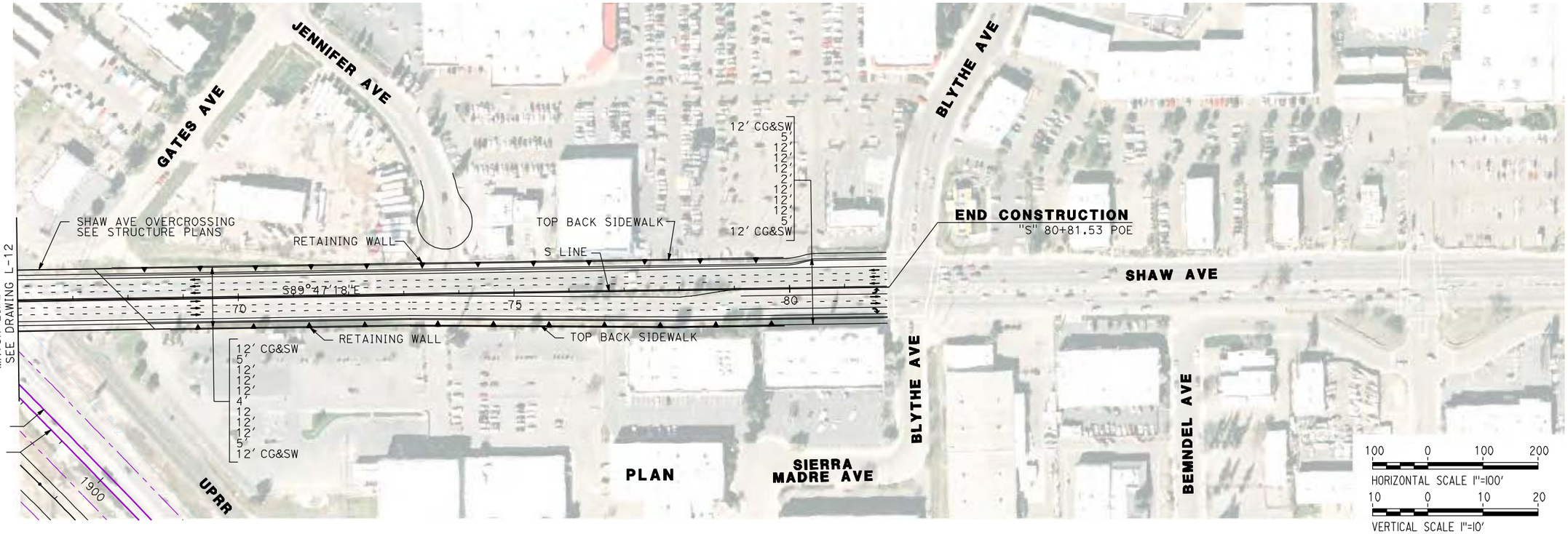
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

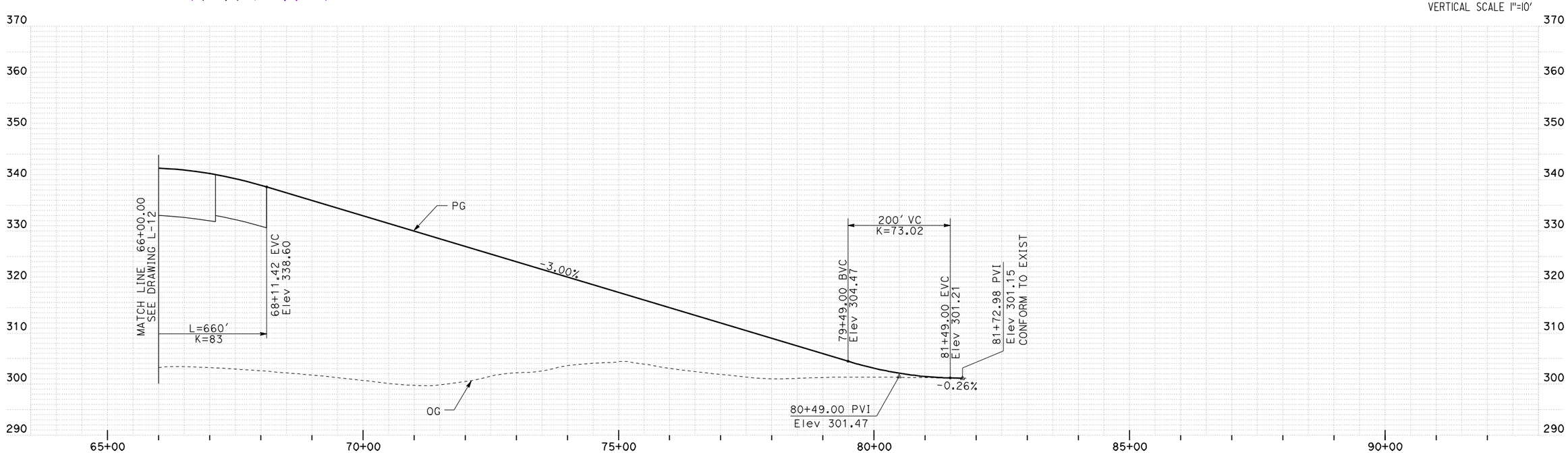
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
SHAW AVENUE RE-ALIGNMENT
LAYOUT
"S" 50+00 TO "S" 66+00

CONTRACT NO. HSR06-007
DRAWING NO. **L-14**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

SEE SHEETS L-2 THRU L-11 FOR GOLDEN STATE BLVD





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

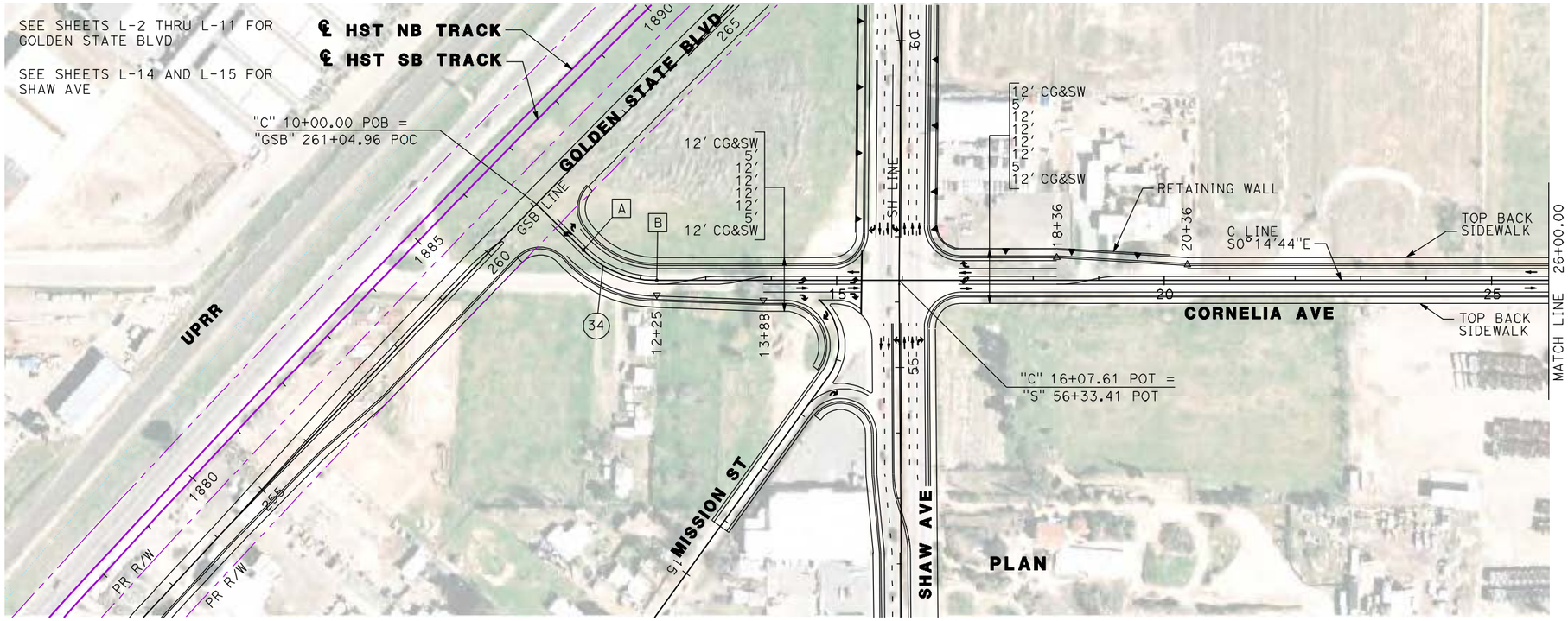
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
SHAW AVENUE RE-ALIGNMENT
LAYOUT
"S" 66+00 TO "S" 80+81

CONTRACT NO. HSR06-007
DRAWING NO. **L-15**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros

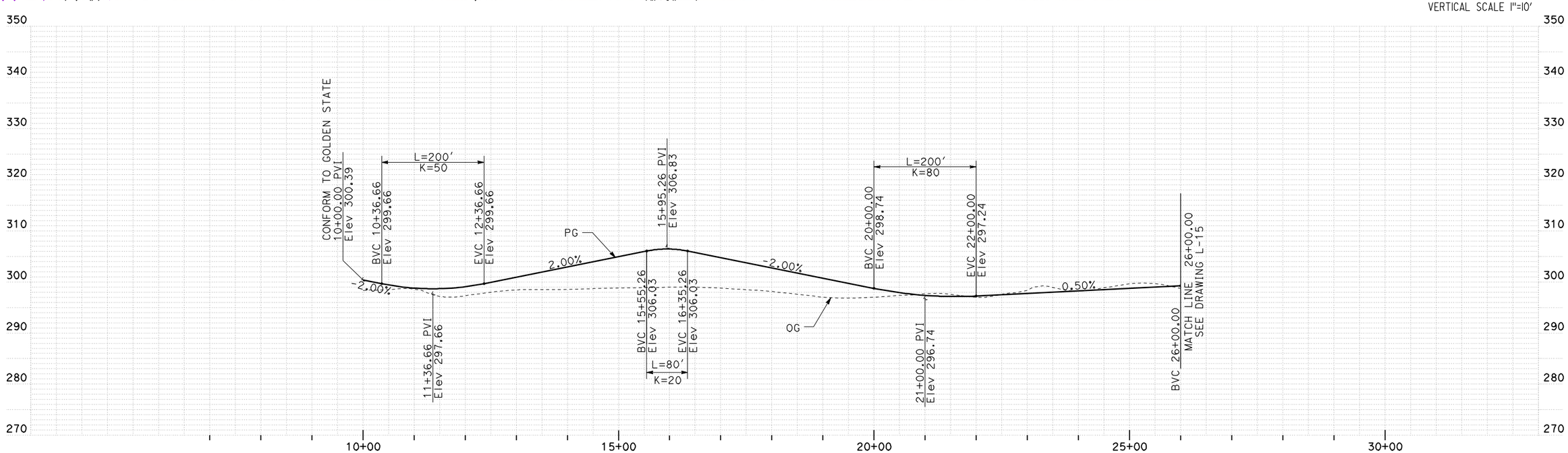


CURVE DATA					
No.	LINE	R	Δ	L	T
34	C	160.00'	44°29'15"	124.23'	65.44'

A 11+00.95 BC

B 12+25.19 EC

100 0 100 200
HORIZONTAL SCALE 1"=100'
10 0 10 20
VERTICAL SCALE 1"=10'



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

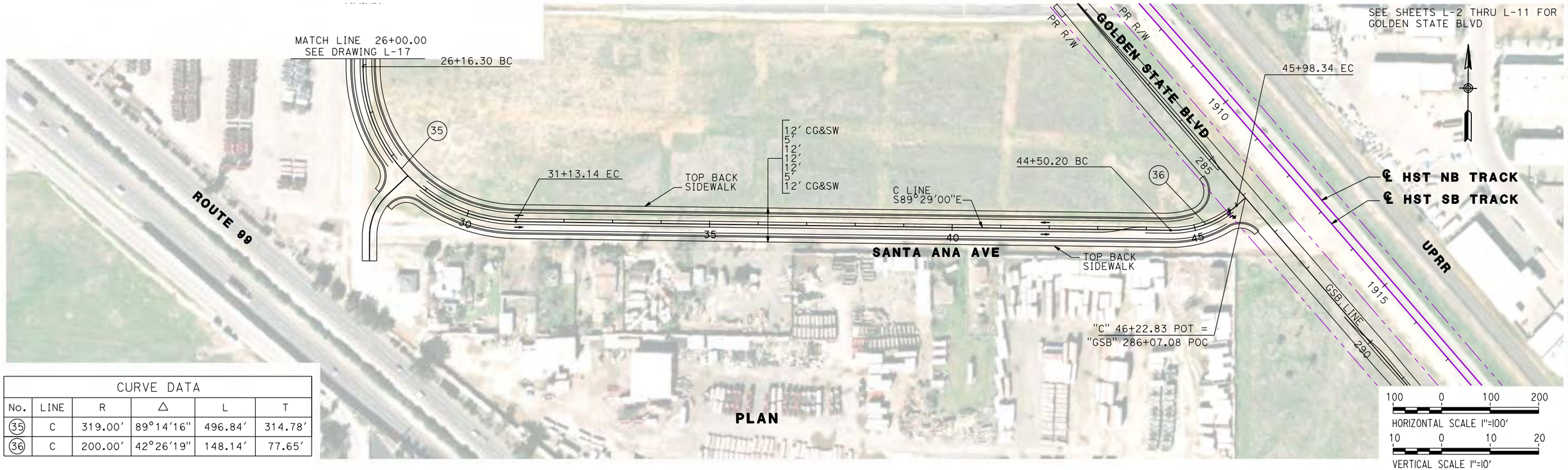
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

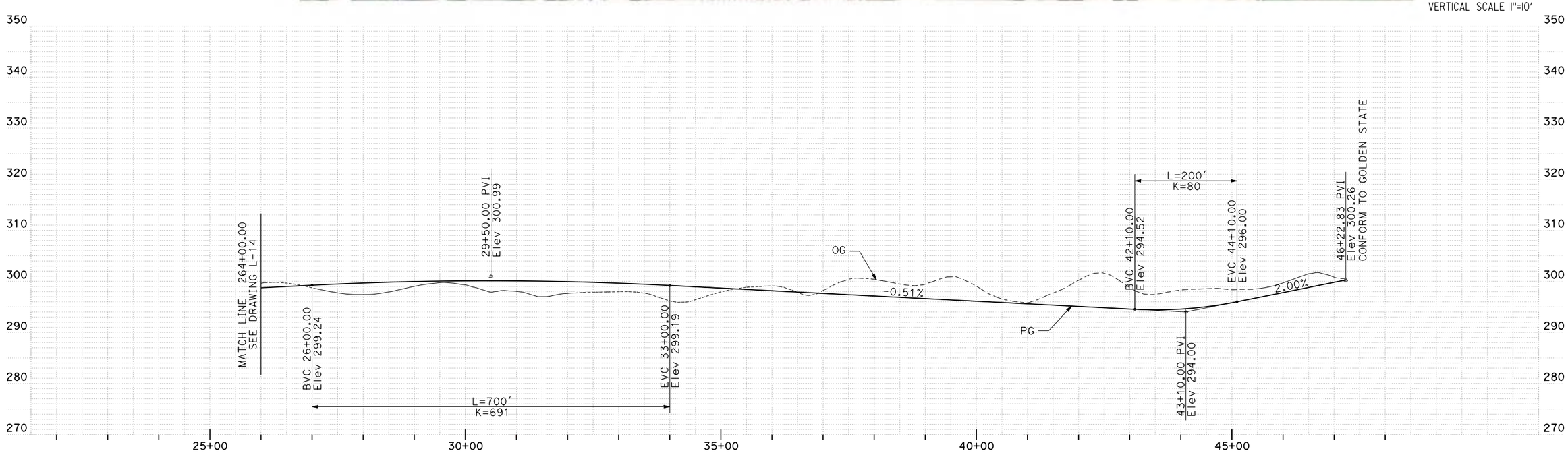
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
CORNELIA AVENUE RE-ALIGNMENT
LAYOUT
"C" 10+00 TO "C" 26+00

CONTRACT NO. HSR06-007
DRAWING NO. L-16
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 27-APR-2011
USERNAME => lros



CURVE DATA					
No.	LINE	R	Δ	L	T
35	C	319.00'	89°14'16"	496.84'	314.78'
36	C	200.00'	42°26'19"	148.14'	77.65'



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

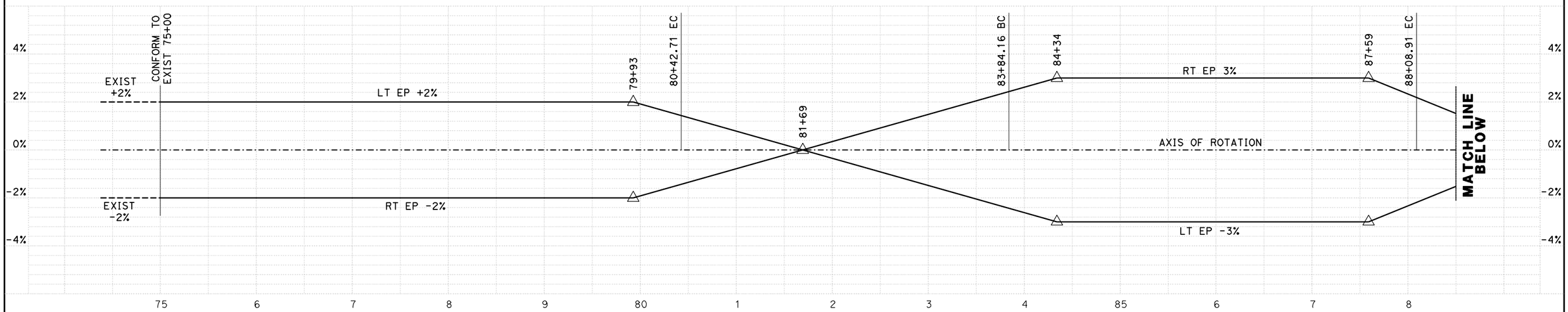
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

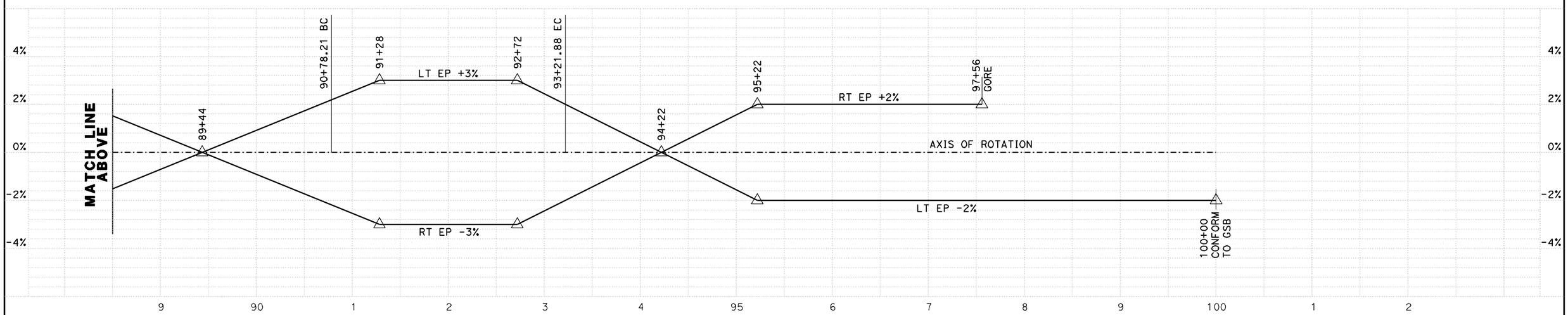
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
SANTA ANA AVENUE RE-ALIGNMENT
LAYOUT
"C" 26+00 TO "C" 46+23

CONTRACT NO. HSR06-007
DRAWING NO. **L-17**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => lros





NB LINE

SUPERELEVATION DIAGRAM

NO SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

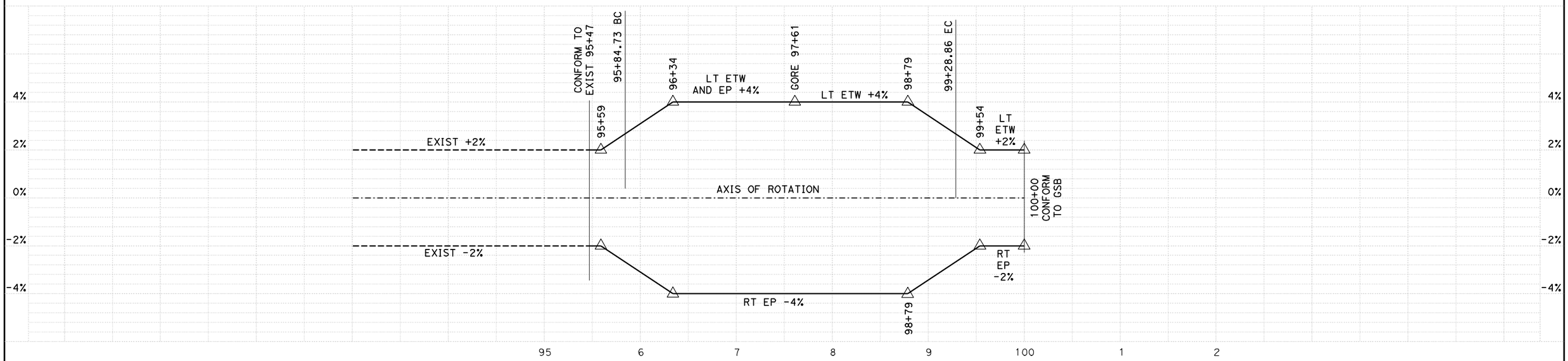
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
SUPERELEVATION DIAGRAM

CONTRACT NO. HSR06-007
DRAWING NO. **SE-1**
SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011

USERNAME => lros



SB LINE

SUPERELEVATION DIAGRAM

NO SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY B. CHAN
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

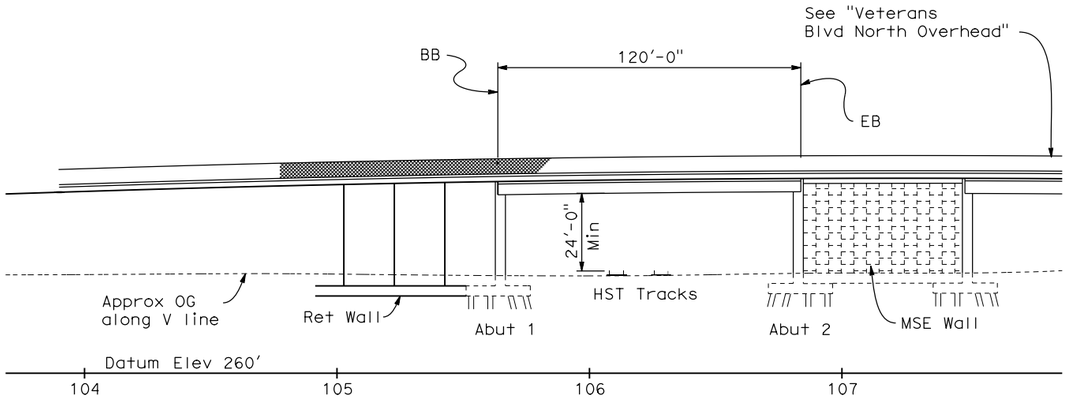
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
SUPERELEVATION DIAGRAM

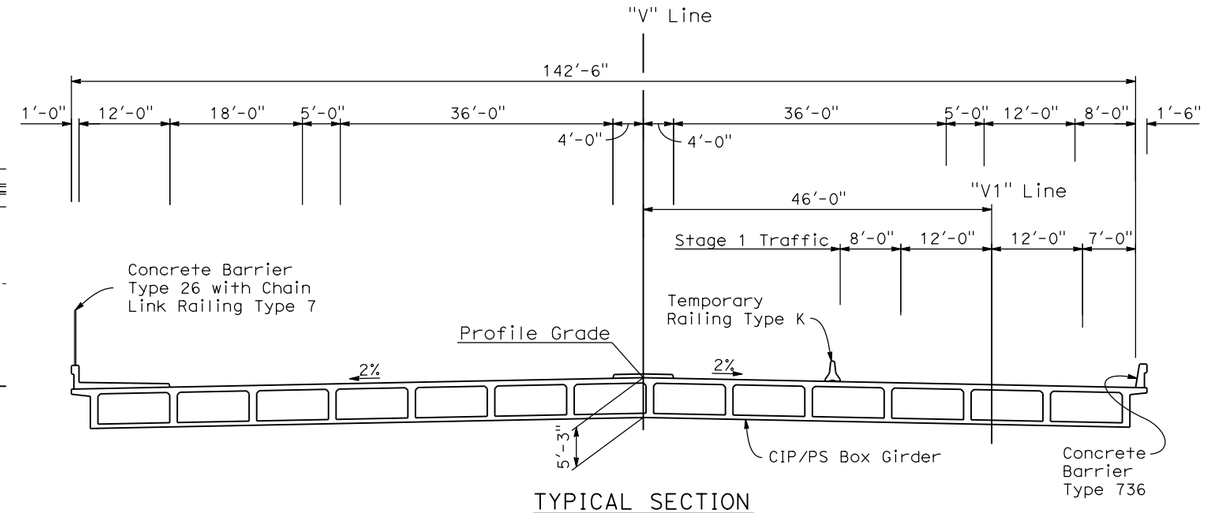
CONTRACT NO. HSR06-007
DRAWING NO. **SE-2**
SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011

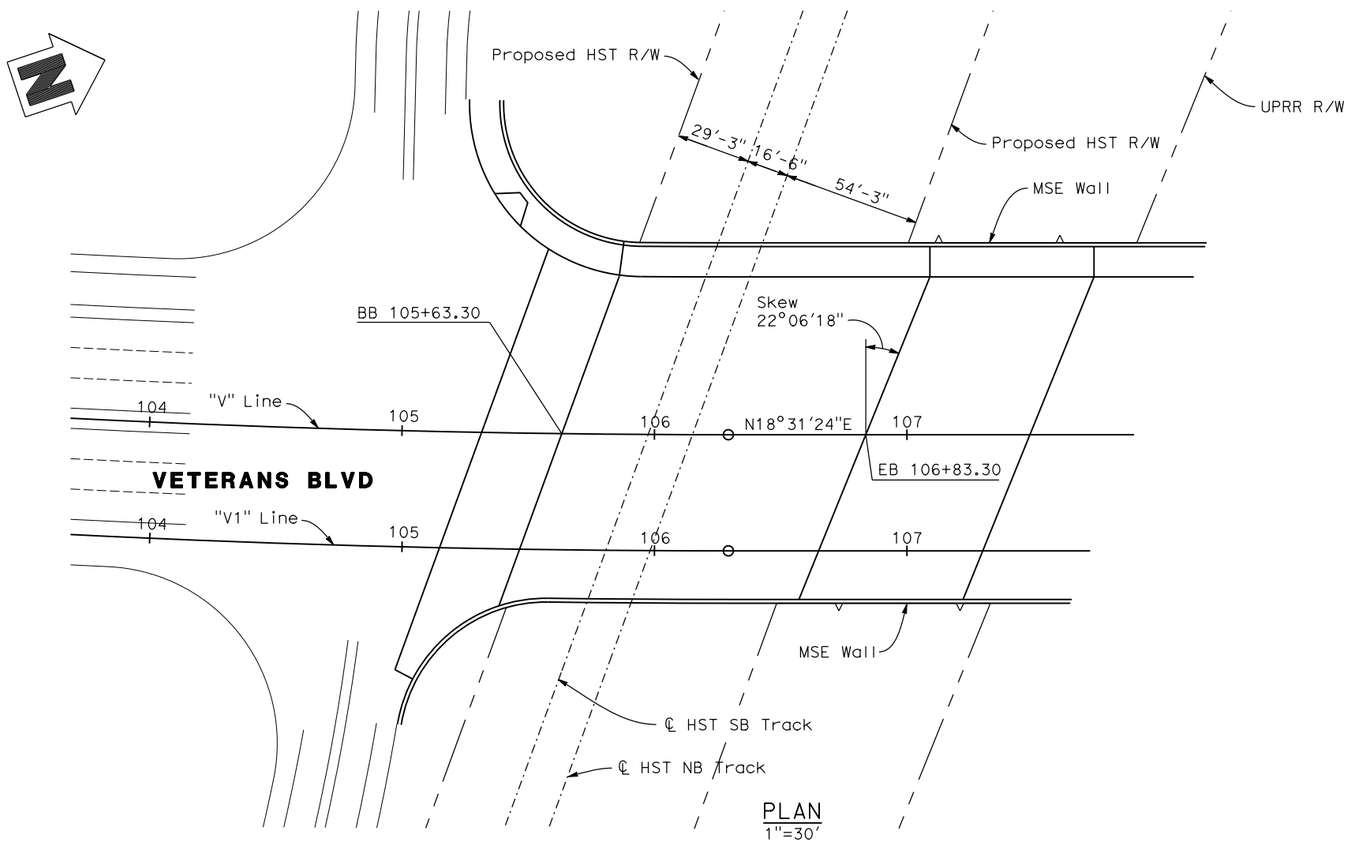
USERNAME => lros



ELEVATION
1"=30'



TYPICAL SECTION
1"=10'



PLAN
1"=30'

DATE OF ESTIMATE	= 04-13-2011
BRIDGE REMOVAL	= -
STRUCTURE DEPTH	= 5'-3"
LENGTH	= 120'-0"
WIDTH	= 142'-6"
AREA	= 17,100 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$ 175/ft^2
TOTAL COST	= \$ 2,993,000

VETERANS BLVD. SOUTH OVERHEAD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

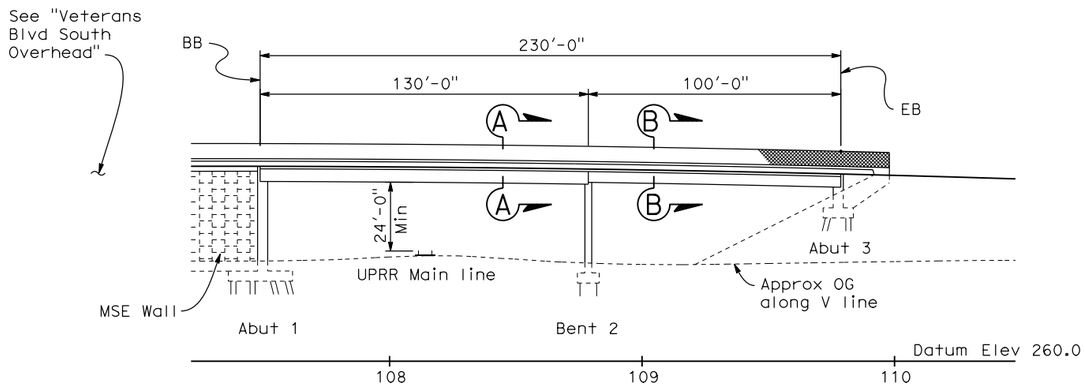
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

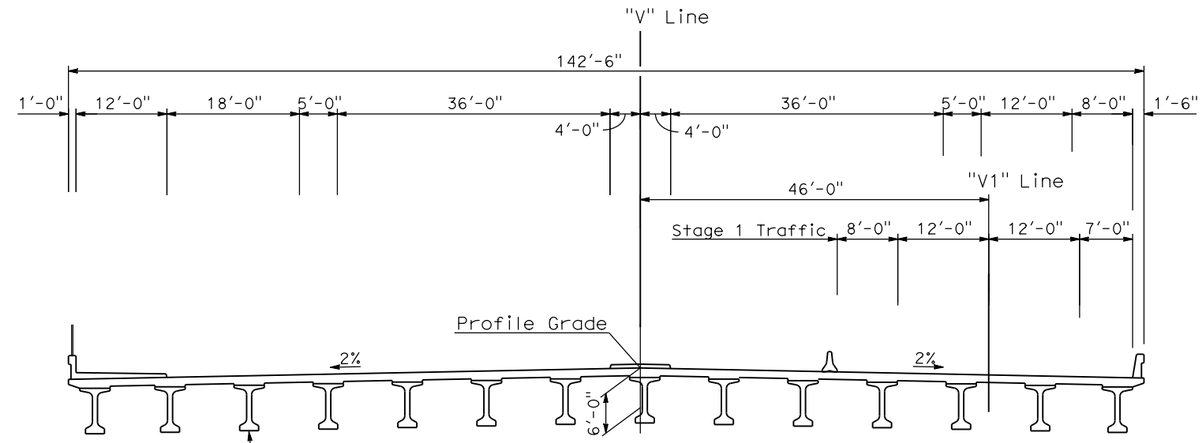
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-1**
SCALE AS SHOWN
SHEET NO.

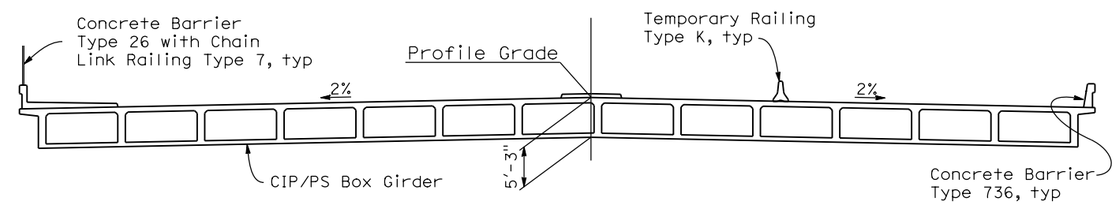
DATE PLOTTED => 29-APR-2011
USERNAME =>



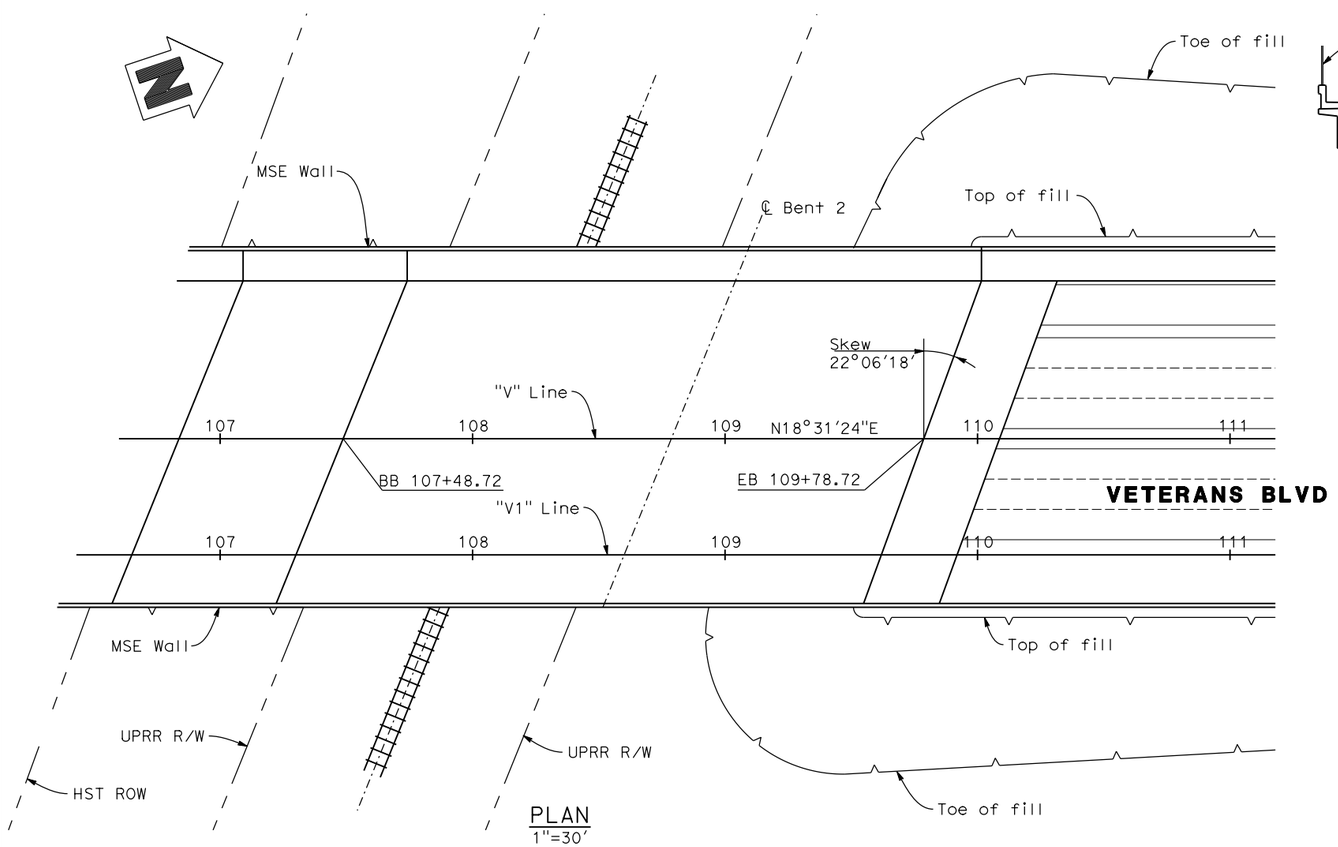
ELEVATION
1"=30'



SECTION A-A
1"=10'



SECTION B-B
1"=10'



PLAN
1"=30'

DATE OF ESTIMATE	= 04-13-2011
BRIDGE REMOVAL	= -
STRUCTURE DEPTH	= 5'-3" TO 6'-0"
LENGTH	= 230'-0"
WIDTH	= 142'-6"
AREA	= 32,775 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= \$ 175/ft^2
TOTAL COST	= \$ 5,736,000

VETERANS BLVD. NORTH OVERHEAD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

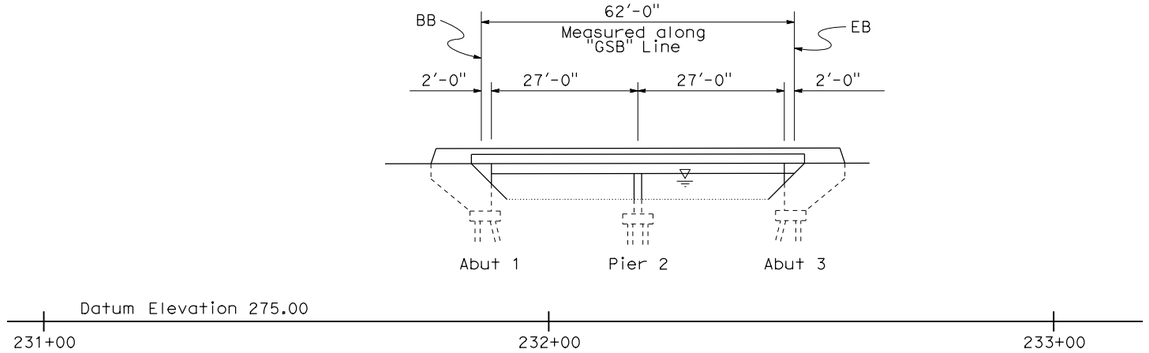
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

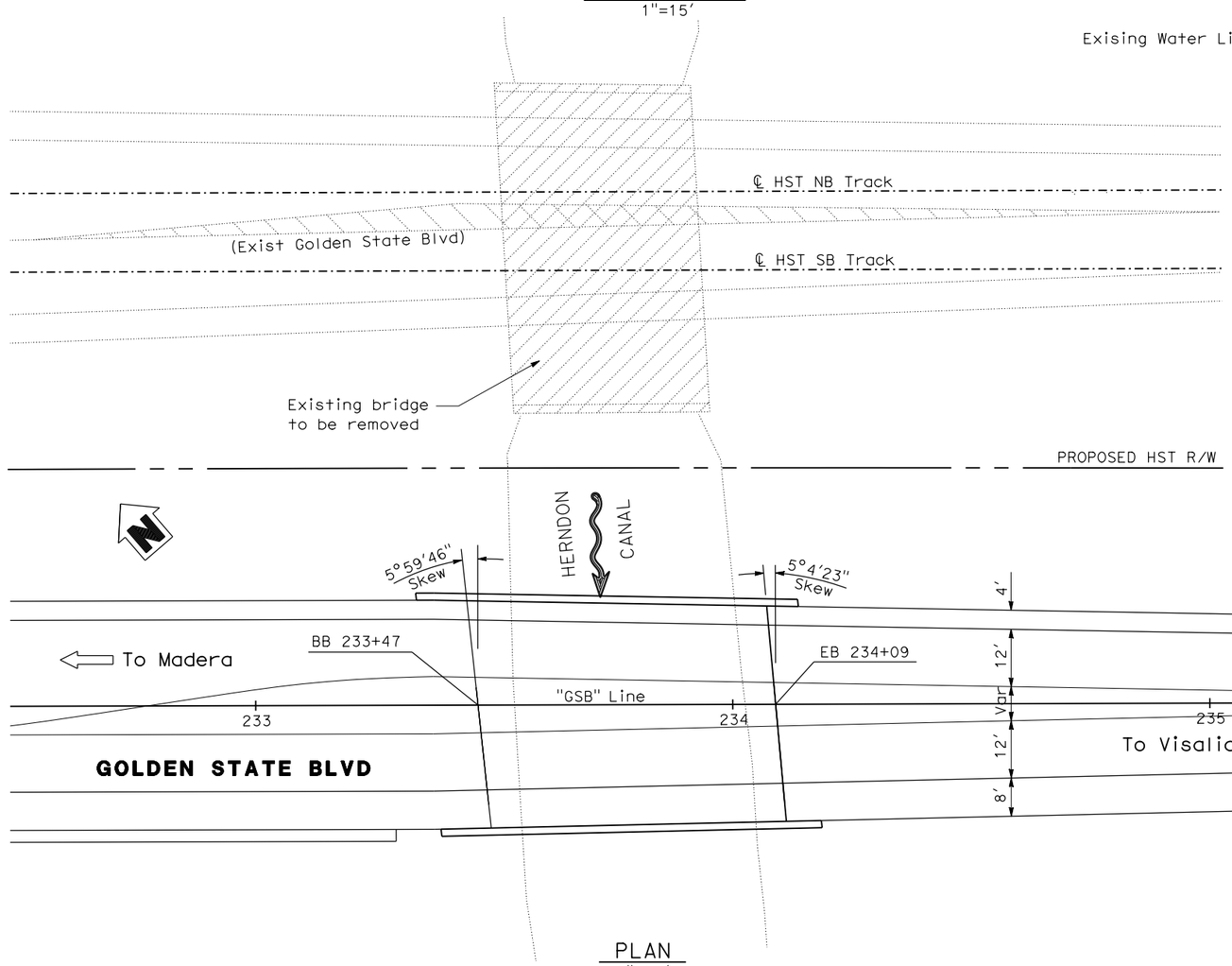
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-2**
SCALE AS SHOWN
SHEET NO.

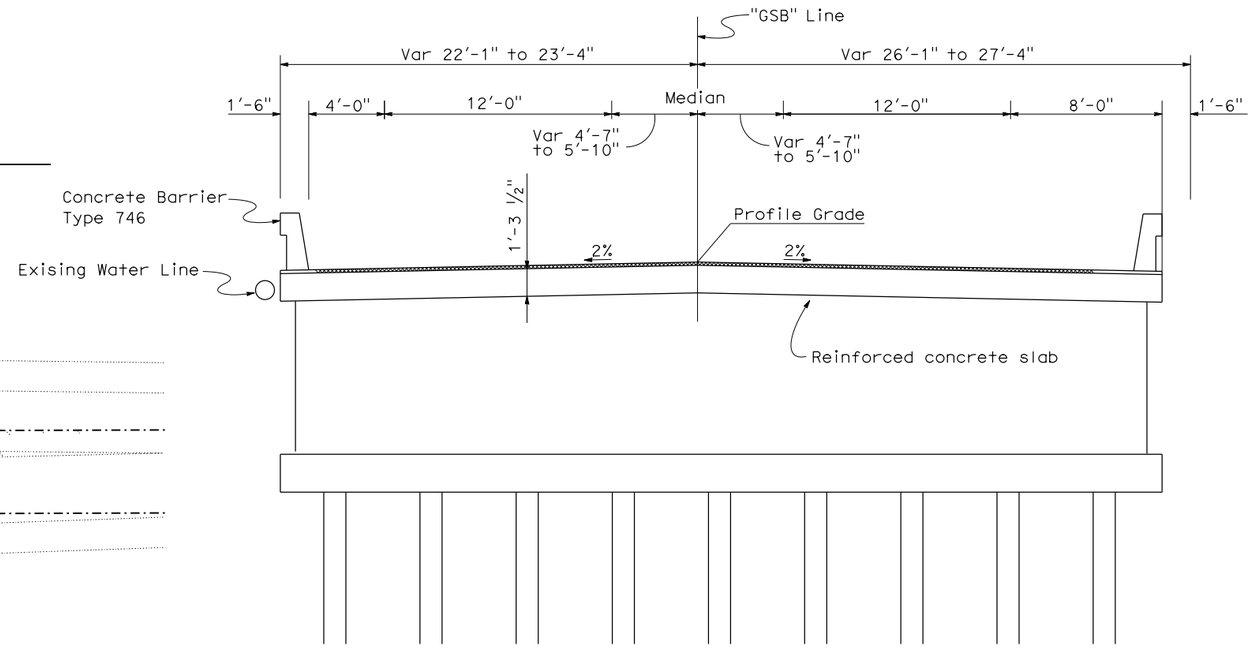
DATE PLOTTED => 28-APR-2011
USERNAME => k666



ELEVATION
1"=15'



PLAN
1"=15'



TYPICAL SECTION
1/4"=1'-0"

DATE OF ESTIMATE	03-09-2011
BRIDGE REMOVAL	= $ 50,000
STRUCTURE DEPTH	= 1'-3 1/2"
LENGTH	= 62'-0"
WIDTH	= 49'-5"
AREA	= 3064 Sq. Ft.
COST/ □_ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= $ 150
TOTAL COST	= $ 510,000

HERNDON CANAL BRIDGE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

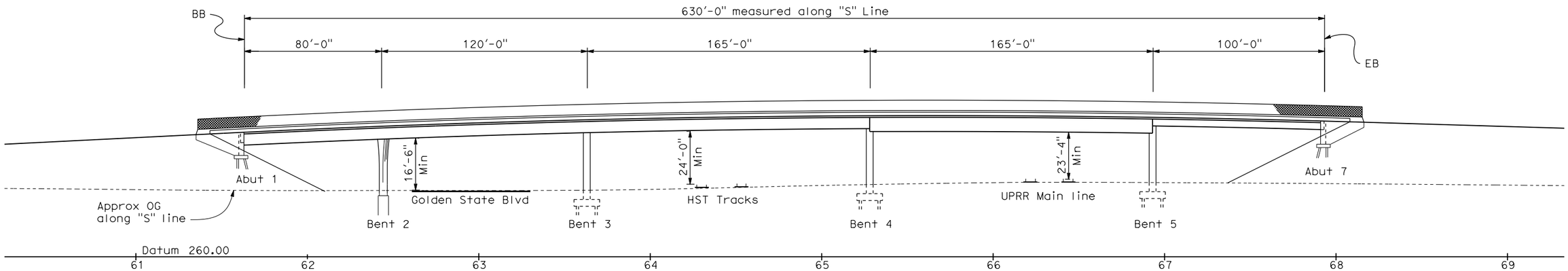
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
ADVANCE PLANNING STUDY

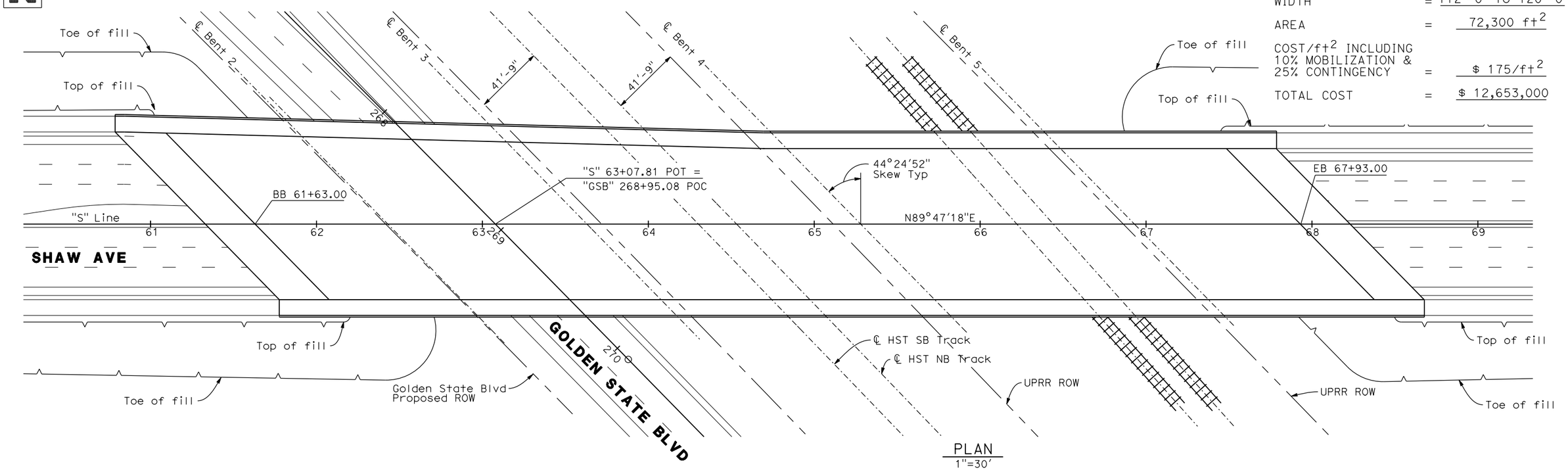
CONTRACT NO. HSR006-007
DRAWING NO. **BR-3**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 29-APR-2011
USERNAME => 1000



ELEVATION
1"=30'

DATE OF ESTIMATE	=	04-13-2011
BRIDGE REMOVAL	=	-
STRUCTURE DEPTH	=	6'-0" TO 7'-3"
LENGTH	=	630'-0"
WIDTH	=	112'-0" to 120'-0"
AREA	=	72,300 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	\$ 175/ft^2
TOTAL COST	=	\$ 12,653,000



PLAN
1"=30'

SHAW AVE OVERCROSSING

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

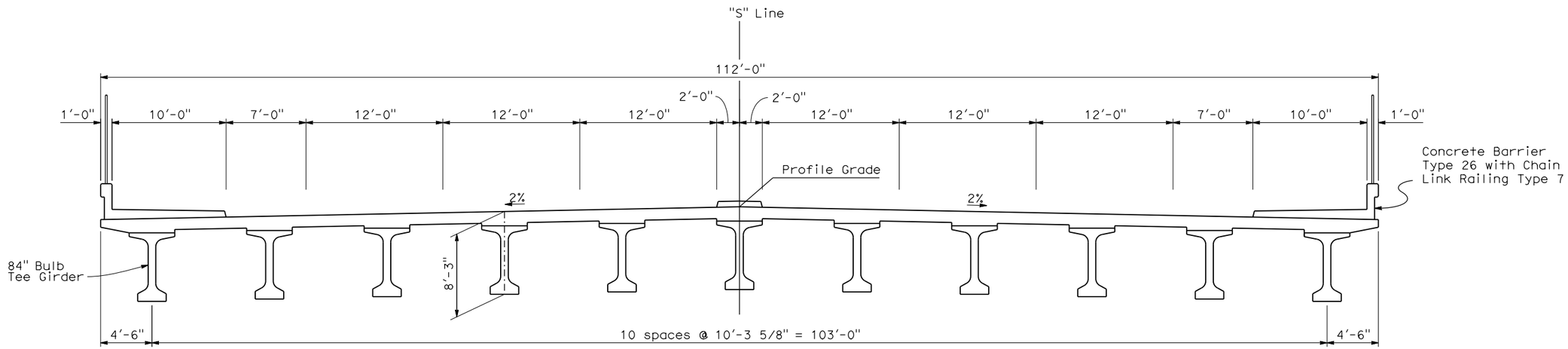
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

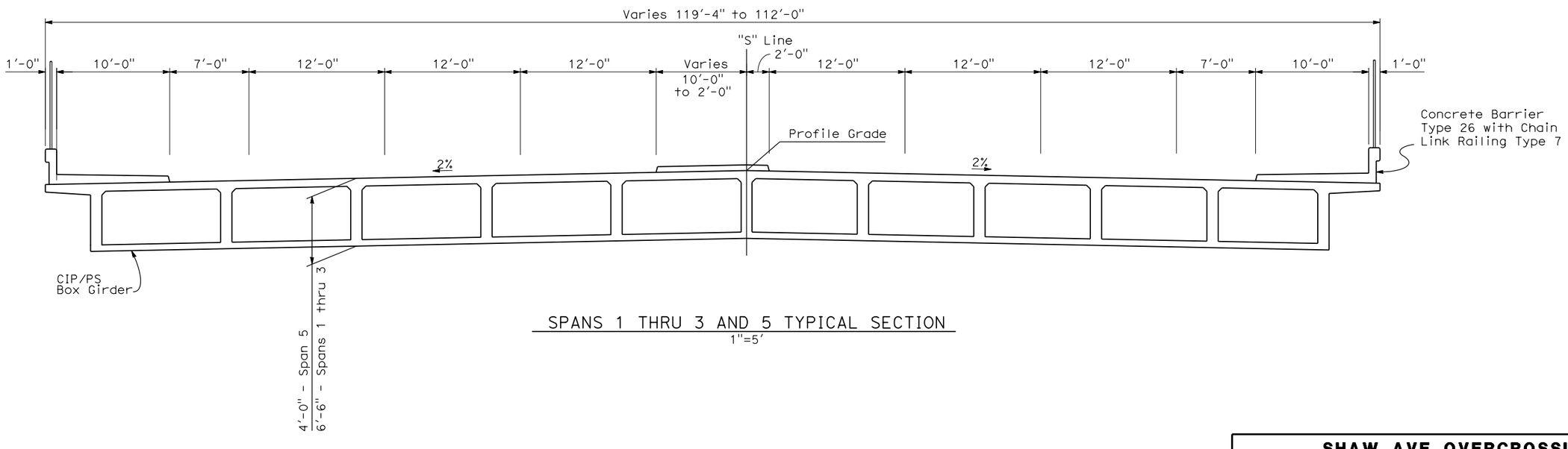
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-4**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => 1000



SPAN 4 TYPICAL SECTION
1"=5'



SPANS 1 THRU 3 AND 5 TYPICAL SECTION
1"=5'

SHAW AVE OVERCROSSING

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

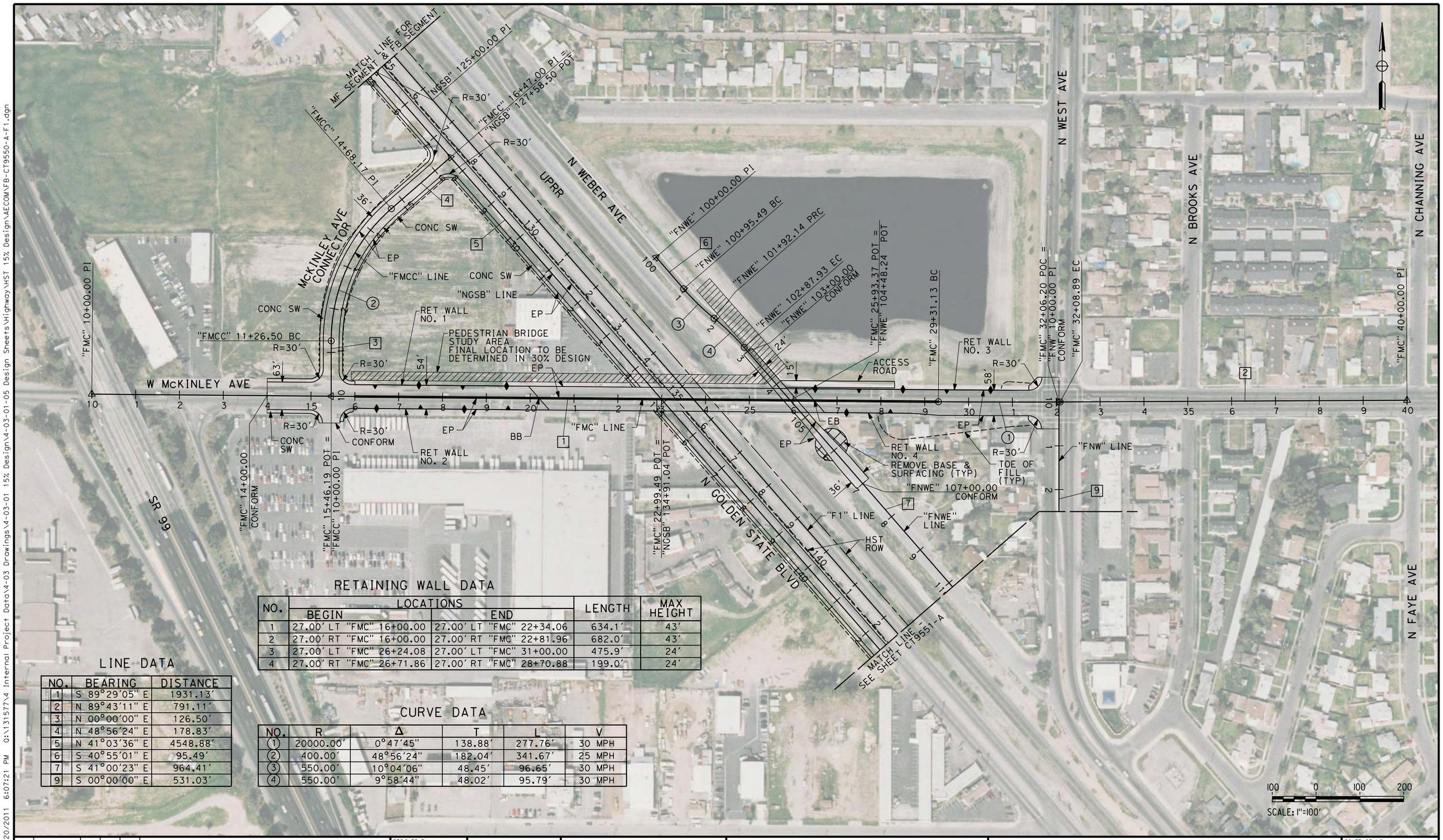
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
GOLDEN STATE BOULEVARD RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-5**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => 1600



RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	27.00' LT "FMC" 16+00.00	27.00' LT "FMC" 22+34.06	634.1'	43'
2	27.00' RT "FMC" 16+00.00	27.00' RT "FMC" 22+81.96	682.0'	43'
3	27.00' LT "FMC" 26+24.08	27.00' LT "FMC" 31+00.00	475.9'	24'
4	27.00' RT "FMC" 26+71.86	27.00' RT "FMC" 28+70.88	199.0'	24'

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°29'05" E	1931.13'
2	N 89°43'11" E	791.11'
3	N 00°00'00" E	126.50'
4	N 48°56'24" E	178.83'
5	N 41°03'36" E	4548.88'
6	S 40°55'01" E	95.49'
7	S 41°00'23" E	964.41'
9	S 00°00'00" E	531.03'

CURVE DATA

NO.	R	Δ	T	L	V
1	20000.00'	0°47'45"	138.88'	277.76'	30 MPH
2	400.00'	48°56'24"	182.04'	341.67'	25 MPH
3	550.00'	10°04'06"	48.45'	96.65'	30 MPH
4	550.00'	9°58'44"	48.02'	95.79'	30 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

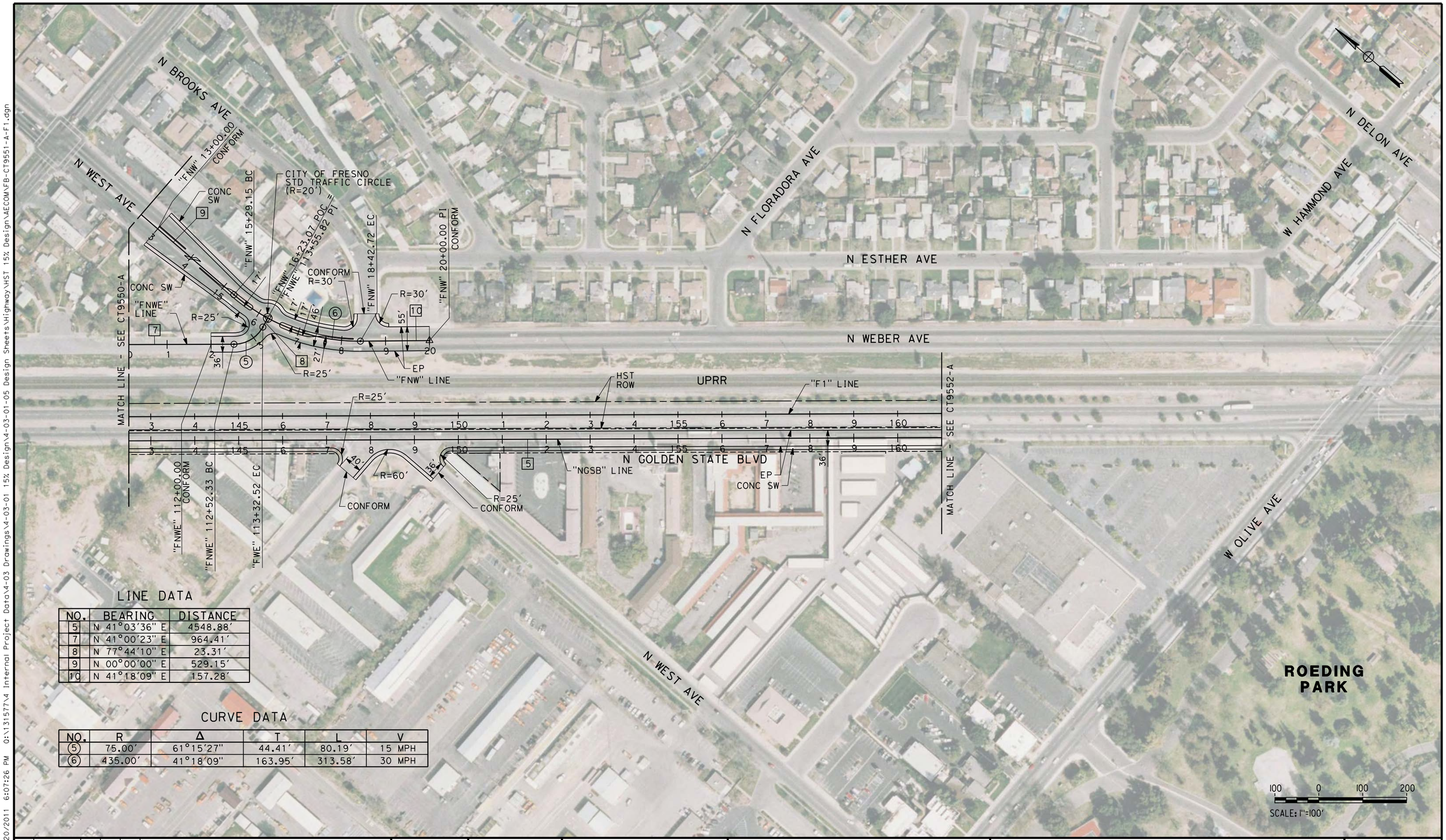
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
W McKINLEY AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9550-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:21 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9550-A-F1.dgn



LINE DATA

NO.	BEARING	DISTANCE
5	N 41°03'36" E	4548.88'
7	N 41°00'23" E	964.41'
8	N 77°44'10" E	23.31'
9	N 00°00'00" E	529.15'
10	N 41°18'09" E	157.28'

CURVE DATA

NO.	R	Δ	T	L	V
5	75.00'	61°15'27"	44.41'	80.19'	15 MPH
6	435.00'	41°18'09"	163.95'	313.58'	30 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

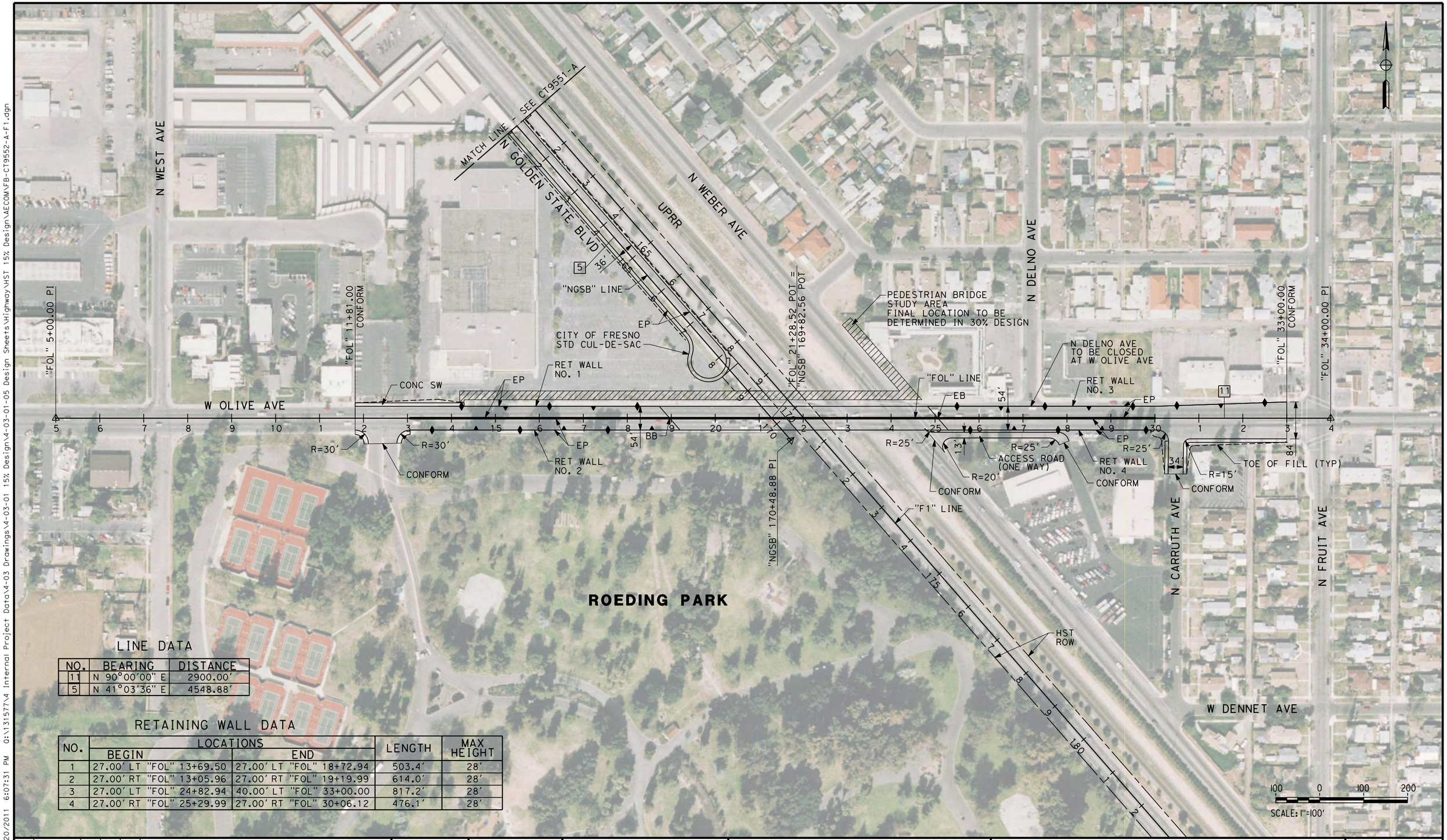
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
N GOLDEN STATE BLVD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9551-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:26 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9551-A-F1.dgn



LINE DATA

NO.	BEARING	DISTANCE
11	N 90°00'00" E	2900.00'
5	N 41°03'36" E	4548.88'

RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
1	27.00' LT "FOL" 13+69.50	27.00' LT "FOL" 18+72.94	503.4'	28'
2	27.00' RT "FOL" 13+05.96	27.00' RT "FOL" 19+19.99	614.0'	28'
3	27.00' LT "FOL" 24+82.94	40.00' LT "FOL" 33+00.00	817.2'	28'
4	27.00' RT "FOL" 25+29.99	27.00' RT "FOL" 30+06.12	476.1'	28'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

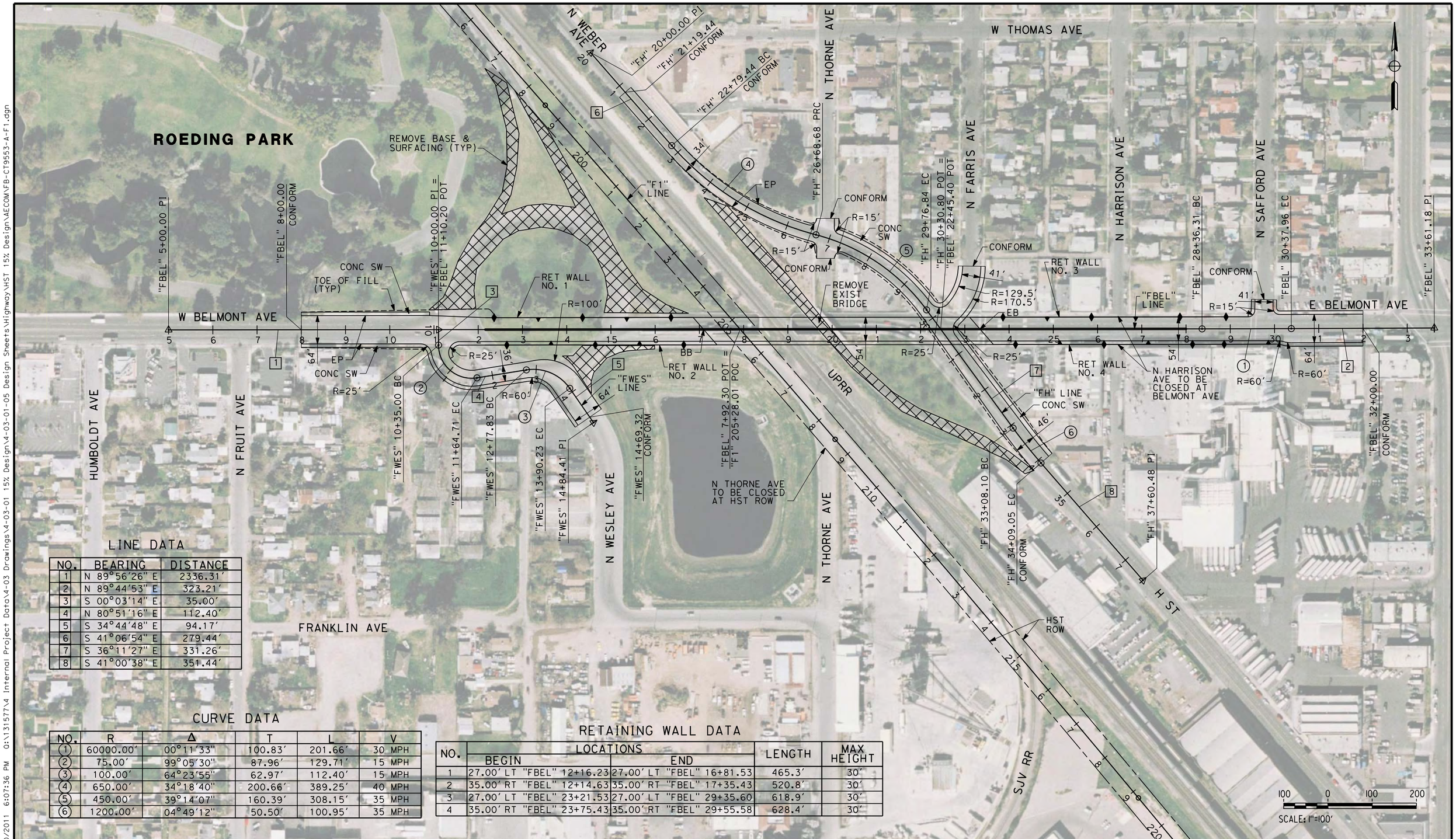
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
W OLIVE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9552-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:31 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9552-A-F1.dgn



LINE DATA

NO.	BEARING	DISTANCE
1	N 89°56'26" E	2336.31'
2	N 89°44'53" E	323.21'
3	S 00°03'14" E	35.00'
4	N 80°51'16" E	112.40'
5	S 34°44'48" E	94.17'
6	S 41°06'54" E	279.44'
7	S 36°11'27" E	331.26'
8	S 41°00'38" E	351.44'

CURVE DATA

NO.	R	Δ	T	L	V
1	60000.00'	00°11'33"	100.83'	201.66'	30 MPH
2	75.00'	99°05'30"	87.96'	129.71'	15 MPH
3	100.00'	64°23'55"	62.97'	112.40'	15 MPH
4	650.00'	34°18'40"	200.66'	389.25'	40 MPH
5	450.00'	39°14'07"	160.39'	308.15'	35 MPH
6	1200.00'	04°49'12"	50.50'	100.95'	35 MPH

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	27.00' LT "FBEL" 12+16.23	27.00' LT "FBEL" 16+81.53	465.3'	30'
2	35.00' RT "FBEL" 12+14.63	35.00' RT "FBEL" 17+35.43	520.8'	30'
3	27.00' LT "FBEL" 23+21.53	27.00' LT "FBEL" 29+35.60	618.9'	30'
4	35.00' RT "FBEL" 23+75.43	35.00' RT "FBEL" 29+55.58	628.4'	30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

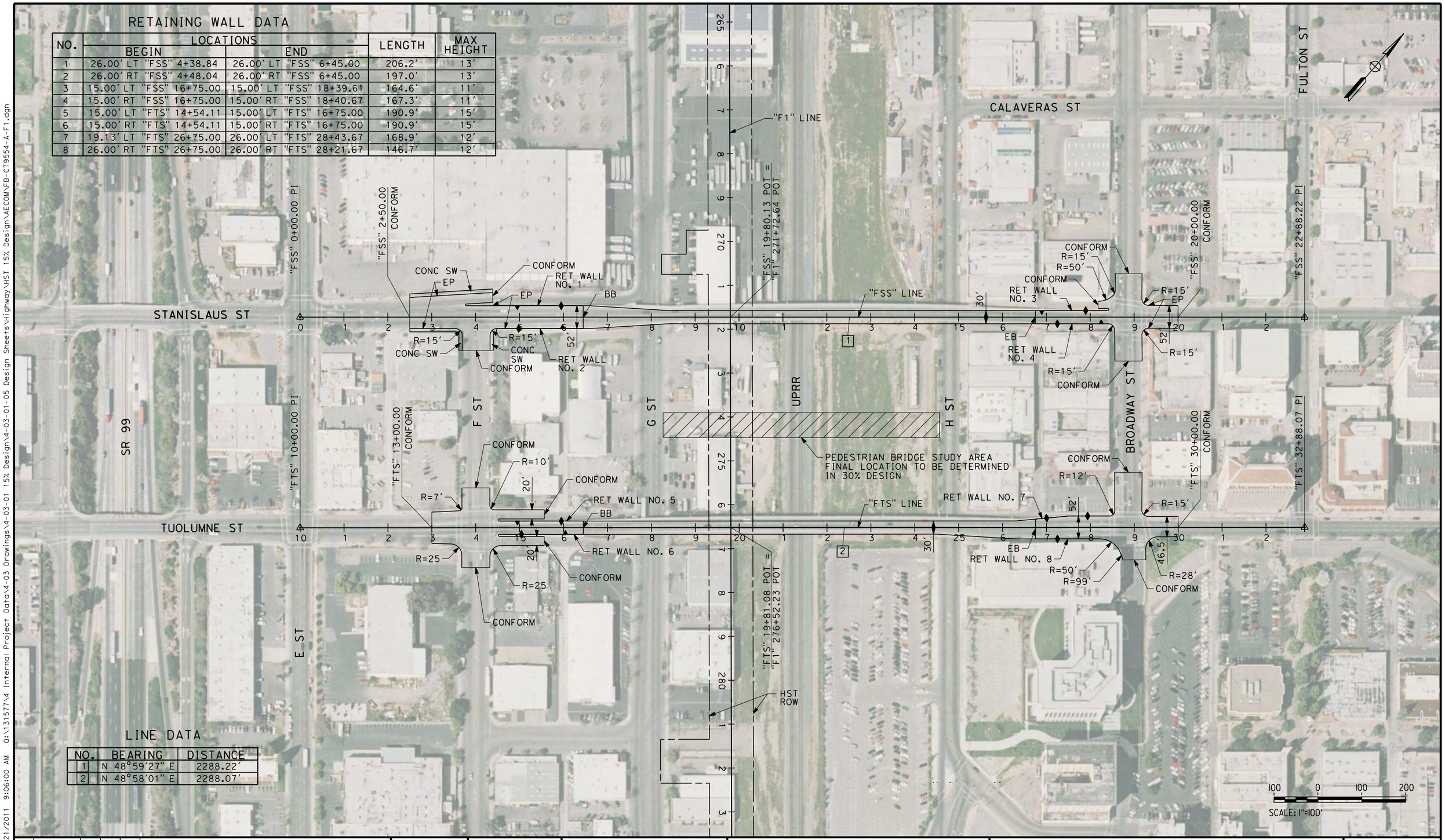
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
BELMONT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9553-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:36 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9553-A-F1.dgn

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	26.00' LT "FSS" 4+38.84	26.00' LT "FSS" 6+45.00	206.2'	13'
2	26.00' RT "FSS" 4+48.04	26.00' RT "FSS" 6+45.00	197.0'	13'
3	15.00' LT "FSS" 16+75.00	15.00' LT "FSS" 18+39.61	164.6'	11'
4	15.00' RT "FSS" 16+75.00	15.00' RT "FSS" 18+40.67	167.3'	11'
5	15.00' LT "FTS" 14+54.11	15.00' LT "FTS" 16+75.00	190.9'	15'
6	15.00' RT "FTS" 14+54.11	15.00' RT "FTS" 16+75.00	190.9'	15'
7	19.13' LT "FTS" 26+75.00	26.00' LT "FTS" 28+43.67	168.9'	12'
8	26.00' RT "FTS" 26+75.00	26.00' RT "FTS" 28+21.67	146.7'	12'



LINE DATA

NO.	BEARING	DISTANCE
1	N 48°59'27" E	2288.22'
2	N 48°58'01" E	2288.07'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
STANISLAUS ST AND TUOLUMNE ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9554-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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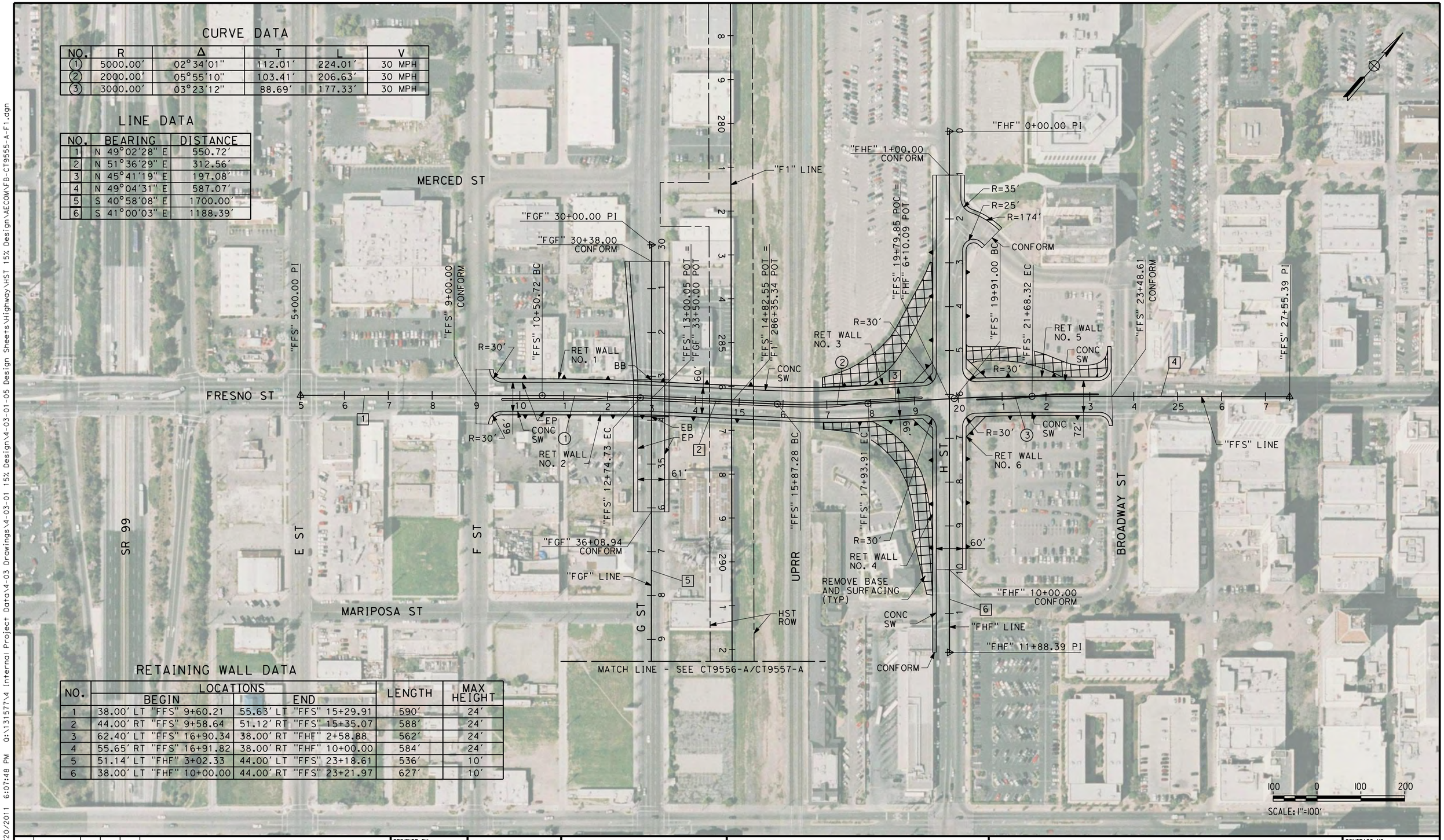

CURVE DATA

NO.	R	Δ	T	L	V
1	5000.00′	02°34′01"	112.01′	224.01′	30 MPH
2	2000.00′	05°55′10"	103.41′	206.63′	30 MPH
3	3000.00′	03°23′12"	88.69′	177.33′	30 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	N 49°02′28" E	550.72′
2	N 51°36′29" E	312.56′
3	N 45°41′19" E	197.08′
4	N 49°04′31" E	587.07′
5	S 40°58′08" E	1700.00′
6	S 41°00′03" E	1188.39′

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	38.00′ LT "FFS" 9+60.21	55.63′ LT "FFS" 15+29.91	590′	24′
2	44.00′ RT "FFS" 9+58.64	51.12′ RT "FFS" 15+35.07	588′	24′
3	62.40′ LT "FFS" 16+90.34	38.00′ RT "FHF" 2+58.88	562′	24′
4	55.65′ RT "FFS" 16+91.82	38.00′ RT "FHF" 10+00.00	584′	24′
5	51.14′ LT "FHF" 3+02.33	44.00′ LT "FFS" 23+18.61	536′	10′
6	38.00′ LT "FHF" 10+00.00	44.00′ RT "FFS" 23+21.97	627′	10′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
FRESNO ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9555-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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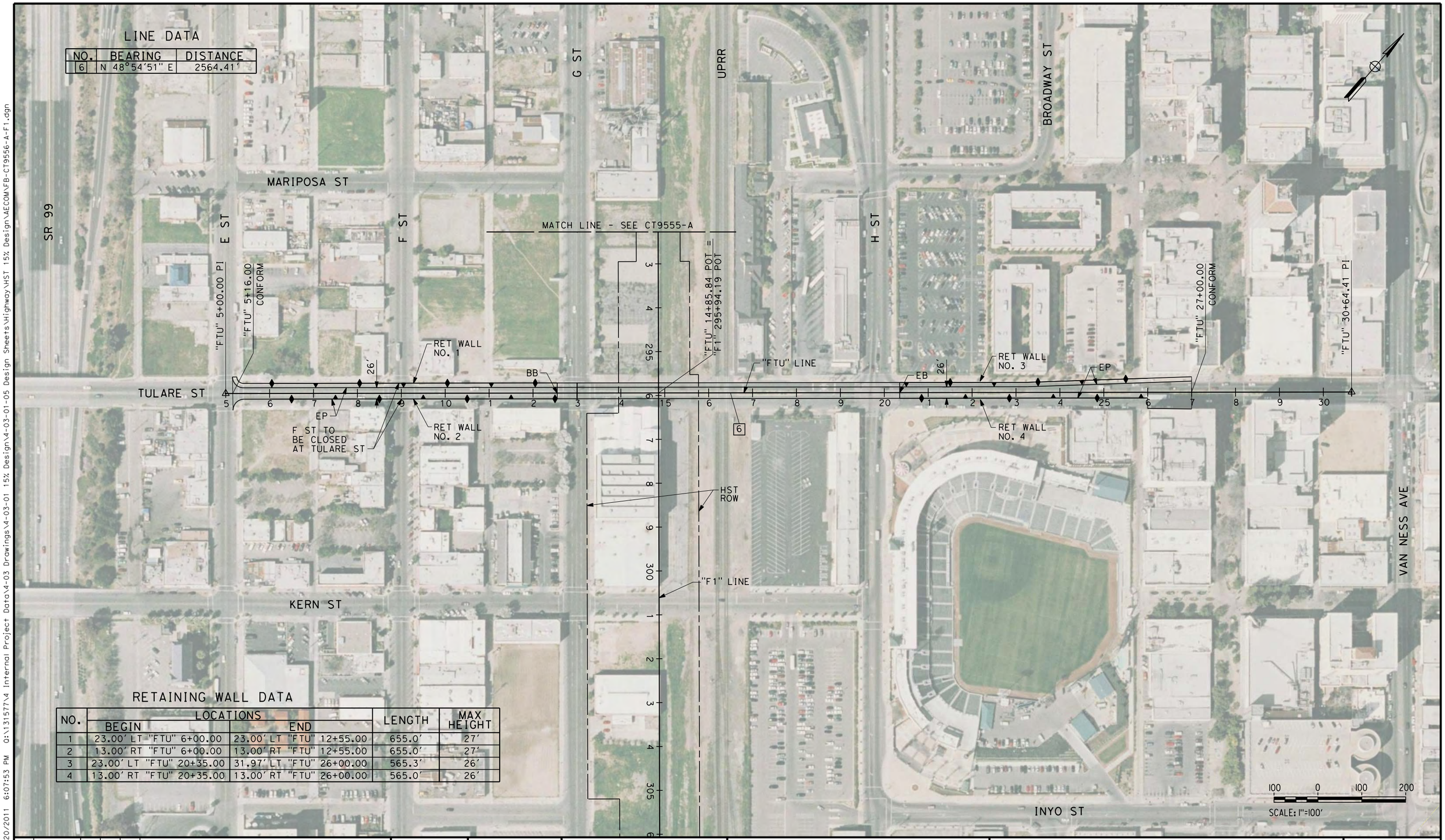


LINE DATA

NO.	BEARING	DISTANCE
6	N 48°54'51" E	2564.41'

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	23.00' LT "FTU" 6+00.00	23.00' LT "FTU" 12+55.00	655.0'	27'
2	13.00' RT "FTU" 6+00.00	13.00' RT "FTU" 12+55.00	655.0'	27'
3	23.00' LT "FTU" 20+35.00	31.97' LT "FTU" 26+00.00	565.3'	26'
4	13.00' RT "FTU" 20+35.00	13.00' RT "FTU" 26+00.00	565.0'	26'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

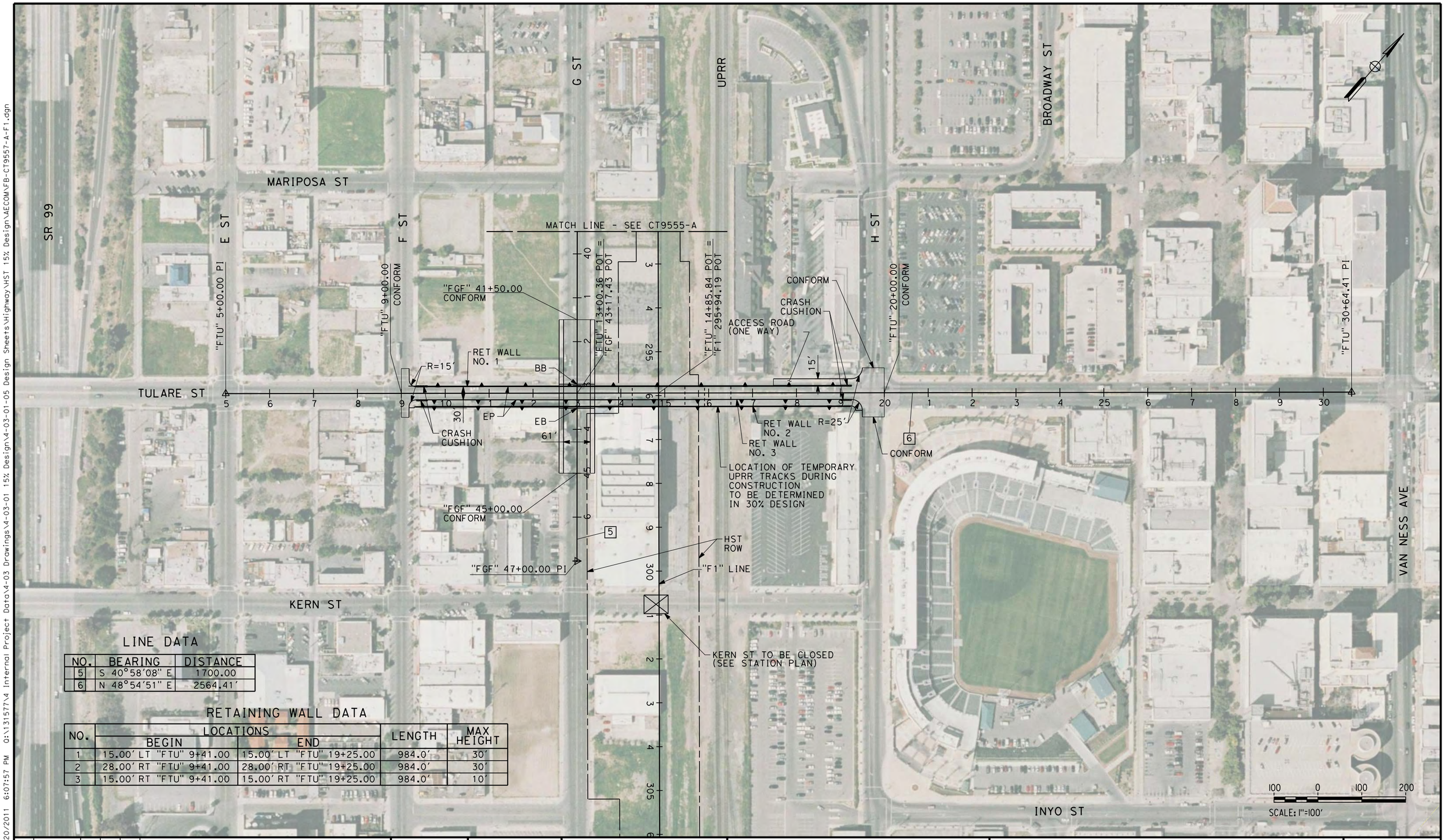
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
TULARE ST (OVERHEAD)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9556-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:53 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9556-A-F1.dgn



LINE DATA

NO.	BEARING	DISTANCE
5	S 40°58'08" E	1700.00
6	N 48°54'51" E	2564.41'

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	15.00' LT "FTU" 9+41.00	15.00' LT "FTU" 19+25.00	984.0'	30'
2	28.00' RT "FTU" 9+41.00	28.00' RT "FTU" 19+25.00	984.0'	30'
3	15.00' RT "FTU" 9+41.00	15.00' RT "FTU" 19+25.00	984.0'	10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

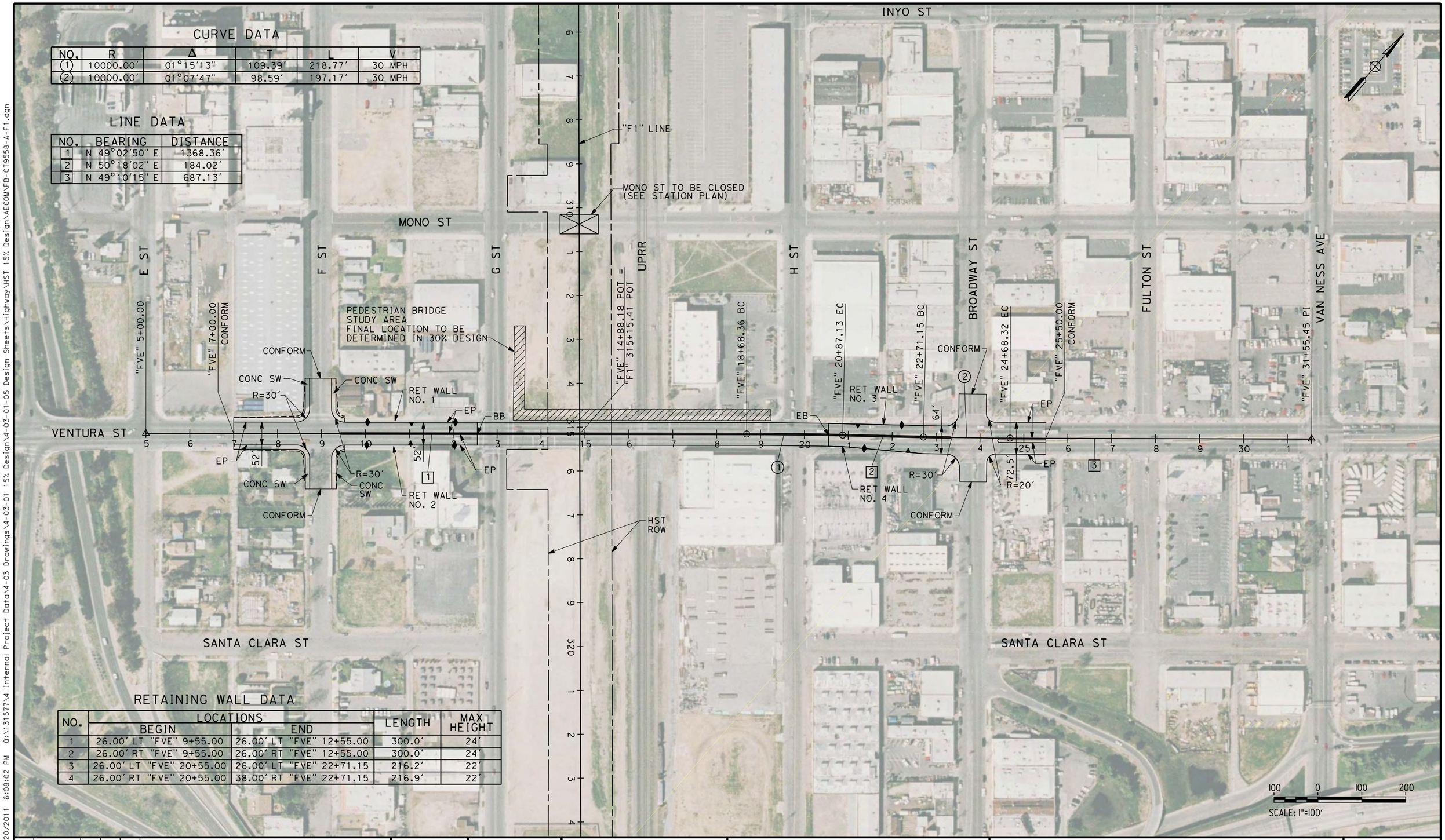
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
TULARE ST (UNDERPASS)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9557-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:07:57 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9557-A-F1.dgn



CURVE DATA

NO.	R	Δ	T	L	V
1	10000.00'	01°15'13"	109.39'	218.77'	30 MPH
2	10000.00'	01°07'47"	98.59'	197.17'	30 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	N 49°02'50" E	1368.36'
2	N 50°18'02" E	184.02'
3	N 49°10'15" E	687.13'

RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
1	26.00' LT "FVE" 9+55.00	26.00' LT "FVE" 12+55.00	300.0'	24'
2	26.00' RT "FVE" 9+55.00	26.00' RT "FVE" 12+55.00	300.0'	24'
3	26.00' LT "FVE" 20+55.00	26.00' LT "FVE" 22+71.15	216.2'	22'
4	26.00' RT "FVE" 20+55.00	38.00' RT "FVE" 22+71.15	216.9'	22'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

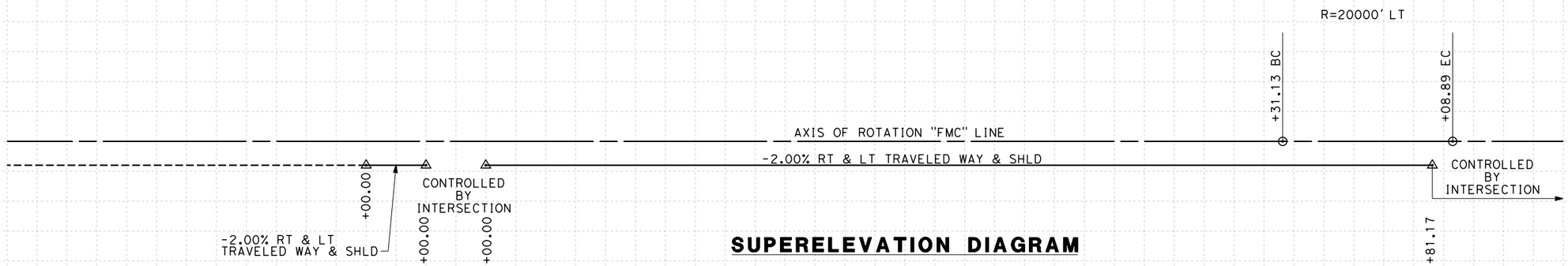
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
VENTURA ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9558-A
SCALE AS SHOWN
SHEET NO. ### OF ###

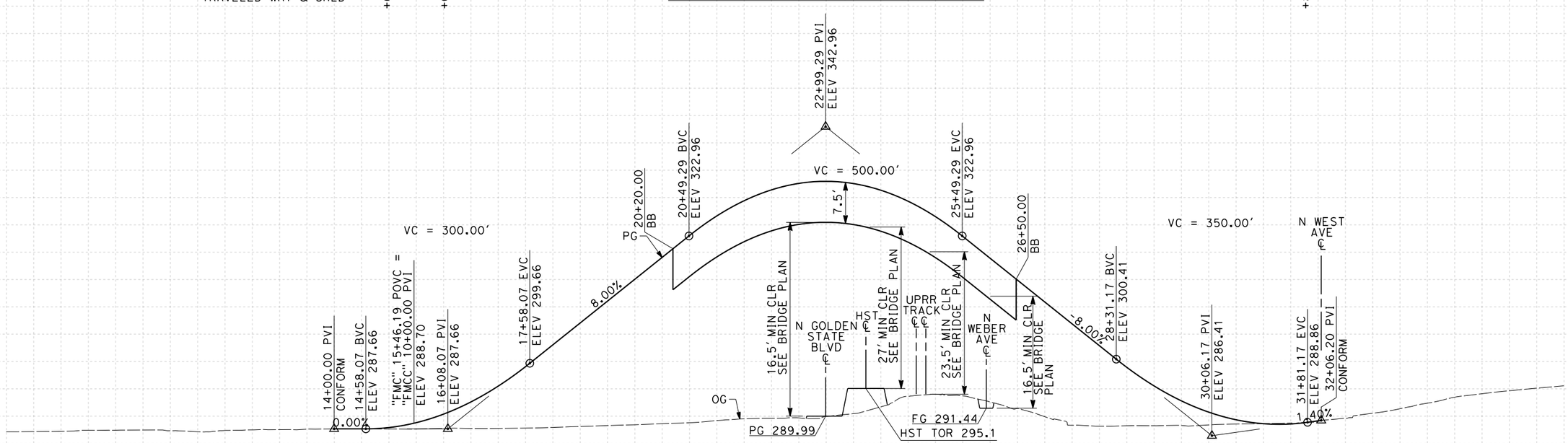
eron.sudhausen 7/20/2011 6:08:02 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01 15% Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9558-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FMC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

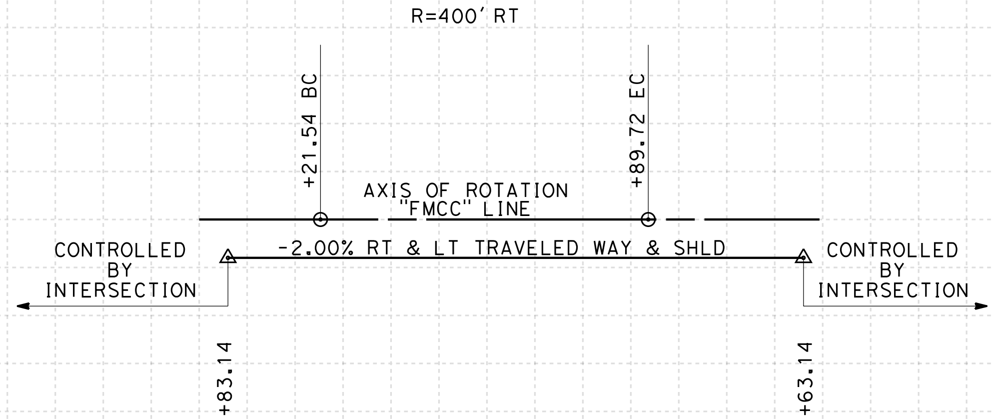
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
W McKINLEY AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9559-A
SCALE AS SHOWN
SHEET NO. ### OF ###

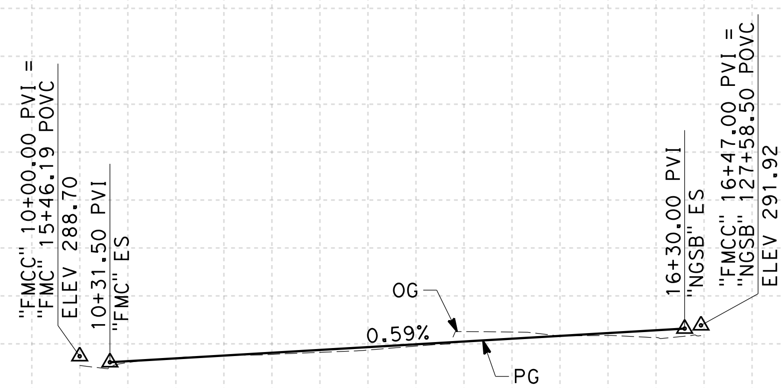
eron.sudhausen 7/20/2011 6:08:06 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9559-A-F1.dgn
esign\4-03-01-05 Design

NOTES:

1. VERTICAL DESIGN SPEED = 25 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT 1001 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FMCC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION
-
NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

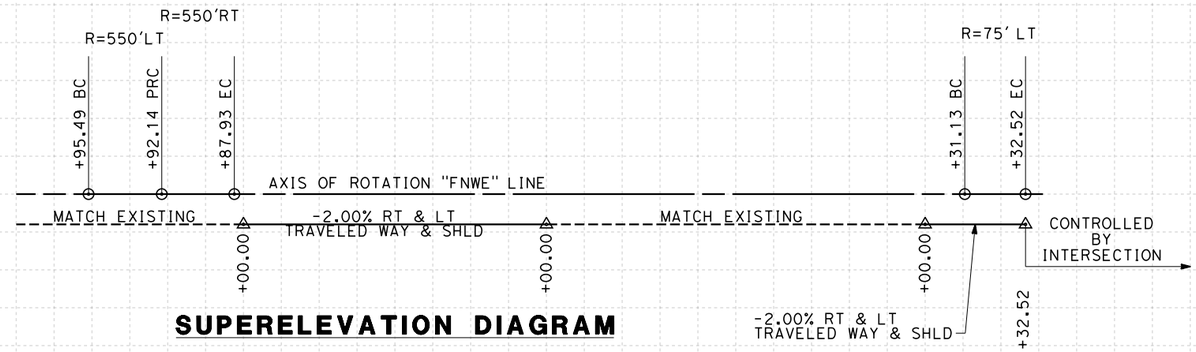
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
McKINLEY AVE CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9560-A
SCALE AS SHOWN
SHEET NO. ### OF ###

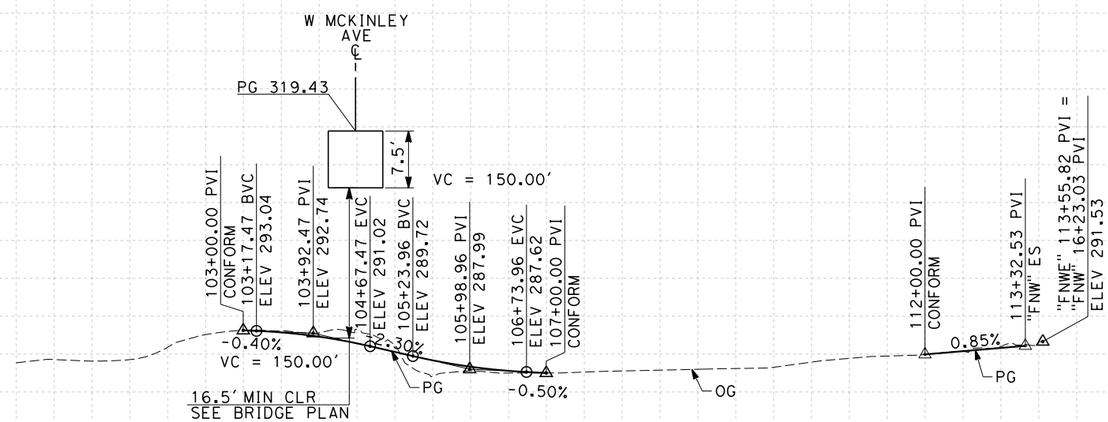
eron.sudhausen 7/20/2011 6:08:07 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9560-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE UNDER STRUCTURE IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 25 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1001 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FNWE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	TOTAL
CY	Exc																
	Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

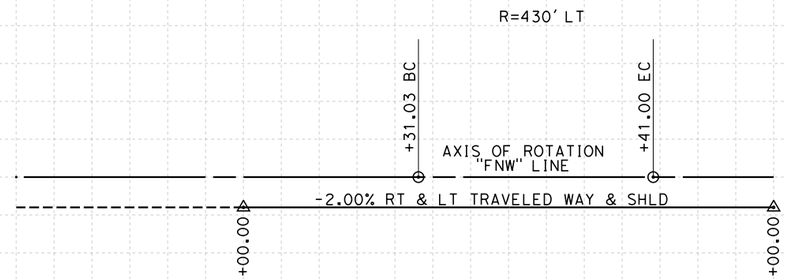
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N WEBER AVE

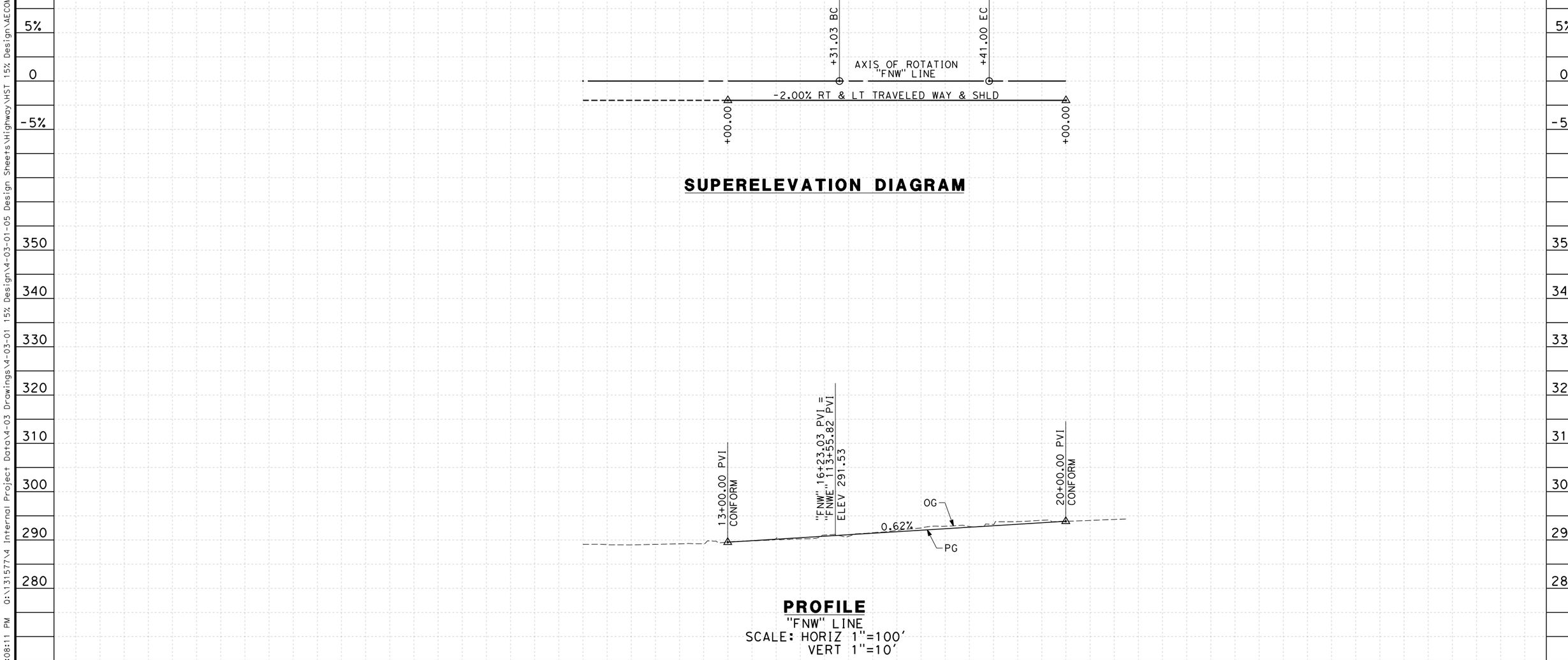
CONTRACT NO. HSR 06-0003
DRAWING NO. CT9561-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:09 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9561-A-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 25 MPH AT TRAFFIC CIRCLE
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1001 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FNW" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

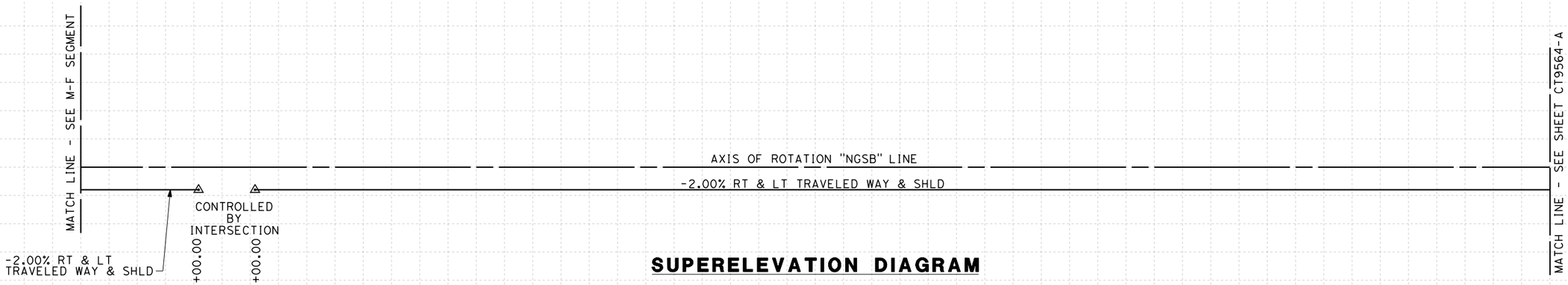
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N WEST AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9562-A
SCALE AS SHOWN
SHEET NO. ### OF ###

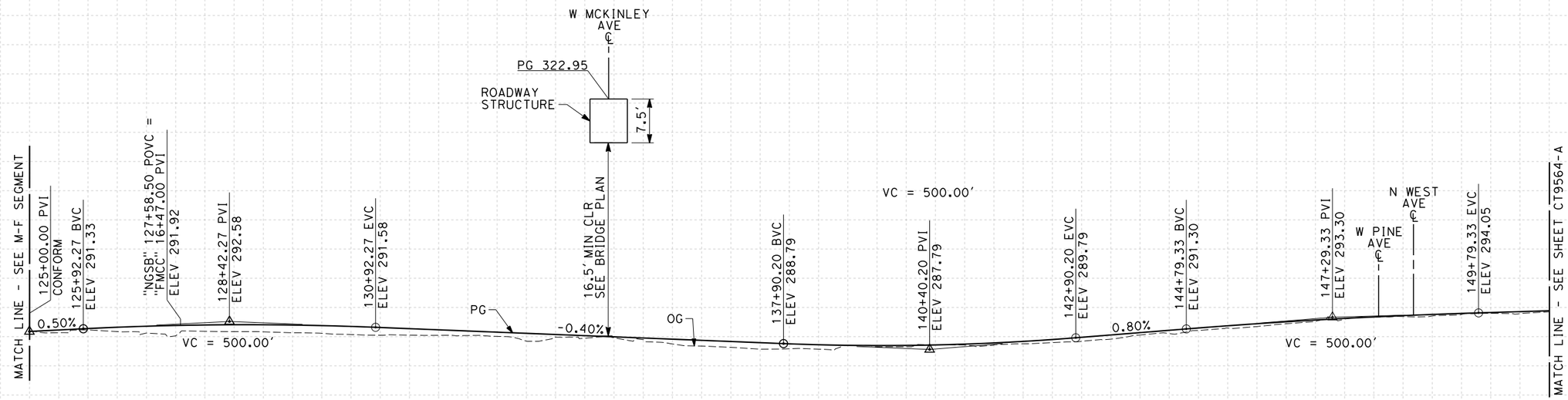
eron.sudhausen 7/20/2011 6:08:11 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9562-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE UNDER STRUCTURE IS 16.5' FROM ROAD SURFACE.
2. VERTICAL DESIGN SPEED = 50 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1001, CT1005, AND CT1007 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"NGSB" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		125	6	7	8	9	130	1	2	3	4	135	6	7	8	9	140	1	2	3	4	145	6	7	8	9	150	1	TOTAL
CY	Exc																												
	Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

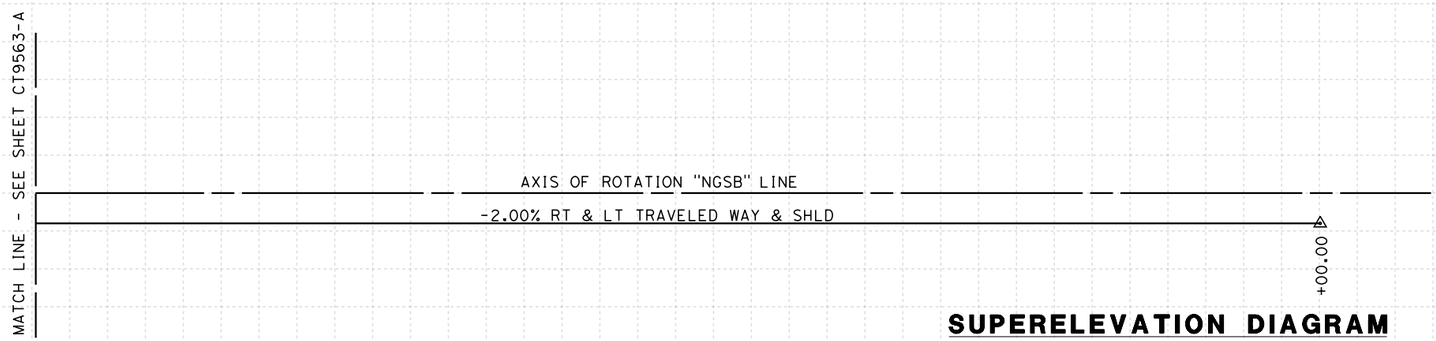
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

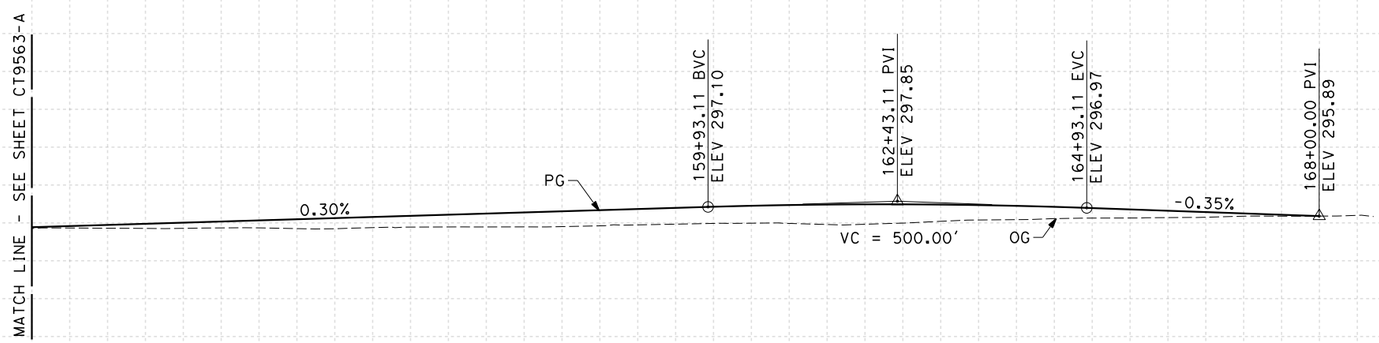
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N GOLDEN STATE BLVD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9563-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:13 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9563-A-F1.dgn



SUPERELEVATION DIAGRAM



PROFILE

"NGSB" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	1	2	3	4	155	6	7	8	9	160	1	2	3	4	165	6	7	8	9	170	1	TOTAL
CY Exc																						
CY Emb																						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

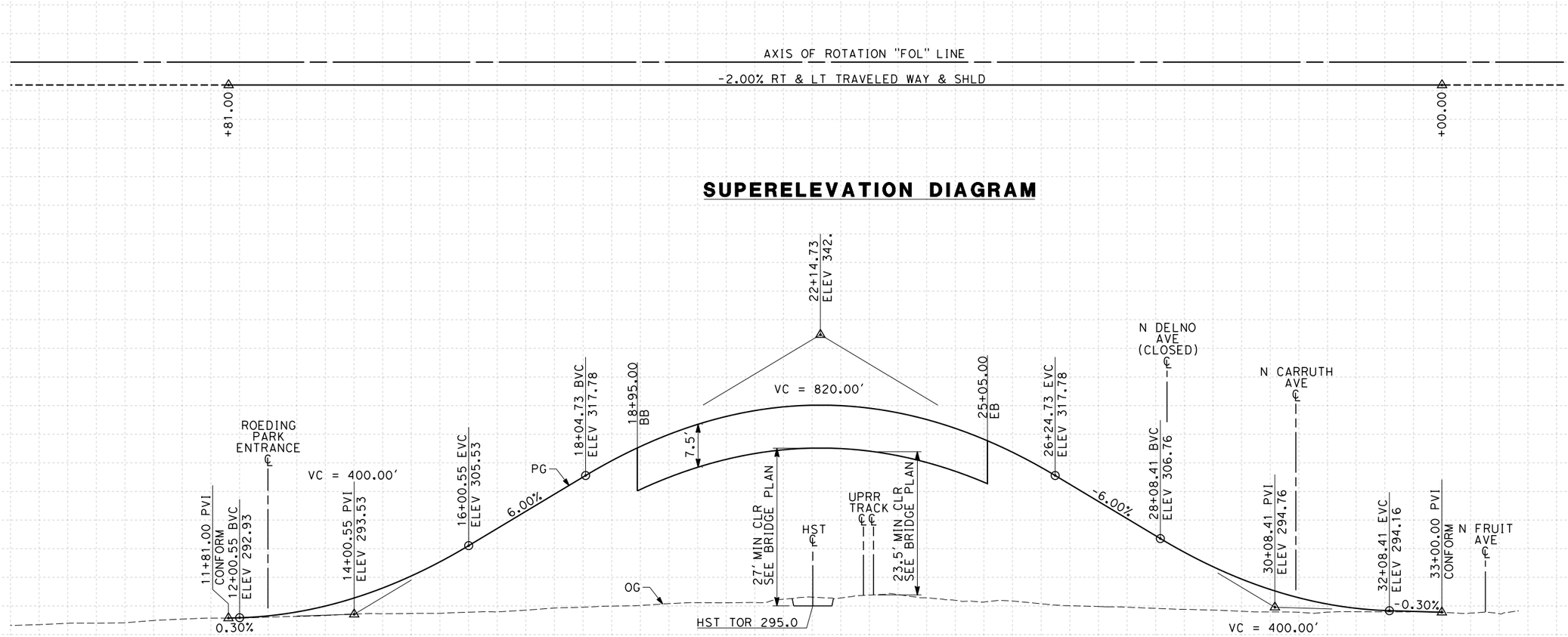
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N GOLDEN STATE BLVD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9564-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:15 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9564-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 40 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



PROFILE
"FOL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY	Exc																														
	Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

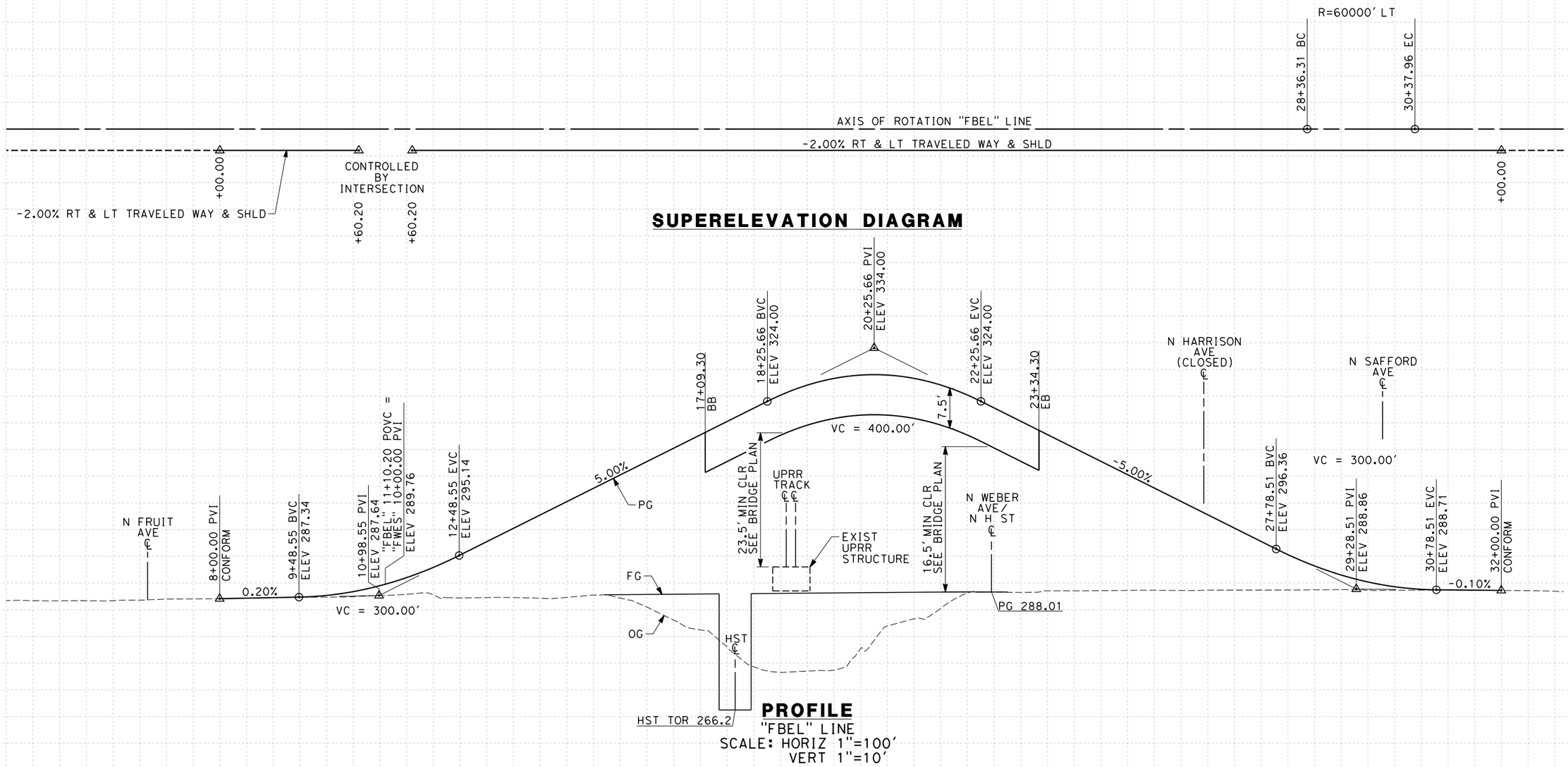
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
W OLIVE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9565-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:17 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9565-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

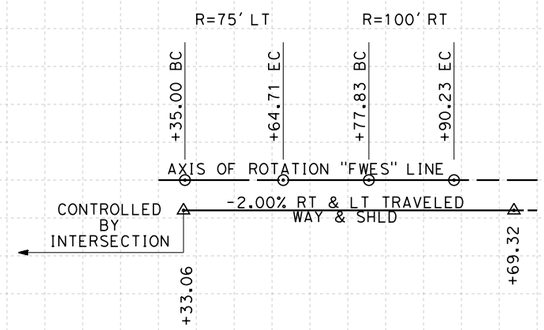
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
BELMONT AVE

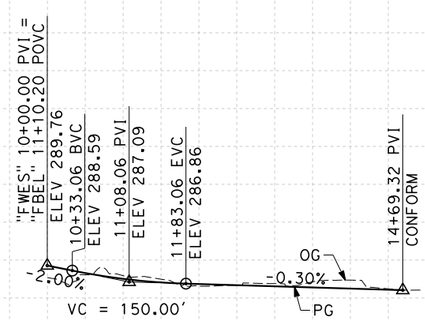
CONTRACT NO. HSR 06-0003
DRAWING NO. CT9566-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:18 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9566-A-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 25 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1008 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FWES" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		10	1	2	3	4	15	TOTAL
CY	Exc							
	Emb							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

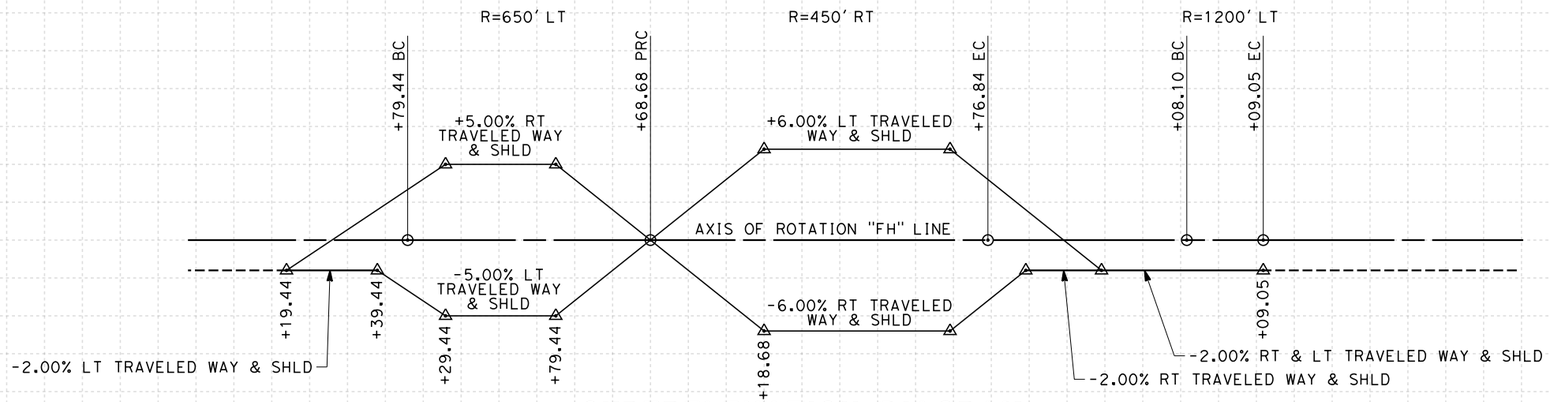
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N WESLEY AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9567-A
SCALE AS SHOWN
SHEET NO. ### OF ###

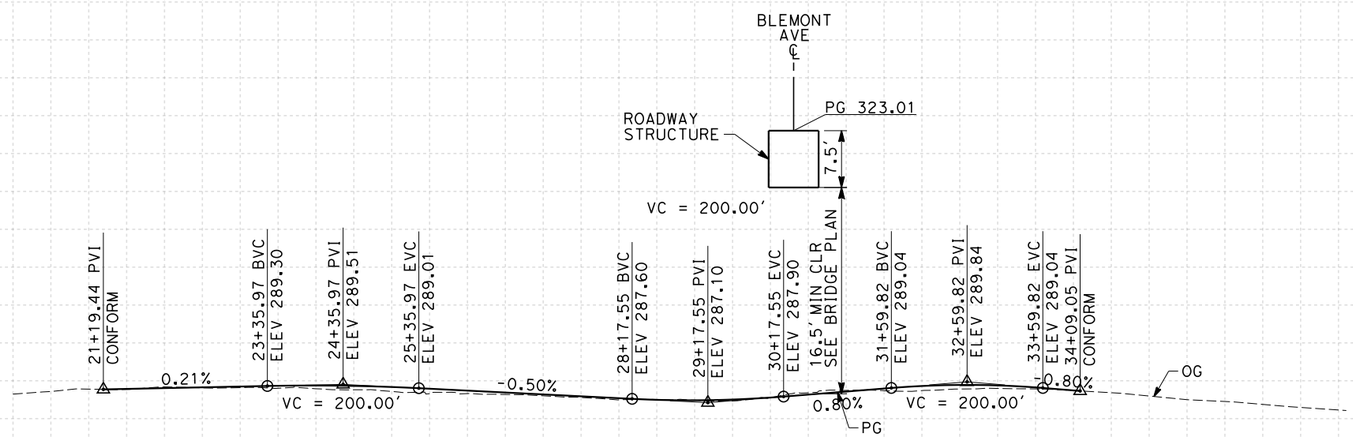
eron.sudhausen 7/20/2011 6:08:20 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9567-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE UNDER STRUCTURE IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 35 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1008 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FH" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	TOTAL
CY Exc																				
CY Emb																				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

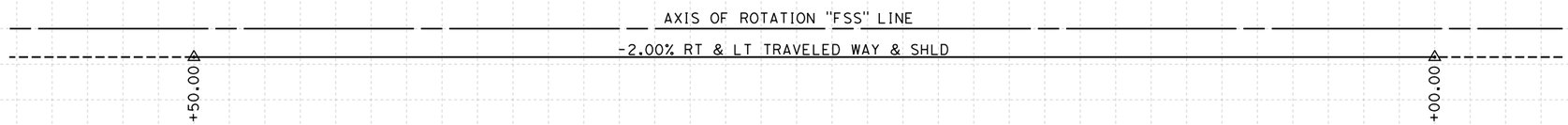
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
N H ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9568-A
SCALE AS SHOWN
SHEET NO. ### OF ###

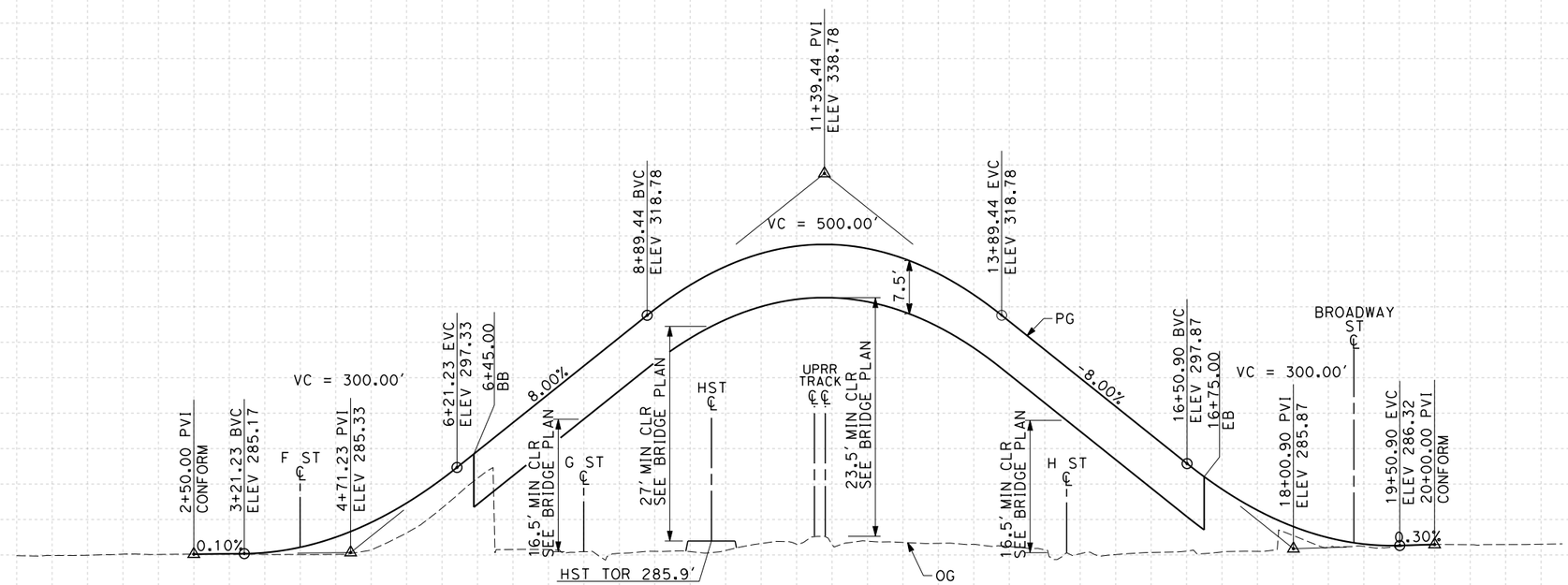
eron.sudhausen 7/20/2011 6:08:22 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9568-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARNACE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FSS" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	TOTAL
CY Exc																								
CY Emb																								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

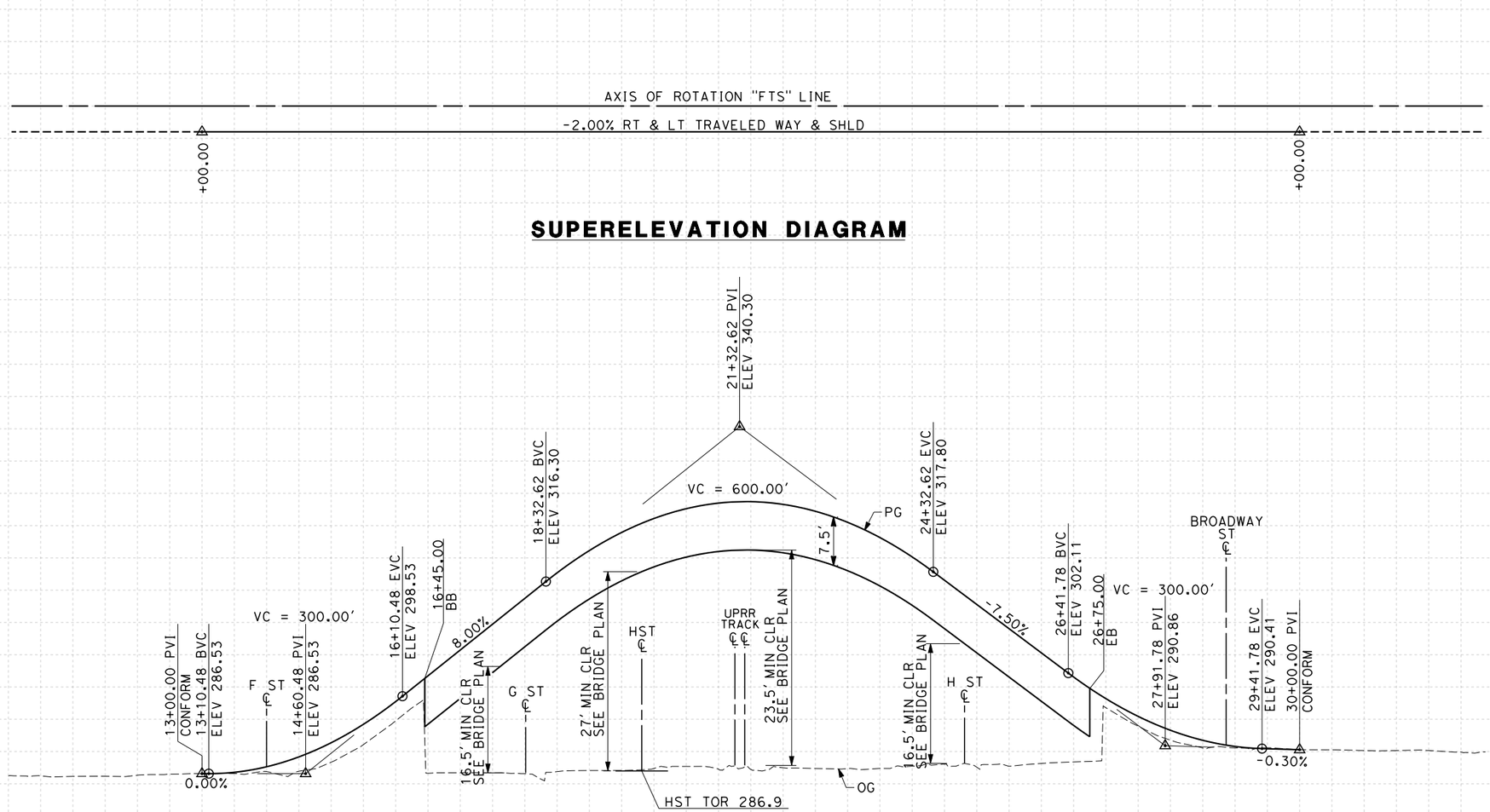
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STANISLAUS ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9569-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:24 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9569-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE FOR BNSF IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

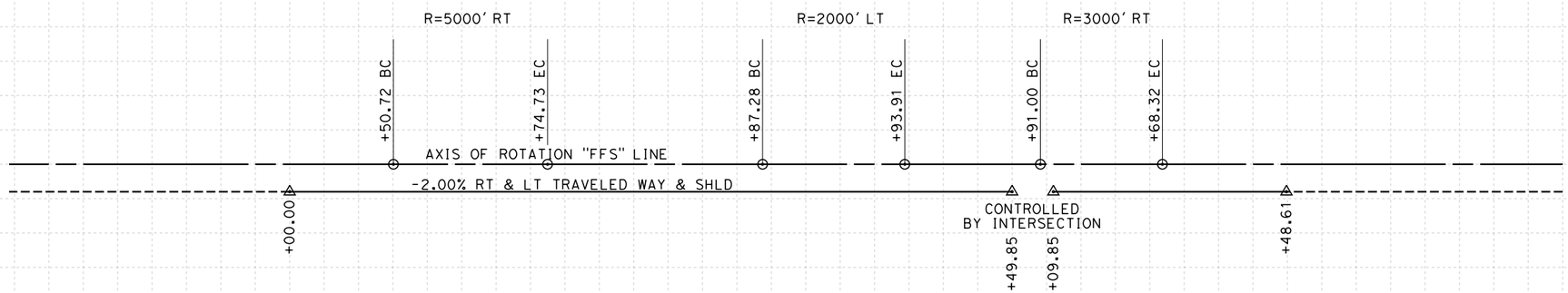
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
TUOLUMNE ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9570-A
SCALE AS SHOWN
SHEET NO. ### OF ###

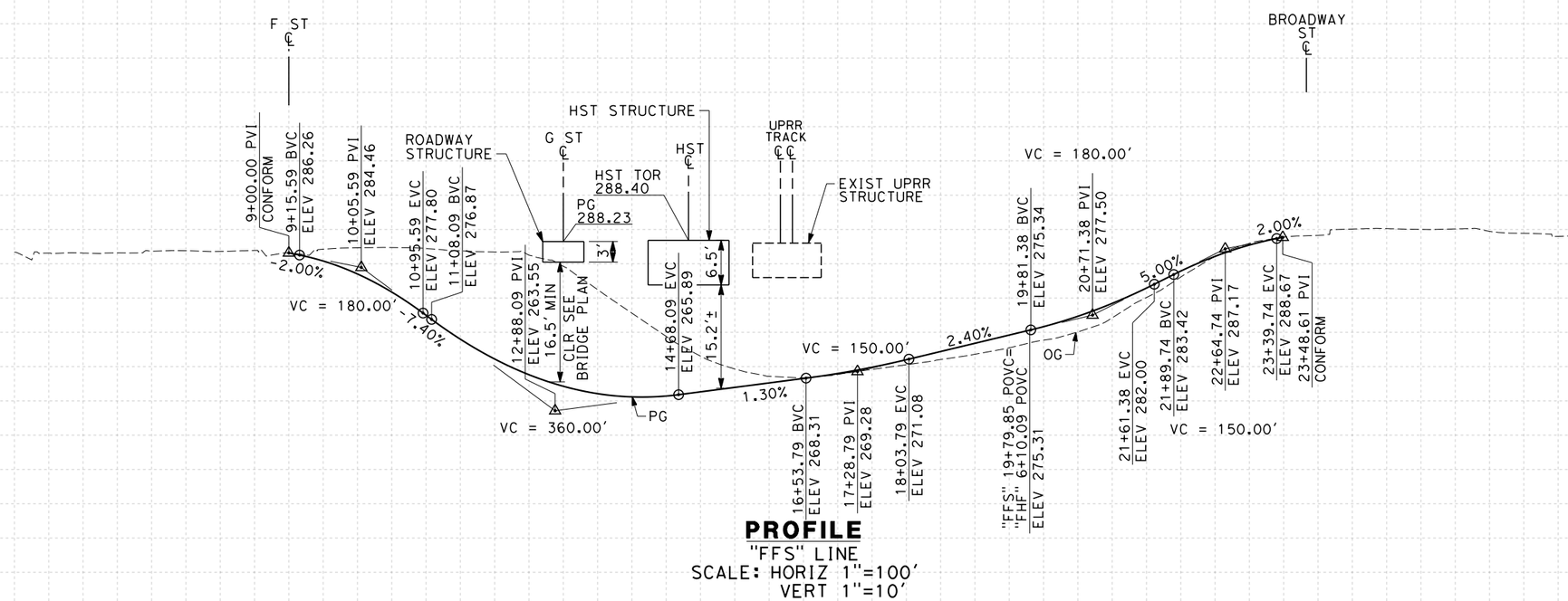
eron.sudhausen 7/20/2011 6:08:26 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9570-A-F1.dgn

NOTES:

1. VERTICAL CLEARANCE FOR FRESNO STREET UNDERPASS TO MATCH EXISTING CONDITION
2. VERTICAL DESIGN SPEED = 30 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FFS" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

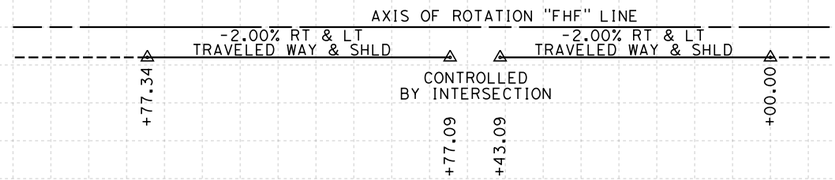
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
FRESNO ST

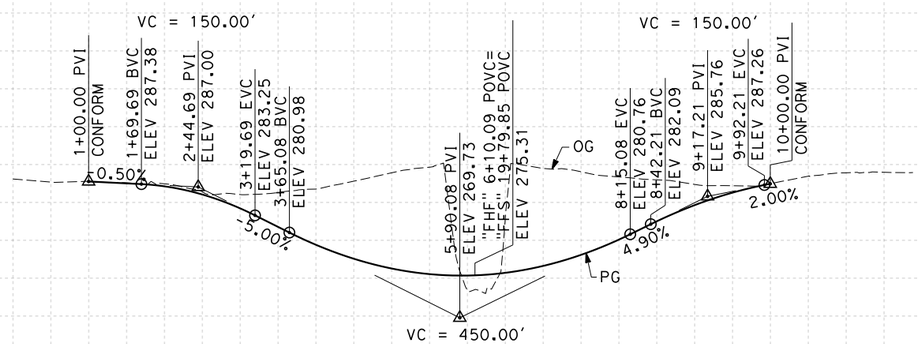
CONTRACT NO. HSR 06-0003
DRAWING NO. CT9571-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:27 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9571-A-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 40 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1013 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FHF" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		0	1	2	3	4	5	6	7	8	9	10	1	2	3	TOTAL
CY	Exc															
	Emb															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

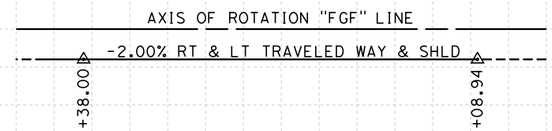
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
H ST (FRESNO ST)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9572-A
SCALE AS SHOWN
SHEET NO. ### OF ###

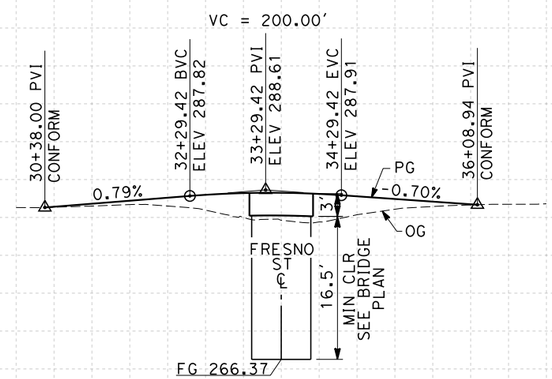
eron.sudhausen 7/20/2011 6:08:29 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9572-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 40 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1013 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FGF" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		30	1	2	3	4	35	6	7	8	TOTAL
CY	Exc										
	Emb										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

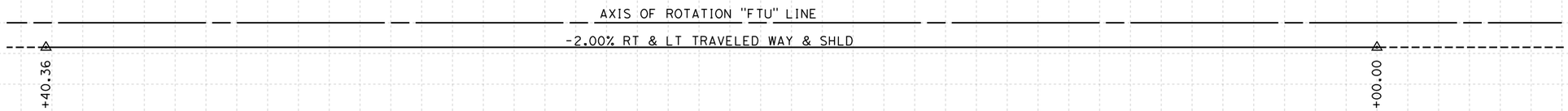
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
G ST (FRESNO ST)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9573-A
SCALE AS SHOWN
SHEET NO. ### OF ###

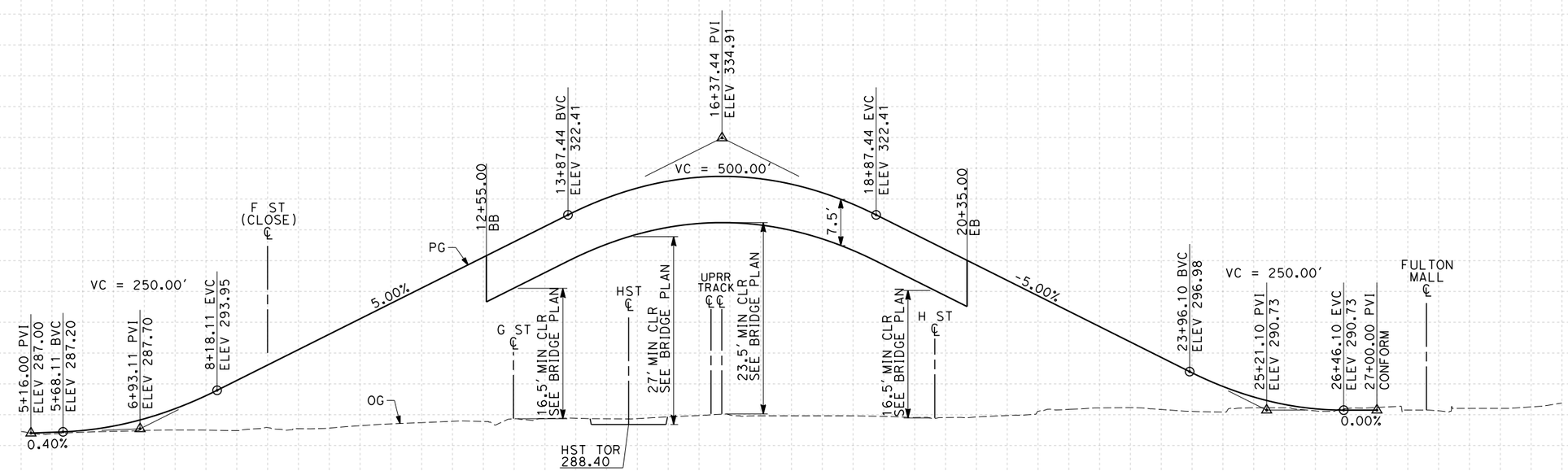
eron.sudhausen 7/20/2011 6:08:31 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9573-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FTU" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

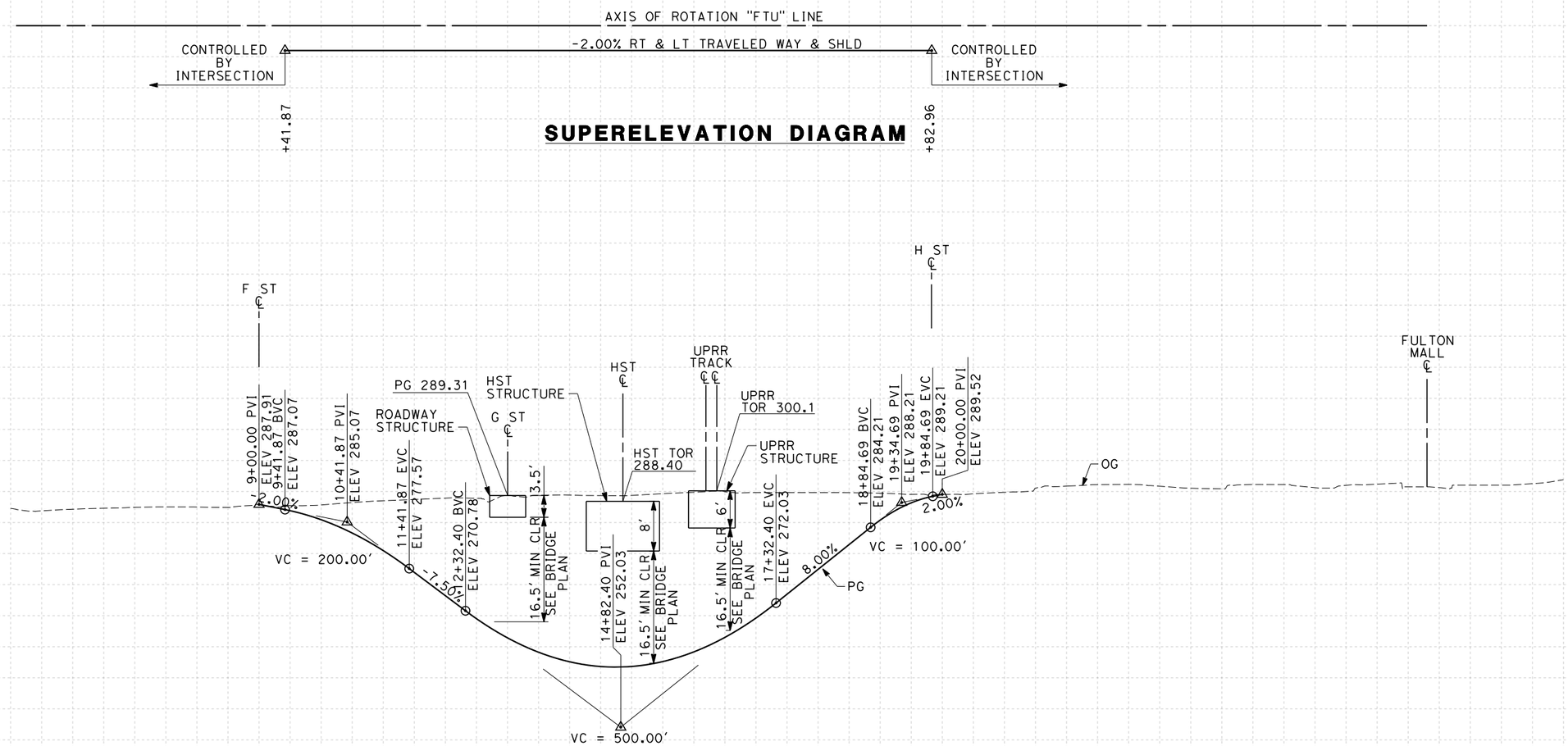
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
TULARE ST (OVERHEAD)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9574-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:32 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9574-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE UNDER STRUCTURE IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 25 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



PROFILE

"FTU" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
CY	Exc																									
	Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

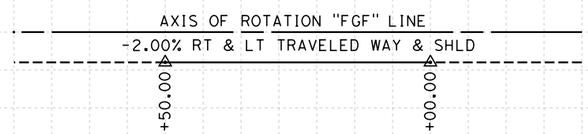
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
TULARE ST (UNDERPASS)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9575-A
SCALE AS SHOWN
SHEET NO. ### OF ###

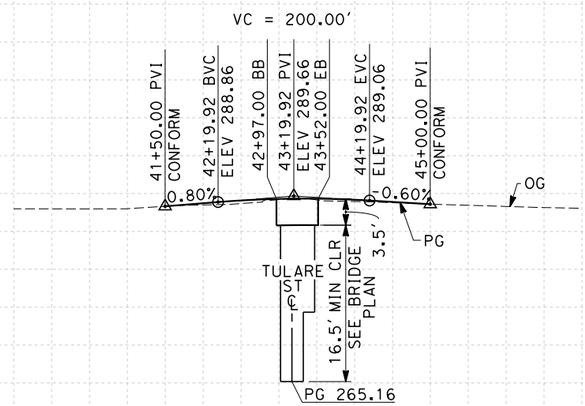
eron.sudhausen 7/20/2011 6:08:34 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9575-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 40 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1017 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"FGF" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	40	1	2	3	4	45	6	7	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

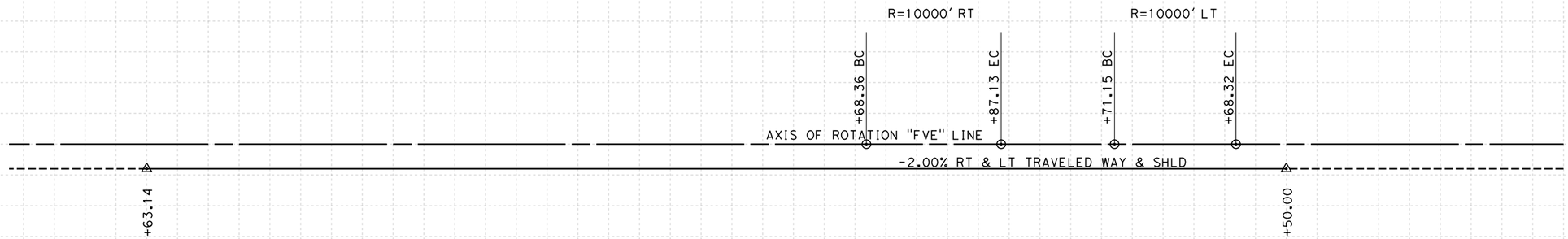
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
G ST (TULARE ST UNDERPASS)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9576-A
SCALE AS SHOWN
SHEET NO. ### OF ###

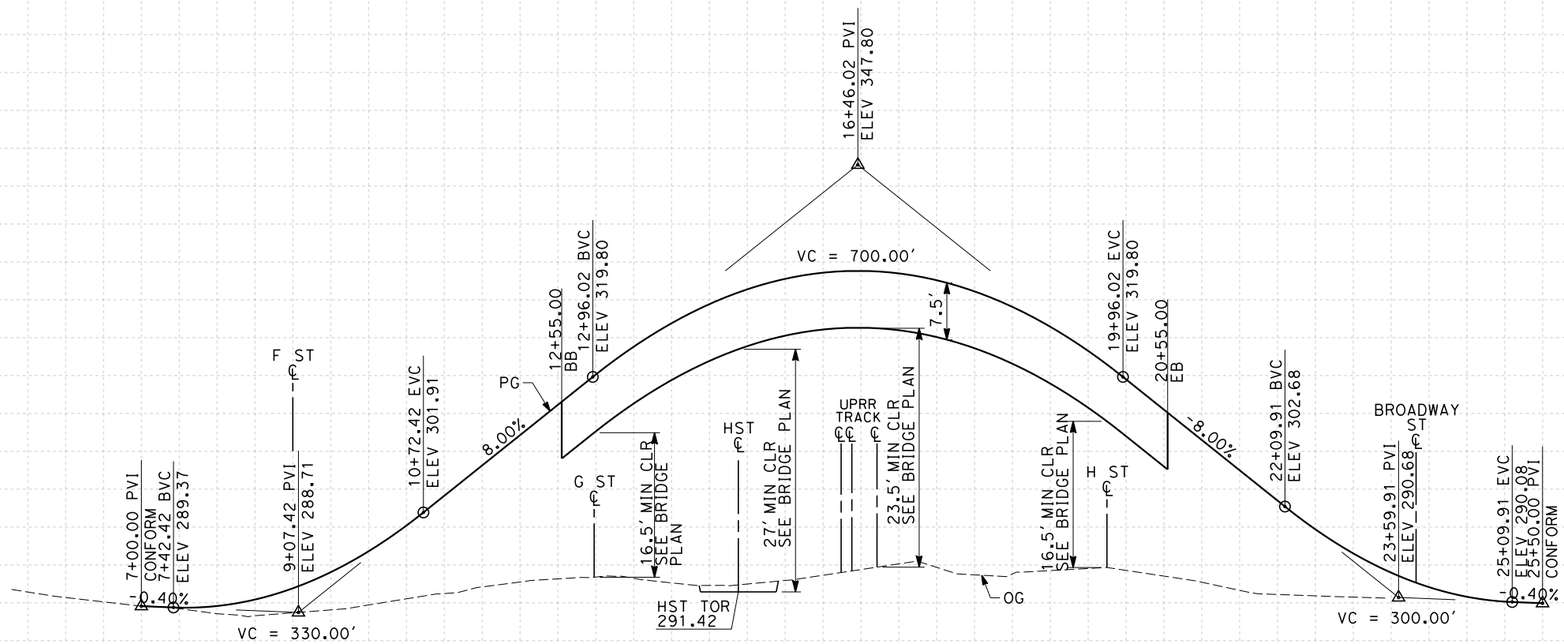
eron.sudhausen 7/20/2011 6:08:35 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9576-A-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE
4. VERTICAL DESIGN SPEED = 30 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FVE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
VENTURA ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9577-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:37 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9577-A-F1.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

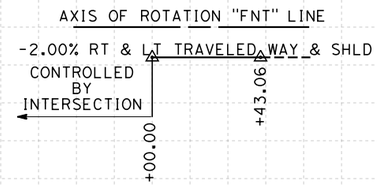
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY LAYOUT
N THORNE AVE

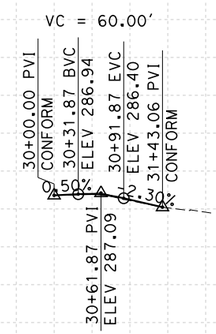
CONTRACT NO. HSR 06-0003
DRAWING NO. CR9578-A
SCALE AS SHOWN
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:44 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\AECOM\FB-CR9578-A-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 15 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FNT" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	30	1	2	3	6	7	8	9	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
N THORNE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR9579-A
SCALE AS SHOWN
SHEET NO. ### OF ###

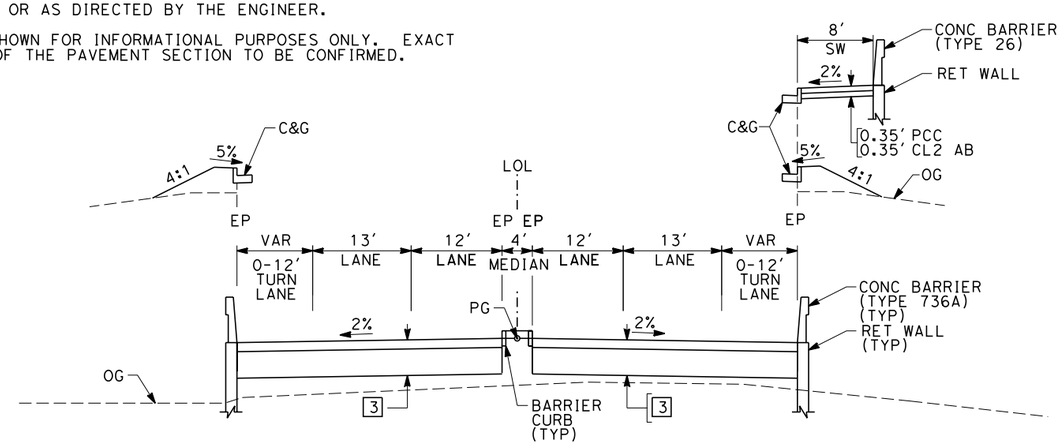
eron.sudhausen 7/20/2011 6:08:47 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CR9579-A-F1.dgn

NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

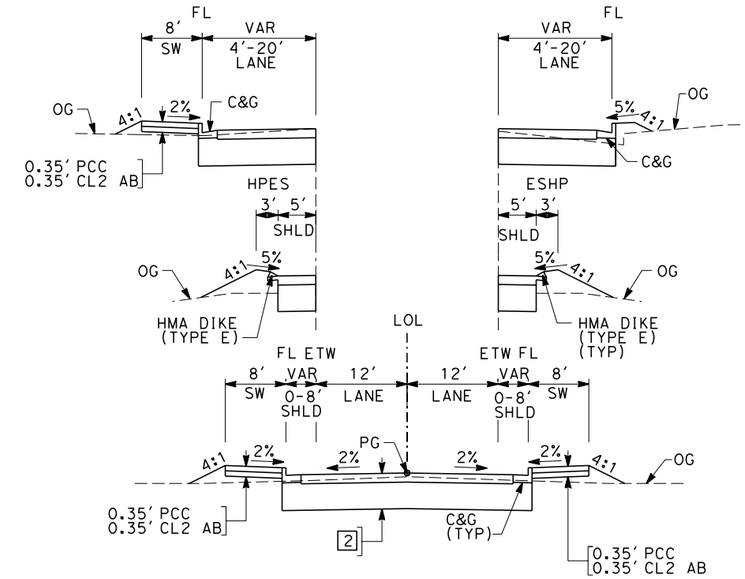
STRUCTURAL SECTIONS
TYPICAL ROADWAY

1 — 0.65' HMA (TYPE A) / 1.75' CL2 AB
2 — 0.35' HMA (TYPE A) / 1.00' CL2 AB
3 — 0.40' HMA (TYPE A) / 1.50' CL2 AB
4 — 0.55' HMA (TYPE A) / 1.50' CL2 AB



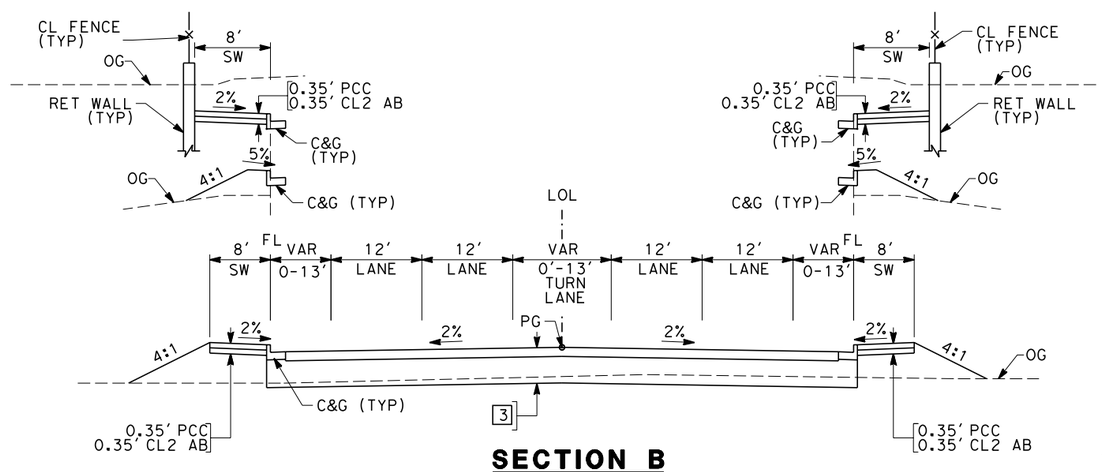
SECTION A

"FMC"	16+00.00 TO 22+60.00	"FBEL"	23+34.30 TO 29+55.58
"FMC"	26+50.00 TO 29+31.13	"FVE"	9+55.00 TO 12+55.00
"FOL"	13+05.96 TO 19+19.99	"FVE"	20+55.00 TO 22+71.15
"FOL"	24+82.94 TO 30+06.12	"FCH"	16+85.51 TO 21+20.00
"FBEL"	12+14.63 TO 17+09.30	"FCH"	29+45.00 TO 35+45.11



