CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

DRAFT

Fresno to Bakersfield Section

Draft EIR-EIS

Volume III:

Section C – Roadway and Grade Separation Plans

Part 1 of 2

August 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

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paul.tonkin

LEGEND

- COUNTY LINES
- STATE PARKS
- USFWS RESERVES
- URBAN AREAS
- B1 — CHST ALIGNMENT OPTIONS

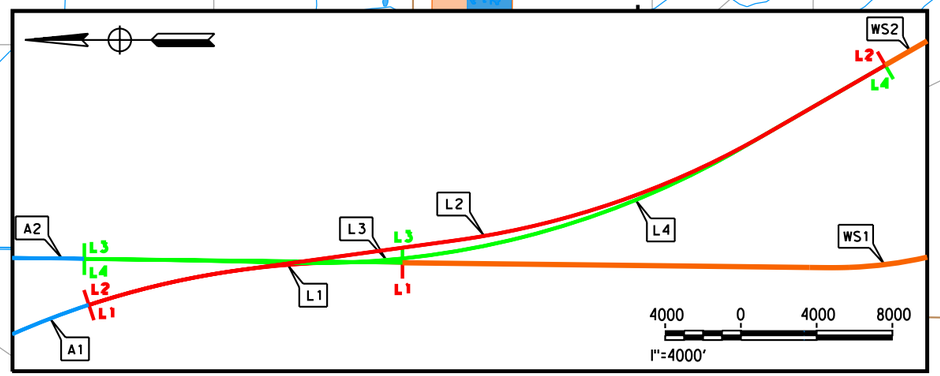
TULARE COUNTY
FRESNO COUNTY
KINGS COUNTY

VISALIA
TULARE
FRESNO
HANFORD
CORCORAN
BAKERSFIELD
WASCO
SHAFTER

SR 180
SR 99
SR 43
SR 198
SR 41
SR 58

Kaweah River
Tule River
Kings River
Poso Creek
Kern
Canal
Canal

B1
B2
WS2
WS1
L1,L2,L3,L4
A2
A1
P
C2
C1, C3
H
F1



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE A. LUFT
DATE 05/13/11

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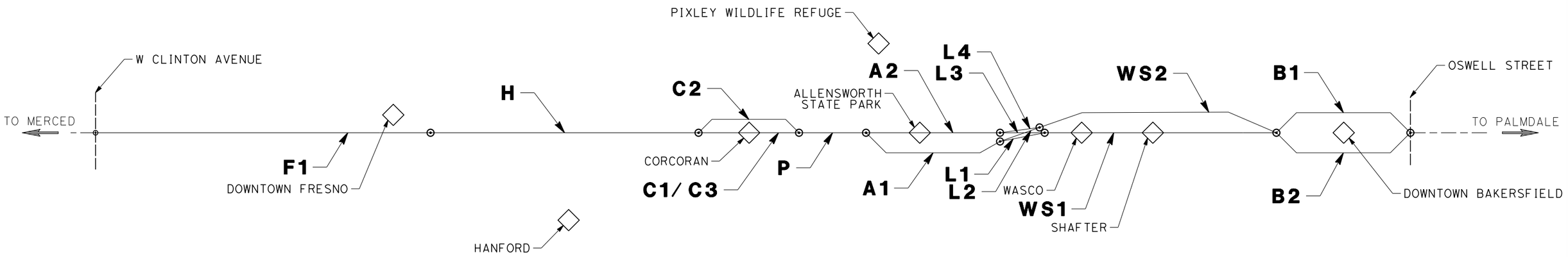
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0001
SCALE AS SHOWN
SHEET NO. 2 OF 13

SUBSECTION CODE	NAME	LENGTH (MI)
F1	FRESNO	10.12
H	HANFORD	28.69
C1	CORCORAN (ELEVATED)	19.34
C2	CORCORAN BYPASS	19.49
C3	CORCORAN (AT GRADE)	19.36
P	PIXLEY	6.88
A1	ALLENSWORTH BYPASS	19.07
A2	THROUGH ALLENSWORTH	19.04
L1	POSO CREEK	3.18
L2	POSO CREEK	8.41
L3	POSO CREEK	3.18
L4	POSO CREEK	8.44
WS1	THROUGH WASCO-SHAFTER	20.63
WS2	WASCO-SHAFTER BYPASS	14.49
B1	BAKERSFIELD URBAN (NORTH)	11.96
B2	BAKERSFIELD URBAN (SOUTH)	11.89



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

ALIGNMENT
ALIGNMENT SUBSECTIONS DIAGRAM

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0002
SCALE NO SCALE
SHEET NO. 3 OF 13

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GENERAL SHEETS

DRG NO.	DRAWING DESCRIPTION	SHEET NO.
	FRESNO TO BAKERSFIELD - ROADWAY & GRADE SEPARATION - COVER SHEET	SHEET 1 OF 13
CB0001	ALIGNMENT - LOCATION MAP	SHEET 2 OF 13
CB0002	ALIGNMENT - ALIGNMENT SUBSECTION DIAGRAM	SHEET 3 OF 13
CB1003	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 1 OF 8	SHEET 4 OF 13
CB1004	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 2 OF 8	SHEET 5 OF 13
CB1005	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 3 OF 8	SHEET 6 OF 13
CB1006	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 4 OF 8	SHEET 7 OF 13
CB1007	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 5 OF 8	SHEET 8 OF 13
CB1008	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 6 OF 8	SHEET 9 OF 13
CB1009	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 7 OF 8	SHEET 10 OF 13
CB1010	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS - SHEET 8 OF 8	SHEET 11 OF 13
CB0009	GENERAL - ABBREVIATIONS AND LEGEND - SHEET 1 OF 2	SHEET 12 OF 13
CB0010	GENERAL - ABBREVIATIONS AND LEGEND - SHEET 2 OF 2	SHEET 13 OF 13

REFER TO ROADWAY PLANS - PART 1 OF 2

GRADE SEPARATION PLANS - ALIGNMENT F1

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0040	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 47	NOT INCLUDED IN THIS PACKAGE
CT1001	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - W MCKINLEY AVE	SHEET 2 OF 47	
CT1005	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY LAYOUT - N GOLDEN STATE BLVD	SHEET 3 OF 47	
CT1007	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - W OLIVE AVE	SHEET 4 OF 47	
CT1008	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - BELMONT AVE	SHEET 5 OF 47	
CT1011	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - STANISLAUS ST & TUOLUMNE ST	SHEET 6 OF 47	
CT1013	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - FRESNO ST	SHEET 7 OF 47	1
CT1016	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - TULARE ST OVERHEAD	SHEET 8 OF 47	
CT1017	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - TULARE ST UNDERPASS	SHEET 9 OF 47	
CT1019	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - VENTURA ST	SHEET 10 OF 47	
CT1020	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - CHURCH AVE	SHEET 11 OF 47	
CT1025	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - E CENTRAL AVE	SHEET 12 OF 47	
CT1026	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - E CENTRAL AVE	SHEET 13 OF 47	
CT1028	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEPARATION LAYOUT - E AMERICAN AVE	SHEET 14 OF 47	

ALIGNMENT F1 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2001	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - W MCKINLEY AVE	SHEET 15 OF 47	NOT INCLUDED IN THIS PACKAGE
CT2002	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MCKINLEY CONNECTOR	SHEET 16 OF 47	
CT2003	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - N WEBER AVE	SHEET 17 OF 47	
CT2004	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - N WEST AVE	SHEET 18 OF 47	
CT2005	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM N GOLDEN STATE BLVD	SHEET 19 OF 47	
CT2006	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM N GOLDEN STATE BLVD	SHEET 20 OF 47	
CT2007	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - W OLIVE AVE	SHEET 21 OF 47	
CT2008	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - BELMONT AVE	SHEET 22 OF 47	
CT2009	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - N WESLEY AVE	SHEET 23 OF 47	
CT2010	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - N H ST	SHEET 24 OF 47	
CT2011	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - STANISLAUS ST	SHEET 25 OF 47	
CT2012	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - TUOLUMNE ST	SHEET 26 OF 47	
CT2013	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - FRESNO ST	SHEET 27 OF 47	
CT2014	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM H ST (FRESNO ST)	SHEET 28 OF 47	
CT2015	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM G ST (FRESNO ST)	SHEET 29 OF 47	1
CT2016	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM TULARE ST - OVERHEAD	SHEET 30 OF 47	
CT2017	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM TULARE ST - UNDERPASS	SHEET 31 OF 47	
CT2018	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM G ST (TULARE ST UNDERPASS)	SHEET 32 OF 47	
CT2019	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - VENTURA ST	SHEET 33 OF 47	
CT2020	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E CHURCH AVE	SHEET 34 OF 47	
CT2021	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM G ST (E CHURCH AVE)	SHEET 35 OF 47	
CT2022	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S SUNLAND AVE	SHEET 36 OF 47	
CT2023	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM OLD EAST CHURCH AVE	SHEET 37 OF 47	
CT2024	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM S GOLDEN STATE BLVD	SHEET 38 OF 47	
CT2025	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E CENTRAL AVE	SHEET 39 OF 47	
CT2026	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E CENTRAL AVE	SHEET 40 OF 47	
CT2027	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S CEDAR AVE	SHEET 41 OF 47	
CT2028	FRESNO SUBSECTION - ALIGNMENT F1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E AMERICAN AVE	SHEET 42 OF 47	
CR1001	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY LAYOUT - N THORNE AVE	SHEET 43 OF 47	
CR2001	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM - N THORNE AVE	SHEET 44 OF 47	
CT3001	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 45 OF 47	
CT3002	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 46 OF 47	
CT3003	FRESNO SUBSECTION - ALIGNMENT F1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 47 OF 47	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. MING
DRAWN BY E. SUDHAUSEN
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ROADWAY & GRADE SEPARATION
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SHEET 1 OF 8

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1003
SCALE NO SCALE
SHEET NO. 4 OF 13

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GRADE SEPARATION PLANS - ALIGNMENT H

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0050	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 101	
CB0051	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 2 OF 101	
CT1101	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E LINCOLN AVE	SHEET 3 OF 101	
CT1102	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E CLAYTON AVE	SHEET 4 OF 101	
CT1103	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E ADAMS AVE	SHEET 5 OF 101	
CT1104	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E SOUTH AVE	SHEET 6 OF 101	
CT1105	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E SOUTH AVE	SHEET 7 OF 101	
CT1106	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E MANNING AVE	SHEET 8 OF 101	
CT1107	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E SPRINGFIELD AVE	SHEET 9 OF 101	
CT1109	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E FLORAL AVE	SHEET 10 OF 101	
CT1110	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E FLORAL AVE	SHEET 11 OF 101	
CT1111	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E NEBRASKA AVE	SHEET 12 OF 101	
CT1112	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E NEBRASKA AVE	SHEET 13 OF 101	
CT1113	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E MOUNTAIN VEIW AVE	SHEET 14 OF 101	
CT1114	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E MOUNTAIN VIEW AVE	SHEET 15 OF 101	
CT1115	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CHESTNUT AVE (NORTH)	SHEET 16 OF 101	
CT1116	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CHESTNUT AVE (SOUTH)	SHEET 17 OF 101	
CT1117	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CLOVIS AVE	SHEET 18 OF 101	1
CT1118	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CLOVIS AVE	SHEET 19 OF 101	
CT1119	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E ELKHORN AVE	SHEET 20 OF 101	
CT1120	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E ELKHORN AVE	SHEET 21 OF 101	
CT1121	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S FOWLER AVE	SHEET 22 OF 101	
CT1122	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S FOWLER AVE	SHEET 23 OF 101	
CT1123	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E DAVIS AVE	SHEET 24 OF 101	
CT1124	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E DAVIS AVE	SHEET 25 OF 101	
CT1125	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT STATE ROUTE 43 - KINGS RIVER LEVEE ACCESS	SHEET 26 OF 101	
CT1126	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - KINGS RIVER LEVEE ACCESS	SHEET 27 OF 101	
CT1128	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - CAIRO AVE	SHEET 28 OF 101	
CT1129	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - CAIRO AVE	SHEET 29 OF 101	
CT1130	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - DOVER AVE	SHEET 30 OF 101	
CT1131	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - DOVER AVE	SHEET 31 OF 101	
CT1132	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - 8TH AVE (NORTH)	SHEET 32 OF 101	
CT1133	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - 8TH AVE (SOUTH)	SHEET 33 OF 101	
CT1134	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - EXCELSIOR AVE	SHEET 34 OF 101	
CT1135	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - EXCELSIOR AVE	SHEET 35 OF 101	
CT1136	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - ELDER AVE	SHEET 36 OF 101	
CT1137	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - ELDER AVE	SHEET 37 OF 101	
CT1138	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FLINT AVE	SHEET 38 OF 101	

ALIGNMENT H - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT1139	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FLINT AVE	SHEET 39 OF 101	
CT1140	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FARGO AVE	SHEET 40 OF 101	
CT1141	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FARGO AVE	SHEET 41 OF 101	
CT1144	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HANFORD ARMONA RD	SHEET 42 OF 101	
CT1145	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HANFORD ARMONA RD	SHEET 43 OF 101	
CT1146	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HOUSTON AVE	SHEET 44 OF 101	
CT1147	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HOUSTON AVE	SHEET 45 OF 101	
CT1148	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - IONA AVE	SHEET 46 OF 101	
CT1149	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - IONA AVE	SHEET 47 OF 101	
CT2101	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E LINCOLN AVE	SHEET 48 OF 101	
CT2102	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E CLAYTON AVE	SHEET 49 OF 101	
CT2103	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E ADAMS AVE	SHEET 50 OF 101	
CT2104	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E SOUTH AVE	SHEET 51 OF 101	
CT2105	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E SOUTH AVE	SHEET 52 OF 101	
CT2106	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E MANNING AVE	SHEET 53 OF 101	1
CT2107	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM E SPRINGFIELD AVE	SHEET 54 OF 101	
CT2108	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S CHANCE AVE	SHEET 55 OF 101	
CT2109	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E FLORAL AVE	SHEET 56 OF 101	
CT2110	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E FLORAL AVE	SHEET 57 OF 101	
CT2111	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E NEBRASKA AVE	SHEET 58 OF 101	
CT2112	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E NEBRASKA AVE	SHEET 59 OF 101	
CT2113	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM E MOUNTAIN VIEW AVE	SHEET 60 OF 101	
CT2114	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM E MOUNTAIN VIEW AVE	SHEET 61 OF 101	
CT2115	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM S CHESTNUT AVE (NORTH)	SHEET 62 OF 101	
CT2116	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM S CHESTNUT AVE (SOUTH)	SHEET 63 OF 101	
CT2117	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S CLOVIS AVE	SHEET 64 OF 101	
CT2118	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S CLOVIS AVE	SHEET 65 OF 101	
CT2119	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E ELKHORN AVE	SHEET 66 OF 101	
CT2120	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E ELKHORN AVE	SHEET 67 OF 101	

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SHEET 2 OF 8

CONTRACT NO. HSR 06-0003
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SCALE NO SCALE
SHEET NO. 5 OF 13

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ALIGNMENT H - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2121	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S FOWLER AVE	SHEET 68 OF 101	
CT2122	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - S FOWLER AVE	SHEET 69 OF 101	
CT2123	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E DAVIS AVE	SHEET 70 OF 101	
CT2124	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - E DAVIS AVE	SHEET 71 OF 101	
CT2125	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - STATE ROUTE 43	SHEET 72 OF 101	
CT2126	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KINGS RIVER LEVEE ACCESS	SHEET 73 OF 101	
CT2127	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KINGS RIVER LEVEE ACCESS	SHEET 74 OF 101	
CT2128	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - CAIRO AVE	SHEET 75 OF 101	
CT2129	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - CAIRO AVE	SHEET 76 OF 101	
CT2130	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - DOVER AVE	SHEET 77 OF 101	
CT2131	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - DOVER AVE	SHEET 78 OF 101	
CT2132	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - 8TH AVE (NORTH)	SHEET 79 OF 101	
CT2133	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - 8TH AVE (SOUTH)	SHEET 80 OF 101	
CT2134	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - EXCELSIOR AVE	SHEET 81 OF 101	
CT2135	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - EXCELSIOR AVE	SHEET 82 OF 101	
CT2136	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - ELDER AVE	SHEET 83 OF 101	
CT2137	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - ELDER AVE	SHEET 84 OF 101	
CT2138	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - FLINT AVE	SHEET 85 OF 101	1
CT2139	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - FLINT AVE	SHEET 86 OF 101	
CT2140	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - FARGO AVE	SHEET 87 OF 101	
CT2141	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - FARGO AVE	SHEET 88 OF 101	
CT2142	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM 7 1/2 AVE CONNECTOR	SHEET 89 OF 101	
CT2143	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - 7 ½ AVE	SHEET 90 OF 101	
CT2144	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM HANFORD ARMONA RD	SHEET 91 OF 101	
CT2145	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM HANFORD ARMONA RD	SHEET 92 OF 101	
CT2146	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - HOUSTON AVE	SHEET 93 OF 101	
CT2147	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - HOUSTON AVE	SHEET 94 OF 101	
CT2148	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IONA AVE	SHEET 95 OF 101	
CT2149	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IONA AVE	SHEET 96 OF 101	
CR1251	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY LAYOUT - E CLARKSON AVE AND S MINNEWAWA AVE	SHEET 97 OF 101	
CR2251	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY PROFILE & SUPERELEVATION DIAGRAM E CLARKSON AVE AND S MINNEWAWA AVE	SHEET 98 OF 101	
CR2252	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY PROFILE & SUPERELEVATION DIAGRAM E CLARKSON AVE AND S MINNEWAWA AVE	SHEET 99 OF 101	
CT3030	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 100 OF 101	
CT3031	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 101 OF 101	

GRADE SEPARATION PLANS - ALIGNMENT C1

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0060	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 34	
CT1201	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 2 OF 34	
CT1202	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 3 OF 34	
CT1203	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 4 OF 34	
CT1204	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 5 OF 34	
CT1205	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (JERSEY AVE)	SHEET 6 OF 34	
CT1206	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 7 OF 34	
CT1207	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 8 OF 34	
CT1208	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 9 OF 34	
CT1209	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 10 OF 34	
CT1210	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 11 OF 34	
CT1211	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 12 OF 34	
CT2201	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IDAHO AVE	SHEET 13 OF 34	
CT2202	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IDAHO AVE	SHEET 14 OF 34	
CT2203	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - JACKSON AVE	SHEET 15 OF 34	
CT2204	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - JACKSON AVE	SHEET 16 OF 34	1
CT2205	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (JERSEY AVE)	SHEET 17 OF 34	
CT2206	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KENT AVE	SHEET 18 OF 34	
CT2207	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KENT AVE	SHEET 19 OF 34	
CT2208	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KANSAS AVE	SHEET 20 OF 34	
CT2209	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KANSAS AVE	SHEET 21 OF 34	
CT2210	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - NEVADA AVE	SHEET 22 OF 34	
CT2211	CORCORAN SUBSECTION - ALIGNMENT C1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - NEVADA AVE	SHEET 23 OF 34	
CR1201	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY LAYOUT - SANTA FE AVE OFF RAMP	SHEET 24 OF 34	
CR1202	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY LAYOUT - SANTA FE AVE	SHEET 25 OF 34	
CR1203	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY LAYOUT - SANTA FE AVE	SHEET 26 OF 34	
CR1204	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY LAYOUT - SANTA FE AVE	SHEET 27 OF 34	
CR1205	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY LAYOUT - SANTA FE AVE	SHEET 28 OF 34	
CR2201	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM SANTA FE AVE OFF RAMP	SHEET 29 OF 34	
CR2202	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM - ORANGE AVE	SHEET 30 OF 34	
CR2203	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM - SANTA FE AVE	SHEET 31 OF 34	
CR2204	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM - SANTA FE AVE	SHEET 32 OF 34	
CT3040	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 33 OF 34	
CT3041	CORCORAN SUBSECTION - ALIGNMENT C1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 34 OF 34	

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

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
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CONTRACT NO. HSR 06-0003
DRAWING NO. CB1005
SCALE NO SCALE
SHEET NO. 6 OF 13

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GRADE SEPARATION PLANS - ALIGNMENT C2

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0070	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 42	
CT1230	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 2 OF 42	
CT1231	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 3 OF 42	
CT1232	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 4 OF 42	
CT1233	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 5 OF 42	
CT1234	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (JERSEY AVE)	SHEET 6 OF 42	
CT1235	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 7 OF 42	
CT1236	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 8 OF 42	
CT1237	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 9 OF 42	
CT1238	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 10 OF 42	
CT1239	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 11 OF 42	
CT1240	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 12 OF 42	
CT1241	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (CORCORAN)	SHEET 13 OF 42	
CT1242	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (CORCORAN)	SHEET 14 OF 42	
CT1243	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (CORCORAN)	SHEET 15 OF 42	
CT1244	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - CORCORAN HWY	SHEET 16 OF 42	1
CT1245	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - 5 1/2 AVE	SHEET 17 OF 42	
CT1246	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - 5 1/2 AVE	SHEET 18 OF 42	
CT1248	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT WHITLEY AVE/STATE ROUTE 137	SHEET 19 OF 42	
CT2230	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM IDAHO AVE	SHEET 20 OF 42	
CT2231	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM IDAHO AVE	SHEET 21 OF 42	
CT2232	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM JACKSON AVE	SHEET 22 OF 42	
CT2233	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM JACKSON AVE	SHEET 23 OF 42	
CT2234	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (JERSEY AVE)	SHEET 24 OF 42	
CT2235	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KENT AVE	SHEET 25 OF 42	
CT2236	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KENT AVE	SHEET 26 OF 42	
CT2237	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KANSAS AVE	SHEET 27 OF 42	
CT2238	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KANSAS AVE	SHEET 28 OF 42	

ALIGNMENT C2 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2239	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM NEVADA AVE	SHEET 29 OF 42	
CT2240	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM NEVADA AVE	SHEET 30 OF 42	
CT2241	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (CORCORAN)	SHEET 31 OF 42	
CT2242	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (CORCORAN)	SHEET 32 OF 42	
CT2243	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (CORCORAN)	SHEET 33 OF 42	
CT2244	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM CORCORAN HWY	SHEET 34 OF 42	1
CT2245	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM 5 1/2 AVE	SHEET 35 OF 42	
CT2246	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM 5 1/2 AVE	SHEET 36 OF 42	
CT2247	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM 5 1/2 AVE	SHEET 37 OF 42	
CT2248	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM WHITLEY AVE/STATE ROUTE 137	SHEET 38 OF 42	
CR1230	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY LAYOUT - NILES AVE	SHEET 39 OF 42	
CR2230	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM NILES AVE	SHEET 40 OF 42	
CT3042	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 41 OF 42	
CT3043	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 42 OF 42	

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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

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CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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FRESNO TO BAKERSFIELD
ROADWAY & GRADE SEPARATION
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SHEET 4 OF 8

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1006
SCALE NO SCALE
SHEET NO. 7 OF 13

GRADE SEPARATION PLANS - ALIGNMENT C3

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0080	CORCORAN SUBSECTION - ALIGNMENT C3 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 71	
CT1260	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 2 OF 71	
CT1261	CORCORAN SUBSECTIOn - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - IDAHO AVE	SHEET 3 OF 71	
CT1262	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 4 OF 71	
CT1263	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - JACKSON AVE	SHEET 5 OF 71	
CT1264	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (JERSEY AVE)	SHEET 6 OF 71	
CT1265	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 7 OF 71	
CT1266	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - KENT AVE	SHEET 8 OF 71	
CT1267	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 9 OF 71	
CT1268	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - KANSAS AVE	SHEET 10 OF 71	
CT1269	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 11 OF 71	
CT1270	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - NEVADA AVE	SHEET 12 OF 71	
CT1271	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - CHARLES ST	SHEET 13 OF 71	
CT1272	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - CHARLES ST	SHEET 14 OF 71	
CT1273	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - PATTERSON AVE	SHEET 15 OF 71	
CT1274	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - OTIS AVE	SHEET 16 OF 71	
CT1275	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - OTIS AVE	SHEET 17 OF 71	
CT1277	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - WHITLEY AVE & BOSWELL PRIVATE RD	SHEET 18 OF 71	
CT1280	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43	SHEET 19 OF 71	
CT1281	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43	SHEET 20 OF 71	1
CT1282	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43	SHEET 21 OF 71	
CT1283	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43	SHEET 22 OF 71	
CT1284	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - STATE ROUTE 43	SHEET 23 OF 71	
CT1294	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - AVENUE 148	SHEET 24 OF 71	
CT1295	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - AVENUE 148 & ROAD 24	SHEET 25 OF 71	
CT1296	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEPARATION LAYOUT - ROAD 24	SHEET 26 OF 71	
CT2260	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IDAHO AVE	SHEET 27 OF 71	
CT2261	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - IDAHO AVE	SHEET 28 OF 71	
CT2262	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - JACKSON AVE	SHEET 29 OF 71	
CT2263	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - JACKSON AVE	SHEET 30 OF 71	
CT2264	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 (JERSEY AVE)	SHEET 31 OF 71	
CT2265	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KENT AVE	SHEET 32 OF 71	
CT2266	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KENT AVE	SHEET 33 OF 71	
CT2267	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KANSAS AVE	SHEET 34 OF 71	
CT2268	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - KANSAS AVE	SHEET 35 OF 71	
CT2269	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - NEVADA AVE	SHEET 36 OF 71	
CT2270	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - NEVADA AVE	SHEET 37 OF 71	
CT2271	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - CHARLES ST	SHEET 38 OF 71	
CT2272	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - CHARLES ST	SHEET 39 OF 71	
CT2273	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - SANTA FE AVE	SHEET 40 OF 71	
CT2274	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - PATTERSON AVE	SHEET 41 OF 71	
CT2275	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - YODER BLVD	SHEET 42 OF 71	

ALIGNMENT C3 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2276	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - OTIS AVE	SHEET 43 OF 71	
CT2277	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - OTIS AVE	SHEET 44 OF 71	
CT2278	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - OTIS AVE	SHEET 45 OF 71	
CT2279	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM CONNECTIONS TO OTIS AVE	SHEET 46 OF 71	
CT2280	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - LETTS AVE	SHEET 47 OF 71	
CT2281	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - WHITLEY AVE	SHEET 48 OF 71	
CT2282	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - WHITLEY AVE	SHEET 49 OF 71	
CT2283	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BOSWELL PRIVATE RD	SHEET 50 OF 71	
CT2284	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (SB)	SHEET 51 OF 71	
CT2285	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (SB)	SHEET 52 OF 71	
CT2286	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (SB)	SHEET 53 OF 71	
CT2287	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (SB)	SHEET 54 OF 71	
CT2288	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (SB)	SHEET 55 OF 71	
CT2289	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (NB)	SHEET 56 OF 71	
CT2290	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (NB)	SHEET 57 OF 71	1
CT2291	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (NB)	SHEET 58 OF 71	
CT2292	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (NB)	SHEET 59 OF 71	
CT2293	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 & MAINLINE (NB)	SHEET 60 OF 71	
CT2294	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 SB OFF RAMP	SHEET 61 OF 71	
CT2295	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 SB ON RAMP	SHEET 62 OF 71	
CT2296	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 NB OFF RAMP	SHEET 63 OF 71	
CT2297	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 43 NB ON RAMP	SHEET 64 OF 71	
CT2298	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 148	SHEET 65 OF 71	
CT2299	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 148	SHEET 66 OF 71	
CT2300	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - RD 24	SHEET 67 OF 71	
CT2301	CORCORAN SUBSECTION - ALIGNMENT C3 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - RD 24	SHEET 68 OF 71	
CT3044	CORCORAN SUBSECTION - ALIGNMENT C3 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 69 OF 71	
CT3045	CORCORAN SUBSECTION - ALIGNMENT C3 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 70 OF 71	
CT3046	CORCORAN SUBSECTION - ALIGNMENT C3 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 71 OF 71	

REFER TO ROADWAY PLANS - PART 2 OF 2

REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY J. MONG
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DATE 06/30/11

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GRADE SEPARATION PLANS - ALIGNMENT P

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0100	PIXLEY SUBSECTION - ALIGNMENT P - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 16	
CT1401	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 128	SHEET 2 OF 16	
CT1411	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - HESSE AVE	SHEET 3 OF 16	
CT1421	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 112	SHEET 4 OF 16	
CT1431	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 88	SHEET 5 OF 16	
CT2401	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 128	SHEET 6 OF 16	
CT2402	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 128	SHEET 7 OF 16	
CT2411	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - HESSE AVE	SHEET 8 OF 16	
CT2412	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - HESSE AVE	SHEET 9 OF 16	2
CT2421	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 112	SHEET 10 OF 16	
CT2422	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 112	SHEET 11 OF 16	
CT2423	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 112 CONNECTOR	SHEET 12 OF 16	
CT2431	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 88	SHEET 13 OF 16	
CT2432	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 88	SHEET 14 OF 16	
CT2433	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - AVE 88 CONNECTOR	SHEET 15 OF 16	
CT3060	PIXLEY SUBSECTION - ALIGNMENT P - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 16 OF 16	

GRADE SEPARATION PLANS - ALIGNMENT A1

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0110	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 20	
CT1501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - COUNTY RD J22	SHEET 2 OF 20	
CT1511	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - GARCES HWY	SHEET 3 OF 20	
CT1512	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - SCOFIELD AVE	SHEET 4 OF 20	
CT1513	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - SCOFIELD AVE	SHEET 5 OF 20	
CT1521	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - POND RD	SHEET 6 OF 20	
CT1522	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - POND RD	SHEET 7 OF 20	
CT1523	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - MAGNOLIA AVE	SHEET 8 OF 20	
CT1531	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - PETERSON RD	SHEET 9 OF 20	
CT2501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM COUNTY RD J22	SHEET 10 OF 20	2
CT2511	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM GARCES HWY	SHEET 11 OF 20	
CT2512	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SCOFIELD AVE	SHEET 12 OF 20	
CT2513	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SCOFIELD AVE	SHEET 13 OF 20	
CT2514	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SCOFIELD AVE	SHEET 14 OF 20	
CT2521	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POND RD	SHEET 15 OF 20	

ALIGNMENT A1 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2522	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POND RD	SHEET 16 OF 20	
CT2523	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MAGNOLIA AVE	SHEET 17 of 20	2
CT2524	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MAGNOLIA AVE	SHEET 18 of 20	
CT2531	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM PETERSON RD	SHEET 19 of 20	
CT3070	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 20 of 20	

GRADE SEPARATION PLANS - ALIGNMENT A2

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0120	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 18	
CT1601	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEPARATION LAYOUT - COUNTY RD J22	SHEET 2 OF 18	
CT1602	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEPARATION LAYOUT - COUNTY RD J22	SHEET 3 OF 18	
CT1611	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEPARATION LAYOUT - AVENUE 24	SHEET 4 OF 18	
CT1621	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEPARATION LAYOUT - GARCES HWY	SHEET 5 OF 18	
CT1631	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEPARATION LAYOUT - SCHUSTER RD	SHEET 6 OF 18	
CT1641	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM PETERSON RD	SHEET 7 OF 18	
CT2601	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM COUNTY RD J22	SHEET 8 OF 18	
CT2602	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM COUNTY RD J22	SHEET 9 OF 18	
CT2611	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM AVE 24	SHEET 10 OF 18	
CT2612	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM AVE 24	SHEET 11 OF 18	2
CT2621	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM GARCES HWY	SHEET 12 OF 18	
CT2622	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM GARCES HWY	SHEET 13 OF 18	
CT2631	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SCHUSTER RD	SHEET 14 OF 18	
CT2632	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SCHUSTER RD	SHEET 15 OF 18	
CT2641	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM PETERSON RD	SHEET 16 OF 18	
CT2642	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM PETERSON RD	SHEET 17 OF 18	
CT3080	THROUGH ALLENSWORTH SUBSECTION - ALIGNMENT A2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 18 OF 18	

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY E. SUDHAUSEN
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GRADE SEPARATION PLANS - ALIGNMENT L2

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0140	POSO CREEK SUBSECTION - ALIGNMENT L2 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 7	
CT1751	POSO CREEK SUBSECTION - ALIGNMENT L2 - GRADE SEPARATION LAYOUT - STATE ROUTE 46	SHEET 2 OF 7	
CT1752	POSO CREEK SUBSECTION - ALIGNMENT L2 - GRADE SEPARATION LAYOUT - STATE ROUTE 46	SHEET 3 OF 7	
CT2751	POSO CREEK SUBSECTION - ALIGNMENT L2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 46	SHEET 4 OF 7	2
CT2752	POSO CREEK SUBSECTION - ALIGNMENT L2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 46	SHEET 5 OF 7	
CT2753	POSO CREEK SUBSECTION - ALIGNMENT L2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - ROOT AVENUE	SHEET 6 OF 7	
CT3100	POSO CREEK SUBSECTION - ALIGNMENT L2 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 7 OF 7	

GRADE SEPARATION PLANS - ALIGNMENT L4

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0160	POSO CREEK SUBSECTION - ALIGNMENT L4 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 7	
CT1851	POSO CREEK SUBSECTION - ALIGNMENT L4 - GRADE SEPARATION LAYOUT - STATE ROUTE 46	SHEET 2 OF 7	
CT1852	POSO CREEK SUBSECTION - ALIGNMENT L4 - GRADE SEPARATION LAYOUT - STATE ROUTE 46	SHEET 3 OF 7	
CT2851	POSO CREEK SUBSECTION - ALIGNMENT L4 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 46	SHEET 4 OF 7	2
CT2852	POSO CREEK SUBSECTION - ALIGNMENT L4 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM STATE ROUTE 46	SHEET 5 OF 7	
CT2853	POSO CREEK SUBSECTION - ALIGNMENT L4 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - ROOT AVENUE	SHEET 6 OF 7	
CT3120	POSO CREEK SUBSECTION - ALIGNMENT L4 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 7 OF 7	

GRADE SEPARATION PLANS - ALIGNMENT WS1

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0170	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 35	
CT1900	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - MCCOMBS AVE	SHEET 2 OF 35	
CT1901	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - KIMBERLINA RD	SHEET 3 OF 35	
CT1911	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - MERCED AVE	SHEET 4 OF 35	
CT1912	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - POPLAR AVE	SHEET 5 OF 35	
CT1913	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - FRESNO AVE	SHEET 6 OF 35	
CT1914	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - BURBANK ST	SHEET 7 OF 35	
CT1921	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - KRATZMEYER RD	SHEET 8 OF 35	
CT1923	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEPARATION LAYOUT - REINA RD	SHEET 9 OF 35	2
CT2899	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MCCOMBS AVE	SHEET 10 OF 35	
CT2900	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MCCOMBS AVE	SHEET 11 OF 35	
CT2901	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KIMBERLINA RD	SHEET 12 OF 35	
CT2911	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MERCED AVE	SHEET 13 OF 35	
CT2912	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM MERCED AVE	SHEET 14 OF 35	

ALIGNMENT WS1 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2913	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POPLAR AVE	SHEET 15 OF 35	
CT2914	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POPLAR FRONTAGE RD	SHEET 16 OF 35	
CT2915	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM FRESNO AVE	SHEET 17 OF 35	
CT2916	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM FRESNO AVE	SHEET 18 OF 35	
CT2917	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BURBANK ST	SHEET 19 OF 35	
CT2918	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BURBANK ST	SHEET 20 OF 35	
CT2919	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BURBANK ST WEST	SHEET 21 OF 35	
CT2921	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KRATZMEYER RD	SHEET 22 OF 35	2
CT2923	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KRATZMEYER FRONTAGE RD	SHEET 23 OF 35	
CT2924	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM REINA RD	SHEET 24 OF 35	
CT2925	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM REINA FRONTAGE RD	SHEET 25 OF 35	
CR1980	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY LAYOUT - SANTA FE WAY	SHEET 26 OF 35	
CR1981	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY LAYOUT - SANTA FE WAY	SHEET 27 OF 35	
CR1982	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY LAYOUT - SANTA FE WAY	SHEET 28 OF 35	
CR2990	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY PROFILE - SANTA FE WAY	SHEET 29 OF 35	
CR2991	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY PROFILE - SANTA FE WAY	SHEET 30 OF 35	
CR2992	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY PROFILE - SANTA FE WAY	SHEET 31 OF 35	
CR2993	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY & SUPERELEVATION DIAGRAM SANTA FE WAY	SHEET 32 OF 35	
CR2994	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY & SUPERELEVATION DIAGRAM SANTA FE WAY	SHEET 33 OF 35	
CT3130	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 34 OF 35	
CT3131	THROUGH WASCO-SHAFTER SUBSECTION - ALIGNMENT WS1 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 35 OF 35	

GRADE SEPARATION PLANS - ALIGNMENT WS2

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0180	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 44	
CT1931	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - KIMBERLINA ROAD	SHEET 2 OF 44	
CT1932	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT KIMBERLINA RD & POPLAR AVE	SHEET 3 OF 44	2
CT1933	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - POPLAR AVE	SHEET 4 OF 44	
CT1941	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - SHAFTER AVE	SHEET 5 OF 44	

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ALIGNMENT WS2 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT1942	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - SHAFTER AVE	SHEET 6 OF 44	
CT1951	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - BEECH AVE	SHEET 7 OF 44	
CT1952	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT BEECH AVE & FRESNO AVE	SHEET 8 OF 44	
CT1961	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - EAST LERDO HWY	SHEET 9 OF 44	
CT1962	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT EAST LERDO HWY & CHERRY AVE	SHEET 10 OF 44	
CT1963	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT CHERRY AVE & RIVERSIDE ST	SHEET 11 OF 44	
CT1964	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT CHERRY AVE & RIVERSIDE ST	SHEET 12 OF 44	
CT1971	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - KRATZMEYER RD	SHEET 13 OF 44	
CT1973	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEPARATION LAYOUT - REINA RD	SHEET 14 OF 44	
CT2931	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KIMBERLINA RD	SHEET 15 OF 44	
CT2932	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KIMBERLINA RD	SHEET 16 OF 44	
CT2933	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POPLAR AVE	SHEET 17 OF 44	
CT2934	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POPLAR AVE	SHEET 18 OF 44	
CT2935	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM POPLAR AVE	SHEET 19 OF 44	
CT2941	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SHAFTER AVE	SHEET 20 OF 44	
CT2942	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM SHAFTER AVE	SHEET 21 OF 44	
CT2951	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BEECH AVE	SHEET 22 OF 44	2
CT2952	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM BEECH AVE	SHEET 23 OF 44	
CT2953	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM FRESNO AVE	SHEET 24 OF 44	
CT2961	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM EAST LERDO HWY	SHEET 25 OF 44	
CT2962	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM EAST LERDO HWY	SHEET 26 OF 44	
CT2963	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM CHERRY AVE	SHEET 27 OF 44	
CT2964	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM CHERRY AVE	SHEET 28 OF 44	
CT2965	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM RIVERSIDE ST	SHEET 29 OF 44	
CT2966	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM RIVERSIDE ST	SHEET 30 OF 44	
CT2967	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM RIVERSIDE ST	SHEET 31 OF 44	

ALIGNMENT WS2 - CONT'D

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CT2971	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KRATZMEYER RD	SHEET 32 OF 44	
CT2973	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM KRATZMEYER FRONTAGE RD	SHEET 33 OF 44	
CT2974	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM REINA RD	SHEET 34 OF 44	
CT2975	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM REINA FRONTAGE RD	SHEET 35 OF 44	
CR1985	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY LAYOUT - SANTA FE WAY	SHEET 36 OF 44	
CR1986	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY LAYOUT - SANTA FE WAY	SHEET 37 OF 44	
CR2995	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY PROFILE - SANTA FE WAY	SHEET 38 OF 44	
CR2996	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY PROFILE - SANTA FE WAY	SHEET 39 OF 44	2
CR2997	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY SUPERELEVATION DIAGRAM SANTA FE WAY	SHEET 40 OF 44	
CT3140	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 41 OF 44	
CT3141	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 42 OF 44	
CT3142	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 43 OF 44	
CT3143	WASCO-SHAFTER BYPASS SUBSECTION - ALIGNMENT WS2 - ROADWAY/GRADE SEPARATION TYPICAL CROSS SECTIONS	SHEET 44 OF 44	

GRADE SEPARATION PLANS - ALIGNMENT B1

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0190	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B1 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 5	
CT1980	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B1 - GRADE SEPARATION LAYOUT ROSEDALE HWY/STATE ROUTE 58	SHEET 2 OF 5	
CT2980	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B1 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM ROSEDALE HWY/STATE ROUTE 58	SHEET 3 OF 5	2
CR1401	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B1 - ROADWAY LAYOUT - N ST PEDESTRIAN BRIDGE	SHEET 4 OF 5	
CT3170	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 5 OF 5	

GRADE SEPARATION PLANS - ALIGNMENT B2

DRG NO.	DRAWING DESCRIPTION	SHEET NO.	PART NO.
CB0200	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY/GRADE SEPARATION - KEY MAP	SHEET 1 OF 8	
CT1981	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - GRADE SEPARATION LAYOUT ROSEDALE HWY/STATE ROUTE 58	SHEET 2 OF 8	
CT2981	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM ROSEDALE HWY/STATE ROUTE 58	SHEET 3 OF 8	2
CR1501	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY LAYOUT - N ST PEDESTRIAN BRIDGE	SHEET 4 OF 8	
CR1511	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY LAYOUT - E CALIFORNIA AVE	SHEET 5 OF 8	NOT INCLUDED IN THIS PACKAGE
CR2511	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY PROFILE & SUPERELEVATION DIAGRAM E CALIFORNIA AVE	SHEET 6 OF 8	
CT3160	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 7 OF 8	
CT3180	BAKERSFIELD URBAN SUBSECTION - ALIGNMENT B2 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	SHEET 8 OF 8	

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

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CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ROADWAY & GRADE SEPARATION
INDEX OF SHEETS
SHEET 8 OF 8

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1010
SCALE NO SCALE
SHEET NO. 11 OF 13

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A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BNSF	BURLINGTON NORTH & SANTA FE
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER
CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL

C CONTINUED

CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CANDLEPOWER
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD
CULV	CULVERT
℄	CENTERLINE

D

D	DEPTH
DD	DOWNDRAIN
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION
EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN

E CONTINUED

EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION, EXPRESSWAY
EXP JT	EXPANSION JOINT
EXT	EXTERIOR

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FTG	FOOTING
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY
FPLM	FULL SPAN PRECAST LAUNCHING METHOD

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
H, HR	HOUR
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER

H CONTINUED

HPS	HIGH PERFORMANCE STEEL
HS	HIGH STRENGTH
HST	HIGH SPEED TRAIN
HSR	HIGH SPEED RAIL
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LCB	LEAN CONCRETE BASE
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LC	LENGTH OF CURVE
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)
MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
MTL	MATERIAL
MSS	MOVING SCAFFOLDING SYSTEM

N

N	NORTH
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
N/A	NOT APPLICABLE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
℄,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT

Q

QTY	QUANTITY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE A. LUFT
DATE 05/13/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0009
SCALE NO SCALE
SHEET NO. 12 OF 13

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R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND, SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
S	STATION LINE
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER

S CONTINUED

STD	STANDARD
STR	STRUCTURE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES
SJV RR	SAN JOAQUIN VALLEY RAILROAD

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TRANS	TRANSITION
TS	TRANSVERSE
	TRAFFIC SIGNAL, TUBULAR STEEL
TS	TANGET TO SPIRAL
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE

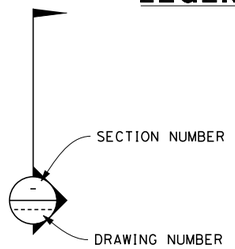
X

X SEC	CROSS SECTION
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

LEGEND



PROPOSED HST RIGHT OF WAY

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

TRACK (PLAN AND ELEVATION)

TRACK TO BE REMOVED AND RELOCATED PER BNSF

REMOVE BASE & SURFACING

DIRECTION OF FLOW

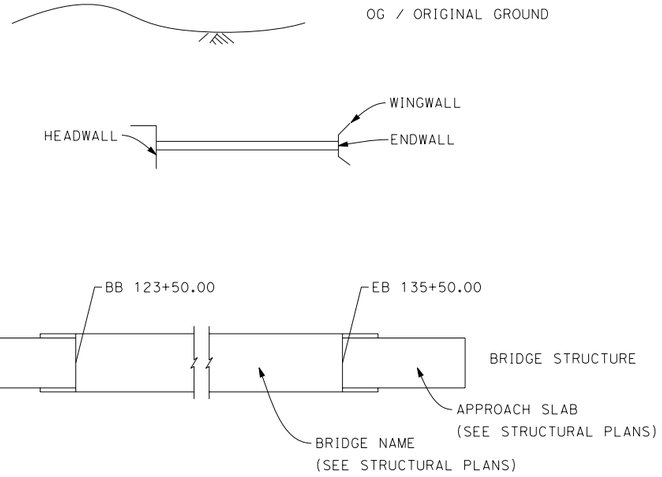
WATER SURFACE

CURVE DATA

LINE DATA

EXISTING OVERHEAD HIGH VOLTAGE POWER LINES

EXISTING HIGH VOLTAGE TOWER FOOTPRINT



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE A. LUFT
DATE 05/13/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0010
SCALE NO SCALE
SHEET NO. 13 OF 13

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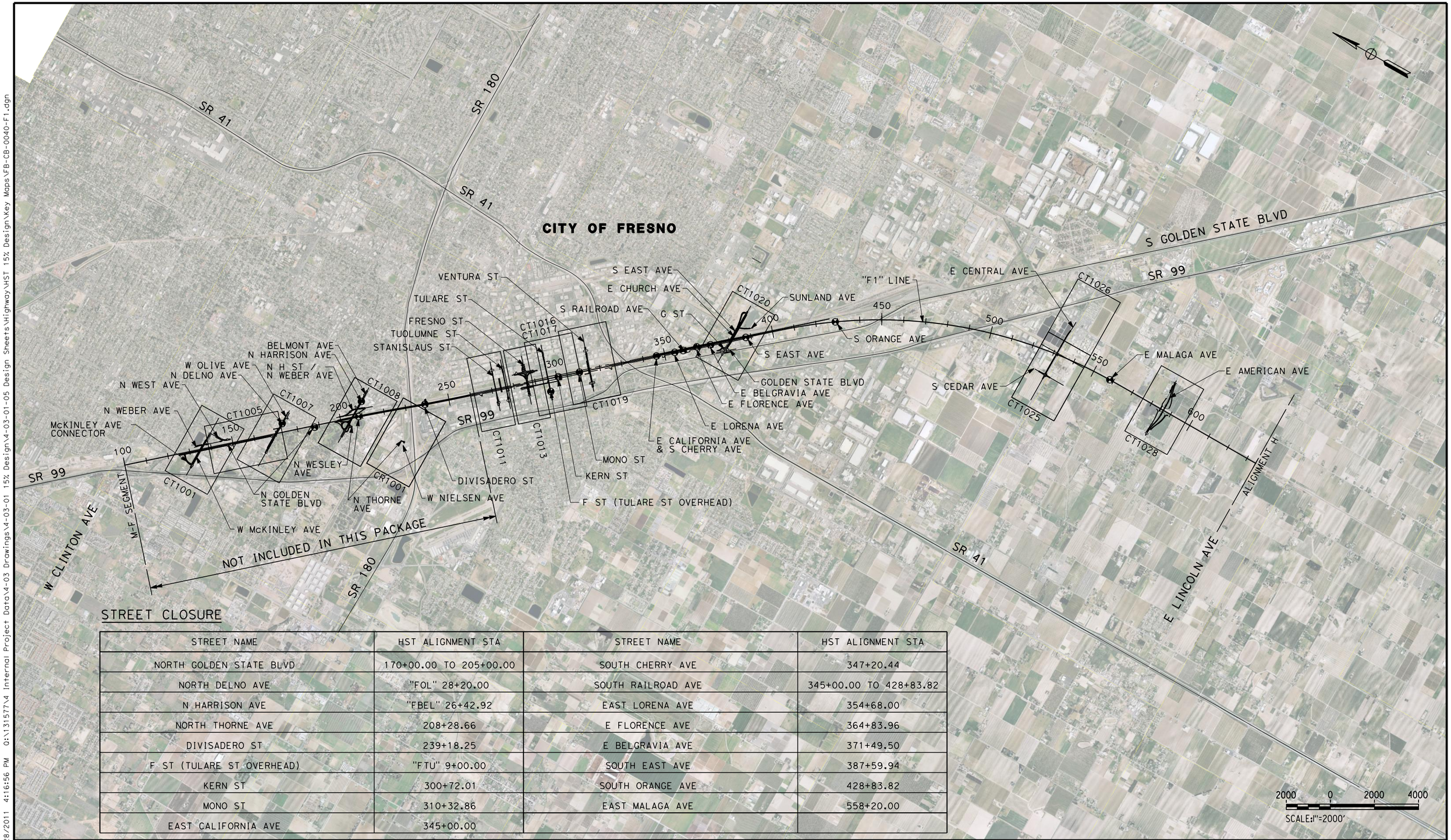

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	STREET NAME	HST ALIGNMENT STA
NORTH GOLDEN STATE BLVD	170+00.00 TO 205+00.00	SOUTH CHERRY AVE	347+20.44
NORTH DELNO AVE	"FOL" 28+20.00	SOUTH RAILROAD AVE	345+00.00 TO 428+83.82
N HARRISON AVE	"FBEL" 26+42.92	EAST LORENA AVE	354+68.00
NORTH THORNE AVE	208+28.66	E FLORENCE AVE	364+83.96
DIVISADERO ST	239+18.25	E BELGRAVIA AVE	371+49.50
F ST (TULARE ST OVERHEAD)	"FTU" 9+00.00	SOUTH EAST AVE	387+59.94
KERN ST	300+72.01	SOUTH ORANGE AVE	428+83.82
MONO ST	310+32.86	EAST MALAGA AVE	558+20.00
EAST CALIFORNIA AVE	345+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 06/30/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0040
SCALE AS SHOWN
SHEET NO. 1 OF 47

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RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
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'

STANISLAUS ST
TUOLUMNE ST
CALAVERAS ST
FULTON ST
SR 99
F ST
E ST
G ST
H ST
UPRR
BROADWAY ST
"F1" LINE
"FSS" LINE
"FTS" LINE
"FSS" 0+00.00 PI
"FSS" 2+50.00 CONFORM
"FSS" 19+80.13 POT = "F1" 271+72.64 POT
"FSS" 20+00.00 CONFORM
"FSS" 22+88.22 PI
"FTS" 10+00.00 PI
"FTS" 13+00.00 CONFORM
"FTS" 19+81.08 POT = "F1" 276+52.23 POT
"FTS" 30+00.00 CONFORM
"FTS" 32+88.07 PI
"FGF" 30+00.00 PI
"FHF" 0+00.00 PI
"FHF" 1+00.00 CONFORM
5 POC = POT
HST ROW
PEDESTRIAN BRIDGE STUDY AREA
FINAL LOCATION TO BE DETERMINED
IN 30% DESIGN
CONC SW
EP
CONFORM
RET WALL NO. 1
BB
R=15'
RET WALL NO. 2
RET WALL NO. 3
RET WALL NO. 4
RET WALL NO. 5
RET WALL NO. 6
RET WALL NO. 7
RET WALL NO. 8
EB
R=10'
R=7'
R=25
R=50'
R=99'
R=12'
R=28'
52'
30'
20'
46.5'
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
STANISLAUS ST AND TUOLUMNE ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1011
SCALE AS SHOWN
SHEET NO. 6 OF 47

eron.sudhausen 6/28/2011 7:21:59 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-1011-F1.dgn

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′

MERCED ST
FRESNO ST
MARIPOSA ST
SR 99
E ST
F ST
G ST
H ST
UPRR
BROADWAY ST
"F1" LINE
"FFS" 5+00.00 PI
"FFS" 9+00.00 CONFORM
"FFS" 10+50.72 BC
"FFS" 12+74.73 EC
"FFS" 13+00.05 POT = "FGF" 33+50.00 POT
"FFS" 14+82.55 POT = "F1" 286+35.34 POT
"FFS" 15+87.28 BC
"FFS" 17+93.91 EC
"FFS" 19+79.85 POC = "FHF" 6+10.09 POT
"FFS" 19+91.00 BC
"FFS" 21+68.32 EC
"FFS" 23+48.61 CONFORM
"FFS" 27+55.39 PI
"FFS" LINE
"FGF" 30+00.00 PI
"FGF" 30+38.00 CONFORM
"FGF" 36+08.94 CONFORM
"FGF" LINE
"FHF" 0+00.00 PI
"FHF" 1+00.00 CONFORM
"FHF" 10+00.00 CONFORM
"FHF" LINE
"FHF" 11+88.39 PI
R=35′
R=25′
R=174′
CONFORM
R=30′
RET WALL NO. 1
RET WALL NO. 2
RET WALL NO. 3
RET WALL NO. 4
RET WALL NO. 5
RET WALL NO. 6
BB
EP
EB
CONC SW
REMOVE BASE AND SURFACING (TYP)
HST ROW
MATCH LINE - SEE CT1016/CT1017
60′
61′
66′
72′
99′
SCALE: 1"=100′

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
FRESNO ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1013
SCALE AS SHOWN
SHEET NO. 7 OF 47

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LINE DATA

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

RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
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'

SR 99
MARIPOSA ST
E ST
F ST
G ST
UPRR
H ST
BROADWAY ST
VAN NESS AVE
TULARE ST
KERN ST
INYO ST
MATCH LINE - SEE CT1014
"FTU" 5+00.00 PI
"FTU" 5+16.00 CONFORM
"FTU" 14+85.84 POT = "F1" 295+94.19 POT
"FTU" LINE
"FTU" 27+00.00 CONFORM
"FTU" 30+64.41 PI
RET WALL NO. 1
RET WALL NO. 2
RET WALL NO. 3
RET WALL NO. 4
BB
EB
EP
26'
F ST TO BE CLOSED AT TULARE ST
HST ROW
"F1" LINE
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

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

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1016
SCALE AS SHOWN
SHEET NO. 8 OF 47

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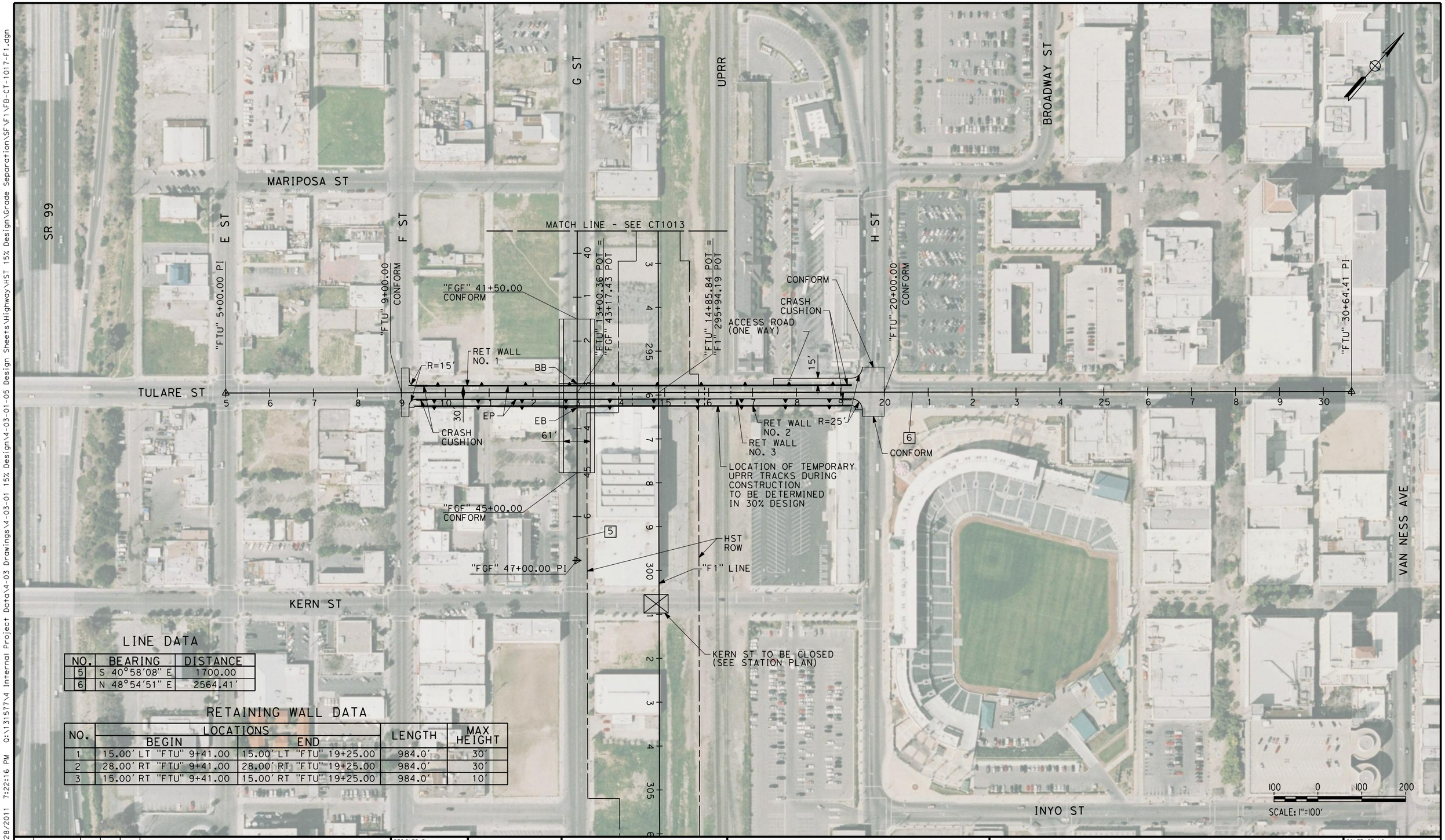

LINE DATA

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
FRESNO TO BAKERSFIELD

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

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1017
SCALE AS SHOWN
SHEET NO. 9 OF 47

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 BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
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'

INYO ST
"F1" LINE
MONO ST TO BE CLOSED (SEE STATION PLAN)
MONO ST
E ST
F ST
G ST
UPRR
H ST
BROADWAY ST
FULTON ST
VAN NESS AVE
"FVE" 5+00.00
"FVE" 7+00.00 CONFORM
"FVE" 14+88.18 POT = "F1" 315+15.41 POT
"FVE" 18+68.36 BC
"FVE" 20+87.13 EC
"FVE" 22+71.15 BC
"FVE" 24+68.32 EC
"FVE" 25+50.00 CONFORM
"FVE" 31+55.45 PI
PEDESTRIAN BRIDGE STUDY AREA
FINAL LOCATION TO BE DETERMINED IN 30% DESIGN
VENTURA ST
CONFORM
CONC SW
R=30'
RET WALL NO. 1
EP
BB
EB
RET WALL NO. 3
64'
52'
RET WALL NO. 2
RET WALL NO. 4
72.5'
R=20'
HST ROW
SANTA CLARA ST
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
VENTURA ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1019
SCALE AS SHOWN
SHEET NO. 10 OF 47

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RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
1	74.11' LT "FCH" 20+49.15	72.89' RT "FCH" 21+84.91	198.9'	32'
2	26.00' LT "FCH" 30+36.75	26.00' LT "FCH" 35+45.11	508.4'	27'
3	26.00' RT "FCH" 30+83.03	26.00' RT "FCH" 35+45.11	468.4'	27'

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°42'45" E	685.51'
2	S 84°00'26" E	141.45'
3	S 89°29'10" E	1880.26'
4	S 41°15'17" E	100.00'
5	S 39°08'46" E	100.00'
6	S 41°44'27" E	81.85'
7	S 01°49'52" W	38.00'
8	N 37°34'00" W	136.79'
9	S 89°04'12" E	361.22'
10	N 77°23'45" E	366.53'
11	S 00°30'51" W	31.49'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1500.00'	05°42'20"	74.75'	149.37'	40 MPH
(2)	1500.00'	05°28'44"	71.77'	143.44'	40 MPH
(3)	2000.00'	02°06'21"	367.56'	735.04'	55 MPH
(4)	290.00'	19°45'26"	81.87'	159.58'	25 MPH
(5)	130.00'	75°06'05"	99.94'	170.40'	15 MPH
(6)	1350.00'	24°48'21"	296.89'	584.47'	25 MPH
(7)	1350.00'	13°32'03"	160.19'	318.89'	25 MPH
(8)	130.00'	103°07'06"	163.78'	233.97'	15 MPH

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
E CHURCH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1020
SCALE AS SHOWN
SHEET NO. 11 OF 47

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CURVE DATA

NO.	R	Δ	T	L	V
(1)	10900.00′	00°43′07"	68.36′	136.72′	35 MPH
(2)	10900.00′	00°53′02"	84.09′	168.18′	35 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°45′49" E	765.34′
2	N 89°31′04" E	619.48′
3	S 89°35′54" W	1591.65′
6	S 00°34′36" W	2138.91′

RETAINING WALL DATA

NO.	LOCATIONS BEGIN	LOCATIONS END	LENGTH	MAX HEIGHT
1	20.00′ LT "FCE" 24+00.00	20.00′ LT "FCE" 32+60.00	860.0′	40′
2	20.00′ RT "FCE" 24+00.00	20.00′ RT "FCE" 32+60.00	860.0′	40′
3	20.00′ LT "FCE" 37+80.00	20.00′ LT "FCE" 46+00.00	820.0′	28′
4	20.00′ RT "FCE" 37+80.00	20.00′ RT "FCE" 46+00.00	820.0′	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
FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
E CENTRAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1025
SCALE AS SHOWN
SHEET NO. 12 OF 47

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RETAINING WALL DATA

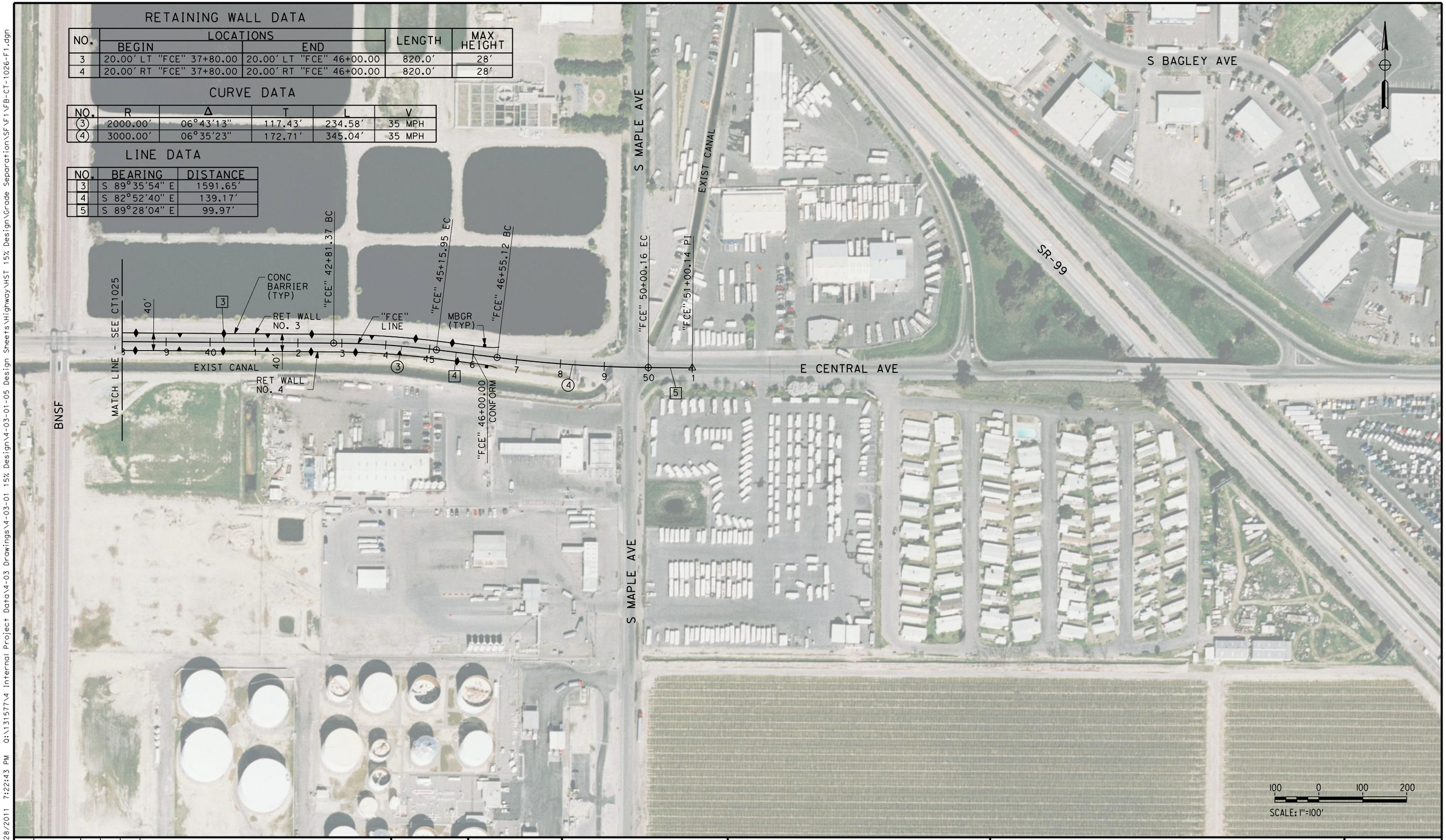
NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
3	20.00' LT "FCE" 37+80.00	20.00' LT "FCE" 46+00.00	820.0'	28'
4	20.00' RT "FCE" 37+80.00	20.00' RT "FCE" 46+00.00	820.0'	28'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	2000.00'	06°43'13"	117.43'	234.58'	35 MPH
(4)	3000.00'	06°35'23"	172.71'	345.04'	35 MPH