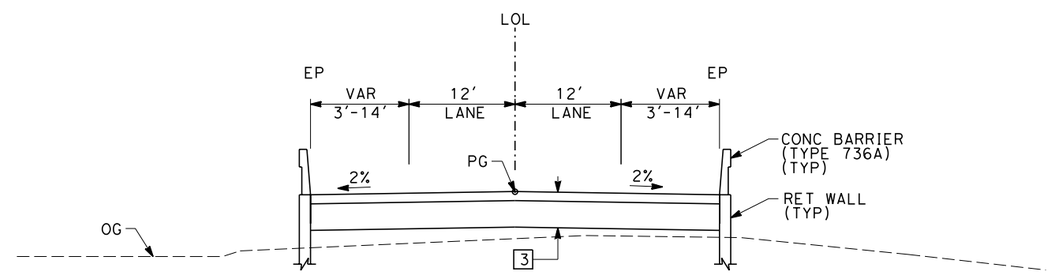
SECTION C

"FMCC"	10+00.00 TO 16+47.00	"FSL"	11+36.79 TO 17+27.26
"FNWE"	103+00.00 TO 107+00.00	"FSE"	1+00.00 TO 14+12.10
"FNWE"	112+00.00 TO 113+55.54	"FNT"	30+00.00 TO 31+46.01
"NGSB"	125+00.00 TO 167+12.45	"FGC"	0+50.00 TO 4+49.83
"FWES"	10+00.00 TO 14+69.32		



SECTION B

"FMC"	14+00.00 TO 16+00.00	"FTS"	13+00.00 TO 14+54.11
"FMC"	29+31.13 TO 32+08.89	"FTS"	28+43.67 TO 30+00.00
"FOL"	11+81.00 TO 13+05.96	"FVE"	7+00.00 TO 9+55.00
"FOL"	30+06.12 TO 33+00.00	"FVE"	22+71.15 TO 25+50.00
"FBEL"	8+00.00 TO 12+14.63	"FCH"	14+00.00 TO 16+85.51
"FBEL"	29+55.58 TO 32+00.00	"FCH"	35+45.11 TO 37+00.00
"FSS"	2+50.00 TO 4+38.84	"FGF"	30+38.00 TO 33+08.00
"FSS"	18+40.67 TO 20+00.00	"FGF"	33+92.00 TO 36+08.94
"FHF"	1+77.34 TO 10+00.00	"FGF"	41+50.00 TO 45+00.00



SECTION D

"FSS"	4+38.84 TO 6+45.00		
"FSS"	16+75.00 TO 18+40.67		
"FTS"	14+54.11 TO 16+75.00		
"FTS"	26+75.00 TO 28+43.67		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

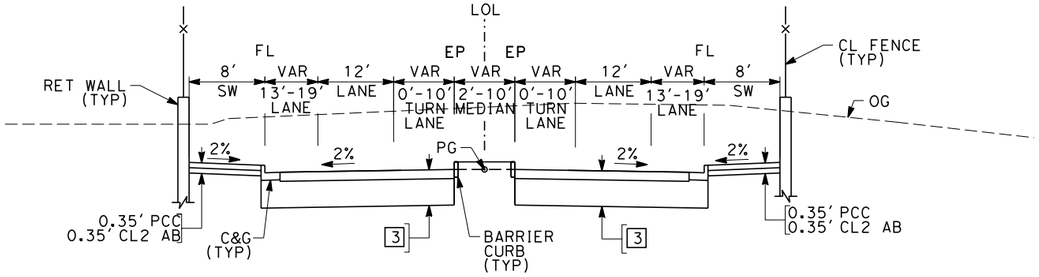
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

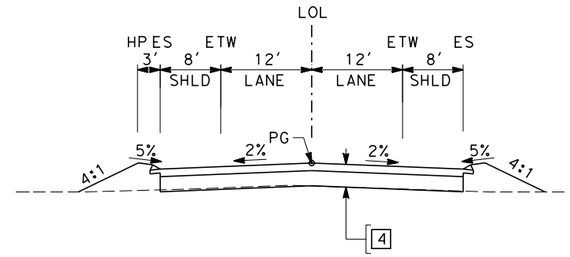
CONTRACT NO. HSR 06-0003
DRAWING NO. CT9580-A
SCALE NO SCALE
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:51 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9580-A-F1.dgn



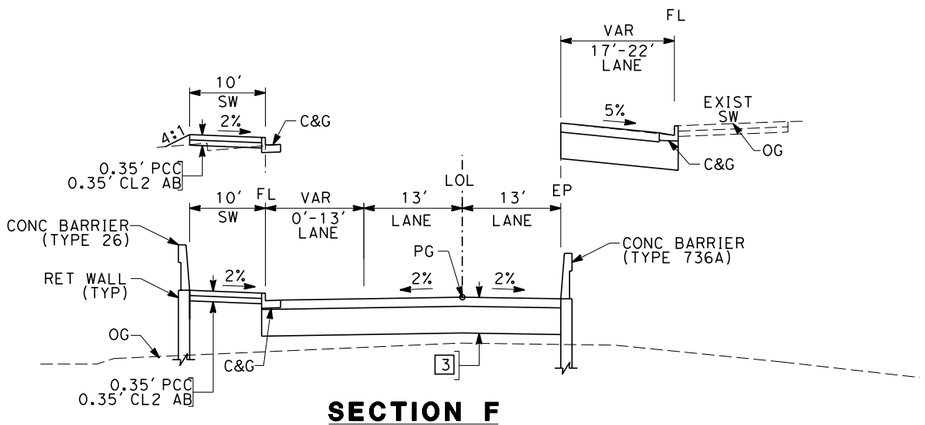
SECTION E

"FFS" 9+00.00 TO 23+48.61



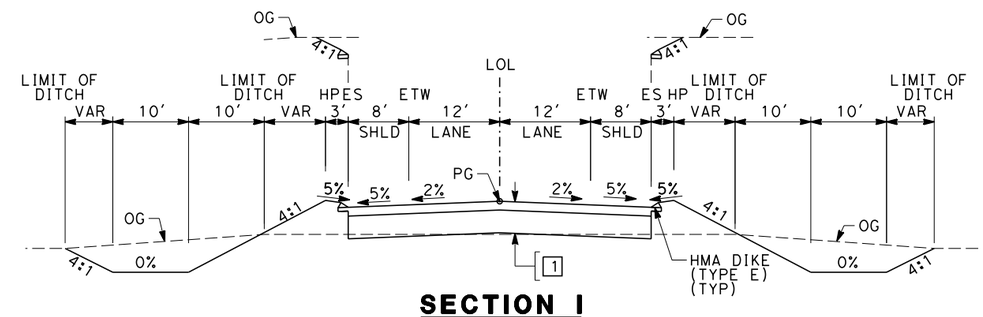
SECTION H

"FCE" 21+00.00 TO 24+00.00



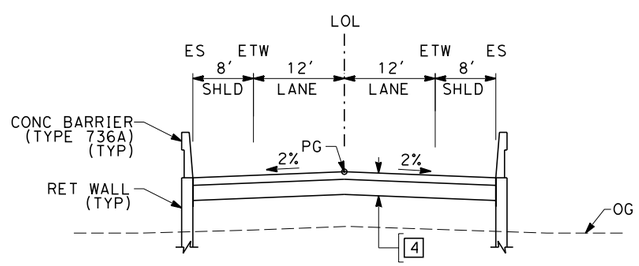
SECTION F

"FTU" 5+16.00 TO 12+55.43 (OVERHEAD OPTION)
"FTU" 20+34.30 TO 27+00.00 (OVERHEAD OPTION)



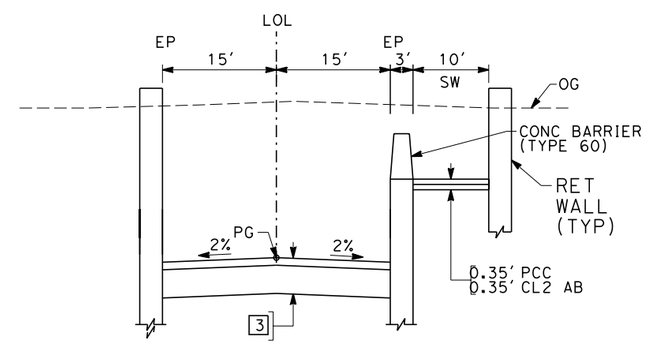
SECTION I

"FAM" 12+50.00 TO 24+63.00
"FAM" 28+13.00 TO 39+91.28



SECTION G

"FCE" 24+00.00 TO 32+60.00
"FCE" 37+80.00 TO 46+00.00



SECTION J

"FTU" 9+00.00 TO 20+00.00 (UNDERPASS OPTION)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

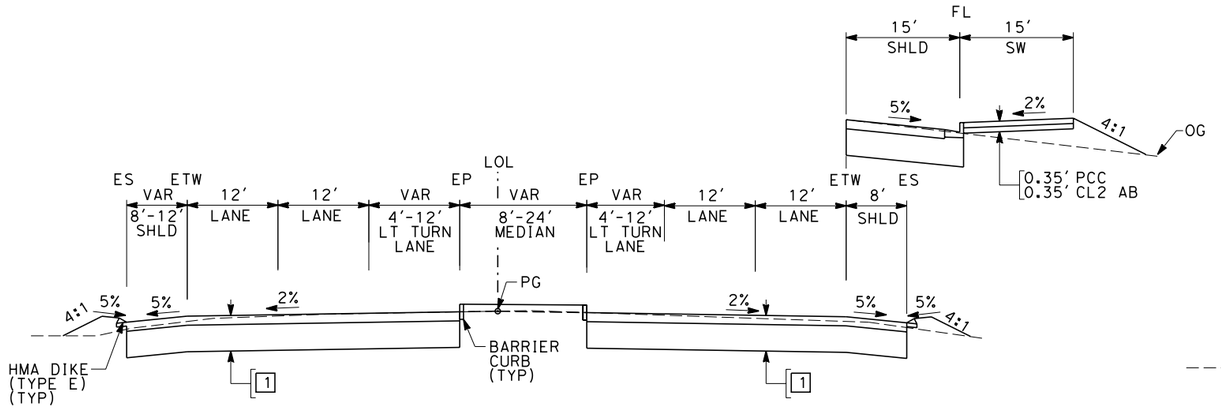
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

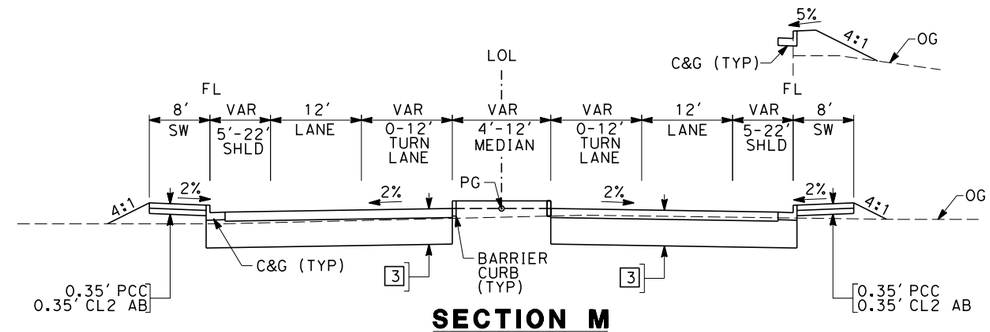
CONTRACT NO. HSR 06-0003
DRAWING NO. CT9581-A
SCALE NO SCALE
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:53 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9581-A-F1.dgn



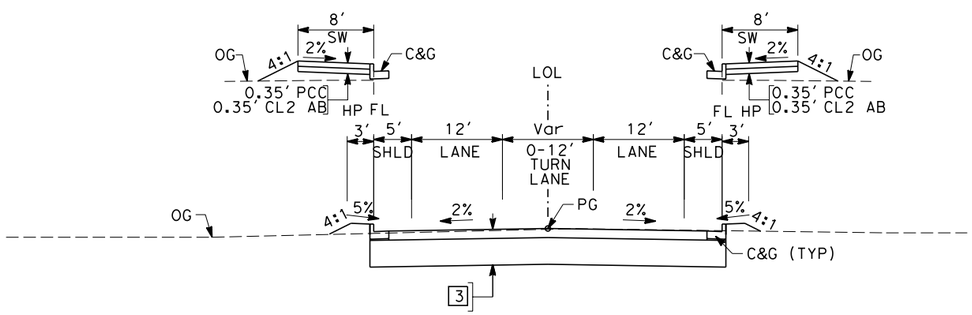
SECTION K

"SGSB" 2+00.00 TO 6+00.00



SECTION M

"FNW" 13+00.00 TO 18+25.72



SECTION L

"FH" 21+19.44 TO 34+09.05
"FNW" 18+25.72 TO 20+00.00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

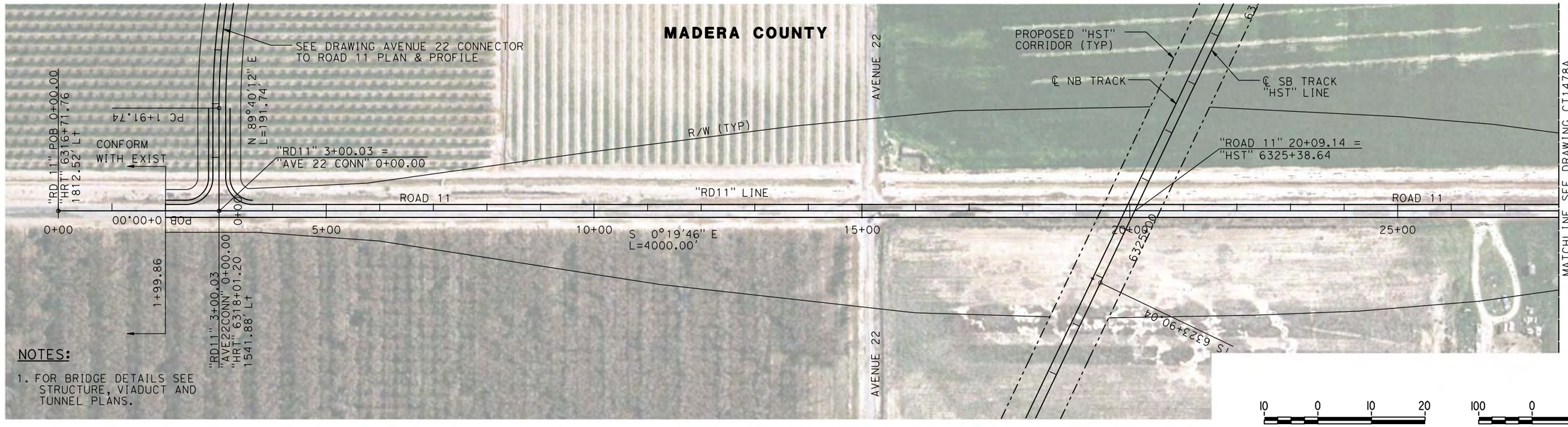
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT9582-A
SCALE NO SCALE
SHEET NO. ### OF ###

eron.sudhausen 7/20/2011 6:08:54 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\AECOM\FB-CT9582-A-F1.dgn



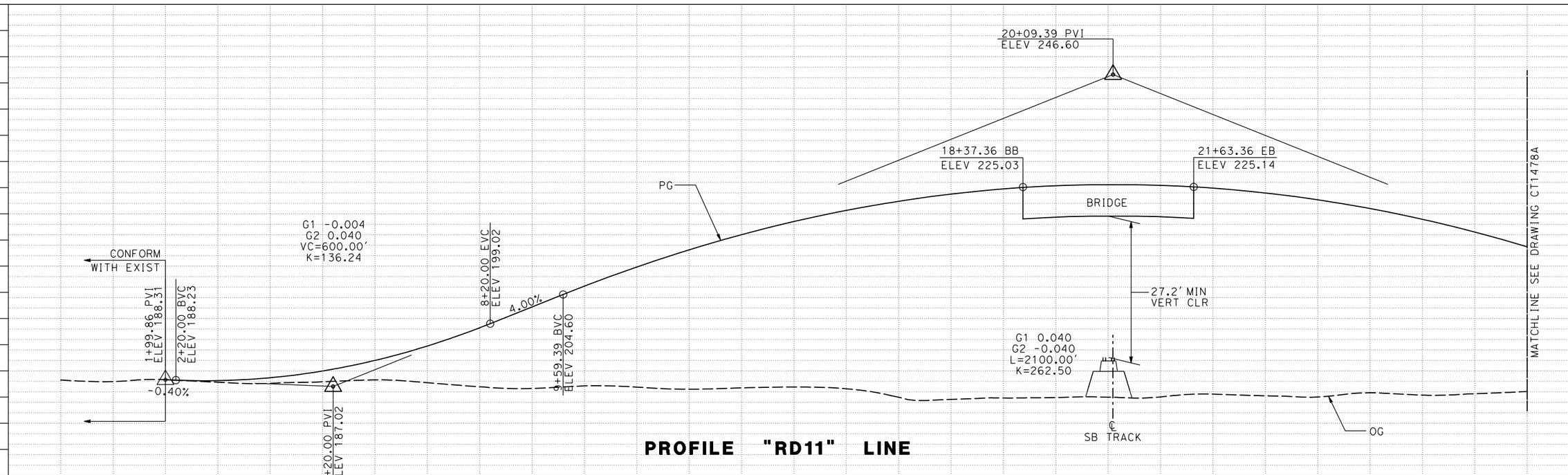
NOTES:

1. FOR BRIDGE DETAILS SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'

PLAN



PROFILE "RD11" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 11 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1477A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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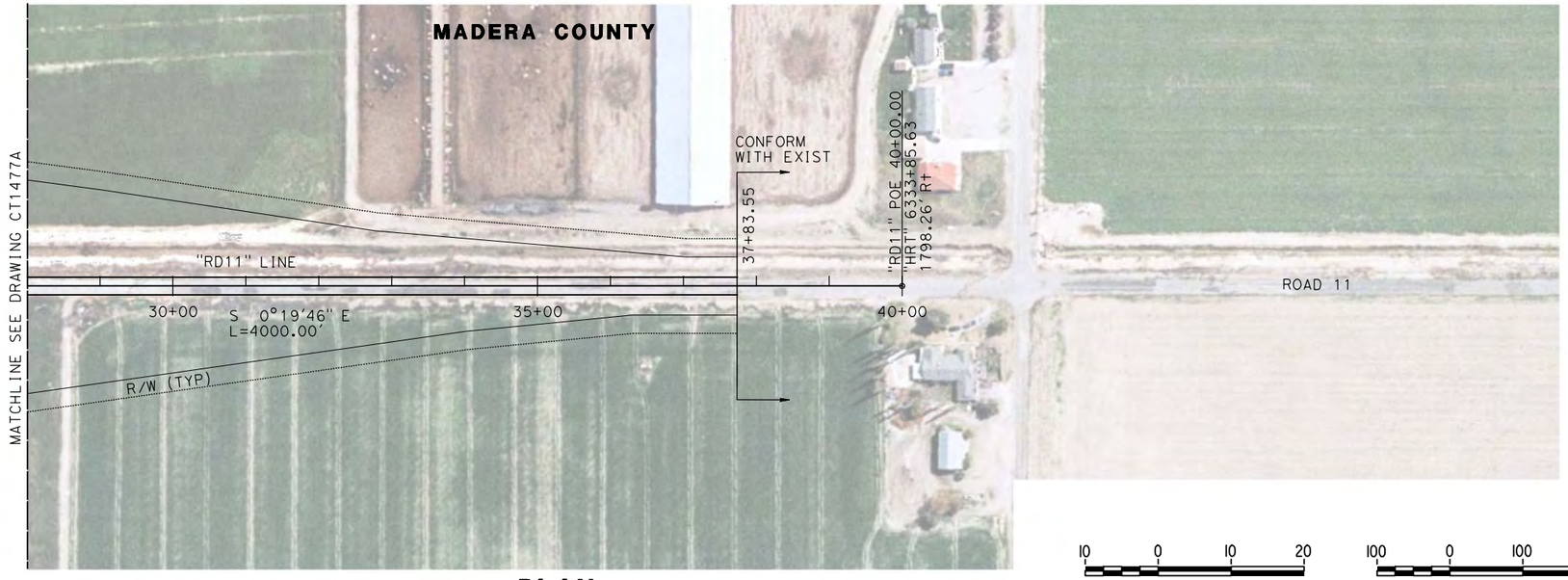
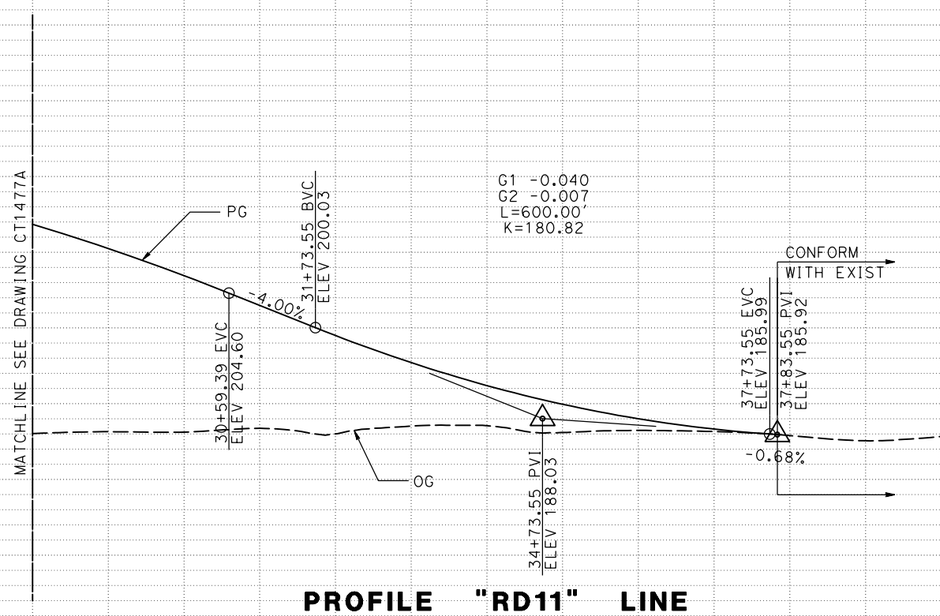


PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "RD11" LINE

STATION	8	9	30+00	1	2	3	4	35+00	6	7	8	9	40+00	1	TOTAL
CY EXC															
CY EMB															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 11 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1478A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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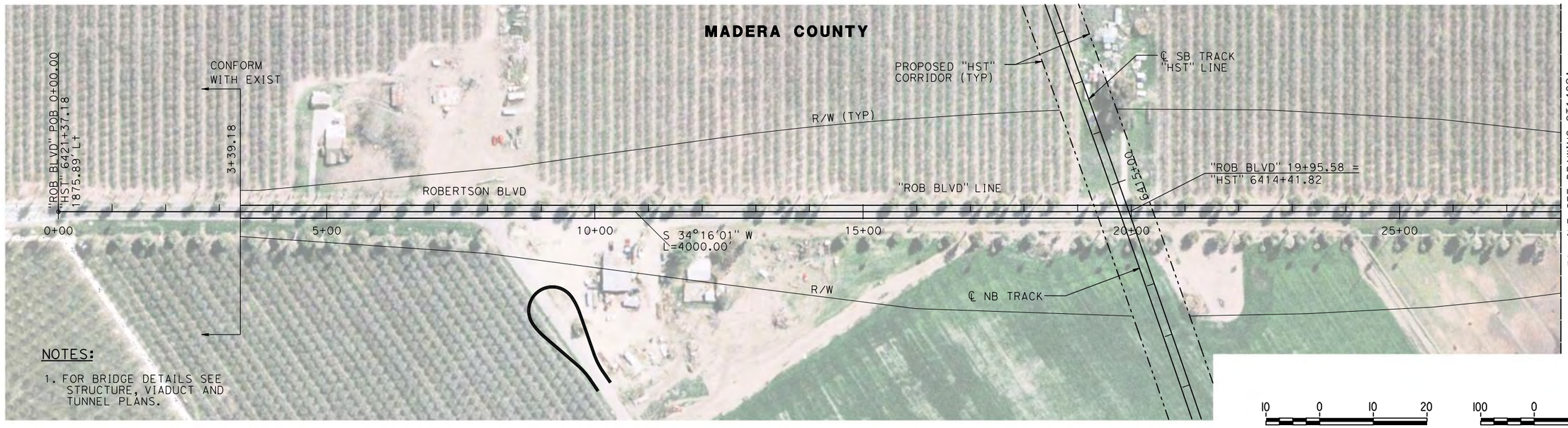
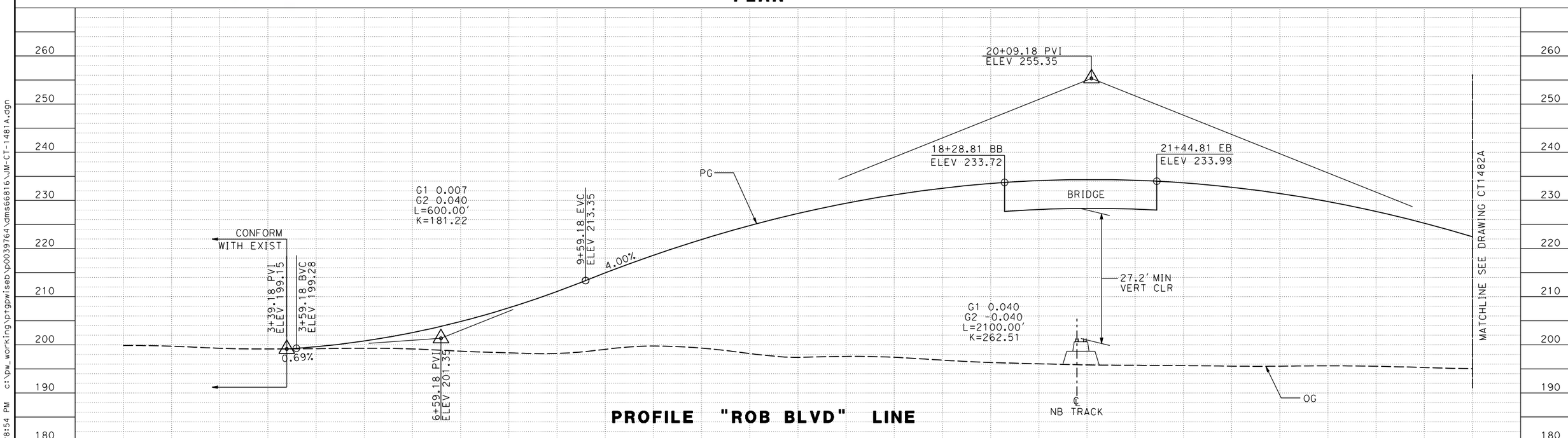


10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'

PLAN



PROFILE "ROB BLVD" LINE

STATION	0+00	1	2	3	4	5+00	6	7	8	9	10+00	1	2	3	4	15+00	6	7	8	9	20+00	1	2	3	4	25+00	6	7	8	TOTAL
CY EXC																														
CY EMB																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROBERTSON BLVD GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1481A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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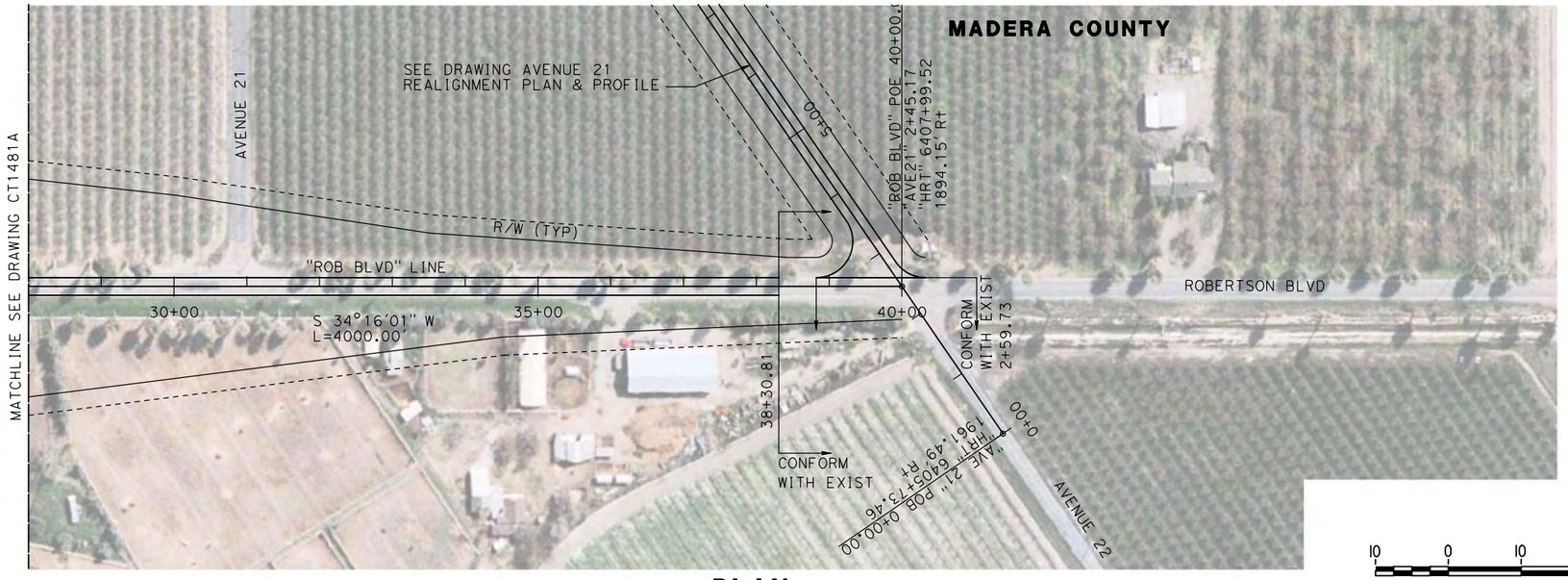
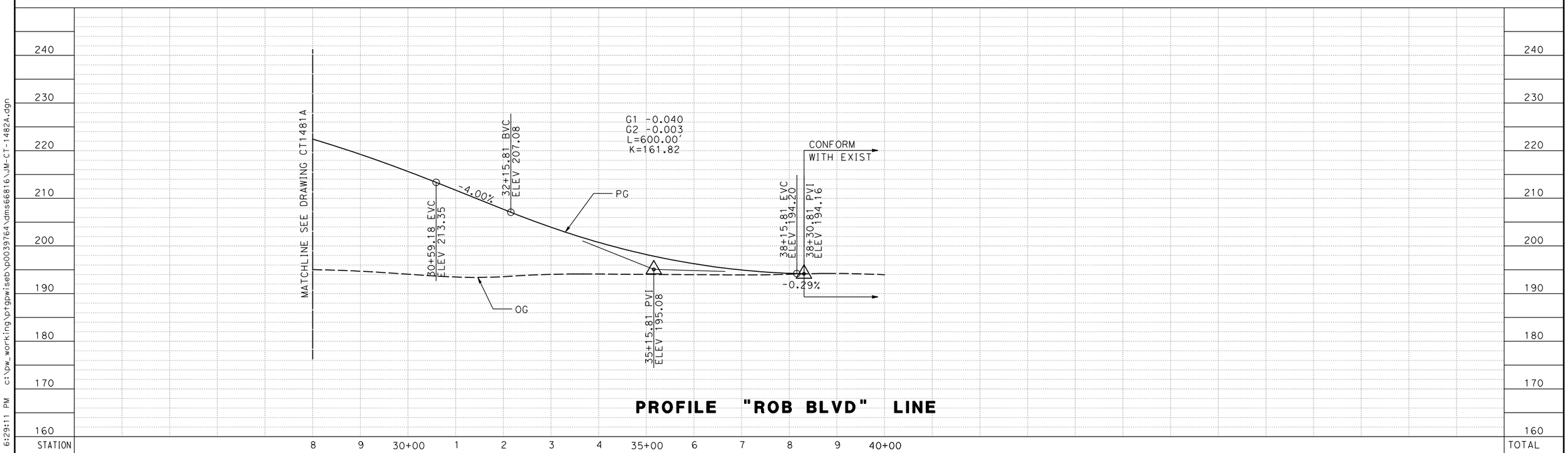


PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "ROB BLVD" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROBERTSON BLVD GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1482A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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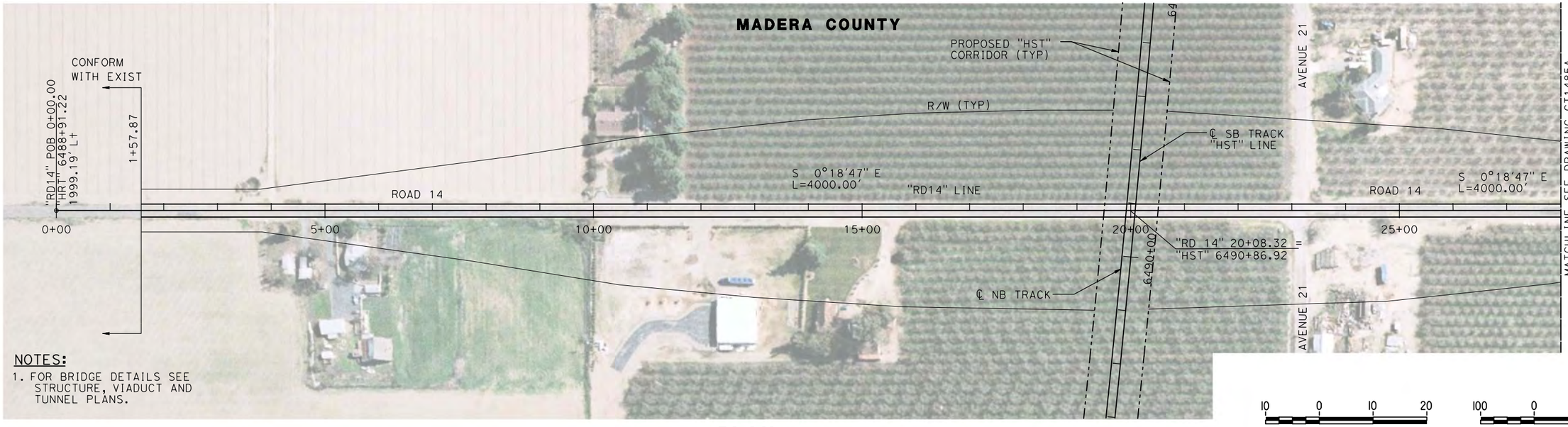
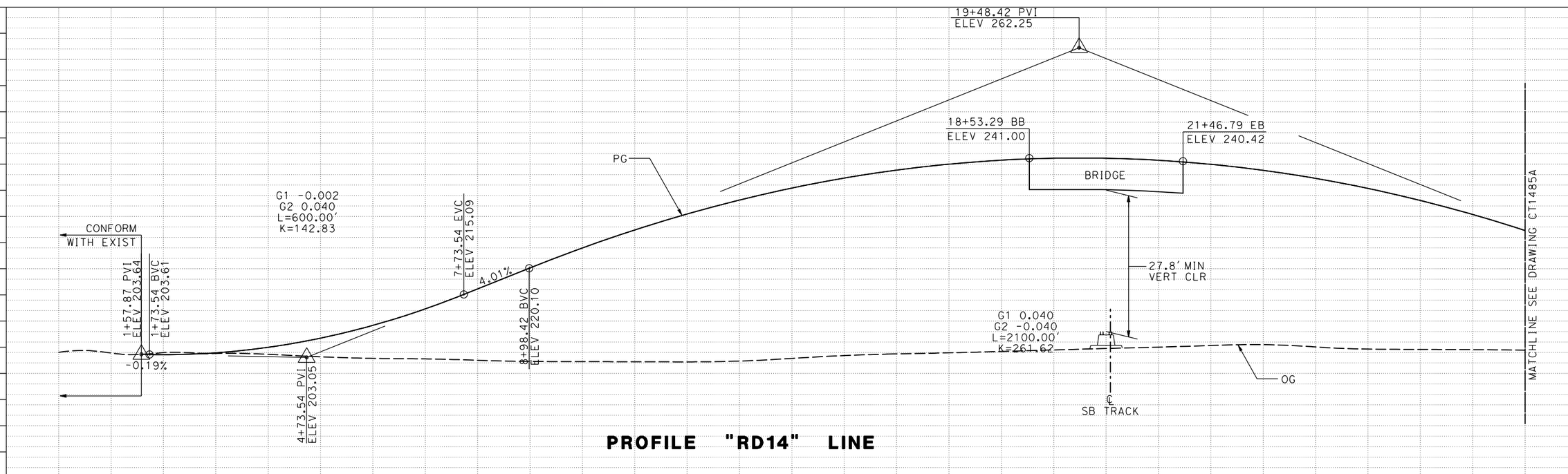


NOTES:

1. FOR BRIDGE DETAILS SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

VERT: 1"=10' HORIZ: 1"=100'

PLAN



PROFILE "RD14" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 14 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1484A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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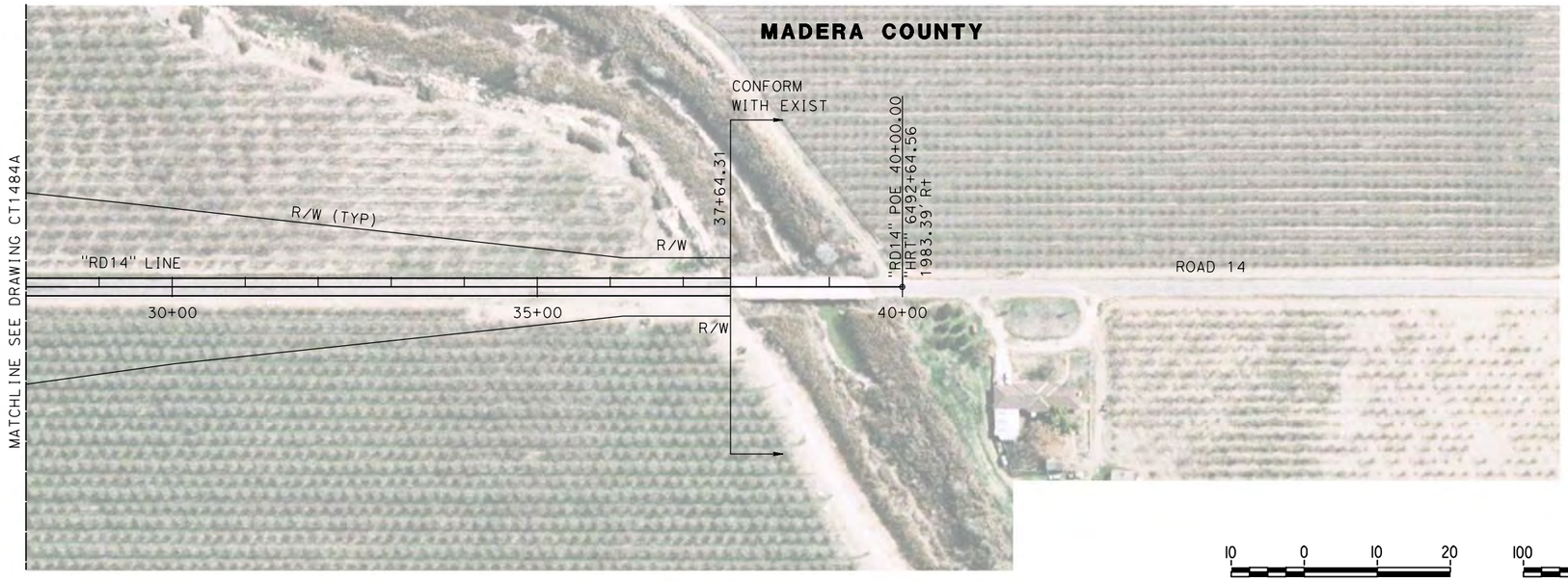
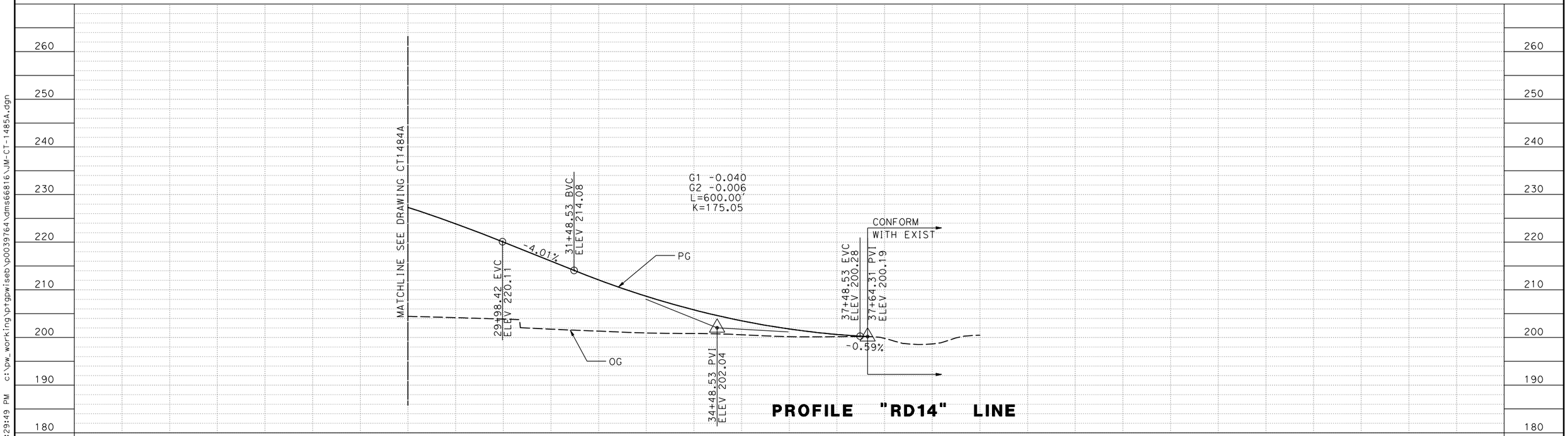


PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "RD14" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 14 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1485A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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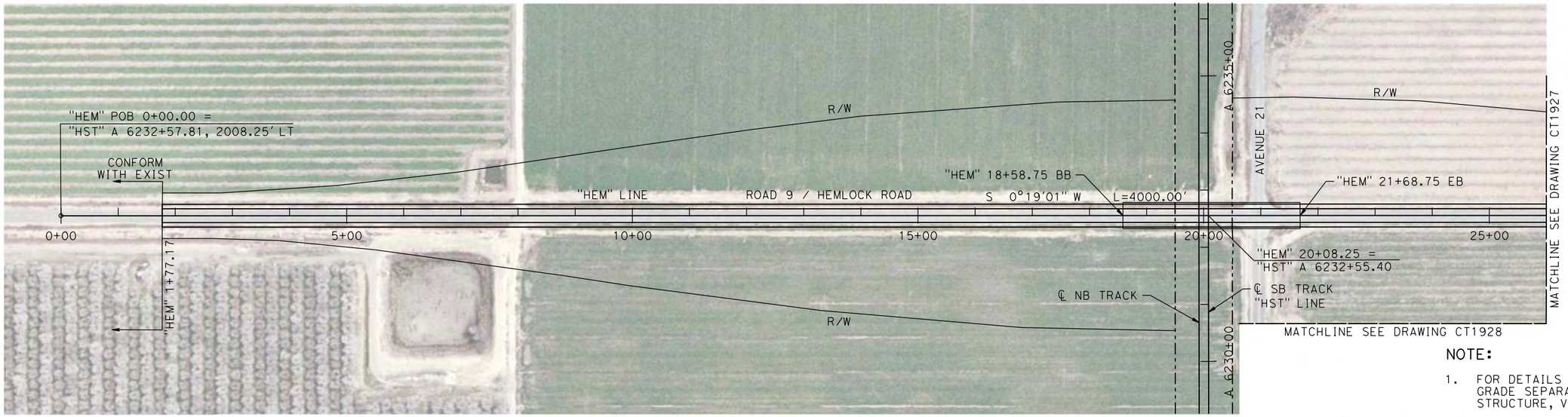
MADERA COUNTY



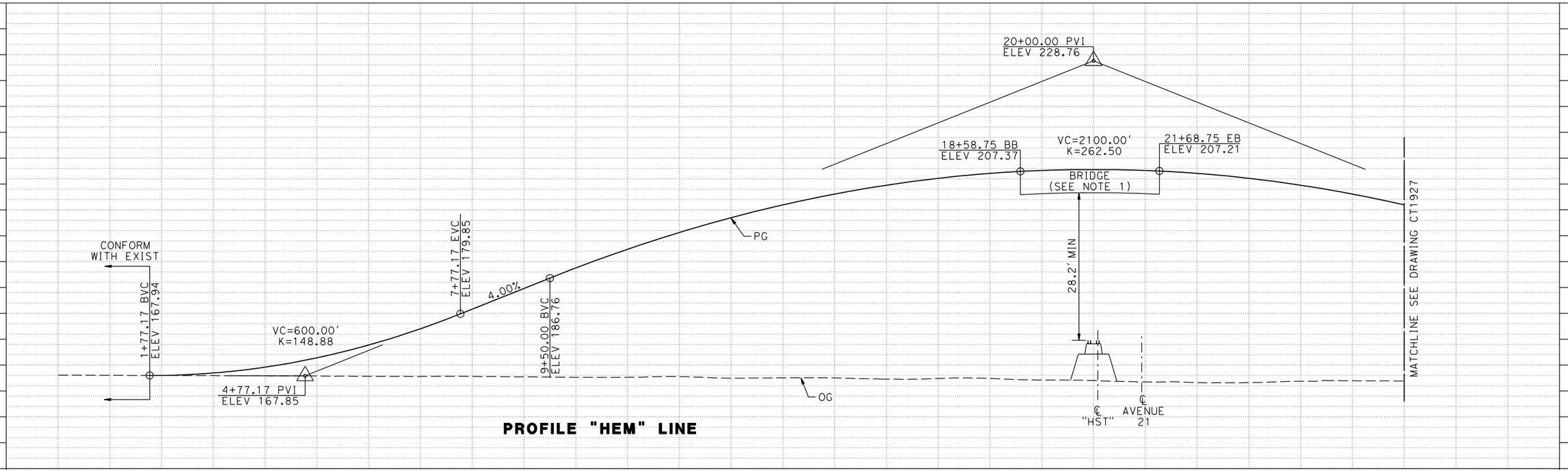
PLAN

NOTE:

1. FOR DETAILS OF ROAD 9 / HEMLOCK ROAD GRADE SEPARATION BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "HEM" LINE

STATION	0+00	5+00	10+00	15+00	20+00	25+00	TOTAL
CY EXC							
CY EMB							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1926
SCALE AS NOTED
SHEET NO.

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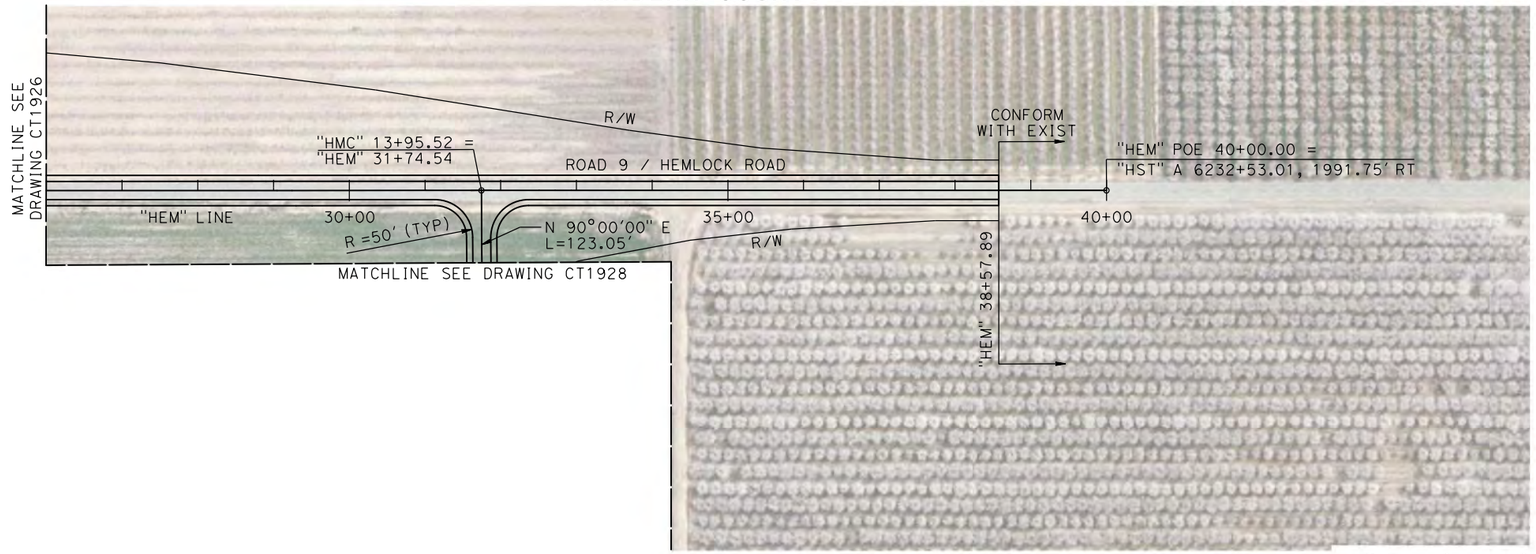
MADERA COUNTY



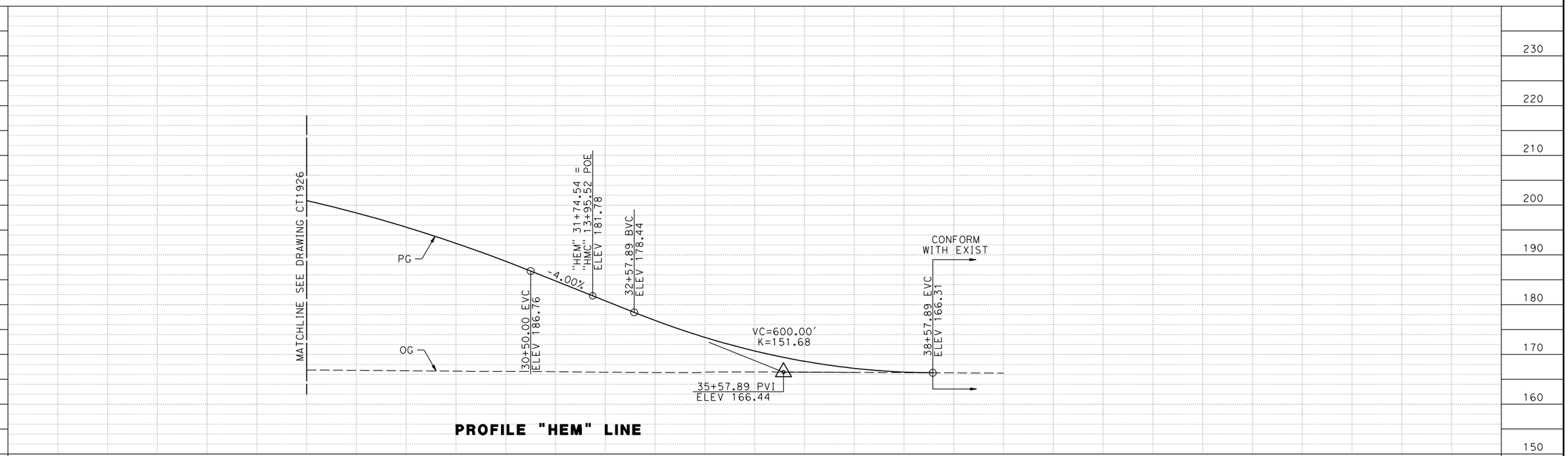
PLAN

NOTE:

1. SEE DRAWING CT1928 FOR DETAILS OF ROAD 9 / HEMLOCK ROAD TO AVENUE 21 CONNECTOR ROAD "HMC" LINE.

10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'



PROFILE "HEM" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1927
SCALE AS NOTED
SHEET NO.

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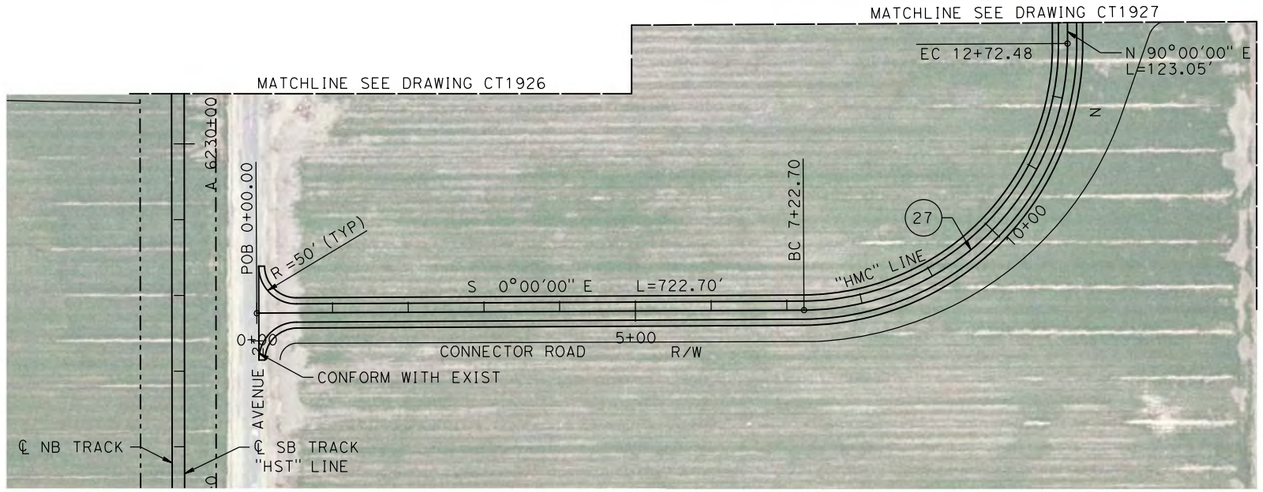
MADERA COUNTY



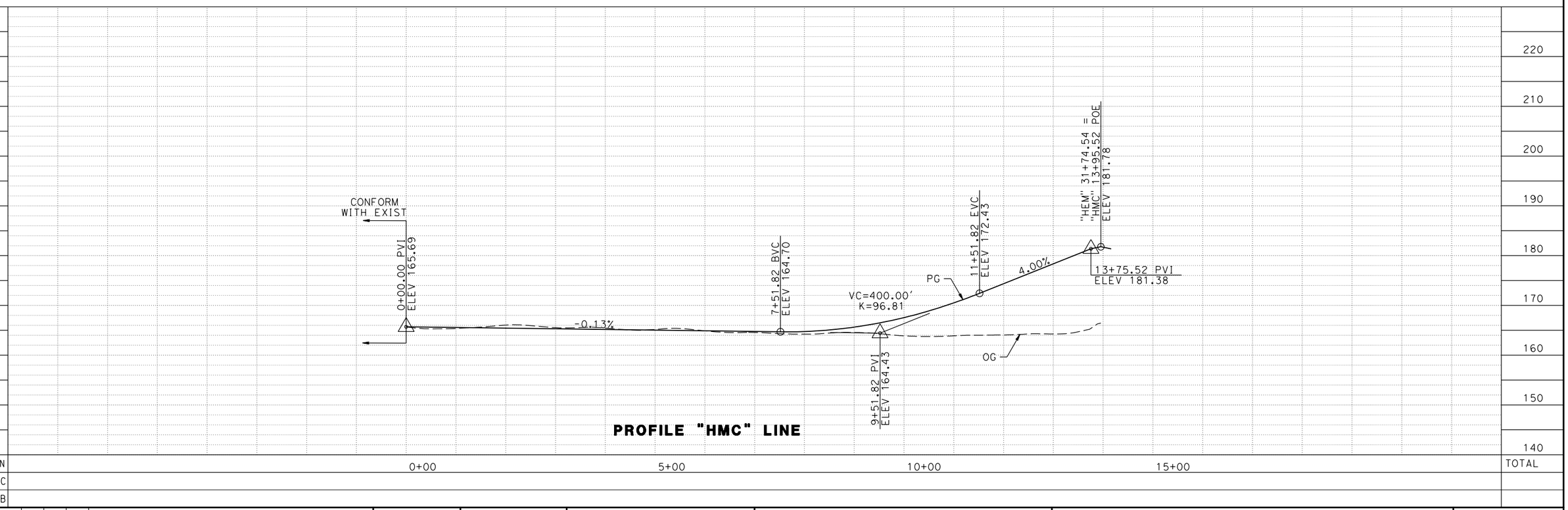
PLAN

NOTE:

1. SEE DRAWINGS CT1926 AND CT1927 FOR DETAILS OF ROAD 9 / HEMLOCK ROAD "HEM" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "HMC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1928
SCALE AS NOTED
SHEET NO.

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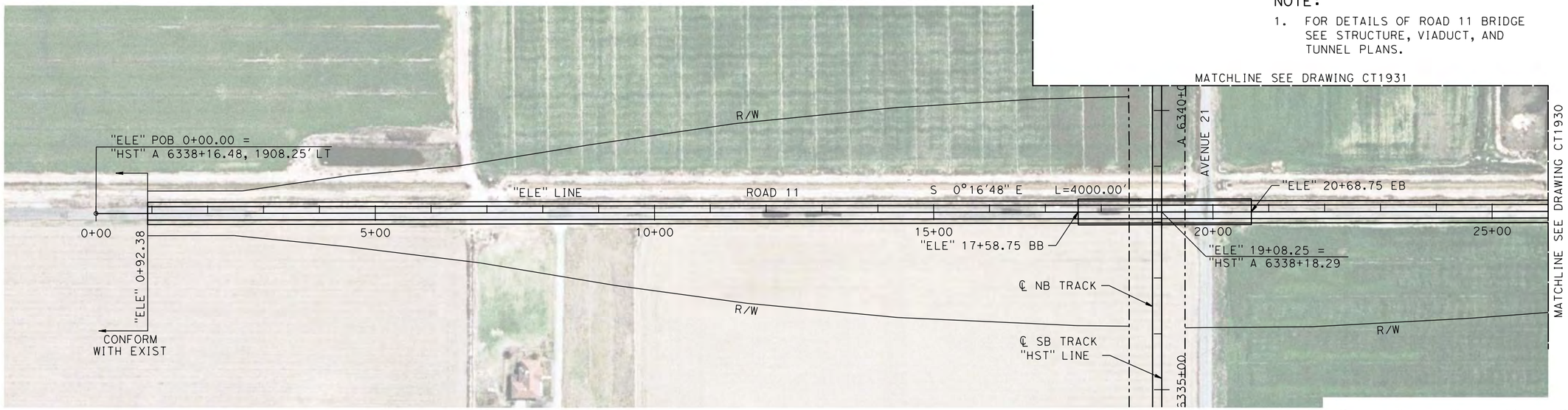
MADERA COUNTY

NOTE:

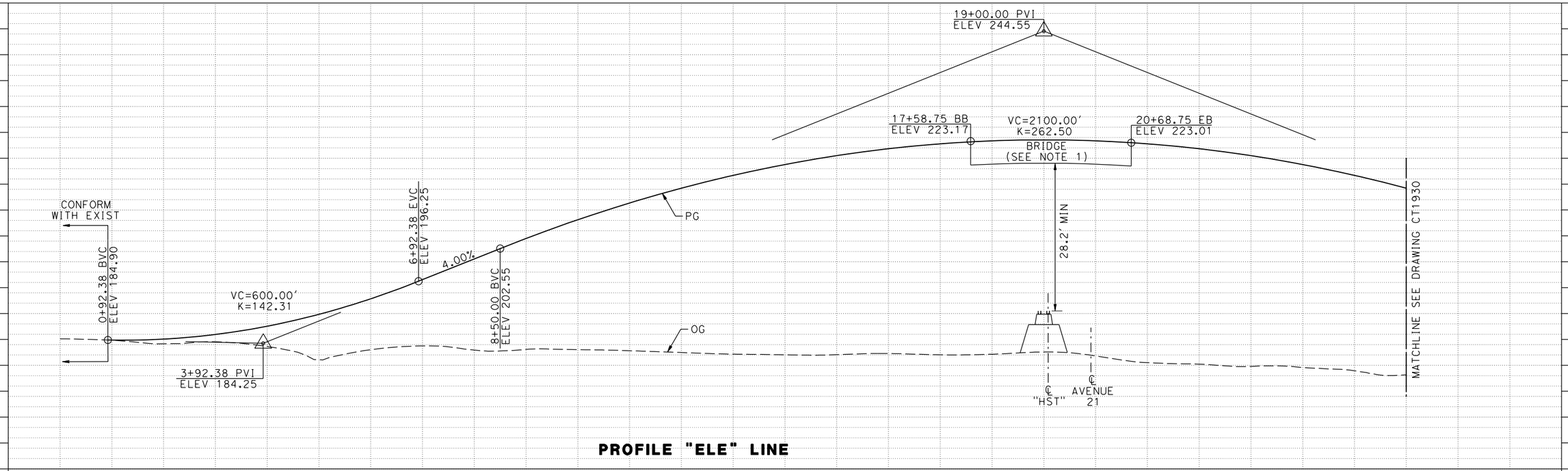
1. FOR DETAILS OF ROAD 11 BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.



PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ELE" LINE

STATION	0+00	5+00	10+00	15+00	20+00	25+00	TOTAL
CY EXC							
CY EMB							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1929
SCALE AS NOTED
SHEET NO.

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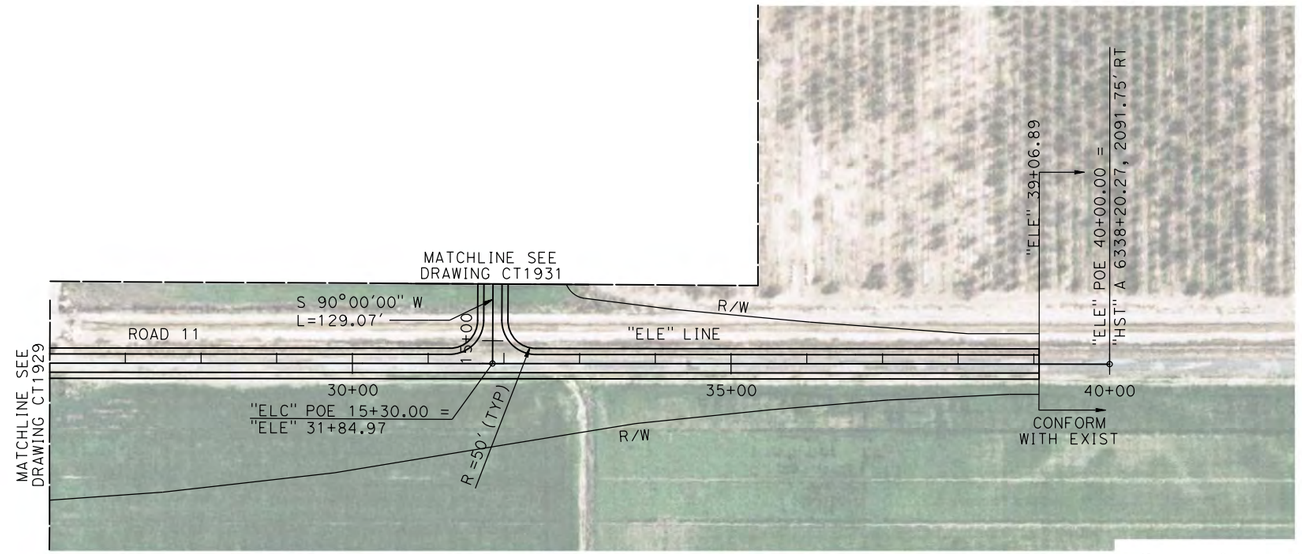
MADERA COUNTY

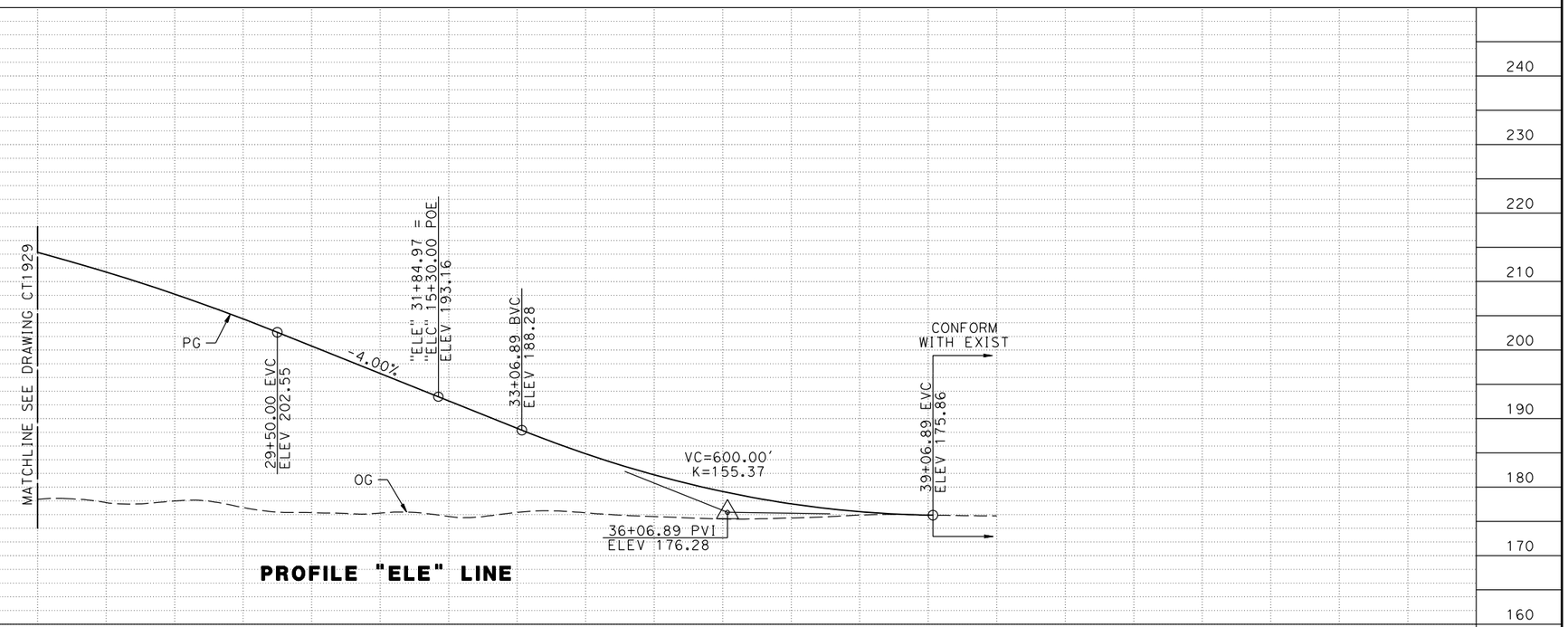


PLAN

NOTE:

1. SEE DRAWING CT1931 FOR DETAILS OF ROAD 11 TO AVENUE 21 CONNECTOR ROAD "ELC" LINE.

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "ELE" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1930
SCALE AS NOTED
SHEET NO.

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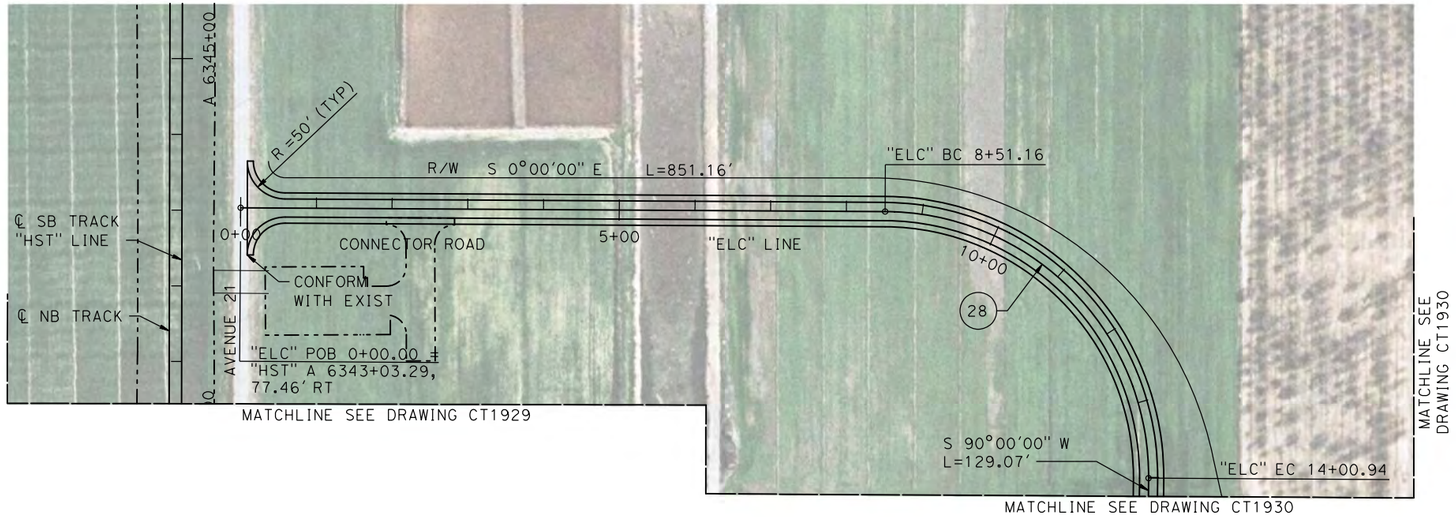
MADERA COUNTY



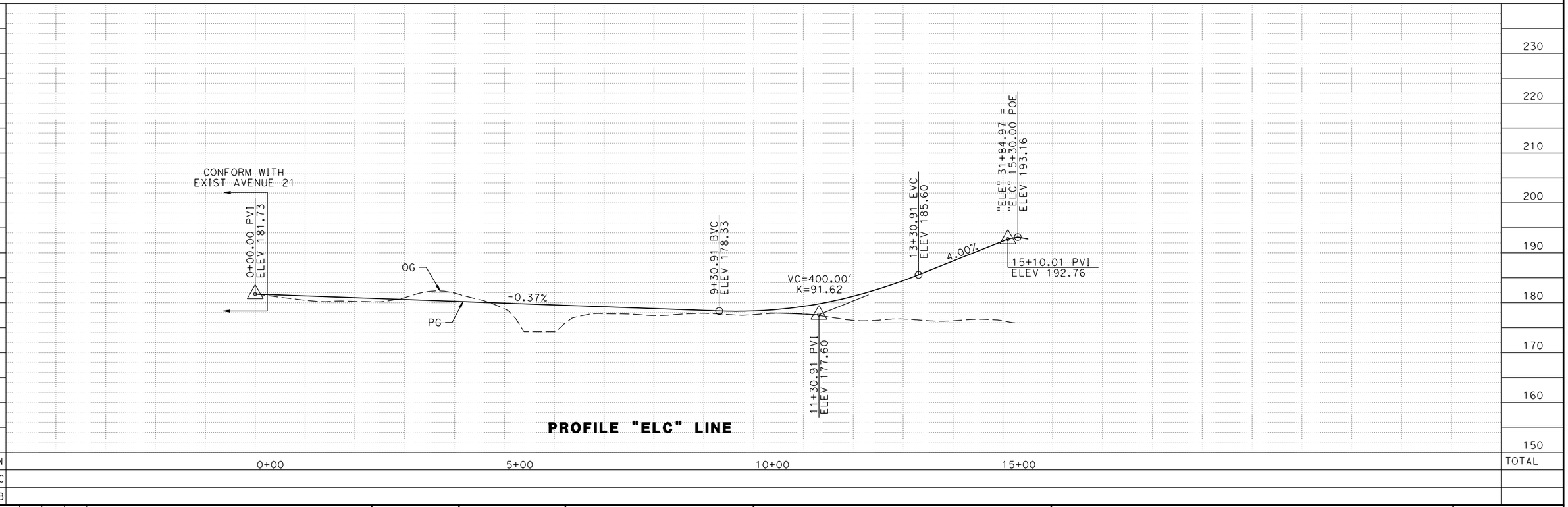
NOTE:

1. SEE DRAWINGS CT1929 AND CT1930 FOR DETAILS OF ROAD 11 "ELE" LINE.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ELC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1931
SCALE AS NOTED
SHEET NO.

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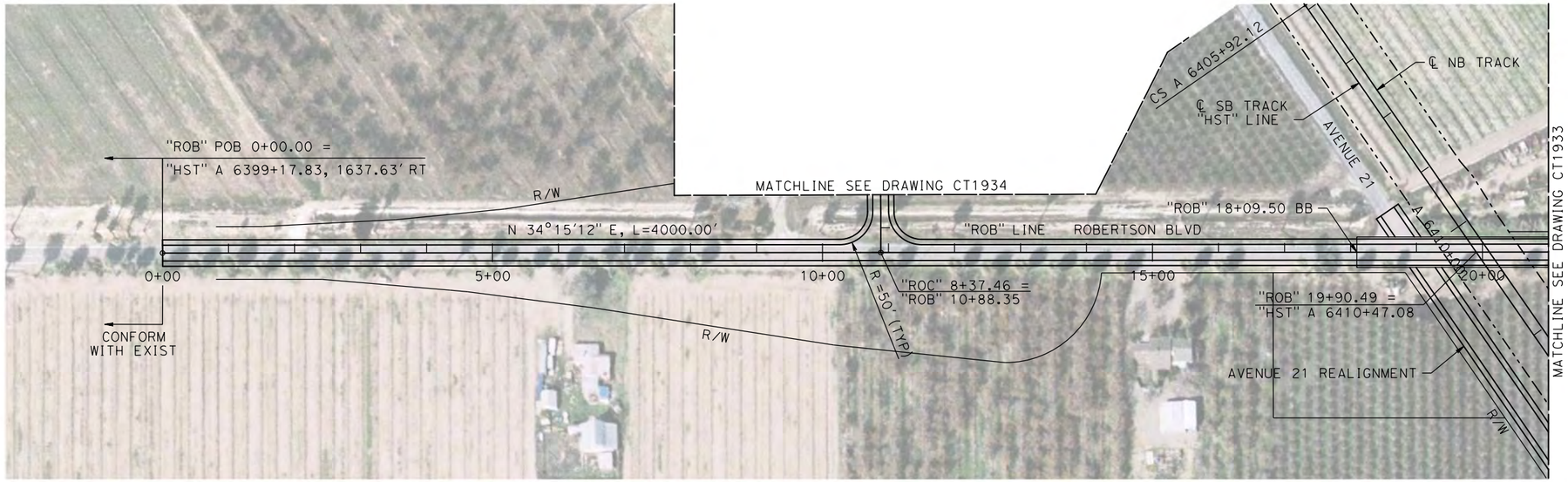
MADERA COUNTY



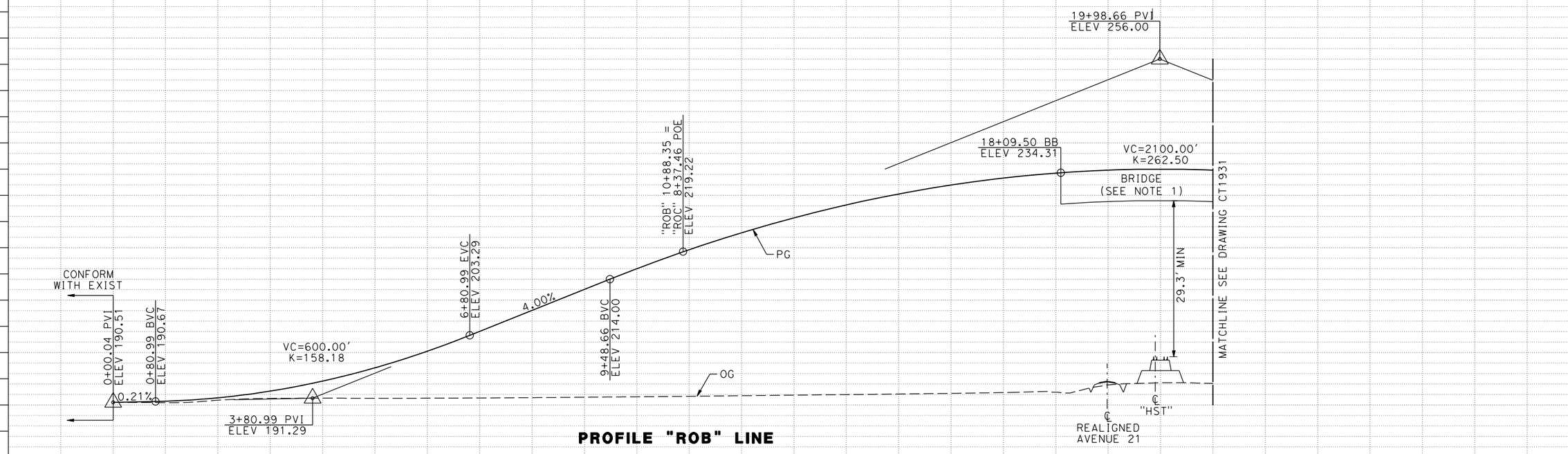
PLAN

NOTE:

1. FOR DETAILS OF ROBERTSON BLVD BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.
2. SEE DRAWING CT1934 FOR DETAILS OF ROBERTSON BLVD TO AVENUE 21 CONNECTOR ROAD "ROB" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROB" LINE

STATION	0+00	5+00	10+00	15+00	20+00	TOTAL
CY EXC						
CY EMB						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

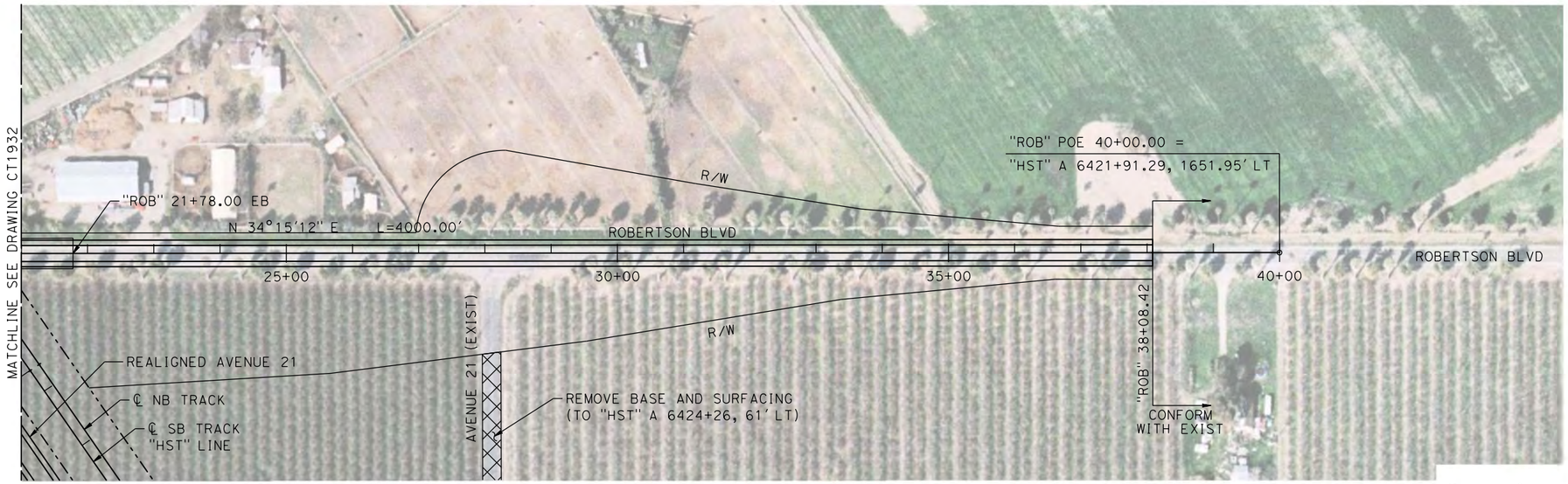
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1932
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:25:46 PM c:\pw_working\prtgpwiseb\p0039764\dms66815\JM-CT-1932-VA.dgn

MADERA COUNTY



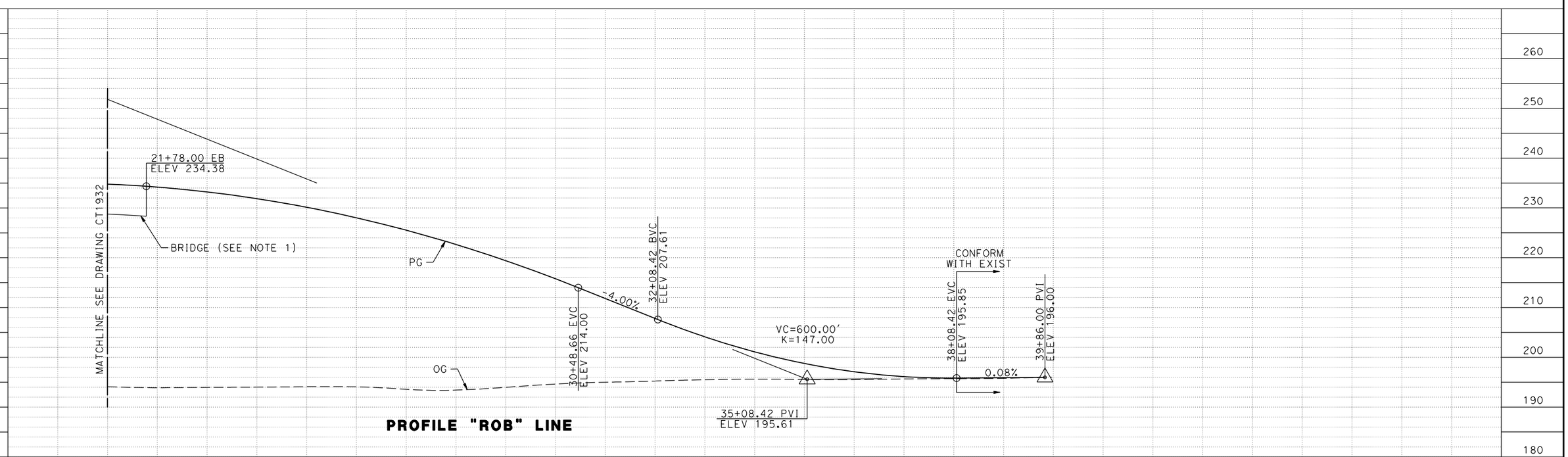
NOTE:

1. FOR DETAILS OF ROBERTSON BLVD BRIDGE SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROB" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

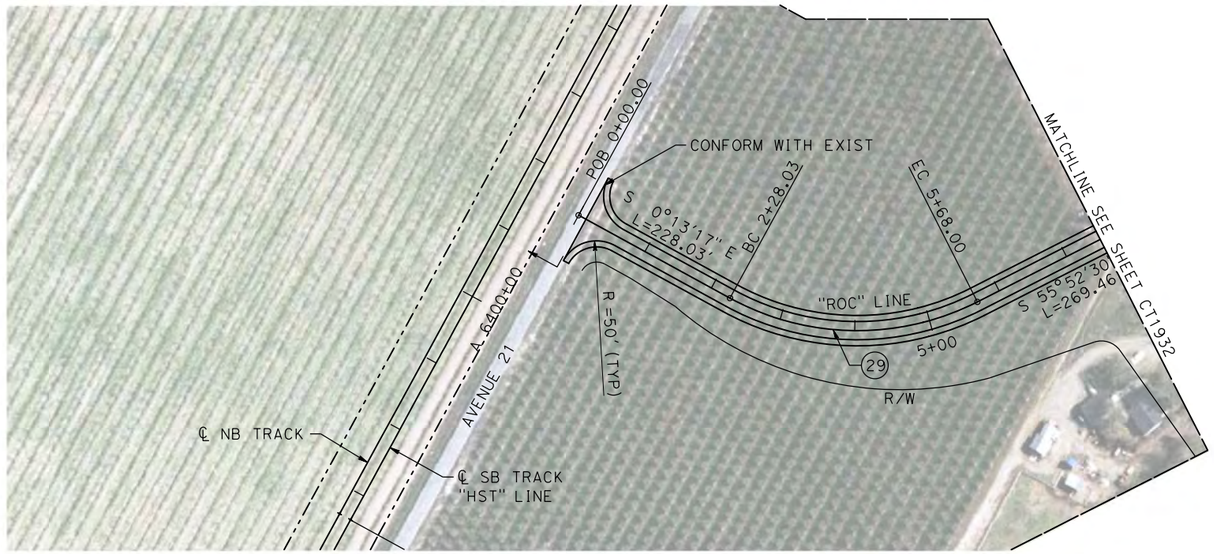
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1933
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:26:22 PM c:\pw_working\prtgpwiseb\p0039764\dms66815\JM-CT-1933-VA.dgn

MADERA COUNTY



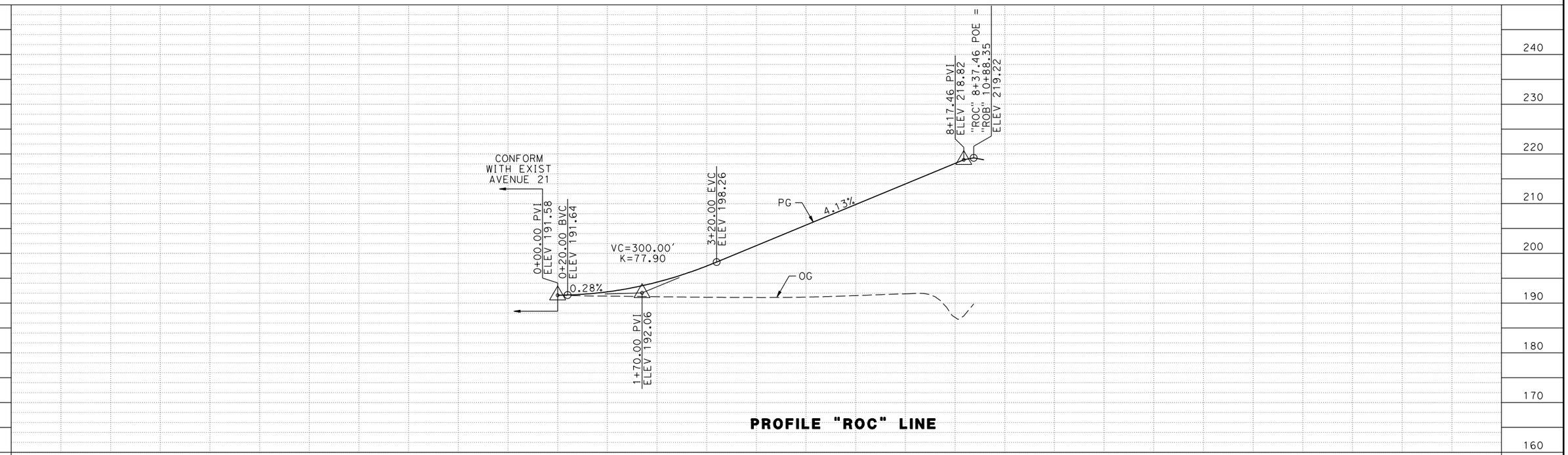
PLAN

NOTE:

1. SEE DRAWINGS CT1932 AND CT1933 FOR DETAILS OF ROBERTSON BLVD "ROB" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

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PARSONS

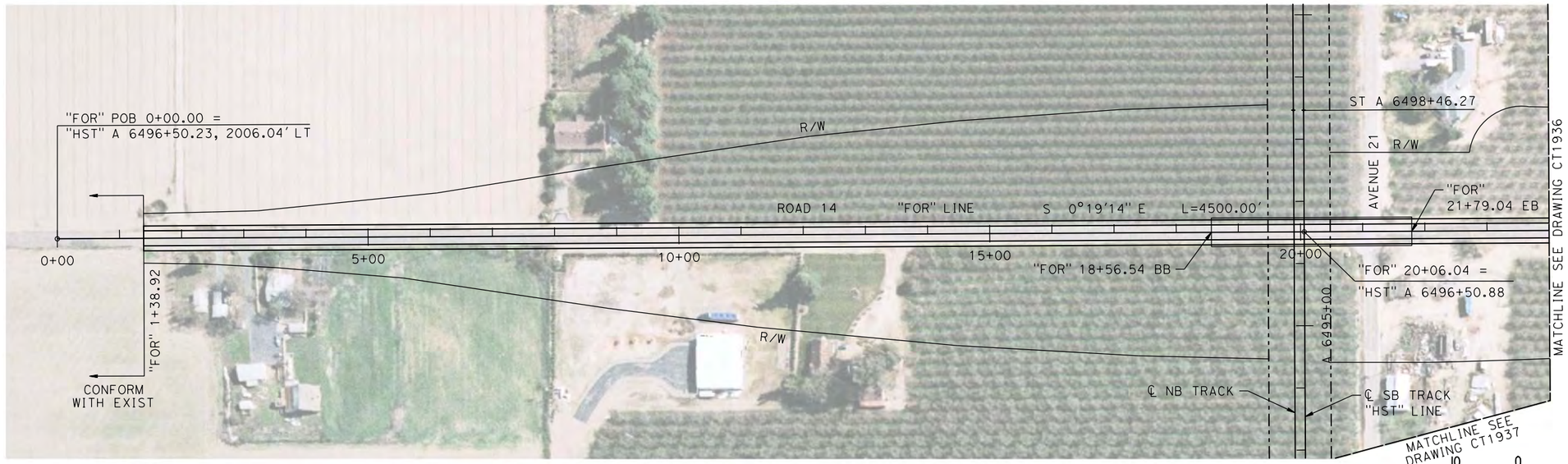
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1934
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:26:45 PM c:\pw_working\ptgpwiseb\p0039764\dms66815\JM-CT-1934-VA.dgn

MADERA COUNTY

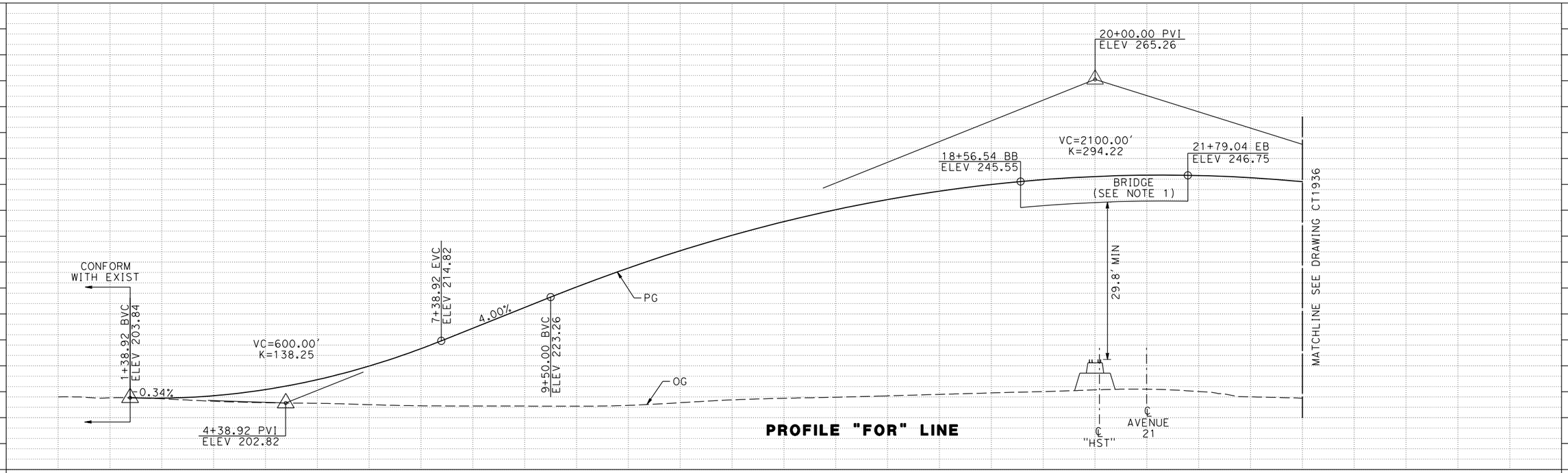


NOTE:

1. FOR DETAILS OF ROAD 14 BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.

PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "FOR" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

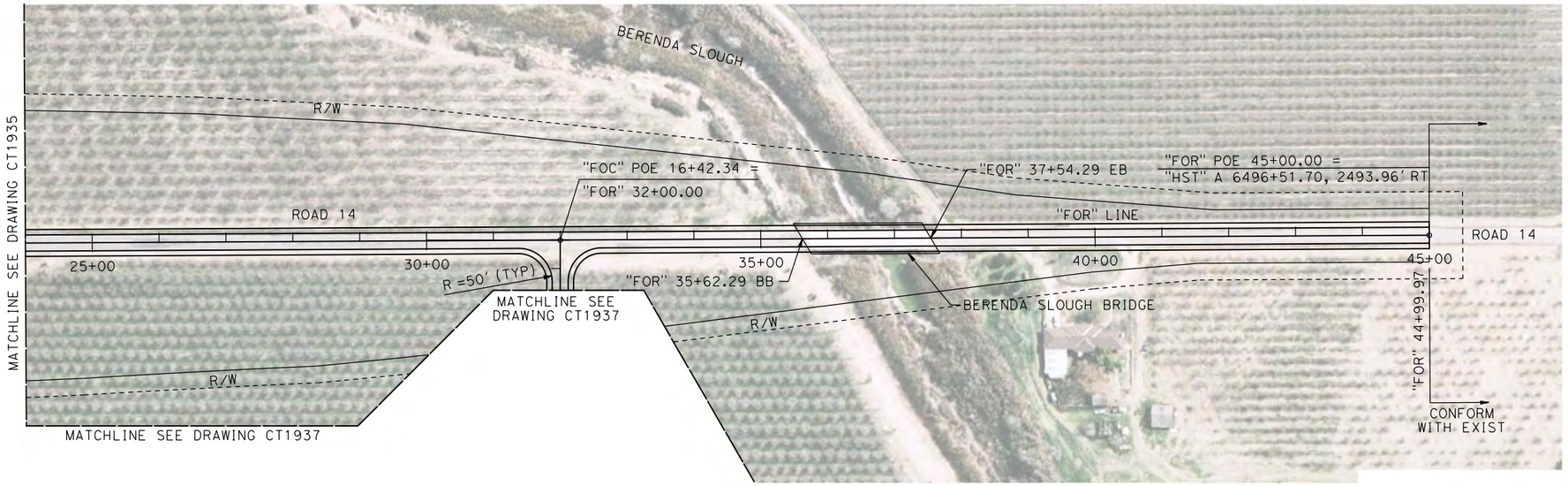
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1935
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:27:11 PM c:\pw_working\ptgpwiseb\p0039764\dms66815\JM-CT-1935-VA.dgn

MADERA COUNTY



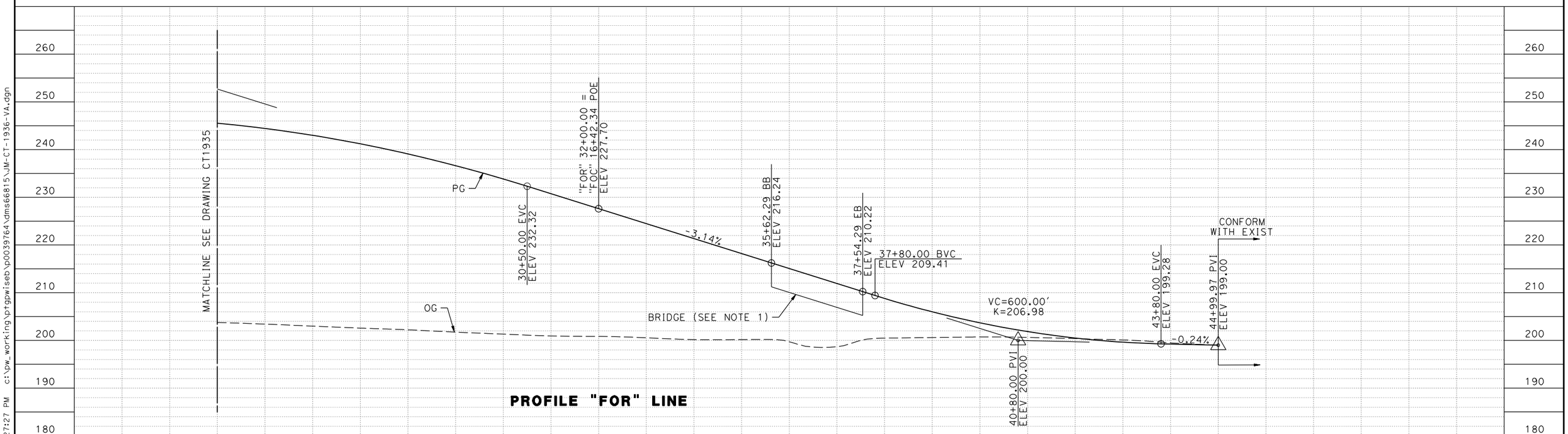
NOTE:

1. FOR BERENDA SLOUGH BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.
2. SEE DRAWING CT1937 FOR DETAILS OF ROAD 14 TO AVENUE 21 CONNECTOR ROAD "FOC" LINE.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "FOR" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1936
SCALE AS NOTED
SHEET NO.

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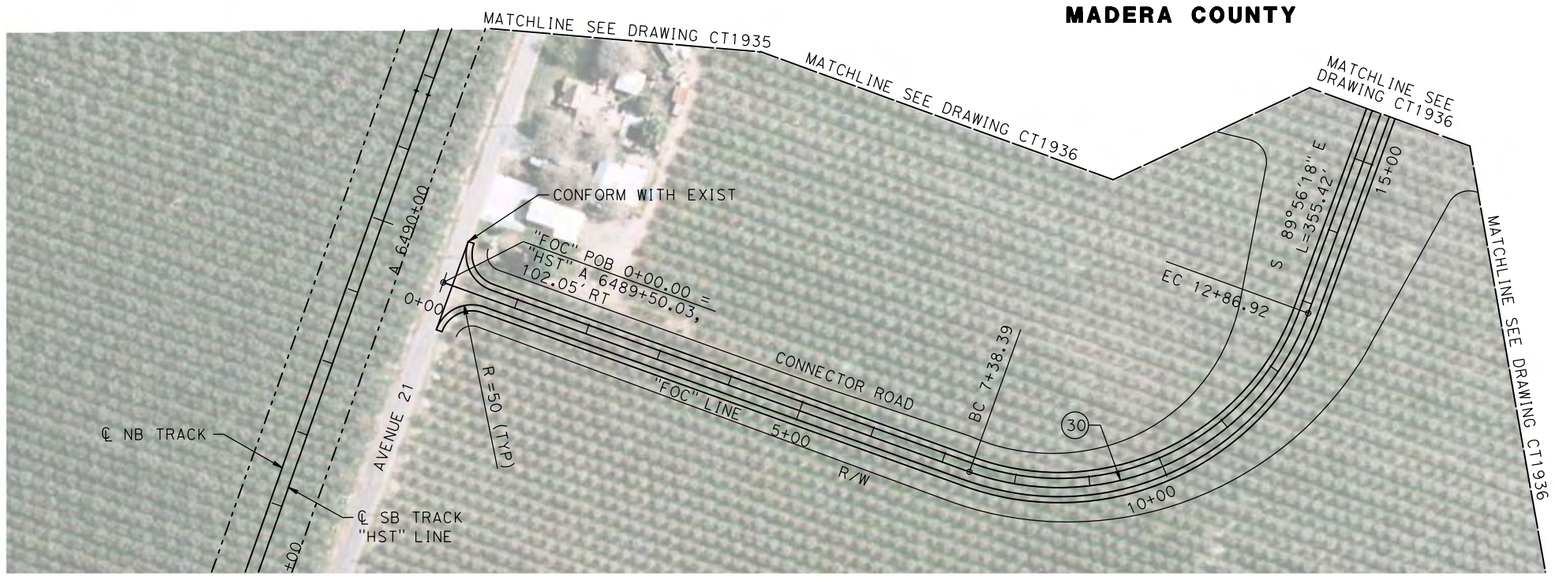
MADERA COUNTY

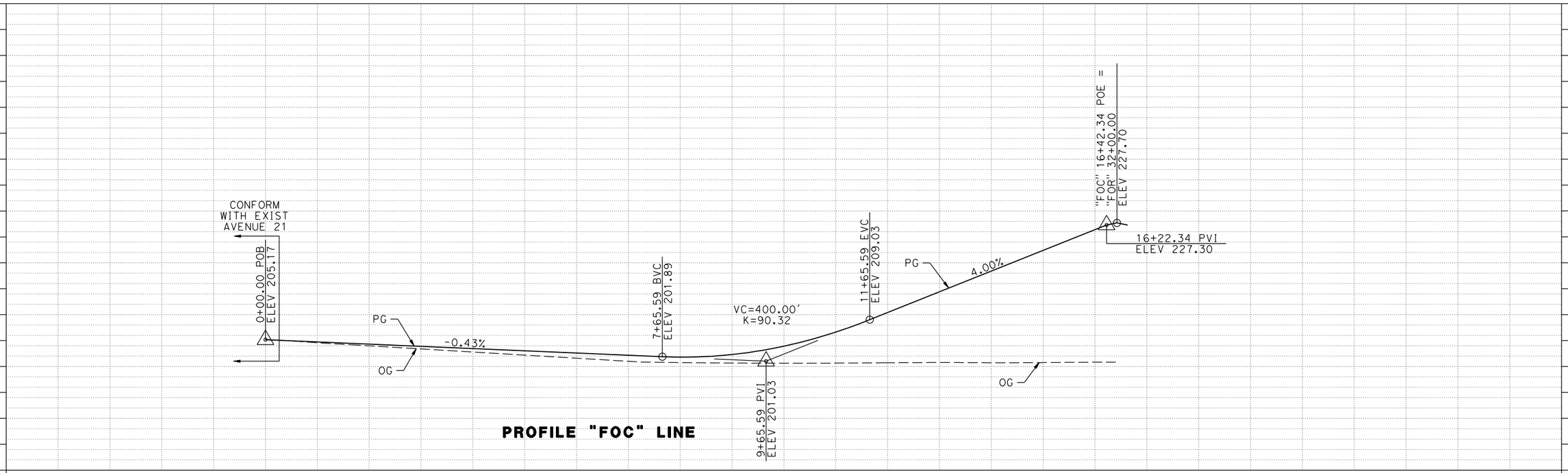


PLAN

NOTE:

1. SEE DRAWINGS CT1935 AND CT1936 FOR DETAILS OF ROAD 14 "FOR" LINE.

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "FOC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1937
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:27:47 PM c:\pw_working\ptgpwiseb\p0039764\dms66815\JM-CT-1937-VA.dgn

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
GENERAL						
		B6990-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 3
		B6991-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 2 OF 3
		B6992-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 3 OF 3
		B6993-B	UPRR/SR99 - (AVE 21)	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B7000-B	UPRR/SR99 - (AVE 21)		INDEX MAP	SHEET 1 OF 2
		B7001-B	UPRR/SR99 - (AVE 21)		INDEX MAP	SHEET 2 OF 2
		CB7000-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	KEY MAP	SHEET 1 OF 1
		CB7001-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CB7002-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	KEY MAP	SHEET 1 OF 1
		CB7003-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20 1/2 - INTERCHANGE ALT 1	KEY MAP	SHEET 1 OF 1
		CB7004-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20 1/2 - INTERCHANGE ALT 2	KEY MAP	SHEET 1 OF 1
		CB7005-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CB7006-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CT6990-B	UPRR/SR99 - (AVE 21)	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		CT6991-B	UPRR/SR99 - (AVE 21)	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 2 OF 2
		CT6992-B	UPRR/SR99 - (AVE 21)		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
LAYOUT						
14		CT7000-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	LAYOUT	SHEET 1 OF 3
14		CT7001-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	LAYOUT	SHEET 2 OF 3
14		CT7002-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	LAYOUT	SHEET 3 OF 3
15		CT7003-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	LAYOUT	SHEET 1 OF 7
15		CT7004-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	LAYOUT	SHEET 2 OF 7
15		CT7005-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	LAYOUT	SHEET 3 OF 7
15		CT7006-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	LAYOUT	SHEET 4 OF 7
15		CT7007-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	LAYOUT	SHEET 5 OF 7
15		CT7008-B	UPRR/SR99 MAINLINE - (AVE 21)	AVE 9 - INTERCHANGE SR 99 NB OFF/SB ON RAMPS	LAYOUT	SHEET 6 OF 7
15		CT7009-B	UPRR/SR99 MAINLINE - (AVE 21)	AVE 9 - INTERCHANGE SR 99 NB ON/SB OFF RAMPS	LAYOUT	SHEET 7 OF 7
16		CT7010-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	LAYOUT	SHEET 1 OF 5
16		CT7011-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	LAYOUT	SHEET 2 OF 5
16		CT7012-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	LAYOUT	SHEET 3 OF 5
16		CT7013-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	LAYOUT	SHEET 4 OF 5
16		CT7014-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	LAYOUT	SHEET 5 OF 5
17		CT7015-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 1 OF 8
17		CT7016-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 2 OF 8
17		CT7017-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 3 OF 8
17		CT7018-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 4 OF 8
17		CT7019-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 5 OF 8
17		CT7020-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 6 OF 8
17		CT7021-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 7 OF 8
17		CT7022-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	LAYOUT	SHEET 8 OF 8
17.1		CT7023-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 1 OF 8
17.1		CT7024-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 2 OF 8
17.1		CT7025-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 3 OF 8
17.1		CT7026-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 4 OF 8
17.1		CT7027-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 5 OF 8
17.1		CT7028-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 6 OF 8
17.1		CT7029-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 7 OF 8
17.1		CT7030-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	LAYOUT	SHEET 8 OF 8
17		CT7031-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20/20.5 - IC ALT 1&2 SR99 SB ON/NB OFF RAMP	LAYOUT	SHEET 1 OF 3
17		CT7032-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20/20.5 - IC ALT 1&2 SR99 SB ON/NB OFF RAMP	LAYOUT	SHEET 2 OF 3
17		CT7033-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20/20.5 - IC ALT 1&2 SR99 SB OFF/NB ON RAMP	LAYOUT	SHEET 3 OF 3
18		CT7034-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 1 OF 3
18		CT7035-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 2 OF 3
18		CT7036-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 3 OF 3
19		CT7037-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 1 OF 5
19		CT7038-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 2 OF 5
19		CT7039-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 3 OF 5
19		CT7040-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 4 OF 5
19		CT7041-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 5 OF 5
19		CT7042-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD IC SR99 SB ON-RAMP	LAYOUT	SHEET 1 OF 2
19		CT7043-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD IC SR99 SB OFF-RAMP	LAYOUT	SHEET 2 OF 2
PROFILE						
14		CT8000-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	PROFILE	SHEET 1 OF 4
14		CT8001-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	PROFILE	SHEET 2 OF 4
14		CT8002-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	PROFILE	SHEET 3 OF 4
14		CT8003-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 8 - OVERHEAD	PROFILE	SHEET 4 OF 4
15		CT8004-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	PROFILE	SHEET 1 OF 11
15		CT8005-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	PROFILE	SHEET 2 OF 11
15		CT8006-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	PROFILE	SHEET 3 OF 11
15		CT8007-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	PROFILE	SHEET 4 OF 11

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99-(AVE 21)
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. B6990-B
SCALE NONE
SHEET NO. ### OF ###

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ayeled

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
15		CT8008-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE	PROFILE	SHEET 5 OF 11
15		CT8009-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 NB OFF-RAMP	PROFILE	SHEET 6 OF 11
15		CT8010-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 NB ON-RAMP	PROFILE	SHEET 7 OF 11
15		CT8011-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 NB ON-RAMP	PROFILE	SHEET 8 OF 11
15		CT8012-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 SB ON-RAMP	PROFILE	SHEET 9 OF 11
15		CT8013-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 SB ON-RAMP	PROFILE	SHEET 10 OF 11
15		CT8014-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 9 - INTERCHANGE SR 99 SB OFF-RAMP	PROFILE	SHEET 11 OF 11
16		CT8015-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	PROFILE	SHEET 1 OF 5
16		CT8016-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	PROFILE	SHEET 2 OF 5
16		CT8017-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	PROFILE	SHEET 3 OF 5
16		CT8018-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	PROFILE	SHEET 4 OF 5
16		CT8019-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 11 - OVERHEAD	PROFILE	SHEET 5 OF 5
17		CT8020-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 1 OF 8
17		CT8021-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 2 OF 8
17		CT8022-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 3 OF 8
17		CT8023-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 4 OF 8
17		CT8024-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 5 OF 8
17		CT8025-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 6 OF 8
17		CT8026-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 7 OF 8
17		CT8027-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 1	PROFILE	SHEET 8 OF 8
17.1		CT8028-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 1 OF 8
17.1		CT8029-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 2 OF 8
17.1		CT8030-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 3 OF 8
17.1		CT8031-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 4 OF 8
17.1		CT8032-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 5 OF 8
17.1		CT8033-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 6 OF 8
17.1		CT8034-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 7 OF 8
17.1		CT8035-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVENUE 20 & 20.5 - INTERCHANGE ALT 2	PROFILE	SHEET 8 OF 8
17		CT8036-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB OFF-RAMP	PROFILE	SHEET 1 OF 9
17		CT8037-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB OFF-RAMP	PROFILE	SHEET 2 OF 9
17		CT8038-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB ON-RAMP	PROFILE	SHEET 3 OF 9
17		CT8039-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB ON-RAMP	PROFILE	SHEET 4 OF 9
17		CT8040-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP	PROFILE	SHEET 5 OF 9
17		CT8041-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP	PROFILE	SHEET 6 OF 9
17		CT8042-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP	PROFILE	SHEET 7 OF 9
17		CT8043-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB OFF-RAMP	PROFILE	SHEET 8 OF 9
17		CT8044-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB OFF-RAMP	PROFILE	SHEET 9 OF 9
18		CT8045-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 1 OF 3
18		CT8046-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 2 OF 3
18		CT8047-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 3 OF 3
19		CT8048-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 1 OF 5
19		CT8049-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 2 OF 5
19		CT8050-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 3 OF 5
19		CT8051-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 4 OF 5
19		CT8052-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 5 OF 5
19		CT8053-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 1 OF 4
19		CT8054-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 2 OF 4
19		CT8055-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 3 OF 4
19		CT8056-B	UPRR/SR99 MERCED - (AVE 21)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 4 OF 4
		T-1	ROUTE 99 RE-ALIGNMENT		TITLE	
		X-1	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-2	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-3	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-4	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-5	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-6	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-7	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-8	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-9	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-10	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-11	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-12	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-13	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-14	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		X-15	ROUTE 99 RE-ALIGNMENT		TYPICAL CROSS SECTIONS	
		K-1	ROUTE 99 RE-ALIGNMENT		KEY MAP	
		L-1	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-2	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-3	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-4	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-5	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-6	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-7	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-8	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-9	ROUTE 99 RE-ALIGNMENT		LAYOUT	

REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY A. SILVER
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99-(AVE 21)
GENERAL
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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
		L-10	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-11	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-12	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-13	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-14	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-15	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-16	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		L-17	ROUTE 99 RE-ALIGNMENT		LAYOUT	
		P-1	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-2	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-3	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-4	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-5	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-6	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-7	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-8	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-9	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-10	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-11	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-12	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-13	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-14	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-15	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-16	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-17	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-18	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-19	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-20	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-21	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-22	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-23	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-24	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-25	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-26	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		P-27	ROUTE 99 RE-ALIGNMENT		PROFILE AND SUPERELEVATION	
		SC-1	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-2	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-3	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-4	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-5	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-6	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-7	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-8	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-9	ROUTE 99 RE-ALIGNMENT		STAGE 1 CONSTRUCTION	
		SC-10	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-11	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-12	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-13	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-14	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-15	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-16	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-17	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		SC-18	ROUTE 99 RE-ALIGNMENT		STAGE 2 CONSTRUCTION	
		BR-1	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-2	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-3	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-4	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-5	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	
		BR-6	ROUTE 99 RE-ALIGNMENT		ADVANCE PLANNING STUDY	

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MERCED TO FRESNO
UPRR/SR99-(AVE 21)
GENERAL
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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
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DRAWING NO. B6993-B
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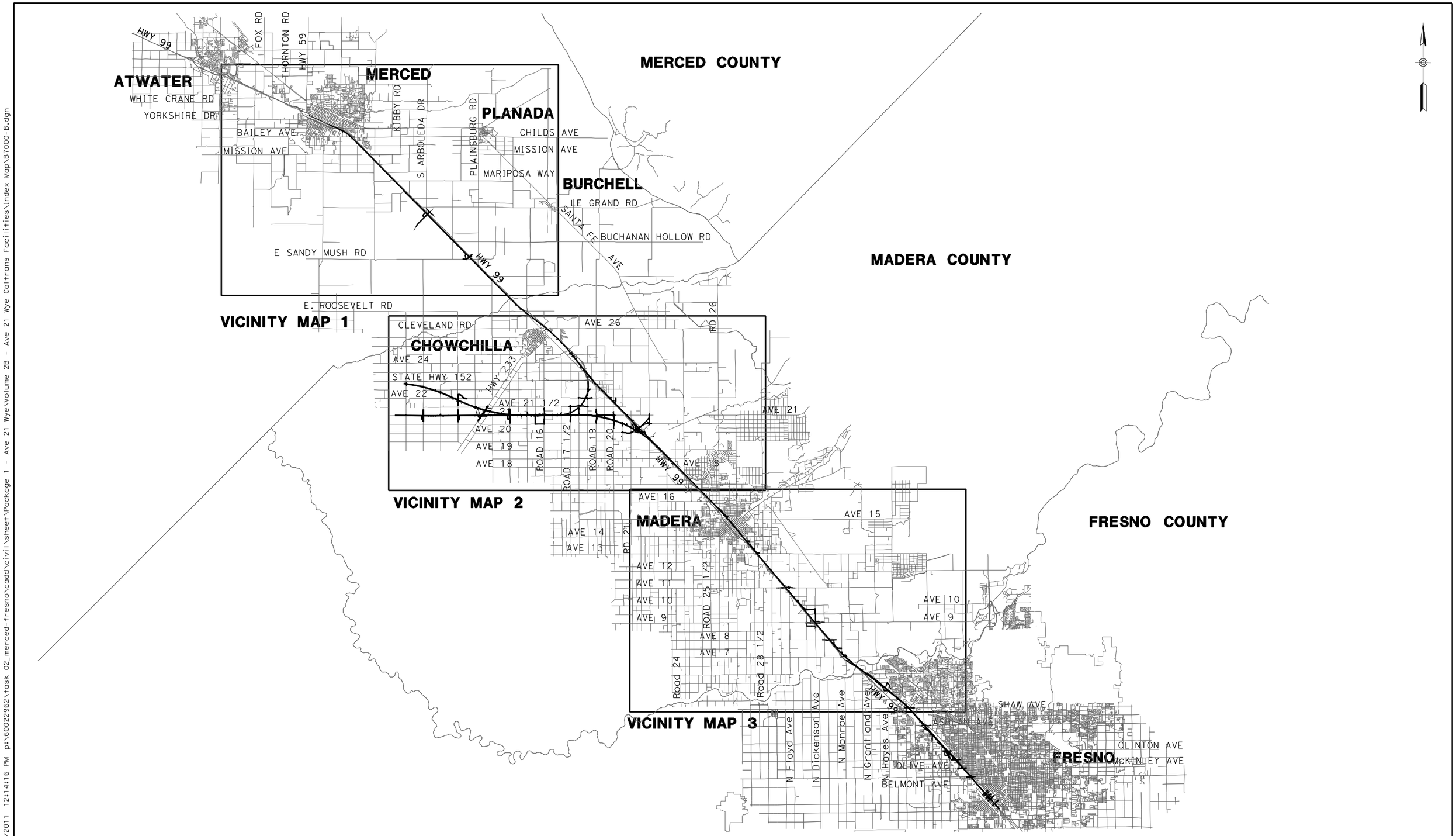

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

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CONTRACT NO. HSR06-007
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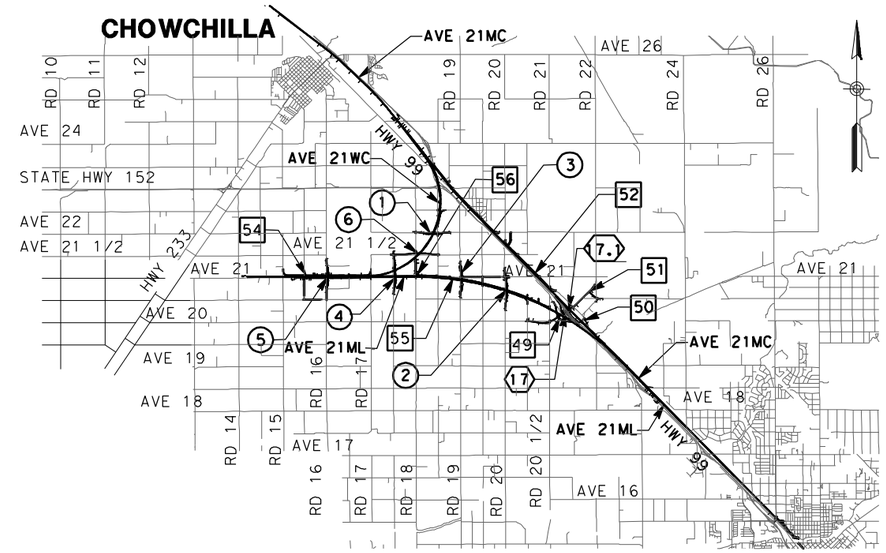
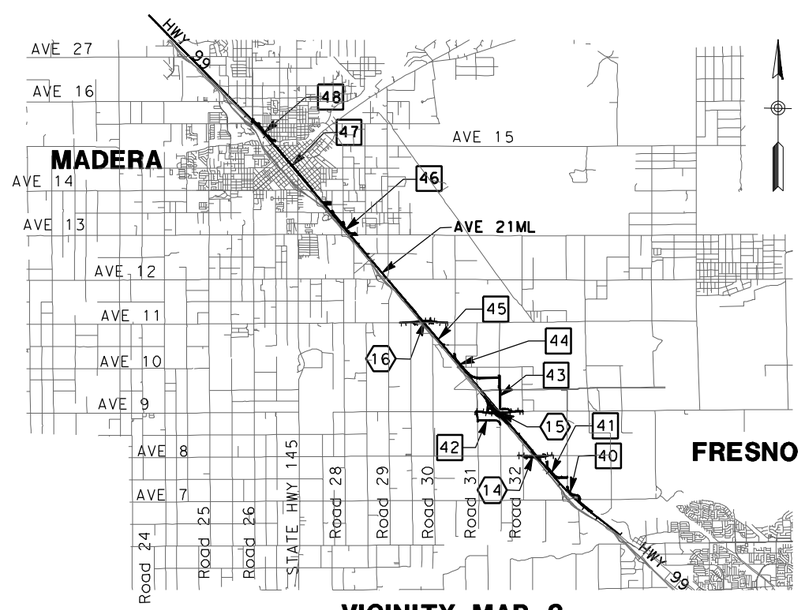
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
2	GRADE SEPARATION - ROAD 20	CT5012-B - CT5015-B	ST1105
3	GRADE SEPARATION - ROAD 19	CT5008-B - CT5011-B	ST1104
4	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
5	GRADE SEPARATION - ROAD 16 ALT 1	CT5000-B - CT5003-B	ST1101
	GRADE SEPARATION -	CT5023-B - CT5025-B	ST1101
	ROAD 16 ALONG EXIST ALT 2		
6	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
14	AVENUE 8 - OVERCROSSING	CT7000-B - CT7002-B	ST1107
15	AVENUE 9 - INTERCHANGE	CT7003-B - CT7009-B	ST1108 - ST1109
16	AVENUE 11 - OVERCROSSING	CT7010-B - CT7014-B	ST1110
17	AVENUE 20 & 20 1/2 -	CT7015-B - CT7022-B	ST1111 - ST1112
	INTERCHANGE ALT 1	CT7031-B - CT7033-B	
7.	AVENUE 20 & 20 1/2 -	CT7023-B - CT7030-B	ST1111 - ST1112
	INTERCHANGE ALT 2		
18	GRADE SEPARATION -	CT7034-B - CT7036-B	ST1113
	SANDY MUSH RD INTERCHANGE		
19	GRADE SEPARATION -	CT7037-B - CT7043-B	ST1114
	LE GRAND RD INTERCHANGE		

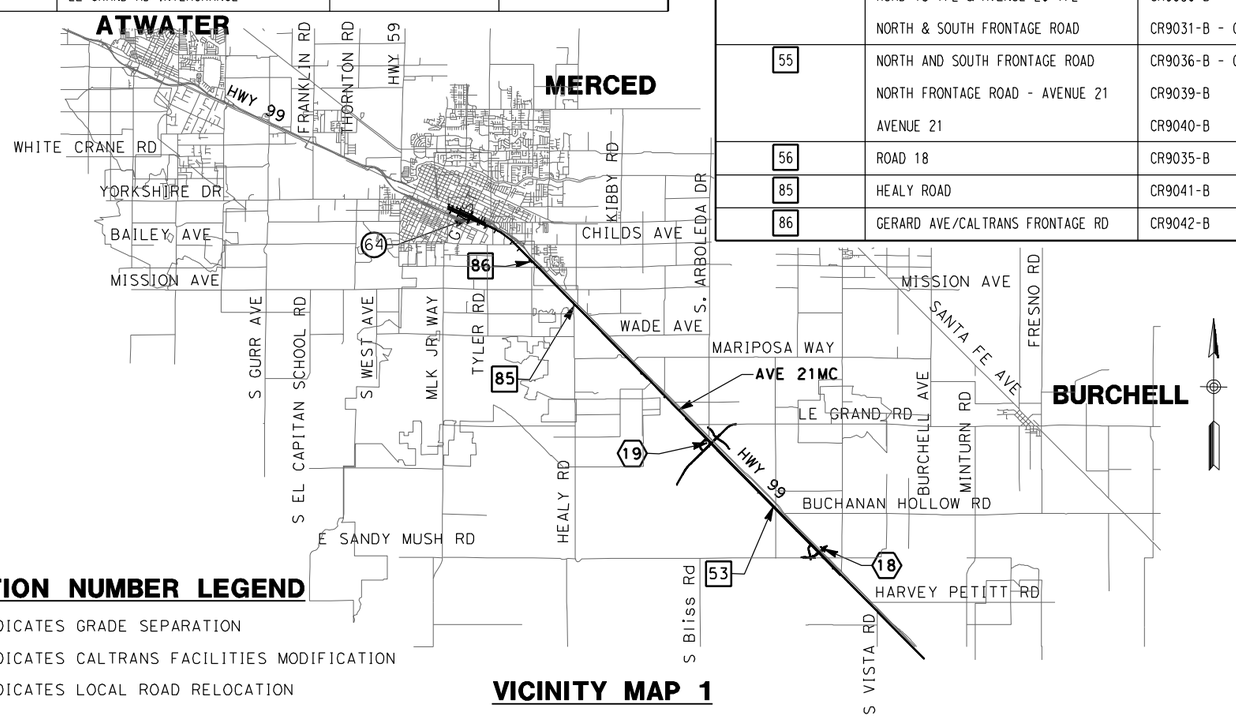
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.
40	ROAD 33	CR9000-B
41	PROPOSED ROAD	CR9001-B
42	ROAD 31 & GOLDEN STATE BLVD	CR9002-B
	AT AVENUE 9	
43	ROAD 31 1/2	CR9003-B - CR9004-B
44	ROAD 30 1/2	CR9005-B - CR9006-B
45	ROAD 30 AT AVENUE 11	CR9007-B
	ACCESS ROAD AT AVENUE 11	CR9008-B
46	S. KNOX ST	CR9009-B
47	N. E ST AND S. E ST	CR9010-B
48	SHARON BLVD & E ST	CR9011-B
49	GOLDEN STATE BLVD AT	CR9012-B
	AVENUE 20 AND 20 1/2	
50	ACCESS ROAD	CR9013-B
51	MASA ST AND ROAD 22 - ALT 1	CR9014-B
	MASA ST AND AVENUE 20 1/2 - ALT 2	CR9015-B
52	FAIRMEAD BLVD	CR9016-B - CR9020-B
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B
54	ROAD 15 1/2 & NORTH FRONTAGE ROAD	CR9029-B
	ROAD 15 1/2 & AVENUE 20 1/2	CR9030-B
	NORTH & SOUTH FRONTAGE ROAD	CR9031-B - CR9034-B
55	NORTH AND SOUTH FRONTAGE ROAD	CR9036-B - CR9038-B
	NORTH FRONTAGE ROAD - AVENUE 21	CR9039-B
	AVENUE 21	CR9040-B
56	ROAD 18	CR9035-B
85	HEALY ROAD	CR9041-B
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9042-B



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

9000 0 9000 18000

GRAPHIC SCALE

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MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:32:04 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Key Map\CB7000-B.dgn
ayeled

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelled 4/27/2011 5:32:46 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Key Map\CB7001-B.dgn

200 0 200 400
1"=200'

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayelled

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20 1/2 - INTERCHANGE ALT 1
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20 1/2 - INTERCHANGE ALT 2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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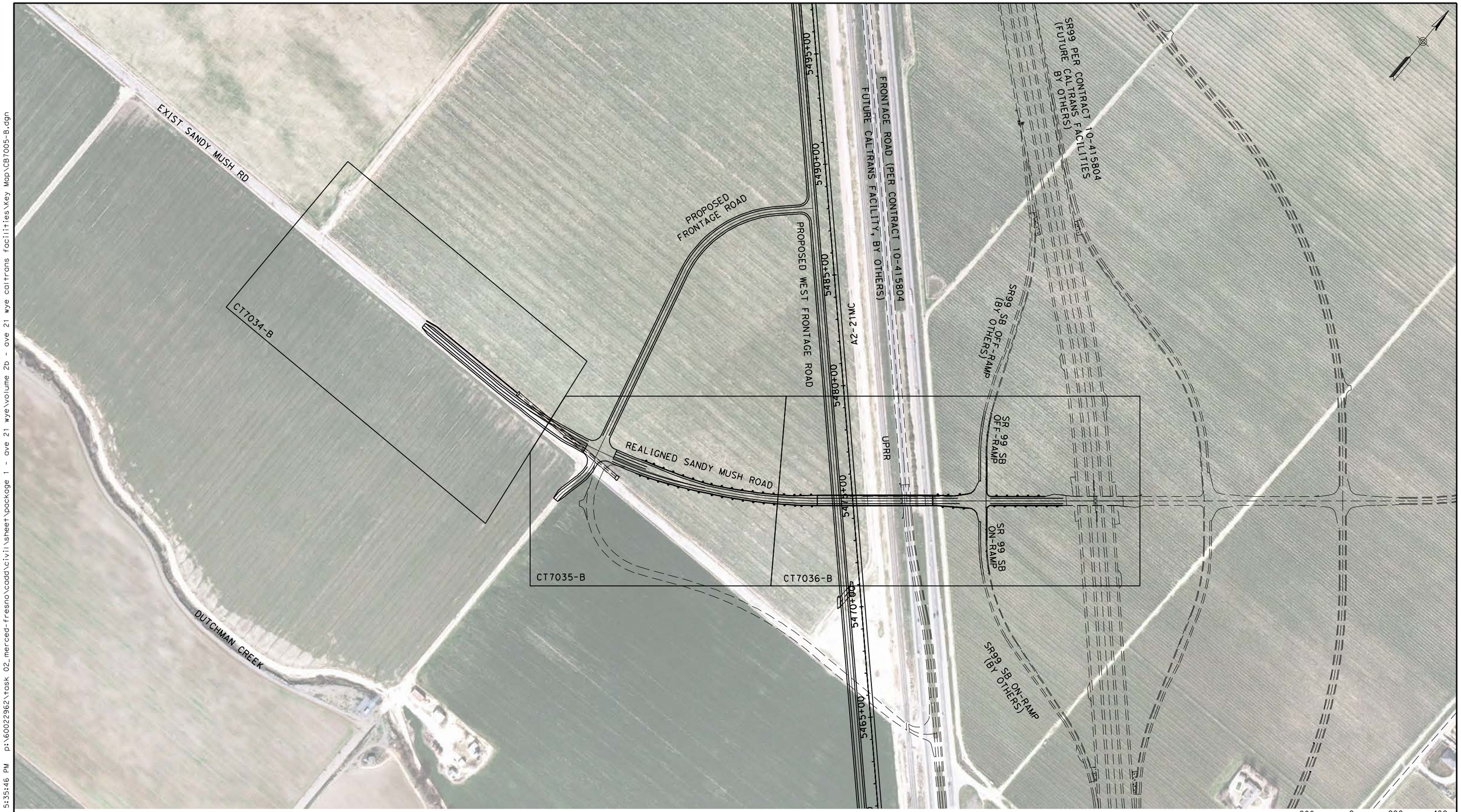

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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DATE 04/29/2011

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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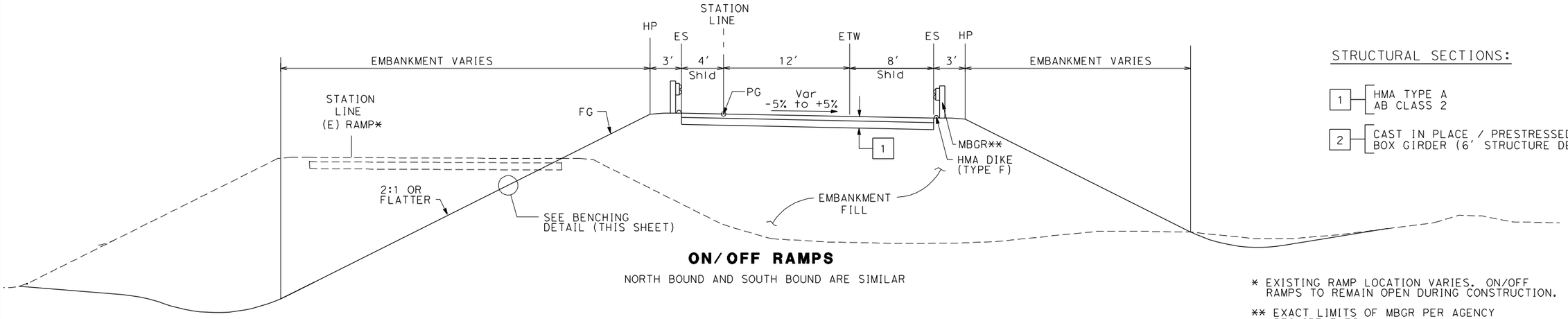


ON/OFF RAMPS

NORTH BOUND AND SOUTH BOUND ARE SIMILAR

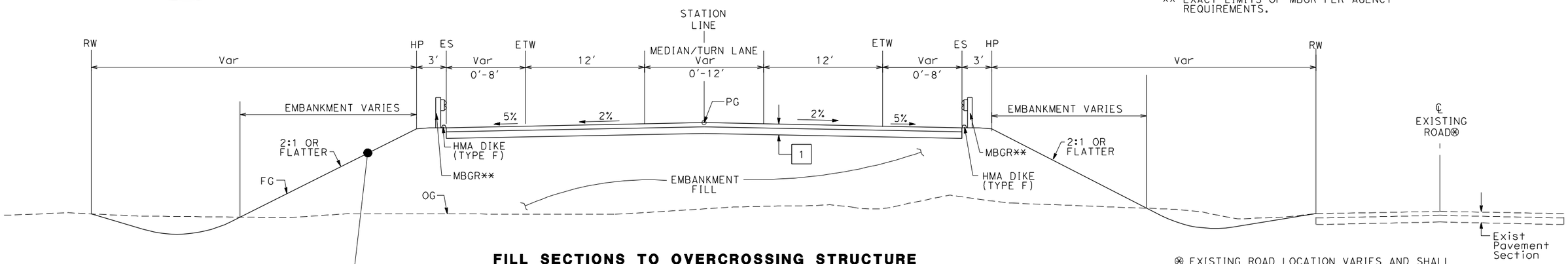
STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

* EXISTING RAMP LOCATION VARIES. ON/OFF RAMPS TO REMAIN OPEN DURING CONSTRUCTION.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.

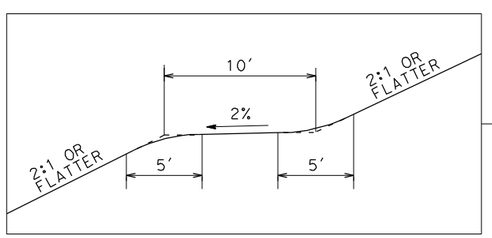


FILL SECTIONS TO OVERCROSSING STRUCTURE

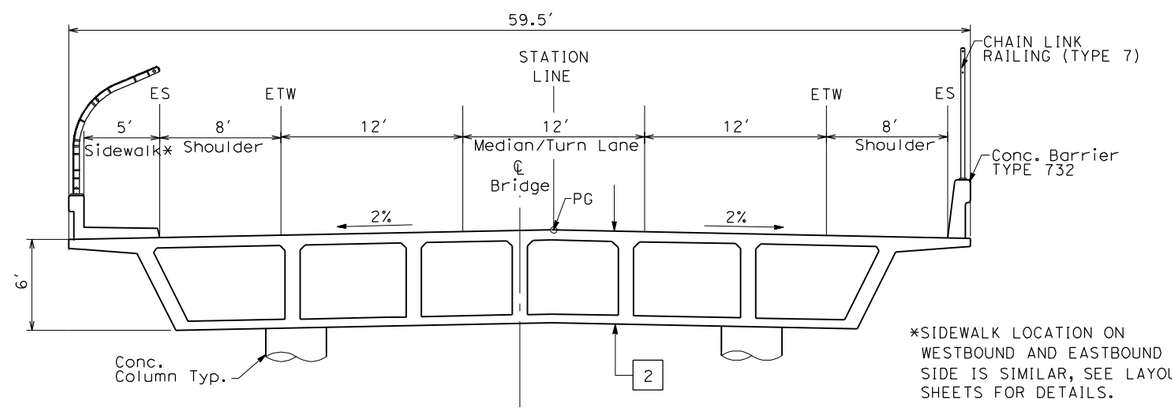
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL, TYP



OVERCROSSING STRUCTURE

SEE STRUCTURAL PLANS

*SIDEWALK LOCATION ON WESTBOUND AND EASTBOUND SIDE IS SIMILAR, SEE LAYOUT SHEETS FOR DETAILS.

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 21 WYE:

NO.	STREET NAME
1	Avenue 20 & 20 .5 INTERCHANGE (ALT 1 & 2)
2	Avenue 9 INTERCHANGE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
HIGHWAY
TYPICAL CROSS SECTIONS
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT6990-B
SCALE NTS
SHEET NO. ### OF ###

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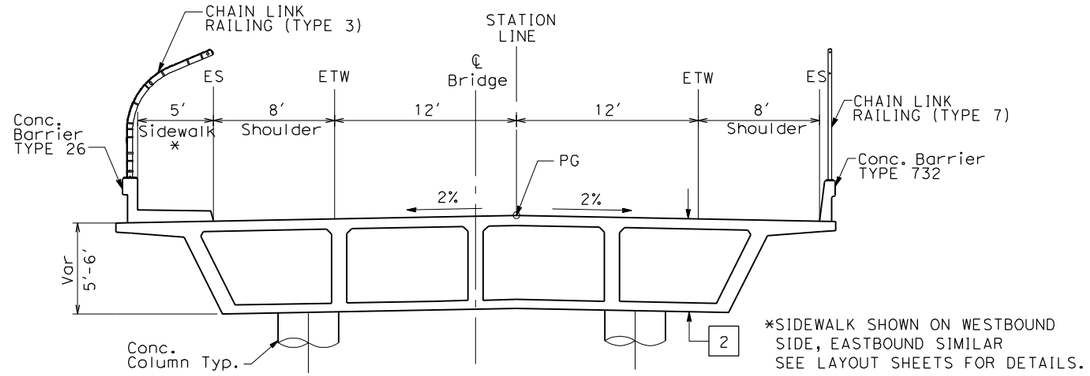
ayelled

NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



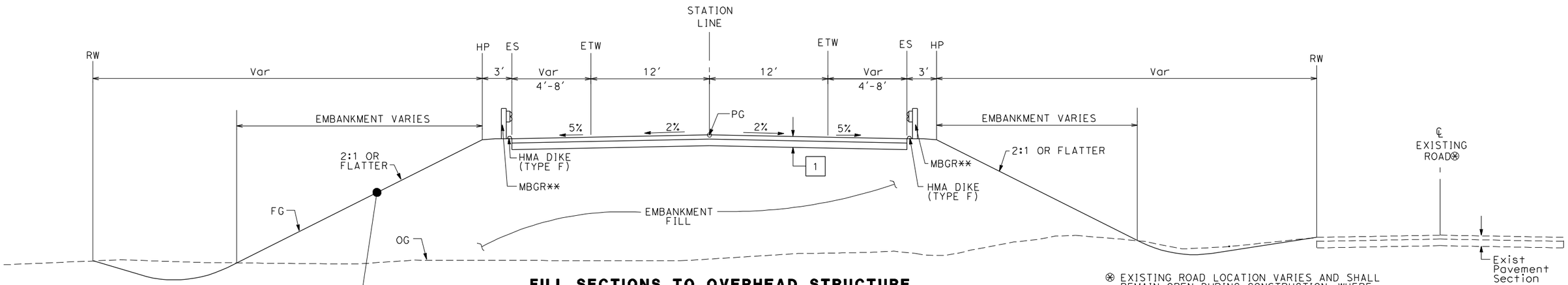
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

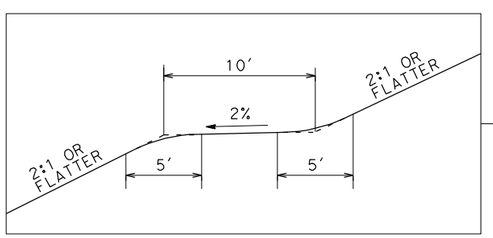


FILL SECTIONS TO OVERHEAD STRUCTURE

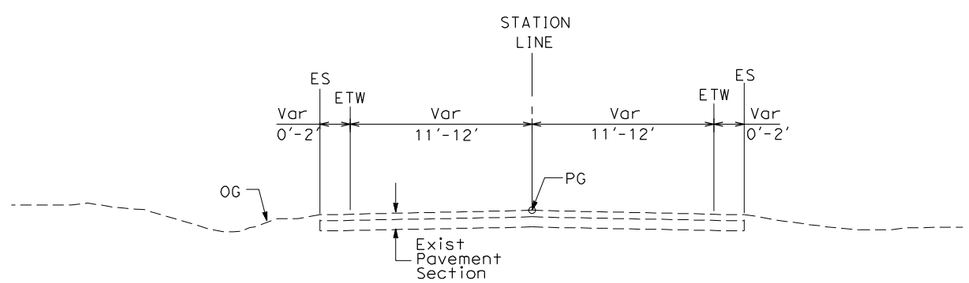
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)

SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 21 WYE:

NO.	STREET NAME
1	Le Grand
2	E. Sandy Mush Road
3	Avenue 11
4	Avenue 8

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
HIGHWAY
TYPICAL CROSS SECTIONS
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT6991-B
SCALE NTS
SHEET NO. ### OF ###

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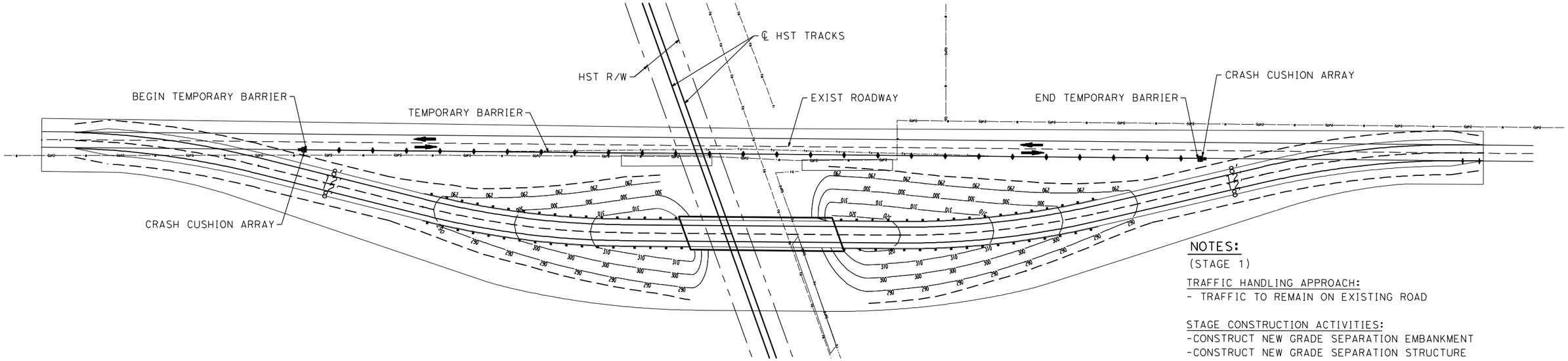
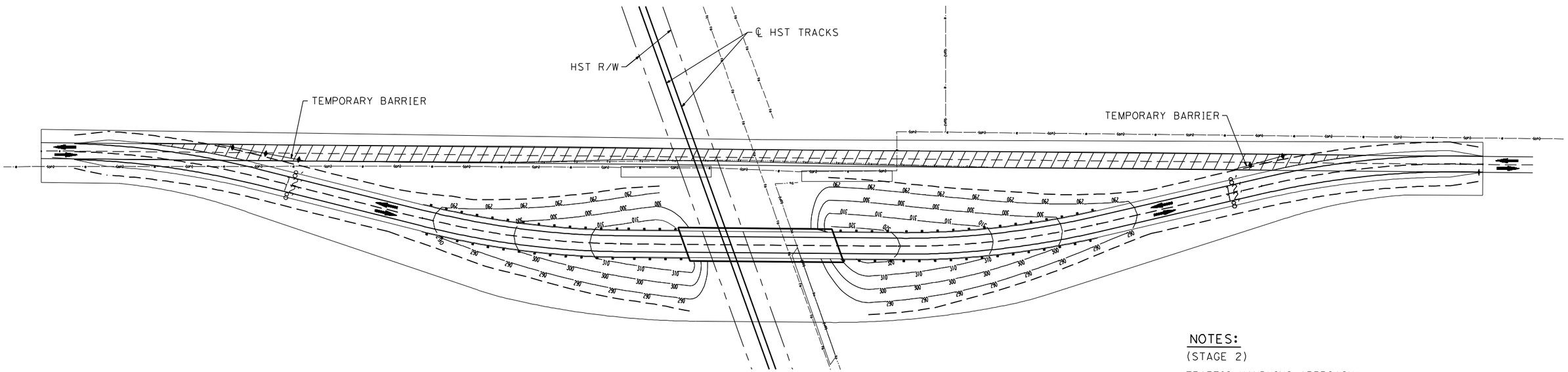


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE SURFACE AND BASE OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (TYPE U11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. WONG
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT6992-B
SCALE NO SCALE
SHEET NO. ### OF ###

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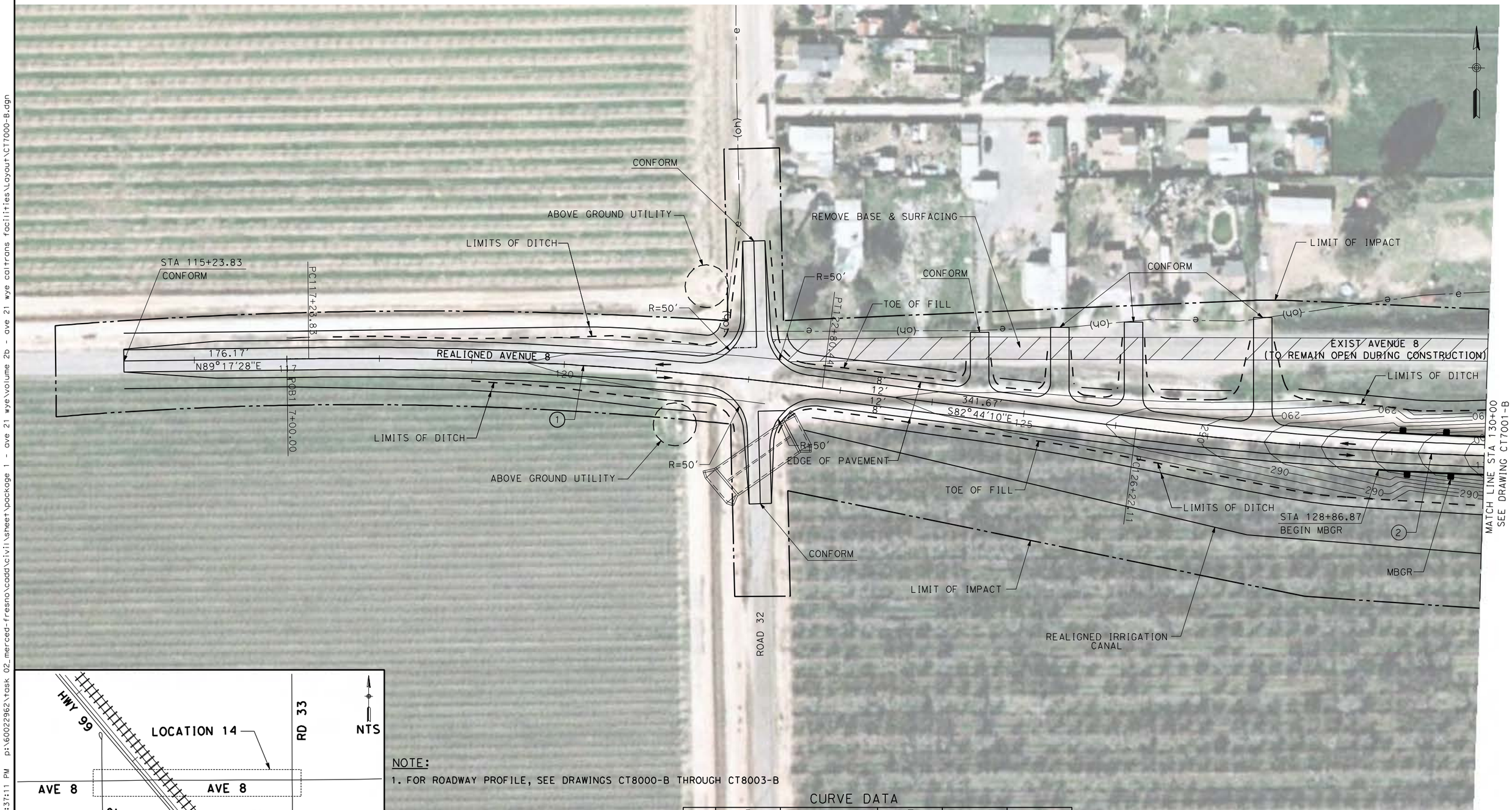

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8000-B THROUGH CT8003-B

CURVE DATA

No.	R	Δ	T	L	V
1	4000.00	7°58'22"	278.75	556.61	45 MPH
2	4000.00	7°15'50"	253.90	507.12	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:37:11 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7000-B.dgn

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HST R/W

℄ HST TRACKS
A2-21ML(SEE DRAWING T2123-A)

REALIGNED
UNPAVED ROAD

LIMIT OF IMPACT

UPRR R/W

REMOVE BASE & SURFACING

LIMITS OF DITCH

LIMITS OF DITCH

EXIST AVENUE 8
(TO REMAIN OPEN DURING CONSTRUCTION)

TOE OF FILL

MBGR

STA 133+73.39
END MBGR

STA 139+77.18
END BRIDGE

TOE OF FILL

REALIGNED AVENUE 8

1185.54'
N90°0'0"E

1185.54'
N90°0'0"E

MATCH LINE STA 130+00
SEE DRAWING CT7000-B

MATCH LINE STA 144+00
SEE DRAWING CT7002-B

TOE OF FILL

LIMITS OF DITCH

EDGE OF PAVEMENT

STA 133+95.02
BEGIN BRIDGE

SR 99 SB

SR 99 NB

UPRR

STA 139+94.73
BEGIN MBGR

TOE OF FILL

MBGR

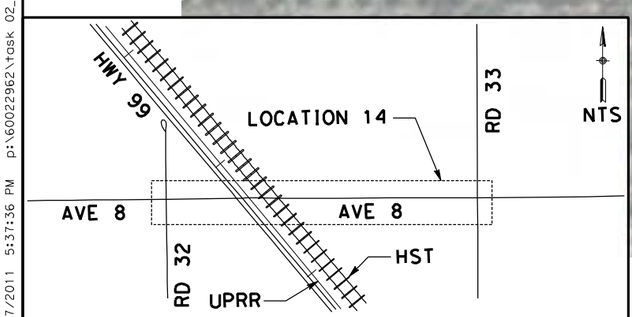
LIMITS OF DITCH

REALIGNED AVENUE 8 OVERHEAD

REALIGNED IRRIGATION CANAL

LIMIT OF IMPACT

EXIST IRRIGATION
CANAL



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8000-B THROUGH CT8003-B

CURVE DATA

No.	R	Δ	T	L	V
2	4000.00	7°15'50"	253.90	507.12	45 MPH
3	3500.00	8°36'07"	263.22	525.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

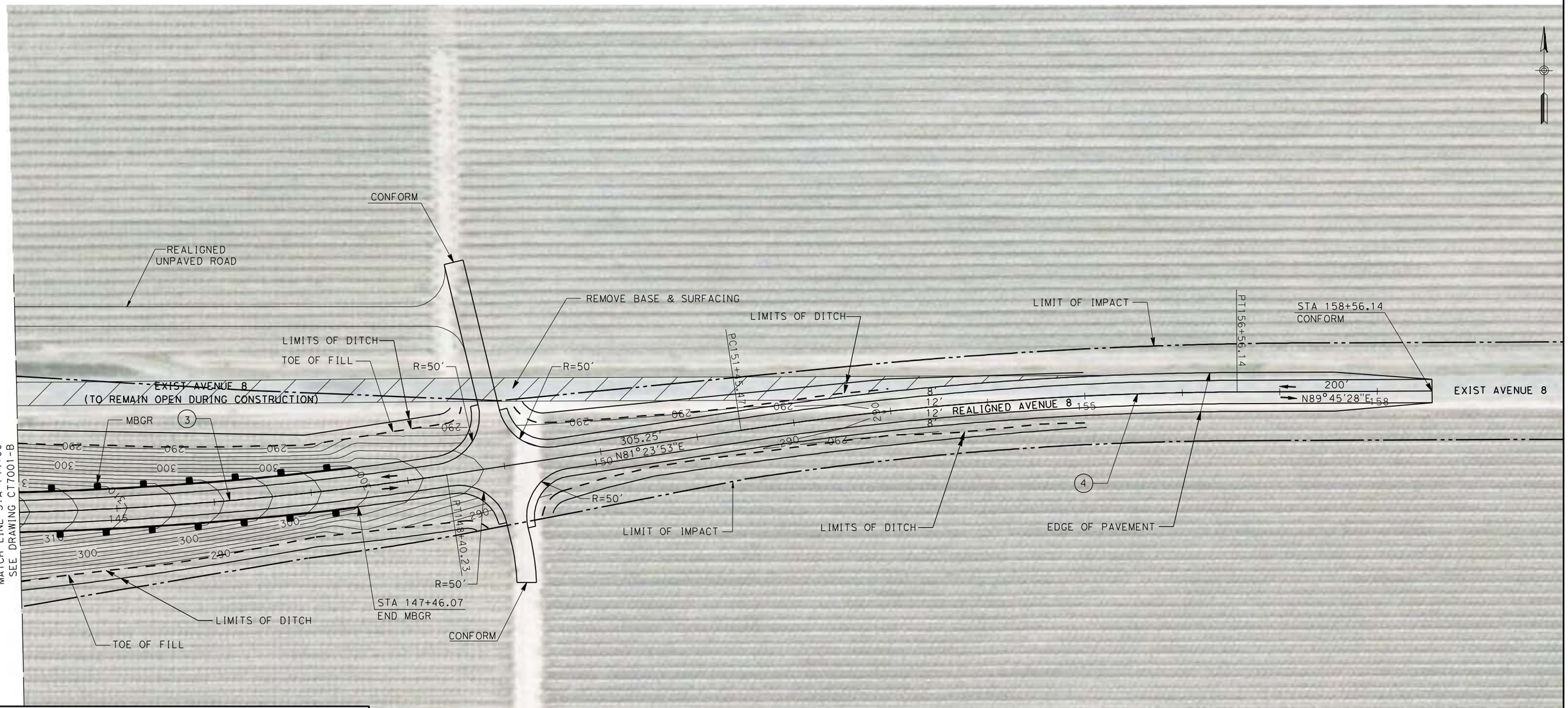
AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

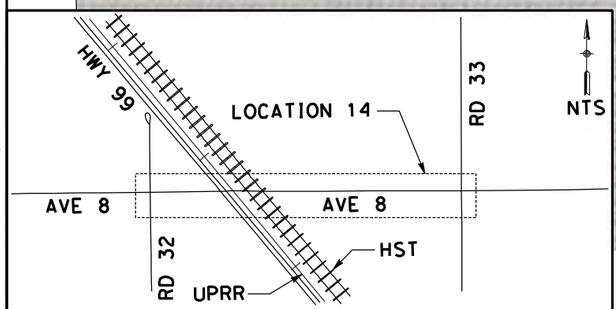
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7001-B
SCALE AS SHOWN
SHEET NO. ### OF ###





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8000-B THROUGH CT8003-B

CURVE DATA

No.	R	Δ	T	L	V
3	3500.00	8°36'07"	263.22	525.46	45 MPH
4	3500.00	8°21'35"	255.79	510.66	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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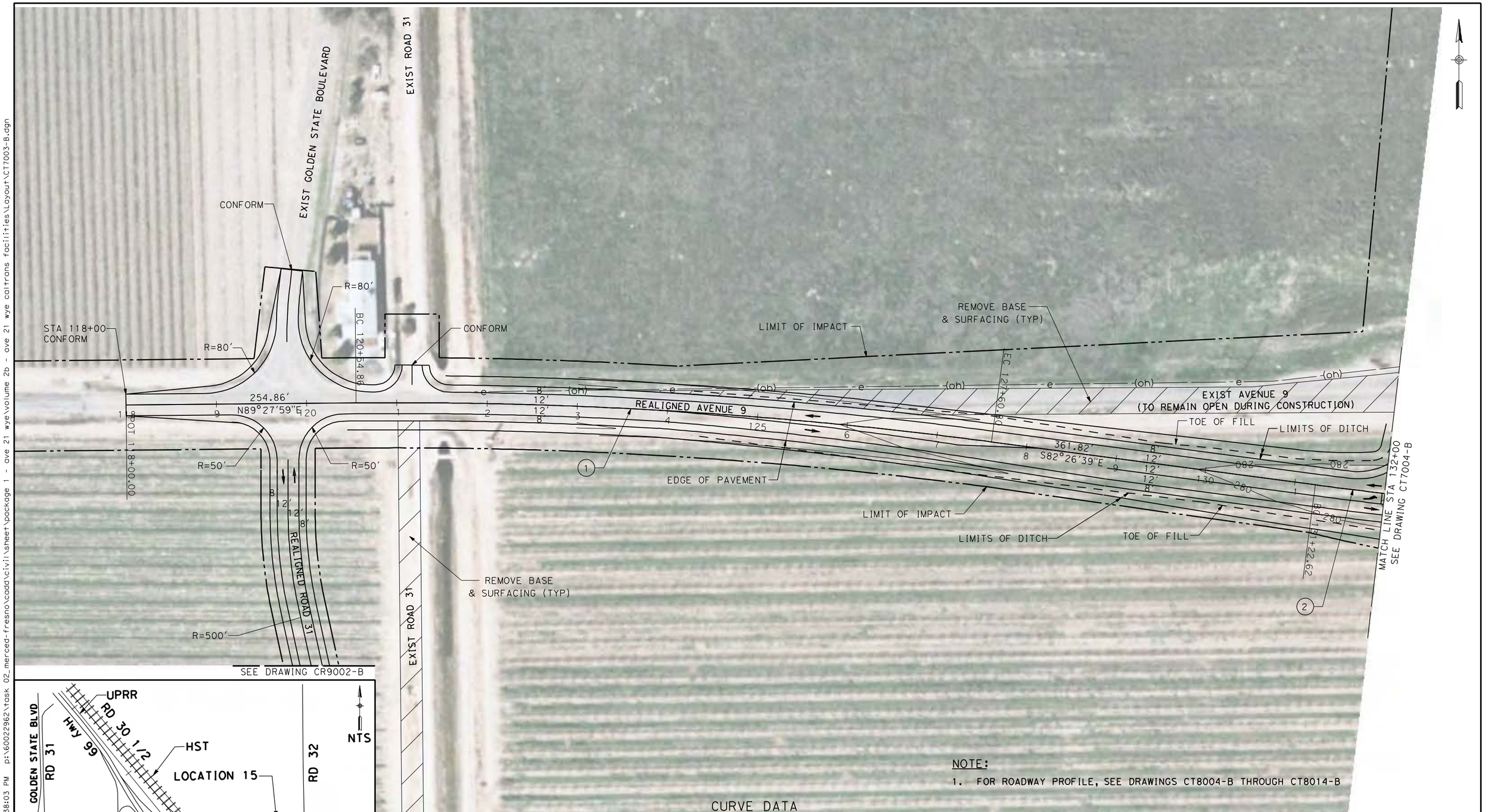

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

CURVE DATA

No.	R	Δ	T	L	V
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2	5000.00	7°33'21"	330.16	659.37	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

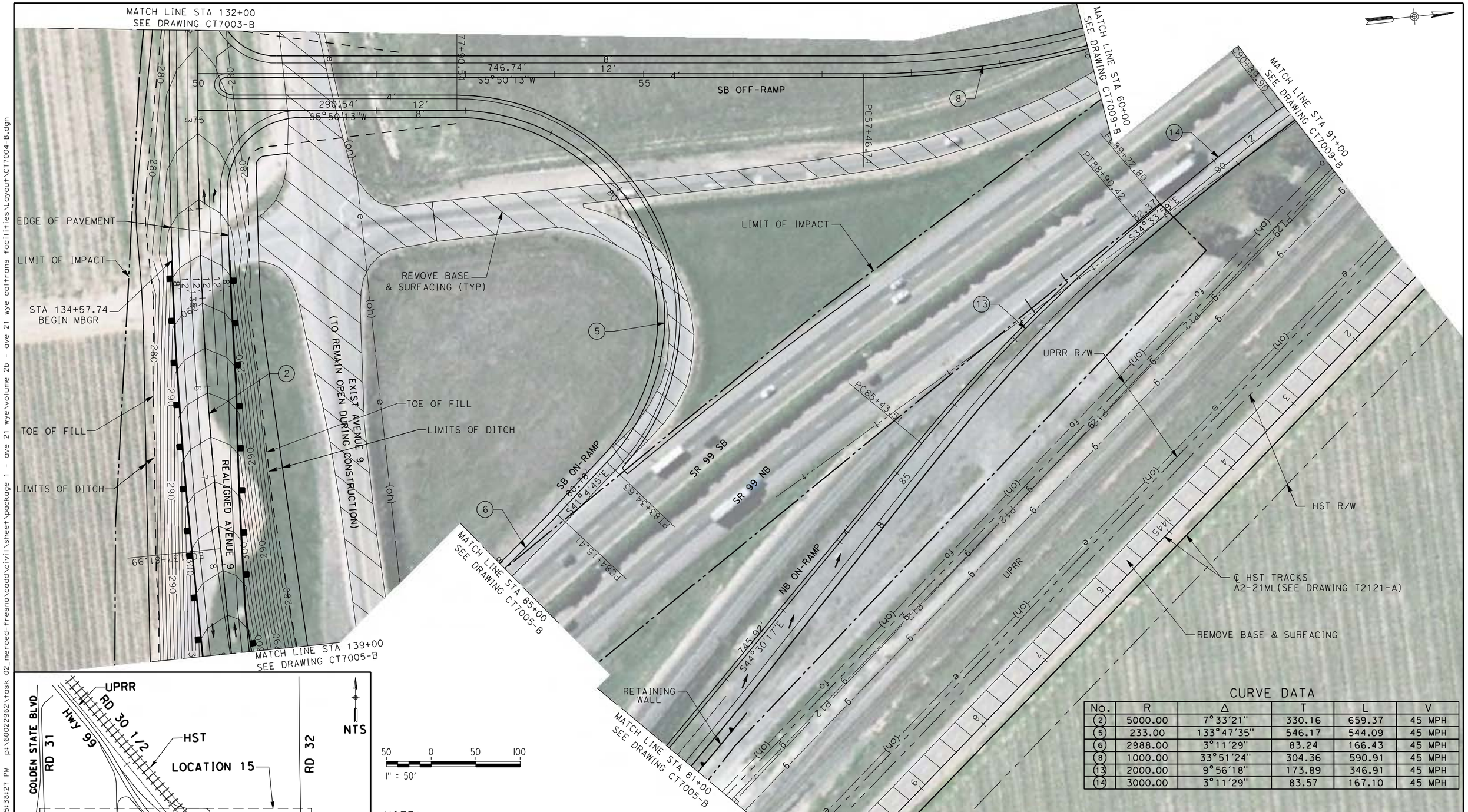
NOT FOR CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
LAYOUT
SHEET 1 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7003-B
SCALE AS SHOWN
SHEET NO. ### OF ###



CURVE DATA

No.	R	Δ	T	L	V
2	5000.00	7°33'21"	330.16	659.37	45 MPH
5	233.00	133°47'35"	546.17	544.09	45 MPH
6	2988.00	3°11'29"	83.24	166.43	45 MPH
8	1000.00	33°51'24"	304.36	590.91	45 MPH
13	2000.00	9°56'18"	173.89	346.91	45 MPH
14	3000.00	3°11'29"	83.57	167.10	45 MPH

NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

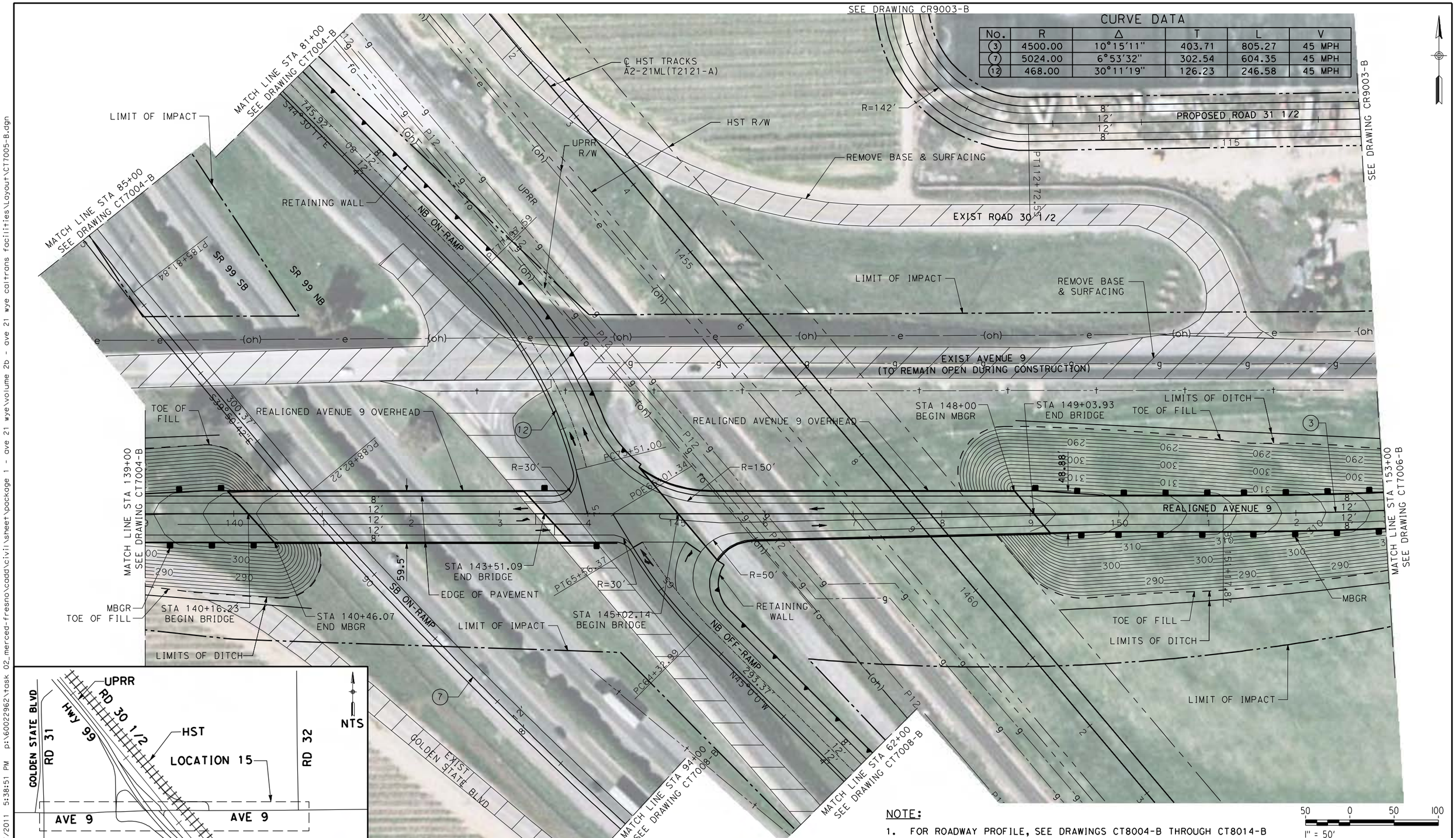
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
LAYOUT
SHEET 2 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:38:27 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7004-B.dgn
ayelled



CURVE DATA

No.	R	Δ	T	L	V
3	4500.00	10°15'11"	403.71	805.27	45 MPH
7	5024.00	6°53'32"	302.54	604.35	45 MPH
12	468.00	30°11'19"	126.23	246.58	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811
CH2MHILL

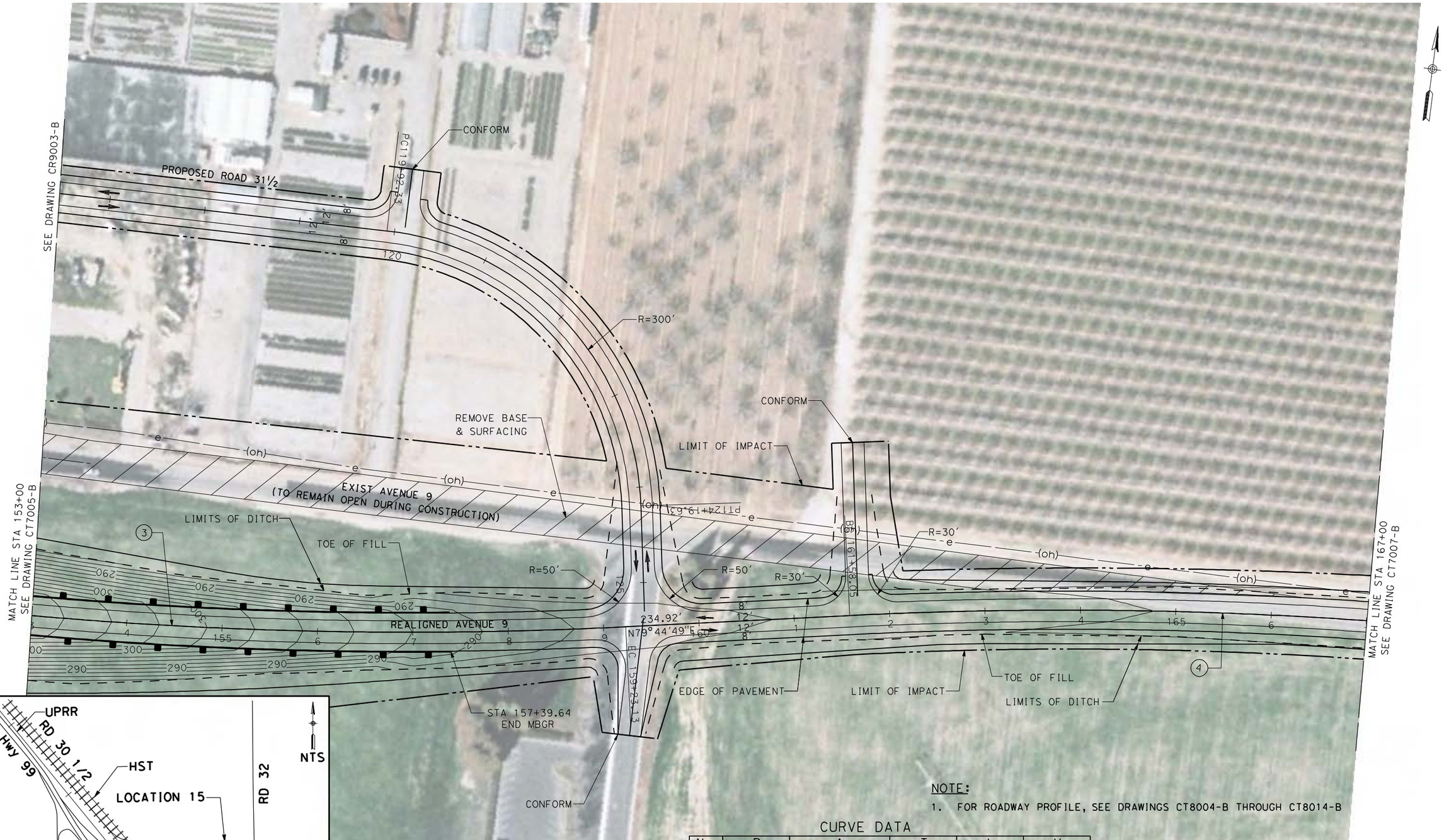
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
LAYOUT
SHEET 3 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:38:51 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7005-B.dgn

4/27/2011 5:39:05 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7006-B.dgn



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

CURVE DATA

No.	R	Δ	T	L	V
3	4500.00	10°15'11"	403.71	805.27	45 MPH
4	4500.00	9°43'10"	382.59	763.35	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
LAYOUT
SHEET 4 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

CURVE DATA

No.	R	Δ	T	L	V
4	4500.00	9°43'10"	382.59	763.35	45 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
LAYOUT
SHEET 5 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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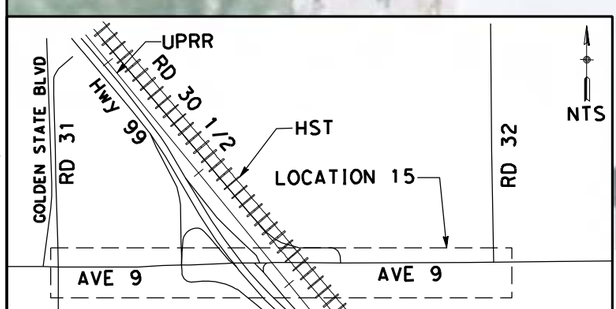
ayeled



NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

CURVE DATA

No.	R	Δ	T	L	V
7	5024.00	6°53'32"	302.54	604.35	45 MPH
10	5012.00	1°36'00"	69.99	139.96	45 MPH
11	10000.00	3°01'58"	264.72	529.31	45 MPH

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVE 9 - INTERCHANGE SR 99 NB OFF/SB ON RAMPS
LAYOUT
SHEET 6 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7008-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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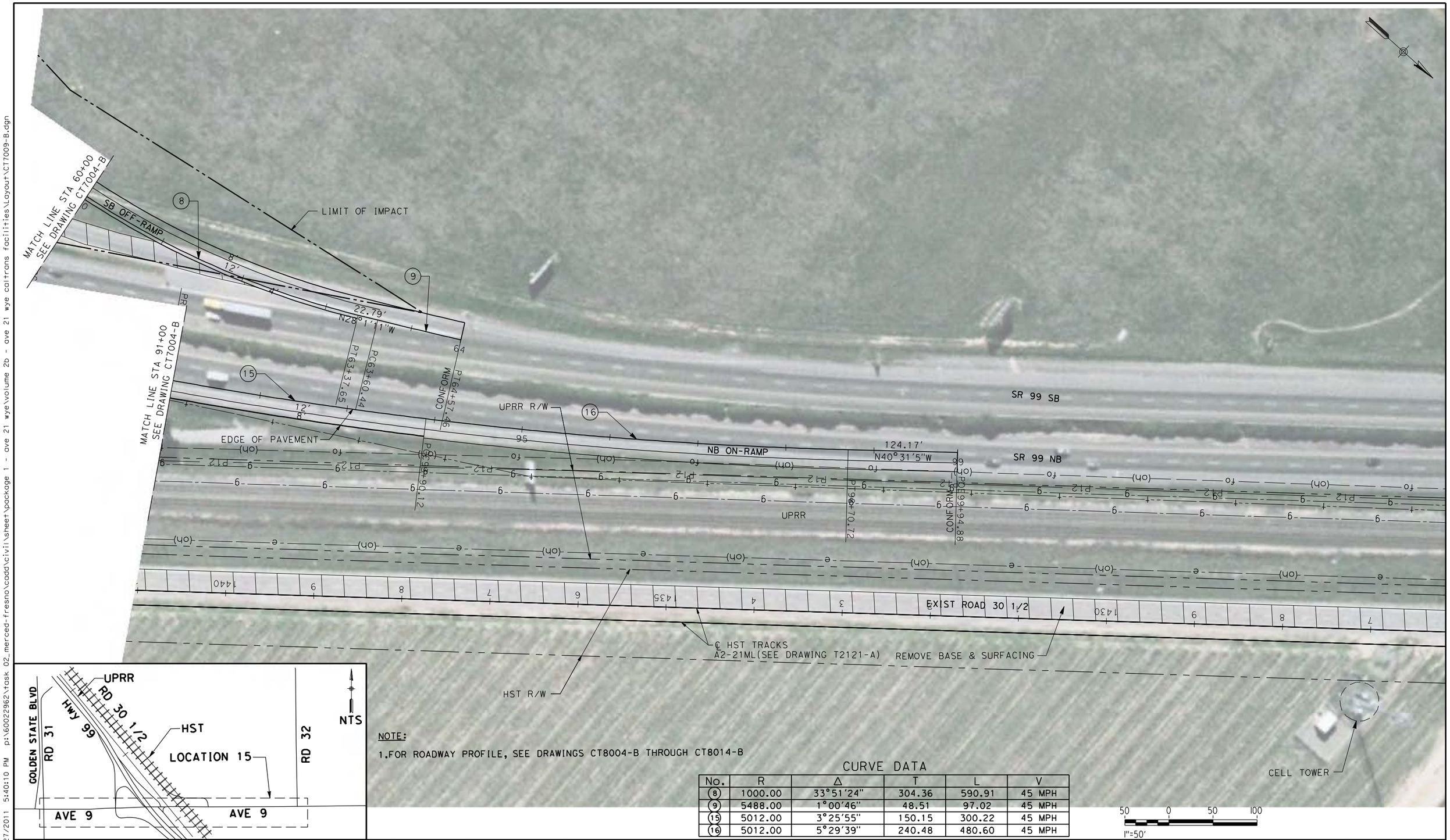
ayelad



NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8004-B THROUGH CT8014-B

CURVE DATA

No.	R	Δ	T	L	V
8	1000.00	33°51'24"	304.36	590.91	45 MPH
9	5488.00	1°00'46"	48.51	97.02	45 MPH
15	5012.00	3°25'55"	150.15	300.22	45 MPH
16	5012.00	5°29'39"	240.48	480.60	45 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVE 9 - INTERCHANGE SR 99 NB ON/SB OFF RAMPS
LAYOUT
SHEET 7 OF 7

CONTRACT NO. HSR06-007
DRAWING NO. CT7009-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayeled

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8015-B THROUGH CT8019-B

CURVE DATA

No.	R	Δ	T	L	V
1	10000.00	3°3'13"	266.54	532.96	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
LAYOUT
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7010-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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layed

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8015-B THROUGH CT8019-B

CURVE DATA

No.	R	Δ	T	L	V
1	10000.00	3°3'13"	266.54	532.96	45 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
LAYOUT
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7011-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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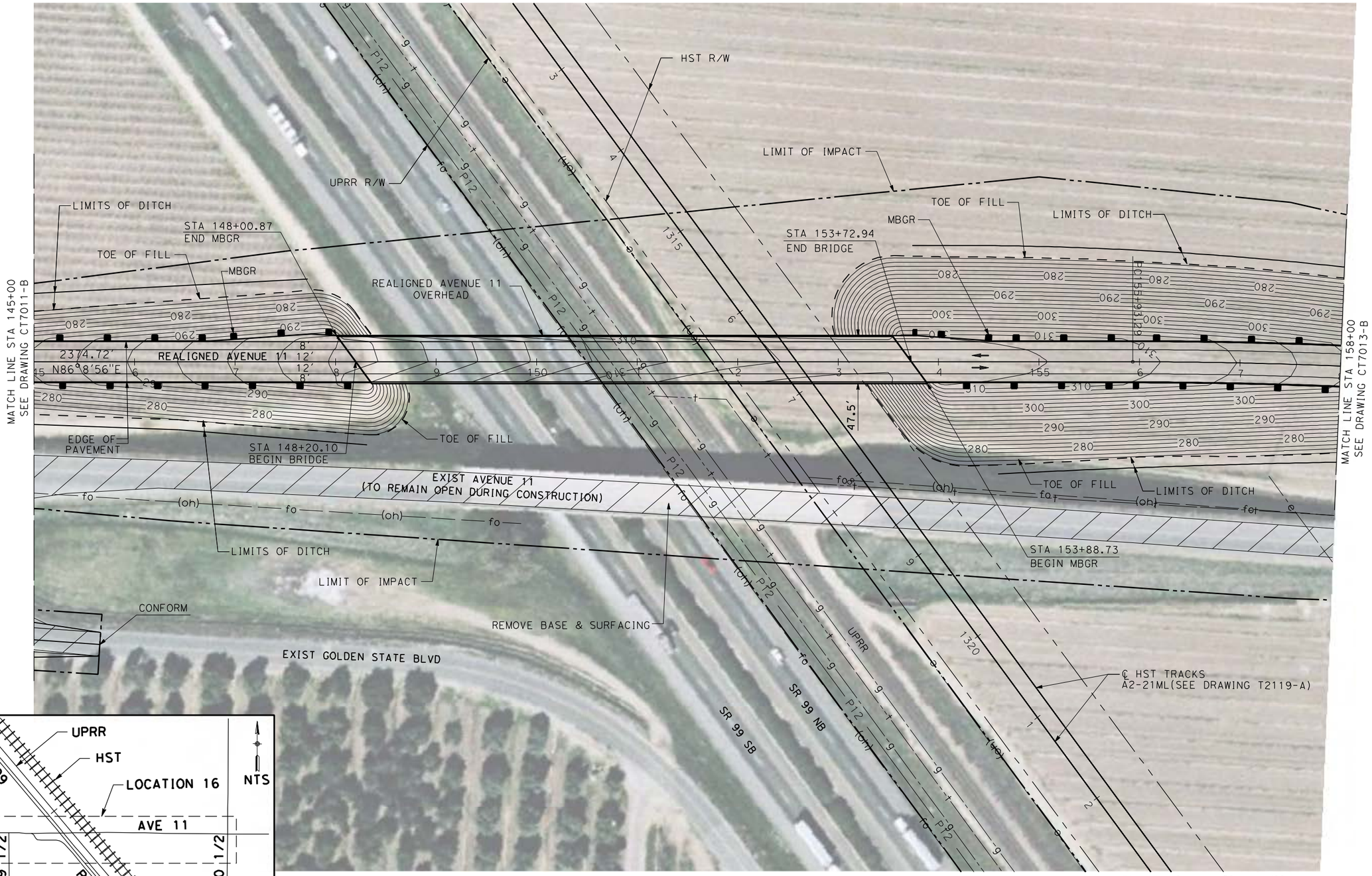

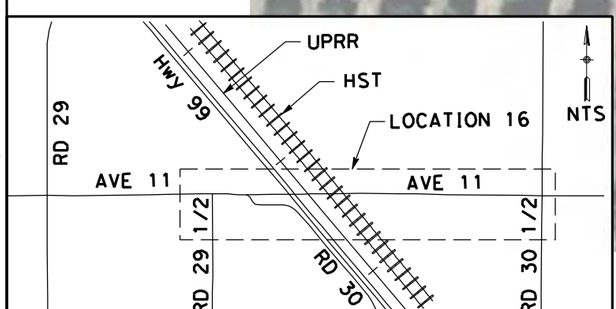

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8015-B THROUGH CT8019-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
LAYOUT
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7012-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayelad

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ayelad

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8015-B THROUGH CT8019-B

CURVE DATA

No.	R	Δ	T	L	V
2	5000.00	11°21'48"	497.45	991.64	45 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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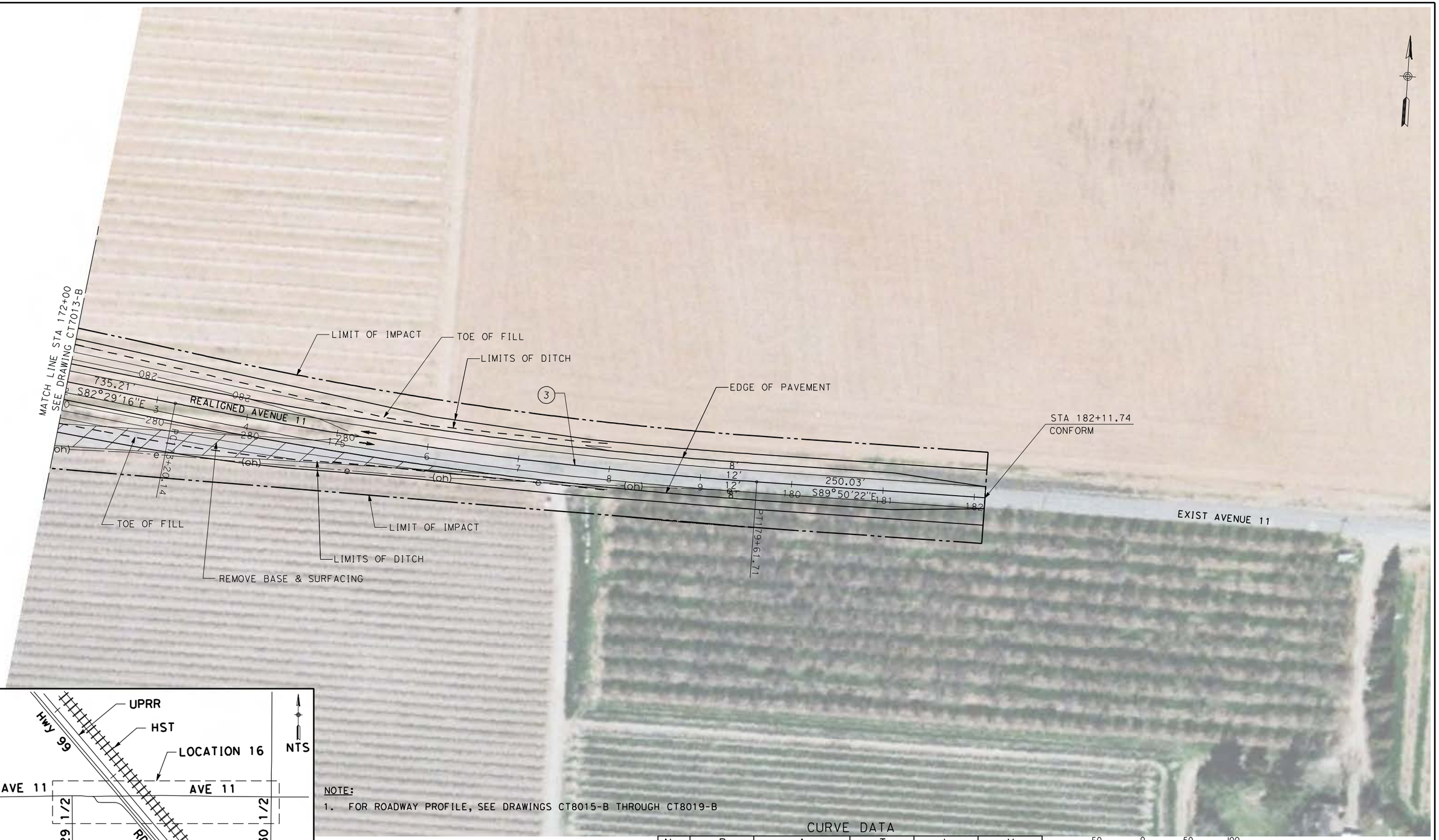
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
LAYOUT
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7013-B
SCALE AS SHOWN
SHEET NO. ### OF ###



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8015-B THROUGH CT8019-B

CURVE DATA

No.	R	Δ	T	L	V
3	5000.00	7°21'6"	321.22	641.56	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
LAYOUT
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7014-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayeled

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7015-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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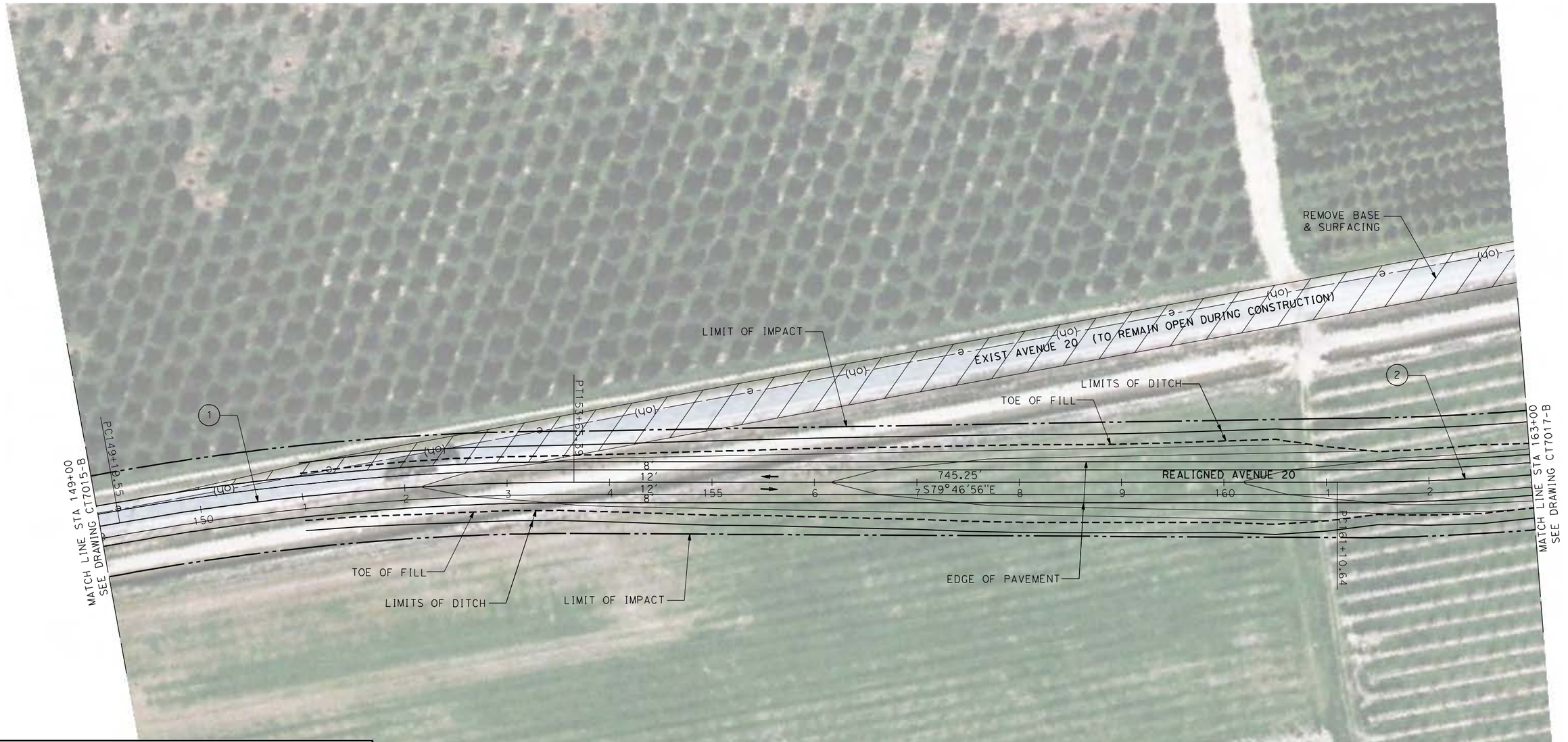

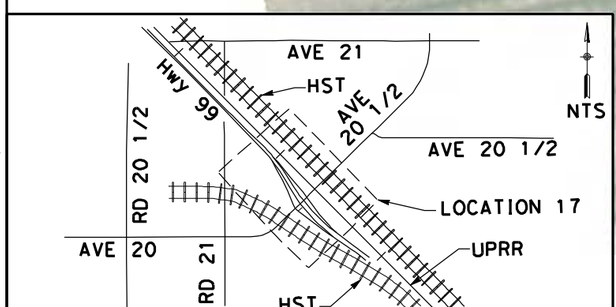

NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

CURVE DATA

No.	R	Δ	T	L	V
1	2500.00	10°13'4"	223.51	445.84	45 MPH
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:42:14 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7016-B.dgn

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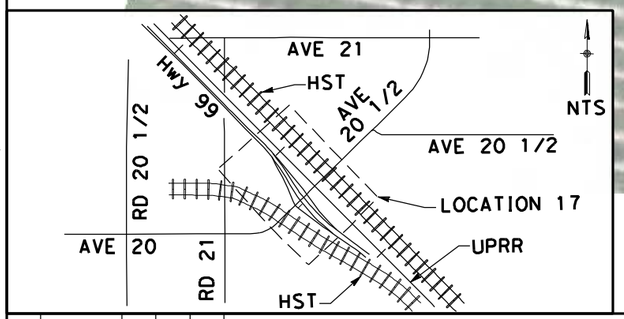

CURVE DATA

No.	R	Δ	T	L	V
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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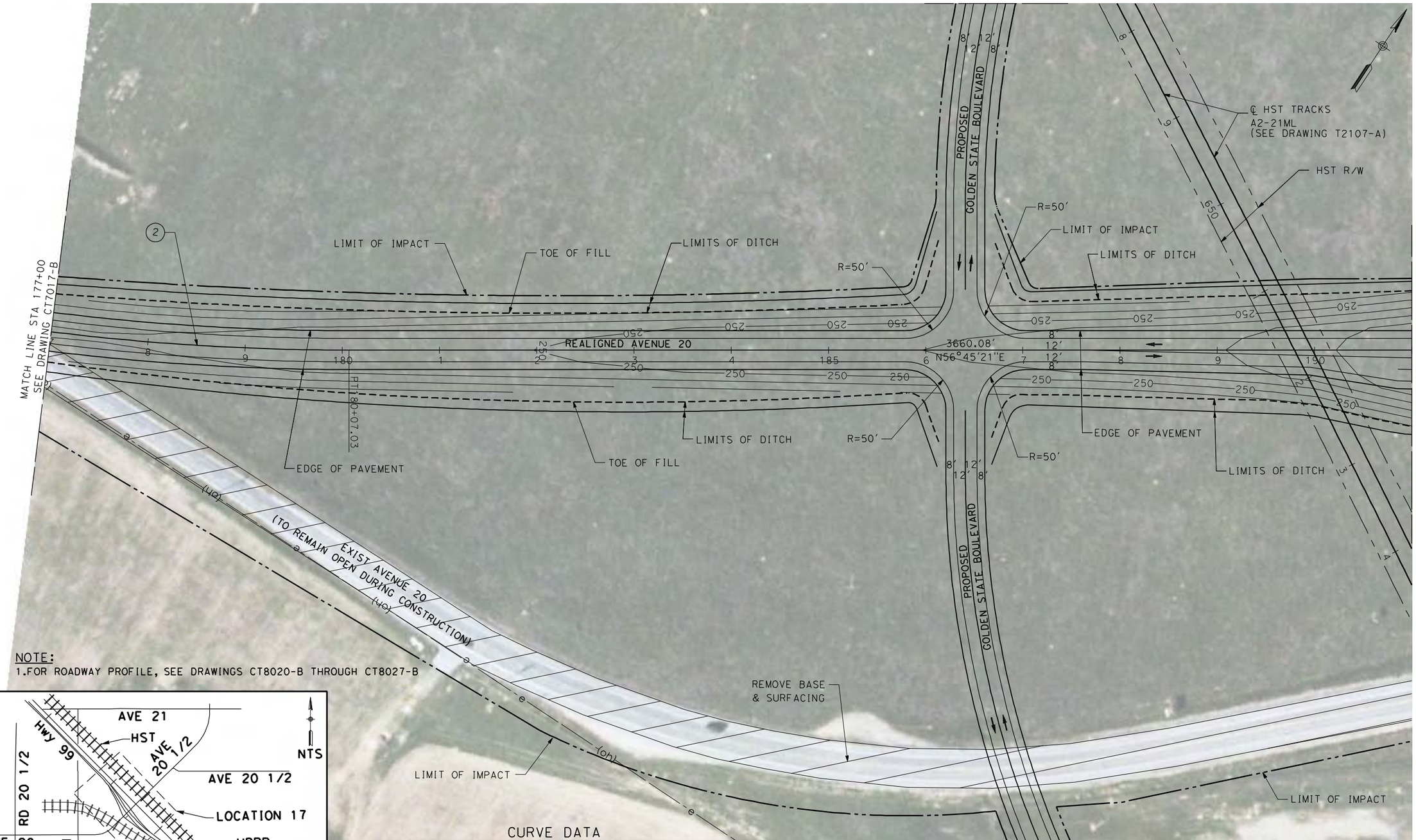
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

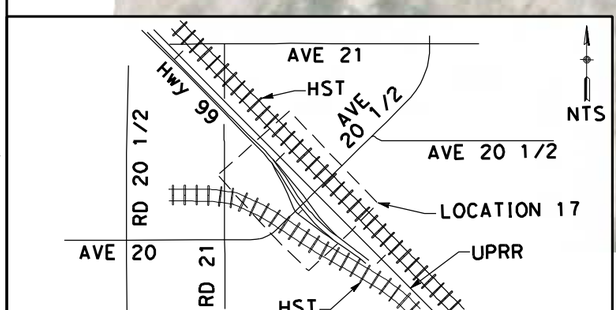
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:42:50 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7018-B.dgn



NOTE:
1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B



CURVE DATA

No.	R	Δ	T	L	V
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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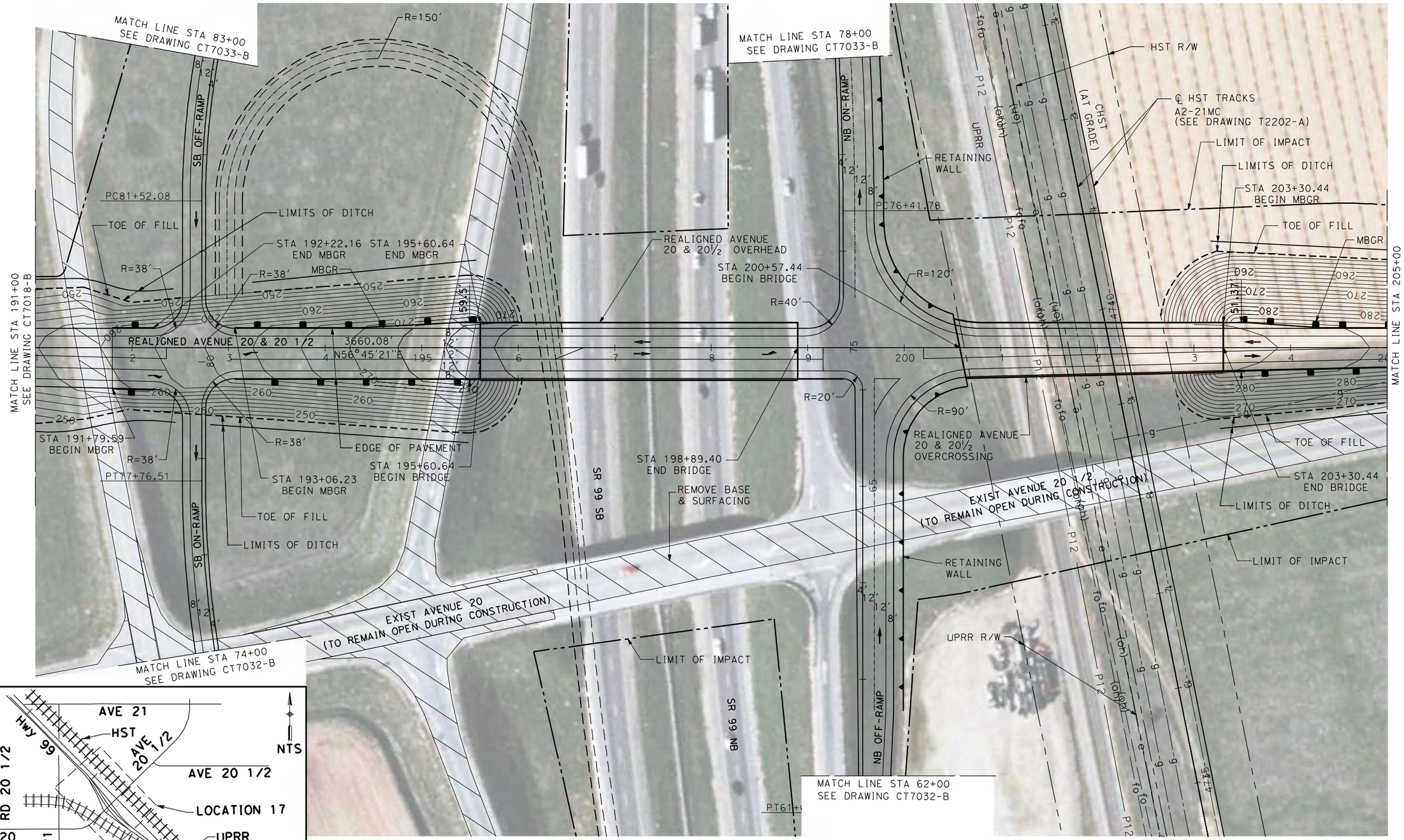

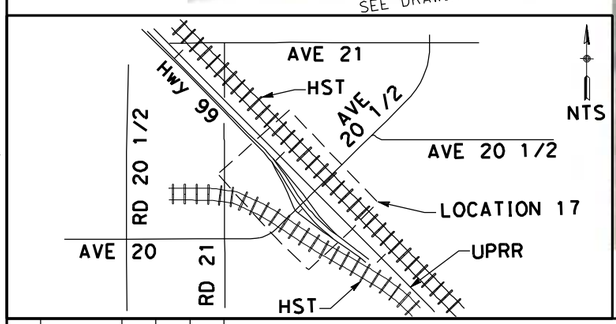

NOTE:
1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:43:10 PM p:\60029962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7019-B.dgn
ayeled

4/27/2011 5:43:23 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7020-B.dgn

NOTE:
1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	33°14'35"	895.57	1740.60	45 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811
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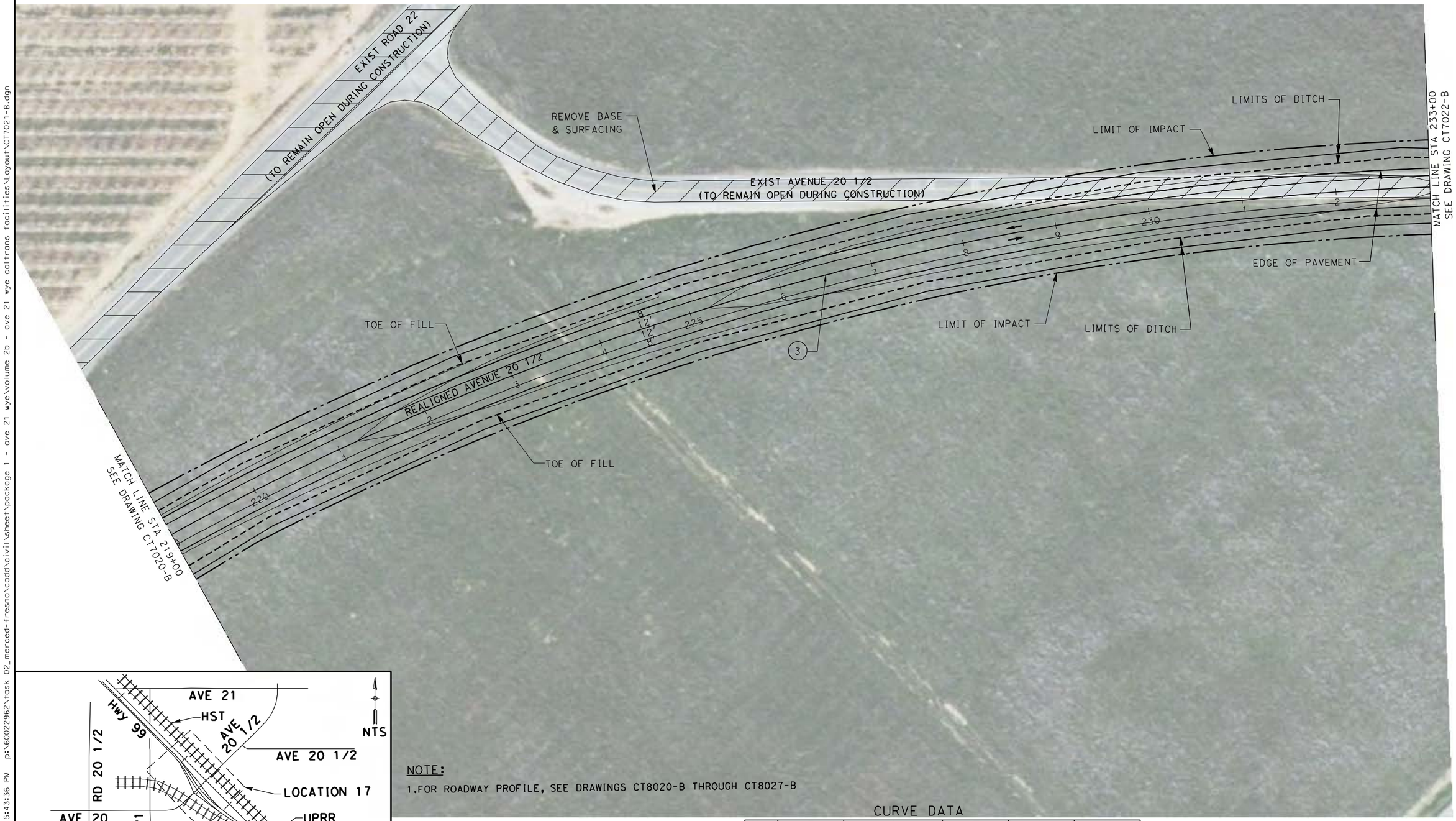
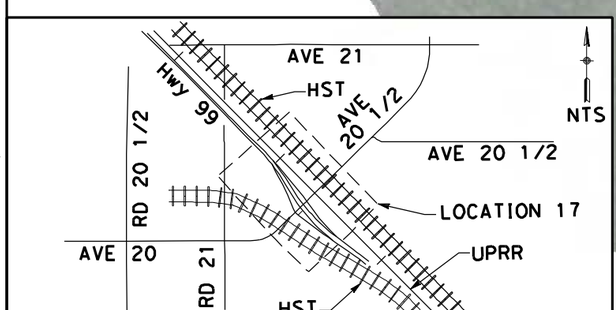
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelea





NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	33°14'35"	895.57	1740.60	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayelled

4/27/2011 5:43:47 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7022-B.dgn

NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8020-B THROUGH CT8027-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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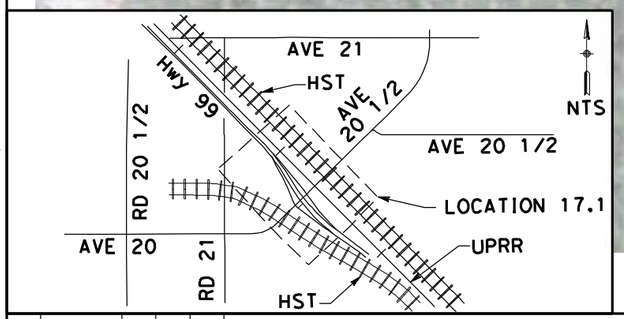
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
LAYOUT
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayeled



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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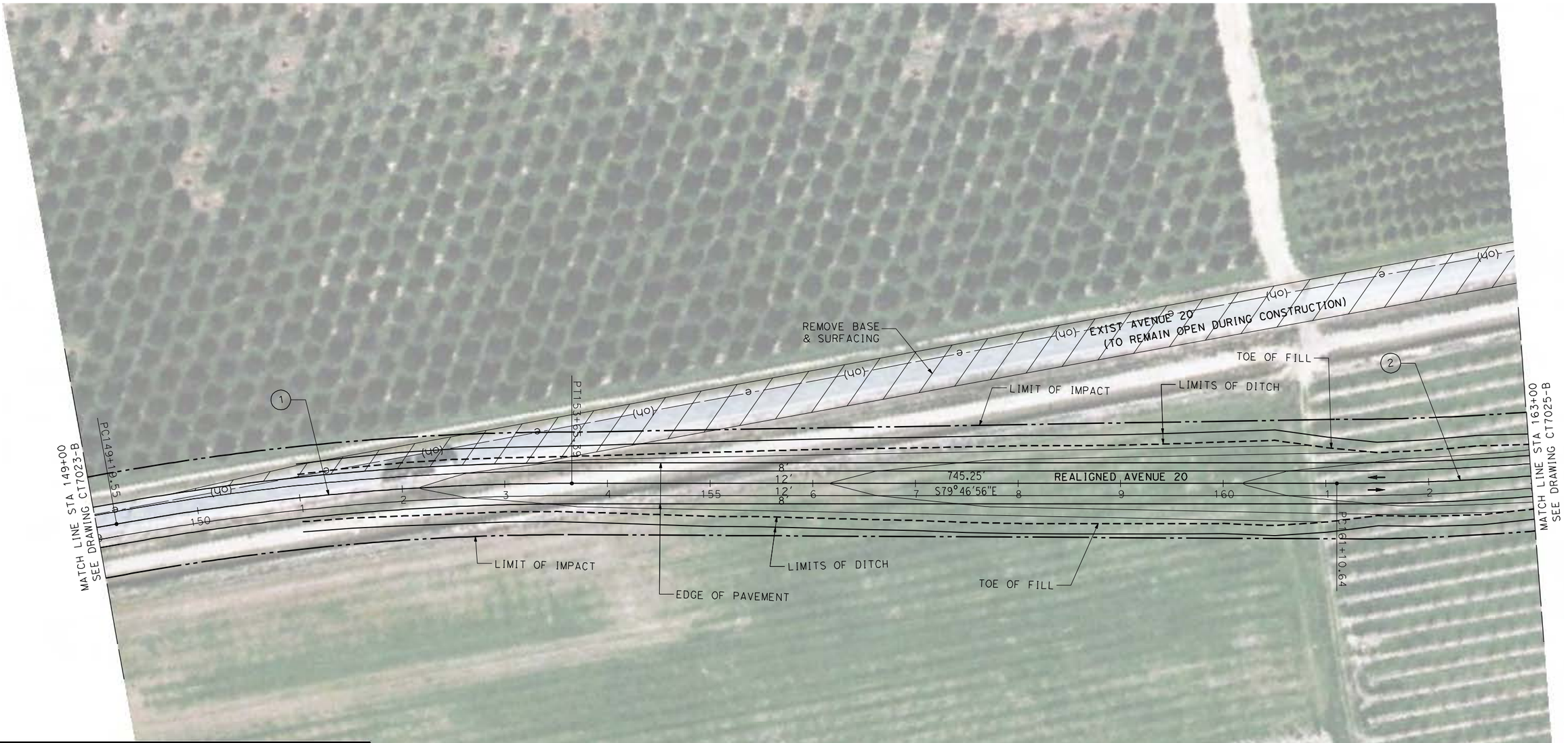
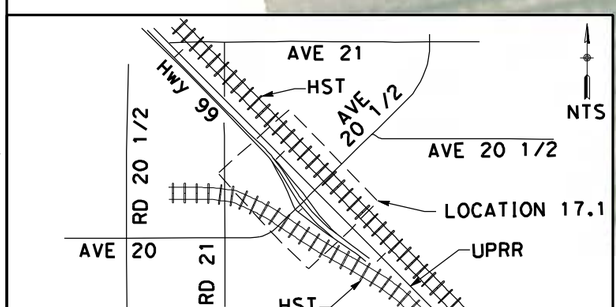
ayelad





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

CURVE DATA

No.	R	Δ	T	L	V
1	2500.00	10°13'4"	223.51	445.84	45 MPH
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

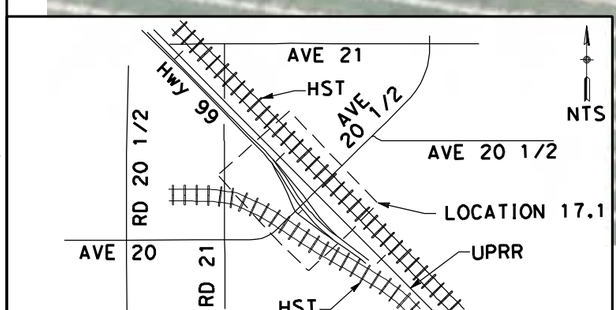
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:44:10 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7024-B.dgn
ayeled

4/27/2011 5:44:22 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7025-B.dgn



CURVE DATA

No.	R	Δ	T	L	V
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
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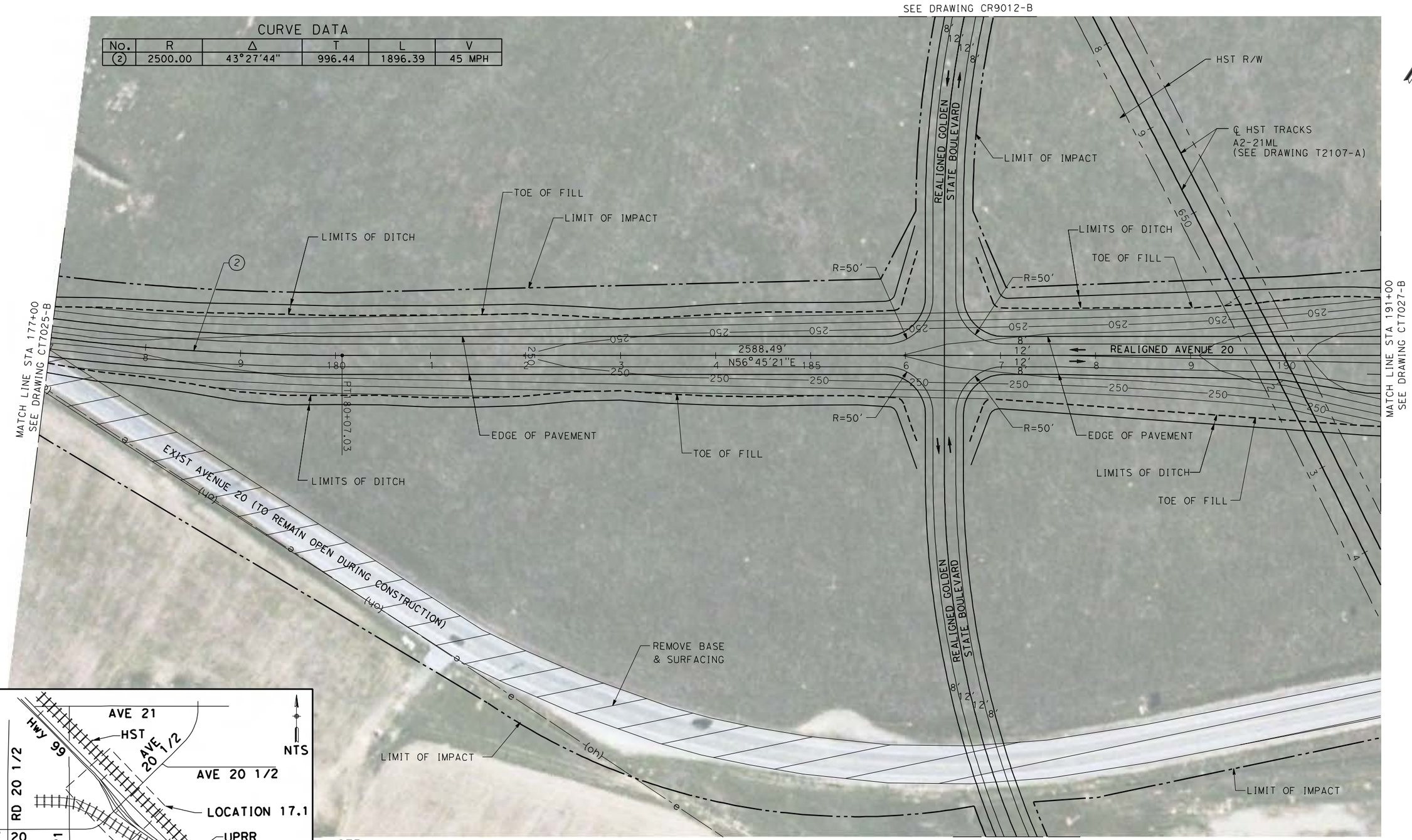
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

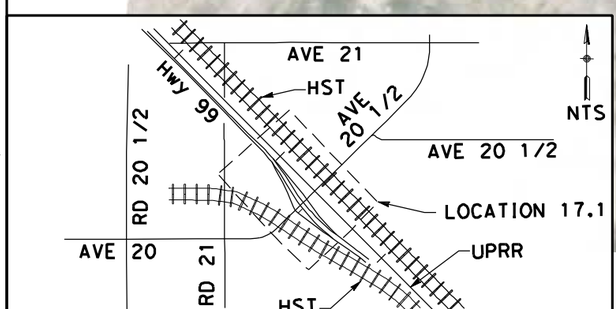
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelled

4/27/2011 5:44:50 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7026-B.dgn





No.	R	Δ	T	L	V
2	2500.00	43°27'44"	996.44	1896.39	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
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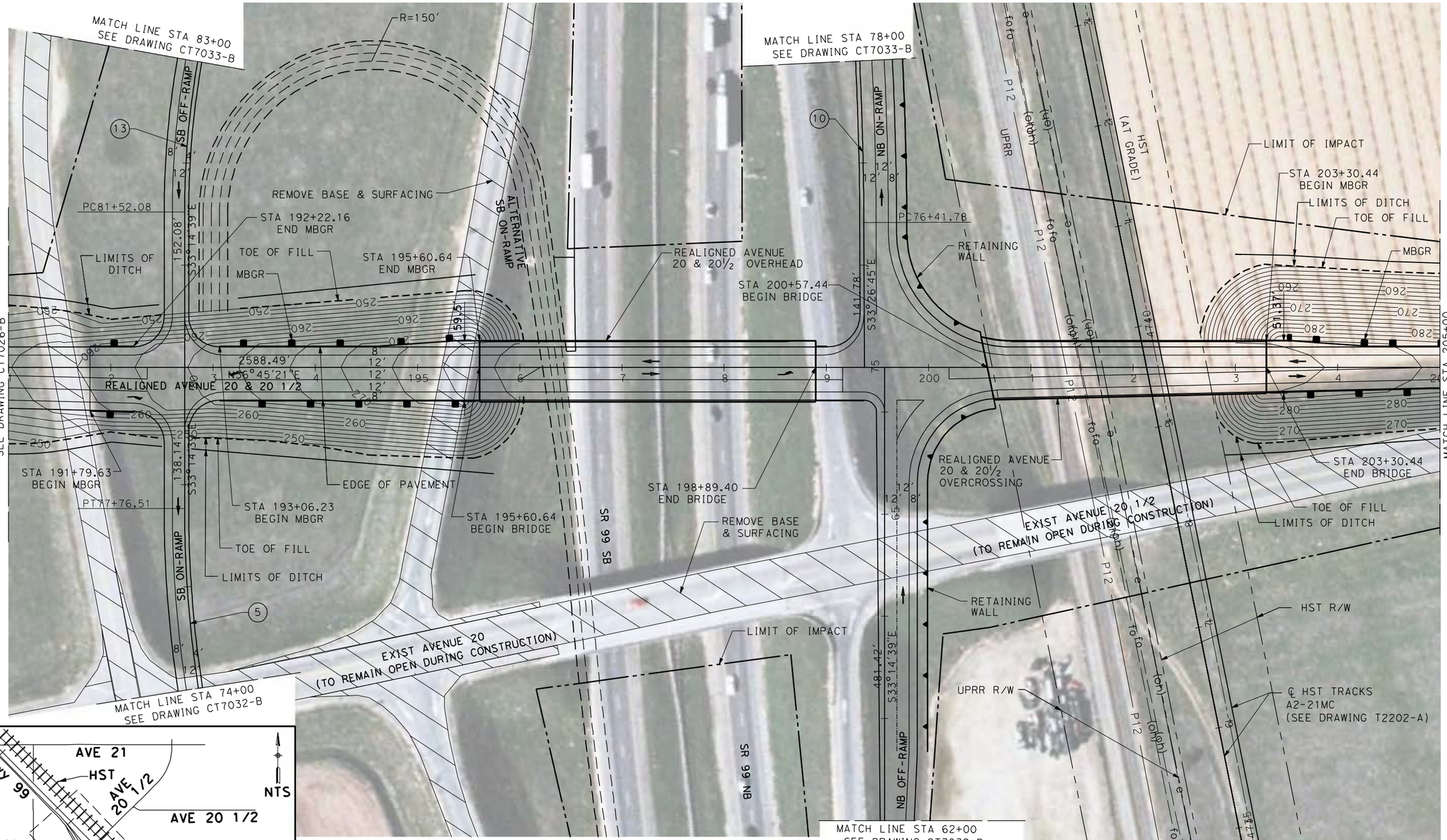
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

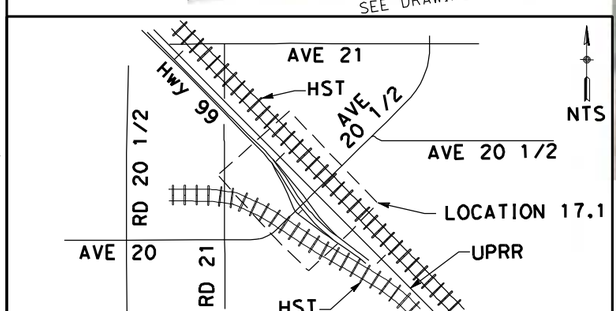
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelled

4/27/2011 5:45:14 PM p:\60029621task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7027-B.dgn
ayeled





CURVE DATA

No.	R	Δ	T	L	V
5	1150.00	55°24'40"	358.06	694.25	45 MPH
10	3500.00	77°22'14"	387.32	771.49	45 MPH
13	850.00	63°18'28"	201.65	395.99	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7027-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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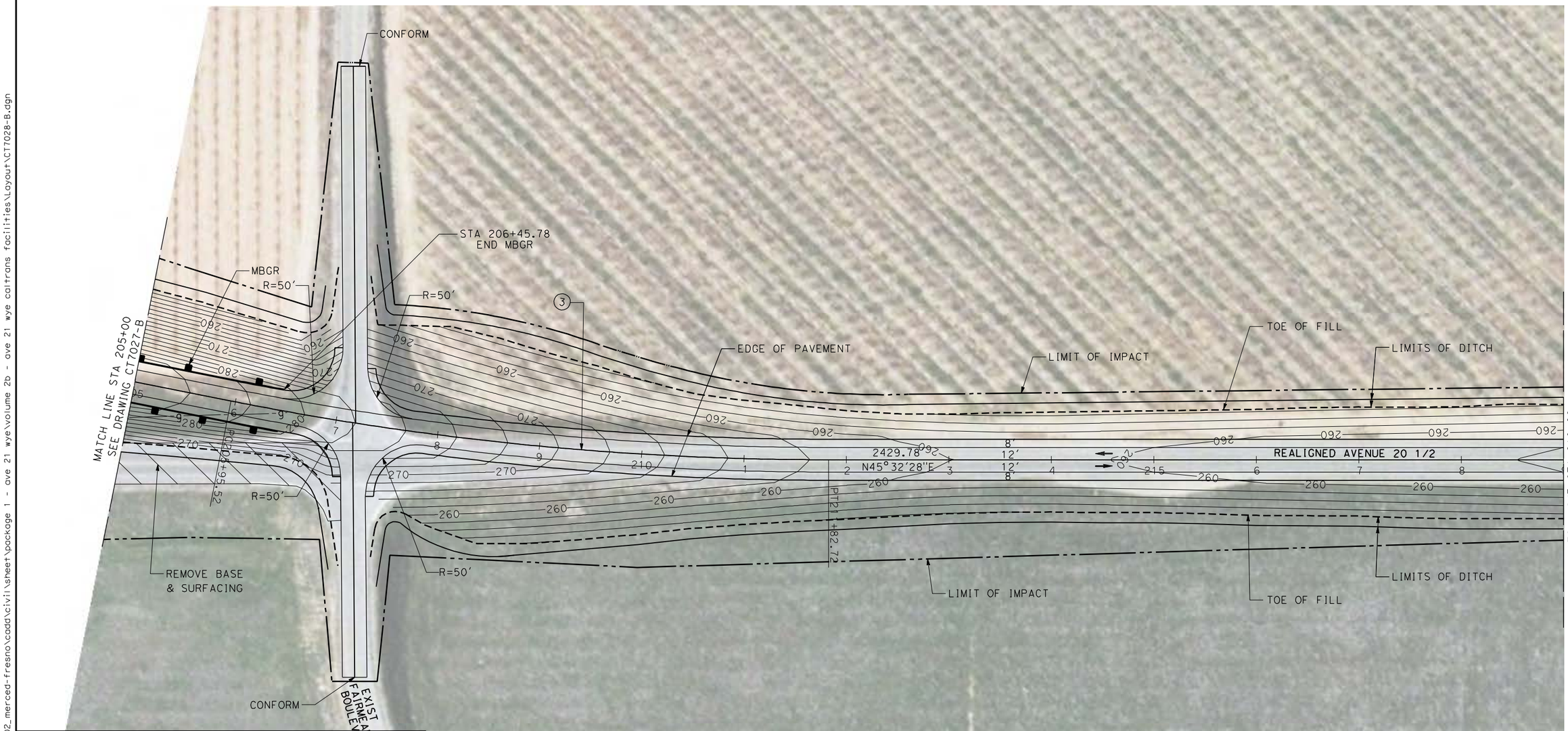

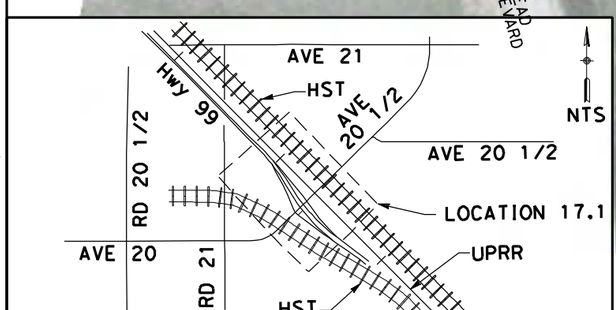

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	11 33/64 12'53"	294.54	587.19	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
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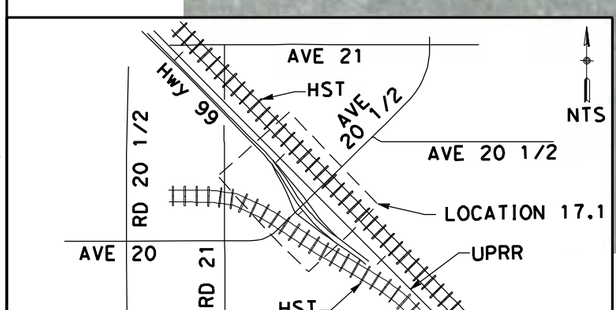
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7028-B
SCALE AS SHOWN
SHEET NO. ### OF ###



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7029-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:45:40 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7029-B.dgn
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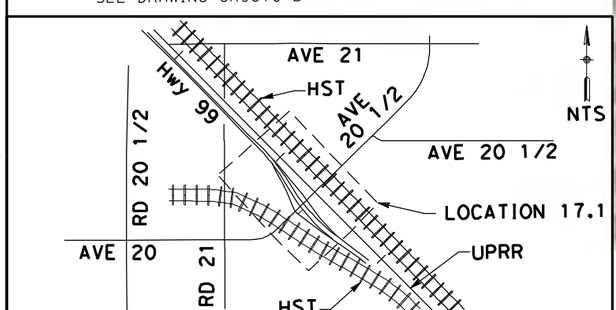

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8028-B THROUGH CT8035-B

CURVE DATA

No.	R	Δ	T	L	V
4	2262.00	22°28'49"	449.53	887.50	45 MPH

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

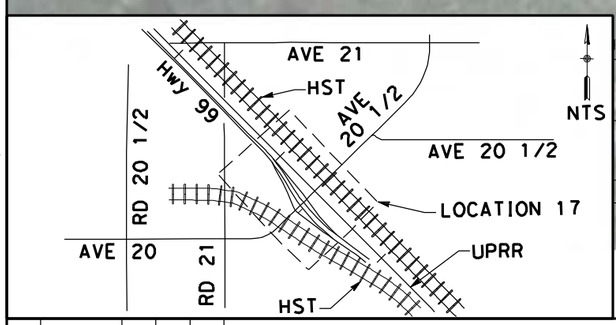
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
LAYOUT
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT7030-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:45:53 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7030-B.dgn
layeled

CURVE DATA

No.	R	Δ	T	L	V
7	3000.00	3°11'29"	83.57	167.10	45 MPH
8	5000.00	5°33'56"	243.03	485.68	45 MPH
9	4000.00	14°29'18"	508.45	1011.48	45 MPH



NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8035-B THROUGH CT8044-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20/20.5 - IC ALT 1&2 SR99 SB ON/NB OFF RAMP
LAYOUT
SHEET 1 OF 3

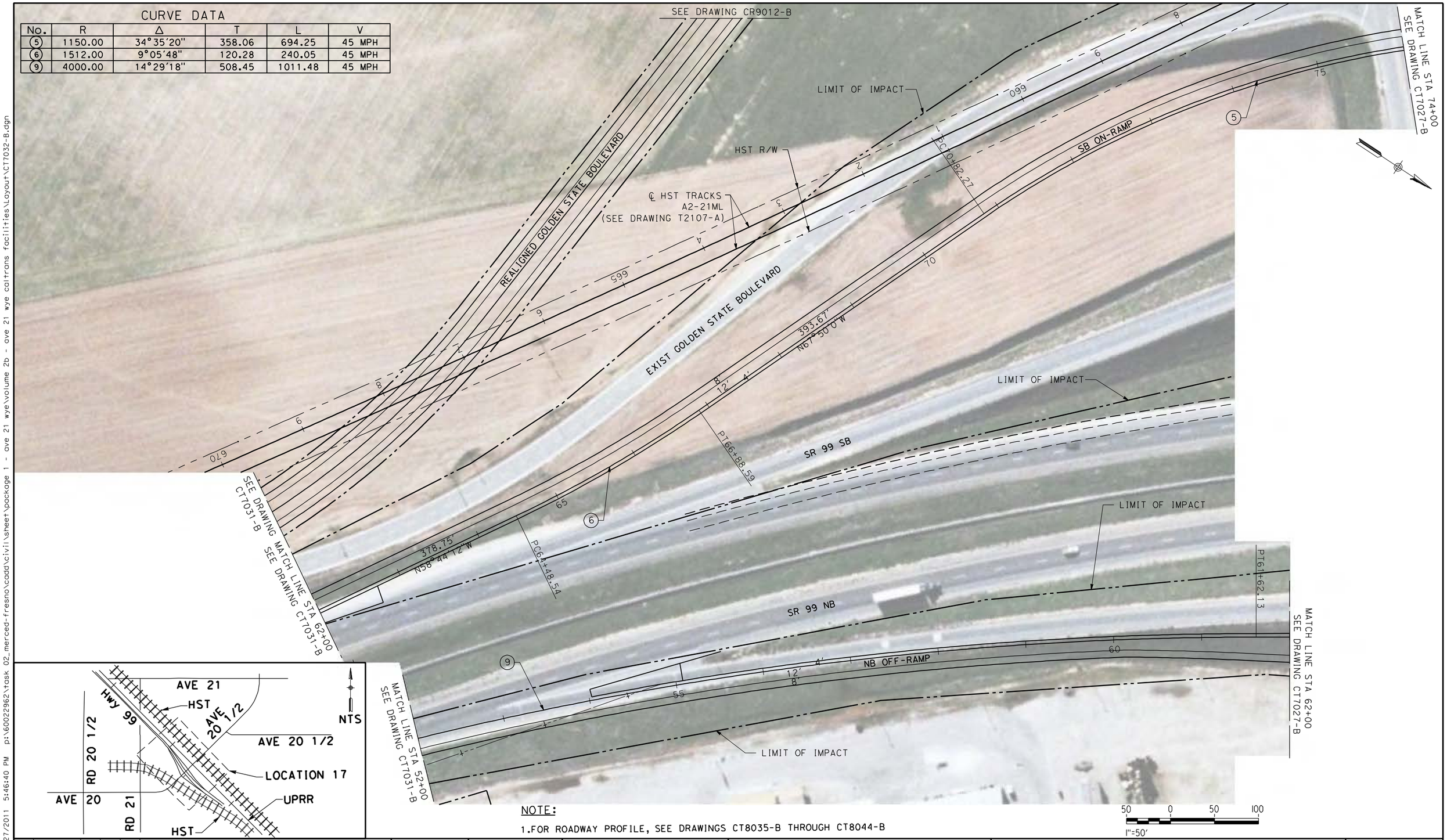
CONTRACT NO. HSR06-007
DRAWING NO. CT7031-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:46:15 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7031-B.dgn

ayelled

CURVE DATA

No.	R	Δ	T	L	V
5	1150.00	34°35'20"	358.06	694.25	45 MPH
6	1512.00	9°05'48"	120.28	240.05	45 MPH
9	4000.00	14°29'18"	508.45	1011.48	45 MPH



NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8035-B THROUGH CT8044-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

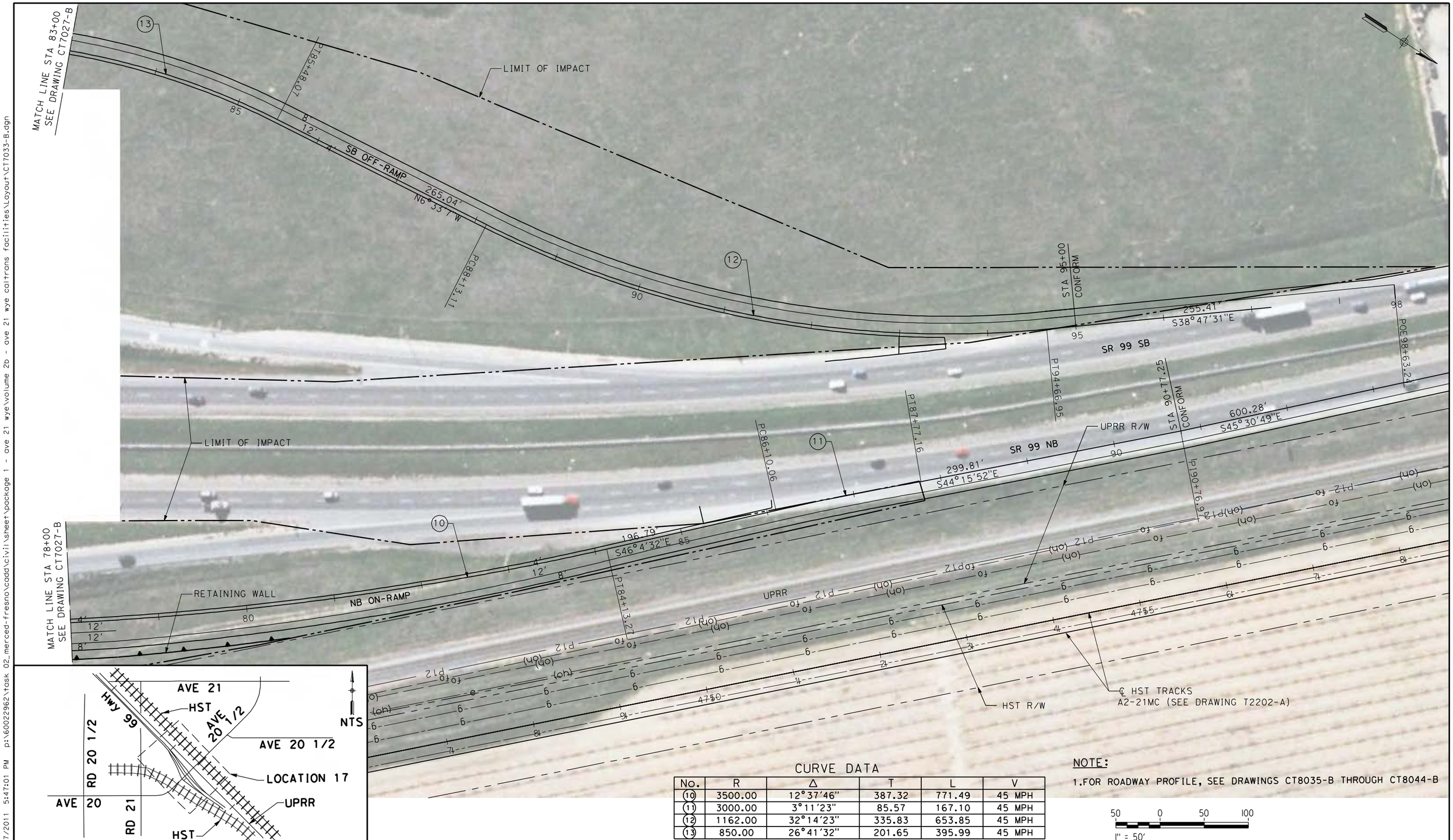
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20/20.5 - IC ALT 1&2 SR99 SB ON/NB OFF RAMP
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7032-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:46:40 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7032-B.dgn
ayelea



CURVE DATA

No.	R	Δ	T	L	V
10	3500.00	12°37'46"	387.32	771.49	45 MPH
11	3000.00	3°11'23"	85.57	167.10	45 MPH
12	1162.00	32°14'23"	335.83	653.85	45 MPH
13	850.00	26°41'32"	201.65	395.99	45 MPH

NOTE:

1.FOR ROADWAY PROFILE, SEE DRAWINGS CT8035-B THROUGH CT8044-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20/20.5 - IC ALT 1&2 SR99 SB OFF/NB ON RAMP
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7033-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:47:01 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7033-B.dgn
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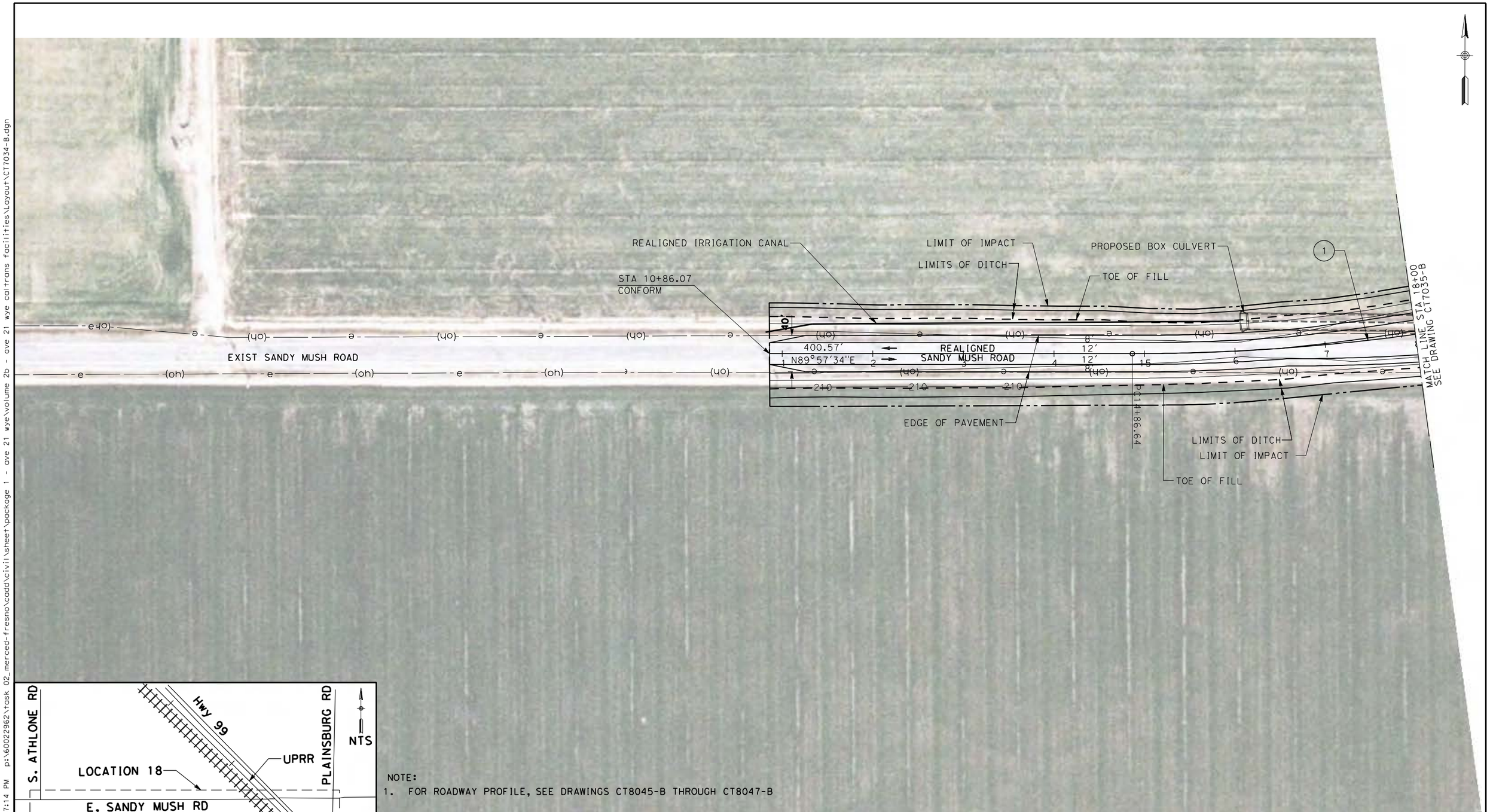

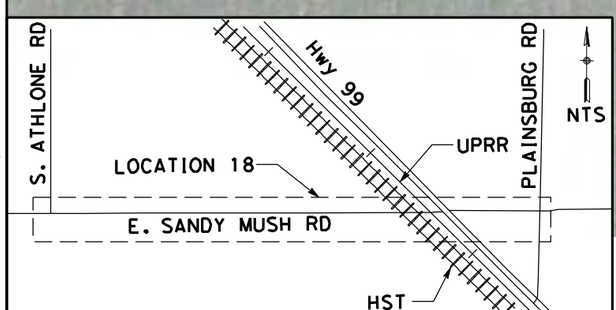

NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7034-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:47:14 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7034-B.dgn
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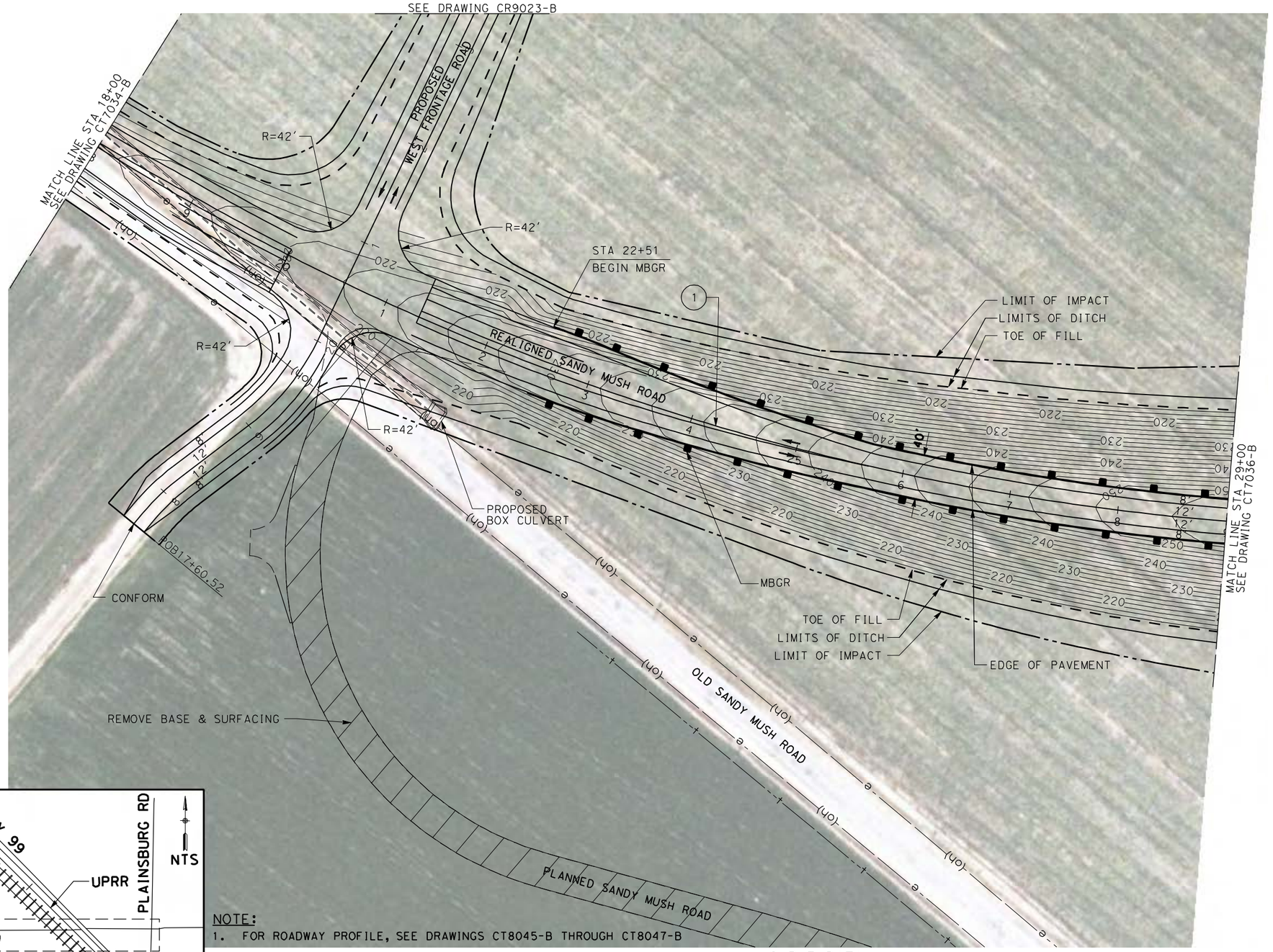

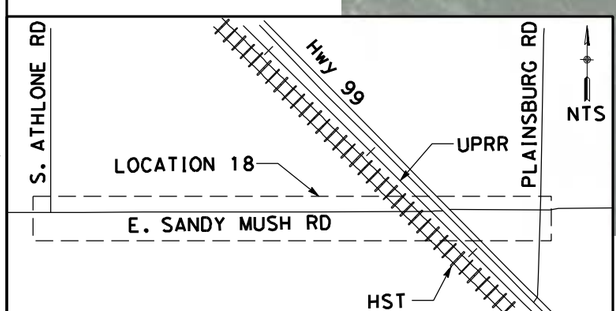

NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7035-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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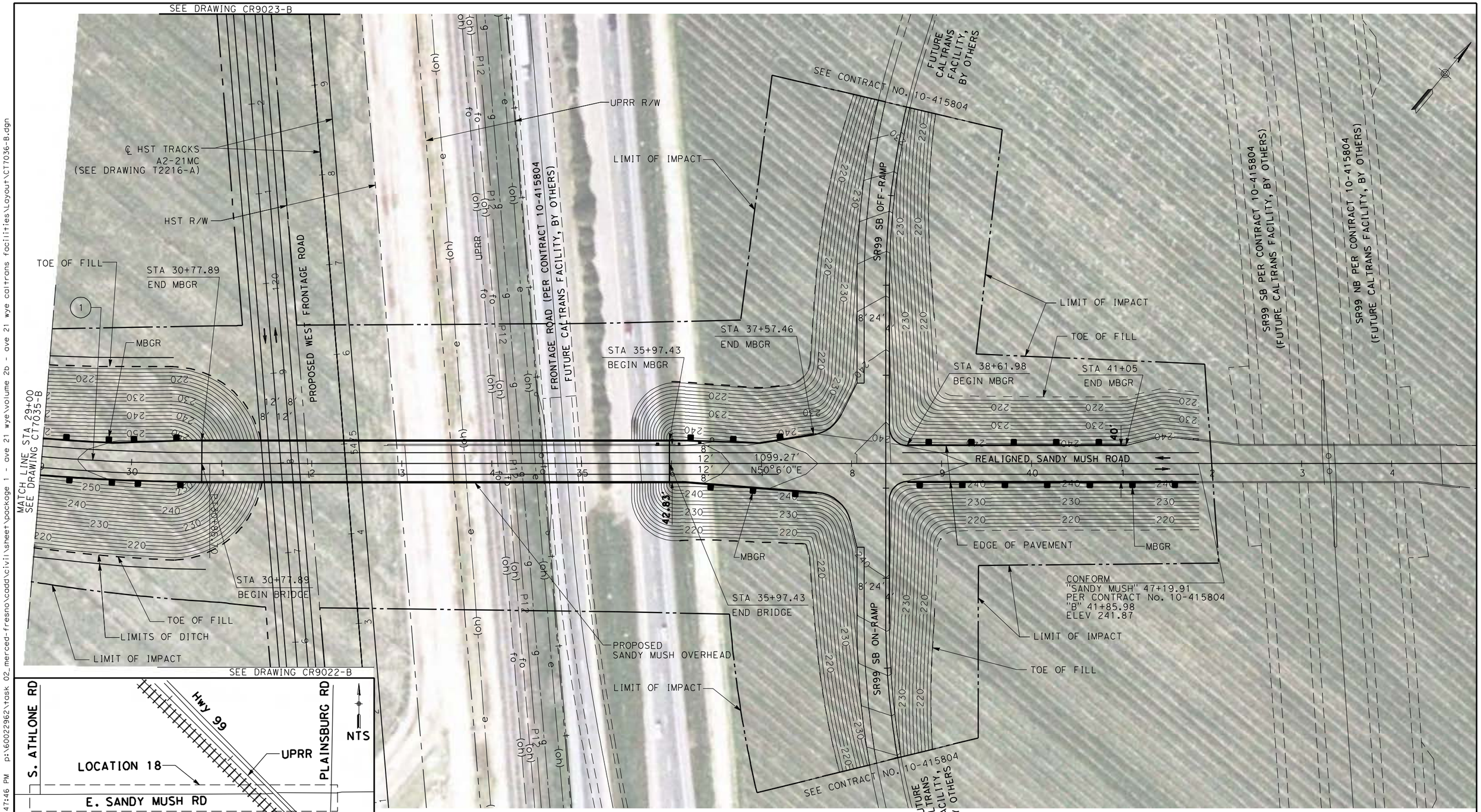

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7036-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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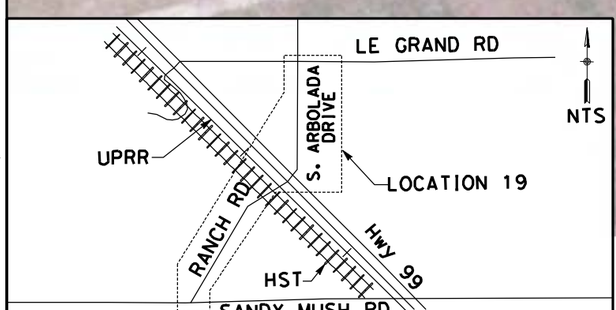

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

CURVE DATA

No.	R	Δ	T	L
1	3000.00	14°17'14"	375.99	748.07

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7037-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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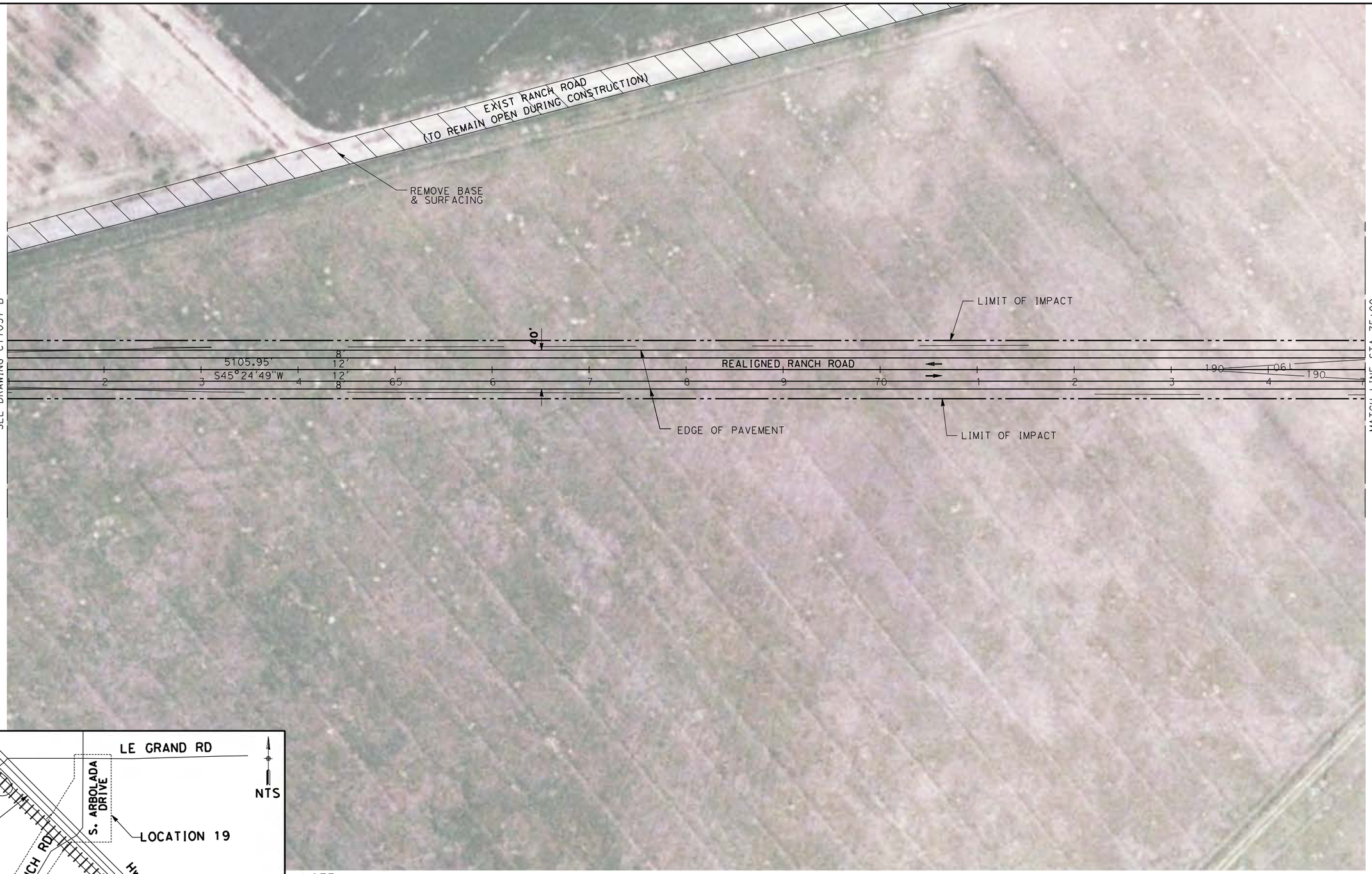

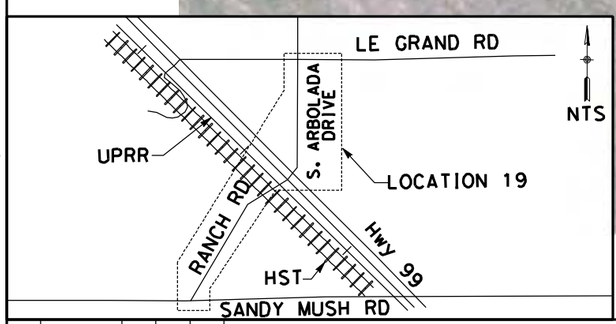

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7038-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:48:14 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7038-B.dgn
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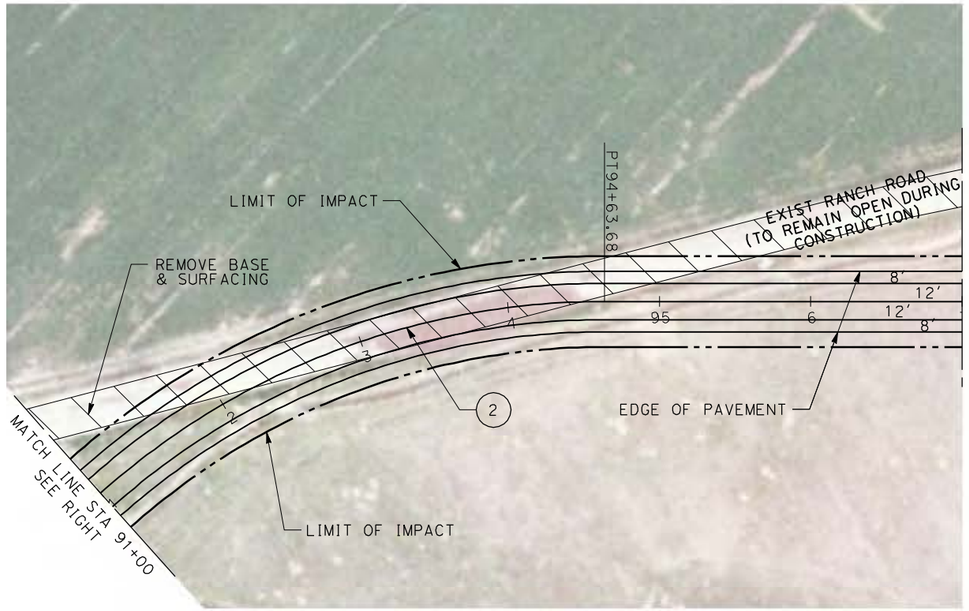

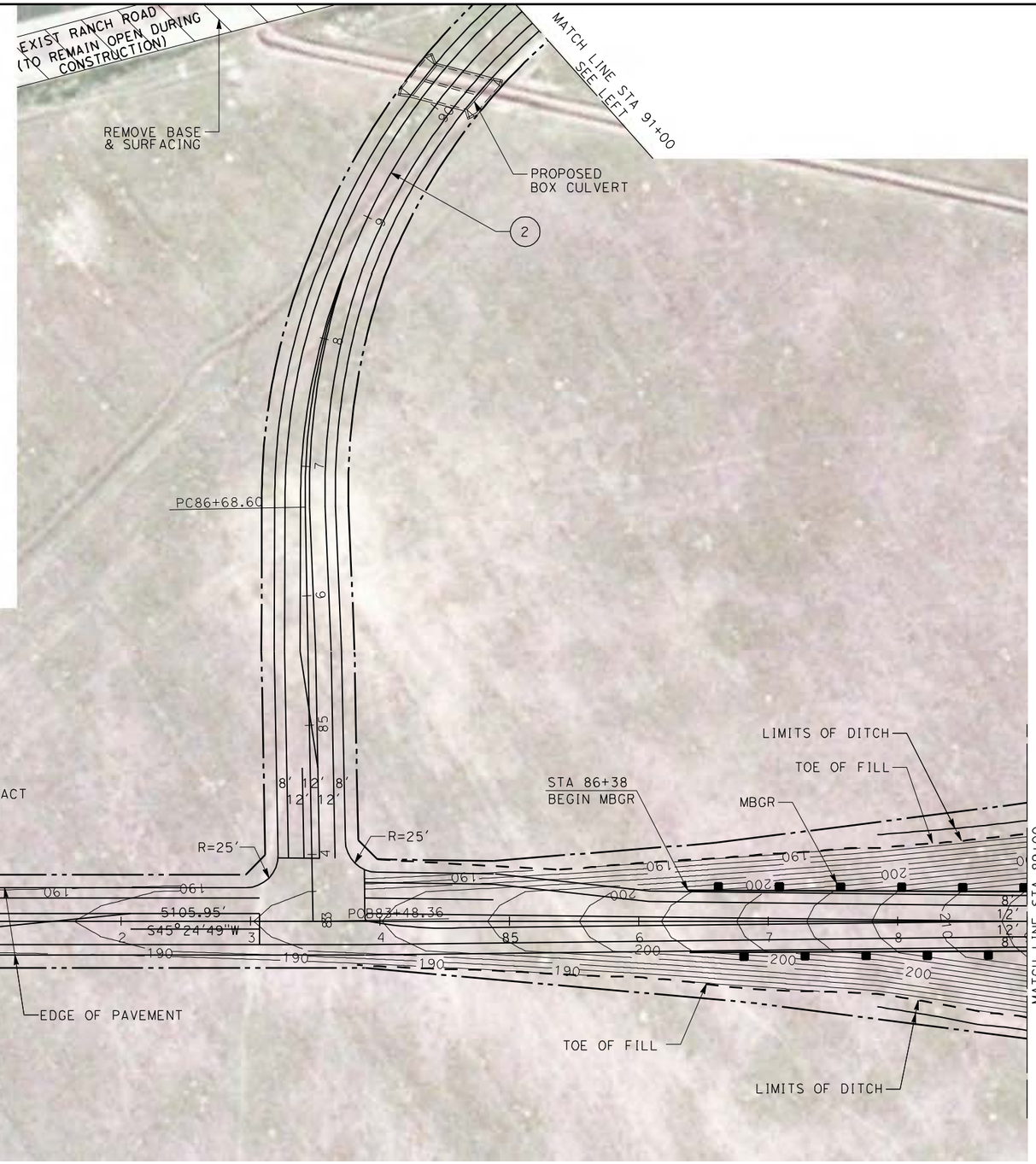

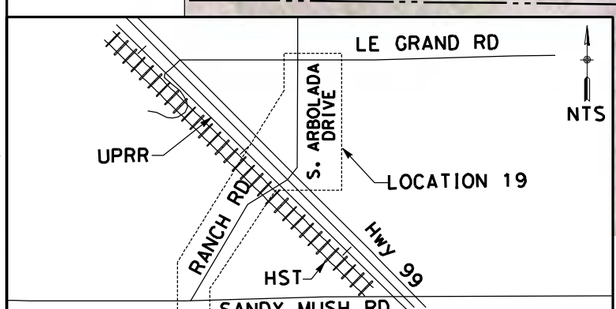

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8127-B THROUGH CT8131-B

CURVE DATA

No.	R	Δ	T	L
2	500.00	91°06'35"	509.78	795.08

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7039-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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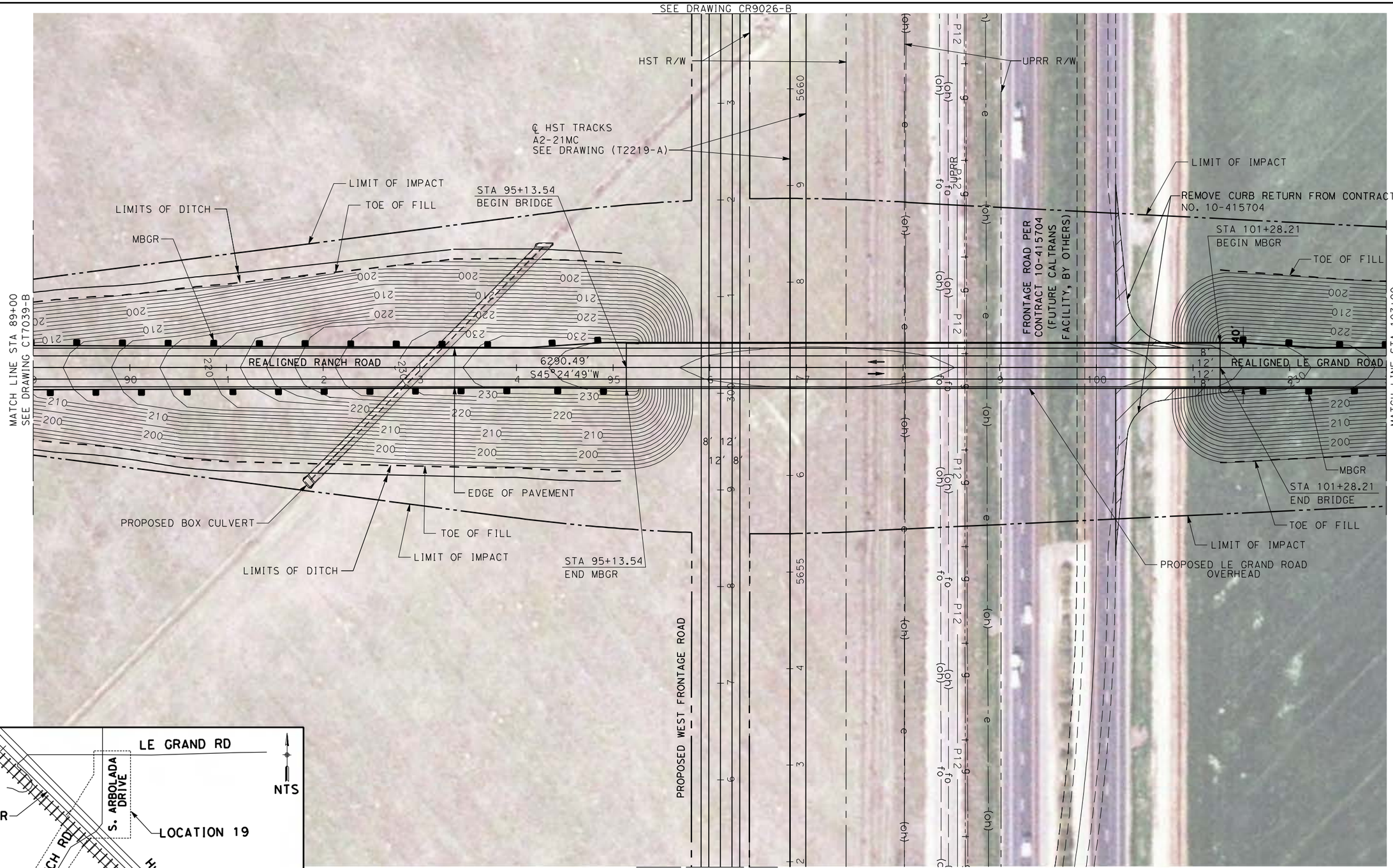

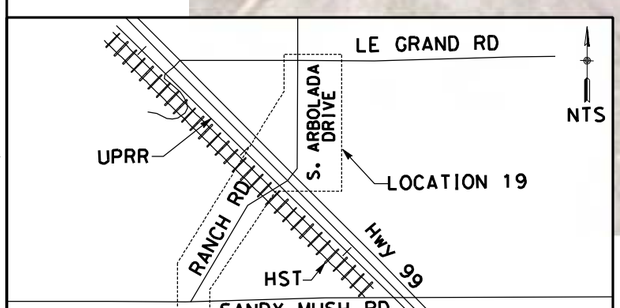

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7040-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:48:49 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7040-B.dgn
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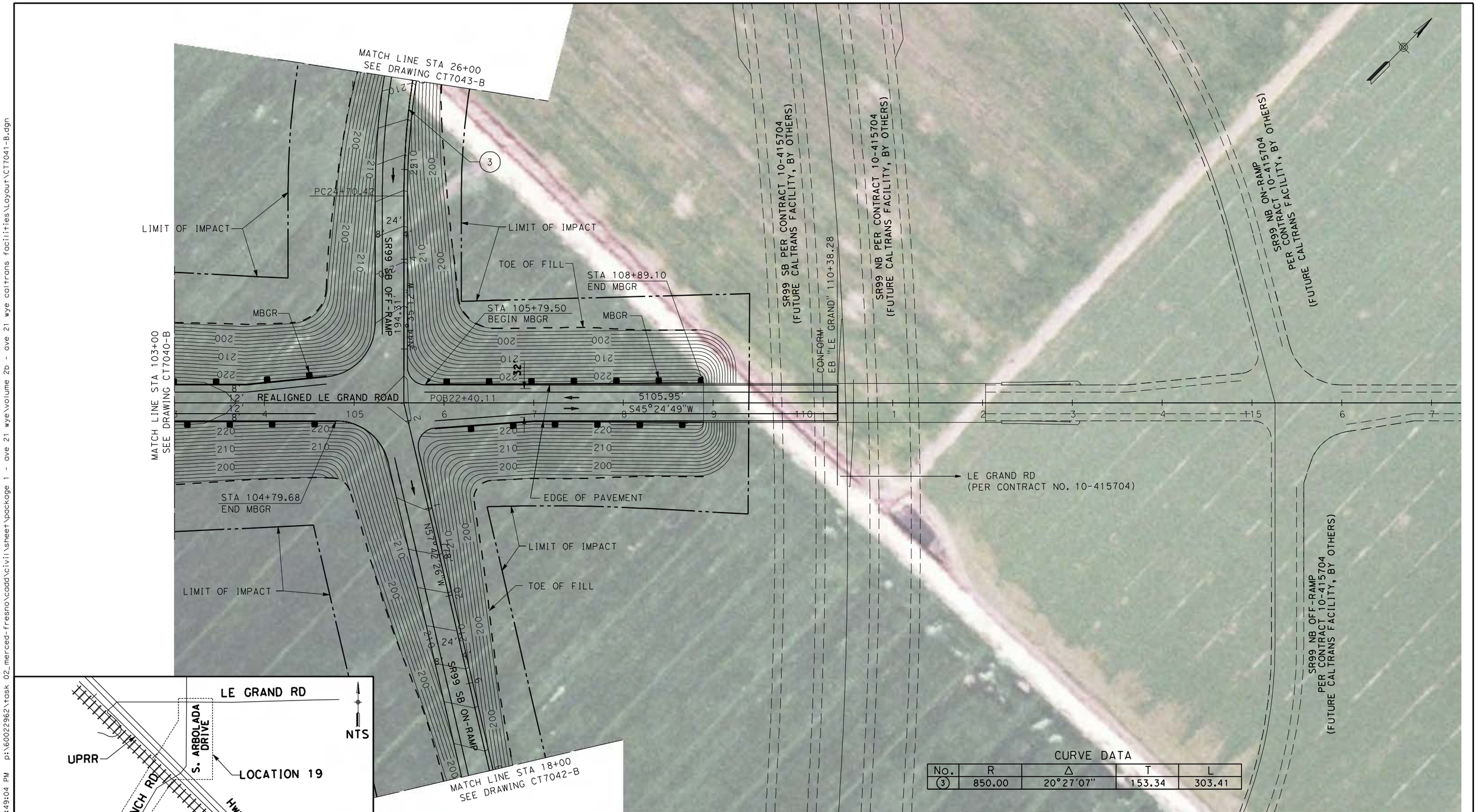

CURVE DATA

No.	R	Δ	T	L
3	850.00	20°27'07"	153.34	303.41

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7041-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:49:04 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 2b - ave 21 wye caltrans facilities\Layout\CT7041-B.dgn

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NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

CURVE DATA

No.	R	Δ	T	L
1	3000.00	5°31'37"	144.81	289.39
2	850.00	17°23'25"	290.57	576.68

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
LAYOUT
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7042-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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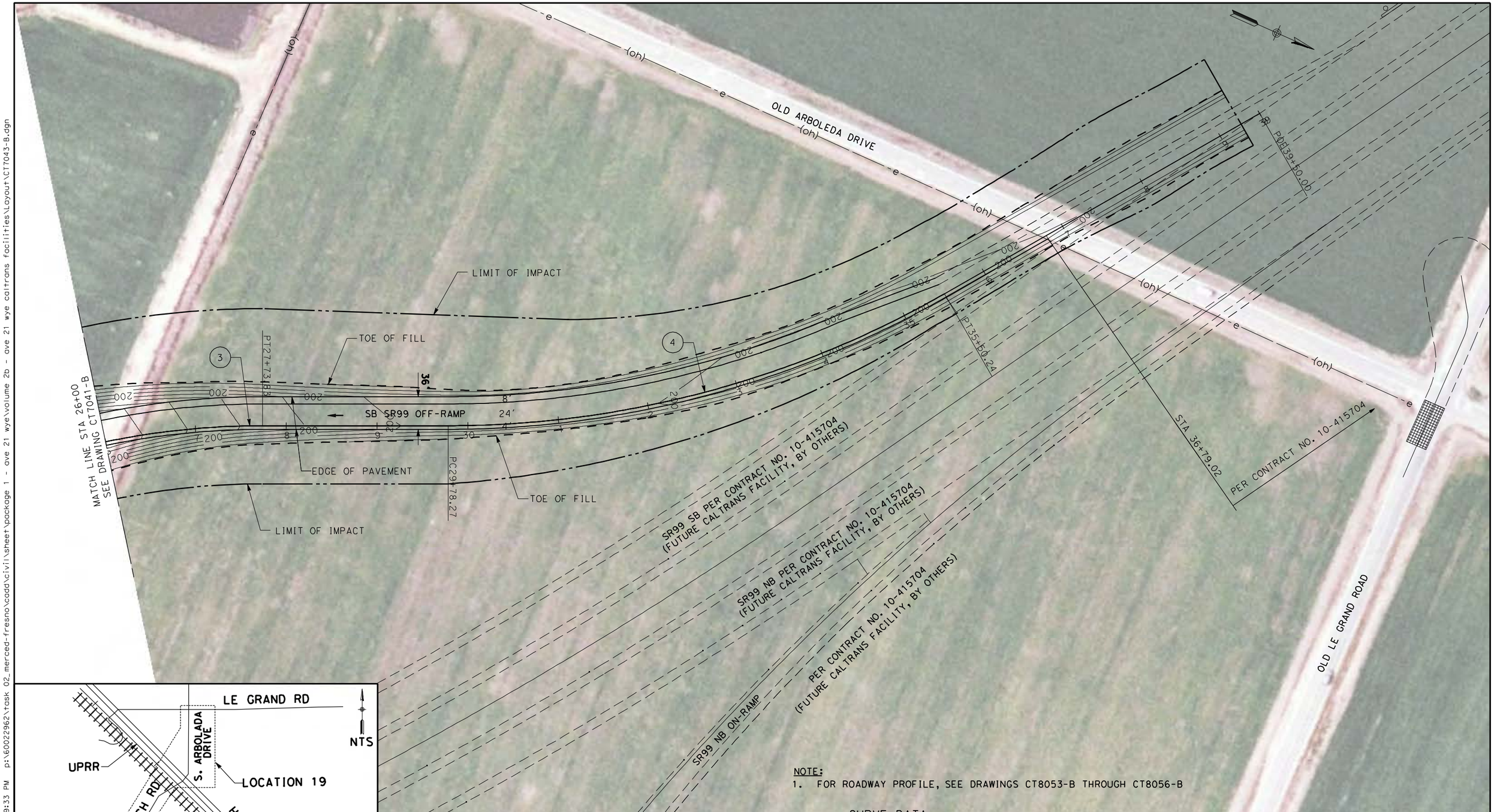

NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

CURVE DATA

No.	R	Δ	T	L
3	850.00	20°27'07"	153.34	303.41
4	1100.00	29°47'31"	292.61	571.97

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP
LAYOUT
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7043-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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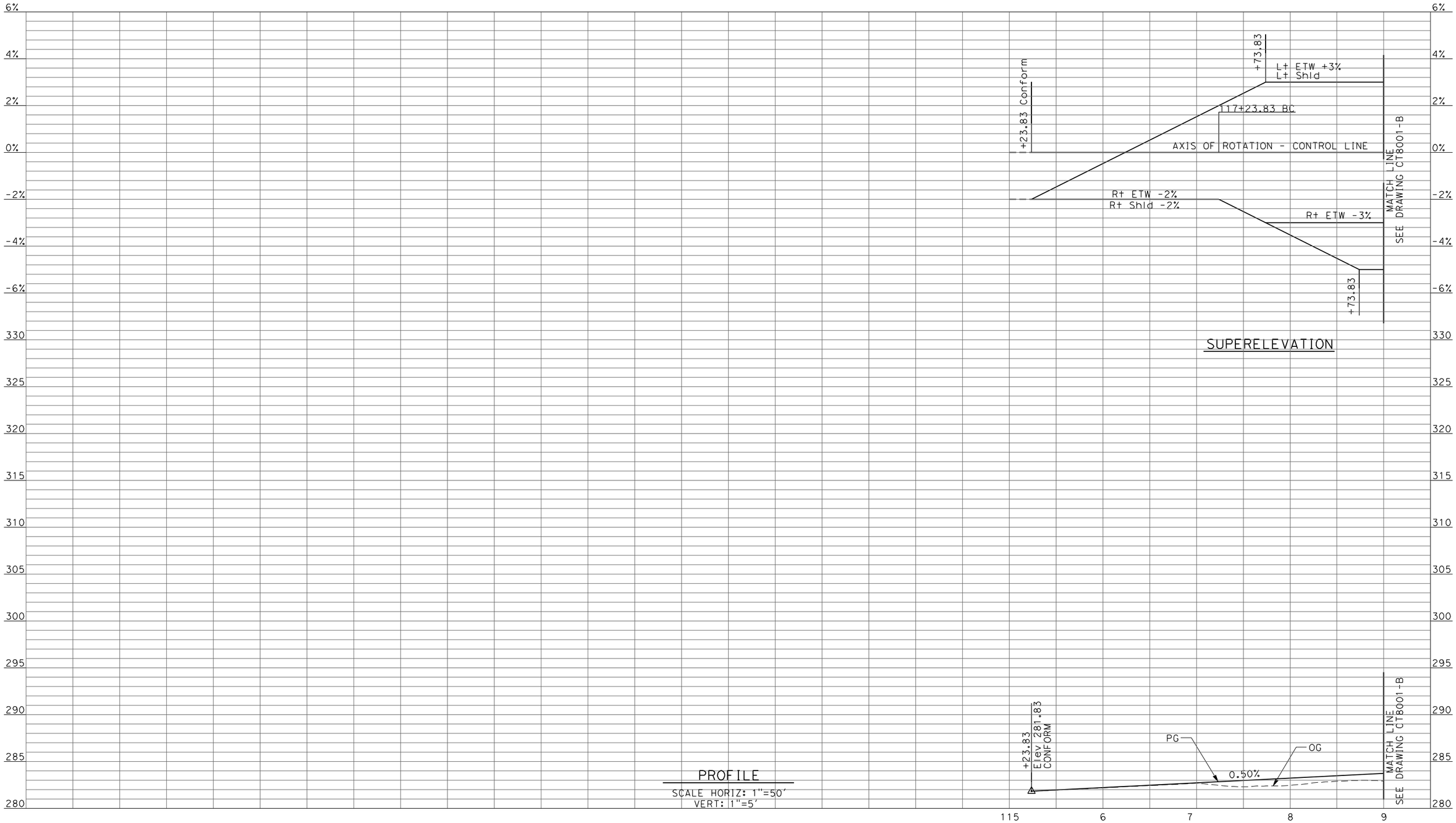

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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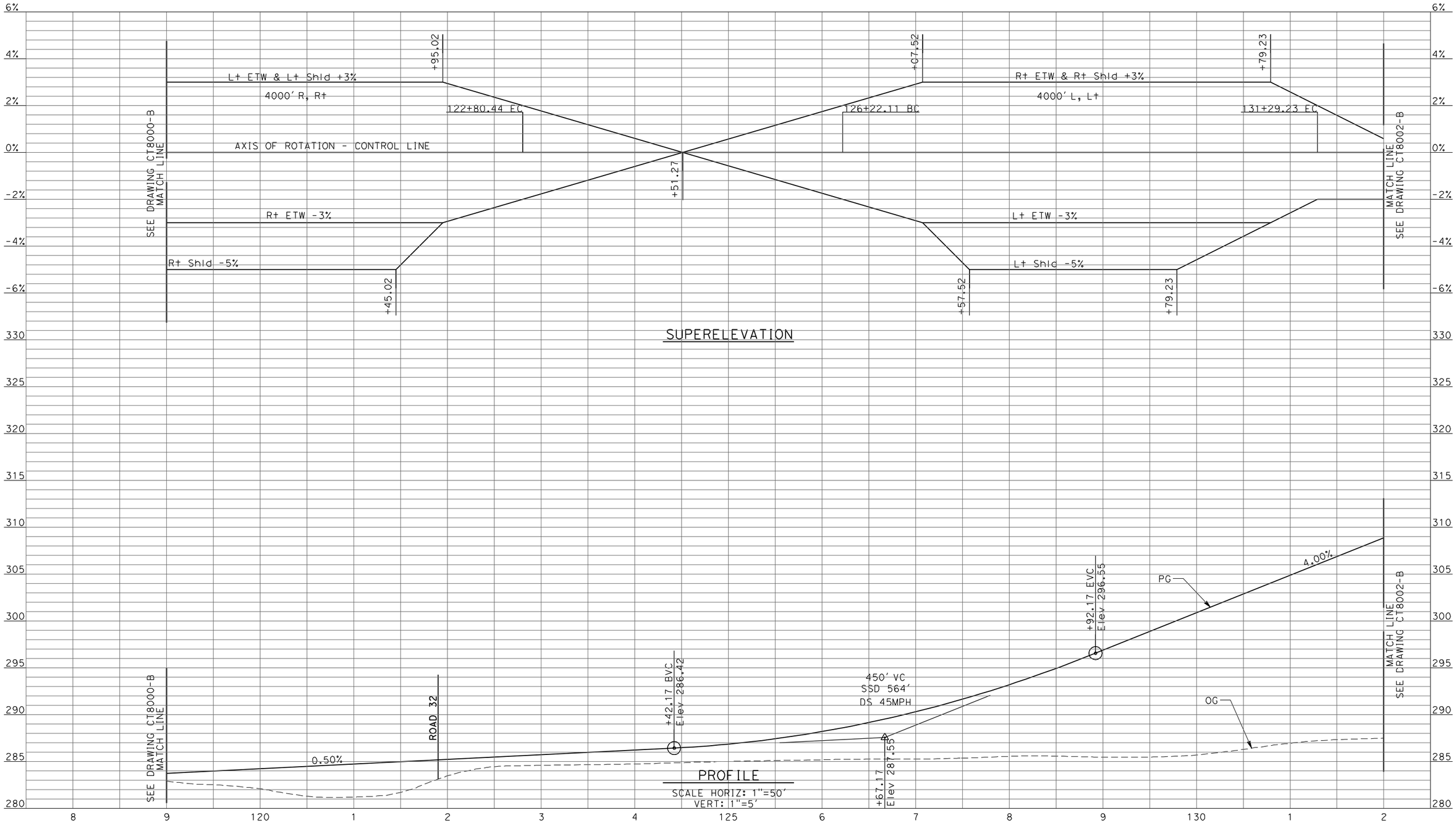

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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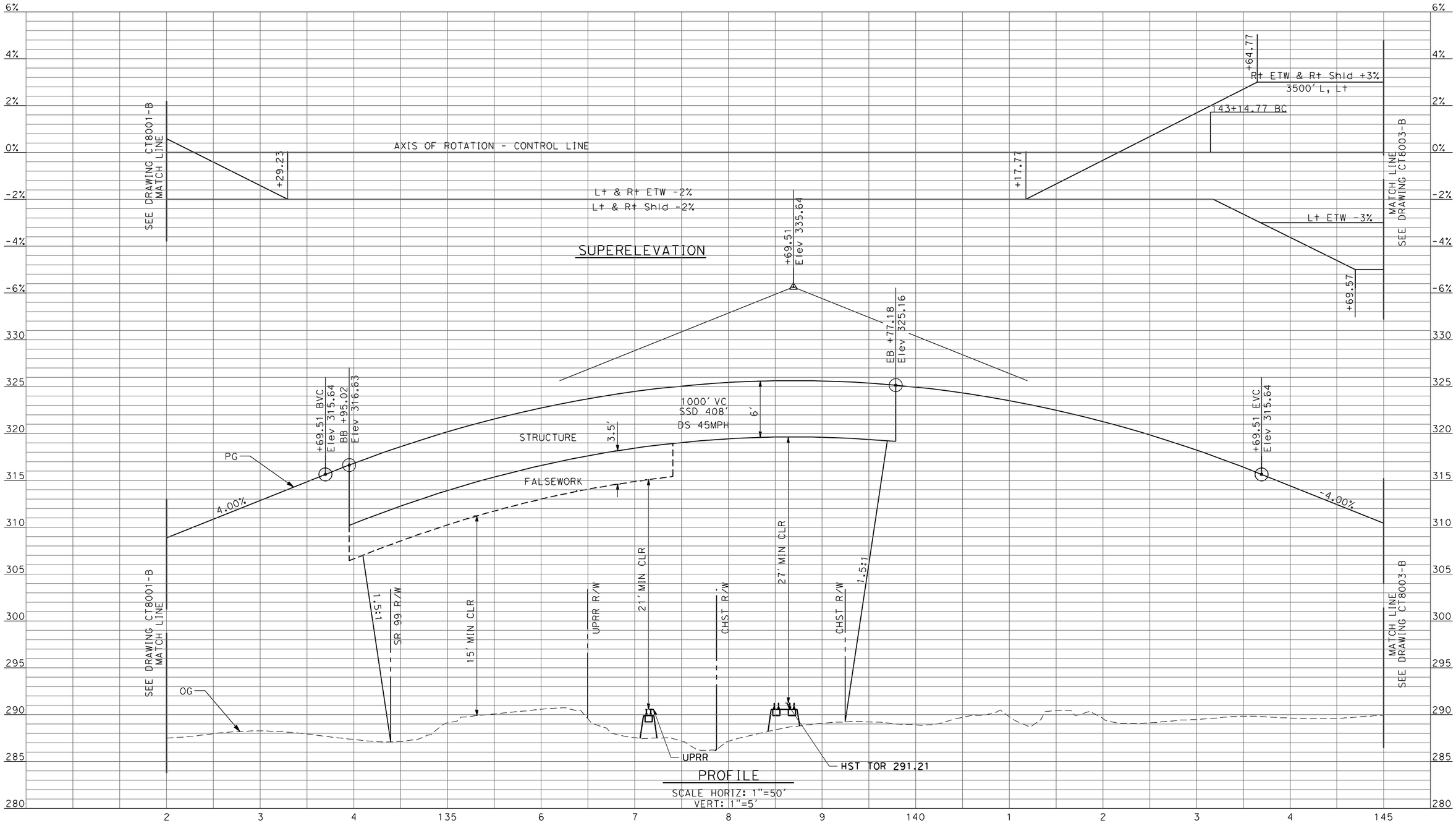

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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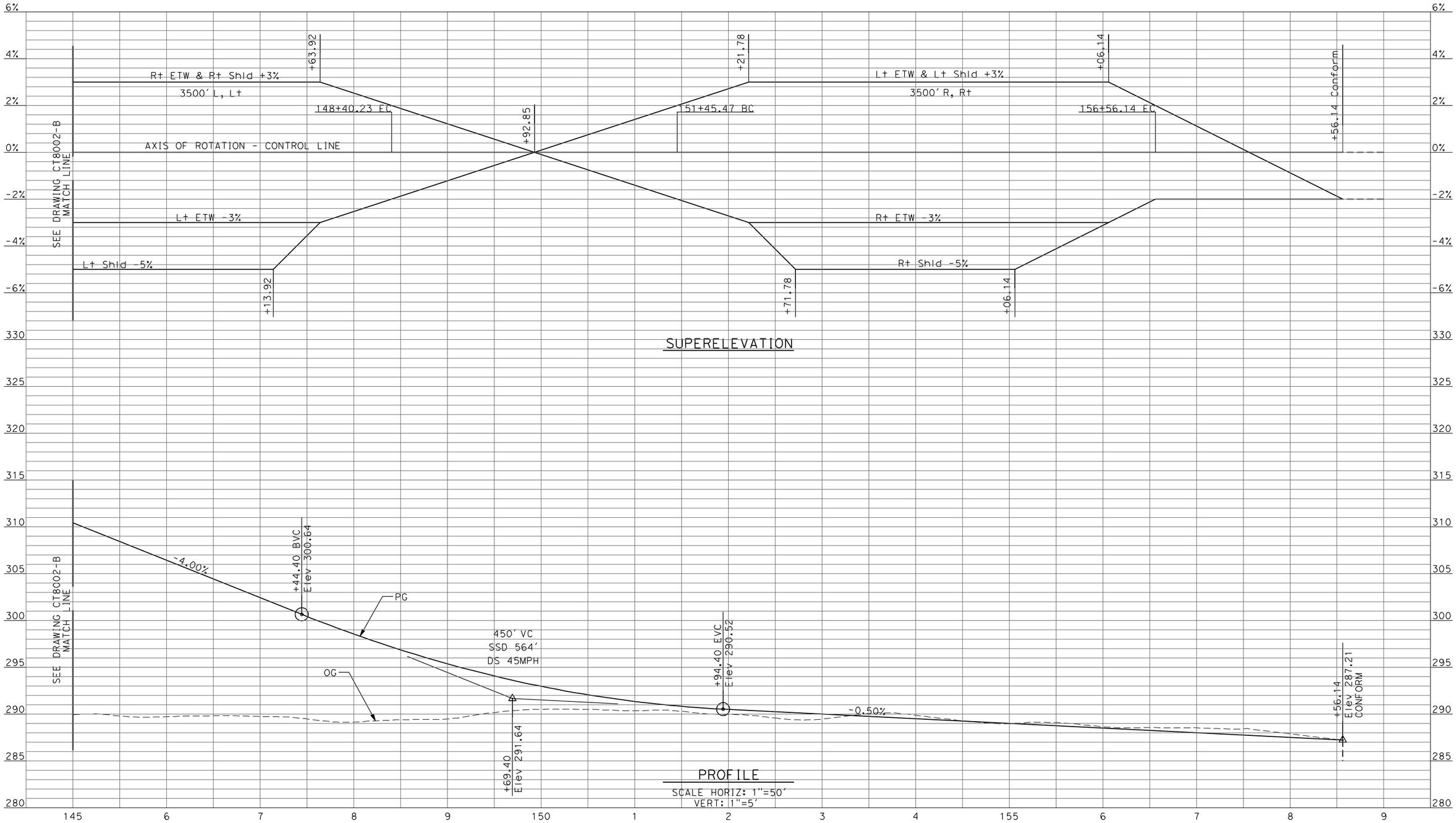
ayeled



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 8 - OVERHEAD
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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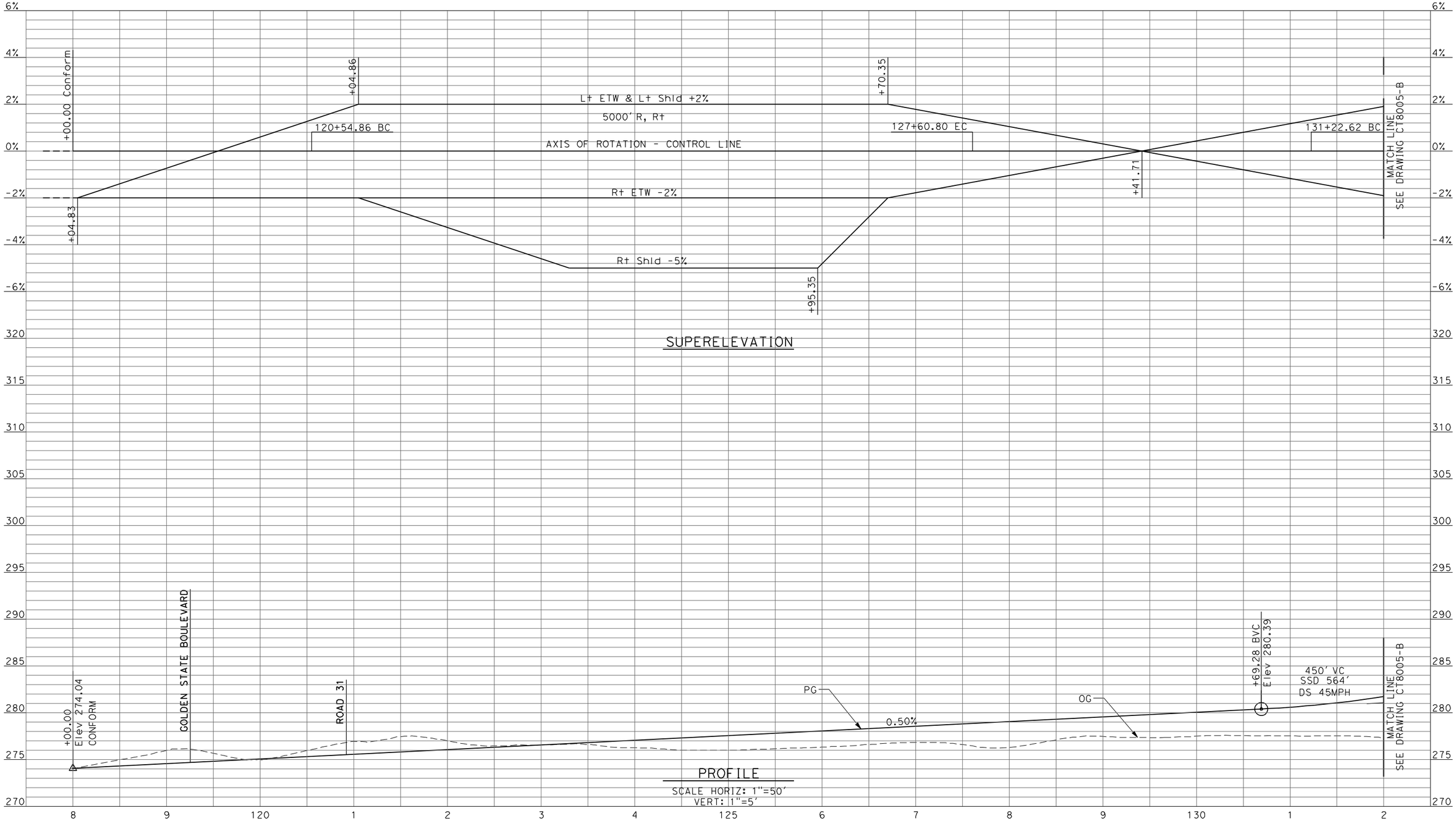

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
PROFILE
SHEET 1 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8004-B
SCALE AS SHOWN
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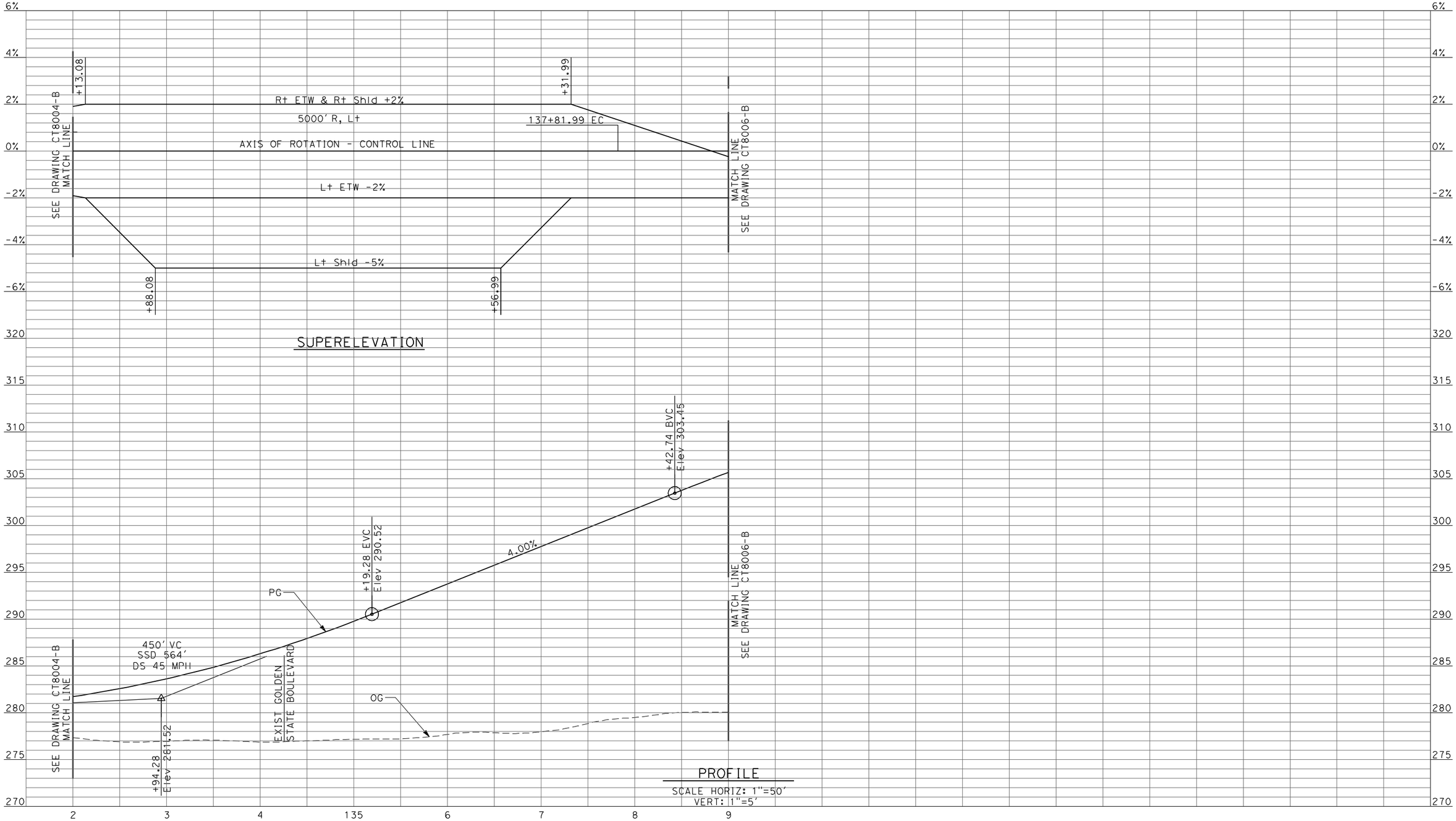

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
PROFILE
SHEET 2 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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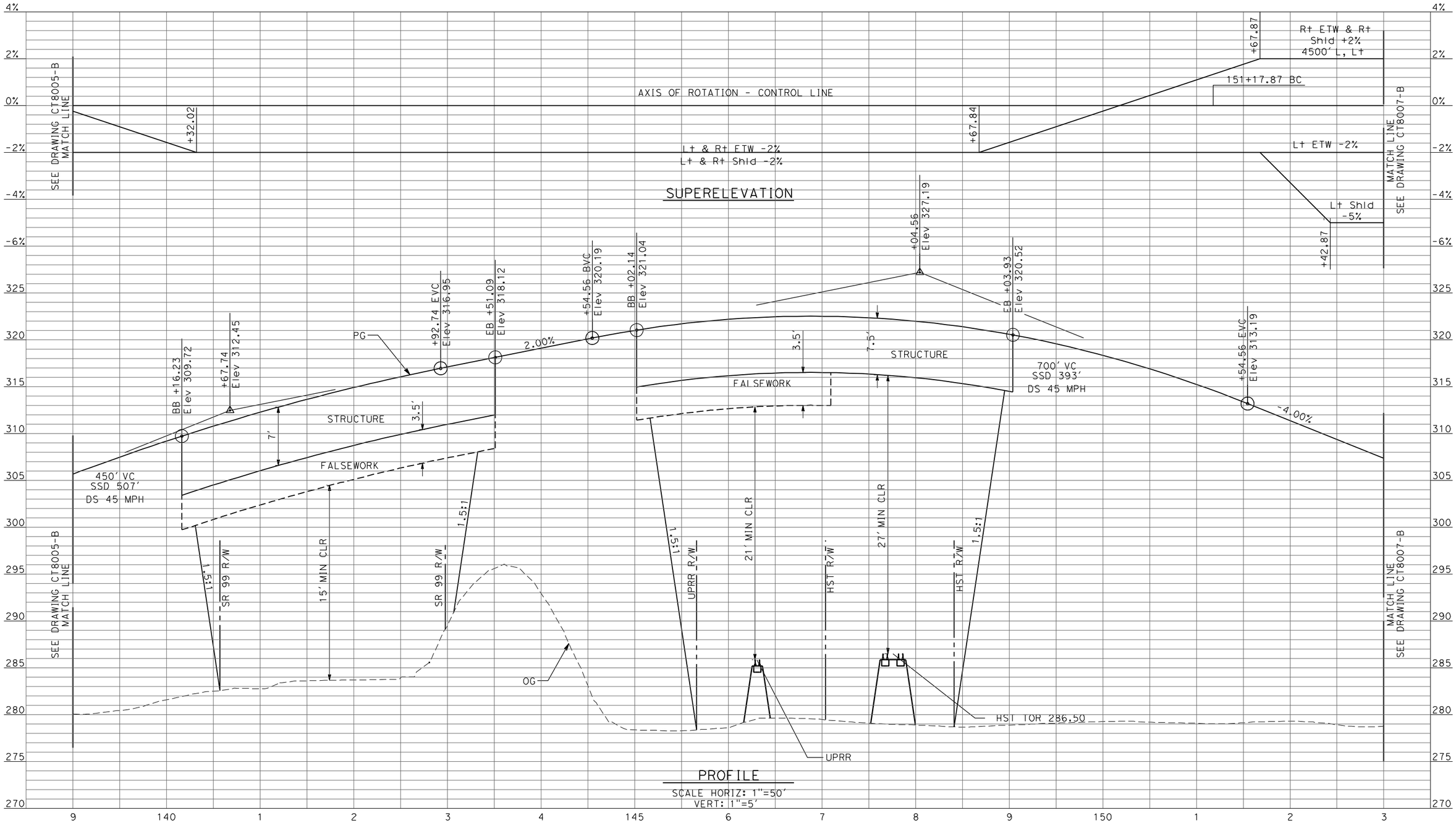

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
PROFILE
SHEET 3 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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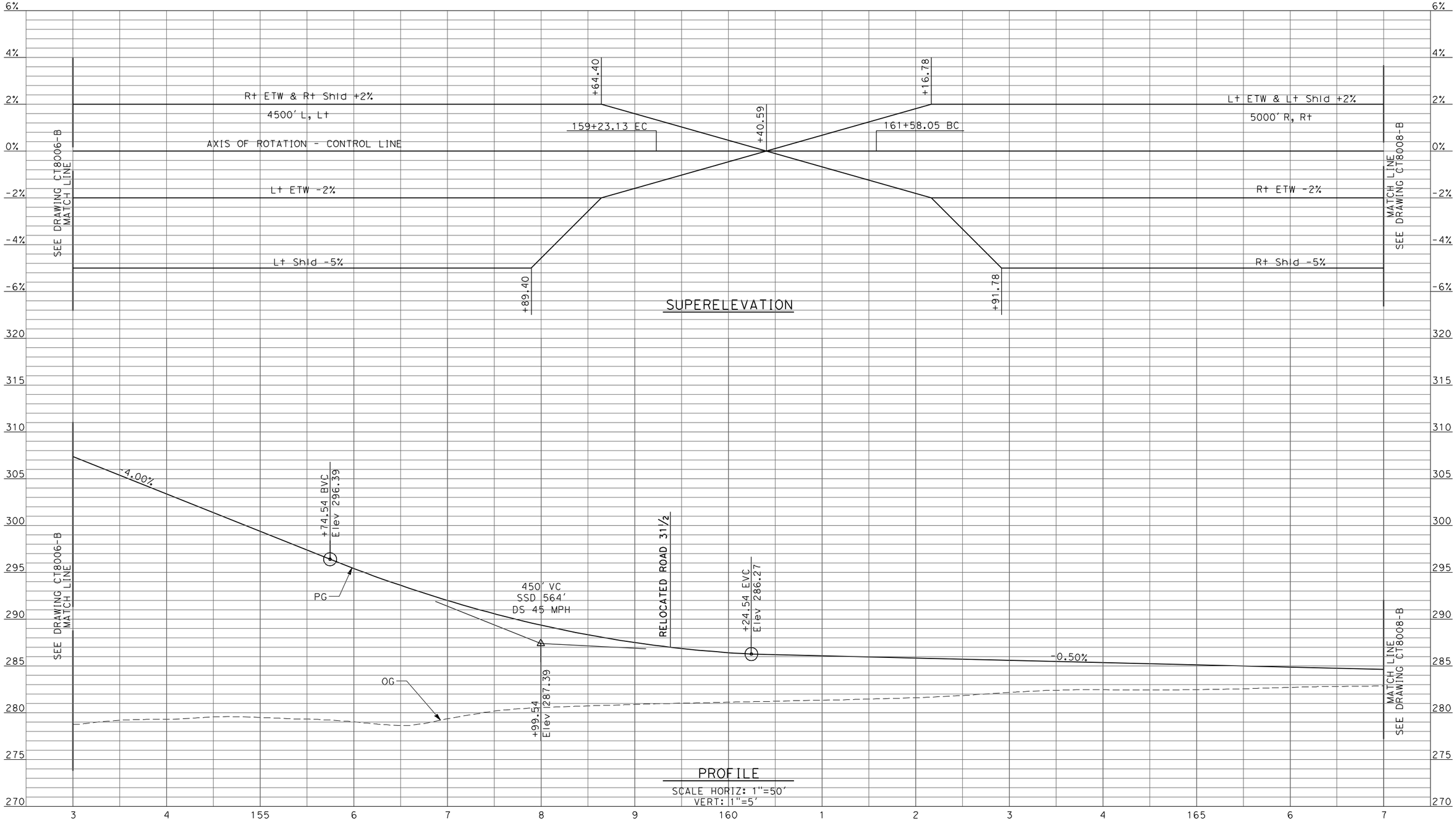

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
PROFILE
SHEET 4 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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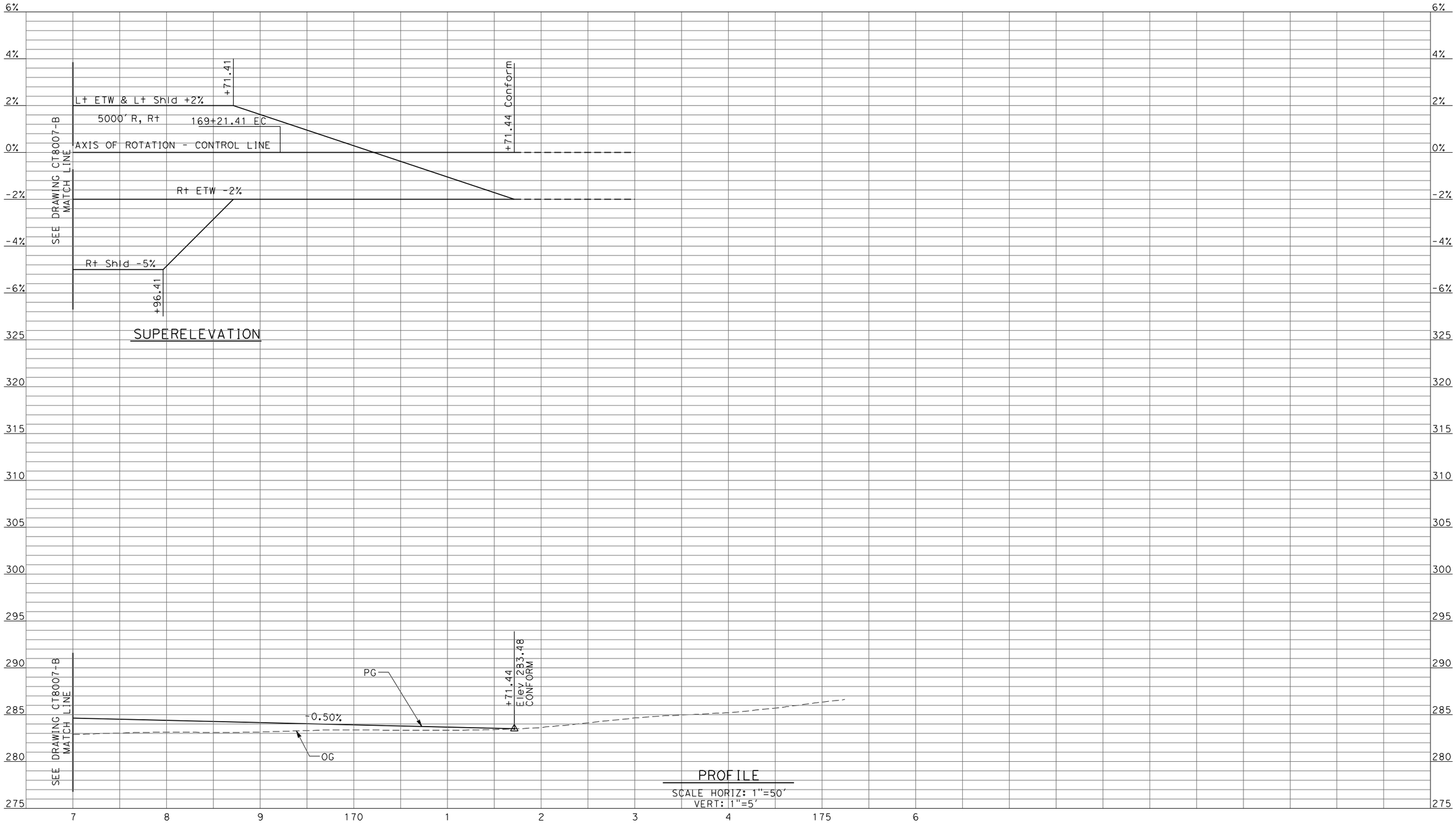

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE
PROFILE
SHEET 5 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8008-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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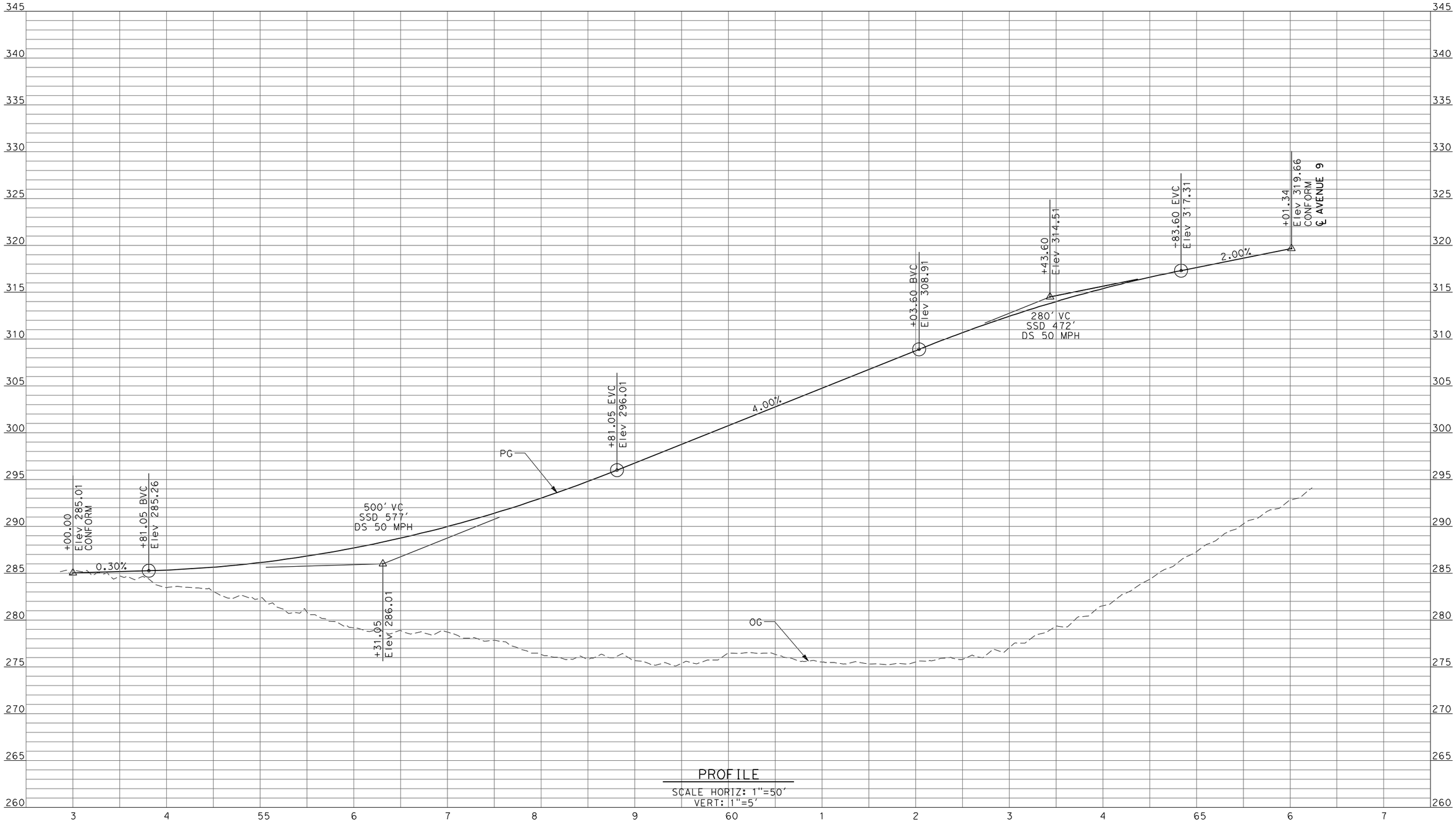

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 NB OFF-RAMP
PROFILE
SHEET 6 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8009-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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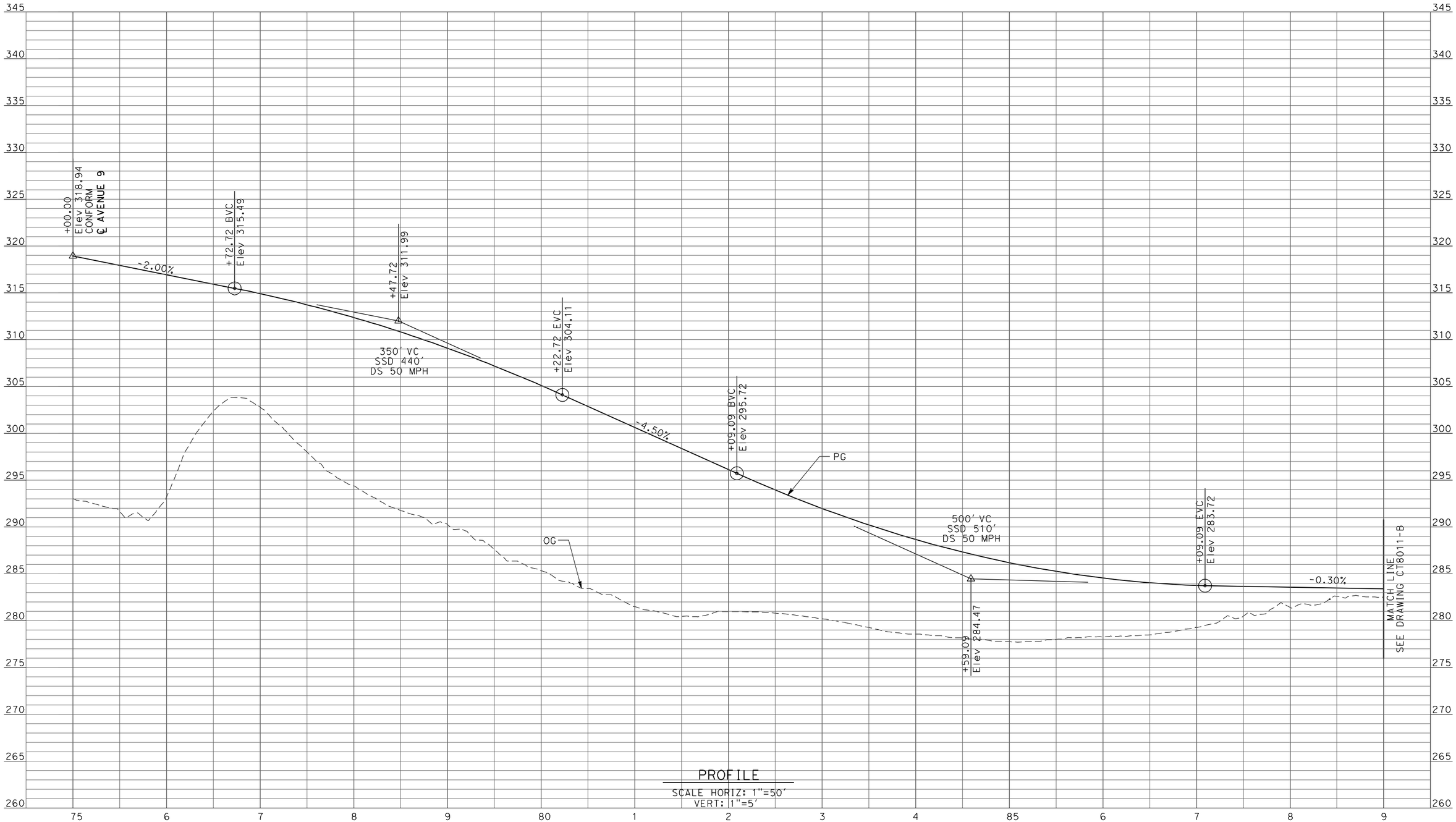

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 NB ON-RAMP
PROFILE
SHEET 7 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8010-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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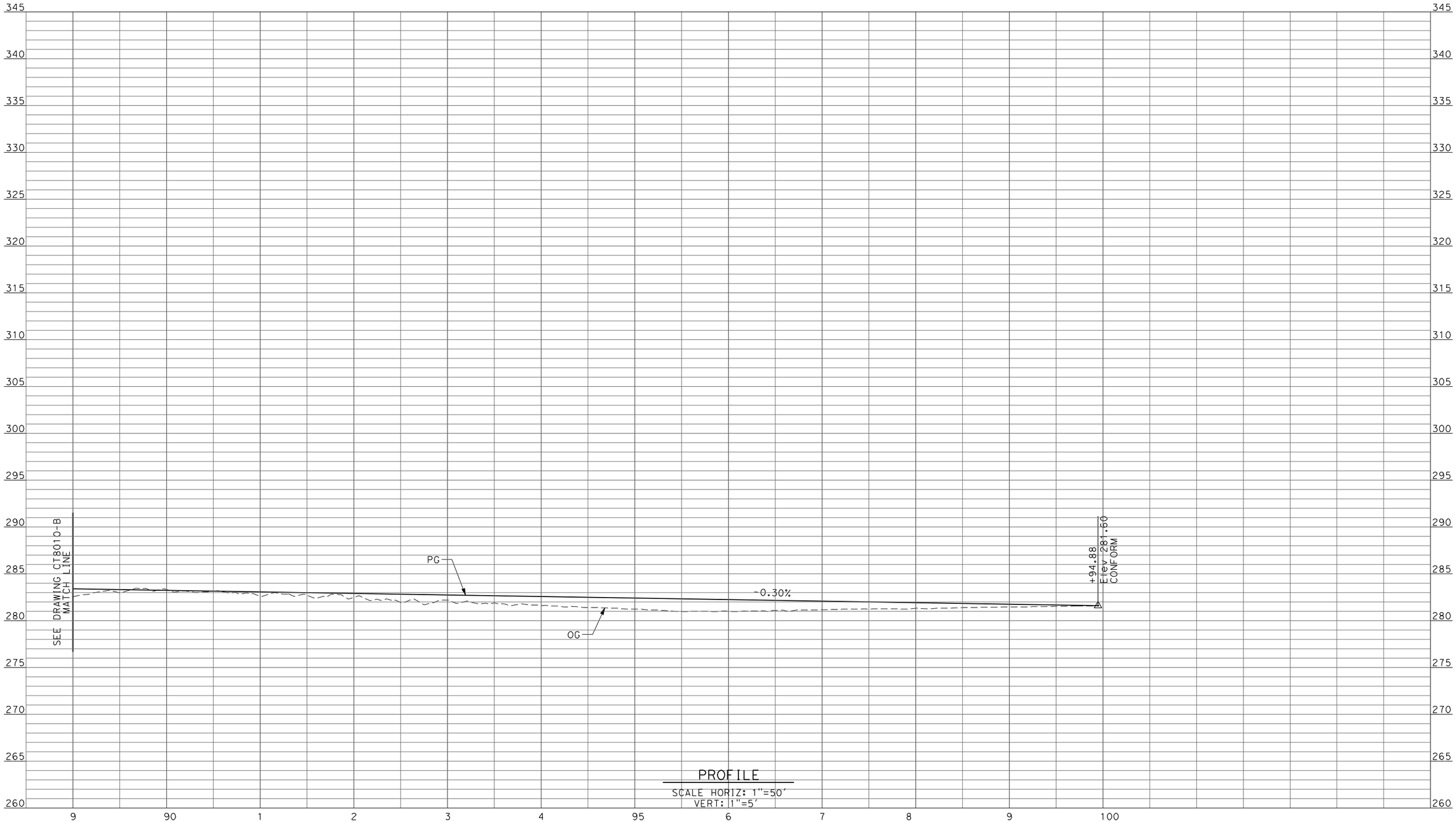

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 NB ON-RAMP
PROFILE
SHEET 8 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8011-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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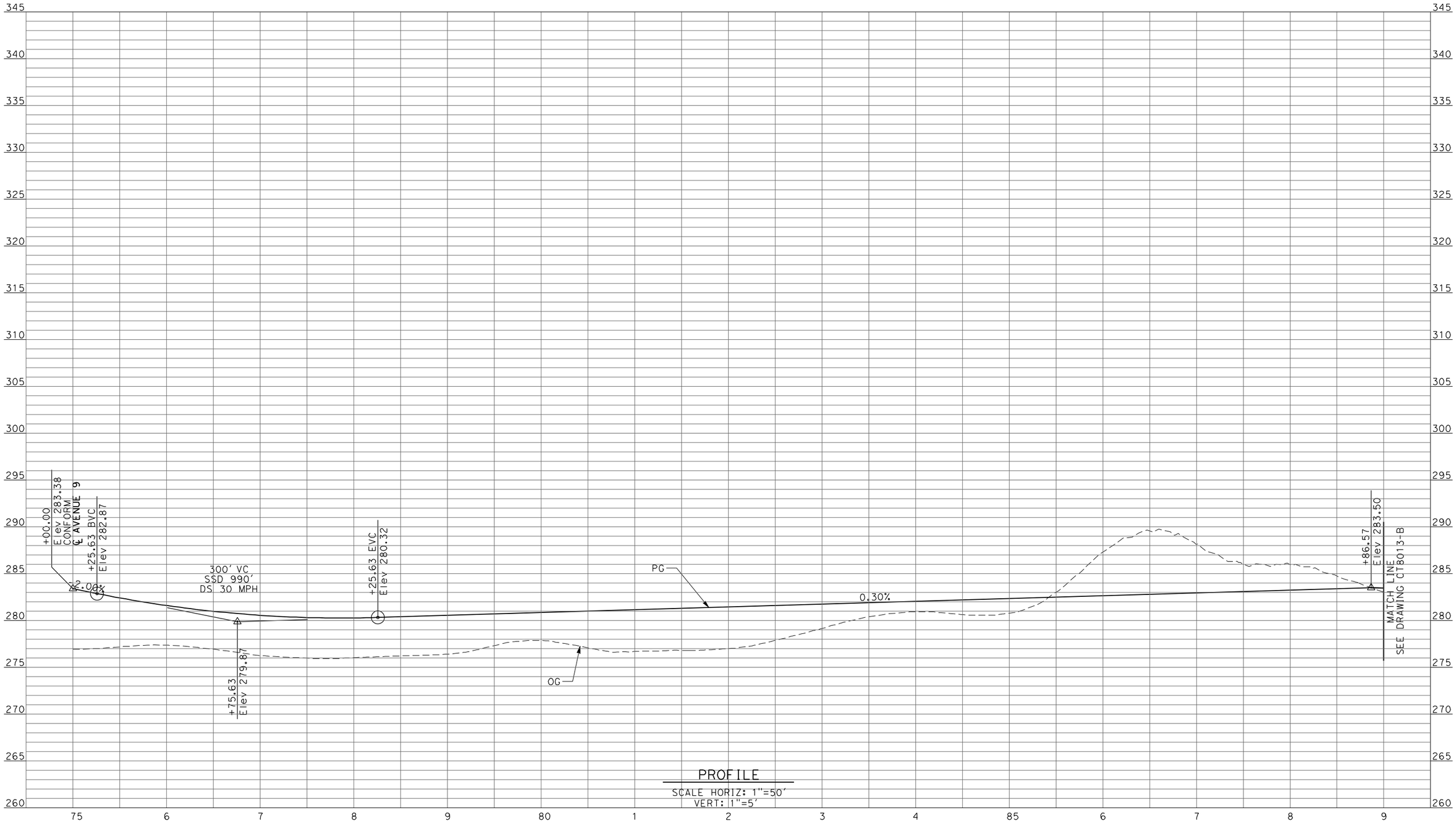

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 SB ON-RAMP
PROFILE
SHEET 9 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8012-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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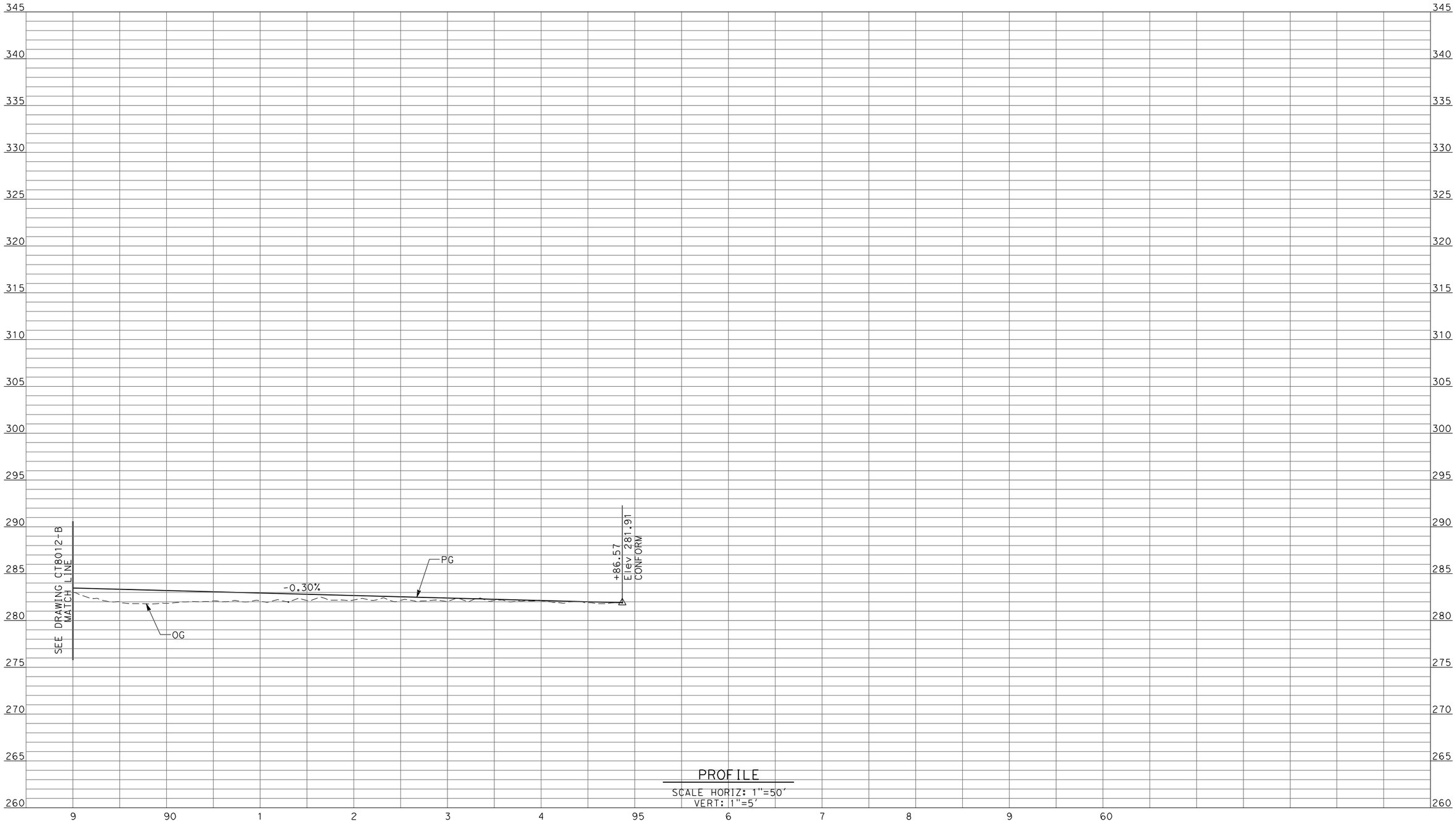

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 SB ON-RAMP
PROFILE
SHEET 10 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8013-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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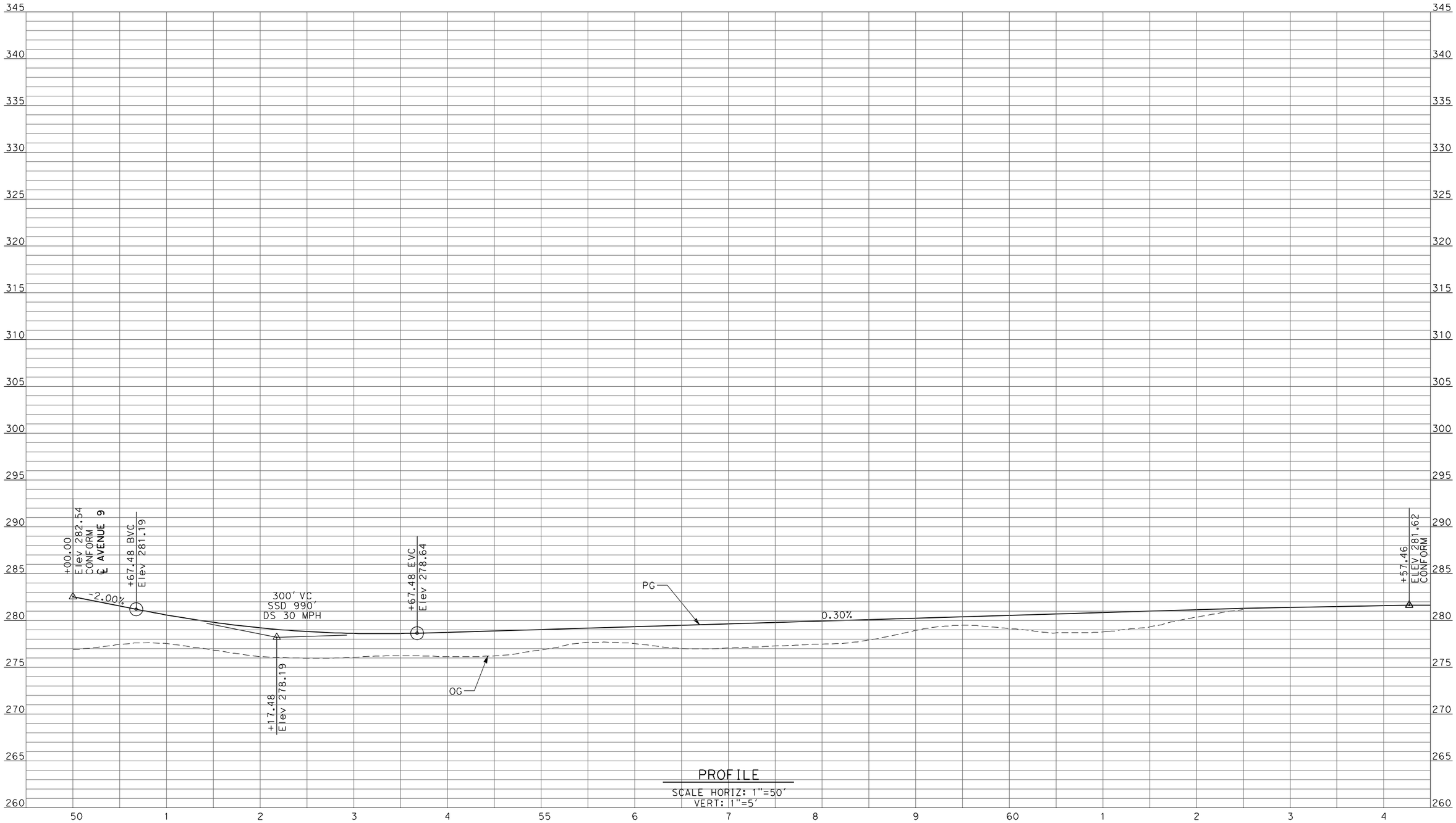

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 9 - INTERCHANGE SR 99 SB OFF-RAMP
PROFILE
SHEET 11 OF 11

CONTRACT NO. HSR06-007
DRAWING NO. CT8014-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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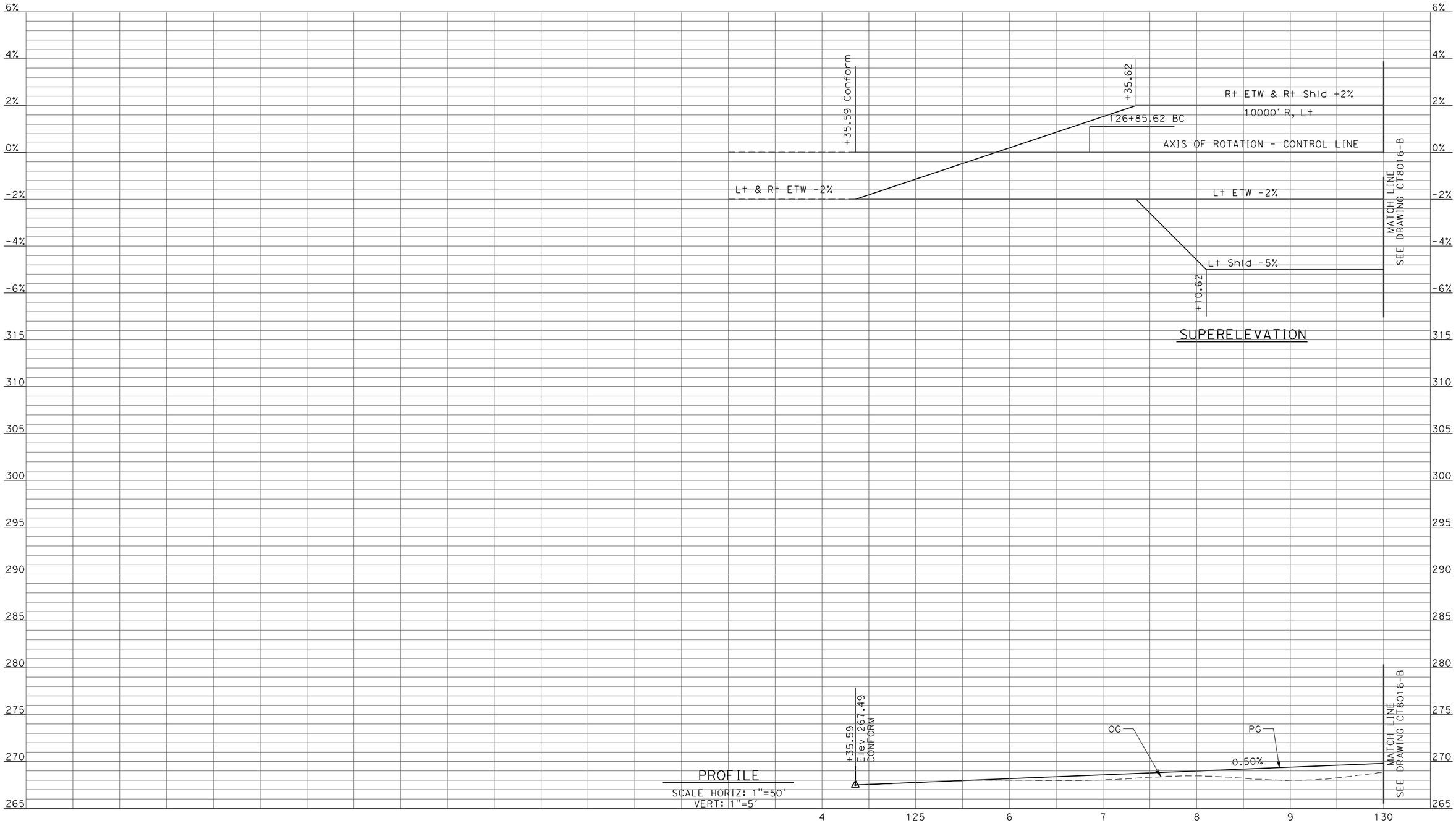