LINE DATA

NO.	BEARING	DISTANCE
3	S 89°35'54" E	1591.65'
4	S 82°52'40" E	139.17'
5	S 89°28'04" E	99.97'



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
FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
E CENTRAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1026
SCALE AS SHOWN
SHEET NO. 13 OF 47

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CURVE DATA

NO.	R	Δ	T	L	V
①	1800.00'	16°35'52"	117.43'	262.56'	45 MPH
②	1800.00'	16°35'52"	172.71'	262.56'	45 MPH
③	1800.00'	16°35'52"	117.43'	262.56'	45 MPH
④	1800.00'	16°35'52"	172.71'	262.56'	45 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°42'51" E	130.33'
2	S 89°42'51" E	587.85'
3	S 89°42'51" E	97.31'

"F1" LINE
HST ROW
BNSF
TRACTION POWER FACILITY (NORTH OPTION)
REMOVE EXIST AT-GRADE RAILROAD CROSSING
REMOVE BASE AND SURFACING (TYP)
"FAM" 26+19.88 POT = "F1" 586+06.97 POT
"FAM" 29+61.06 BC
S MAPLE AVE
"FAM" 40+03.93 EC
"FAM" 41+00.00 PI
S CEDAR AVE
"FAM" 12+00.00 PI
"FAM" 12+50.00 CONFORM
"FAM" 13+30.34 BC
E AMERICAN AVE
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
CONFORM
R=15'
R=60'
R=25'
ACCESS ROAD
EP
MBGR (TYP)
BB
EB
"FAM" LINE
"FAM" 18+51.77 PRC
"FAM" 23+73.21 EC
"FAM" 34+82.49 PRC
"FAM" 39+91.28 CONFORM
DRAIANGE DITCH (TYP)
TRACTION POWER FACILITY (SOUTH OPTION)

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEPARATION LAYOUT
E AMERICAN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1028
SCALE AS SHOWN
SHEET NO. 14 OF 47

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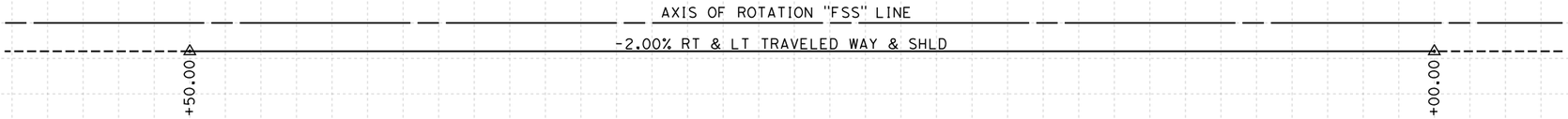
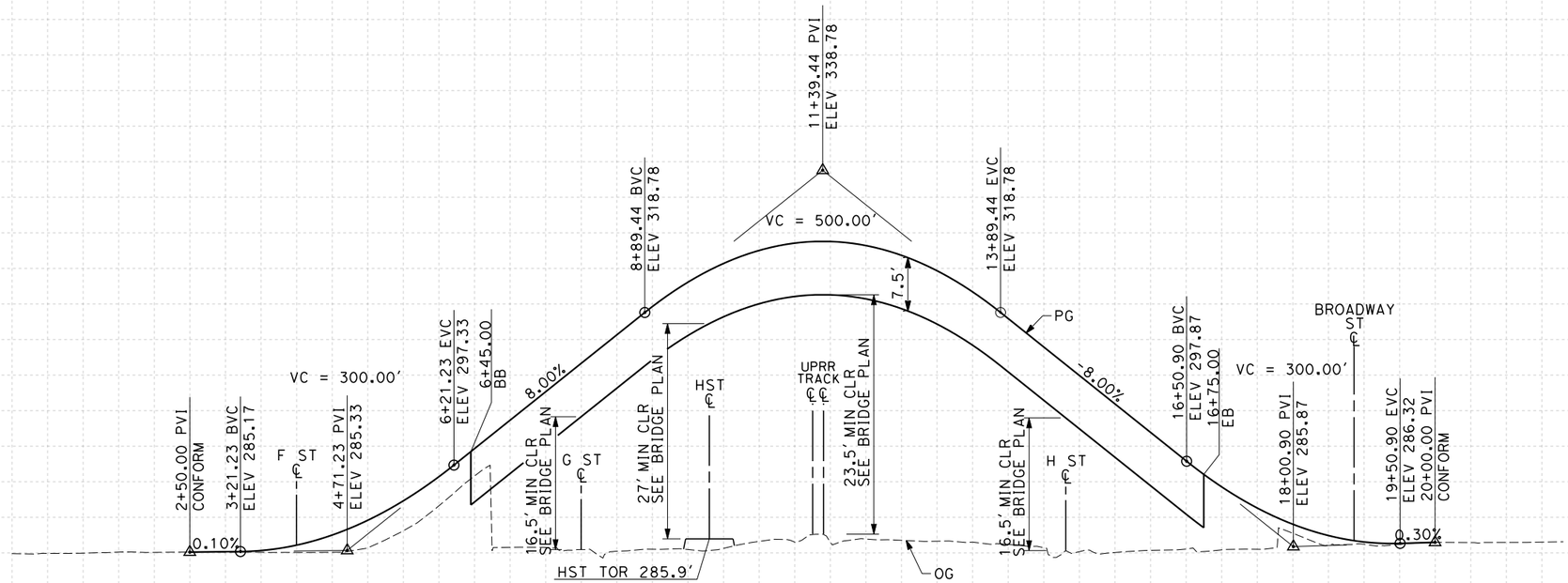
NOTES:

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

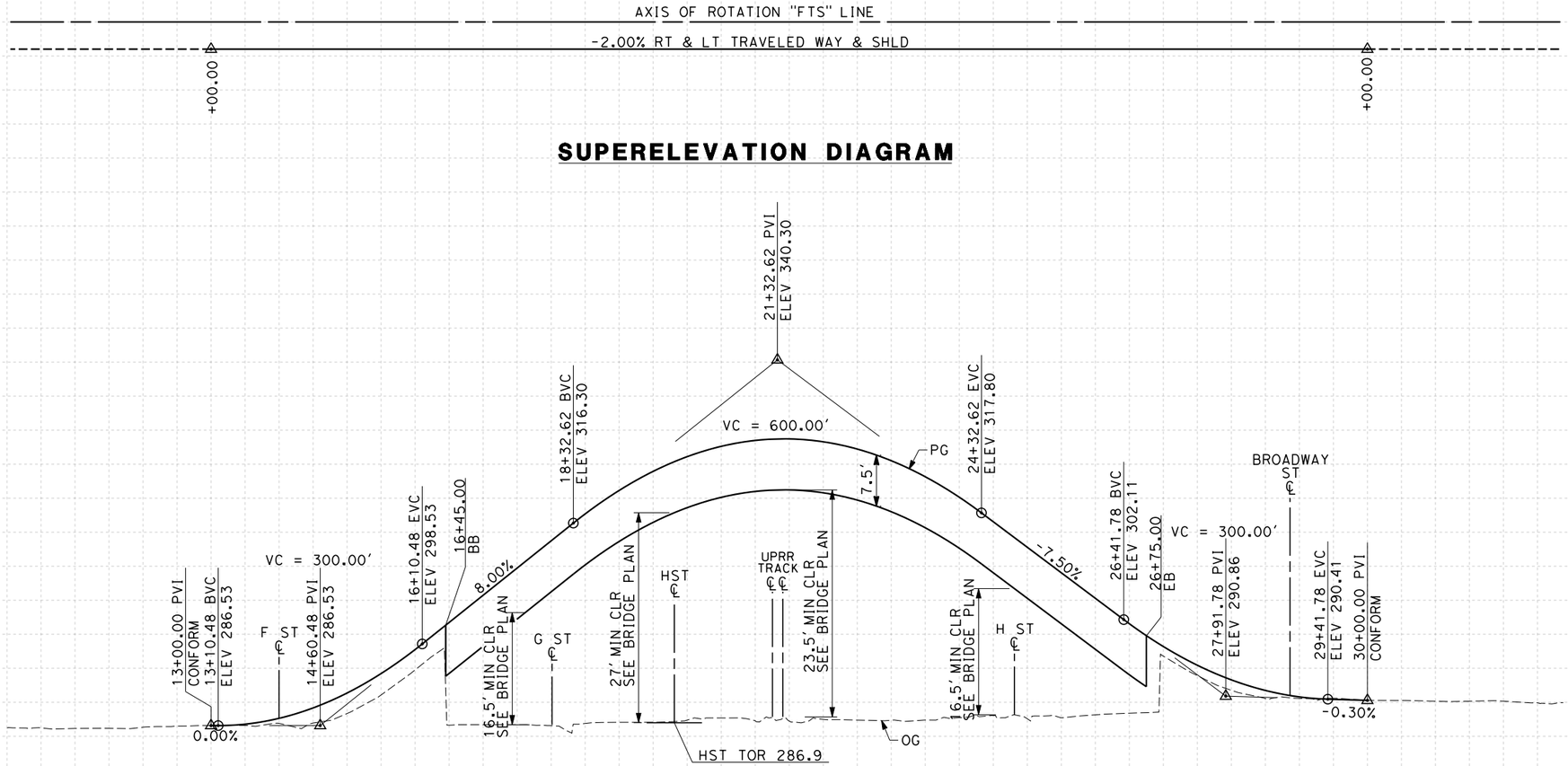
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STANISLAUS ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2011
SCALE AS SHOWN
SHEET NO. 25 OF 47

eron.sudhausen 6/28/2011 7:23:09 PM G:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2011-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



SUPERELEVATION DIAGRAM

PROFILE

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

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

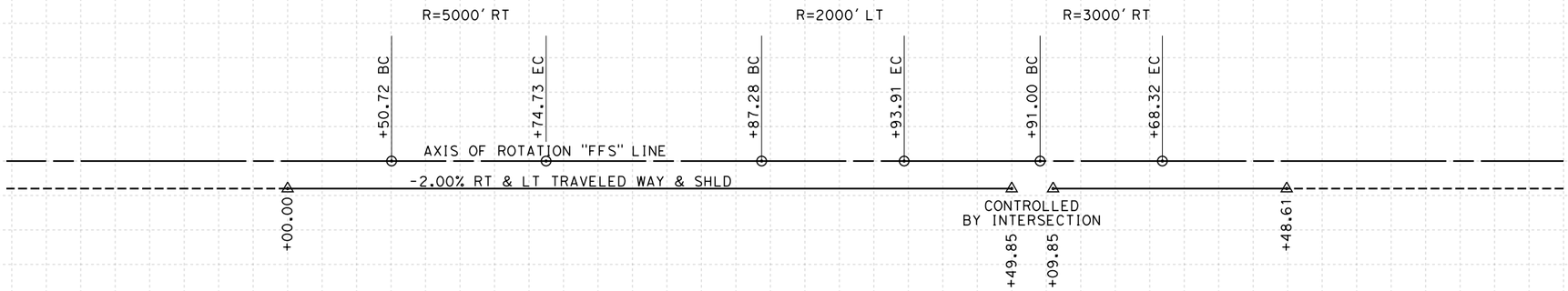
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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

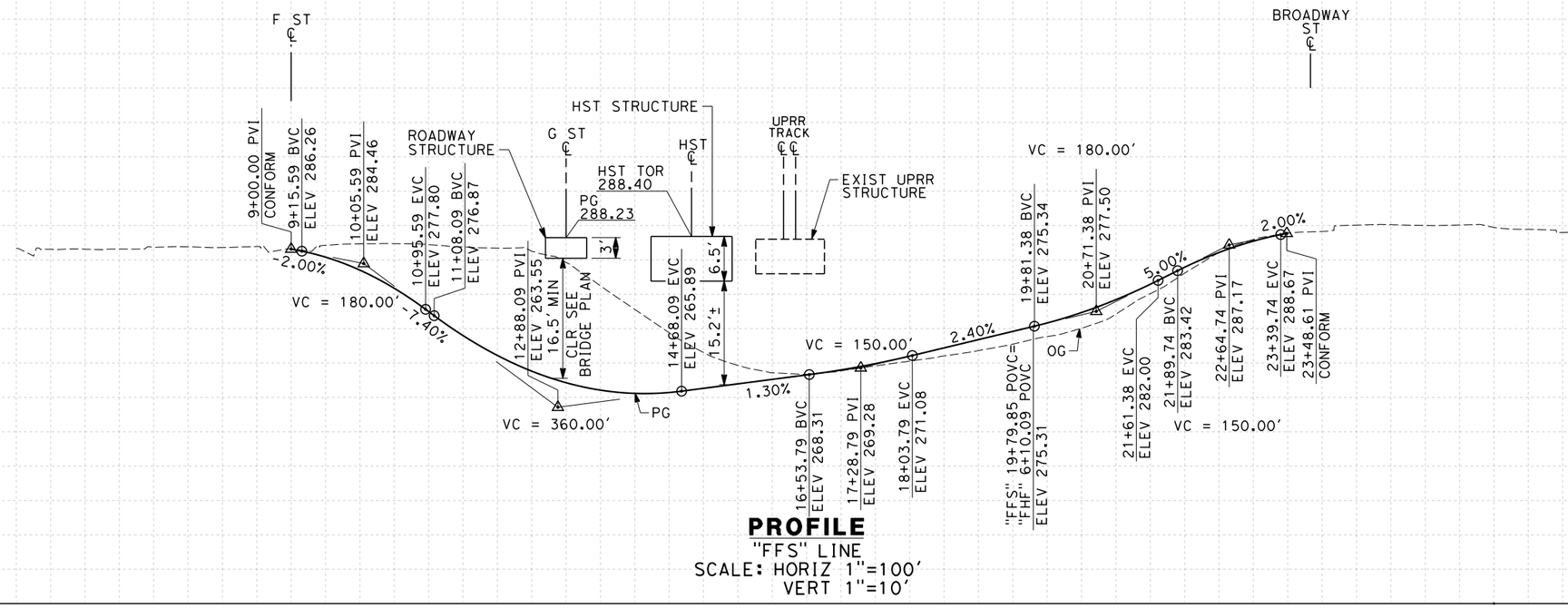
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2012
SCALE AS SHOWN
SHEET NO. 26 OF 47

eron.sudhausen 6/28/2011 7:23:11 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\Grade Separation\SF\F1\FB-CT-2012-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

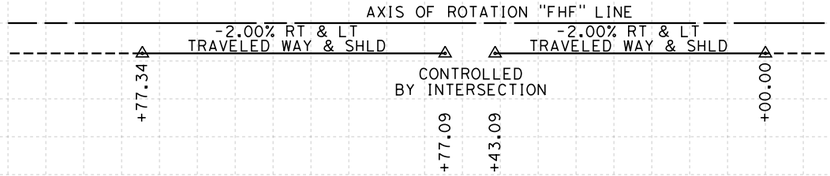
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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

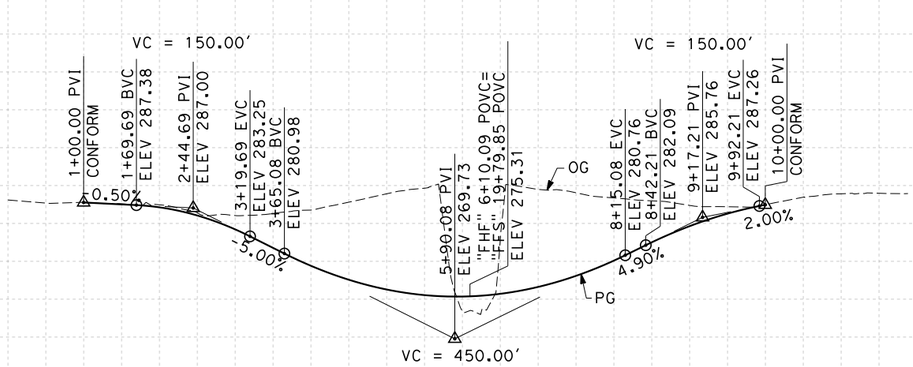
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2013
SCALE AS SHOWN
SHEET NO. 27 OF 47

eron.sudhausen 6/28/2011 7:23:12 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\Grade Separation\SF\F1\FB-CT-2013-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															
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

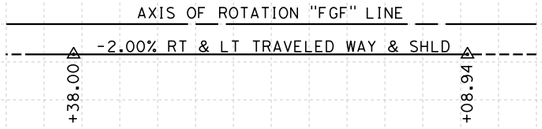
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
H ST (FRESNO ST)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2014
SCALE AS SHOWN
SHEET NO. 28 OF 47

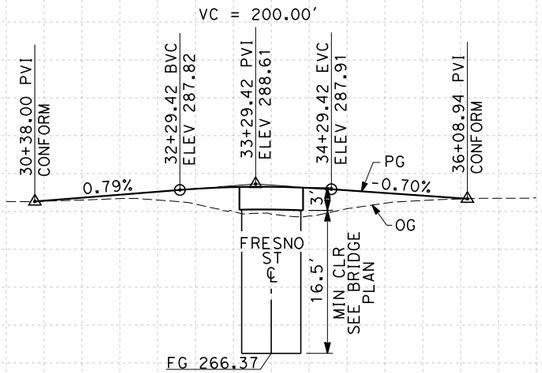
eron.sudhausen 6/28/2011 7:23:14 PM G:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2014-F1.dgn

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

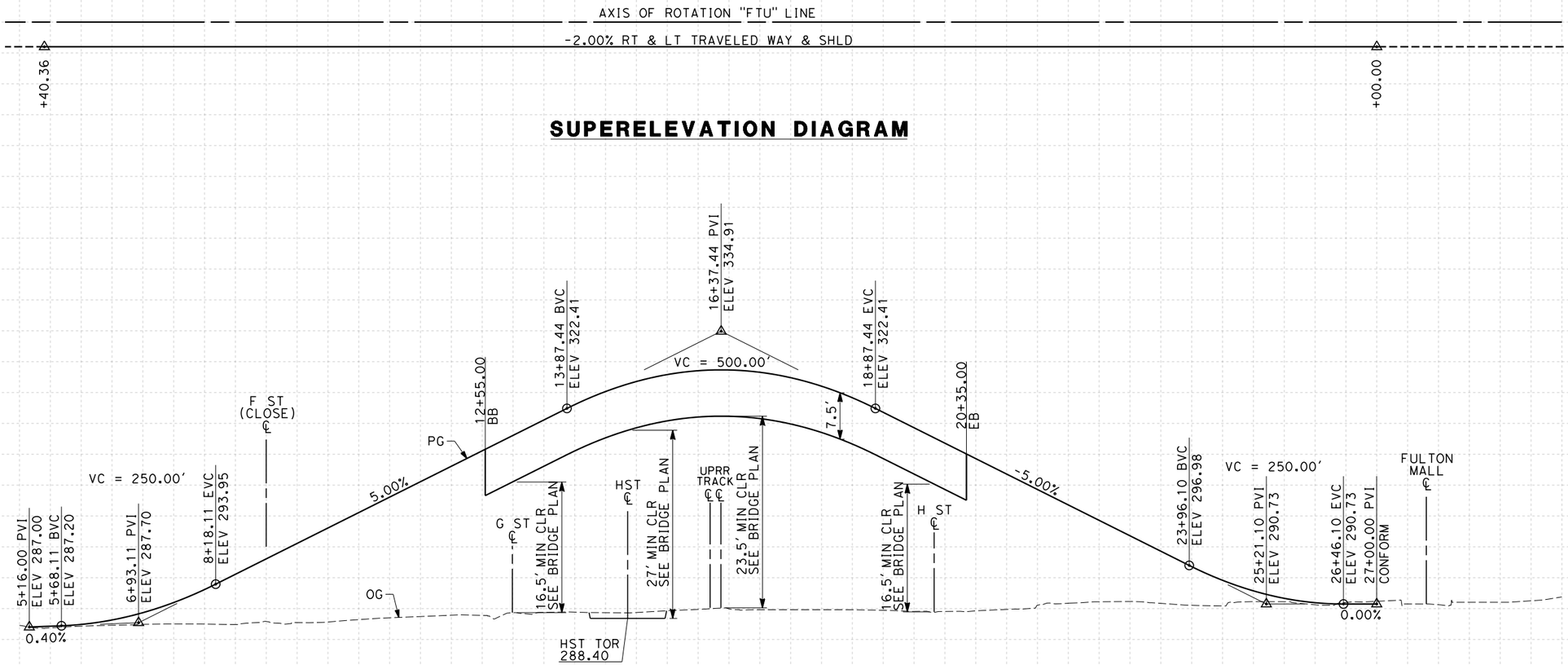
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
G ST (FRESNO ST)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2015
SCALE AS SHOWN
SHEET NO. 29 OF 47

eron.sudhausen 6/28/2011 7:23:15 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\Grade Separation\SF\F1\FB-CT-2015-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

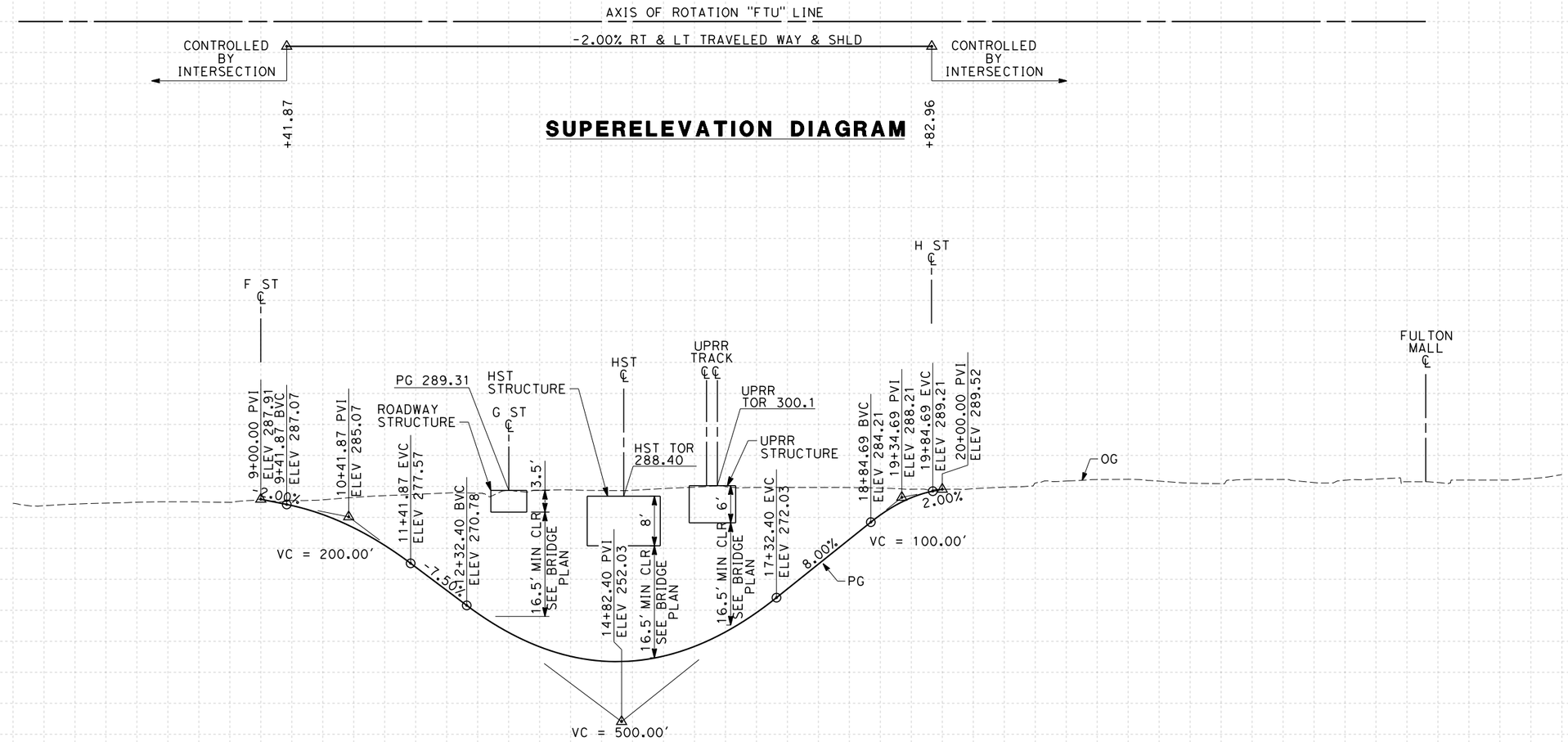
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2016
SCALE AS SHOWN
SHEET NO. 30 OF 47

eron.sudhausen 6/28/2011 7:23:17 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\Grade Separation\SF\F1\FB-CT-2016-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																									
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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
TULARE ST (UNDERPASS)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2017
SCALE AS SHOWN
SHEET NO. 31 OF 47

eron.sudhausen 6/28/2011 7:23:18 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\Grade Separation\SF\F1\FB-CT-2017-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

5% | 0 | -5%

SUPERELEVATION DIAGRAM

320 | 310 | 300 | 290 | 280 | 270 | 260

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

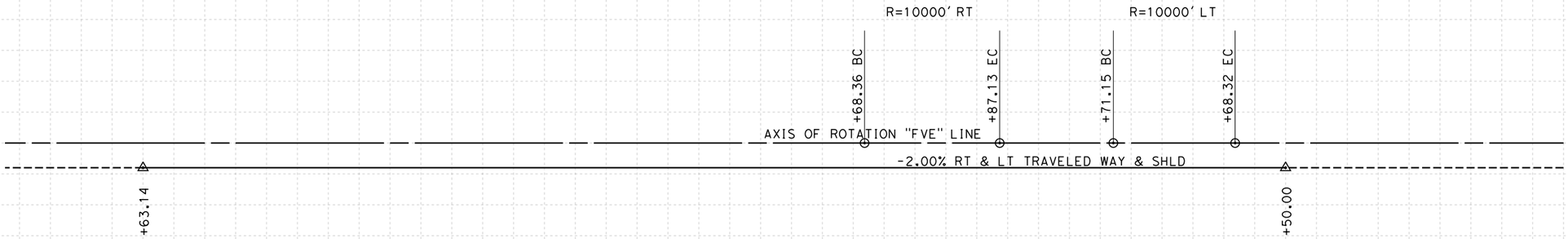
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
G ST (TULARE ST UNDERPASS)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2018
SCALE AS SHOWN
SHEET NO. 32 OF 47

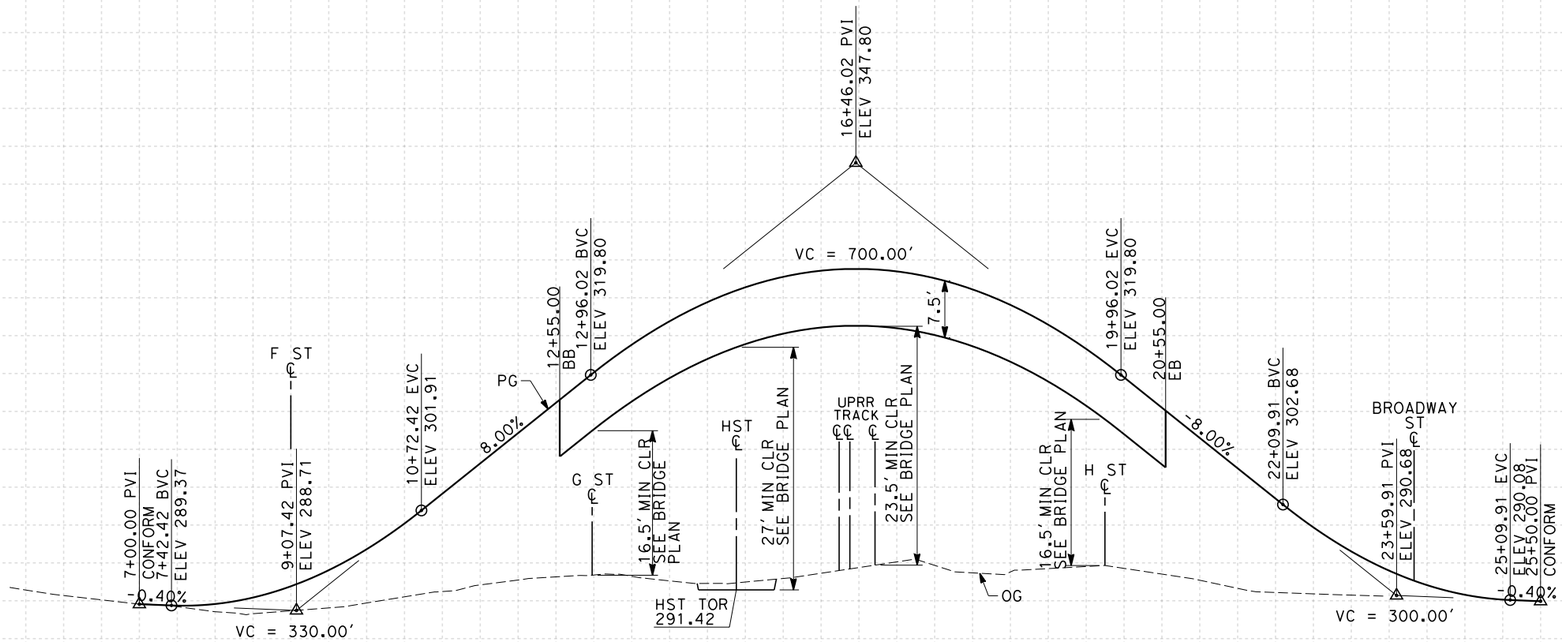
eron.sudhausen 6/28/2011 7:23:20 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2018-F1.dgn

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

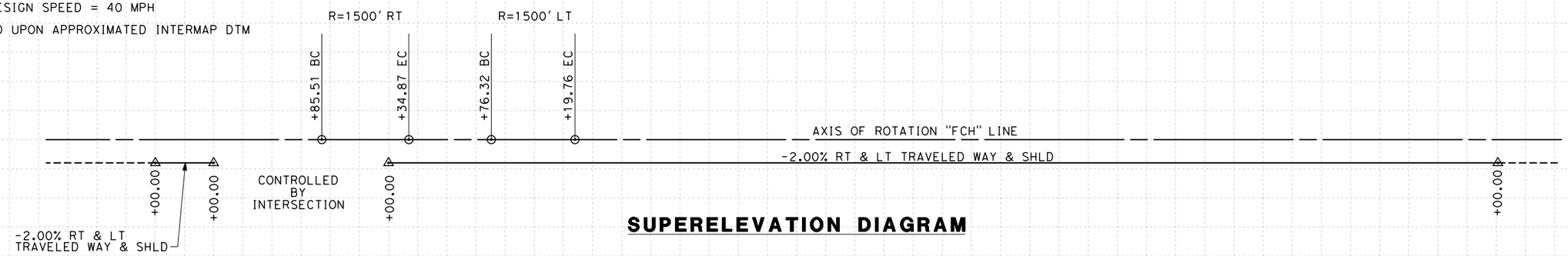
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
VENTURA ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2019
SCALE AS SHOWN
SHEET NO. 33 OF 47

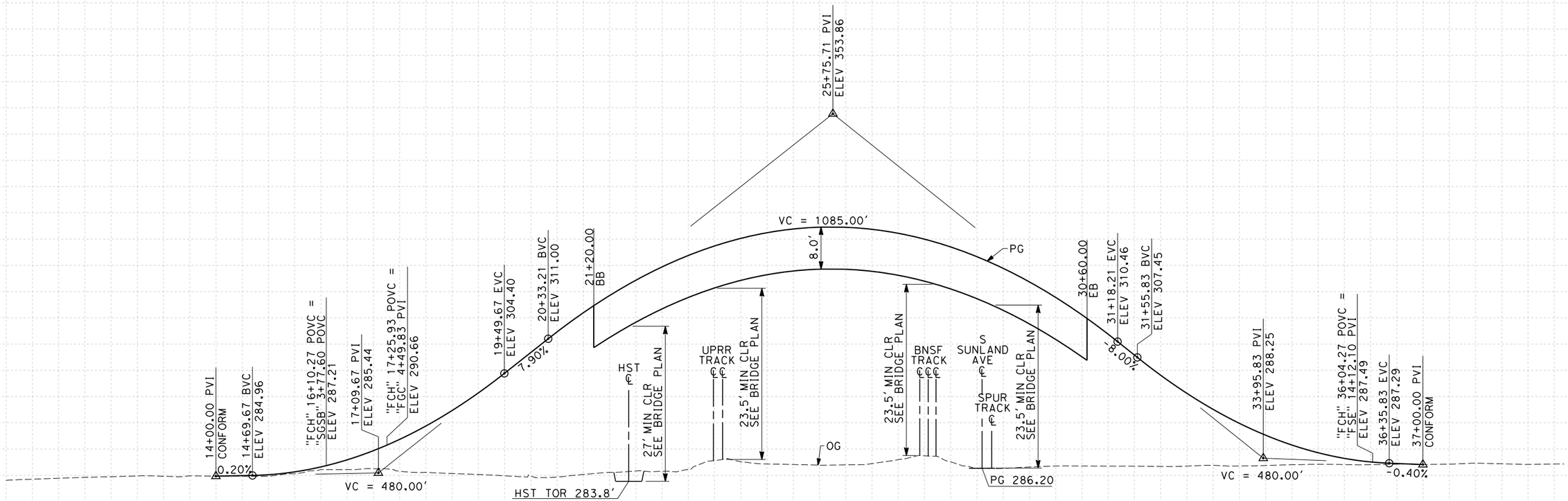
eron.sudhausen 6/28/2011 7:23:21 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2019-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER UPRR AND 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 = 40 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	4	35	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

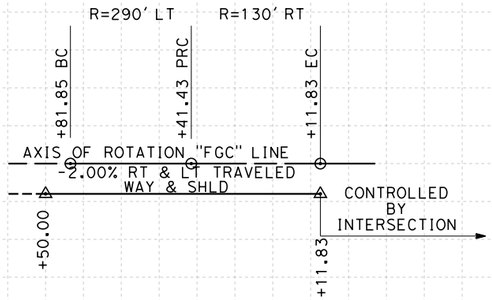
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E CHURCH AVE

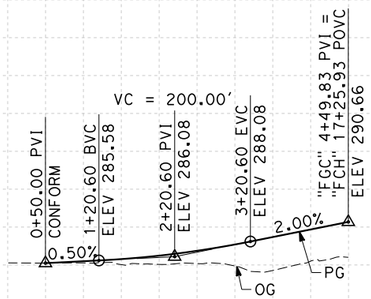
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2020
SCALE AS SHOWN
SHEET NO. 34 OF 47

eron.sudhausen 6/28/2011 7:23:23 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\Grade Separation\SF\F1\FB-CT-2020-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 35 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1020 FOR LAYOUT



SUPERELEVATION DIAGRAM



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

STATION	0	1	2	3	4	5	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

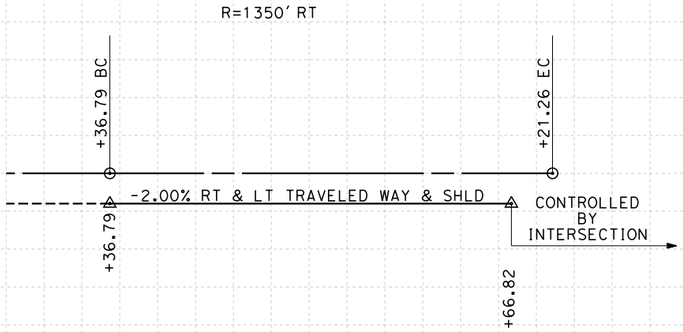
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
G ST (E CHURCH AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2021
SCALE AS SHOWN
SHEET NO. 35 OF 47

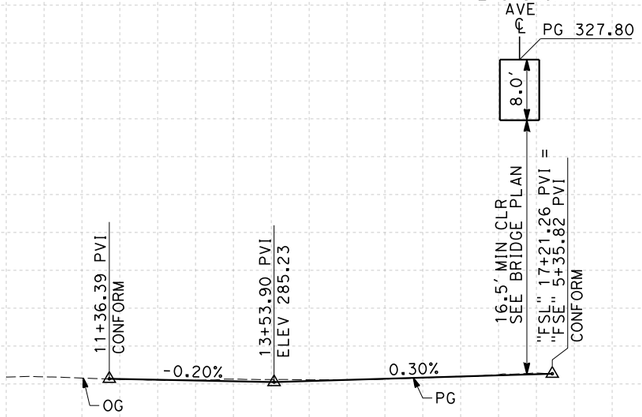
eron.sudhausen 6/28/2011 7:23:24 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2021-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE UNDER STRUCTURE IS 16.5' FROM ROAD SURFACE
2. VERTICAL DESIGN SPEED = 30 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO SHEET CT1020 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	10	1	2	3	4	15	6	7	8	9	20	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

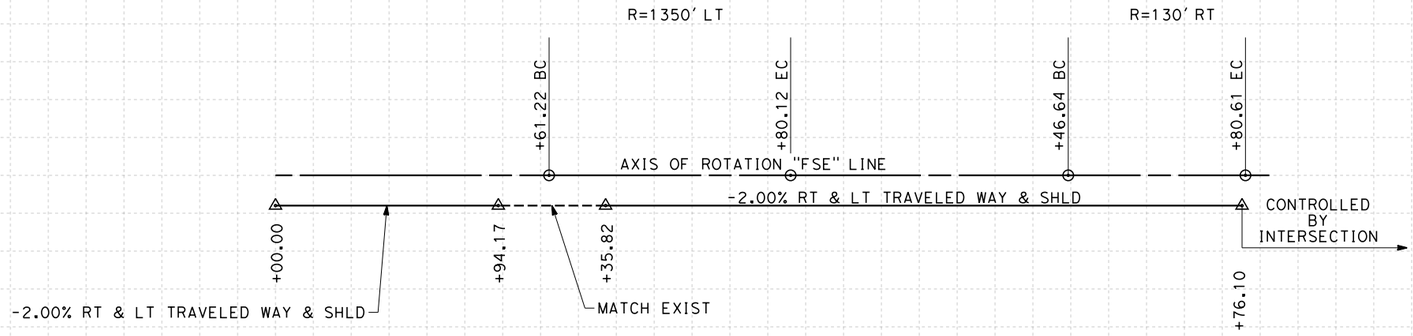
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S SUNLAND AVE

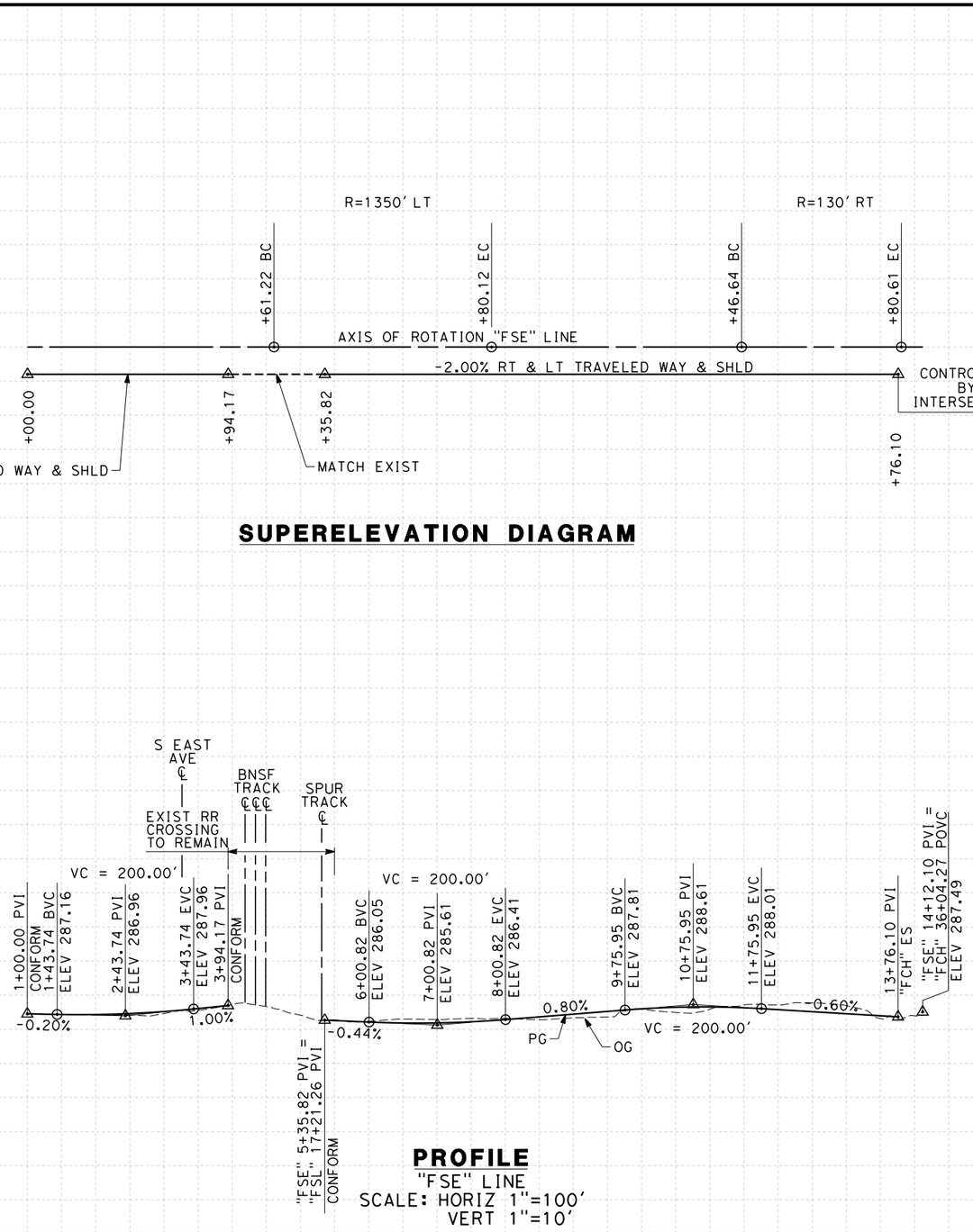
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2022
SCALE AS SHOWN
SHEET NO. 36 OF 47

eron.sudhausen 6/28/2011 7:23:26 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\Grade Separation\SF\F1\FB-CT-2022-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 25 MPH & 15 MPH AT INTERSECTION
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1020 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE
"FSE" 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	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

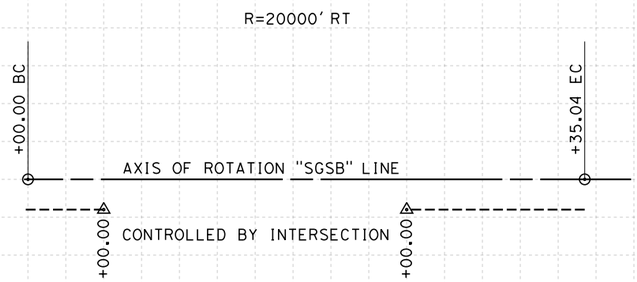
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
OLD E CHURCH AVE

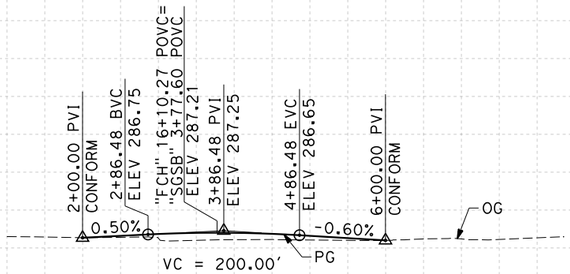
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2023
SCALE AS SHOWN
SHEET NO. 37 OF 47

eron.sudhausen 6/28/2011 7:23:27 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2023-F1.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 50 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1020 FOR LAYOUT



SUPERELEVATION DIAGRAM



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

STATION		1	2	3	4	5	6	7	8	9	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

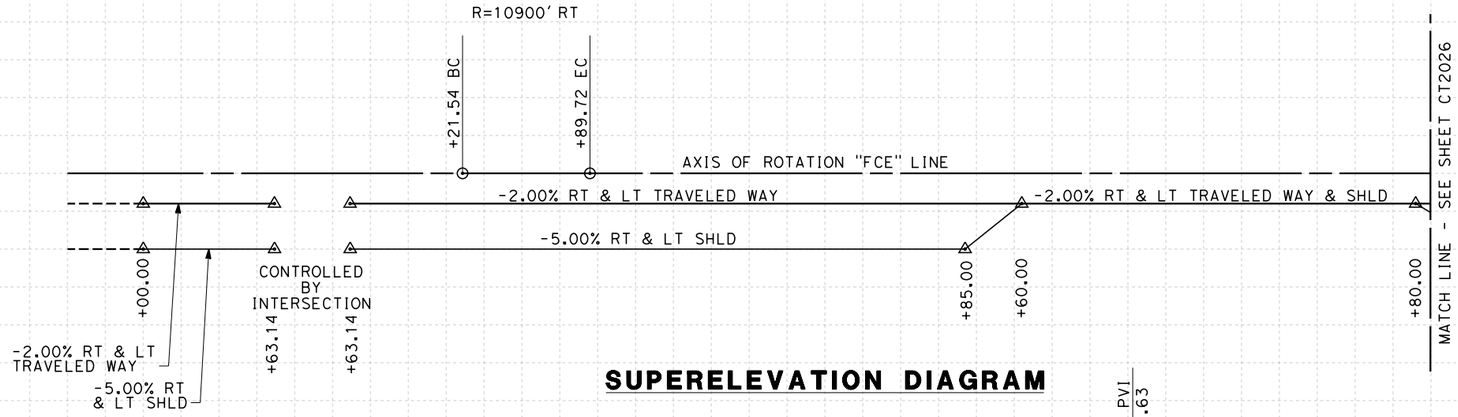
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S GOLDEN STATE BLVD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2024
SCALE AS SHOWN
SHEET NO. 38 OF 47

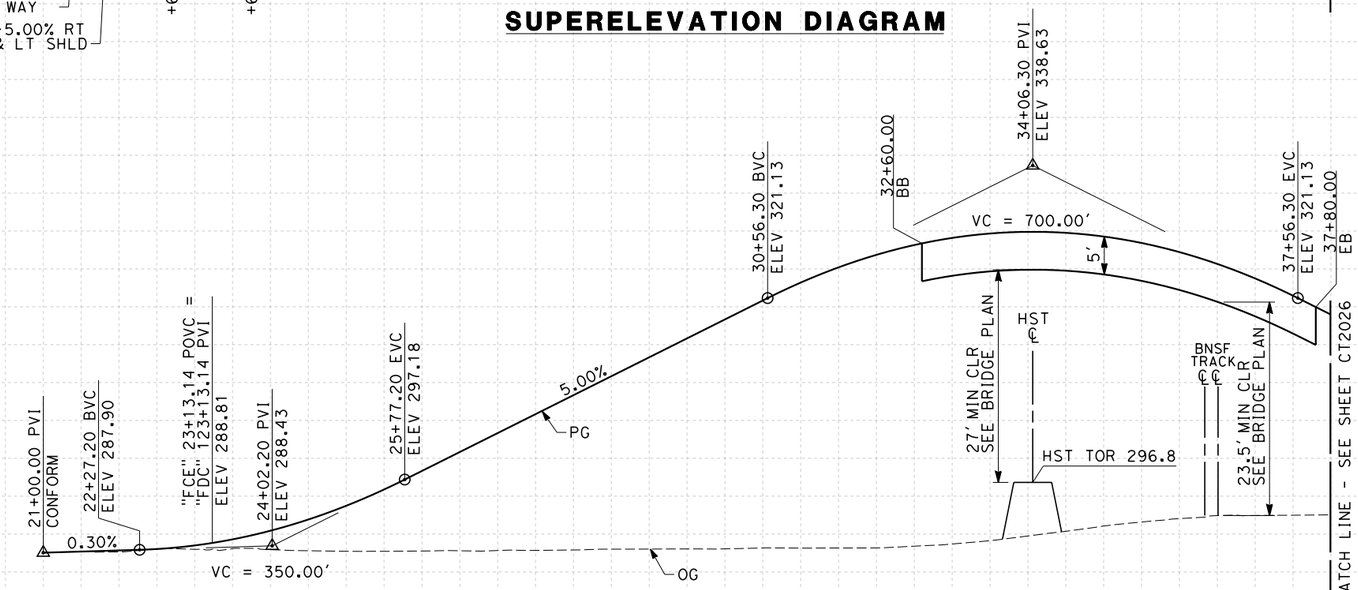
eron.sudhausen 6/28/2011 7:23:29 PM G:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2024-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 35 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	15	6	7	8	9	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

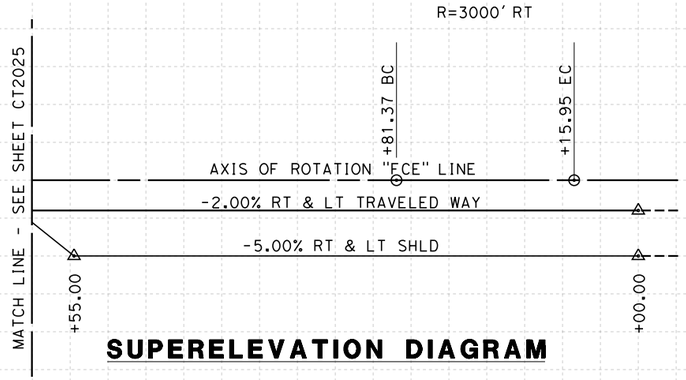
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

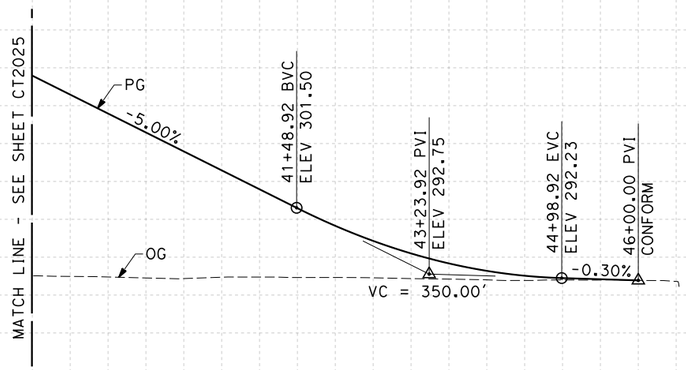
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E CENTRAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2025
SCALE AS SHOWN
SHEET NO. 39 OF 47

eron.sudhausen 6/28/2011 7:23:30 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2025-F1.dgn



SUPERELEVATION DIAGRAM



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

STATION		8	9	40	1	2	3	4	45	6	7	8	9	50	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

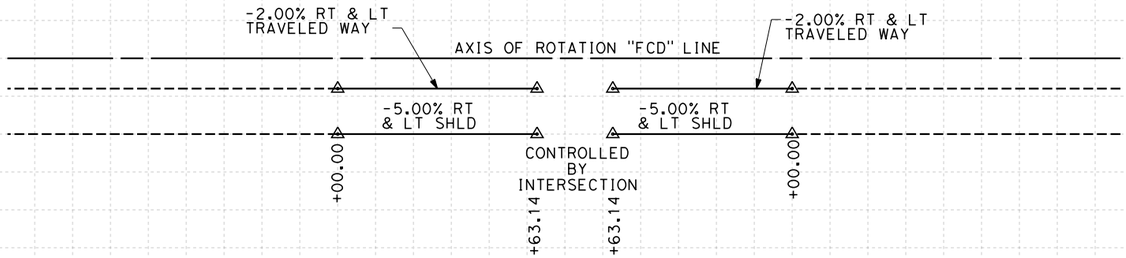
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E CENTRAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2026
SCALE AS SHOWN
SHEET NO. 40 OF 47

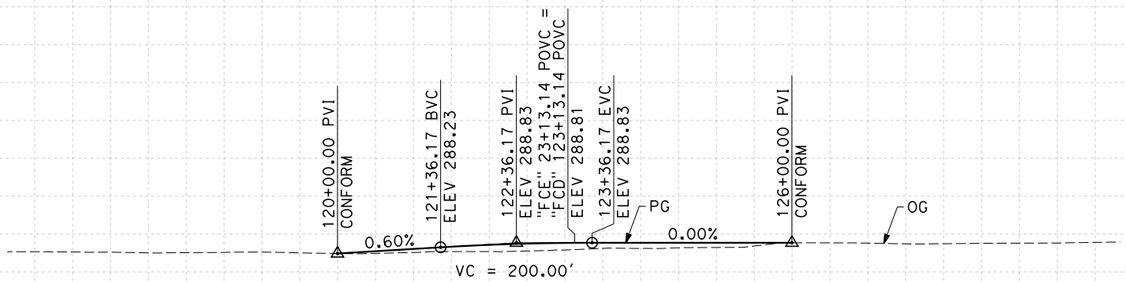
eron.sudhausen 6/28/2011 7:23:32 PM G:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2026-F1.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 45 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO SHEET CT1025 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	6	7	8	9	120	1	2	3	4	125	6	7	8	9	130	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

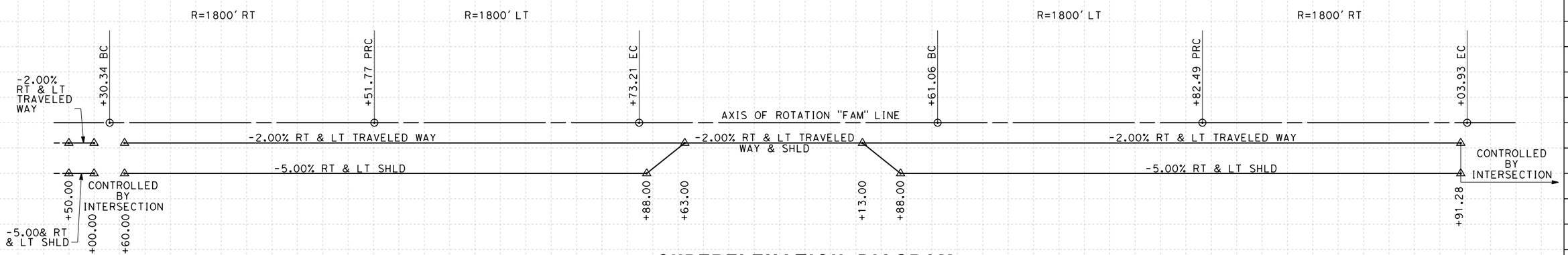
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CEDAR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2027
SCALE AS SHOWN
SHEET NO. 41 OF 47

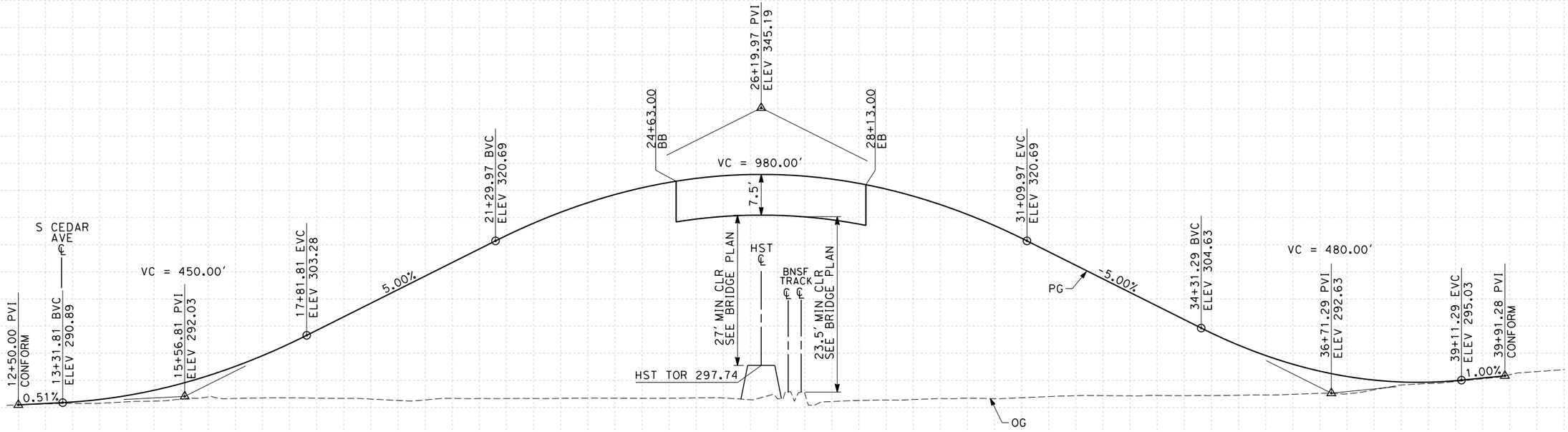
eron.sudhausen 6/28/2011 7:23:33 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2027-F1.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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	7	8	9	40	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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E AMERICAN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2028
SCALE AS SHOWN
SHEET NO. 42 OF 47

eron.sudhausen 6/28/2011 7:23:35 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\F1\FB-CT-2028-F1.dgn

eron.sudhausen 6/28/2011 7:23:41 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\Roadway\F1\FB-CR-1001-F1.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	N 00°00'00" E	207.32'

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

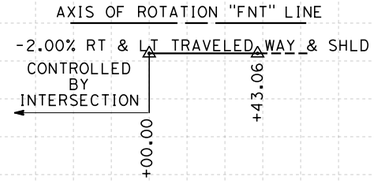
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

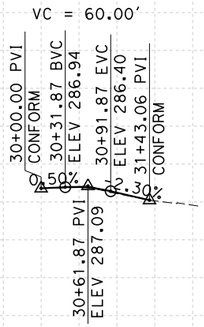
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY LAYOUT
N THORNE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1001
SCALE AS SHOWN
SHEET NO. 43 OF 47

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
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
N THORNE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2001
SCALE AS SHOWN
SHEET NO. 44 OF 47

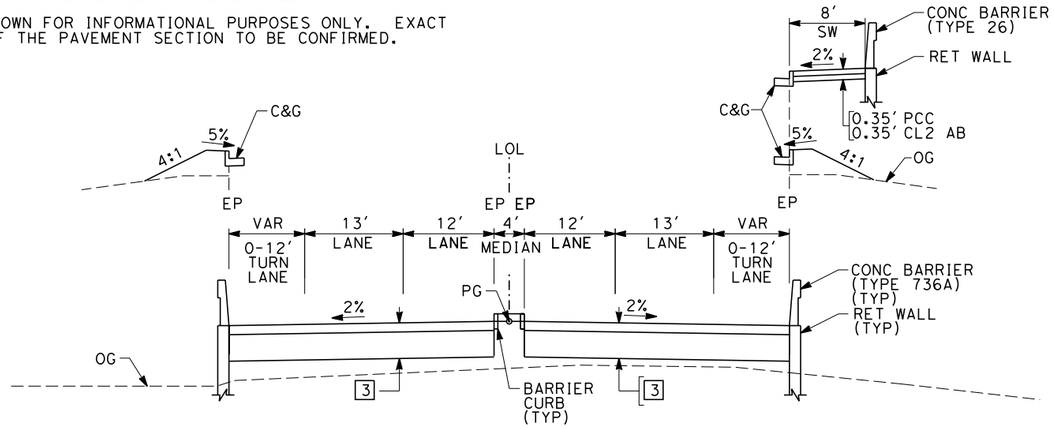
eron.sudhausen 6/28/2011 7:23:45 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Roadway\F1\FB-CR-2001-F1.dgn

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.