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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
PROFILE
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8015-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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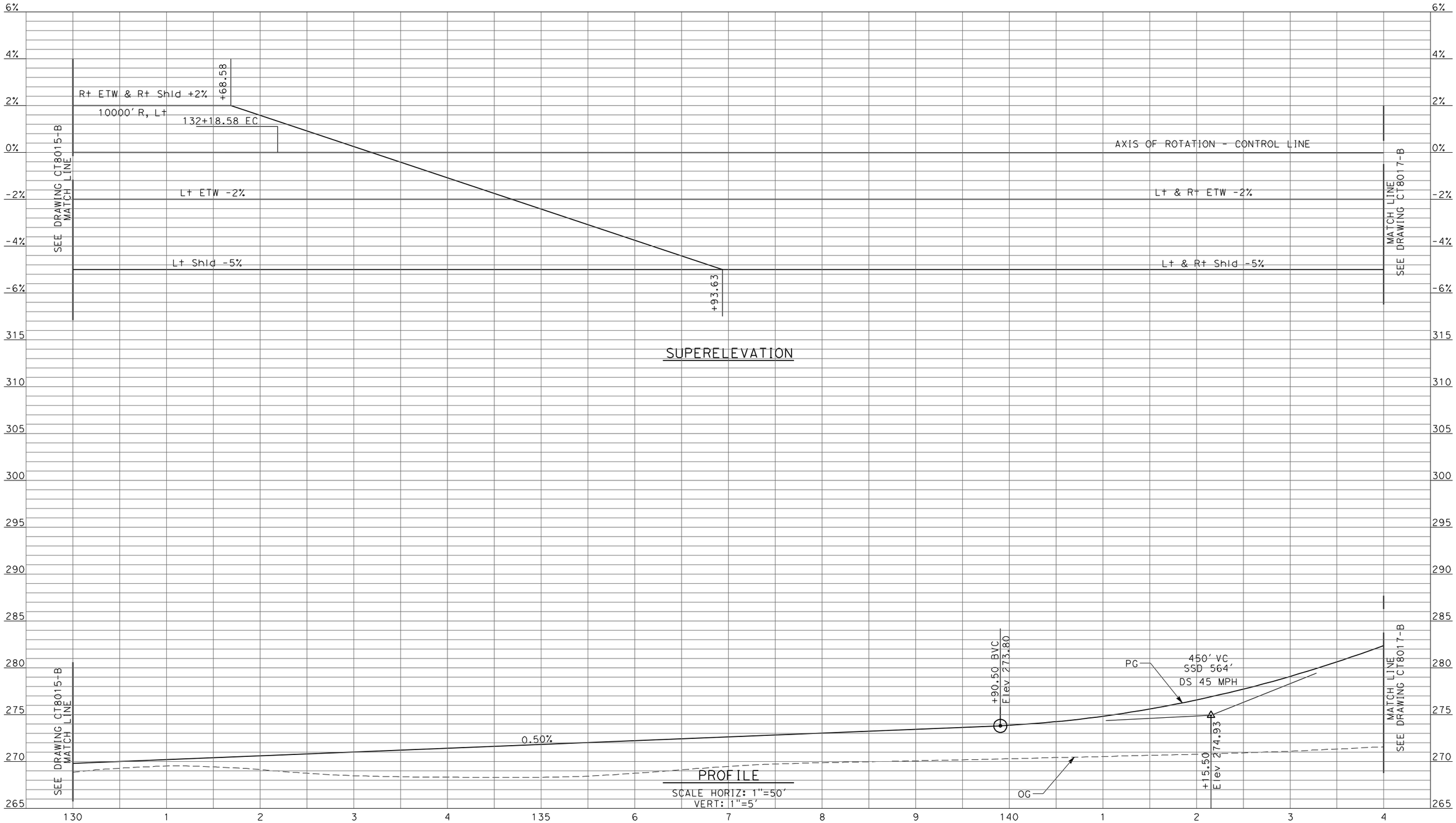

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
PROFILE
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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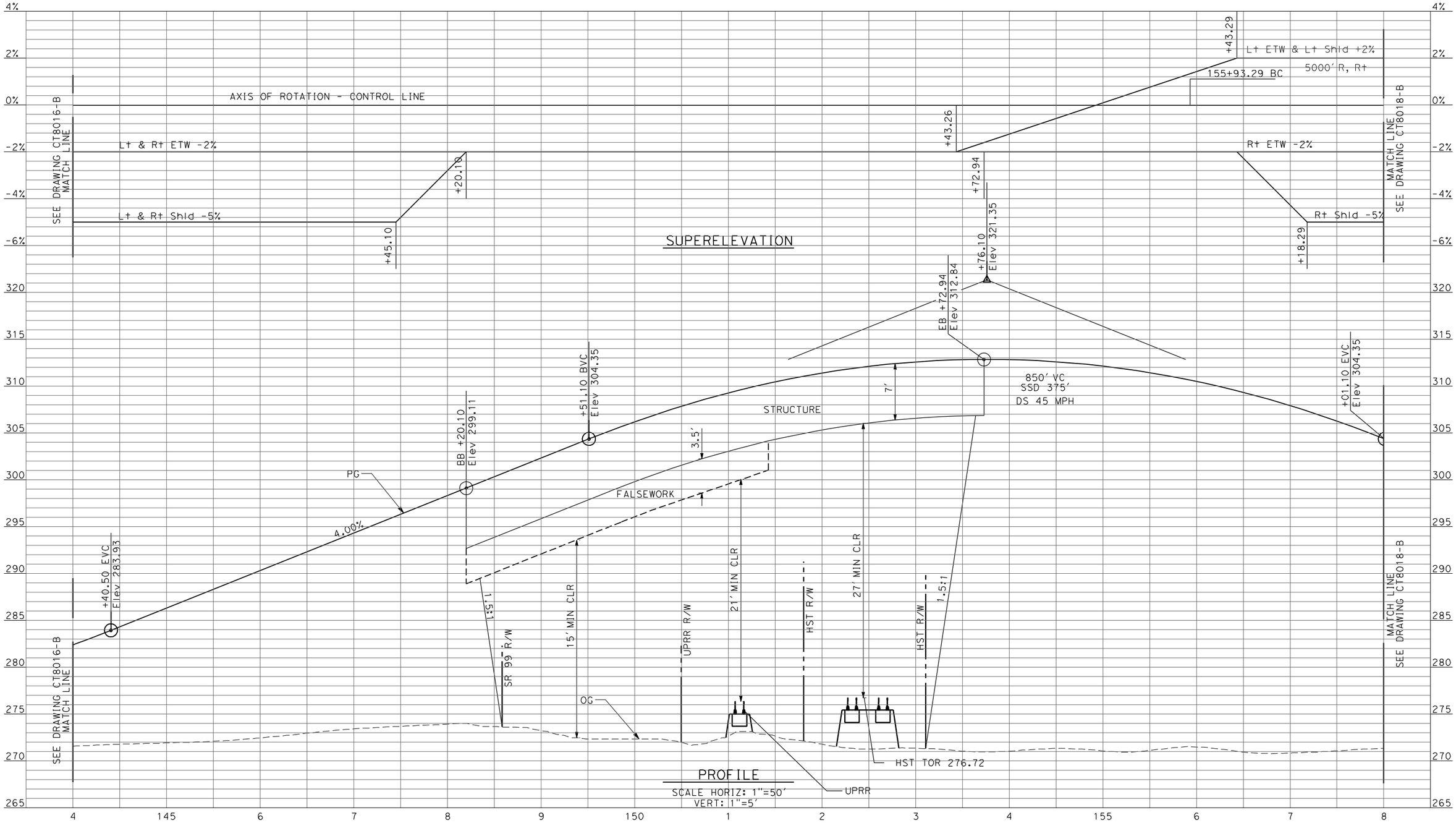

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
PROFILE
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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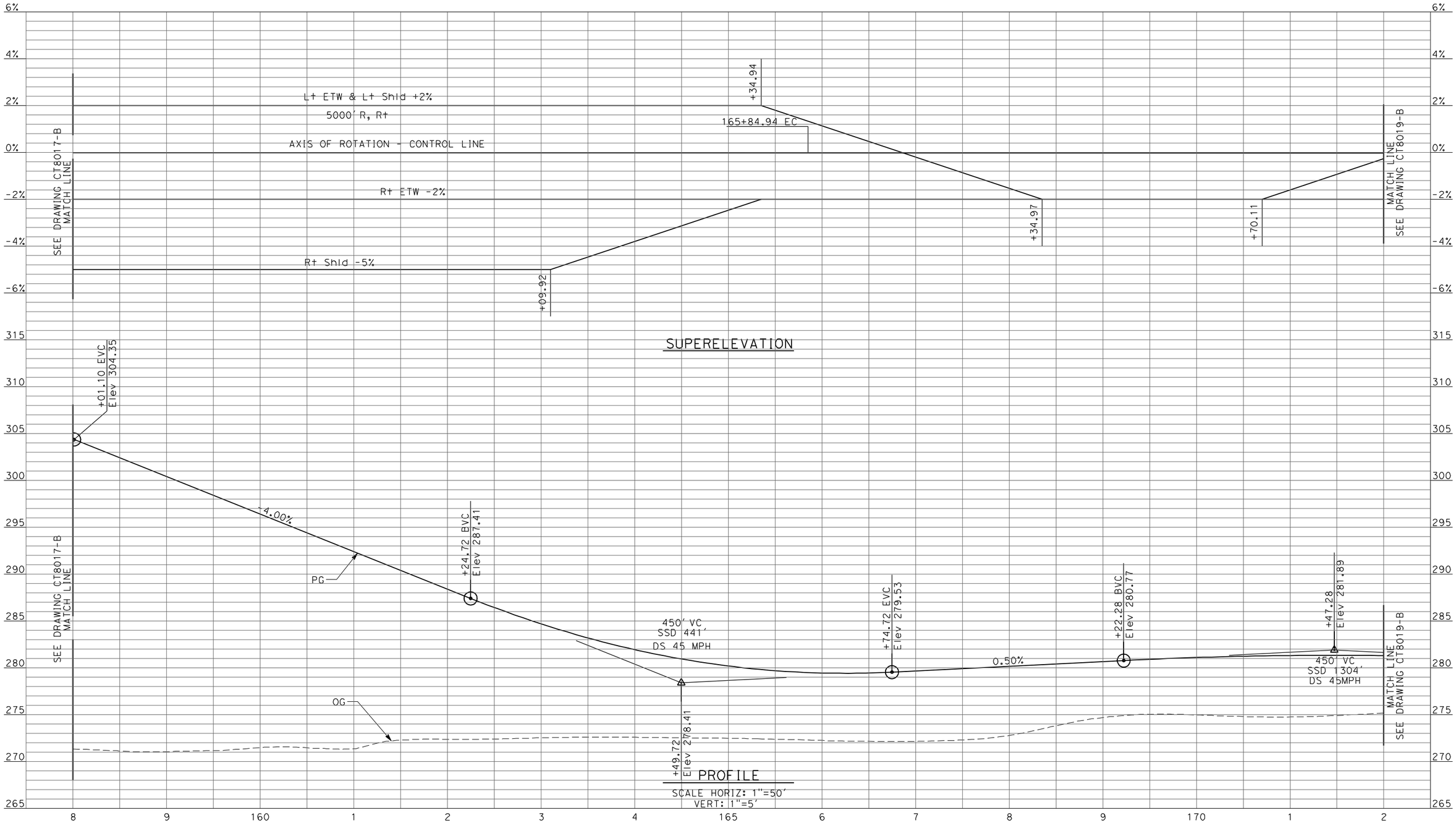

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
PROFILE
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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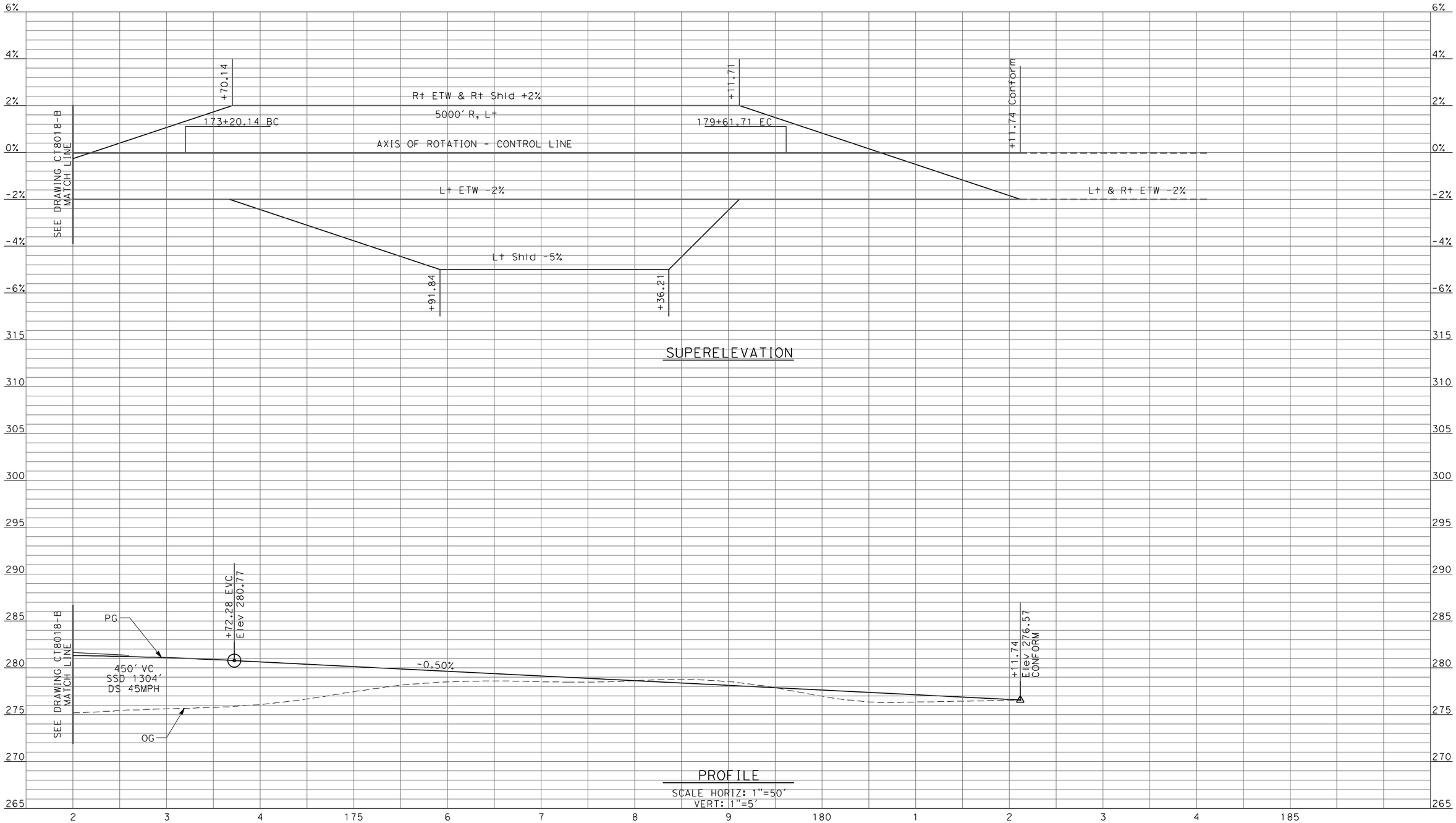

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MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 11 - OVERHEAD
PROFILE
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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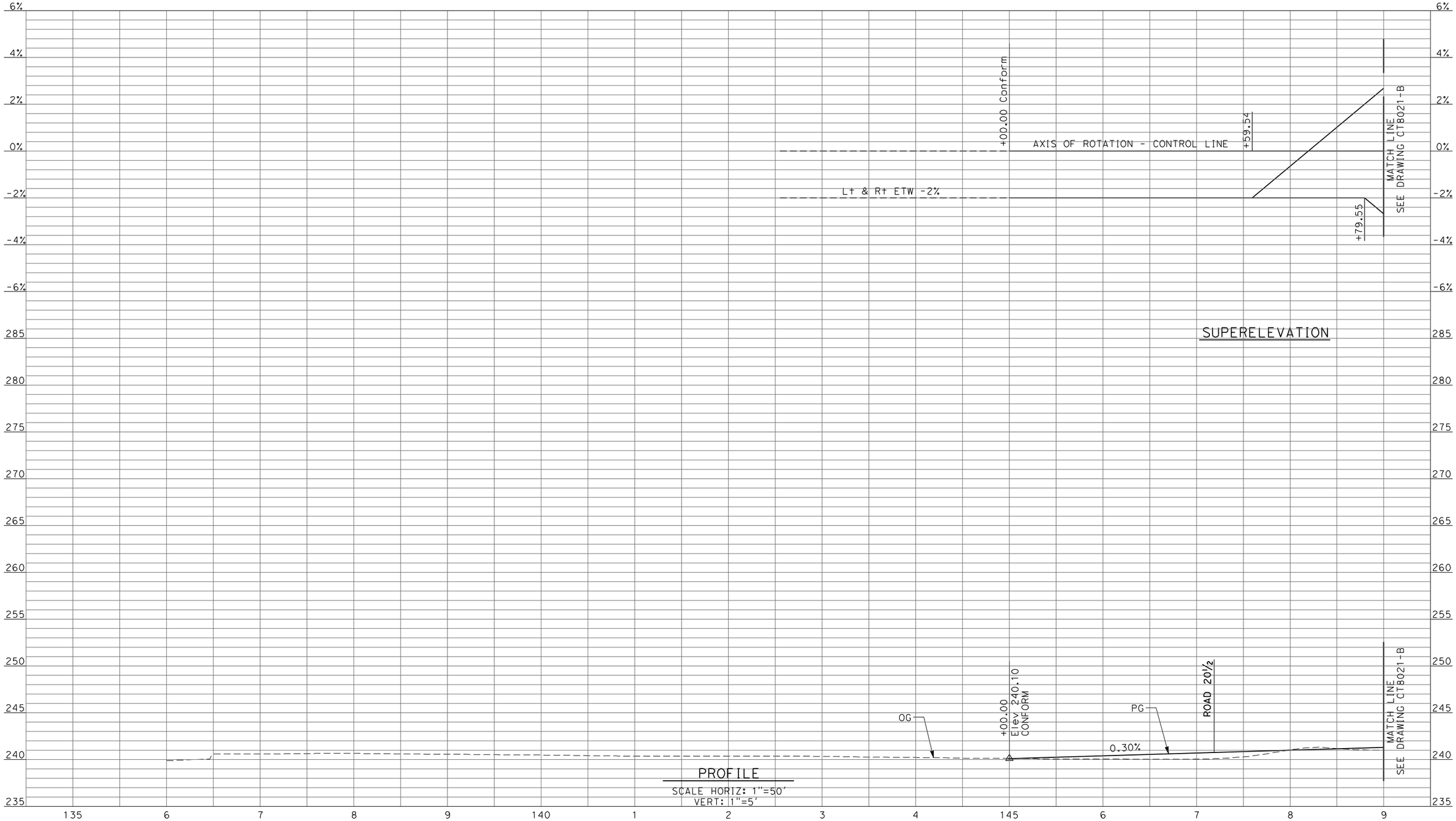

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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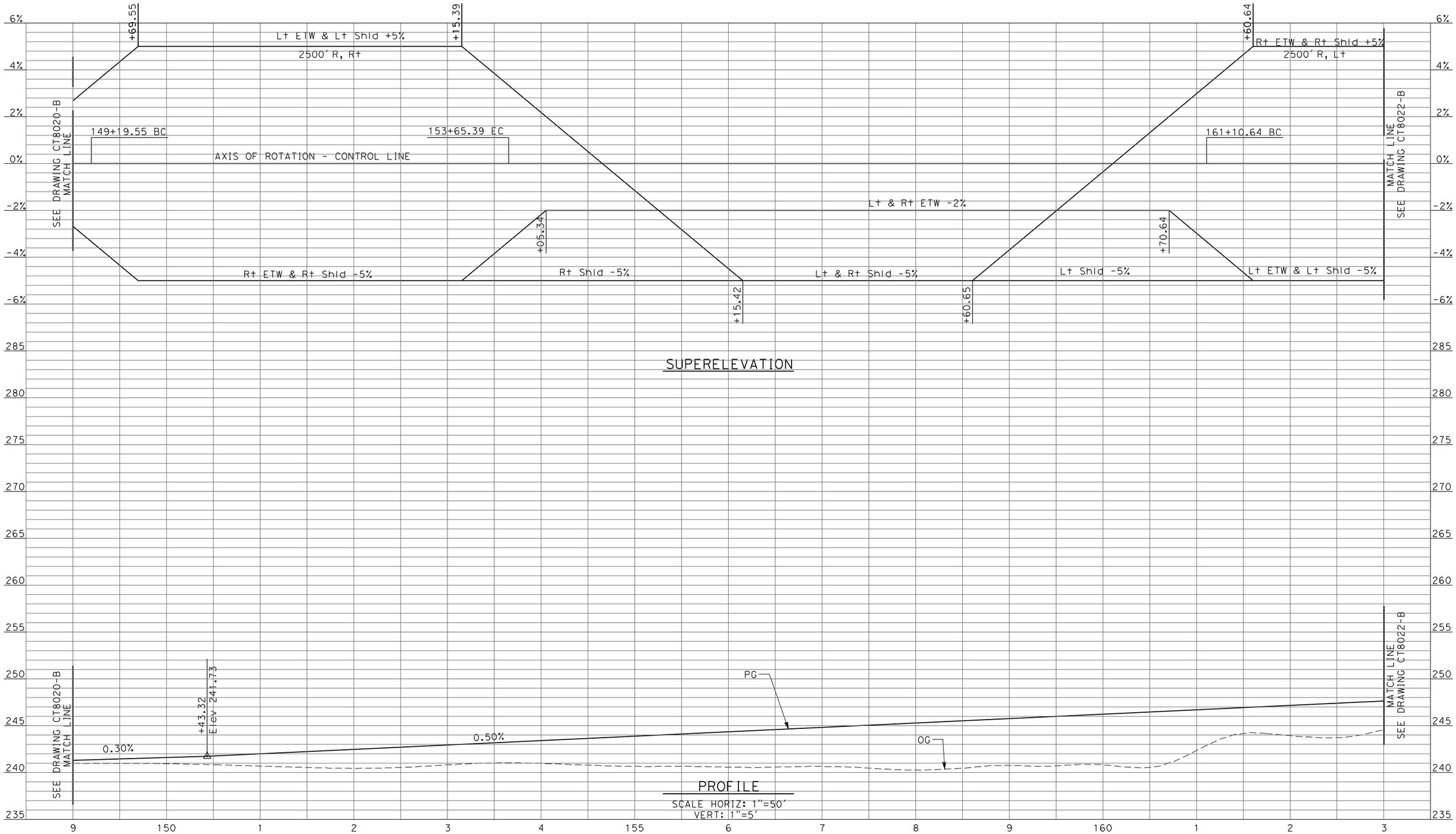

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8021-B
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SHEET NO. ### OF ###

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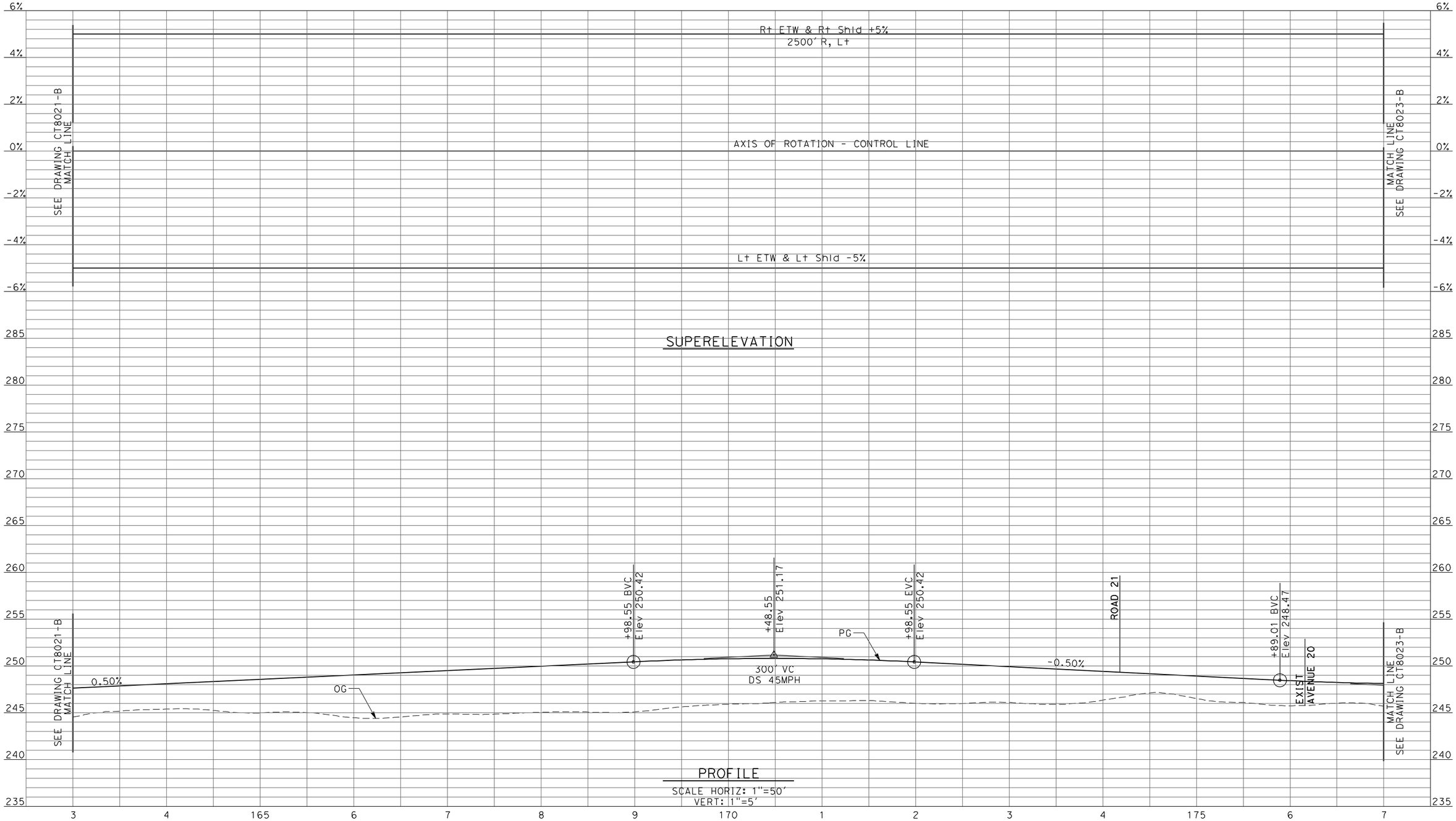

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AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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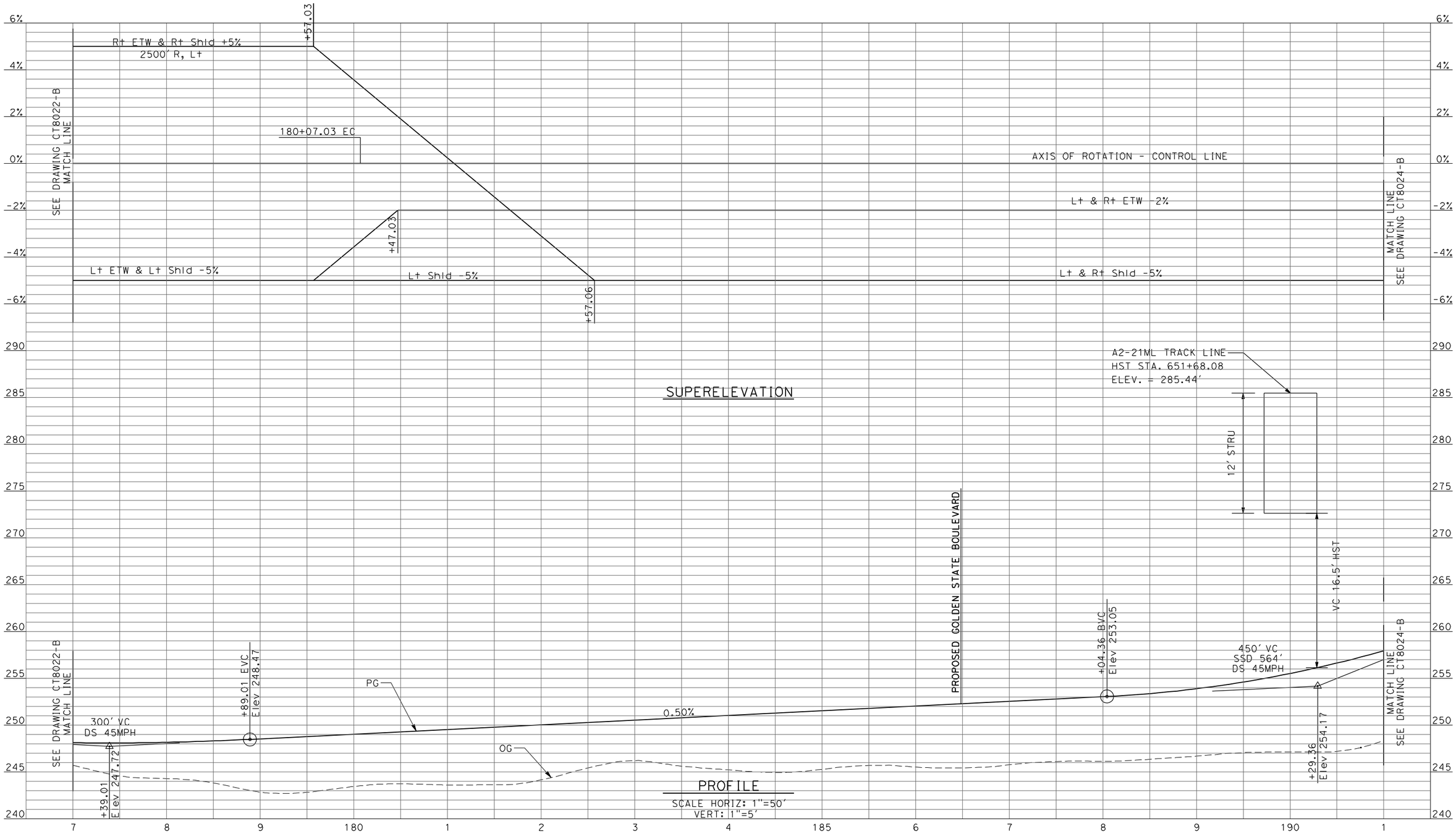

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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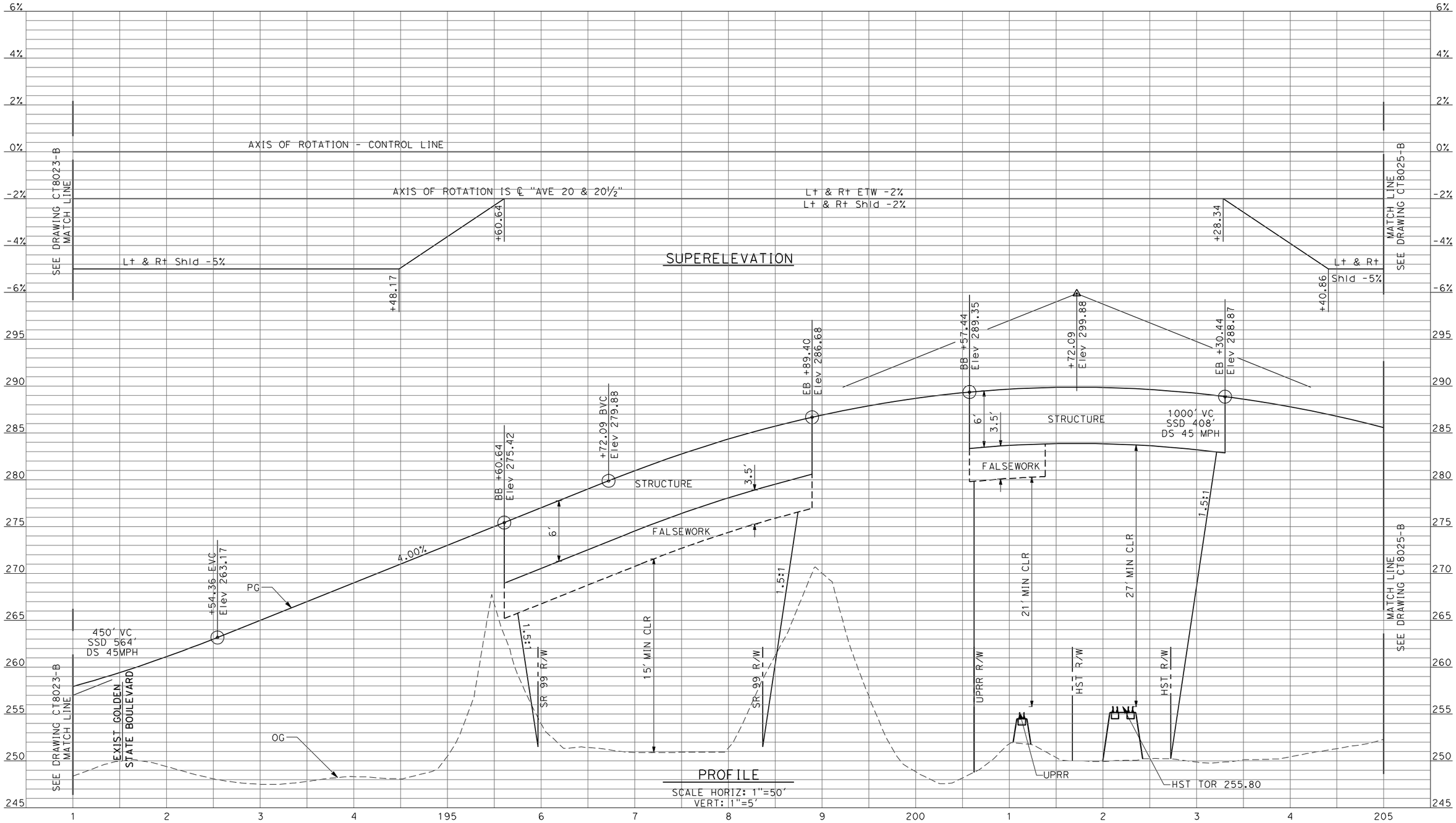

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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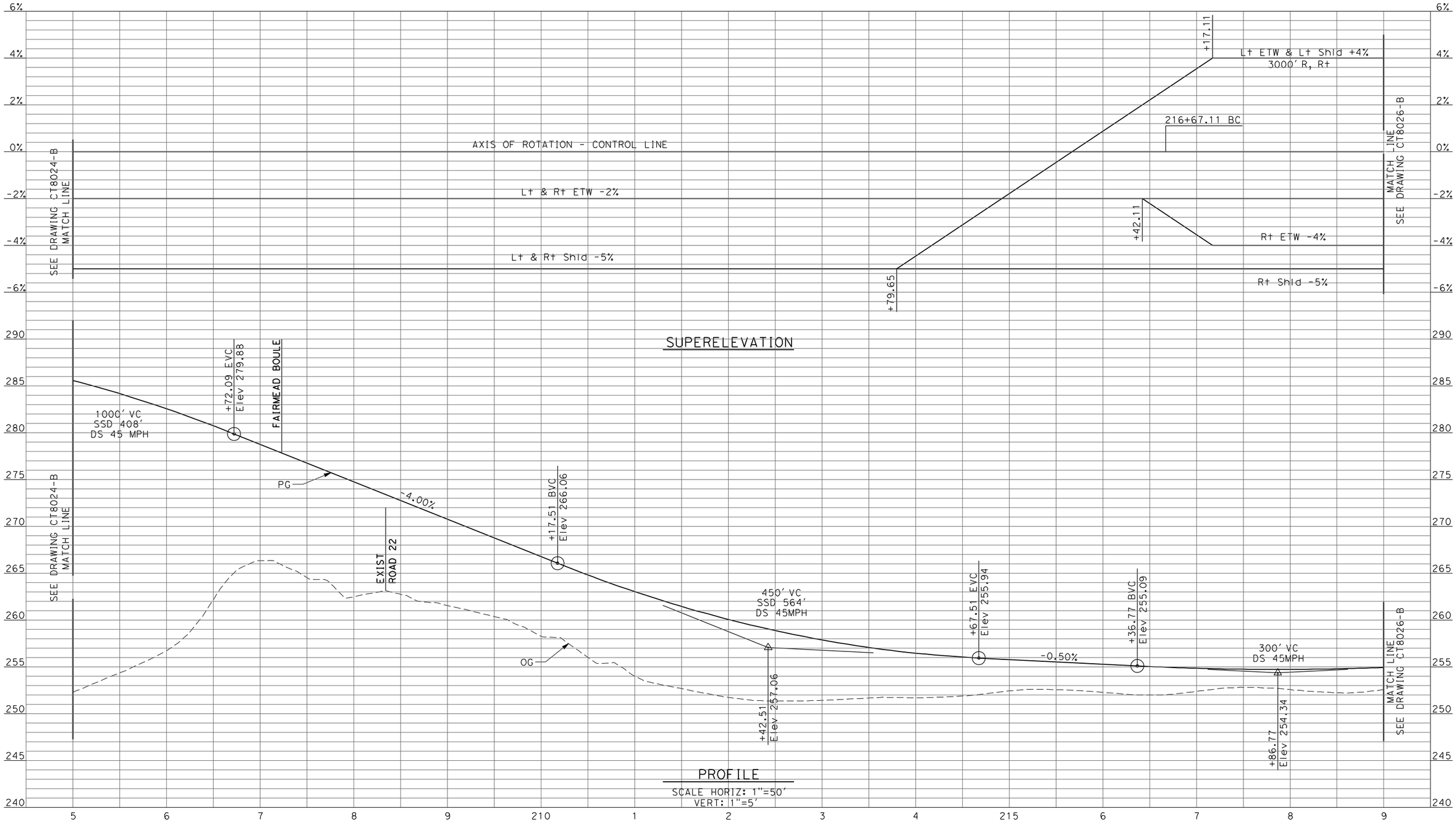

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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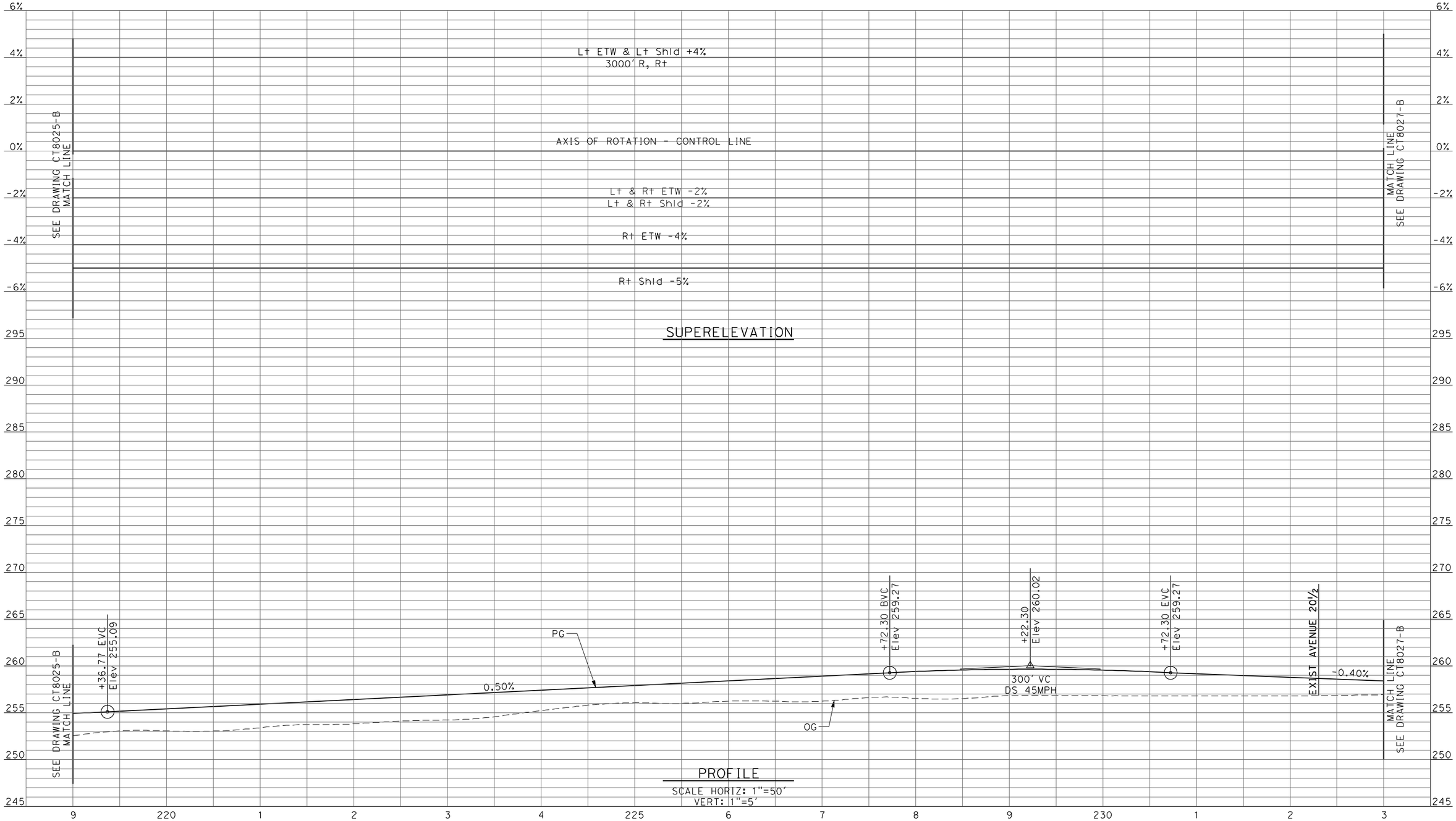

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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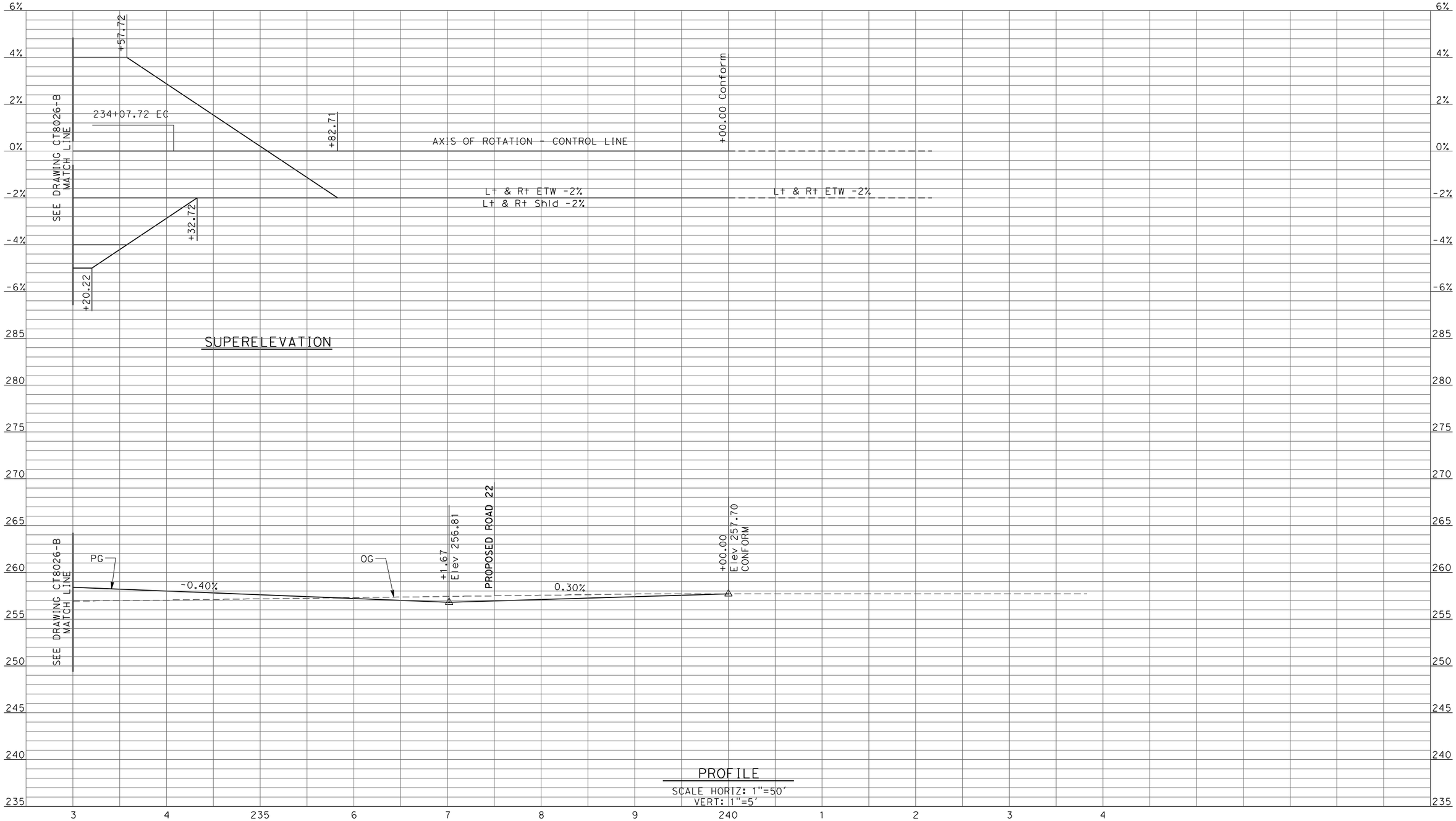

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 1
PROFILE
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8027-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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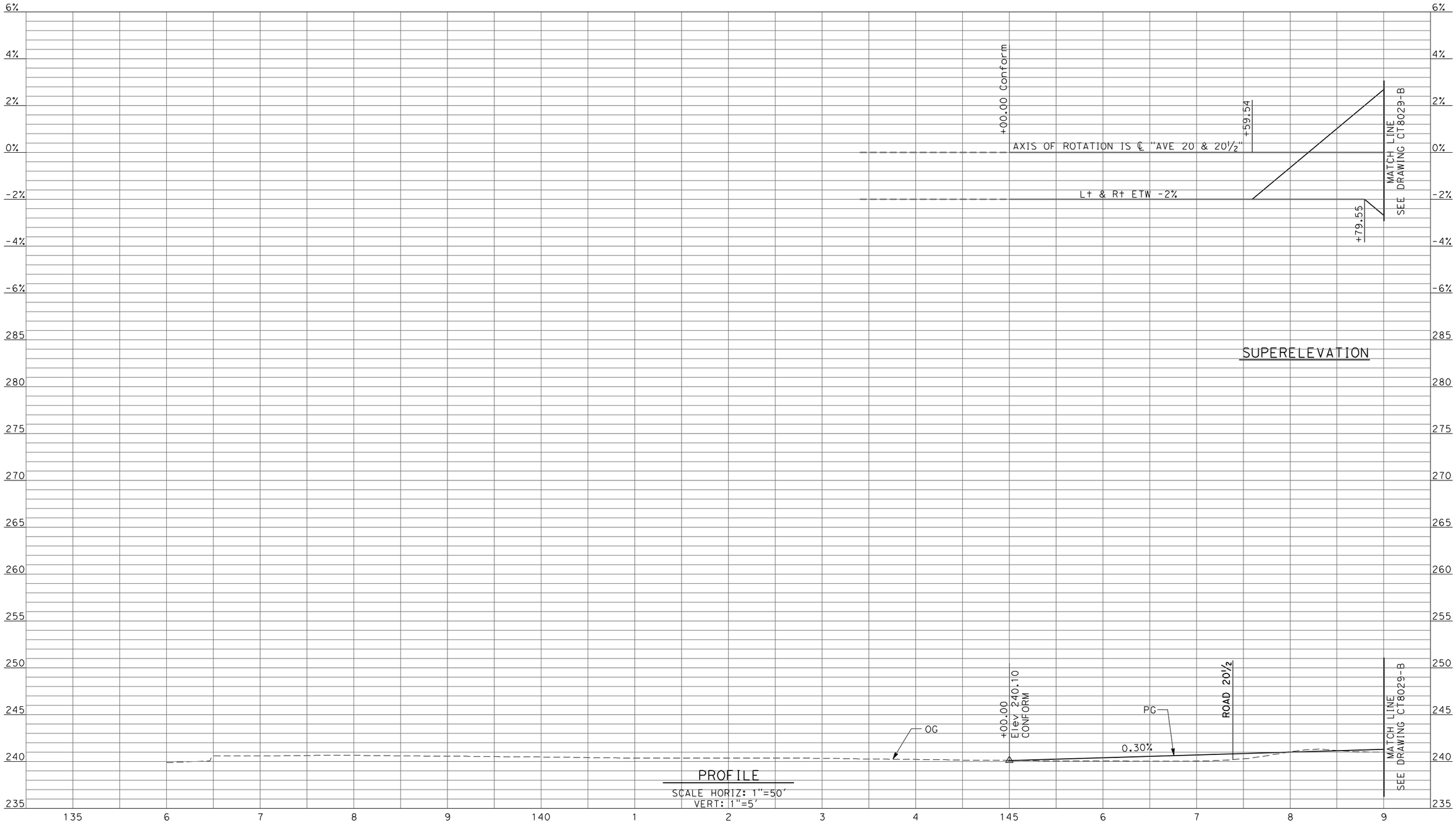

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8028-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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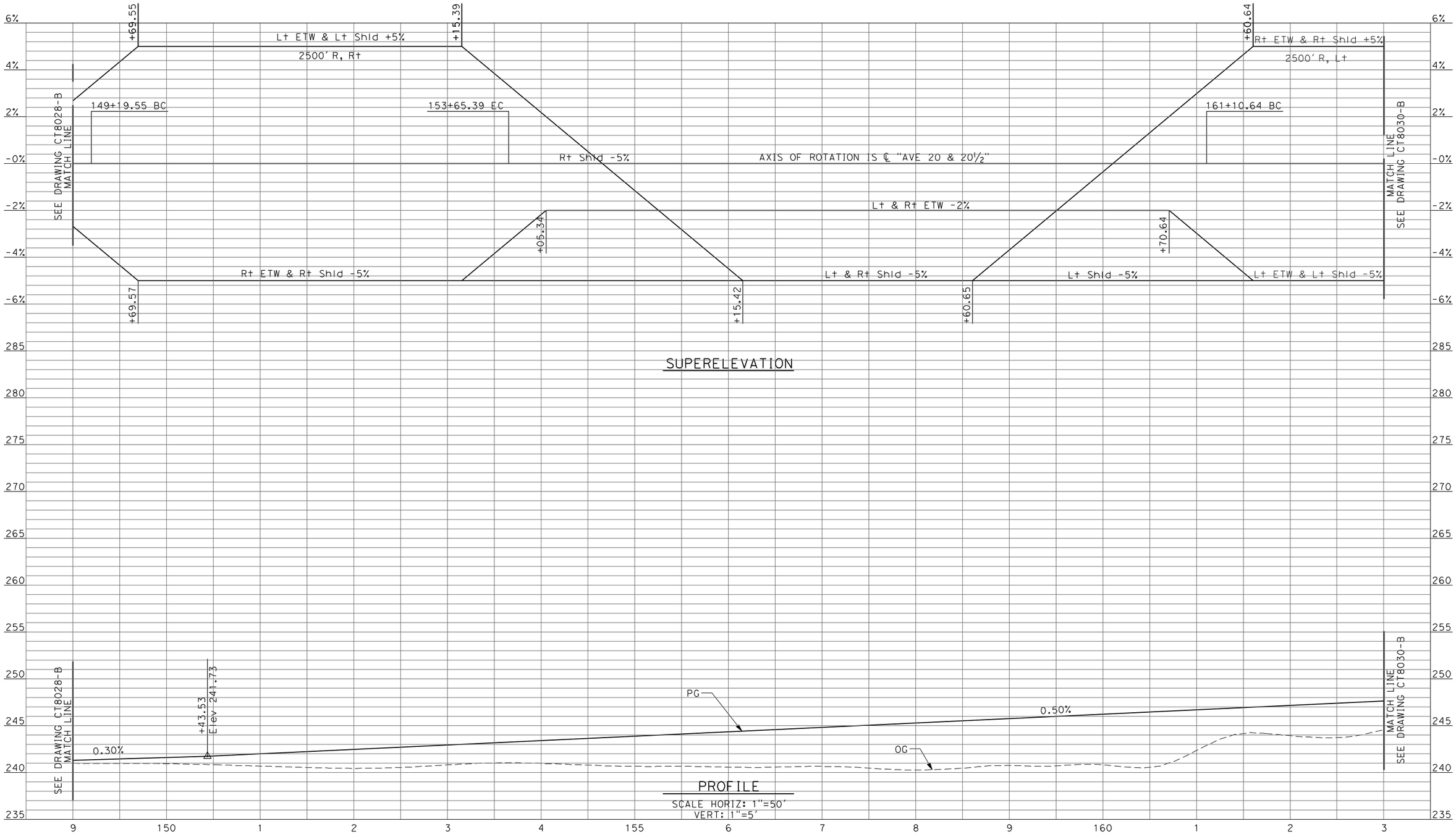

REV	DATE	BY	CHK	APP	DESCRIPTION

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UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8029-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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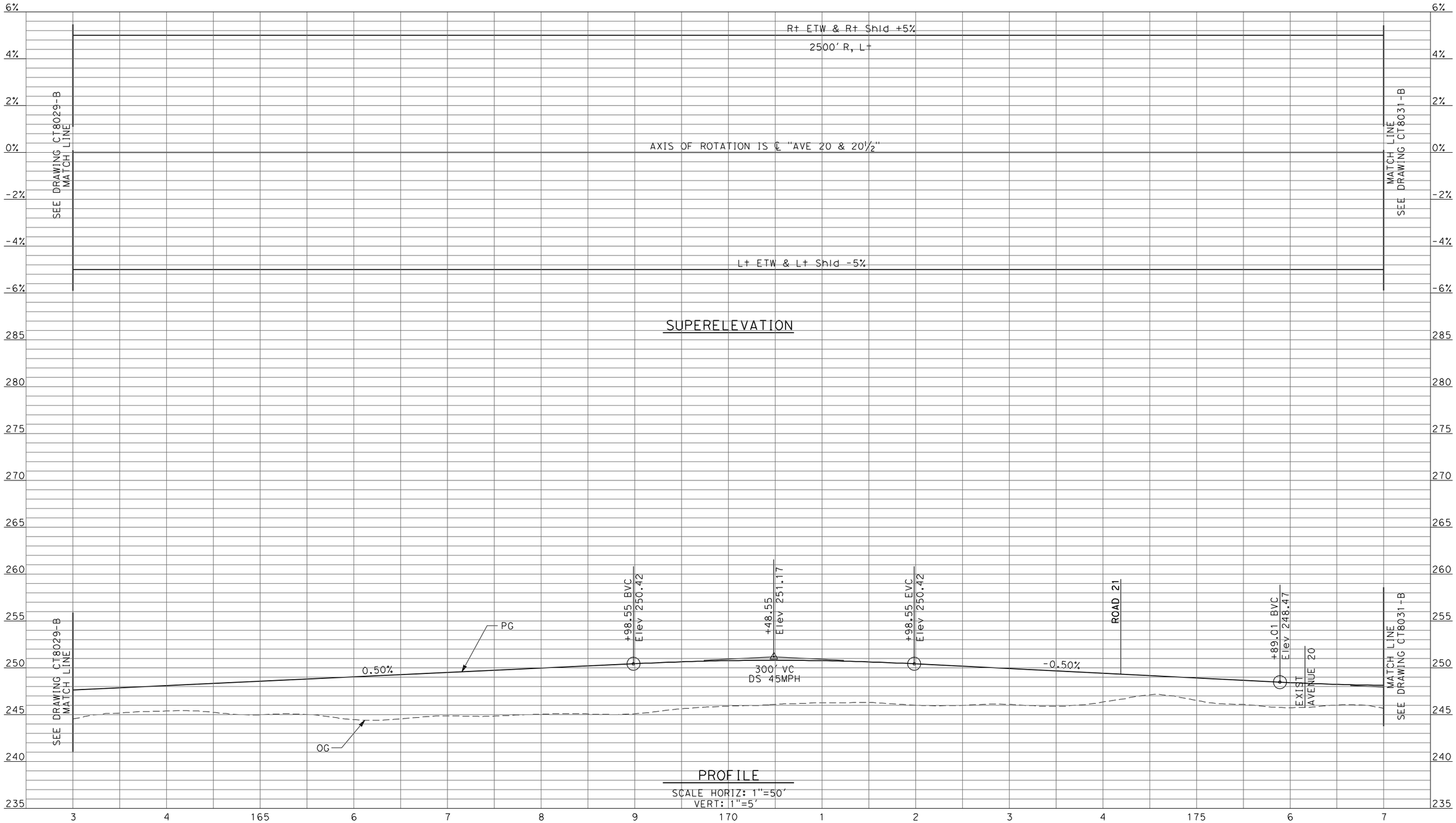

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8030-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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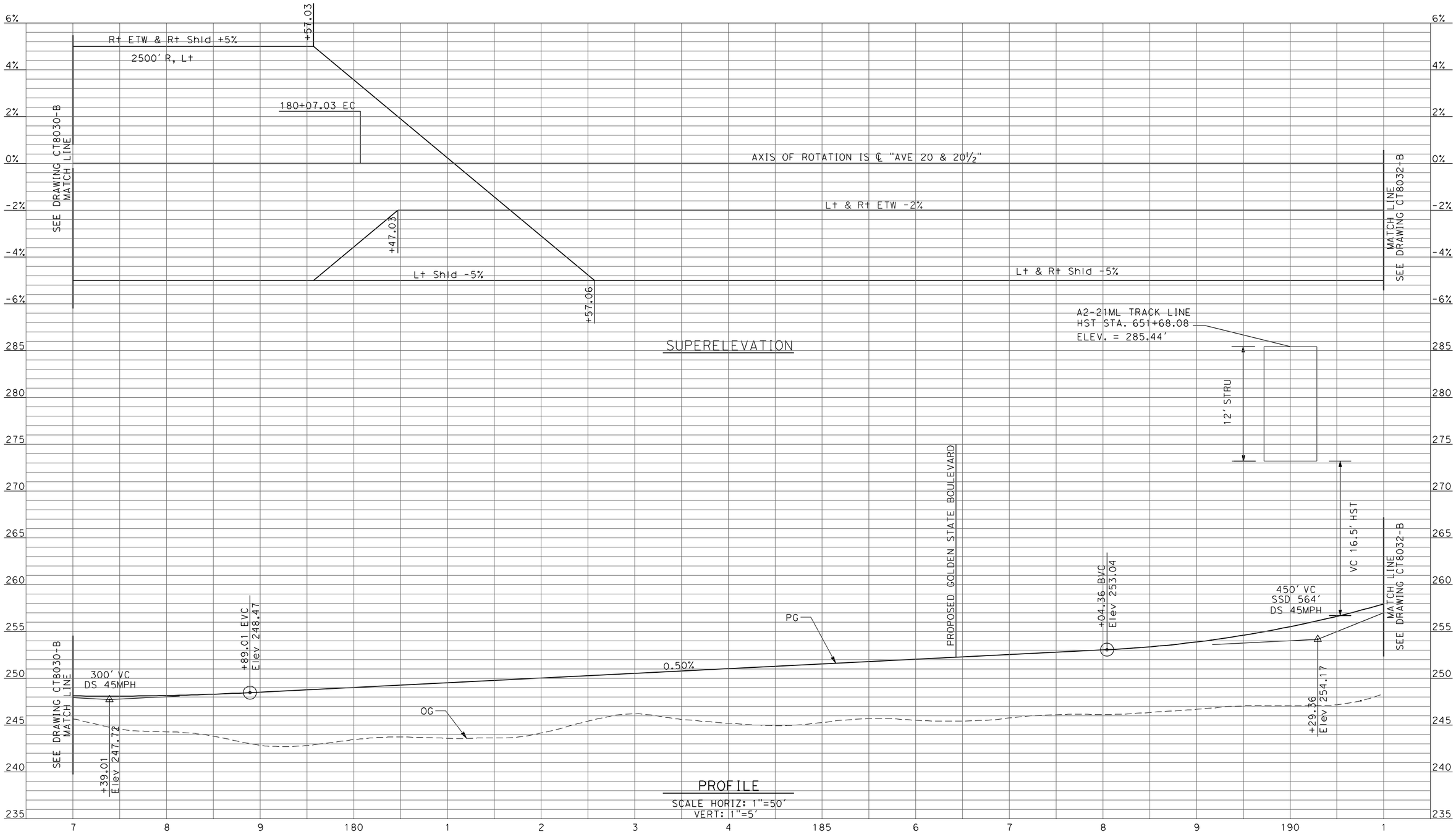

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8031-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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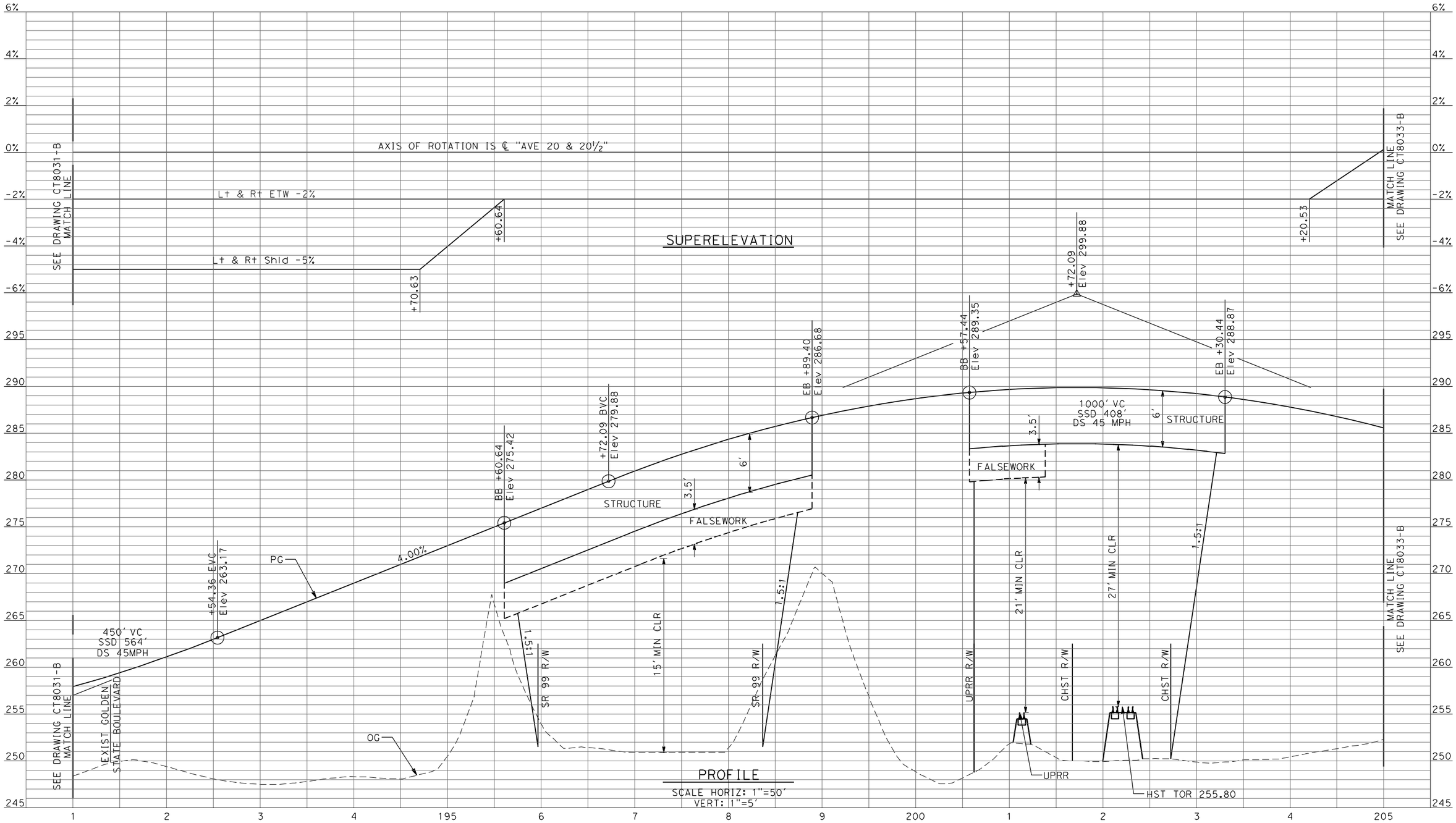

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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DATE 04/29/2011

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8032-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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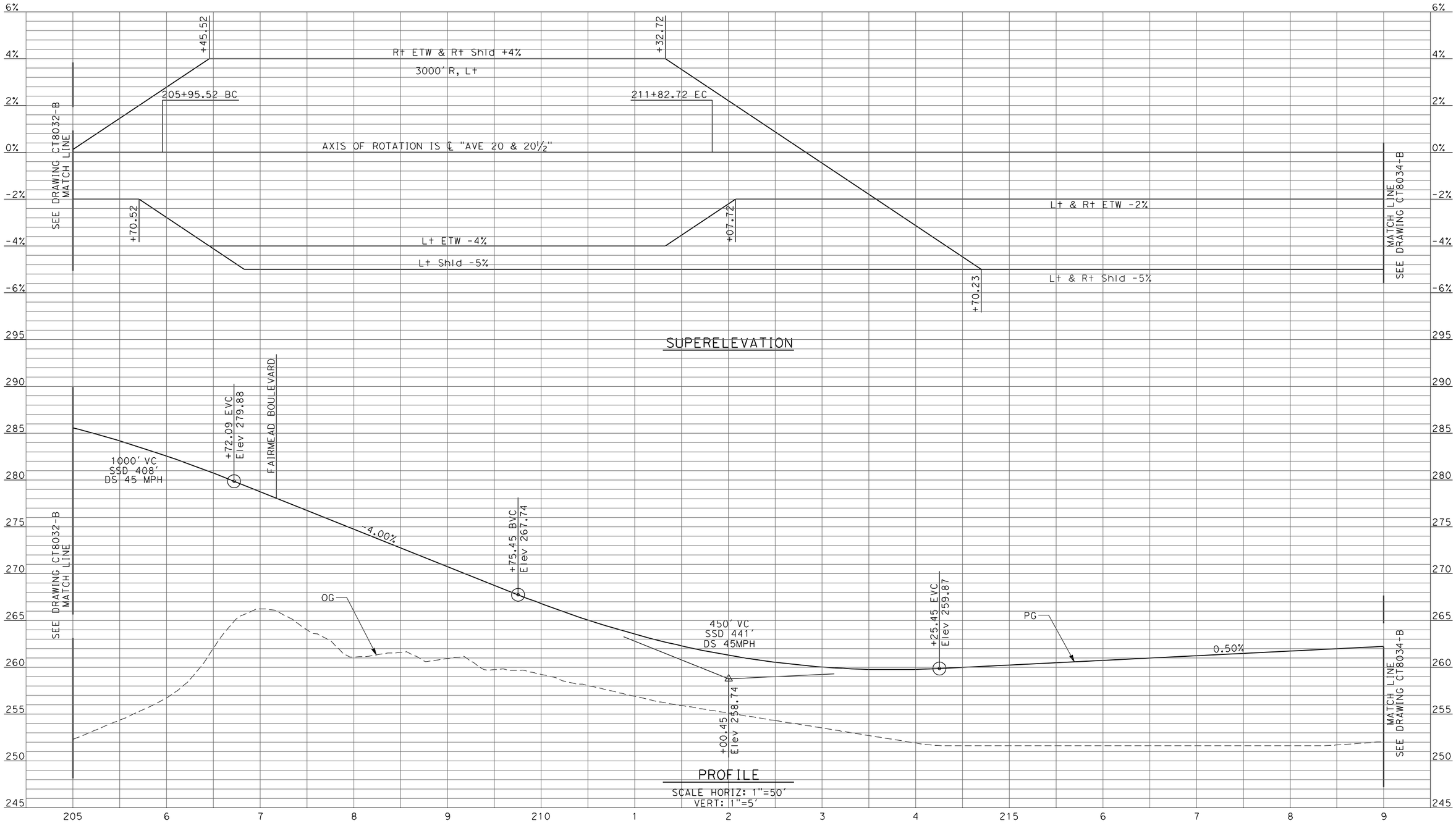

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8033-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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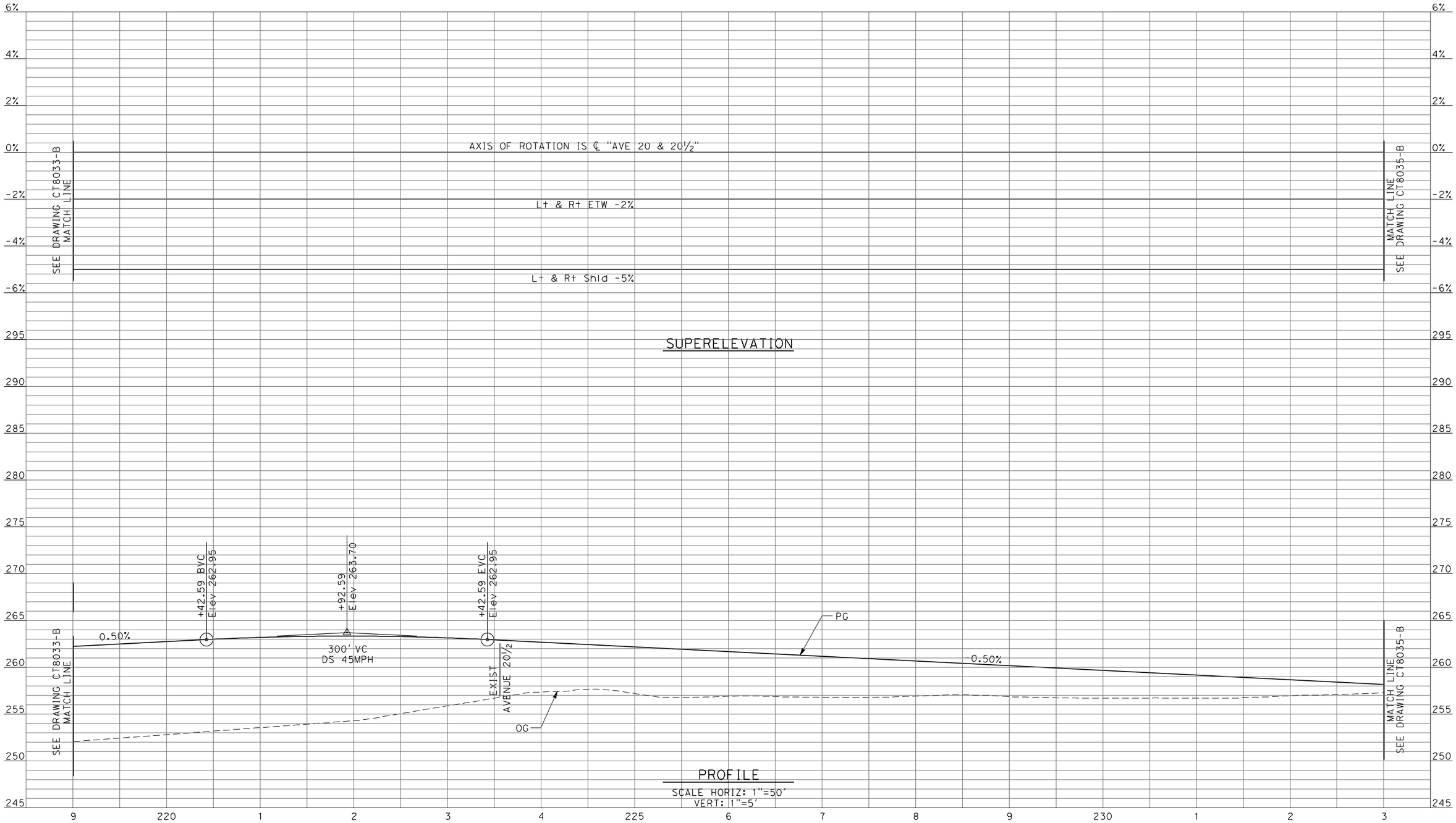

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8034-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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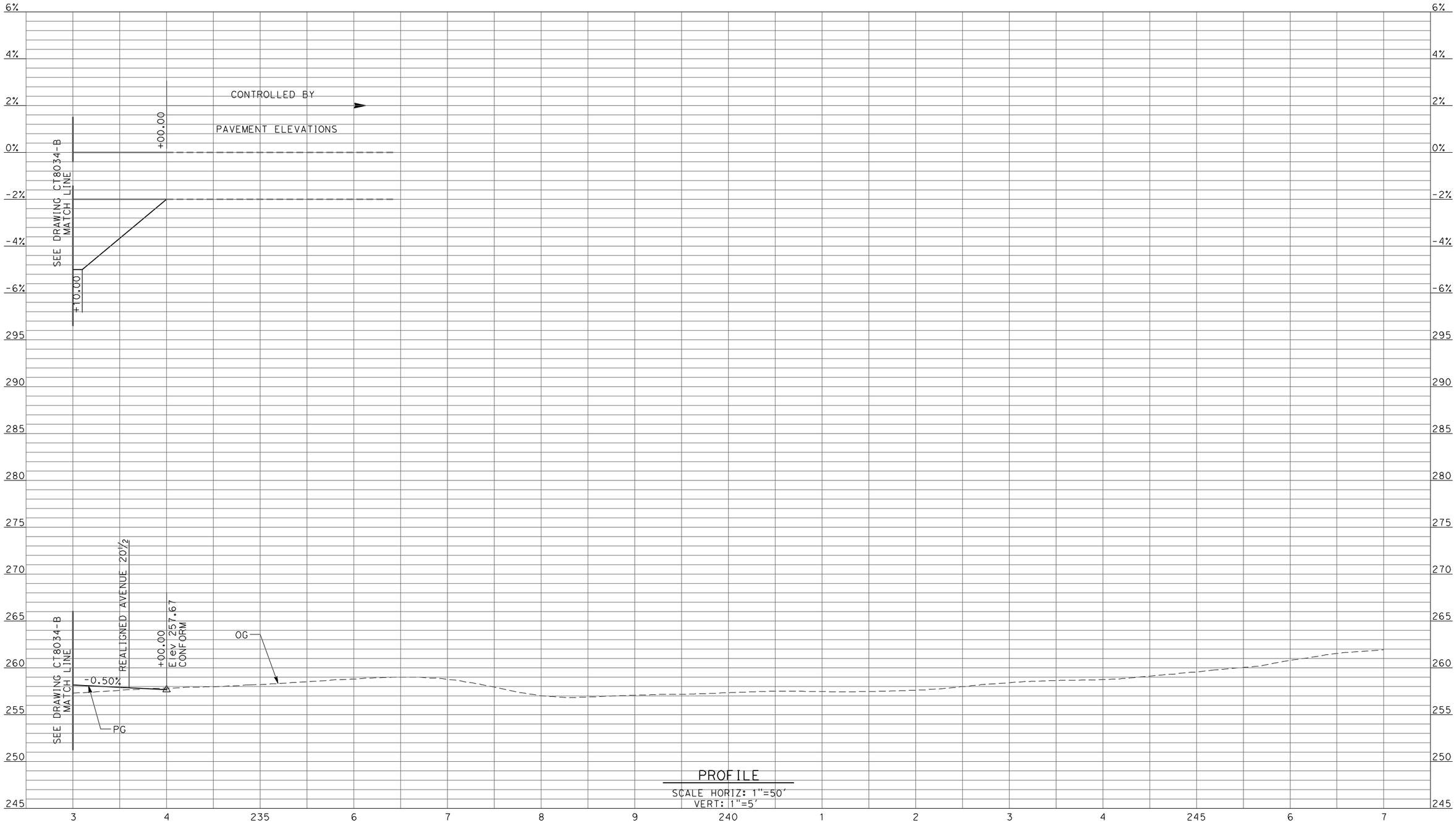

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVENUE 20 & 20.5 - INTERCHANGE ALT 2
PROFILE
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CT8035-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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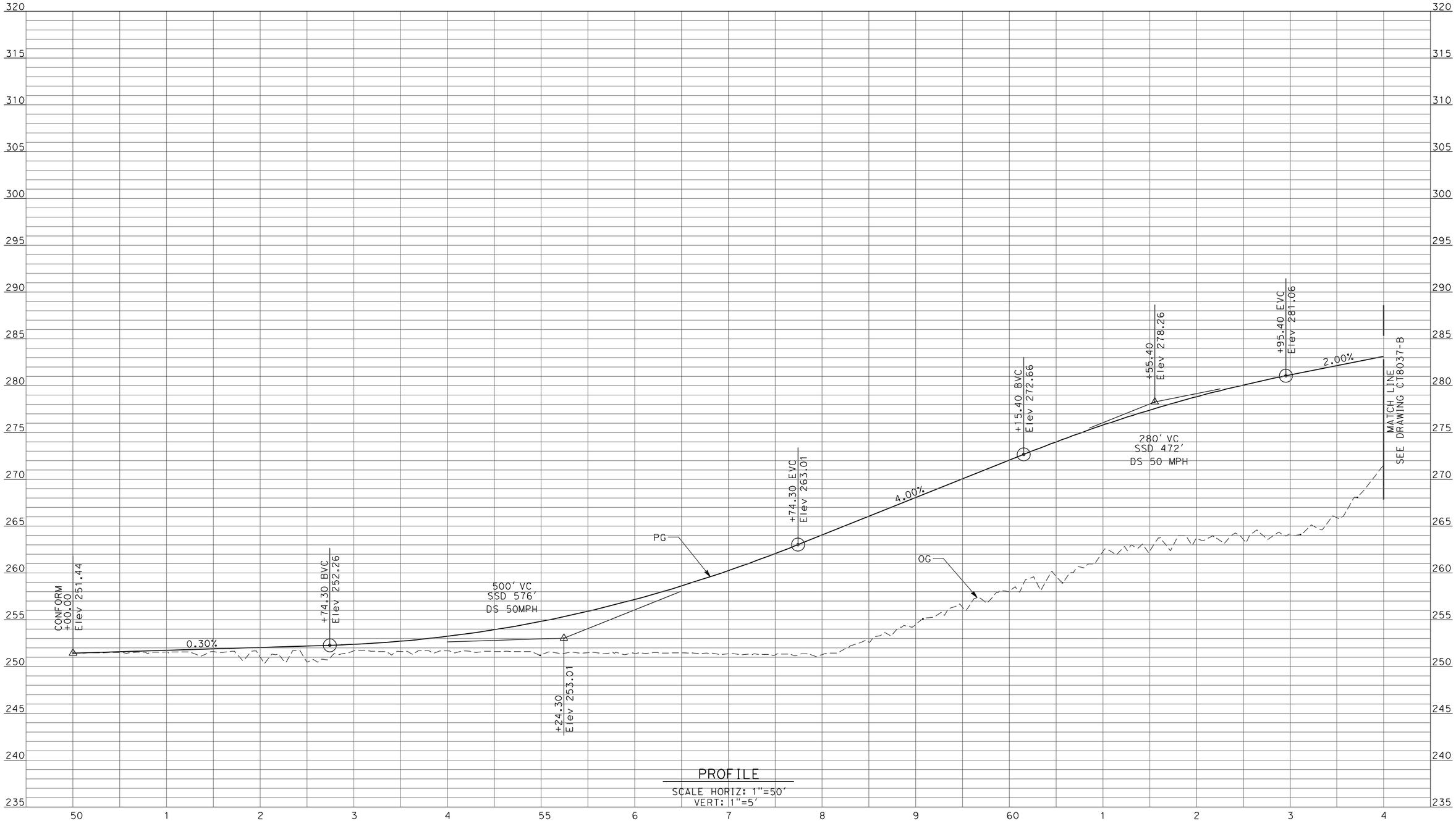

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB OFF-RAMP
PROFILE
SHEET 1 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8036-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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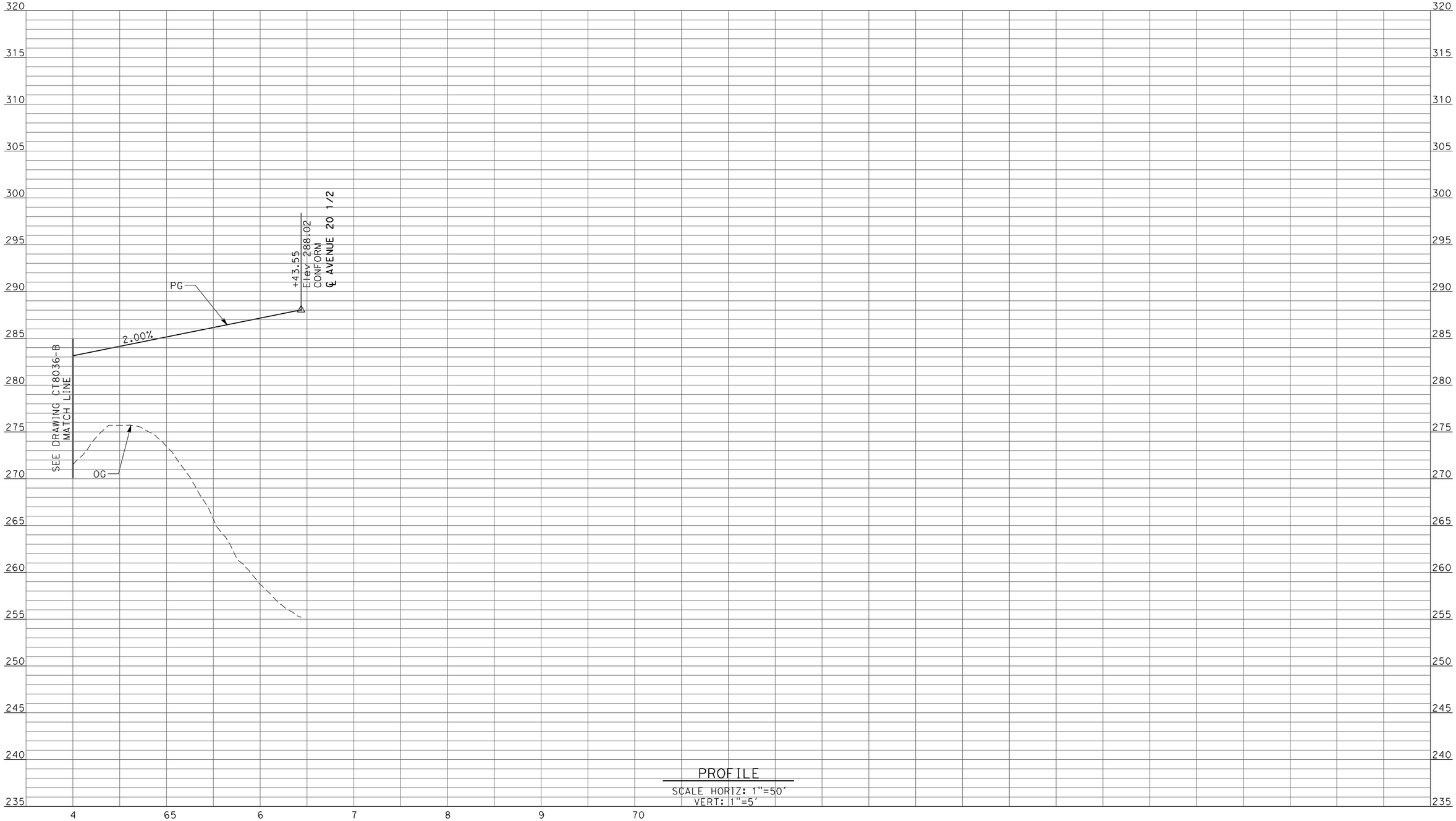

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB OFF-RAMP
PROFILE
SHEET 2 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8037-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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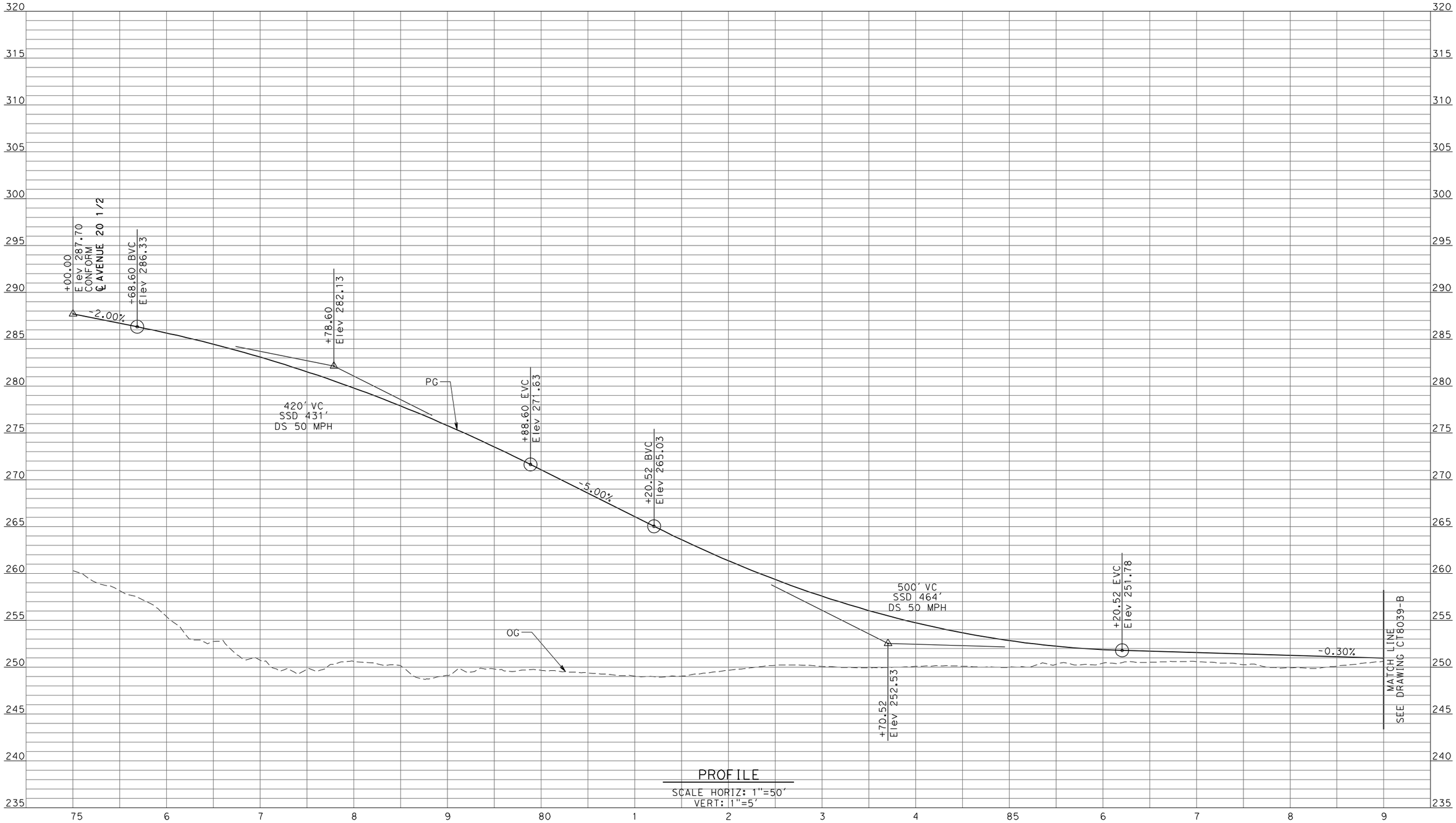

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO
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AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB ON-RAMP
PROFILE
SHEET 3 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8038-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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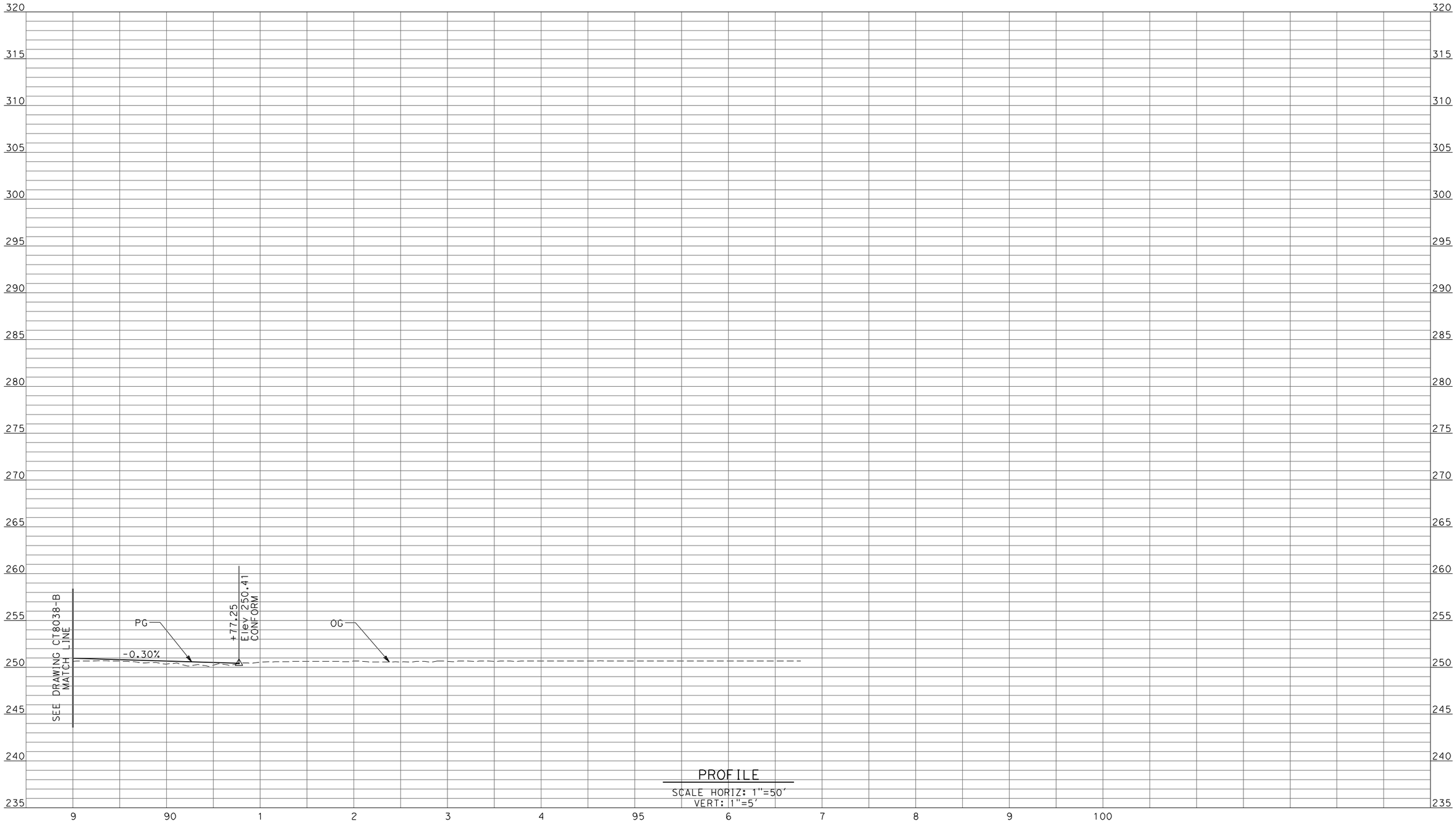

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AVE 20 & 20.5 - IC ALT 1 & 2 SR99 NB ON-RAMP
PROFILE
SHEET 4 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8039-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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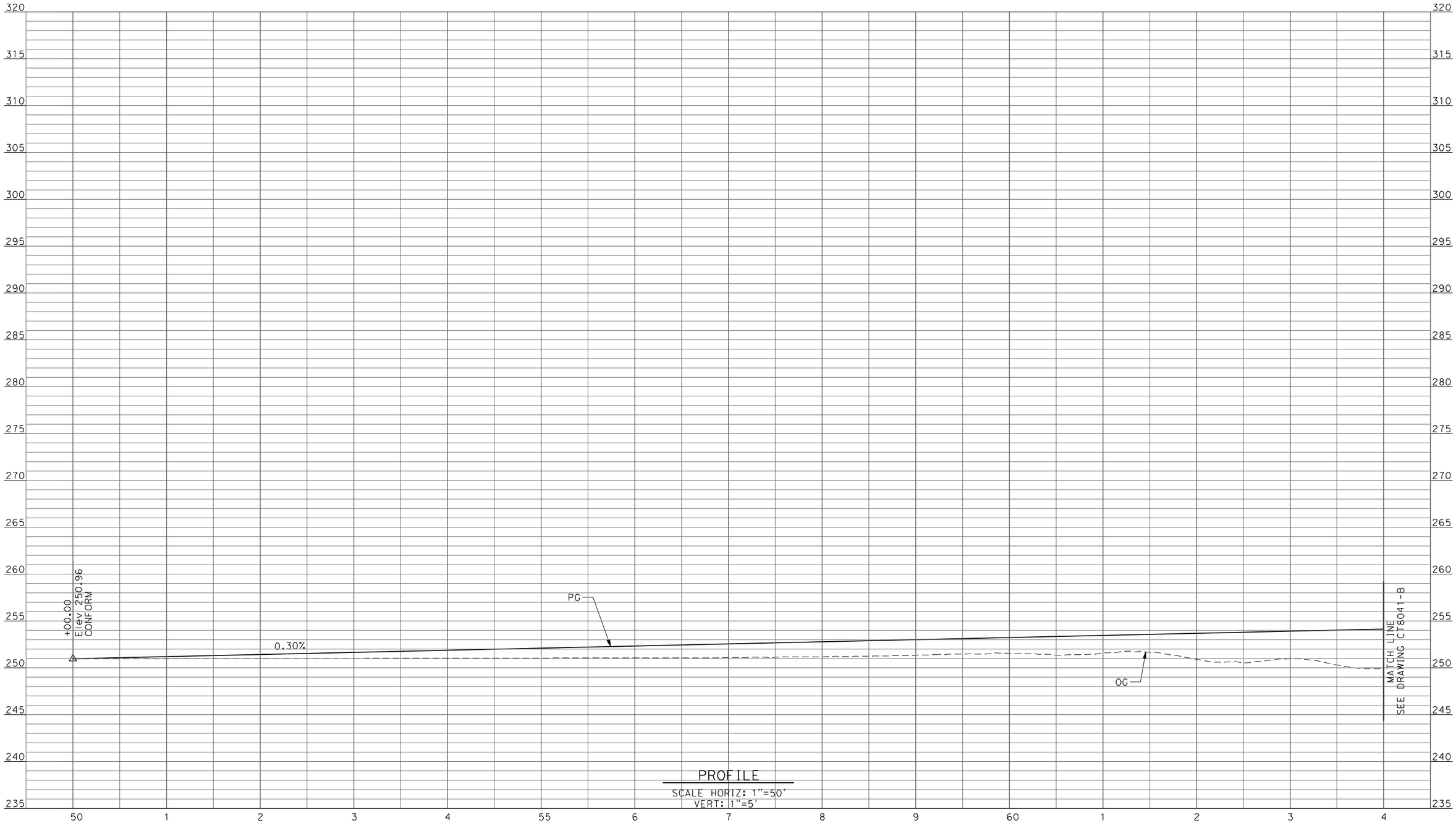

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP
PROFILE
SHEET 5 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8040-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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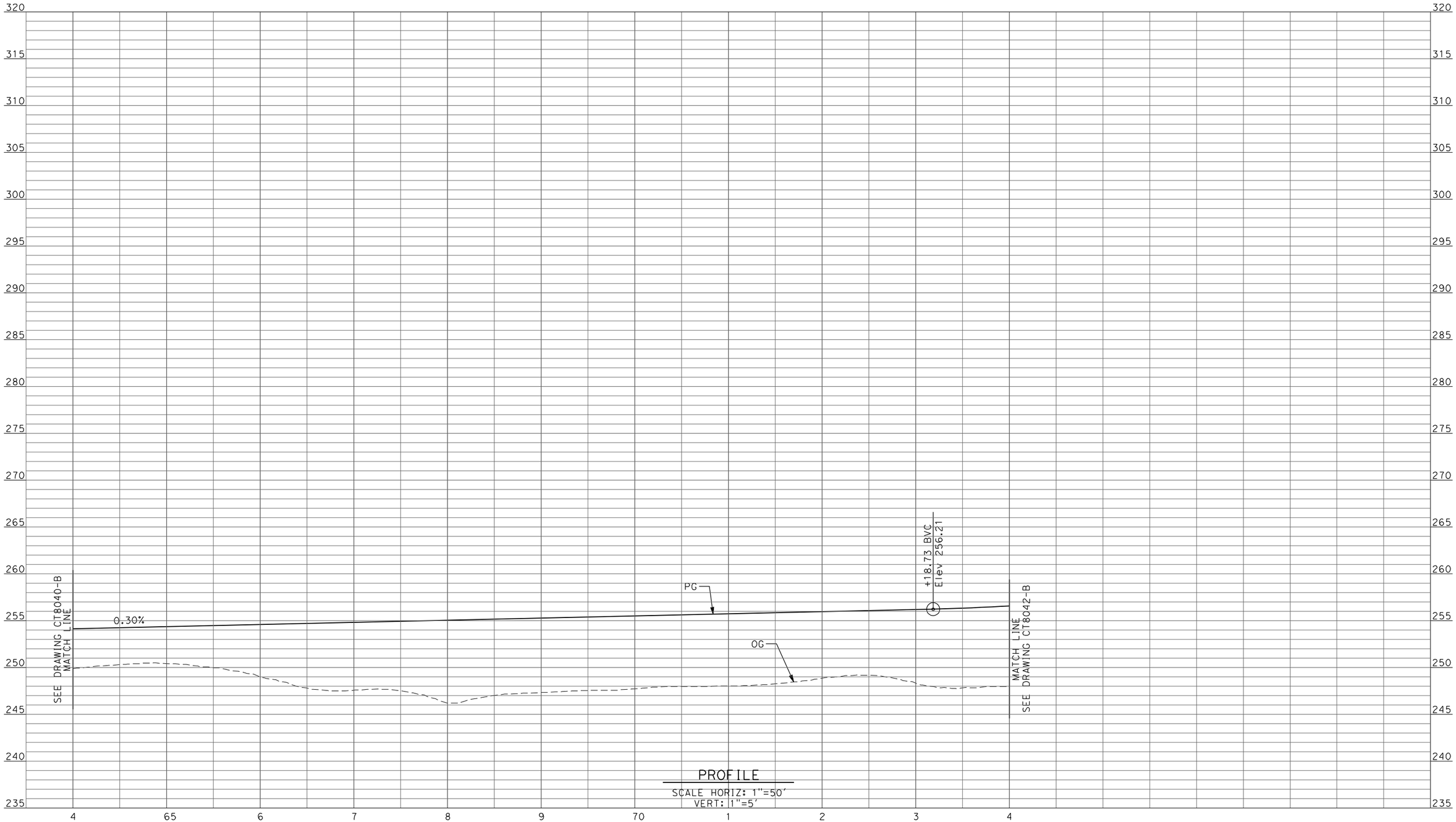

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP
PROFILE
SHEET 6 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8041-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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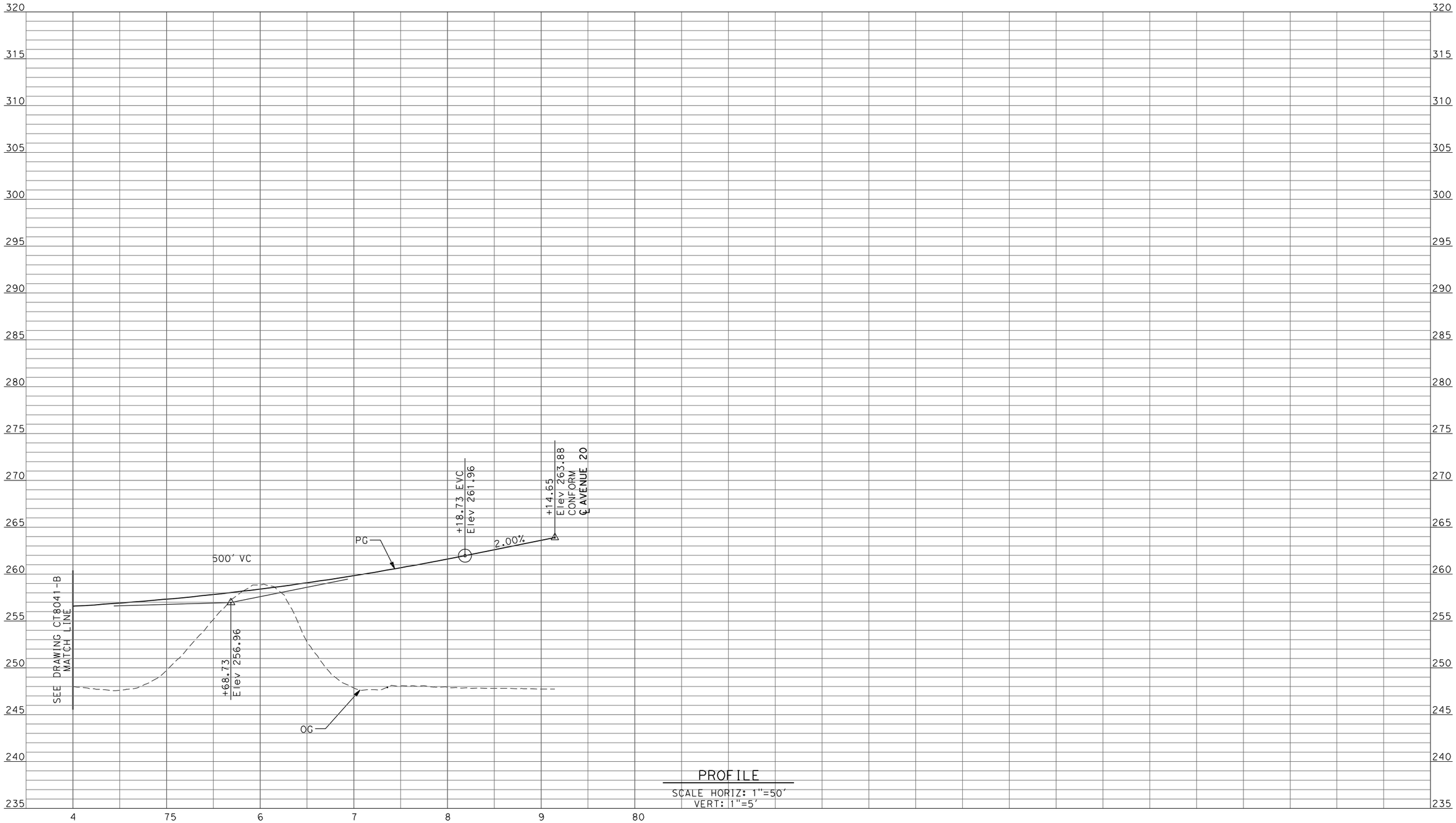

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB ON-RAMP
PROFILE
SHEET 7 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8042-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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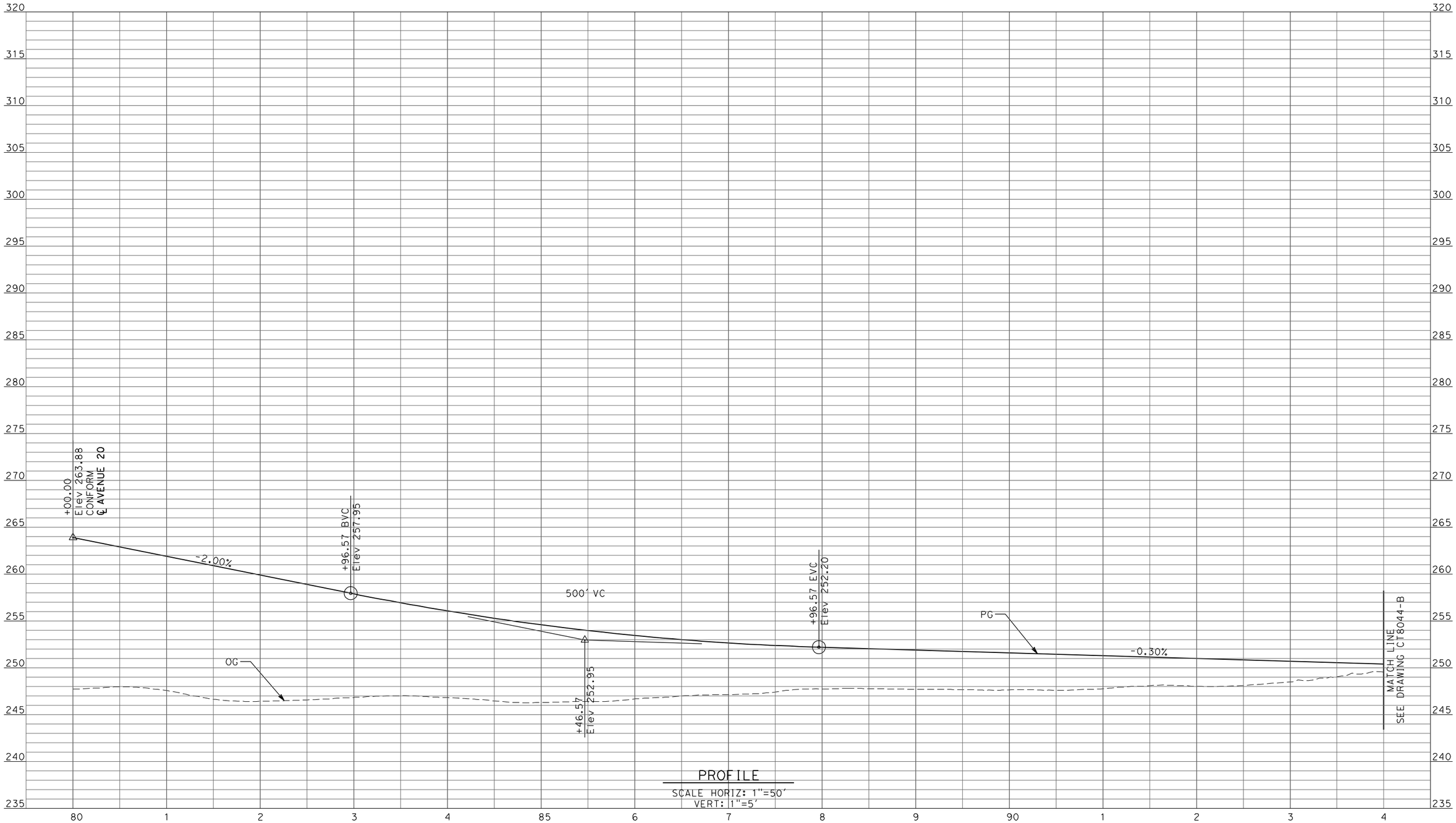

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB OFF-RAMP
PROFILE
SHEET 8 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8043-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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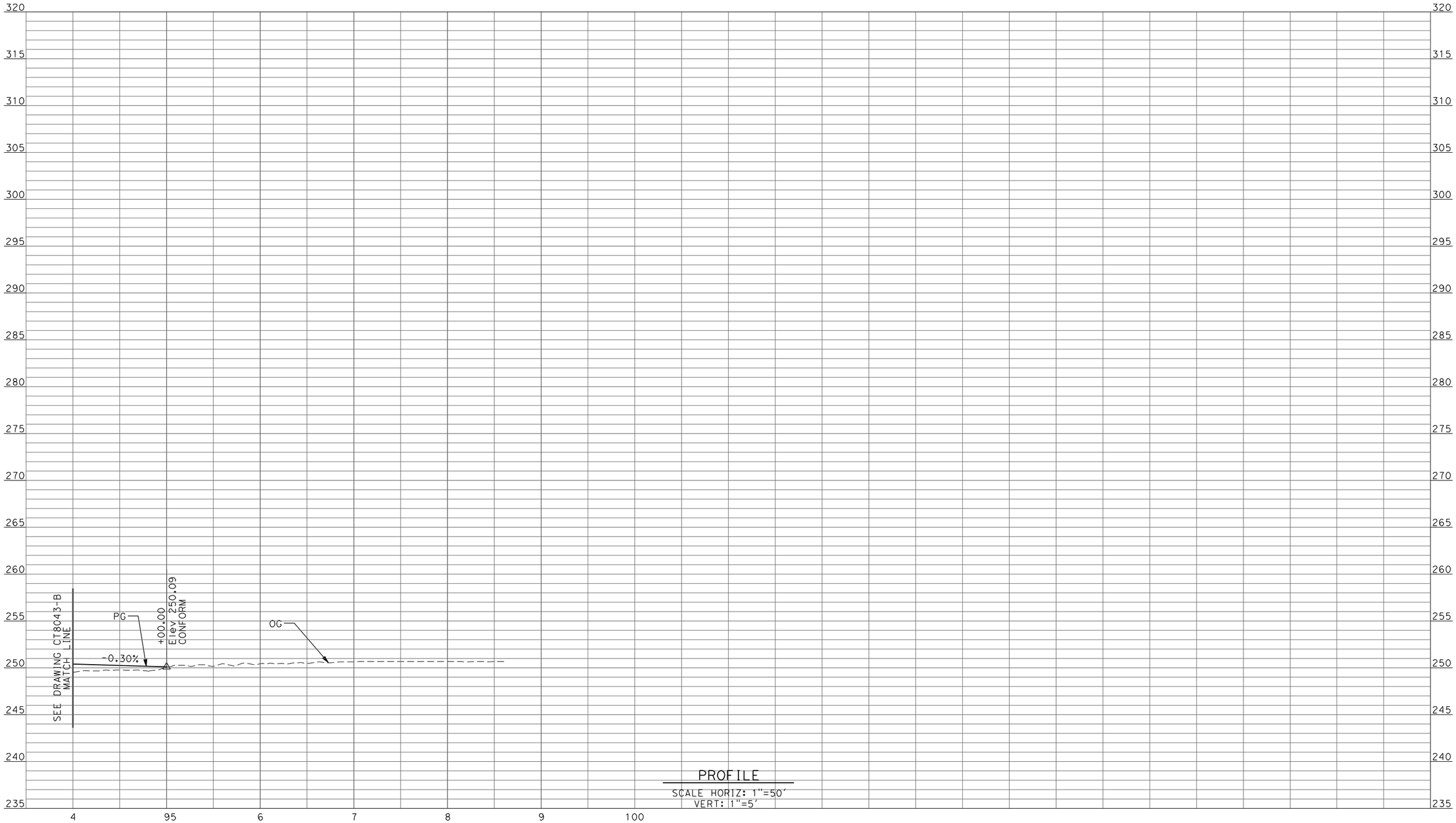

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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MERCED TO FRESNO
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
AVE 20 & 20.5 - IC ALT 1 & 2 SR99 SB OFF-RAMP
PROFILE
SHEET 9 OF 9

CONTRACT NO. HSR06-007
DRAWING NO. CT8044-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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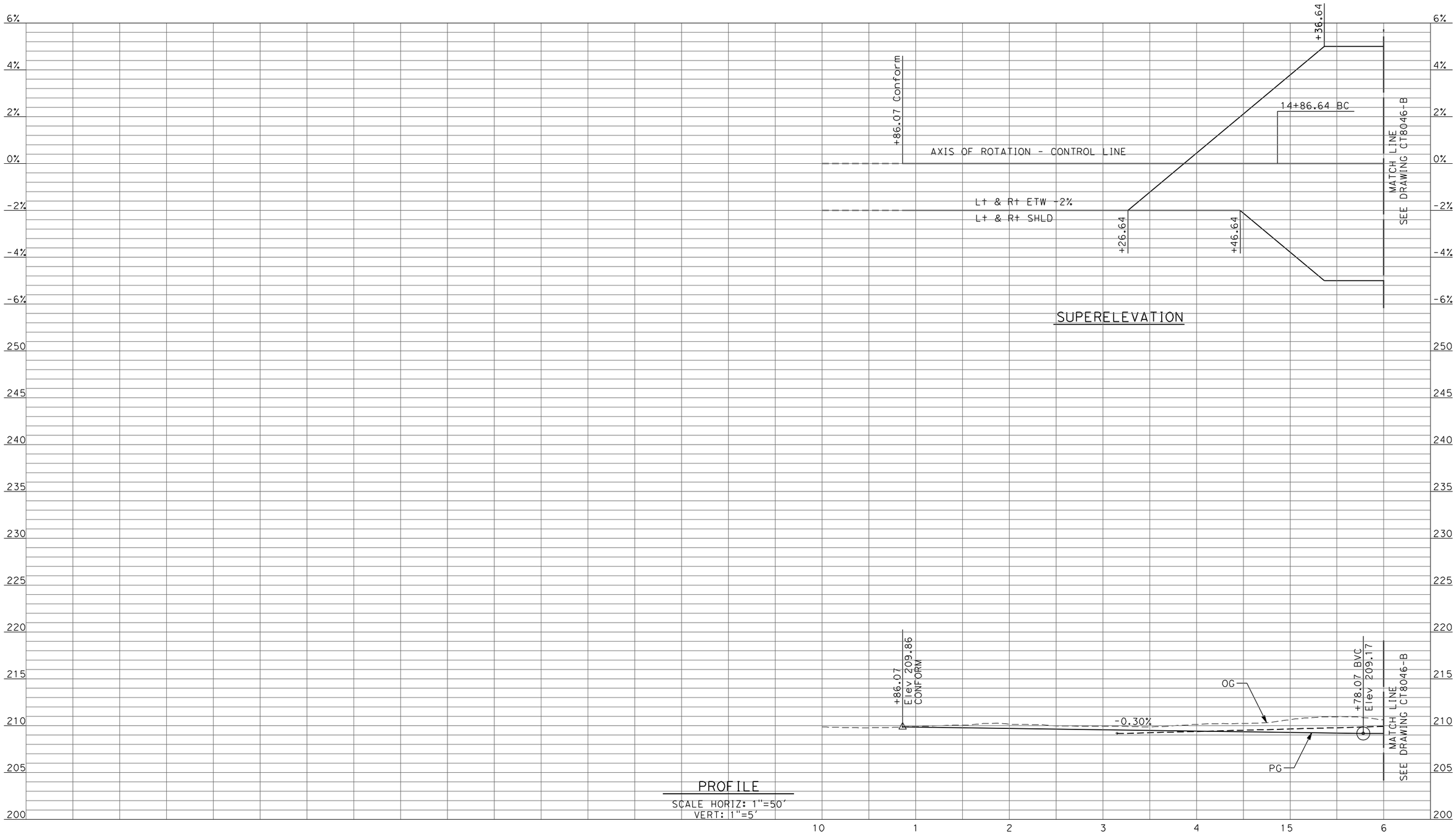

REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8045-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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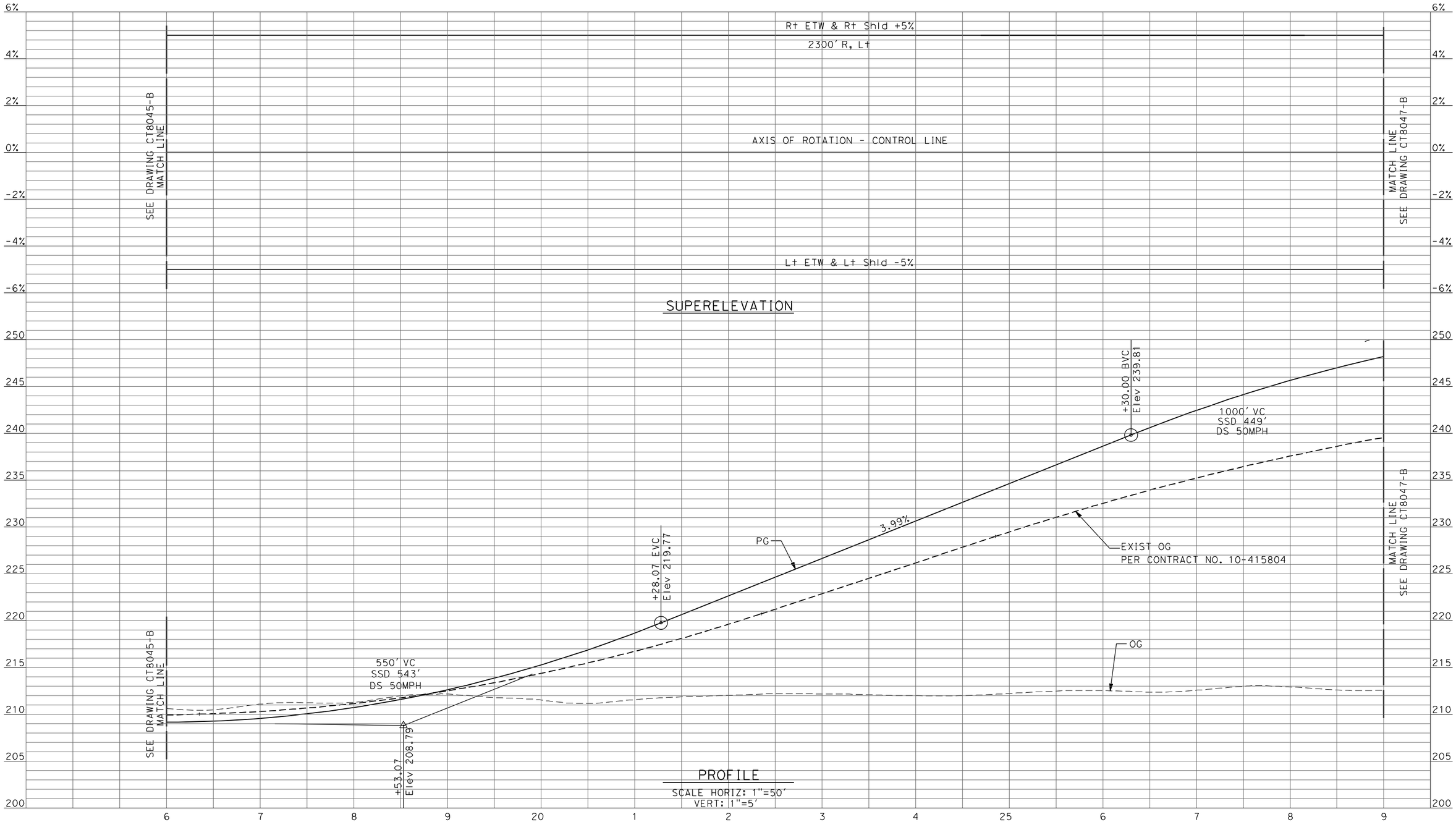

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CHECKED BY A. SILVER
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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8046-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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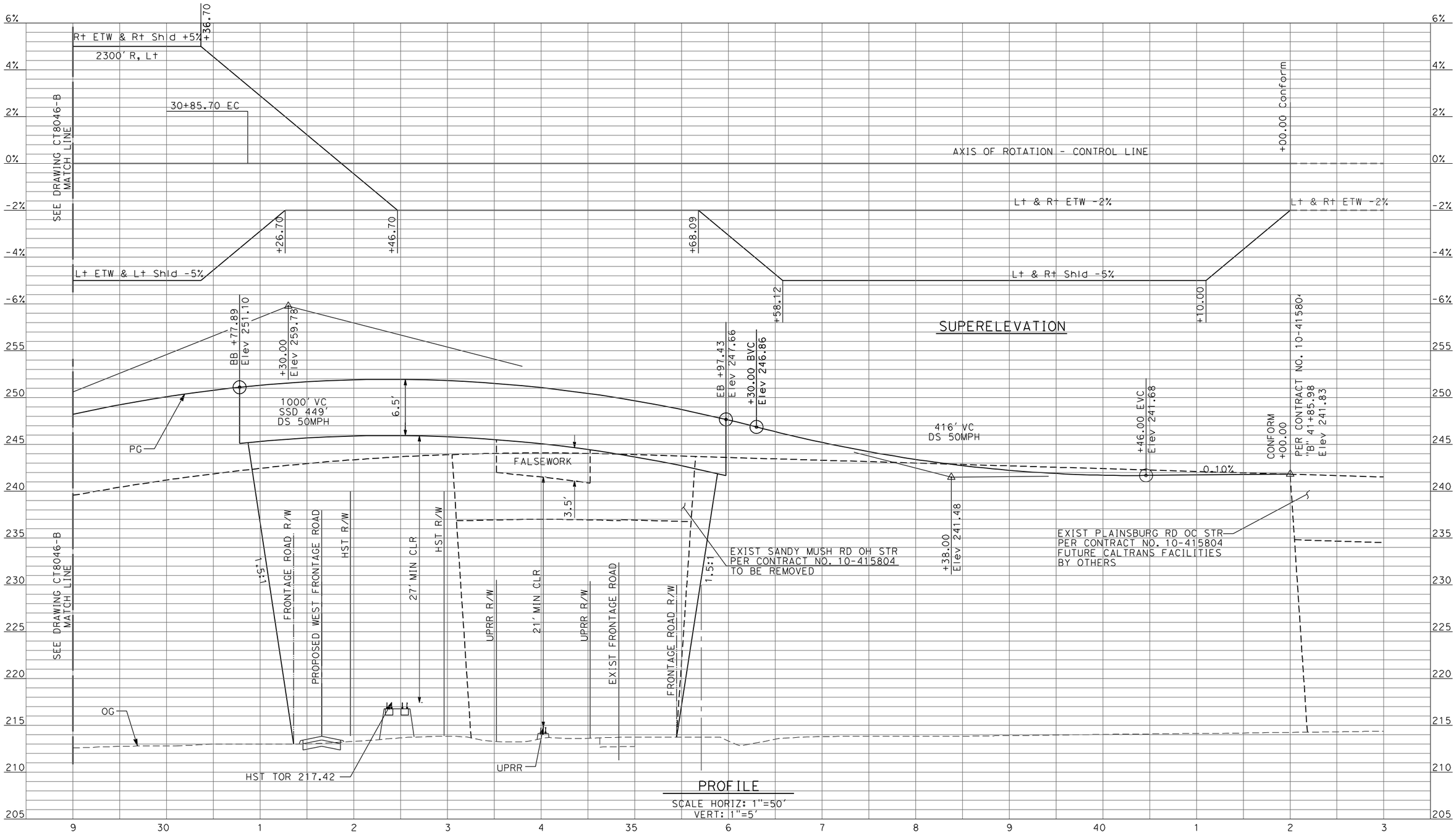

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8047-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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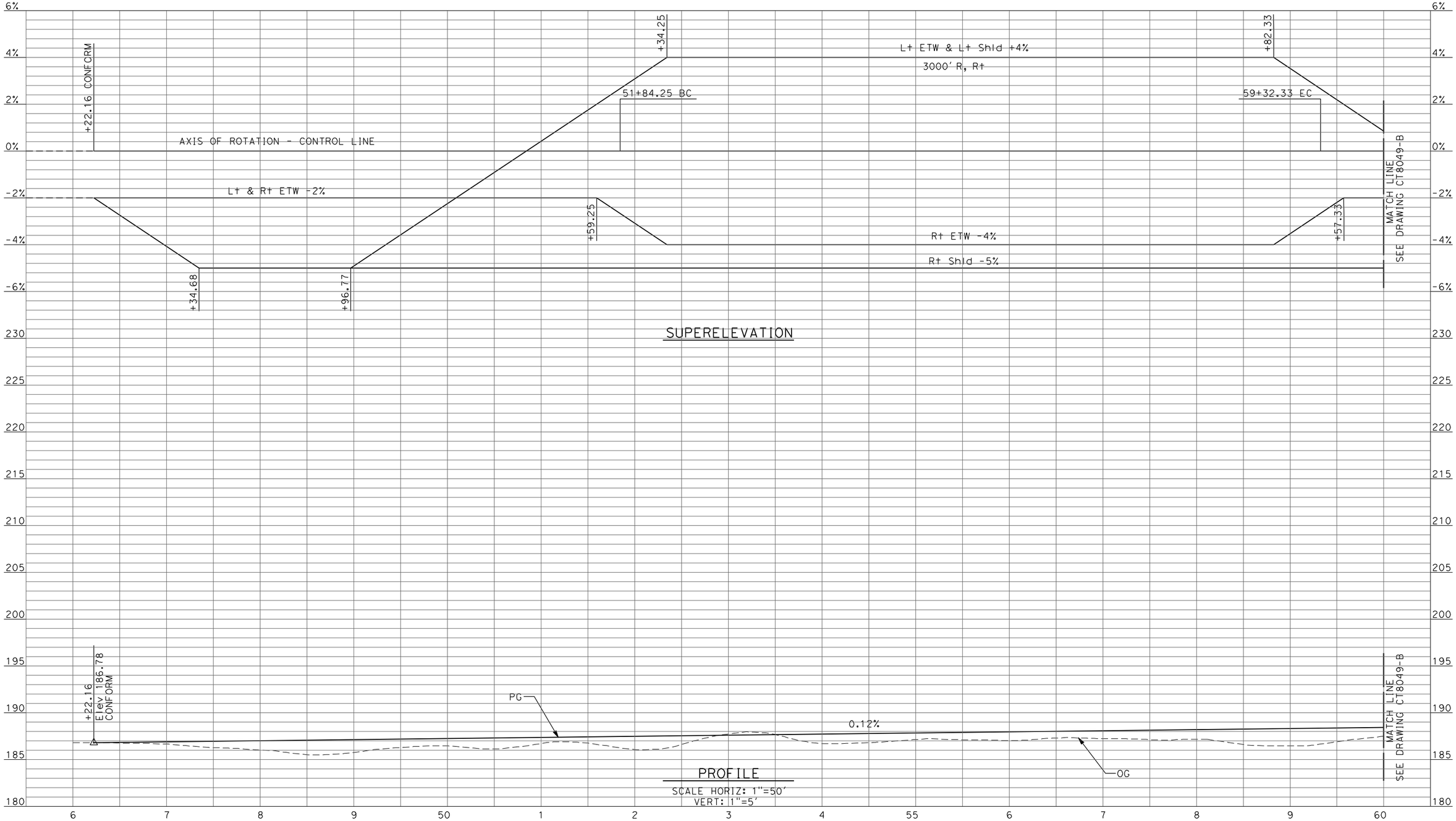

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8048-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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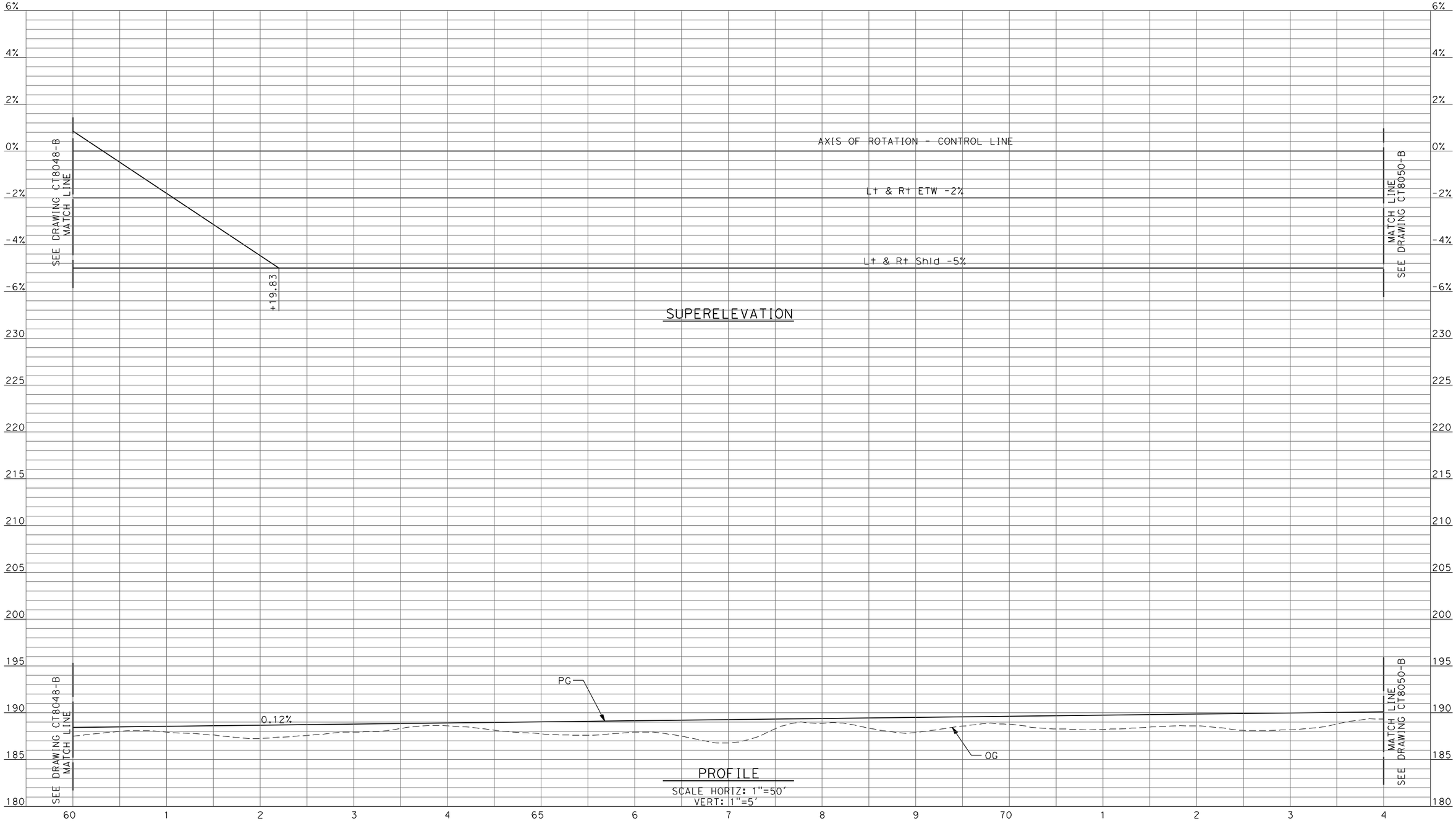

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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DATE 04/29/2011

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8049-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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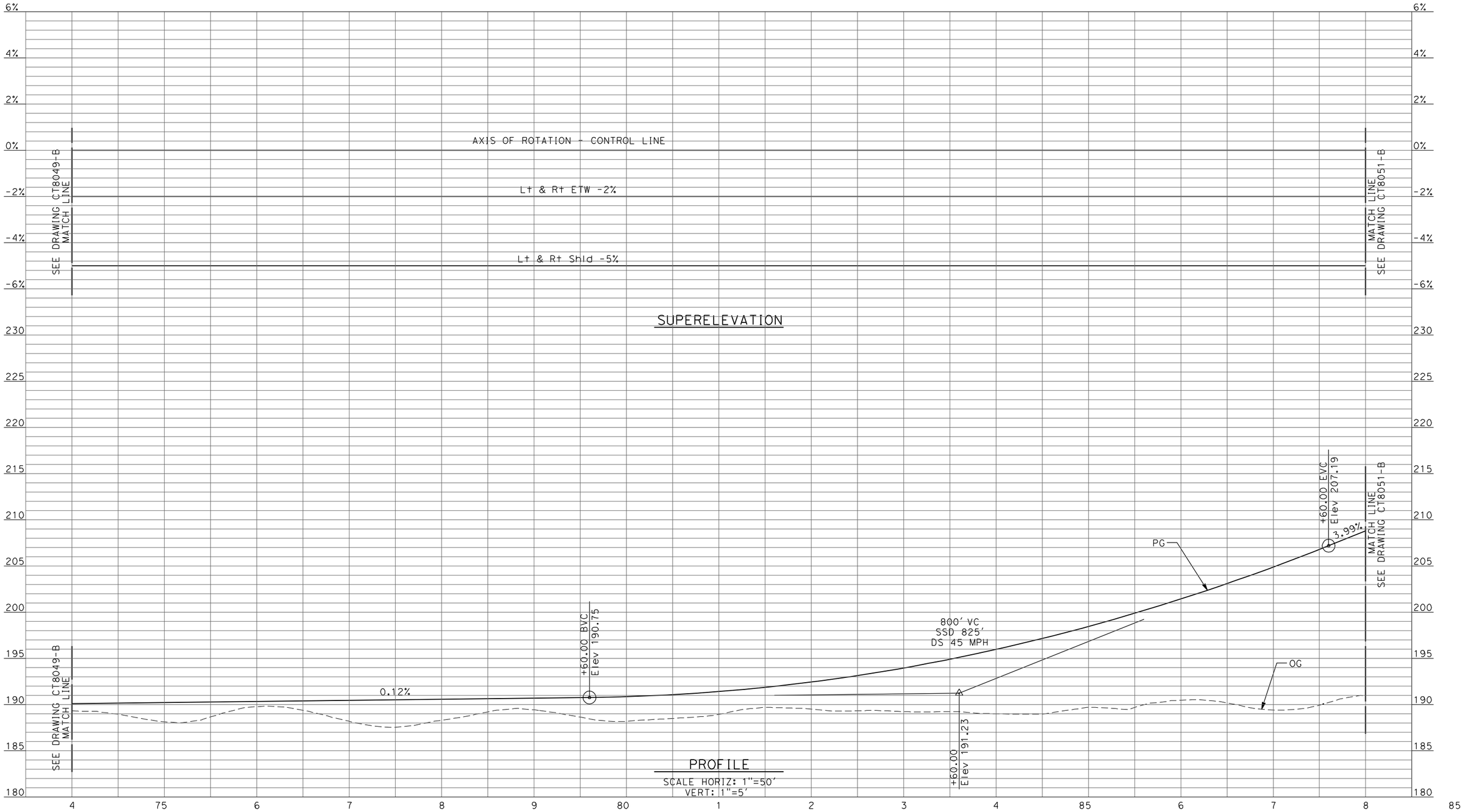

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8050-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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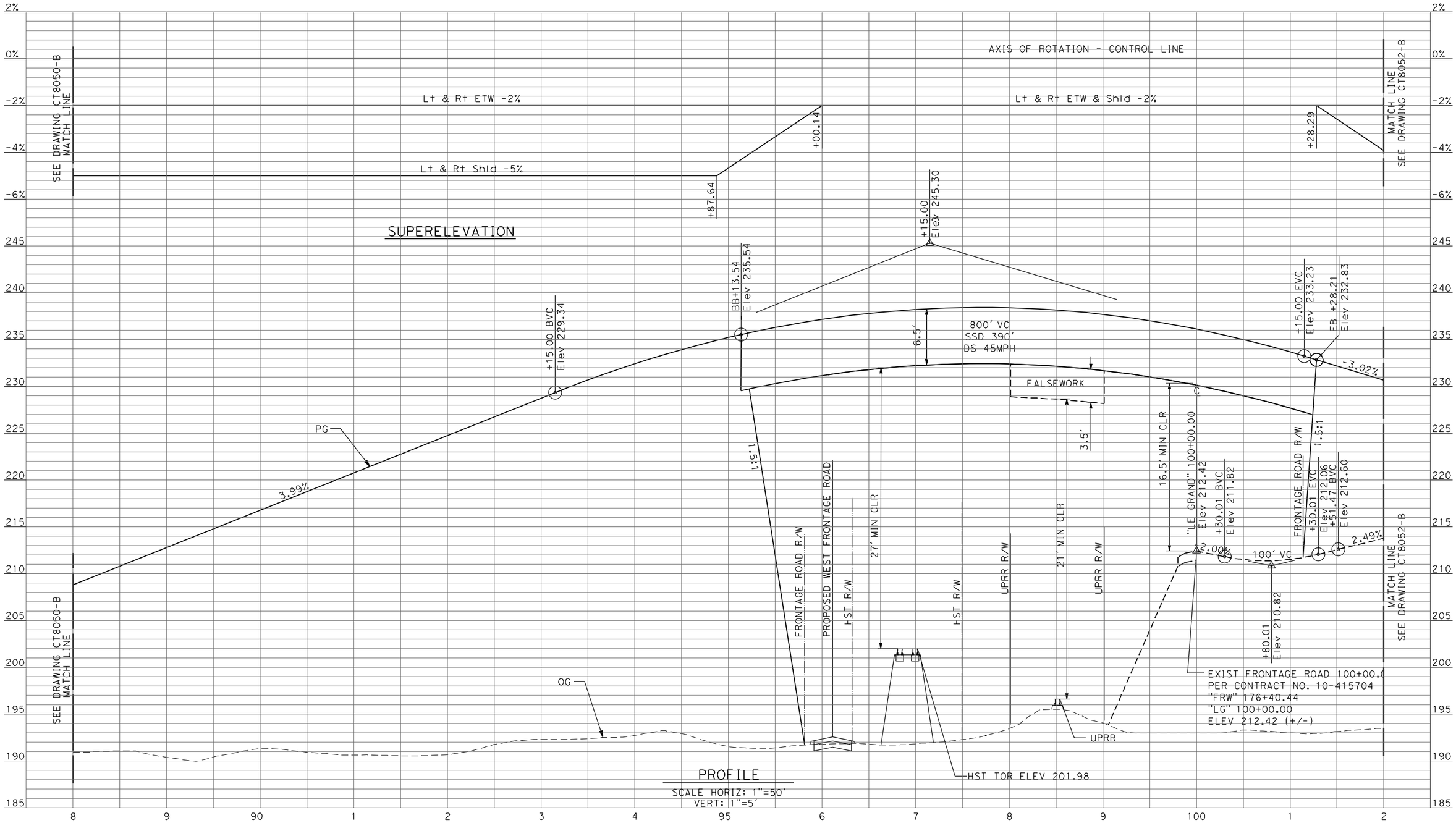

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8051-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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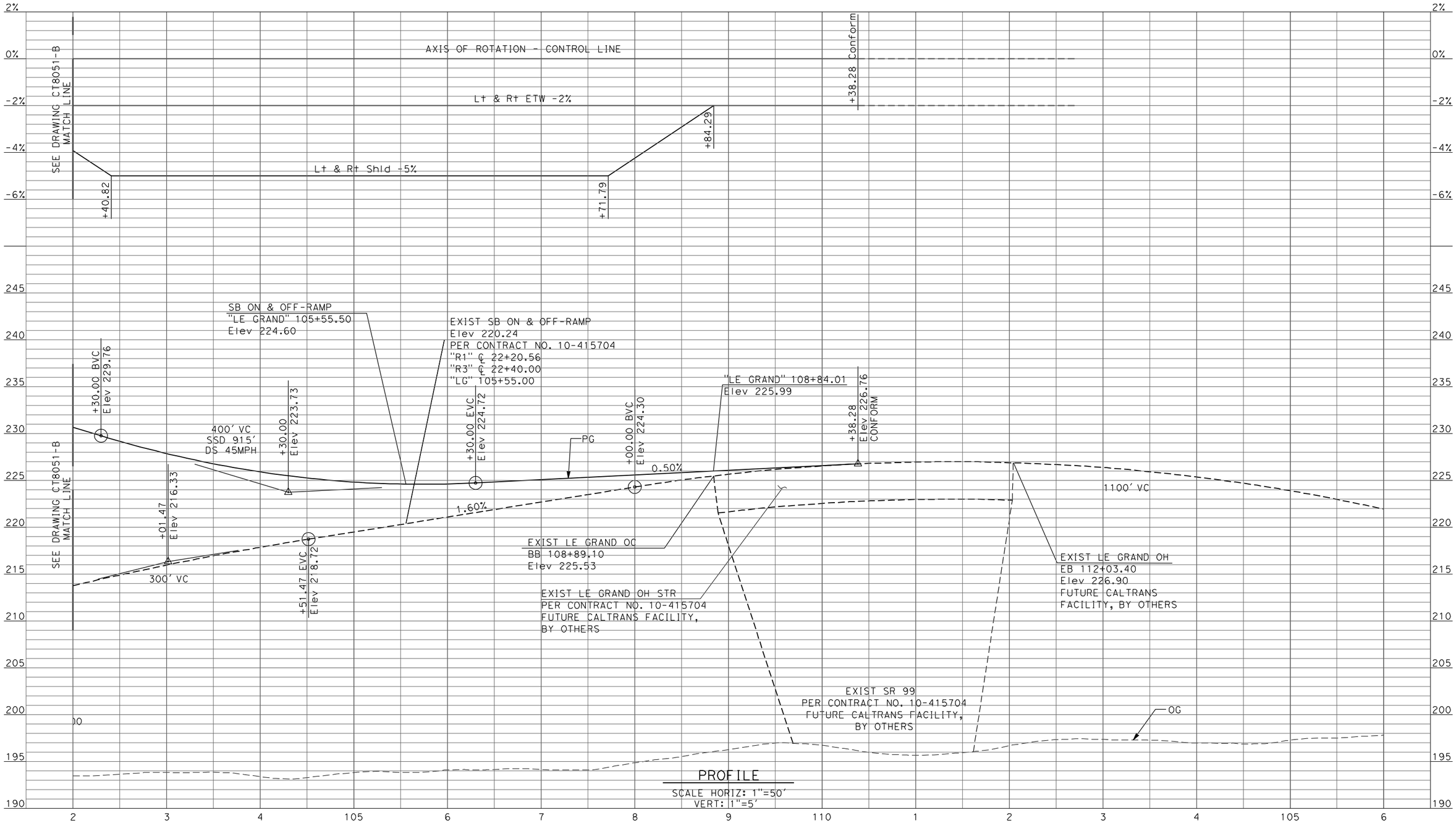

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8052-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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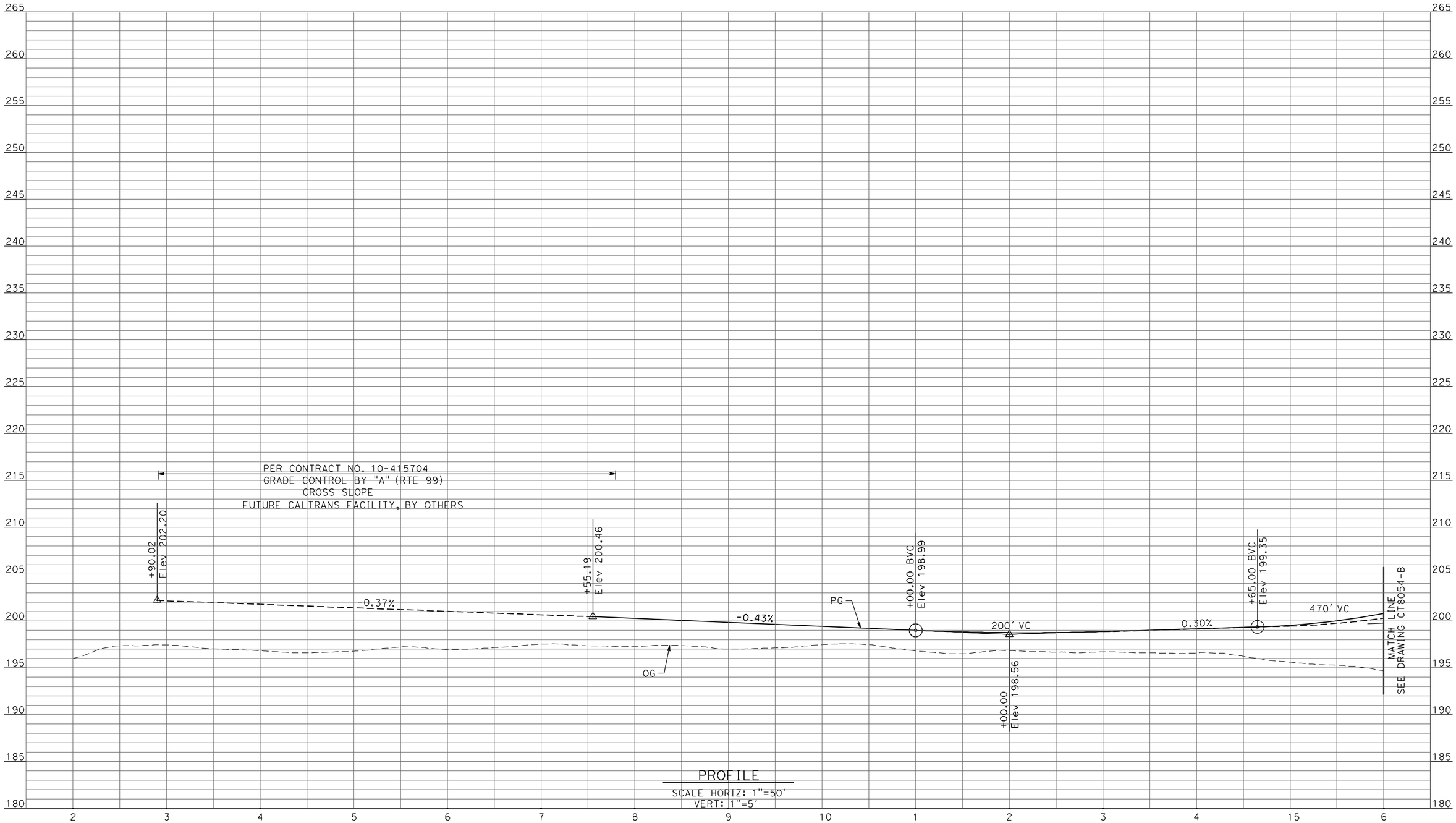

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8053-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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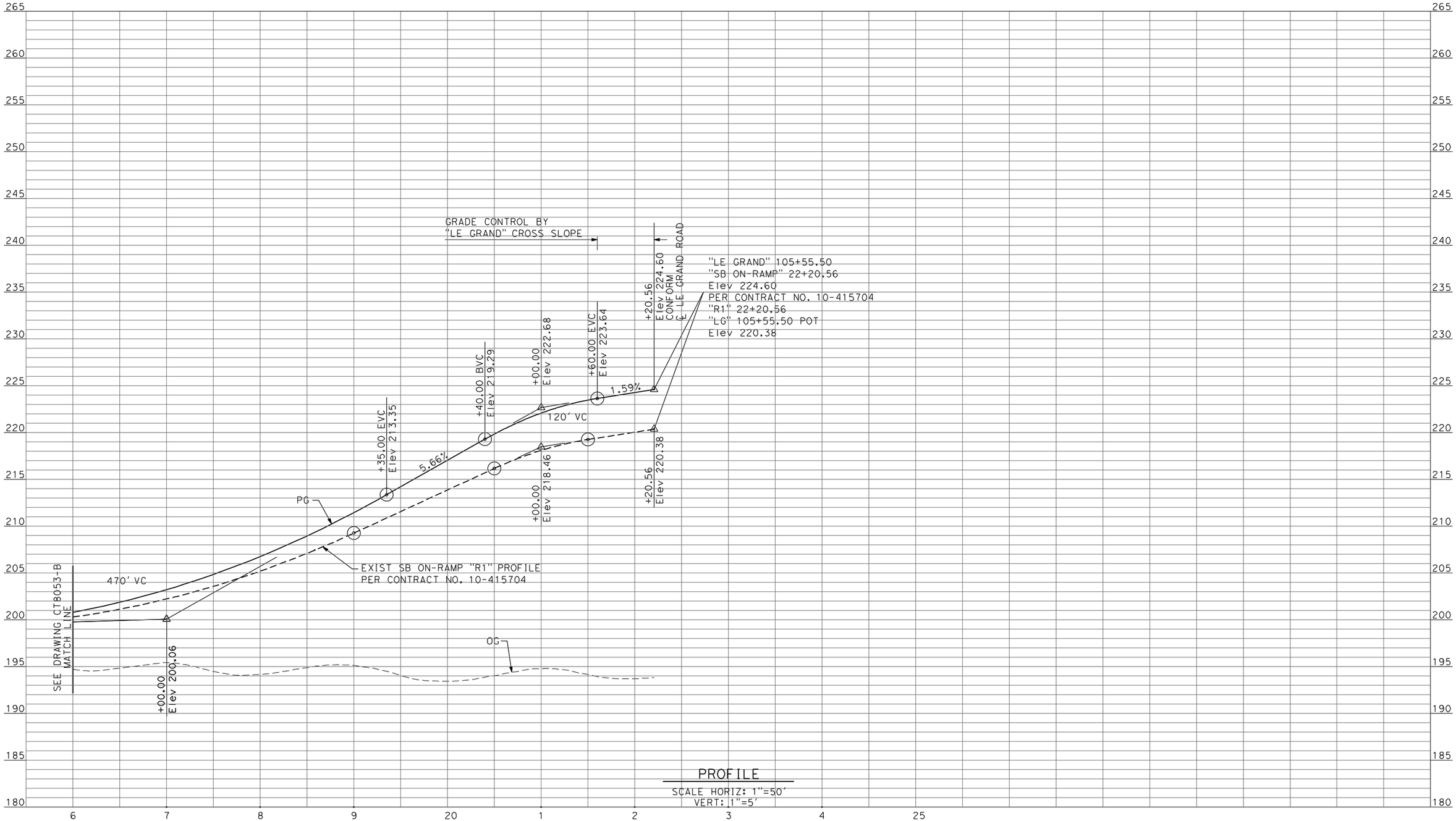

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8054-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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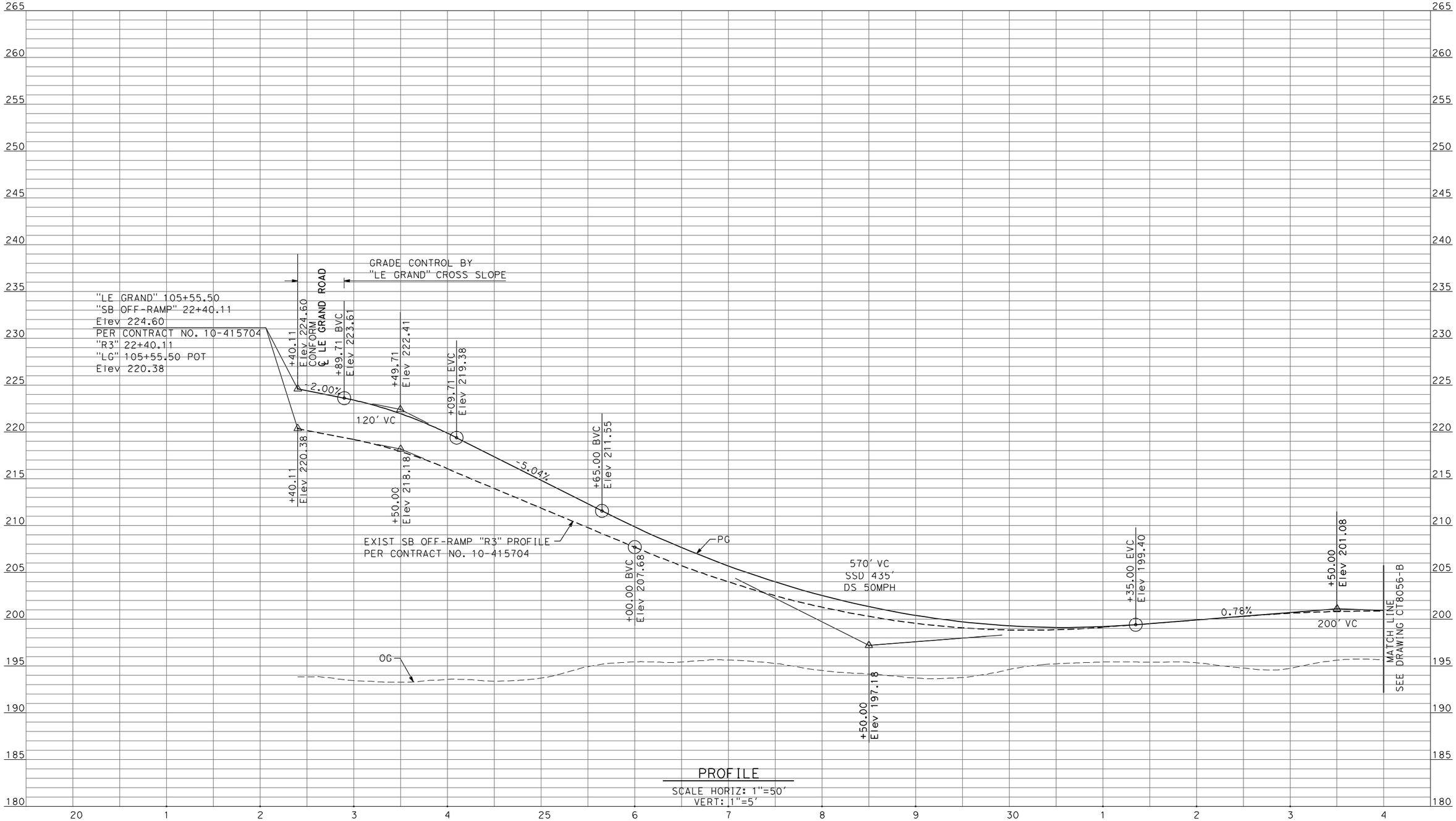

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8055-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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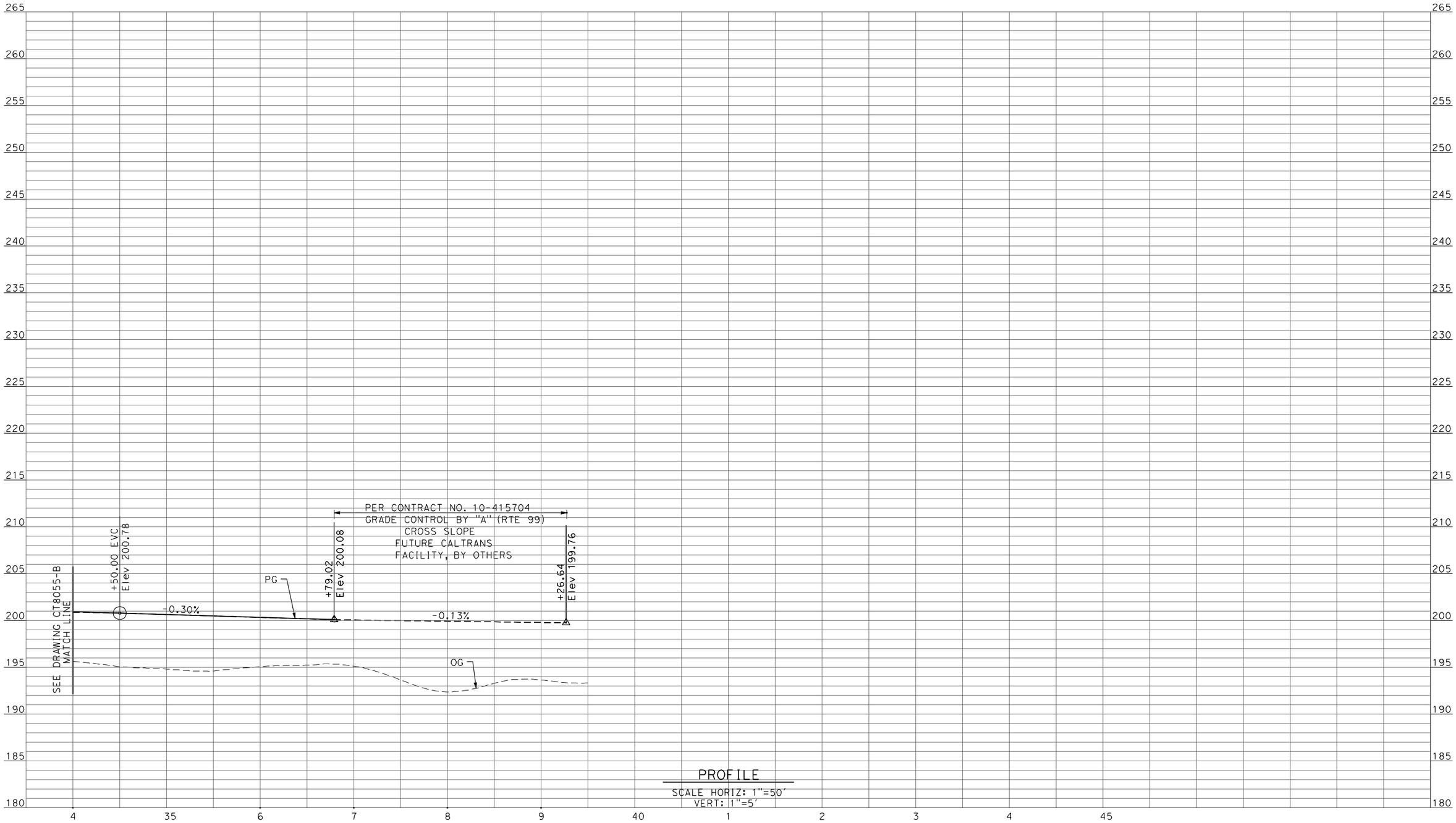

PROFILE

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VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8056-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
ROADWAY BRIDGE STRUCTURE PLANS UPRR/SR 99 AVENUE 21 ALTERNATIVE					
GENERAL					
	SB1111	UPRR/SR 99 ALTERNATIVE	AVENUE 21	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1112	UPRR/SR 99 ALTERNATIVE	AVENUE 21	STRUCTURE INDEX MAP	SHEET 1 OF 1
OVERHEAD BRIDGES					
	ST1107	UPRR/SR 99 MAIN LINE	AVENUE 21	AVENUE 8 OVERHEAD - REPLACEMENT	PLANNING STUDY
	ST1108	UPRR/SR 99 MAIN LINE	AVENUE 21	AVENUE 9 OVERHEAD - REPLACEMENT	PLANNING STUDY - BRIDGE AT UPPR
	ST1109	UPRR/SR 99 MAIN LINE	AVENUE 21	AVENUE 9 OVERCROSSING - REPLACEMENT	PLANNING STUDY - BRIDGE AT SR 99
	ST1110	UPRR/SR 99 MAIN LINE	AVENUE 21	AVENUE 11 OVERHEAD - REPLACEMENT	PLANNING STUDY
	ST1111	UPRR/SR 99 MAIN LINE/MERCED CONNECTION	AVENUE 21	AVENUE 20½ OVERHEAD - REPLACEMENT	PLANNING STUDY - BRIDGE AT UPPR
	ST1112	UPRR/SR 99 MAIN LINE/MERCED CONNECTION	AVENUE 21	AVENUE 20½ OVERCROSSING - REPLACEMENT	PLANNING STUDY - BRIDGE AT SR 99
	ST1113	UPRR/SR 99 MERCED CONNECTION	AVENUE 21	SANDY MUSH ROAD OVERHEAD	PLANNING STUDY
	ST1114	UPRR/SR 99 MERCED CONNECTION	AVENUE 21	LE GRAND ROAD OVERHEAD	PLANNING STUDY
	ST1181	UPRR/SR 99 MERCED CONNECTION	AVENUE 21	SR 99 SOUTHBOUND OVERHEAD	PLANNING STUDY

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. RENTERIA
CHECKED BY B. DOLAN
IN CHARGE A. BOONE
DATE 04/29/2011

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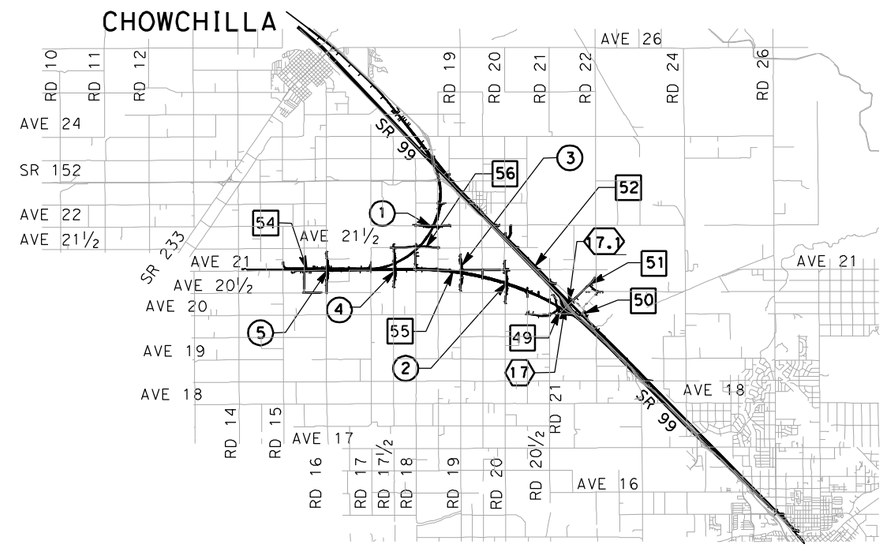
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

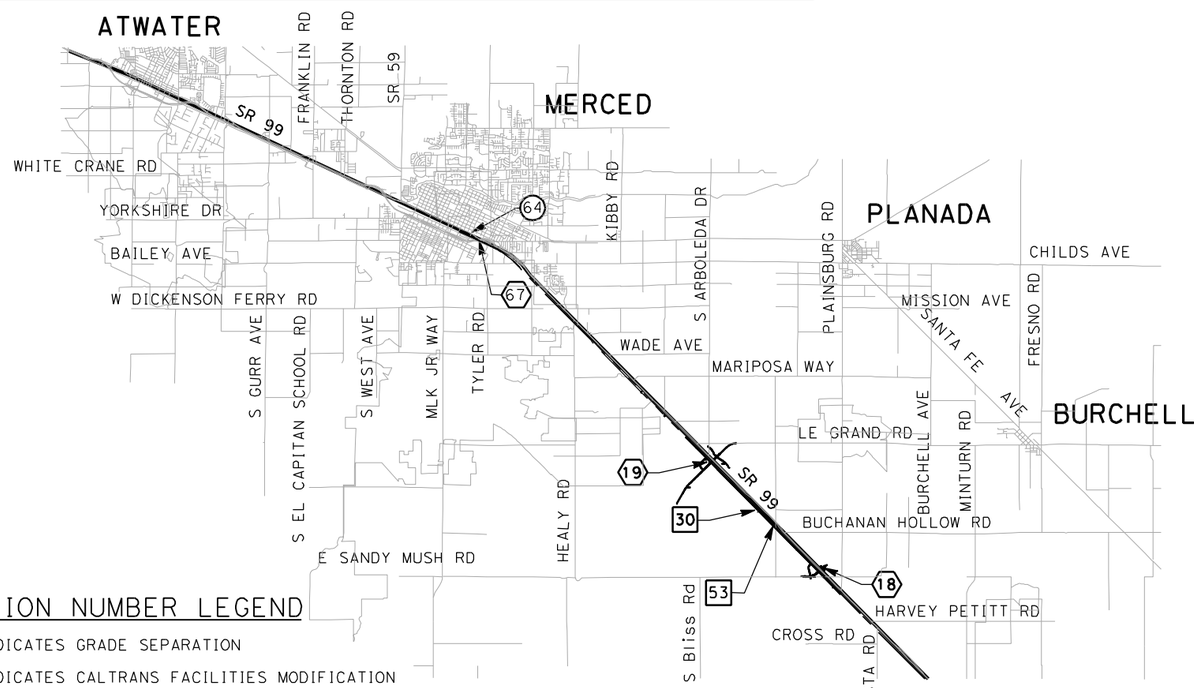
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALTERNATIVE
AVENUE 21
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1111
SCALE No scale
SHEET NO. OF

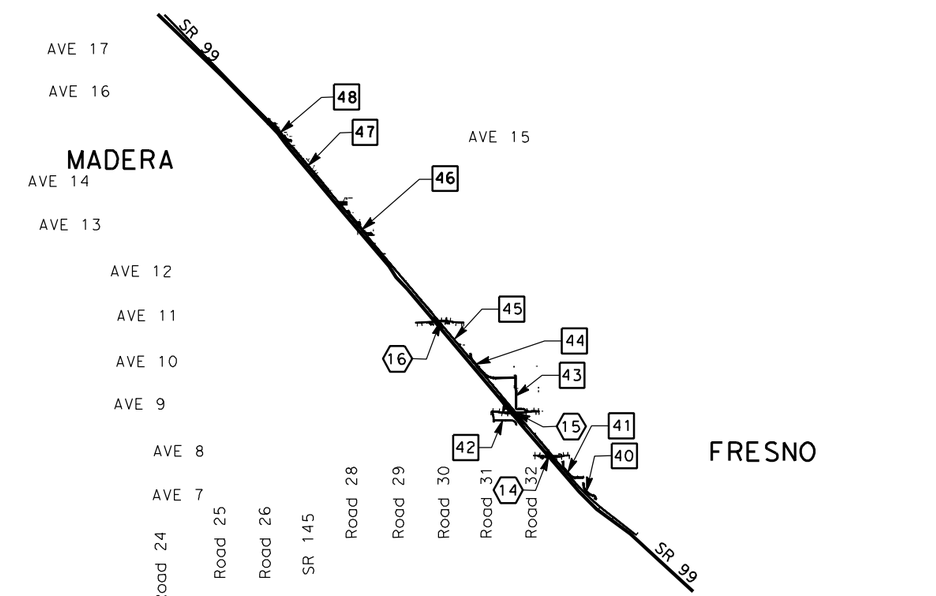
LOCATION NO.	SHEET TITLE	STRUCTURE DRAWING NO.	ROADWAY DRAWING NO.
1	AVENUE 22 OVERHEAD	-	-
2	ROAD 20 OVERHEAD	-	-
3	ROAD 19 OVERHEAD	-	-
4	ROAD 17½ OVERHEAD	-	-
5	ROAD 16 OVERHEAD	-	-
64	G STREET OVERHEAD	-	-
14	AVENUE 8 OVERHEAD - REPLACEMENT	ST1107	CT7000-B - CT7002-B
15	AVENUE 9 - INTERCHANGE	ST1108 & ST1109	CT7003-B - CT7009-B
16	AVENUE 11 OVERHEAD - REPLACEMENT	ST1110	CT7010-B - CT7014-B
17	AVENUE 20½ OVERHEAD - REPLACEMENT	ST1111 & ST1112	CT7015-B - CT7022-B CT7031-B - CT7033-B
7.	AVENUE 20½ OVERHEAD - REPLACEMENT	ST1111 & ST1112	CT7023-B - CT7030-B
18	SANDY MUSH RD OVERHEAD	ST1113	CT7034-B - CT7036-B
19	LE GRAND RD OVERHEAD	ST1114	CT7037-B - CT7043-B
67	SR 99 SOUTHBOUND OVERHEAD	ST1181	-
40	ROAD 33	-	-
41	PROPOSED ROAD	-	-
42	ROAD 31 & GOLDEN STATE BLVD AT AVENUE 9	-	-
43	ROAD 30½	-	-



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

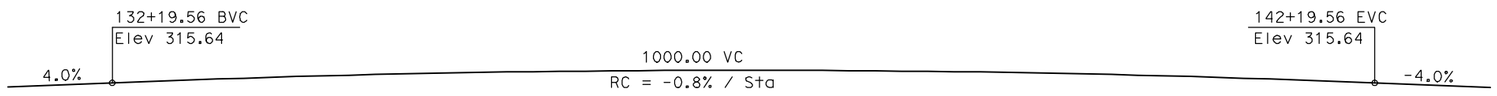
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALTERNATIVE
AVENUE 21
STRUCTURE INDEX MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1112
SCALE No scale
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\MF-SB-1112.dgn 5/1/2011 7:43:21 PM cisnerose



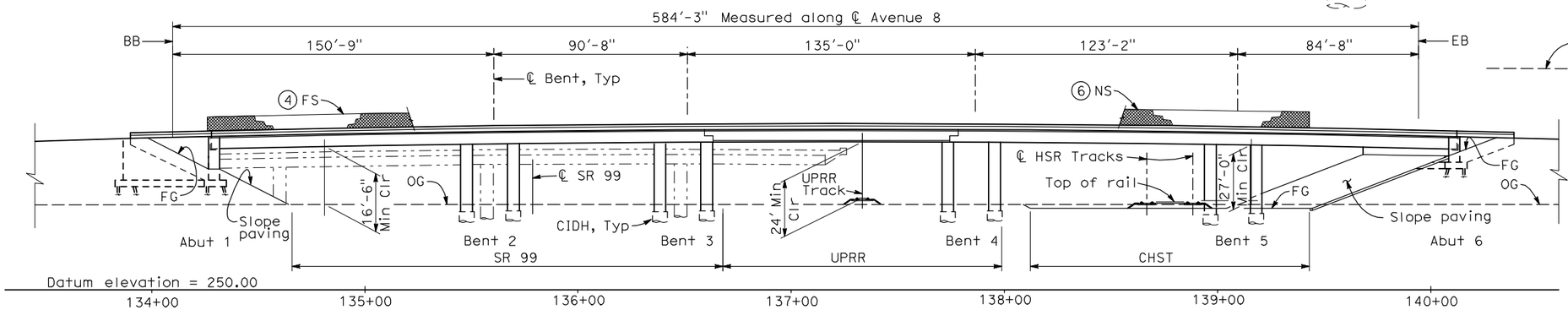
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	584'-3"
WIDTH	=	47'-6"
AREA	=	27,750 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

PROFILE GRADE
NTS

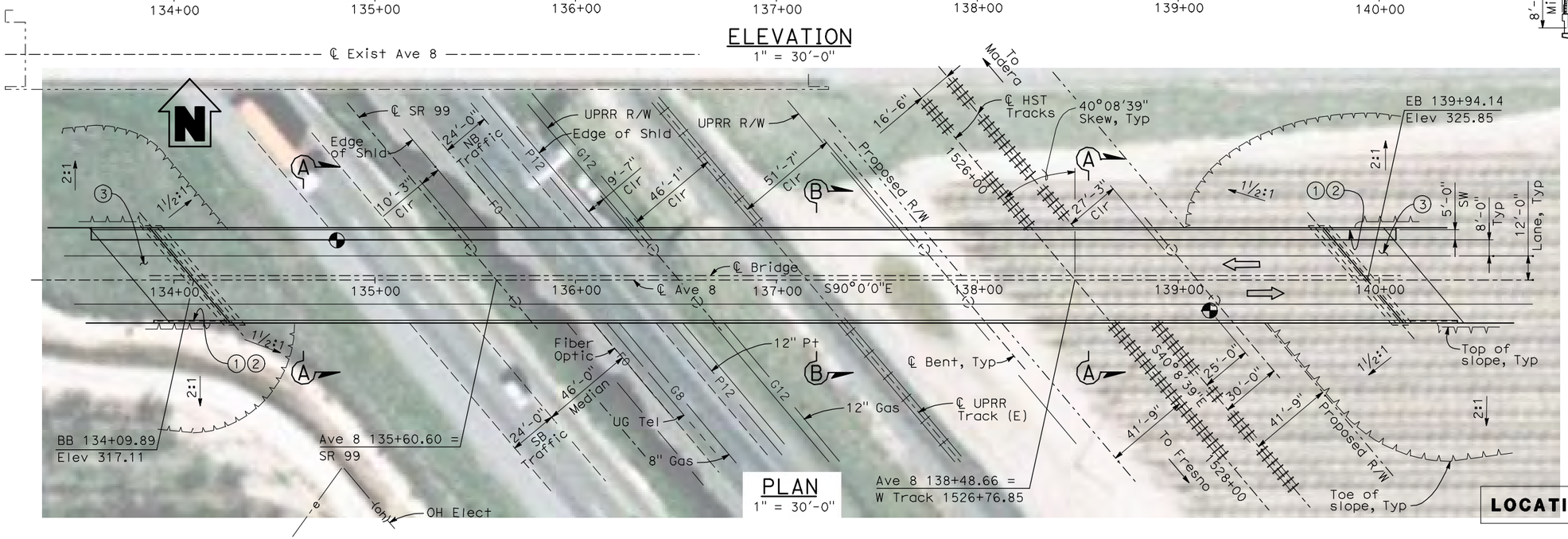
LEGEND:

- Direction of traffic
- Point of minimum vertical clearance

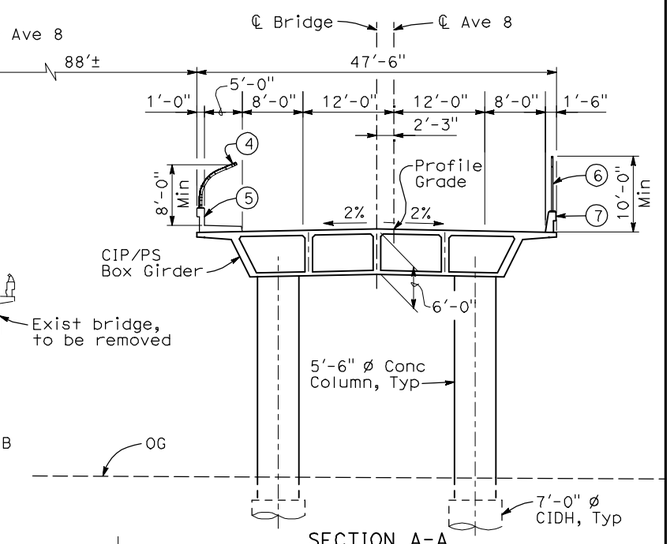
Pt = Petroleum
UG = Underground



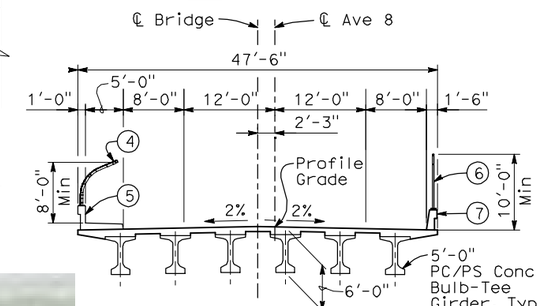
ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



SECTION A-A



SECTION B-B

TYPICAL SECTIONS
1" = 10'-0"

NOTES:

1. Paint "Bridge No. 41-60"
2. Paint "Avenue 8 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 8, SR 99 and UPRR track to be verified.
9. Existing underground and overhead utilities to be determined.
10. Location and elevation of existing UPRR track to be determined.

LOCATION 14

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

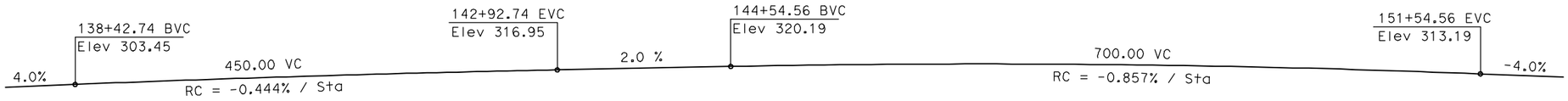
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

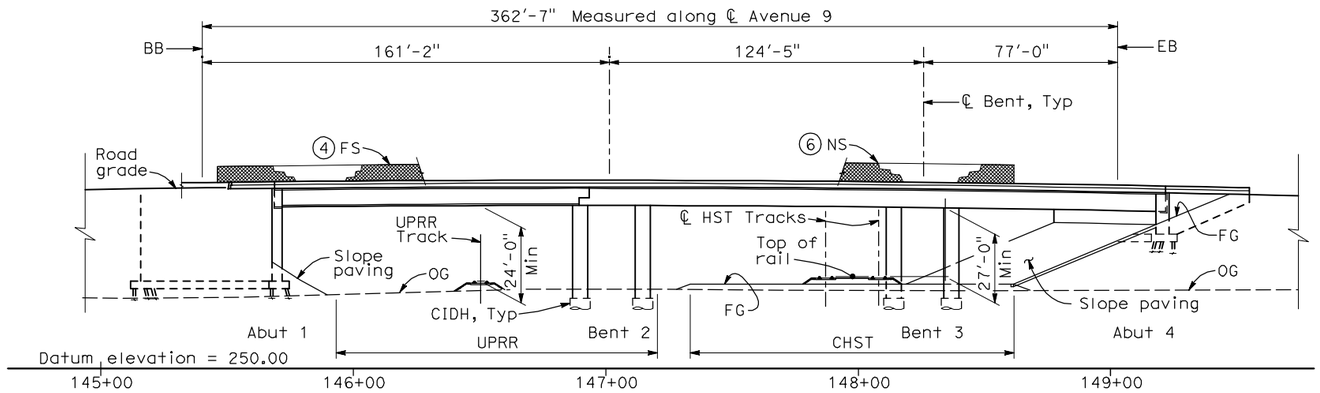
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
AVENUE 8 OVERHEAD - REPLACEMENT
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1107
SCALE As shown
SHEET NO. OF

DolanR 4/30/2011 5:30:33 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 8-Loc14.dgn



PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 7'-6"
LENGTH	= 362'-7"
WIDTH	= 53'-3⅝" Avg
AREA	= 19,400 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

NOTES:

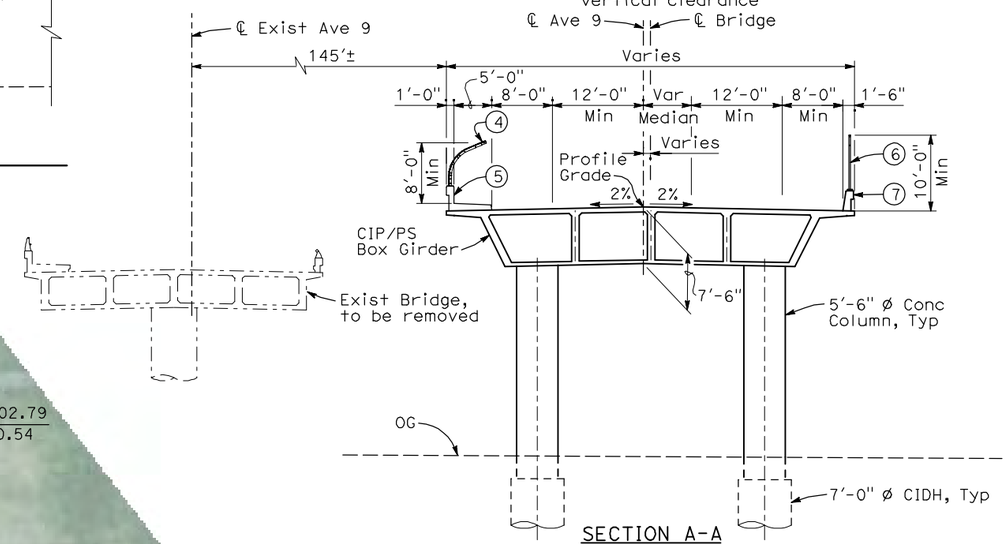
1. Paint "Bridge No. _____"
2. Paint "Avenue 9 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of UPRR track to be verified.
9. Existing underground and overhead utilities to be determined.
10. Location and elevation of existing UPRR track to be determined.

LEGEND/ABBREVIATIONS:

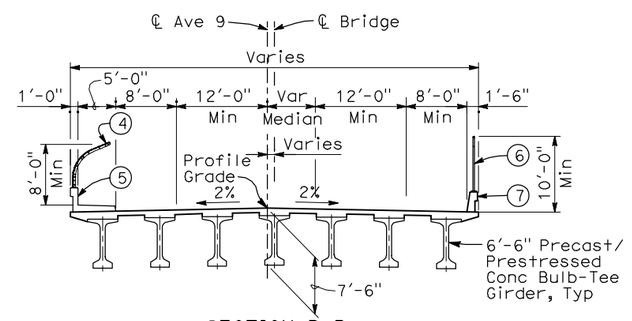
Direction of traffic

Point of minimum vertical clearance

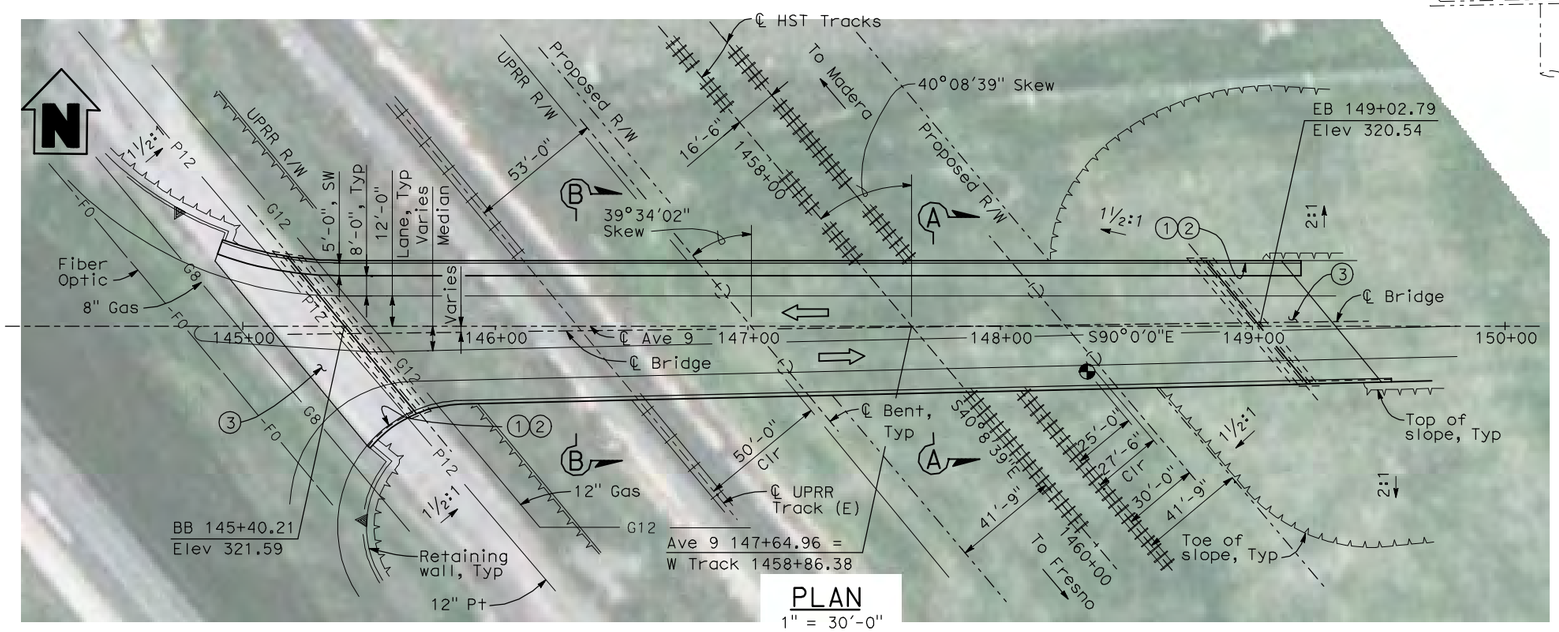
Pt = Petroleum
UG = Underground



SECTION A-A



SECTION B-B



PLAN
1" = 30'-0"

LOCATION 15

TYPICAL SECTIONS
1" = 10'-0"

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

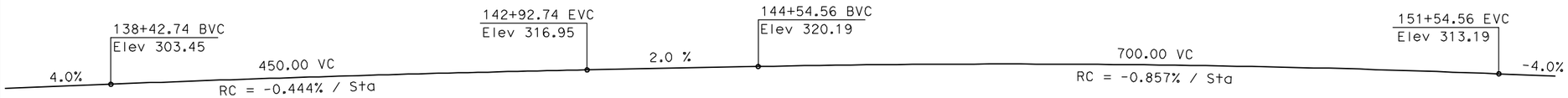
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

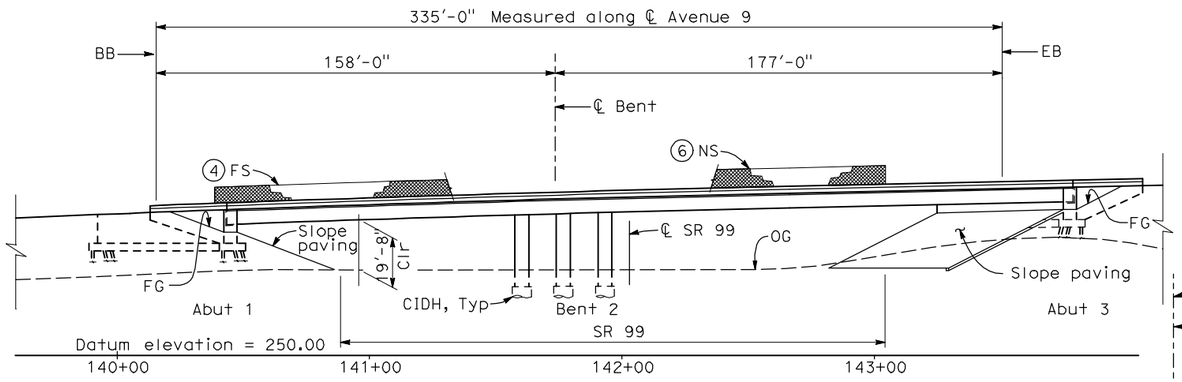
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
AVENUE 9 OVERHEAD - REPLACEMENT
PLANNING STUDY - BRIDGE AT UPRR

CONTRACT NO. HSR06-007
DRAWING NO. ST1108
SCALE As shown
SHEET NO. OF

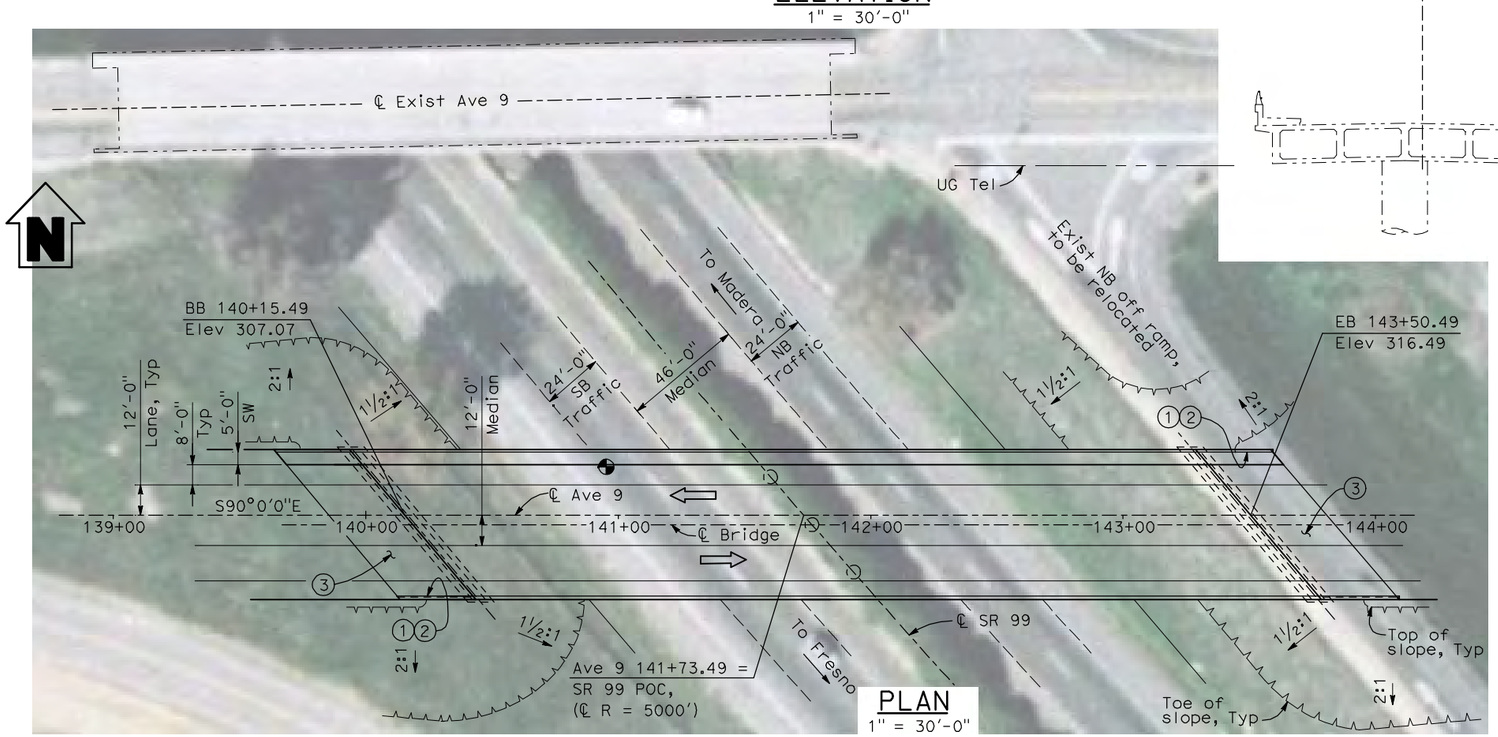
4/30/2011 5:31:12 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\WM-MF-ST-OH_Ave 9@UPRR-Loc15.dgn
DolanR



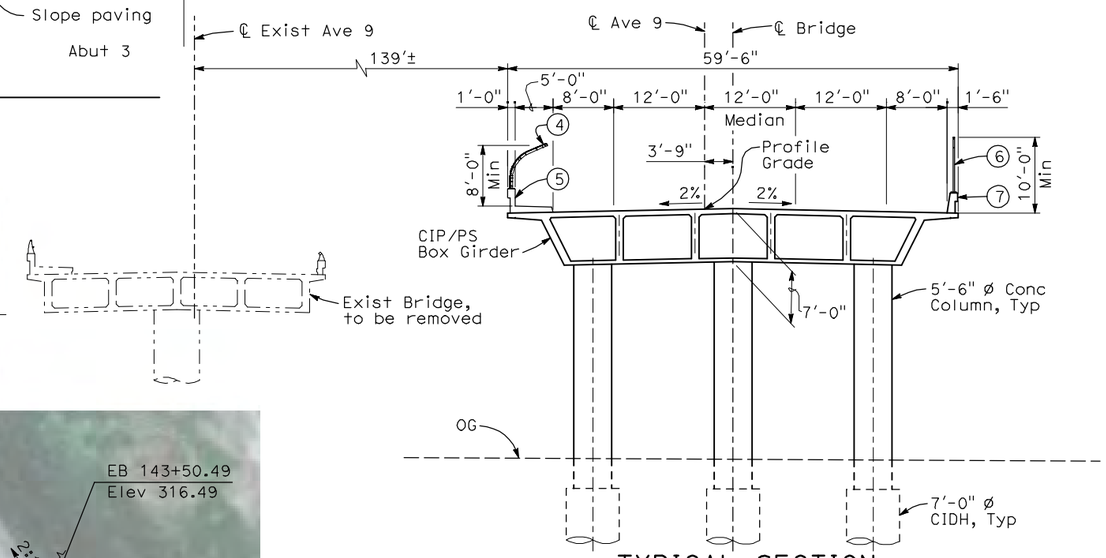
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

1. Paint "Bridge No. _____"
2. Paint "Avenue 9 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Location of SR 99 to be verified.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

UG = Underground

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	7'-0"
LENGTH	=	335'-0"
WIDTH	=	59'-6"
AREA	=	19,950 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 15

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

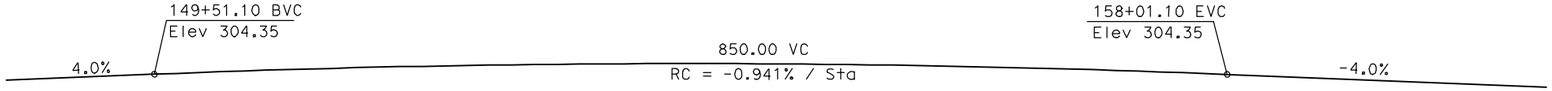
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
AVENUE 9 OVERCROSSING - REPLACEMENT
PLANNING STUDY - BRIDGE AT SR 99

CONTRACT NO. HSR06-007
DRAWING NO. ST1109
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 9@Hwy99-Loc15.dgn 4/30/2011 5:31:45 PM DolanR



PROFILE GRADE
NTS

LEGEND:

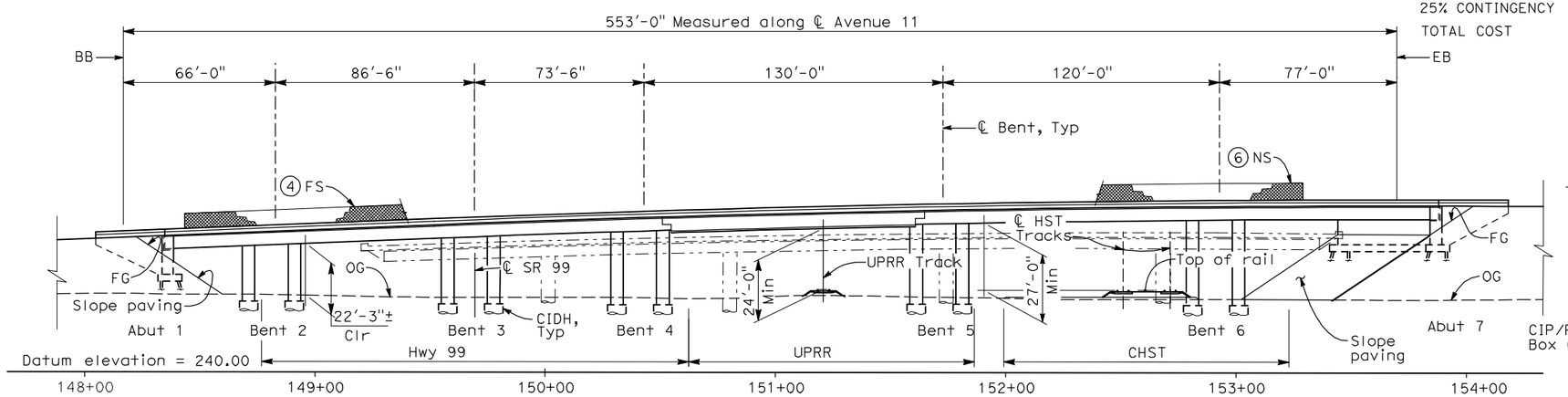
- Direction of traffic
- Point of minimum vertical clearance

Pt = Petroleum
UG = Underground

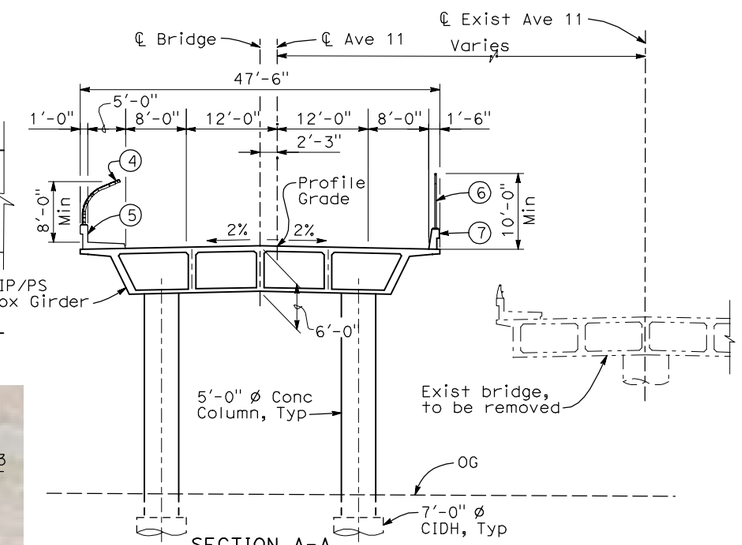
DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 6'-0" and 7'-0"
LENGTH	= 553'-0"
WIDTH	= 47'-6"
AREA	= 26,300 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

NOTES:

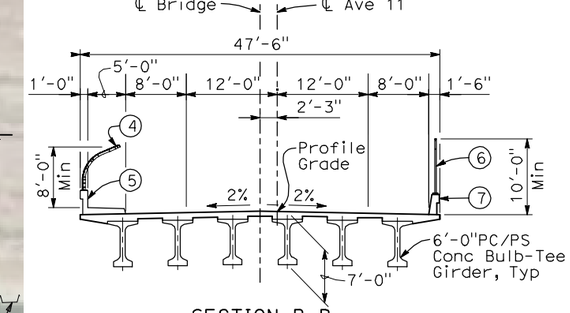
1. Paint "Bridge No. 41-61"
2. Paint "Avenue 11 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.
9. Location, bearing and elevation of existing UPRR track(s) to be determined.
10. Location of existing bridge to be verified.



ELEVATION
1" = 30'-0"

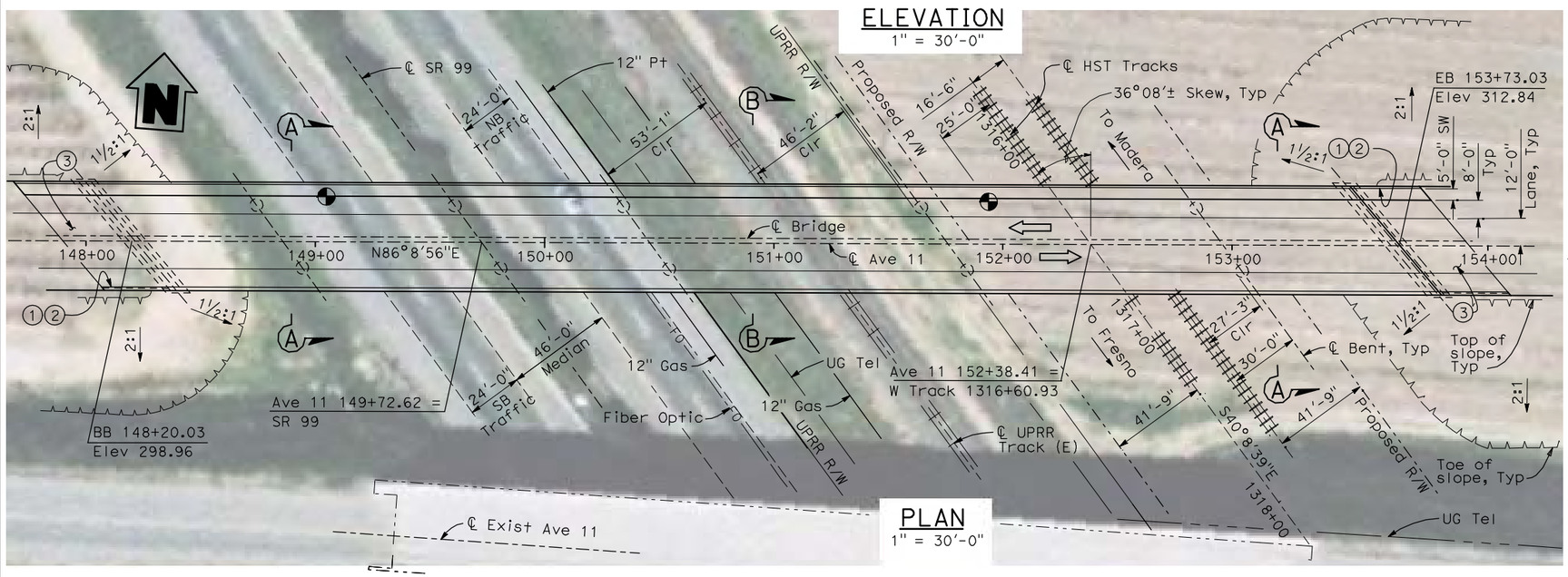


SECTION A-A



SECTION B-B

TYPICAL SECTIONS
1" = 10'-0"



PLAN
1" = 30'-0"

LOCATION 16

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
AVENUE 11 OVERHEAD - REPLACEMENT
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1110
SCALE As shown
SHEET NO. OF

4/30/2011 5:32:33 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 11-Loc 16.dgn
DolanR

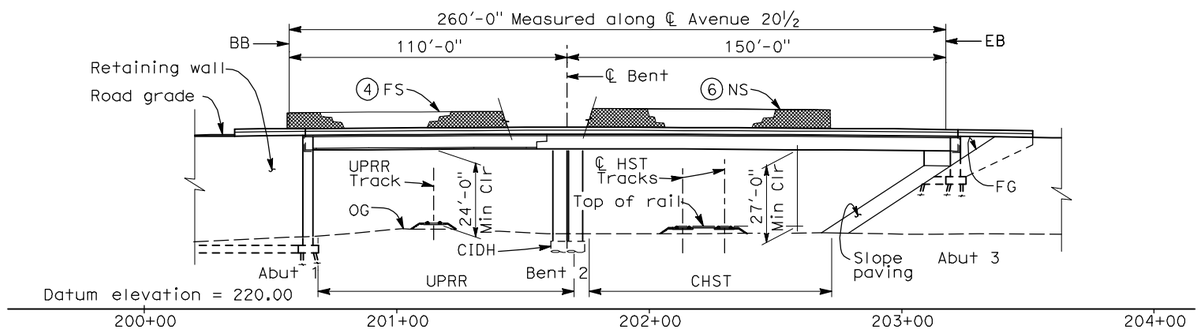
PROFILE GRADE
NTS

LEGEND:

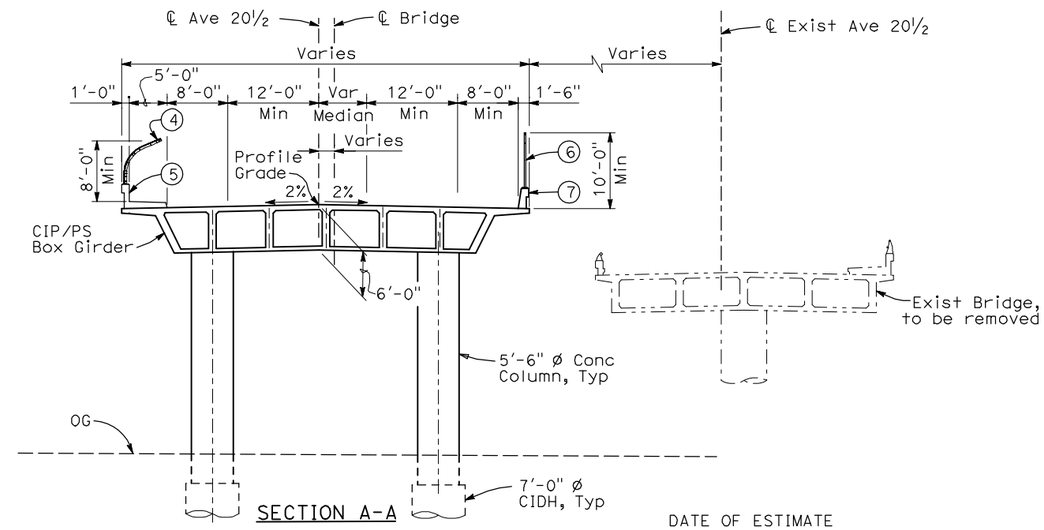
- Direction of traffic
- Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground

NOTES:

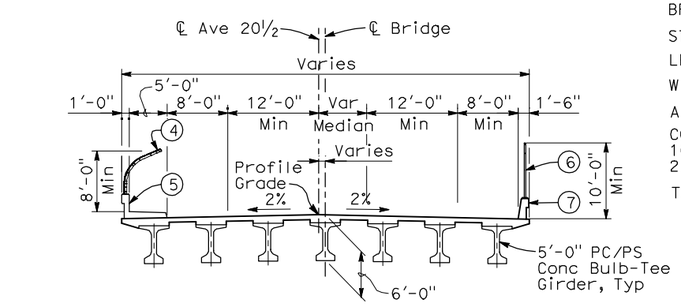
1. Paint "Bridge No. _____"
2. Paint "Avenue 20½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of UPRR track to be verified.
9. Existing underground and overhead utilities to be determined.
10. Location and elevation of existing UPRR track to be determined.



ELEVATION
1" = 30'-0"



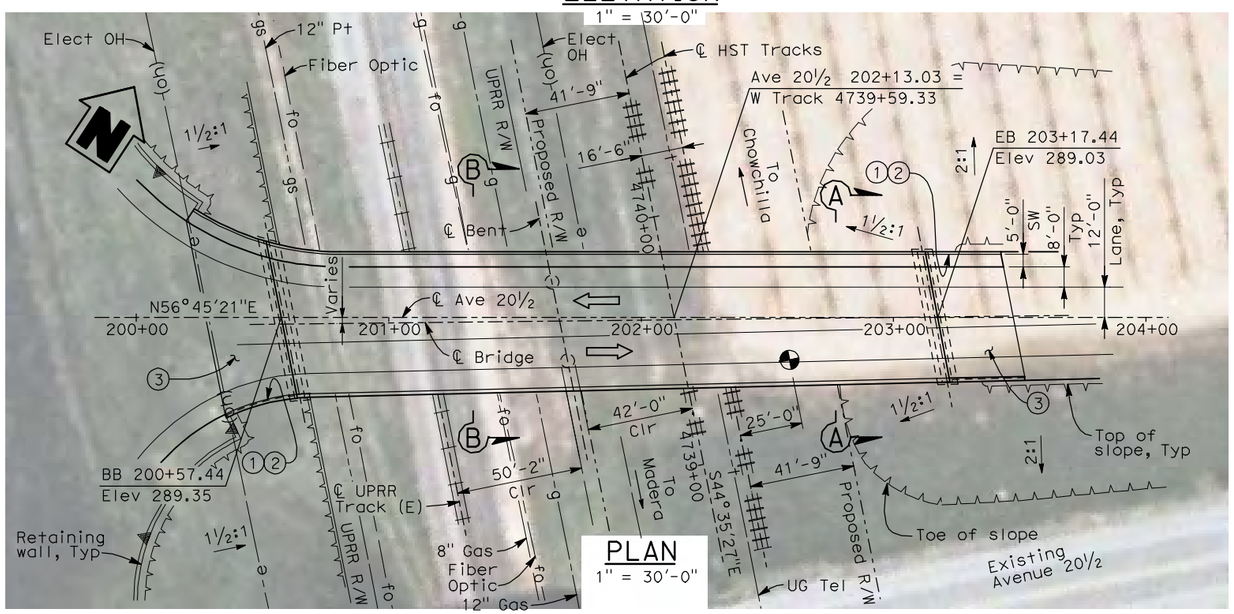
SECTION A-A



SECTION B-B

TYPICAL SECTIONS
1" = 10'-0"

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	260'-0"
WIDTH	=	55'-0" Avg
AREA	=	14,250 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



PLAN
1" = 30'-0"

LOCATION 17 & 17.1

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY P. ARIGO
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

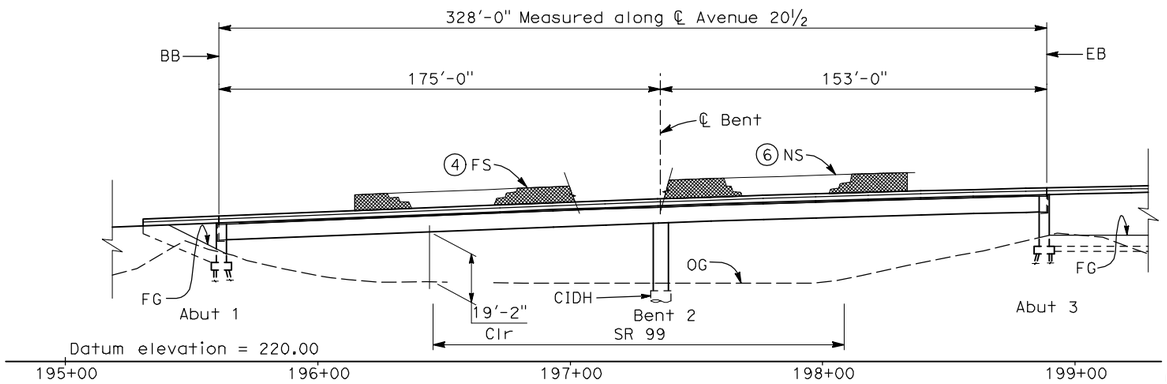
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE/MERCED CONNECTION
AVENUE 21
AVENUE 20½ OVERHEAD - REPLACEMENT
PLANNING STUDY - BRIDGE AT UPRR

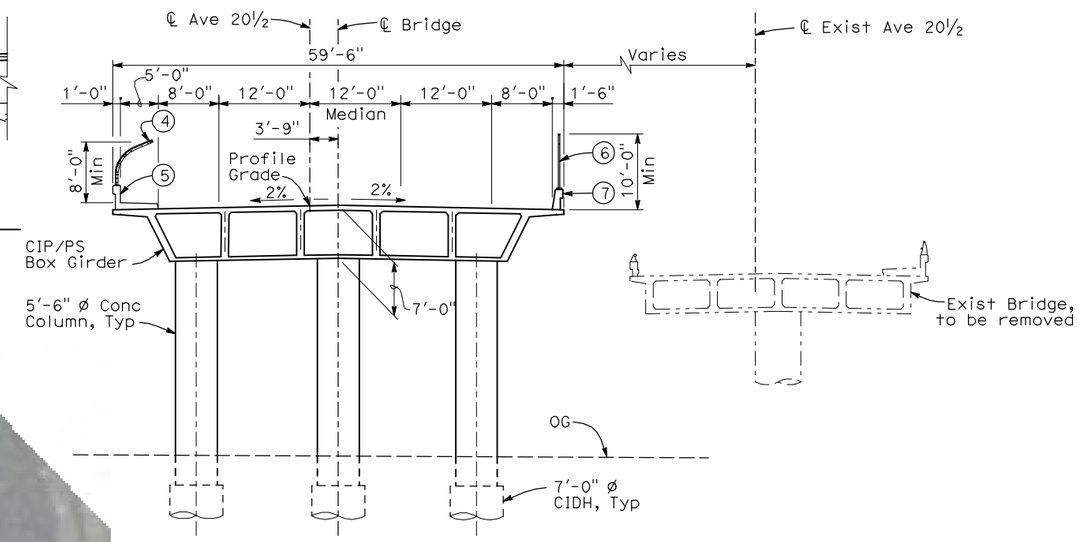
CONTRACT NO. HSR06-007
DRAWING NO. ST1111
SCALE As shown
SHEET NO. OF

DgIgnR 4/30/2011 5:33:09 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 20@UPRR-Loc 17&17.1.dgn

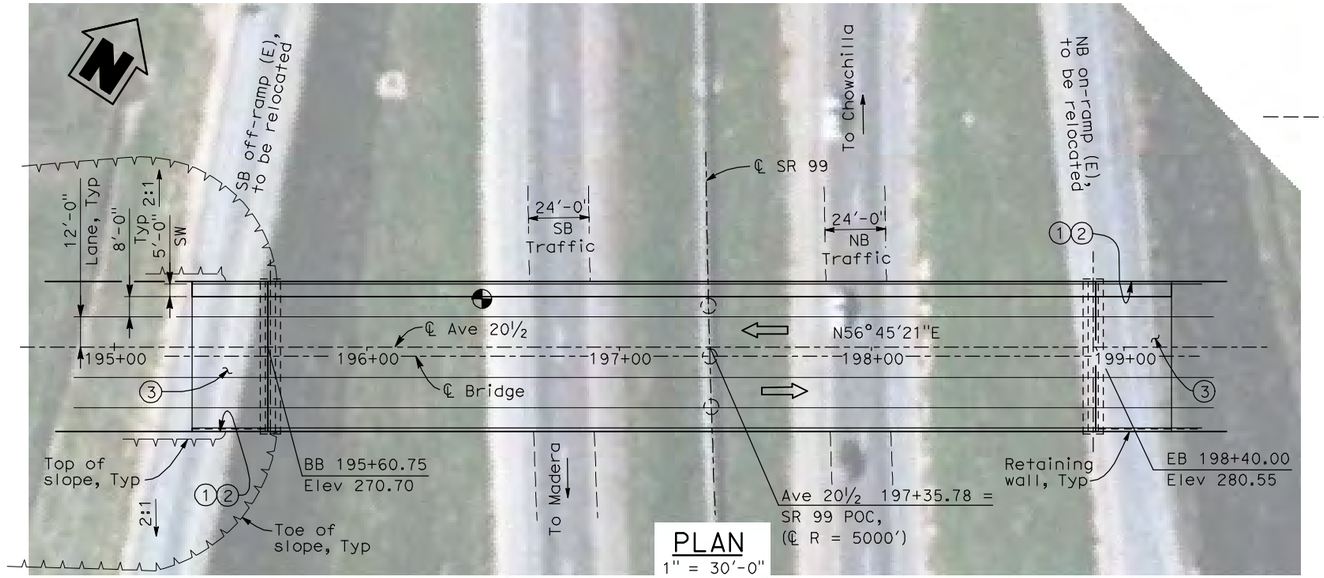
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. WX-YZ"
2. Paint "Avenue 20½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of SR 99 to be verified.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	7'-0"
LENGTH	=	328'-0"
WIDTH	=	59'-6"
AREA	=	19,500 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATIONS 17 & 17.1

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY P. ARIGO
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

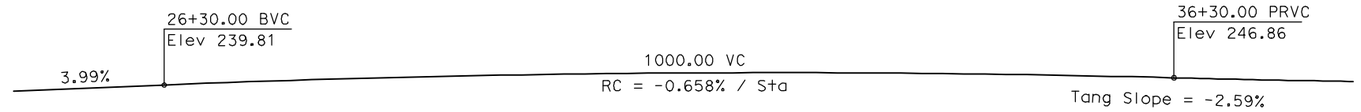
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE/MERCED CONNECTION
AVENUE 21
AVENUE 20½ OVERCROSSING - REPLACEMENT
PLANNING STUDY - BRIDGE AT SR 99

CONTRACT NO. HSR06-007
DRAWING NO. ST1112
SCALE As shown
SHEET NO. OF

DolanR 4/30/2011 5:33:38 PM I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Ave 20@Hwy99-Loc 17&17.1.dgn

I:\CHSR\6002962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_Sandy Mush21-Loc 18.dgn 4/30/2011 5:35:16 PM DolanR

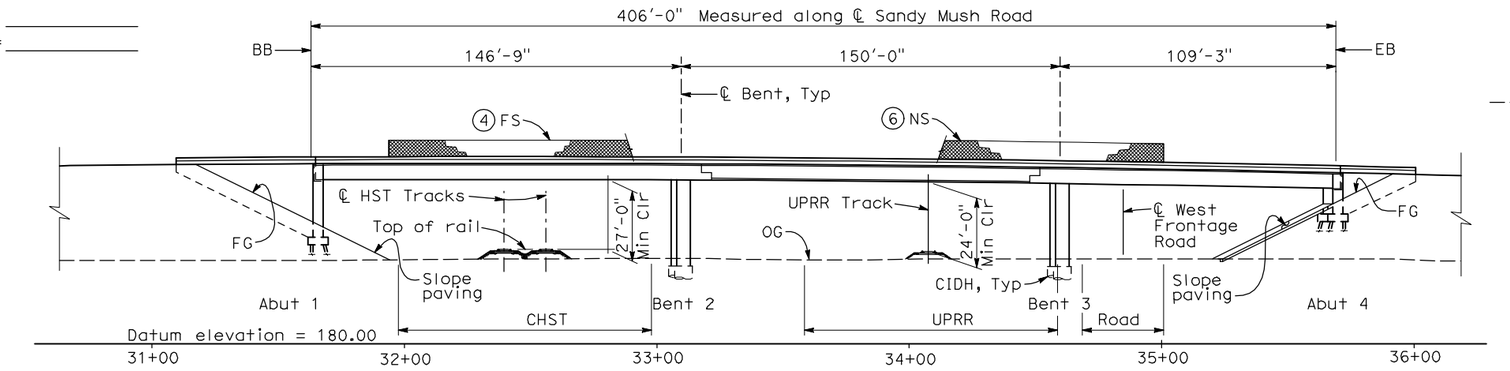


PROFILE GRADE
NTS

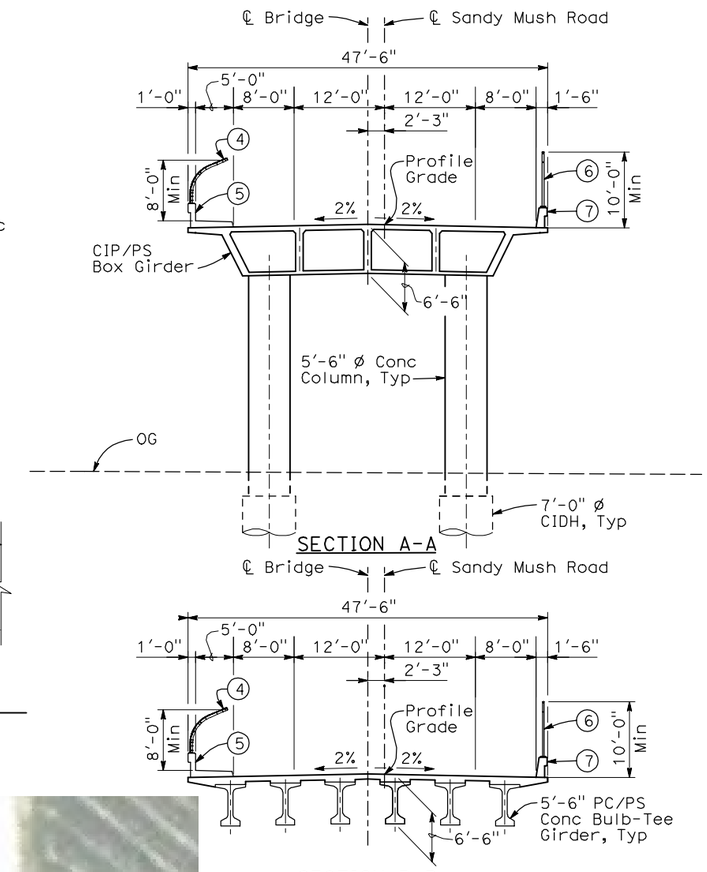
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-6"
LENGTH	=	406'-0"
WIDTH	=	47'-6"
AREA	=	19,285 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LEGEND/ABBREVIATIONS:

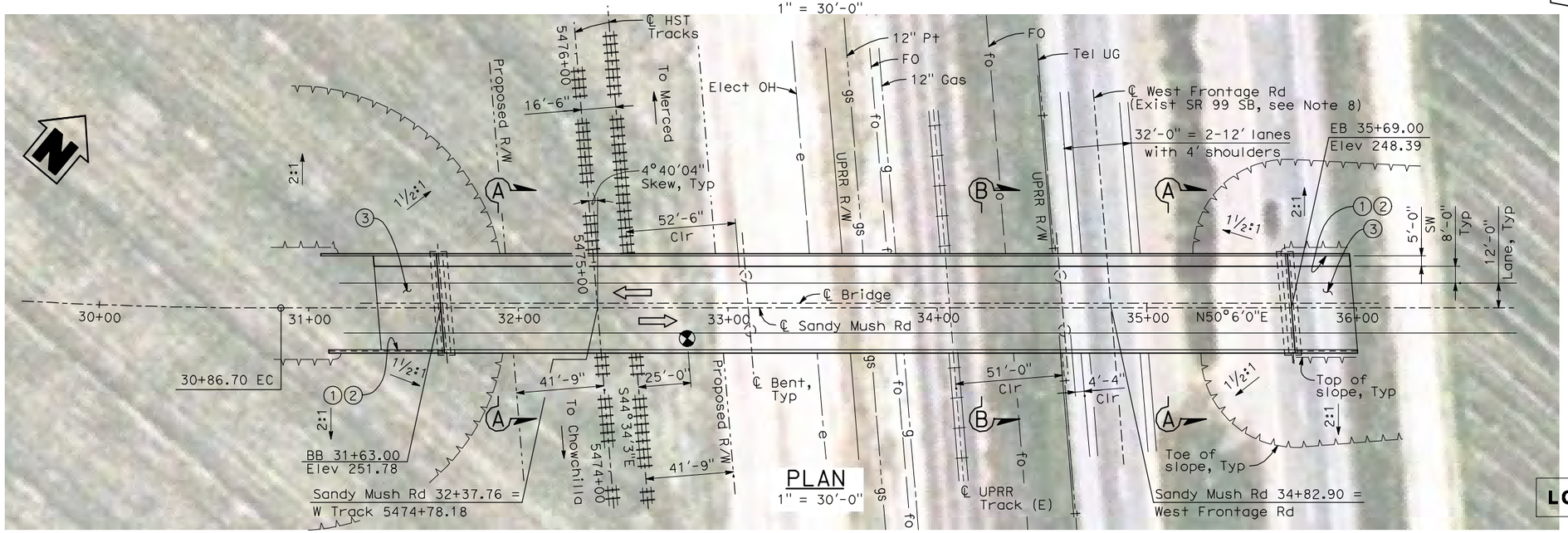
- Direction of traffic
- Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground
- FO = Fiber Optic



ELEVATION
1" = 30'-0"



TYPICAL SECTIONS
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. WX-YZ"
2. Paint "Sandy Mush Road OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. SR 99 will be relocated prior to or concurrent with this construction.
9. Bearing of Sandy Mush Road and UPRR track to be verified.
10. Existing underground and overhead utilities to be determined.
11. Location and elevation of existing UPRR track to be determined.

LOCATION 18

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

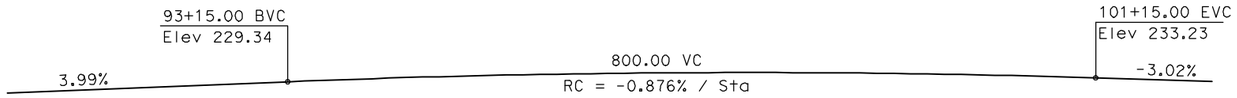
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
SANDY MUSH ROAD OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1113
SCALE As shown
SHEET NO. OF

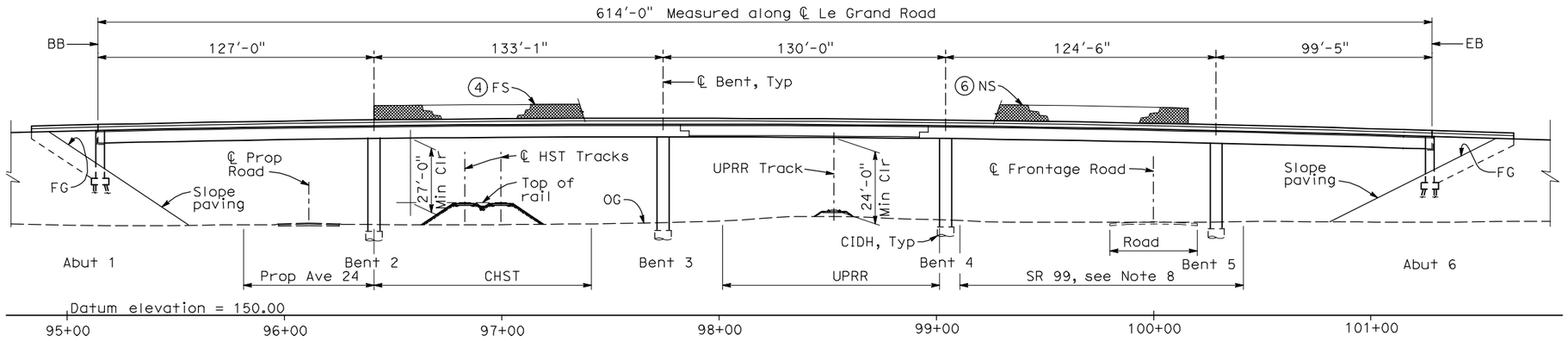
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	614'-0"
WIDTH	=	47'-6"
AREA	=	29,200 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



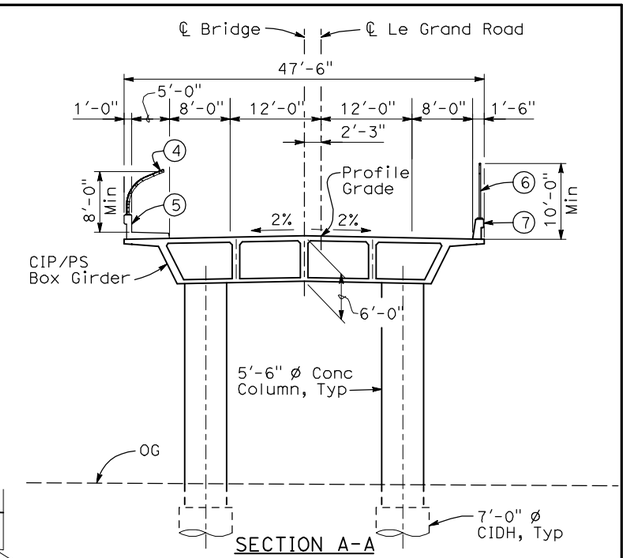
PROFILE GRADE
NTS

LEGEND/ABBREVIATIONS:

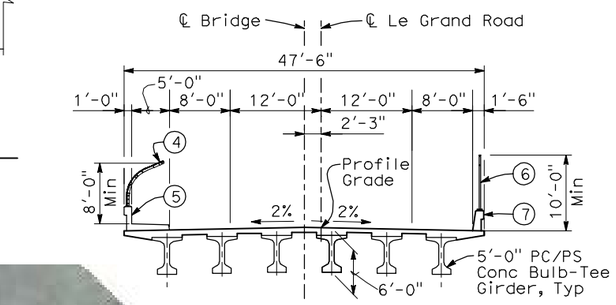
- ⇦ Direction of traffic
- ◐ Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground
- FO = Fiber Optic



ELEVATION
1" = 30'-0"

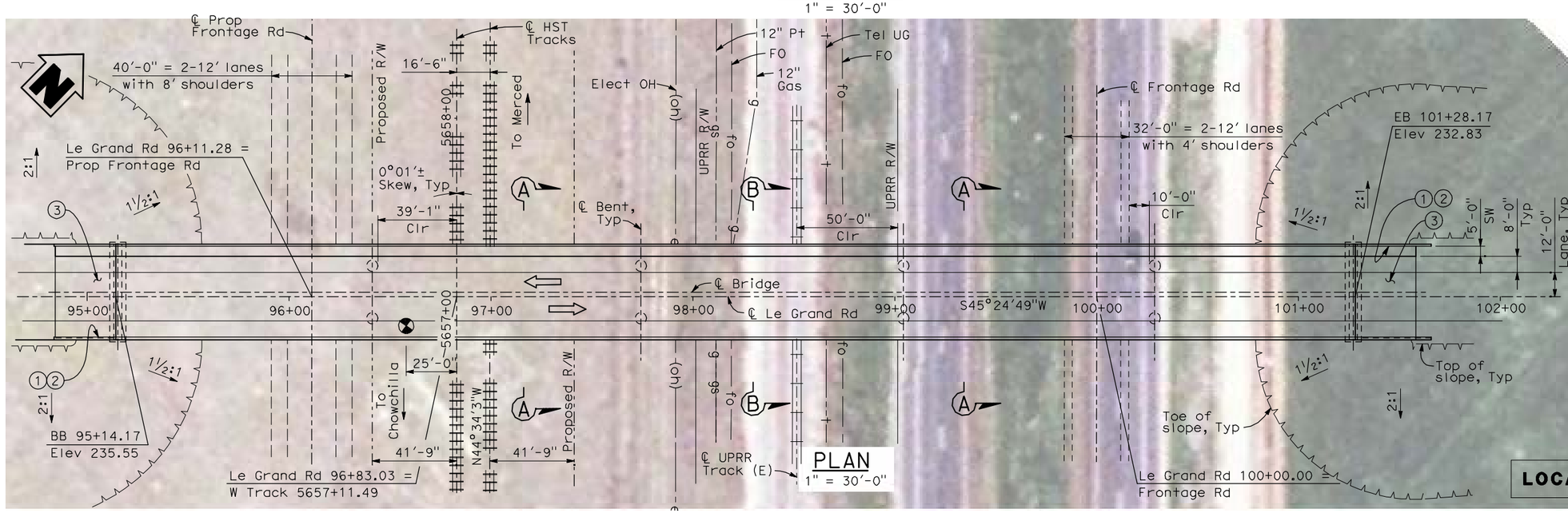


SECTION A-A



SECTION B-B

TYPICAL SECTIONS
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. WX-YY"
2. Paint "Le Grand Road OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. SR 99 will be relocated prior to or concurrent with this construction.
9. Bearing of Le Grand Road and UPRR track to be verified.
10. Existing underground and overhead utilities to be determined.
11. Location and elevation of existing UPRR track to be determined.

LOCATION 19

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

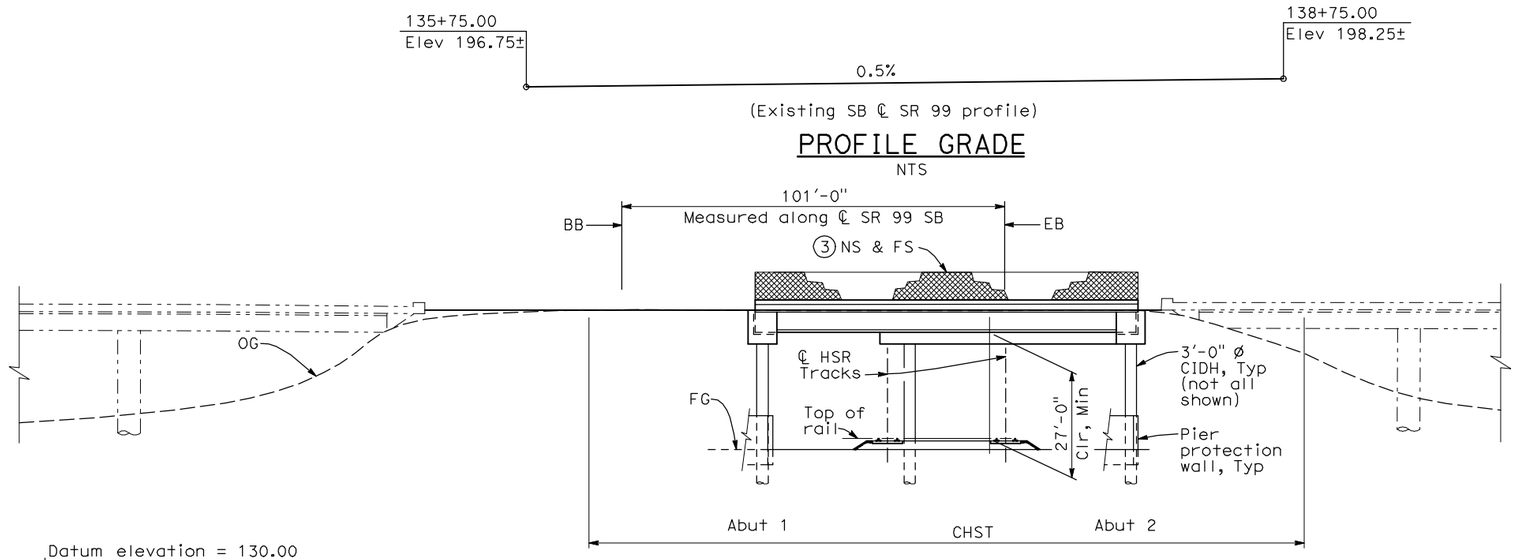
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
LE GRAND ROAD OVERHEAD
PLANNING STUDY

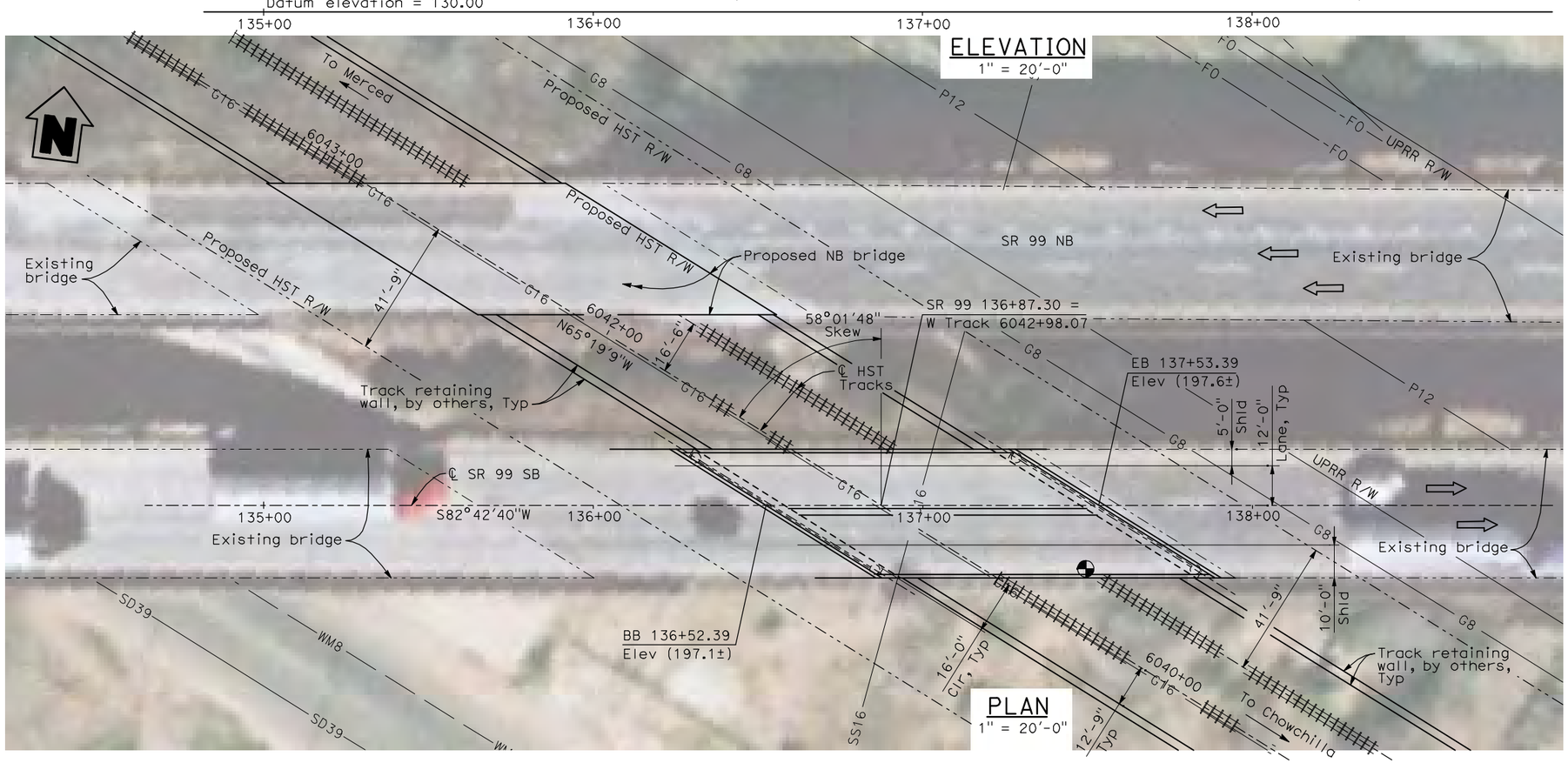
CONTRACT NO. HSR06-007
DRAWING NO. ST1114
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\WX-MF-ST-OH_Le Grand Road-Loc 19.dgn 4/30/2011 5:35:51 PM DolanR



PROFILE GRADE

NTS

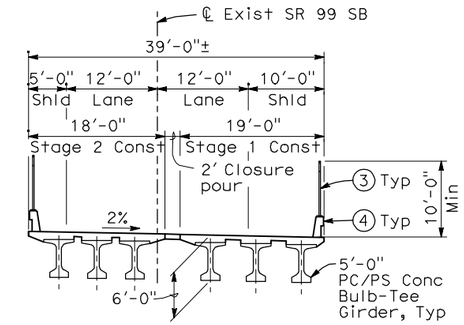


ELEVATION

1" = 20'-0"

PLAN

1" = 20'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. WX-YY"
2. Paint "SR 99 OH"
3. Chain Link Railing Type 7 (Mod)
4. Concrete Barrier Type 732
5. Southbound bridge shown, northbound bridge similar.
6. Bearing, stationing and elevation of SR 99 SB to be verified.
7. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

⊕ Point of minimum vertical clearance

G = Gas
FO = Fiber Optic
P = Petroleum
SD = Storm Drain
SS = Sanitary Sewer
WM = Water

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	101'-0"
WIDTH	=	39'-0"
AREA	=	3,950 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 67

20 0 20 40
1"=20'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
SR 99 SOUTHBOUND OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1181
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\cadd\Struct\Sheet\APS\A2\15% cost reduction submittal\Grade Structure\W-MF-ST-OH_SR 99-Loc67.dgn 4/30/2011 5:36:22 PM DolanR

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

INDEX OF PLANS

T-1	TITLE SHEET
X-1 TO X-15	TYPICAL CROSS SECTIONS
K-1	KEYMAP
L-1 TO L-17	LAYOUT
P-1 TO P-27	PROFILE AND SUPERELEVATION
SC-1 TO SC-18	STAGE CONSTRUCTION
BR-1 TO BR-6	STRUCTURE PLANS

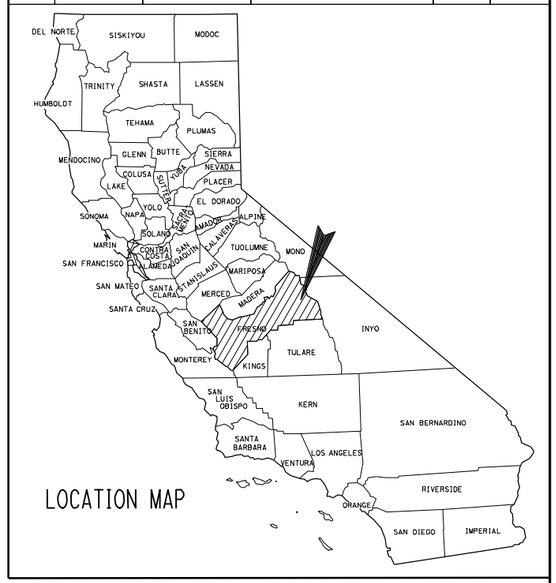
CALIFORNIA HIGH SPEED RAIL AUTHORITY

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN THE CITY OF FRESNO
0.5 MI SOUTH OF CLINTON AVENUE
TO 0.2 MI SOUTH OF ASHLAN AVENUE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



END CONSTRUCTION
STA 239+45 PM 26.2

BEGIN CONSTRUCTION
STA 229+27 PM 23.7

BEGIN WORK
14+00

DAKOTA Ave OC
Br No. 42-148

END WORK
243+00

TO VISALIA

TO MADERA

ASHLAN Ave OC
Br No. 42-140

ROUTE 99

UPRR

CLINTON Ave OC
Br No. 42-183

FRESNO

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

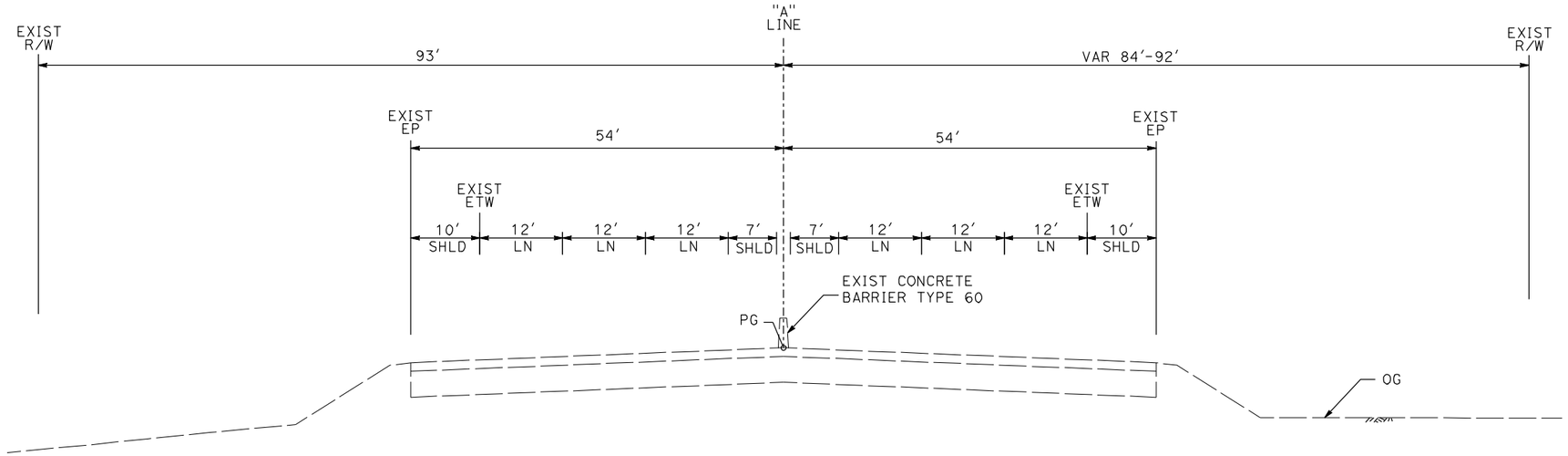
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

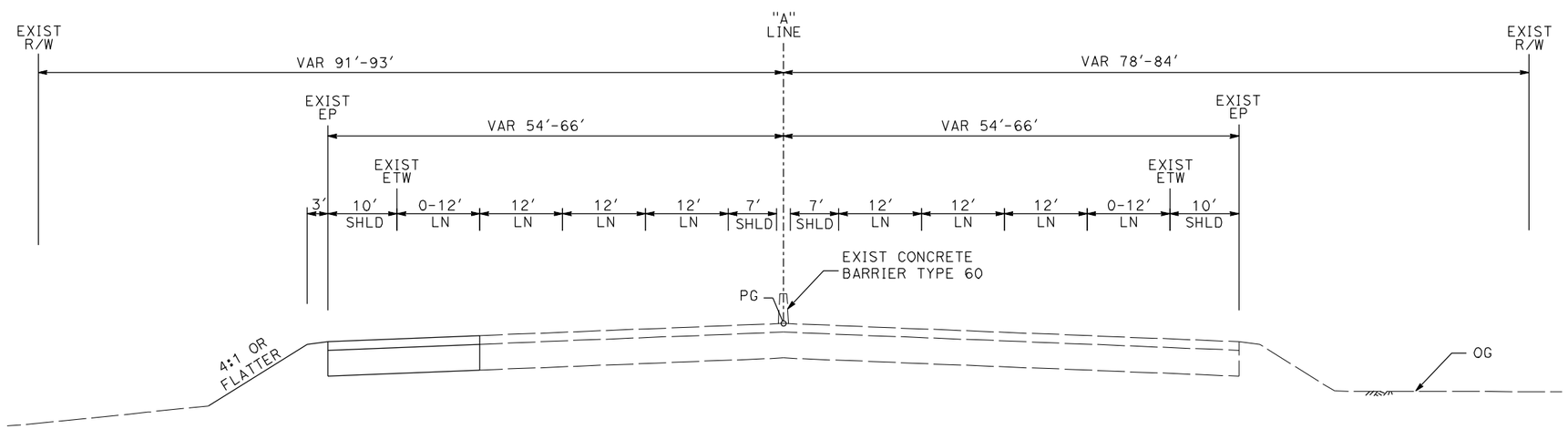
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TITLE

CONTRACT NO. HSR06-007
DRAWING NO. **T-1**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => [illegible]



SB 117+00 TO 117+40 **NB 117+00 TO 119+55**



SB 117+40 TO 123+40 **NB 119+55 TO 123+15**

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

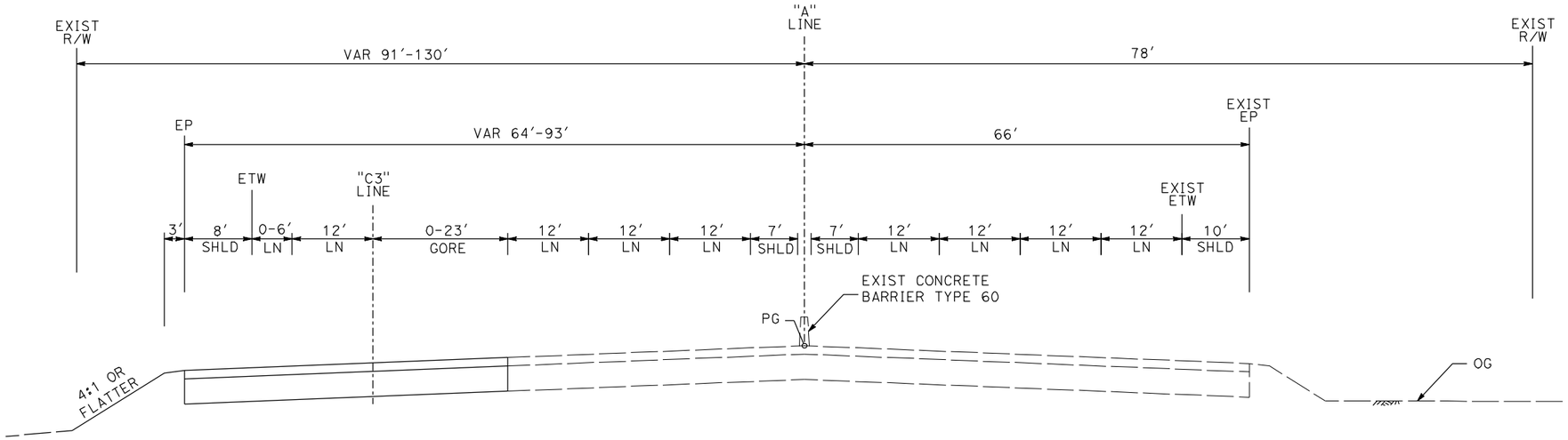
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

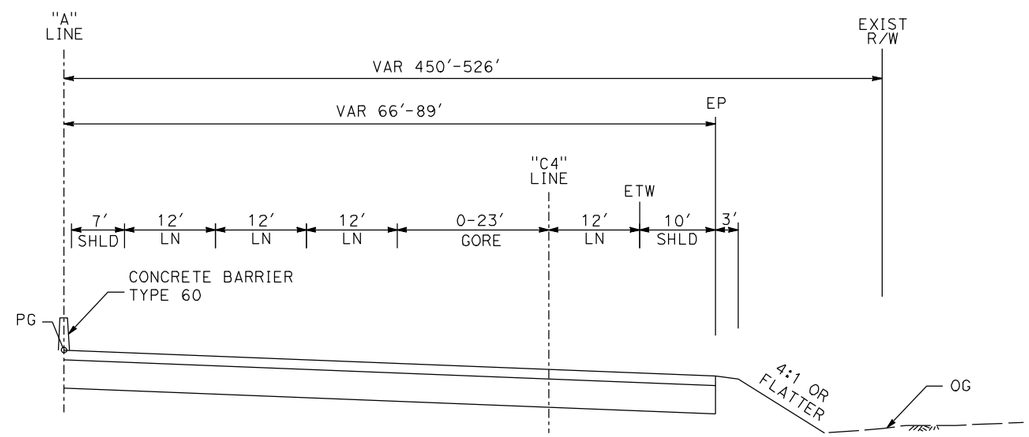
CONTRACT NO. HSR06-007
DRAWING NO. **X-1**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011



SB 123+40 TO 129+27

NB 123+15 TO 130+18



NB 130+18 TO 132+89

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

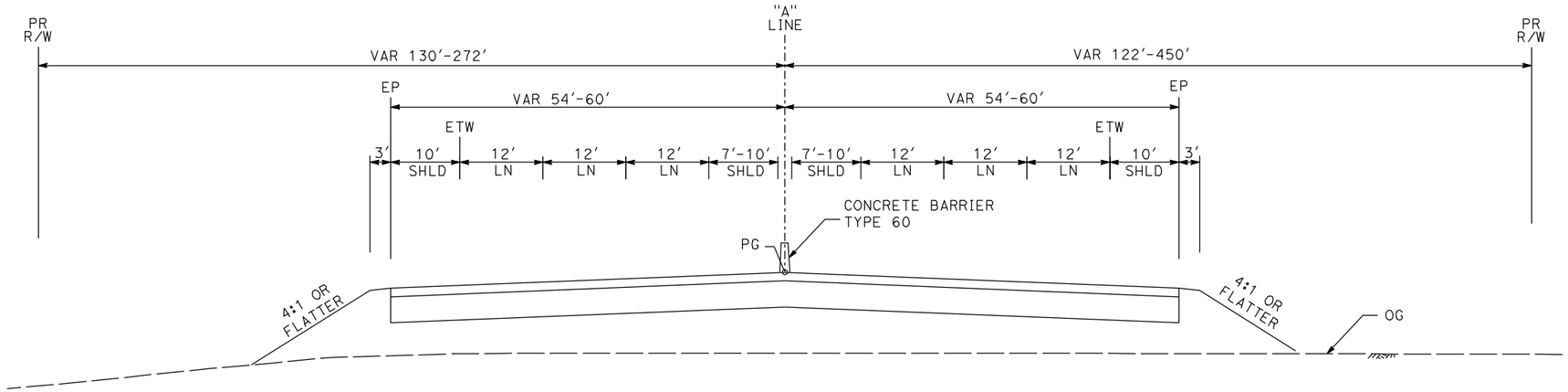
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

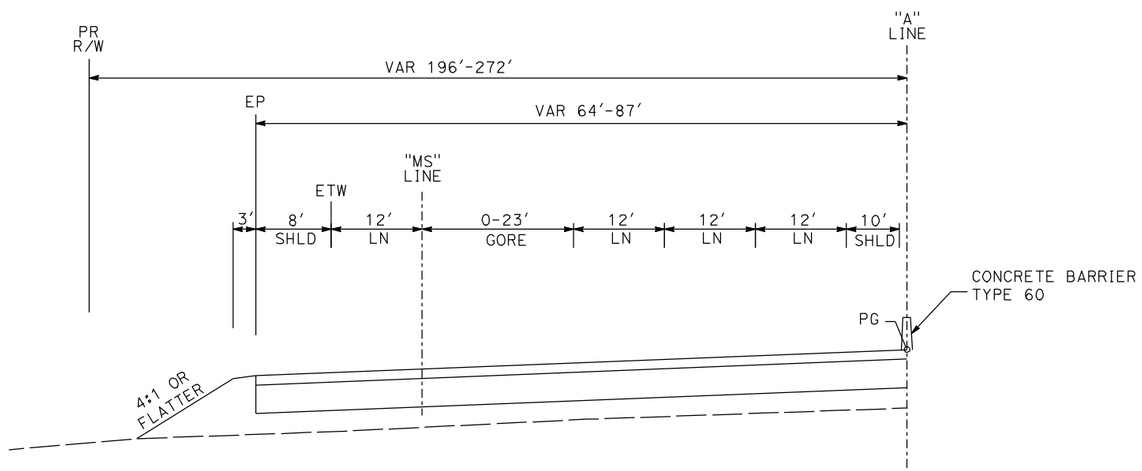
CONTRACT NO. HSR06-007
DRAWING NO. **X-2**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => [illegible]



SB 129+27 TO 146+07

NB 132+89 TO 152+18



SB 146+07 TO 148+79

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

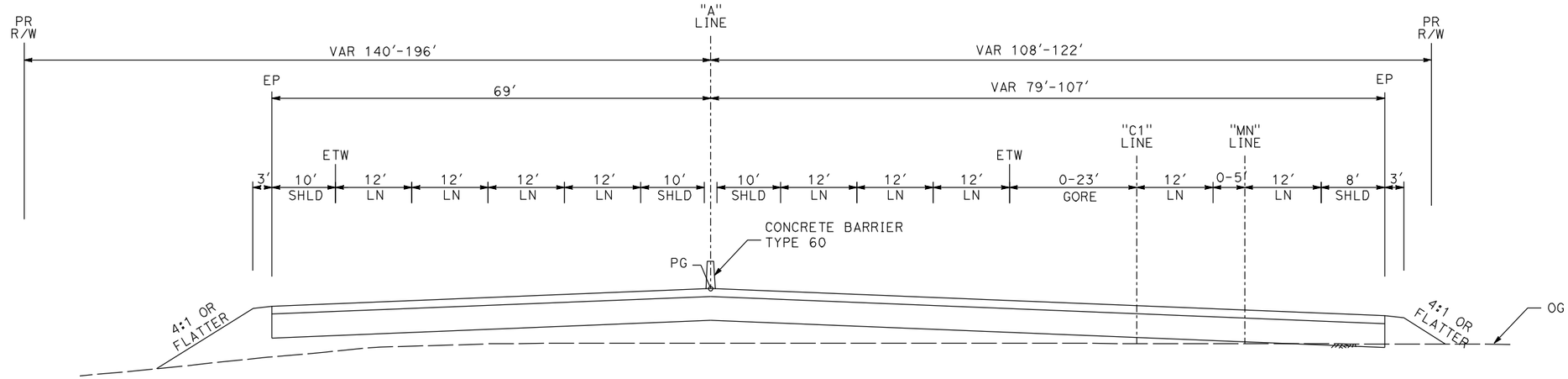
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

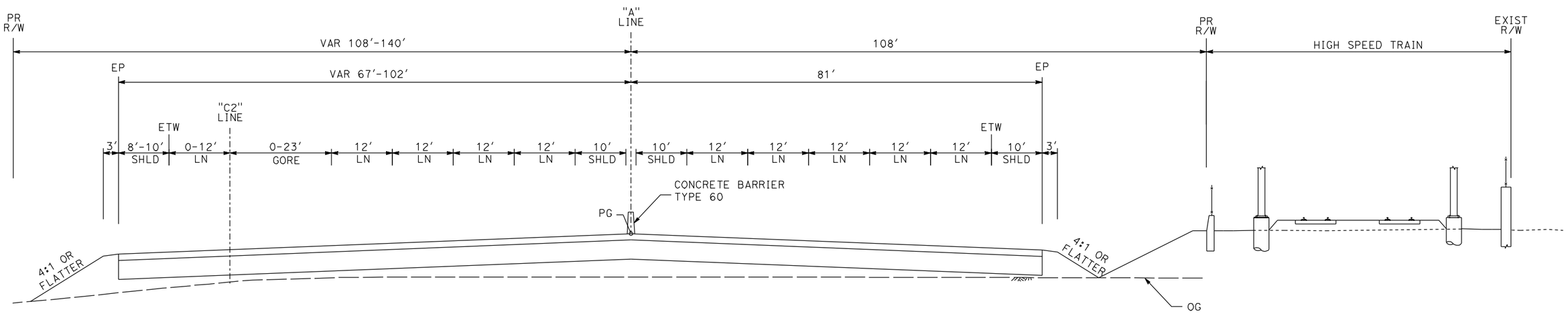
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-3**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011



SB 148+79 TO 157+19 **NB 152+18 TO 158+14**



SB 157+19 TO 161+30 **NB 152+18 TO 158+14**

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

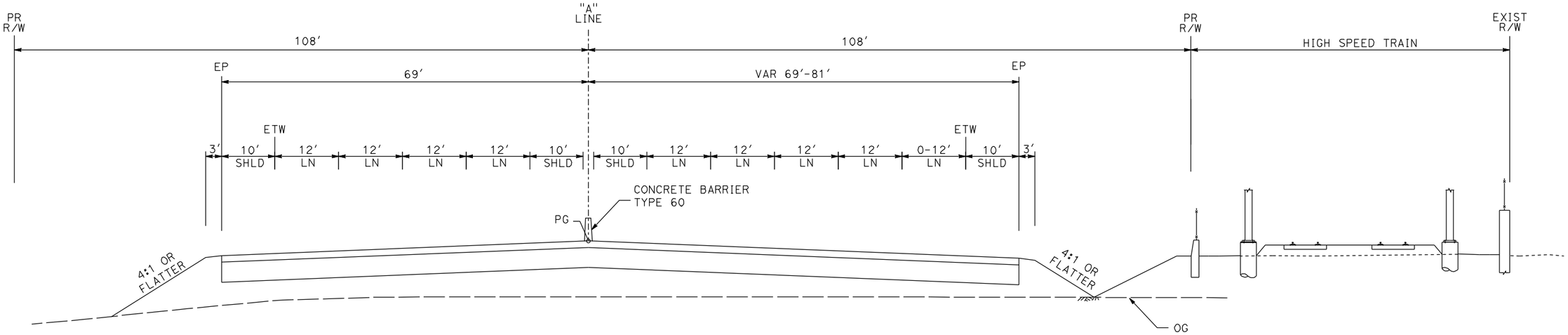
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

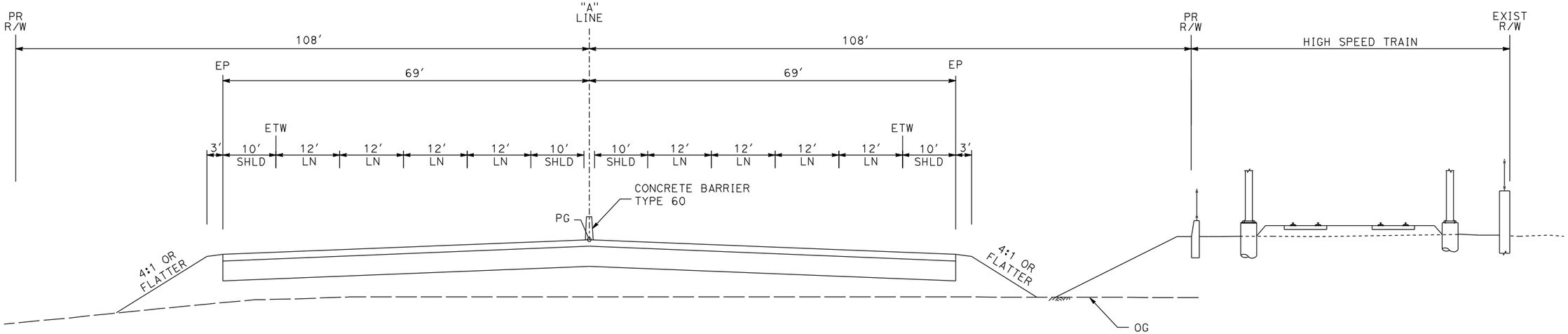
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-4**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => 1700



SB 161+30 TO 164+14 **NB 158+14 TO 164+14**



SB 164+14 TO 220+00 **NB 164+14 TO 220+80**

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

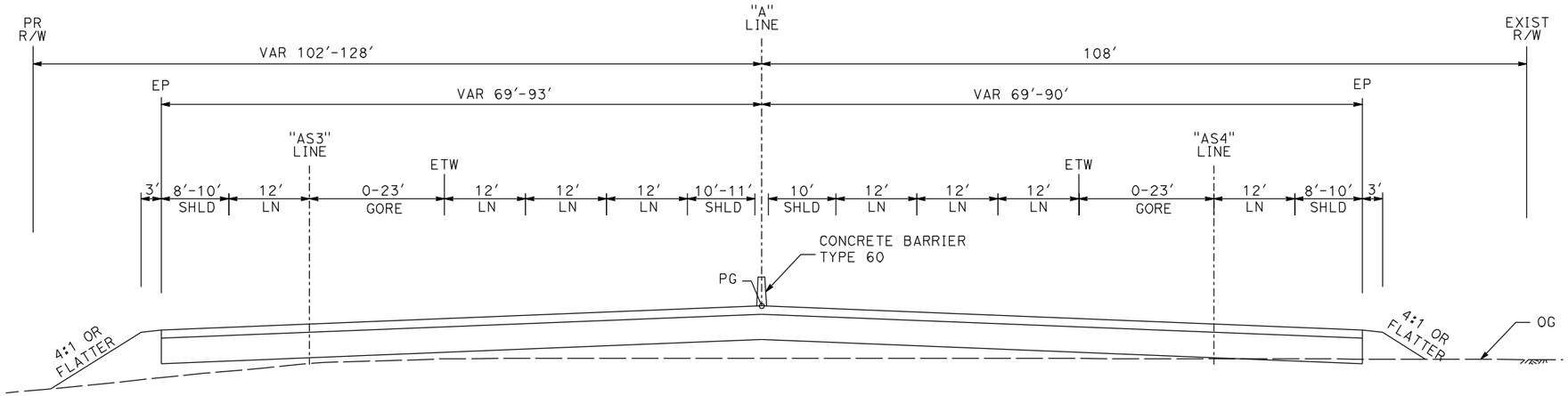
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

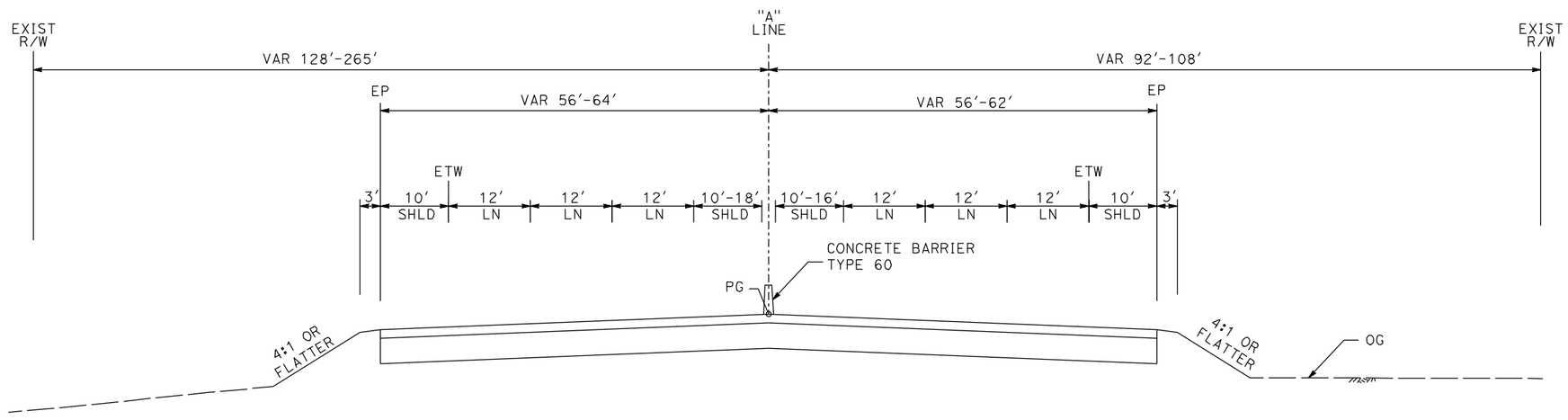
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-5**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011



SB 220+00 TO 226+80 **NB 220+80 TO 223+50**



SB 226+80 TO 239+45 **NB 223+50 TO 239+45**

ROUTE 99

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

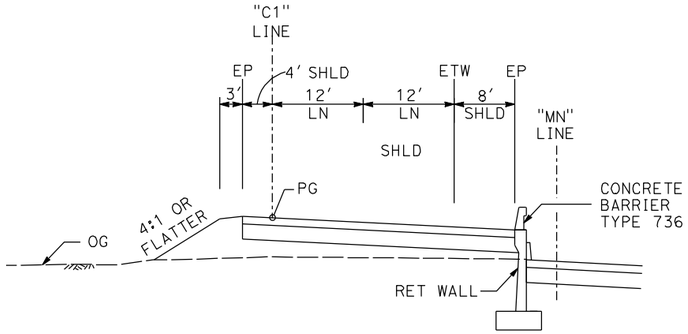
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

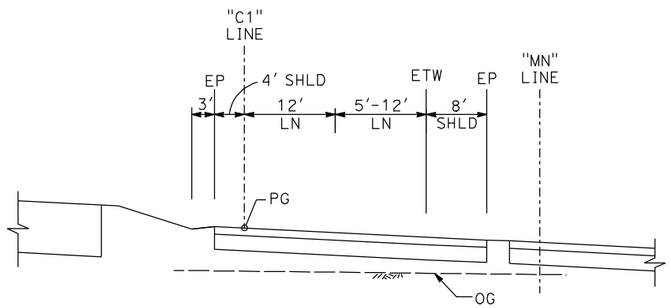
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-6**
SCALE NO SCALE
SHEET NO.

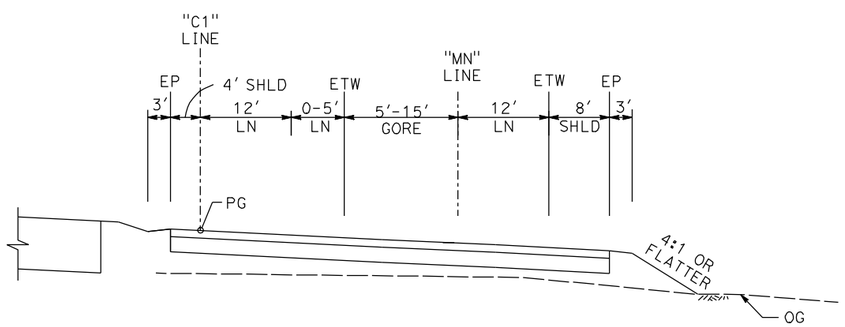
DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



142+10 TO 1147+31

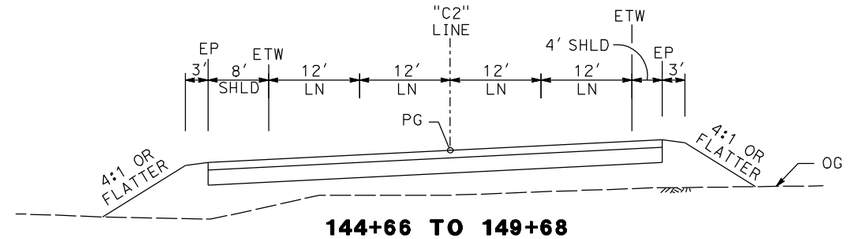


147+31 TO 149+07

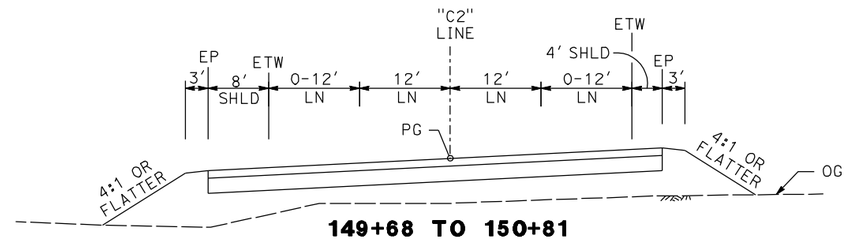


149+07 TO 152+15

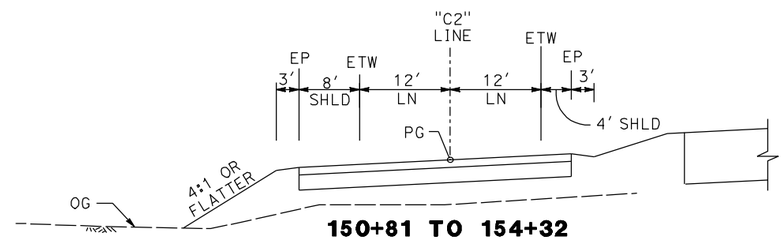
C1 LINE
(NB ON RAMP AT CLINTON AVE)



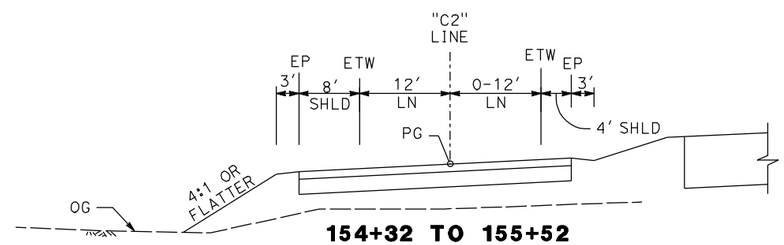
144+66 TO 149+68



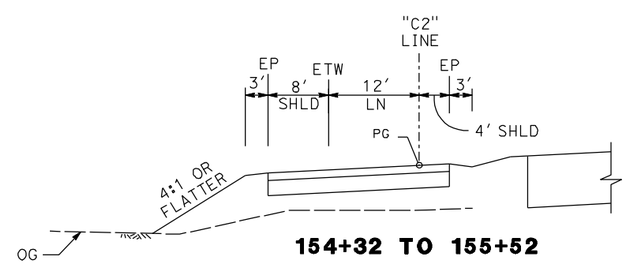
149+68 TO 150+81



150+81 TO 154+32



154+32 TO 155+52



154+32 TO 155+52

C2 LINE
(SB OFF RAMP AT CLINTON AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

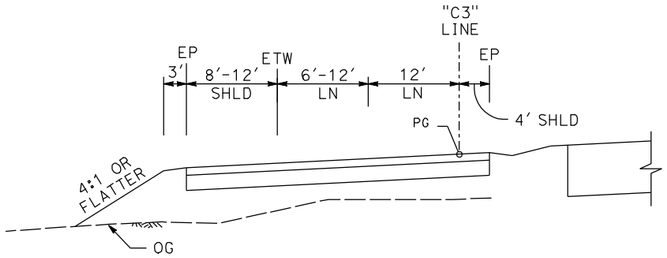
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

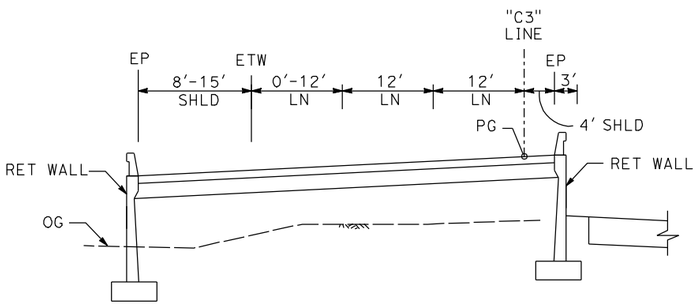
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-7**
SCALE NO SCALE
SHEET NO.

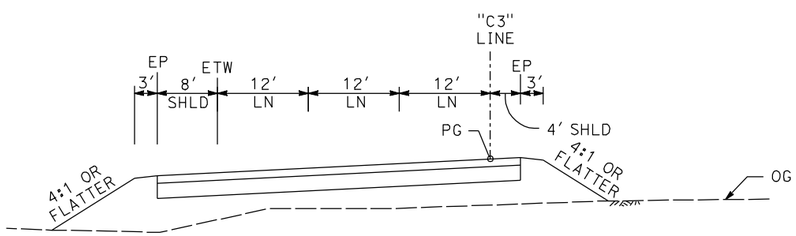
DATE PLOTTED => 26-APR-2011



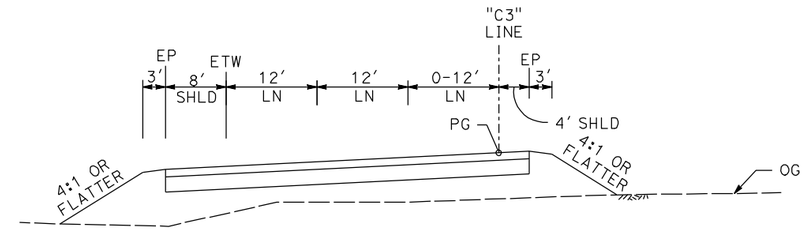
129+27 TO 131+09



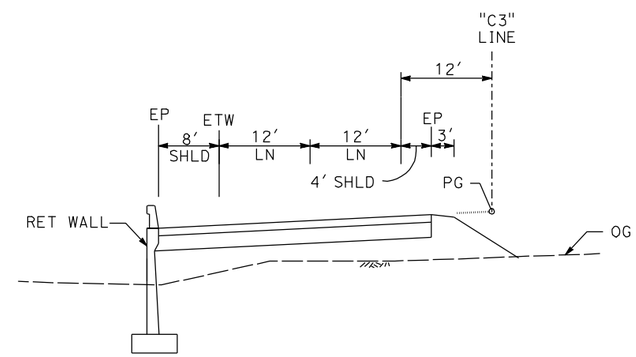
131+09 TO 134+80



134+80 TO 139+92



139+92 TO 141+22



141+22 TO 143+56

C3 LINE
(SB ON RAMP AT CLINTON AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

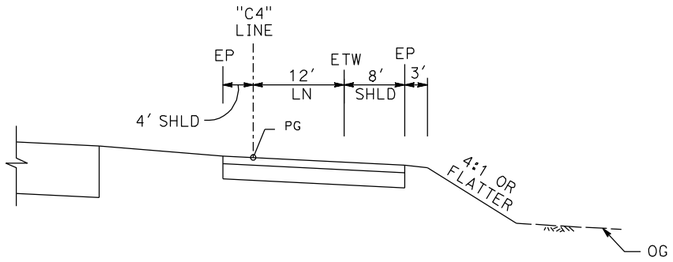
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

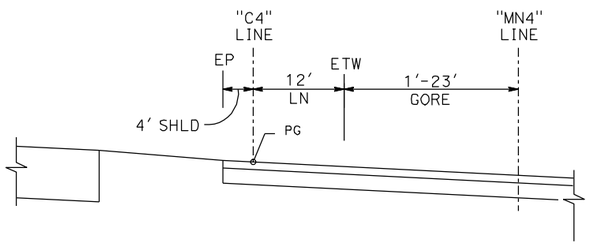
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-8**
SCALE NO SCALE
SHEET NO.

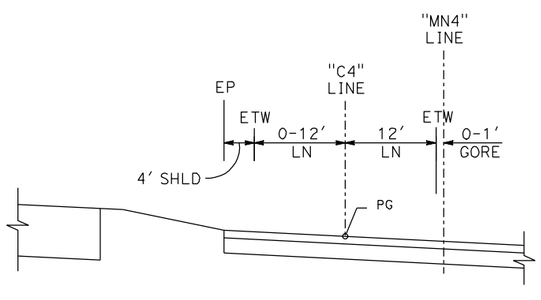
DATE PLOTTED => 26-APR-2011
USERNAME => 1700



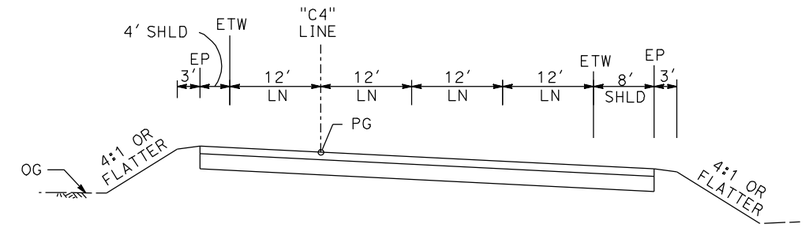
132+89 TO 133+20



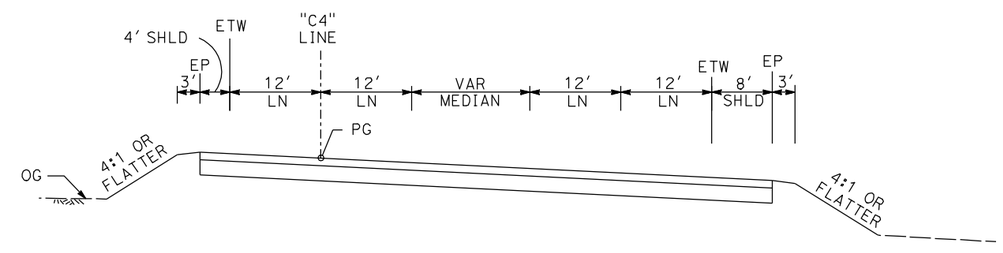
133+20 TO 134+72



134+72 TO 135+92



135+92 TO 139+95



139+95 TO 141+12

C4 LINE
(NB OFF RAMP AT CLINTON AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

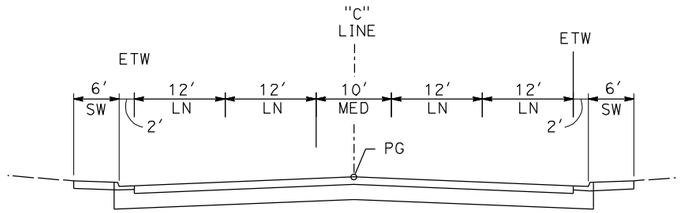
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

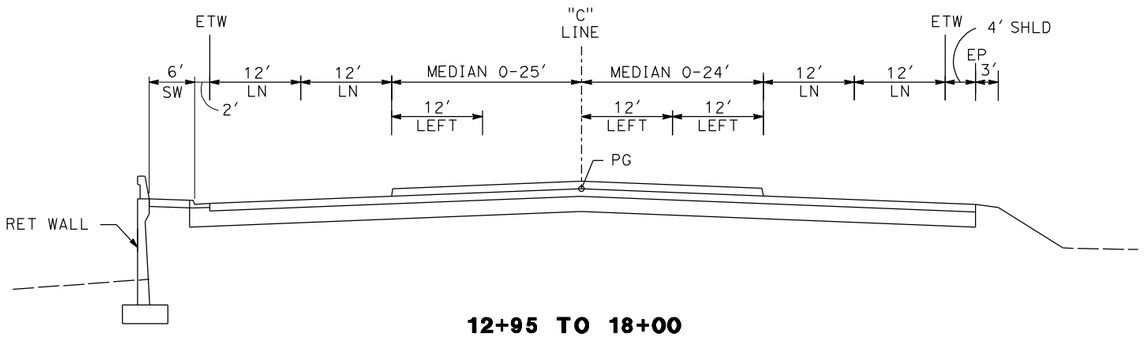
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-9**
SCALE NO SCALE
SHEET NO.

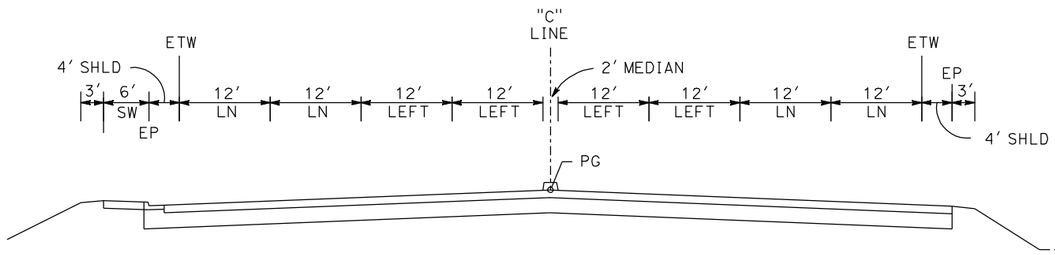
DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



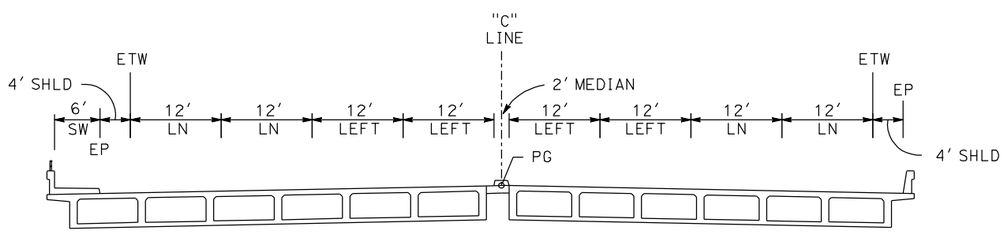
10+00 TO 12+95



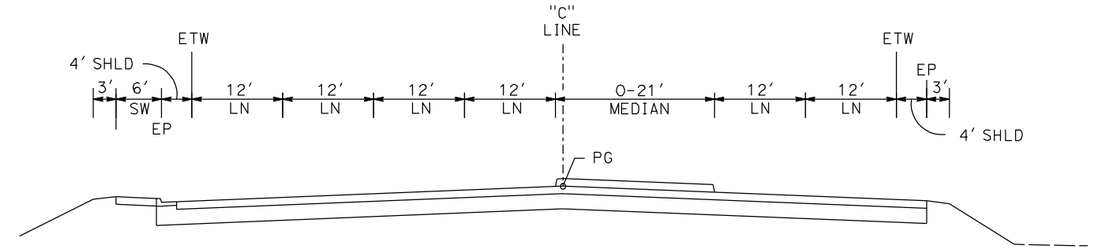
12+95 TO 18+00



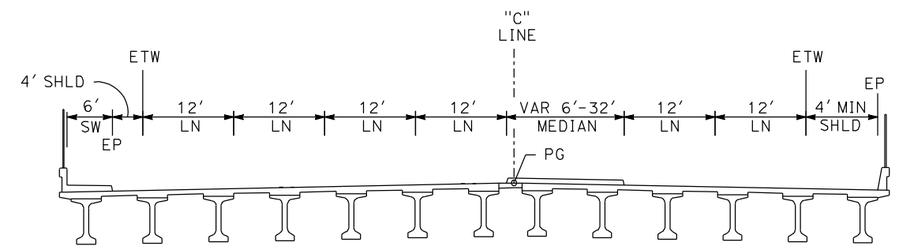
18+00 TO 19+66



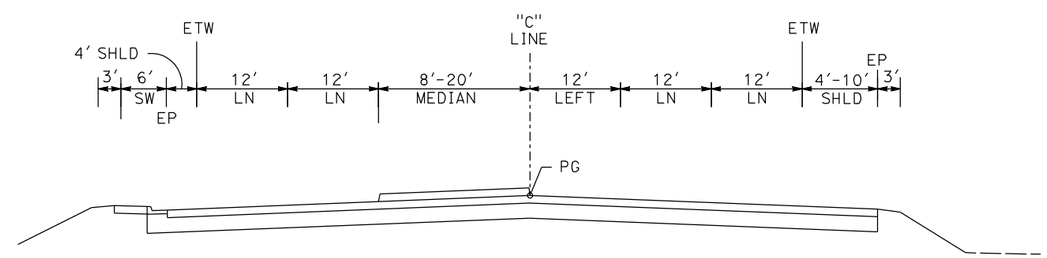
19+66 TO 22+49
CLINTON AVE OC



22+49 TO 24+08



24+08 TO 27+98
FREPNO YARD OH



27+98 TO 34+18

CLINTON AVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

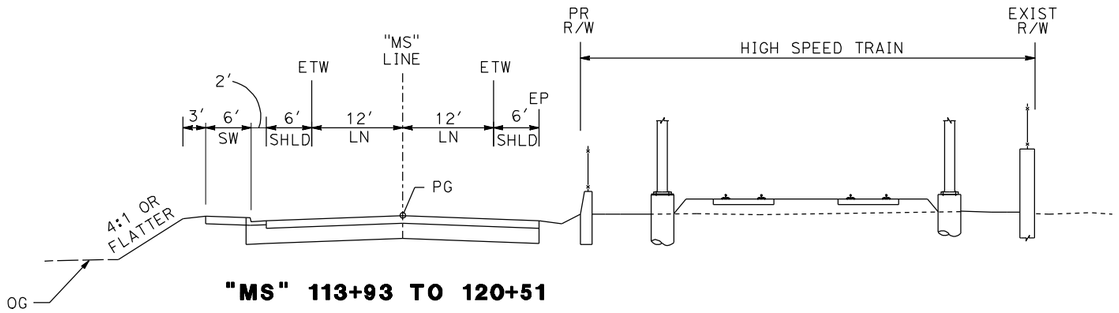
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

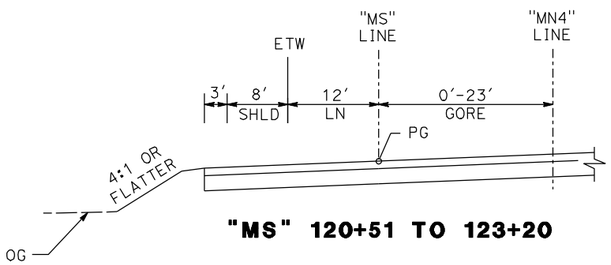
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-10**
SCALE NO SCALE
SHEET NO.

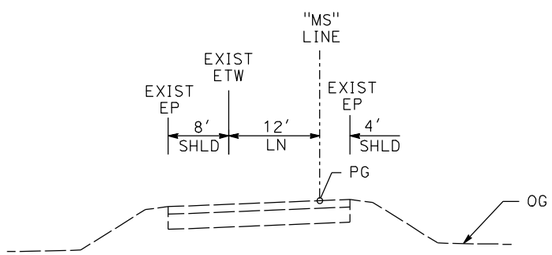
DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



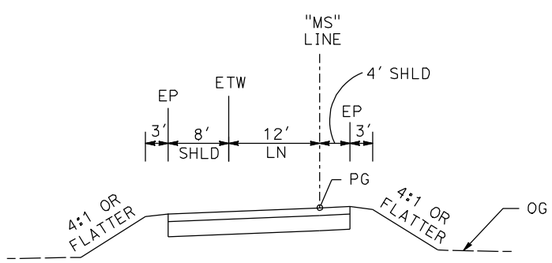
"MS" 113+93 TO 120+51



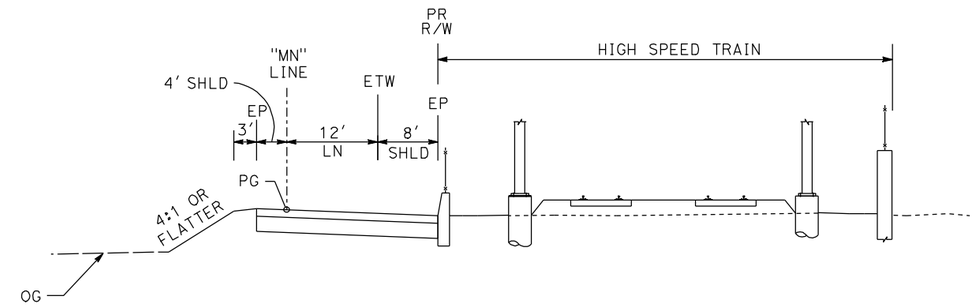
"MS" 120+51 TO 123+20



"MS" 129+00 TO 133+00



"MS" 123+20 TO 129+00
"MS" 133+00 TO 146+08



"MN" 124+25 TO 149+06

GOLDEN STATE BLVD

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

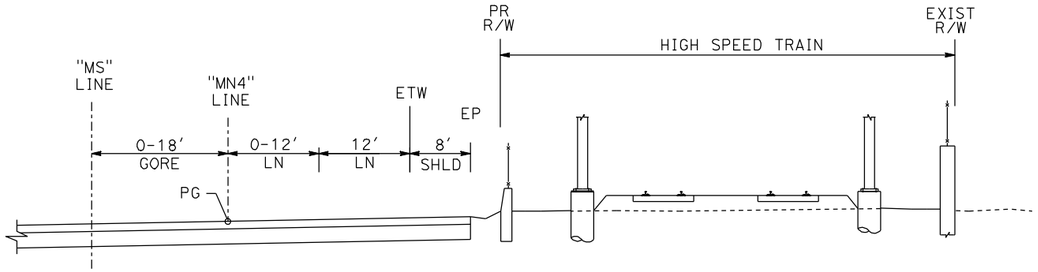
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

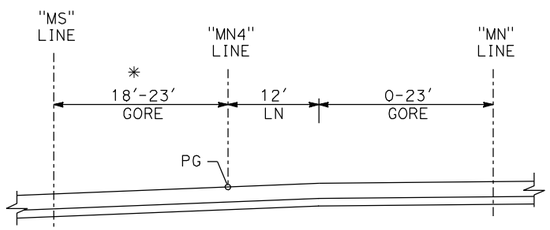
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-11**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS

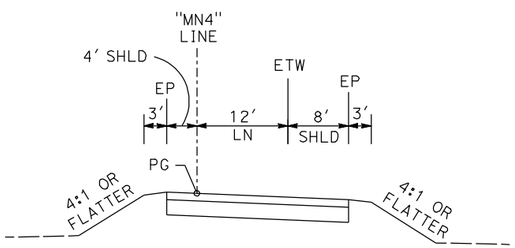


"MN4" 120+51 TO 122+70

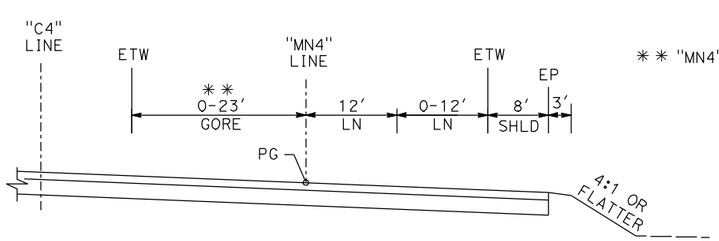


* "MN4" 122+70 TO 123+20

"MN4" 122+70 TO 123+62



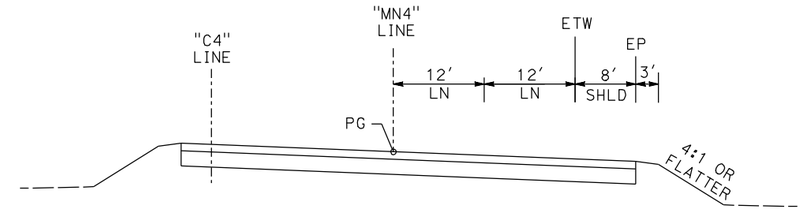
"MN4" 123+62 TO 132+24



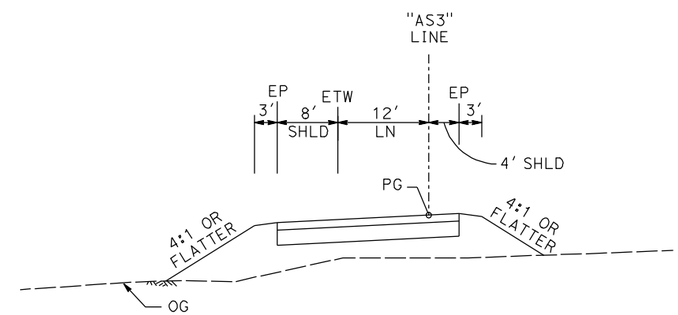
** "MN4" 132+24 TO 134+18

"MN4" 132+24 TO 134+46

MN4 LINE
(GOLDEN STATE BLVD NB OFF RAMP AT)



"MN4" 134+46 TO 134+98



"AS3" 226+72 TO 233+35

AS3 LINE
(SB ON RAMP AT ASHLAN AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

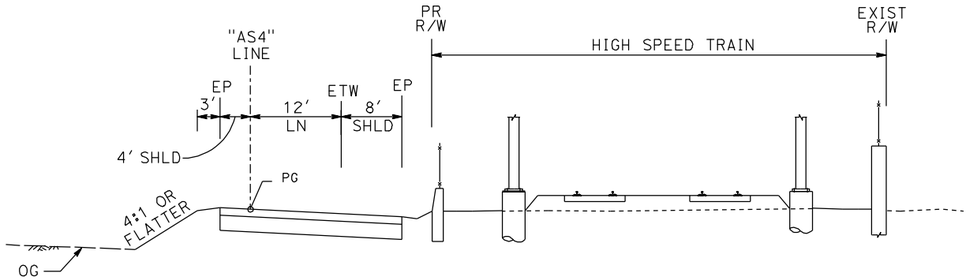
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

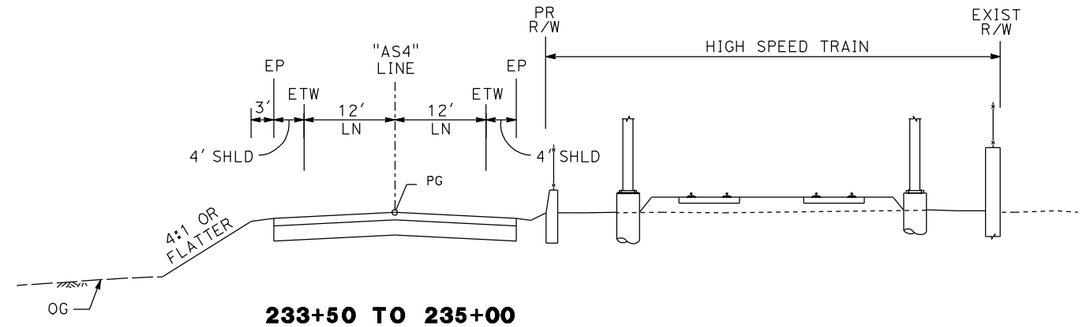
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-12**
SCALE NO SCALE
SHEET NO.

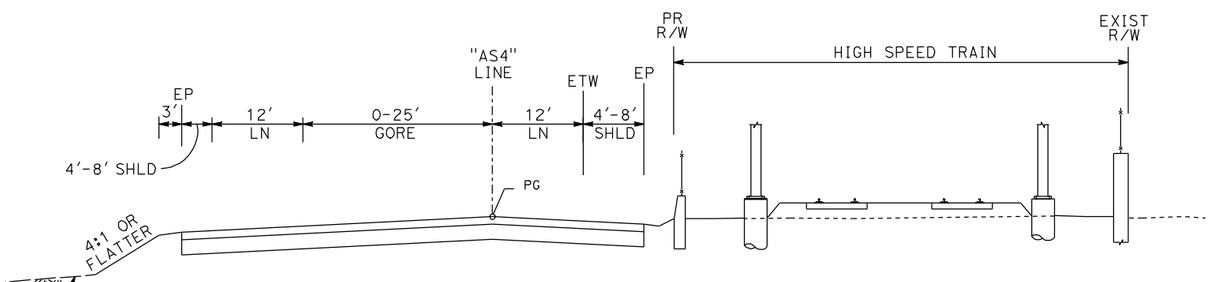
DATE PLOTTED => 26-APR-2011



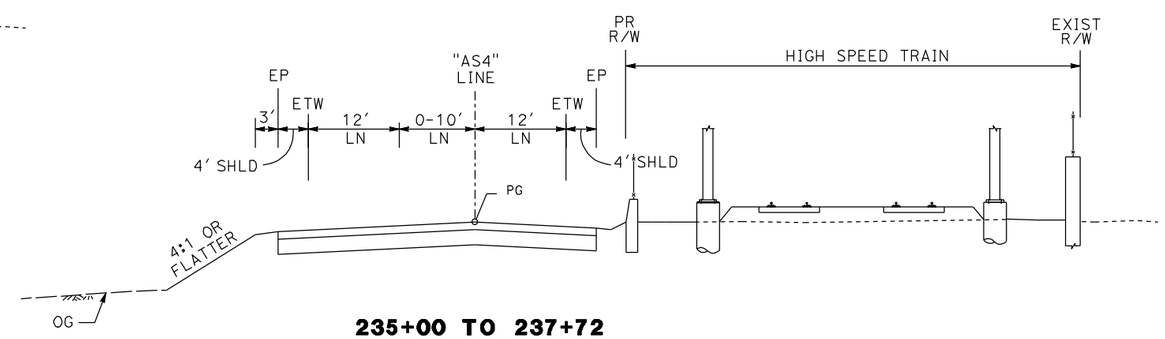
223+51 TO 232+56



233+50 TO 235+00



232+56 TO 233+50



235+00 TO 237+72

AS4 LINE
(NB OFF RAMP AT ASHLAN AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

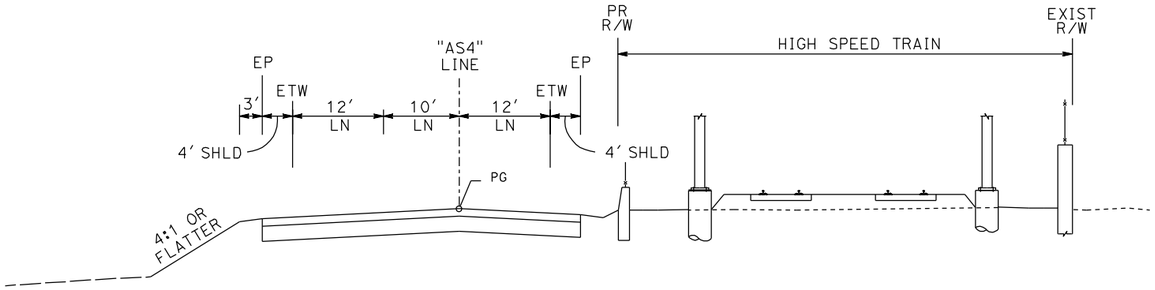
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

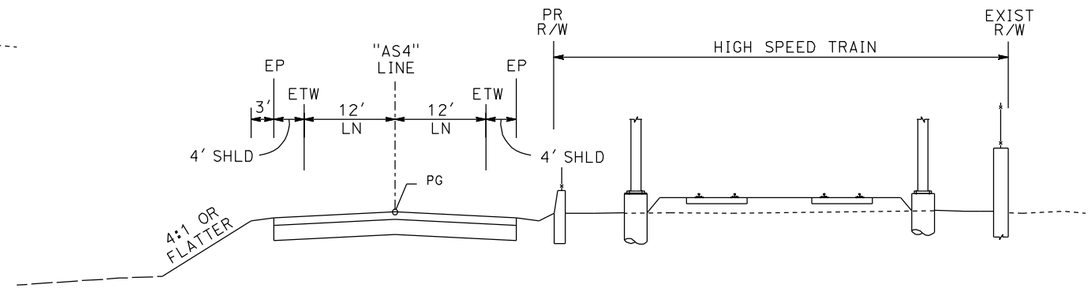
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-13**
SCALE NO SCALE
SHEET NO.

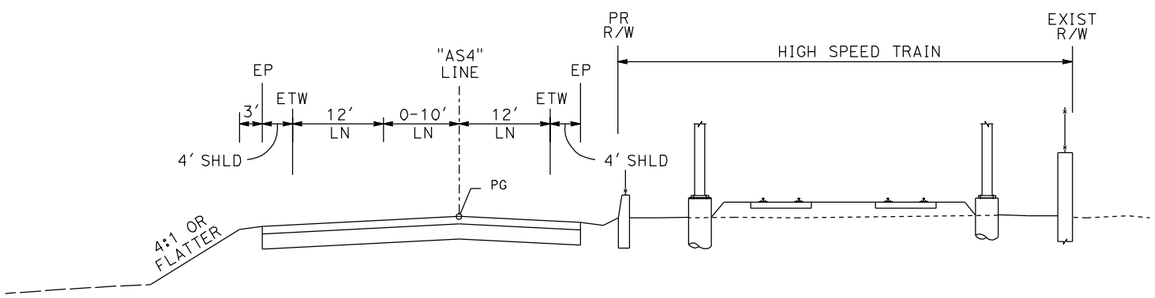
DATE PLOTTED => 26-APR-2011
USERNAME => 1500



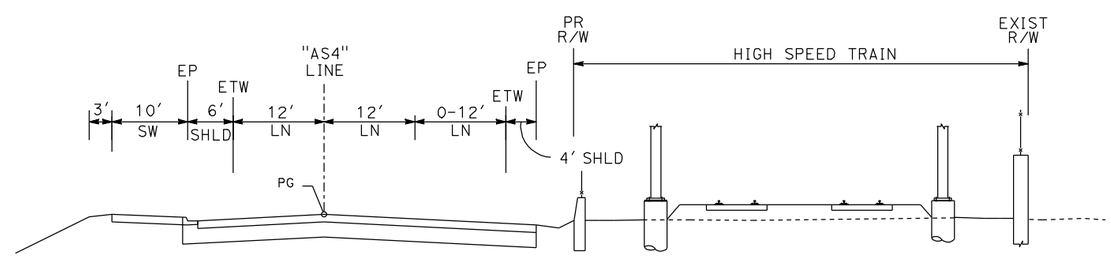
237+72 TO 243+78



245+19 TO 249+52



243+78 TO 245+19



245+19 TO 249+52

AS4 LINE
(NB OFF RAMP AT ASHLAN AVE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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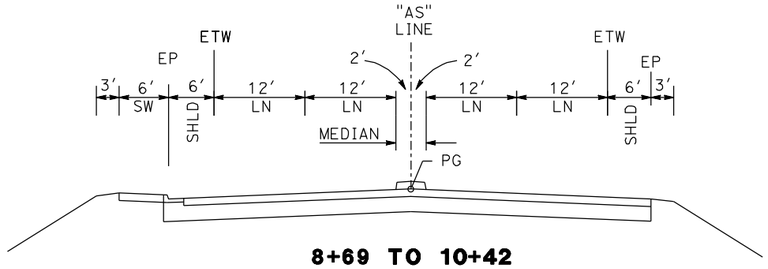
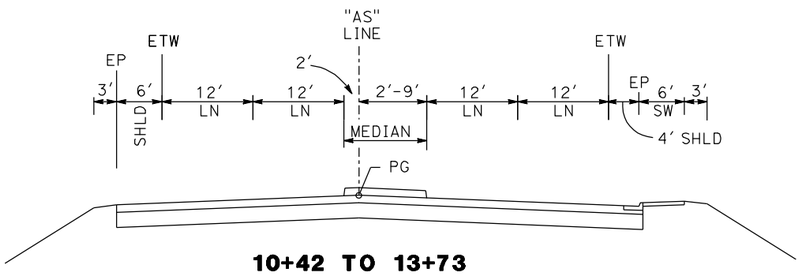
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-14**
SCALE NO SCALE
SHEET NO.

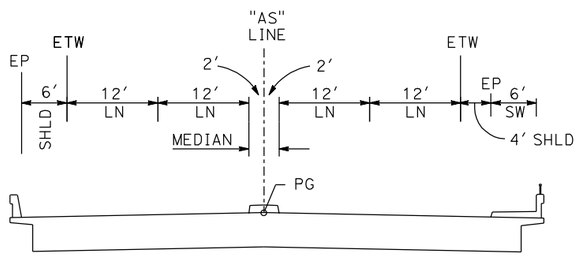
DATE PLOTTED => 26-APR-2011



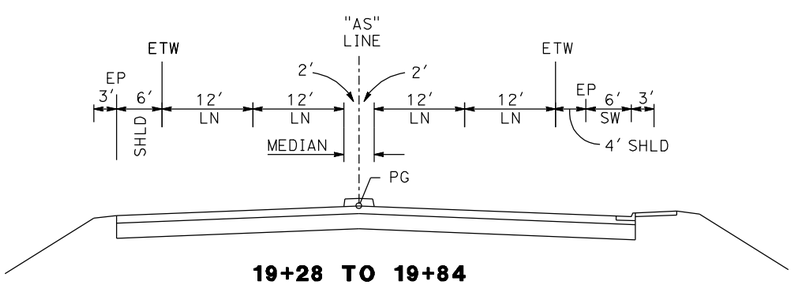
8+69 TO 10+42



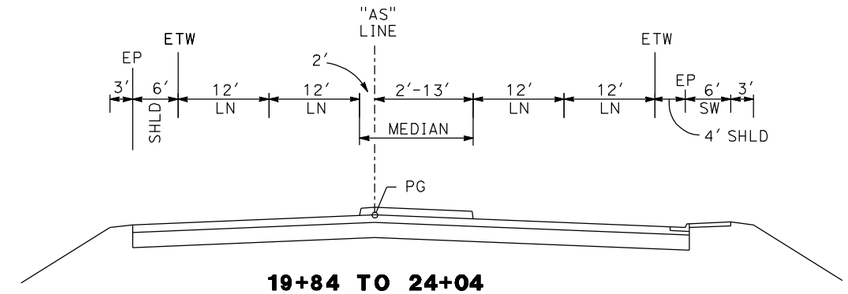
10+42 TO 13+73



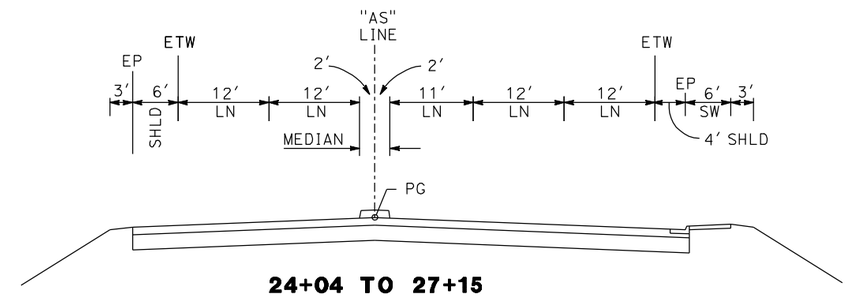
13+73 TO 19+28



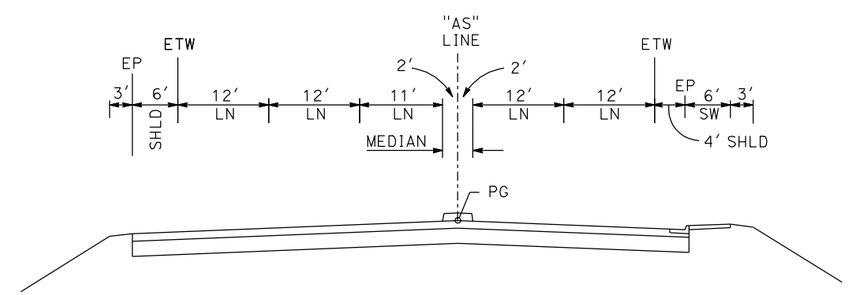
19+28 TO 19+84



19+84 TO 24+04



24+04 TO 27+15



27+15 TO 30+00

ASHLAN AVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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AECOM Technical Services, Inc.
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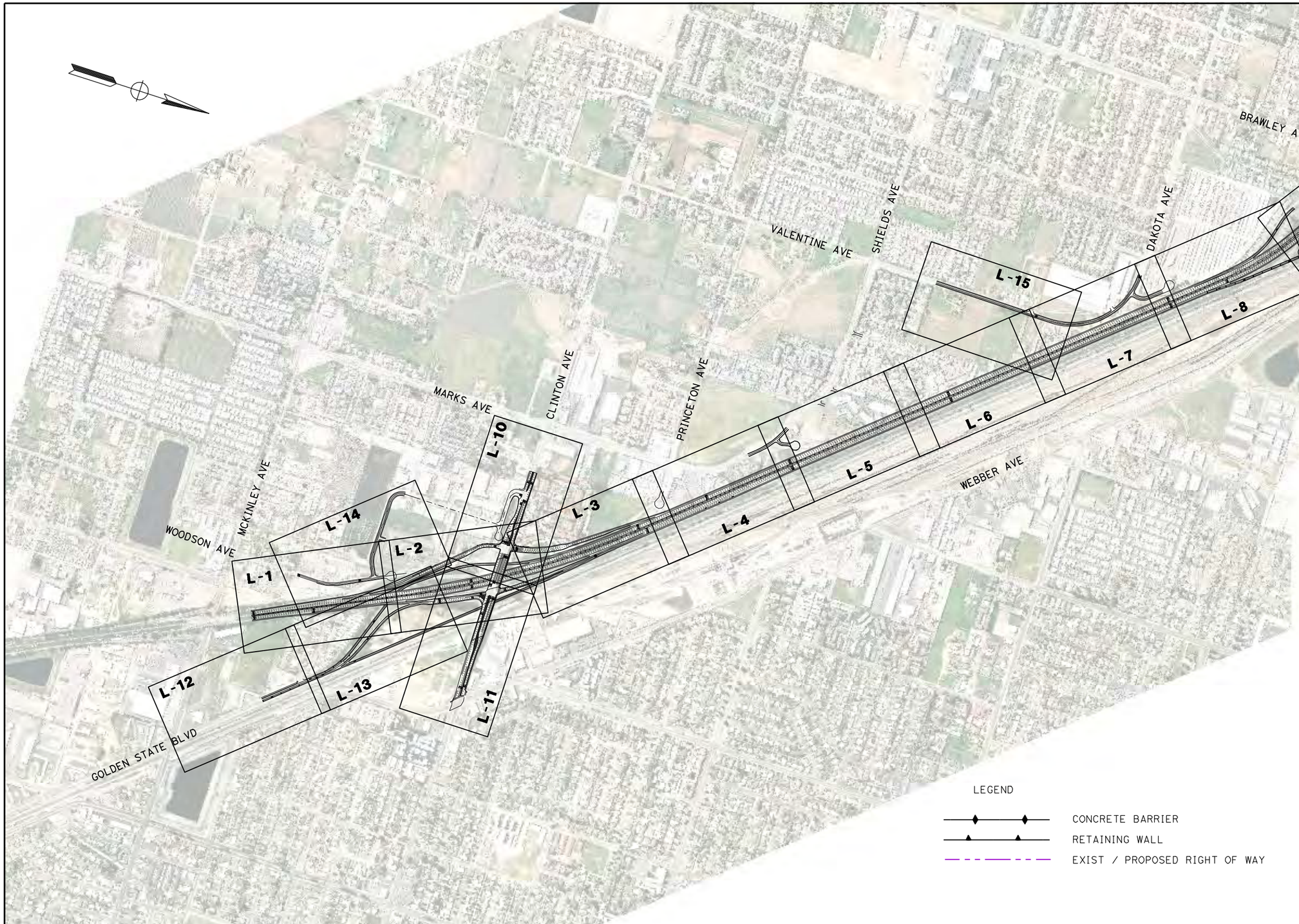
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR06-007
DRAWING NO. **X-15**
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011



ABBREVIATIONS

BC	BEGIN CURVE
BVC	BEGIN VERTICAL CURVE
CG	CURB GUTTER
CL	CENTER LINE
CT	CALTRANS
EC	END CURVE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
HORIZ	HORIZONTAL
HST	HIGH SPEED TRAIL
L	LENGTH
LT	LEFT
NB	NORTHBOUND
OC	OVERCROSSING
OG	ORIGINAL GROUND
PCC	POINT OF COMPOUND CURVE
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PVI	POINT OF VERTICAL INTERSECTION
PR	PROPOSED
PRVC	POINT REVERSE VERTICAL CURVE
R	RADIUS
RT	RIGHT
R/W	RIGHT OF WAY
SB	SOUTHBOUND
SHLD	SHOULDER
SR	STATE ROUTE
SW	SIDEWALK
T	TANGENT
UPRR	UNION PACIFIC RAILROAD

LEGEND

- CONCRETE BARRIER
- RETAINING WALL
- EXIST / PROPOSED RIGHT OF WAY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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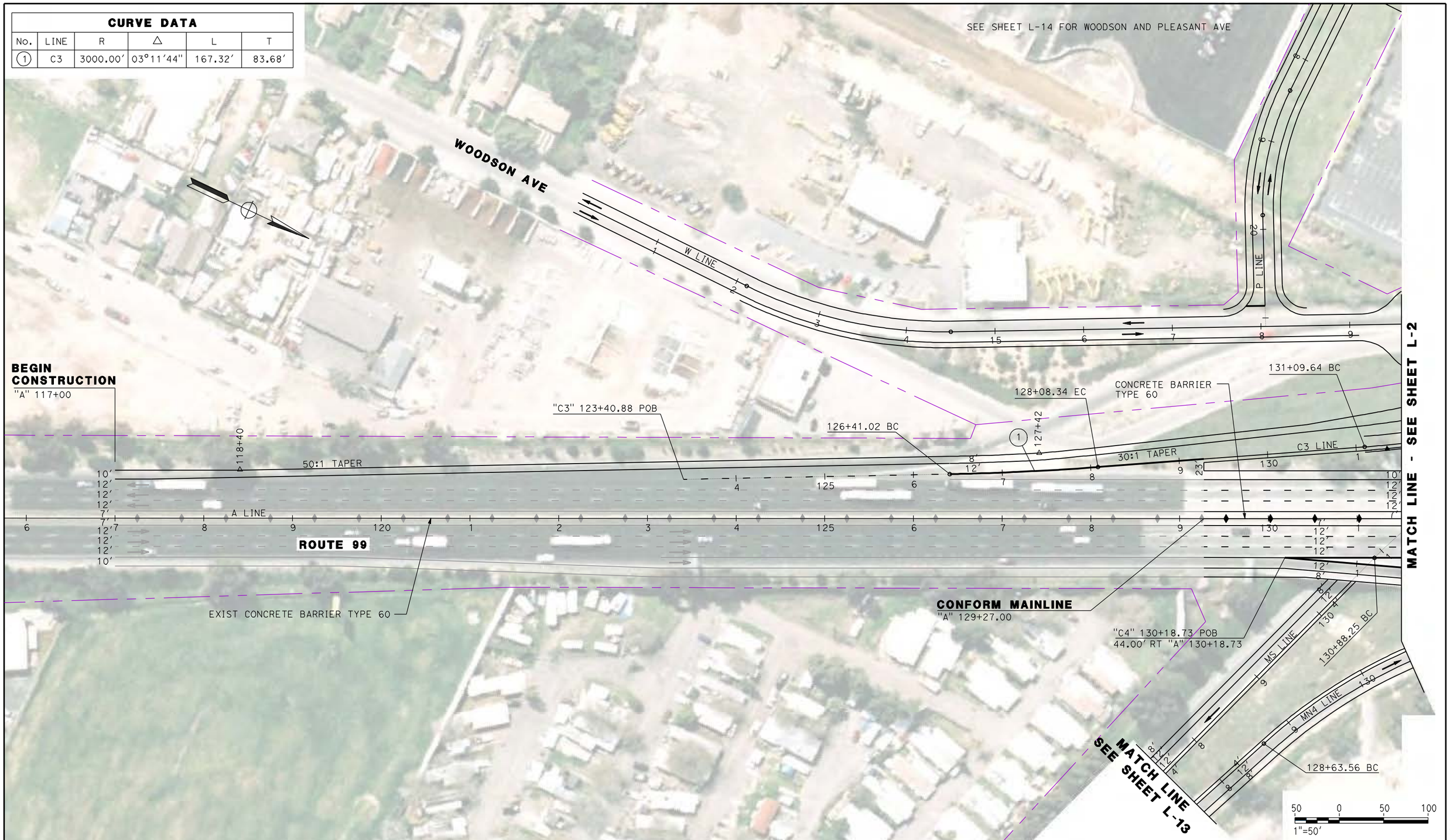
ROUTE 99 RE-ALIGNMENT
KEY MAP

CONTRACT NO. HSR06-007
DRAWING NO. K-1
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => [illegible]

CURVE DATA					
No.	LINE	R	Δ	L	T
1	C3	3000.00′	03°11′44"	167.32′	83.68′



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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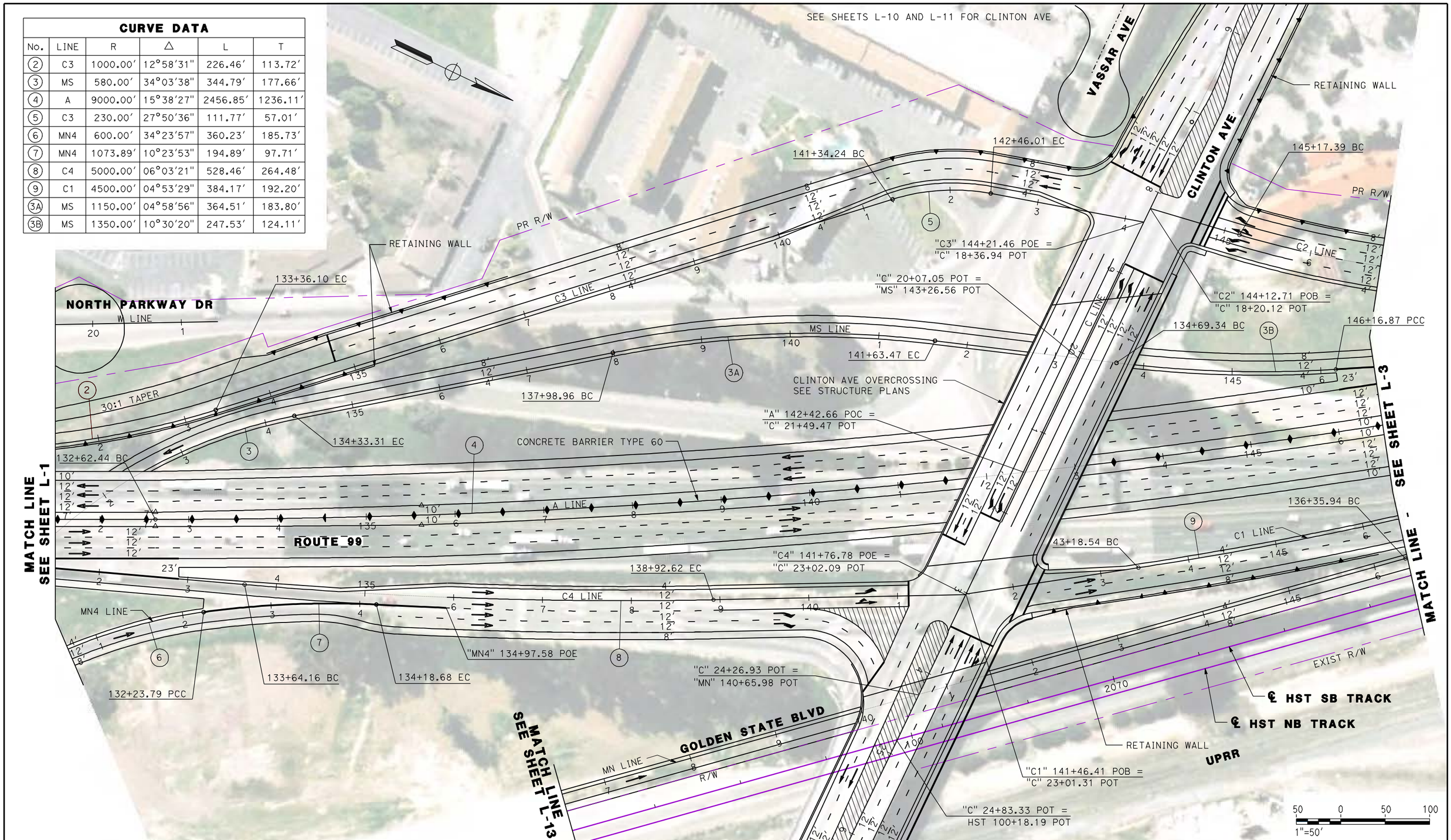
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-1
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS

CURVE DATA					
No.	LINE	R	Δ	L	T
2	C3	1000.00′	12°58′31"	226.46′	113.72′
3	MS	580.00′	34°03′38"	344.79′	177.66′
4	A	9000.00′	15°38′27"	2456.85′	1236.11′
5	C3	230.00′	27°50′36"	111.77′	57.01′
6	MN4	600.00′	34°23′57"	360.23′	185.73′
7	MN4	1073.89′	10°23′53"	194.89′	97.71′
8	C4	5000.00′	06°03′21"	528.46′	264.48′
9	C1	4500.00′	04°53′29"	384.17′	192.20′
3A	MS	1150.00′	04°58′56"	364.51′	183.80′
3B	MS	1350.00′	10°30′20"	247.53′	124.11′



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
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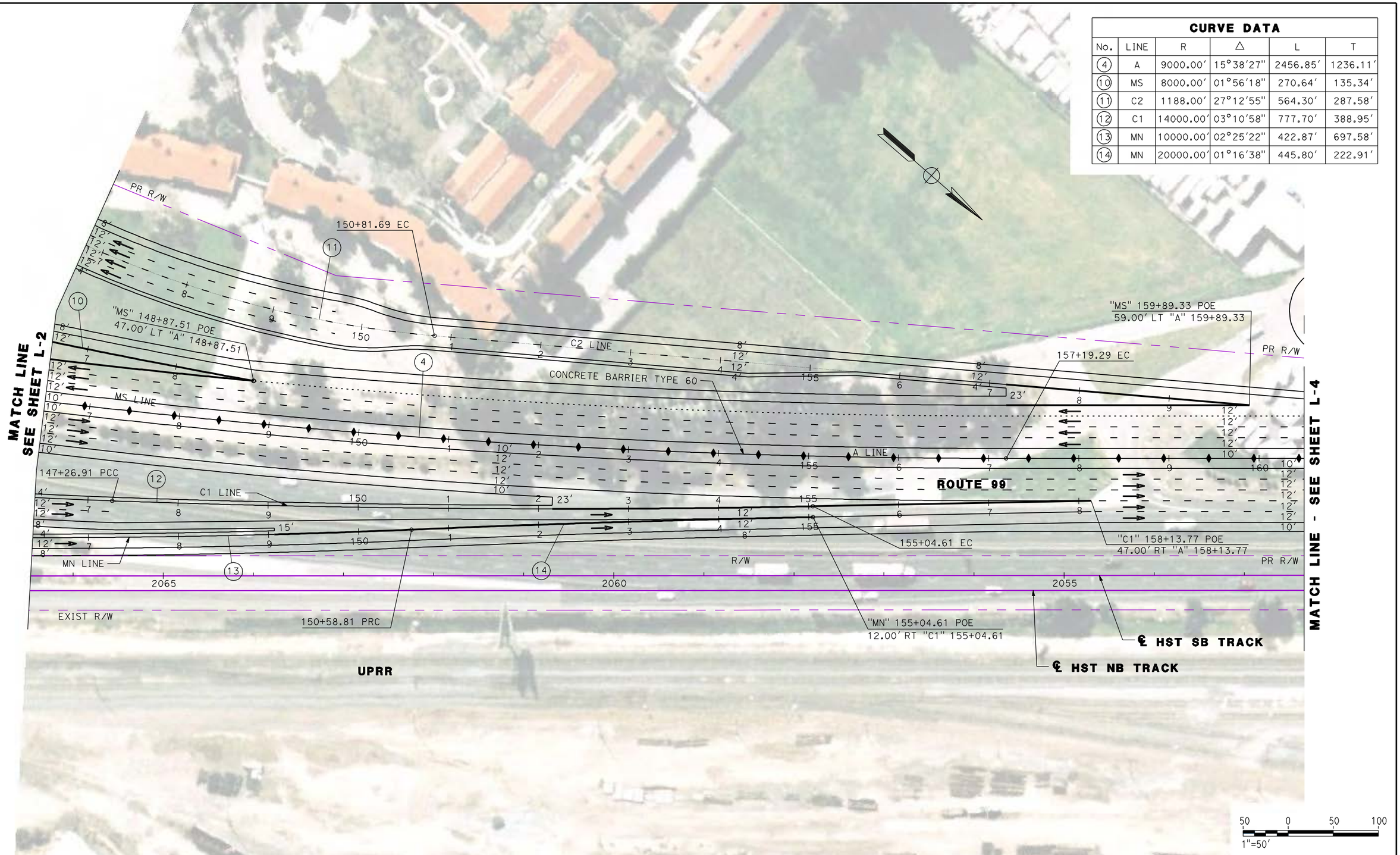
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-2
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	Δ	L	T
4	A	9000.00′	15°38′27″	2456.85′	1236.11′
10	MS	8000.00′	01°56′18″	270.64′	135.34′
11	C2	1188.00′	27°12′55″	564.30′	287.58′
12	C1	14000.00′	03°10′58″	777.70′	388.95′
13	MN	10000.00′	02°25′22″	422.87′	697.58′
14	MN	20000.00′	01°16′38″	445.80′	222.91′



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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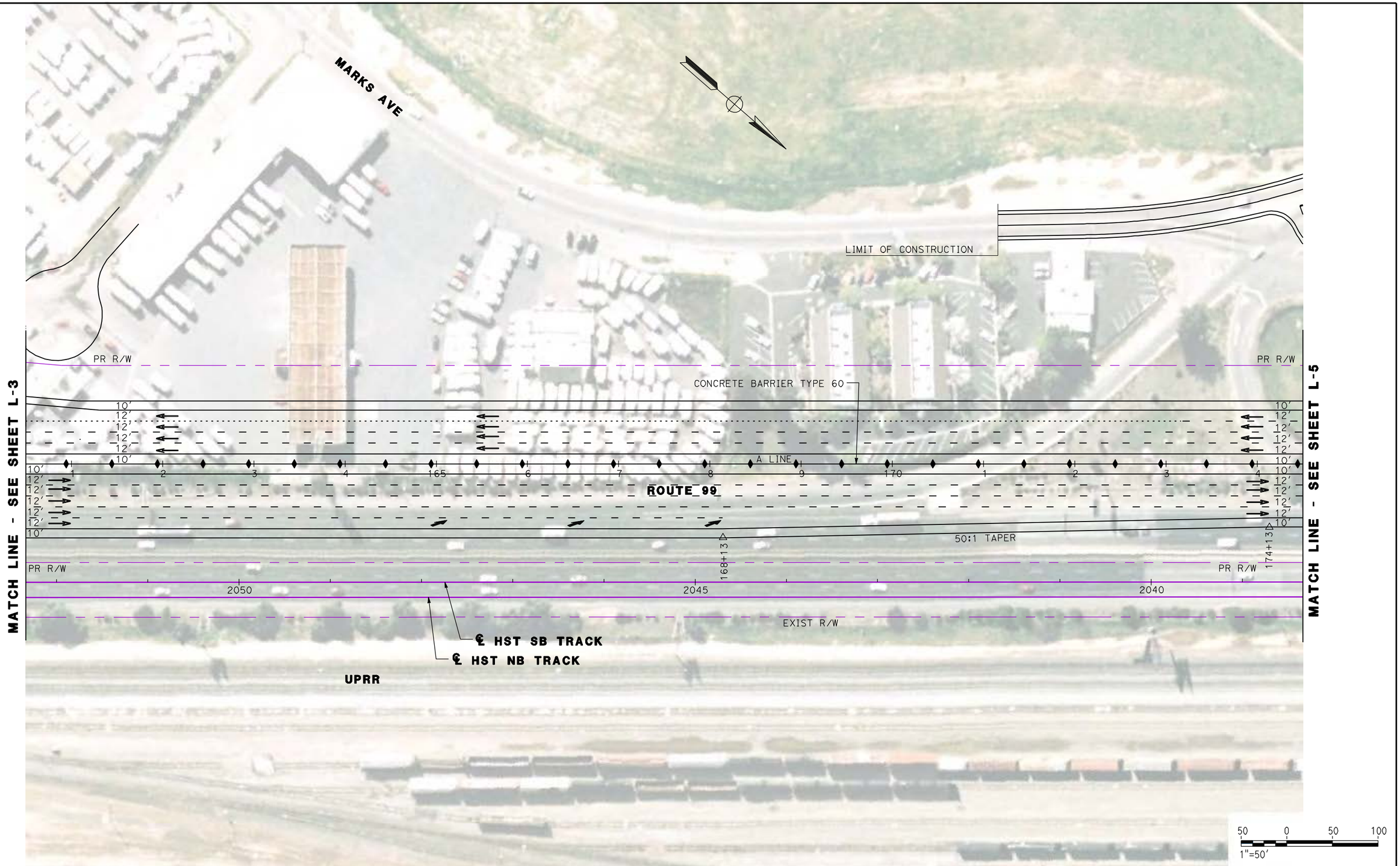
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-3
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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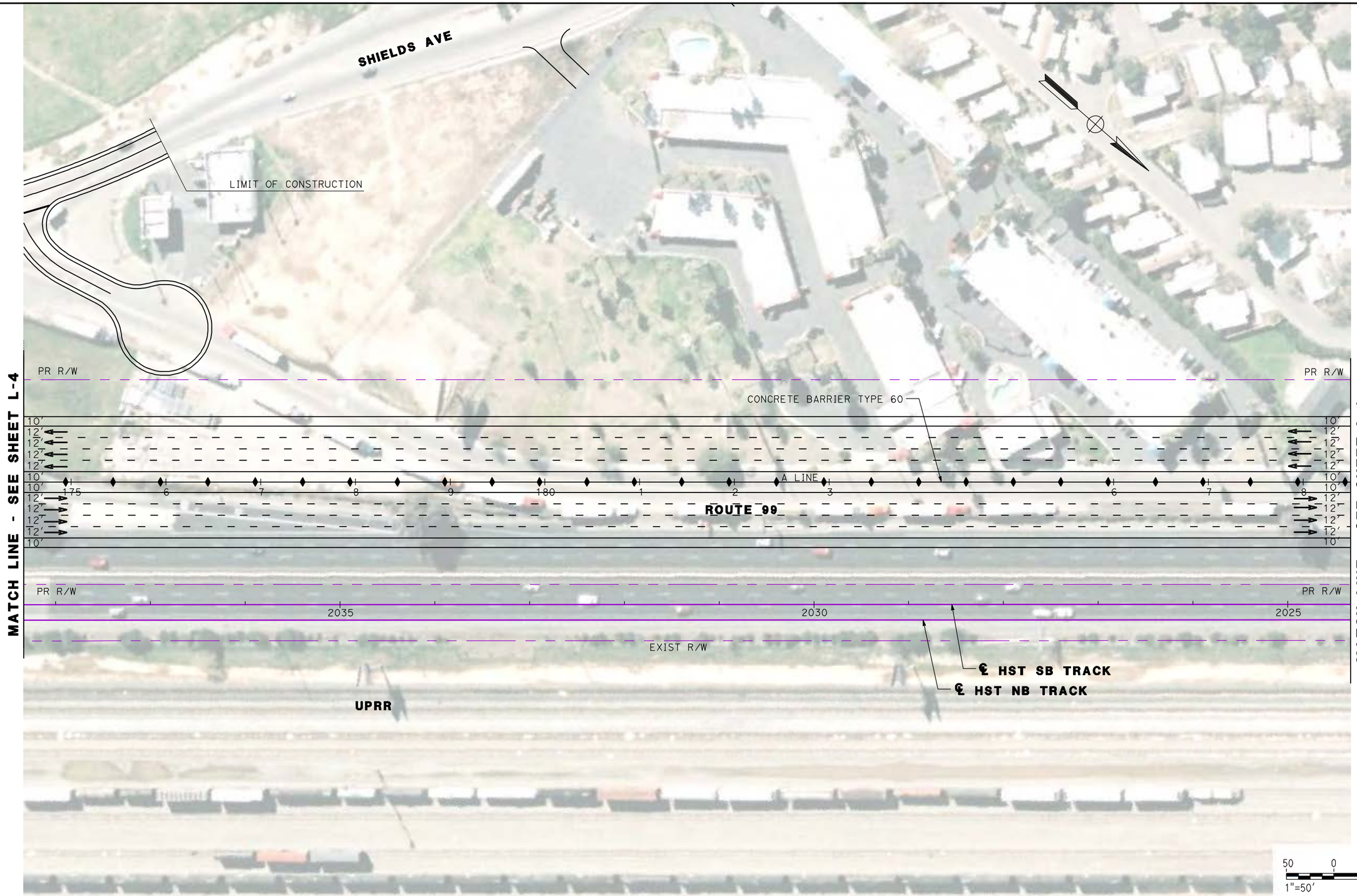
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-4
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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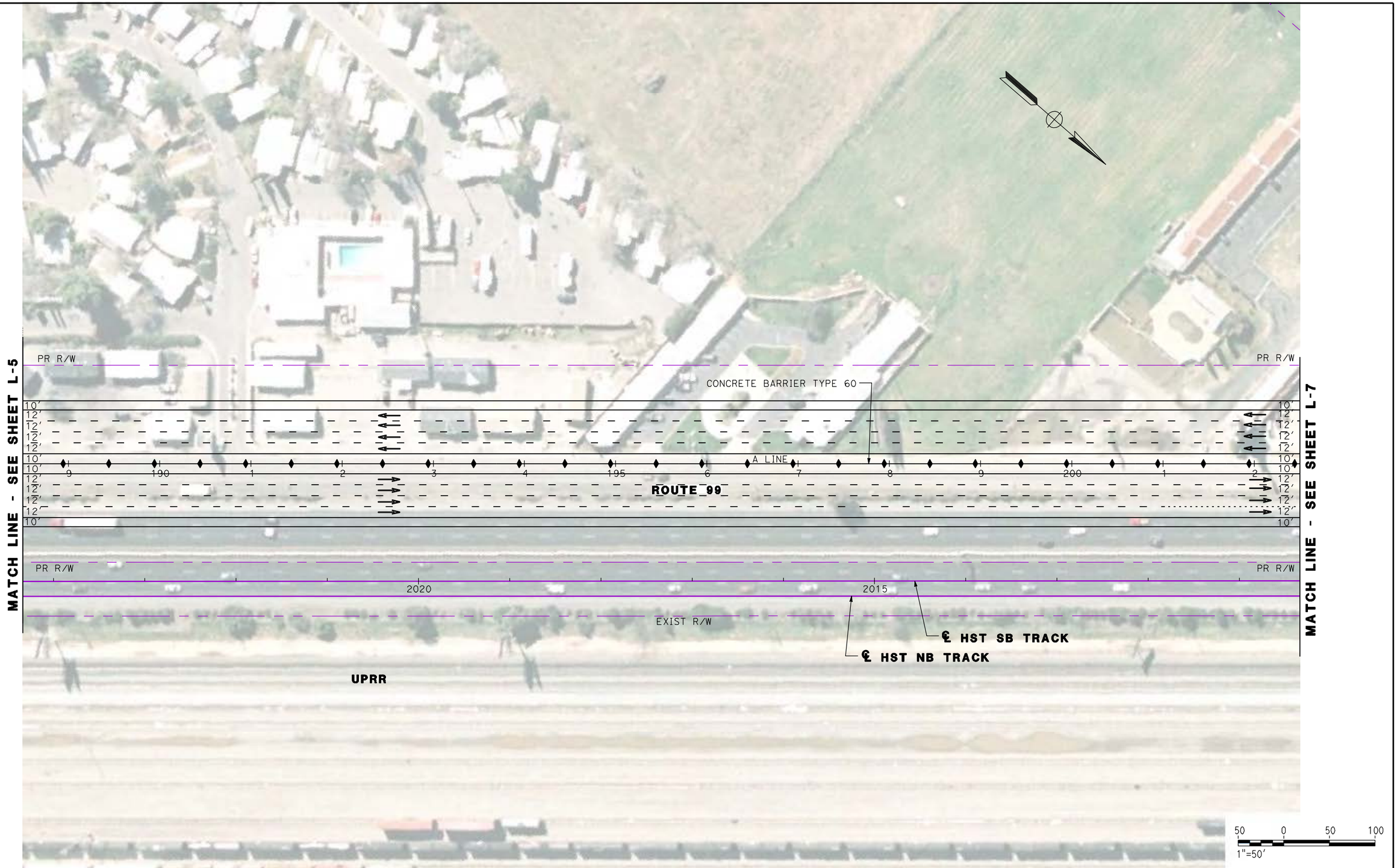
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. **L-5**
SCALE AS SHOWN
SHEET NO.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
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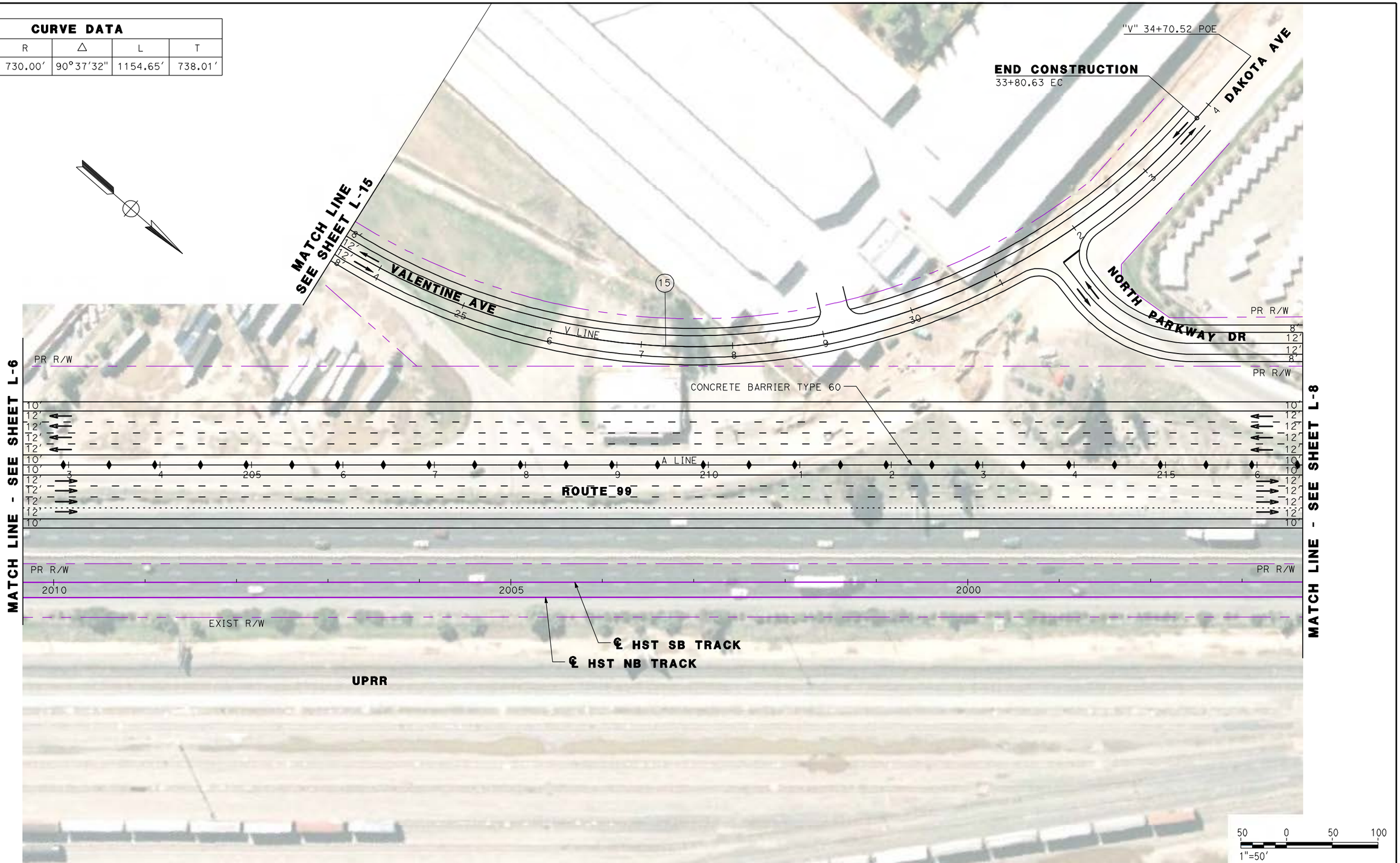
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-6
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	Δ	L	T
15	V	730.00′	90°37′32"	1154.65′	738.01′



REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY L. ROS
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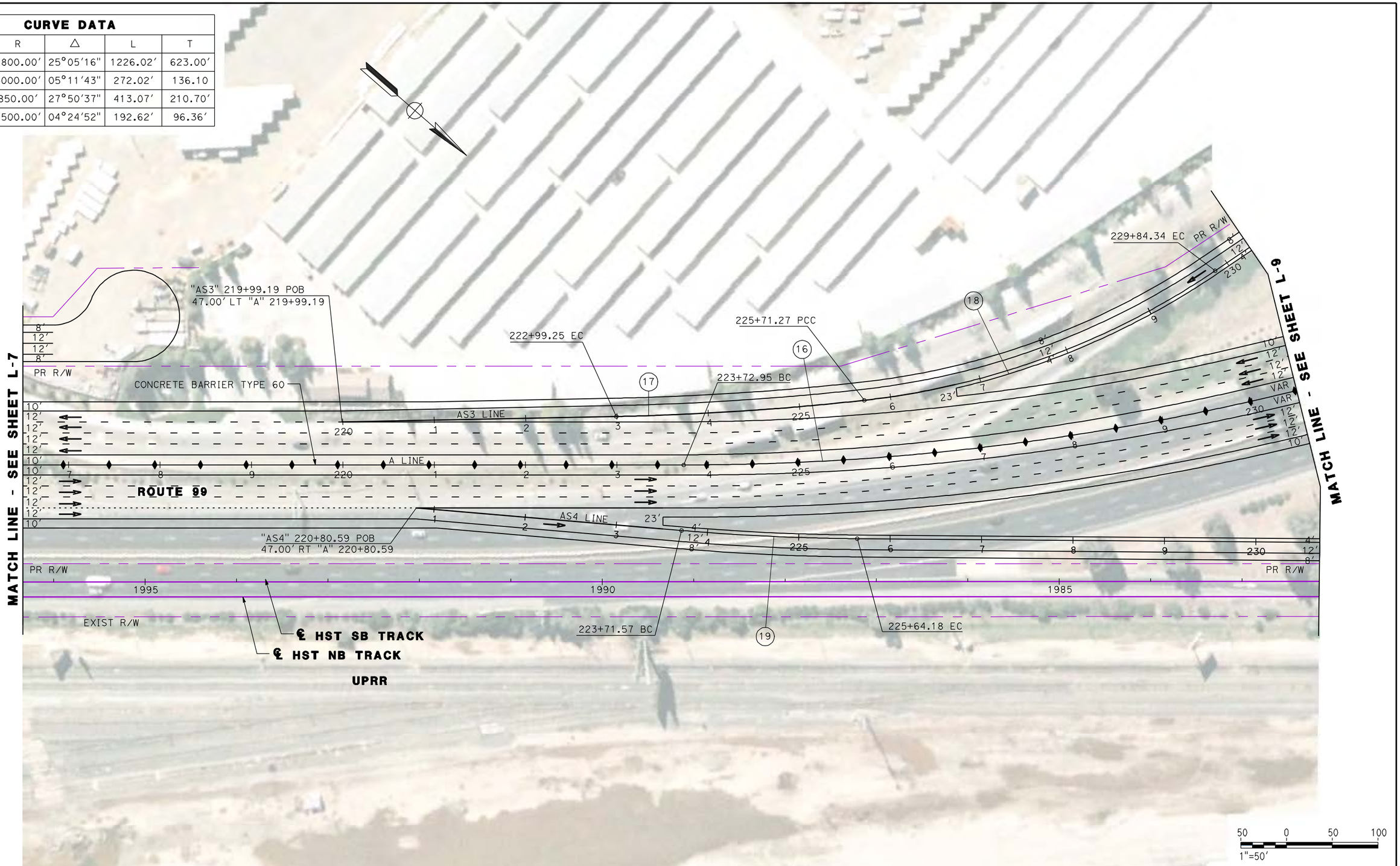
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-7
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	△	L	T
16	A	2800.00′	25°05′16"	1226.02′	623.00′
17	AS3	3000.00′	05°11′43"	272.02′	136.10
18	AS3	850.00′	27°50′37"	413.07′	210.70′
19	AS4	2500.00′	04°24′52"	192.62′	96.36′



REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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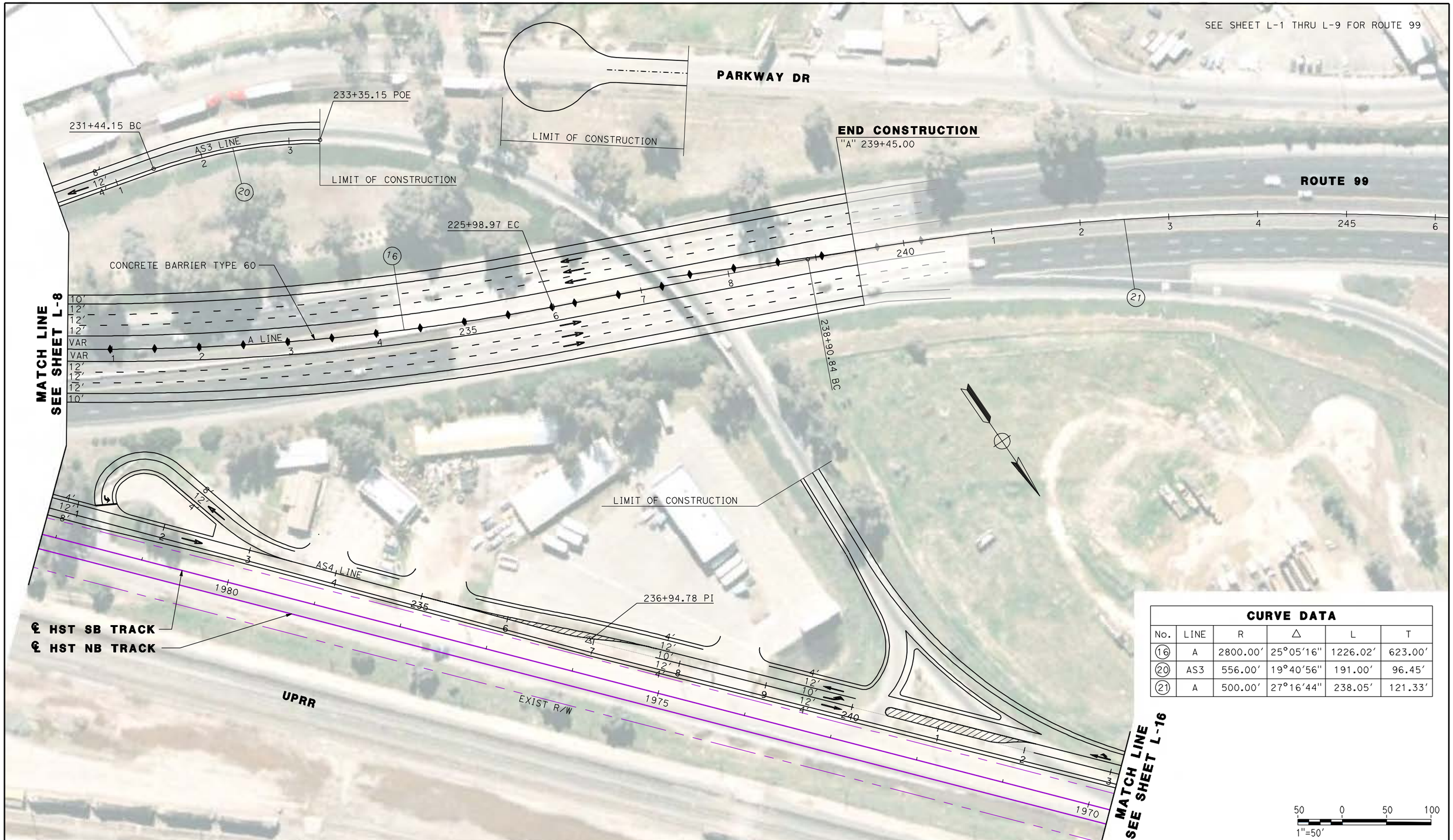
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-8
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



CURVE DATA					
No.	LINE	R	Δ	L	T
16	A	2800.00′	25°05′16″	1226.02′	623.00′
20	AS3	556.00′	19°40′56″	191.00′	96.45′
21	A	500.00′	27°16′44″	238.05′	121.33′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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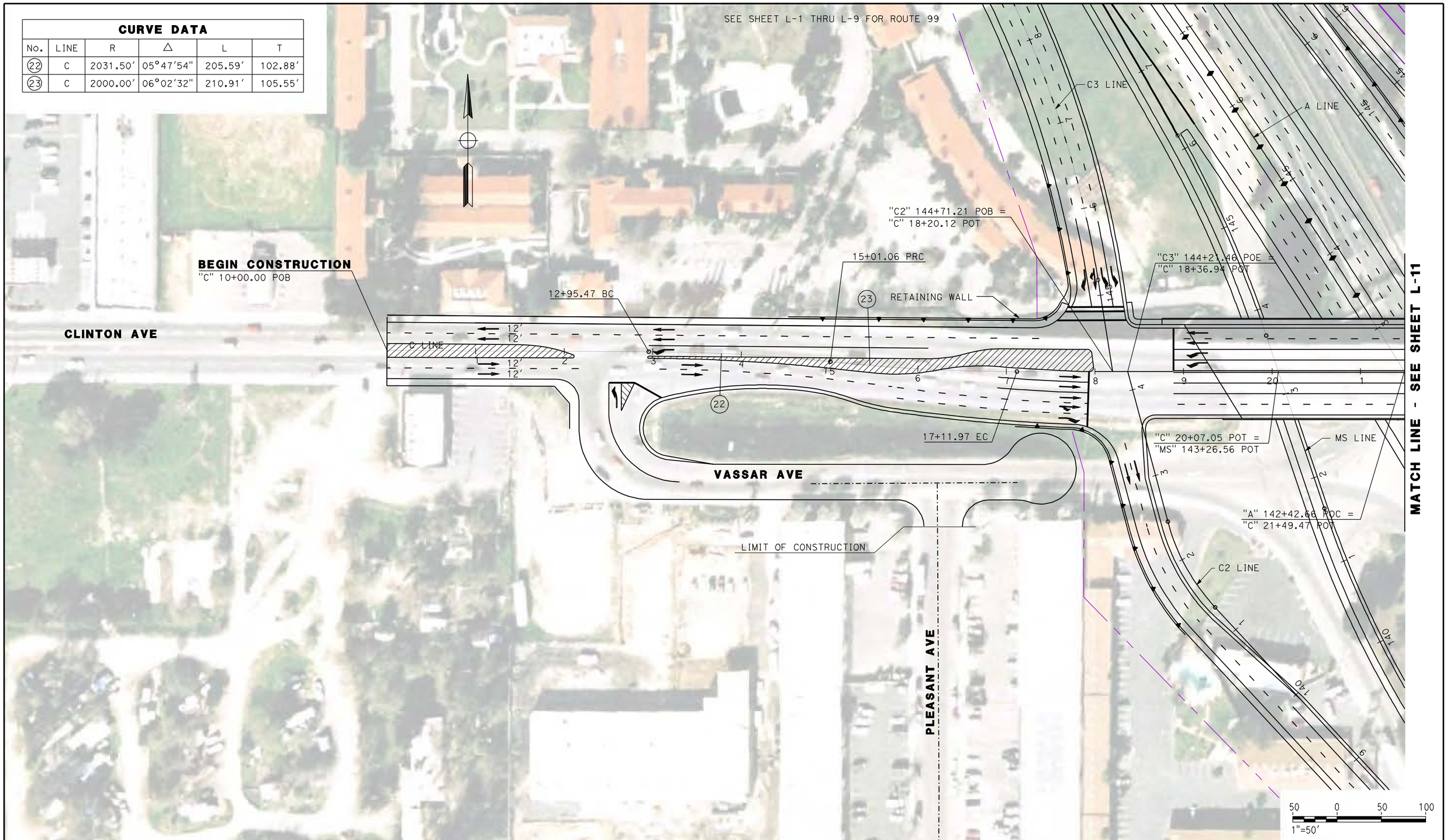
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-9
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	Δ	L	T
22	C	2031.50′	05°47′54"	205.59′	102.88′
23	C	2000.00′	06°02′32"	210.91′	105.55′



REV	DATE	BY	CHK	APP	DESCRIPTION

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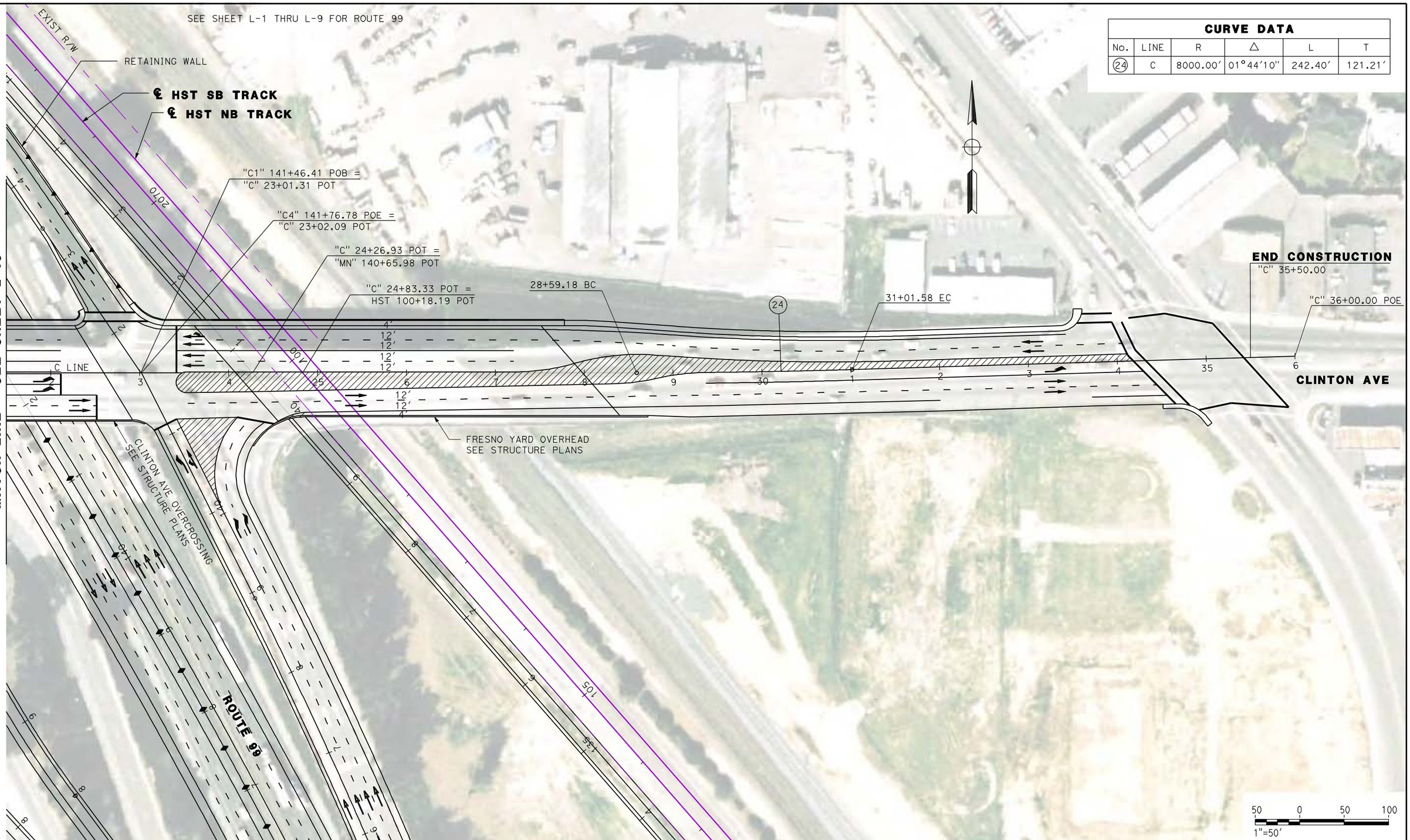
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-10
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	Δ	L	T
24	C	8000.00′	01°44′10″	242.40′	121.21′



REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE J. MATSUI-DRURY
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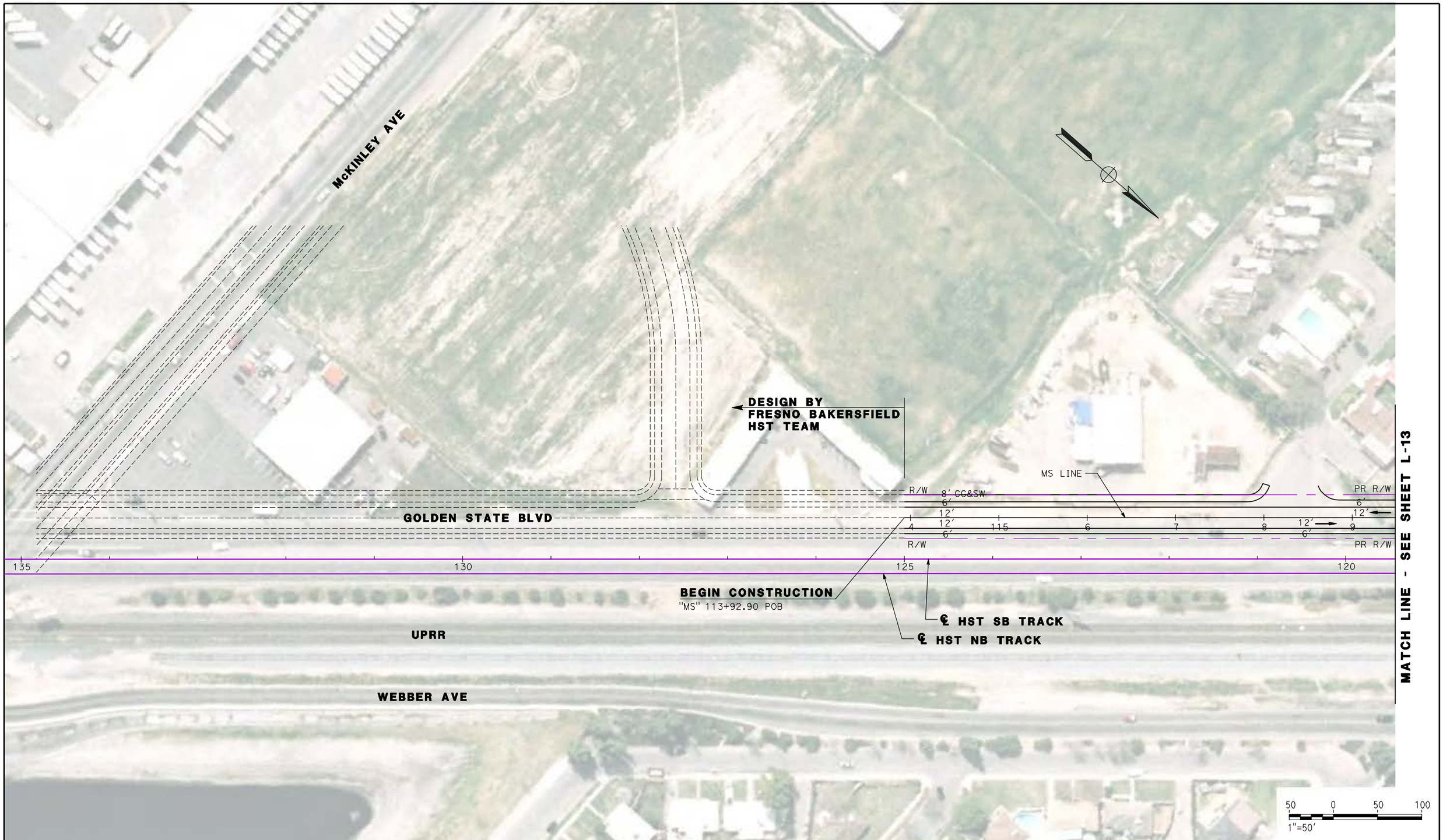
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-11
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

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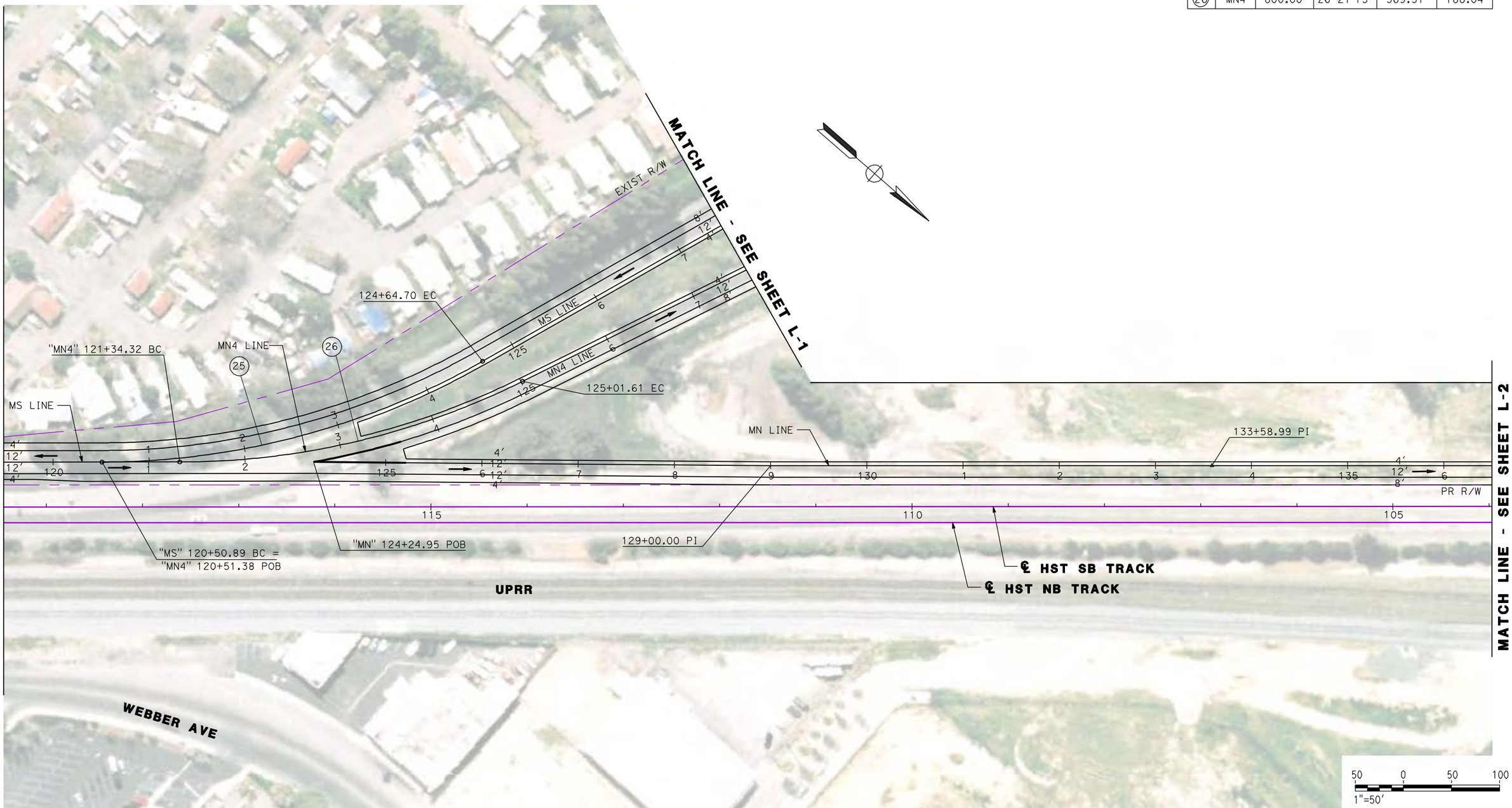
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-12
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => LROS

CURVE DATA					
No.	LINE	R	△	L	T
25	MS	800.00′	29°28′13″	413.81′	211.65′
26	MN4	800.00′	26°27′15″	369.37′	188.04′



REV	DATE	BY	CHK	APP	DESCRIPTION

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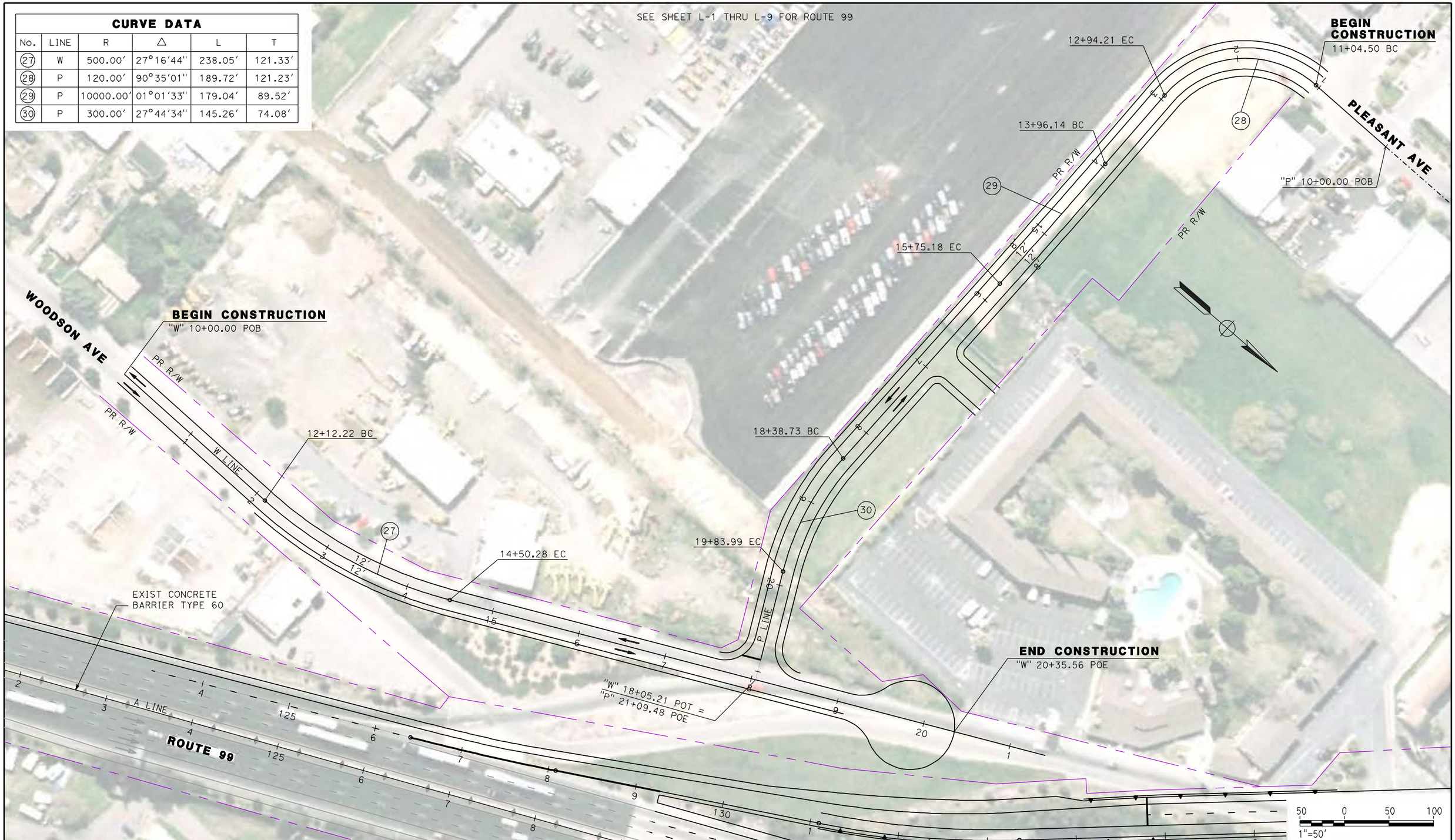
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-13
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS

CURVE DATA					
No.	LINE	R	△	L	T
27	W	500.00′	27°16′44″	238.05′	121.33′
28	P	120.00′	90°35′01″	189.72′	121.23′
29	P	10000.00′	01°01′33″	179.04′	89.52′
30	P	300.00′	27°44′34″	145.26′	74.08′



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SCALE AS SHOWN
SHEET NO.

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

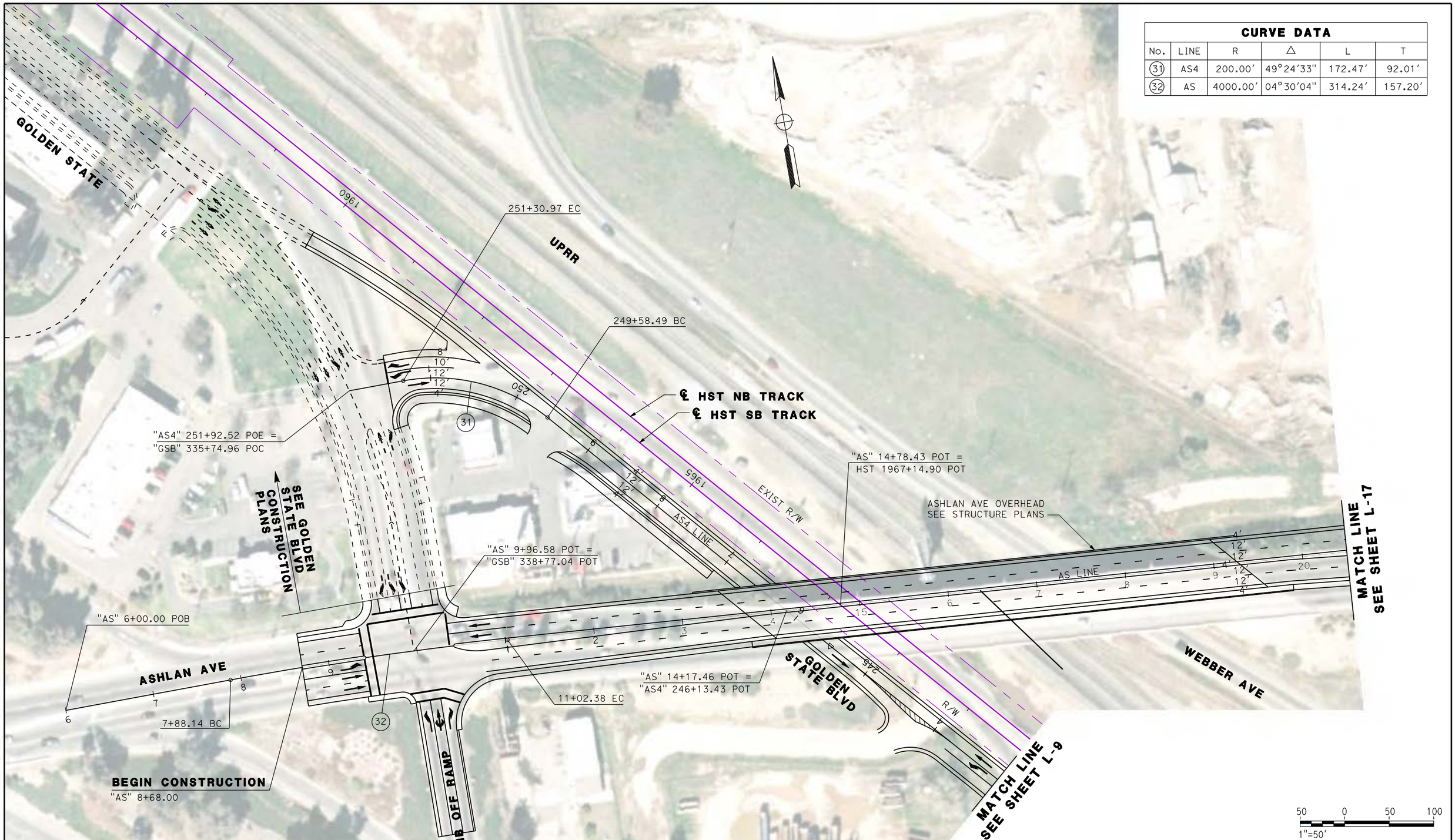
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. **L-15**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

CURVE DATA					
No.	LINE	R	△	L	T
31	AS4	200.00′	49°24′33″	172.47′	92.01′
32	AS	4000.00′	04°30′04″	314.24′	157.20′



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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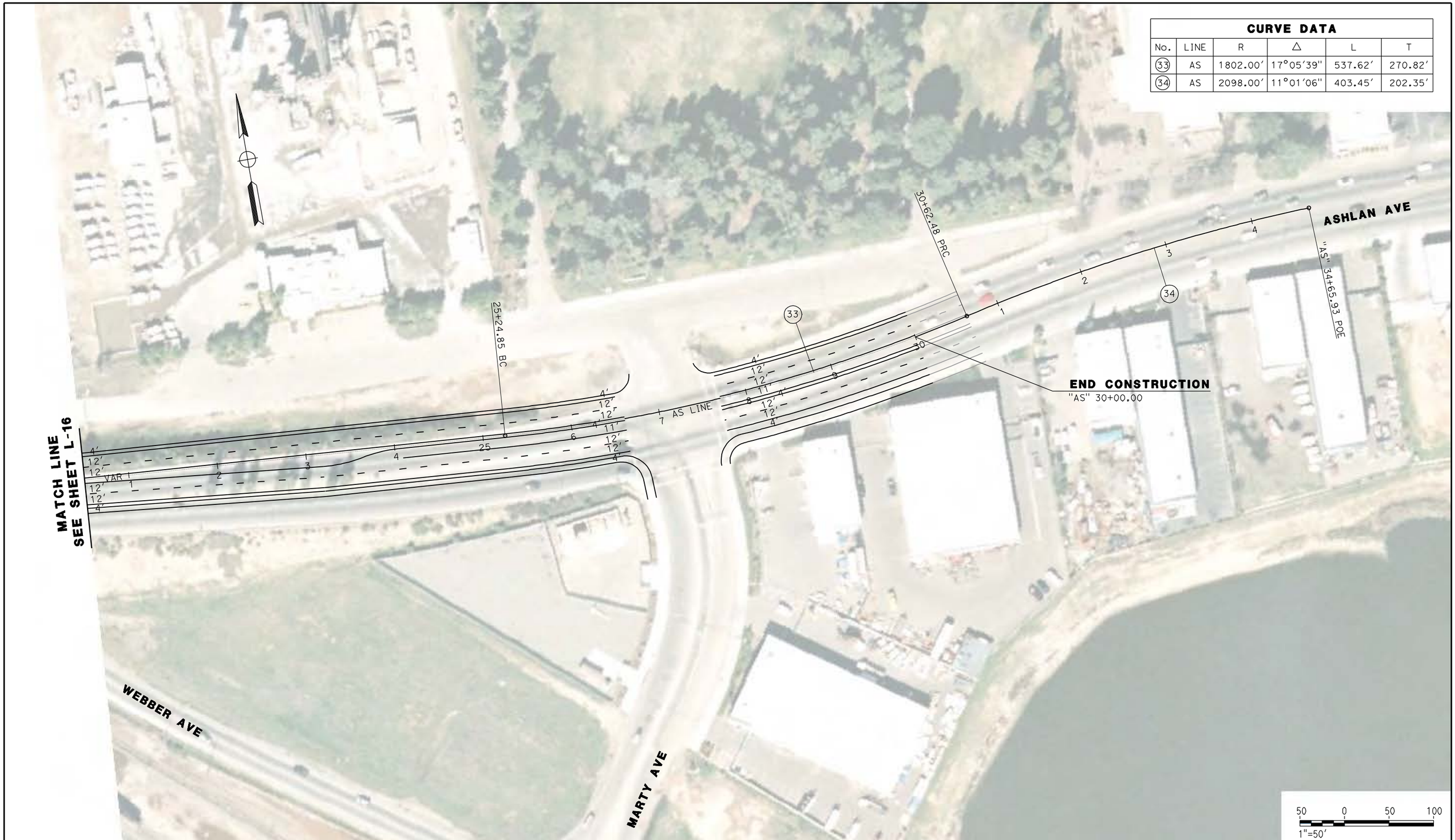
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-16
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 29-APR-2011
USERNAME => L.ROS

CURVE DATA					
No.	LINE	R	Δ	L	T
33	AS	1802.00′	17°05′39″	537.62′	270.82′
34	AS	2098.00′	11°01′06″	403.45′	202.35′



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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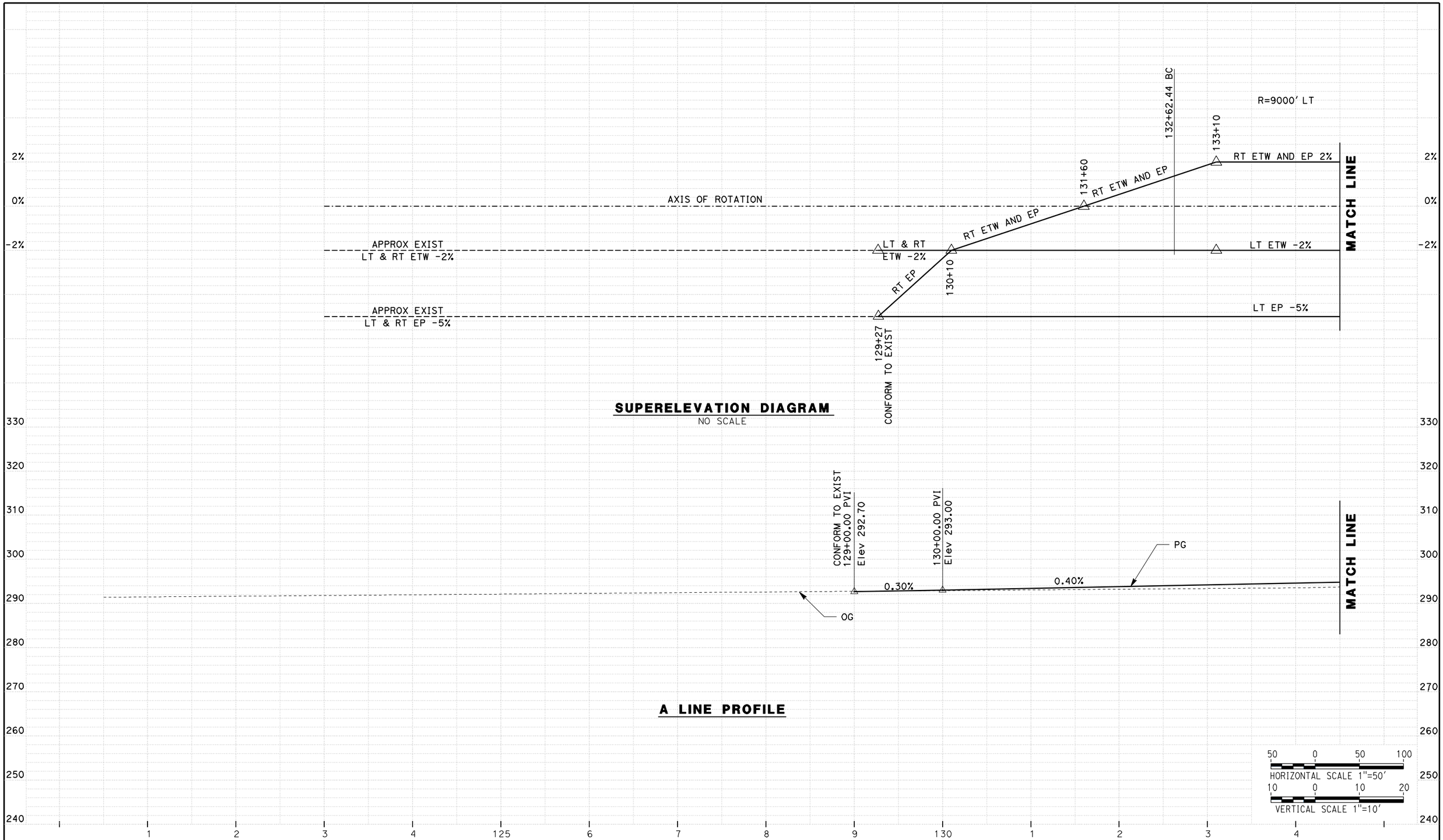
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. L-17
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L700



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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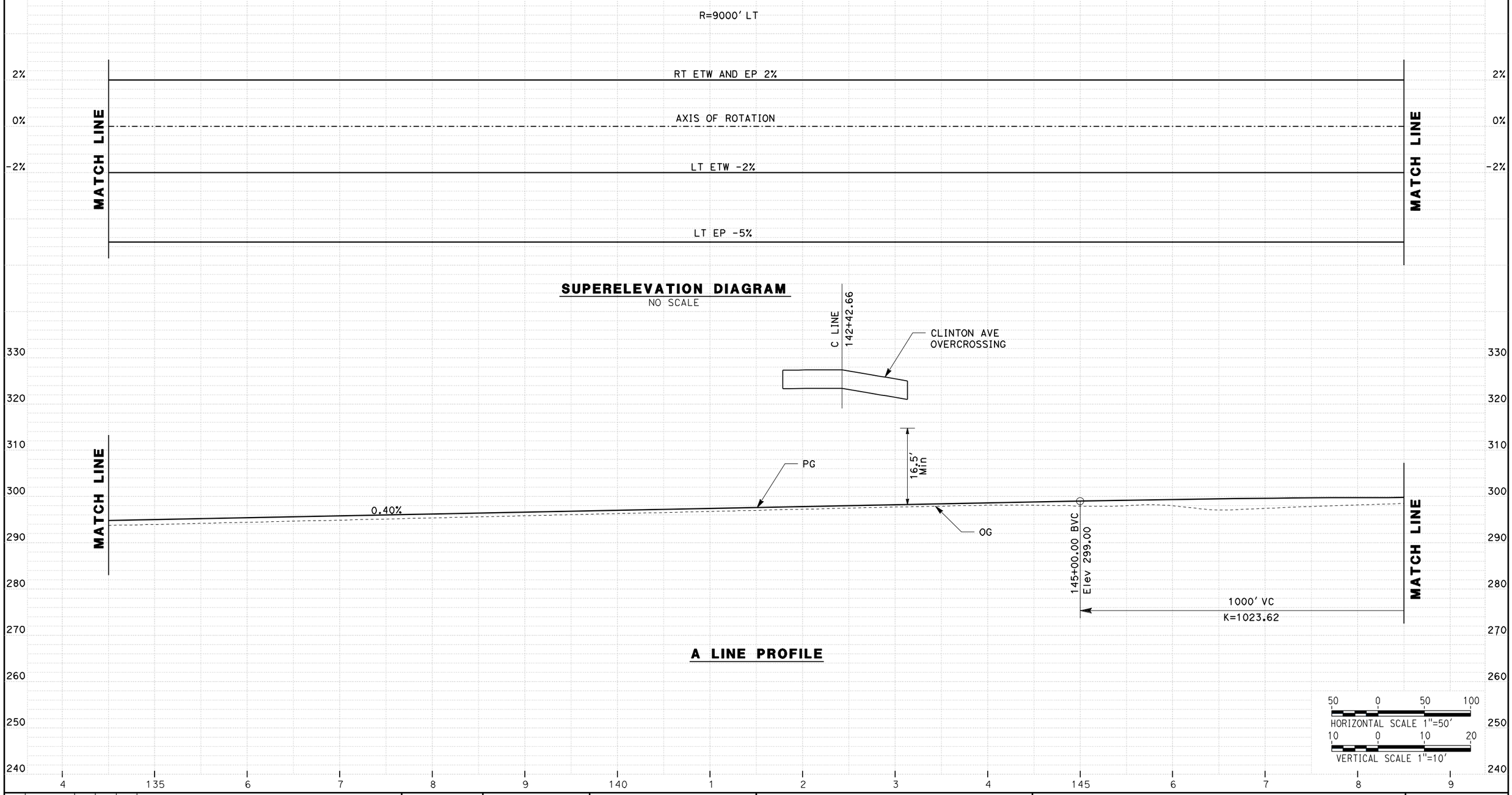
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-1**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
SUBMITTAL

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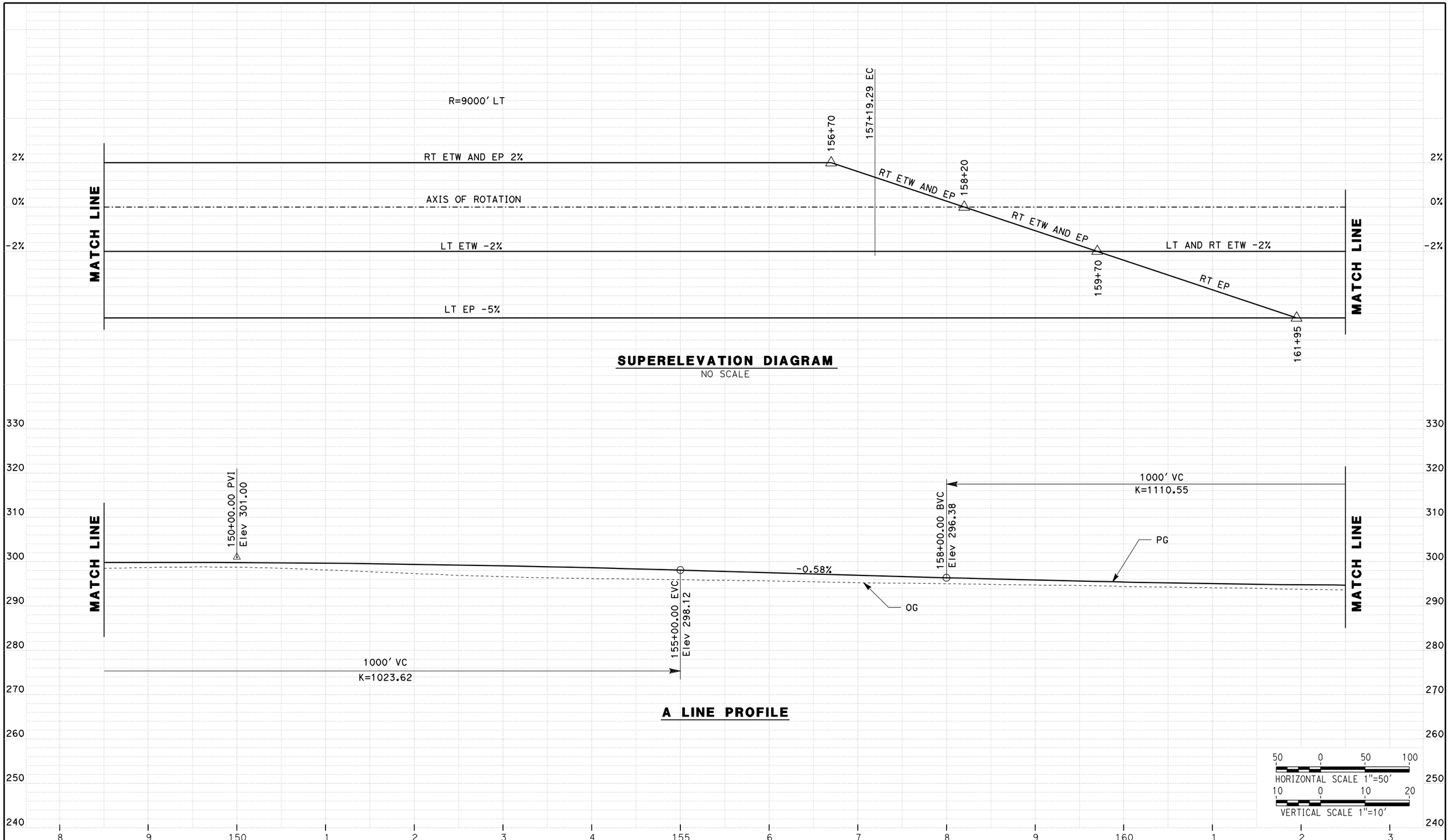
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-2**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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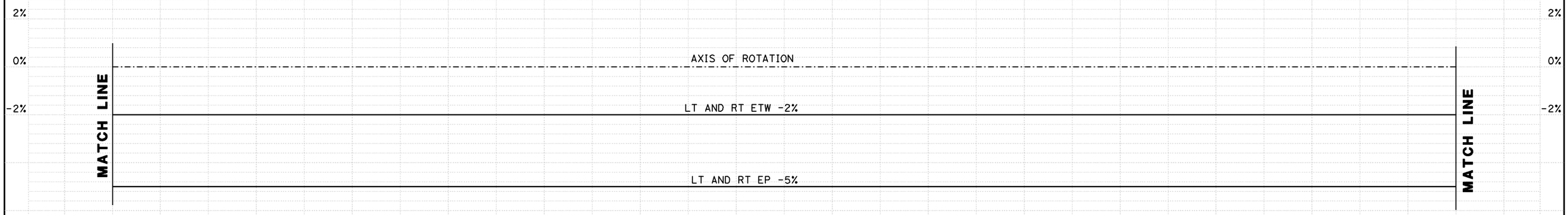
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

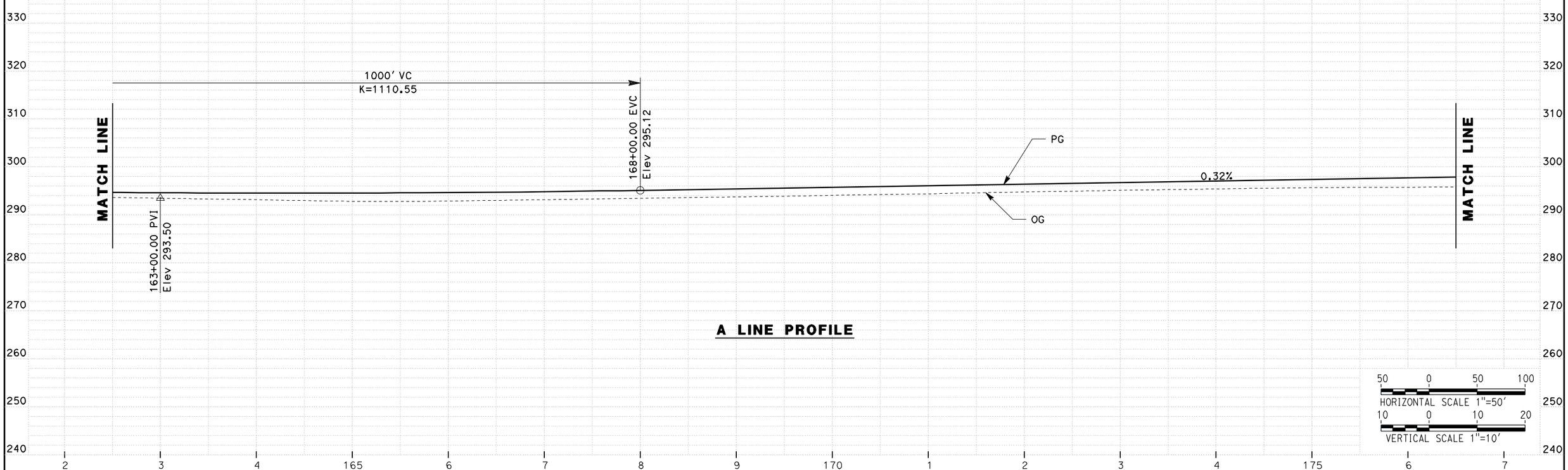
CONTRACT NO. HSR06-007
DRAWING NO. **P-3**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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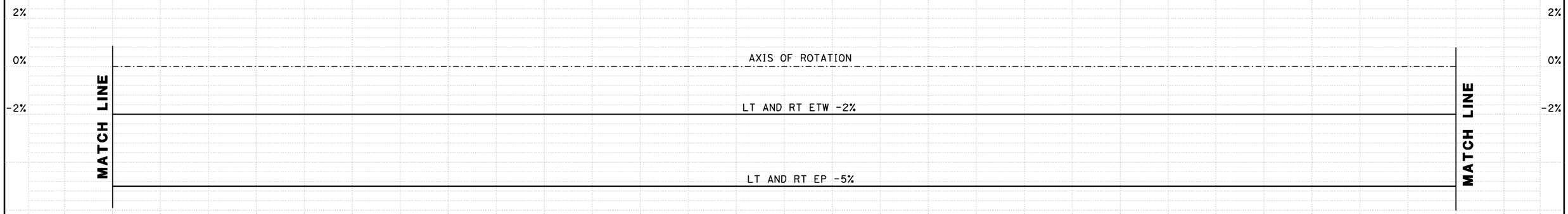
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

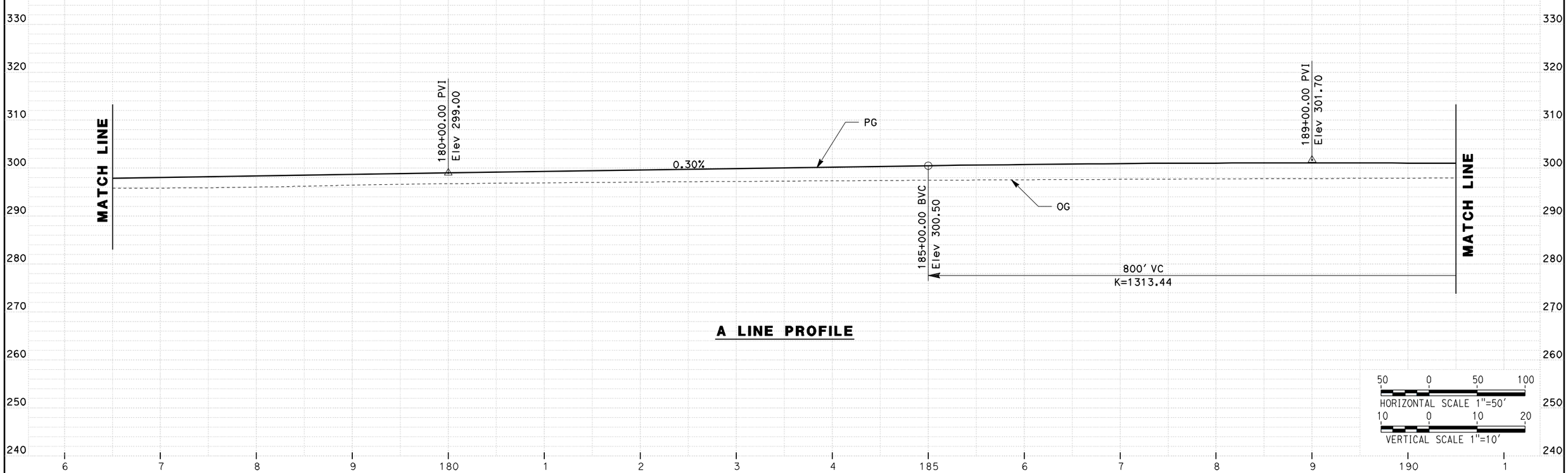
CONTRACT NO. HSR06-007
DRAWING NO. P-4
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM

NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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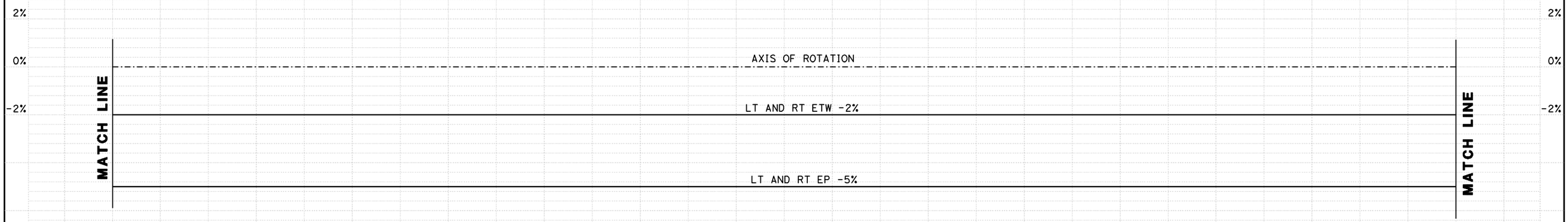
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

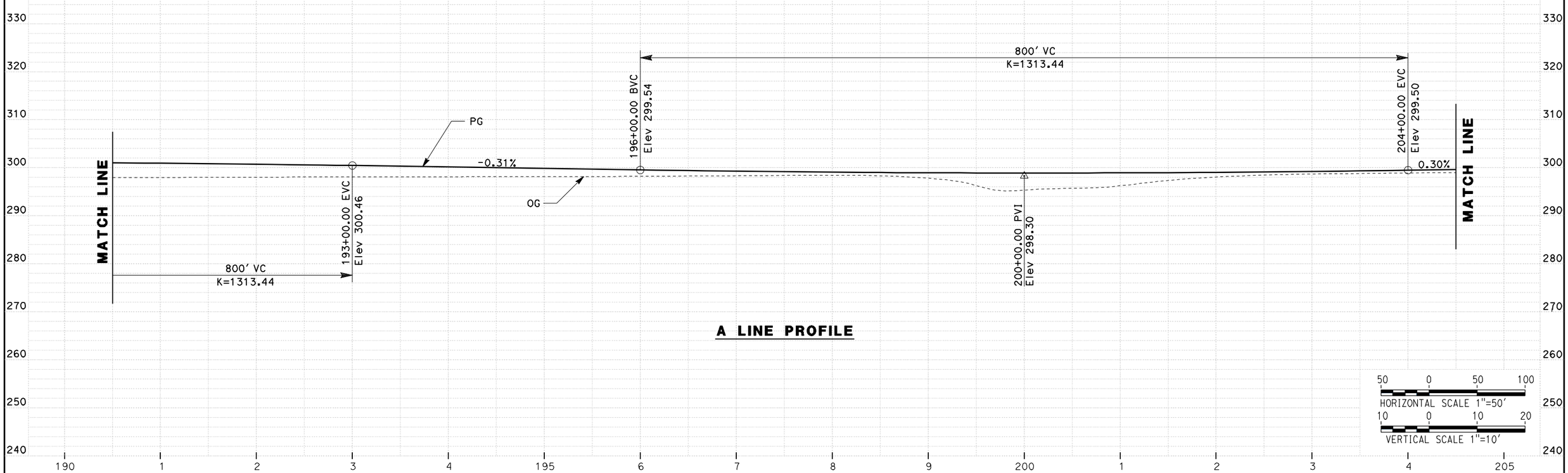
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-5**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM
NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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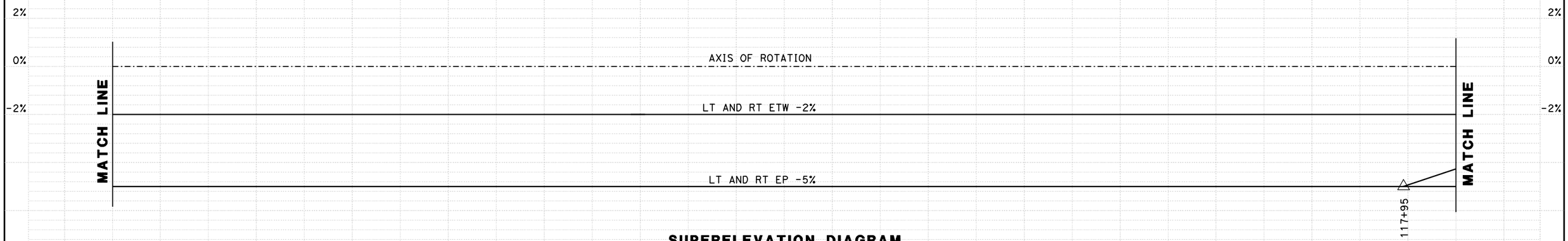
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

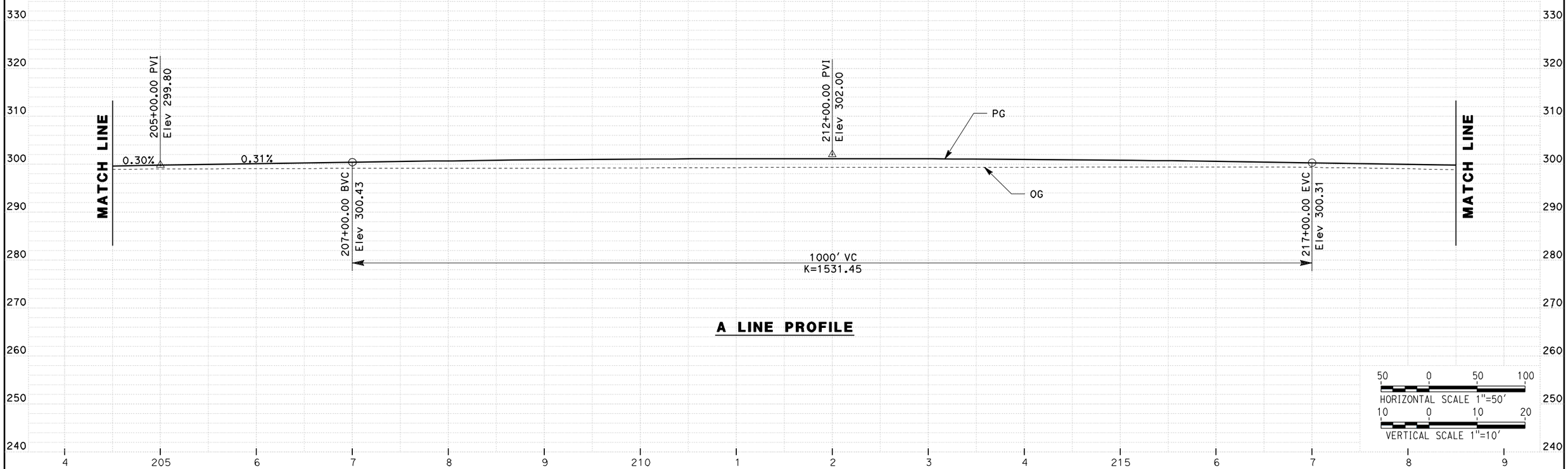
CONTRACT NO. HSR06-007
DRAWING NO. P-6
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM

NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
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CONSTRUCTION

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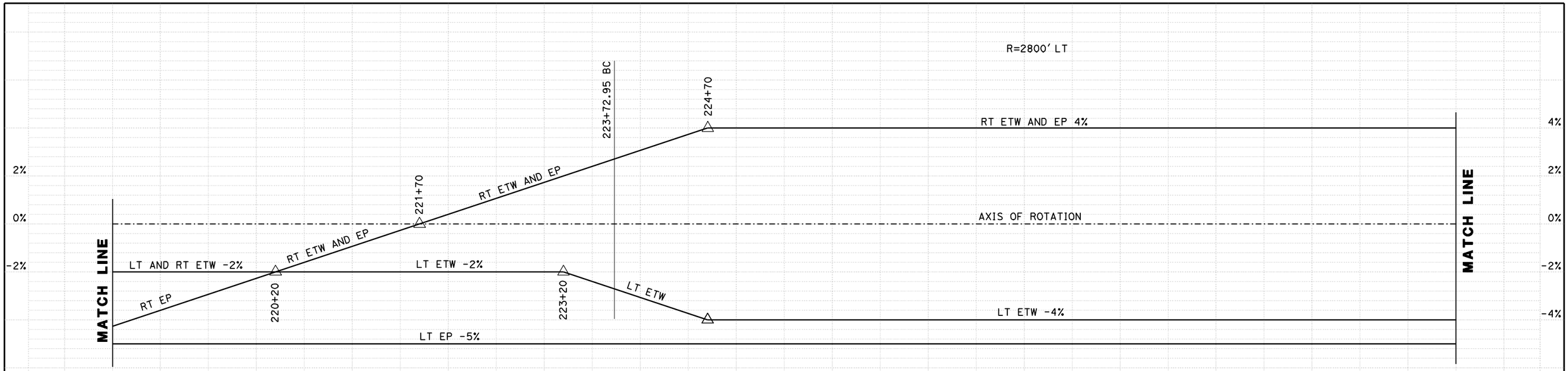
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

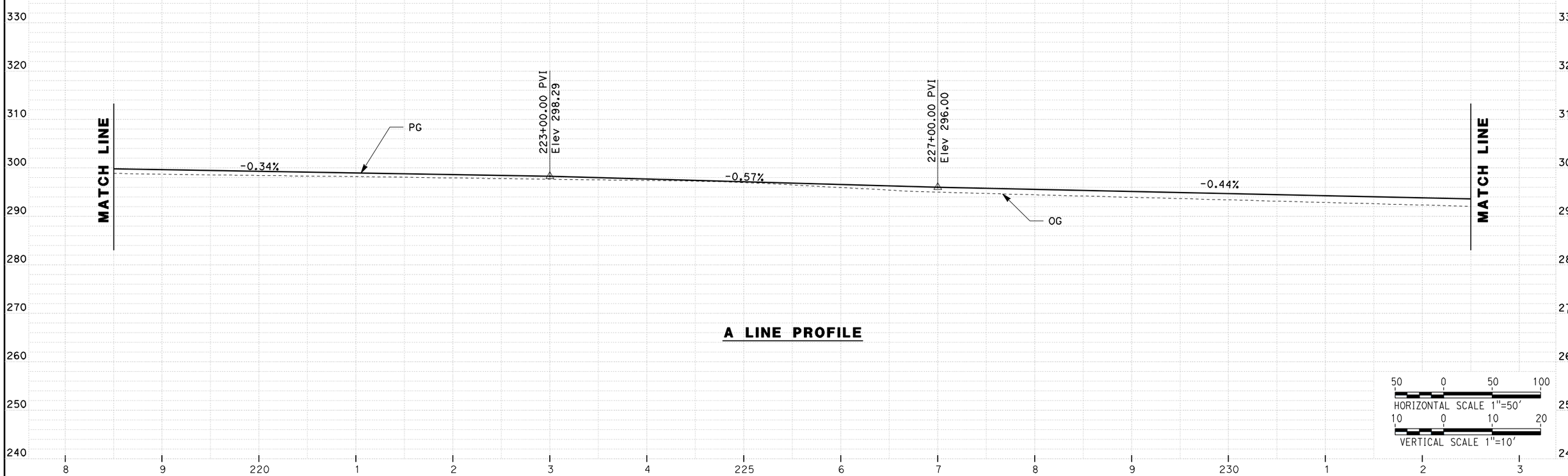
CONTRACT NO. HSR06-007
DRAWING NO. P-7
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM

NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
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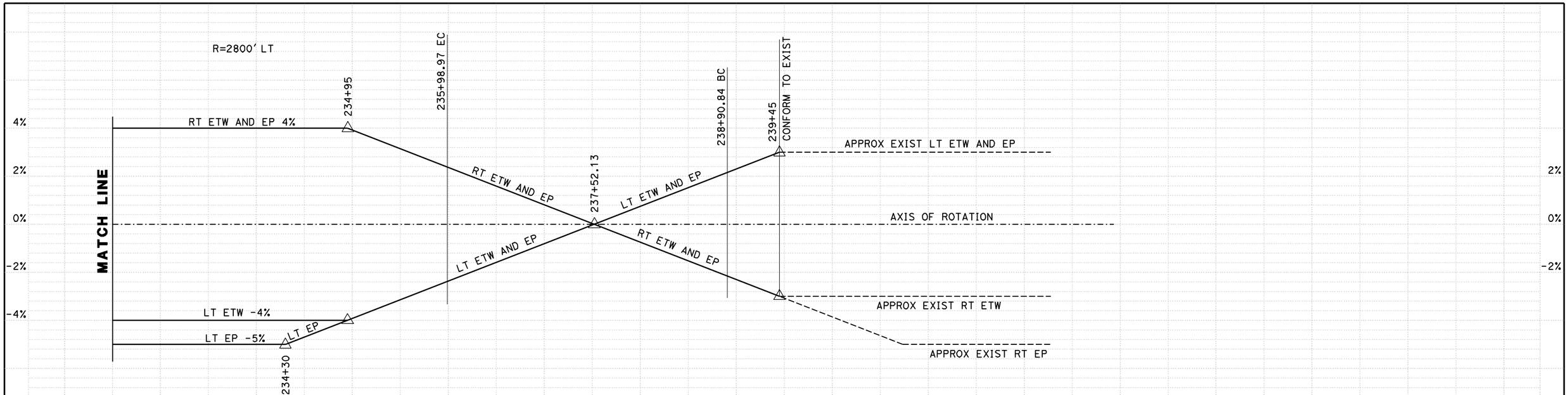
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

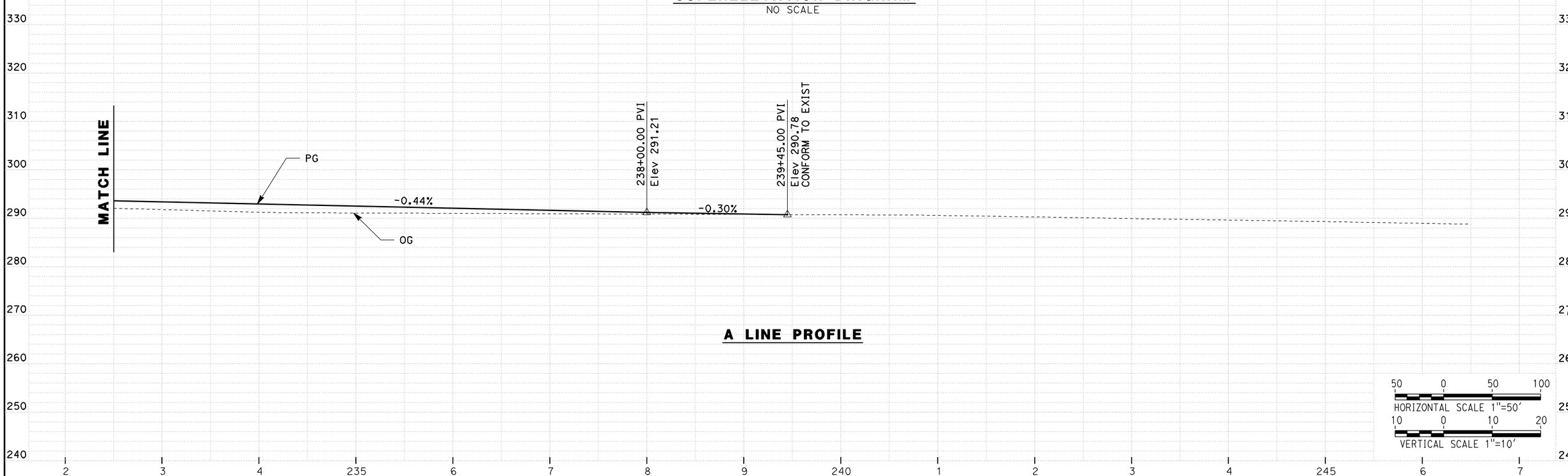
CONTRACT NO. HSR06-007
DRAWING NO. **P-8**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM

NO SCALE



A LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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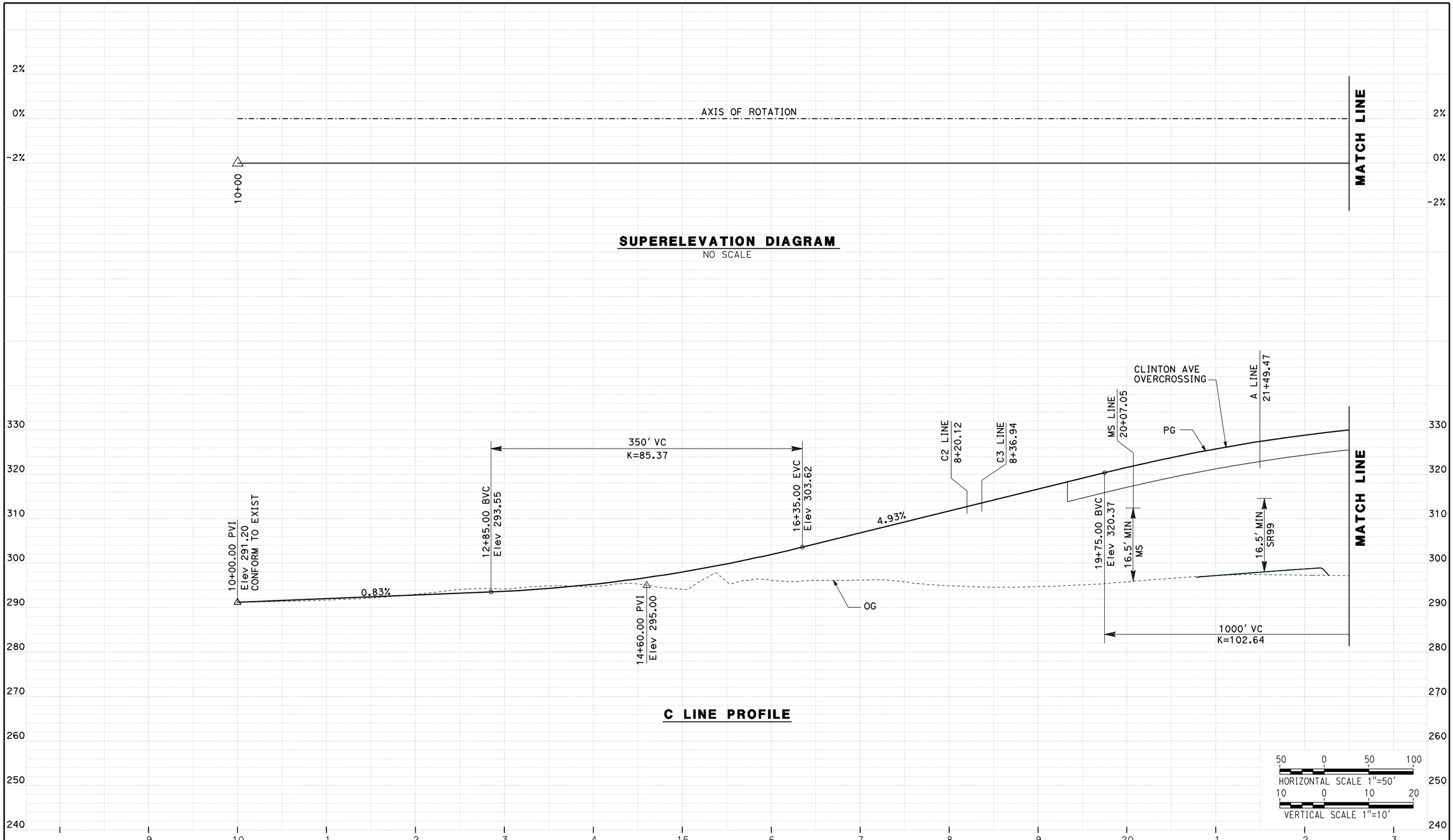
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-9**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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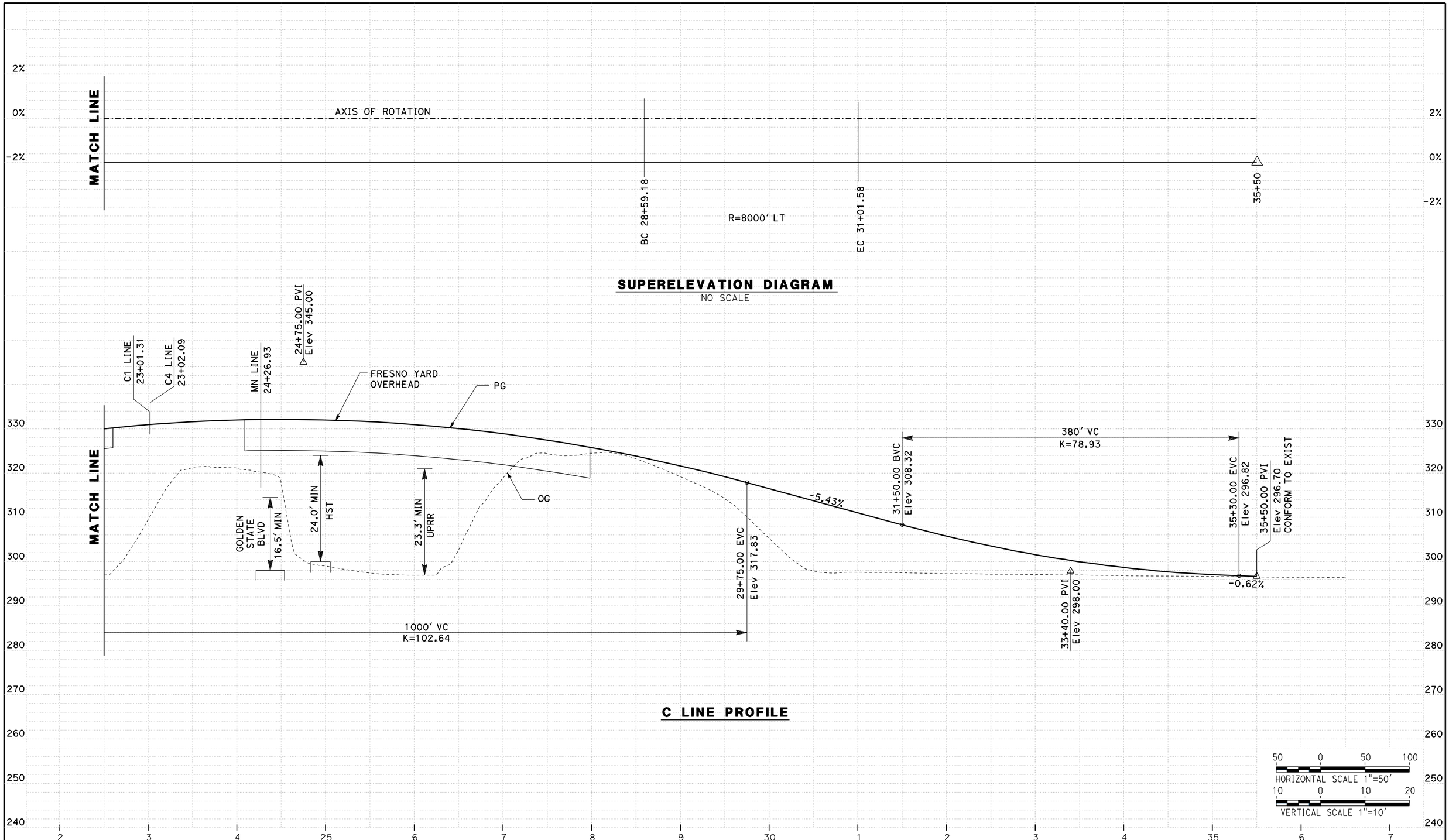
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-10**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



C LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
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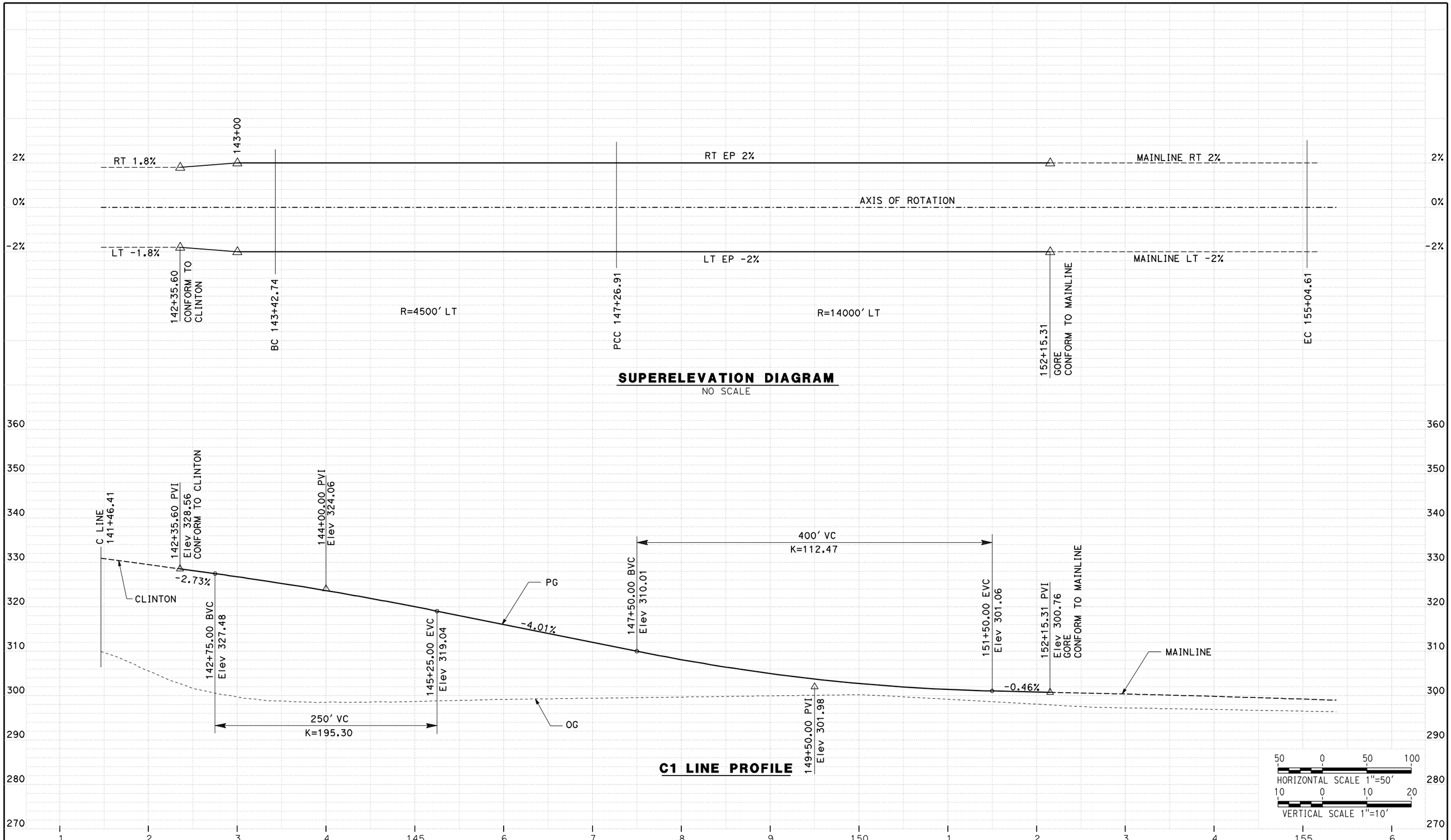
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. P-11
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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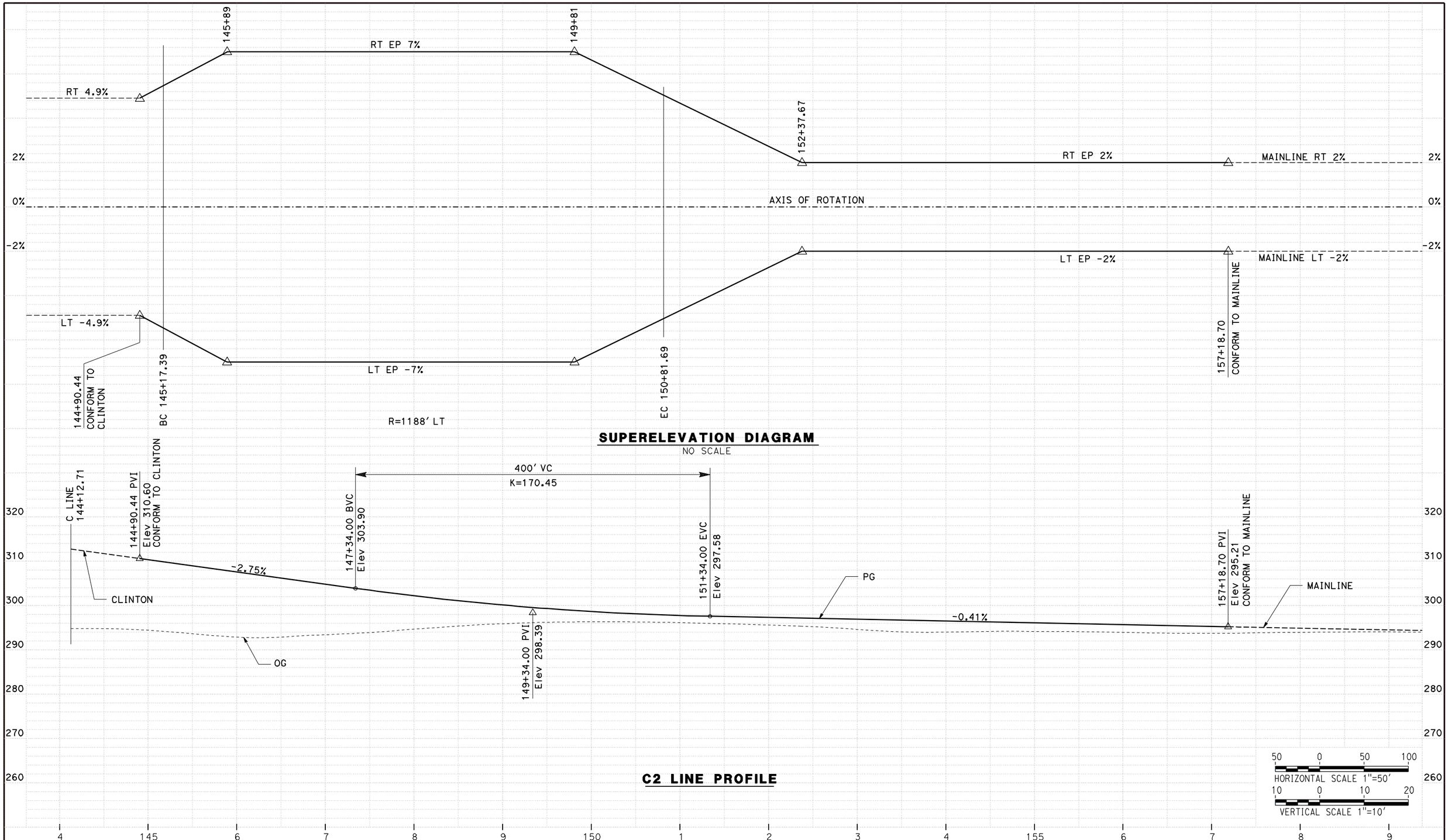
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-12**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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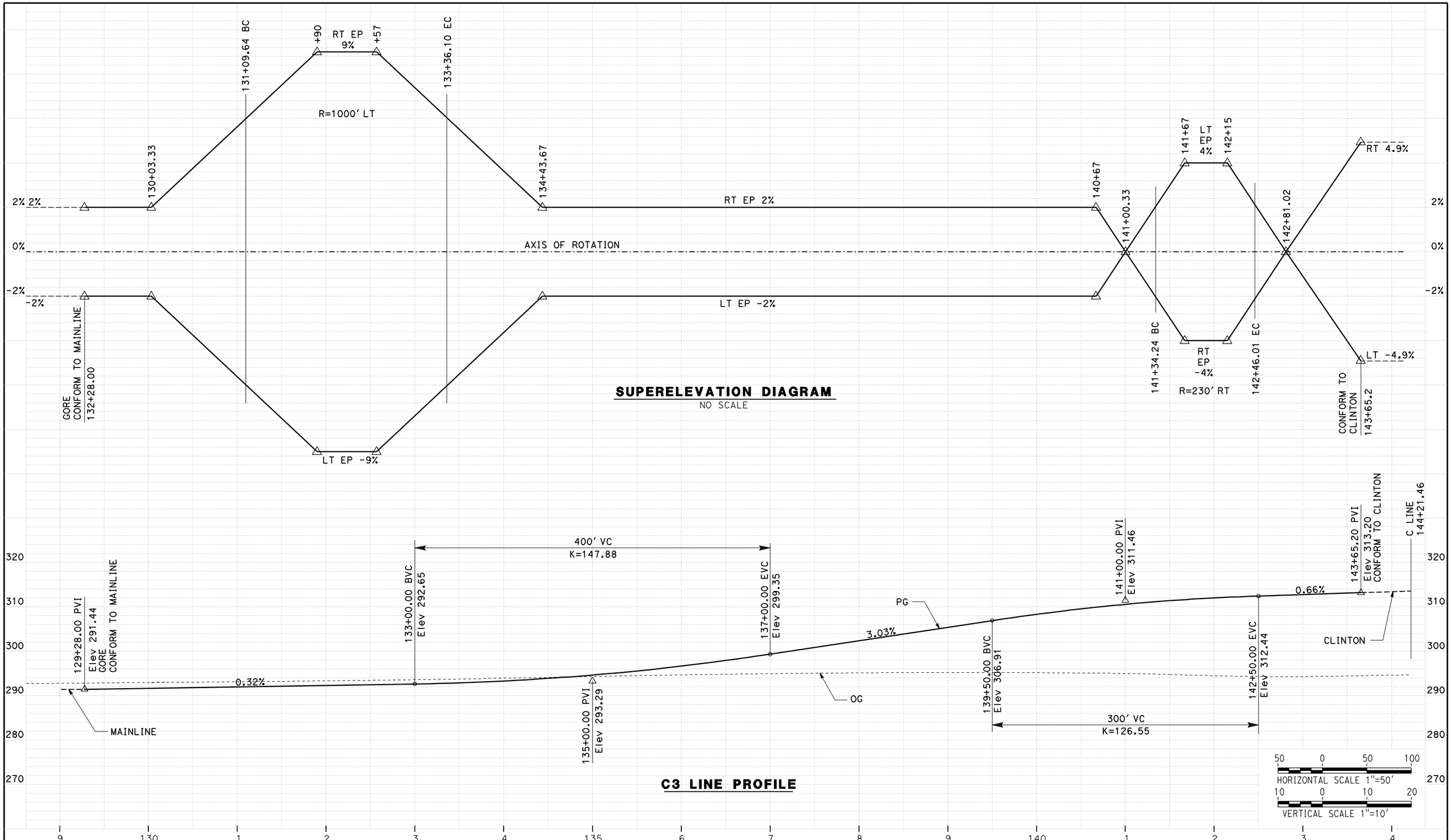
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-13**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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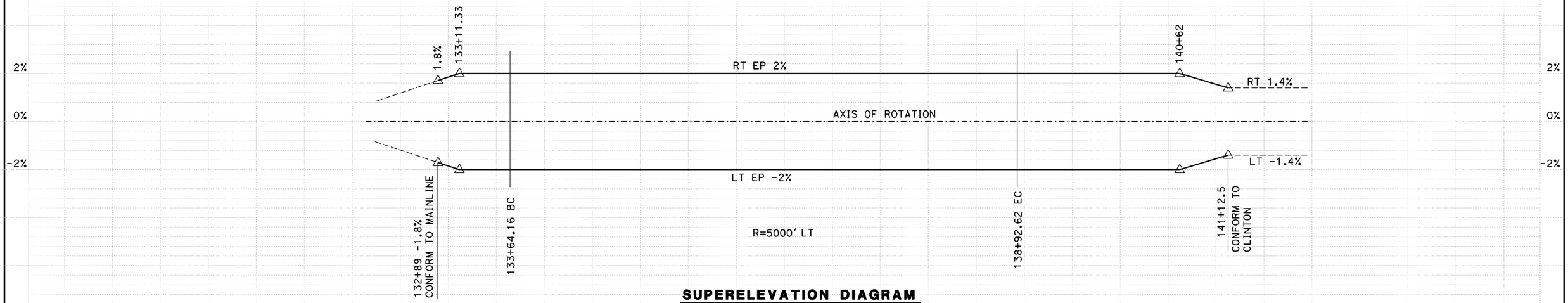
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

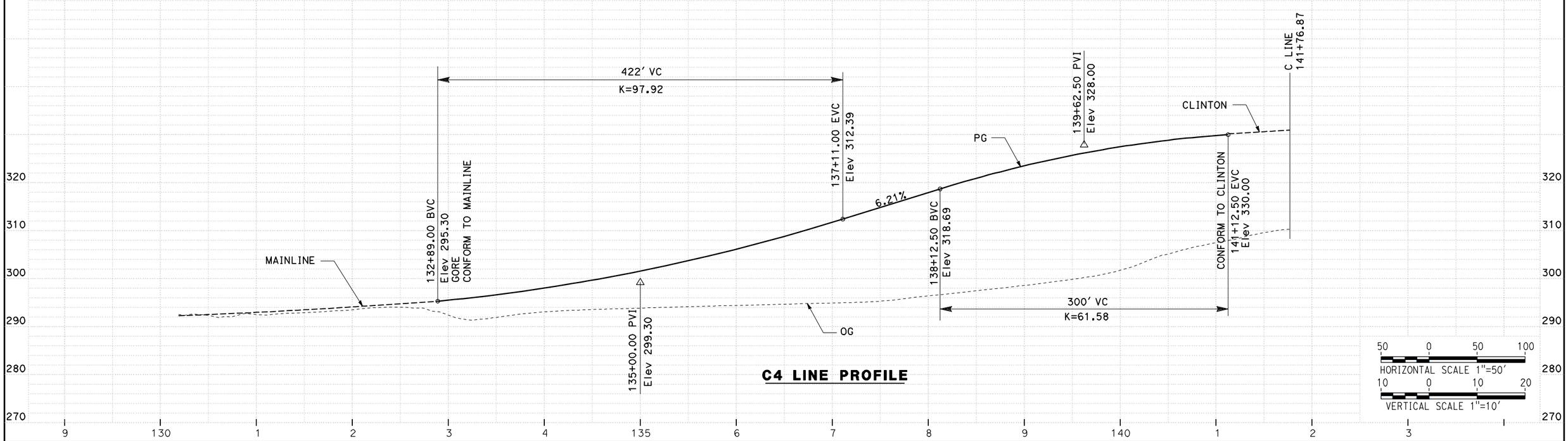
CONTRACT NO. HSR06-007
DRAWING NO. **P-14**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



C4 LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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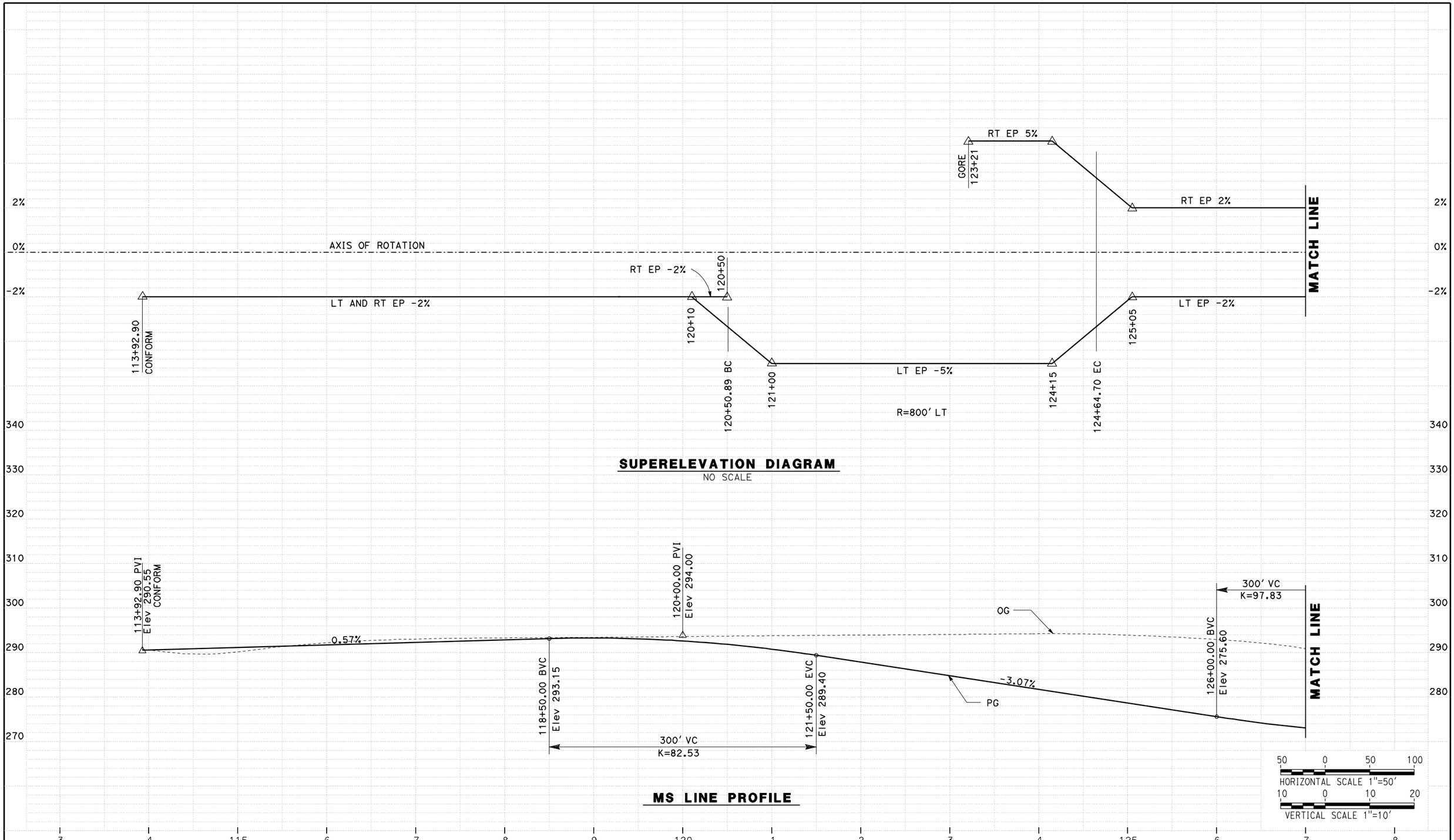
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-15**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM
NO SCALE

MS LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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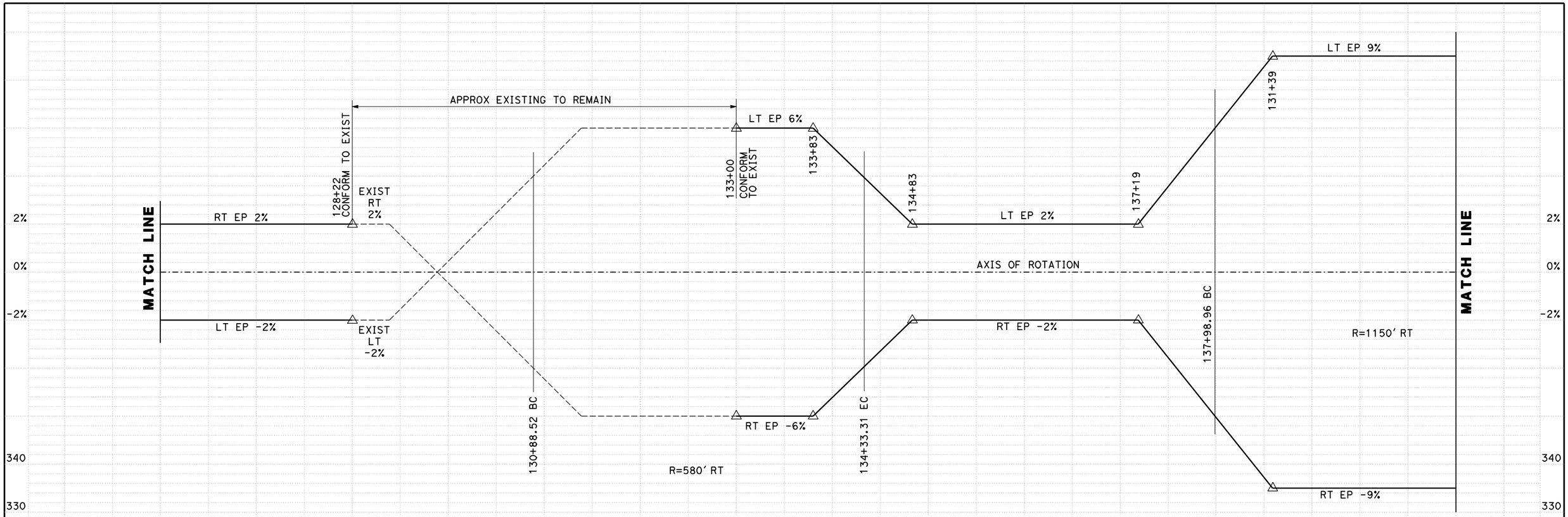
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

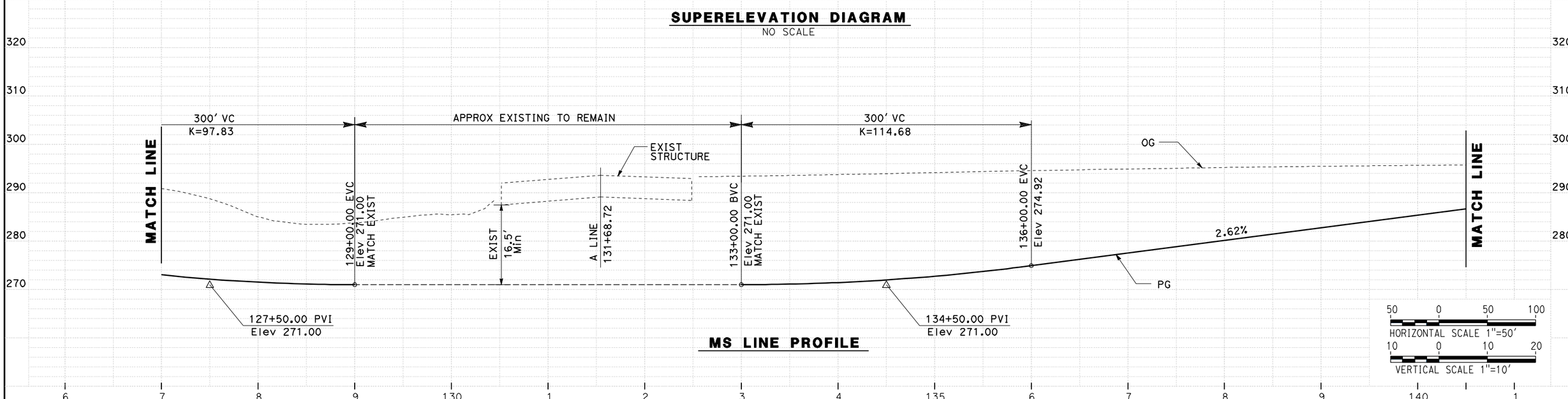
CONTRACT NO. HSR06-007
DRAWING NO. **P-16**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



MS LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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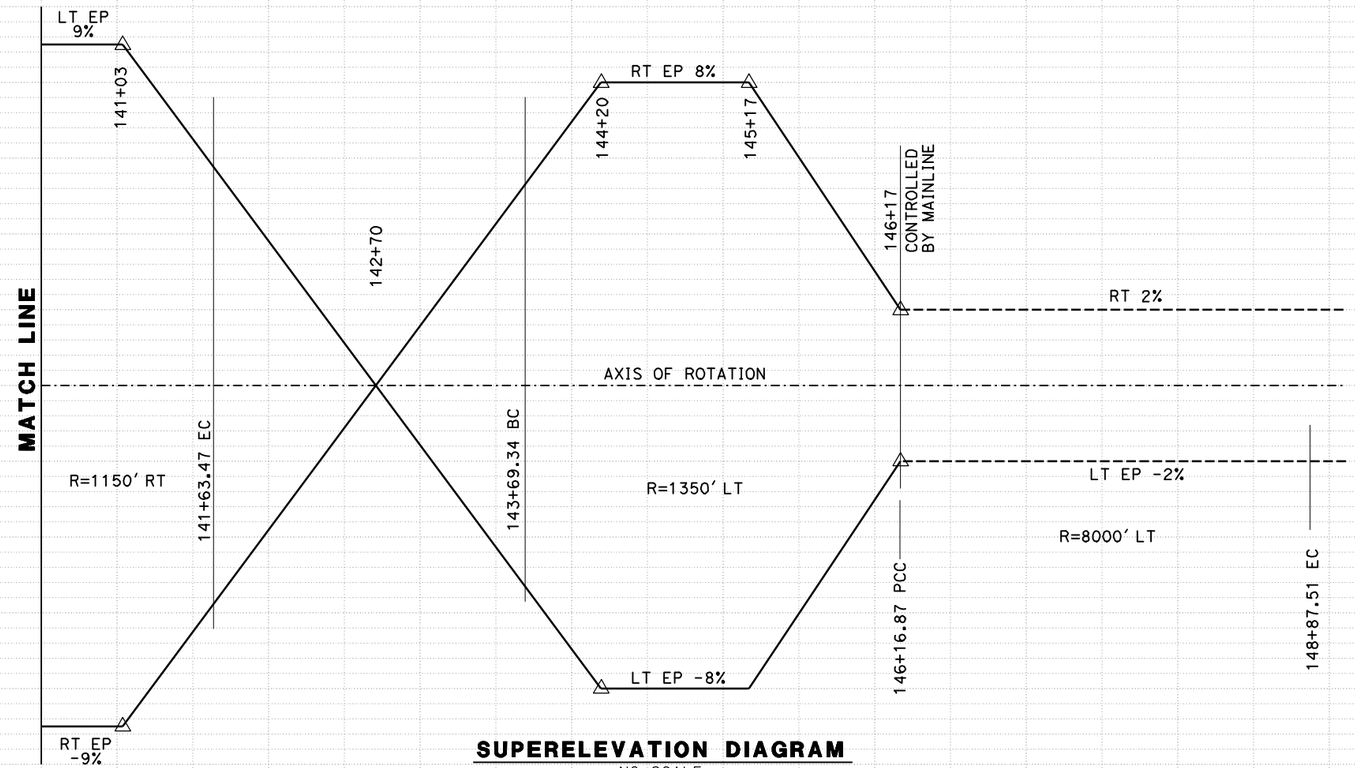
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

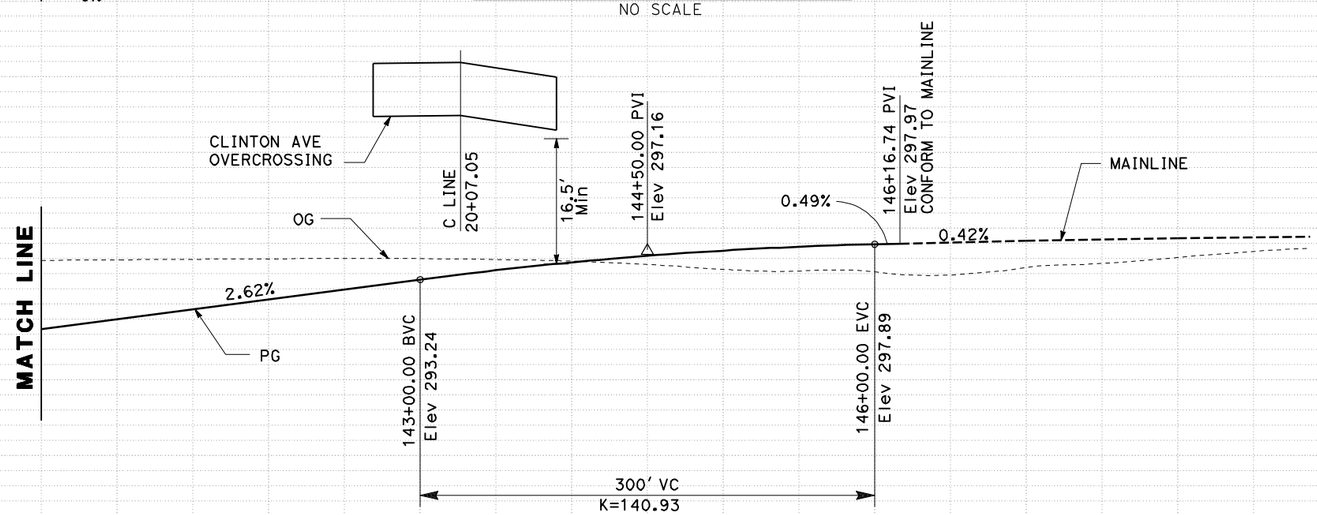
CONTRACT NO. HSR06-007
DRAWING NO. P-17
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ros

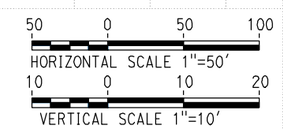


SUPERELEVATION DIAGRAM

NO SCALE



MS LINE PROFILE



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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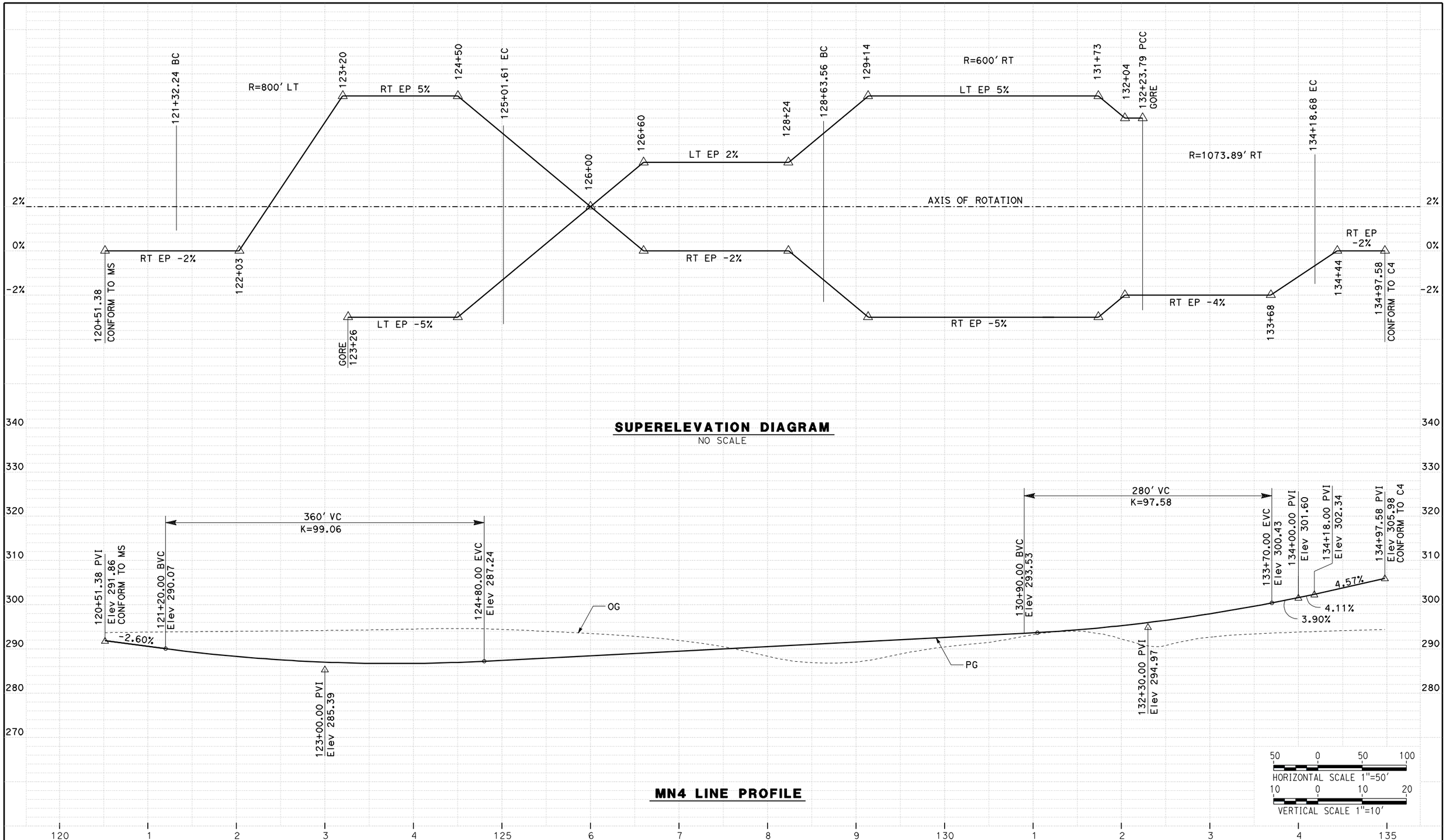
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-18**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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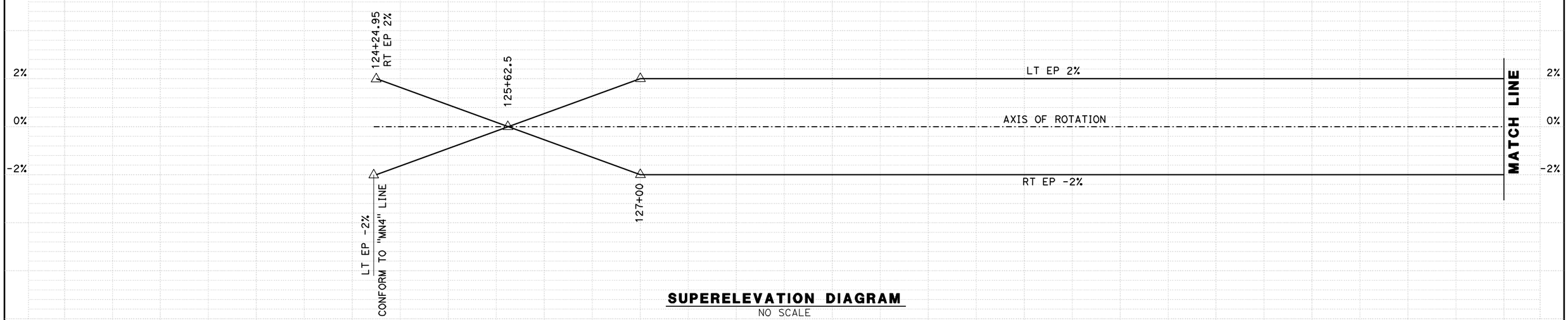
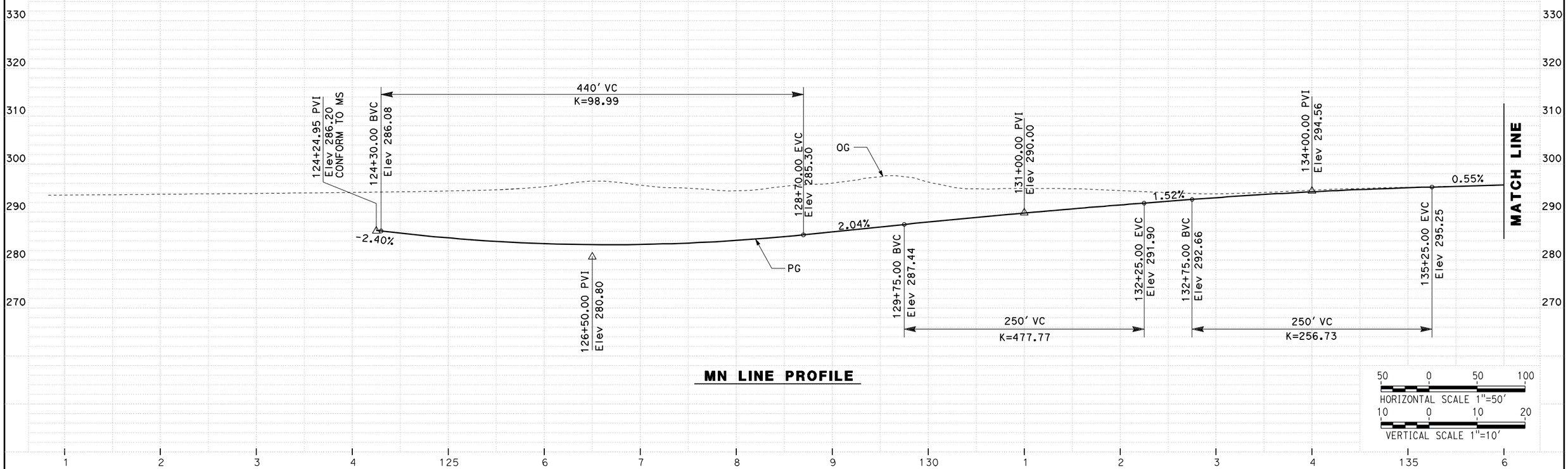
CONTRACT NO. HSR06-007
DRAWING NO. **P-19**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM
NO SCALE



MN LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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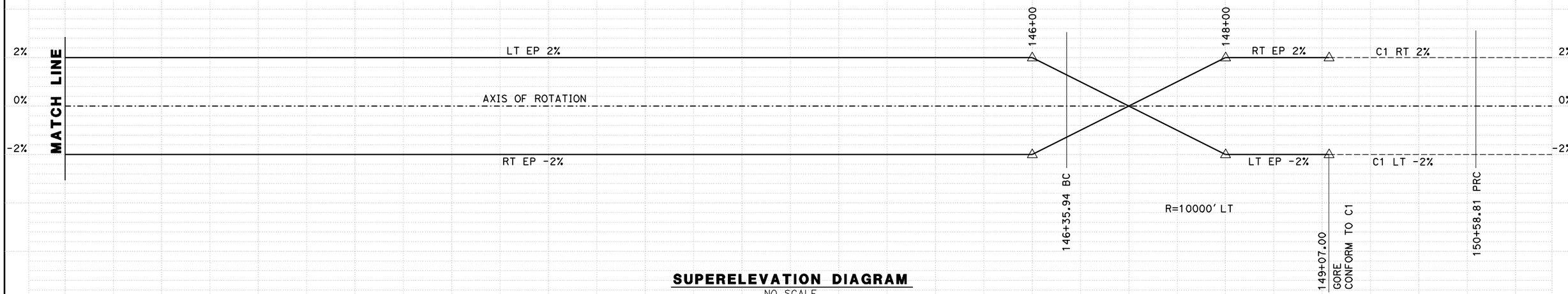
PROFILE AND SUPERELEVATION

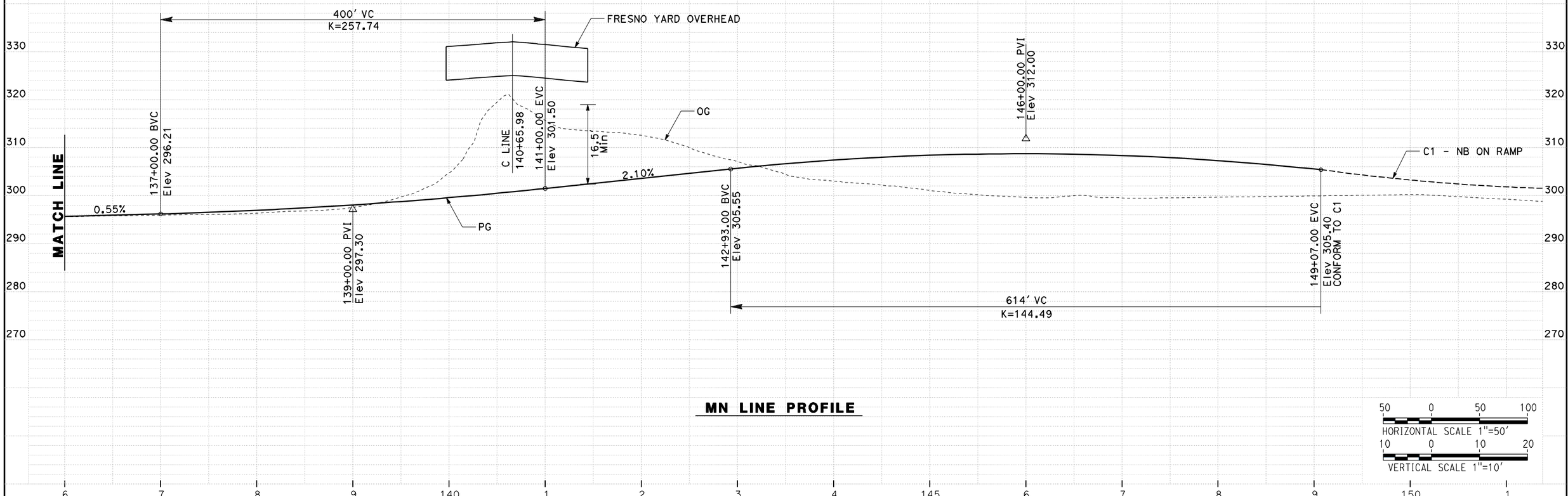
CONTRACT NO. HSR06-007
DRAWING NO. P-20
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



SUPERELEVATION DIAGRAM

NO SCALE



MN LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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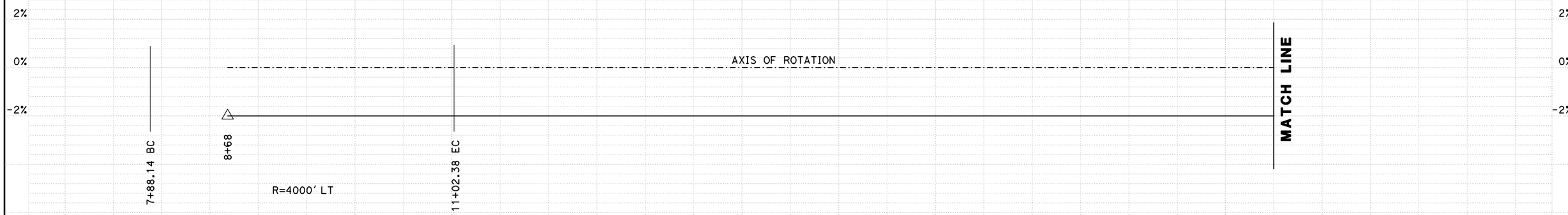
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

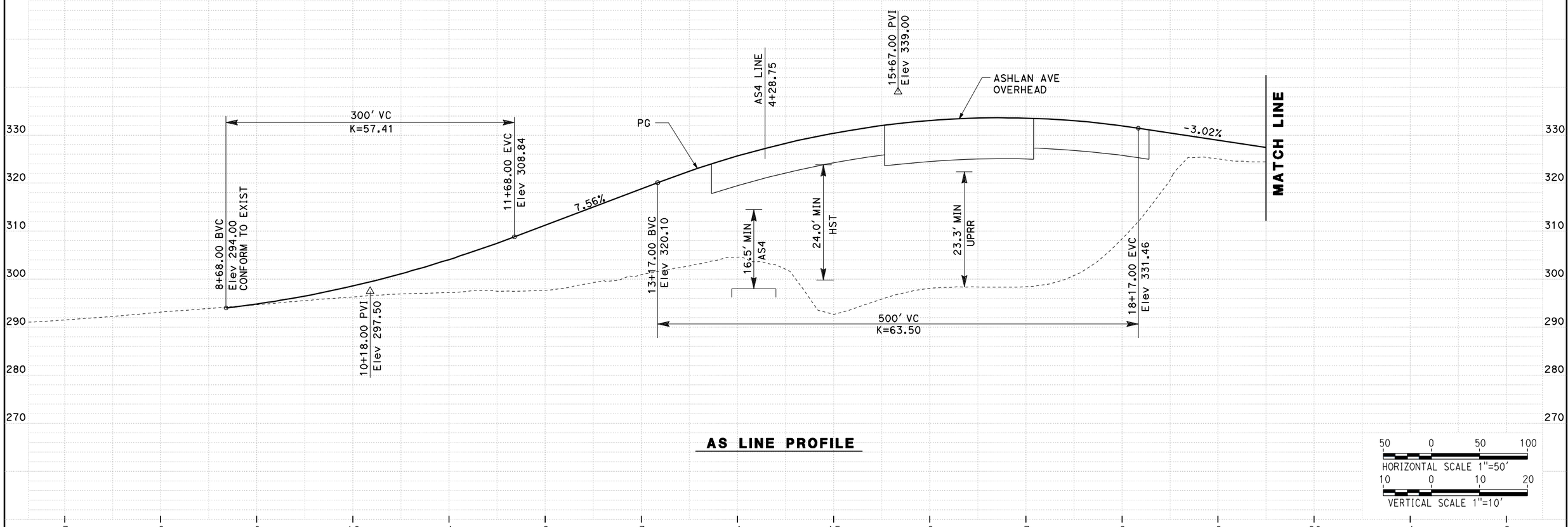
CONTRACT NO. HSR06-007
DRAWING NO. **P-21**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => [illegible]



SUPERELEVATION DIAGRAM

NO SCALE



AS LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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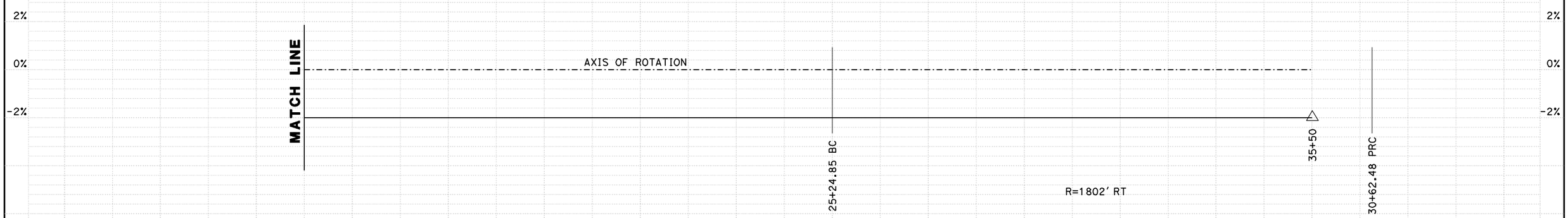
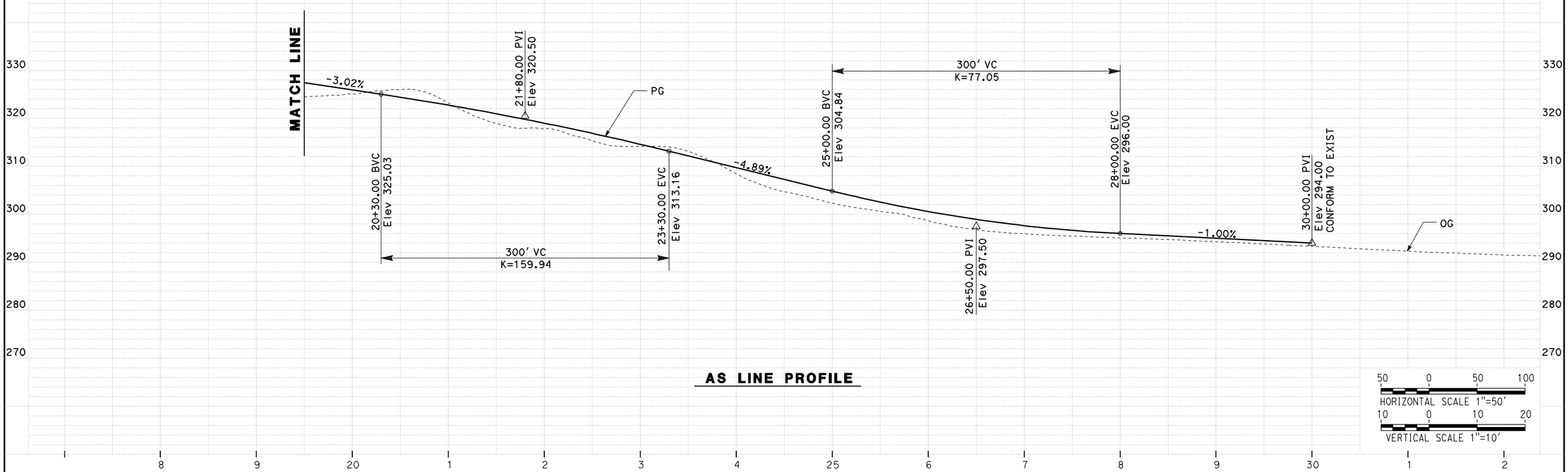
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-22**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



SUPERELEVATION DIAGRAM
NO SCALE



AS LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

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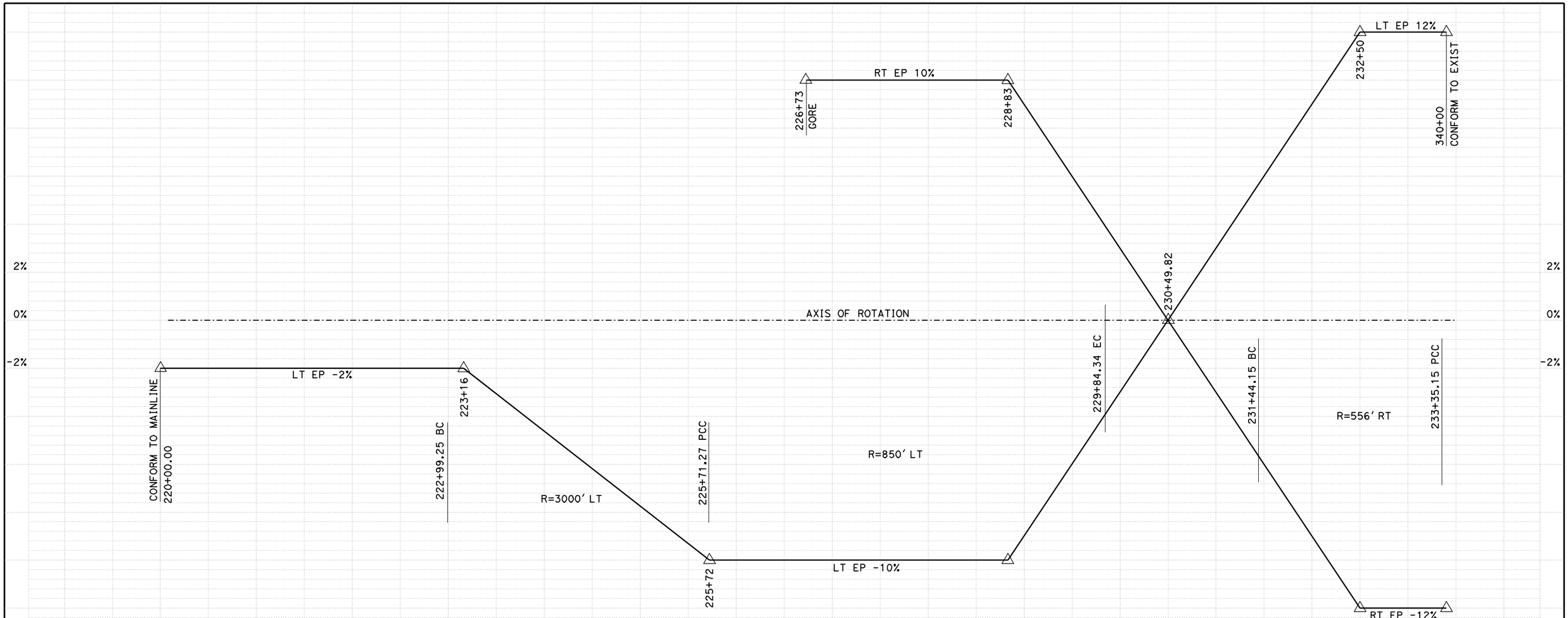
PROFILE AND SUPERELEVATION

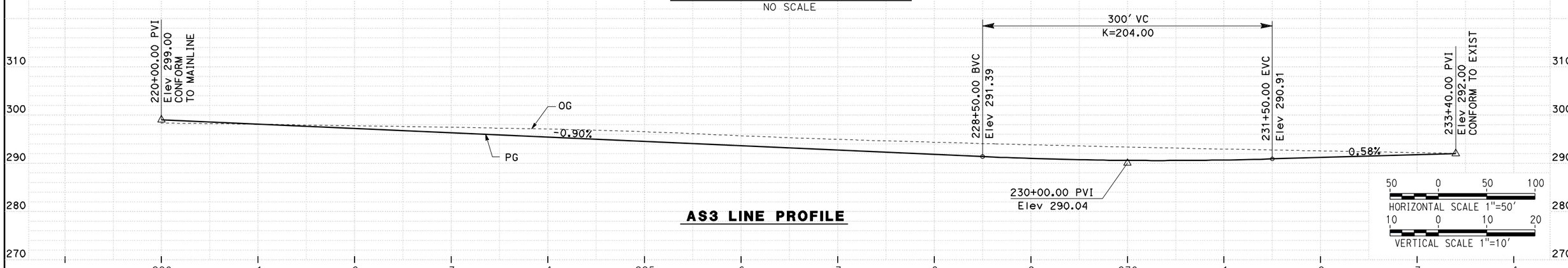
CONTRACT NO. HSR06-007
DRAWING NO. **P-23**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



AS3 LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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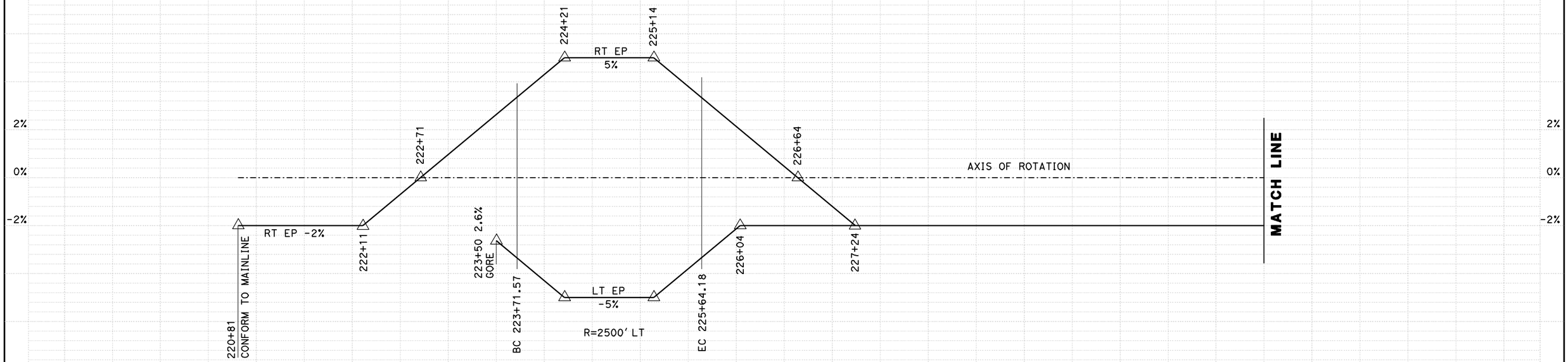
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

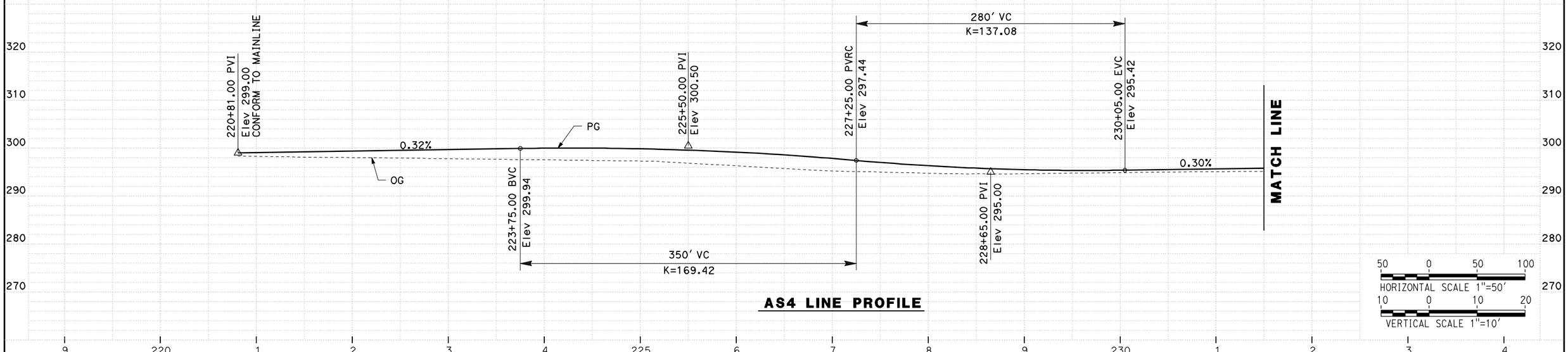
CONTRACT NO. HSR06-007
DRAWING NO. **P-24**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



AS4 LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
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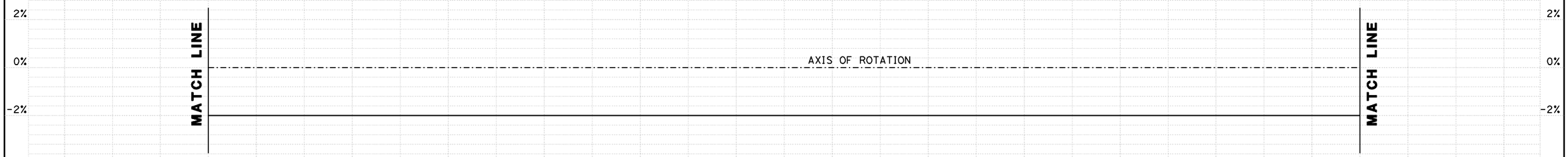
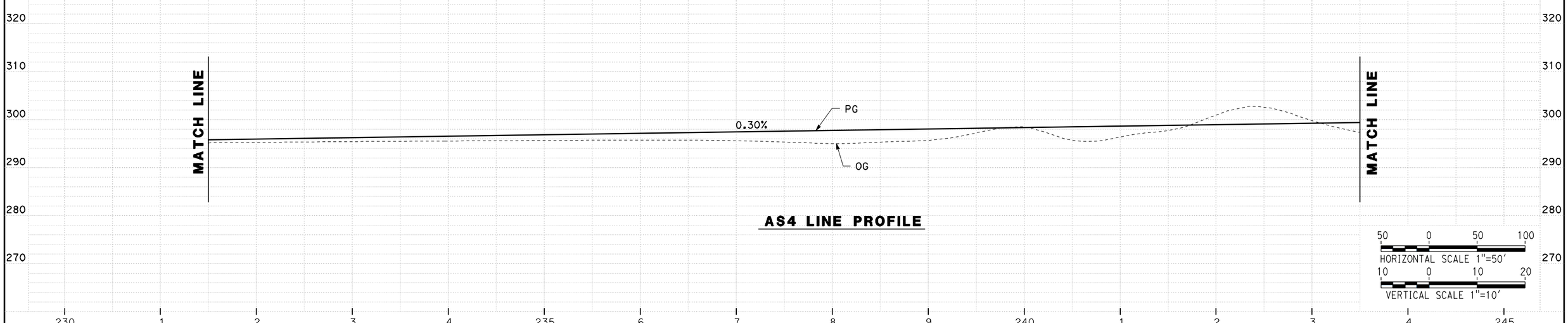
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. **P-25**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM
NO SCALE



AS4 LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
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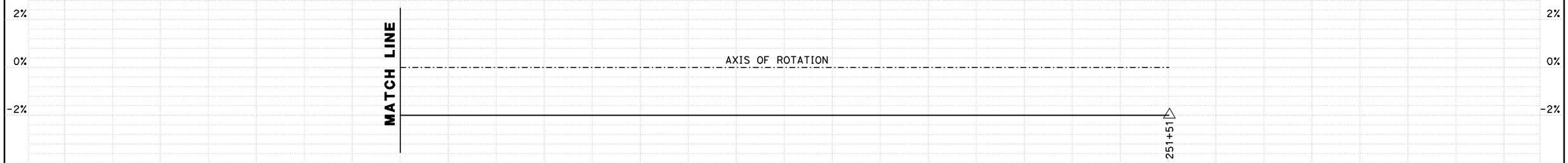
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

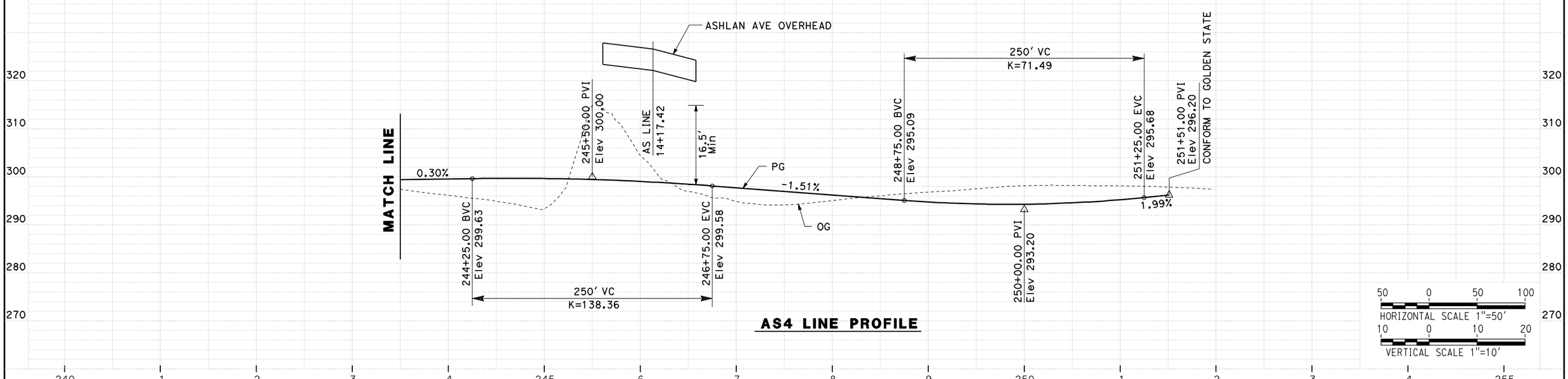
CONTRACT NO. HSR06-007
DRAWING NO. **P-26**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



SUPERELEVATION DIAGRAM

NO SCALE



AS4 LINE PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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ROUTE 99 RE-ALIGNMENT
PROFILE AND SUPERELEVATION

CONTRACT NO. HSR06-007
DRAWING NO. P-27
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

STAGING NOTES:

1. -CLOSE ON/OFF RAMP AT DAKOTA, PRINCETON AND SHIELD AVE.
   -CLOSE SOUTHBOUND ON/OFF RAMP AT CLINTON AVE.
2. -ROUTE 99 NORTHBOUND/SOUTHBOUND TRAFFIC REMAIN AS IS.
   SEE TYPICAL SECTION SHEETS SC-2 AND SC-4.
3. -CONSTRUCT ROUTE 99.
   -CONSTRUCT SOUTHBOUND ON/OFF RAMP AT CLINTON AVE.
   -CONSTURCT SOUTHBOUND ON RAMP ASHLAN AVE.
   -CONSTRUCT SOUTHBOUND OFF RAMP MOTEL DR.
4. -MULTIPLE PHASES AND NIGHT CLOSURE ARE ANTICIPATED FOR
   CONFORM TO ROUTE 99.
5. -ASHLAN AVE SOUTHBOUND ON RAMP TO REMAIN OPEN AT ALL TIMES.
6. -HIGH SPEED RAIL TO BE CONSTRUCTED AFTER COMPLETION OF ROUTE 99.

LEGEND:

CONSTRUCT THIS STAGE

CONSTRUCT PREVIOUS STAGE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CONSTRUCTION

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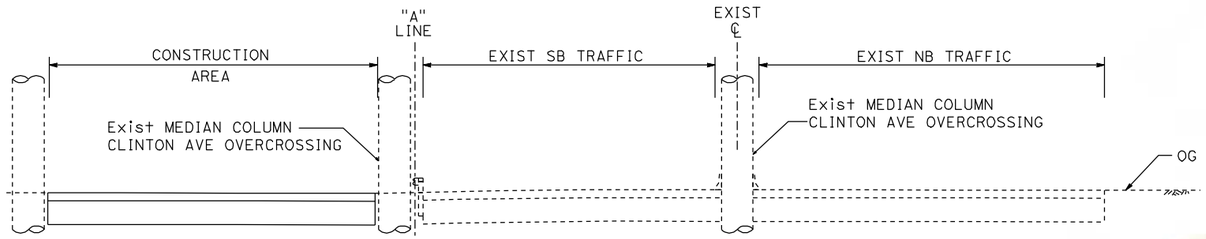
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

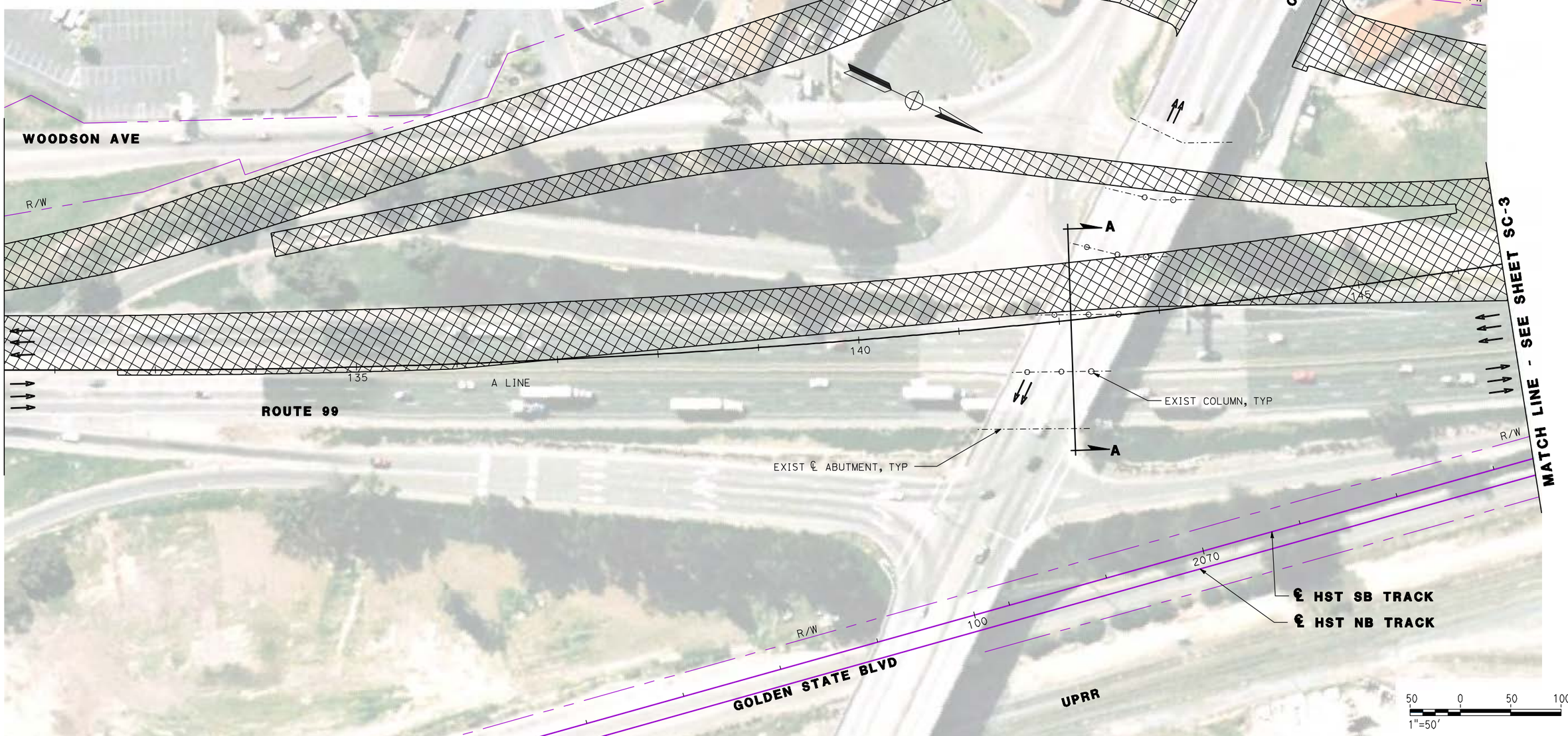
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-1
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



SECTION A-A
ROUTE 99 AT CLINTON AVE



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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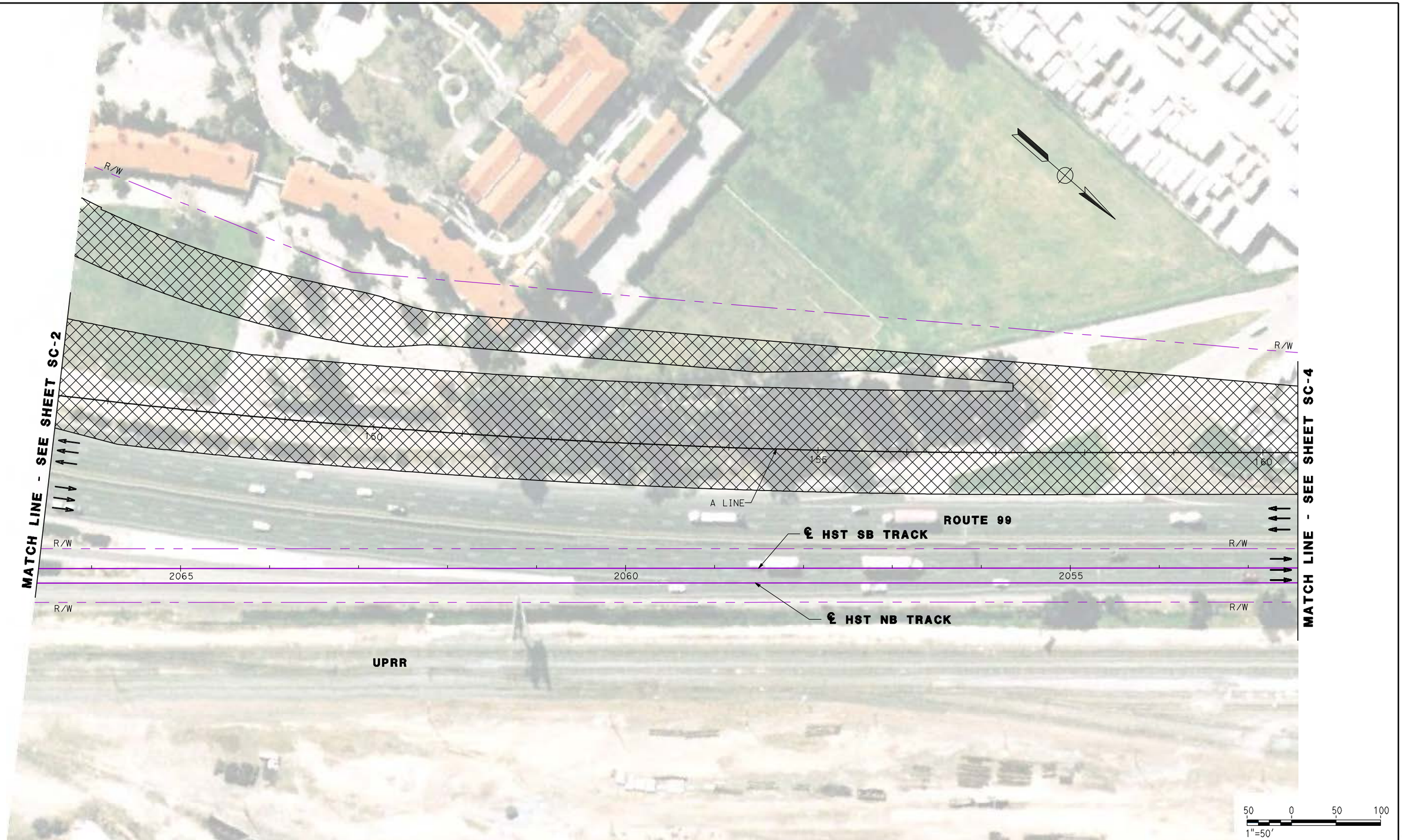
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. **SC-2**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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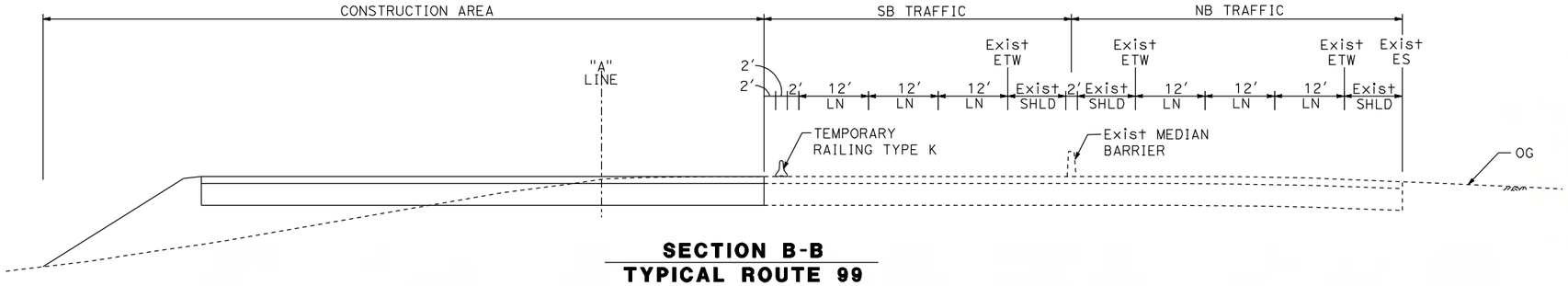
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

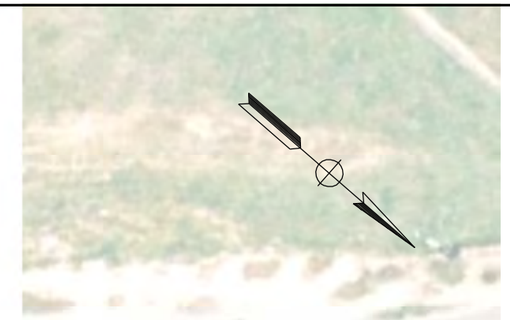
CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

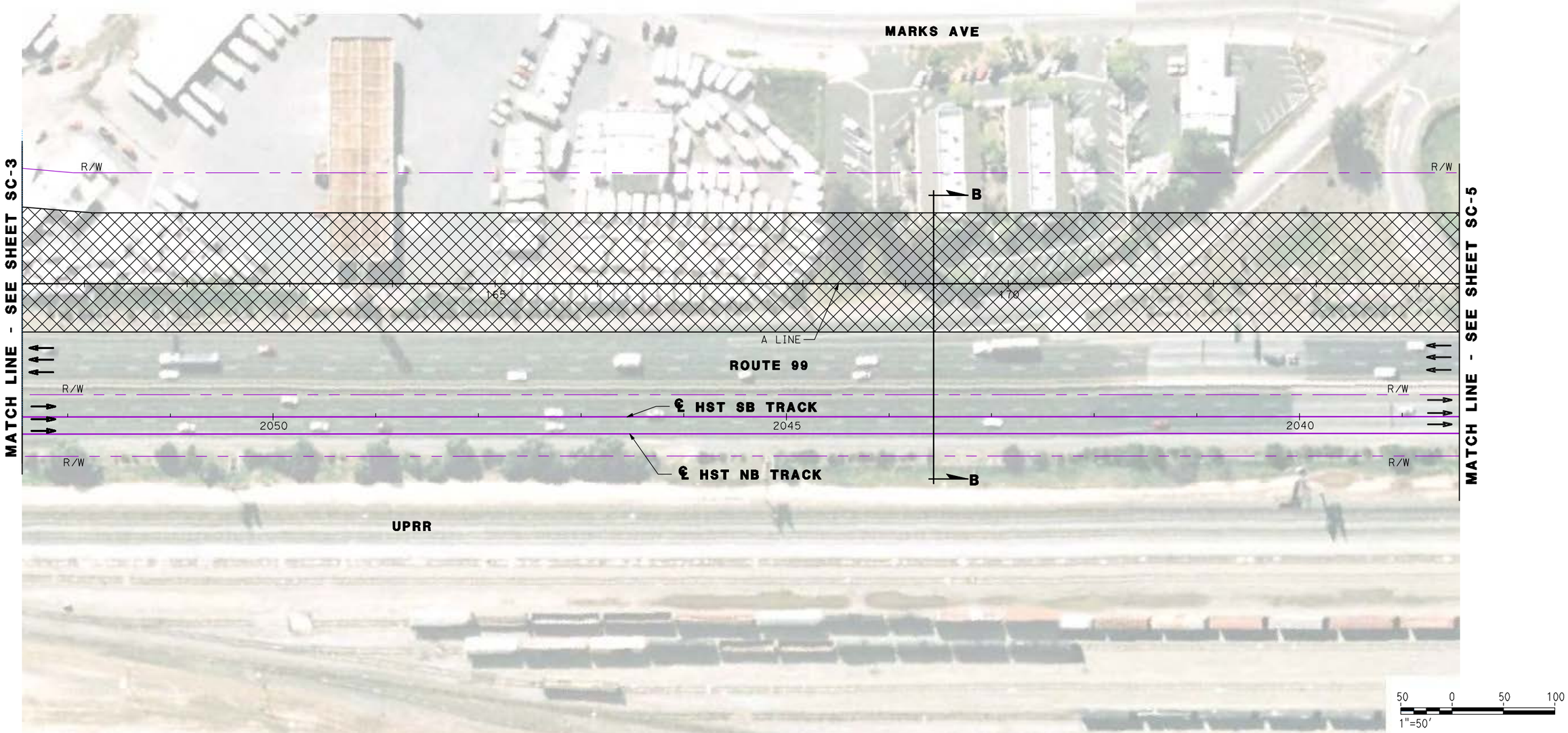
CONTRACT NO. HSR06-007
DRAWING NO. SC-3
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => /



SECTION B-B
TYPICAL ROUTE 99





REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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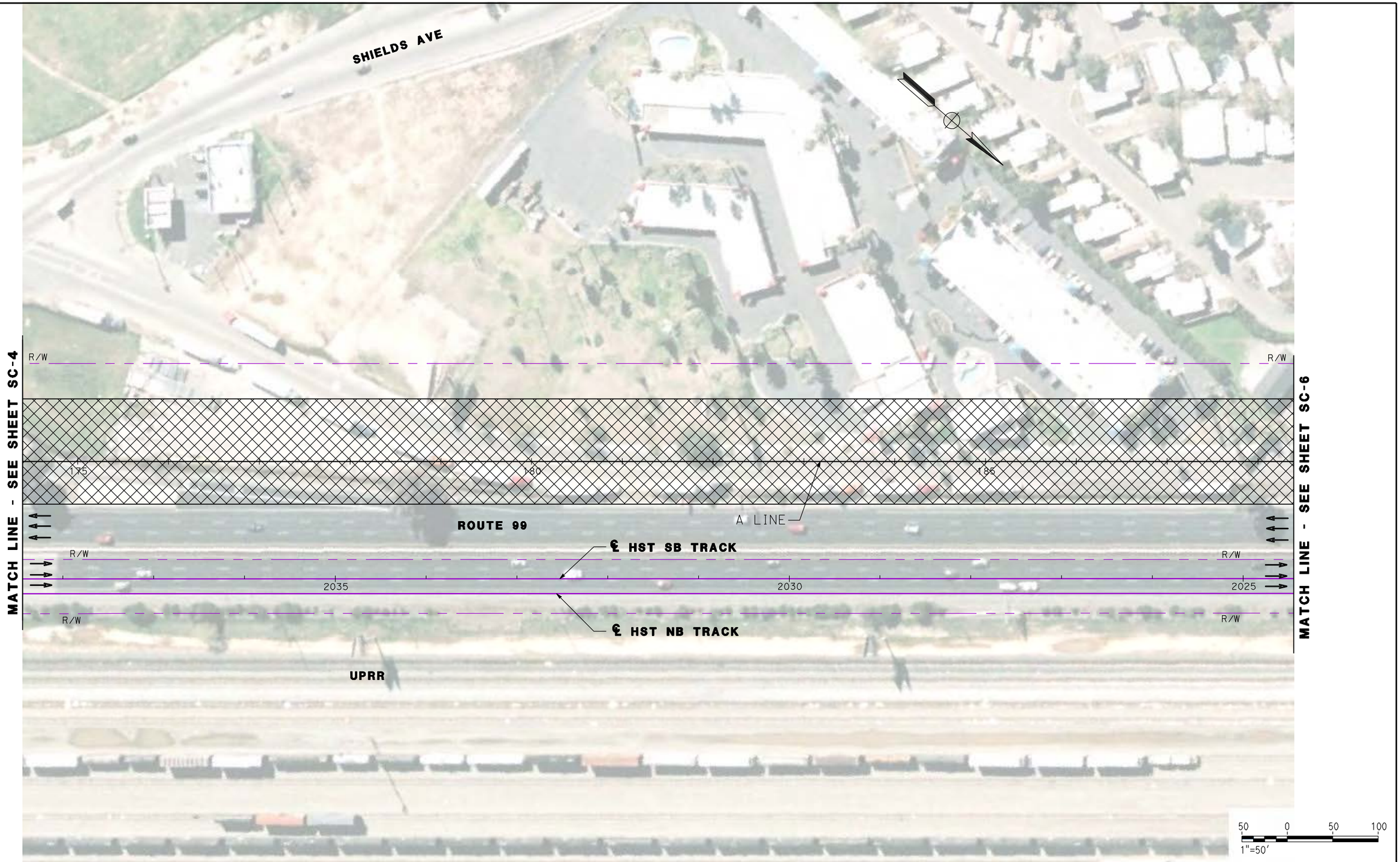
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-4
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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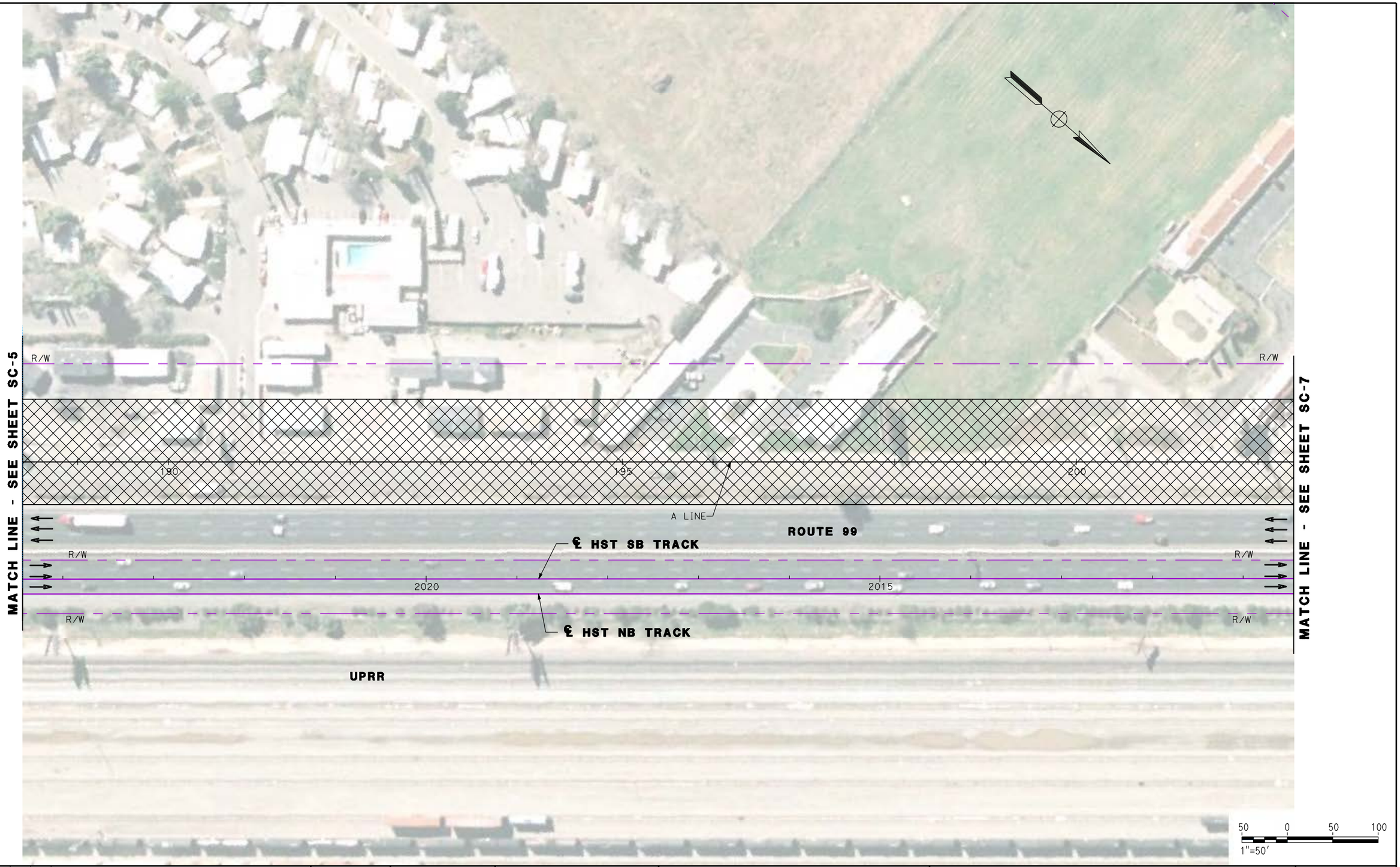
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-5
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 04/29/11

RECORD SET
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Sacramento, CA 95811
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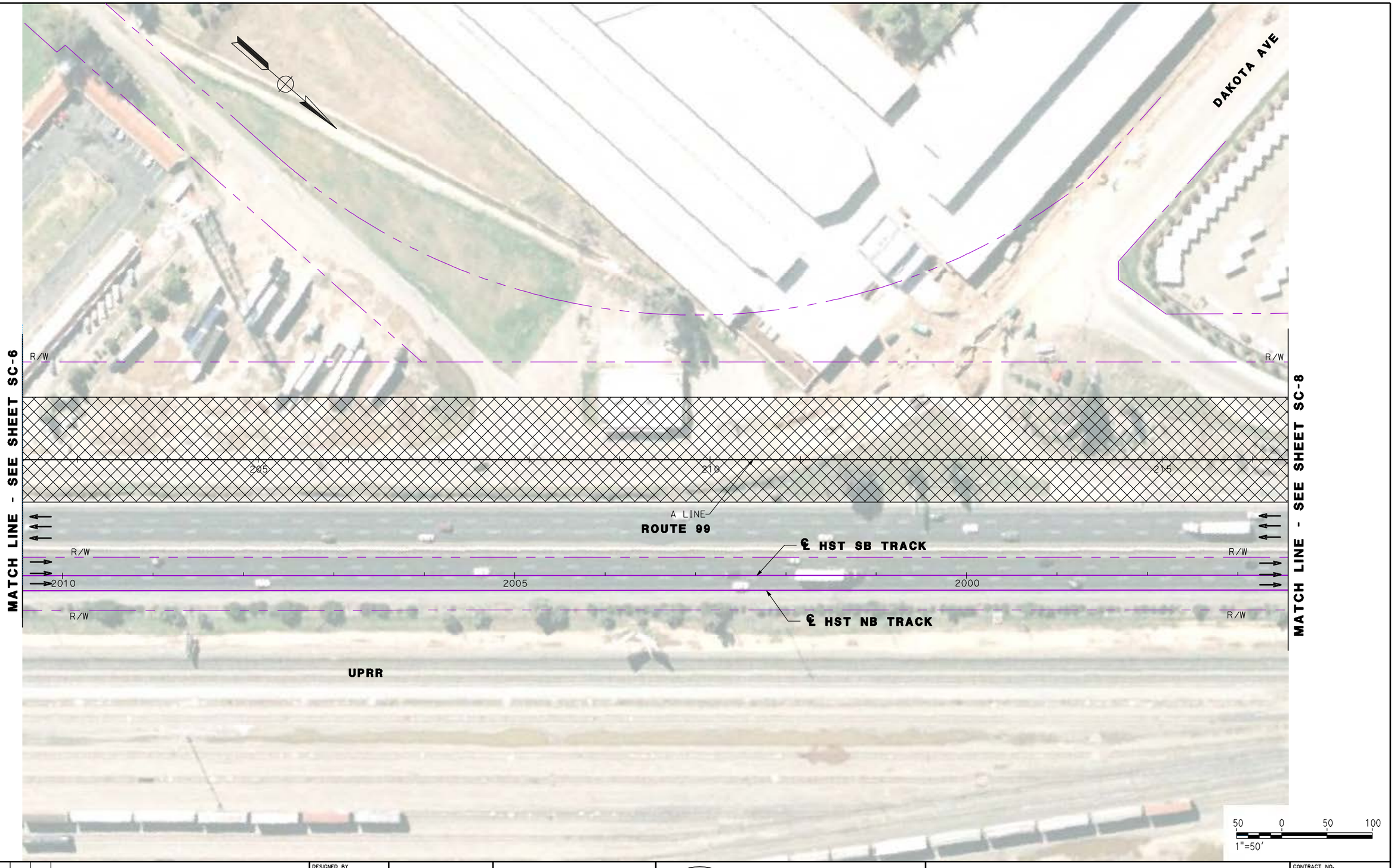
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. **SC-6**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

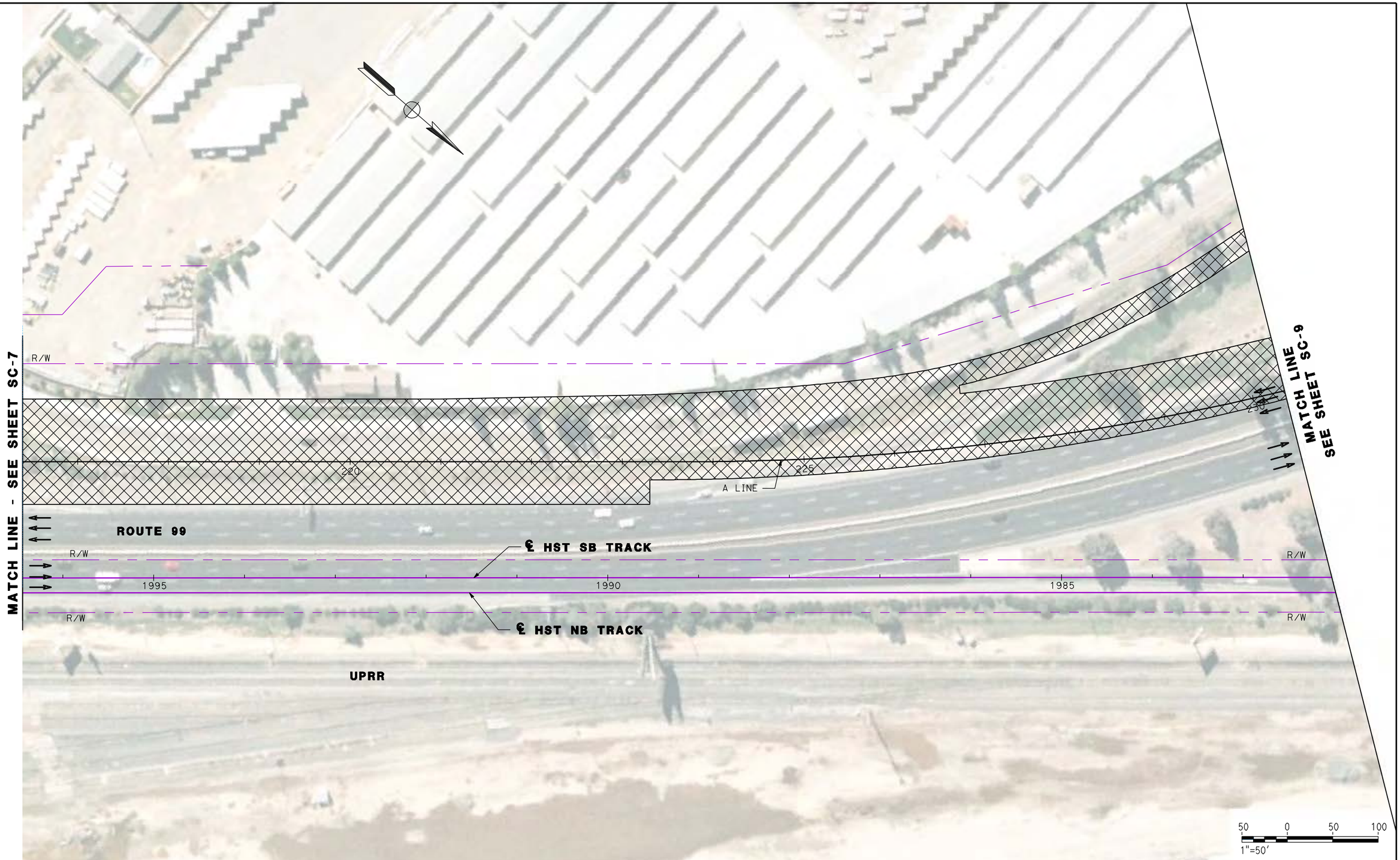
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. **SC-7**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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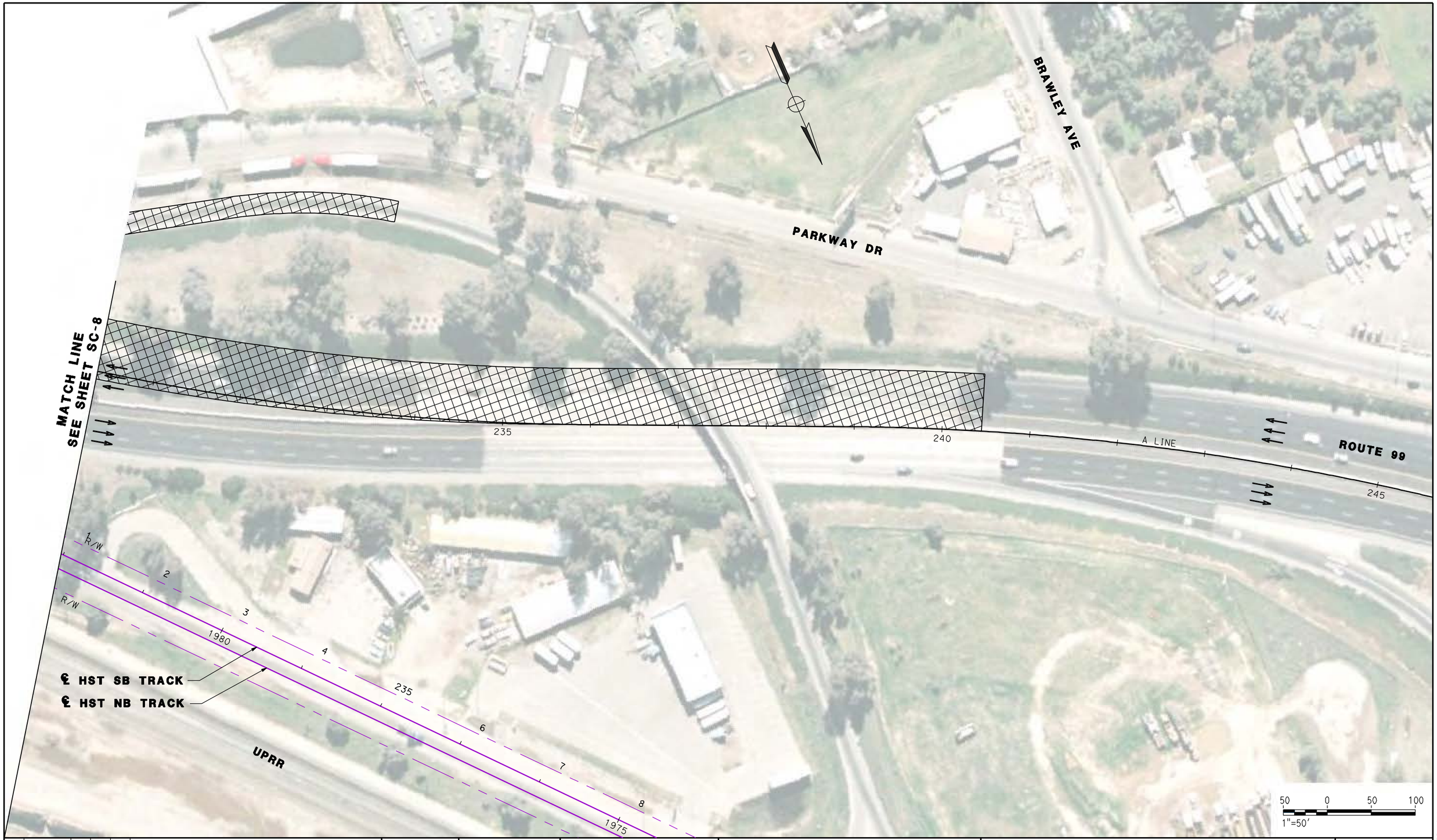
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-8
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 1 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-9
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011

STAGING NOTES:

1. -CLOSE ON/OFF RAMP AT DAKOTA, PRINCETON AND SHIELD AVE.
   -CLOSE SOUTHBOUND ON/OFF RAMP AT CLINTON AVE.
   -CLOSE NORTHBOUND ON/OFF RAMP AT CLINTON AVE.