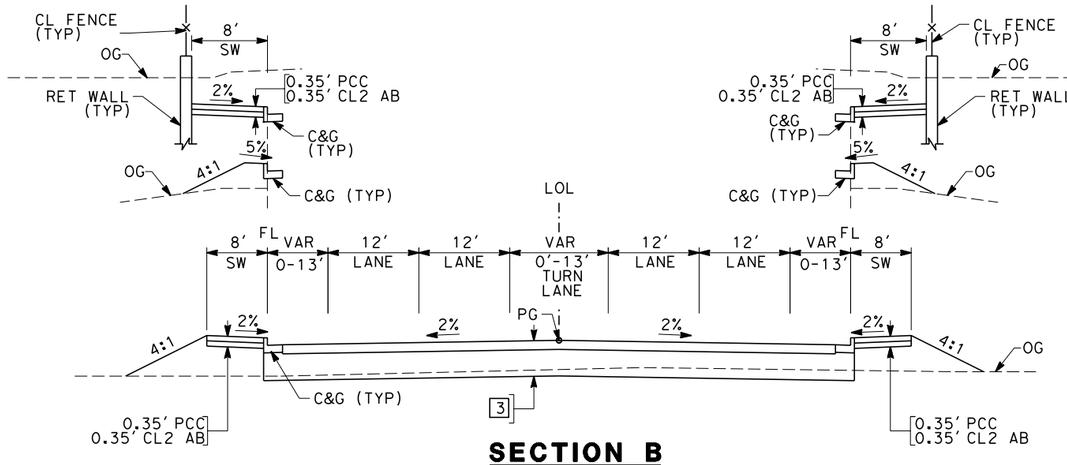
STRUCTURAL SECTIONS
TYPICAL ROADWAY

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



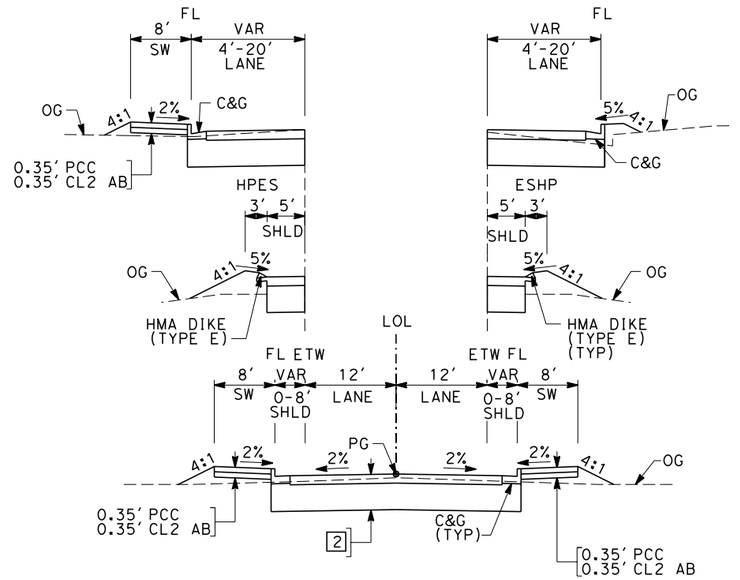
SECTION A

"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



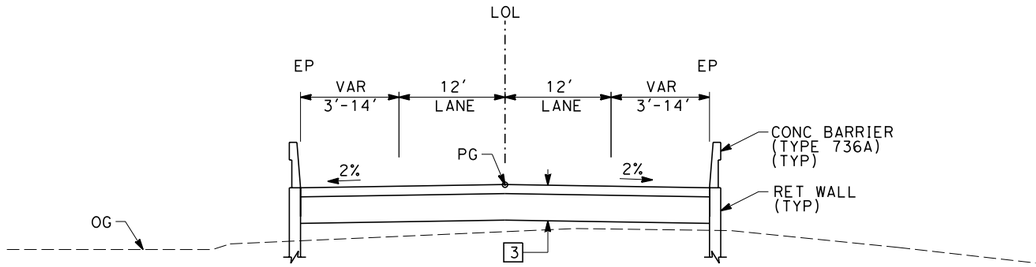
SECTION B

"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 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 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

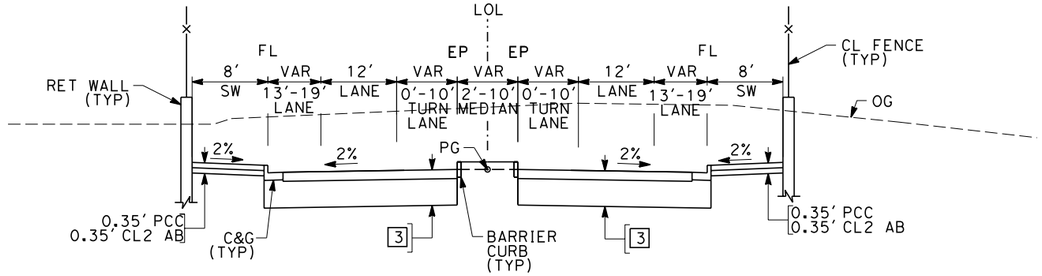
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

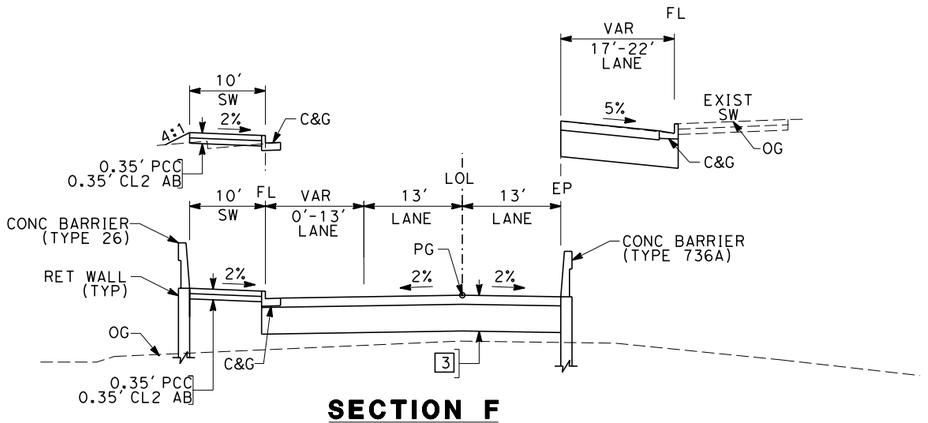
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3001
SCALE NO SCALE
SHEET NO. 45 OF 47

eron.sudhausen 6/28/2011 7:23:48 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\Cross Sections\FB-CT-3001-F1.dgn



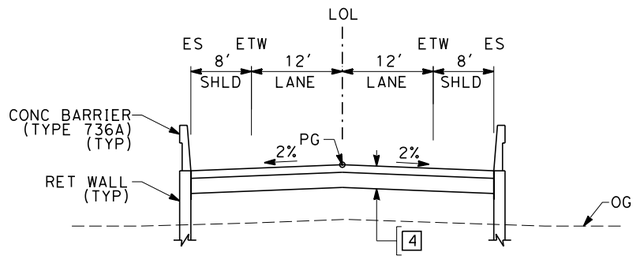
SECTION E

"FFS" 9+00.00 TO 23+48.61



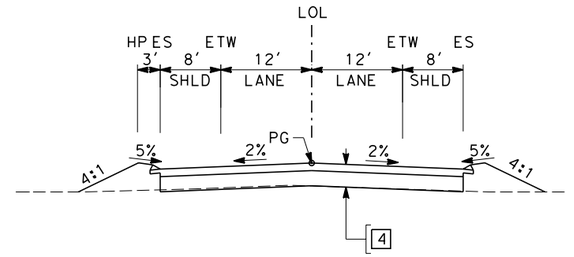
SECTION F

"FTU" 5+16.00 TO 12+55.43 (OVERHEAD OPTION)
"FTU" 20+34.30 TO 27+00.00 (OVERHEAD OPTION)



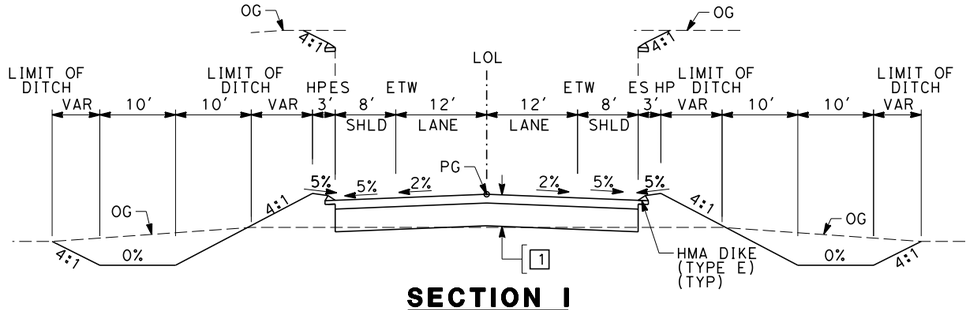
SECTION G

"FCE" 24+00.00 TO 32+60.00
"FCE" 37+80.00 TO 46+00.00



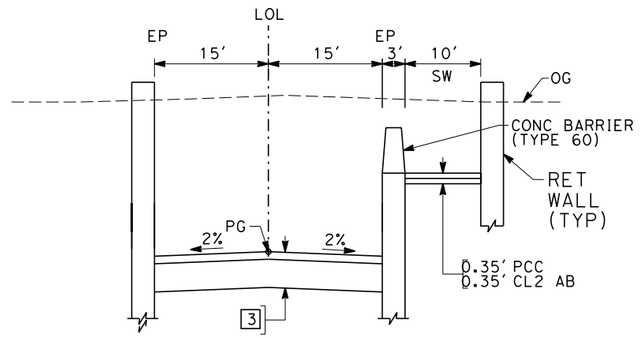
SECTION H

"FCE" 21+00.00 TO 24+00.00



SECTION I

"FAM" 12+50.00 TO 24+63.00
"FAM" 28+13.00 TO 39+91.28



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

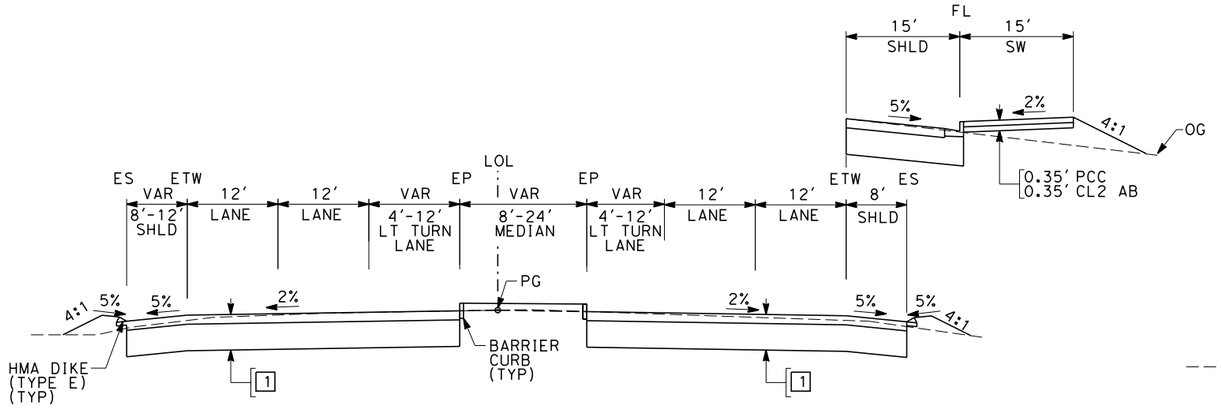
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

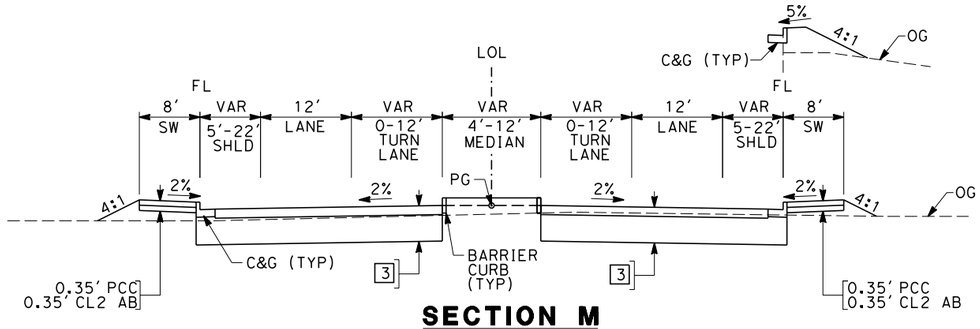
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3002
SCALE NO SCALE
SHEET NO. 46 OF 47

eron.sudhausen 6/28/2011 7:23:50 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\Cross Sections\FB-CT-3002-F1.dgn



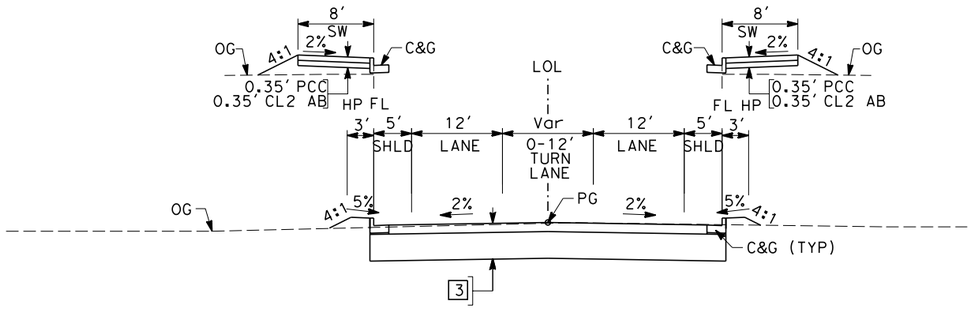
SECTION K

"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

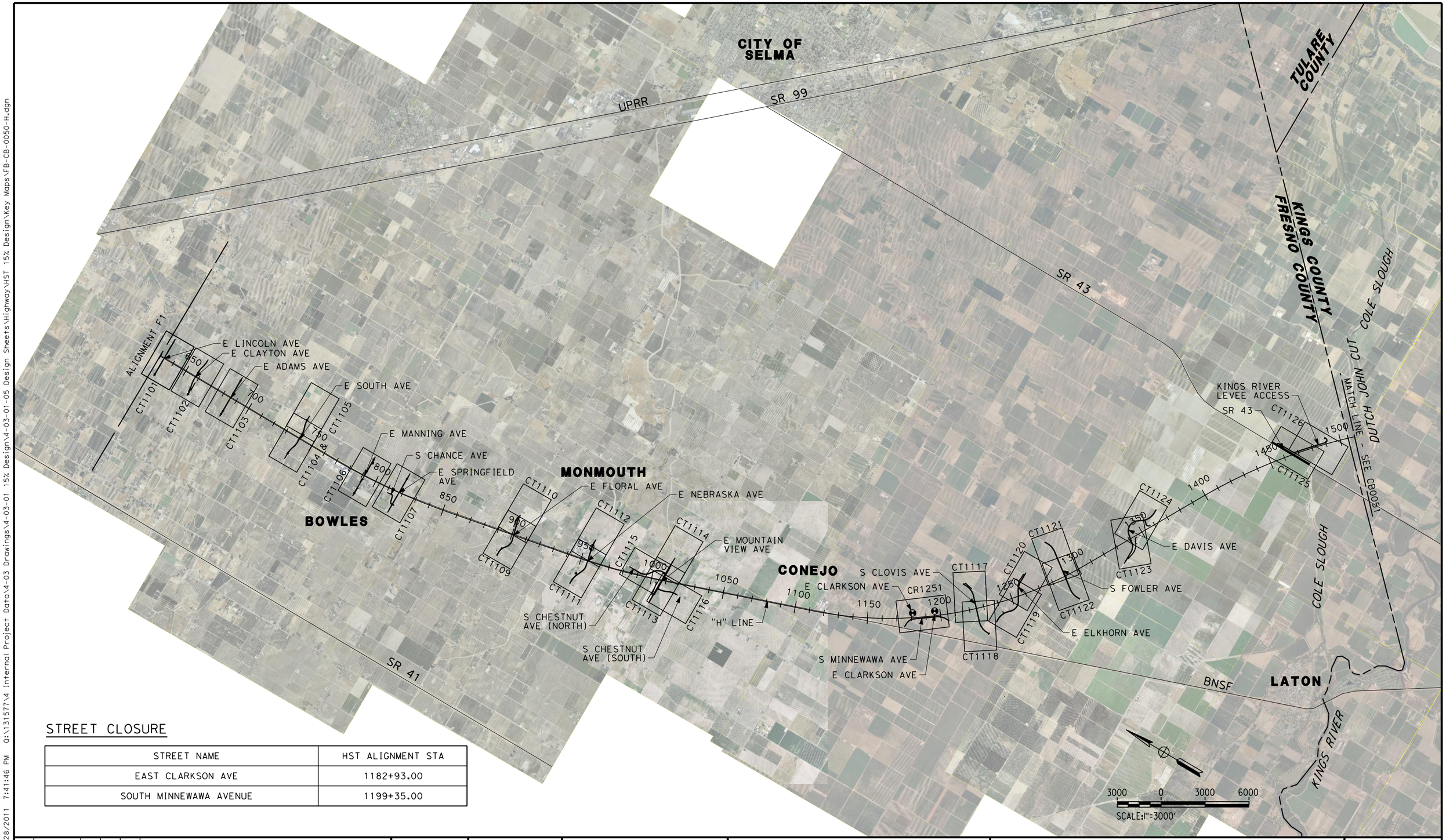
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3003
SCALE NO SCALE
SHEET NO. 47 OF 47

eron.sudhausen 6/28/2011 7:23:52 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Cross Sections\FB-CT-3003-F1.dgn



STREET CLOSURE

STREET NAME	HST ALIGNMENT STA
EAST CLARKSON AVE	1182+93.00
SOUTH MINNEWAWA AVENUE	1199+35.00

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0050
SCALE AS SHOWN
SHEET NO. 1 OF 101

eron.sudhausen 6/28/2011 7:41:46 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\Key Maps\FB-CB-0050-H.dgn

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA
9TH AVE	1540+75.00

TULARE COUNTY
KINGS COUNTY
KINGS COUNTY
FRESNO COUNTY
CITY OF HANFORD
LATON
KINGS RIVER
COLE SLOUGH
DUTCH JOHN CUT
UPRR
SR 43
SR 198
BNSF
MATCH LINE - SEE CB0050
9TH AVE
8TH AVE (NORTH)
8TH AVE (SOUTH)
NORTH AVE
DOVER AVE
ELDER AVE
FLINT AVE
FARGO AVE
7½ AVE
7½ AVE CONNECTOR
EXCELSIOR AVE
HOUSTON AVE
IONA AVE
HANFORD ARMONA RD
CAIRO AVE
"H" LINE
ALIGNMENT C1,C2 & C3
CT1128
CT1129
CT1130
CT1131
CT1132
CT1133
CT1134
CT1135
CT1136
CT1137
CT1138
CT1139
CT1140
CT1141
CT1144
CT1145
CT1146
CT1147
CT1148
CT1149
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
3000 0 3000 6000
SCALE:1"=3000'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0051
SCALE AS SHOWN
SHEET NO. 2 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°49'15"E	2909.13'

"FLI" 8+90.87 PI CONFORM

"FLI" 22+76.85 POT = "H" 632+80.66 POT

"FI" 634+31.78 POT = "H" 632+59.22 POT

"FLI" 36+15.29 CONFORM

"FLI" 38+00.00 PI

BNSF

E LINCOLN AVE

S CEDAR AVE

S MAPLE AVE

CONFORM

R=15'

R=60'

40'

EP

MBGR (TYP)

BB

EB

"FLI" LINE

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

"H" LINE

HST ROW

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E LINCOLN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1101
SCALE AS SHOWN
SHEET NO. 3 OF 101

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CURVE DATA

NO.	R	Δ	T	L	V
①	2000.00′	16°28′27"	289.53′	575.06′	45 MPH
②	1800.00′	16°28′27"	260.57′	517.55′	45 MPH
③	1800.00′	16°28′27"	260.57′	517.55′	45 MPH
④	2000.00′	16°28′27"	289.53′	575.06′	45 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S89°49′48"E	102.82′
2	S89°49′48"E	484.80′
3	S89°49′48"E	101.93′

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00′ LT 12+49.78	20.00′ LT 17+00.00	450′	25′

SCALE: 1"=100′

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E CLAYTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1102
SCALE AS SHOWN
SHEET NO. 4 OF 101

eron.sudhausen 6/28/2011 7:47:52 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-1102-H.dgn

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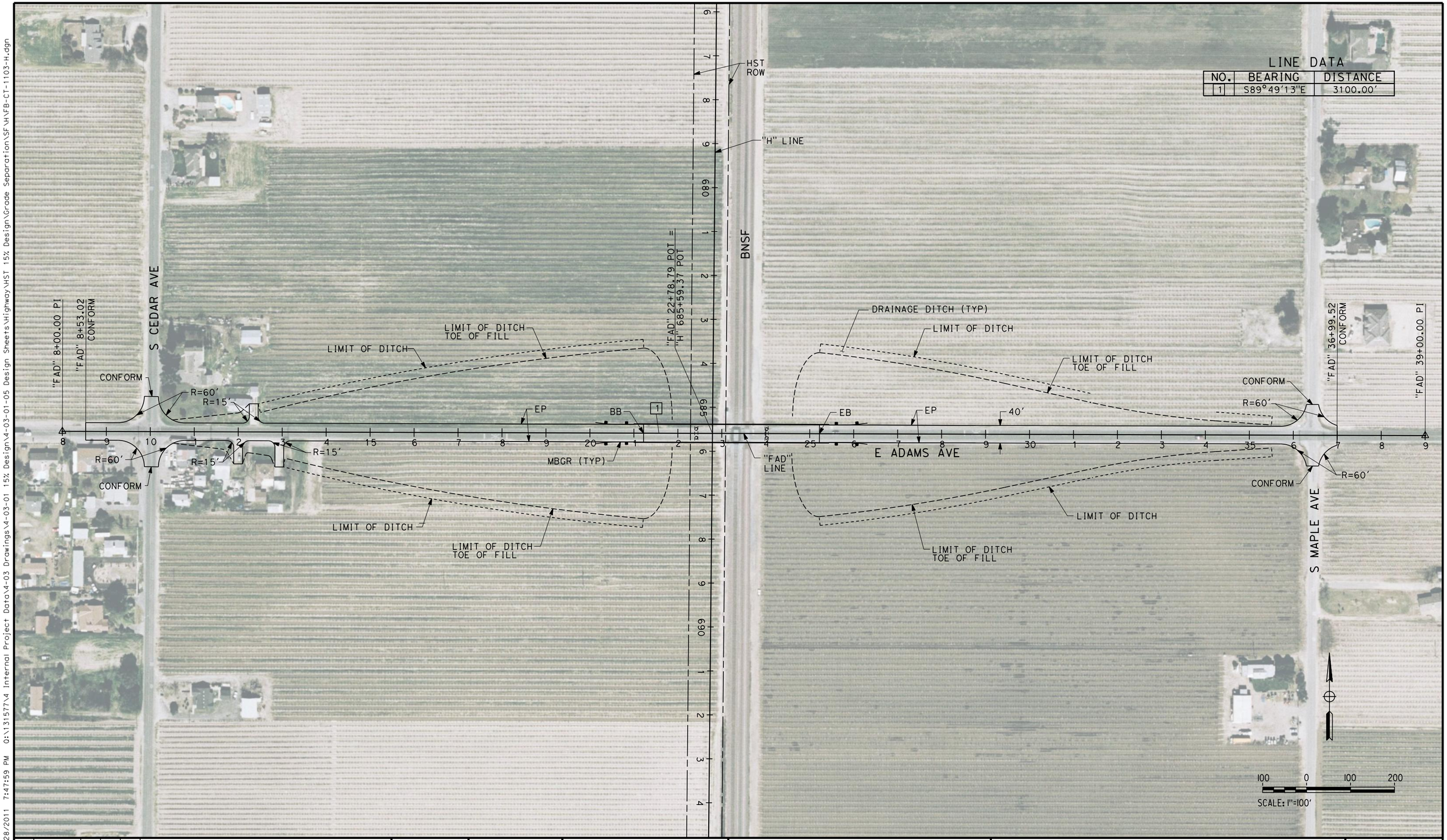

LINE DATA

NO.	BEARING	DISTANCE
1	S89°49'13"E	3100.00'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ADAMS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1103
SCALE AS SHOWN
SHEET NO. 5 OF 101

eron.sudhausen 6/28/2011 7:48:06 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-1104-H.dgn

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1500.00′	21°02′22"	278.54′	550.81′	45 MPH
(2)	1500.00′	21°02′22"	278.54′	550.81′	45 MPH
(3)	1500.00′	21°02′22"	278.54′	550.81′	45 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S89°46′25"E	422.73′
2	S89°46′25"E	484.60′

HST ROW
"H" LINE
BNSF
"FSO" 7+75.41 PI
"FSO" 10+83.35 CONFORM
"FSO" 11+98.13 BC
"FSO" 17+48.95 PRC
"FSO" 22+99.76 EC
"FSO" 27+84.36 BC
CONFORM
R=60′
EXIST CANAL
EXIST CULVERT
E SOUTH AVE
S CEDAR AVE
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
BOX CULVERT (APPROX 5′X8′)
REMOVE EXIST AT-GRADE CROSSING
REMOVE BASE AND SURFACING
EXIST CULVERT
EP
MBGR (TYP)
BB
EB
32′
"FSO" LINE
"FSO" 24+96.11 POT = "H" 740+41.39 POT
MATCH LINE - SEE CT1105
DRAINAGE DITCH (TYP)
100 0 100 200
SCALE: 1"=100′

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E SOUTH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1104
SCALE AS SHOWN
SHEET NO. 6 OF 101

eron.sudhausen 6/28/2011 7:48:12 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1105-H.dgn

CURVE DATA

NO.	R	Δ	T	L	V
③	1500.00'	21°02'22"	278.54'	550.81'	45 MPH
④	1500.00'	21°02'22"	278.54'	550.81'	45 MPH

LINE DATA

NO.	BEARING	DISTANCE
3	S89°46'25"E	338.61'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E SOUTH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1105
SCALE AS SHOWN
SHEET NO. 7 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
1	S90°00'00"E	3090.00'

"FMN" 0+00.00 PI

"FMN" 1+56.62 CONFORM

"FMN" 15+80.78 POT
"H" 791+35.27 POC

"FMN" 29+46.78 CONFORM

"FMN" 30+90.00 PI

HST ROW

"H" LINE

"FMN" LINE

BNSF TRACK RELOCATION

ACCESS ROAD

RET WALL NO.2

RET WALL NO.1

BB

REMOVE BASE AND SURFACING

REMOVE EXIST AT-GRADE CROSSING

CONFORM

TOE TO FILL

TOE OF FILL

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

DRAINAGE DITCH (TYP)

LIMIT OF DITCH TOE TO FILL

R=60'

R=30'

40'

EB

EP

MBGR (TYP)

E MANNING AVE

S CEDAR AVE

S CHANCE AVE

S MAPLE AVE

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	20.00' RT 6+66.58	20.00' RT 9+31.07	264'	21'
2	20.00' LT 6+66.58	20.00' LT 9+31.07	264'	21'

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1106
SCALE AS SHOWN
SHEET NO. 8 OF 101

CURVE DATA

NO.	R	Δ	T	L	V
(1)	130.00′	83°42′32"	116.46′	189.93′	15 MPH
(2)	130.00′	75°42′08"	101.02′	171.76′	15 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S90°00′00"E	3090.00′
2	S07°44′15"E	300.00′
3	S75°58′17"W	385.44′
4	S00°16′09"W	50.24′

S CHANCE AVE
"H" LINE
"FSC" 10+00.00 PI
"FSC" LINE
"FSC" 12+00.00 CONFORM
HST ROW
"FSC" 13+00.00 BC
"FSC" 14+89.93 EC
"FSC" 18+75.37 BC
"FSC" 20+47.14 EC
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
EP
REMOVE BASE AND SURFACING
S MAPLE AVE
"FSP" 0+00.00 PI
"FSP" 1+75.92 CONFORM
"FSP" 28+66.17 CONFORM
"FSP" 30+90.00 PI
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
DRAINAGE DITCH (TYP)
CONFORM
MBGR (TYP)
R=60′
32′
R=60′
E SPRINGFIELD AVE
BB
EP
"FSP" LINE
EB
R=15′
R=15′
CONFORM
CONFORM
S CEDAR AVE
DRAINAGE DITCH (TYP)
"FSP" 6+40.40 POT = "FSC" 20+97.37 PI
CONFORM
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
"FSP" 15+75.80 POT = "H" 817+72.15 POC
BNSF TRACK RELOCATION
100 0 100 200
SCALE: 1"=100′

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E SPRINGFIELD AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1107
SCALE AS SHOWN
SHEET NO. 9 OF 101

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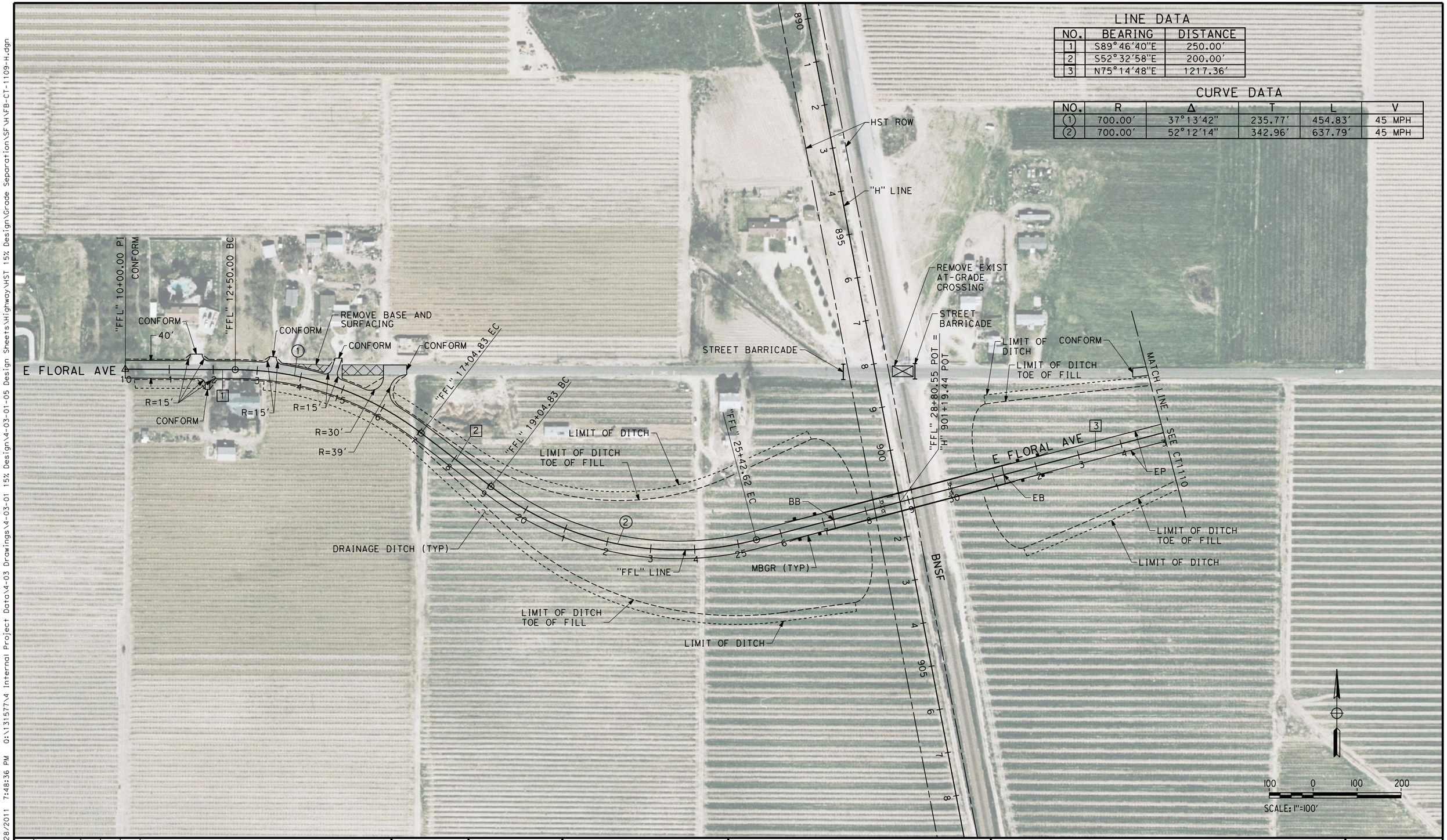
LINE DATA

NO.	BEARING	DISTANCE
1	S89°46'40"E	250.00'
2	S52°32'58"E	200.00'
3	N75°14'48"E	1217.36'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	700.00'	37°13'42"	235.77'	454.83'	45 MPH
(2)	700.00'	52°12'14"	342.96'	637.79'	45 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E FLORAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1109
SCALE AS SHOWN
SHEET NO. 10 OF 101

eron.sudhausen 6/28/2011 7:48:42 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1110-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	N75°14'48"E	1217.36'
4	S89°46'40"E	50.00'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	2000.00'	14°58'32"	262.87'	522.75'	45 MPH

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E FLORAL AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1110
SCALE AS SHOWN
SHEET NO. 11 OF 101

eron.sudhousen 6/28/2011 7:48:50 PM D:\1315774\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-1111-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°38'32"E	250.00'
2	S66°24'12"E	539.00'
3	N77°47'17"E	1283.11'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	23°14'20"	226.19'	446.15'	45 MPH
(2)	700.00'	35°48'31"	226.15'	437.48'	45 MPH

EXIST CANAL
"H" LINE
HST ROW
S TOPEKA AVE
REMOVE EXIST AT-GRADE CROSSING
STREET BARRICADE
TOE OF FILL
MATCH LINE - SEE CT1112
"FNE" 10+00.00 PI CONFORM
"FNE" 12+50.00 BC
40'
REMOVE BASE AND SURFACING
STREET BARRICADE
CONFORM
E NEBRASKA AVE
R=15'
R=30'
"FNE" LINE
"FNE" 16+96.15 EC
"FNE" 22+35.15 BC
"FNE" 26+72.63 EC
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
EP
BB
MBGR (TYP)
EB
E NEBRASKA AVE
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
"FNE" 30+22.64 POT = "H" 954+70.15 POC
BNSF TRACK RELOCATION

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1111
SCALE AS SHOWN
SHEET NO. 12 OF 101

0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1112-H.dgn
6/28/2011 7:48:56 PM
eron.sudhausen

LINE DATA

NO.	BEARING	DISTANCE
3	N77°47'17"E	1283.11'
4	S88°58'15"E	182.05'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	2000.00'	13°14'28"	232.14'	462.20'	45 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E NEBRASKA AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1112
SCALE AS SHOWN
SHEET NO. 13 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	S90°00'00"E	2441.80'
2	S89°02'16"E	1074.23'
3	S00°00'00"E	221.23'
4	S00°00'00"W	121.17'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	5000.00'	00°57'44"	41.99'	83.97'	55 MPH
(2)	1250.00'	24°14'38"	268.48'	528.92'	45 MPH

REMOVE BASE AND SURFACING
STREET BARRICADE
"H" LINE
BNSF TRACK RELOCATION
CONFORM
ACCESS ROAD
R=90'
BOX CULVERT (APPROX 2-5'X8')
"FMV" 11+80.75 POT = "FCS" 0+00.00 PI
"FMV" 17+91.32 POT = "H" 1007+01.05 POC
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
DRAINAGE DITCH (TYP)
R=200'
R=60'
R=30'
"FMV" 0+00.00 PI
"FMV" 1+60.67 CONFORM
MBGR (TYP)
BB
EP
EB
40'
MATCH LINE -SEE CT1115
S CHESTNUT AVE
"FMV" LINE
"FCN" LINE
MATCH LINE - SEE CT1114
E MOUNTAIN VIEW AVE
"FCS" 1+21.17 BC
"FCS" LINE
MATCH LINE - SEE CT1116
REMOVE BASE AND SURFACING
DRAINAGE DITCH (TYP)
"FMV" 23+28.23 POT = "FCN" 27+00.00 PI
"FMV" 24+41.80 BC
"FMV" 25+25.77 EC
EXIST CANAL
HST ROW
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E MOUNTAIN VIEW AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1113
SCALE AS SHOWN
SHEET NO. 14 OF 101

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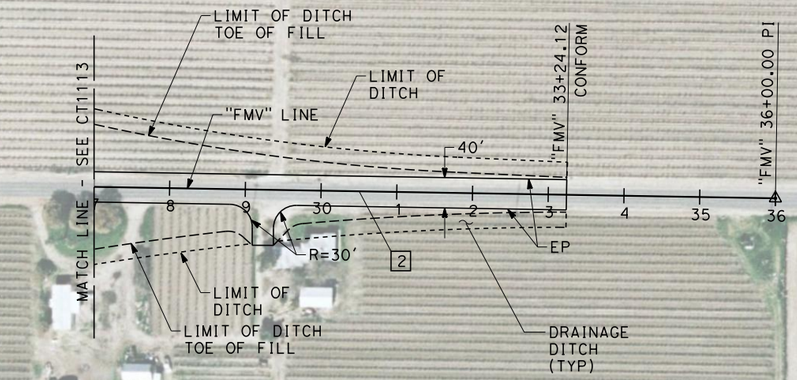
LINE DATA

NO.	BEARING	DISTANCE
2	S89°02'16"E	1074.23'

S WILLOW AVE

E MOUNTAIN VIEW AVE



100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E MOUNTAIN VIEW AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1114
SCALE AS SHOWN
SHEET NO. 15 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	S00°34'37"W	836.96'
2	S54°37'34"E	300.10'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	700.00'	55°11'59"	365.95'	674.39'	45 MPH
(2)	700.00'	54°37'21"	361.47'	667.34'	45 MPH

EXIST CANAL

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

"FCN" 24+78.77 EC

MATCH LINE - SEE CT1113

BOX CULVERT (APPROX 2-5'X8')

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

"FCN" 18+11.39 BC

"FCN" 15+11.39 EC

BOX CULVERT (APPROX 2-5'X8')

"FCN" 0+00.00 PI

"FCN" 3+56.26 CONFORM

"FCN" 8+36.96 BC

REMOVE BASE AND SURFACING

"H" LINE

40'

S CHESTNUT AVE

"FCN" LINE

EP

STREET BARRICADE

REMOVE BASE AND SURFACING

BNSF TRACK RELOCATION

REMOVE EXIST AT-GRADE CROSSING

HST ROW

E MOUNTAIN VIEW AVE

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CHESTNUT AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1115
SCALE AS SHOWN
SHEET NO. 16 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
5	S24°14'38"E	160.00'
6	S01°09'13"W	135.83'

CURVE DATA

NO.	R	Δ	T	L	V
②	1250.00'	24°14'38"	268.48'	528.92'	45 MPH
③	1250.00'	25°23'51"	281.67'	554.09'	45 MPH

HST ROW
BNSF
BNSF TRACK RELOCATION
"H" LINE
1005
1010
1015
1020
"FCS" 13+64.17 EC CONFORM
"FCS" 15+00.00 PI
REMOVE BASE AND SURFACING
LIMIT OF DITCH
40'
LIMIT OF DITCH TOE OF FILL
MATCH LINE - SEE CT1113
"FCS" LINE
EP
"FCS" 8+10.09 BC
"FCS" 6+50.09 EC
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
S CHESTNUT AVE
E MOUNTAIN VIEW AVE
EXIST. CANAL

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CHESTNUT AVE (SOUTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1116
SCALE AS SHOWN
SHEET NO. 17 OF 101

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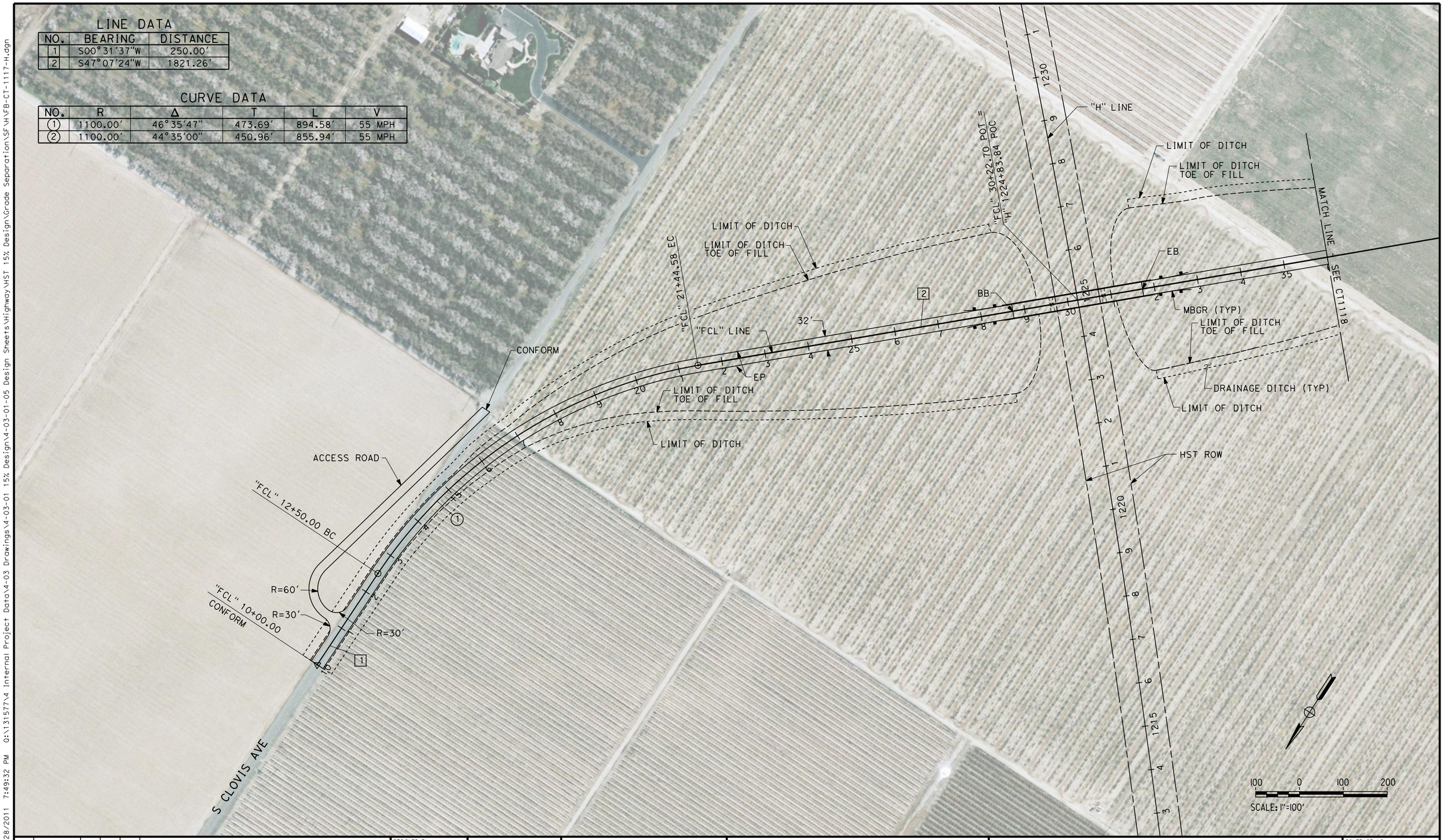
LINE DATA

NO.	BEARING	DISTANCE
1	S00°31'37"W	250.00'
2	S47°07'24"W	1821.26'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	46°35'47"	473.69'	894.58'	55 MPH
(2)	1100.00'	44°35'00"	450.96'	855.94'	55 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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CLOVIS AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1117
SCALE AS SHOWN
SHEET NO. 18 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
2	S47°07'24"W	1821.26'
3	S2°32'24"W	225.00'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	1100.00'	44°35'00"	450.96'	855.94'	55 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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1118
SCALE AS SHOWN
SHEET NO. 19 OF 101

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"FEL" 10+00.00 CONFORM

"FEL" 12+50.00 BC

REMOVE BASE AND SURFACING

STREET BARRICADE

ACCESS ROAD

CONFORM

R=39'

R=30'

EP

40'

"FEL" 21+00.41 EC

LIMIT OF DITCH TOE OF FILL

"FEL" 23+00.41 BC

LIMIT OF DITCH

HST ROW

"H" LINE

STREET BARICADE

REMOVE BASE AND SURFACING

E ELKHORN AVE

MATCH LINE - SEE CT1120

"FEL" 35+49.10 POT = "H" 1254+66.58 POC

EB

"FEL" 32+36.86 EC

BB

MBGR (TYP)

"FEL" LINE

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

DRAINAGE DITCH (TYP)

1245

1250

1255

1260

1265

LINE DATA

NO.	BEARING	DISTANCE
1	S89°18'31"E	250.00'
2	S45°00'47"E	200.00'
3	S58°20'16"E	694.95'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	44°17'44"	447.73'	850.41'	45 MPH
(2)	700.00'	76°38'57"	553.31'	936.45'	45 MPH

100 0 100 200

SCALE: 1"=100'

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 FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

CONTRACT NO. HST 06-0003

DRAWING NO. CT1119

SCALE AS SHOWN

SHEET NO. 20 OF 101

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LINE DATA

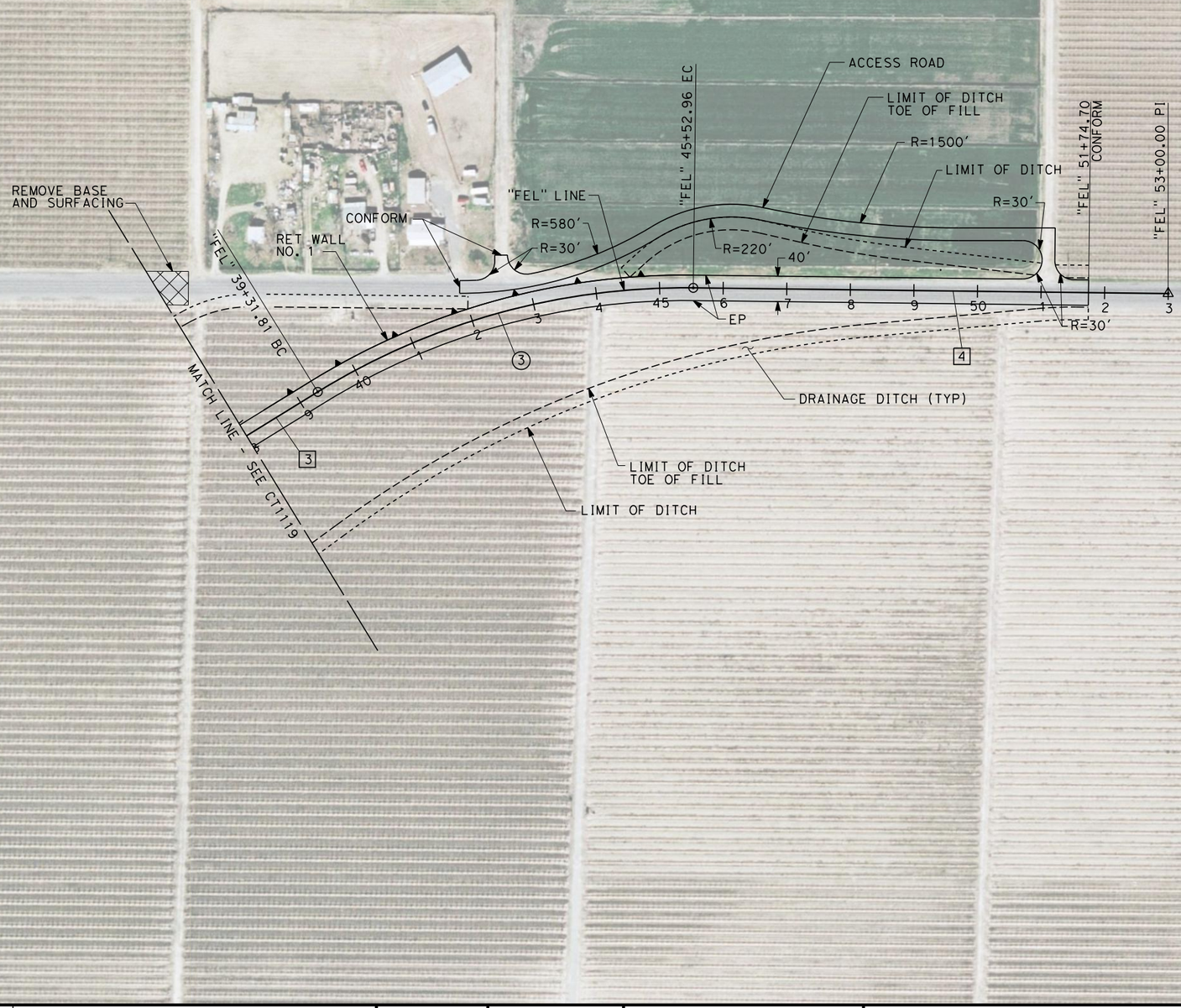
NO.	BEARING	DISTANCE
3	S58°20'16"E	694.95'
4	S89°18'31"E	816.64'

CURVE DATA

NO.	R	Δ	T	L	V
③	1100.00'	32°21'13"	319.10'	621.14'	45 MPH

RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.29' LT "FEL" 38+44.02	20.10' LT "FEL" 45+52.96	720.29'	40'



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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1120
SCALE AS SHOWN
SHEET NO. 21 OF 101

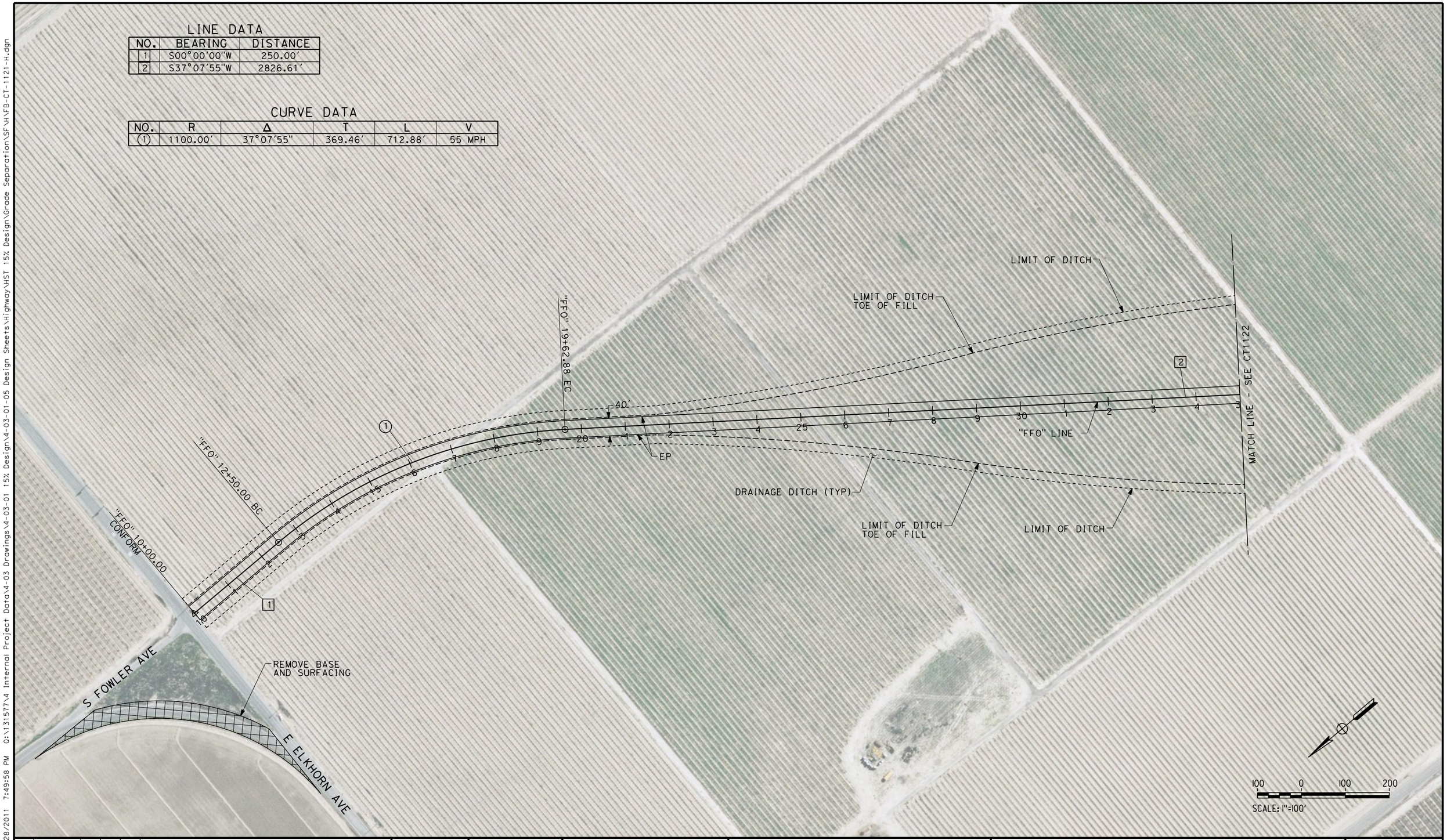
eron.sudhausen 6/28/2011 7:49:52 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-1120-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°00'00"W	250.00'
2	S37°07'55"W	2826.61'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	37°07'55"	369.46'	712.88'	55 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1121
SCALE AS SHOWN
SHEET NO. 22 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
2	S37°07'55"W	2826.61'
3	S01°53'22"W	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	1100.00'	35°14'34"	349.39'	676.61'	55 MPH

HST ROW

"H" LINE

"FFO" 37+91.77 POT = "H" 1289+32.43 POC

MATCH LINE - SEE CT1121

BB

EB

40'

"FFO" LINE

EP

MBGR (TYP)

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

"FFO" 47+89.49 BC

DRAINAGE DITCH (TYP)

"FFO" 54+66.10 EC

"FFO" 57+16.10 CONFORM

S FOWLER AVE

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

REMOVE BASE AND SURFACING

1295 1290 1285 80

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S FOWLER AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1122
SCALE AS SHOWN
SHEET NO. 23 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	S89°38'29"E	950.00'
2	N39°22'52"E	608.97'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	700.00'	50°58'39"	333.71'	622.81'	45 MPH
(2)	700.00'	108°23'29"	970.42'	1324.25'	45 MPH

E DAVIS AVE
"FDA" 3+00.00 PI
"FDA" 4+87.14 CONFORM
"H" LINE
HST ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
R=15'
R=30'
"FDA" 12+50.00 BC
"FDA" 18+72.81 EC
"FDA" 21+77.29 POT = "H" 1340+91.80 POT
"FDA" 24+81.77 BC
DRAINAGE DITCH (TYP)
32'
EP
EB
BB
MBGR (TYP)
MATCH LINE - SEE CT1124
"FDA" LINE
ACCESS ROAD
R=900'
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
R=30'
STREET BARRICADE
R=15'
CONFORM
R=130'
TRACTION POWER FACILITY (NORTH OPTION)
REMOVE BASE AND SURFACING
1330
1335
1340
1345
100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E DAVIS AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1123
SCALE AS SHOWN
SHEET NO. 24 OF 101

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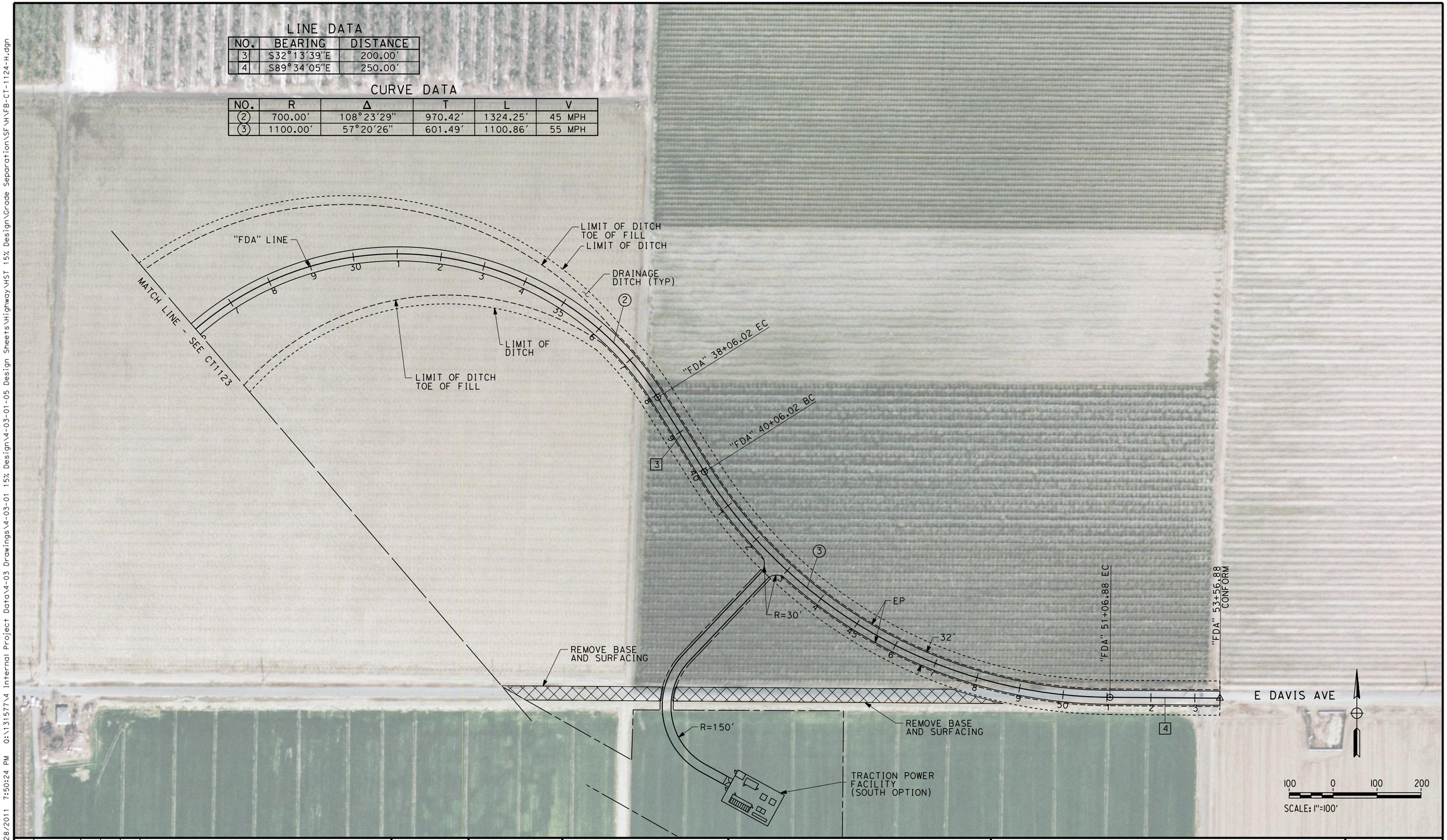
LINE DATA

NO.	BEARING	DISTANCE
3	S32°13'39"E	200.00'
4	S89°34'05"E	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
②	700.00'	108°23'29"	970.42'	1324.25'	45 MPH
③	1100.00'	57°20'26"	601.49'	1100.86'	55 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1124
SCALE AS SHOWN
SHEET NO. 25 OF 101

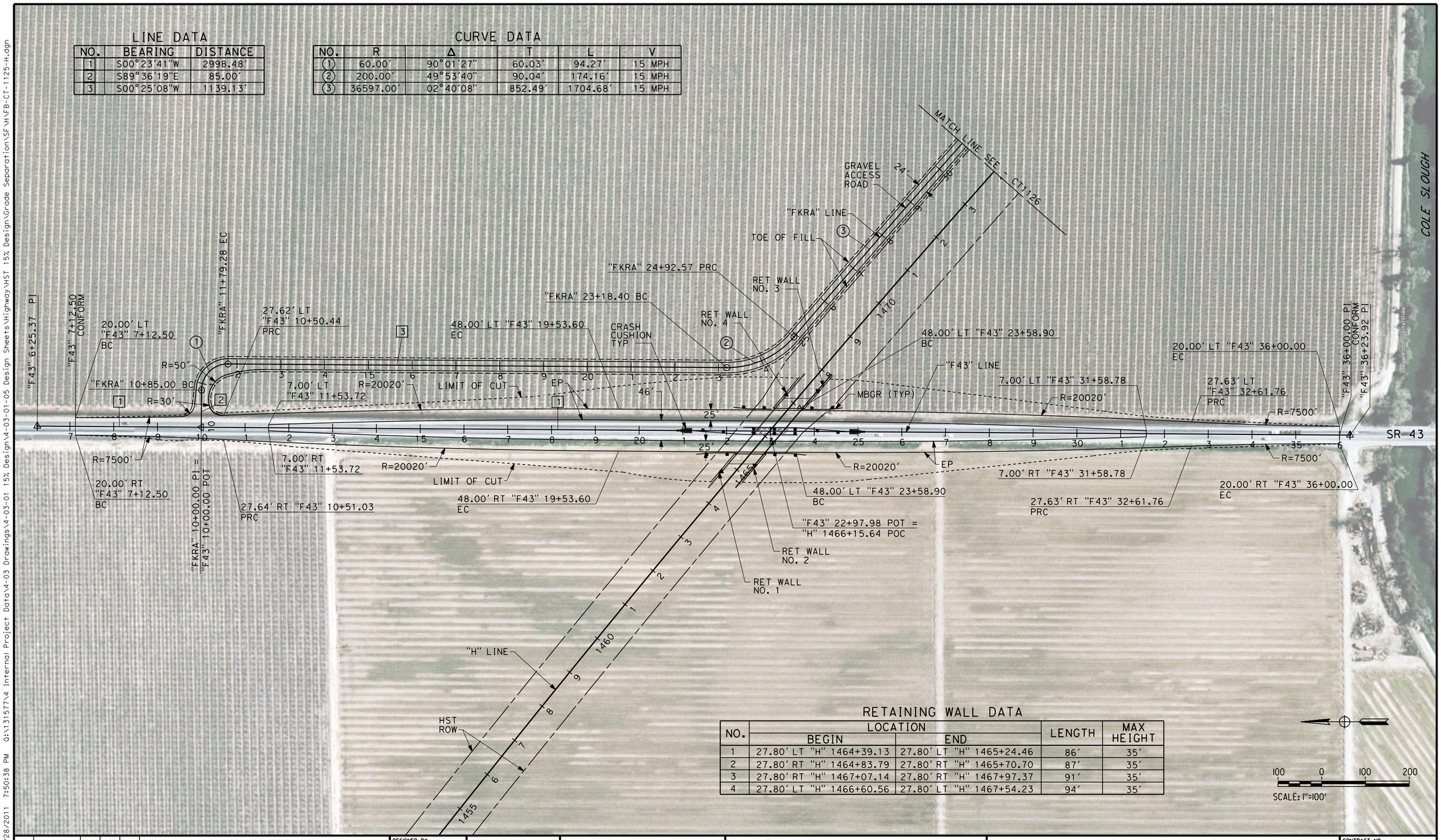
eron.sudhausen 6/28/2011 7:50:24 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1124-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°23'41"W	2998.48'
2	S89°36'19"E	85.00'
3	S00°25'08"W	1139.13'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	60.00'	90°01'27"	60.03'	94.27'	15 MPH
(2)	200.00'	49°53'40"	90.04'	174.16'	15 MPH
(3)	36597.00'	02°40'08"	852.49'	1704.68'	15 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	27.80' LT "H" 1464+39.13	27.80' LT "H" 1465+24.46	86'	35'
2	27.80' RT "H" 1464+83.79	27.80' RT "H" 1465+70.70	87'	35'
3	27.80' RT "H" 1467+07.14	27.80' RT "H" 1467+97.37	91'	35'
4	27.80' LT "H" 1466+60.56	27.80' LT "H" 1467+54.23	94'	35'

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
STATE ROUTE 43 - KINGS RIVER LEVEE ACCESS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1125
SCALE AS SHOWN
SHEET NO. 26 OF 101

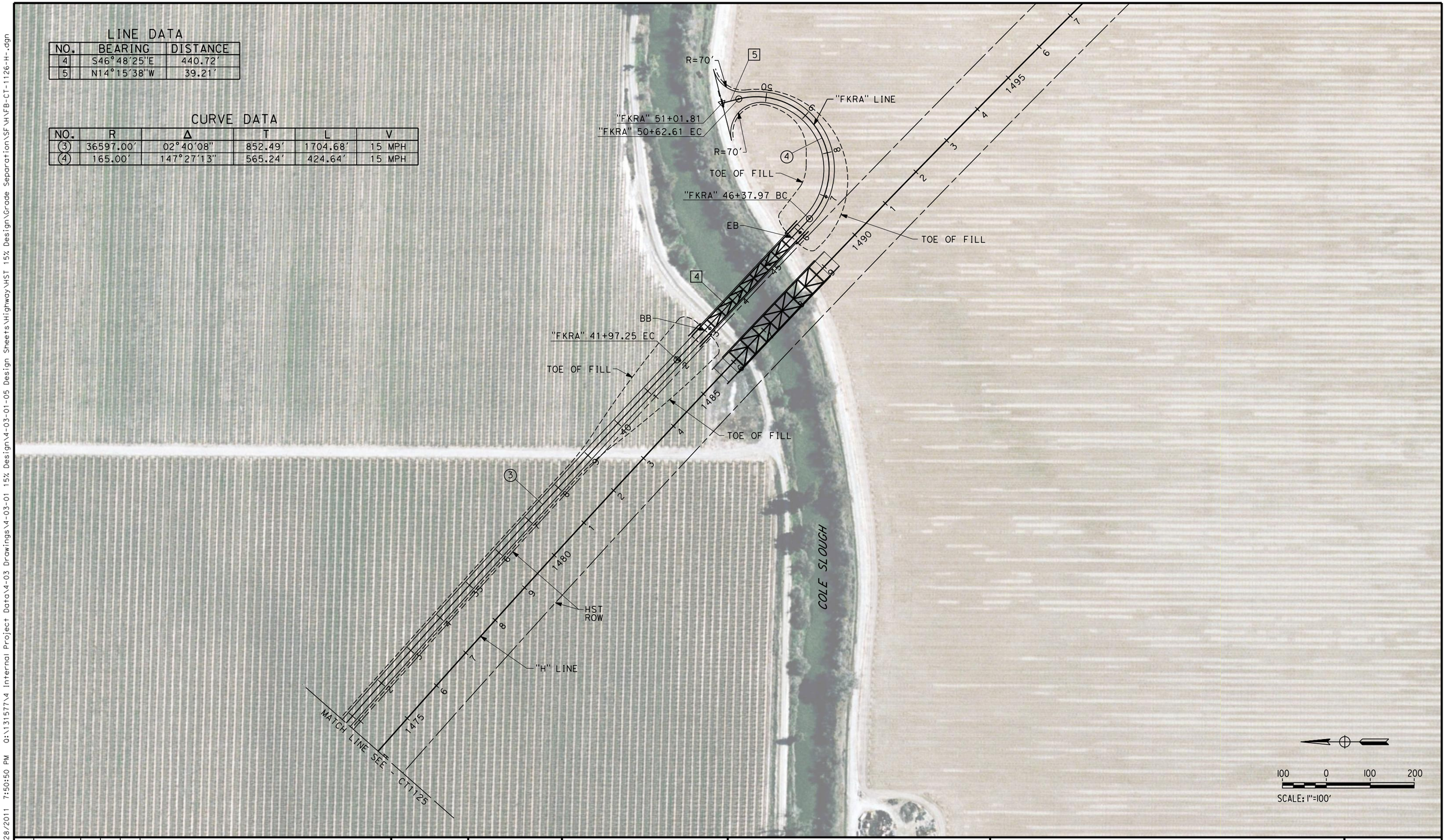
eron.sudhausen 6/28/2011 7:50:38 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-1125-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
4	S46°48'25"E	440.72'
5	N14°15'38"W	39.21'

CURVE DATA

NO.	R	Δ	T	L	V
③	36597.00'	02°40'08"	852.49'	1704.68'	15 MPH
④	165.00'	147°27'13"	565.24'	424.64'	15 MPH



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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
STATE ROUTE 43 - KINGS RIVER LEVEE ACCESS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1126
SCALE AS SHOWN
SHEET NO. 27 OF 101

eron.sudhausen 6/28/2011 7:50:50 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\Grade Separation\SF\HFB-CT-1126-H-.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°27'49"E	4000.00'

"KCA" 10+00.00 PI

"KCA" 11+89.66 CONFORM

STREET BARRICADE

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

DRAINAGE DITCH (TYP)

9TH AVE

HST ROW

"H" LINE

"KCA" 30+02.01 POT = "H" 1562+56.19 POC

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

CAIRO AVE

"KCA" LINE

32'

1

BB

EB

R=30'

R=30'

EP

MBGR (TYP)

CONFORM

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

MATCH LINE SEE - CT1129

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
CAIRO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1128
SCALE AS SHOWN
SHEET NO. 28 OF 101

eron.sudhausen 6/28/2011 7:51:03 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\Grade Separation\SF\HFB-CT-1128-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°27'49"E	4000.00'

LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
"KCA" 47+46.66 CONFORM
"KCA" 50+00.00 PI
1
32'
"KCA" LINE
CAIRO AVE
EP
MATCH LINE SEE - CT1128
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
HST ROW
9
1570
"H" LINE
100 0 100 200
SCALE: 1"=100'

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 FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
CAIRO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1129
SCALE AS SHOWN
SHEET NO. 29 OF 101

eron.sudhausen 6/28/2011 7:51:14 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\Grade Separation\SF\HNFB-CT-1129-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°55'14"E	3600.00'
2	S0°04'46"W	241.00'

"KDO" 10+00.00 PI
"KDO" 10+65.97 CONFORM
"KDO" 13+35.29 POT = "K8S" 10+00.00 PT
"KDO" 28+01.73 POT = "H" 1653+99.55 POC
DRAINAGE DITCH (TYP)
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
REMOVE BASE AND SURFACING (TYP)
HST ROW
"H" LINE
"KDO" LINE
DOVER AVE
8TH AVE
R=60'
"K8S" LINE
32'
MBGR (TYP)
BB
EB
EP
MATCH LINE - SEE CT1133
MATCH LINE - SEE CT1131

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
DOVER AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1130
SCALE AS SHOWN
SHEET NO. 30 OF 101