2. -SHIFT ROUTE 99 NORTHBOUND/SOUTHBOUND TO STAGE 1 PAVEMENT.
   SEE TYPICAL SECTION SHEETS SC-11 AND SC-13.

3. -CONSTRUCT REMAINDER OF ROUTE 99.
   -CONSTRUCT NORTHBOUND ON/OFF RAMP AT CLINTON AVE.
   -CONSTURCT NORTHBOUND OFF RAMP ASHLAN AVE.
   -CONSTRUCT NORTHBOUND ON RAMP MOTEL DR.

4. -SHIFT EASTBOUND AND WESTBOUND CLINTON AVE TRAFFIC TO
   SOUTHERLY PORTION OF CLINTON AVENUE.
   -REMOVE NORTHERLY PORTION OF CLINTON AVENUE OC.
   -CONSTRUCT NEW NORTHERLY PORTION OF CLINTON AVE.
   -SHIFT EASTBOUND AND WESTBOUND CLINTON AVE TRAFFIC TO
   NORTHERLY PORTION OF CLINTON AVENUE.
   -CONSTRUCT NEW SOUTHERLY PORTION OF CLINTON AVE.
   -SEE TYPICAL SECTION SHEET SC-11.

5. -MULTIPLE PHASES AND NIGHT CLOSURES ARE ANTICIPATED FOR REMOVAL OF
   EXISTING BRIDGE, BRIDGE CONSTRUCTION AND CONFORM TO ROUTE 99.

6. -ASHLAN AVE NORTHBOUND OFF RAMP TO REMAIN OPEN AT ALL TIMES.

7. -HIGH SPEED RAIL TO BE CONSTRUCTED AFTER COMPLETION OF ROUTE 99.

LEGEND:

CONSTRUCT THIS STAGE

CONSTRUCT PREVIOUS STAGE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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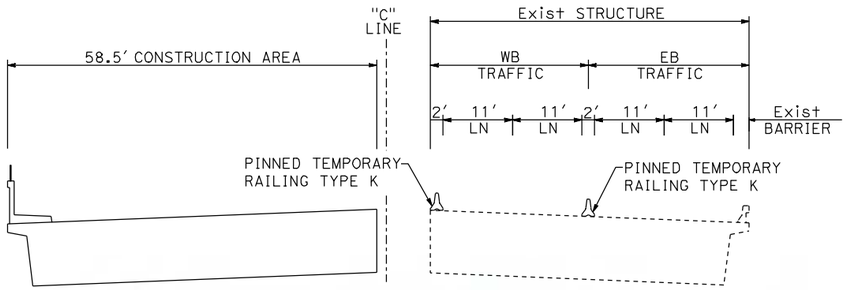
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

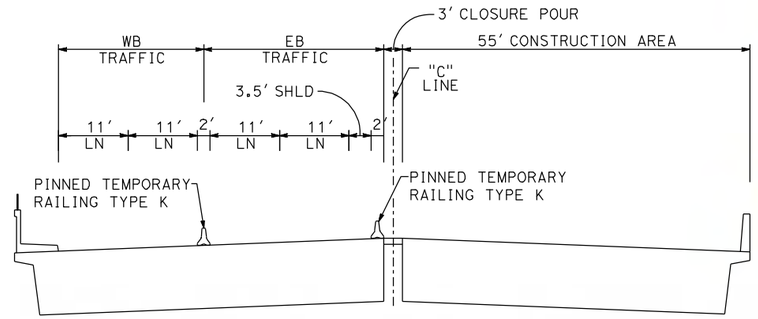
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

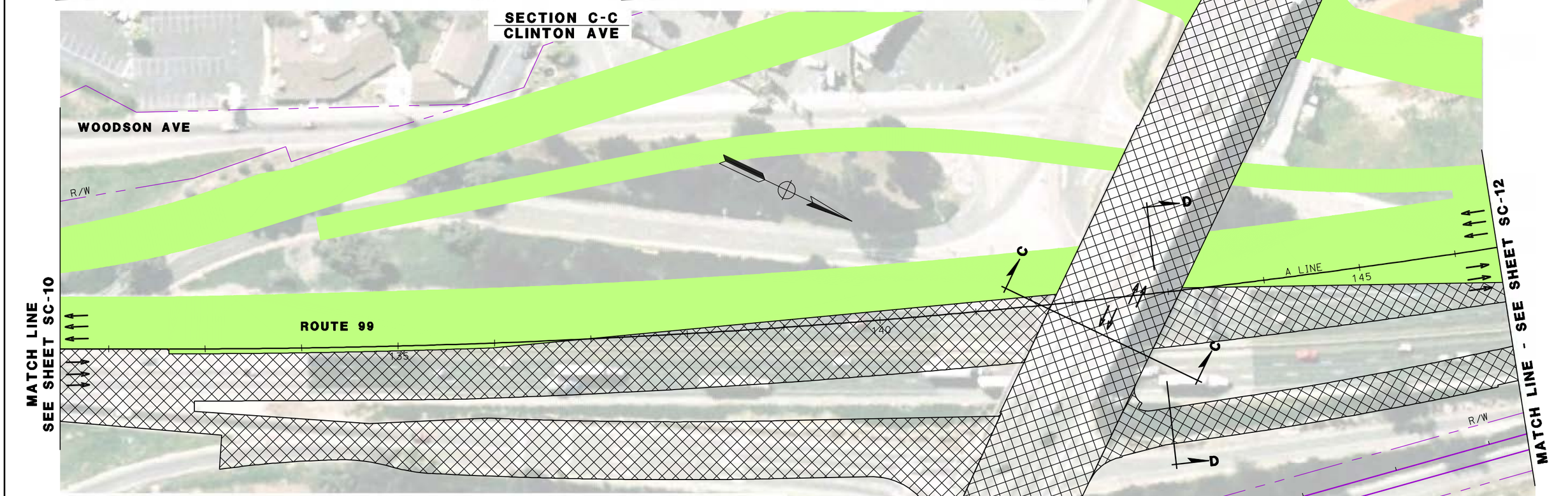
CONTRACT NO. HSR06-007
DRAWING NO. SC-10
SCALE AS SHOWN
SHEET NO.

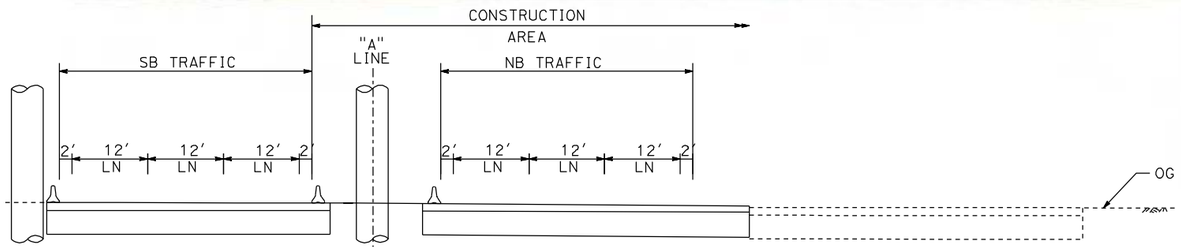
DATE PLOTTED => 26-APR-2011
USERNAME =>





SECTION C-C
CLINTON AVE





SECTION D-D
ROUTE 99 AT CLINTON AVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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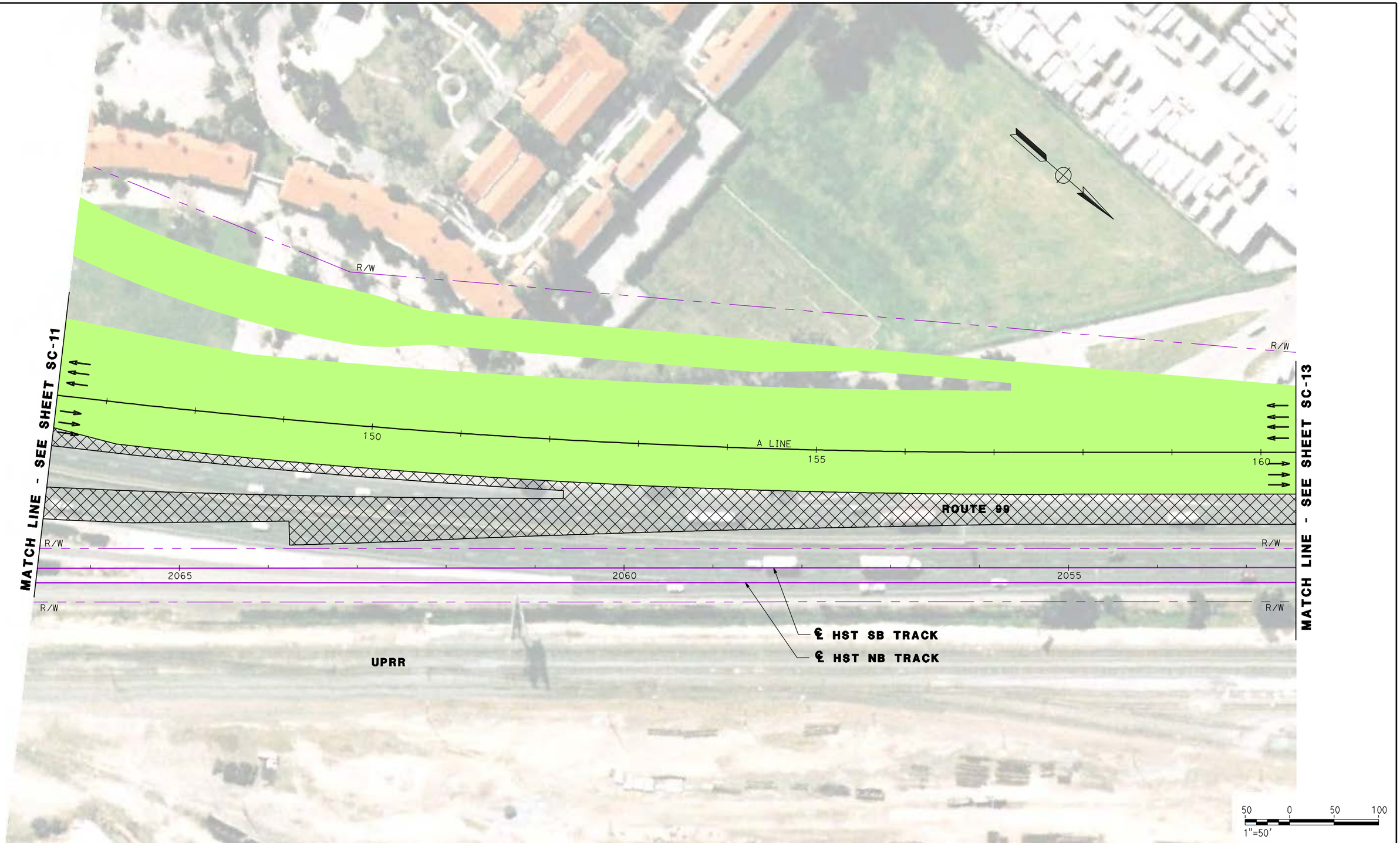
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-11
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
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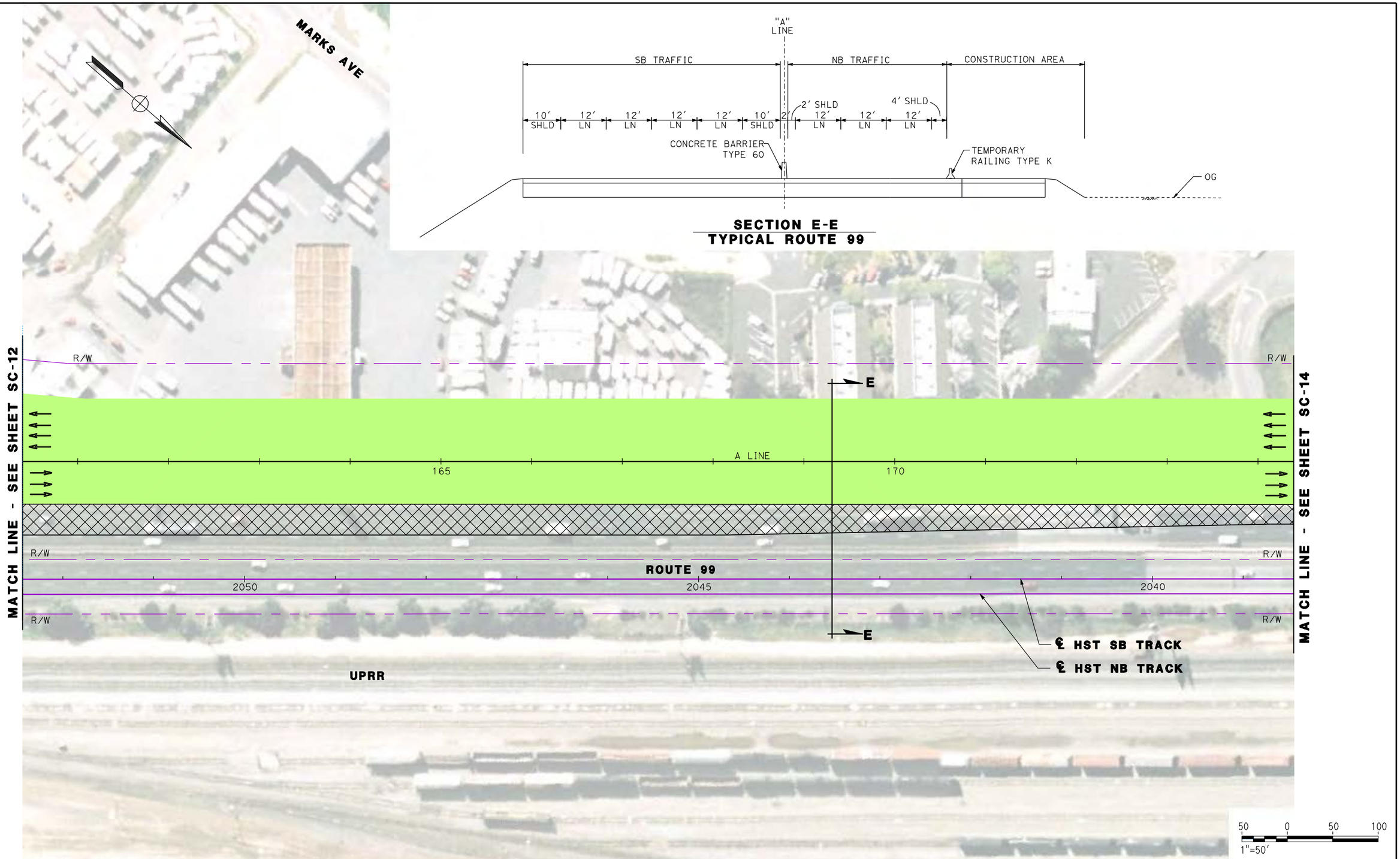
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-12
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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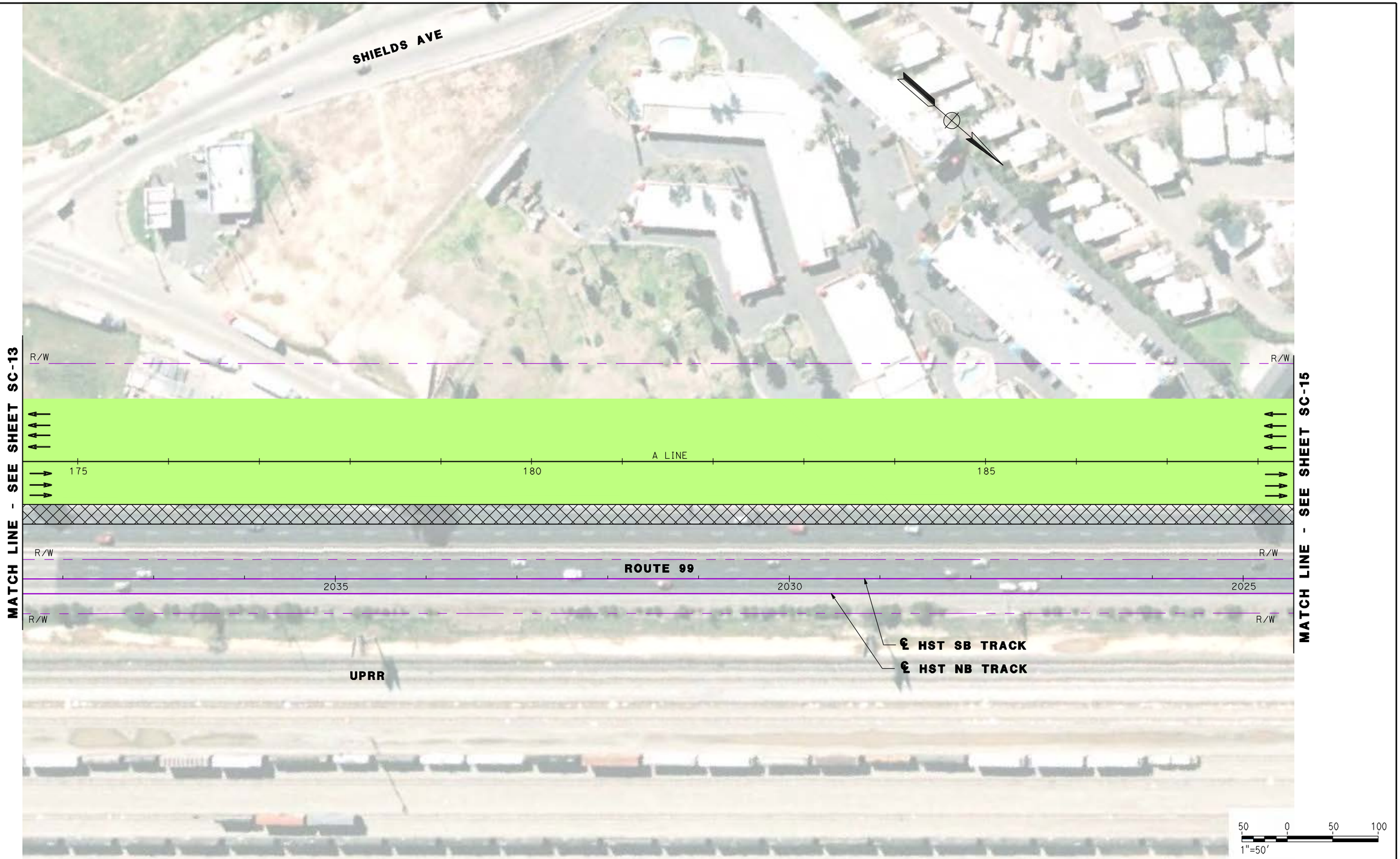
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-13
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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Sacramento, CA 95811
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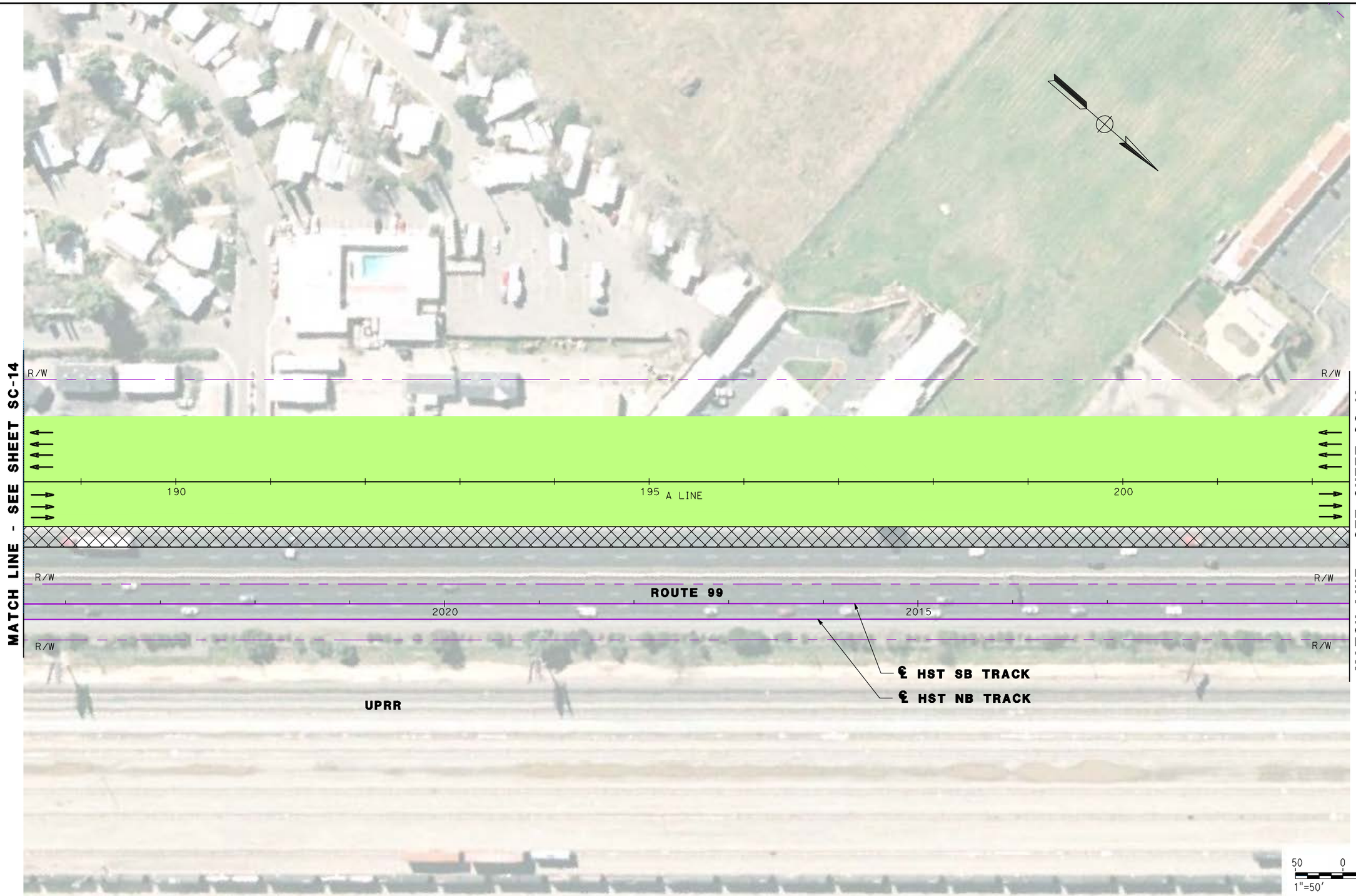
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-14
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ROS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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SUBMITTAL

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CONSTRUCTION

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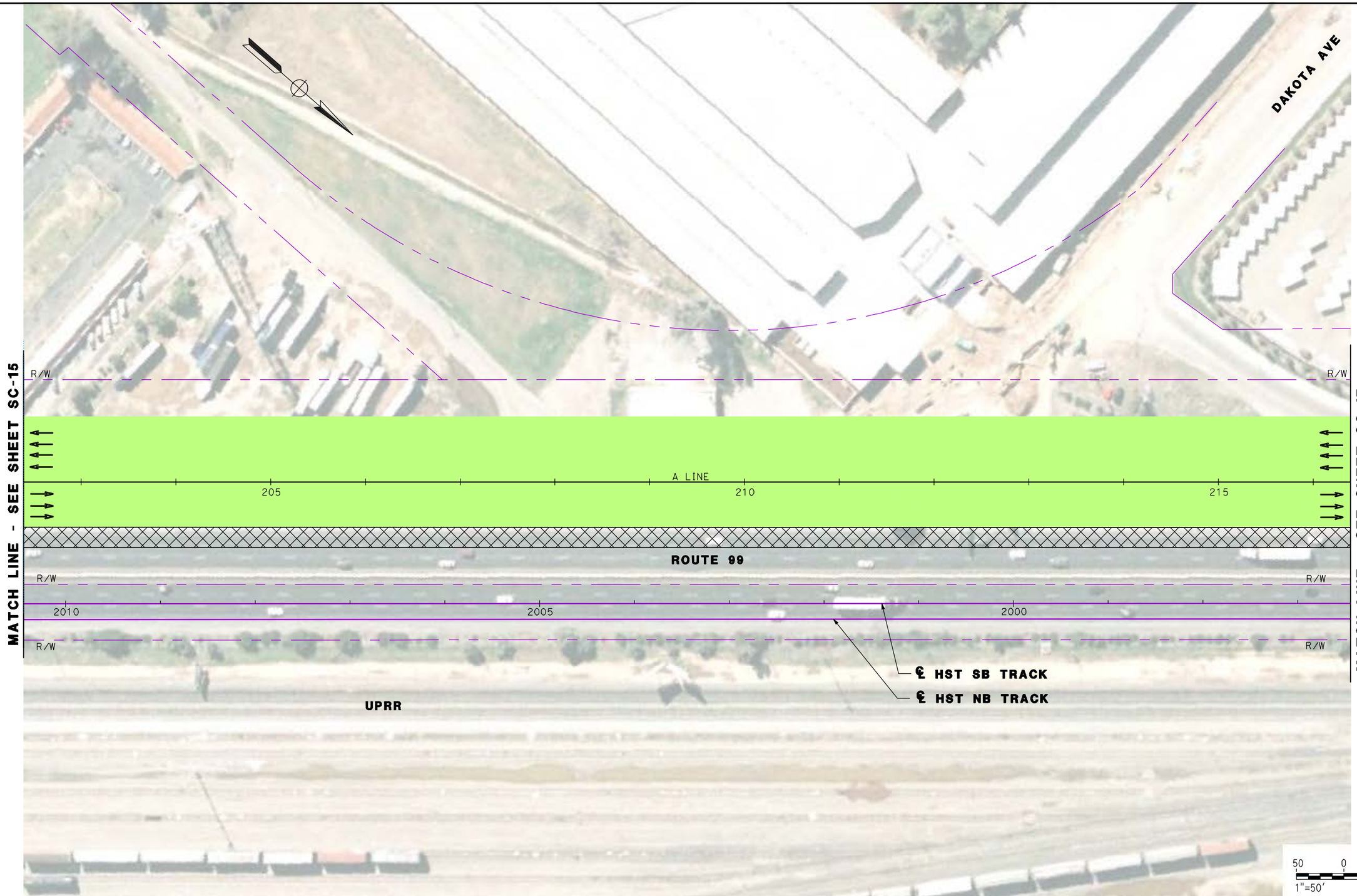
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-15
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME => L.ros



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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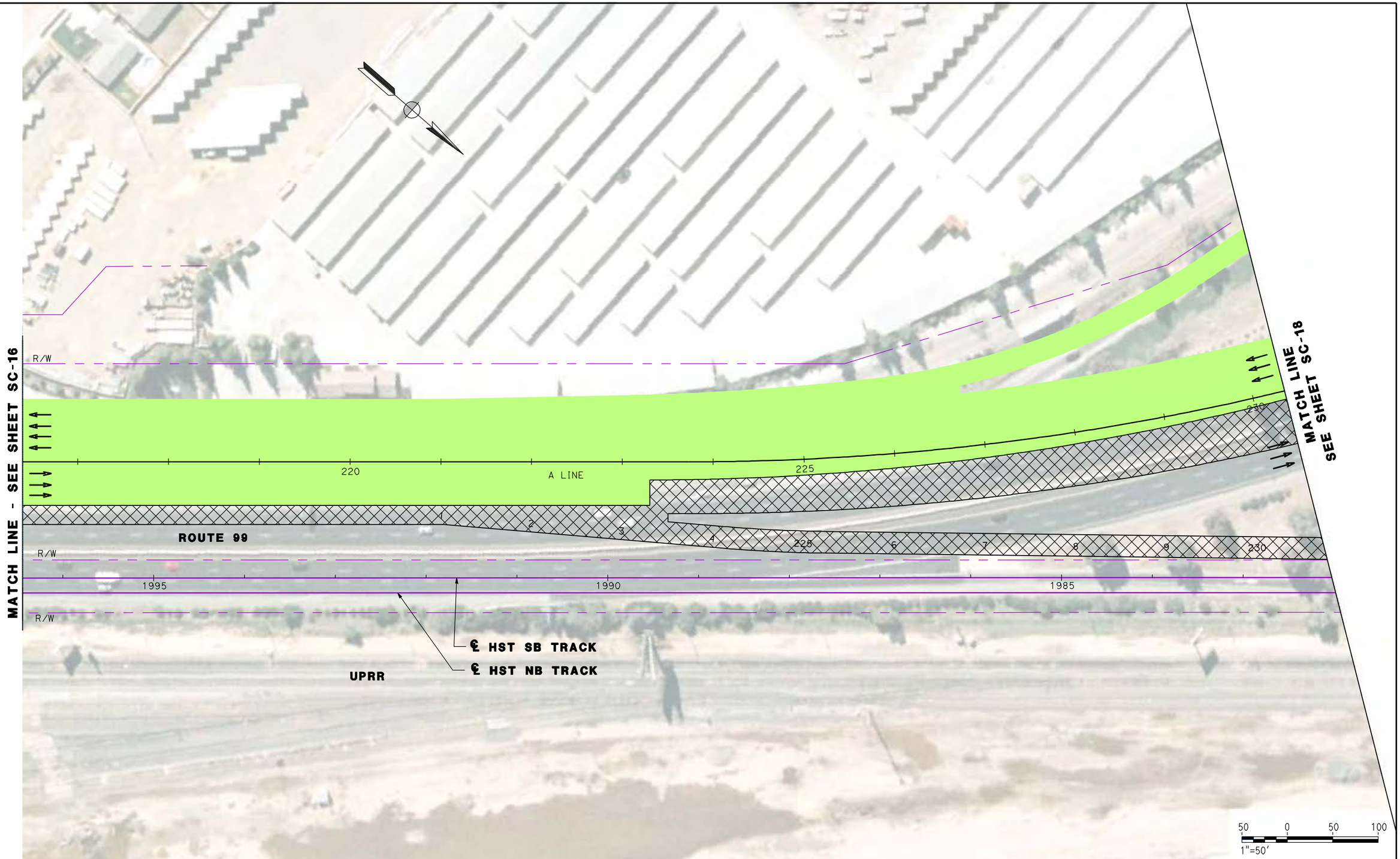
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-16
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011
USERNAME =>



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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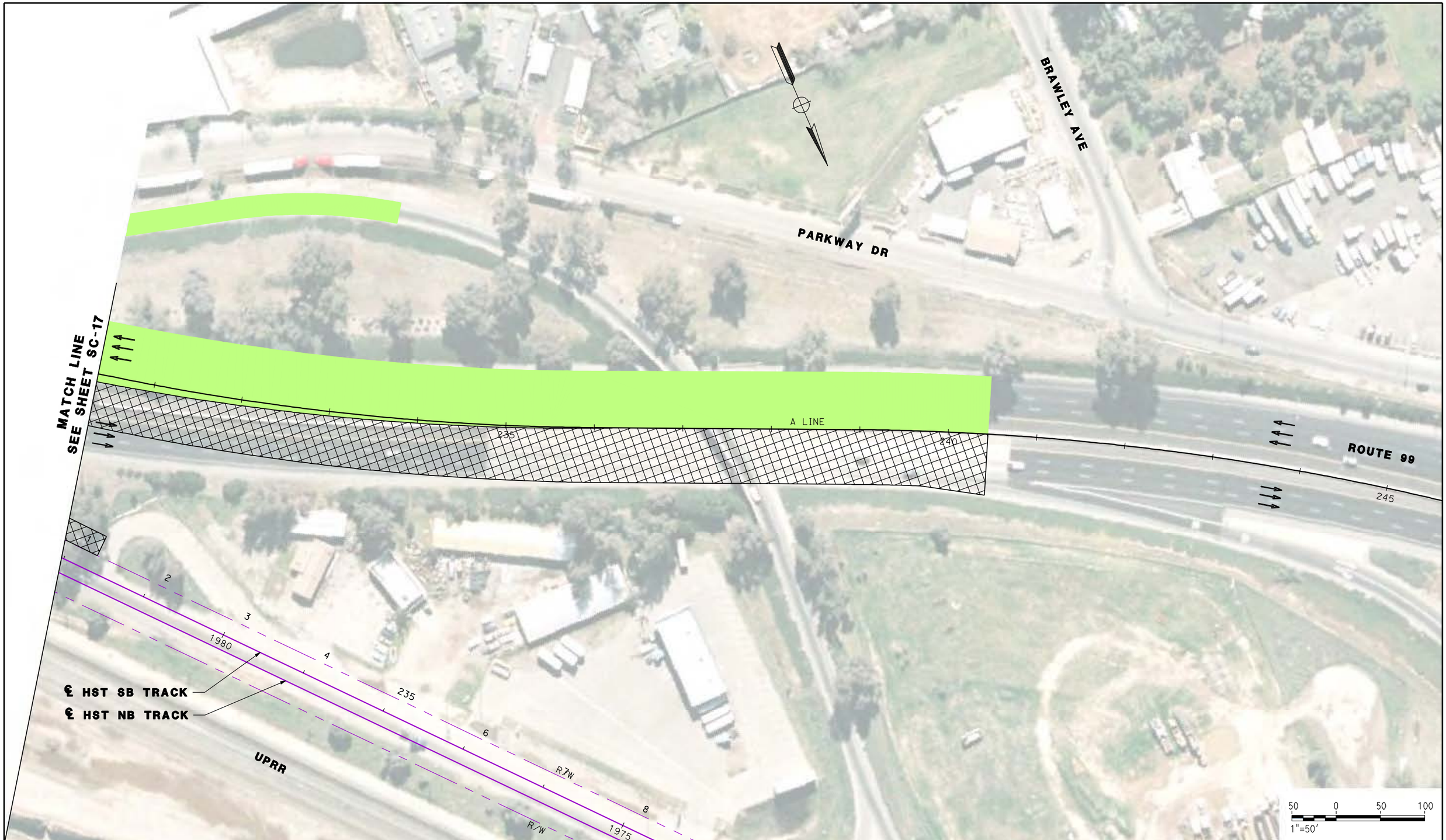
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. SC-17
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 26-APR-2011



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. MANOREK
DRAWN BY L. ROS
CHECKED BY L. HEUSTON
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
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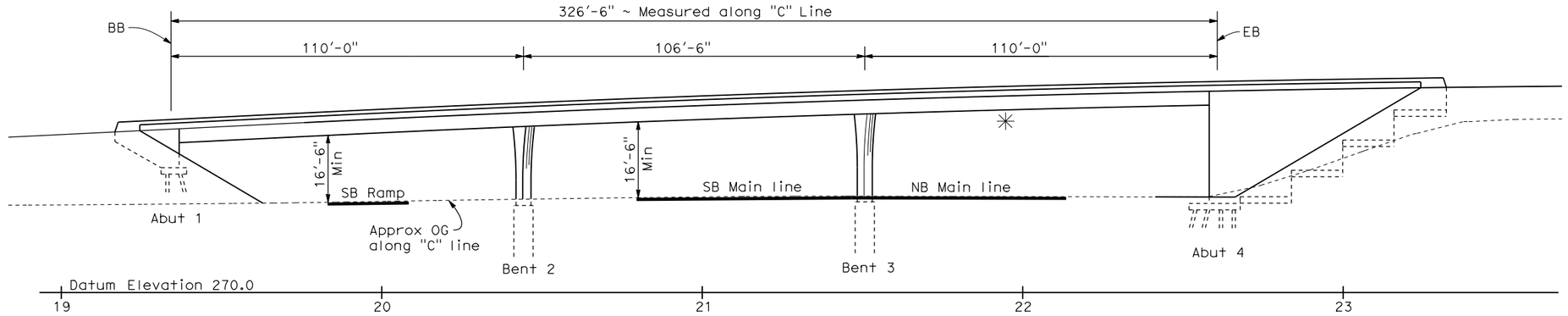
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
STAGE 2 CONSTRUCTION

CONTRACT NO. HSR06-007
DRAWING NO. **SC-18**
SCALE AS SHOWN
SHEET NO.

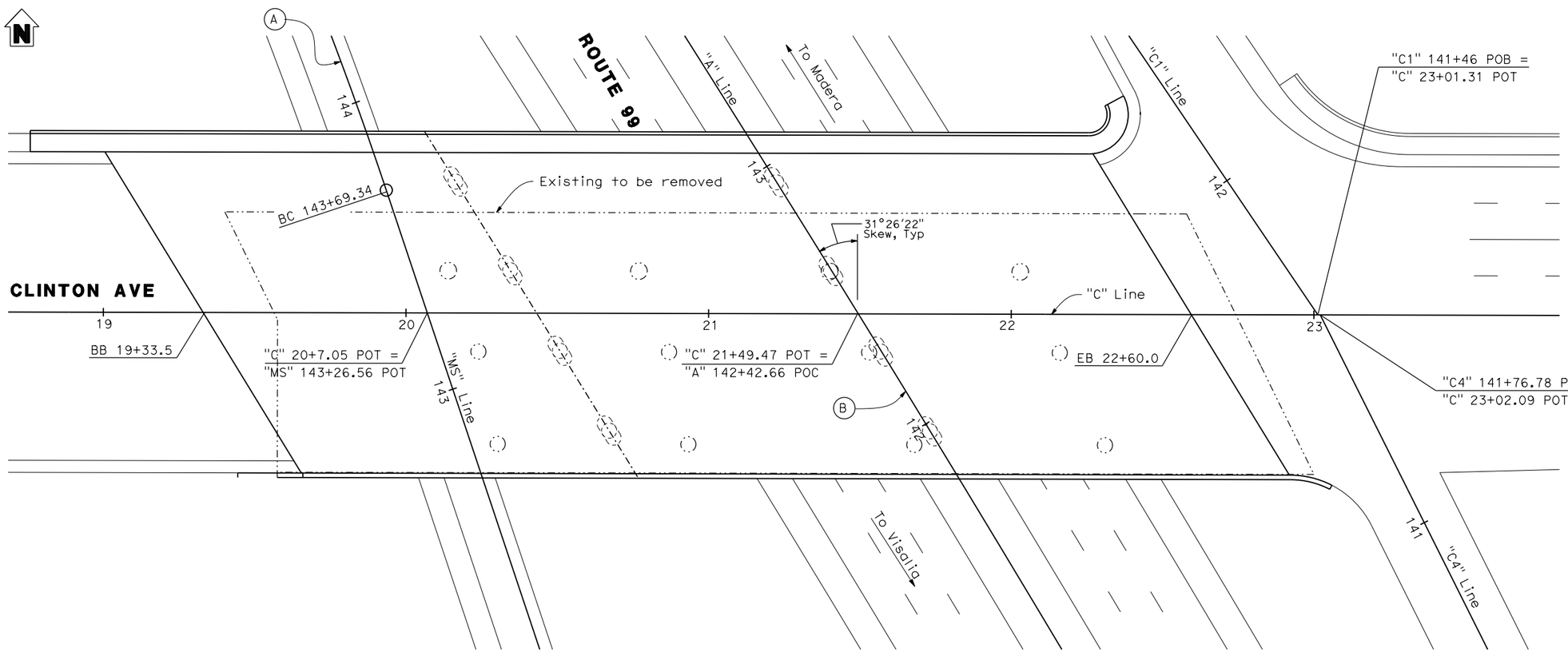
DATE PLOTTED => 26-APR-2011



ELEVATION
1"=20'

✳ Temporary Falsework Clearance = 15'-0"
Falsework Depth = 3'-3 1/2"

DATE OF ESTIMATE	=	10-21-2010
BRIDGE REMOVAL	=	$ 600,000
STRUCTURE DEPTH	=	4'-6"
LENGTH	=	326'-6"
WIDTH	=	114'-6"
AREA	=	37,385 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	$ 175/ft^2
TOTAL COST	=	$ 6,543,000



CURVE DATA (A)
R = 1350'
Δ = 10°30'20"
L = 247.53'
T = 124.11'

CURVE DATA (B)
R = 9000.00'
Δ = 15°38'27"
L = 2456.85'
T = 1236.11

PLAN
1"=20'

CLINTON AVE OVERCROSSING (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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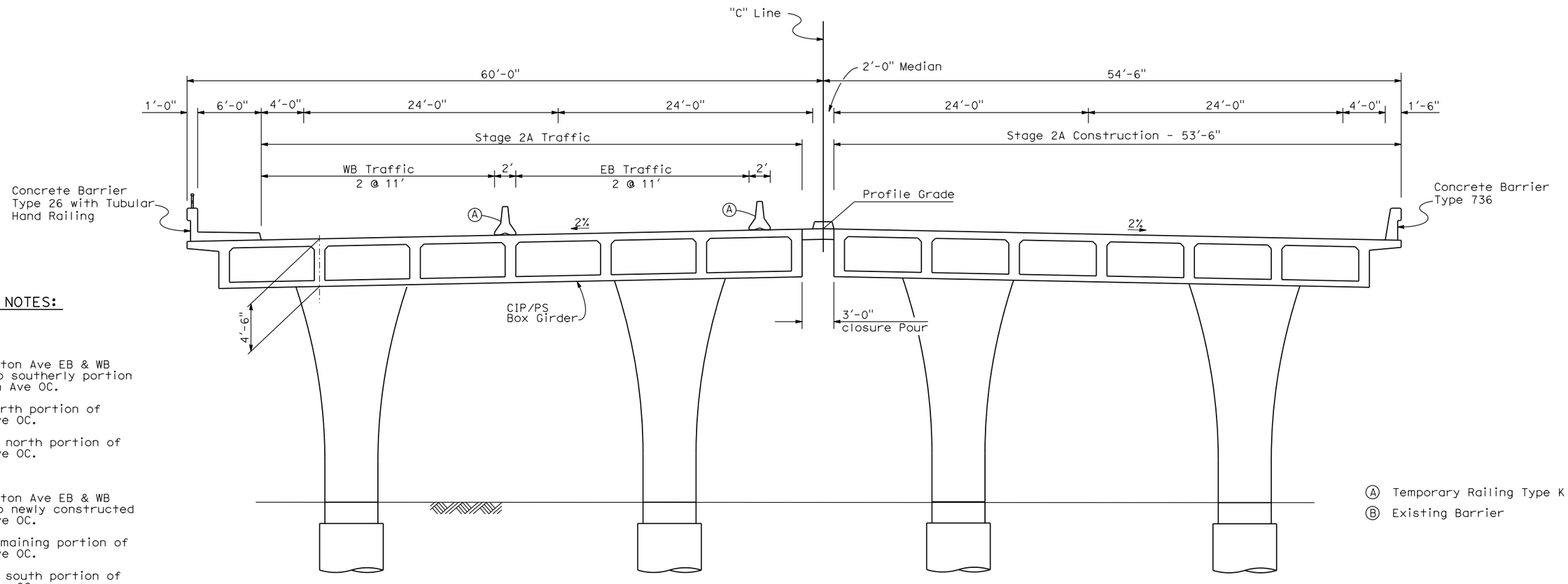
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-1**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => [illegible]



TYPICAL SECTION
1"=5'

STAGING NOTES:

STAGE 1:

Shift Clinton Ave EB & WB traffic to southerly portion of Clinton Ave OC.

Remove north portion of Clinton Ave OC.

Construct north portion of Clinton Ave OC.

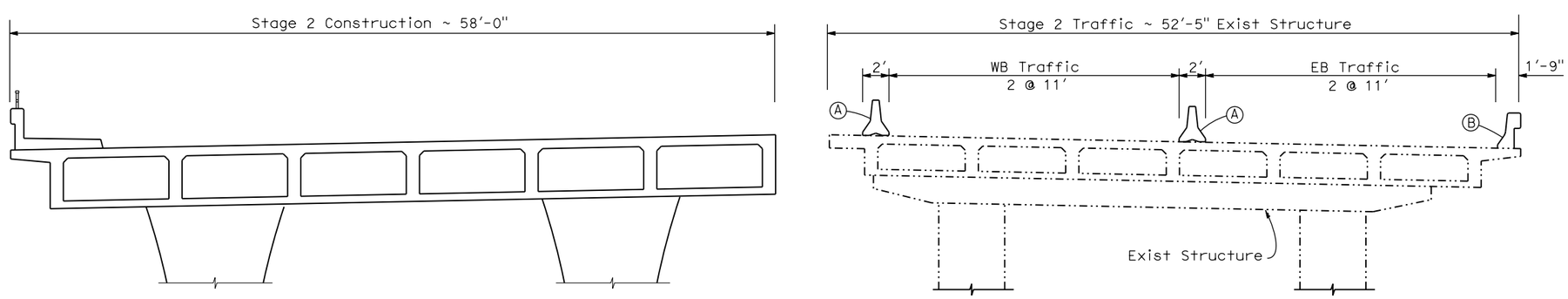
STAGE 2:

Shift Clinton Ave EB & WB traffic to newly constructed Clinton Ave OC.

Remove remaining portion of Clinton Ave OC.

Construct south portion of Clinton Ave OC.

Closure pour.



STAGE CONSTRUCTION
1"=5'

CLINTON AVE OVERCROSSING (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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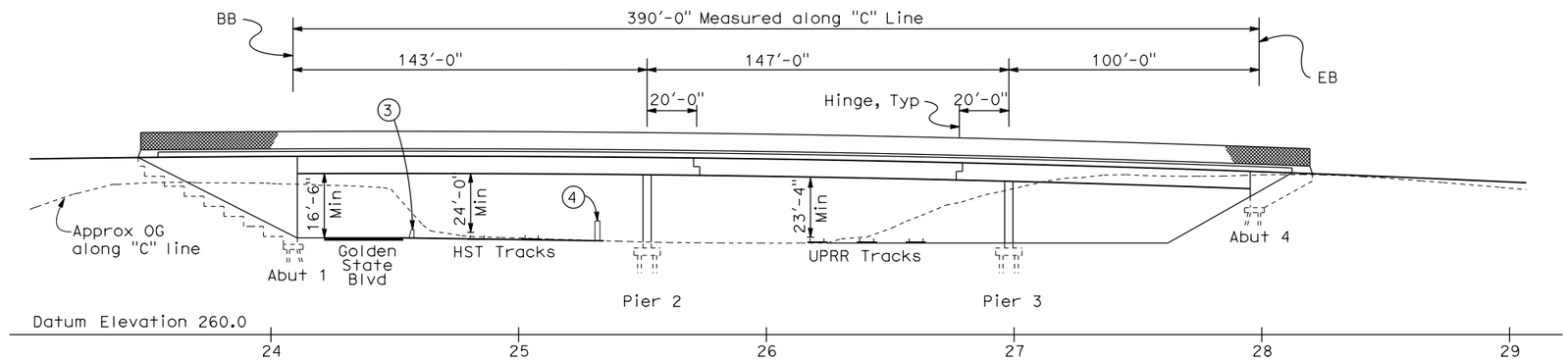
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
ADVANCE PLANNING STUDY

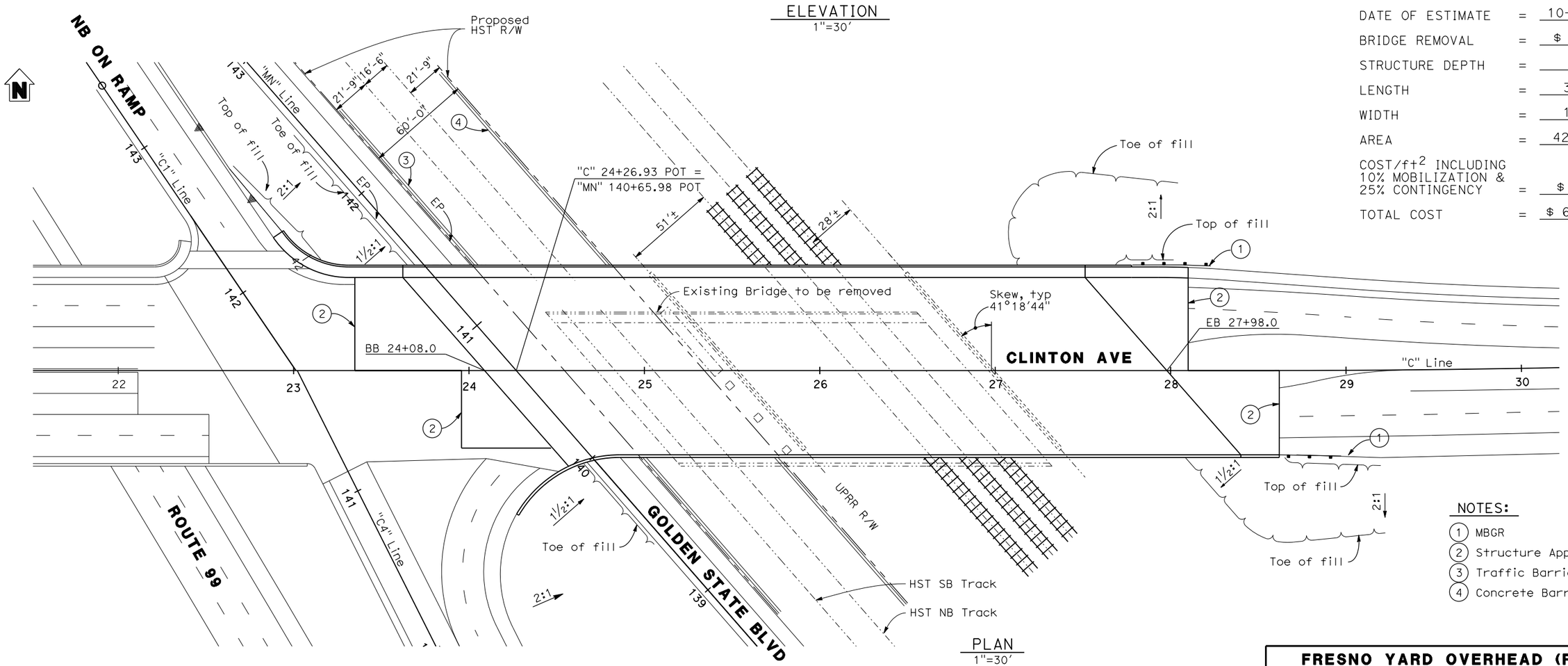
CONTRACT NO. HSR006-007
DRAWING NO. **BR-2**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 29-APR-2011
USERNAME => 1000



ELEVATION
1"=30'

DATE OF ESTIMATE	=	10-21-2010
BRIDGE REMOVAL	=	$ 400,000
STRUCTURE DEPTH	=	7'-6"
LENGTH	=	390'-0"
WIDTH	=	109'-6"
AREA	=	42,705 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	$ 150/ft^2
TOTAL COST	=	$ 6,810,000



PLAN
1"=30'

NOTES:

1. MBGR
2. Structure Approach
3. Traffic Barrier
4. Concrete Barrier Wall

FRESNO YARD OVERHEAD (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET 15% DESIGN SUBMITTAL

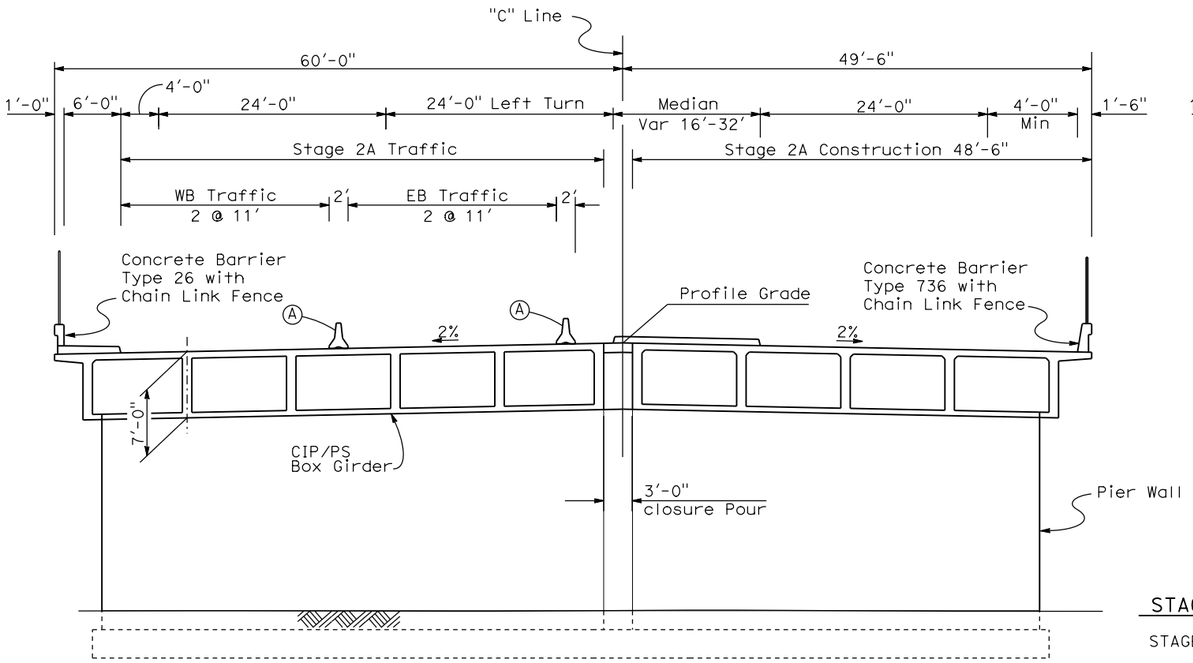
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

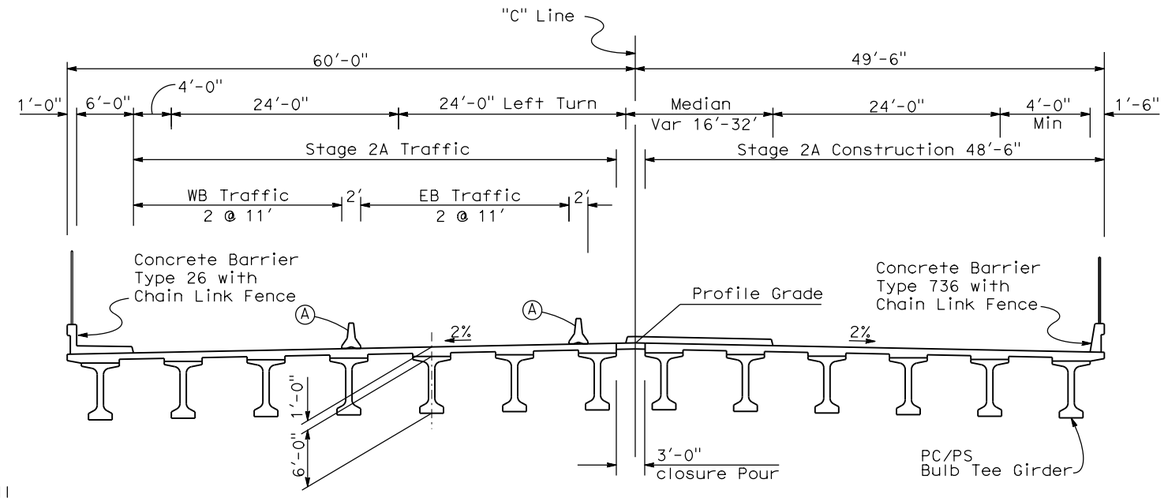
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-3**
SCALE AS SHOWN
SHEET NO.



STAGE 2A - SPANS 1 & 3



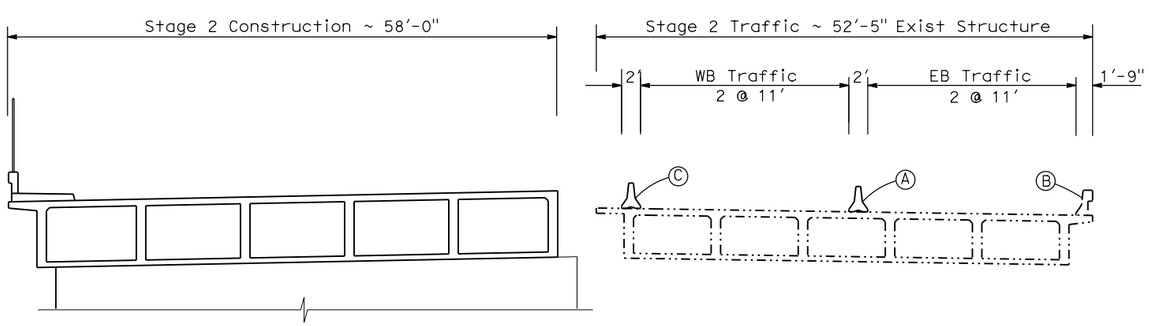
STAGE 2A - SPAN 2

Ⓐ Temporary Railing Type K

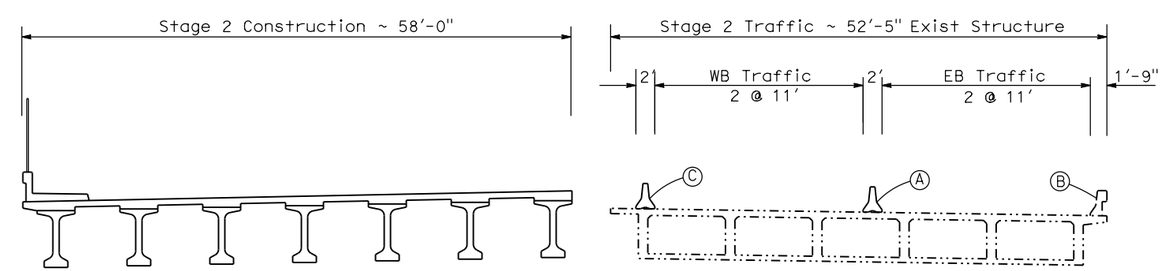
Ⓑ Existing Barrier

STAGING NOTES:

STAGE 2:	STAGE 2A:
Shift Clinton Ave EB & WB traffic to southerly portion of Fresno Yard OH.	Shift Clinton Ave EB & WB traffic to newly constructed Fresno Yard OH.
Remove north portion of Fresno Yard OH.	Remove remaining portion of Fresno Yard OH.
Construct north portion of Fresno Yard OH.	Construct south portion of Fresno Yard OH.
	Closure pour.



STAGE 1 - SPANS 1 & 3



STAGE 1 - SPAN 2

TYPICAL SECTION
1/8"=1'-0"

FRESNO YARD OVERHEAD (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

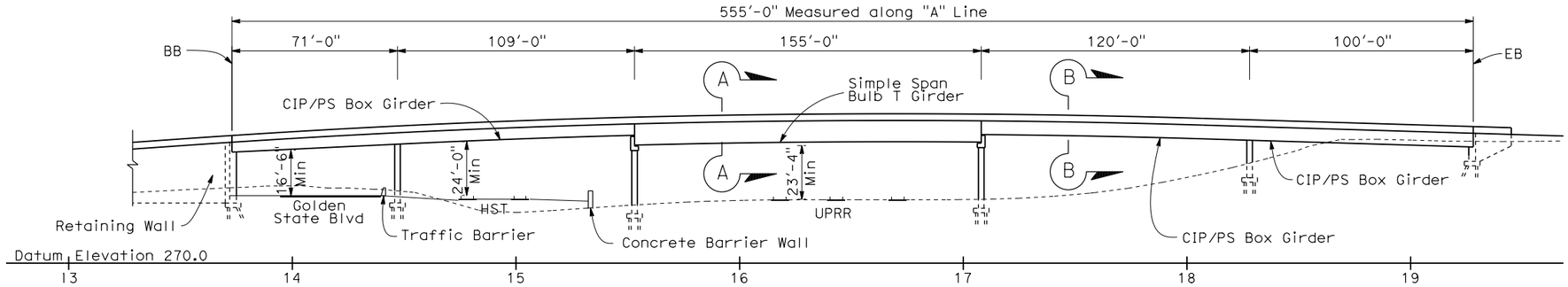
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-4**
SCALE AS SHOWN
SHEET NO.

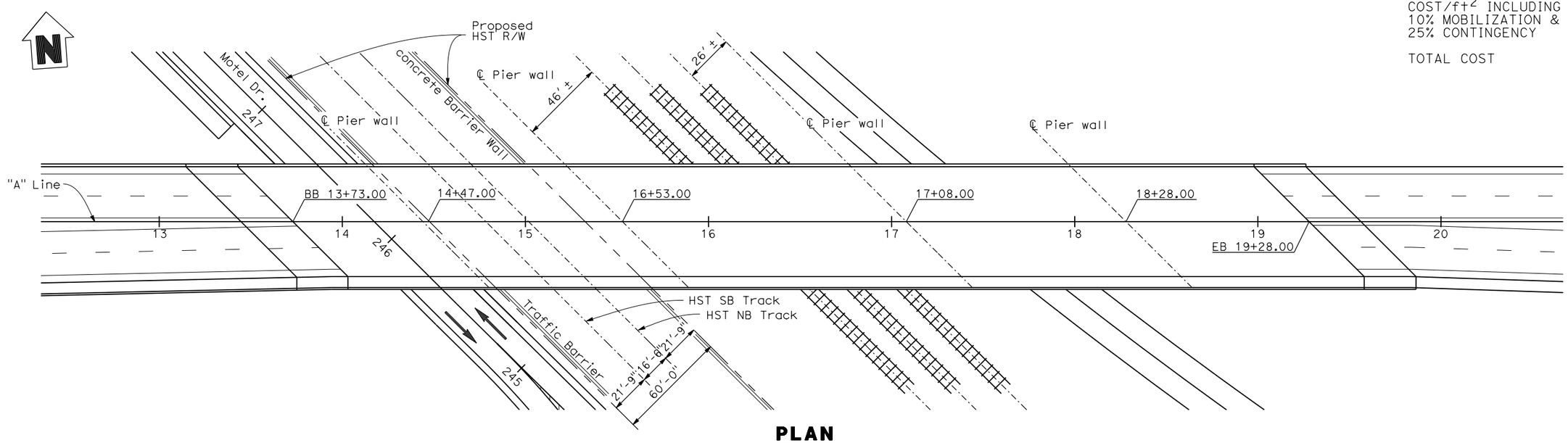
DATE PLOTTED => 29-APR-2011
USERNAME => 1500



ELEVATION

1" = 30'

DATE OF ESTIMATE	=	3-14-2011
BRIDGE REMOVAL	=	$ 600,000
STRUCTURE DEPTH	=	9'-6"
LENGTH	=	555'-0"
WIDTH	=	68'-6"
AREA	=	38,020 ft^2
COST/ft^2 INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	$ 175/ft^2
TOTAL COST	=	$ 6,700,000



PLAN

1" = 30'

ASHLAN AVE OVERHEAD (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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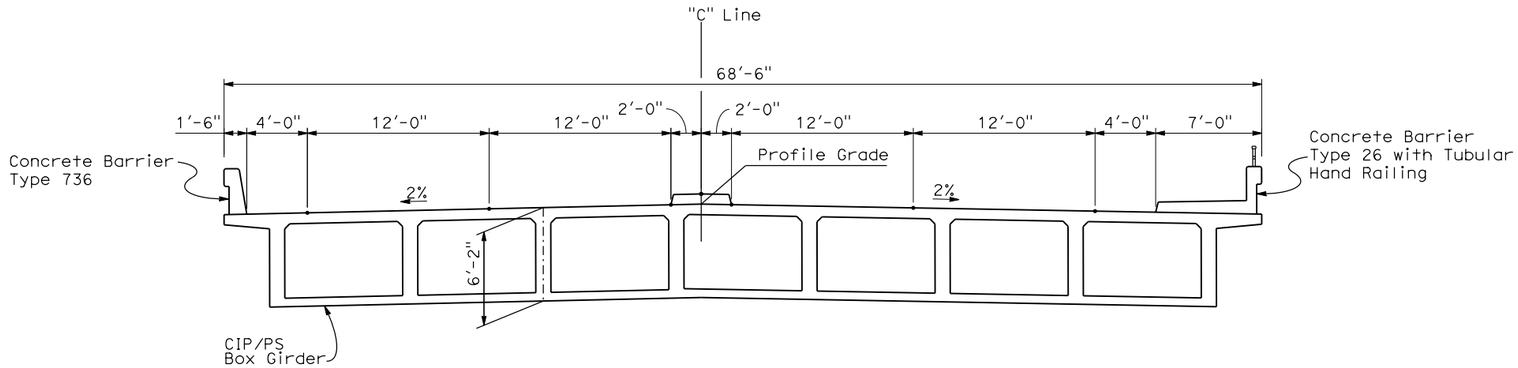
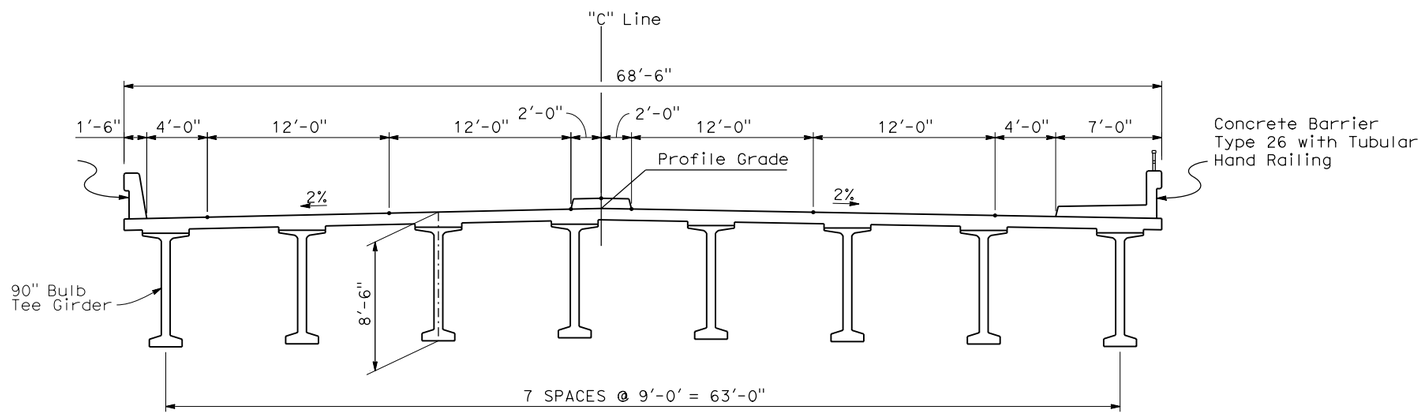
CONTRACT NO. HSR006-007
DRAWING NO. **BR-5**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME =>



SECTION A-A
1"=5'



SECTION B-B
1"=5'

ASHLAN AVE OVERHEAD (REPLACE)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. FREDERICKS
DRAWN BY P. WALKER
CHECKED BY J. SHOWERS
IN CHARGE J. MATSUI-DRURY
DATE 04/29/11

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH SPEED TRAIN PROJECT
MERCED TO FRESNO
ROUTE 99 RE-ALIGNMENT
ADVANCE PLANNING STUDY

CONTRACT NO. HSR006-007
DRAWING NO. **BR-6**
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 29-APR-2011
USERNAME => 1000

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B8990-B	UPRR/SR99 - (AVE 21)	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B8991-B	UPRR/SR99 - (AVE 21)	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B9000-B	UPRR/SR99 - (AVE 21)		INDEX MAP	SHEET 1 OF 2
		B9001-B	UPRR/SR99 - (AVE 21)		INDEX MAP	SHEET 2 OF 2
		CB9000-B	UPRR/SR99 MAINLINE - (AVE 21)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 1 OF 4
		CB9001-B	UPRR/SR99 MAINLINE - (AVE 21)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 2 OF 4
		CB9002-B	UPRR/SR99 MAINLINE/WYE/MERCED - (AVE 21)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 3 OF 4
		CB9003-B	UPRR/SR99 MERCED - (AVE 21)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 4 OF 4
		CR8990-B	UPRR/SR99 - (AVE 21)	LOCAL ROADS	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		CR8991-B	UPRR/SR99 - (AVE 21)	LOCAL ROADS	TYPICAL CROSS SECTIONS	SHEET 2 OF 2
		CR8992-B	UPRR/SR99 - (AVE 21)	DEPRESSED ACCESS ROAD	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CR8993-B	UPRR/SR99 - (AVE 21)		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
				LAYOUT		
40		CR9000-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 33	LAYOUT	STA 13+21 TO STA 58+86
41		CR9001-B	UPRR/SR99 MAINLINE - (AVE 21)	REALIGNED ROAD	LAYOUT	STA 10+00 TO STA 45+94
42		CR9002-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 31 & GOLDEN STATE BLVD AT AVENUE 9	LAYOUT	STA 106+00 TO 120+00 & STA 100+00 TO 130+35.68
43		CR9003-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 31 1/2	LAYOUT	SHEET 1 OF 4
43		CR9004-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 31 1/2	LAYOUT	SHEET 2 OF 4
44		CR9005-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 30 1/2 & ROAD 31 1/2	LAYOUT	SHEET 3 OF 4
44		CR9006-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 30 1/2	LAYOUT	SHEET 4 OF 4
45		CR9007-B	UPRR/SR99 MAINLINE - (AVE 21)	ROAD 30 AT AVENUE 11	LAYOUT	SHEET 1 OF 2
45		CR9008-B	UPRR/SR99 MAINLINE - (AVE 21)	ACCESS ROAD AT AVENUE 11	LAYOUT	SHEET 2 OF 2
46		CR9009-B	UPRR/SR99 MAINLINE - (AVE 21)	S KNOX ST	LAYOUT	STA 10+00 TO STA 34+67
47		CR9010-B	UPRR/SR99 MAINLINE - (AVE 21)	N E ST AND S E ST	LAYOUT	SHEET 1 OF 2
48		CR9011-B	UPRR/SR99 MAINLINE - (AVE 21)	SHARON BLVD & E ST	LAYOUT	SHEET 2 OF 2
49		CR9012-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	GOLDEN STATE BLVD AT AVENUE 20 AND 20 1/2	LAYOUT	STA 100+00 TO STA 146+50.21
50		CR9013-B	UPRR/SR99 MAINLINE - (AVE 21)	ACCESS ROAD	LAYOUT AND PROFILE	STA 50+00 TO 64+49.40, STA 138+43.28
51		CR9014-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	MASA ST AND ROAD 22 - ALT 1	LAYOUT	SHEET 1 OF 1
51		CR9015-B	UPRR/SR99 MAINLINE/MERCED - (AVE 21)	MASA ST AND AVENUE 20 1/2 - ALT 2	LAYOUT	SHEET 1 OF 1
52		CR9016-B	UPRR/SR99 MERCED - (AVE 21)	FAIRMEAD BLVD	LAYOUT	SHEET 1 OF 5
52		CR9017-B	UPRR/SR99 MERCED - (AVE 21)	FAIRMEAD BLVD	LAYOUT	SHEET 2 OF 5
52		CR9018-B	UPRR/SR99 MERCED - (AVE 21)	FAIRMEAD BLVD	LAYOUT	SHEET 3 OF 5
52		CR9019-B	UPRR/SR99 MERCED - (AVE 21)	FAIRMEAD BLVD	LAYOUT	SHEET 4 OF 5
52		CR9020-B	UPRR/SR99 MERCED - (AVE 21)	FAIRMEAD BLVD	LAYOUT	SHEET 5 OF 5
53		CR9021-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 1 OF 8
53		CR9022-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 2 OF 8
53		CR9023-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 3 OF 8
53		CR9024-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 4 OF 8
53		CR9025-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 5 OF 8
53		CR9026-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 6 OF 8
53		CR9027-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 7 OF 8
53		CR9028-B	UPRR/SR99 MERCED - (AVE 21)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 8 OF 8
54		CR9029-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	ROAD 15 1/2 & NORTH FRONTAGE ROAD	LAYOUT	STA 63+99.89 TO STA 77+00
54		CR9030-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	ROAD 15 1/2 & AVENUE 20 1/2	LAYOUT	
54		CR9031-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	AVENUE 20 1/2	LAYOUT	
54		CR9032-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD AVENUE 21	LAYOUT	STA 77+00 TO STA 135+00
54		CR9033-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD AVENUE 21	LAYOUT	STA 135+00 TO STA 165+00
54		CR9034-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD	LAYOUT	STA 165+00 TO STA 225+00, 98+00 & 148+37.86
56		CR9035-B	UPRR/SR99 MAINLINE/WYE - (AVE 21)	ROAD 18	LAYOUT	STA 98+00 TO STA 117+41
55		CR9036-B	UPRR/SR99 MAINLINE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD	LAYOUT	STA 225+00 TO 280 & STA 148+37.86 TO 203+63.43
55		CR9037-B	UPRR/SR99 MAINLINE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD	LAYOUT	STA 280+00 TO 287+51 & STA 203+63.43 TO 258+89
55		CR9038-B	UPRR/SR99 MAINLINE - (AVE 21)	NORTH & SOUTH FRONTAGE ROAD	LAYOUT	STA 258+89 TO STA 265+65
55		CR9039-B	UPRR/SR99 MAINLINE - (AVE 21)	NORTH FRONTAGE ROAD AVENUE 21	LAYOUT	
55		CR9040-B	UPRR/SR99 MAINLINE - (AVE 21)	AVENUE 21	LAYOUT	
85		CR9041-B	UPRR/SR99 MERCED - (AVE 21)	HEALY ROAD	LAYOUT	
86		CR9042-B	UPRR/SR99 MERCED - (AVE 21)	GERARD AVENUE/CALTRANS FRONTAGE ROAD	LAYOUT	
		CR1479-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 22 CONNECTOR TO ROAD 11	PLAN AND PROFILE
		CR1480-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 22 CONNECTOR TO ROAD 11	PLAN AND PROFILE
		CR1483-A	UPRR MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 21	PLAN AND PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99-(AVE 21)
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B8990-B
SCALE NONE
SHEET NO. ### OF ###

7/22/2011 11:05:19 AM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\Package 1 - Ave 21 Wye\Volume 3B - Ave 21 Wye Local Roads\Index Of Drawings\B8990-B.dgn
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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B8991-B
SCALE NO SCALE
SHEET NO. ### OF ###

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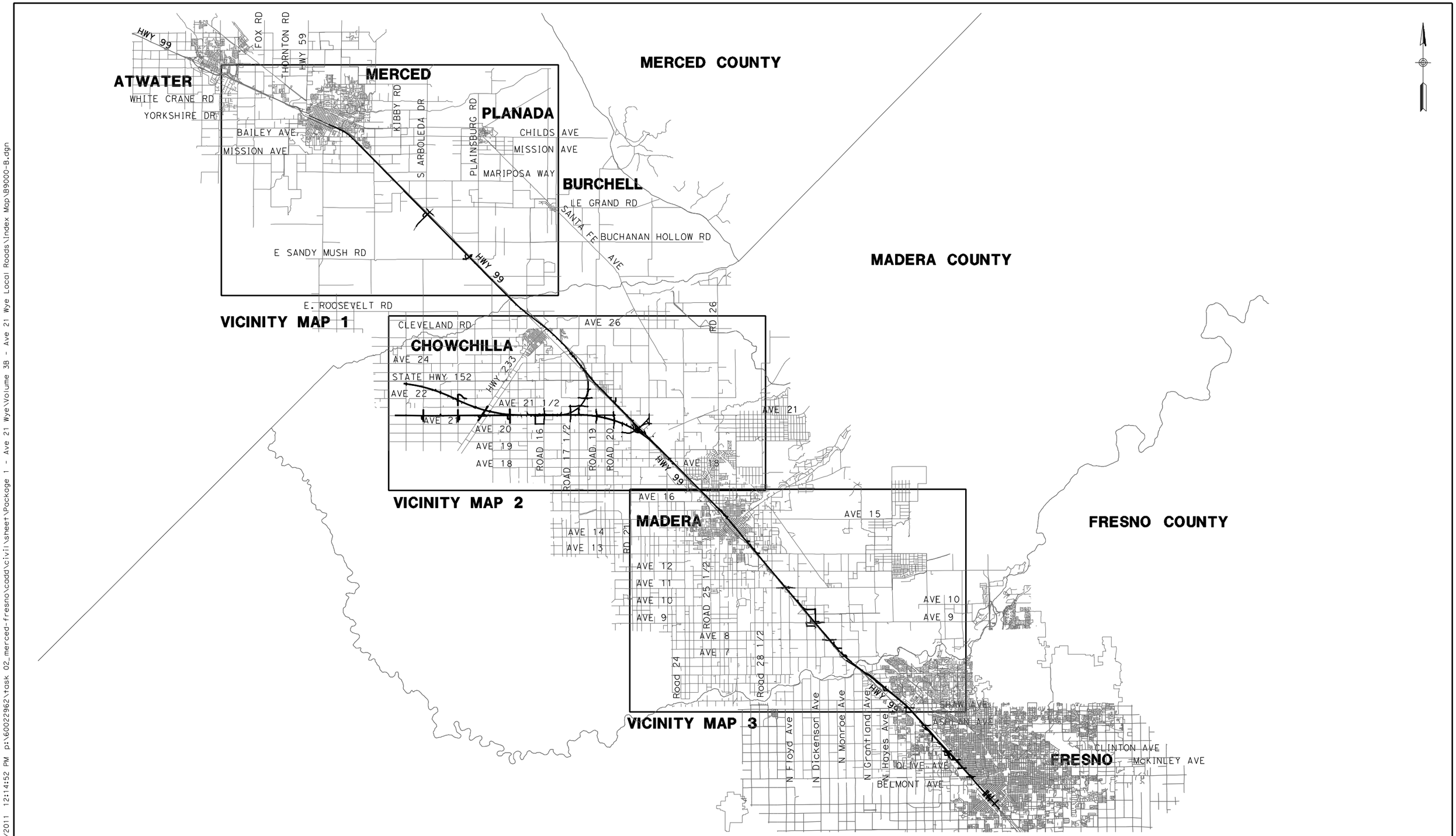

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B9000-B
SCALE NO SCALE
SHEET NO. ### OF ###

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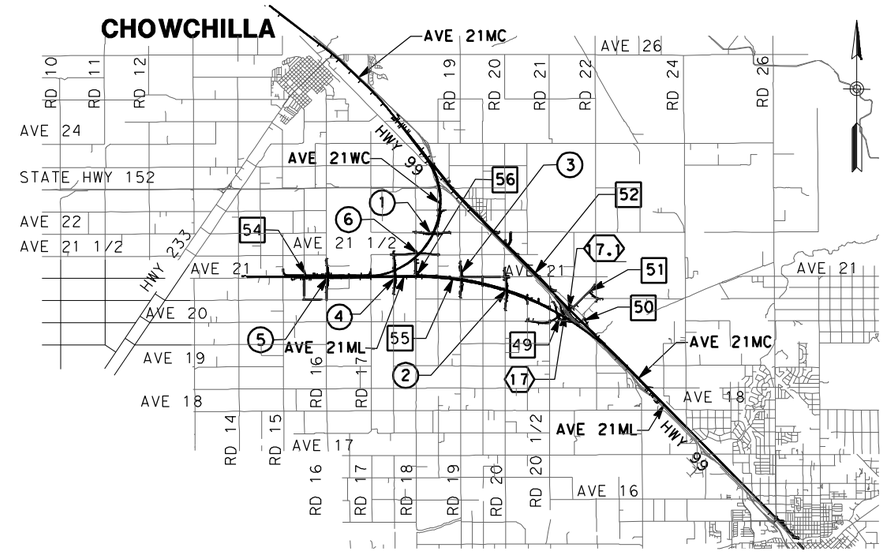
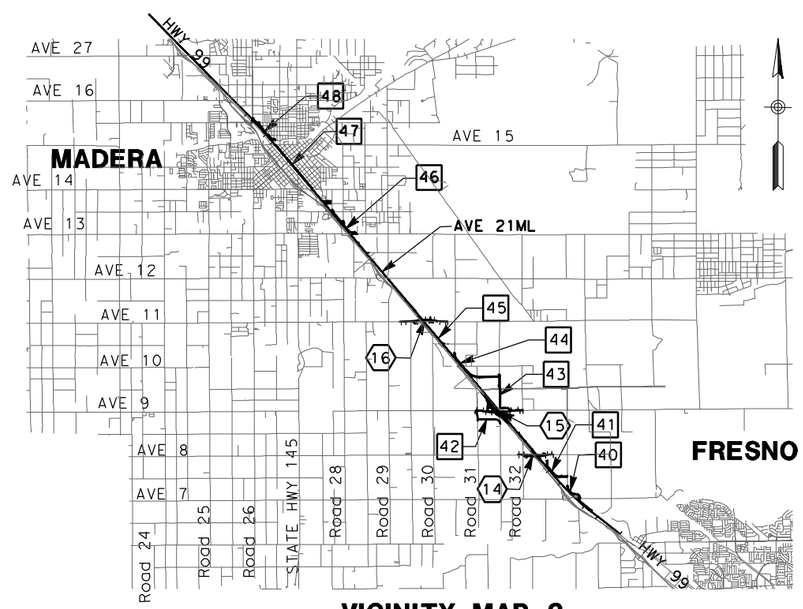
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
2	GRADE SEPARATION - ROAD 20	CT5012-B - CT5015-B	ST1105
3	GRADE SEPARATION - ROAD 19	CT5008-B - CT5011-B	ST1104
4	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
5	GRADE SEPARATION - ROAD 16 ALT 1	CT5000-B - CT5003-B	ST1101
	GRADE SEPARATION -	CT5023-B - CT5025-B	ST1101
	ROAD 16 ALONG EXIST ALT 2		
6	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
14	AVENUE 8 - OVERCROSSING	CT7000-B - CT7002-B	ST1107
15	AVENUE 9 - INTERCHANGE	CT7003-B - CT7009-B	ST1108 - ST1109
16	AVENUE 11 - OVERCROSSING	CT7010-B - CT7014-B	ST1110
17	AVENUE 20 & 20 1/2 -	CT7015-B - CT7022-B	ST1111 - ST1112
	INTERCHANGE ALT 1	CT7031-B - CT7033-B	
7	AVENUE 20 & 20 1/2 -	CT7023-B - CT7030-B	ST1111 - ST1112
	INTERCHANGE ALT 2		
18	GRADE SEPARATION -	CT7034-B - CT7036-B	ST1113
	SANDY MUSH RD INTERCHANGE		
19	GRADE SEPARATION -	CT7037-B - CT7043-B	ST1114
	LE GRAND RD INTERCHANGE		

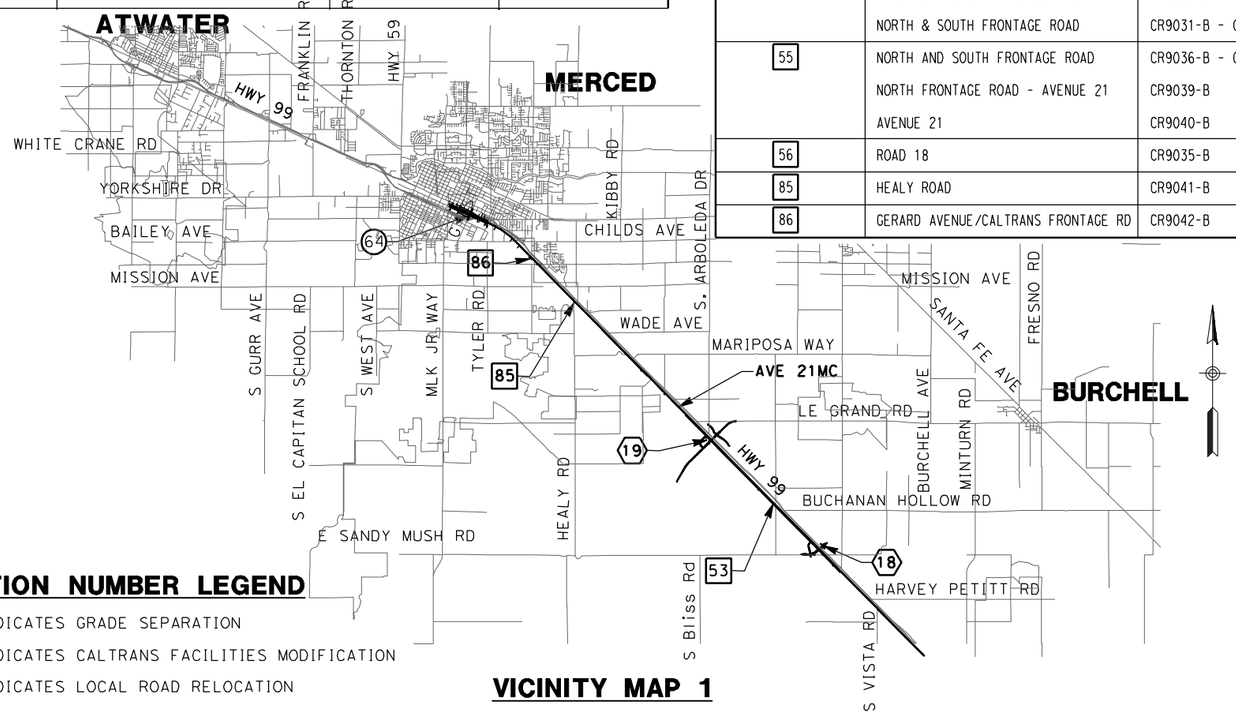
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.
40	ROAD 33	CR9000-B
41	PROPOSED ROAD	CR9001-B
42	ROAD 31 & GOLDEN STATE BLVD	CR9002-B
	AT AVENUE 9	
43	ROAD 31 1/2	CR9003-B - CR9004-B
44	ROAD 30 1/2	CR9005-B - CR9006-B
45	ROAD 30 AT AVENUE 11	CR9007-B
	ACCESS ROAD AT AVENUE 11	CR9008-B
46	S. KNOX ST	CR9009-B
47	N. E ST AND S. E ST	CR9010-B
48	SHARON BLVD & E ST	CR9011-B
49	GOLDEN STATE BLVD AT	CR9012-B
	AVENUE 20 AND 20 1/2	
50	ACCESS ROAD	CR9013-B
51	MASA ST AND ROAD 22 - ALT 1	CR9014-B
	MASA ST AND AVENUE 20 1/2 - ALT 2	CR9015-B
52	FAIRMEAD BLVD	CR9016-B - CR9020-B
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B
54	ROAD 15 1/2 & NORTH FRONTAGE ROAD	CR9029-B
	ROAD 15 1/2 & AVENUE 20 1/2	CR9030-B
	NORTH & SOUTH FRONTAGE ROAD	CR9031-B - CR9034-B
55	NORTH AND SOUTH FRONTAGE ROAD	CR9036-B - CR9038-B
	NORTH FRONTAGE ROAD - AVENUE 21	CR9039-B
	AVENUE 21	CR9040-B
56	ROAD 18	CR9035-B
85	HEALY ROAD	CR9041-B
86	GERARD AVENUE/CALTRANS FRONTAGE RD	CR9042-B



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

9000 0 9000 18000

GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B9001-B
SCALE NO SCALE
SHEET NO. ### OF ###

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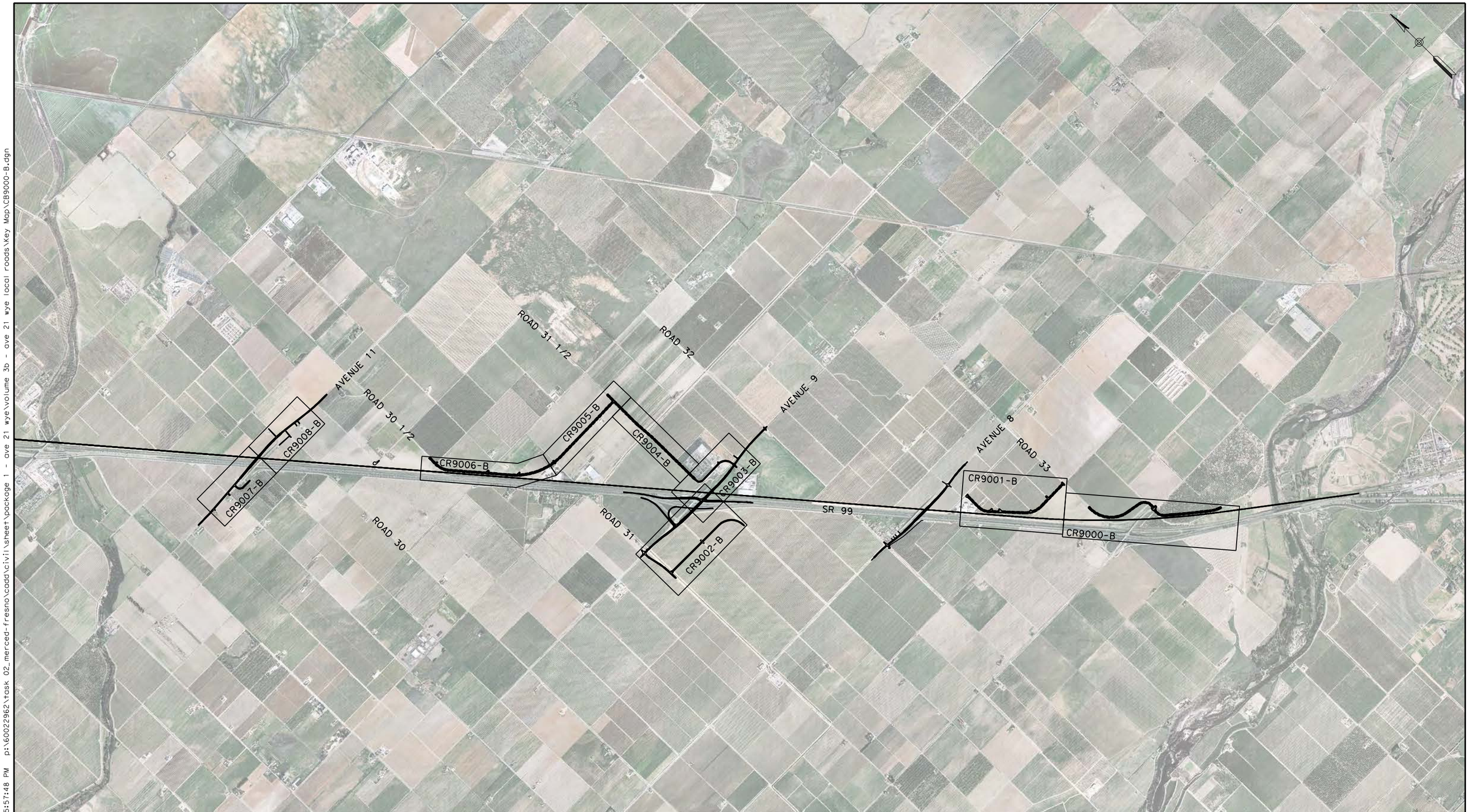


1400 0 1400 2800

1"=1400'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

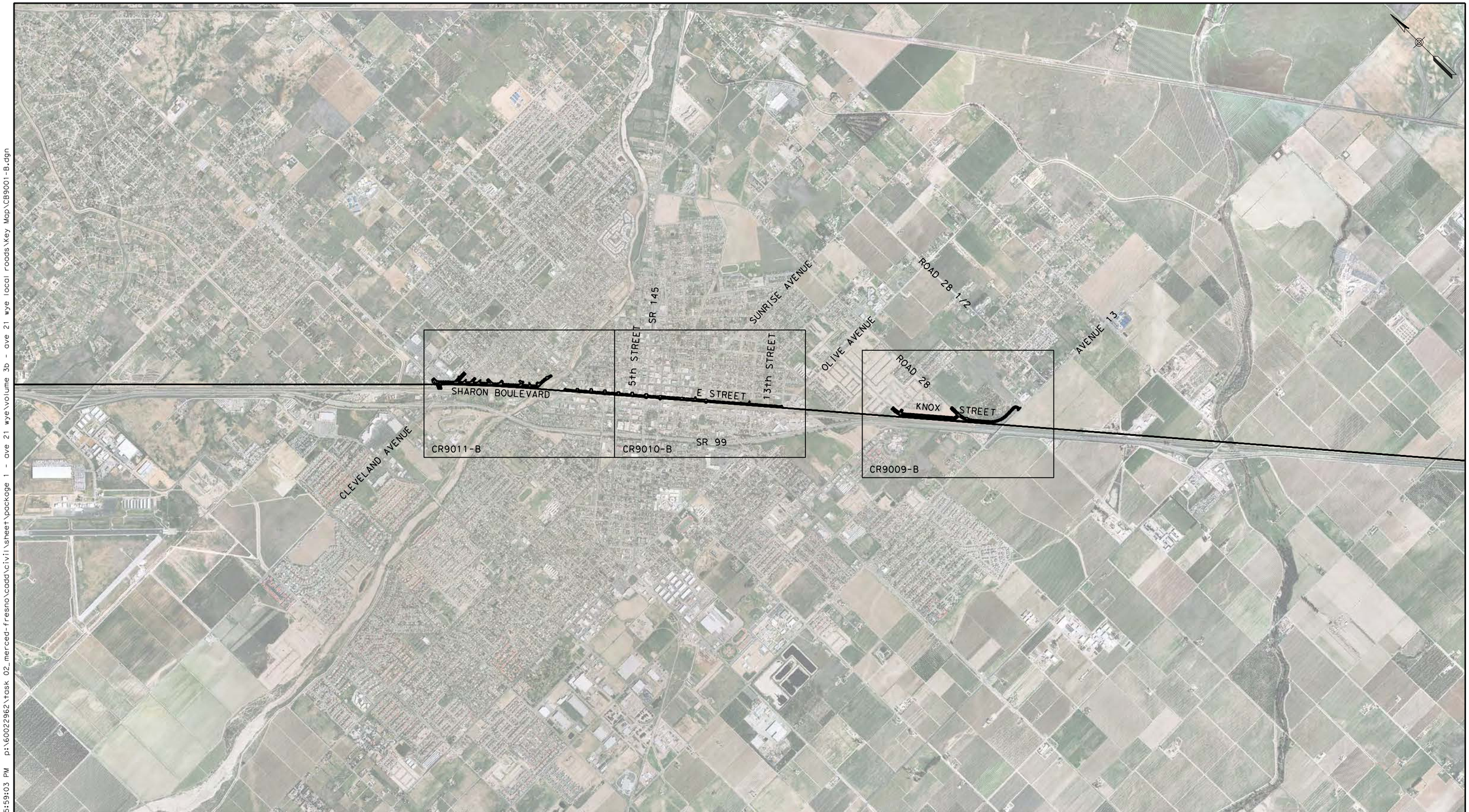
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CB9000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:57:48 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\key Map\CB9000-B.dgn
ayelled



1400 0 1400 2800

1"=1400'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

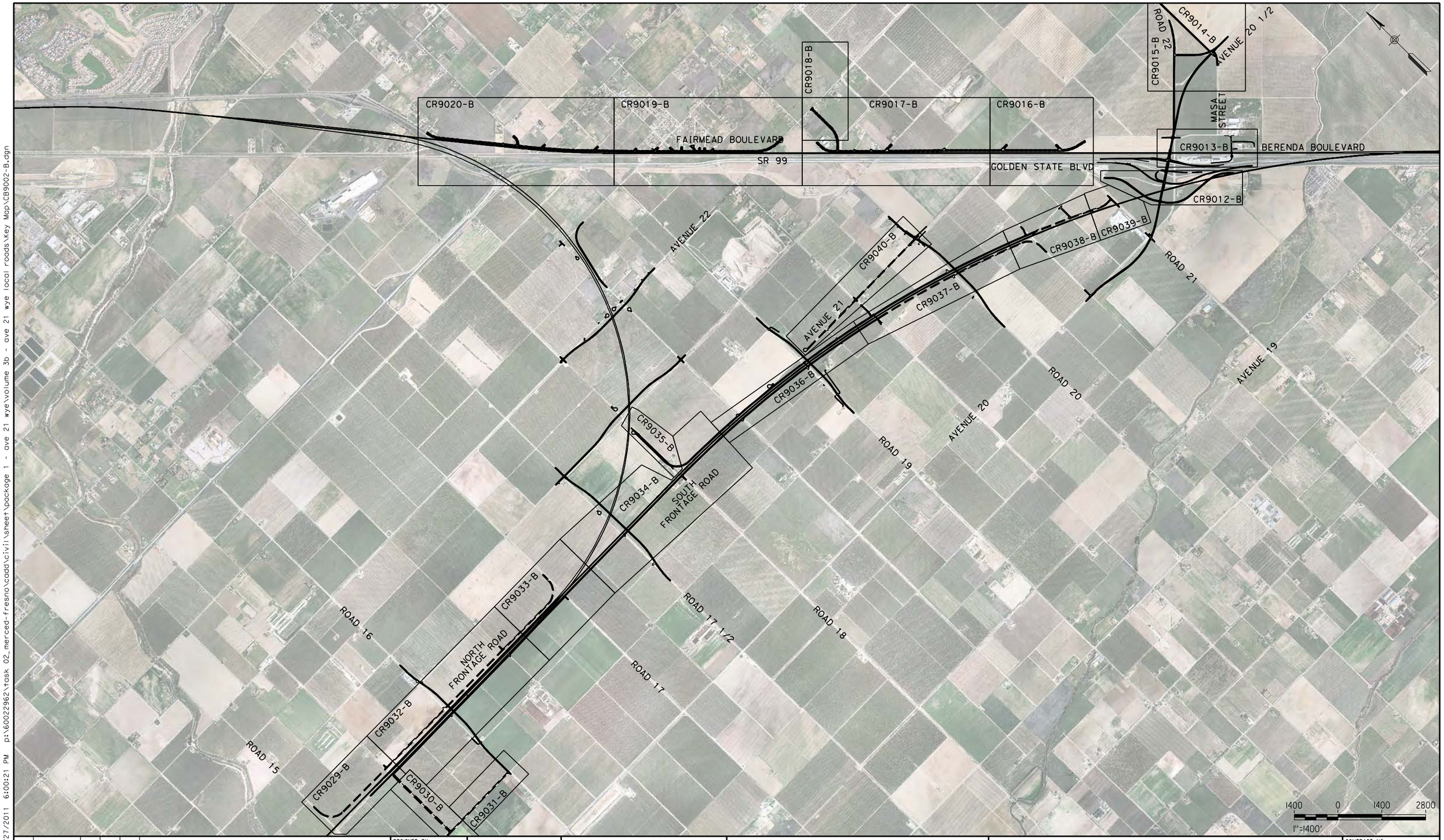
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CB9001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 5:59:03 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\key Map\CB9001-B.dgn
ayelled



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

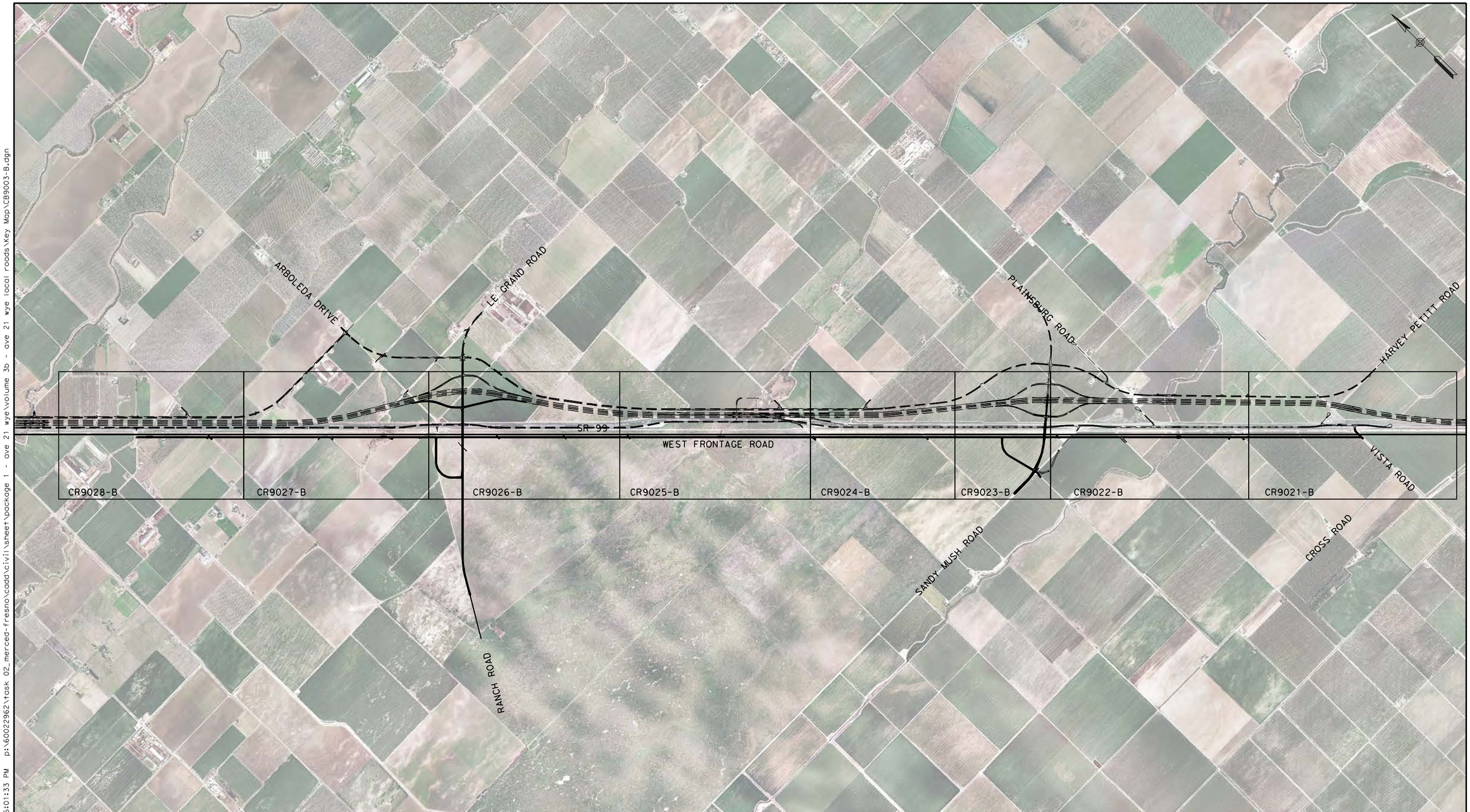
CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE/MERCED - (AVE 21)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CB9002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:00:21 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\key Map\CB9002-B.dgn

oyeled



1400 0 1400 2800

1"=1400'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CB9003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:01:33 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\key Map\CB9003-B.dgn

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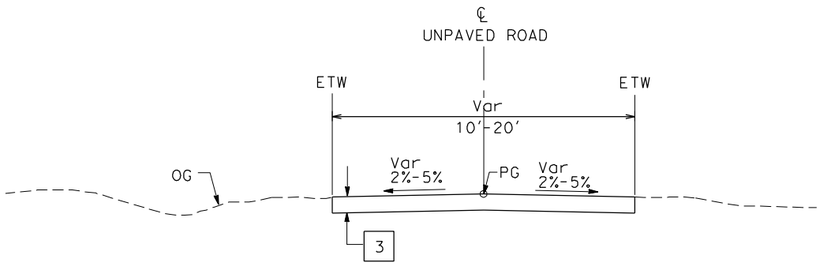
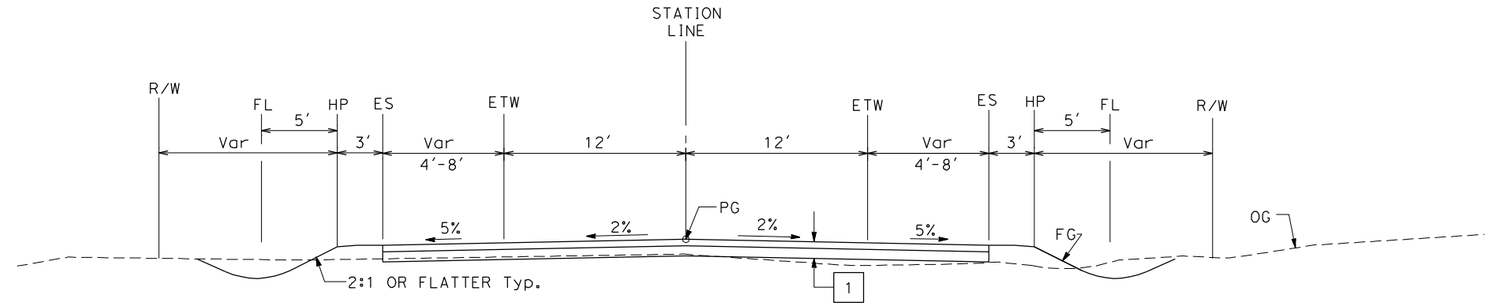


UNPAVED ROAD (TYP)
SEE LAYOUT SHEETS
FOR ACTUAL ROADWAY WIDTHS

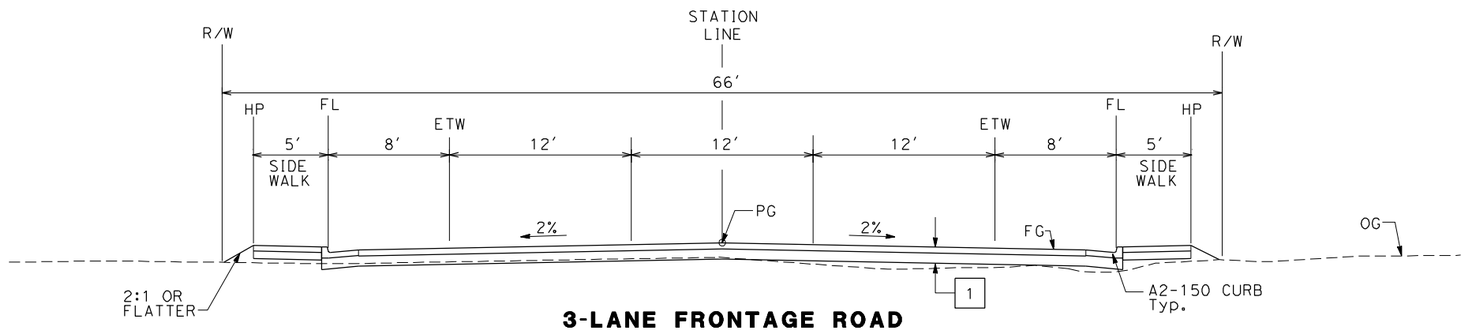


2-LANE FRONTAGE ROAD
SEE LAYOUT SHEETS
FOR ACTUAL SHOULDER WIDTHS

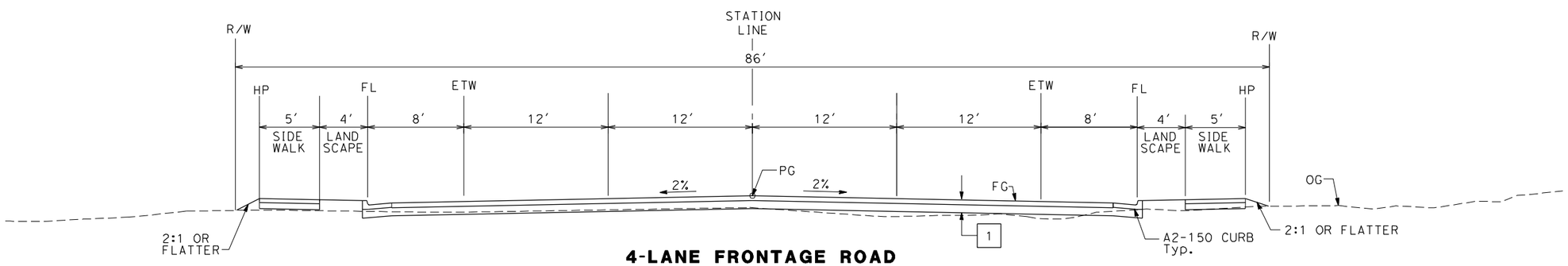
STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

3 — AB CLASS 2



3-LANE FRONTAGE ROAD
SEE LAYOUT SHEETS
FOR ACTUAL SHOULDER WIDTHS



4-LANE FRONTAGE ROAD
SEE LAYOUT SHEETS
FOR ACTUAL SHOULDER WIDTHS

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
LOCAL ROADS
TYPICAL CROSS SECTIONS
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR8990-B
SCALE NTS
SHEET NO. ### OF ###

4/27/2011 6:15:16 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Typical Section\CR8990-B.dgn
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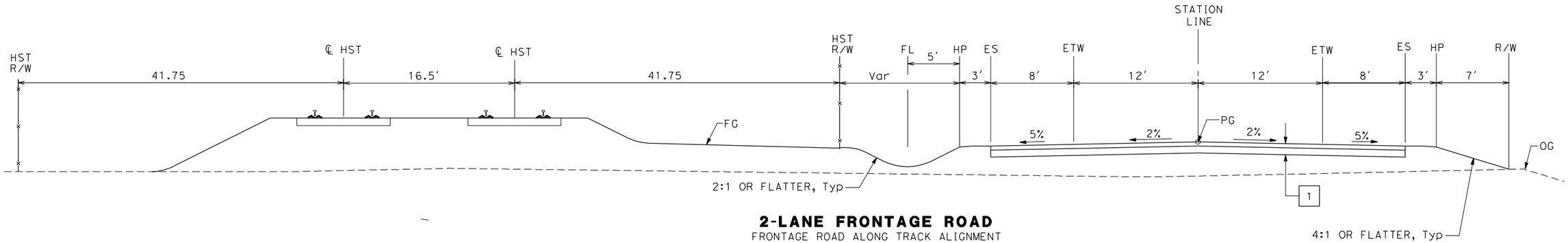
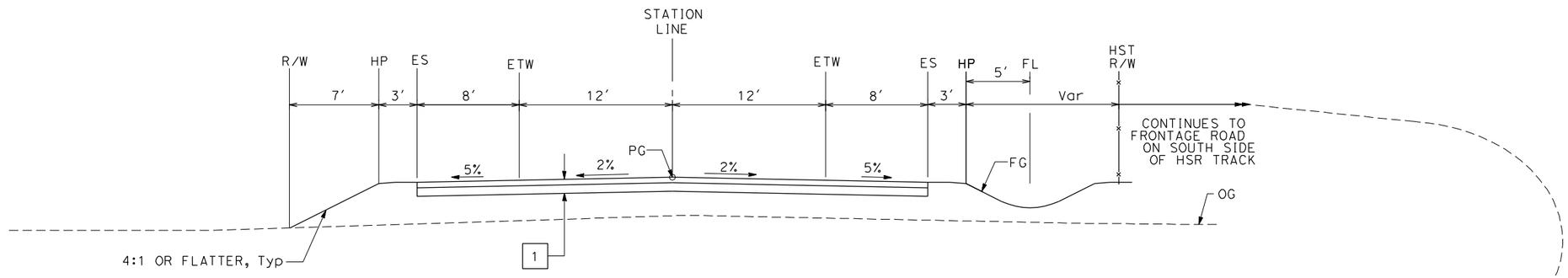


2-LANE FRONTAGE ROAD

FRONTAGE ROAD ALONG TRACK ALIGNMENT

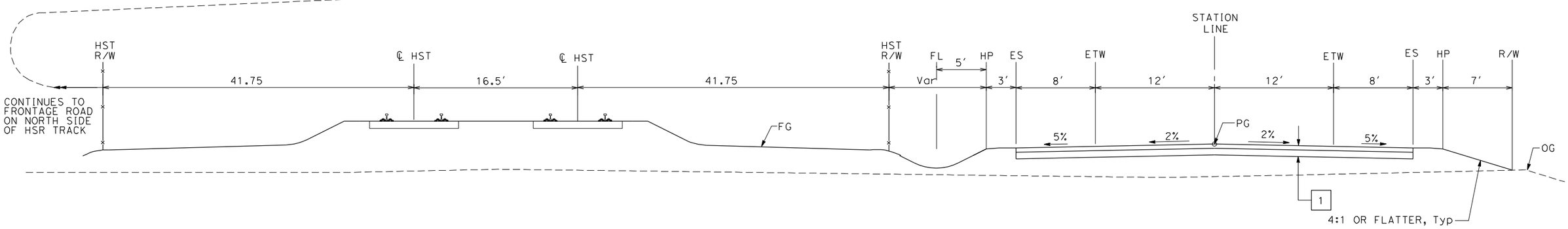
STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2



2-LANE FRONTAGE ROAD*

NORTH SIDE OF TRACK



2-LANE FRONTAGE ROAD*

SOUTH SIDE OF TRACK

*APPLYS TO DUAL FRONTAGE ROADS SEPERATED BY THE HIGH SPEED TRACK ALIGNMENT.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

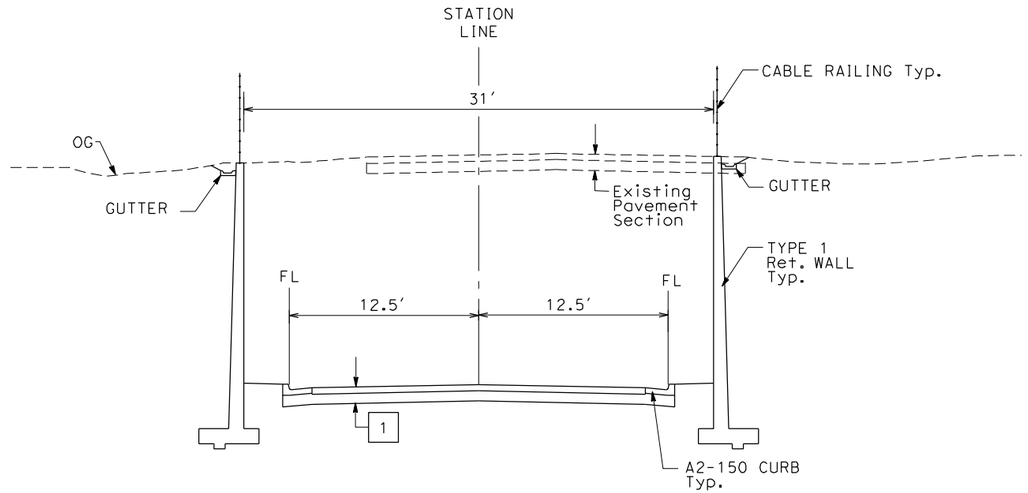
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 - (AVE 21)
LOCAL ROADS
TYPICAL CROSS SECTIONS
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR8991-B
SCALE NTS
SHEET NO. ### OF ###

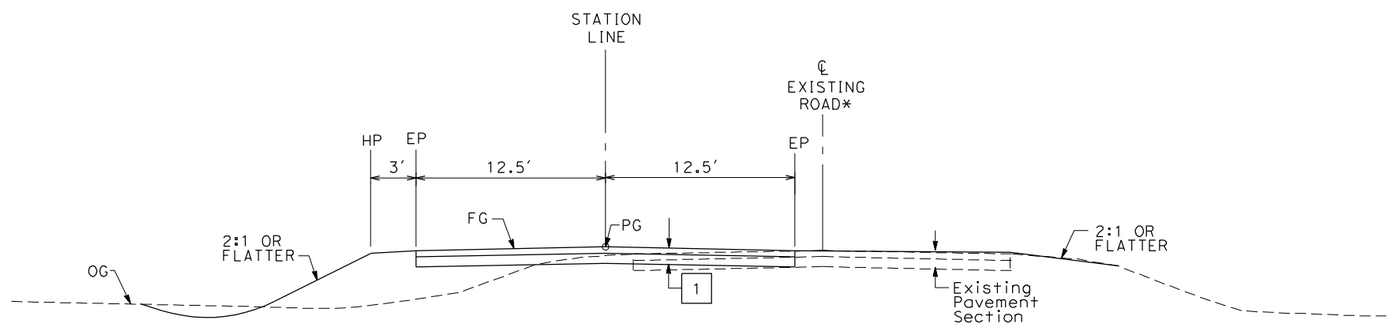
4/27/2011 6:15:21 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Typical Section\CR8991-B.dgn
oyeled



ACCESS ROAD (UNDERCROSSING)
TO INDUSTRIAL FACILITIES

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2



ACCESS ROAD
TO INDUSTRIAL FACILITIES

* EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 21 WYE:

NO.	STREET NAME
1	SOUTH OF AVENUE 20/20.5 INTERCHANGE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

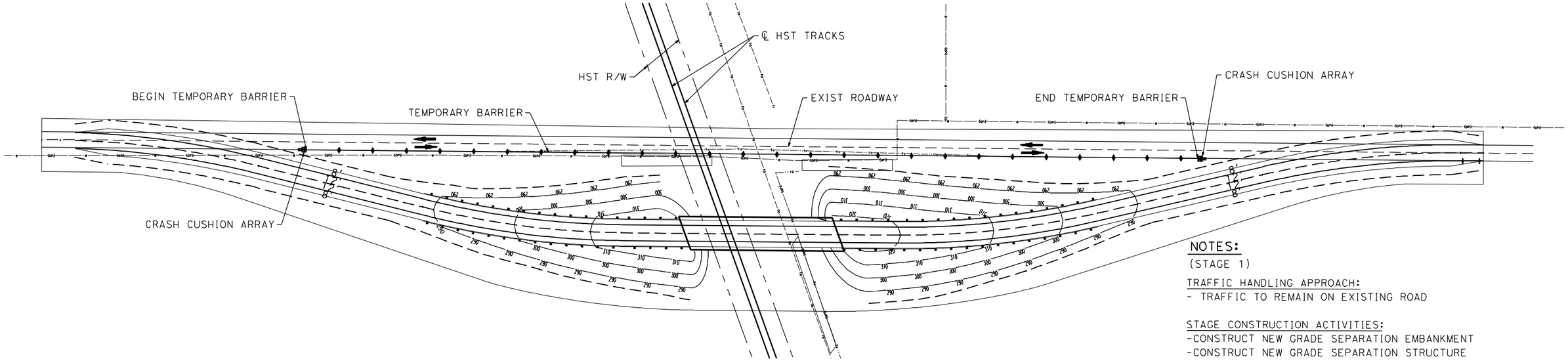
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)
DEPRESSED ACCESS ROAD
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CR8992-B
SCALE NTS
SHEET NO. ### OF ###

4/27/2011 6:15:25 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Typical Section\CR8992-B.dgn
oyeled

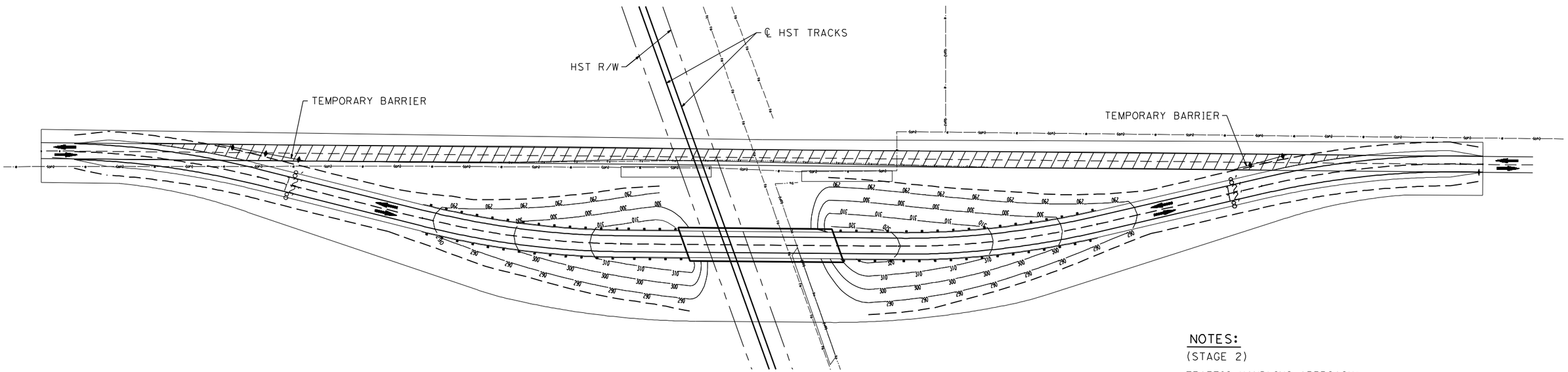


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE SURFACE AND BASE OF EXIST ROAD

LEGEND

- CRASH CUSHION ARRAY (TYPE U11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. WONG
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

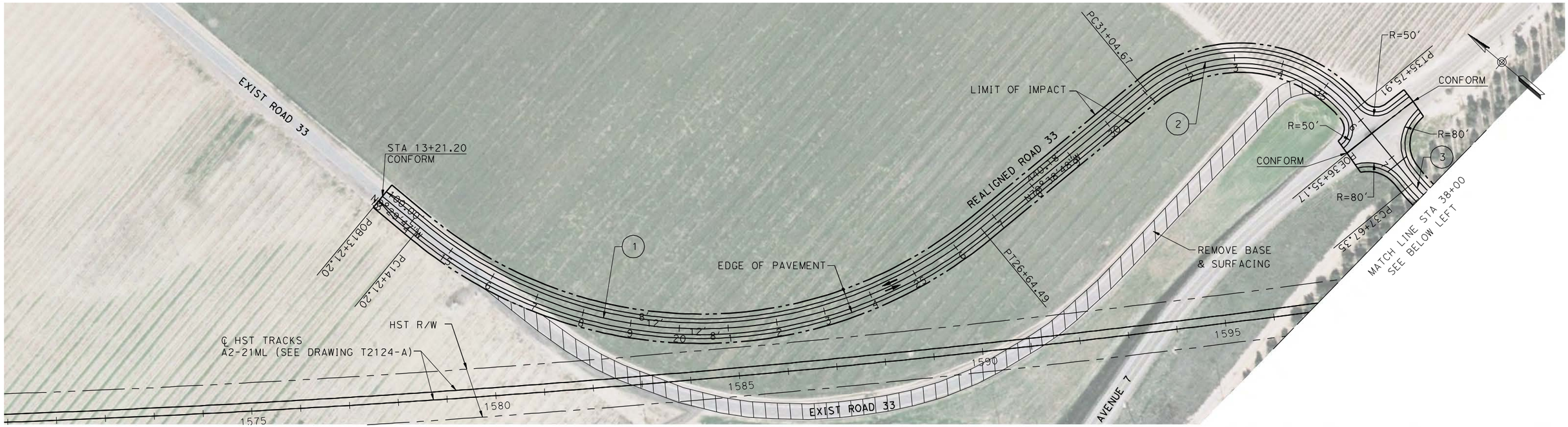
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21)

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 1 OF 1

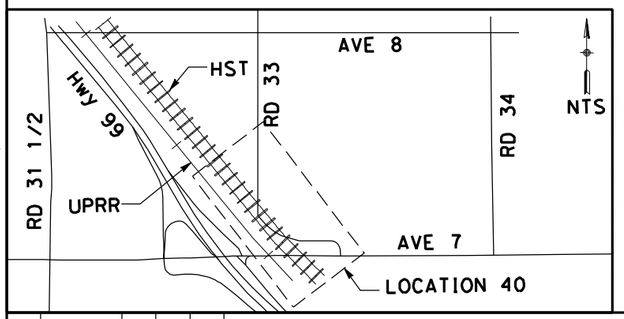
CONTRACT NO. HSR06-007
DRAWING NO. CR8993-B
SCALE NO SCALE
SHEET NO. ### OF ###

4/27/2011 6:14:47 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Staging\CR8993-B.dgn
ayeled



CURVE DATA

No.	R	Δ	T	L
1	900.00	79°9'1"	743.89	1243.29
2	300.00	90°0'0"	300.00	471.24
3	300.00	59°26'46"	171.28	311.26
4	18000.00	1°46'53"	279.85	559.66
5	900.00	20°39'8"	163.98	324.40



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
ROAD 33
LAYOUT
STA 13+21 TO STA 58+86

CONTRACT NO. HSR06-007
DRAWING NO. CR9000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:02:11 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9000-B.dgn

ayelled

CURVE DATA

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1	700.00	48°9'51"	312.86	588.44
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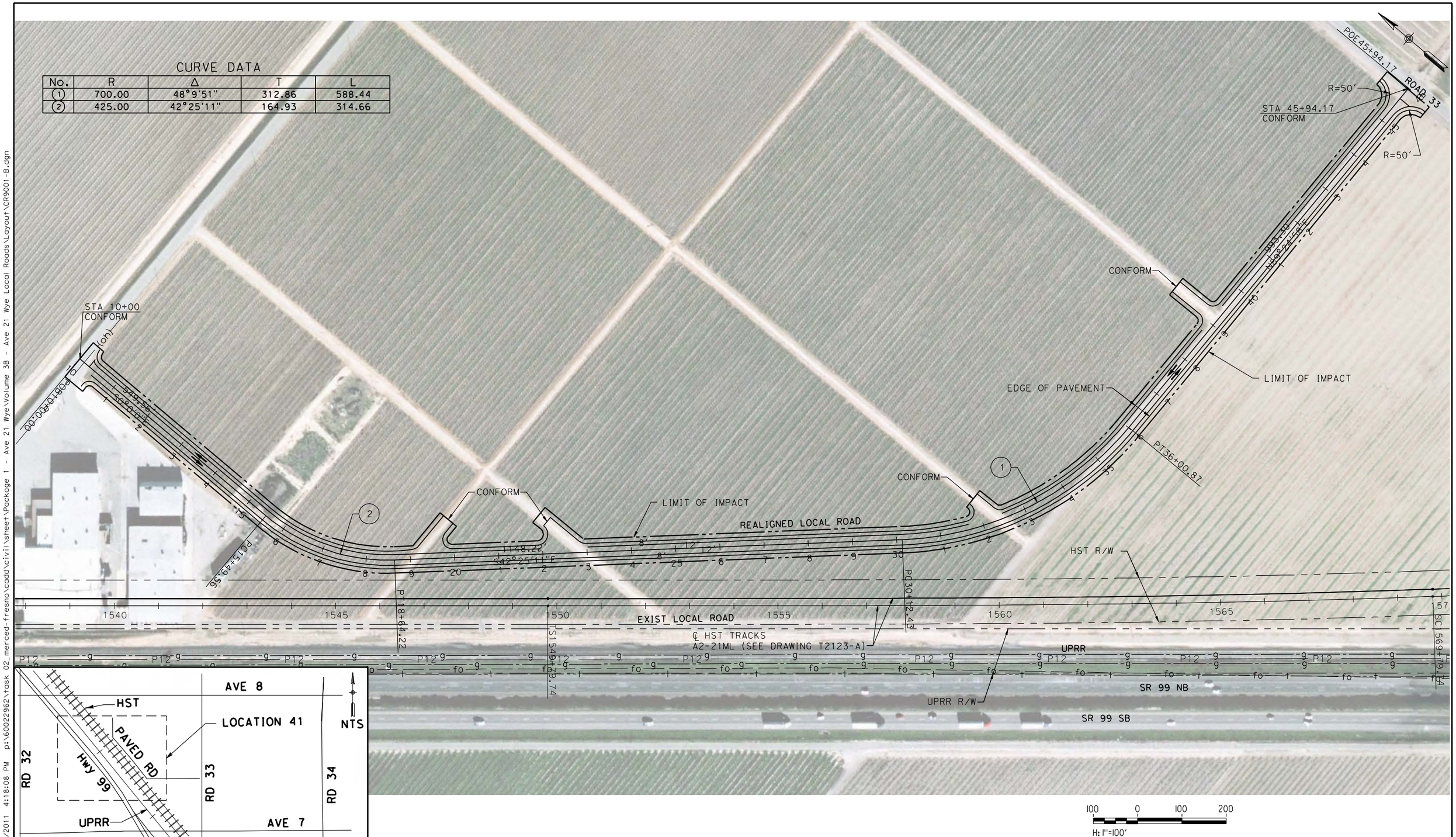

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
REALIGNED ROAD
LAYOUT
STA 10+00 TO STA 45+94

CONTRACT NO. HSR06-007
DRAWING NO. CR9001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/28/2011 4:18:08 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\Package 1 - Ave 21 Wye\Volume 3B - Ave 21 Wye Local Roads\Layout\CR9001-B.dgn
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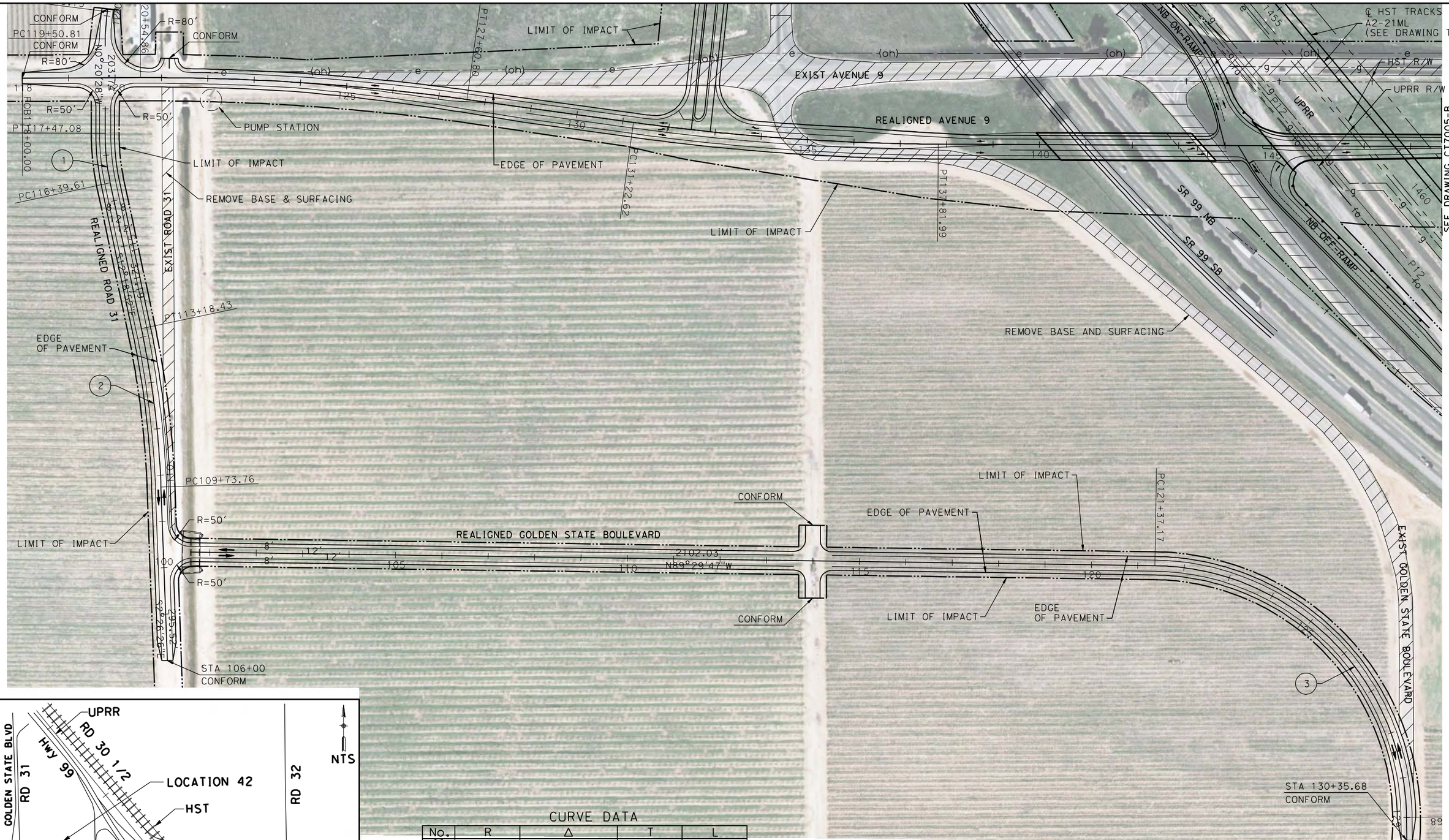

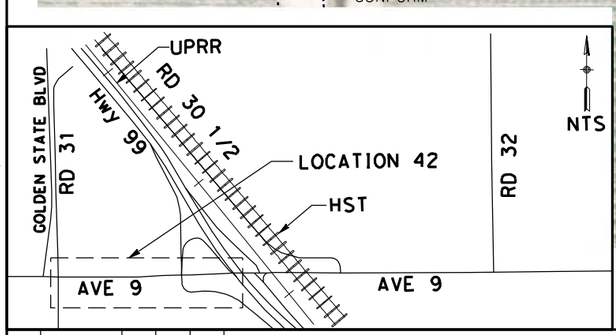

CURVE DATA

No.	R	Δ	T	L
1	500.00	77°41'8"	53.94	107.46
2	2000.00	80°7'34"	172.76	344.67
3	550.00	1°36'28"	534.78	848.50

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
ROAD 31 & GOLDEN STATE BLVD AT AVENUE 9
LAYOUT
STA 106+00 TO 120+00 & STA 100+00 TO 130+35.68

CONTRACT NO. HSR06-007
DRAWING NO. CR9002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:02:50 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9002-B.dgn
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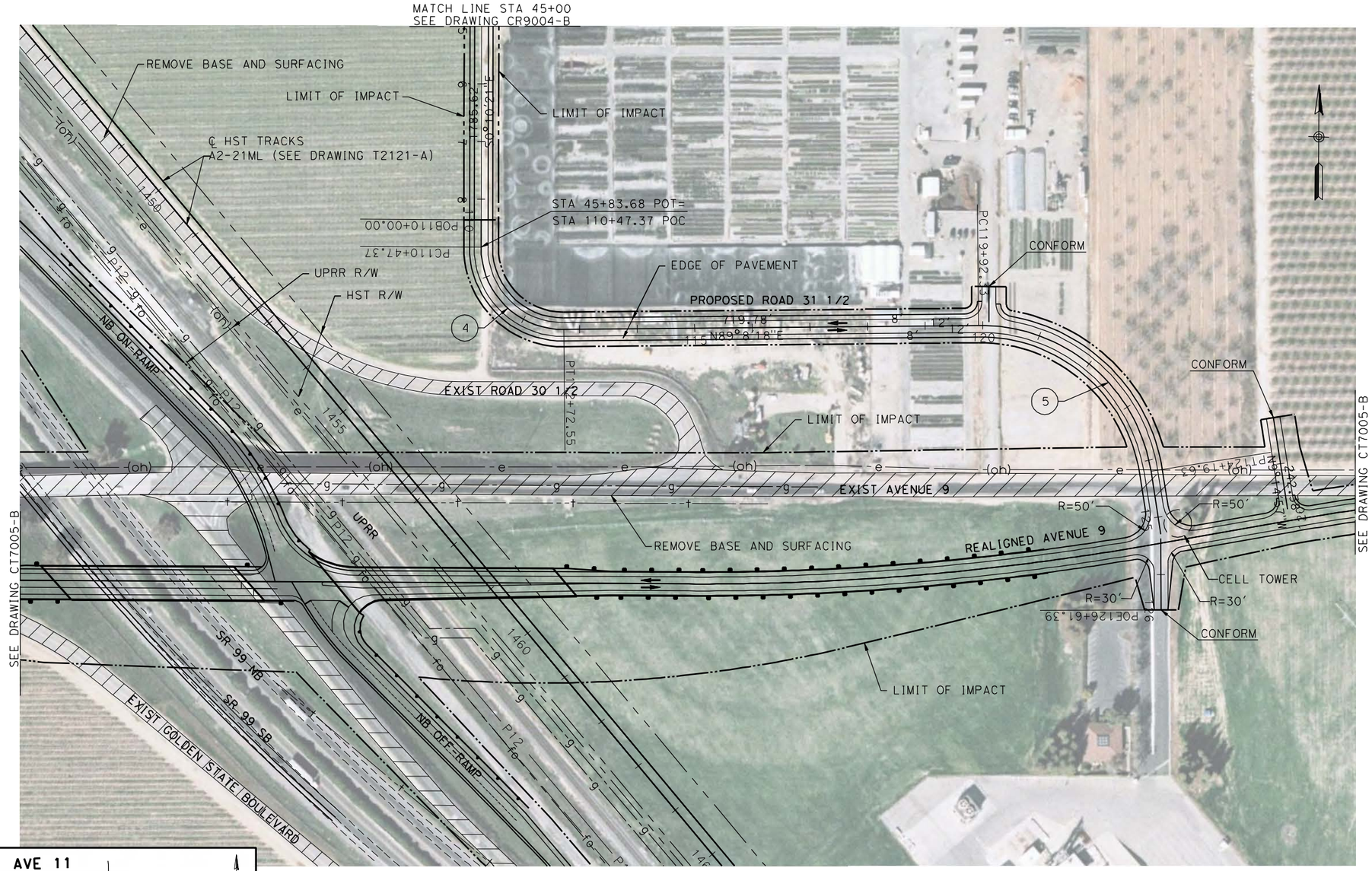

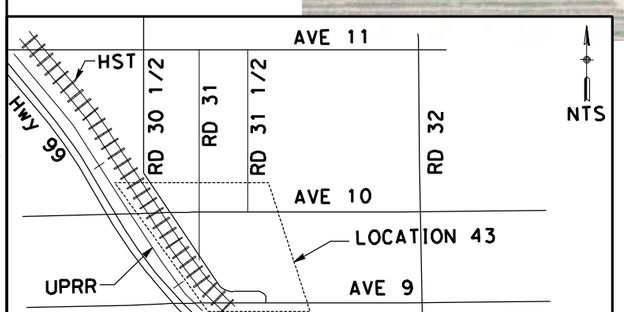

CURVE DATA

No.	R	Δ	T	L
4	142.00	359°8'18"	144.15	225.19
5	300.00	8°23'29"	258.99	427.30

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
ROAD 31 1/2
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:03:09 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9003-B.dgn
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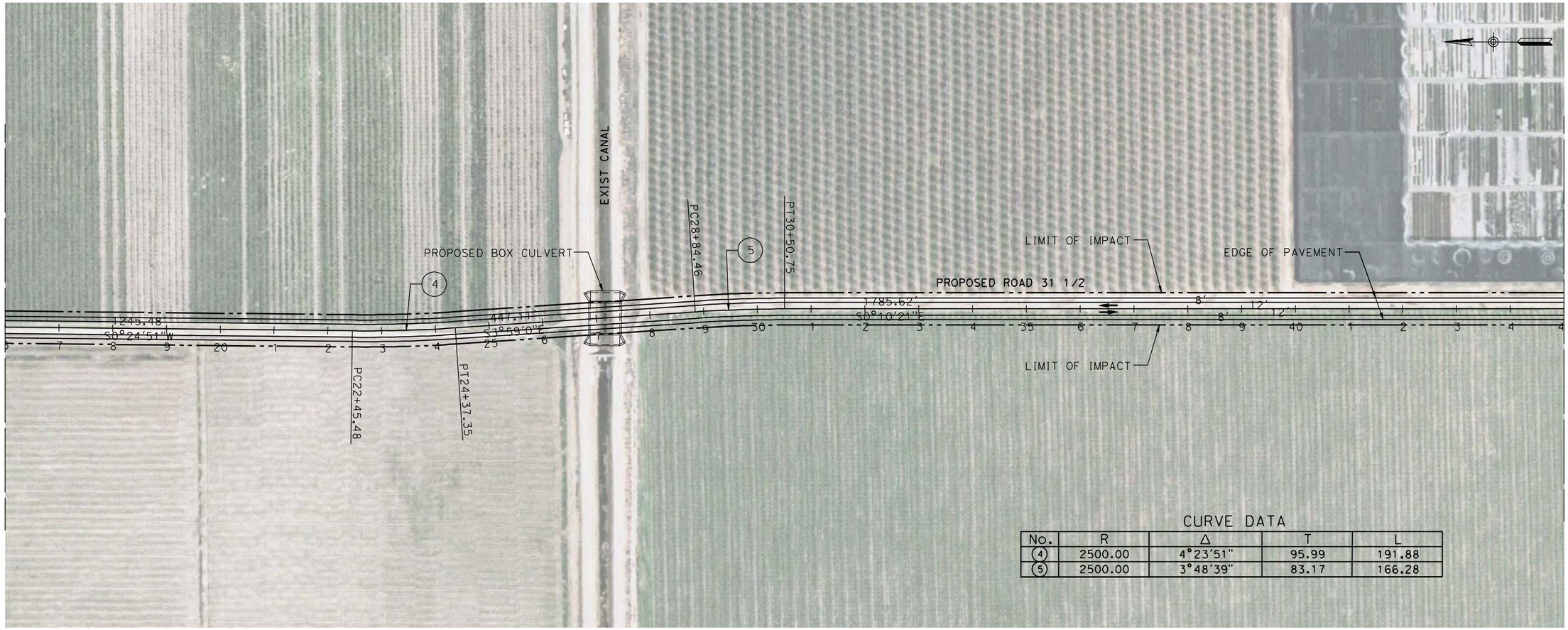

CURVE DATA

No.	R	Δ	T	L
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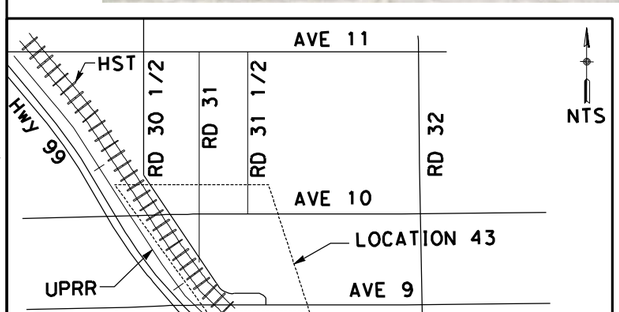


100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

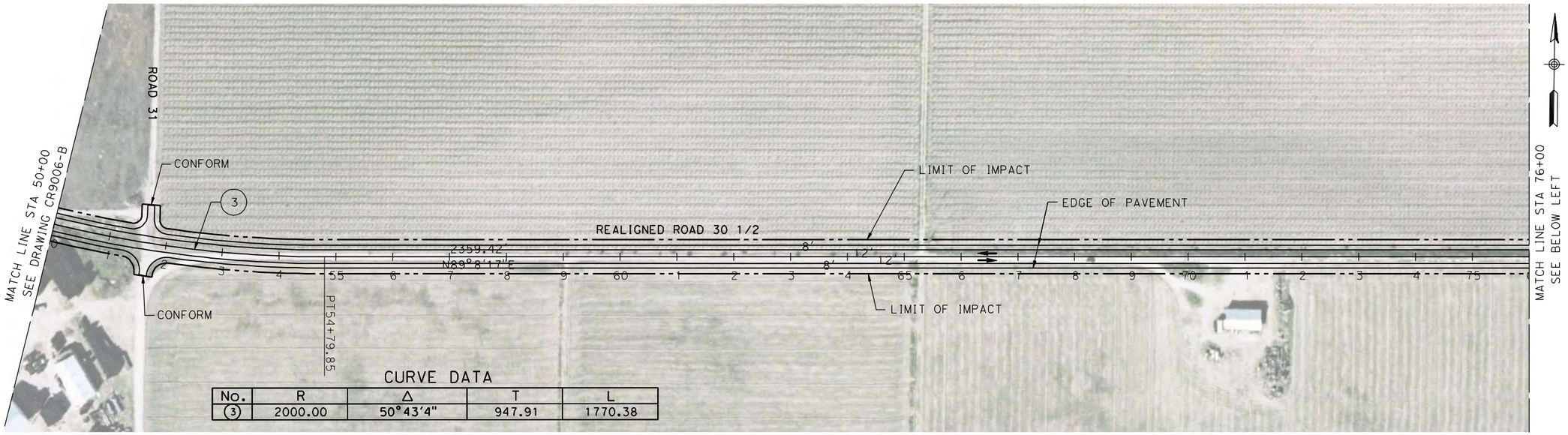
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
ROAD 31 1/2
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

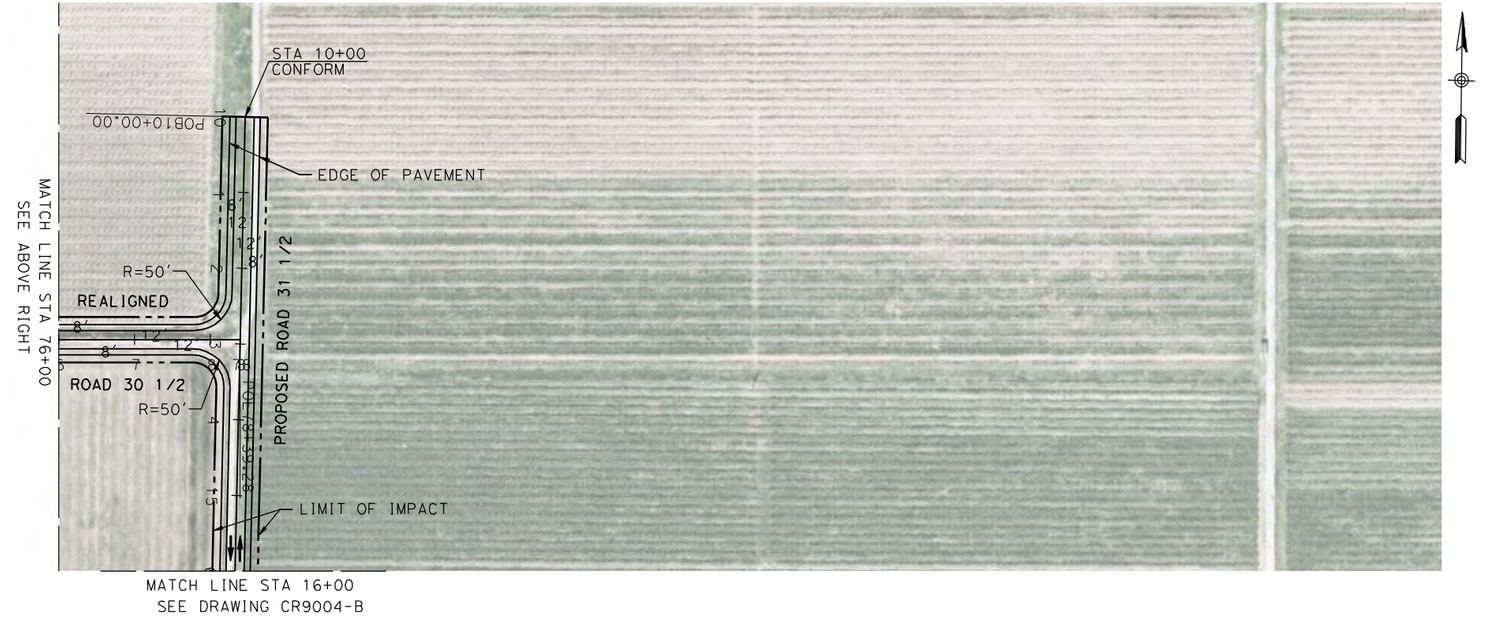
4/27/2011 6:03:24 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9004-B.dgn
ayeled

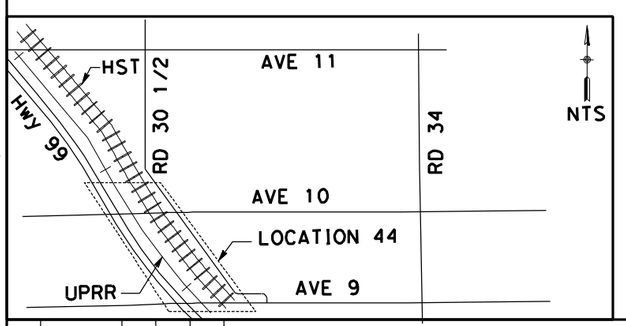


CURVE DATA

No.	R	Δ	T	L
3	2000.00	50°43'4"	947.91	1770.38

100 0 100 200
H: 1"=100'





REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

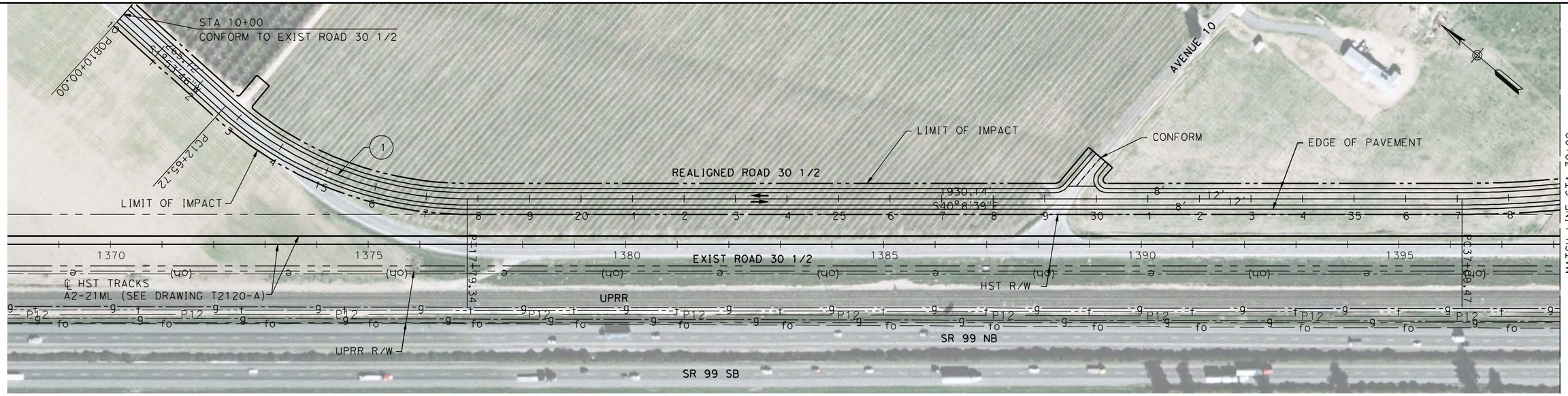
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

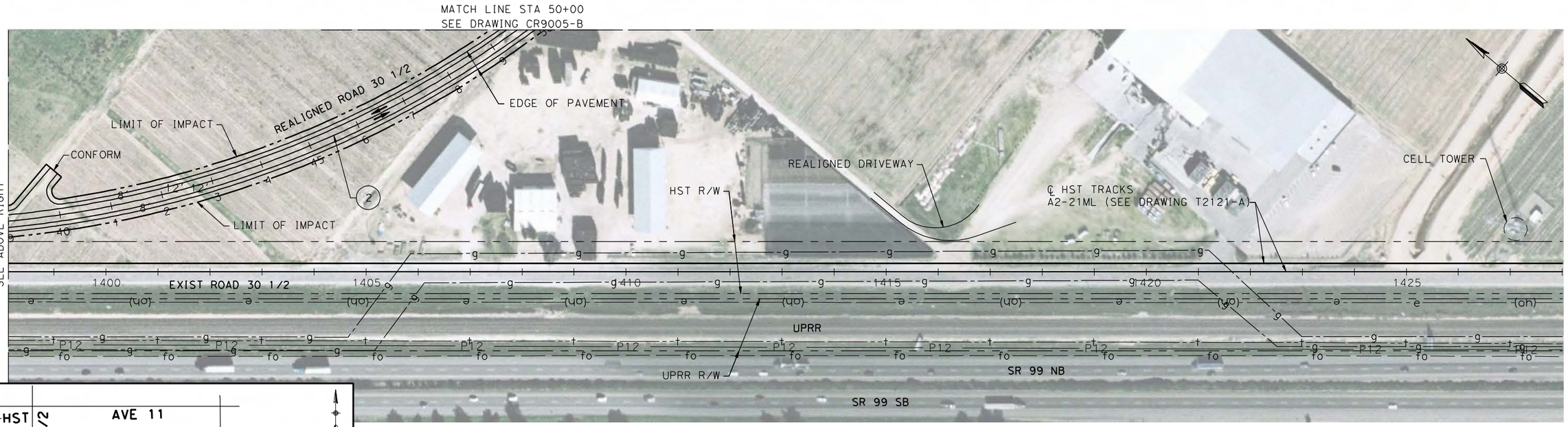
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