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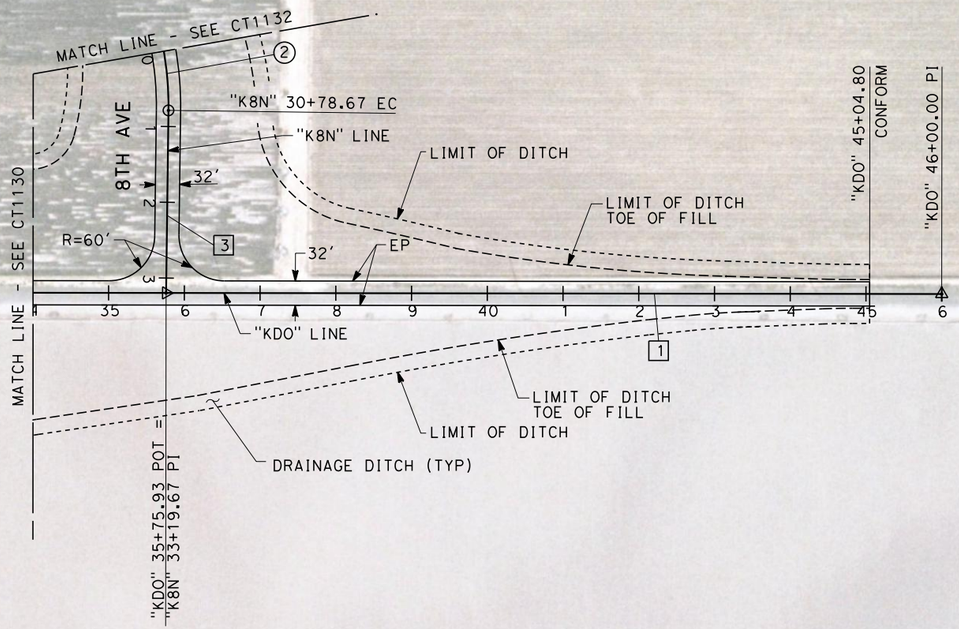
LINE DATA

NO.	BEARING	DISTANCE
1	S89°55'14"E	3600.00'
3	S0°44'50"W	241.00'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	425.00'	83°11'29"	377.27'	617.08'	35 MPH



100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
DOVER AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1131
SCALE AS SHOWN
SHEET NO. 31 OF 101

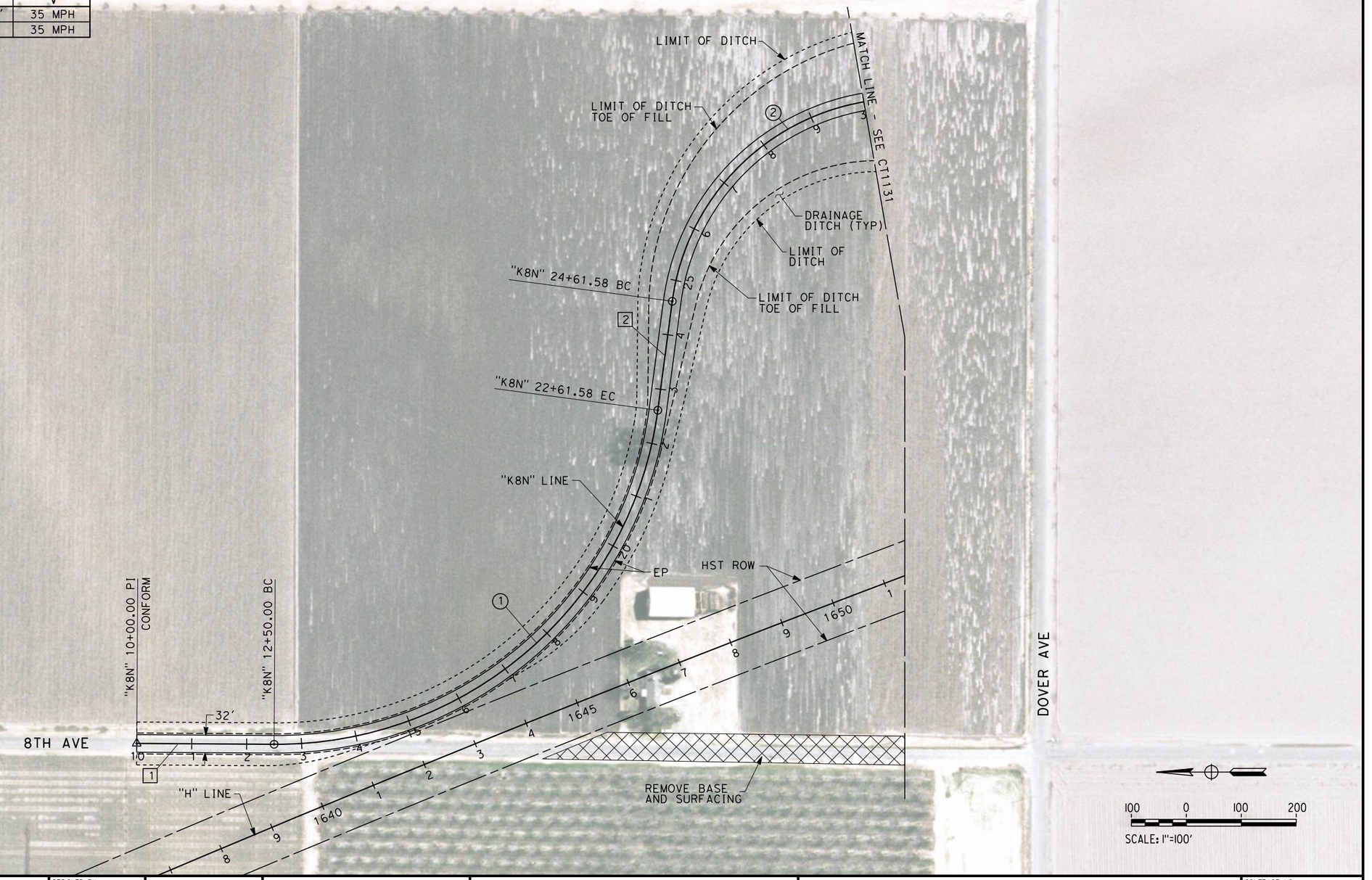
eron.sudhausen 6/28/2011 7:51:34 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1131-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°21'19"W	250.00'
2	S82°26'38"E	200.00'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	700.00'	82°47'57"	617.12'	1011.58'	35 MPH
(2)	425.00'	83°11'29"	377.27'	617.08'	35 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1132
SCALE AS SHOWN
SHEET NO. 32 OF 101

eron.sudhausen 6/28/2011 7:51:44 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\Grade Separation\SF\HNFB-CT-1132-H.dgn

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REMOVE BASE AND SURFACING

"K8S" 29+42.71 EC

"K8S" 31+92.71 PI
CONFORM

8TH AVE

EP

"K8S" LINE

"K8S" 20+07.04 BC

"K8S" 18+07.04 EC

32'

"K8S" 12+41.00 BC

MATCH LINE - SEE CT1130

DOVER AVE

LINE DATA

NO.	BEARING	DISTANCE
2	S0°04'46"W	241.00'
3	S76°13'50"E	200.00'
4	S0°21'19"W	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	425.00'	76°18'37"	333.90'	566.04'	35 MPH
(3)	700.00'	76°35'09"	552.69'	935.67'	35 MPH

100 0 100 200
SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (SOUTH)

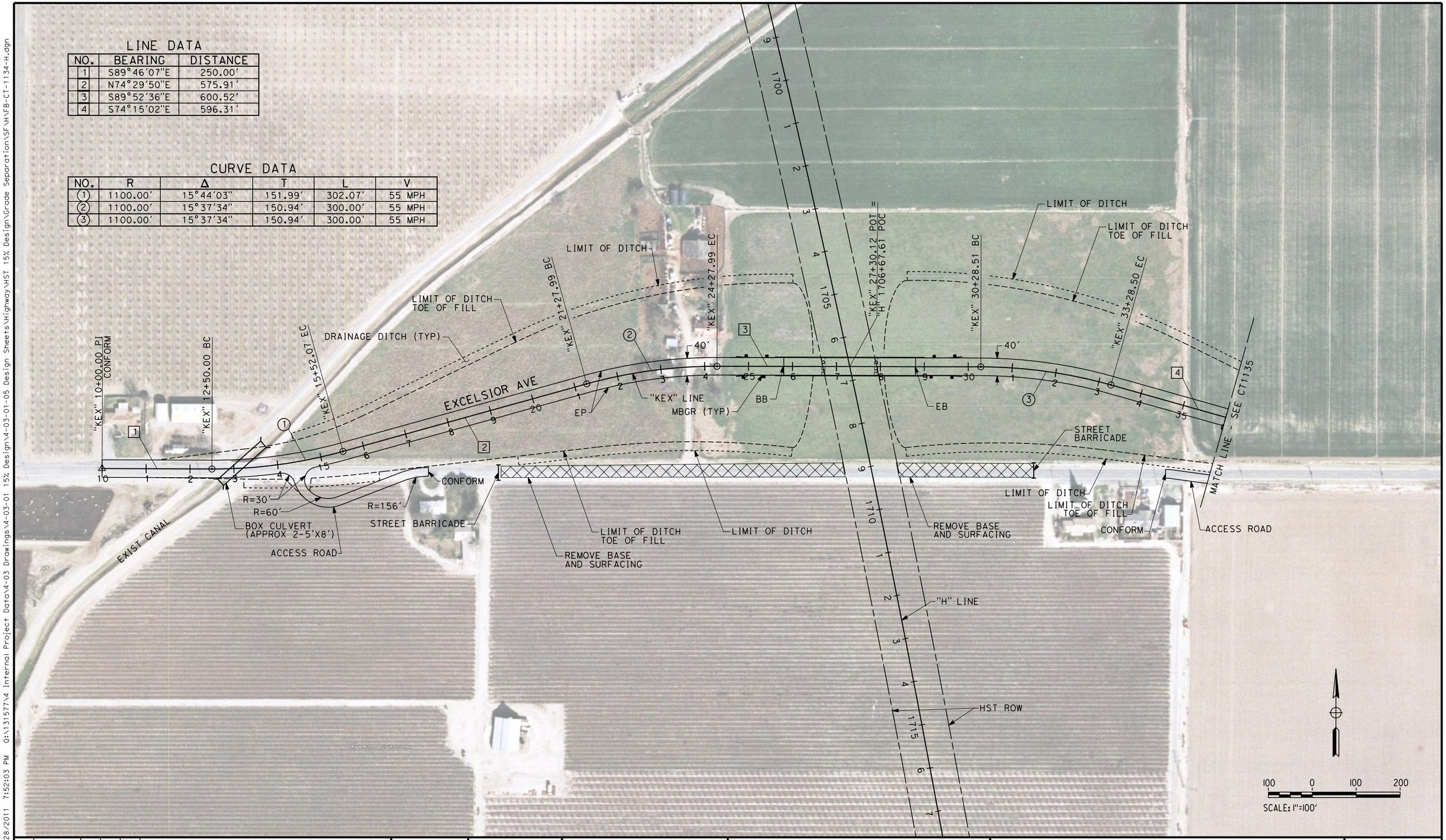
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1133
SCALE AS SHOWN
SHEET NO. 33 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	S89°46'07"E	250.00'
2	N74°29'50"E	575.91'
3	S89°52'36"E	600.52'
4	S74°15'02"E	596.31'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	15°44'03"	151.99'	302.07'	55 MPH
(2)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH
(3)	1100.00'	15°37'34"	150.94'	300.00'	55 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1134
SCALE AS SHOWN
SHEET NO. 34 OF 101

eron.sudhausen 6/28/2011 7:52:03 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\Grade Separation\SF\HFB-CT-1134-H.dgn

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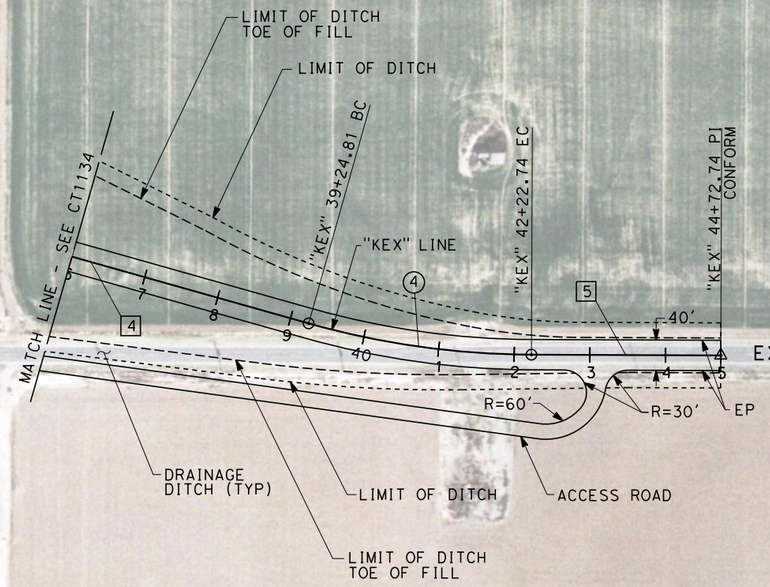
LINE DATA

NO.	BEARING	DISTANCE
4	S74°15'02"E	596.31'
5	S89°46'07"E	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(4)	1100.00'	15°31'05"	149.88'	297.93'	55 MPH



100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1135
SCALE AS SHOWN
SHEET NO. 35 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	N89°51'28"E	250.00'
2	N74°15'47"E	569.56'
3	N89°53'20"E	800.00'
4	S74°29'06"E	563.57'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	15°35'42"	150.63'	299.40'	55 MPH
(2)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH
(3)	1100.00'	15°37'34"	150.94'	300.00'	55 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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1136
SCALE AS SHOWN
SHEET NO. 36 OF 101

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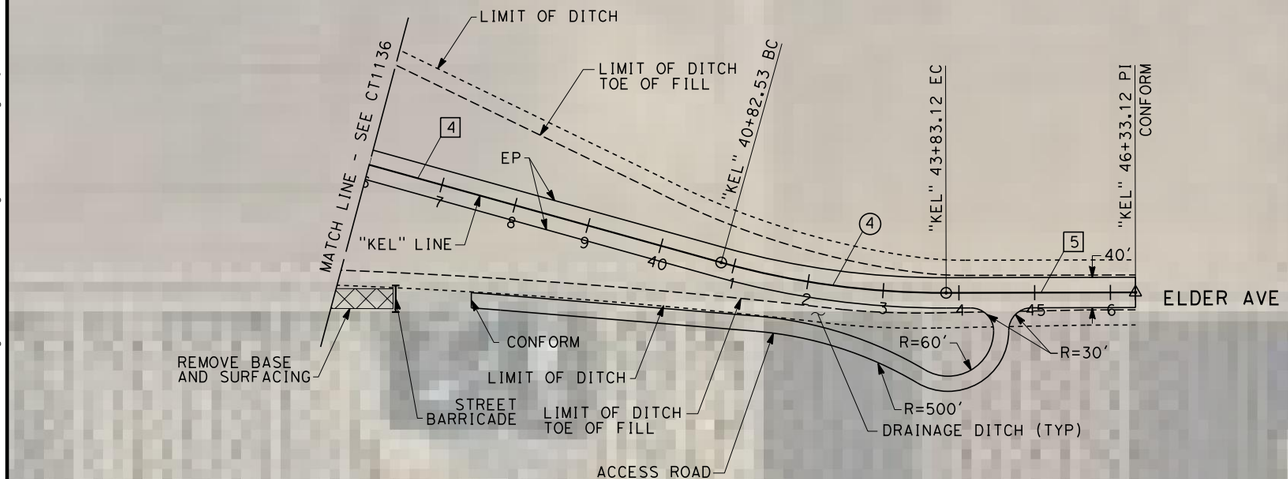
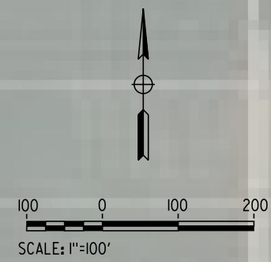
LINE DATA

NO.	BEARING	DISTANCE
4	S74°29'06"E	563.57'
5	N89°51'28"E	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(4)	1100.00'	15°39'26"	151.24'	300.60'	55 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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

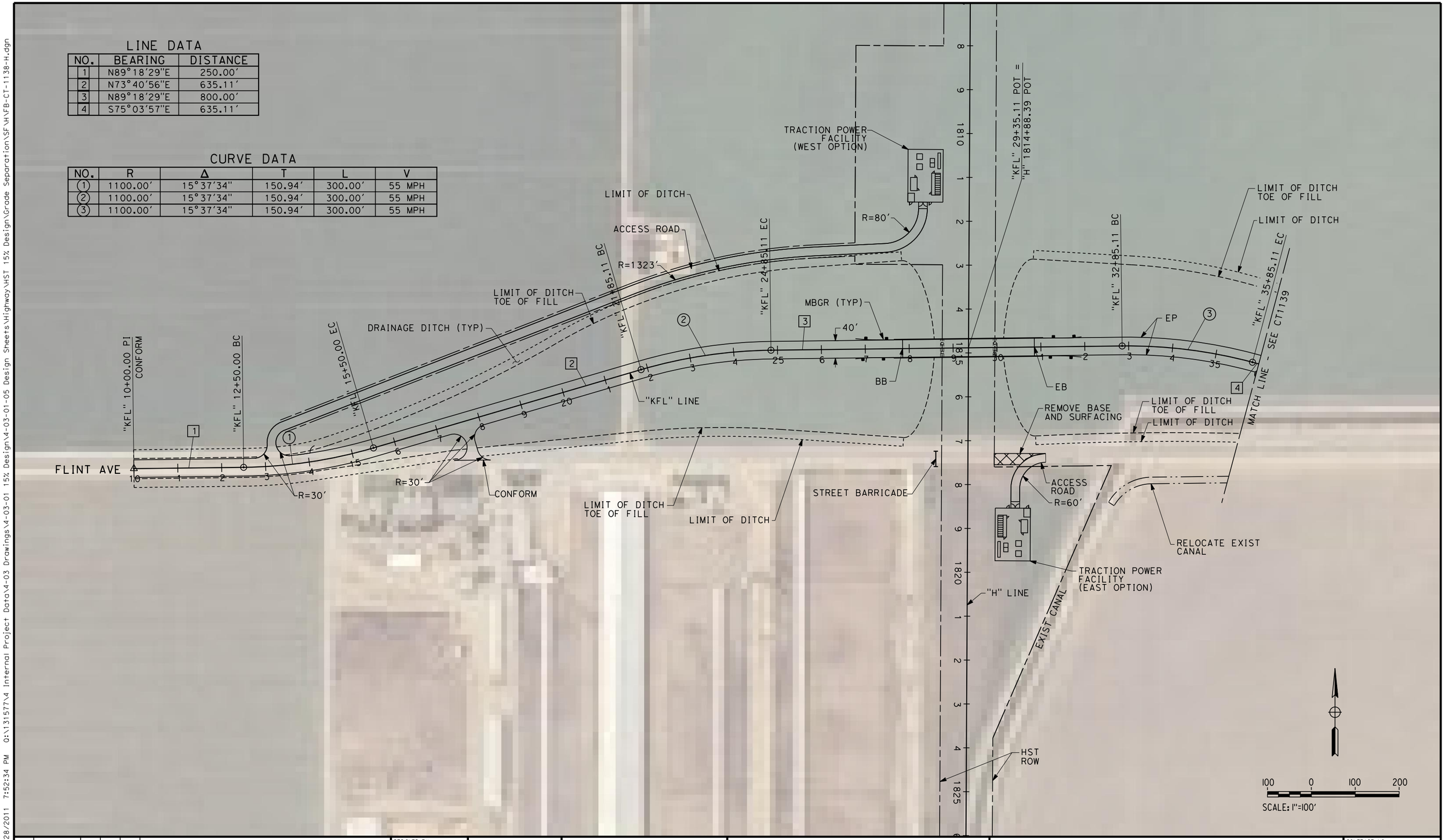
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1137
SCALE AS SHOWN
SHEET NO. 37 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	N89°18'29"E	250.00'
2	N73°40'56"E	635.11'
3	N89°18'29"E	800.00'
4	S75°03'57"E	635.11'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH
(2)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH
(3)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH



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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1138
SCALE AS SHOWN
SHEET NO. 38 OF 101

eron.sudhausen 6/28/2011 7:52:34 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\Grade Separation\SF\HFB-CT-1138-H.dgn

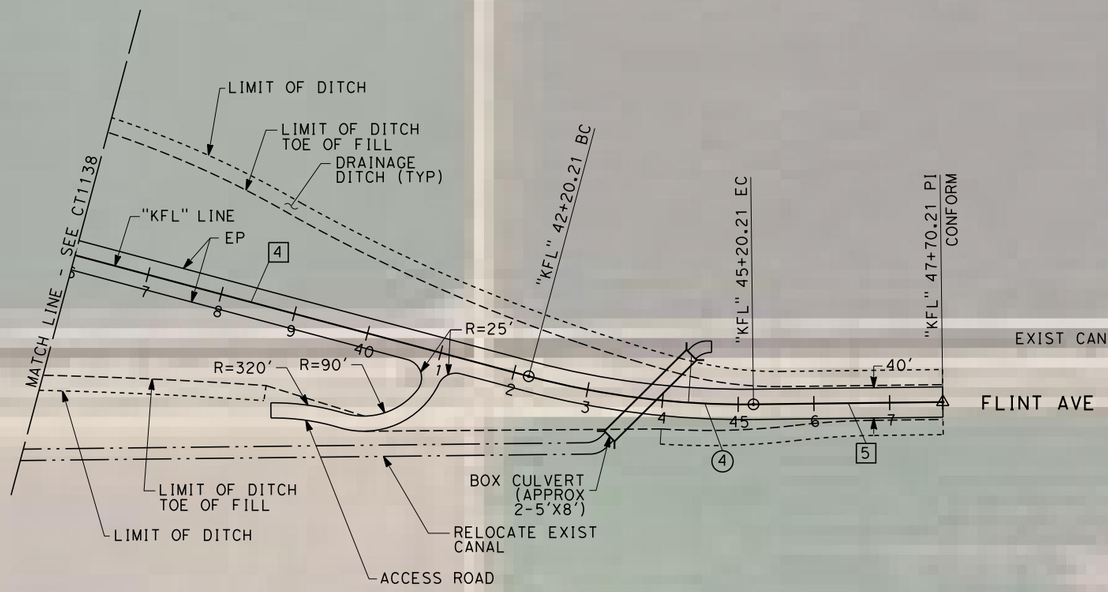
eron.sudhausen 6/28/2011 7:52:39 PM G:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1139-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
4	S75°03'57"E	635.11'
5	N89°18'29"E	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(4)	1100.00'	15°37'34"	150.94'	300.00'	55 MPH



100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1139
SCALE AS SHOWN
SHEET NO. 39 OF 101

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1100.00′	15°37′34"	150.94′	300.00′	55 MPH
(2)	1100.00′	15°37′34"	150.94′	300.00′	55 MPH
(3)	1100.00′	15°37′34"	150.94′	300.00′	55 MPH
(4)	100.00′	99°16′26"	117.65′	173.27′	15 MPH
(5)	1000.00′	14°55′00"	130.91′	260.34′	25 MPH
(6)	2000.00′	05°16′50"	92.23′	184.32′	55 MPH
(7)	4000.00′	10°33′40"	369.70′	737.30′	55 MPH
(8)	2000.00′	05°16′50"	92.23′	184.32′	55 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	N89°27′40"E	250.00′
2	N73°50′06"E	517.12′
3	N89°27′40"E	700.00′
4	S74°54′46"E	517.12′
5	S05°38′34"E	26.51′
6	N75°05′00"E	339.26′
7	S90°00′00"E	531.91′
8	S00°00′00"E	50.00′
9	S00°00′00"E	50.00′

"K7N" 0+00.00 PI
CONFORM
"K7N" 0+50.00 BC
"K7N" LINE
"K7N" 2+34.32 PRC
"KFA" 26+28.28 POT =
"K7N" 6+16.32 POC
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
"KFA" 20+67.12 BC
"KFA" 23+67.12 EC
"KFA" 27+17.12 POT =
"H" 1868+17.19 POT
"KFA" 30+67.12 BC
"KFA" 33+67.12 EC
DRAINAGE DITCH (TYP)
MBGR (TYP)
"KFA" 15+50.00 EC
"KFA" 9+79.75 PI
CONFORM
"KFA" 12+50.00 BC
RETAINING WALL
CONFORM
R=30′
EP
BB
EB
"KFA" LINE
"K7" LINE
32′
FARGO AVE
7 1/2 AVE CONNECTOR
R=60′
"K7N" 8+36.64 POC =
"K7" 13+31.28 POT
TOE OF FILL
CONFORM
ACCESS ROAD
R=580′
MATCH LINE - SEE CT1141
"K7N" 9+71.62 PRC
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
TOE OF FILL
"KFA" 13+47.99 POT =
"K7" 0+00.00 POT
"K7" 0+26.51 BC
"K7" 1+99.78 EC
"K7" 5+39.04 BC
"K7" 7+99.38 EC
"K7N" 11+55.95 EC
"K7N" 12+05.95 PI
CONFORM
7 1/2 AVE
"H" LINE
HST ROW

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	16.00′ LT "KFA" 11+47.33	16.00′ LT "KFA" 17+99.45	652′	24′

100 0 100 200
SCALE: 1"=100′

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1140
SCALE AS SHOWN
SHEET NO. 40 OF 101

eron.sudhausen 6/28/2011 7:52:43 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\Grade Separation\SF\HFB-CT-1140-H.dgn

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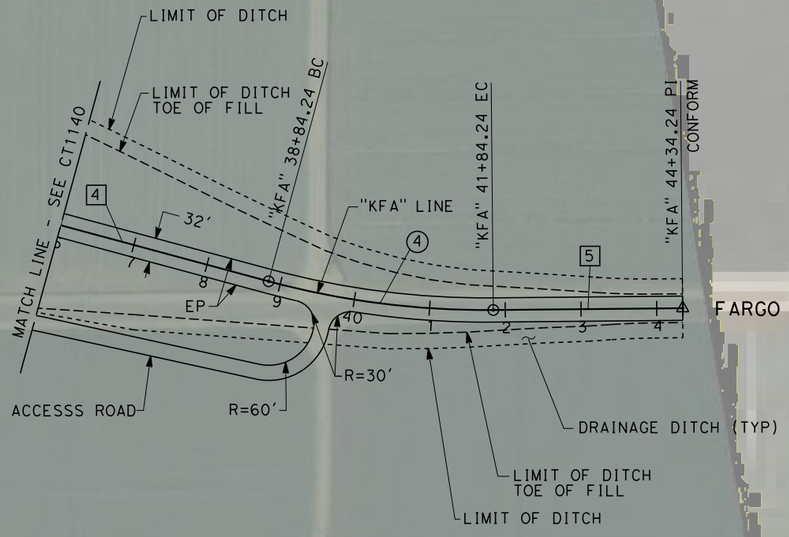
LINE DATA

NO.	BEARING	DISTANCE
4	S74°54'46"E	517.12'
5	N89°27'40"E	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(4)	1100.00'	15°37'34"	150.94'	300.60'	55 MPH



FARGO AVE

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1141
SCALE AS SHOWN
SHEET NO. 41 OF 101

LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'53"E	3650.00'

"KHA" 0+00.00 PI

"KHA" 0+88.49 CONFORM

HANFORD ARMONA RD

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

"KHA" LINE

EP

BB

EXIST CANAL

RELOCATE EXIST CANAL

HST ROW

"H" LINE

"KHA" 18+24.99 POT = "H" 2029+28.92 POT

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

MBGR (TYP)

40'

EB

MATCH LINE - SEE CT1145

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

BOX CULVERT (APPROX 2-5'X8')

EXIST CANAL

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1144
SCALE AS SHOWN
SHEET NO. 42 OF 101

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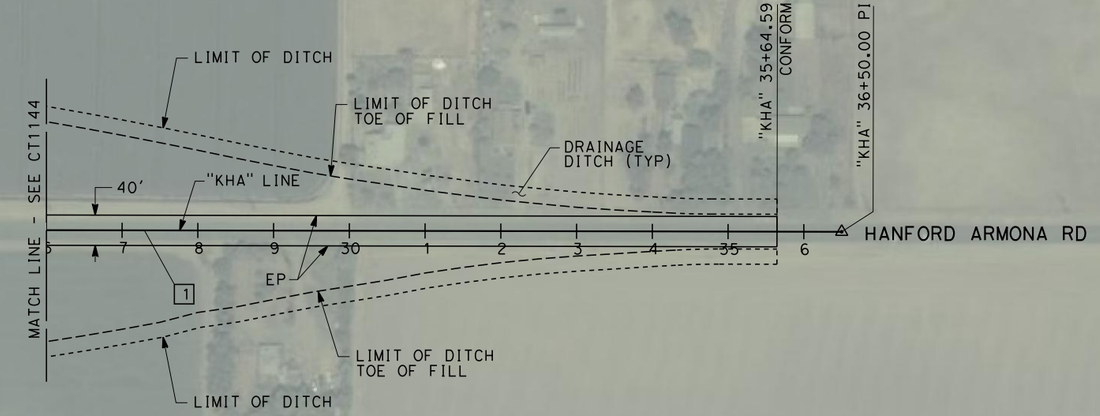
LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'53"E	3650.00'



100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1145
SCALE AS SHOWN
SHEET NO. 43 OF 101

eron.sudhausen 6/28/2011 7:52:59 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\Grade Separation\SF\HFB-CT-1146-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S90°00'00"E	3600.00'

HST ROW

"H" LINE

EXIST CANAL

RELOCATE EXIST CANAL

"KHO" 18+00.00 POT = "H" 2083+90.60 POT

"KHO" 0+00.00 PI

"KHO" 1+16.25 CONFORM

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

"KHO" LINE

HOUSTON AVE

1

40'

EP

BB

EB

MBGR (TYP)

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

MATCH LINE - SEE CT1147

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

BOX CULVERT (APPROX 2-5'X8')

RELOCATE EXIST CANAL

EXIST CANAL

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1146
SCALE AS SHOWN
SHEET NO. 44 OF 101

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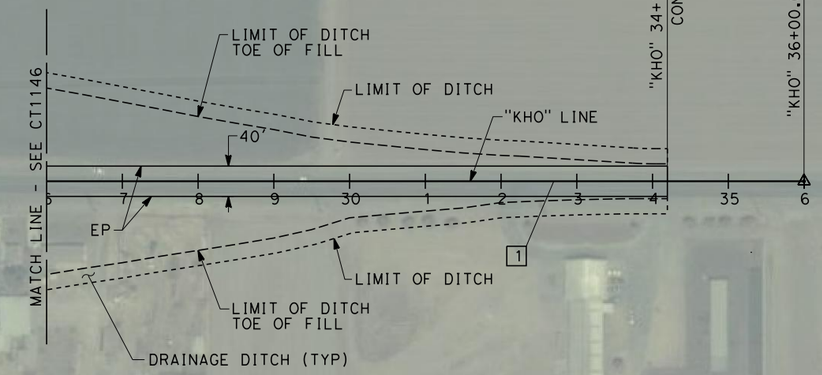
eron.sudhausen

LINE DATA

NO.	BEARING	DISTANCE
1	S90°00'00"E	3600.00'



HOUSTON AVE

7TH AVE

100 0 100 200

SCALE: 1"=100'

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
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1147
SCALE AS SHOWN
SHEET NO. 45 OF 101

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'21"E	3600.00'

HST ROW
"H" LINE
EXIST CANAL
RELOCATE EXIST CANAL
"KIO" 18+00.00 POT = "H" 2136+86.91 POT
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
"KIO" 0+00.00 PI
"KIO" 0+29.73 CONFORM
32'
"KIO" LINE
1
IONA AVE
EP
BB
BOX CULVERT (APPROX 2-5'X8')
EB
MBGR (TYP)
MATCH LINE - SEE CT1149
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
"H" 2144+62.94 POT =
"C1" 2074+96.41 POT =
"C2" 2067+07.38 POT =
"C3" 2073+97.17 POT

100 0 100 200
SCALE: 1"=100'

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

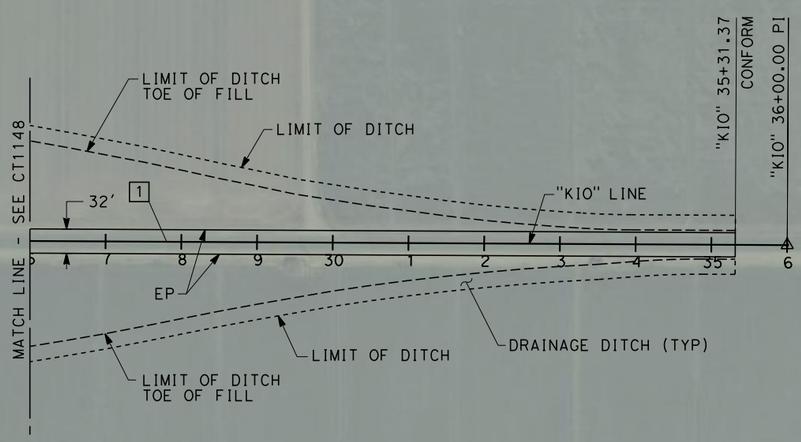
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1148
SCALE AS SHOWN
SHEET NO. 46 OF 101

eron.sudhausen 6/28/2011 7:53:16 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-1149-H.dgn



LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'21"E	3600.00'

100 0 100 200

SCALE: 1"=100'

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

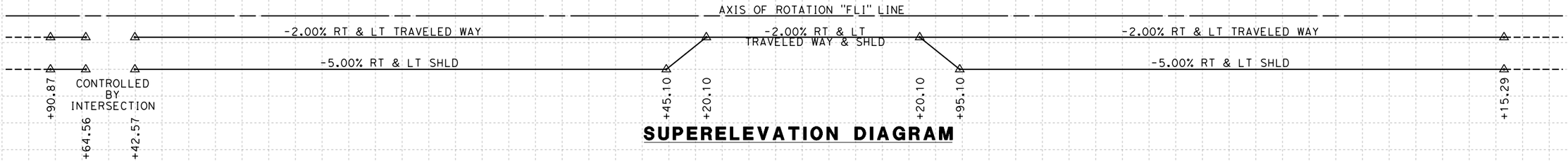
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
IONA AVE

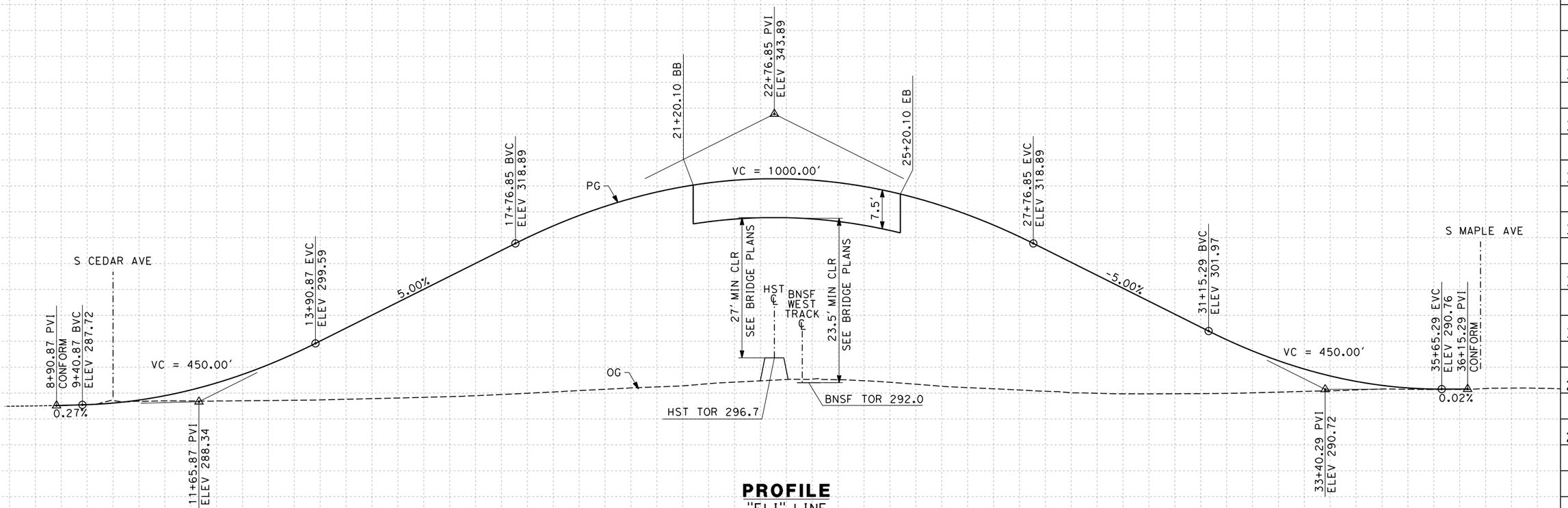
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1149
SCALE AS SHOWN
SHEET NO. 47 OF 101

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FLI" 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	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

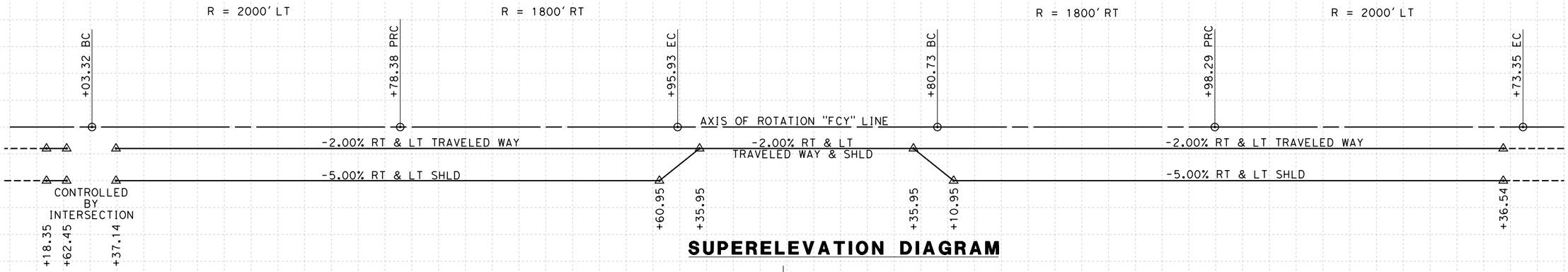
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E LINCOLN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2101
SCALE AS SHOWN
SHEET NO. 48 OF 101

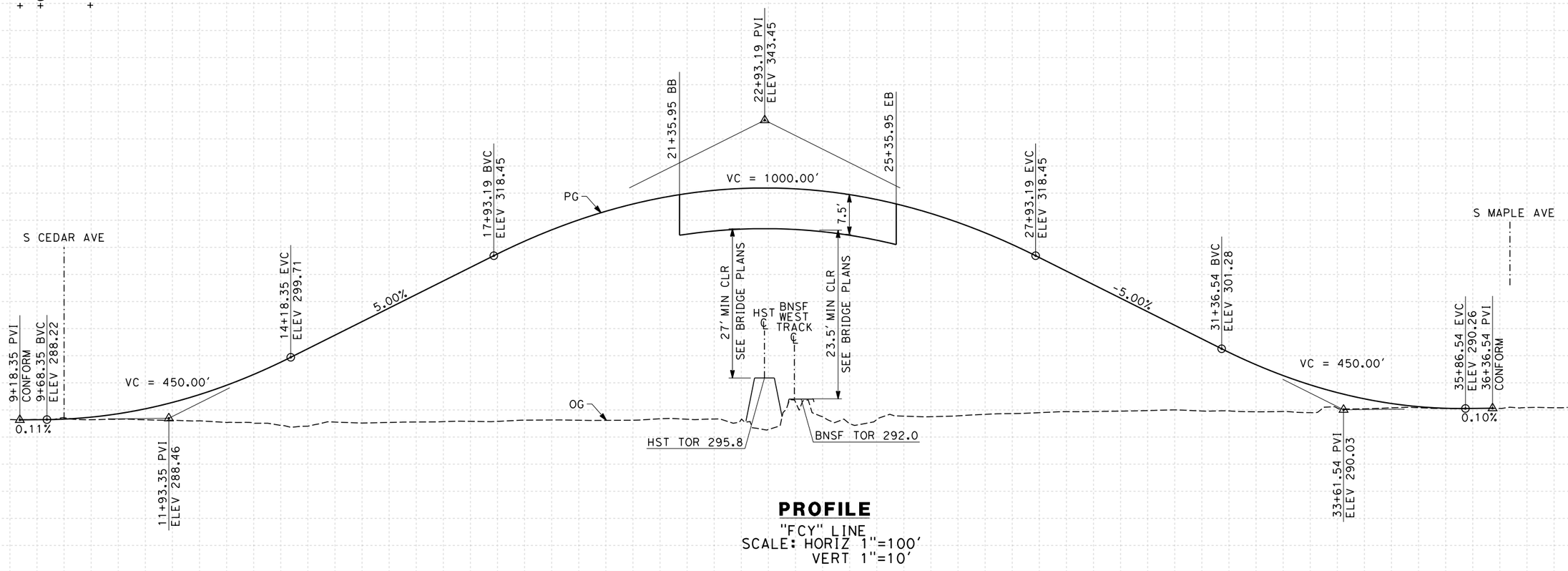
eron.sudhausen 6/28/2011 7:53:20 PM D:\1315774 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2101-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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	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

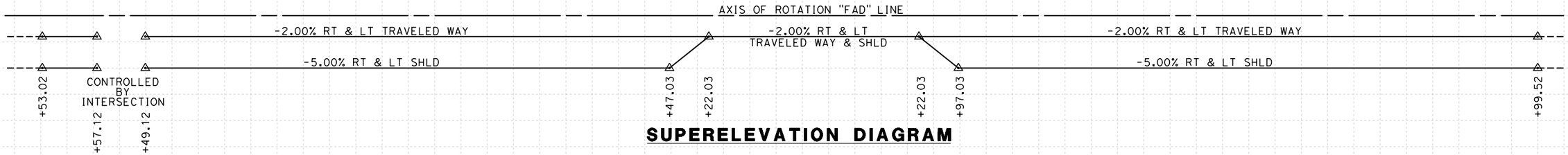
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E CLAYTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2102
SCALE AS SHOWN
SHEET NO. 49 OF 101

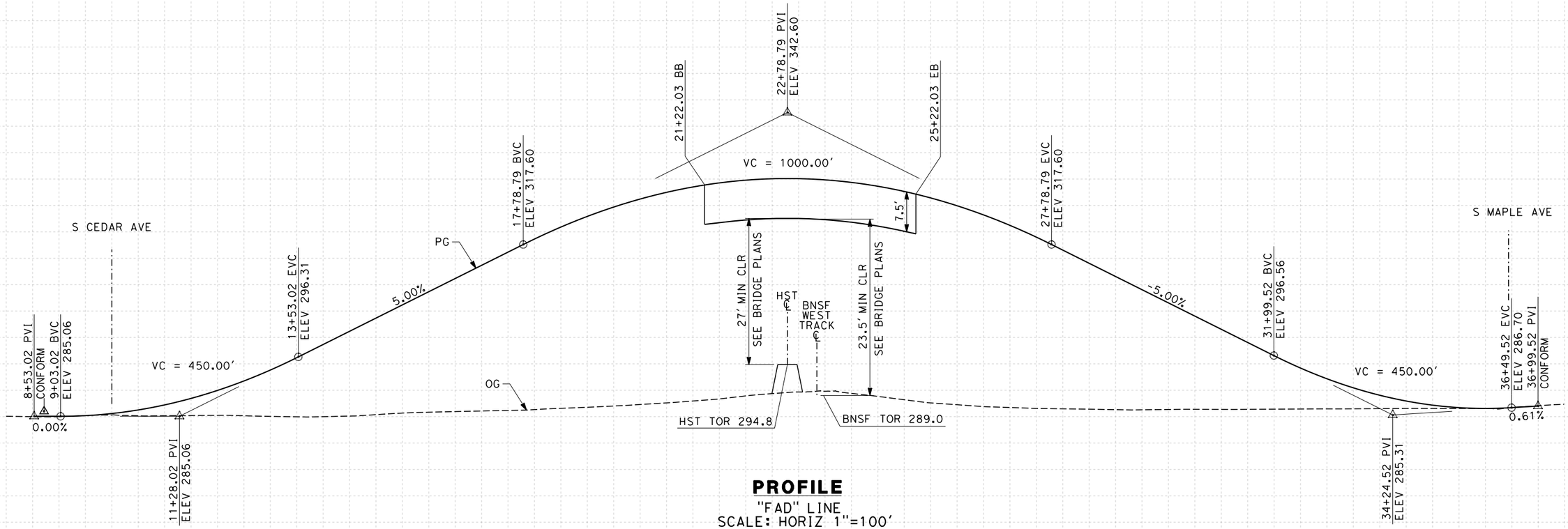
eron.sudhausen 6/28/2011 7:53:22 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2102-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FAD" 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	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 FRESNO TO BAKERSFIELD

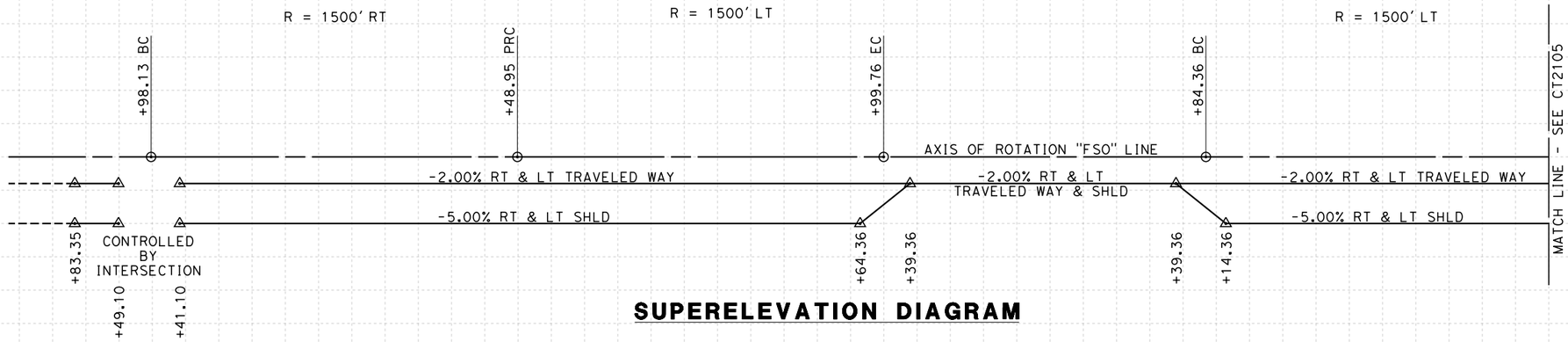
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E ADAMS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2103
SCALE AS SHOWN
SHEET NO. 50 OF 101

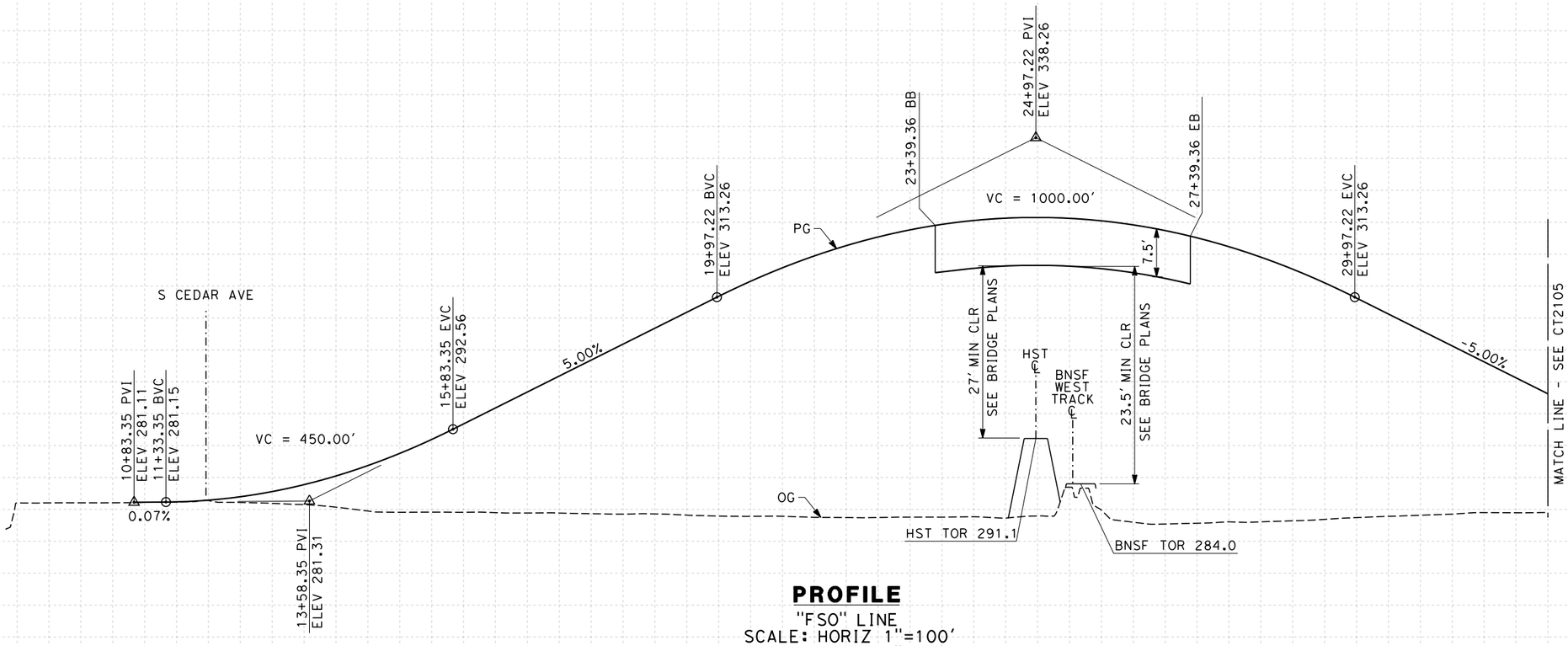
eron.sudhausen 6/28/2011 7:53:23 PM D:\1315774 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2103-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

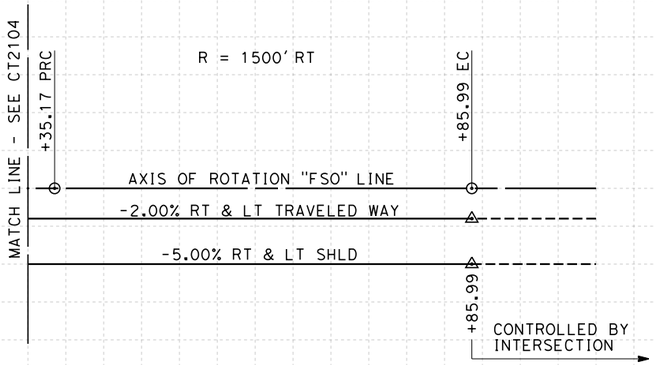
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

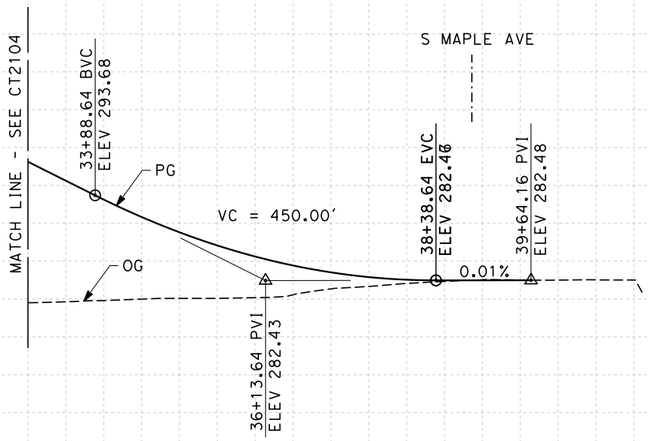
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E SOUTH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2104
SCALE AS SHOWN
SHEET NO. 51 OF 101

eron.sudhausen 6/28/2011 7:53:25 PM D:\1315774 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2104-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		3	4	35	6	7	8	9	40	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

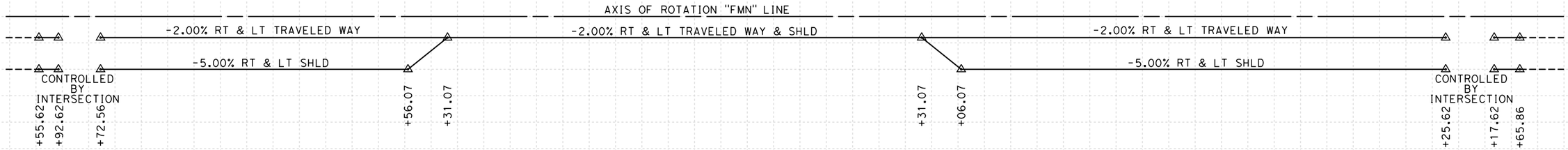
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E SOUTH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2105
SCALE AS SHOWN
SHEET NO. 52 OF 101

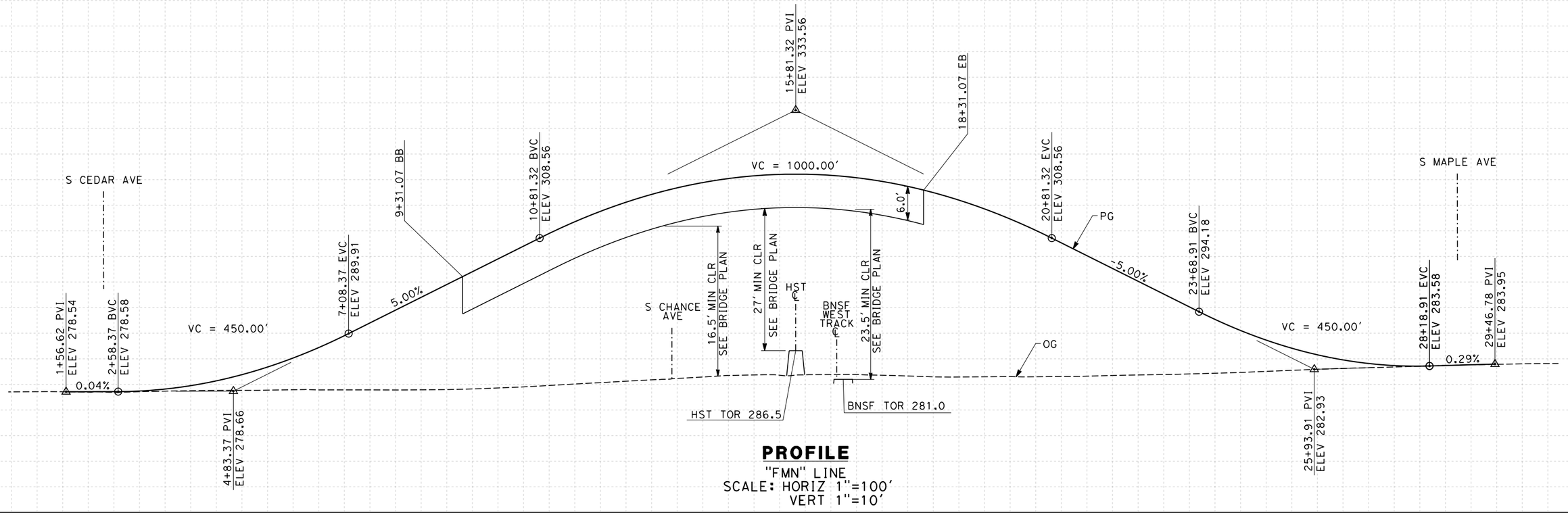
eron.sudhausen 6/28/2011 7:53:26 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2105-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER S CHANCE AVE IS 16.5'
4. VERTICAL DESIGN SPEED = 45 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	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

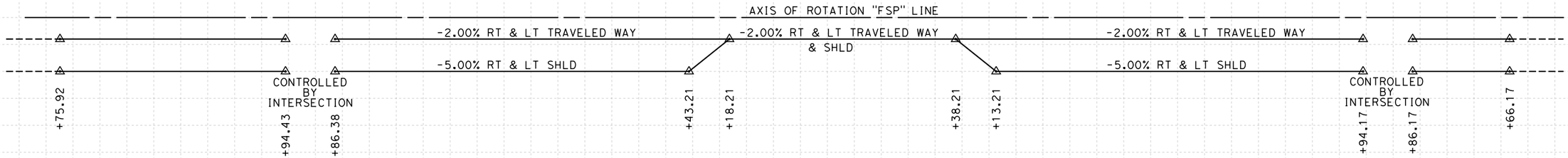
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2106
SCALE AS SHOWN
SHEET NO. 53 OF 101

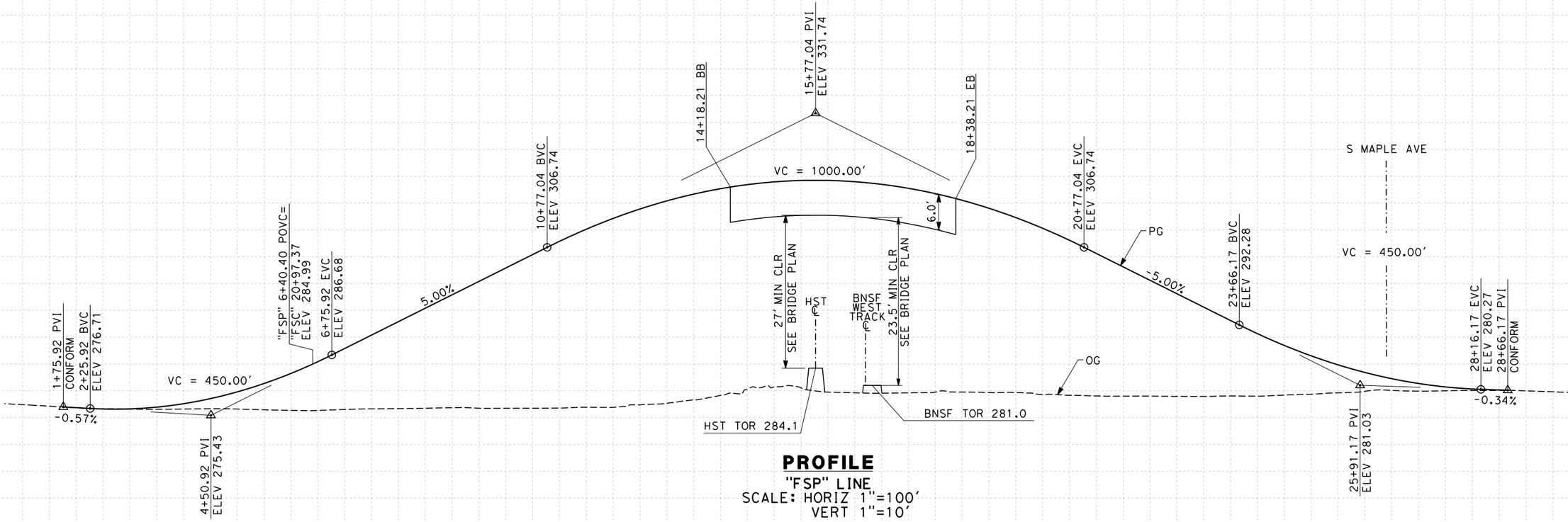
eron.sudhausen 6/28/2011 7:53:28 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2106-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	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
FRESNO TO BAKERSFIELD

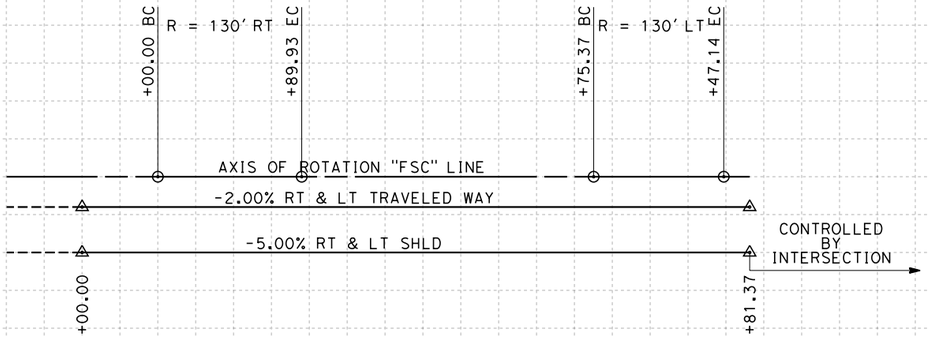
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E SPRINGFIELD AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2107
SCALE AS SHOWN
SHEET NO. 54 OF 101

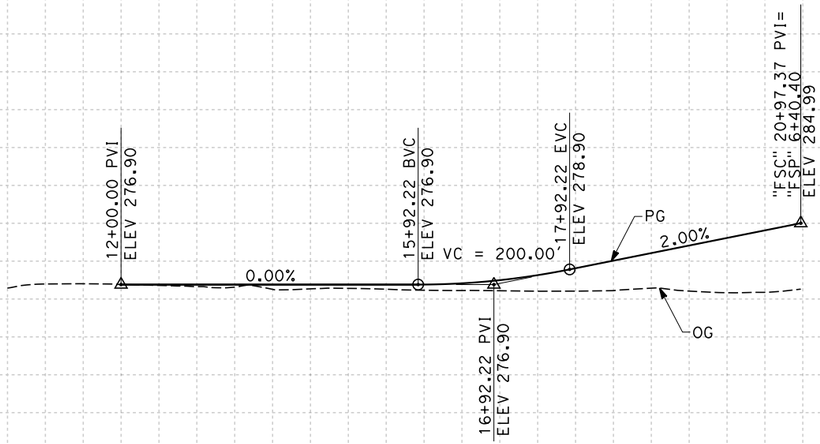
eron.sudhausen 6/28/2011 7:53:29 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2107-H.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 25 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO DRAWING CT1107 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		2	3	4	15	6	7	8	9	20	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

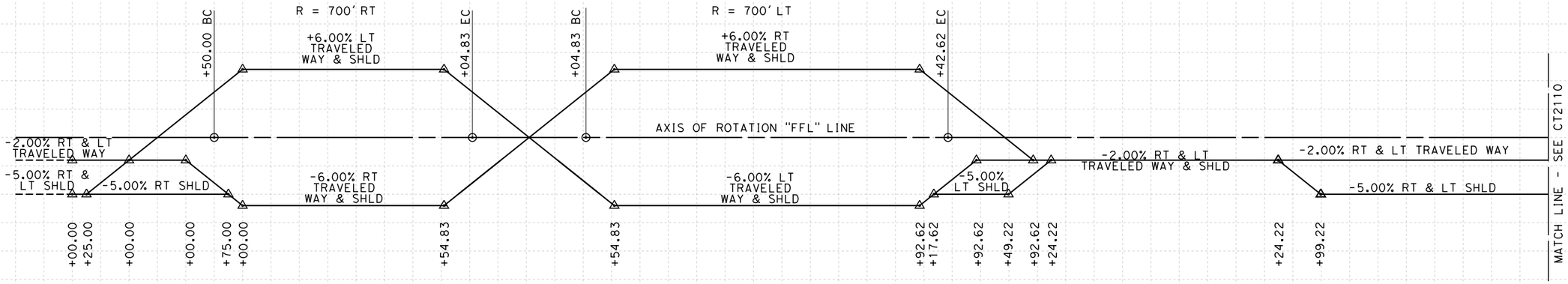
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CHANCE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2108
SCALE AS SHOWN
SHEET NO. 55 OF 101

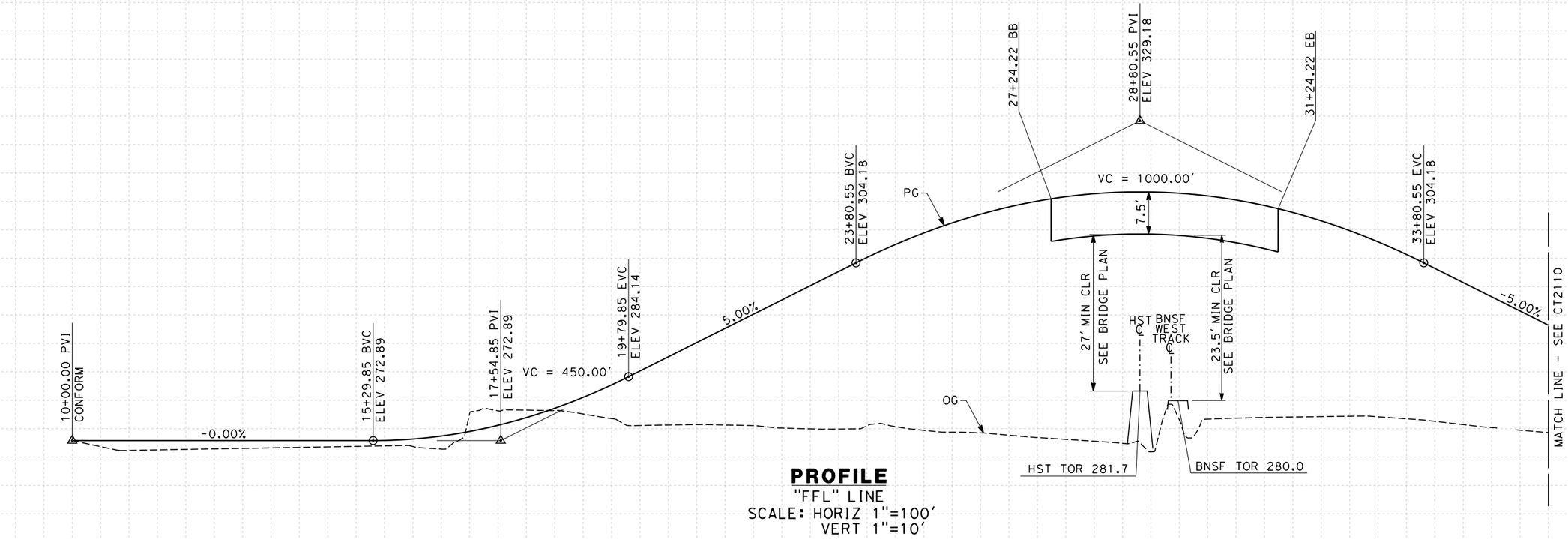
eron.sudhausen 6/28/2011 7:53:31 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2108-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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

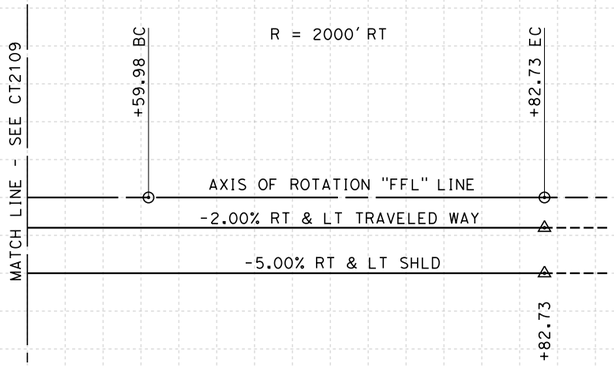
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E FLORAL AVE

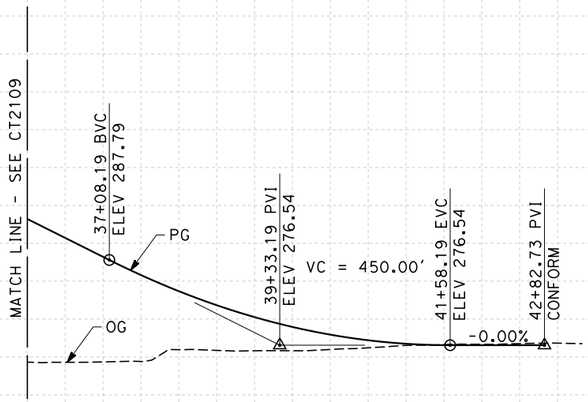
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2109
SCALE AS SHOWN
SHEET NO. 56 OF 101

eron.sudhausen 6/28/2011 7:53:33 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2109-H.dgn

eron.sudhausen 6/28/2011 7:53:34 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2110-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	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

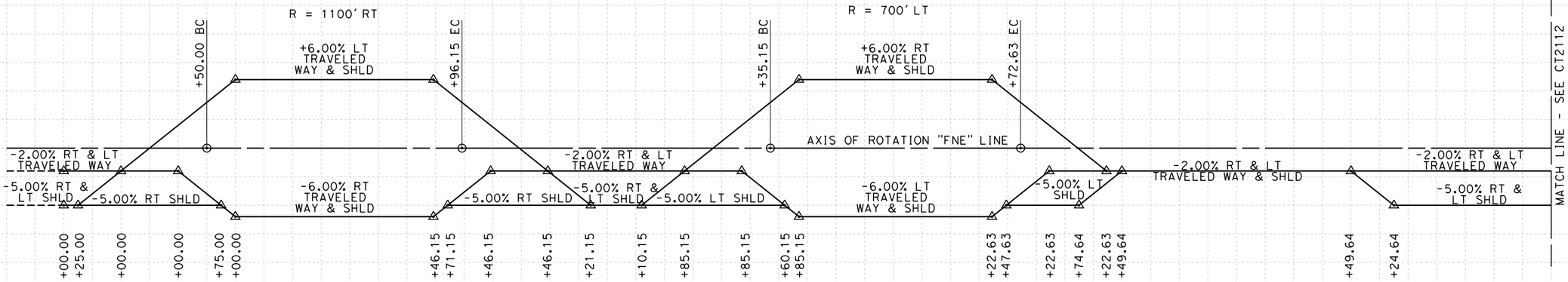
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E FLORAL AVE

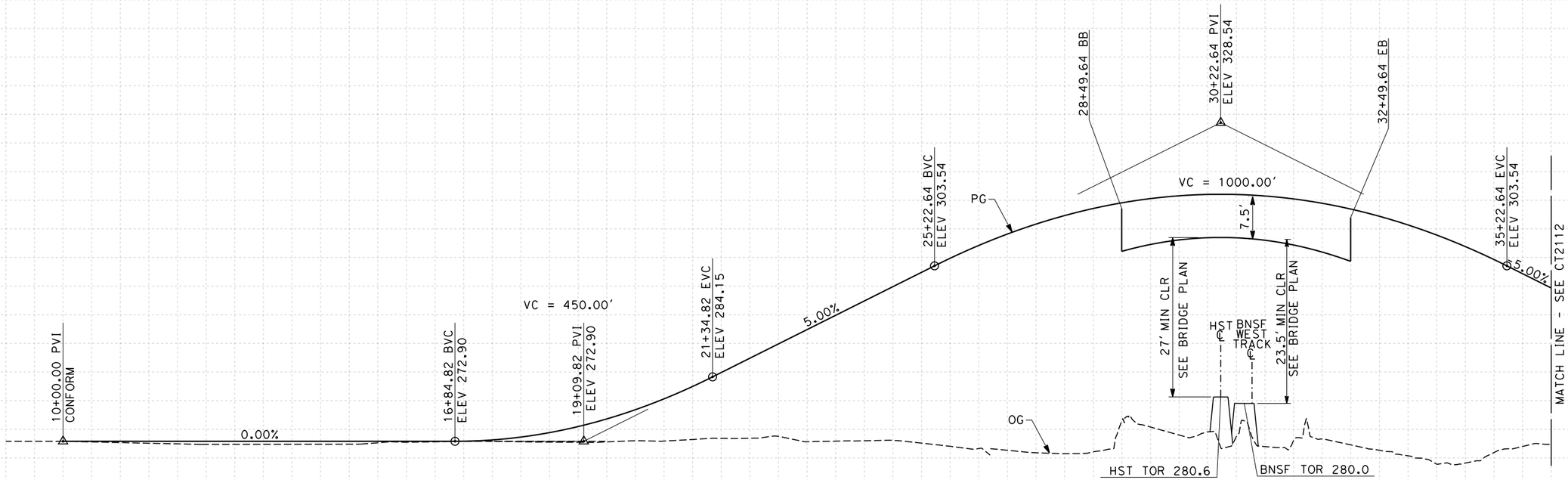
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2110
SCALE AS SHOWN
SHEET NO. 57 OF 101

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 45 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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

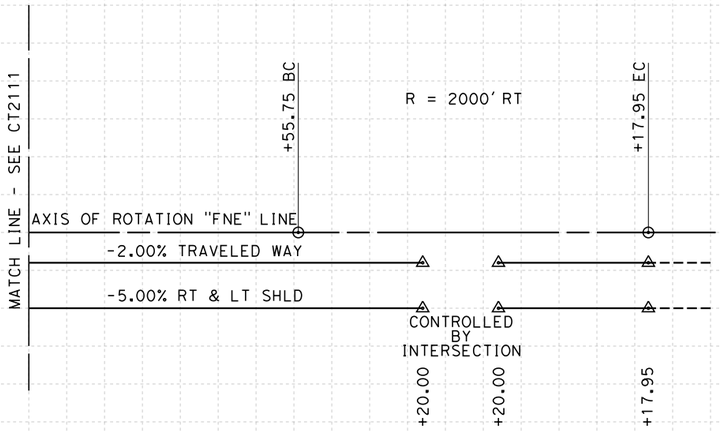
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

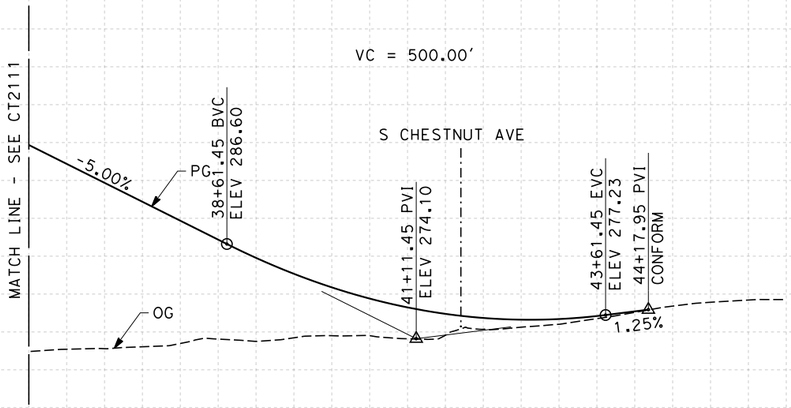
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2111
SCALE AS SHOWN
SHEET NO. 58 OF 101

eron.sudhausen 6/28/2011 7:53:36 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\Grade Separation\SF\H\FB-CT-2111-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	6	7	8	9	40	1	2	3	4	45	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

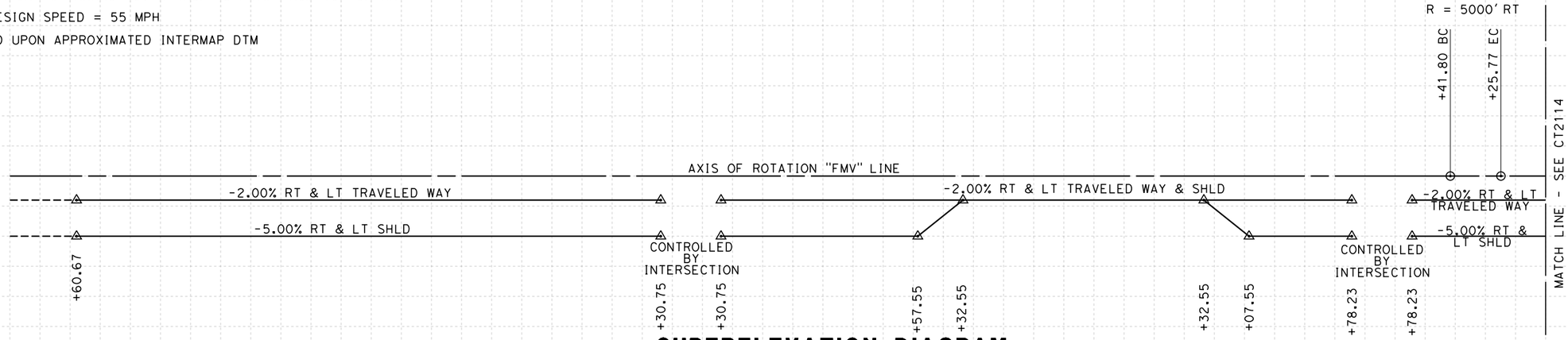
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2112
SCALE AS SHOWN
SHEET NO. 59 OF 101

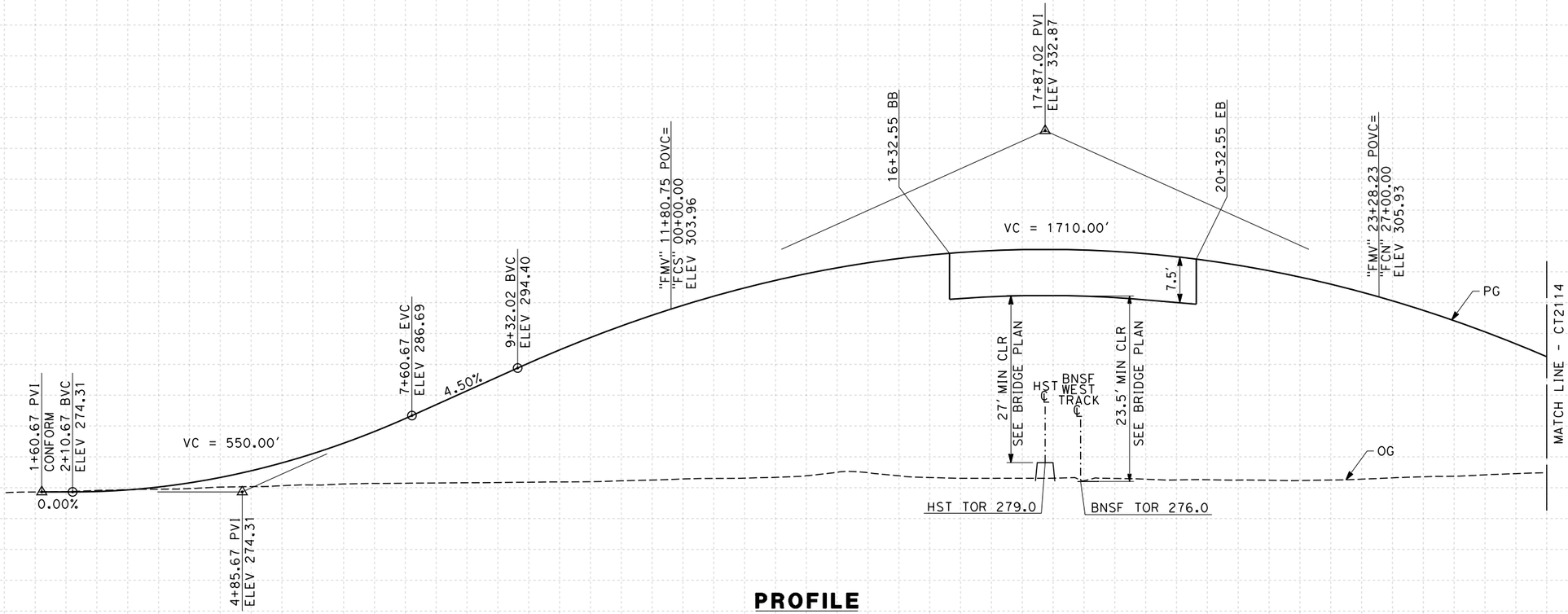
eron.sudhausen 6/28/2011 7:53:37 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2112-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 23.5' FROM TOP OF RAIL
3. VERTICAL DESIGN SPEED = 55 MPH
4. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	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

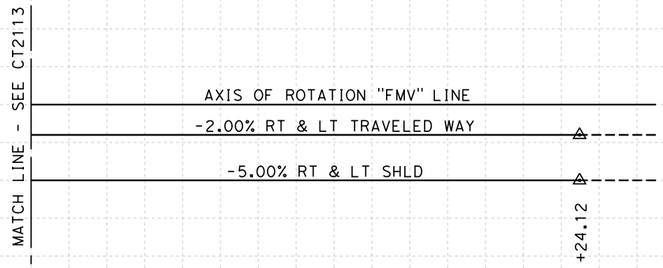
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

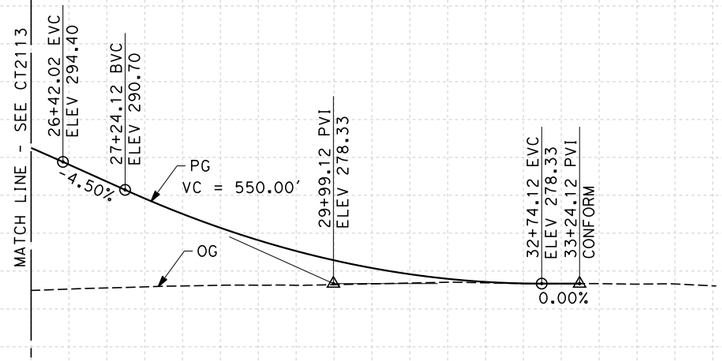
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E MOUNTAIN VIEW AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2113
SCALE AS SHOWN
SHEET NO. 60 OF 101

eron.sudhausen 6/28/2011 7:53:39 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\Grade Separation\SF\H\FB-CT-2113-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	6	7	8	9	30	1	2	3	4	5	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

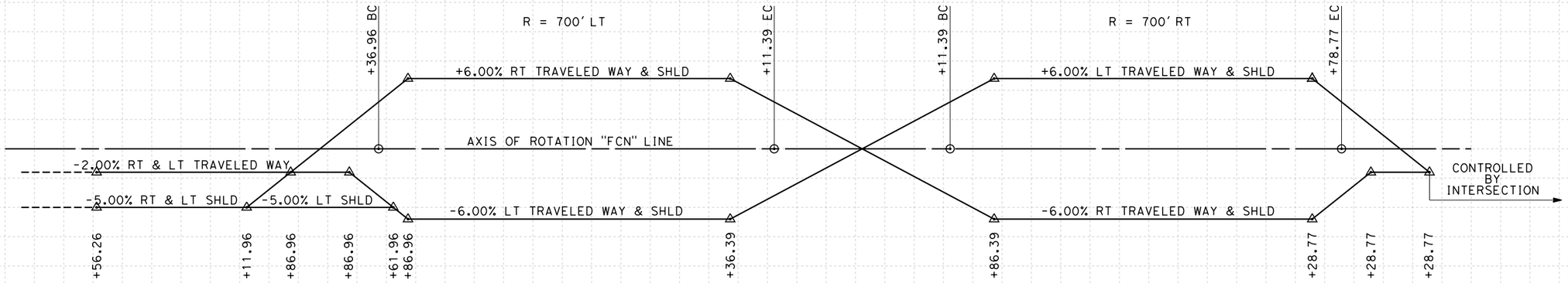
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E MOUNTAIN VIEW AVE

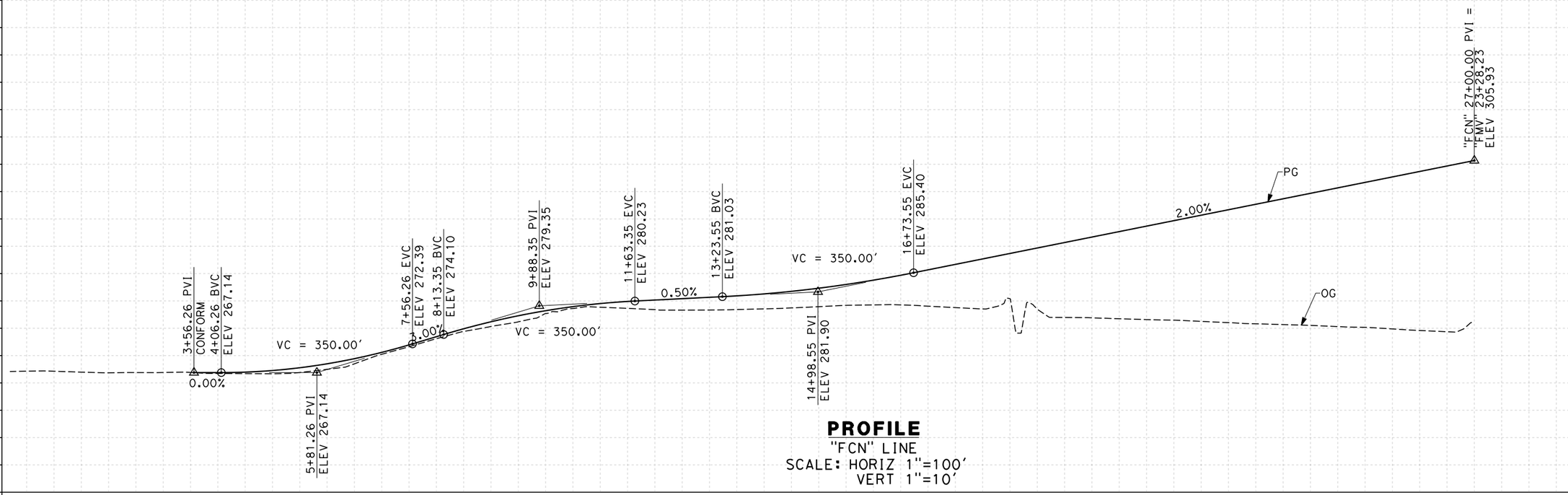
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2114
SCALE AS SHOWN
SHEET NO. 61 OF 101

eron.sudhausen 6/28/2011 7:53:41 PM G:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2114-H.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	2	3	4	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

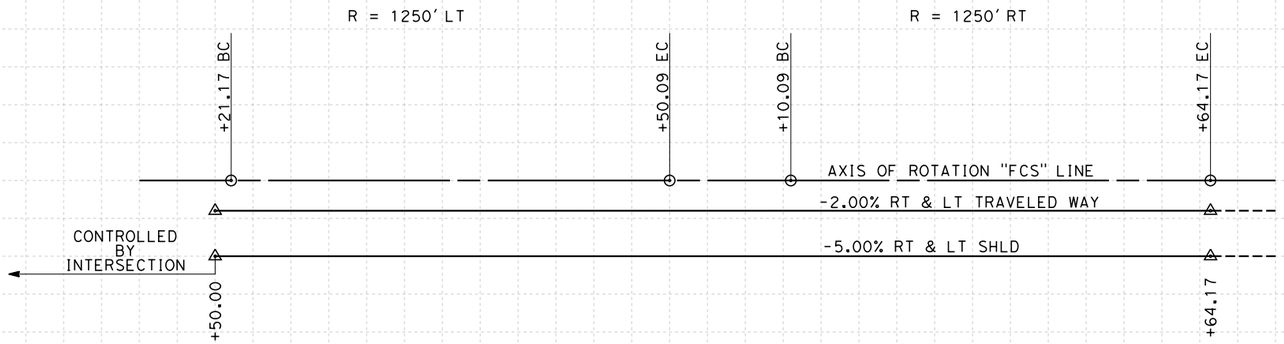
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CHESTNUT AVE (NORTH)

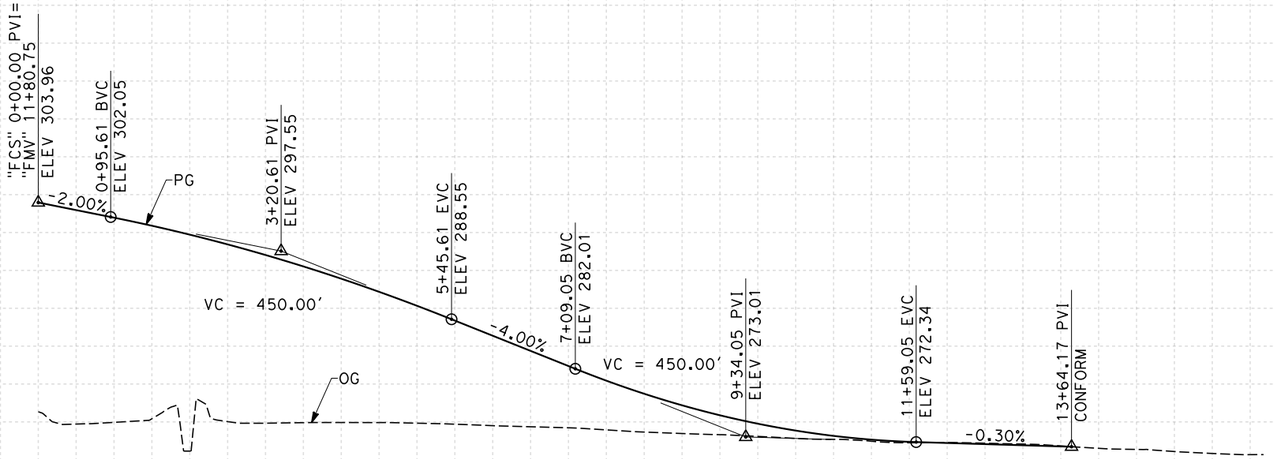
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2115
SCALE AS SHOWN
SHEET NO. 62 OF 100

eron.sudhausen 6/28/2011 7:53:42 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\Grade Separation\SF\H\FB-CT-2115-H.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		0	1	2	3	4	5	6	7	8	9	10	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

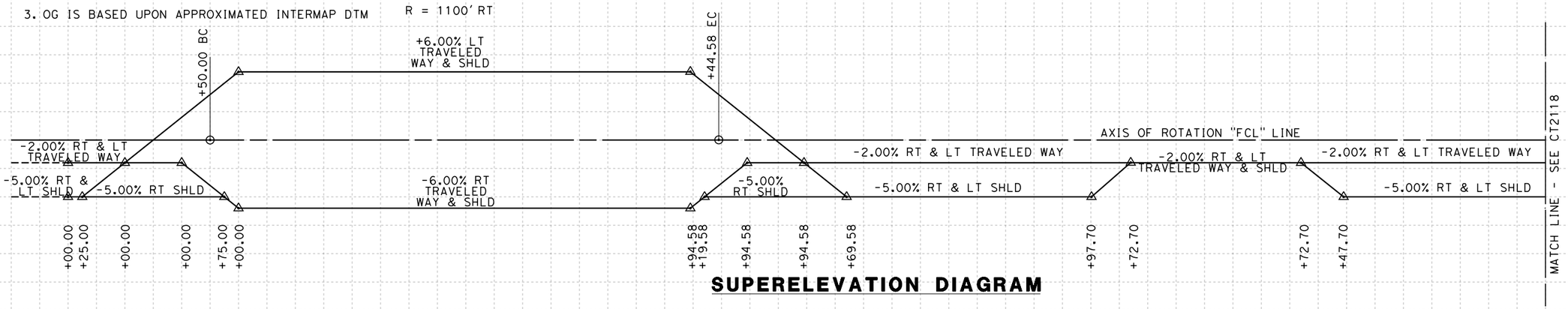
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CHESTNUT AVE (SOUTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2116
SCALE AS SHOWN
SHEET NO. 63 OF 101

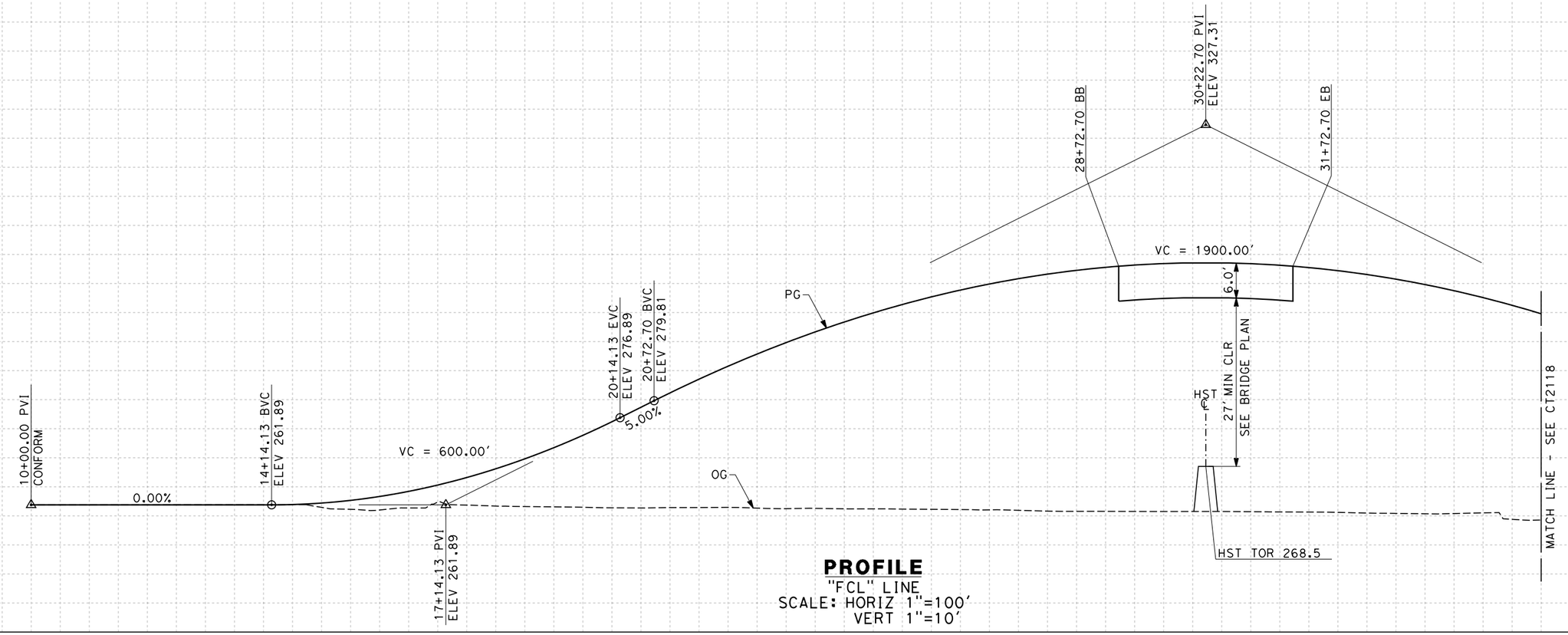
eron.sudhausen 6/28/2011 7:53:44 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2116-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	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

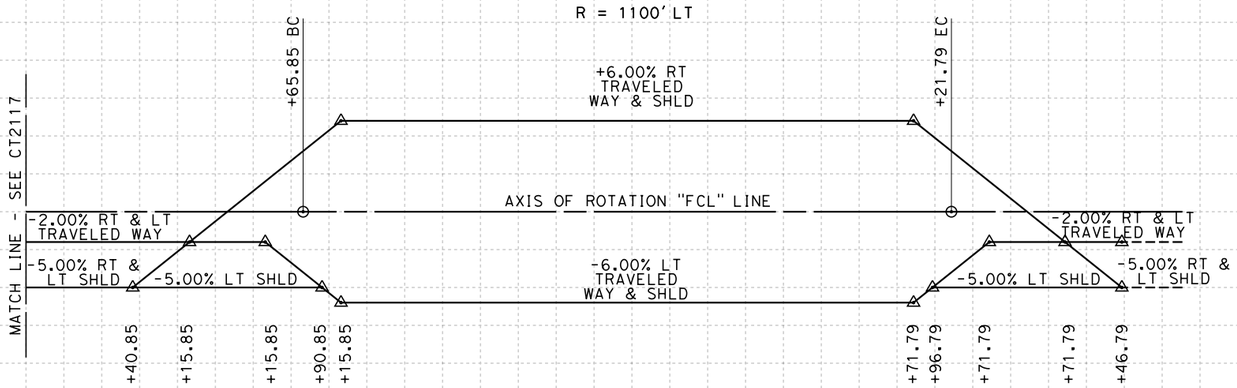
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

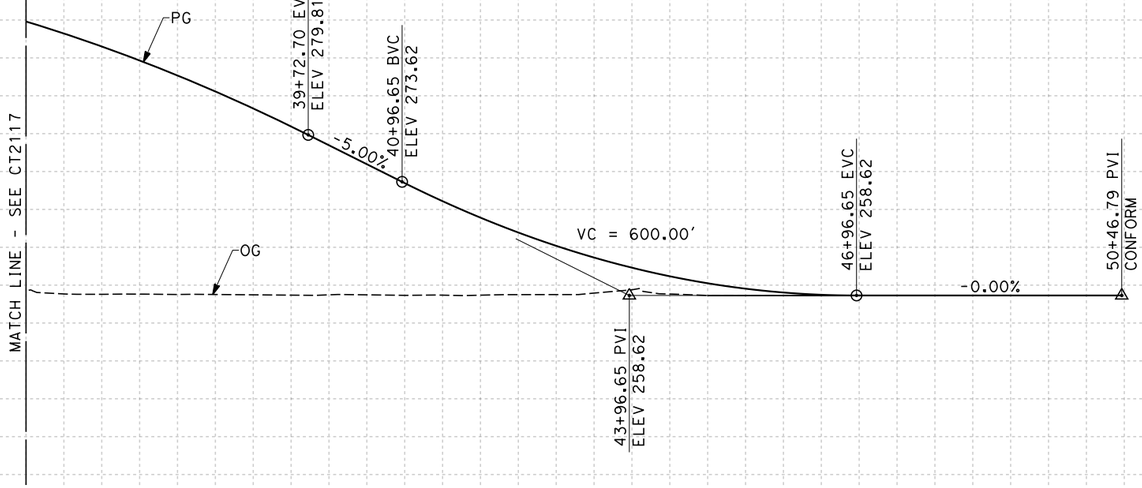
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2117
SCALE AS SHOWN
SHEET NO. 64 OF 101

eron.sudhausen 6/28/2011 7:53:45 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\Grade Separation\SF\H\FB-CT-2117-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	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

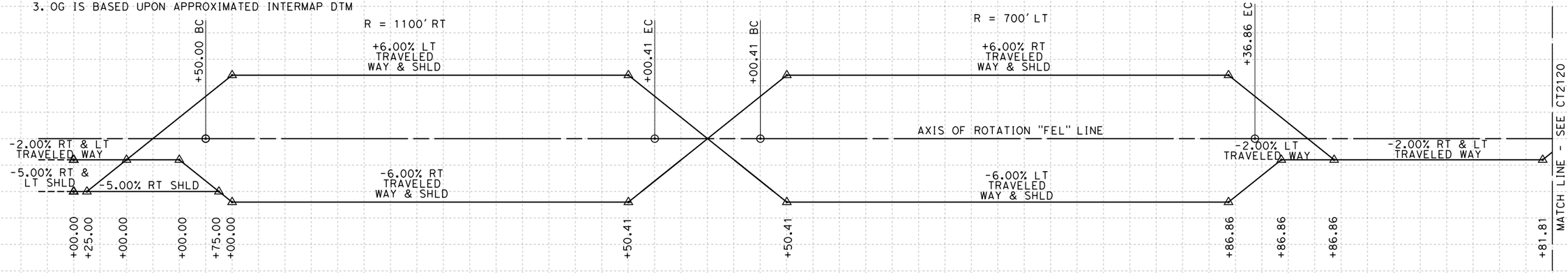
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2118
SCALE AS SHOWN
SHEET NO. 65 OF 101

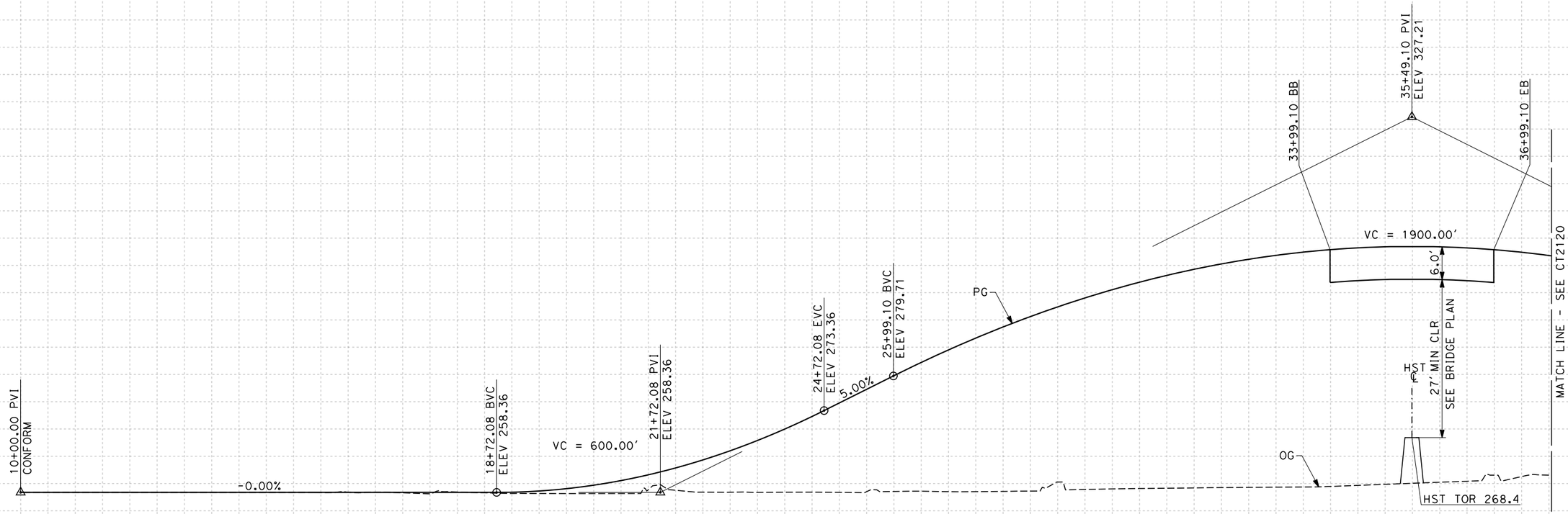
eron.sudhausen 6/28/2011 7:53:47 PM Q:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\HFB-CT-2118-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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	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

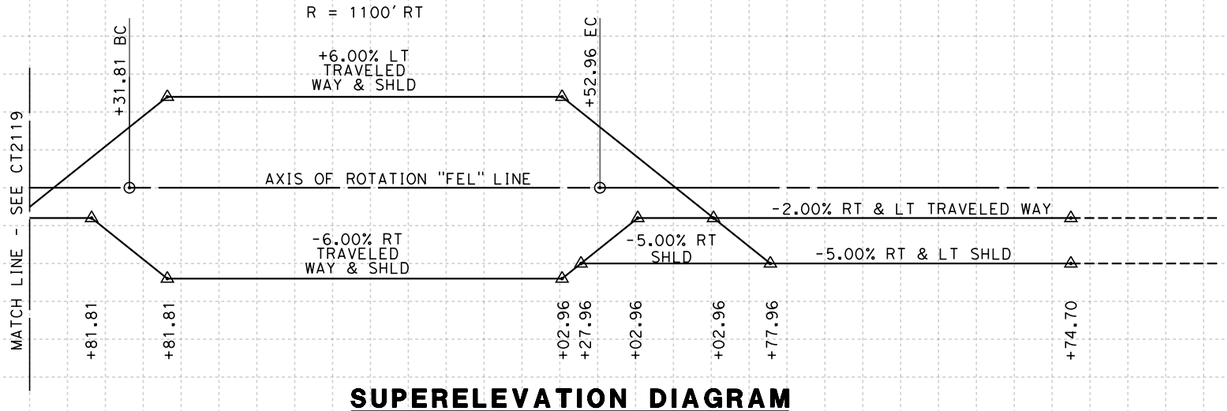
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

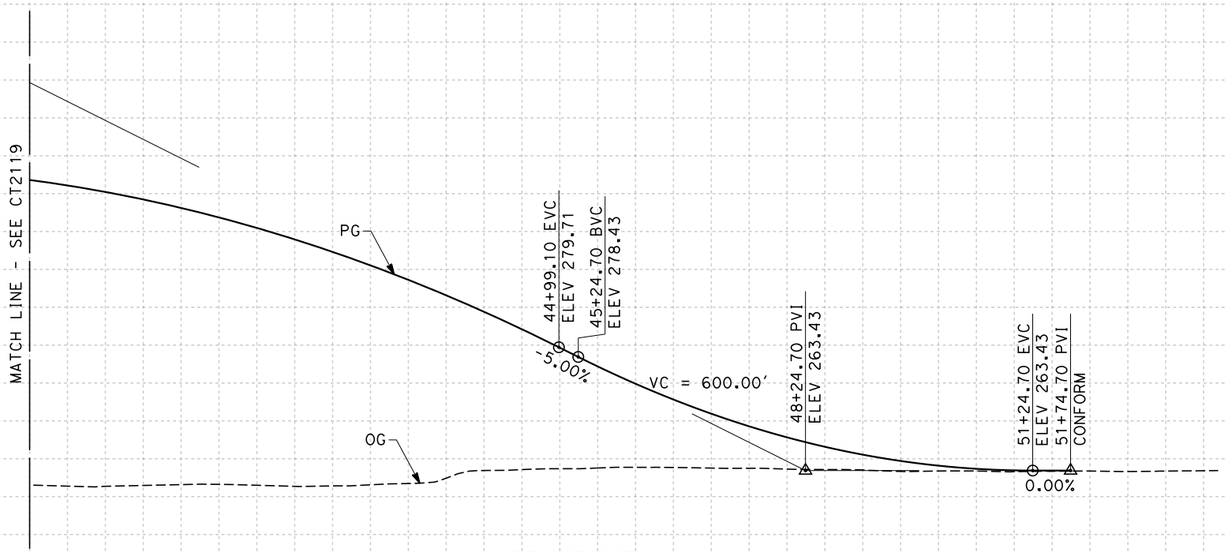
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2119
SCALE AS SHOWN
SHEET NO. 66 OF 101

eron.sudhausen 6/28/2011 7:53:49 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2119-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	8	9	40	1	2	3	4	45	6	7	8	9	50	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

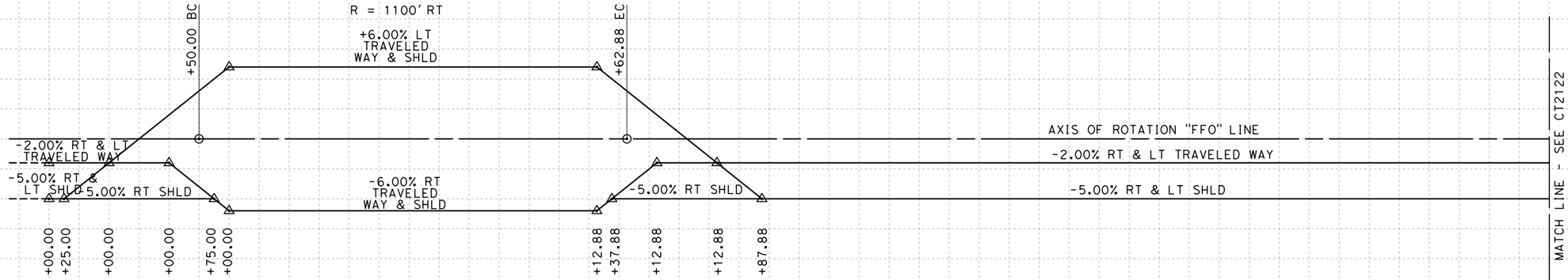
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2120
SCALE AS SHOWN
SHEET NO. 67 OF 101

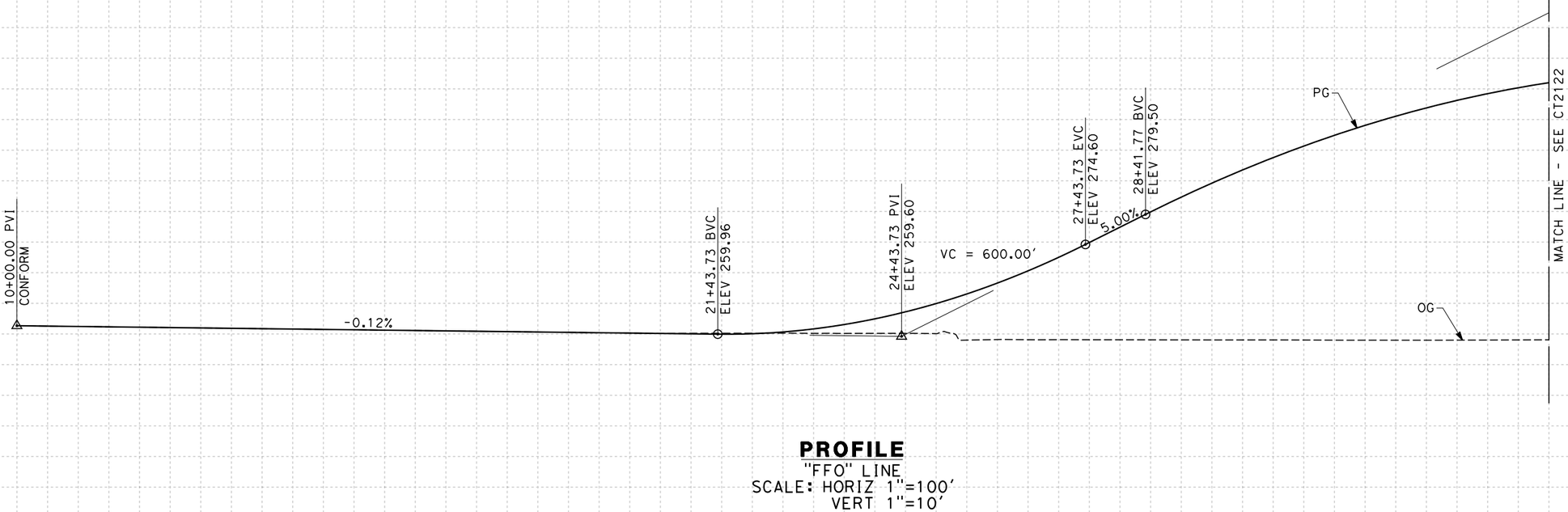
O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\Highway\HST 15% Design Sheets\4-03-01-05 Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2120-H.dgn 6/28/2011 7:53:50 PM eron.sudhausen

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	4	35	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

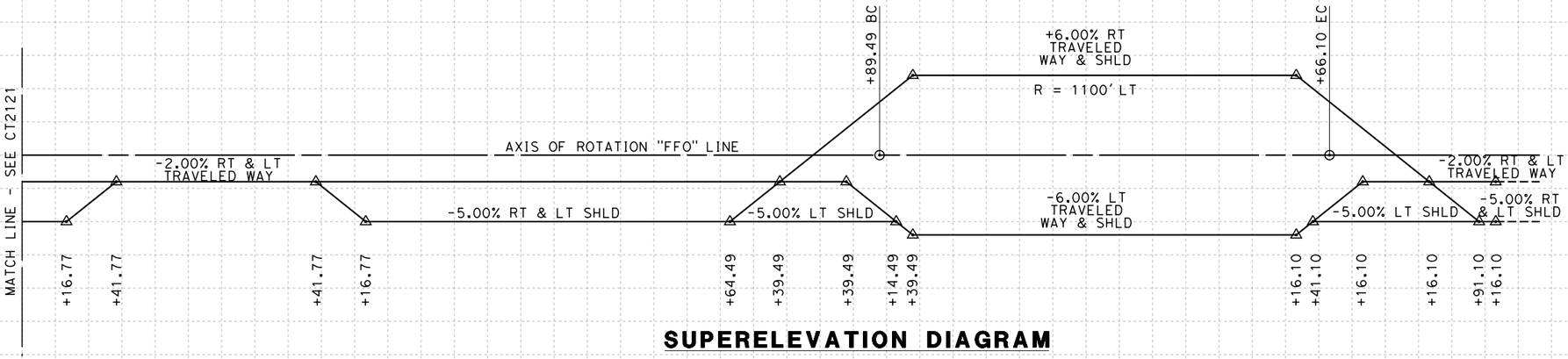
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

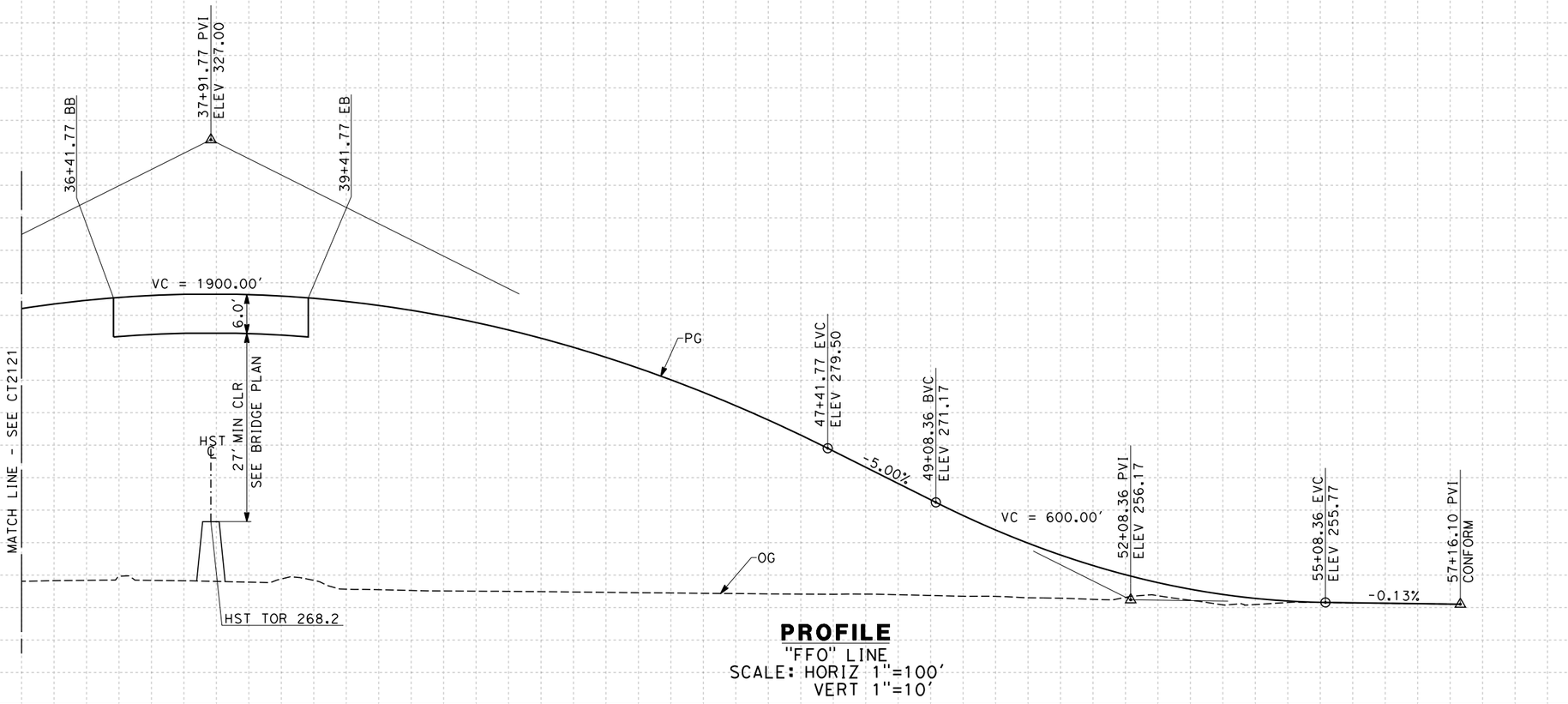
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2121
SCALE AS SHOWN
SHEET NO. 68 OF 101

eron.sudhausen 6/28/2011 7:53:52 PM D:\1315777\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2121-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	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

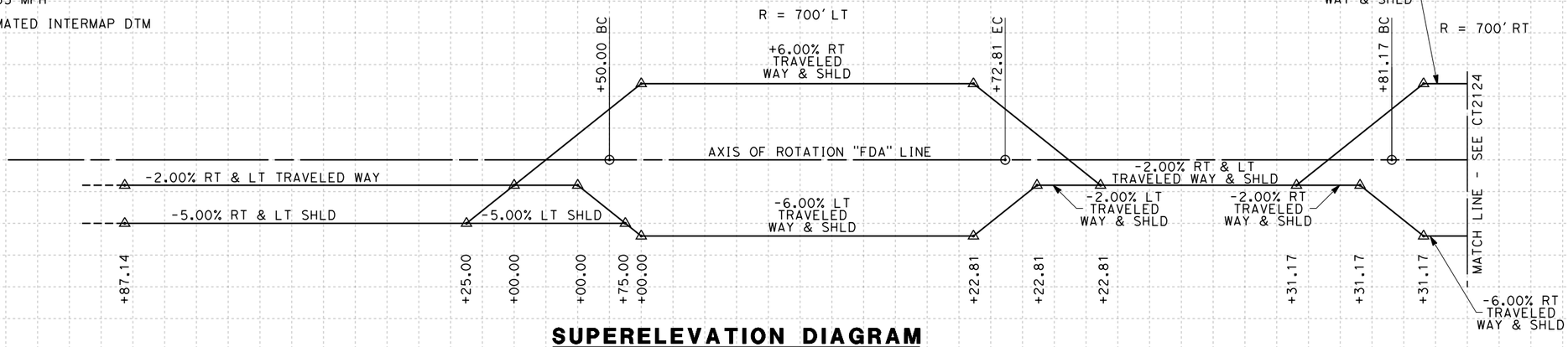
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2122
SCALE AS SHOWN
SHEET NO. 69 OF 101

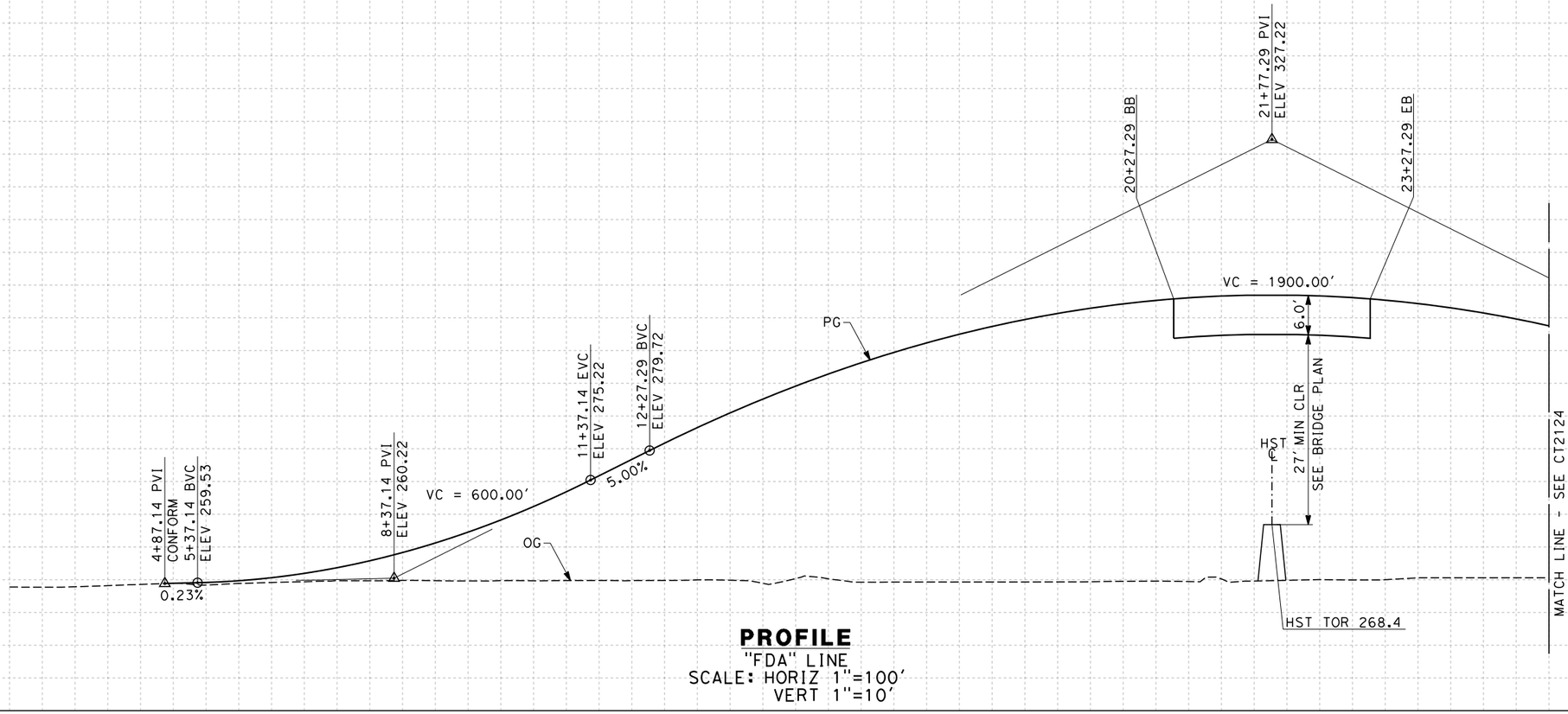
eron.sudhausen 6/28/2011 7:53:54 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2122-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	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

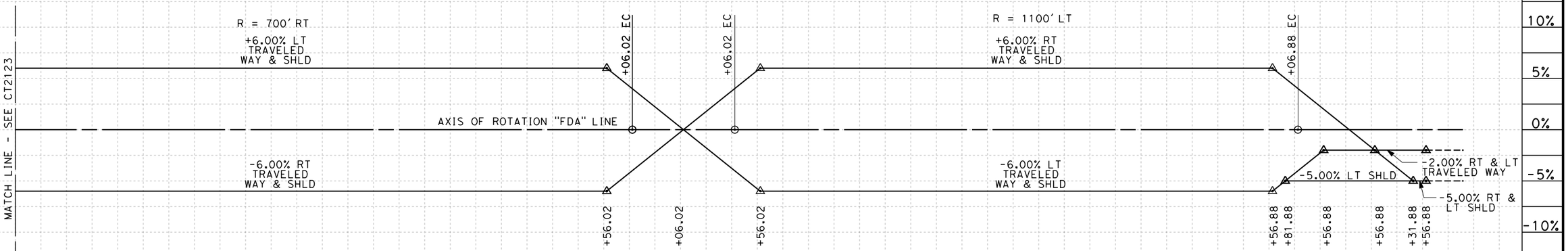
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

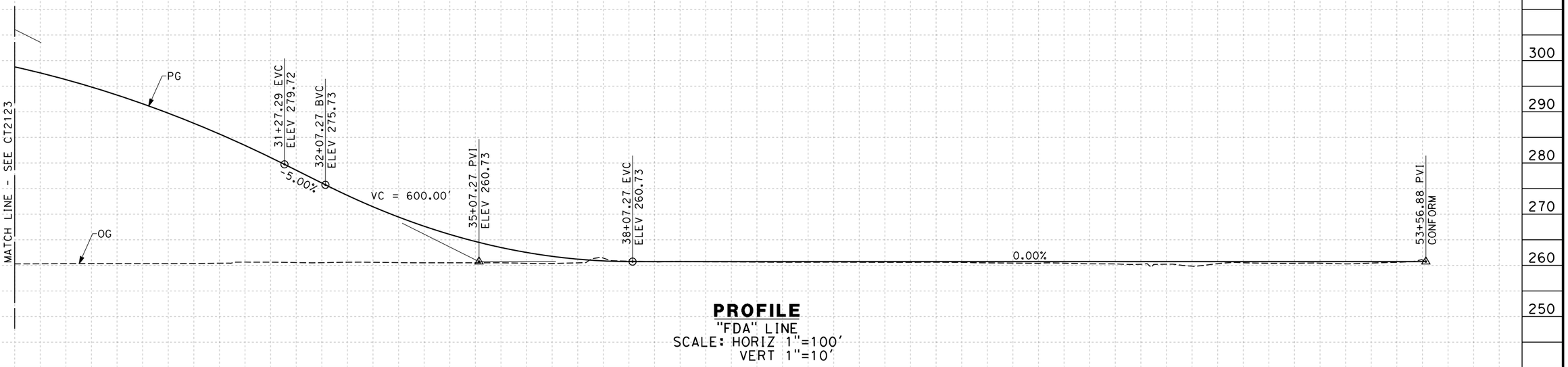
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2123
SCALE AS SHOWN
SHEET NO. 70 OF 101

eron.sudhausen 6/28/2011 7:53:56 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2123-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	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

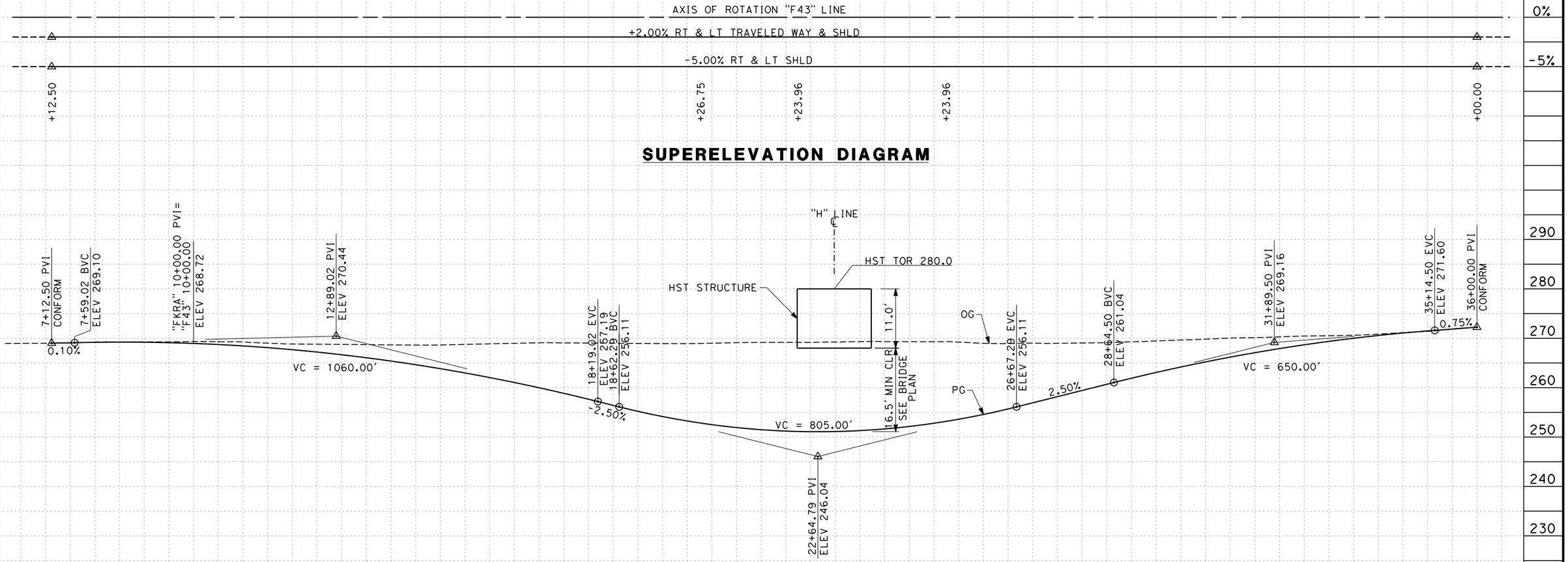
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2124
SCALE AS SHOWN
SHEET NO. 71 OF 101

eron.sudhausen 6/28/2011 7:53:57 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2124-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 65 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE

"F43" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	7	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 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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2125
SCALE AS SHOWN
SHEET NO. 72 OF 101

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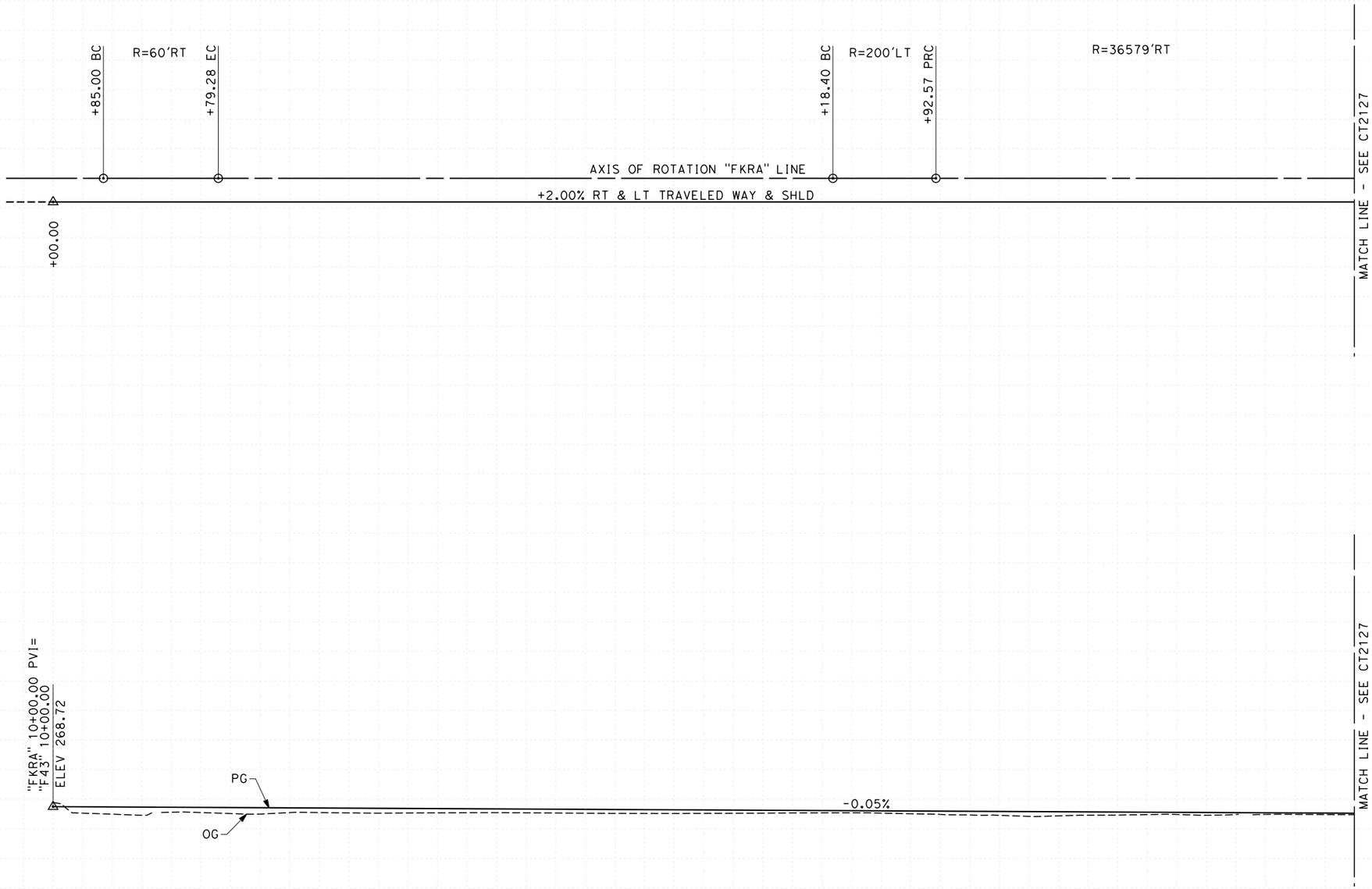
NOTES:

1. MIN VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 15 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



PROFILE

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

STATION	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	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

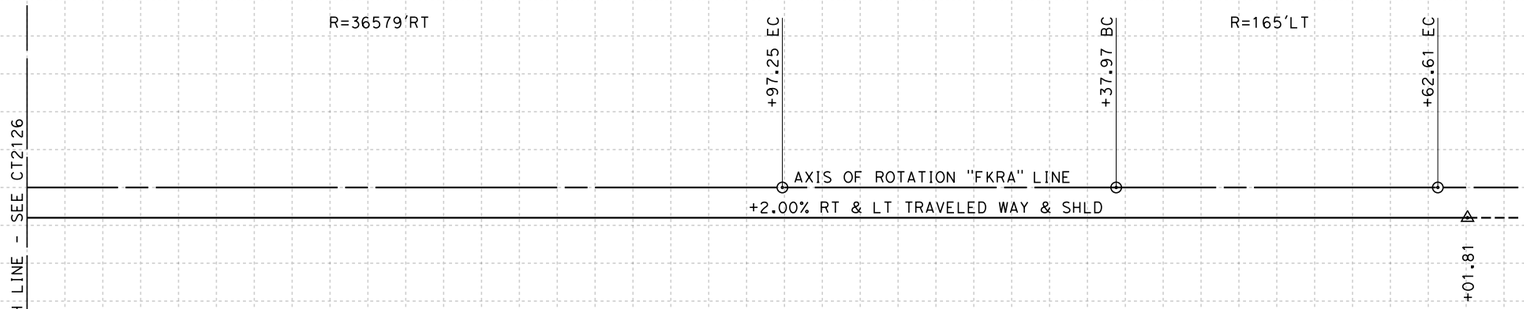
URS | HMM | ARUP
California High-Speed Train