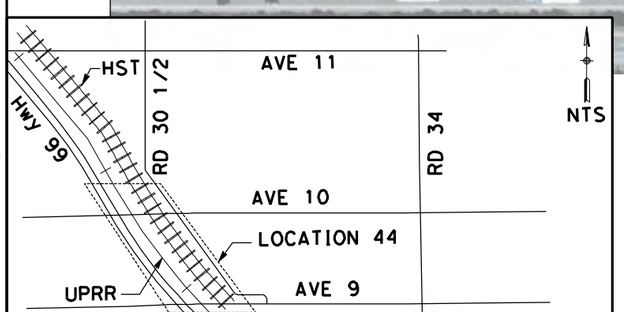
UPRR/SR99 MAINLINE - (AVE 21)
ROAD 30 1/2 & ROAD 31 1/2
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:03:38 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9005-B.dgn
ayelea







CURVE DATA

No.	R	Δ	T	L
1	700.00	42°2'25"	268.99	513.62
2	2000.00	50°43'04"	947.91	1770.38

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

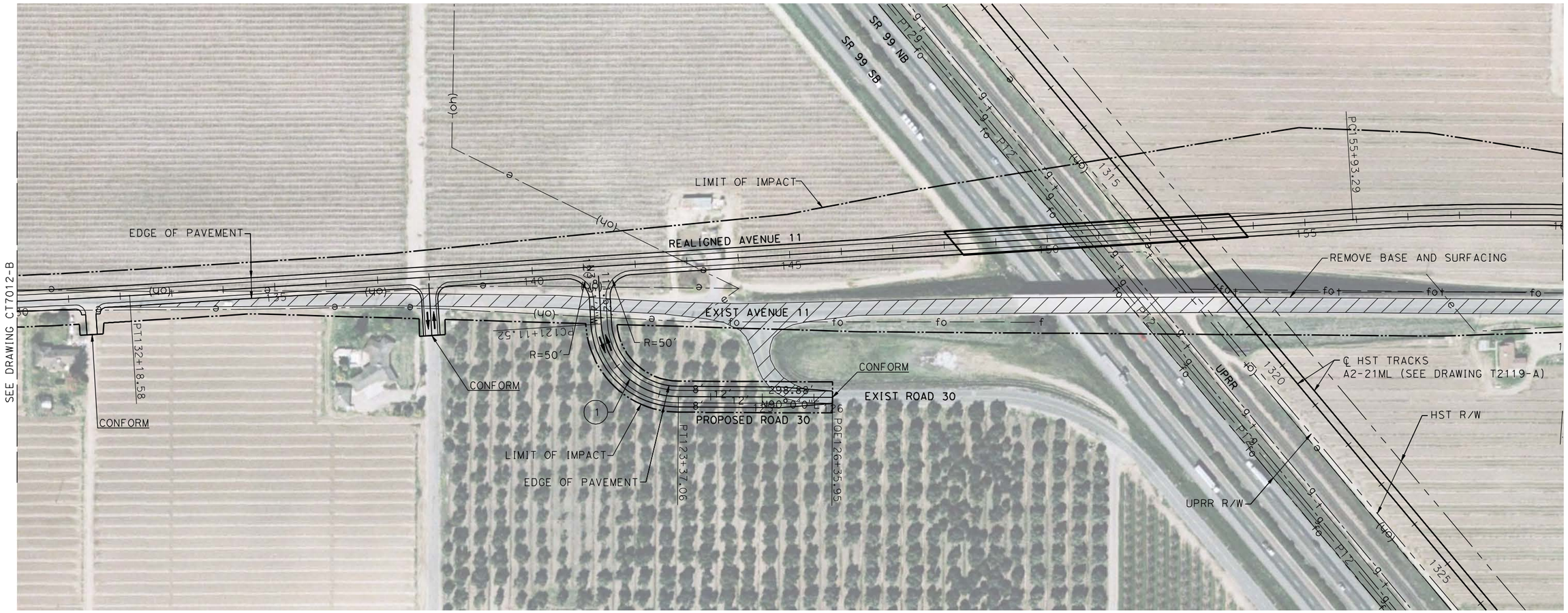
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

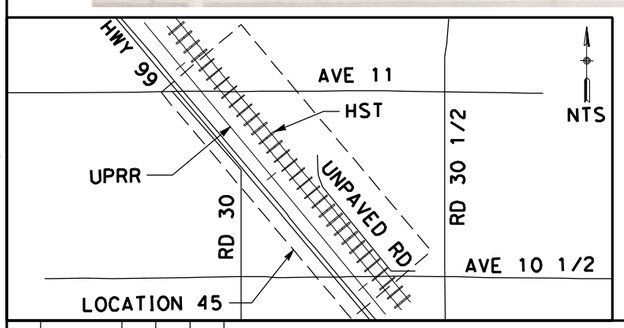
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
ROAD 30 1/2
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:03:55 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9006-B.dgn
ayelled

4/27/2011 6:04:13 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9007-B.dgn





CURVE DATA

No.	R	Δ	T	L
1	150.00	3°51'4"	140.24	225.54

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

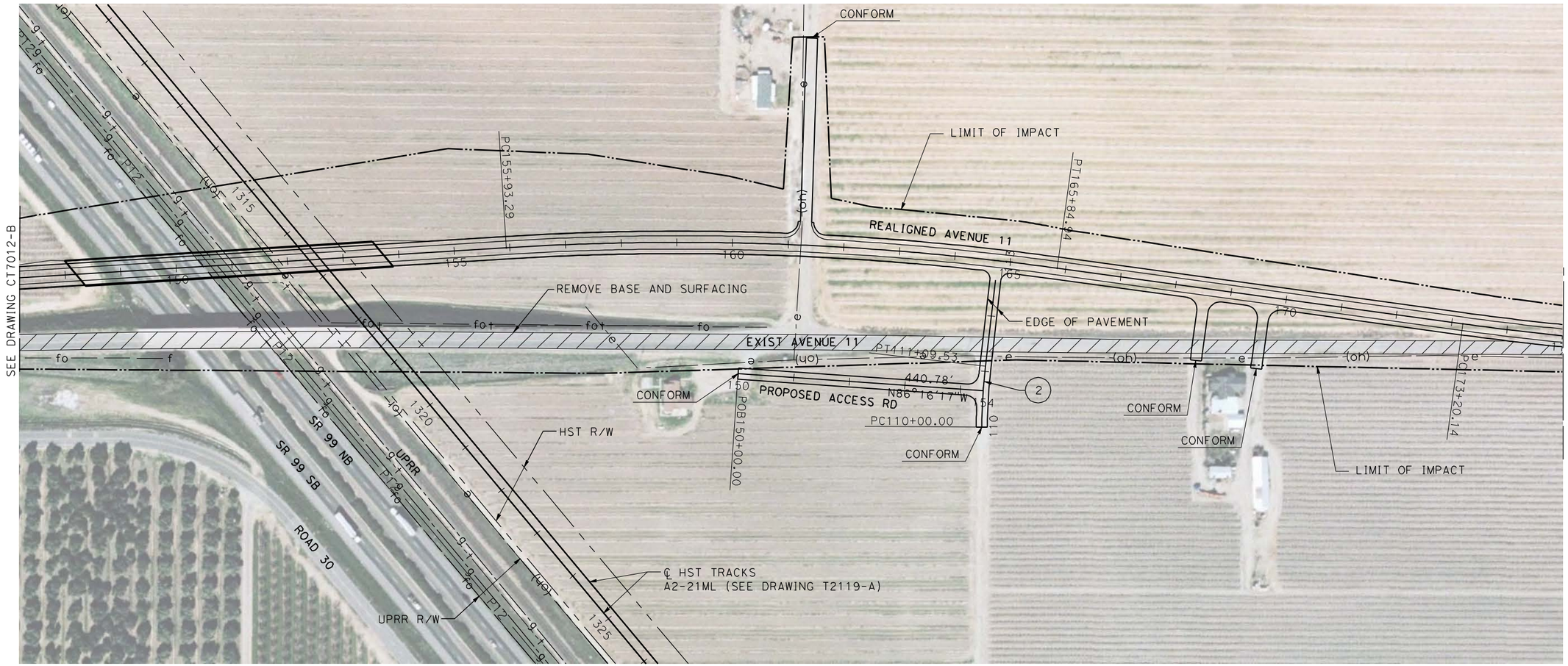
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

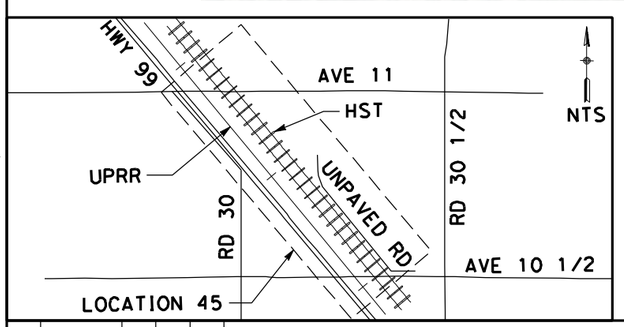
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
ROAD 30 AT AVENUE 11
LAYOUT
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:04:27 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9008-B.dgn





CURVE DATA

No.	R	Δ	T	L
2	1000.00	83°43'28"	54.82	109.53

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
ACCESS ROAD AT AVENUE 11
LAYOUT
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9008-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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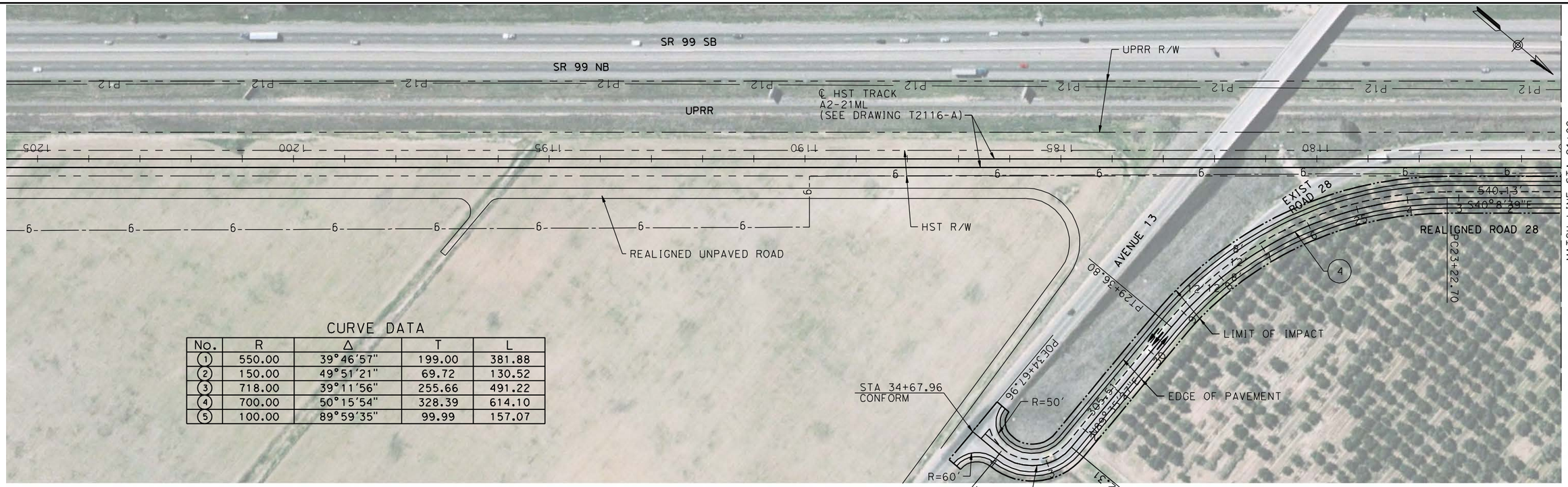
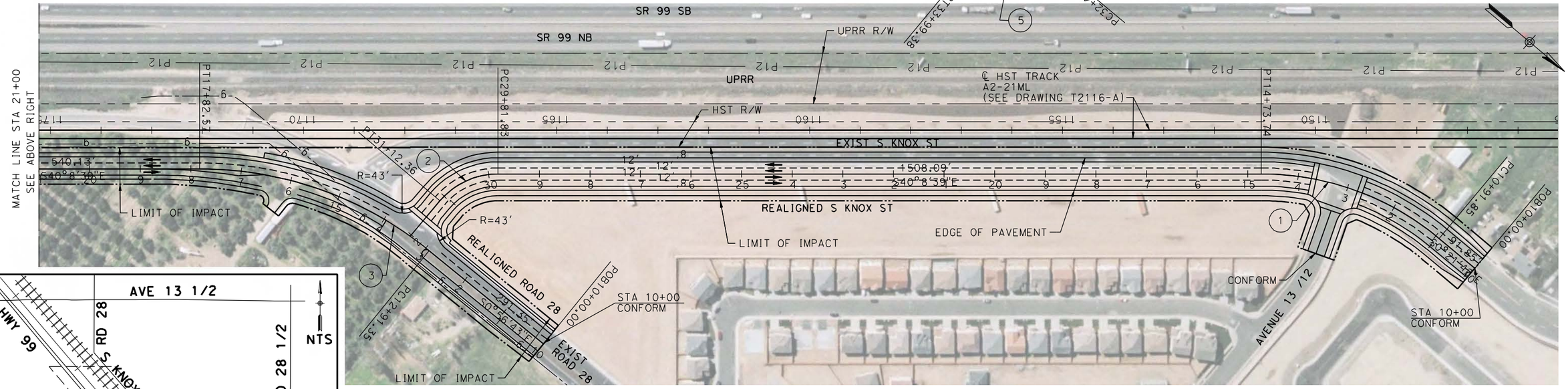
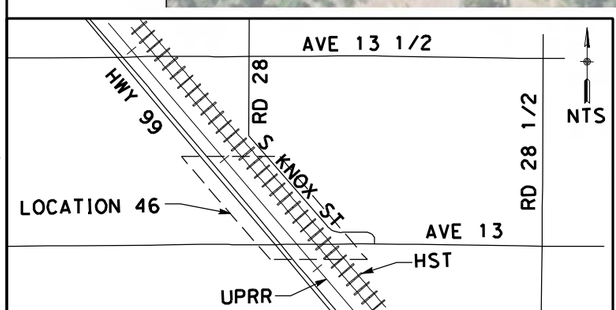


CURVE DATA

No.	R	Δ	T	L
1	550.00	39°46'57"	199.00	381.88
2	150.00	49°51'21"	69.72	130.52
3	718.00	39°11'56"	255.66	491.22
4	700.00	50°15'54"	328.39	614.10
5	100.00	89°59'35"	99.99	157.07





100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
S KNOX ST
LAYOUT
STA 10+00 TO STA 34+67

CONTRACT NO. HSR06-007
DRAWING NO. CR9009-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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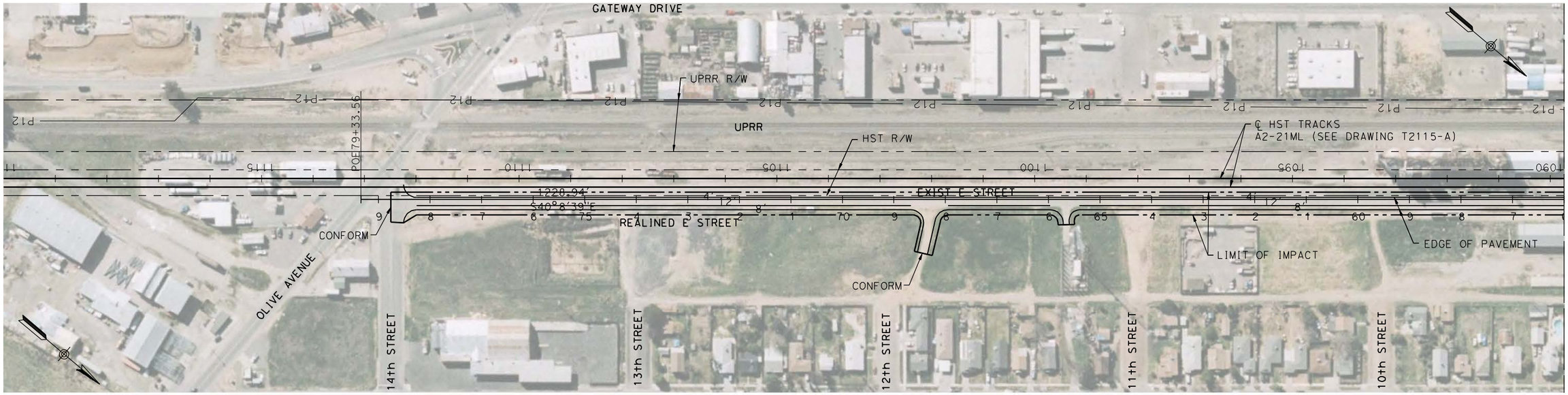

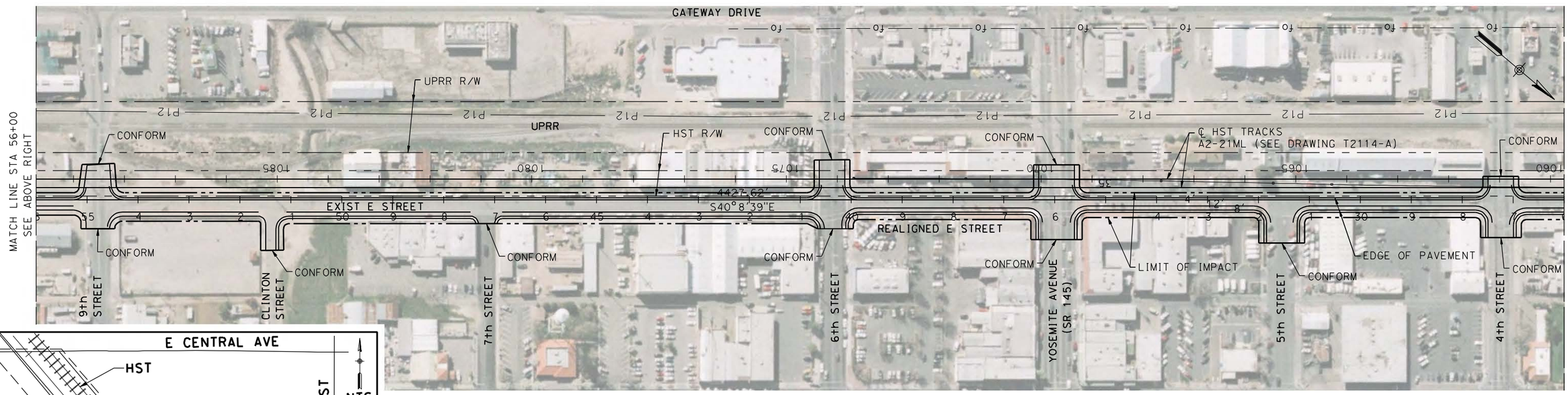

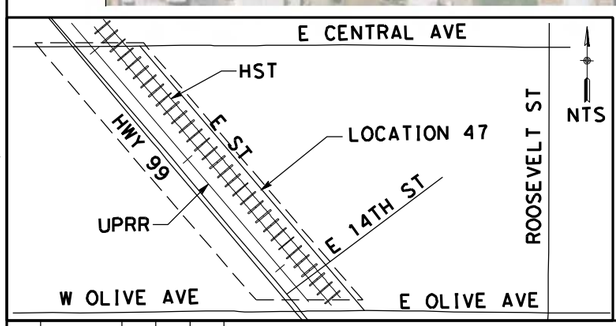

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
N E ST AND S E ST
LAYOUT
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9010-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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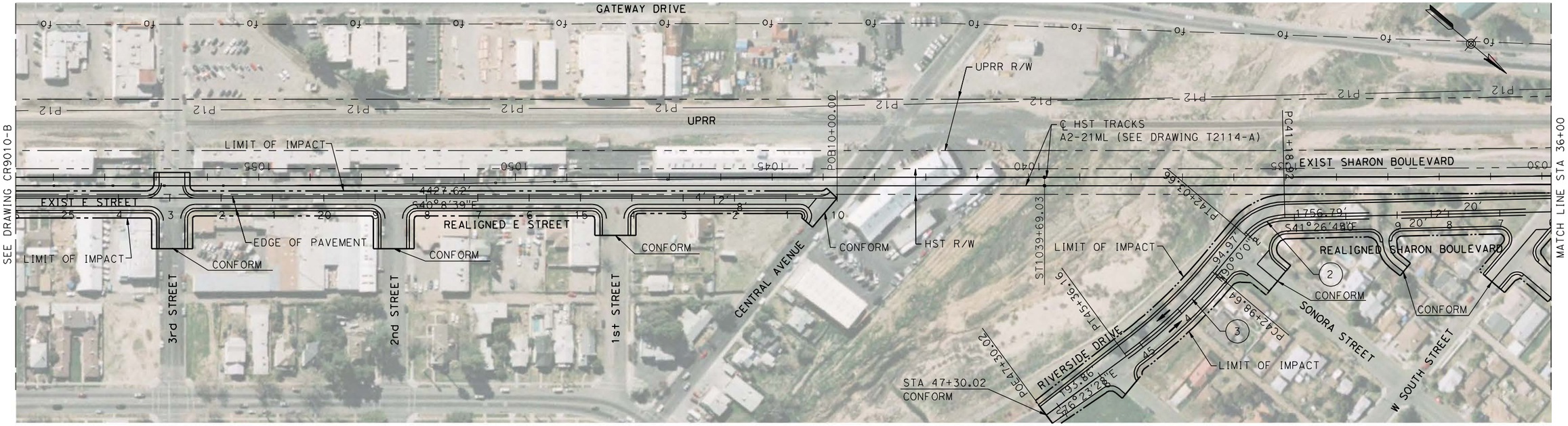

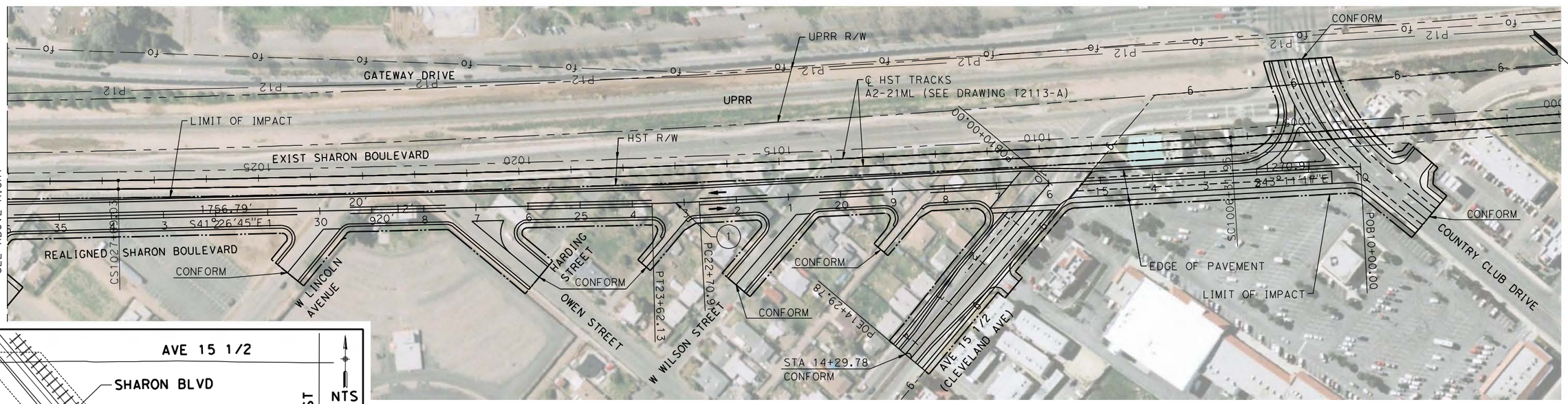

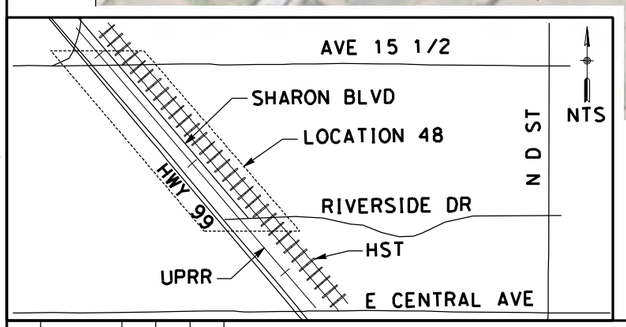

CURVE DATA

No.	R	Δ	T	L
1	3000.00	01°44'32"	45.61	91.22
2	100.00	48°33'15"	45.10	84.74
3	1000.00	13°36'32"	119.32	237.52

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
SHARON BLVD & E ST
LAYOUT
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9011-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:05:27 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9011-B.dgn
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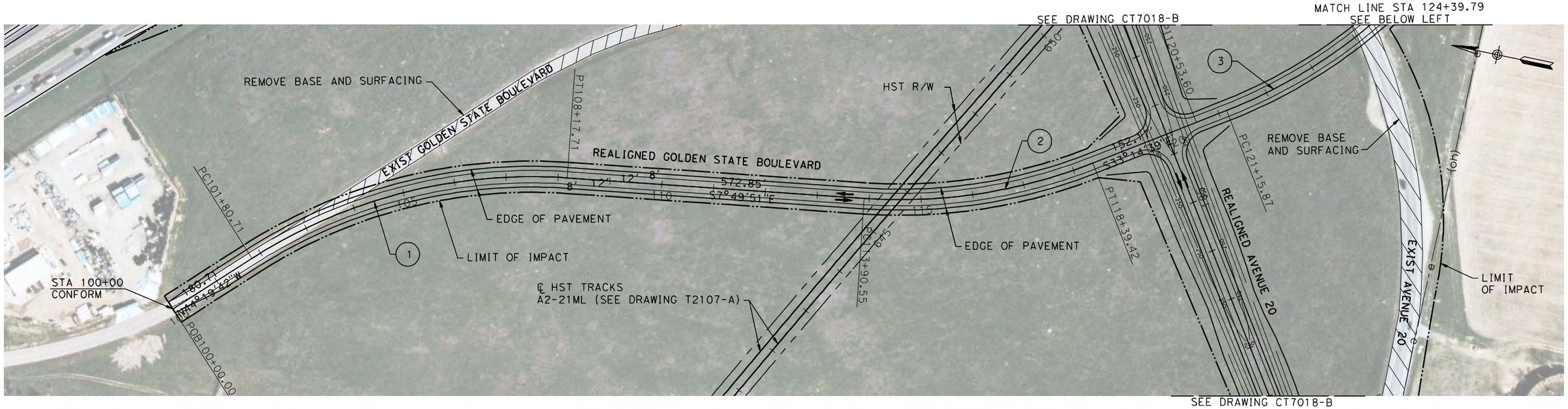
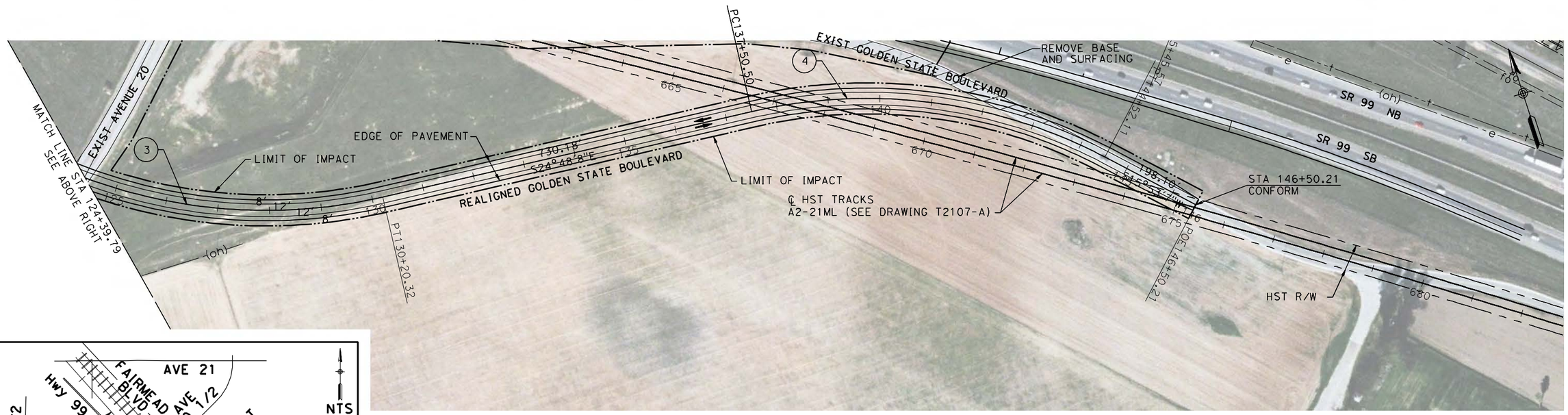
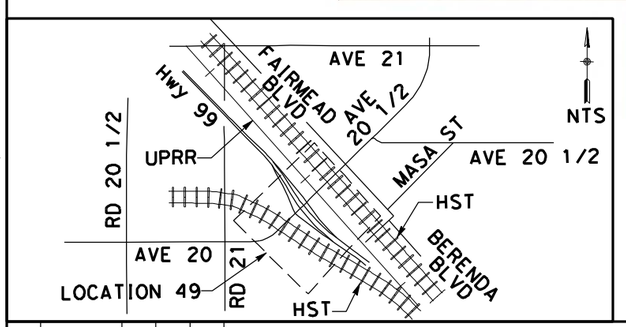






CURVE DATA

No.	R	Δ	T	L
1	1000.00	53°30'10"	329.72	637.00
2	1012.00	64°35'12"	228.19	448.87
3	1000.00	38°10'43"	485.80	904.45
4	988.00	49°18'45"	366.33	701.61

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

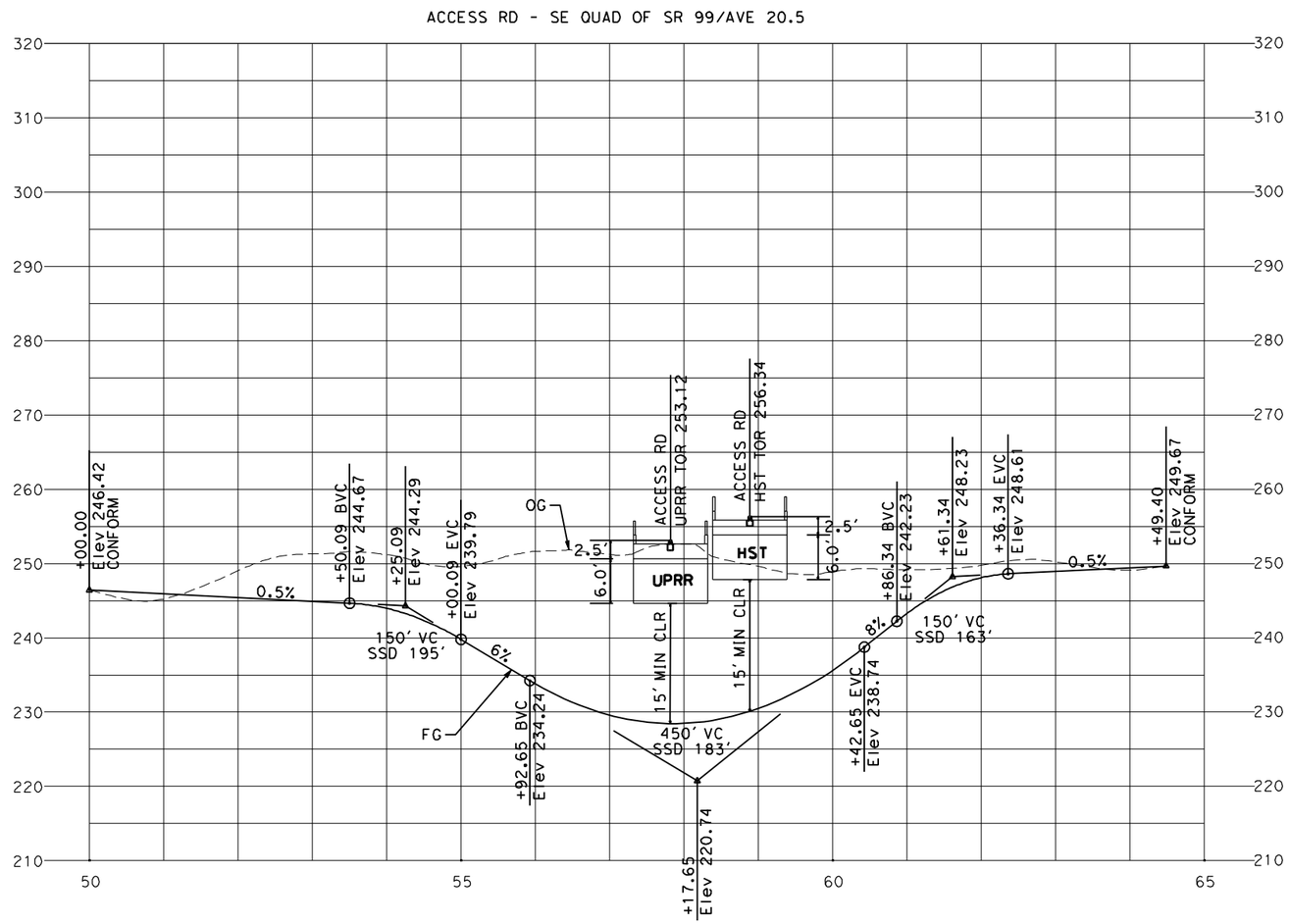
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
GOLDEN STATE BLVD AT AVENUE 20 AND 20 1/2
LAYOUT
STA 100+00 TO STA 146+50.21

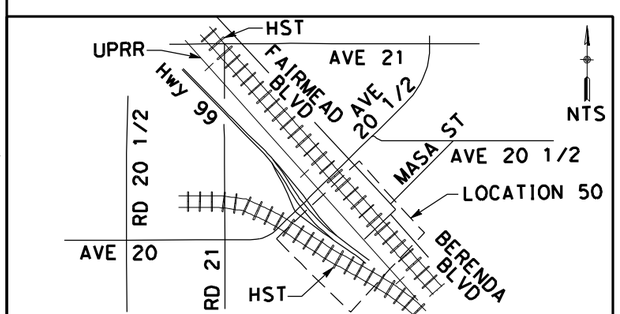
CONTRACT NO. HSR06-007
DRAWING NO. CR9012-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:05:48 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9012-B.dgn
ayelled



PROFILE

SCALE HORIZ: 1"=100'
VERT: 1"=10'



CURVE DATA

No.	R	Δ	T	L
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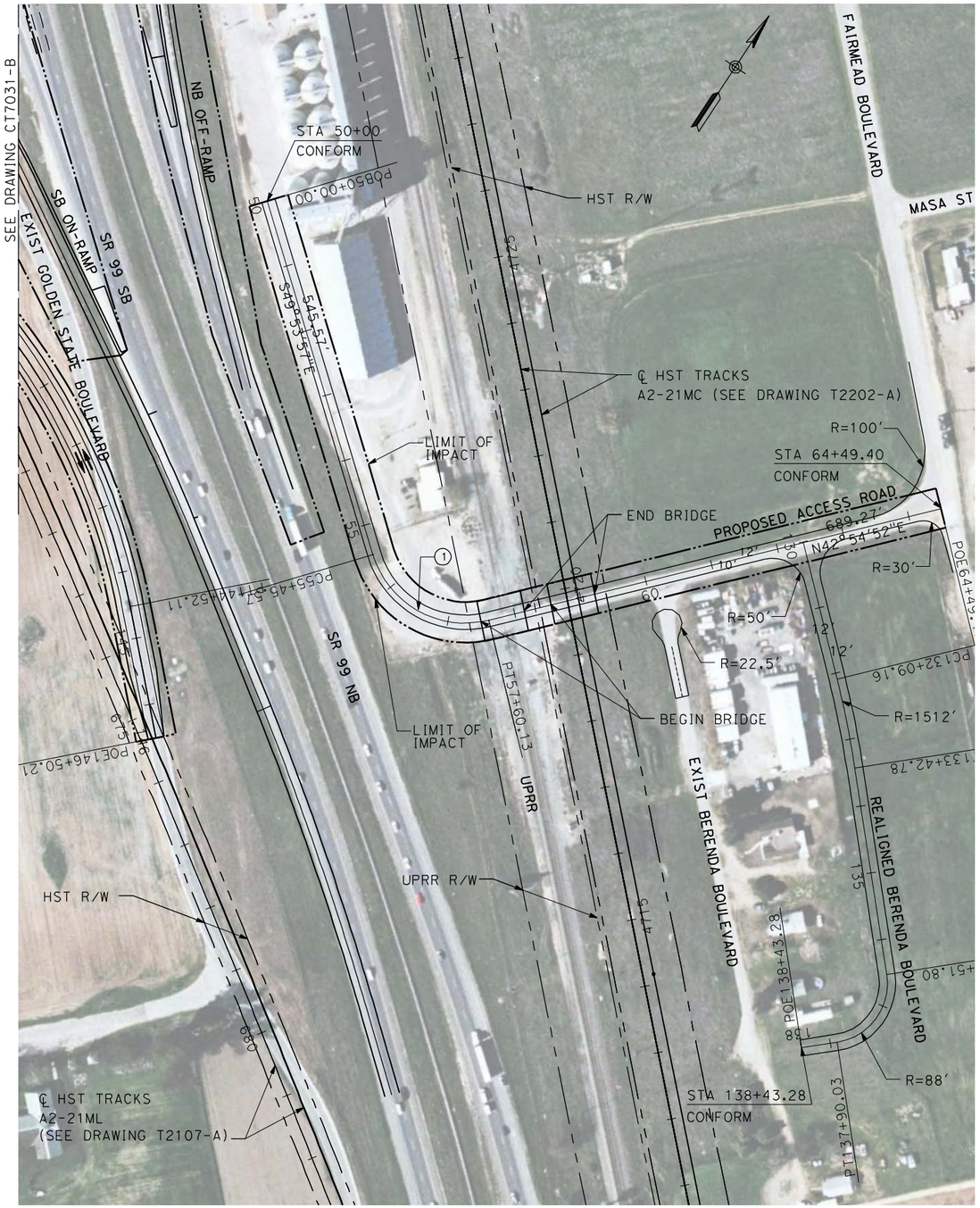

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE - (AVE 21)
ACCESS ROAD
LAYOUT AND PROFILE
STA 50+00 TO 64+49.40, STA 138+43.28

CONTRACT NO. HSR06-007
DRAWING NO. CR9013-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:06:04 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9013-B.dgn
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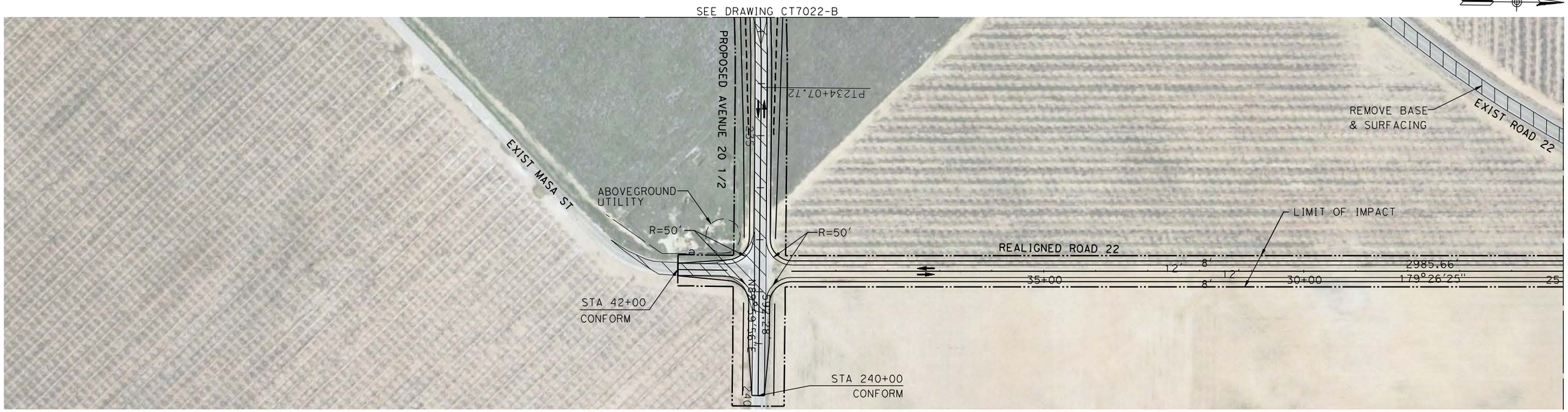
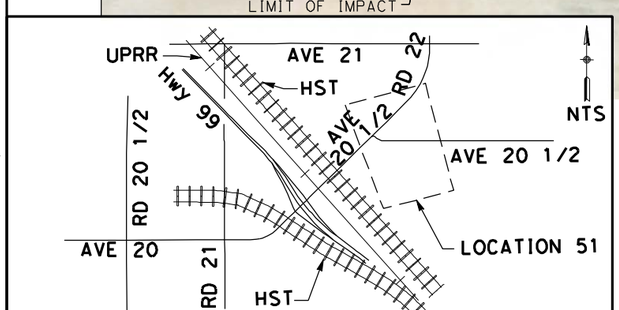




100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

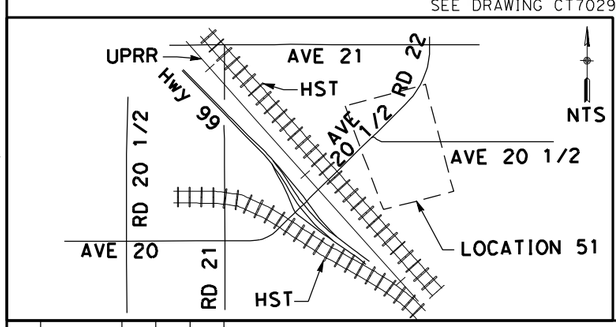
UPRR/SR99 MAINLINE/MERCED - (AVE 21)
MASA ST AND ROAD 22 - ALT 1
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CR9014-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:06:21 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9014-B.dgn
layeled

SEE DRAWING CT7030-B

SEE DRAWING CT7029-B



CURVE DATA

No.	R	Δ	T	L
8	1162.00	44°27'32"	487.76	923.61
9	600.00	58°55'55"	166.78	325.34

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/MERCED - (AVE 21)
MASA ST AND AVENUE 20 1/2 - ALT 2
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CR9015-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:06:38 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9015-B.dgn
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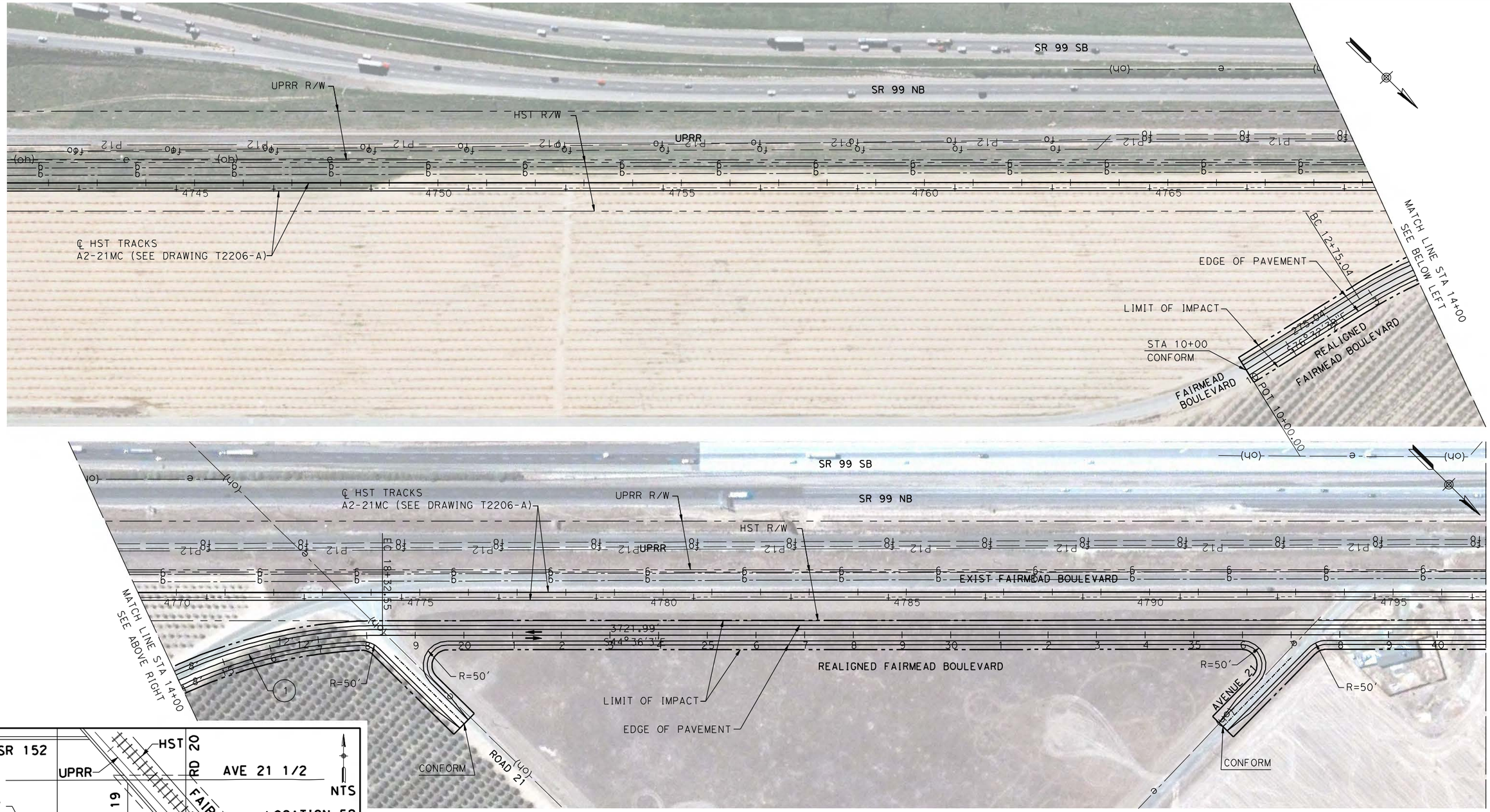

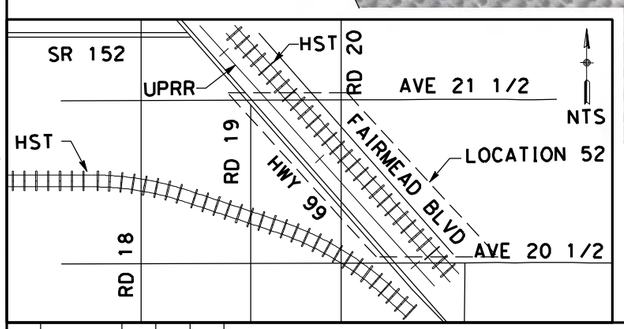

CURVE DATA

No.	R	Δ	T	L
1	1000.00	31°56'36"	286.21	557.51

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
FAIRMEAD BLVD
LAYOUT
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CR9016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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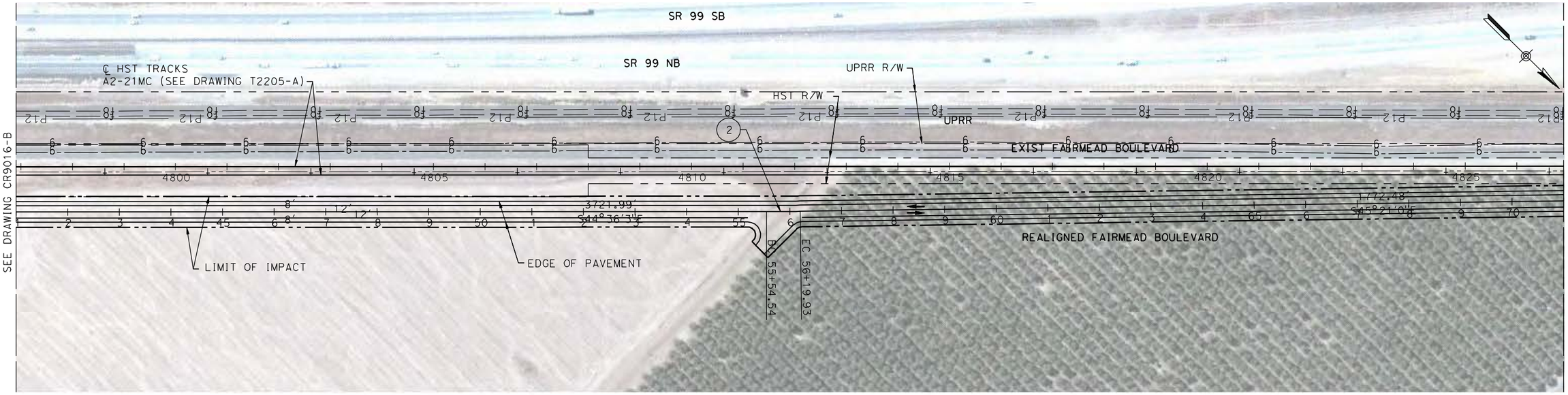

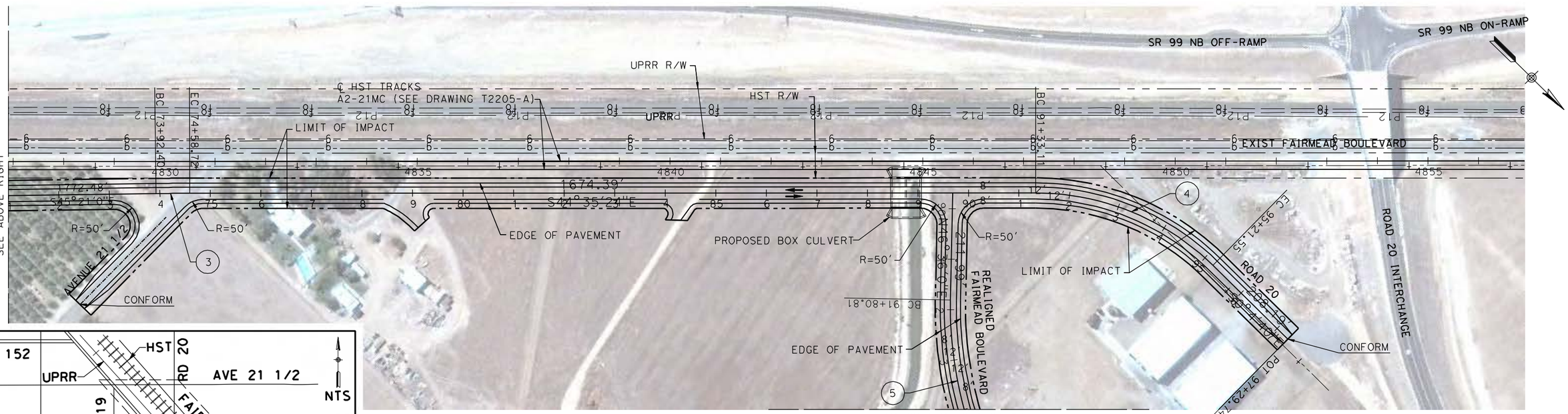

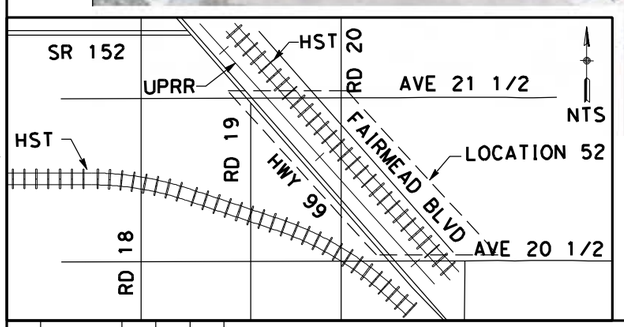

CURVE DATA

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3	5000.00	89°14'24"	33.16	66.32
4	500.00	45°29'16"	204.62	388.44
5	750.00	43°24'00"	323.00	609.99

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21)
FAIRMEAD BLVD
LAYOUT
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CR9017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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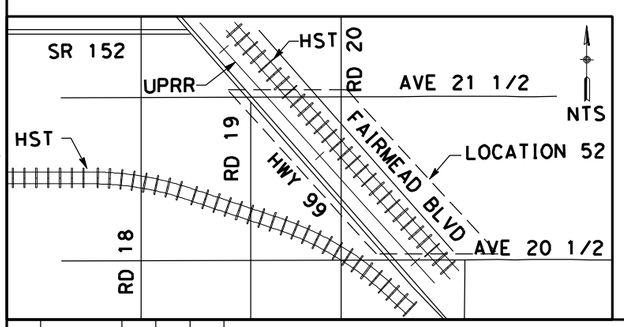
MATCH LINE STA 94+00
SEE DRAWING CR9017-B



CURVE DATA

No.	R	Δ	T	L
5	750.00	43°24'00"	323.00	609.99

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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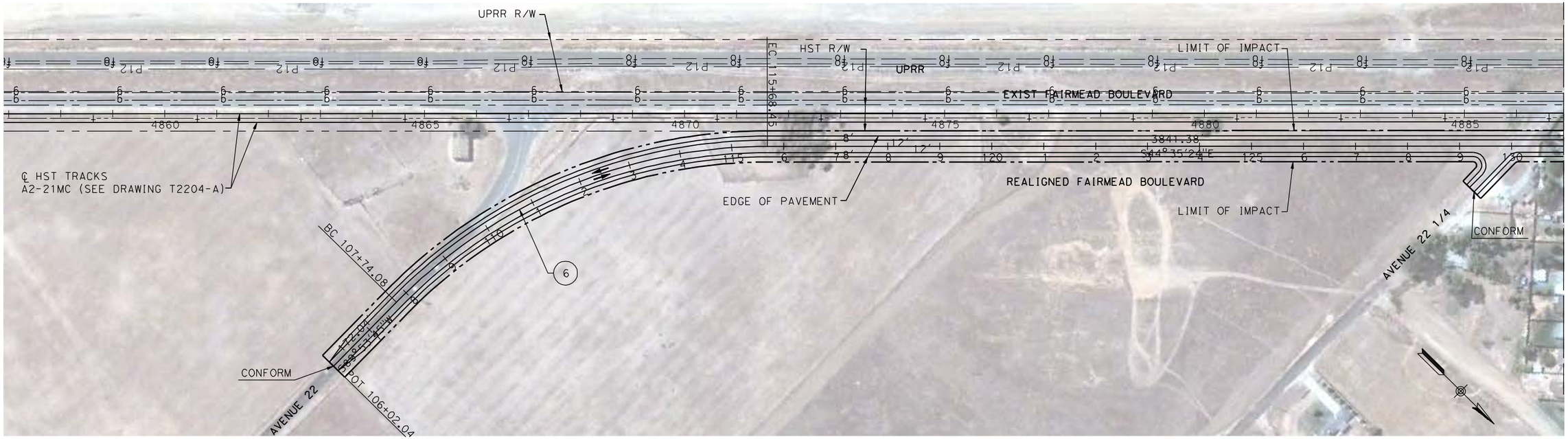
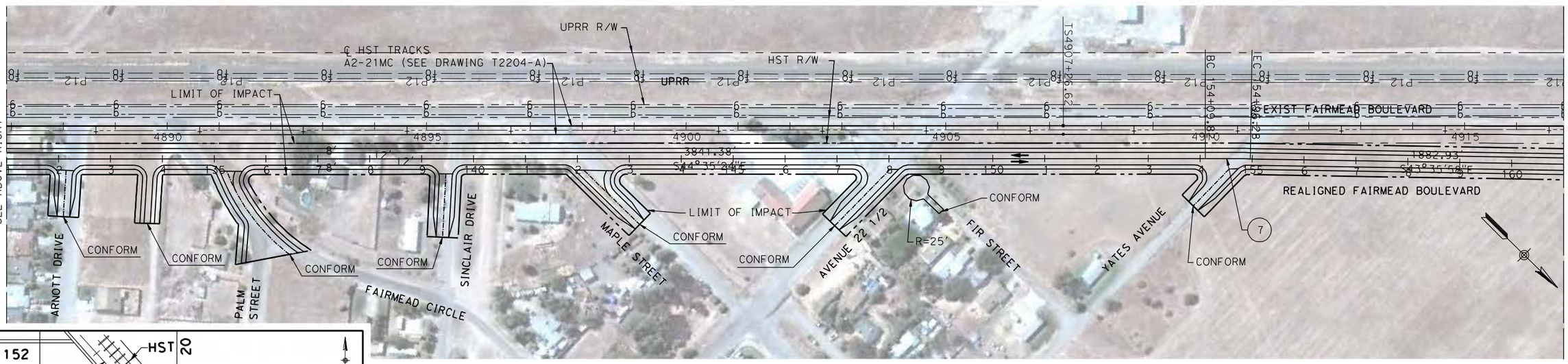
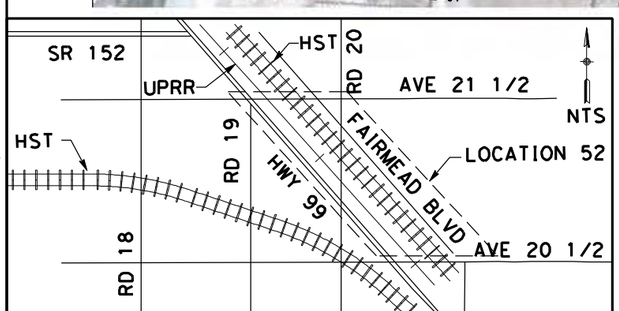
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
FAIRMEAD BLVD
LAYOUT
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CR9018-B
SCALE AS SHOWN
SHEET NO. ### OF ###







CURVE DATA

No.	R	Δ	T	L
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7	5000.00	0°59'26"	43.23	86.45

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21)
FAIRMEAD BLVD
LAYOUT
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CR9019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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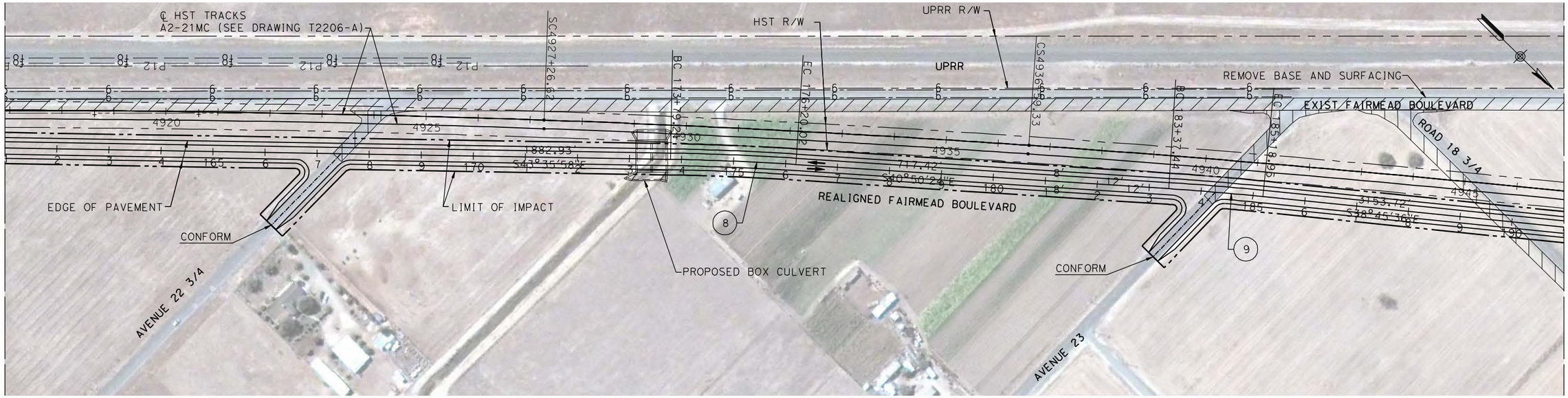

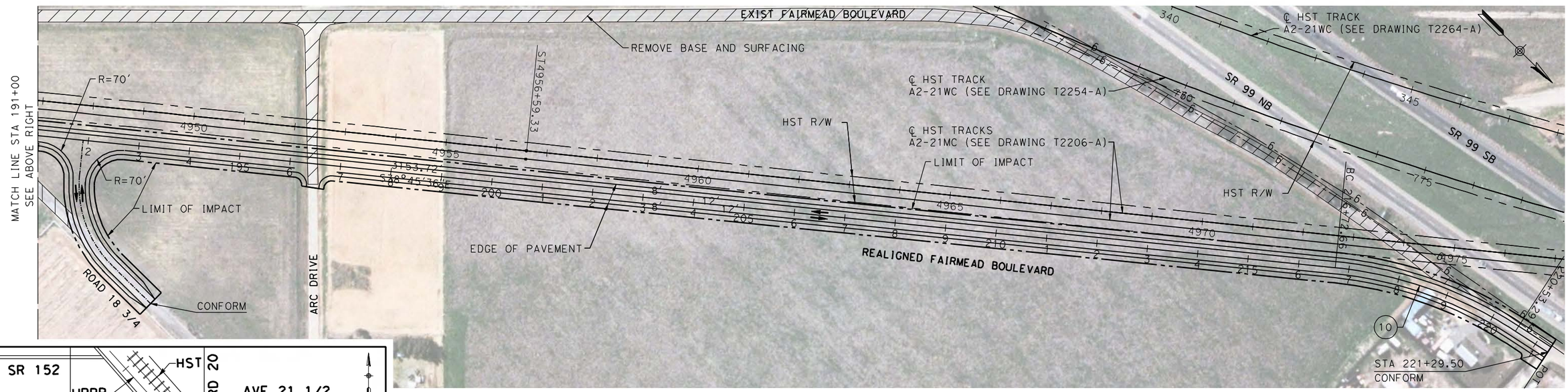

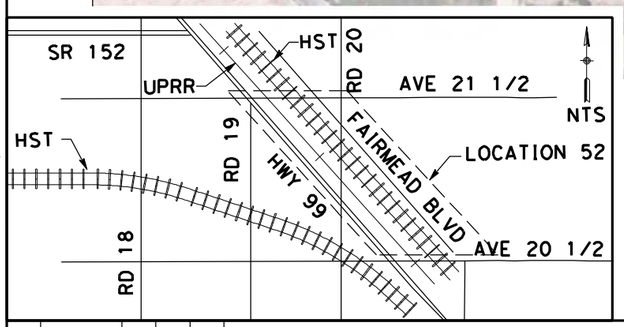

CURVE DATA

No.	R	Δ	T	L
8	5000.00	87°14'26"	120.43	240.81
9	5000.00	87°55'12"	90.76	181.51
10	800.00	62°44'23"	193.99	380.63

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21)
FAIRMEAD BLVD
LAYOUT
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CR9020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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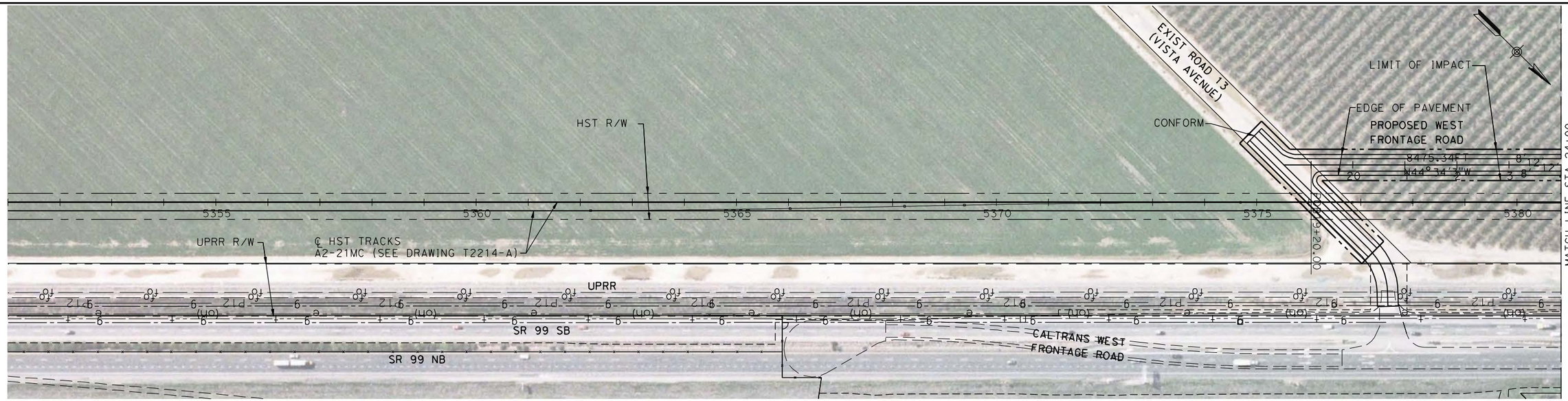

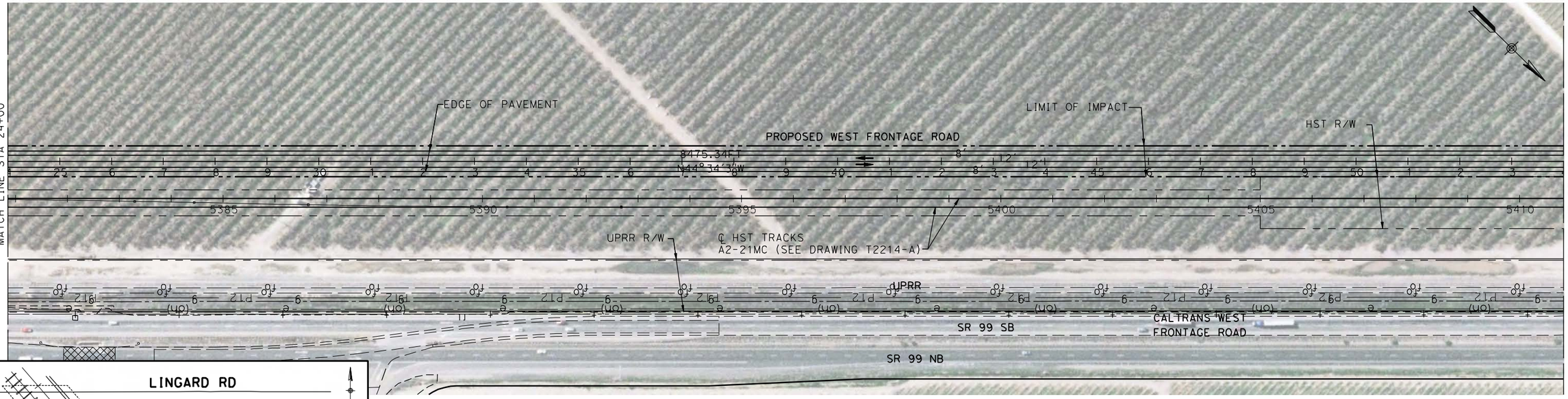

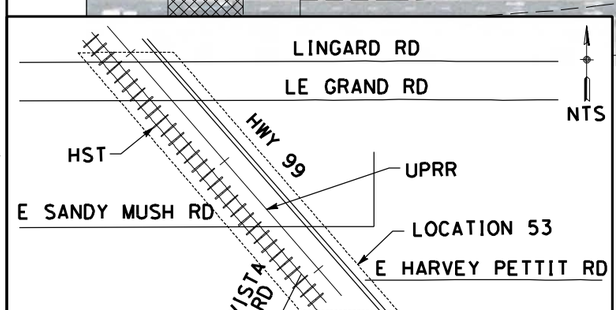

100 0 100 200
H: 1"=100'

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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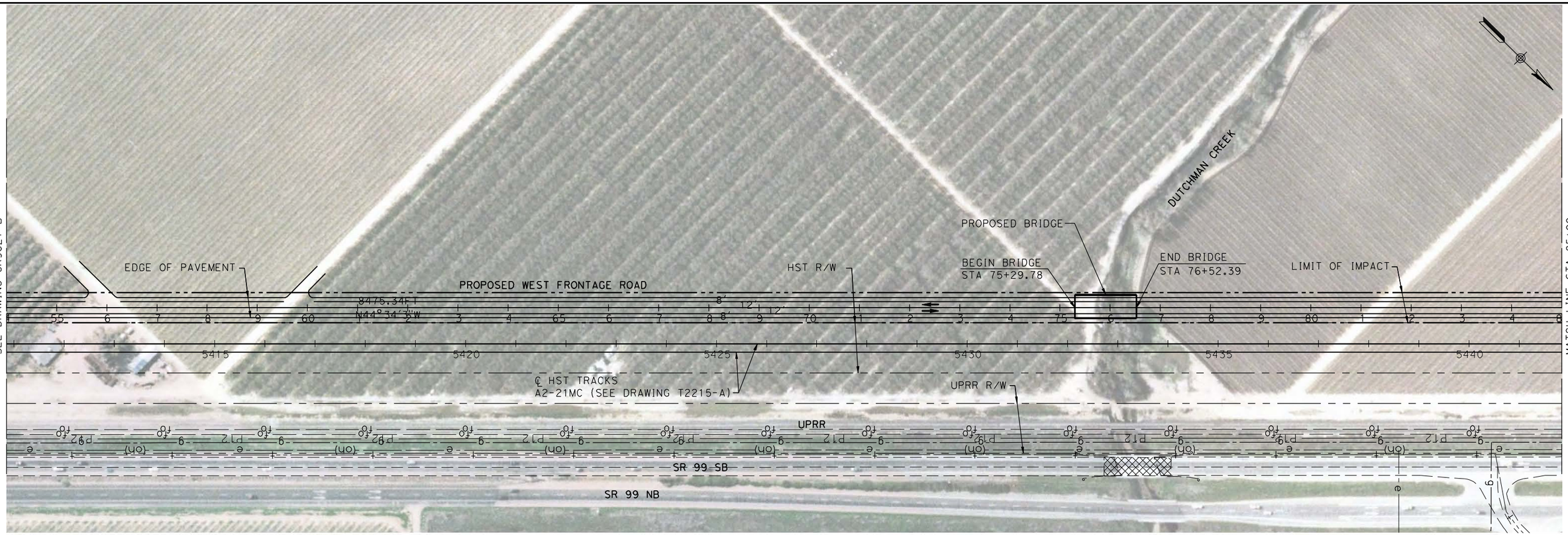

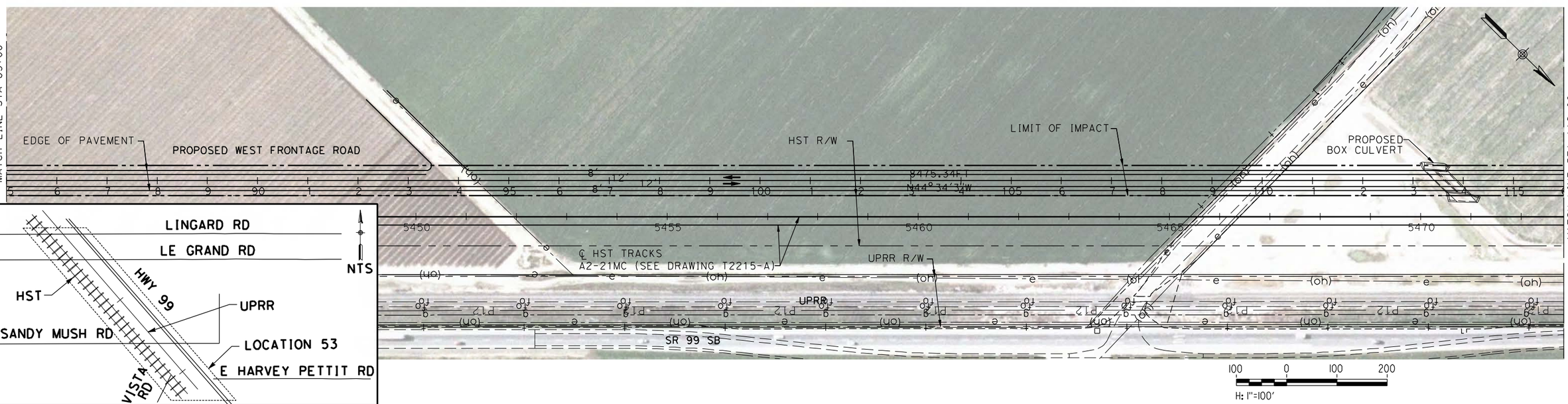

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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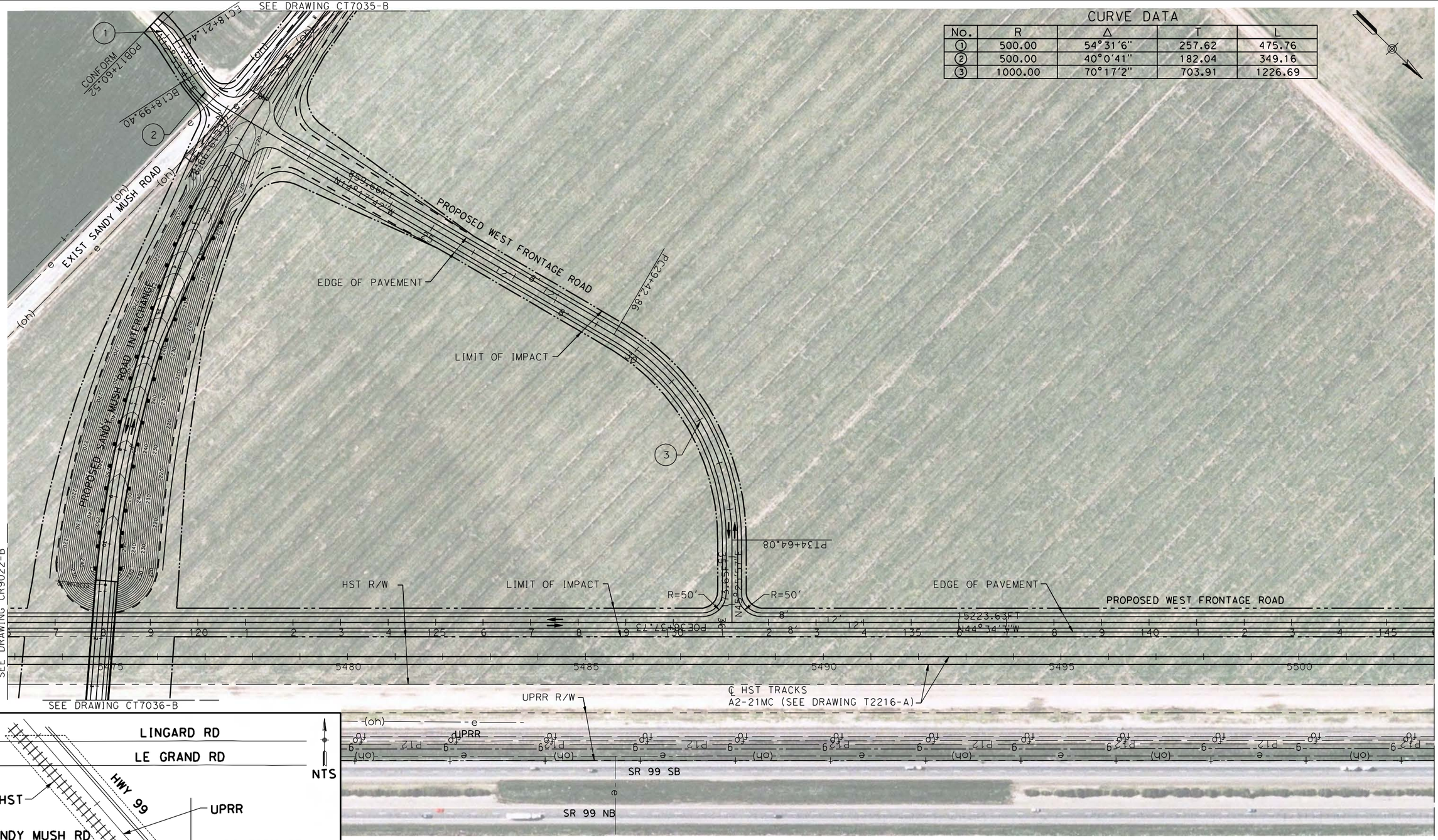

CURVE DATA

No.	R	Δ	T	L
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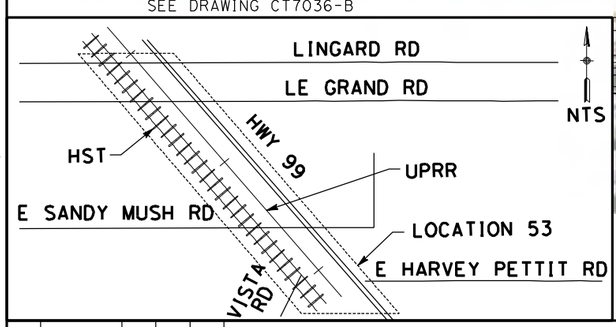
2	500.00	40°0'41"	182.04	349.16
3	1000.00	70°17'2"	703.91	1226.69



100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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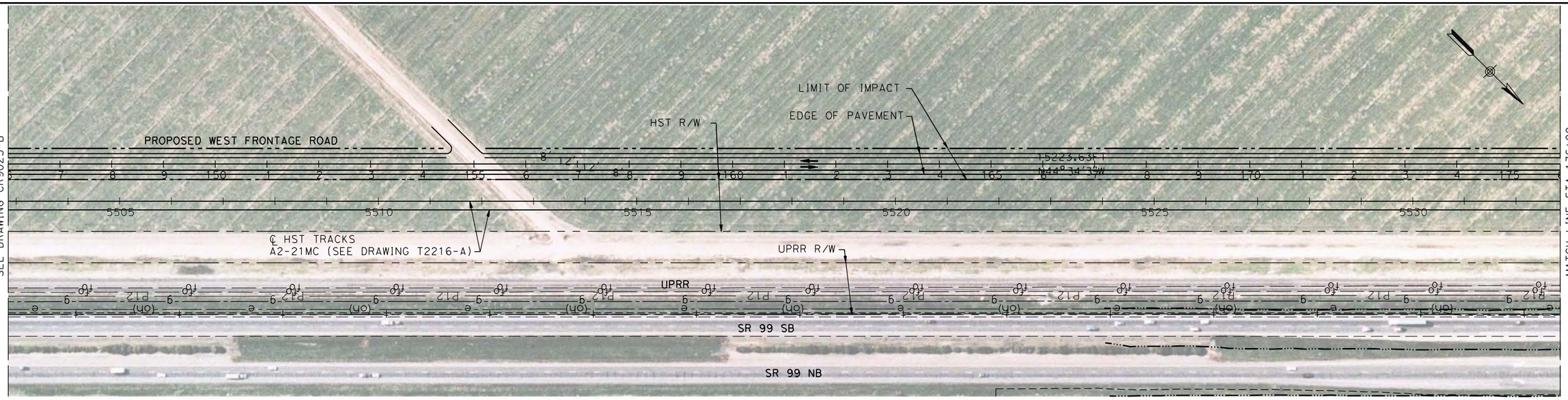

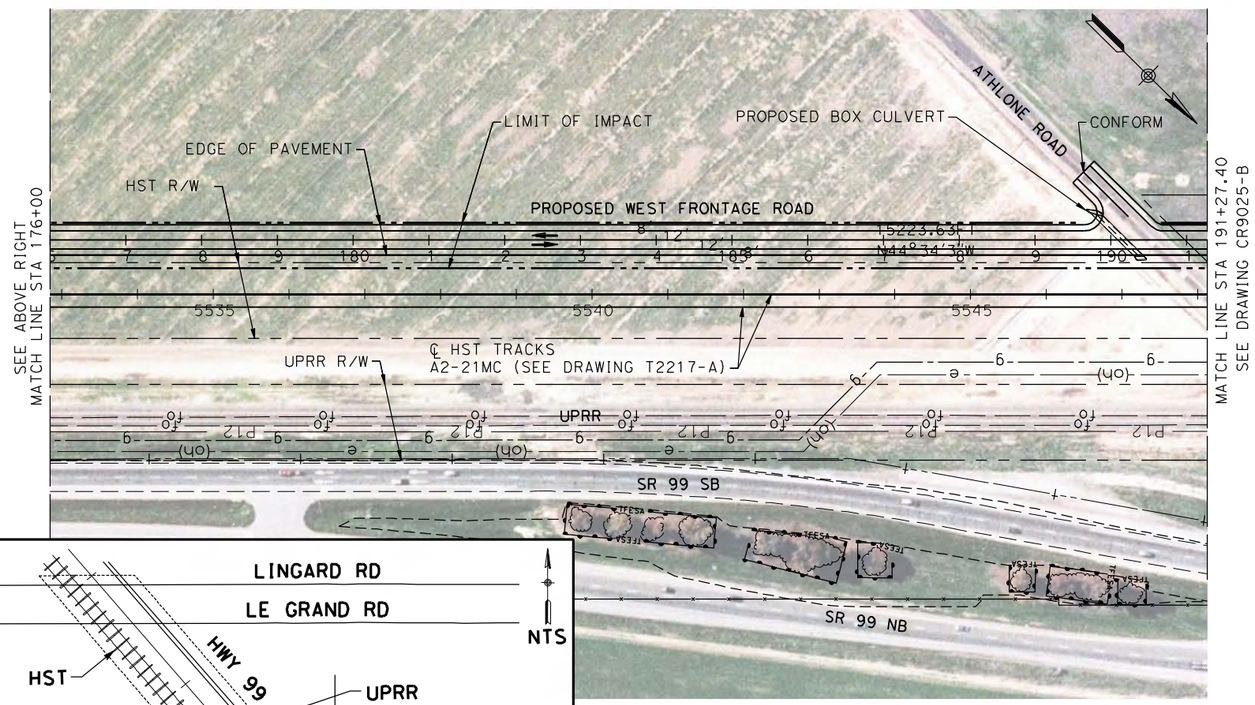

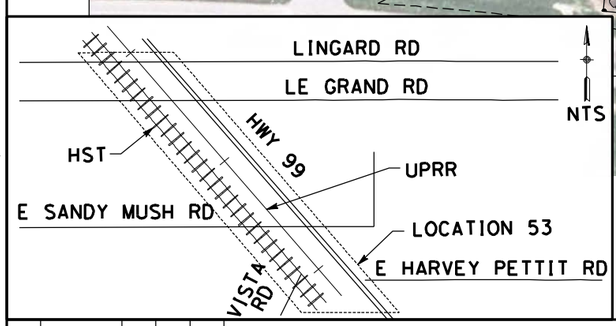

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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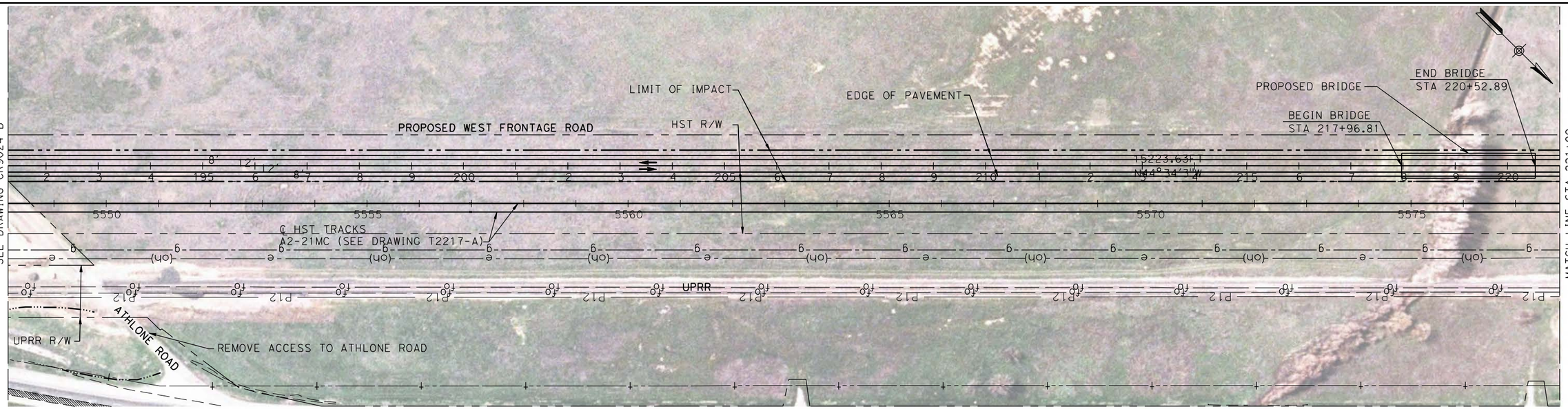

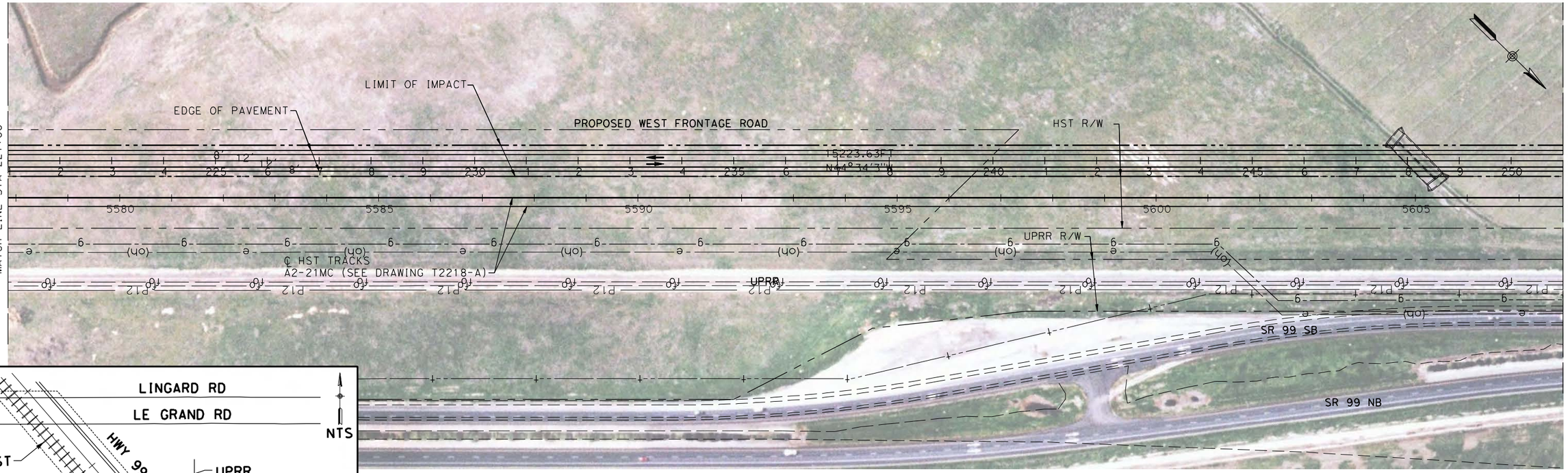

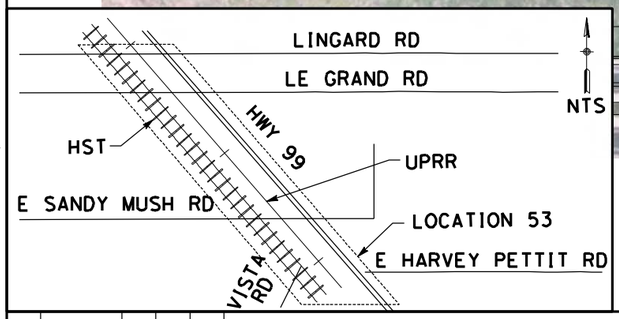

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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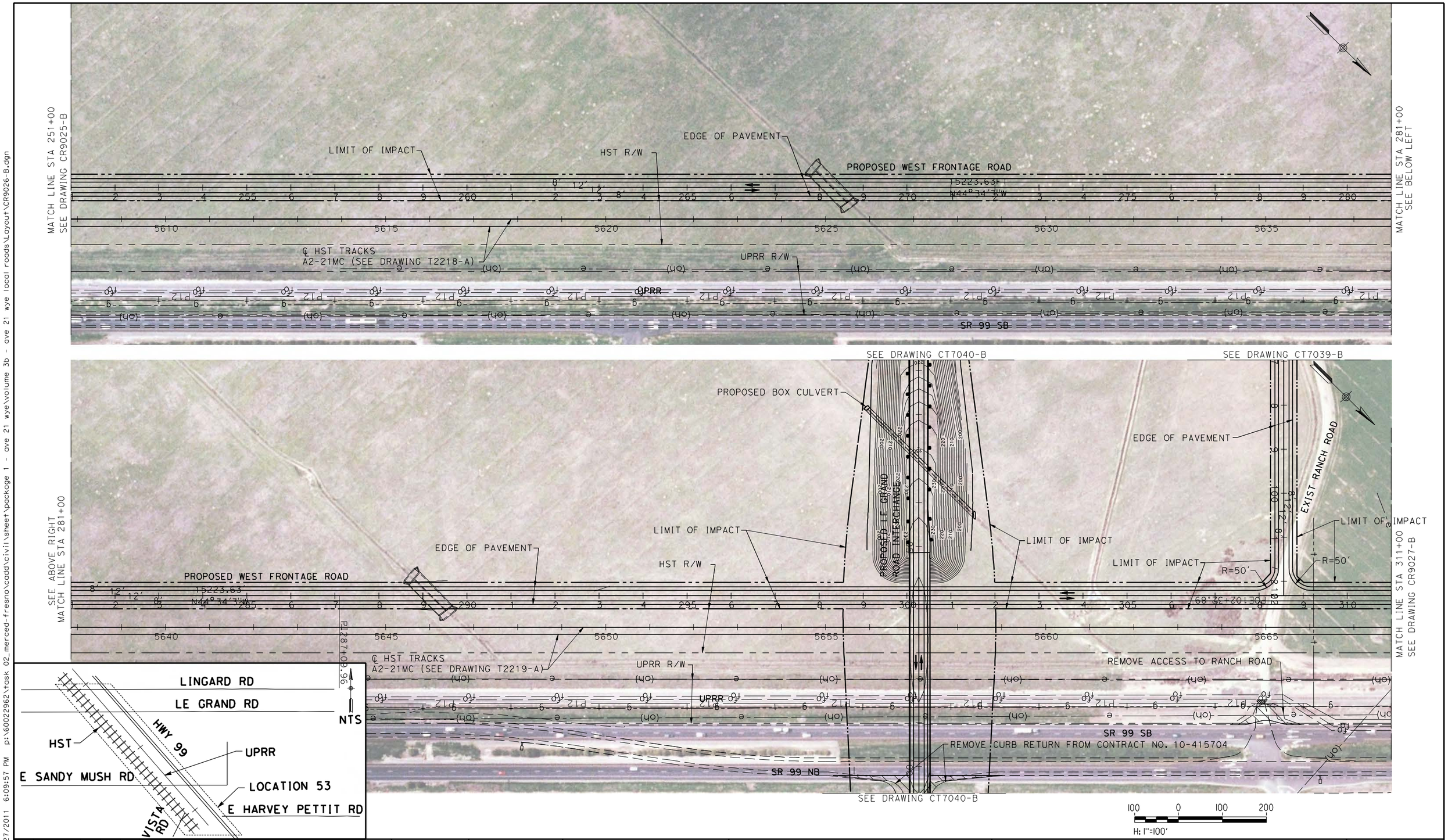

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UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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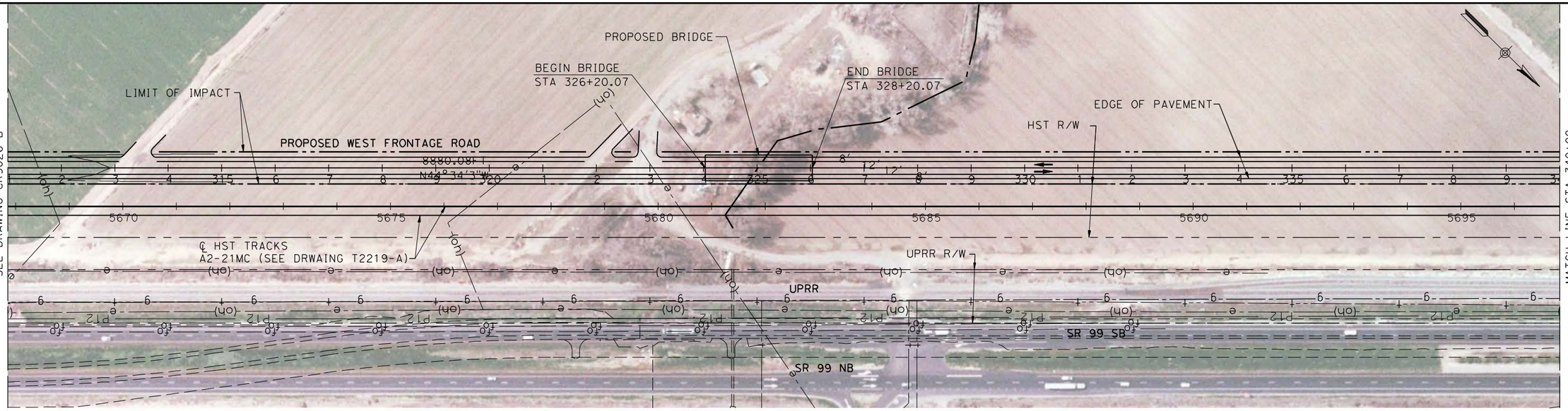

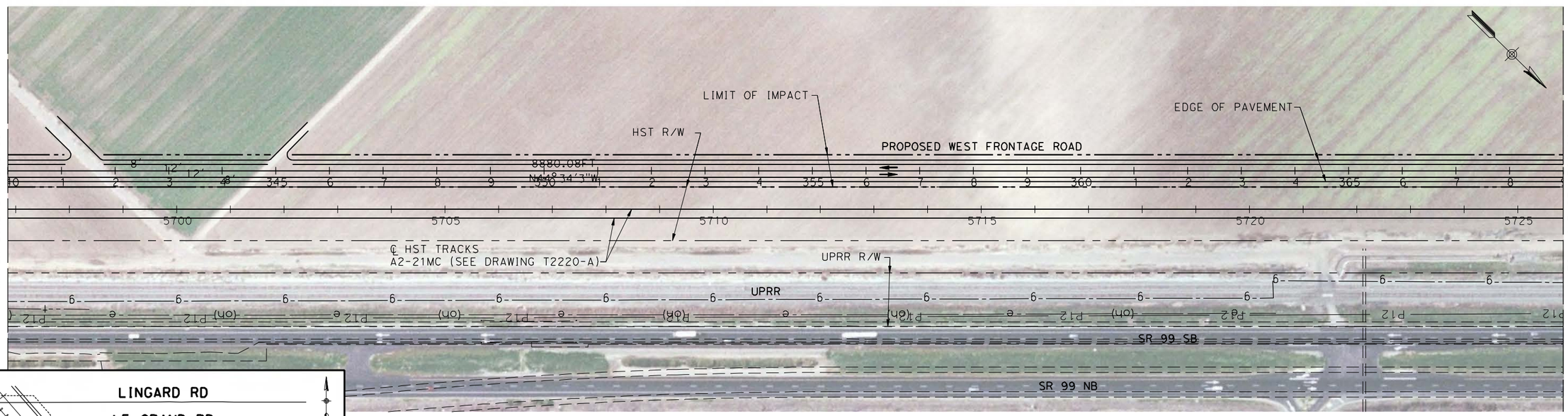

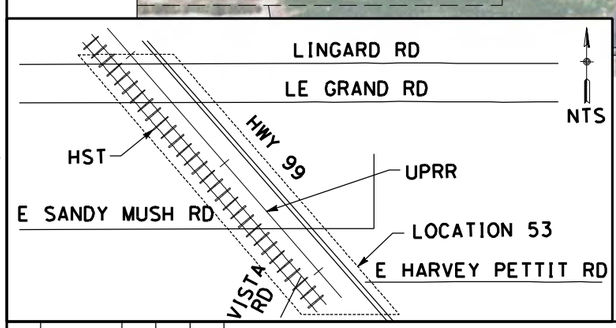

100 0 100 200
H: 1"=100'

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9027-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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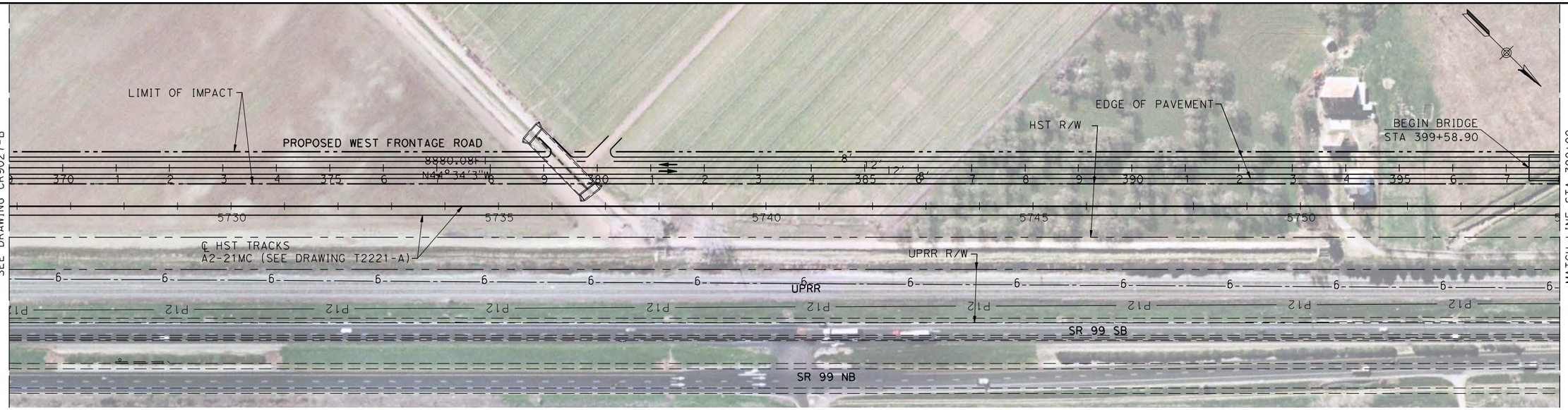

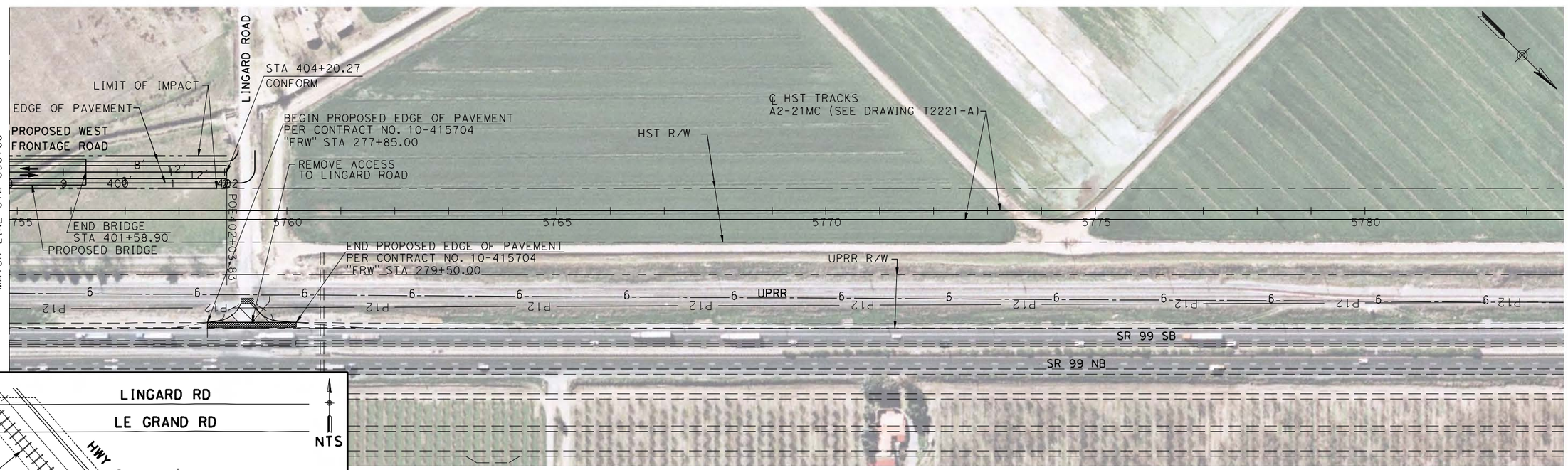

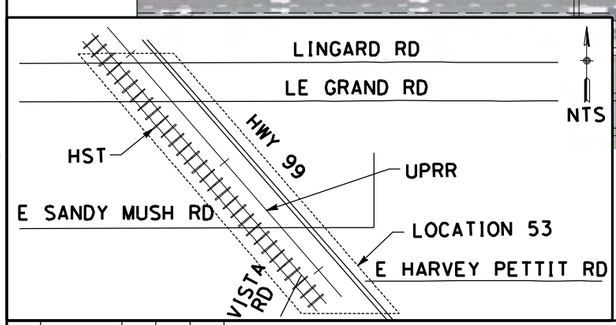

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H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9028-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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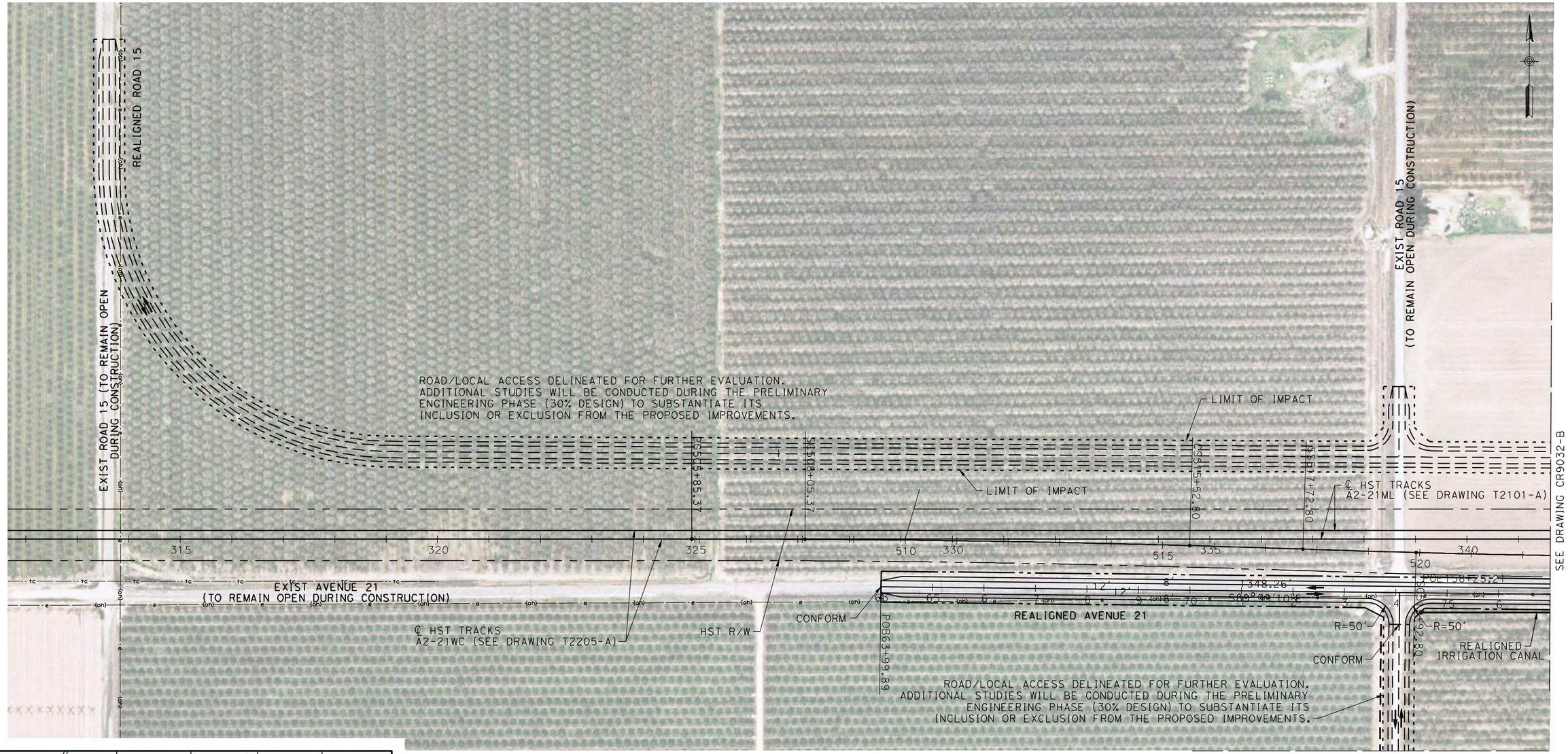

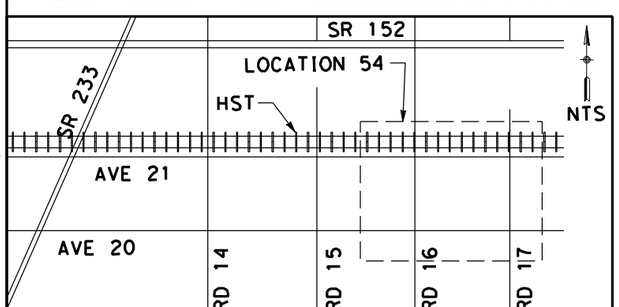

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H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
ROAD 15 1/2 & NORTH FRONTAGE ROAD
LAYOUT
STA 63+99.89 TO STA 77+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9029-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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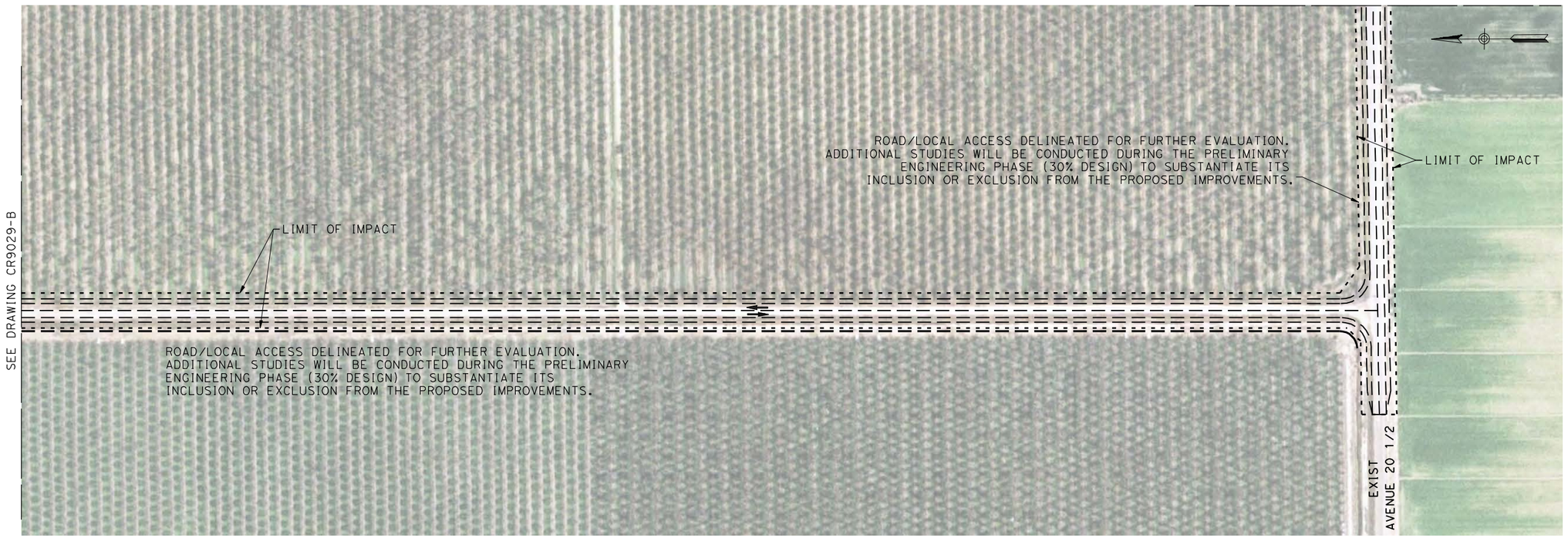

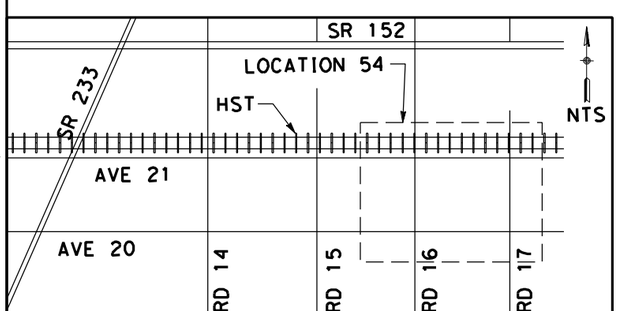

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H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/WYE - (AVE 21)
ROAD 15 1/2 & AVENUE 20 1/2
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9030-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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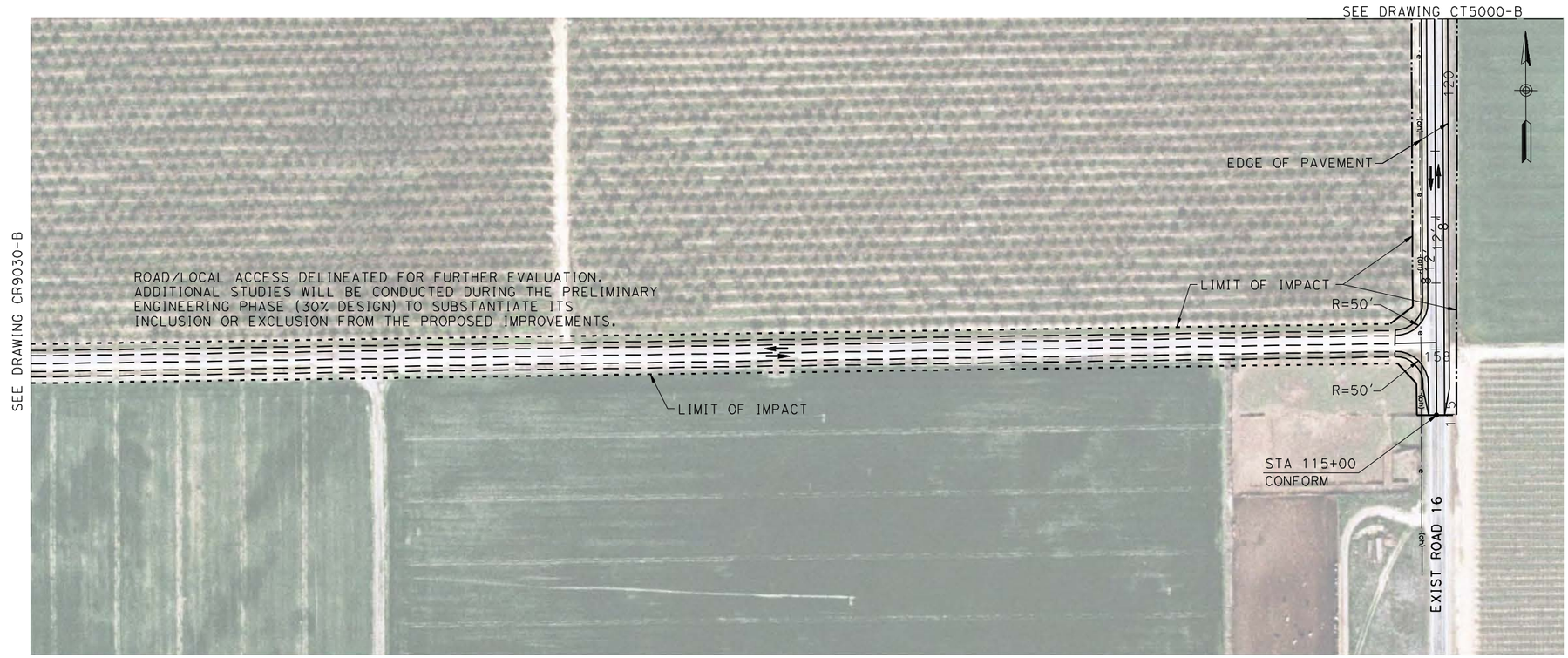

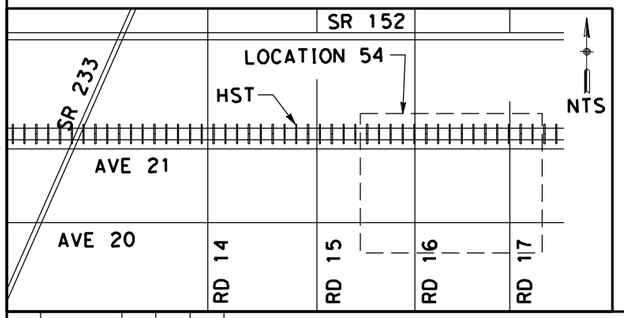

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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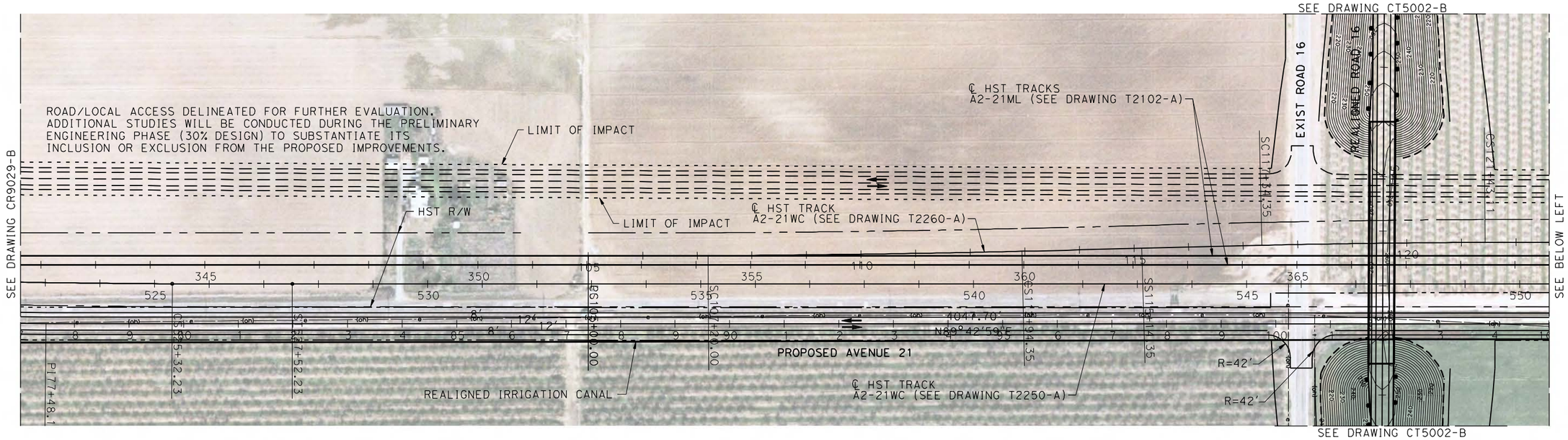
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

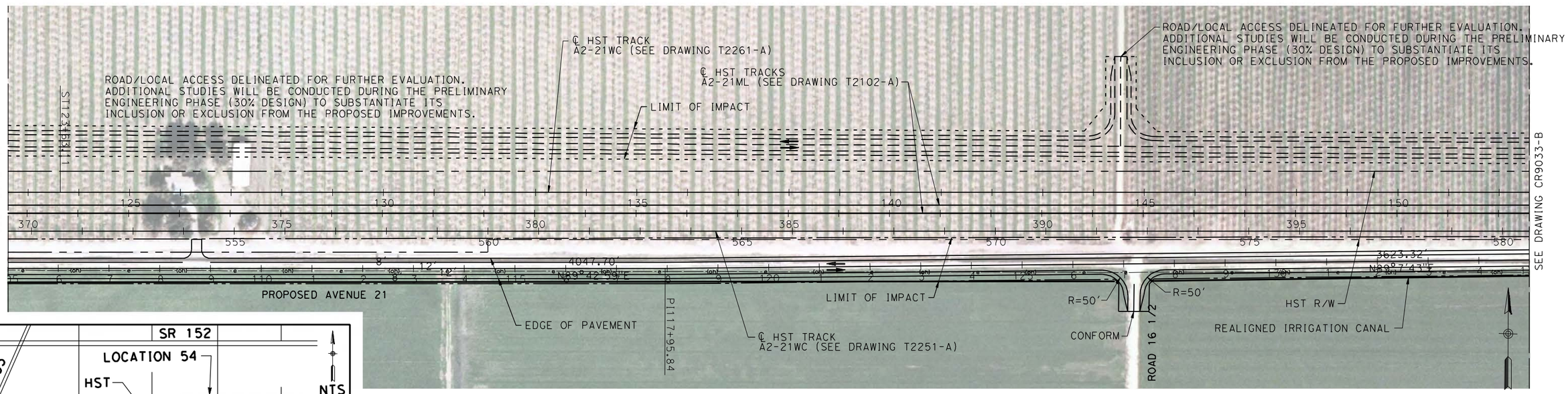
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

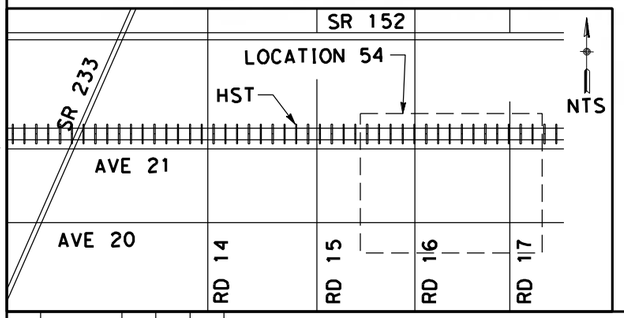
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
AVENUE 20 1/2
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9031-B
SCALE AS SHOWN
SHEET NO. ### OF ###







100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD AVENUE 21
LAYOUT
STA 77+00 TO STA 135+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9032-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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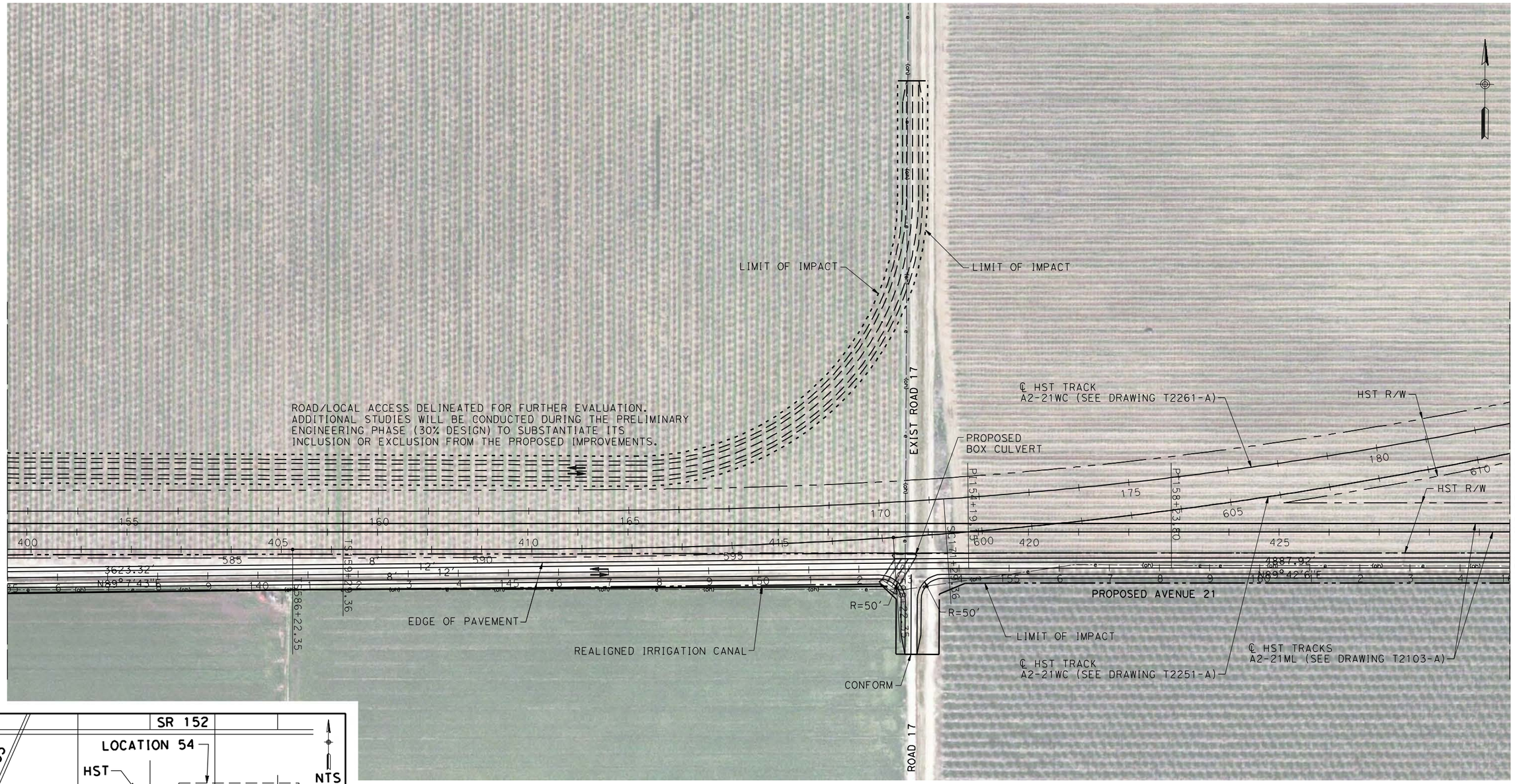

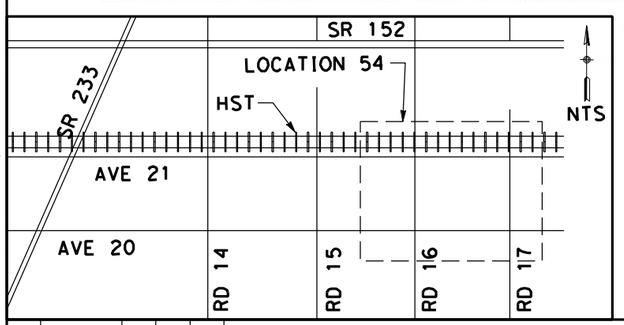

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD AVENUE 21
LAYOUT
STA 135+00 TO STA 165+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9033-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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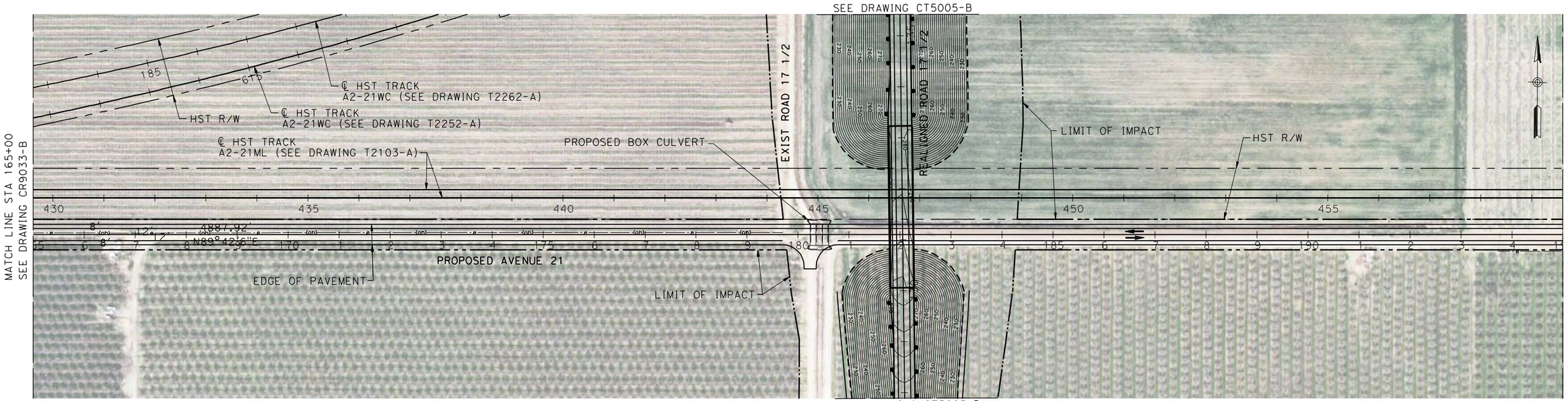

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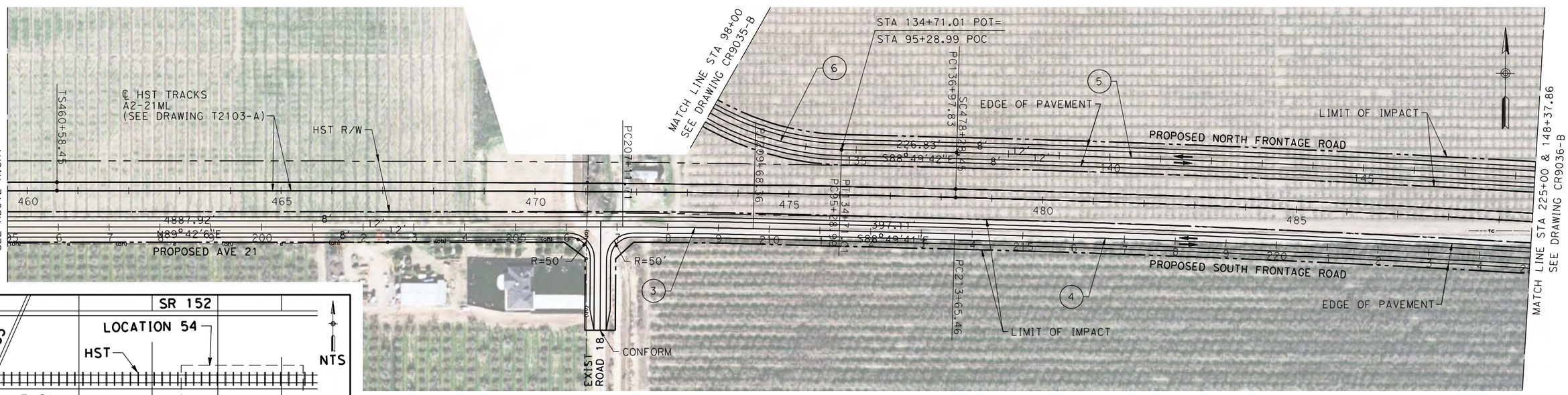

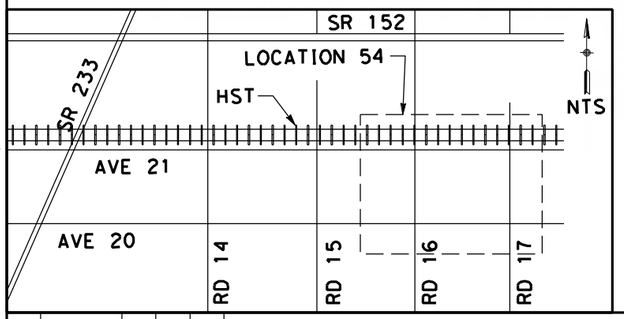

CURVE DATA

No.	R	Δ	T	L
3	10000.02	88°31'46"	128.33	256.64
4	34411.82	69°8'5"	6336.02	12531.69
5	34571.82	64°33'29"	7804.42	15351.51
6	550.00	1°26'55"	536.27	850.04

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD
LAYOUT
STA 165+00 TO STA 225+00, 98+00 & 148+37.86

CONTRACT NO. HSR06-007
DRAWING NO. CR9034-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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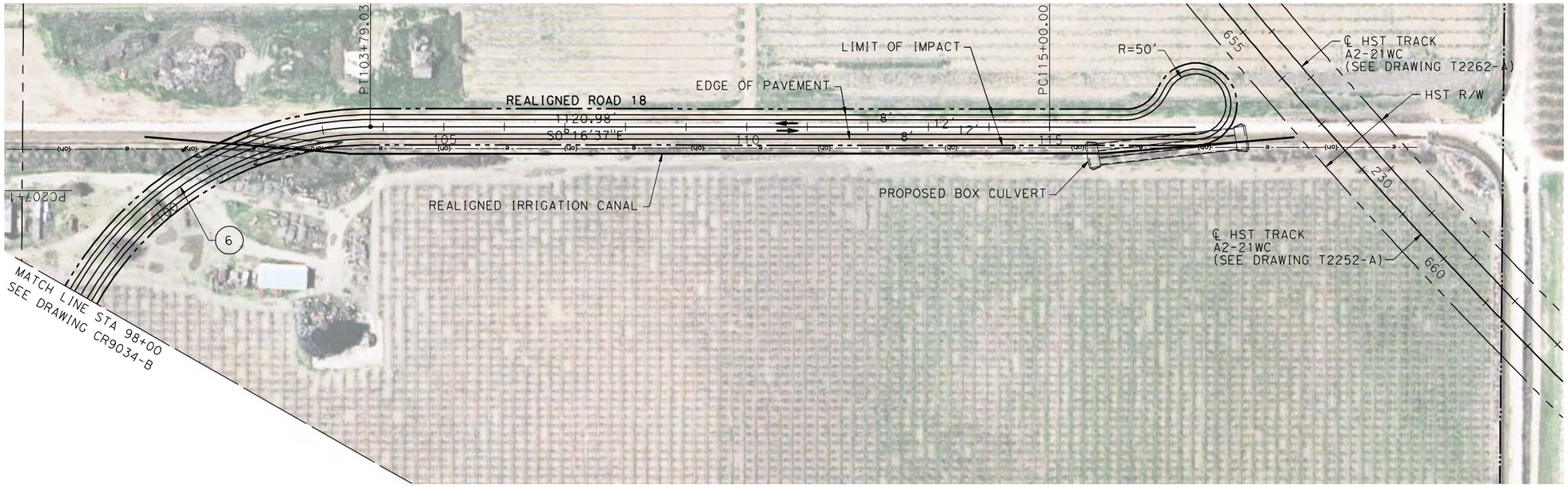

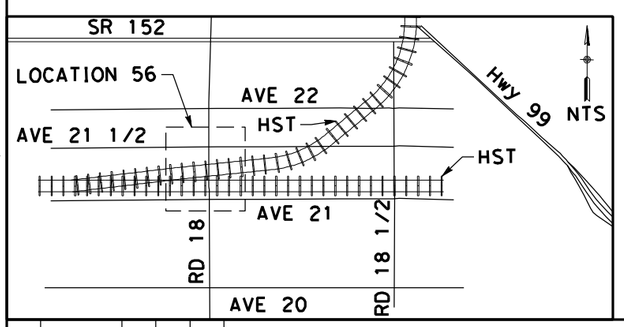

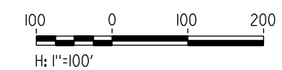

CURVE DATA

No.	R	Δ	T	L
6	550.00	1°26'55"	536.27	850.04

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/WYE - (AVE 21)
ROAD 18
LAYOUT
STA 98+00 TO STA 117+41

CONTRACT NO. HSR06-007
DRAWING NO. CR9035-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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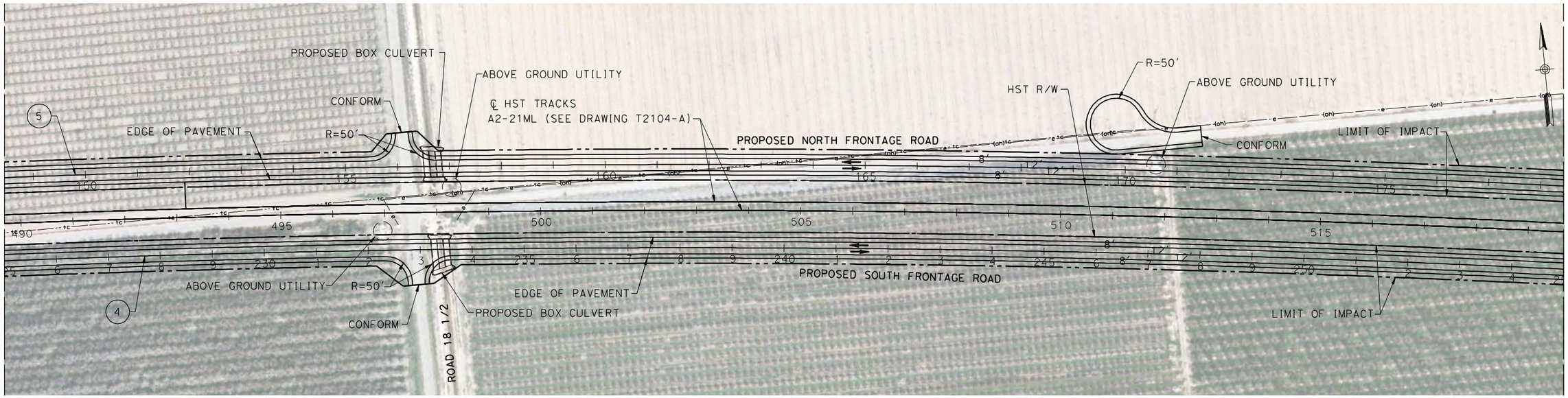

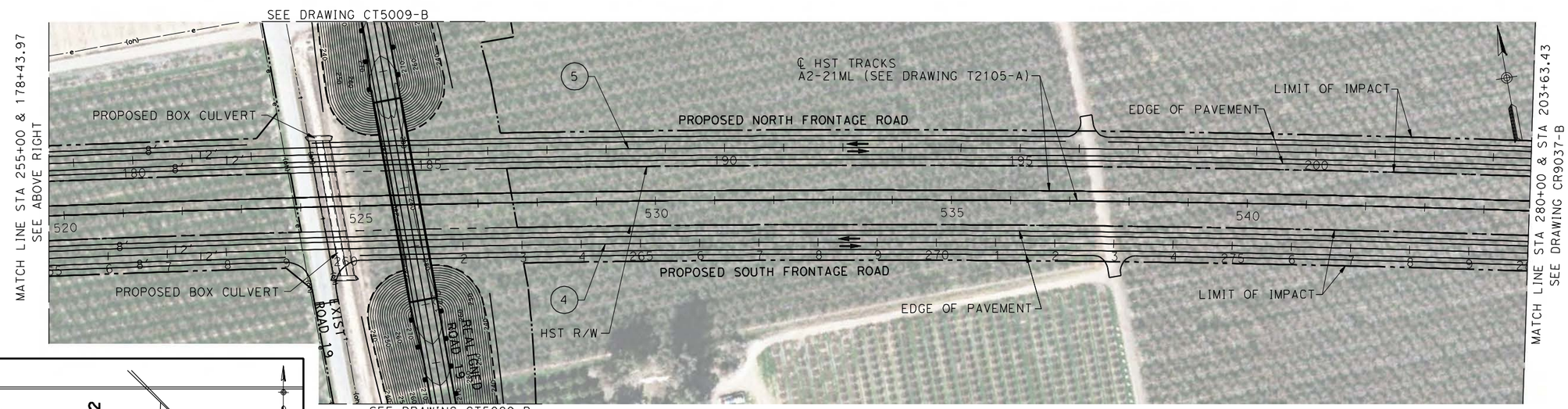

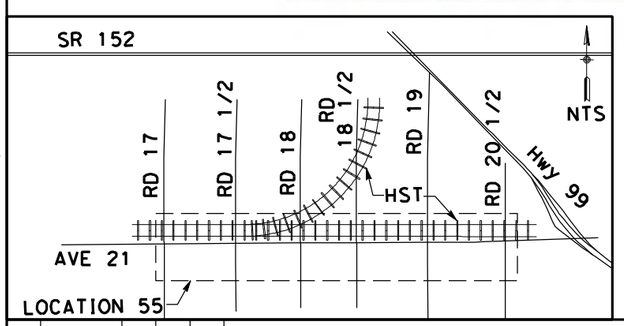

CURVE DATA

No.	R	Δ	T	L
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5	34571.82	64°33'29"	7804.42	15351.51

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD
LAYOUT
STA 225+00 TO 280 & STA 148+37.86 TO 203+63.43

CONTRACT NO. HSR06-007
DRAWING NO. CR9036-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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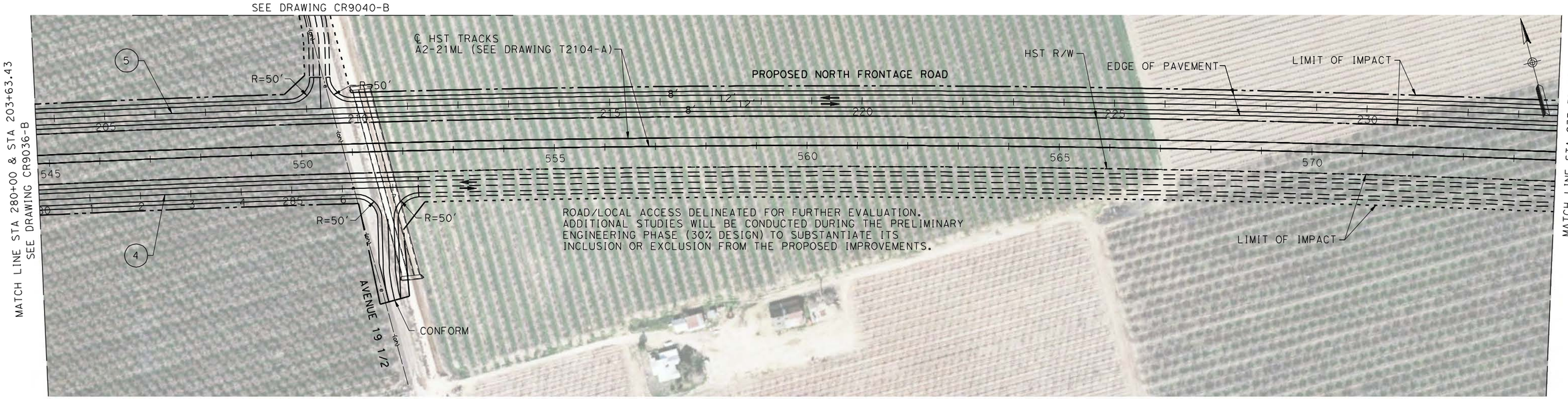

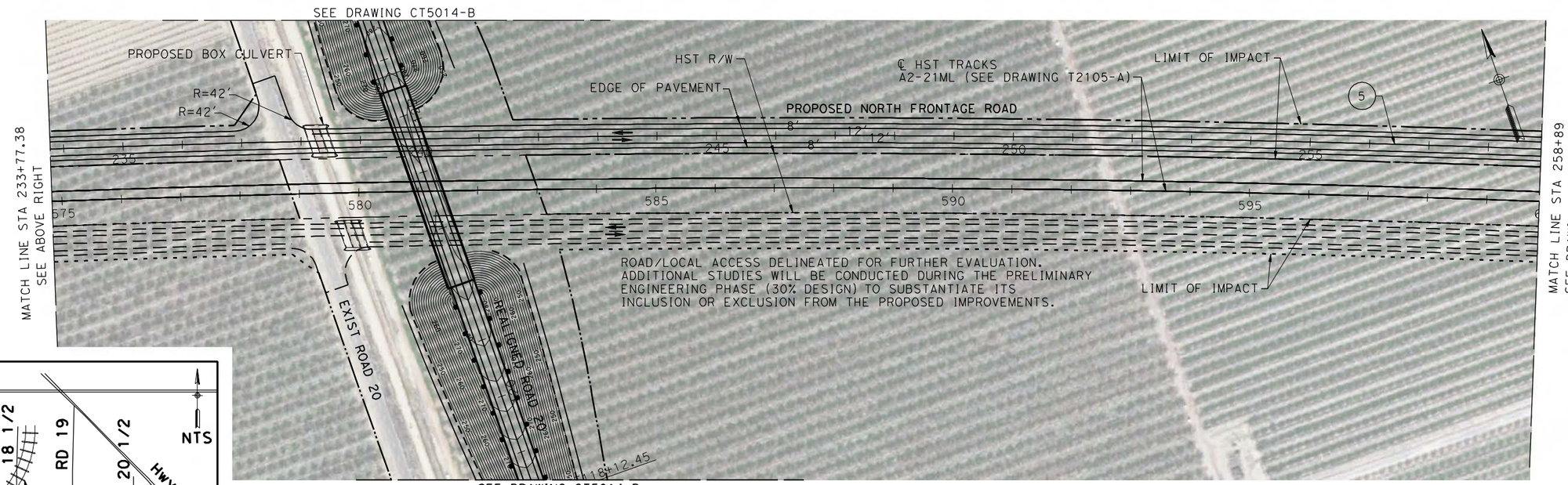

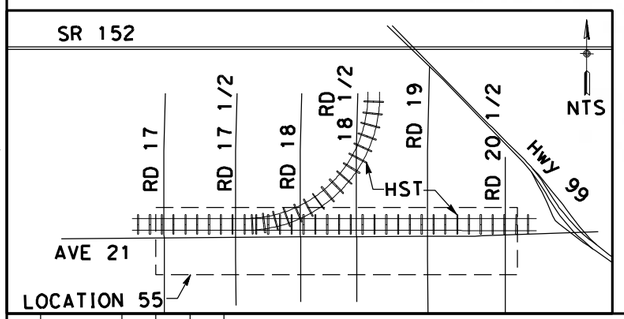

CURVE DATA

No.	R	Δ	T	L
5	34571.82	64°33'29"	7804.42	15351.51
4	34411.82	69°8'5"	6336.02	12531.69

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD
LAYOUT
STA 280+00 TO 287+51 & STA 203+63.43 TO 258+89

CONTRACT NO. HSR06-007
DRAWING NO. CR9037-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 6:13:23 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 1 - ave 21 wye\volume 3b - ave 21 wye local roads\Layout\CR9037-B.dgn
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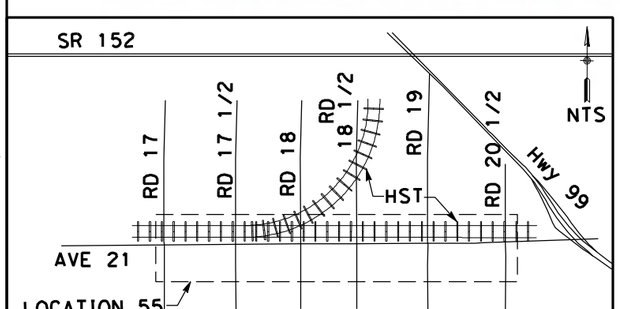

CURVE DATA

No.	R	Δ	T	L
5	34571.82	64°33'29"	7804.42	15351.51

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
NORTH & SOUTH FRONTAGE ROAD
LAYOUT
STA 258+89 TO STA 265+65

CONTRACT NO. HSR06-007
DRAWING NO. CR9038-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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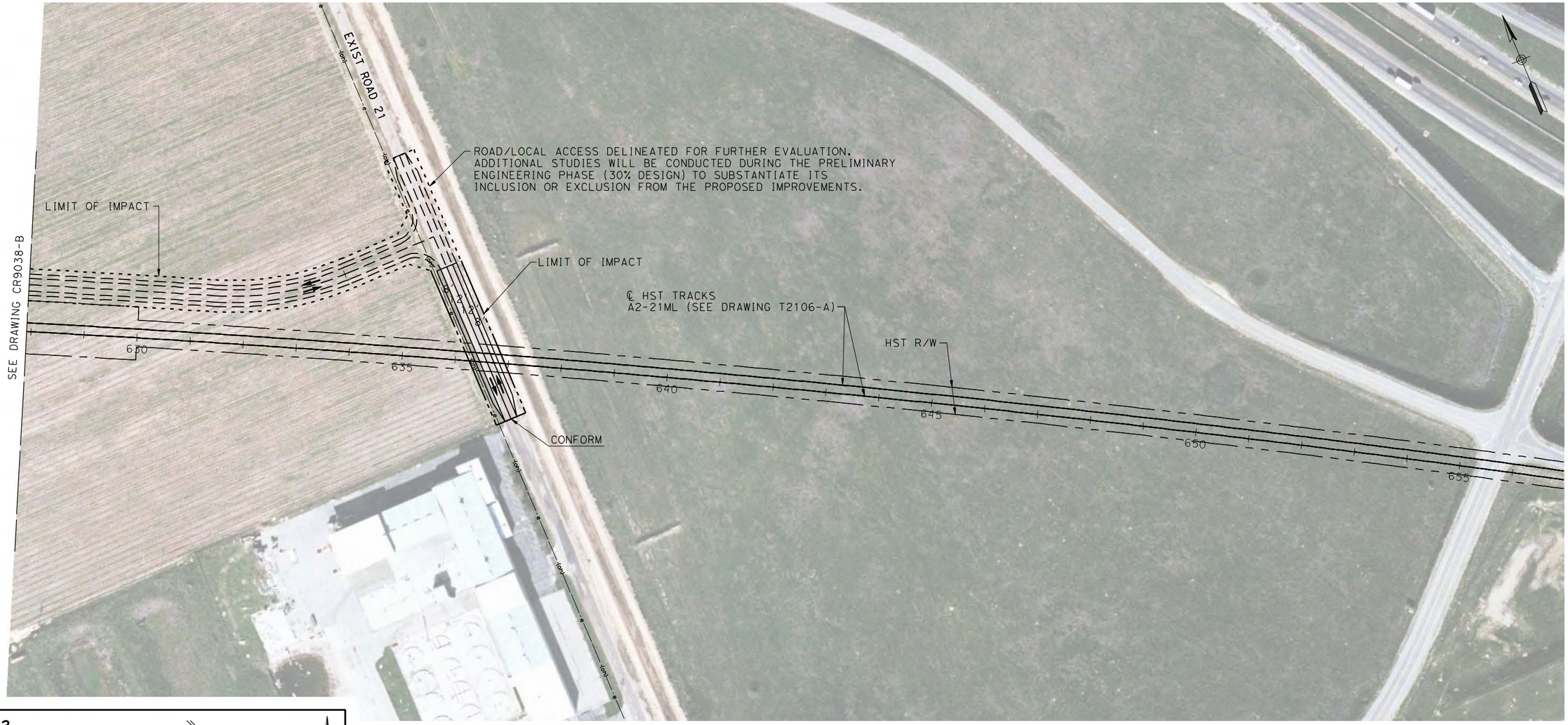
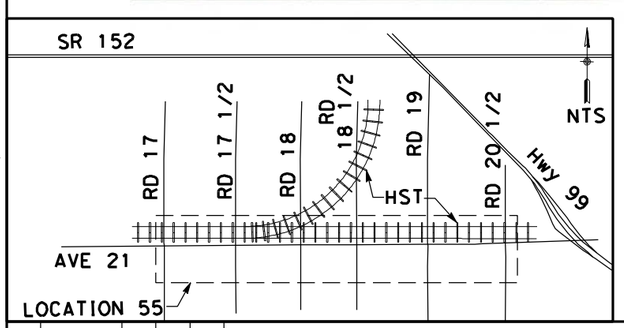
ayelad





100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
NORTH FRONTAGE ROAD AVENUE 21
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9039-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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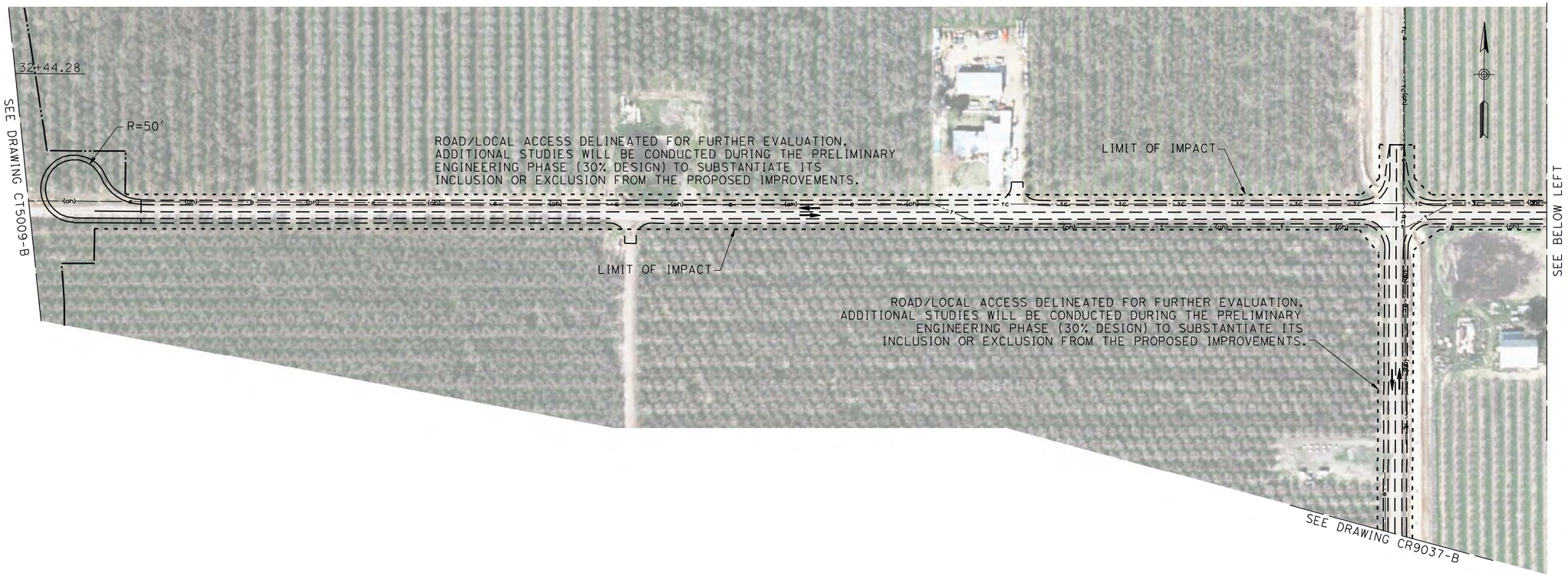

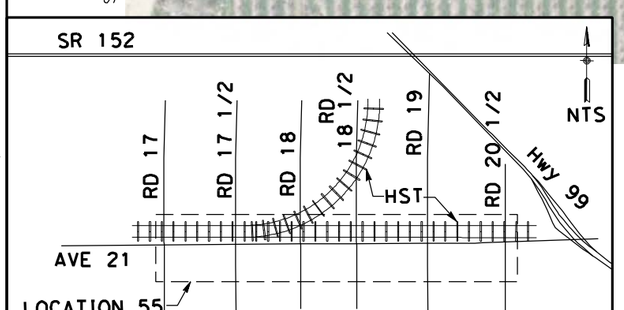

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21)
AVENUE 21
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9040-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
HEALY ROAD
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9041-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayeled

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21)
GERARD AVENUE/CALTRANS FRONTAGE ROAD
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9042-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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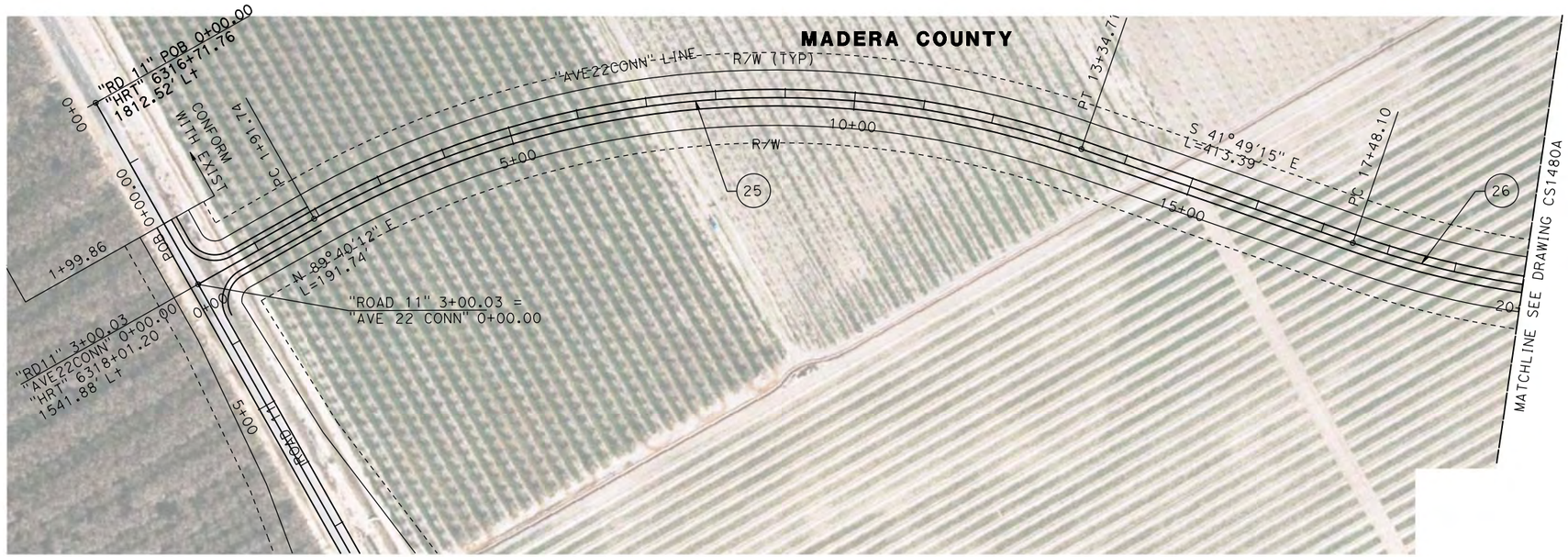
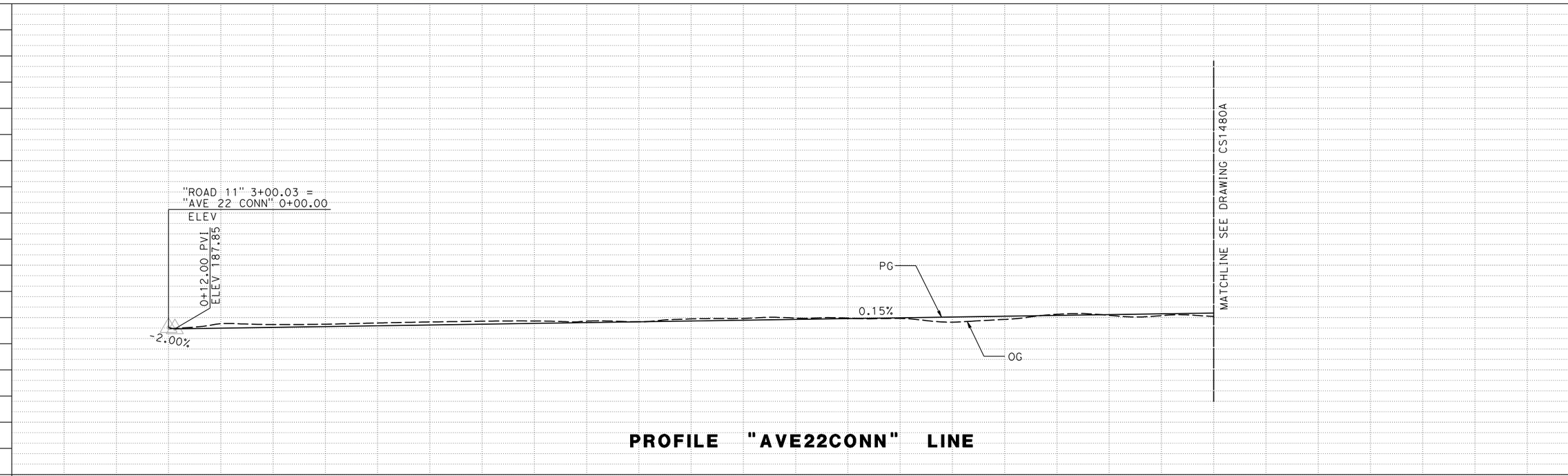
ayeled



PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "AVE22CONN" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 22 CONNECTOR TO ROAD 11
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1479A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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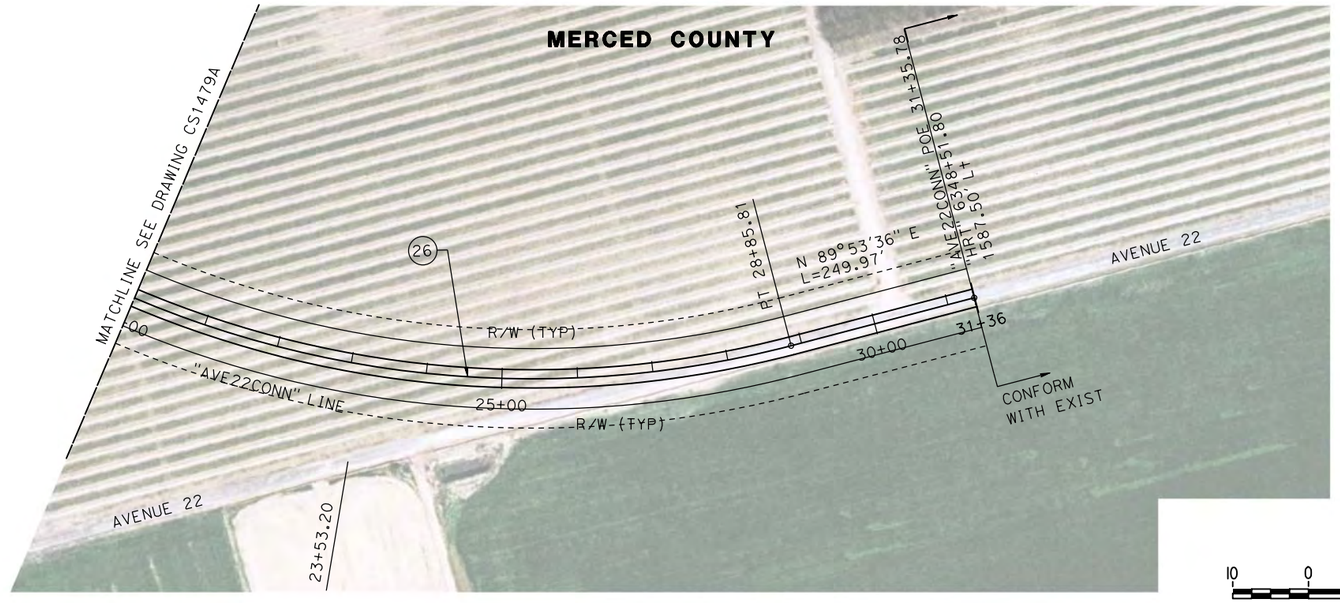
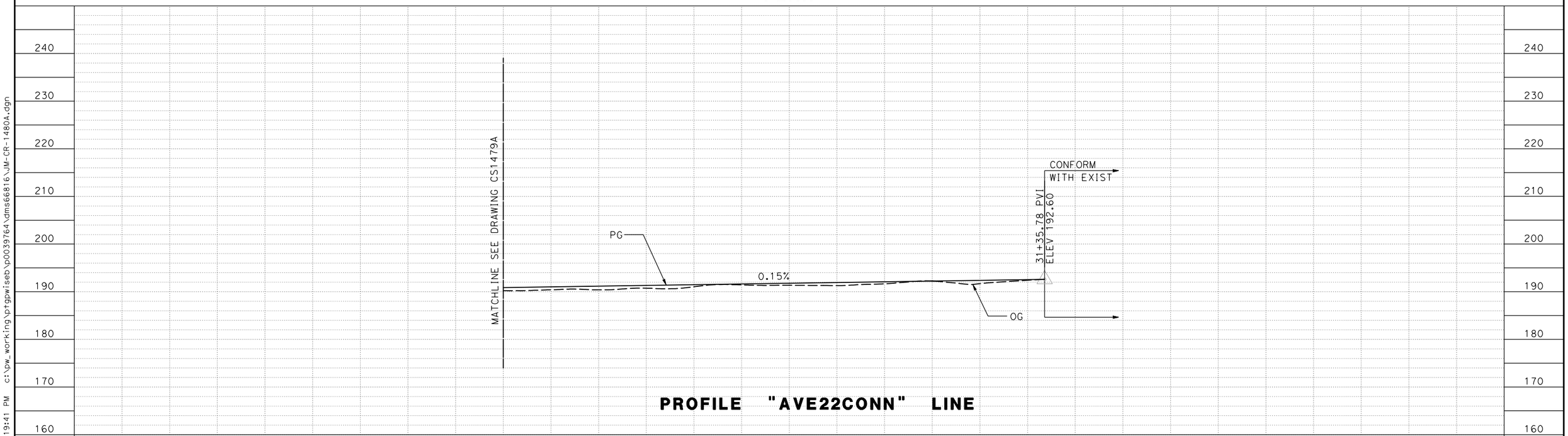


PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "AVE22CONN" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 22 CONNECTOR TO ROAD 11
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1480A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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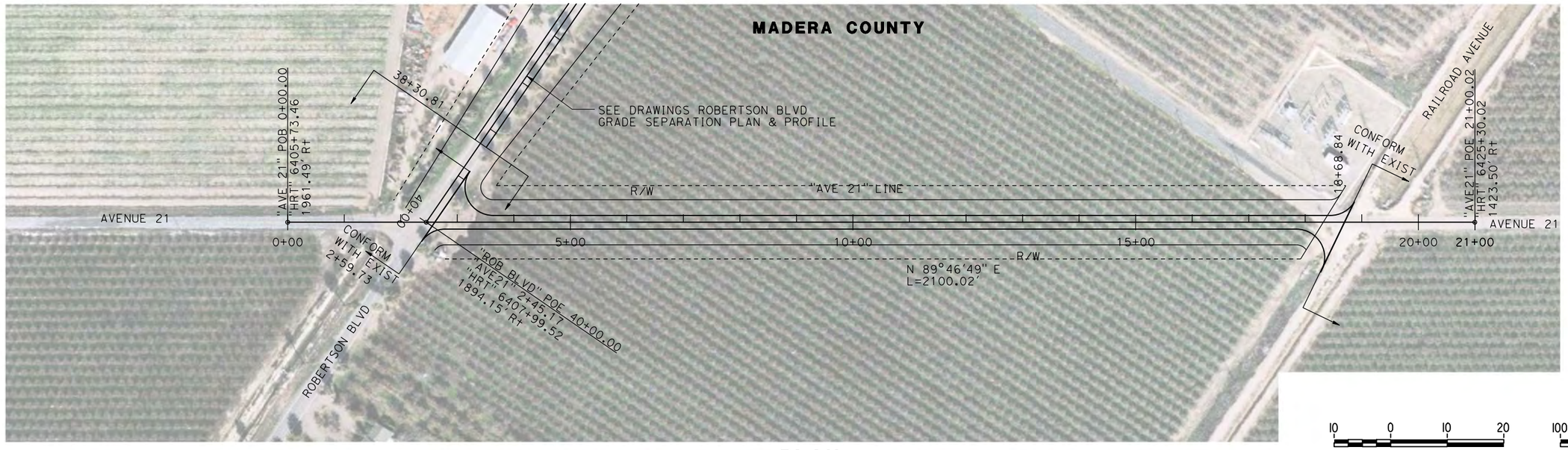
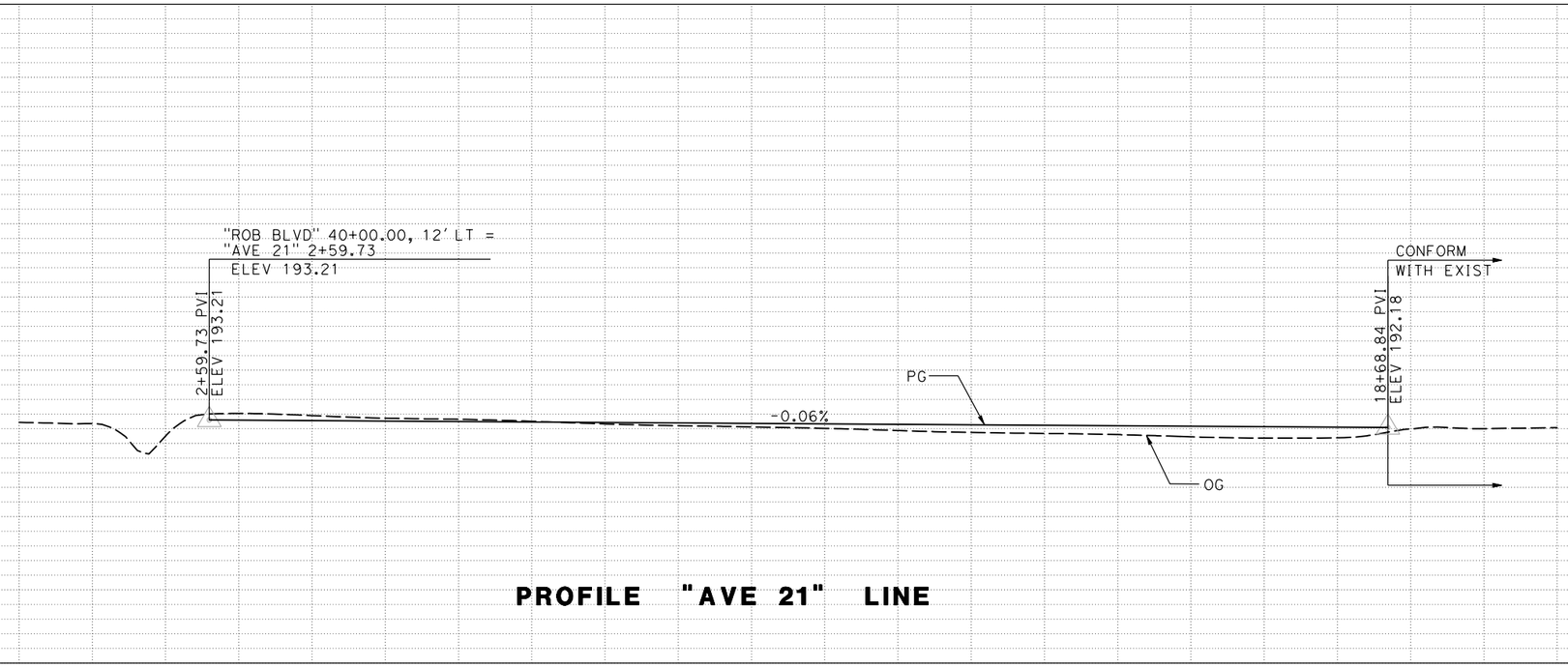


PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "AVE 21" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

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NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 21
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1483A
SCALE AS SHOWN
SHEET NO. 1 OF 1

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