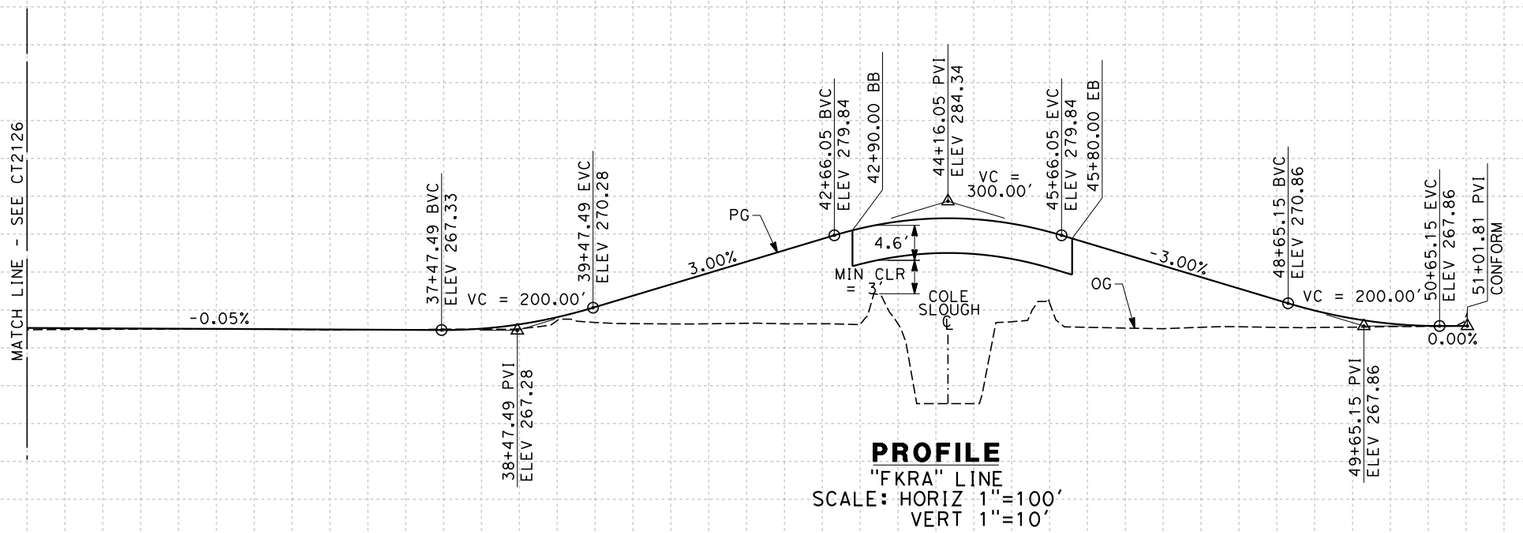
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 - KINGS RIVER LEVEE ACCESS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2126
SCALE AS SHOWN
SHEET NO. 73 OF 101

eron.sudhausen 6/28/2011 8:16:29 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\Grade Separation\SF\HFB-CT-2126-H.dgn





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

STATION	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	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 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

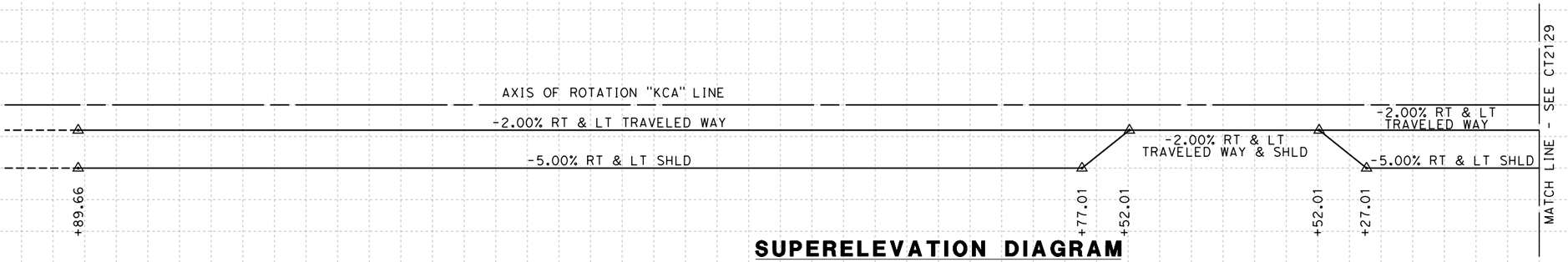
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 - KINGS RIVER LEVEE ACCESS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2127
SCALE AS SHOWN
SHEET NO. 74 OF 101

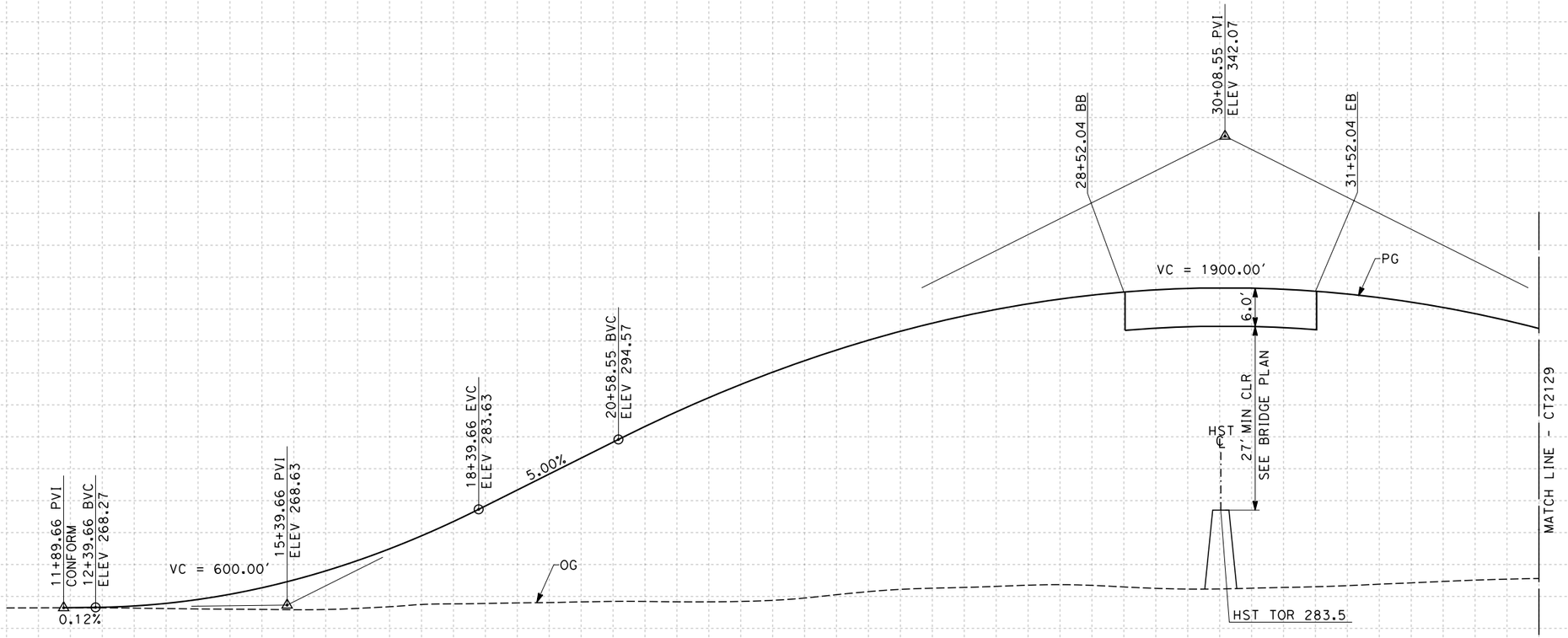
eron.sudhausen 6/28/2011 7:54:02 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2127-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

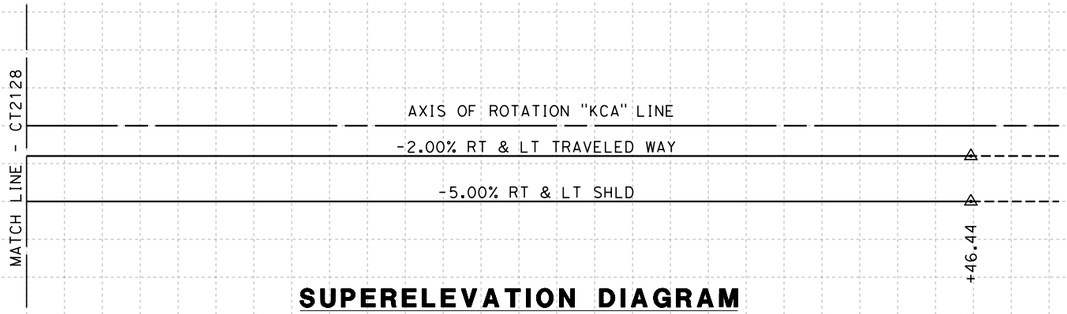
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CAIRO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2128
SCALE AS SHOWN
SHEET NO. 75 OF 101

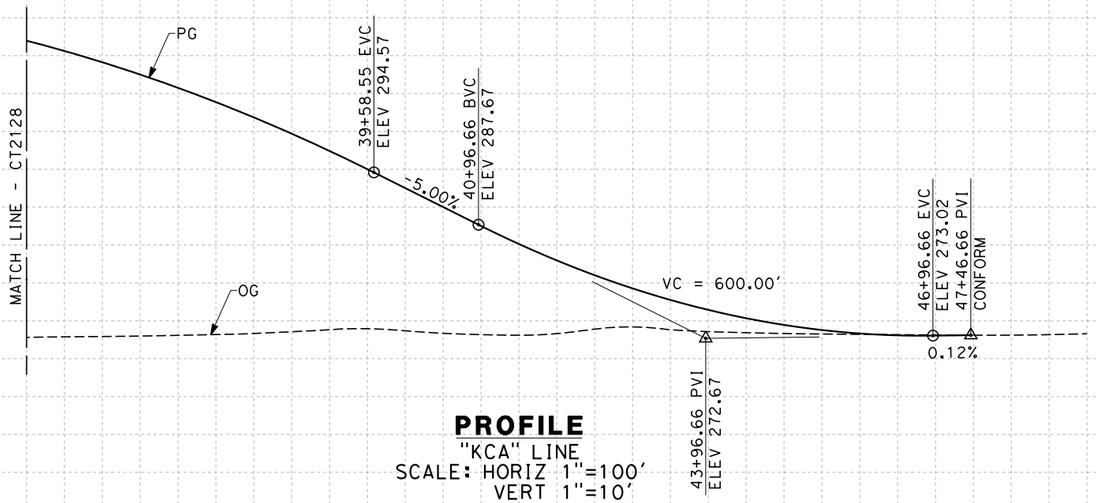
eron.sudhausen 6/28/2011 7:54:04 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2128-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		35	6	7	8	9	40	1	2	3	4	45	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

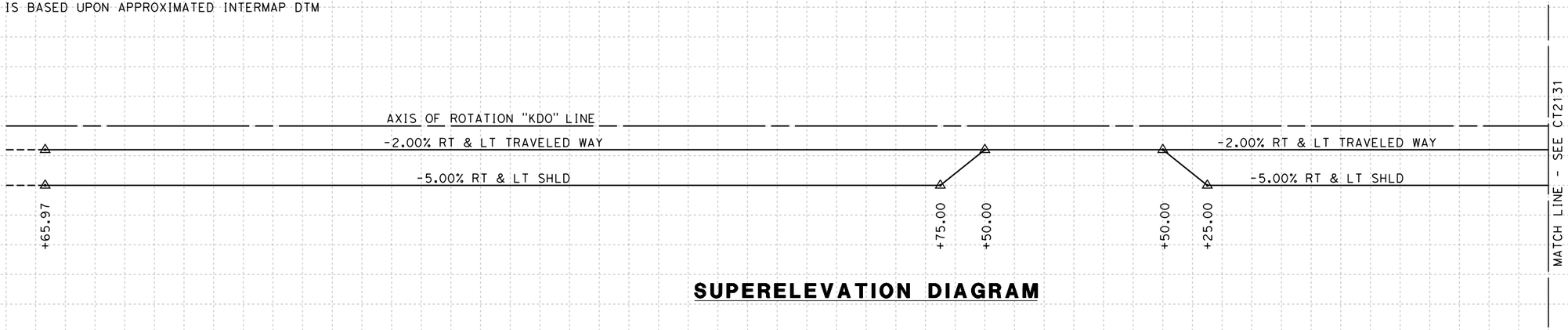
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CAIRO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2129
SCALE AS SHOWN
SHEET NO. 76 OF 101

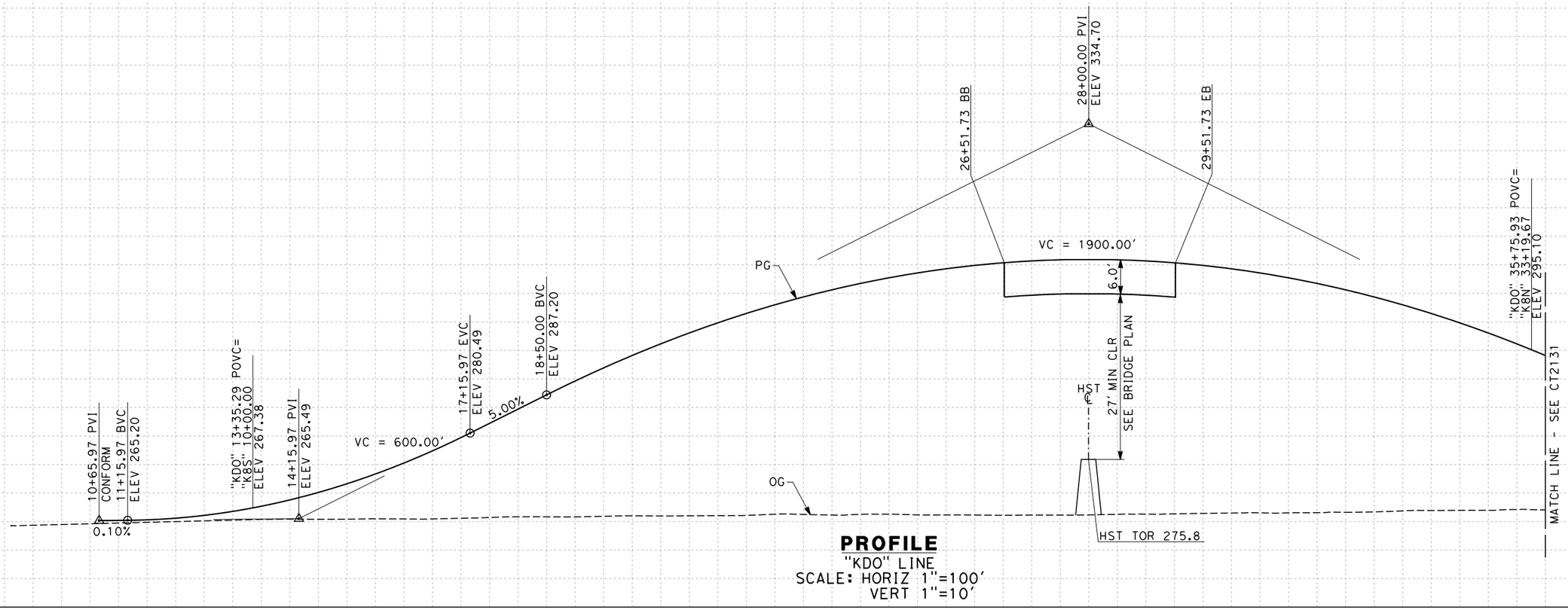
eron.sudhausen 6/28/2011 7:54:05 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2129-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	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

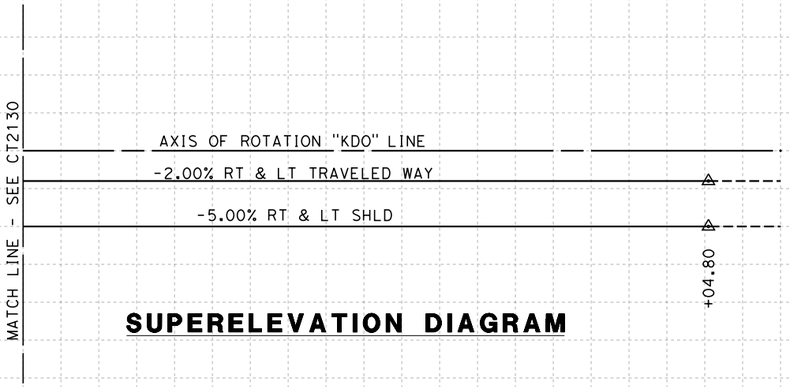
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

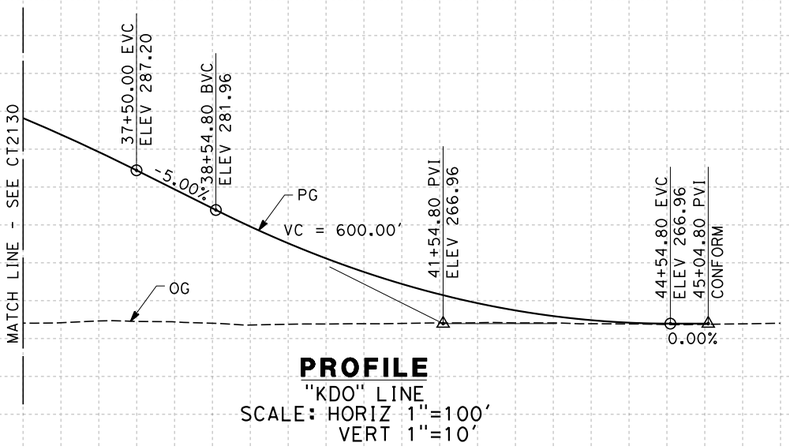
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
DOVER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2130
SCALE AS SHOWN
SHEET NO. 77 OF 101

eron.sudhausen 6/28/2011 7:54:07 PM D:\1315774\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2130-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	1	2	3	4	45	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

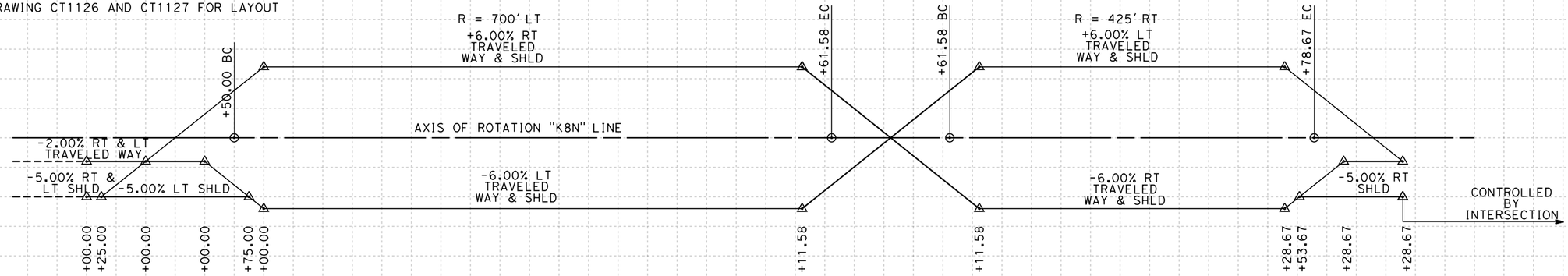
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
DOVER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2131
SCALE AS SHOWN
SHEET NO. 78 OF 101

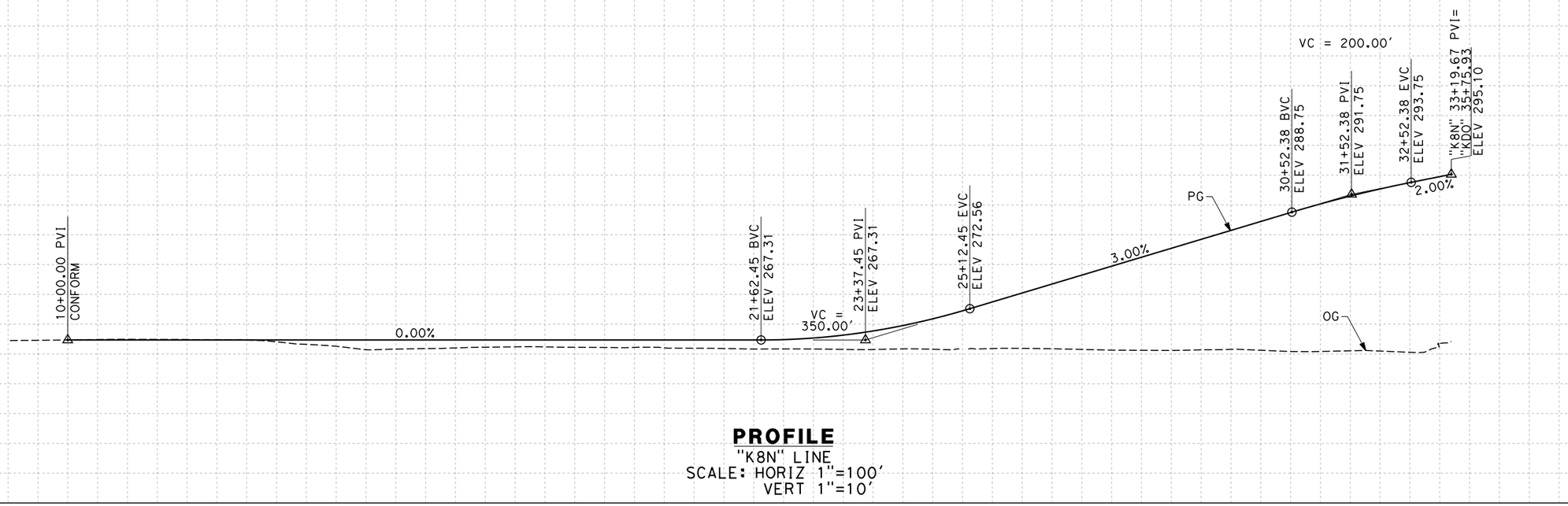
eron.sudhausen 6/28/2011 7:54:08 PM D:\131577\V4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2131-H.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 35 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO DRAWING CT1126 AND CT1127 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"K8N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	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

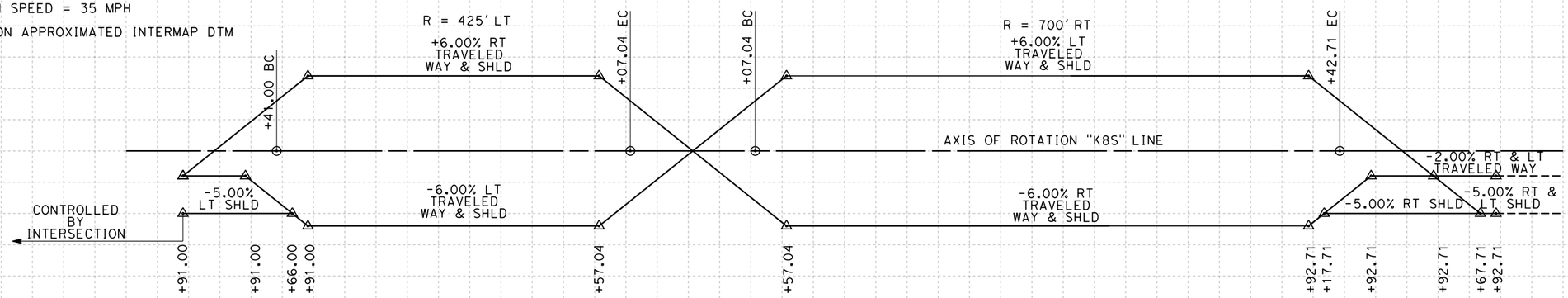
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
8TH AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2132
SCALE AS SHOWN
SHEET NO. 79 OF 101

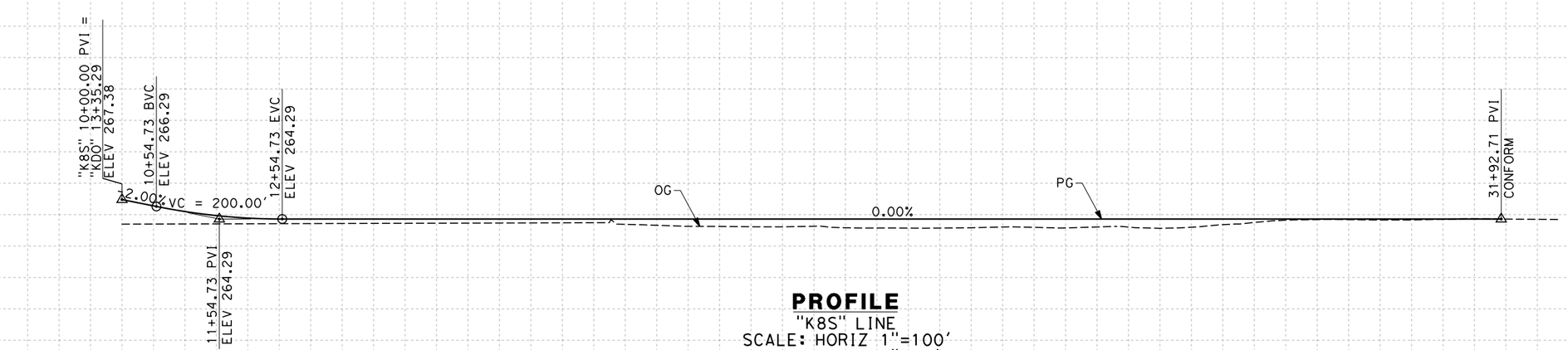
eron.sudhausen 6/28/2011 7:54:10 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2132-H.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 35 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"K8S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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																									
	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

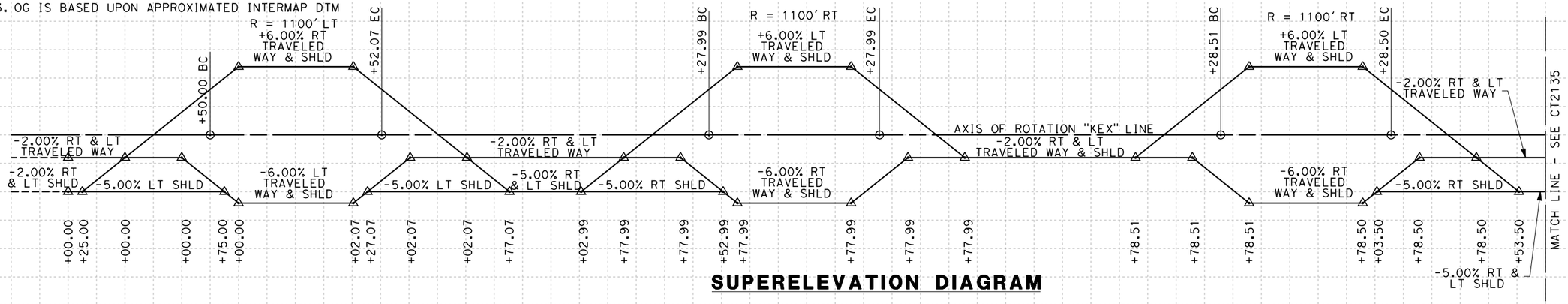
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
8TH AVE (SOUTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2133
SCALE AS SHOWN
SHEET NO. 80 OF 101

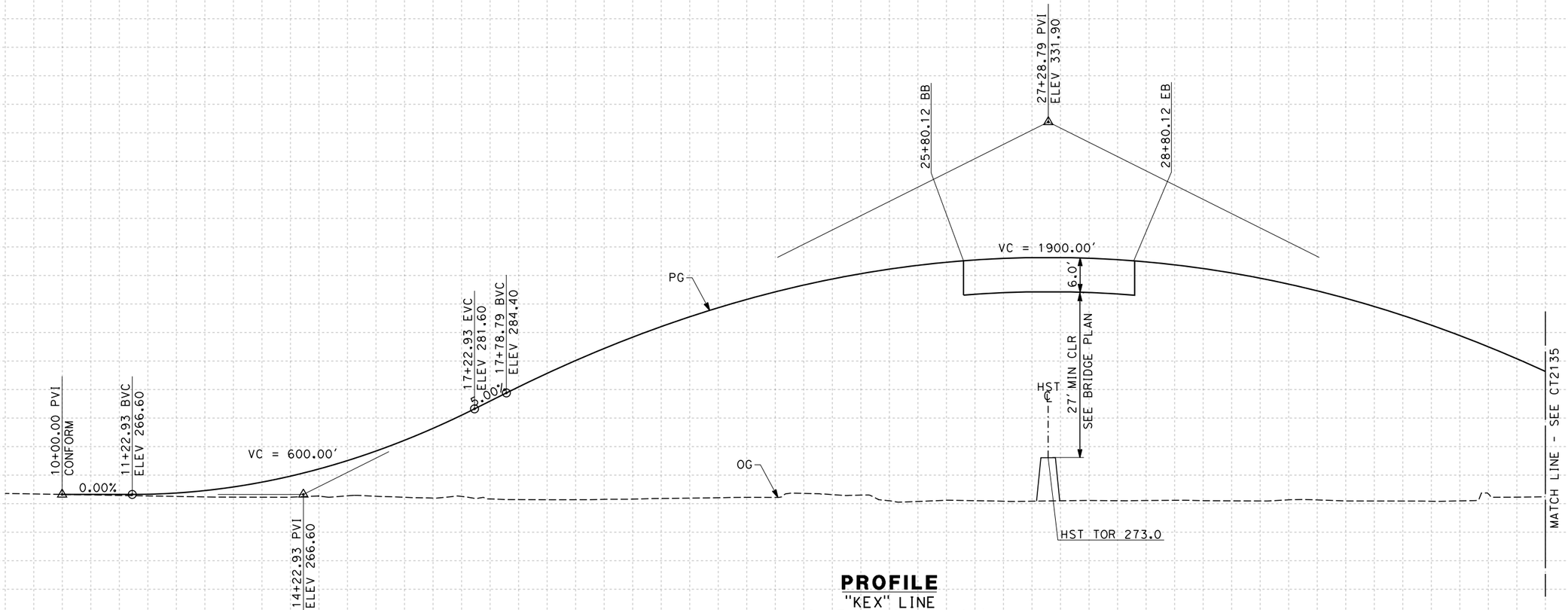
eron.sudhausen 6/28/2011 7:54:11 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2133-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2134
SCALE AS SHOWN
SHEET NO. 81 OF 101

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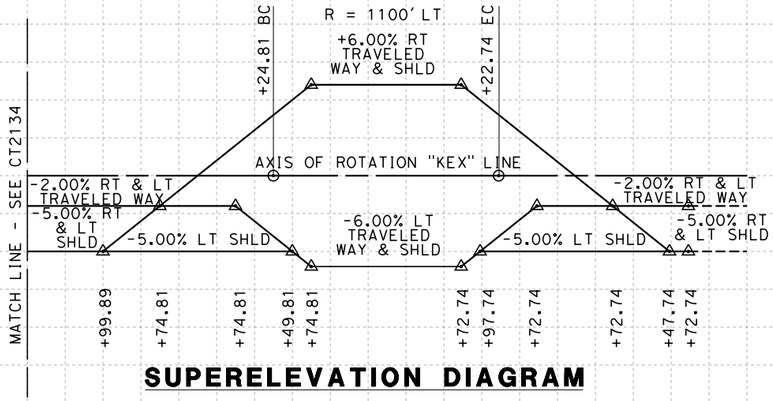
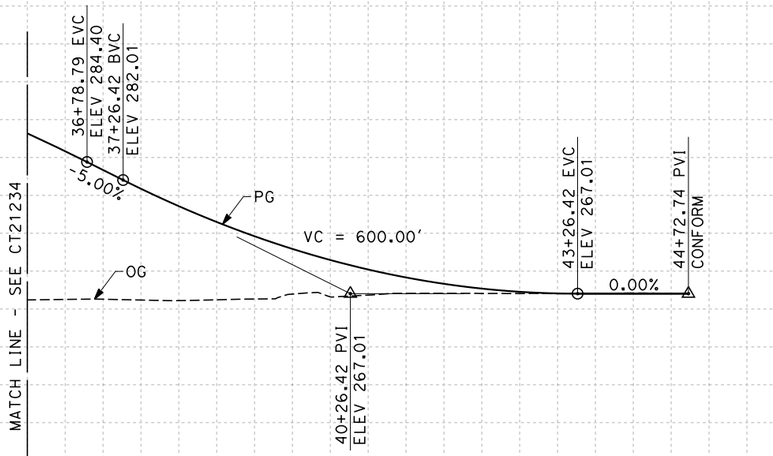
eron.sudhausen



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	6	7	8	9	40	1	2	3	4	45	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

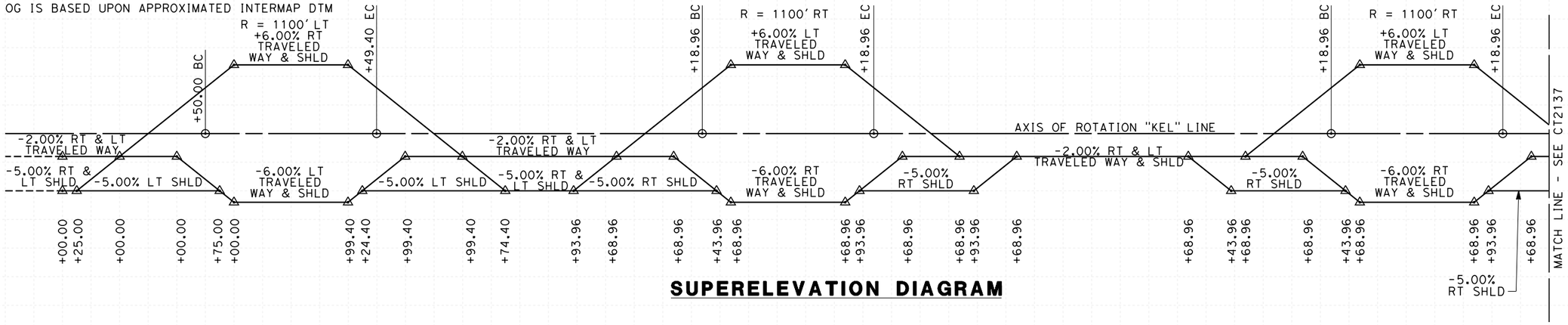
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2135
SCALE AS SHOWN
SHEET NO. 82 OF 101

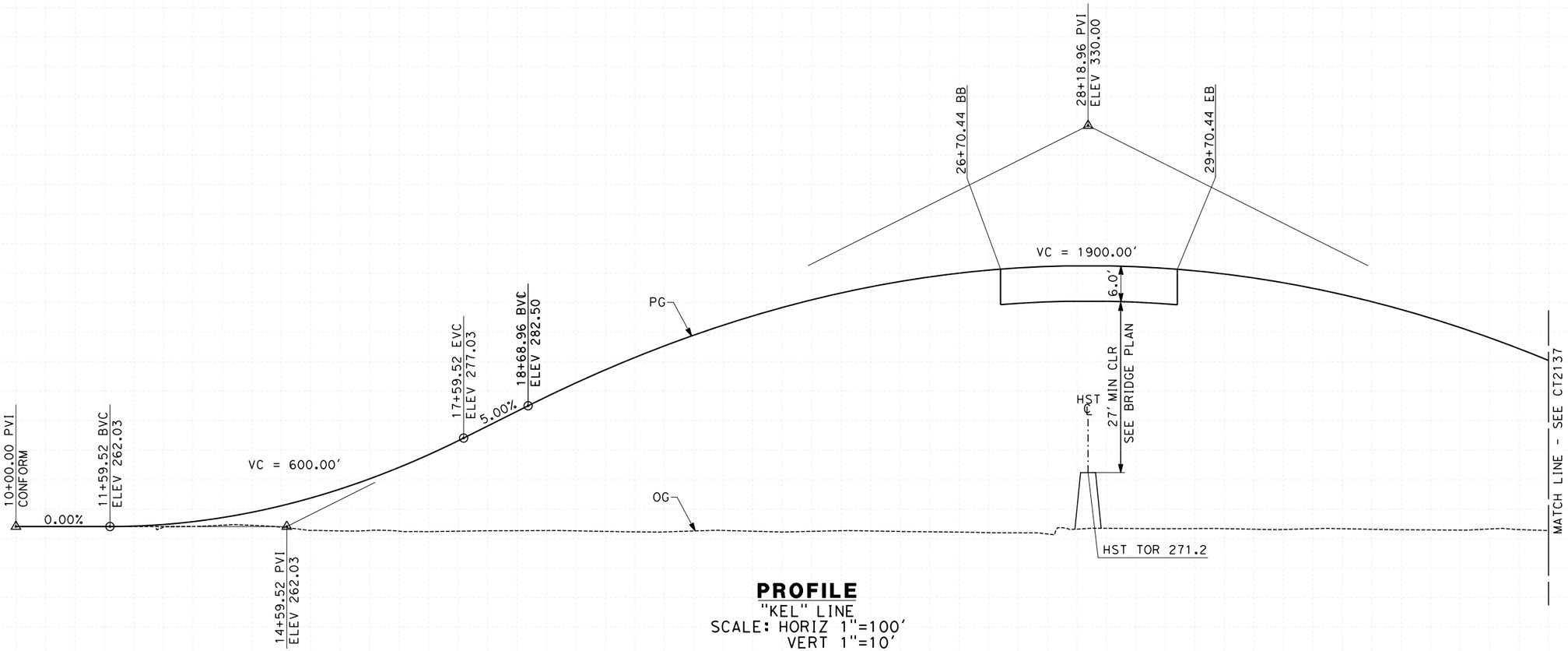
eron.sudhausen 6/28/2011 7:54:15 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2135-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	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

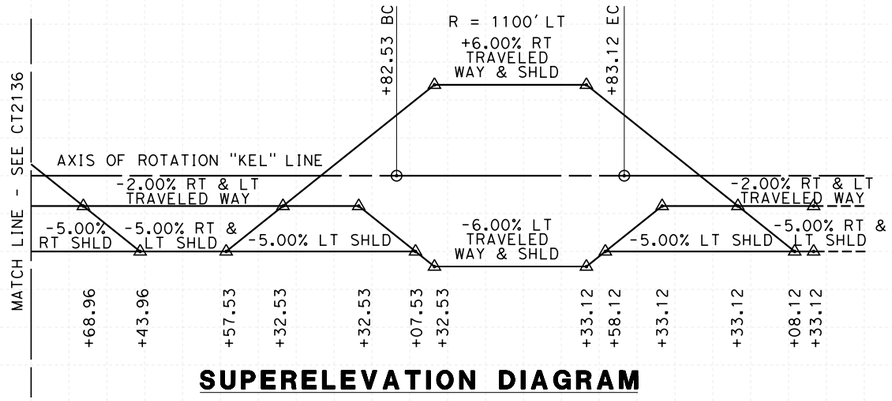
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

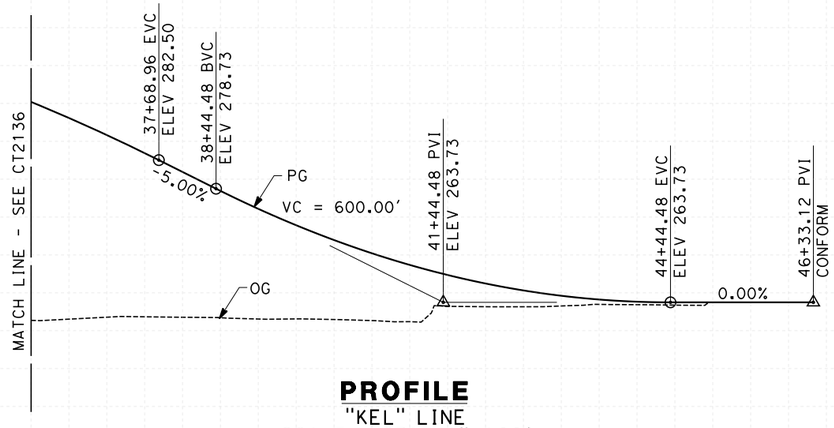
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2136
SCALE AS SHOWN
SHEET NO. 83 OF 101

eron.sudhausen 6/29/2011 11:43:47 AM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2136-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	1	2	3	4	45	6	7	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
FRESNO TO BAKERSFIELD

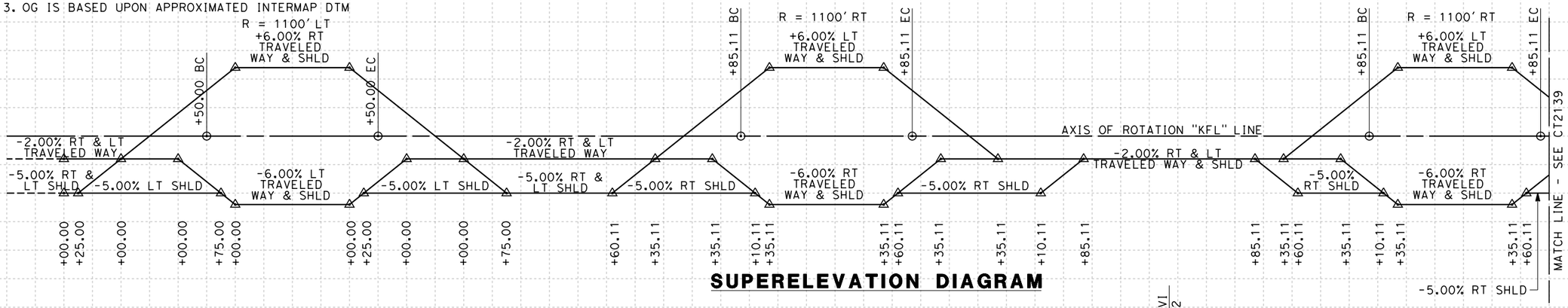
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2137
SCALE AS SHOWN
SHEET NO. 84 OF 101

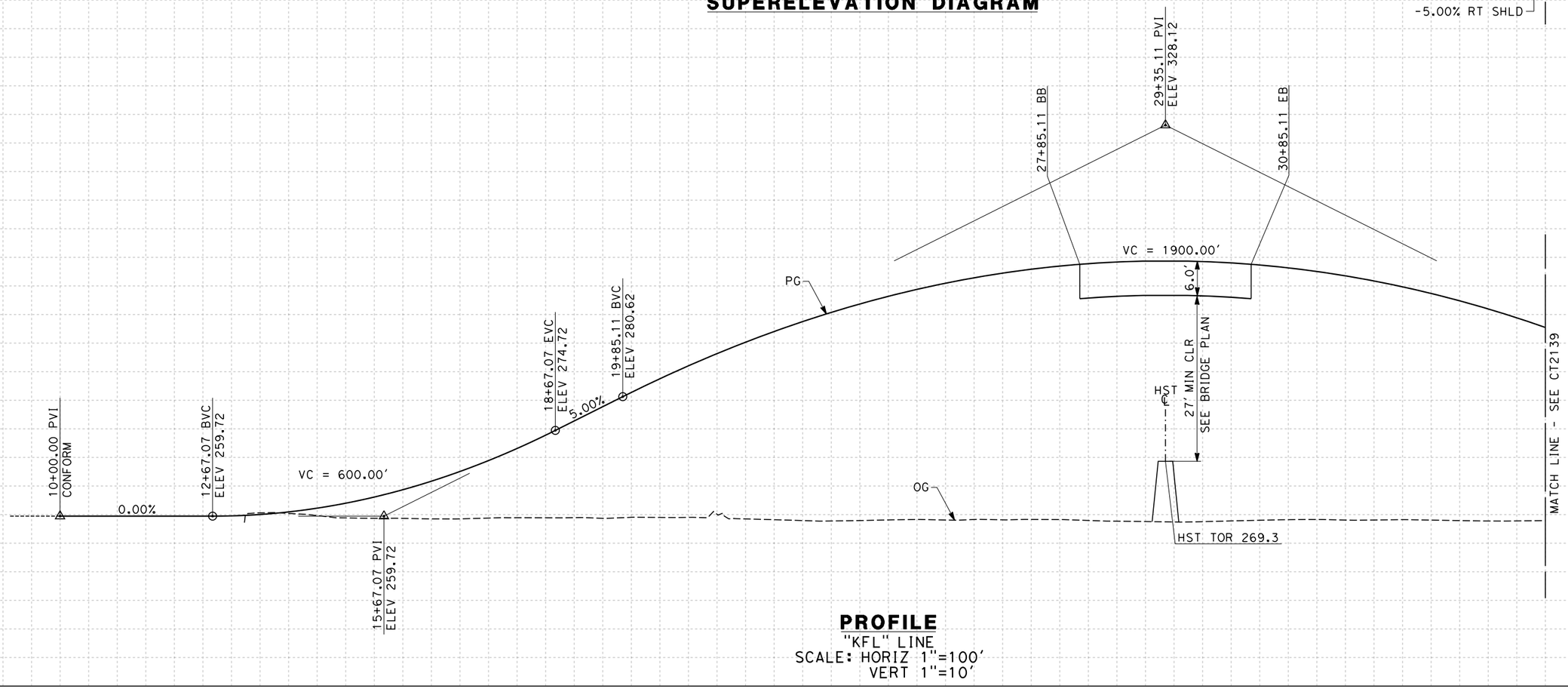
eron.sudhausen 6/29/2011 11:44:41 AM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2137-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	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

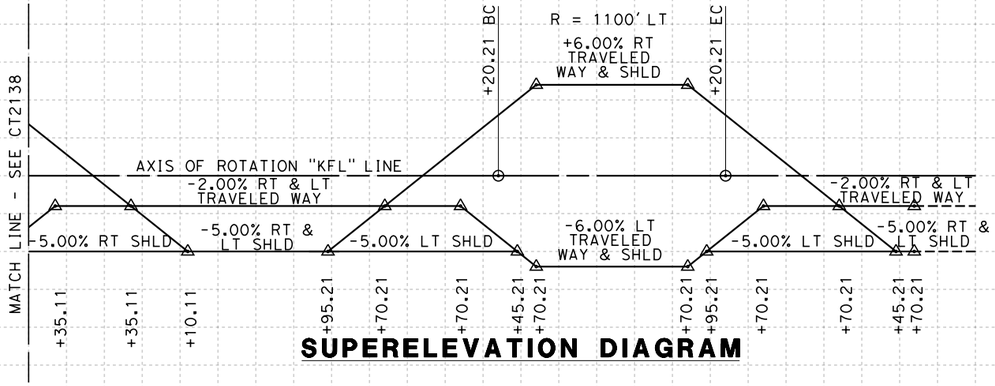
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

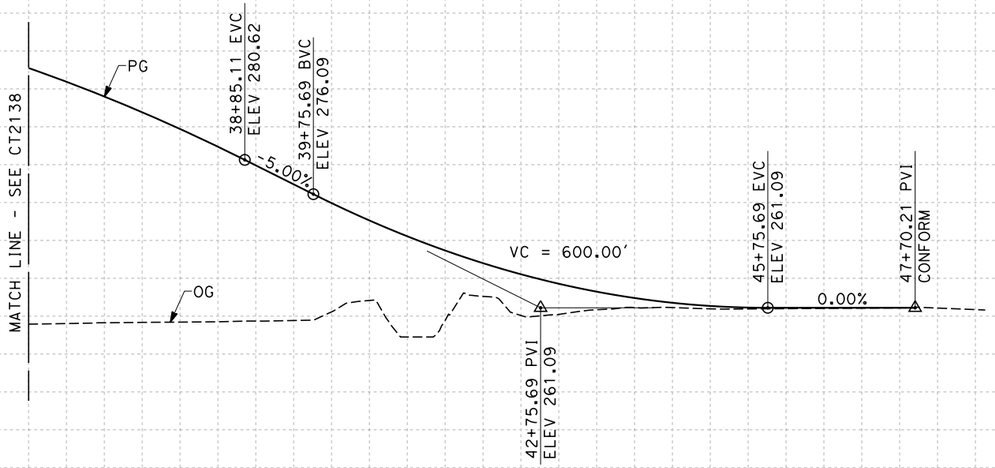
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2138
SCALE AS SHOWN
SHEET NO. 85 OF 101

eron.sudhausen 6/28/2011 7:54:19 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2138-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	1	2	3	4	45	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

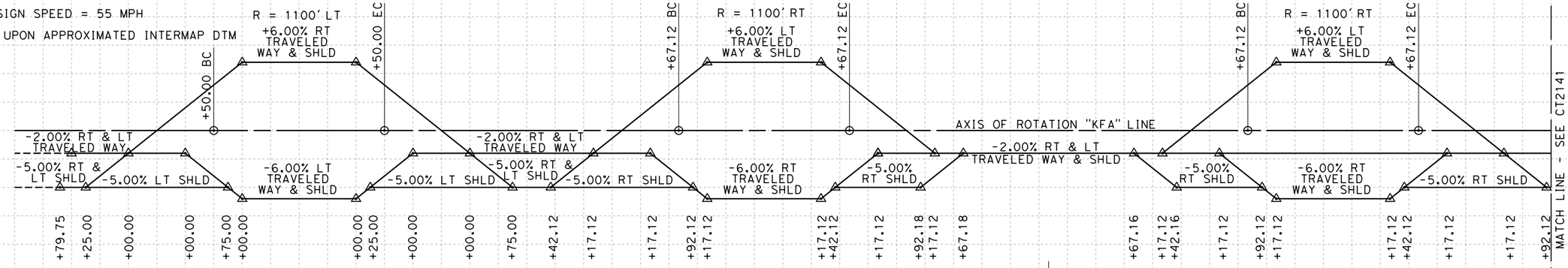
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2139
SCALE AS SHOWN
SHEET NO. 86 OF 101

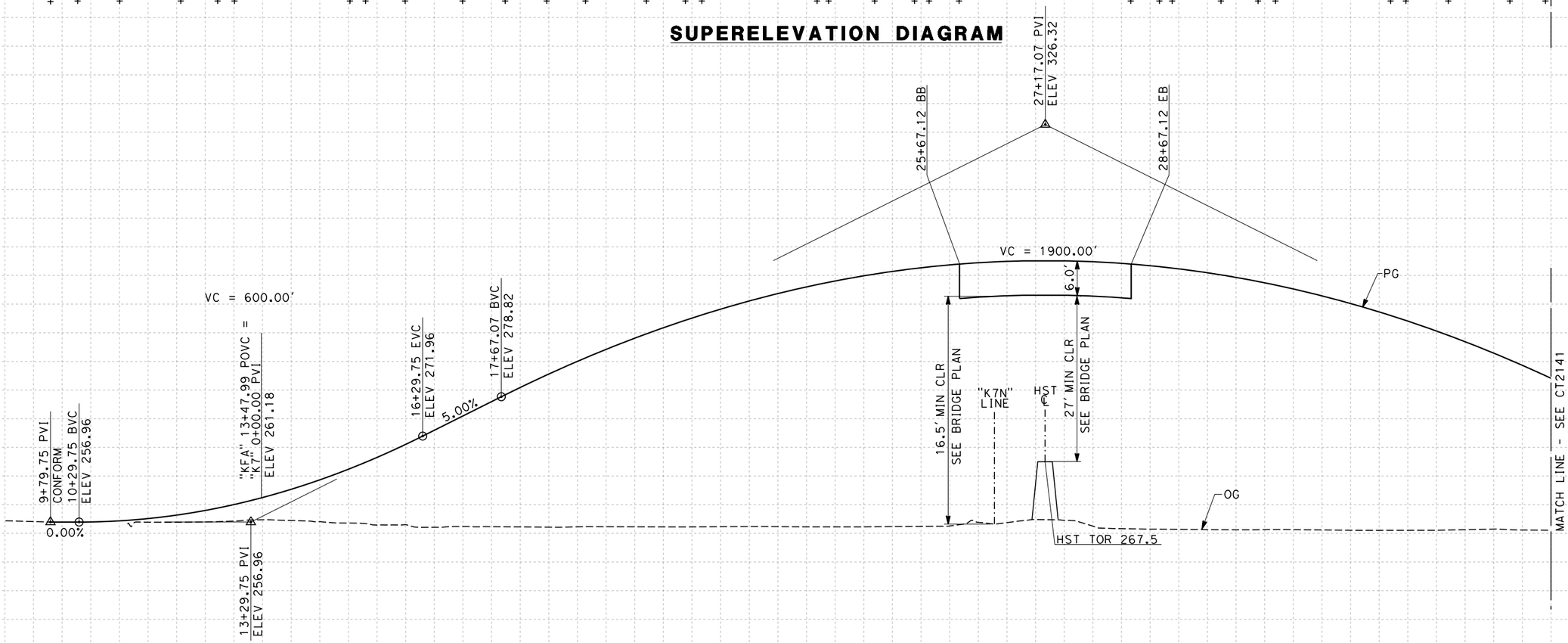
eron.sudhausen 6/28/2011 7:54:21 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2139-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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

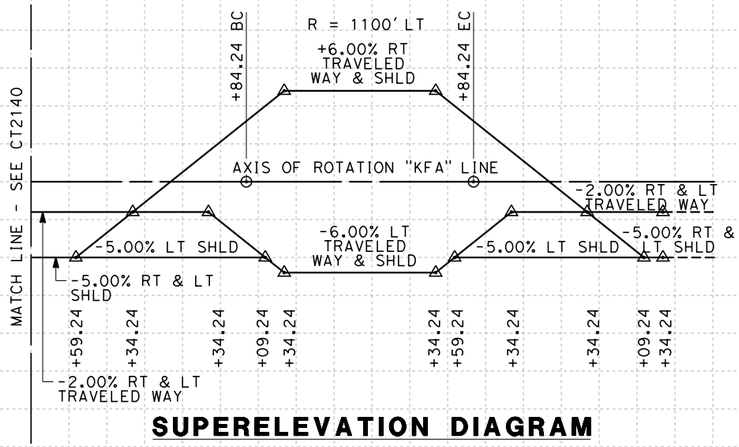
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

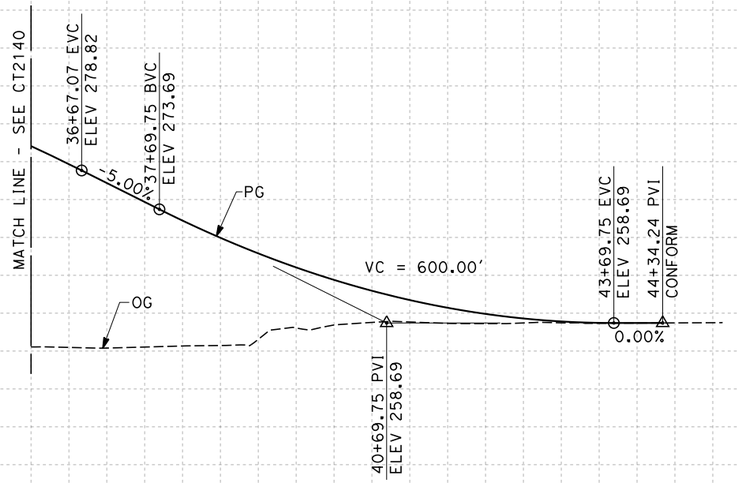
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2140
SCALE AS SHOWN
SHEET NO. 87 OF 101

eron.sudhausen 6/28/2011 7:54:23 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2140-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	40	1	2	3	4	5	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

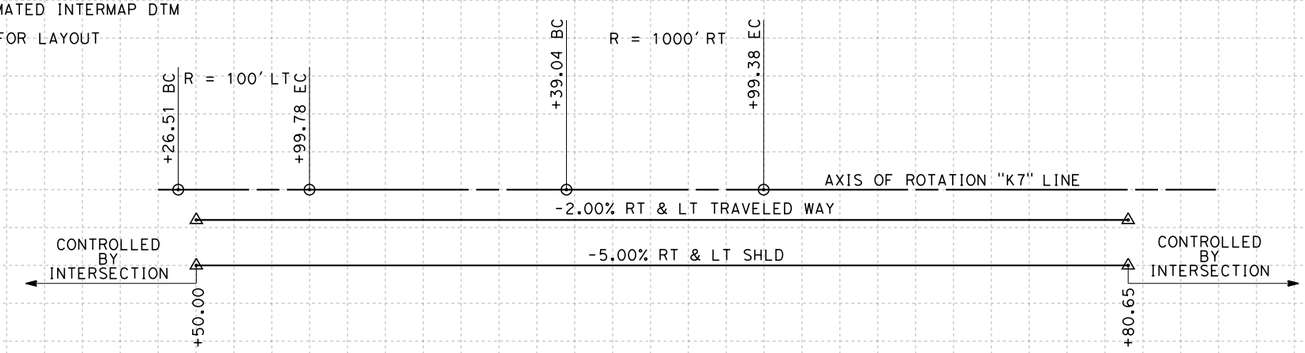
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2141
SCALE AS SHOWN
SHEET NO. 88 OF 101

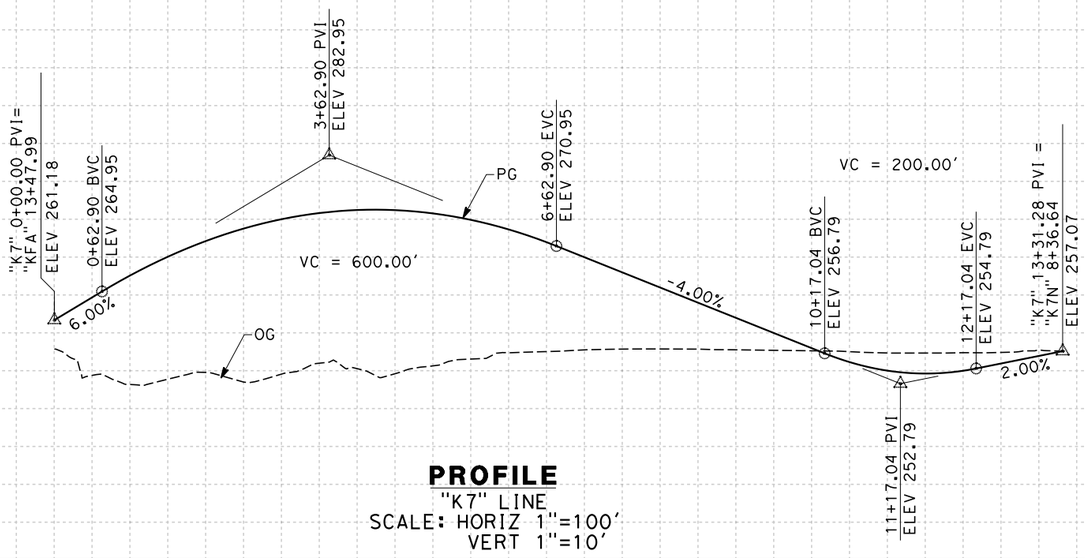
eron.sudhausen 6/28/2011 7:54:24 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2141-H.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 25 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. REFER TO DRAWING CT1139 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"K7" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	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

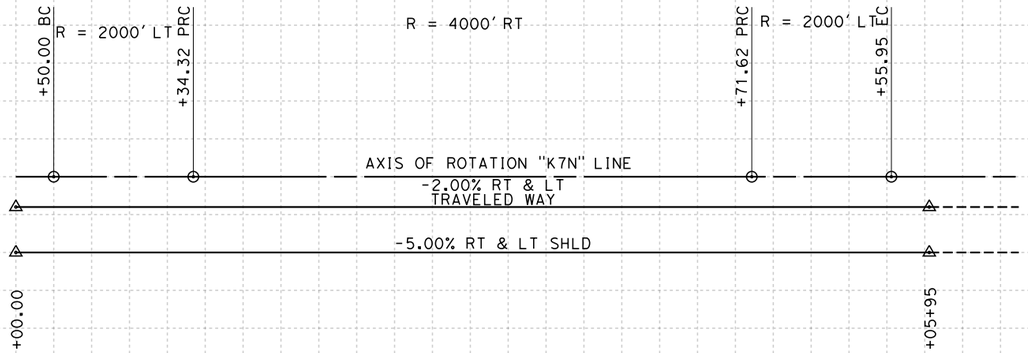
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
7 1/2 AVE CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2142
SCALE AS SHOWN
SHEET NO. 89 OF 101

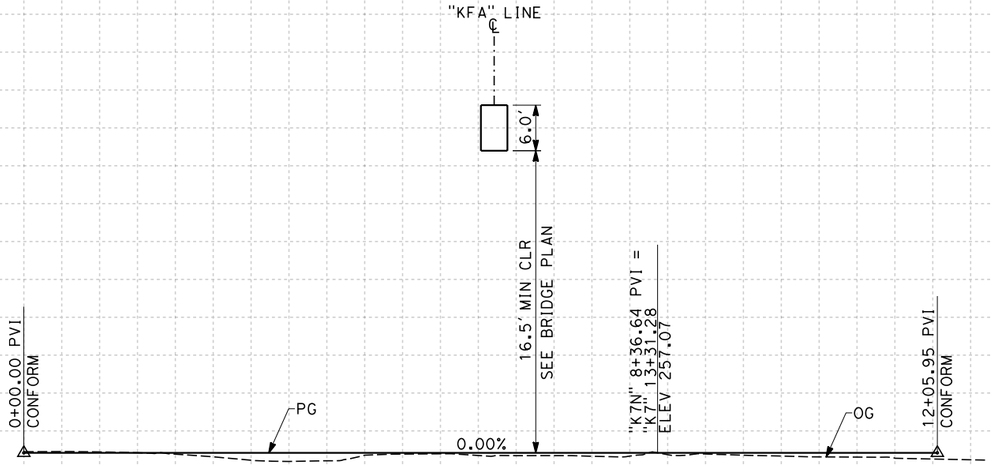
eron.sudhausen 6/28/2011 7:54:26 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2142-H.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE.
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM
4. REFER TO DRAWINGS CT1139 FOR LAYOUT



SUPERELEVATION DIAGRAM



PROFILE

"K7N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	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

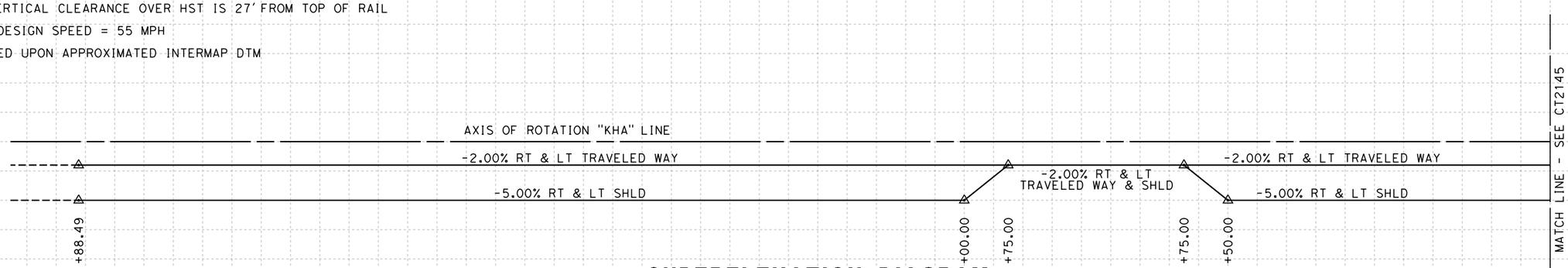
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
7½AVE

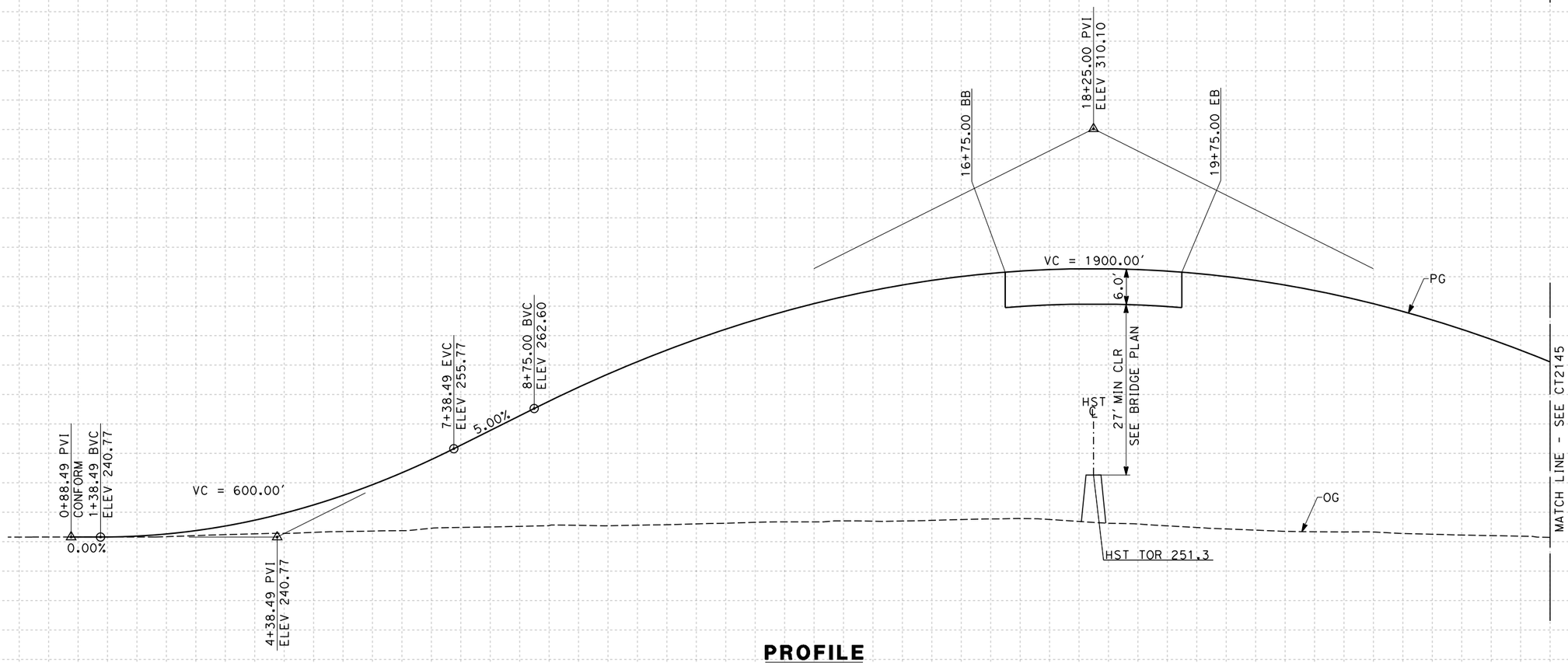
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2143
SCALE AS SHOWN
SHEET NO. 90 OF 101

eron.sudhausen 6/28/2011 7:54:28 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\Grade Separation\SF\H\FB-CT-2143-H.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE
"KHA" 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	3	4	25	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

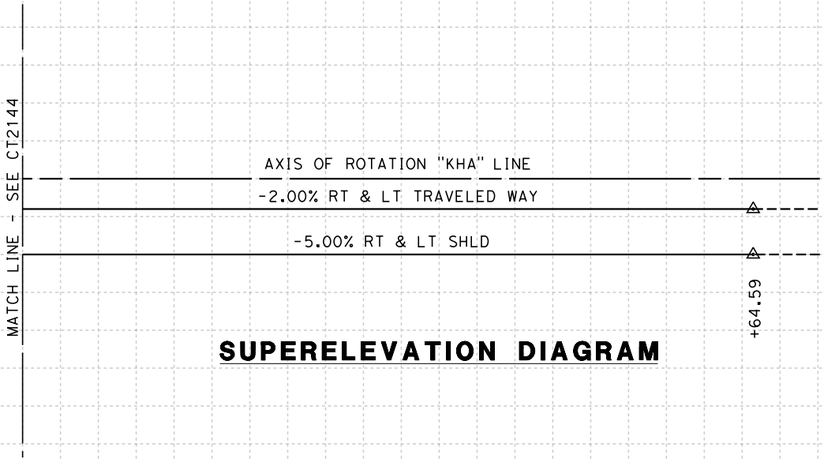
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
HANFORD ARMONA RD

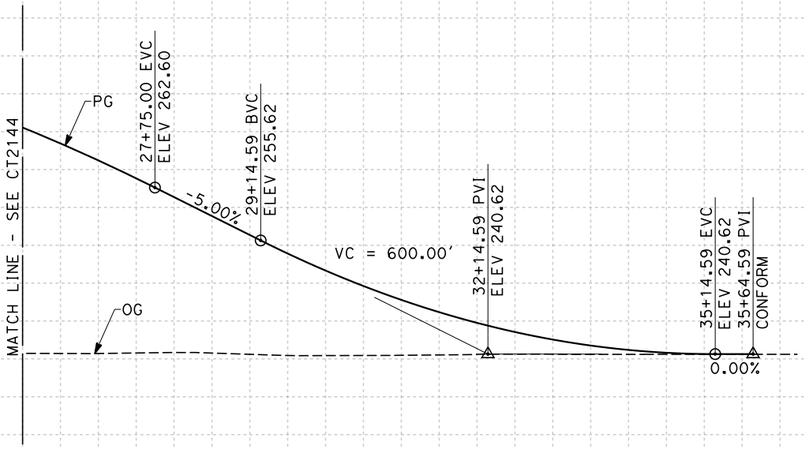
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2144
SCALE AS SHOWN
SHEET NO. 91 OF 101

eron.sudhausen 6/28/2011 7:54:29 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\Grade Separation\SF\H\FB-CT-2144-H.dgn

eron.sudhausen 6/28/2011 7:54:31 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\Grade Separation\SF\H\FB-CT-2145-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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

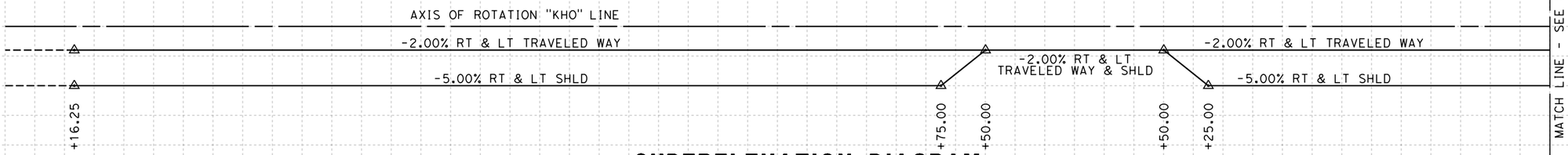
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
HANFORD ARMONA RD

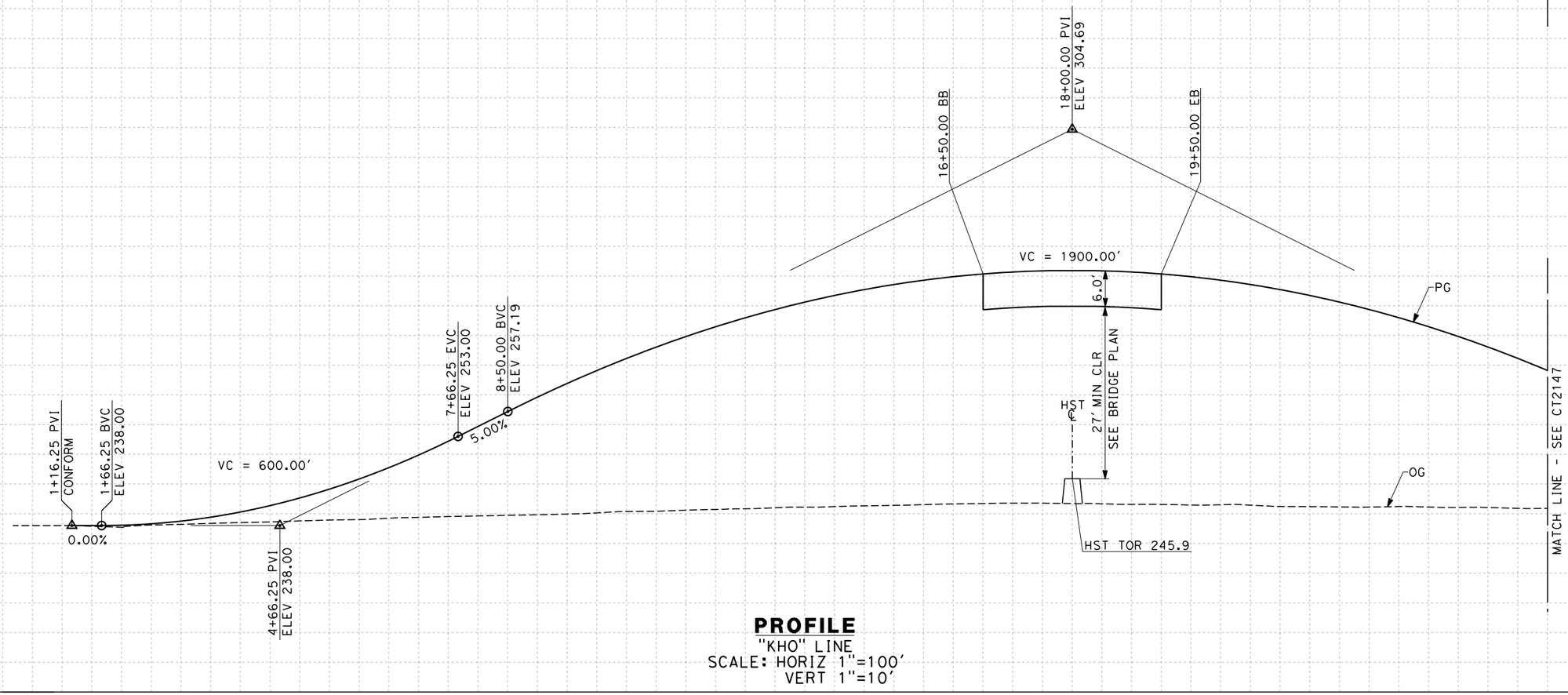
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2145
SCALE AS SHOWN
SHEET NO. 92 OF 101

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"KHO" 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	3	4	25	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

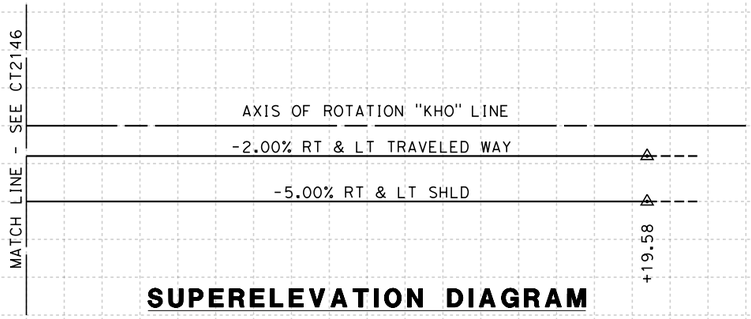
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

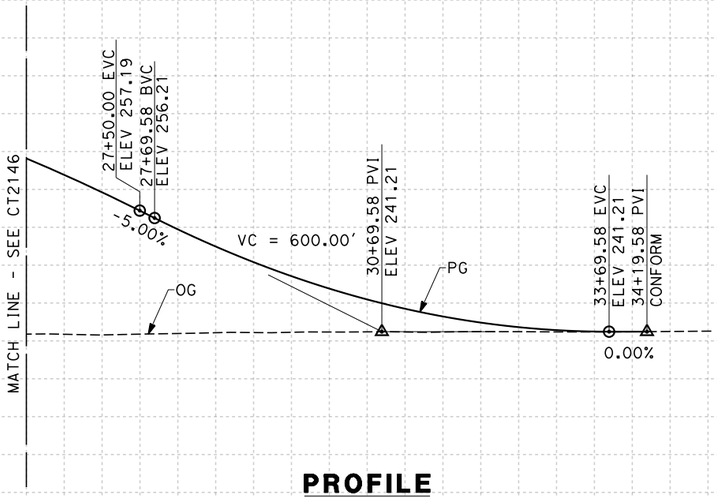
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2146
SCALE AS SHOWN
SHEET NO. 93 OF 101

D:\Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2146-H.dgn 6/28/2011 7:54:32 PM D:\131577\4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2146-H.dgn
eron.sudhausen



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		6	7	8	9	30	1	2	3	4	35	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

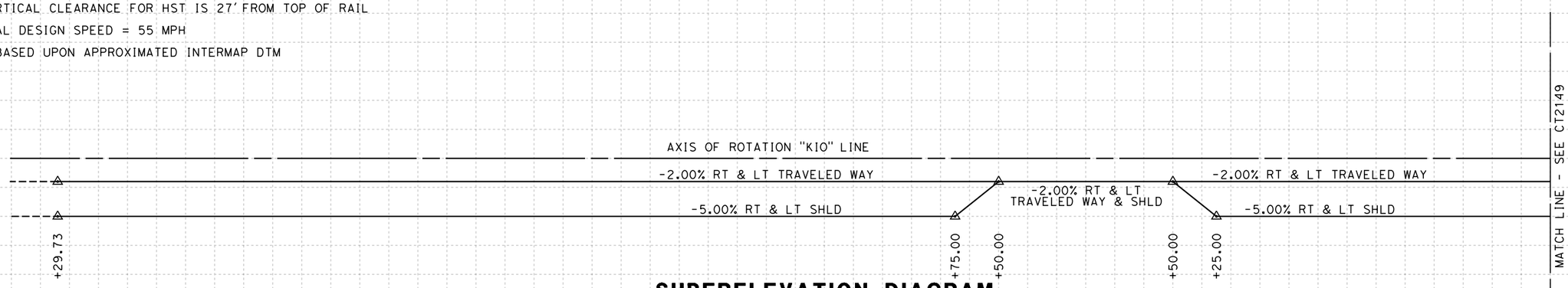
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2147
SCALE AS SHOWN
SHEET NO. 94 OF 101

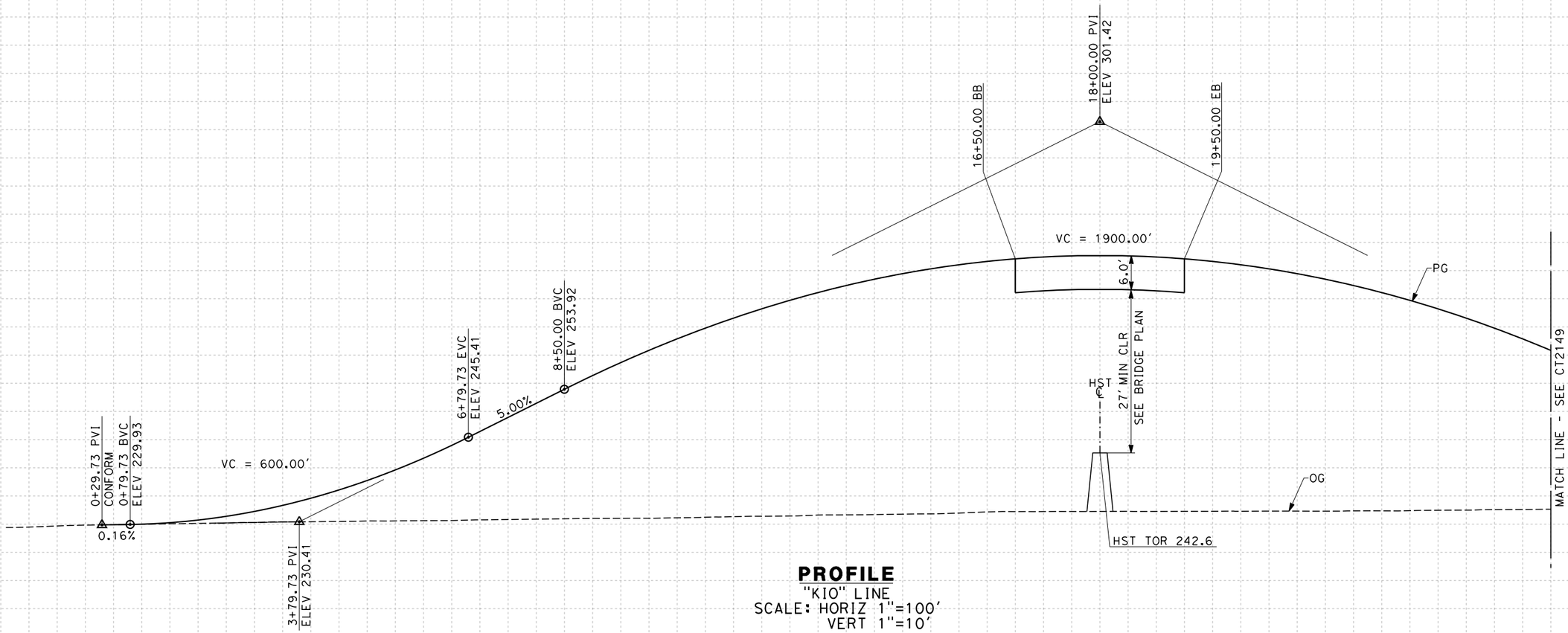
eron.sudhausen 6/28/2011 7:54:34 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2147-H.dgn

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"KIO" 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	3	4	25	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

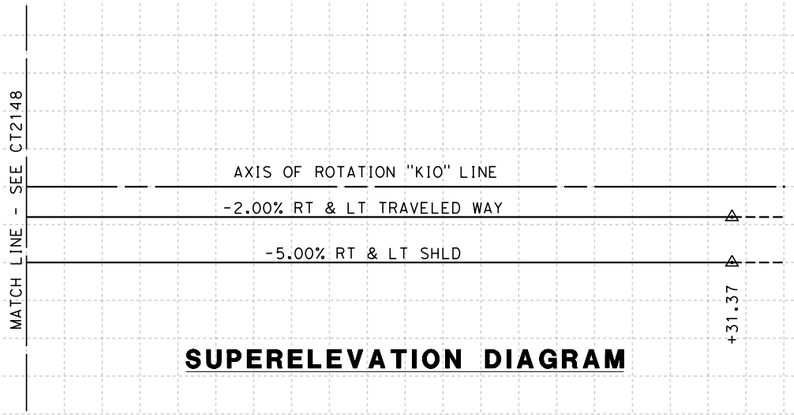
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

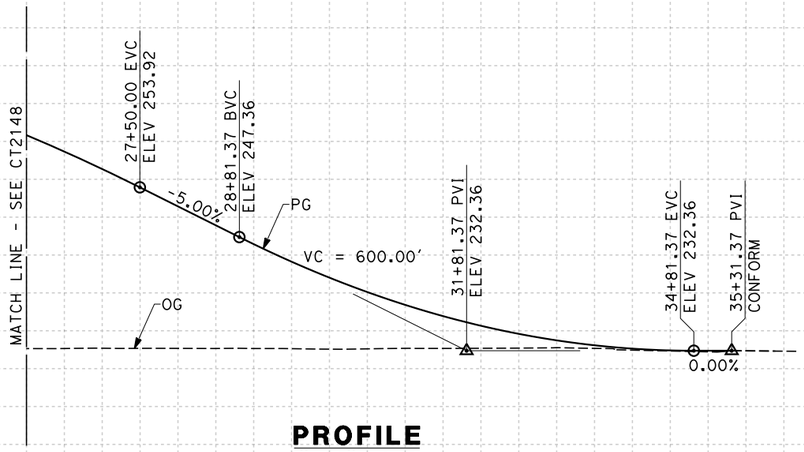
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2148
SCALE AS SHOWN
SHEET NO. 95 OF 101

eron.sudhausen 6/28/2011 7:54:36 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\H\FB-CT-2148-H.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2149
SCALE AS SHOWN
SHEET NO. 96 OF 101

eron.sudhausen 6/28/2011 7:54:38 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\Grade Separation\SF\H\FB-CT-2149-H.dgn

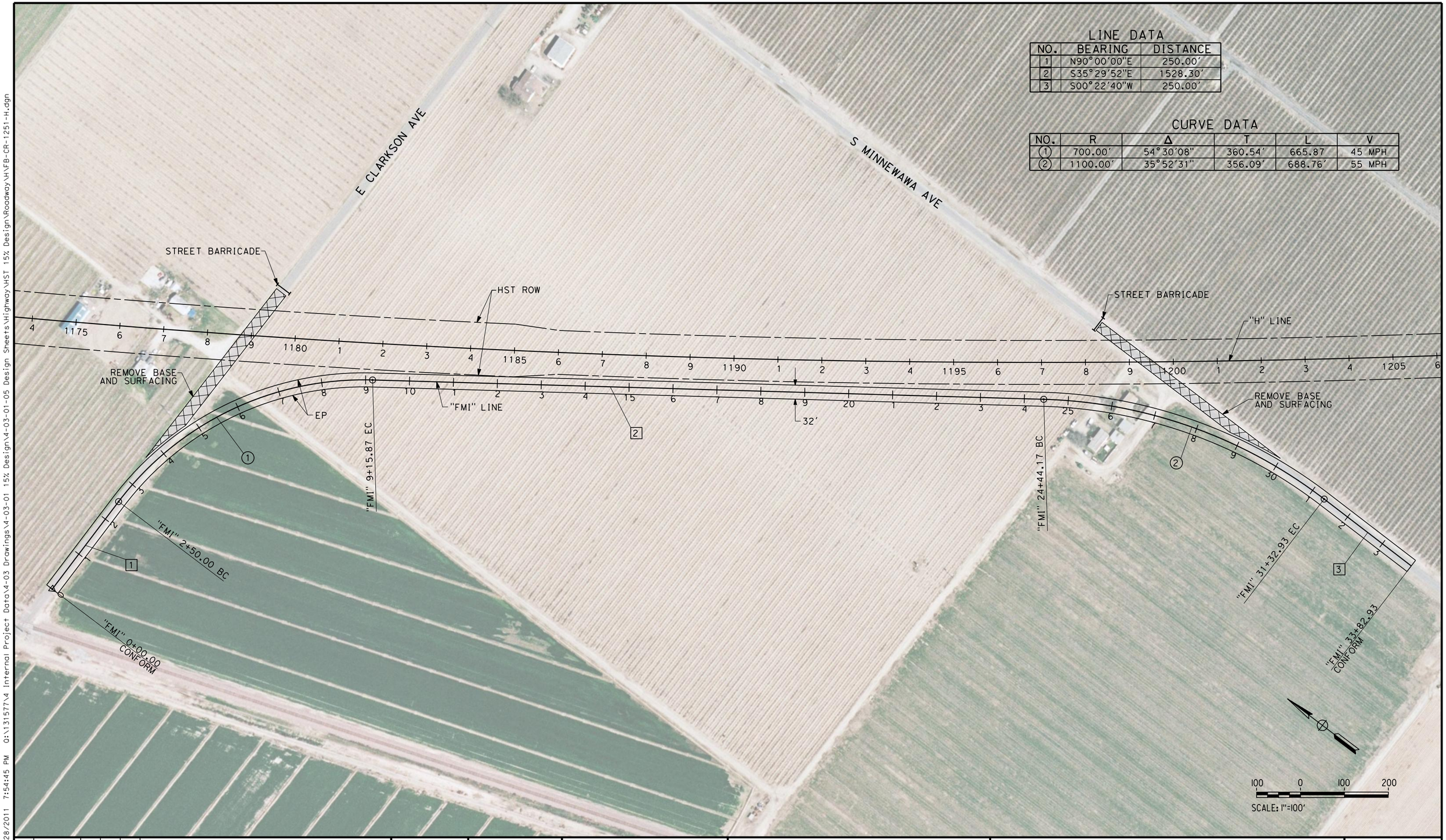
eron.sudhausen 6/28/2011 7:54:45 PM O:\1315777\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Roadway\HYFB-CR-1251-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	250.00'
2	S35°29'52"E	1528.30'
3	S00°22'40"W	250.00'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	700.00'	54°30'08"	360.54'	665.87	45 MPH
(2)	1100.00'	35°52'31"	356.09'	688.76'	55 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

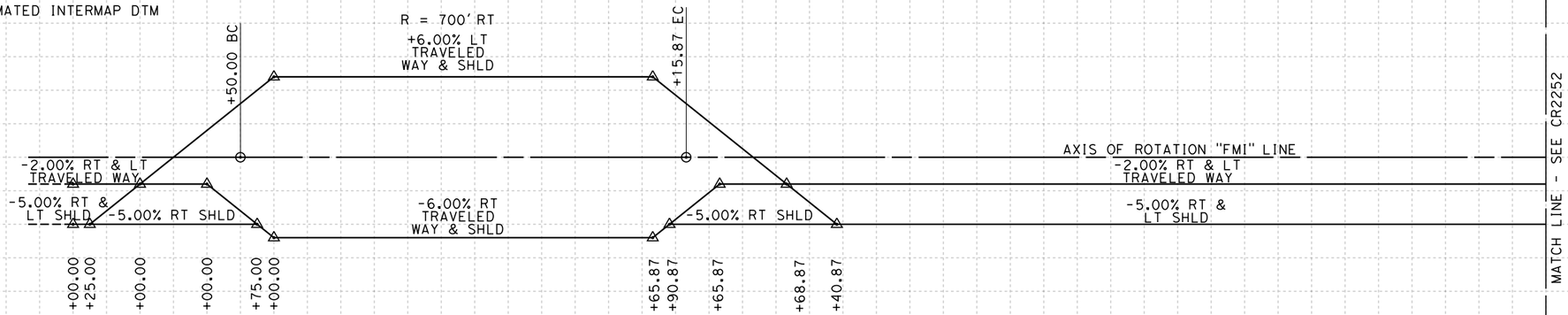
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
ROADWAY LAYOUT
E CLARKSON AVE AND S MINNEWAWA AVE

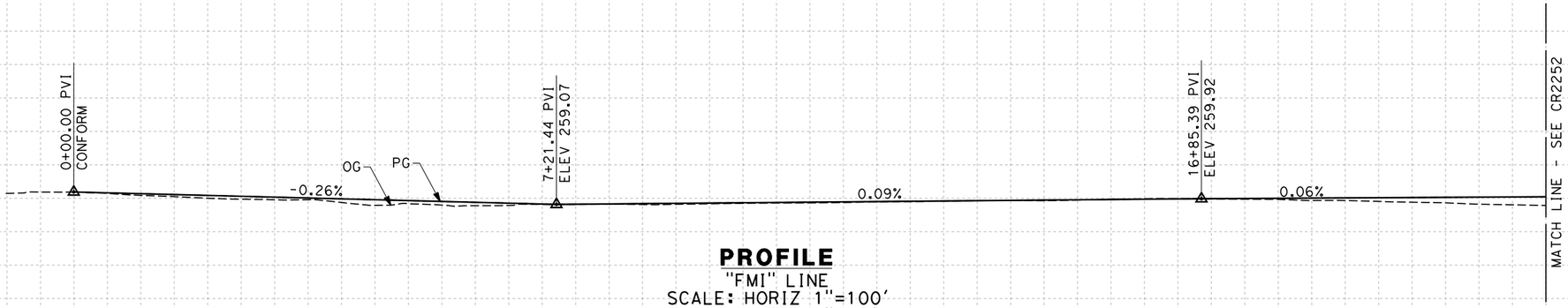
CONTRACT NO. HSR 06-0003
DRAWING NO. CR1251
SCALE AS SHOWN
SHEET NO. 97 OF 101

NOTES:

1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"FMI" 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
FRESNO TO BAKERSFIELD

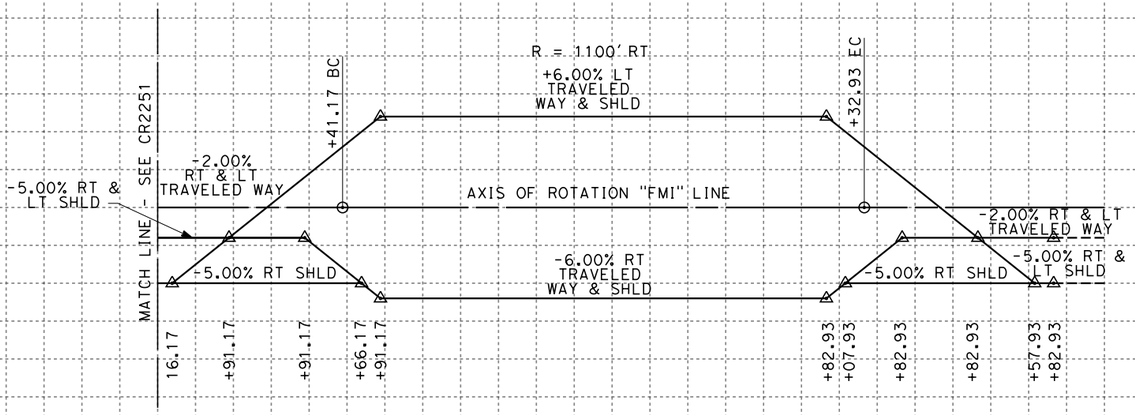
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
E CLARKSON AVE AND S MINNEWAWA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2251
SCALE AS SHOWN
SHEET NO. 98 OF 101

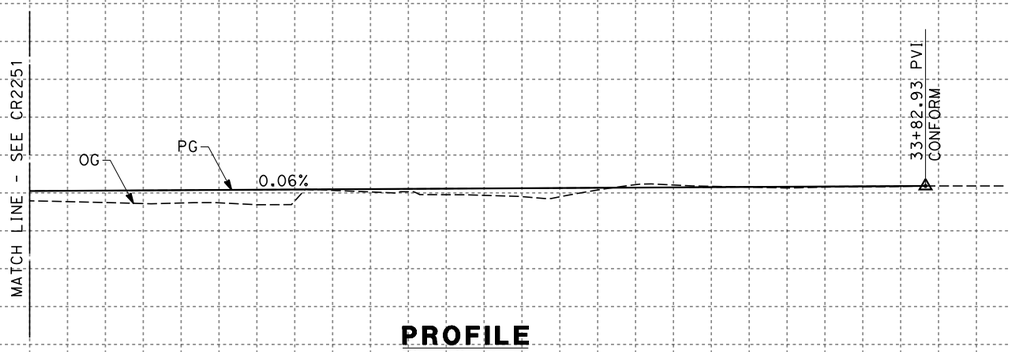
eron.sudhausen 6/28/2011 7:54:50 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Roadway\HVFB-CR-2251-H.dgn

NOTES:

1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		2	3	4	25	6	7	8	9	30	1	2	3	4	35	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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
E CLARKSON AVE AND S MINNEWAWA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2252
SCALE AS SHOWN
SHEET NO. 99 OF 101

eron.sudhausen 6/28/2011 7:54:51 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Roadway\HYFB-CR-2252-H.dgn

NOTES:

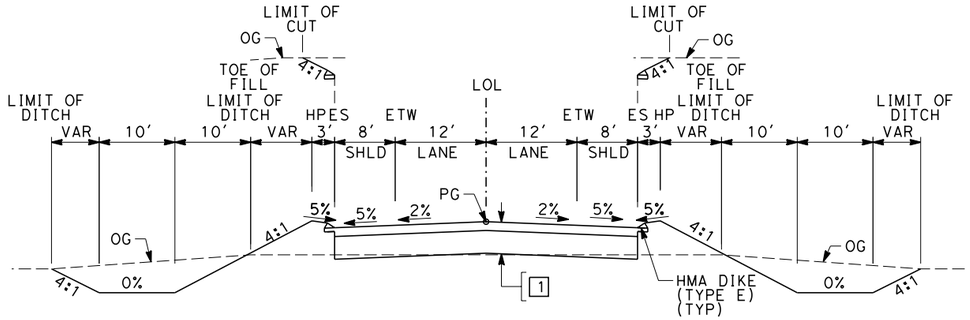
1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS
TYPICAL ROADWAY

1 — 0.60' HMA (TYPE A)
1.50' CL2 AB

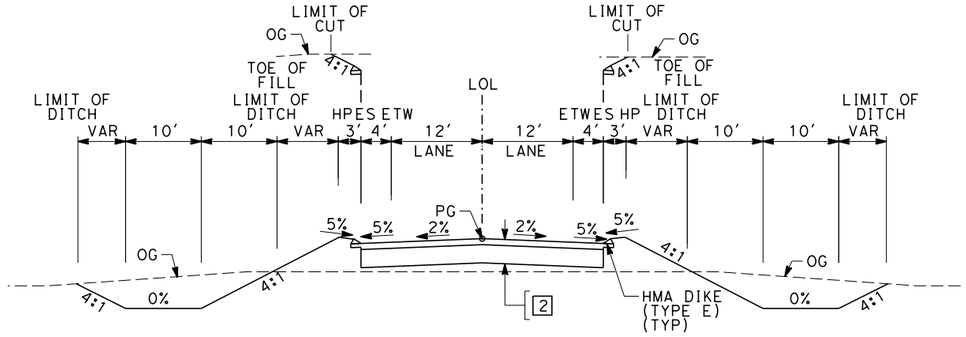
2 — 0.40' HMA (TYPE A)
1.20' CL2 AB

3 — 1.00' CL2 AB



SECTION A

"FLI" 08+90.87 TO 21+20.10	"FEL" 10+00.00 TO 33+99.10
"FLI" 25+20.10 TO 36+15.29	"FEL" 36+99.10 TO 51+74.70
"FAD" 08+53.02 TO 21+22.03	"FFO" 10+00.00 TO 36+41.77
"FAD" 25+22.03 TO 36+99.52	"FFO" 39+41.77 TO 57+16.10
"FMN" 01+56.62 TO 06+66.58	"KEX" 10+00.00 TO 25+80.12
"FMN" 18+31.07 TO 29+46.78	"KEX" 28+80.12 TO 44+72.74
"FFL" 10+00.00 TO 27+24.22	"KEL" 10+00.00 TO 26+70.44
"FFL" 31+24.22 TO 42+82.73	"KEL" 29+70.44 TO 46+33.12
"FNE" 10+00.00 TO 28+49.64	"KFL" 10+00.00 TO 27+85.11
"FNE" 32+49.64 TO 44+17.95	"KFL" 30+85.11 TO 47+70.21
"FMV" 01+60.67 TO 16+32.55	"KHA" 00+88.49 TO 16+75.00
"FMV" 20+32.55 TO 33+24.12	"KHA" 19+75.00 TO 35+64.59
"FCS" 00+00.00 TO 13+64.17	"KHO" 01+16.25 TO 16+50.00
"FCN" 03+56.26 TO 27+00.00	"KHO" 19+50.00 TO 34+19.58



SECTION B

"FCY" 09+18.35 TO 21+35.95	"KKRA" 12+79.11 TO 24+64.00
"FCY" 25+35.95 TO 36+36.54	"KCA" 11+89.66 TO 28+52.04
"FSO" 10+83.35 TO 23+39.36	"KCA" 31+52.04 TO 47+46.66
"FSO" 27+39.36 TO 39+64.16	"KDO" 10+65.97 TO 26+51.73
"FSP" 01+75.92 TO 14+18.21	"KDO" 29+51.73 TO 45+04.80
"FSP" 18+38.21 TO 28+66.17	"K8N" 10+00.00 TO 33+19.67
"FSC" 12+00.00 TO 20+97.37	"K8S" 10+00.00 TO 31+92.71
"FCL" 10+00.00 TO 28+72.70	"KFA" 09+79.75 TO 25+67.12
"FCL" 31+72.70 TO 50+46.79	"KFA" 28+67.12 TO 44+34.24
"FDA" 04+87.14 TO 20+27.29	"KIO" 00+29.73 TO 16+50.00
"FDA" 23+27.29 TO 53+56.88	"KIO" 19+50.00 TO 35+31.37

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

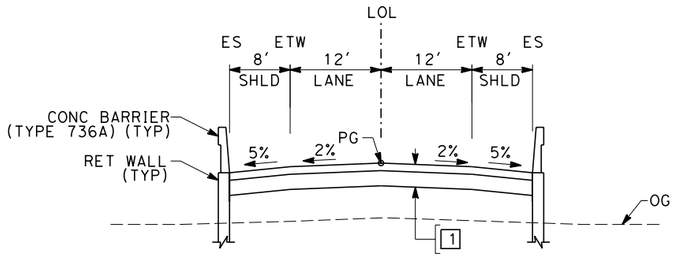
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

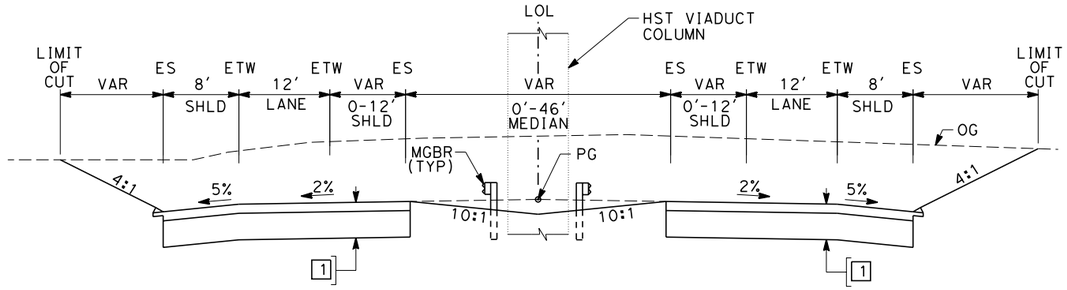
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3030
SCALE NO SCALE
SHEET NO. 100 OF 101

eron.sudhausen 6/29/2011 8:55:04 AM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Cross Sections\FB-CT-3030-H.dgn



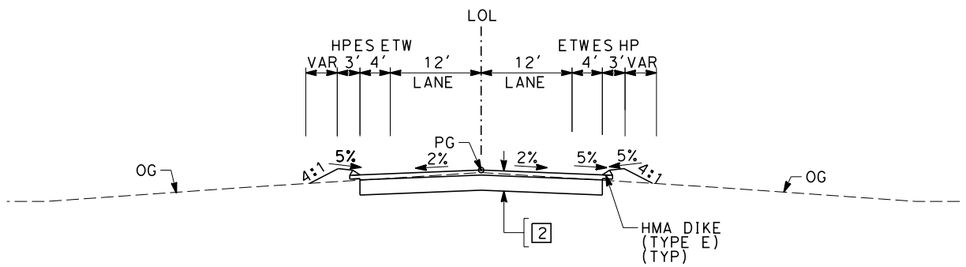
SECTION C

"FMN" 06+66.58 TO 09+31.07



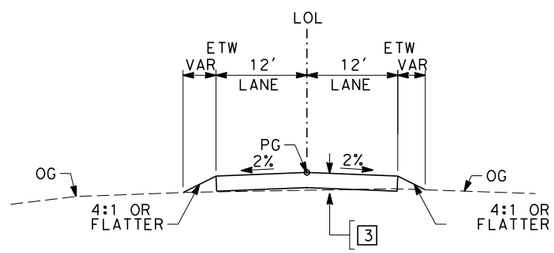
SECTION E

"F43" 07+12.50 TO 36+00.00



SECTION D

"FSC" 12+00.00 TO 20+97.37
"FMI" 00+00.00 TO 33+82.93
"K7" 00+00.00 TO 13+31.28
"K7N" 00+00.00 TO 12+05.95



SECTION F

"FKRA" 10+00.00 TO 42+90.00
"FKRA" 45+80.00 TO 51+01.81

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
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3031
SCALE NO SCALE
SHEET NO. 101 OF 101

eron.sudhausen 6/28/2011 7:54:56 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\Cross Sections\FB-CT-3031-H.dgn

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA
JERSEY AVENUE	2228+56.00
LANSING AVENUE	2396+10.00
AVENUE 136	3056+87.00

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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0060
SCALE AS SHOWN
SHEET NO. 1 OF 34

eron.sudhausen 6/28/2011 8:42:09 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\Key Maps\FB-CB-0060-C1.dgn

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'

IDAHO AVE

"KID" 10+00.00 PI
CONFORM

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

"KID" 28+03.65 POT=
"C1" 2120+10.00 POT

1

32'

"KID" LINE

BB

EB

EP

MBGR
(TYP)

HST ROW

"C1" LINE

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

MATCH LINE - SEE CT1202

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

CULVERT

RELOCATE
CANAL

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

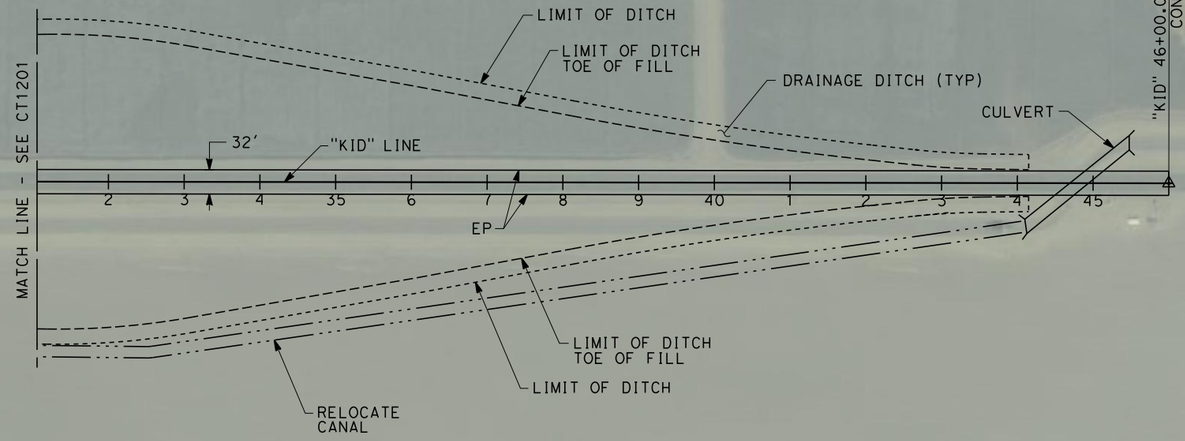
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1201
SCALE AS SHOWN
SHEET NO. 2 OF 34

eron.sudhausen 6/28/2011 8:46:29 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\Grade Separation\SF\C1\FB-CT-1202-C1.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

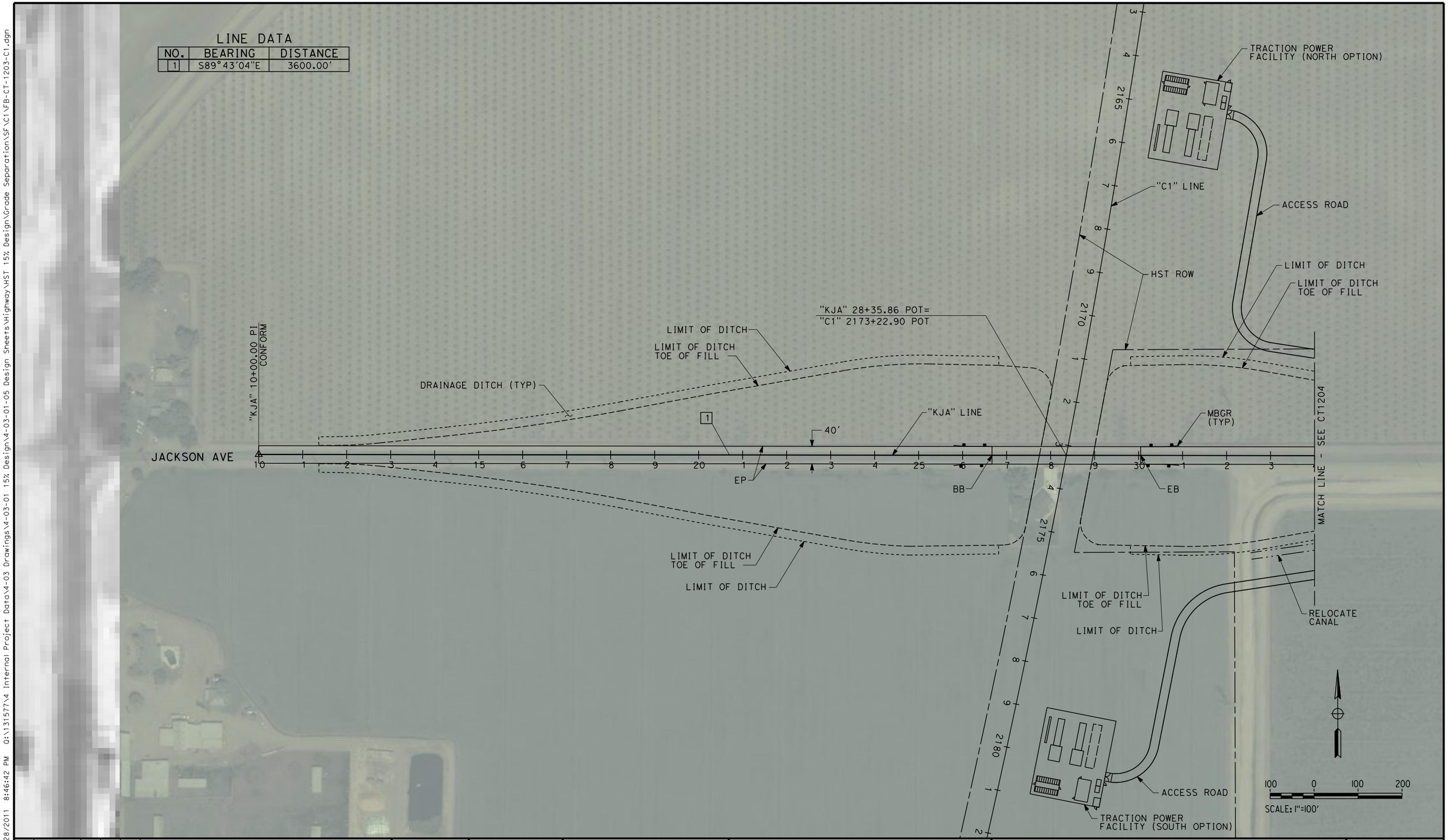
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1202
SCALE AS SHOWN
SHEET NO. 3 OF 34

LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
JACKSON AVE

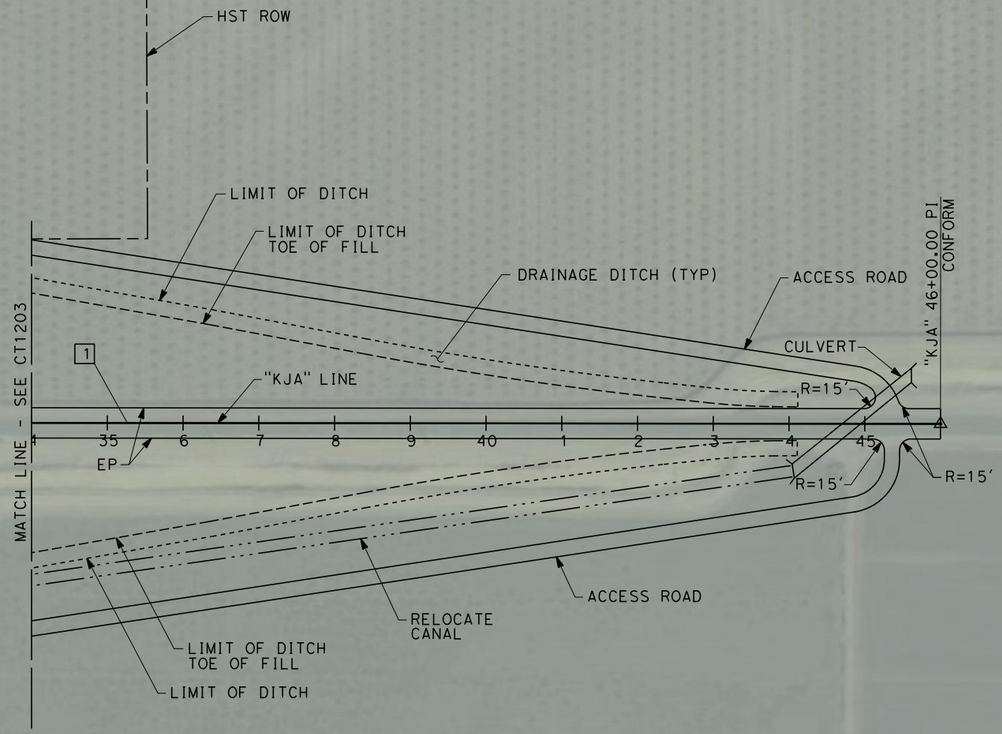
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1203
SCALE AS SHOWN
SHEET NO. 4 OF 34

eron.sudhausen 6/28/2011 8:46:42 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\Grade Separation\SF\C1\FB-CT-1203-C1.dgn

eron.sudhausen 6/28/2011 8:46:45 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\Grade Separation\SF\C1\FB-CT-1204-C1.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'



JACKSON AVE

100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1204
SCALE AS SHOWN
SHEET NO. 5 OF 34

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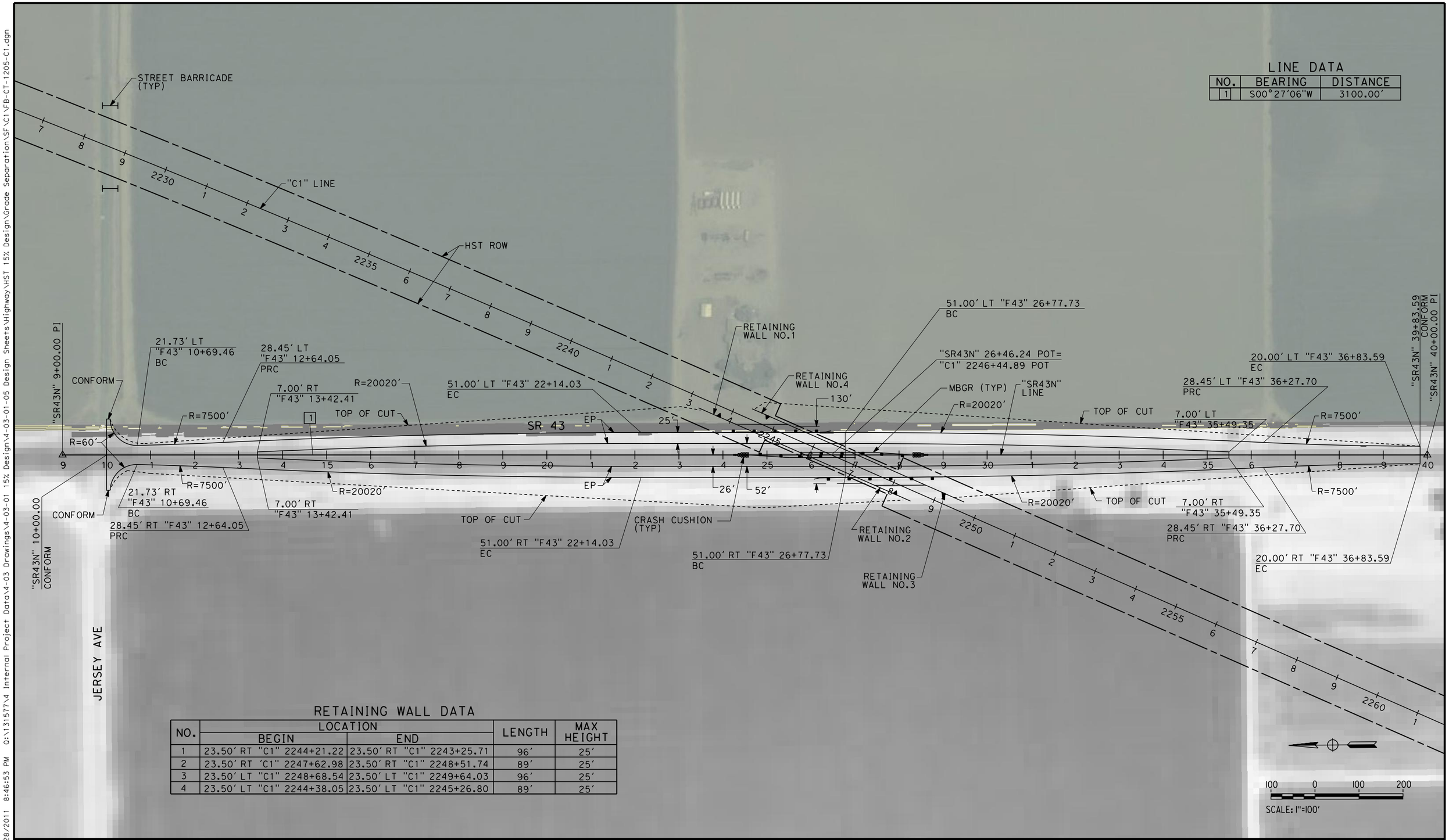
6/28/2011 8:46:53 PM
eron.sudhausen

LINE DATA

NO.	BEARING	DISTANCE
1	S00°27'06"W	3100.00'



RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	23.50' RT "C1" 2244+21.22	23.50' RT "C1" 2243+25.71	96'	25'
2	23.50' RT 'C1" 2247+62.98	23.50' RT "C1" 2248+51.74	89'	25'
3	23.50' LT "C1" 2248+68.54	23.50' LT "C1" 2249+64.03	96'	25'
4	23.50' LT "C1" 2244+38.05	23.50' LT "C1" 2245+26.80	89'	25'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (JERSEY AVE)

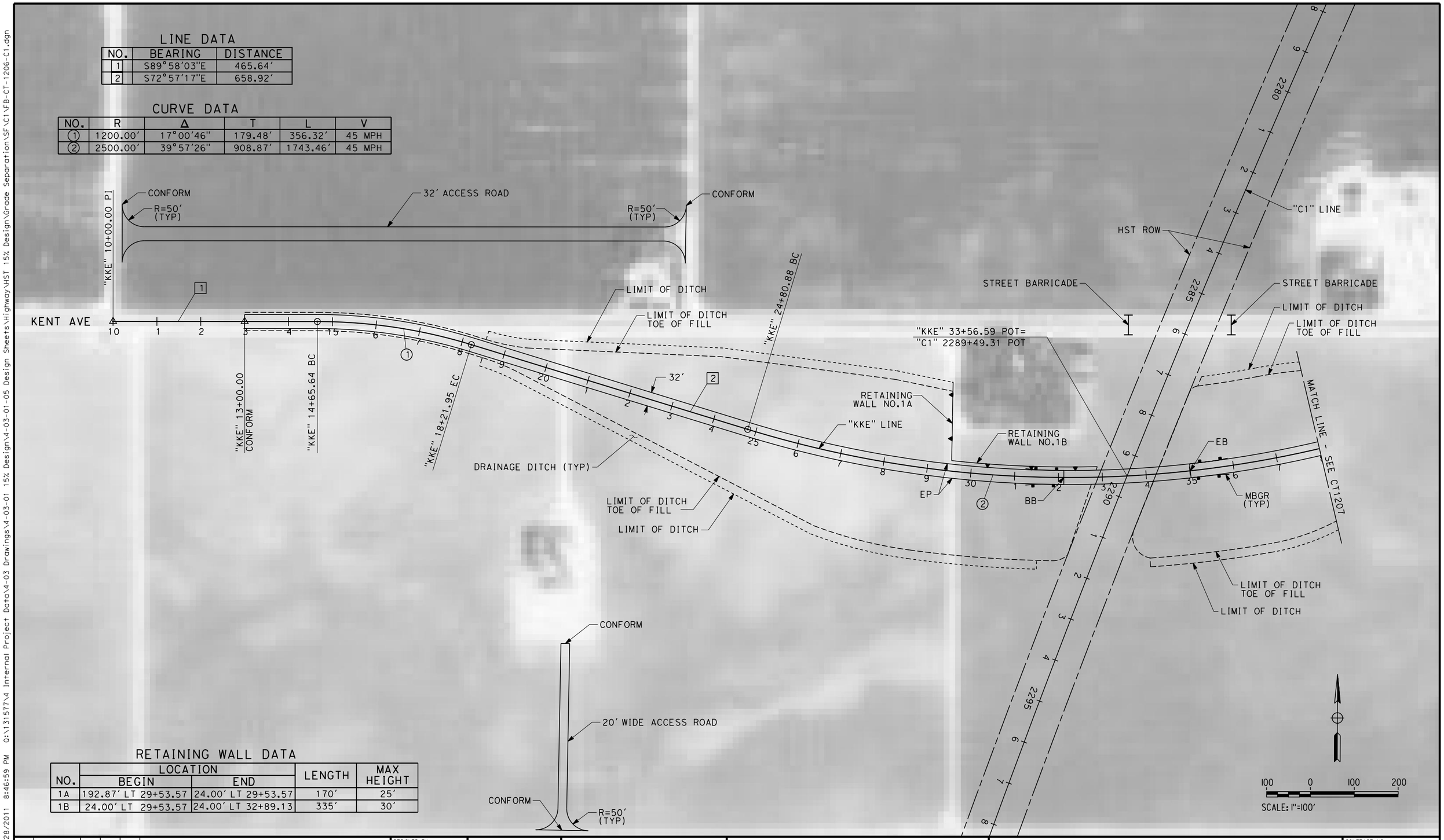
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1205
SCALE AS SHOWN
SHEET NO. 6 OF 34

LINE DATA

NO.	BEARING	DISTANCE
1	S89°58'03"E	465.64'
2	S72°57'17"E	658.92'

CURVE DATA

NO.	R	Δ	T	L	V
①	1200.00'	17°00'46"	179.48'	356.32'	45 MPH
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	192.87' LT 29+53.57	24.00' LT 29+53.57	170'	25'
1B	24.00' LT 29+53.57	24.00' LT 32+89.13	335'	30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1206
SCALE AS SHOWN
SHEET NO. 7 OF 34

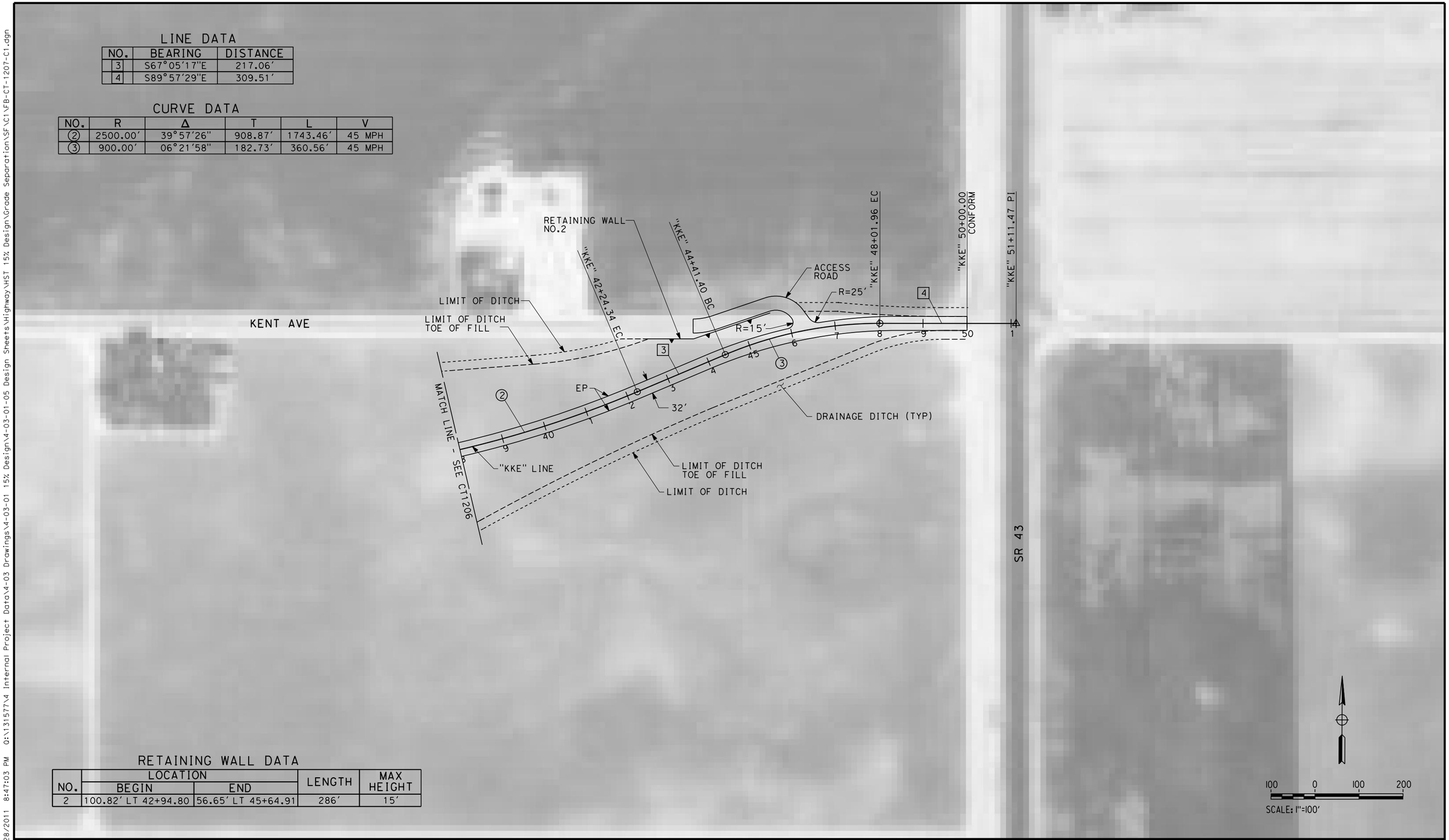
eron.sudhausen 6/28/2011 8:46:59 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-1206-C1.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	S67°05'17"E	217.06'
4	S89°57'29"E	309.51'

CURVE DATA

NO.	R	Δ	T	L	V
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH
③	900.00'	06°21'58"	182.73'	360.56'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
2	100.82' LT 42+94.80	56.65' LT 45+64.91	286'	15'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1207
SCALE AS SHOWN
SHEET NO. 8 OF 34

eron.sudhausen 6/28/2011 8:47:03 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\Grade Separation\SF\C1\FB-CT-1207-C1.dgn

LINE DATA

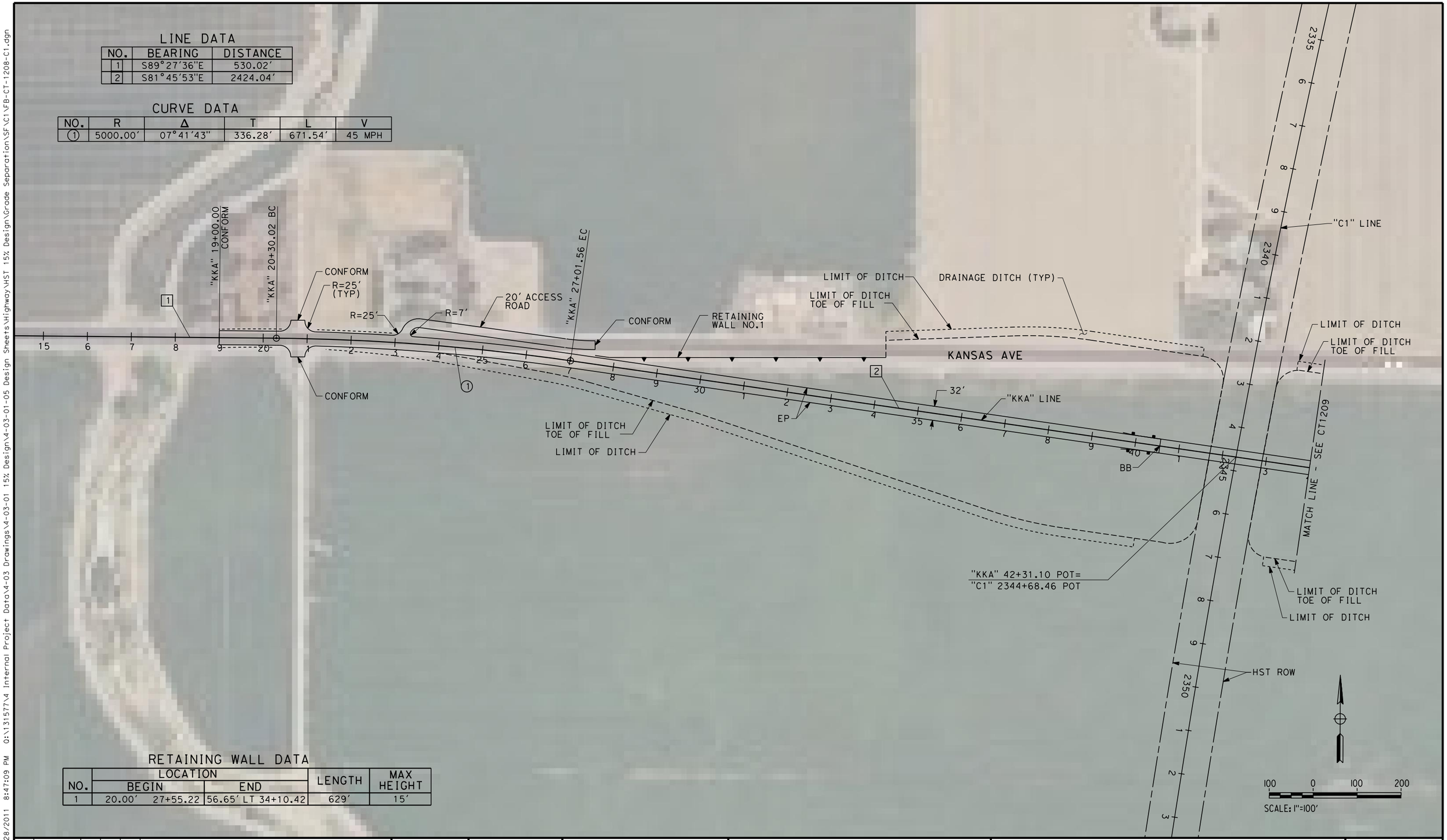
NO.	BEARING	DISTANCE
1	S89°27'36"E	530.02'
2	S81°45'53"E	2424.04'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	5000.00'	07°41'43"	336.28'	671.54'	45 MPH

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	20.00' 27+55.22	56.65' LT 34+10.42	629'	15'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S.DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1208
SCALE AS SHOWN
SHEET NO. 9 OF 34

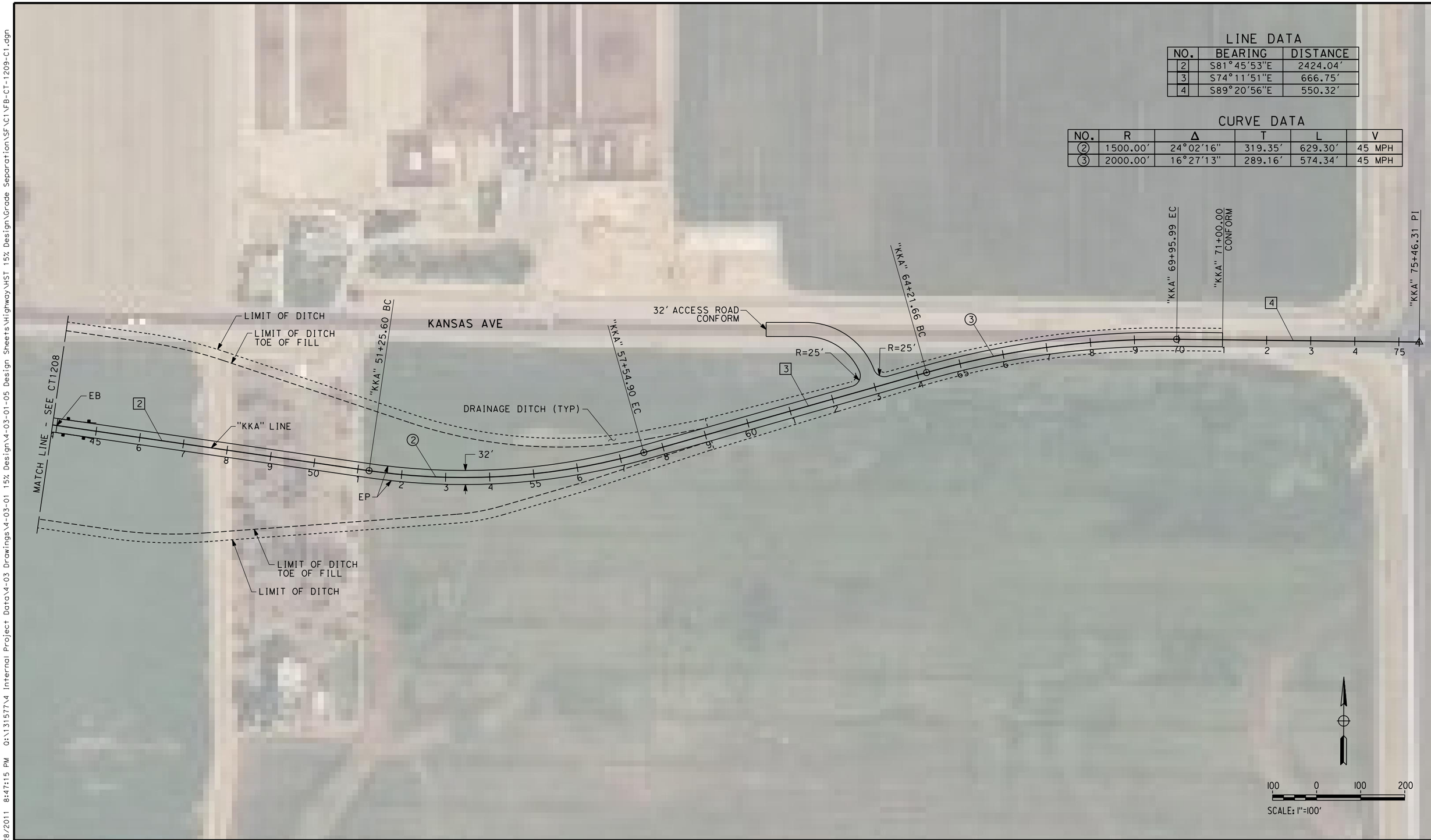
eron.sudhousen 6/28/2011 8:47:09 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-1208-C1.dgn

LINE DATA

NO.	BEARING	DISTANCE
2	S81°45'53"E	2424.04'
3	S74°11'51"E	666.75'
4	S89°20'56"E	550.32'

CURVE DATA

NO.	R	Δ	T	L	V
②	1500.00'	24°02'16"	319.35'	629.30'	45 MPH
③	2000.00'	16°27'13"	289.16'	574.34'	45 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1209
SCALE AS SHOWN
SHEET NO. 10 OF 34

eron.sudhausen 6/28/2011 8:47:15 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\Grade Separation\SF\C1\FB-CT-1209-C1.dgn

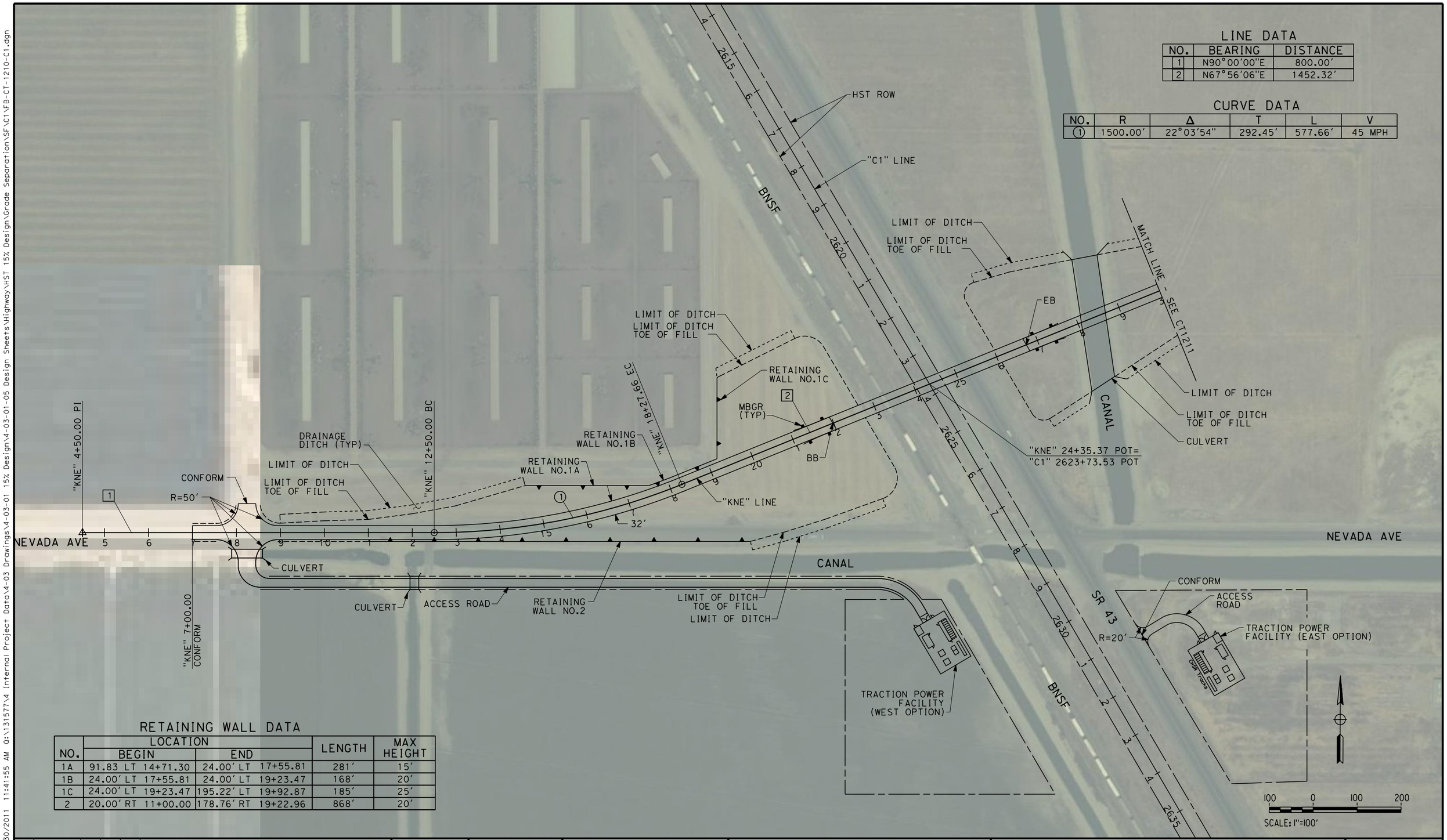
I:\15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-1210-C1.dgn
eron.sudhausen 6/30/2011 11:41:55 AM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design

LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	800.00'
2	N67°56'06"E	1452.32'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1500.00'	22°03'54"	292.45'	577.66'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	91.83 LT 14+71.30	24.00' LT 17+55.81	281'	15'
1B	24.00' LT 17+55.81	24.00' LT 19+23.47	168'	20'
1C	24.00' LT 19+23.47	195.22' LT 19+92.87	185'	25'
2	20.00' RT 11+00.00	178.76' RT 19+22.96	868'	20'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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 FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1210
SCALE AS SHOWN
SHEET NO. 11 OF 34

LINE DATA

NO.	BEARING	DISTANCE
2	S67°56'06"E	1452.32'
3	S00°18'12"W	219.41'

CURVE DATA

NO.	R	Δ	T	L	V
②	450.00'	112°22'06"	671.80'	882.54'	35 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

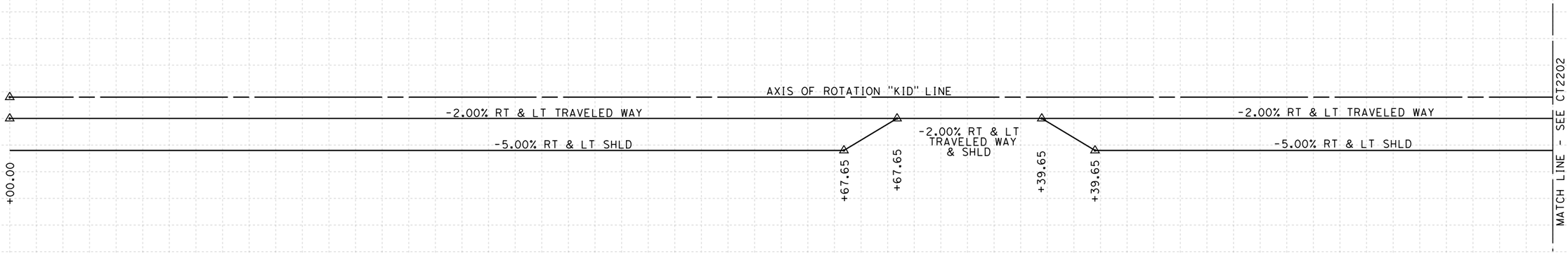
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEPARATION LAYOUT
NEVADA AVE

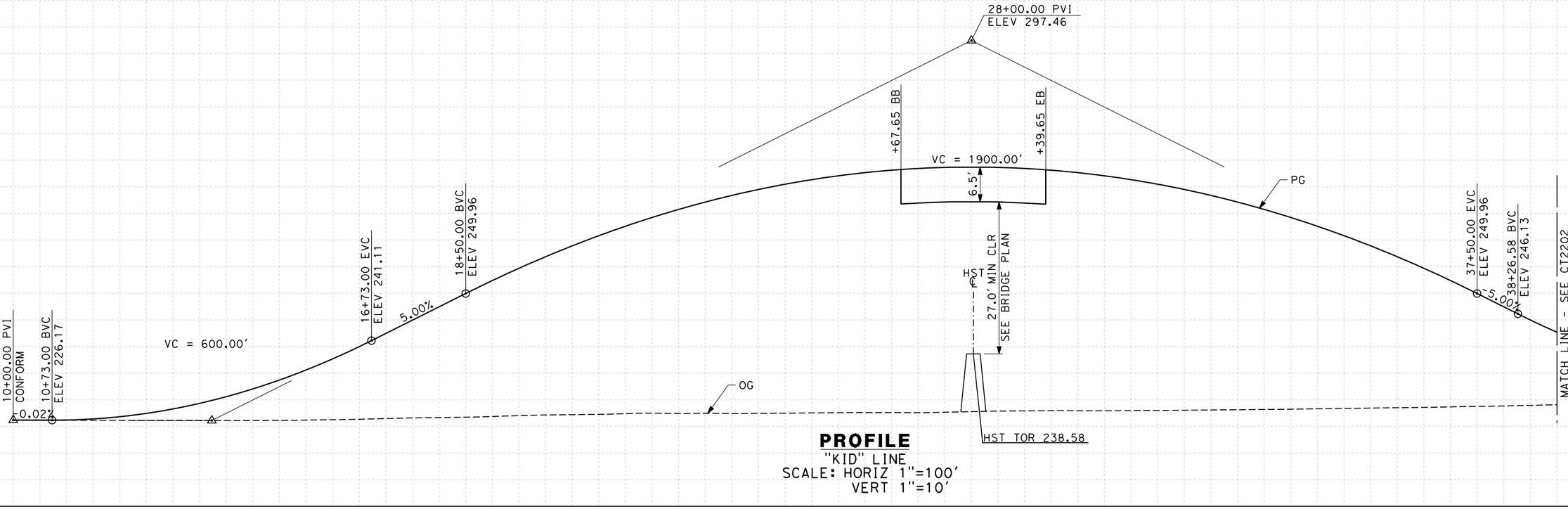
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1211
SCALE AS SHOWN
SHEET NO. 12 OF 34

eron.sudhausen 6/28/2011 8:47:25 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\Grade Separation\SF\C1\FB-CT-1211-C1.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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 FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2201
SCALE AS SHOWN
SHEET NO. 13 OF 34

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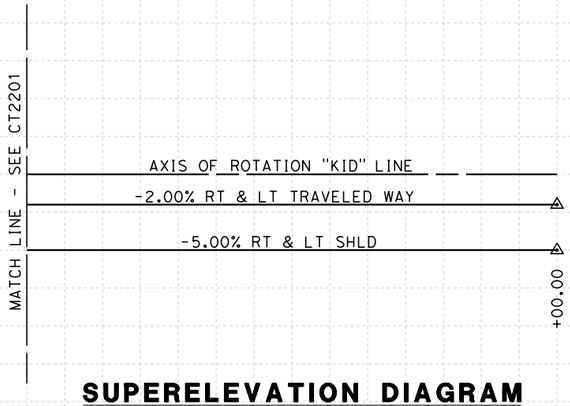
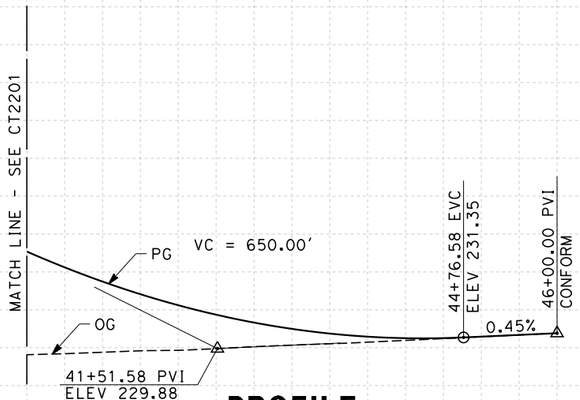


SUPERELEVATION DIAGRAM



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

STATION		9	40	1	2	3	4	45	6	TOTAL
CY	Exc									
	Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2202
SCALE AS SHOWN
SHEET NO. 14 OF 34

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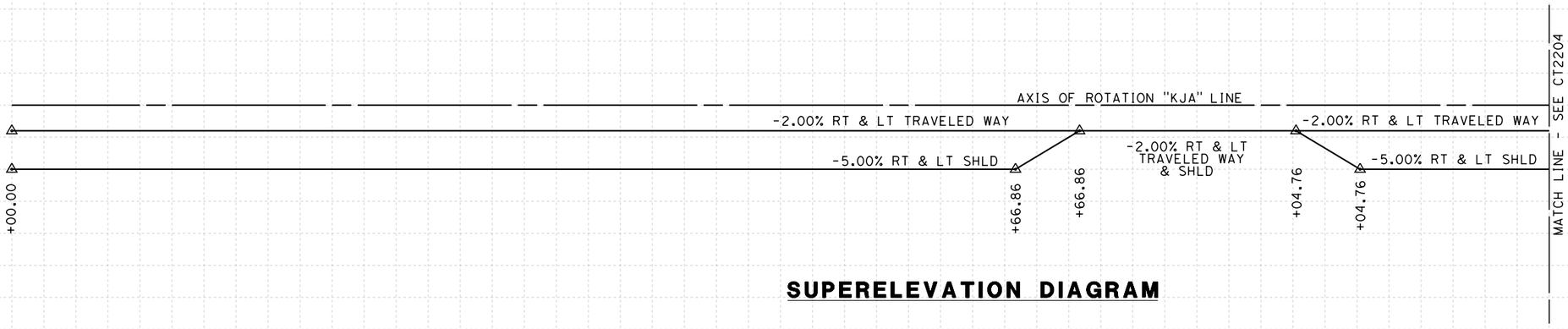
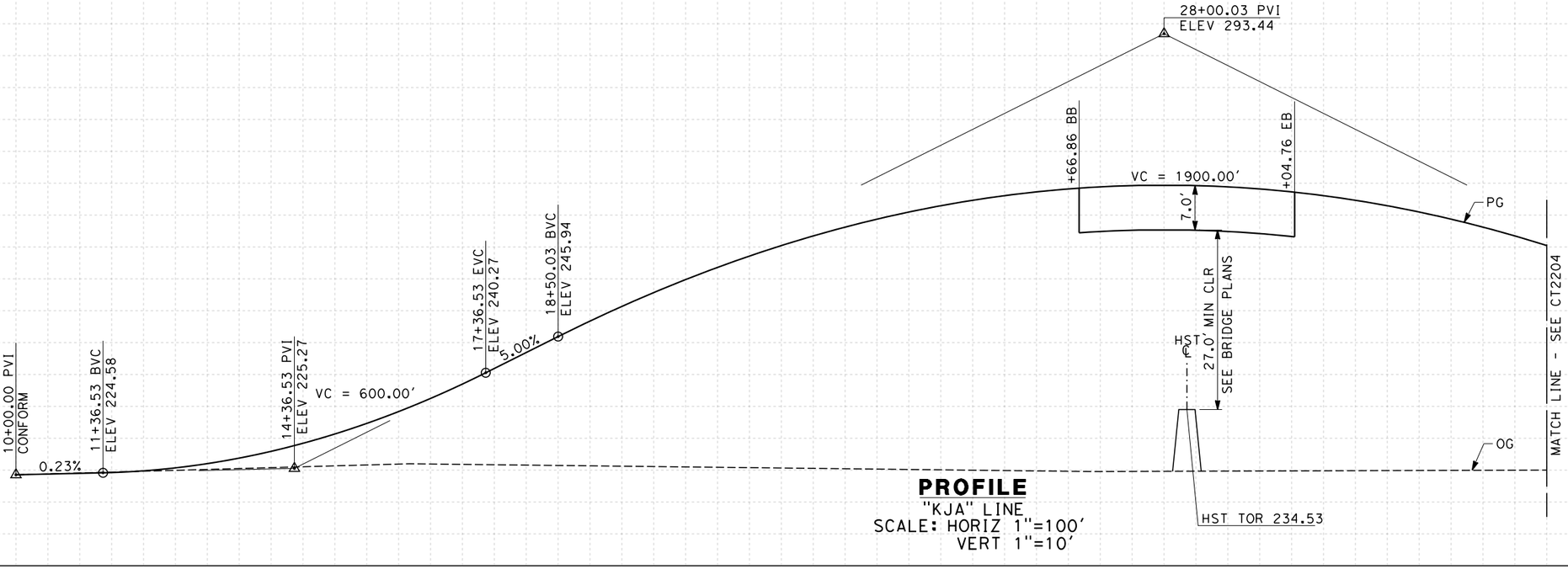
NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

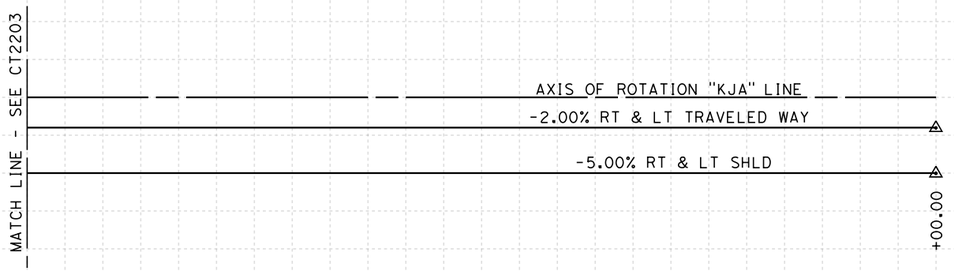
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

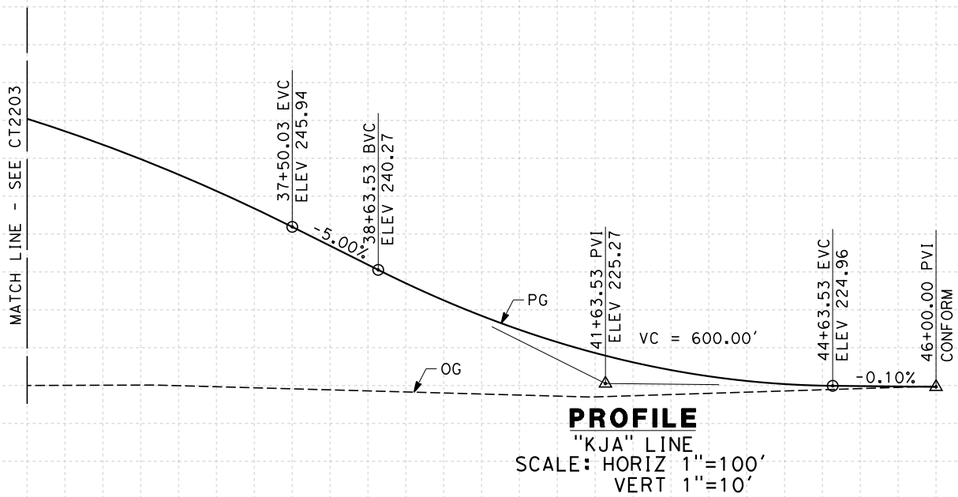
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2203
SCALE AS SHOWN
SHEET NO. 15 OF 34

eron.sudhausen 6/28/2011 8:47:33 PM O:\1315774 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-2203-C1.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	TOTAL
CY Exc														
CY Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

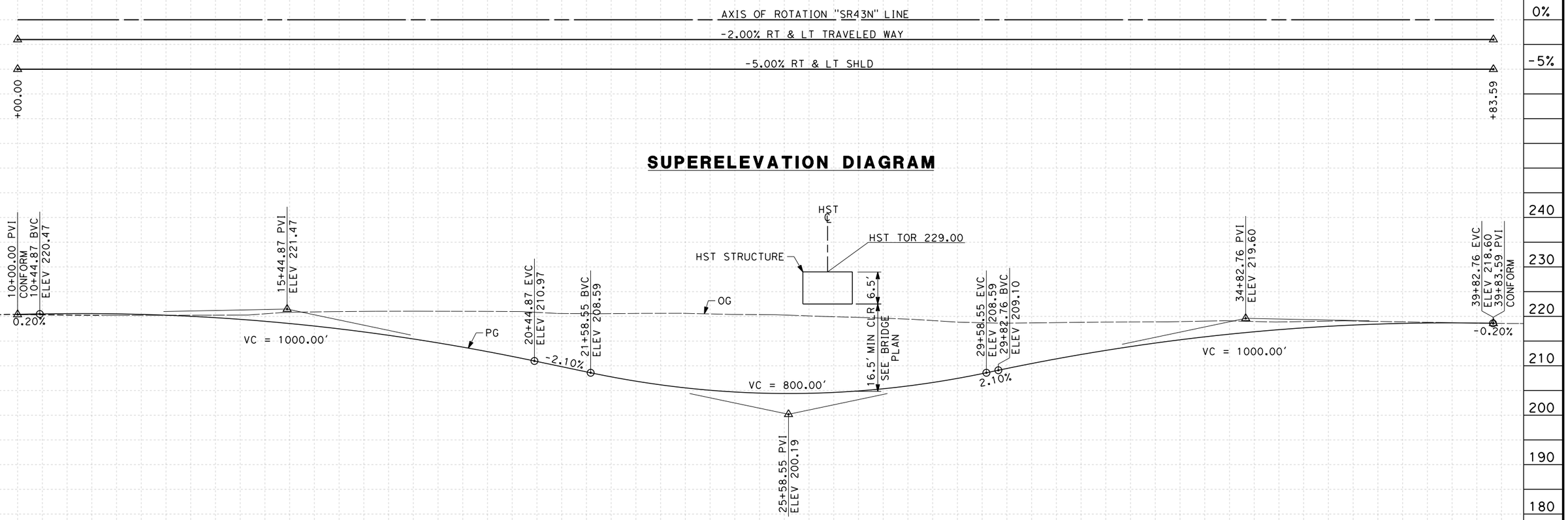
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2204
SCALE AS SHOWN
SHEET NO. 16 OF 34

eron.sudhausen 6/28/2011 8:47:34 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\Grade Separation\SF\C1\FB-CT-2204-C1.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 70 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE
"SR43N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	40	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

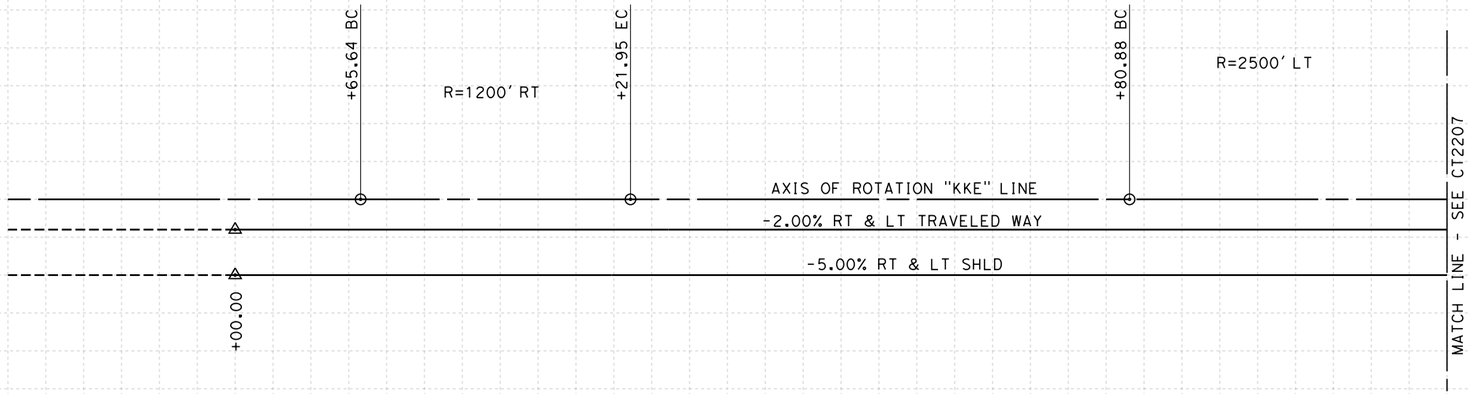
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (JERSEY AVE)

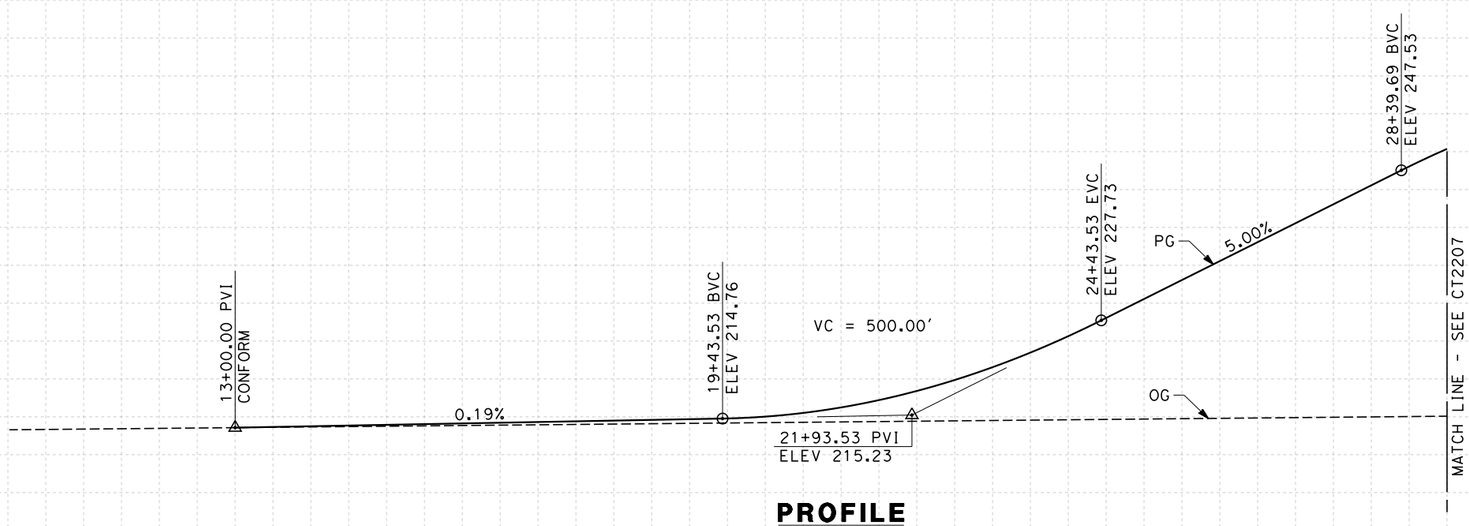
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2205
SCALE AS SHOWN
SHEET NO. 17 OF 34

eron.sudhausen 6/28/2011 8:47:36 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-2205-C1.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

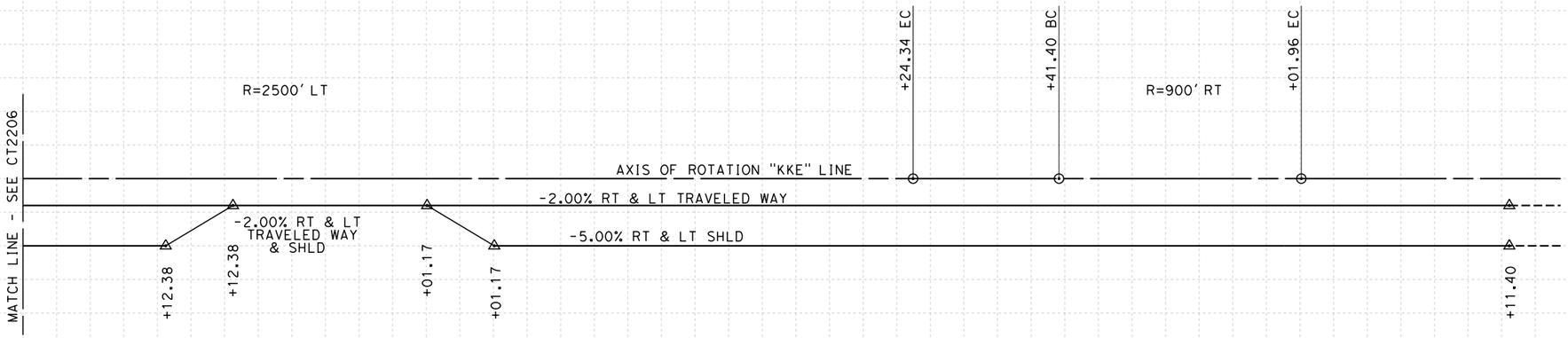
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

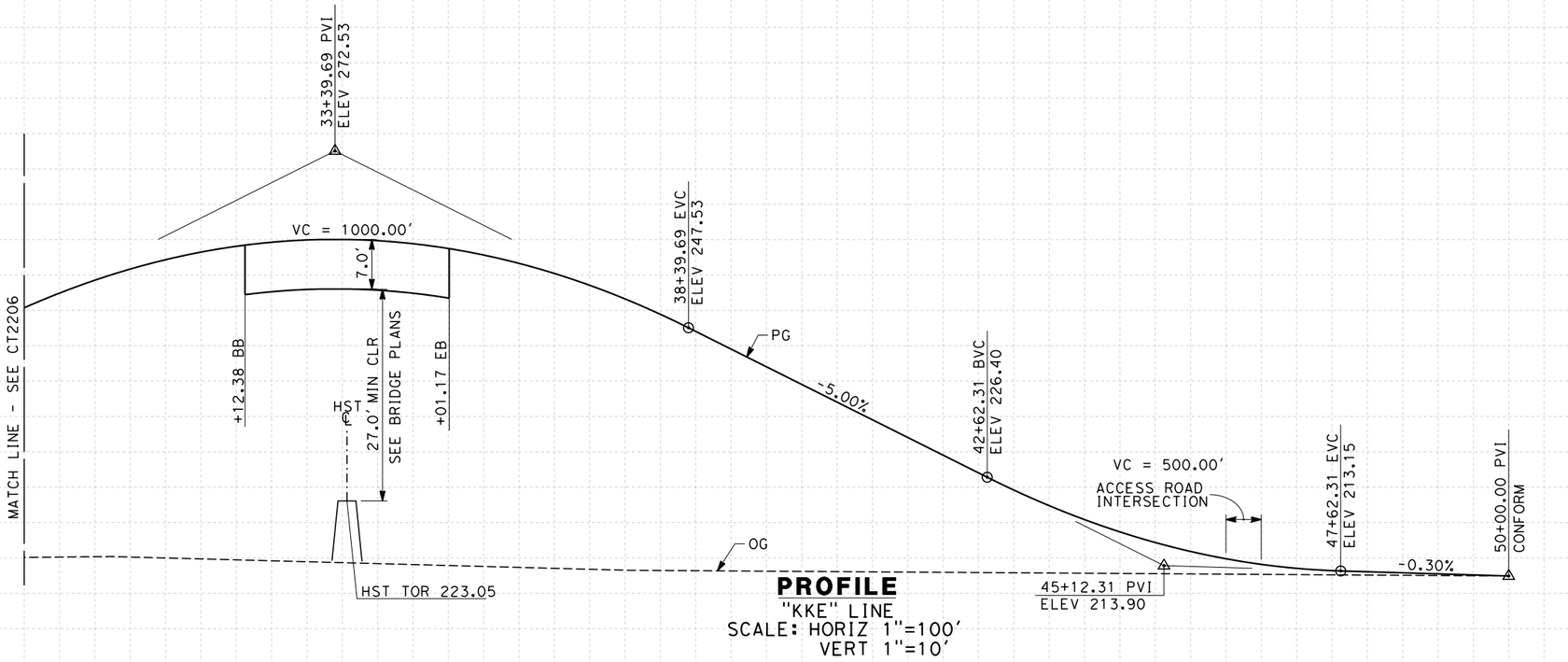
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2206
SCALE AS SHOWN
SHEET NO. 18 OF 34

eron.sudhausen 6/28/2011 8:47:38 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\Grade Separation\SF\C1\FB-CT-2206-C1.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

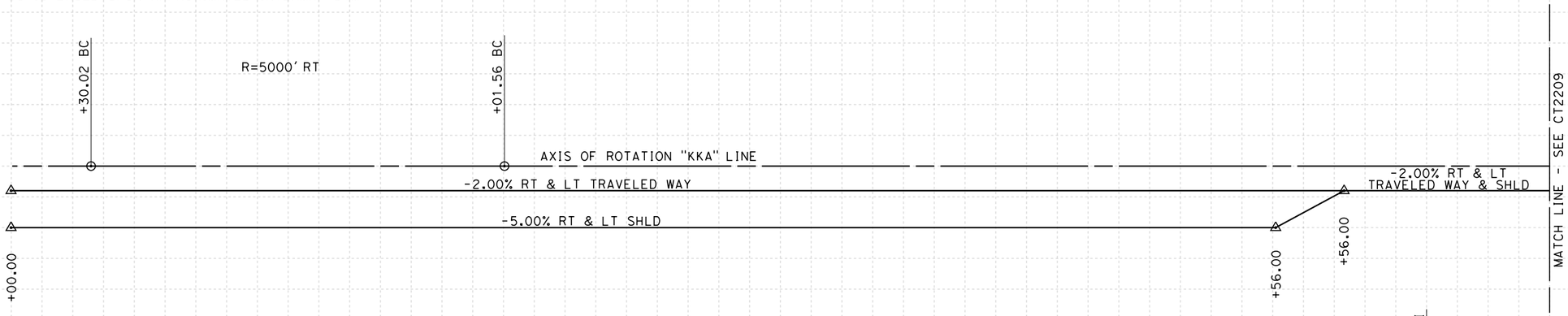
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

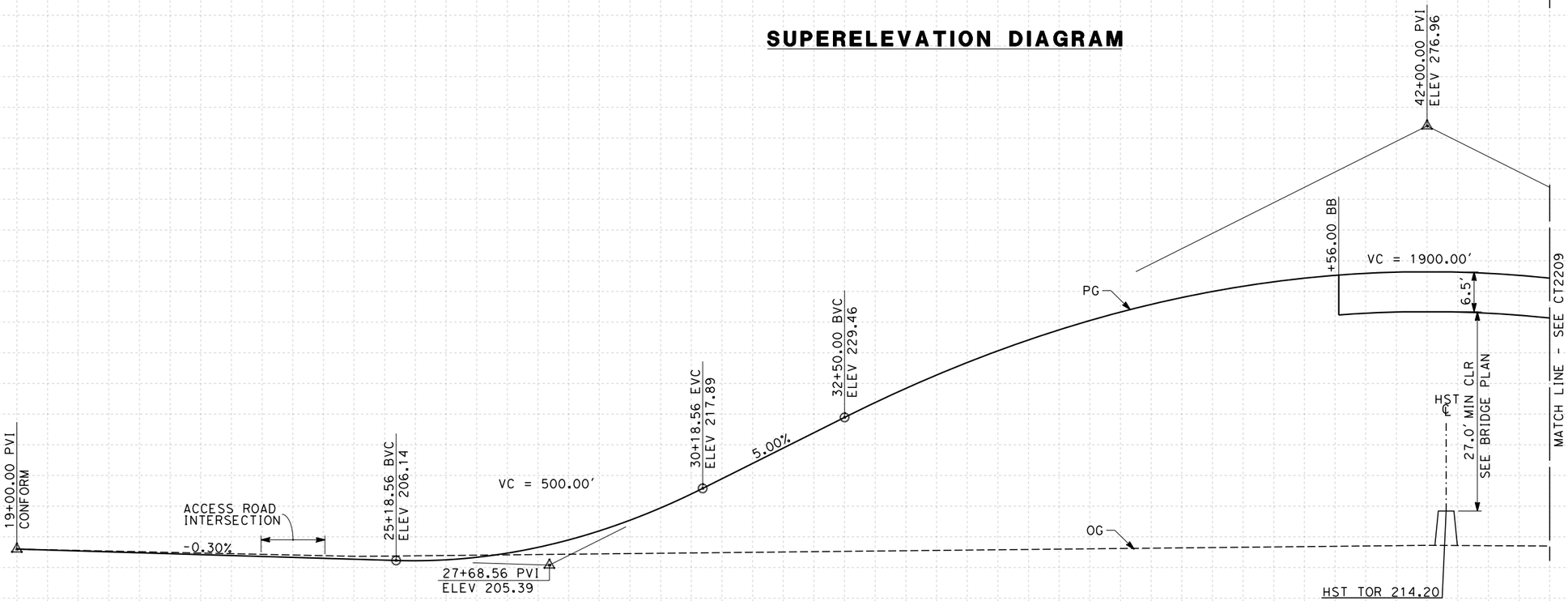
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2207
SCALE AS SHOWN
SHEET NO. 19 OF 34

eron.sudhausen 6/28/2011 8:47:39 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C1\FB-CT-2207-C1.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

STATION	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

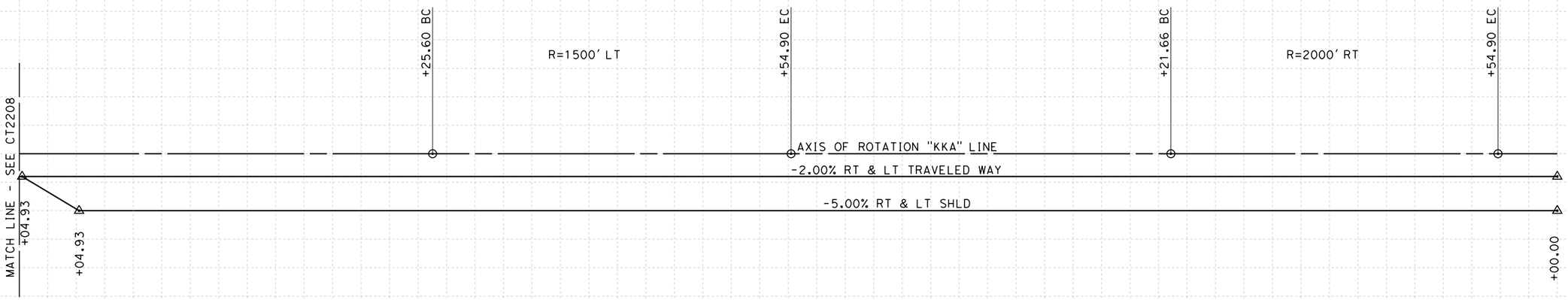
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

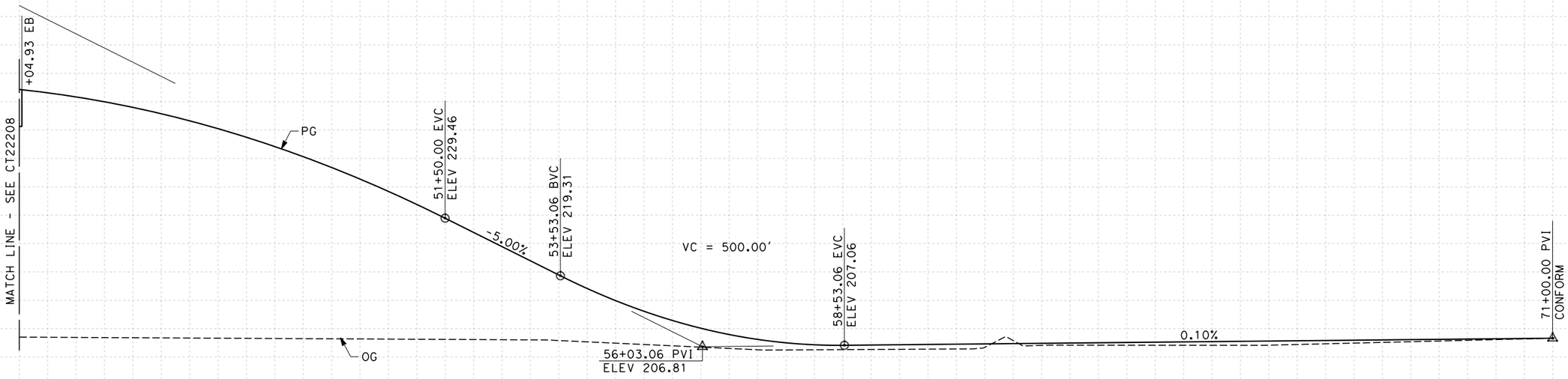
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2208
SCALE AS SHOWN
SHEET NO. 20 OF 34

eron.sudhausen 6/28/2011 8:47:41 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\Grade Separation\SF\C1\FB-CT-2208-C1.dgn

eron.sudhausen 6/28/2011 8:47:43 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\Grade Separation\SF\C1\FB-CT-2209-C1.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

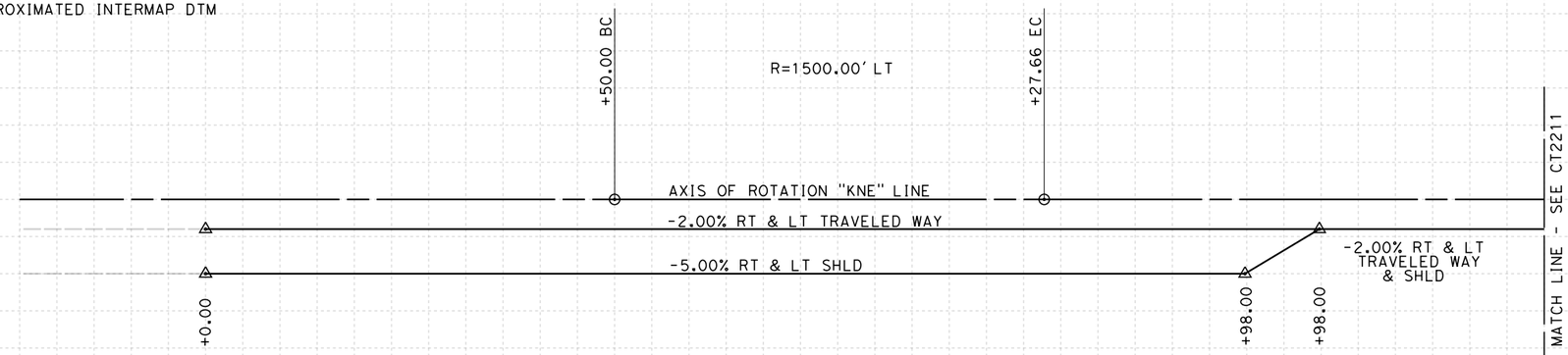
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

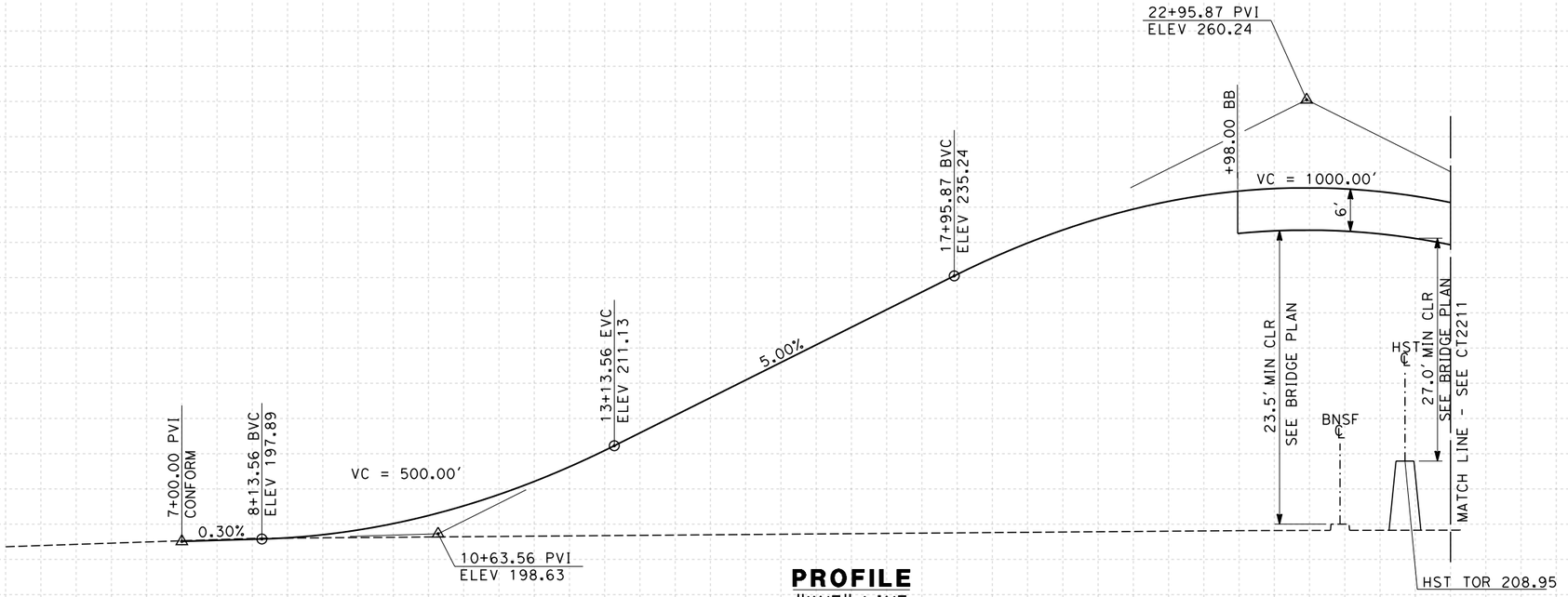
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2209
SCALE AS SHOWN
SHEET NO. 21 OF 34

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 BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
4. VERTICAL DESIGN SPEED = 45 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

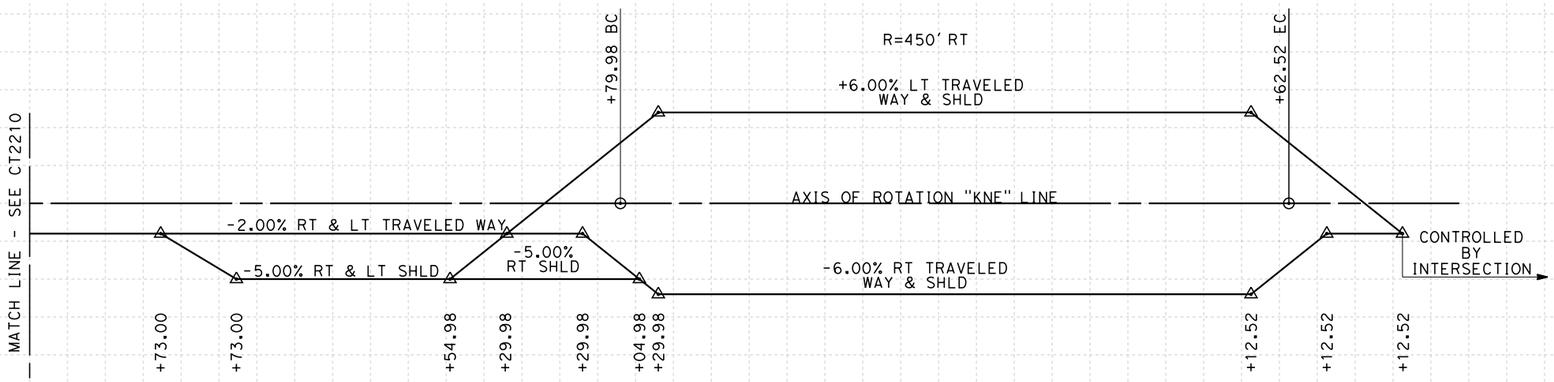
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

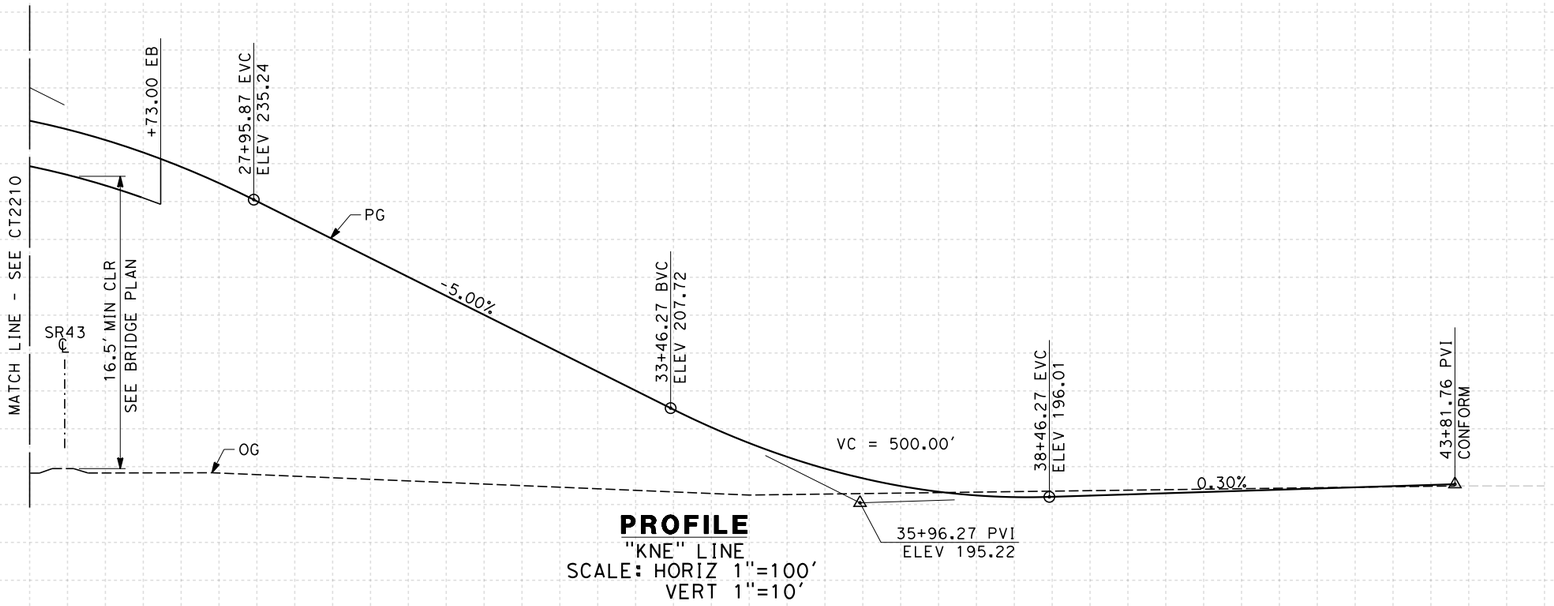
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2210
SCALE AS SHOWN
SHEET NO. 22 OF 34

eron.sudhausen 6/28/2011 8:47:45 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\Grade Separation\SF\C1\FB-CT-2210-C1.dgn

eron.sudhausen 6/28/2011 8:47:48 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\Grade Separation\SF\C1\FB-CT-2211-C1.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	TOTAL
CY Exc																						
CY Emb																						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2211
SCALE AS SHOWN
SHEET NO. 23 OF 34

LINE DATA

NO.	BEARING	DISTANCE
1	S25°32'59"E	410.98'
2	S32°53'56"E	204.33'
3	S30°14'42"E	1103.12'
4	S68°56'09"E	212.36'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1350.00'	07°20'56"	86.70'	173.16'	50 MPH
(2)	4500.00'	02°39'13"	104.23'	208.42'	50 MPH
(3)	190.00'	93°29'19"	201.94'	310.02'	20 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY LAYOUT
SANTA FE AVE OFF RAMP

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1201
SCALE AS SHOWN
SHEET NO. 24 OF 34

carlton_allen 6/28/2011 7:39:16 PM HSTFB_C1_SANTAFE_RAMP_L01.dgn

PICKERELL AVENUE

"SFA" 10+00.00 PI

"SFA" 12+48.27 BC

"SFA" 15+66.37 EC

"SFA" 18+27.63 BC

BOX CULVERT (APPROX 5'x10')

CONFORM

R=50'

"SFA" 11+48.27 CONFORM

"C1" LINE

HST ROW

SANTA FE AVENUE

EP

"SFA" LINE

BNSF

MATCH LINE - SEE CR1203

OTIS AVENUE

SHERMAN AVENUE

FEE

LINE DATA

NO.	BEARING	DISTANCE
1	S00°02'44"W	248.27'
2	S30°19'51"E	261.26'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	600.00'	30°22'35"	162.88'	318.10'	30 MPH
(2)	119950.58'	1°05'09"	1136.76'	2273.46'	50 MPH

100 0 100 200

SCALE: 1"=100'

mark_polischuk 5/13/2011 1:46:39 PM HSTFB_C1_SANTAFE_AVE_L01.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY LAYOUT
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1202
SCALE AS SHOWN
SHEET NO. 25 OF 34

LINE DATA

NO.	BEARING	DISTANCE
3	S31°25'01"E	2762.51'

CURVE DATA

NO.	R	Δ	T	L	V
②	119950.58'	1°05'09"	1136.76'	2273.46'	50 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY LAYOUT
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1203
SCALE AS SHOWN
SHEET NO. 26 OF 34

mark_polischuk 5/13/2011 1:47:02 PM HSTFB_C1_SANTAFE_AVE_L02.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	S31°25'01"E	2762.51'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	50049.42'	4°51'19"	2121.92'	4241.29'	50 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

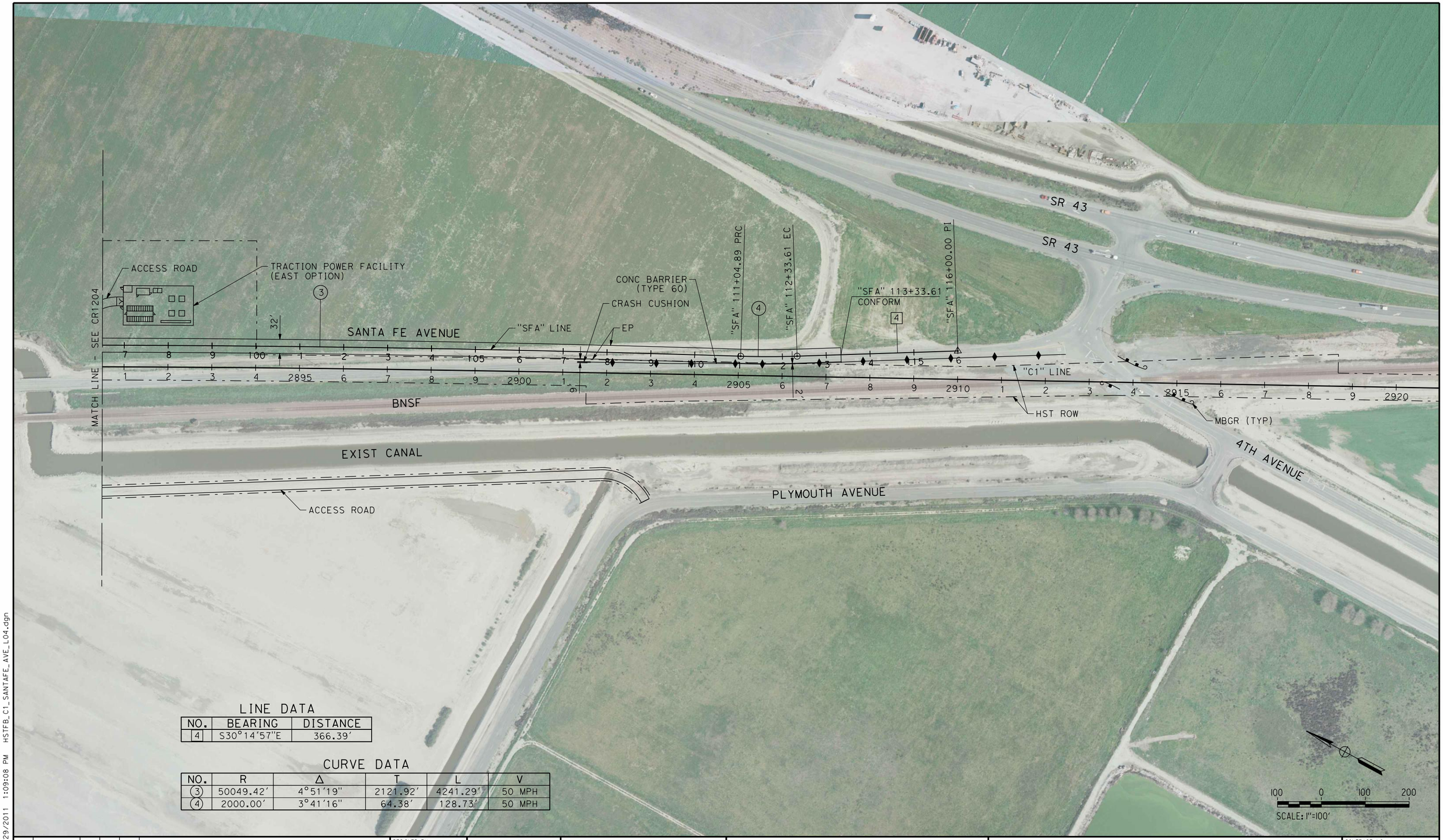
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY LAYOUT
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1204
SCALE AS SHOWN
SHEET NO. 27 OF 34

carlton_allen 6/29/2011 1:08:44 PM HSTFB_C1_SANTAFE_AVE_L03.dgn



LINE DATA

NO.	BEARING	DISTANCE
4	S30°14'57"E	366.39'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	50049.42'	4°51'19"	2121.92'	4241.29'	50 MPH
(4)	2000.00'	3°41'16"	64.38'	128.73'	50 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

IRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

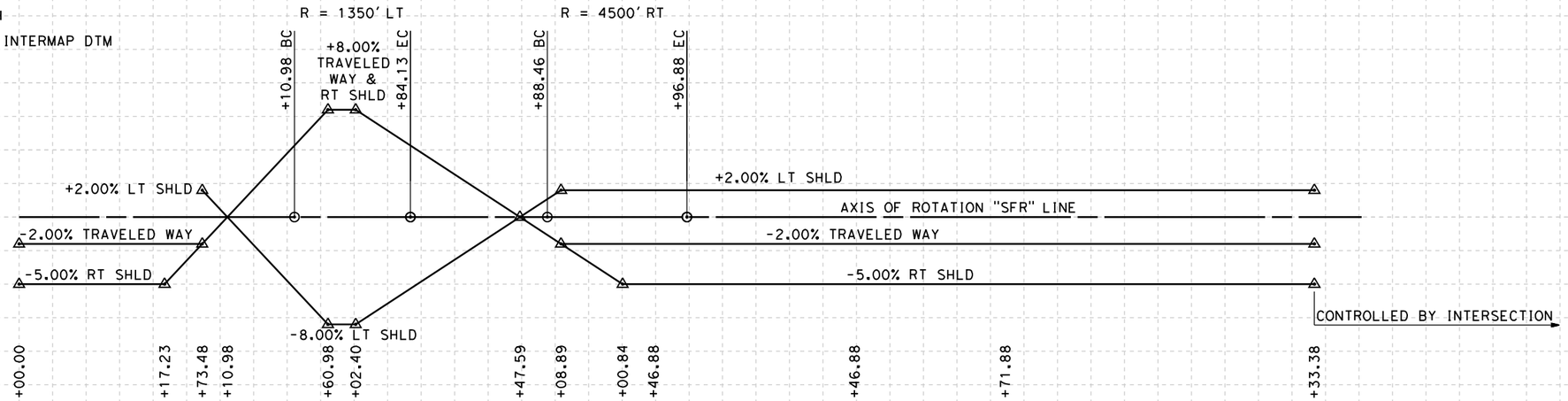
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY LAYOUT
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1205
SCALE AS SHOWN
SHEET NO. 28 OF 34

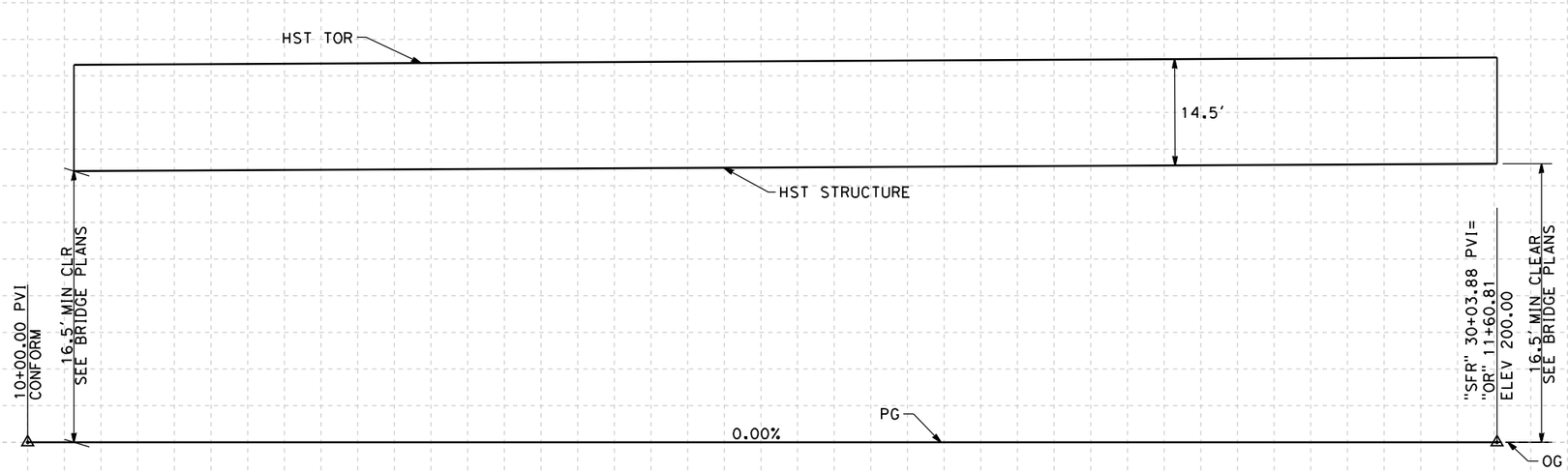
carlton_allen 6/29/2011 1:09:08 PM HSTFB_C1_SANTAFE_AVE_L04.dgn

NOTES:

1. MIN VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY.
2. VERTICAL DESIGN SPEED = 55 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

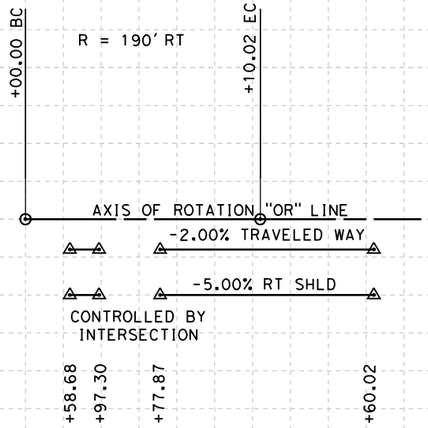
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
SANTA FE AVE OFF RAMP

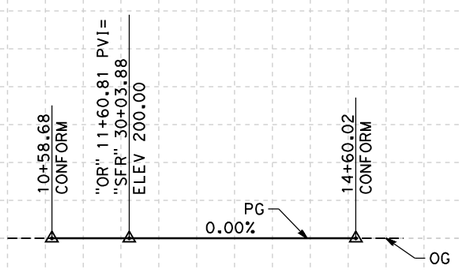
CONTRACT NO. HSR 06-0003
DRAWING NO. CR2201
SCALE AS SHOWN
SHEET NO. 29 OF 34

mark_polischuk 5/13/2011 1:48:02 PM HSTFB_C1_SANTAFE_RAMP_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 20 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. SEE SHEET CR1201 FOR LAYOUT VIEW



SUPERELEVATION DIAGRAM



PROFILE

"OR" 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 C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

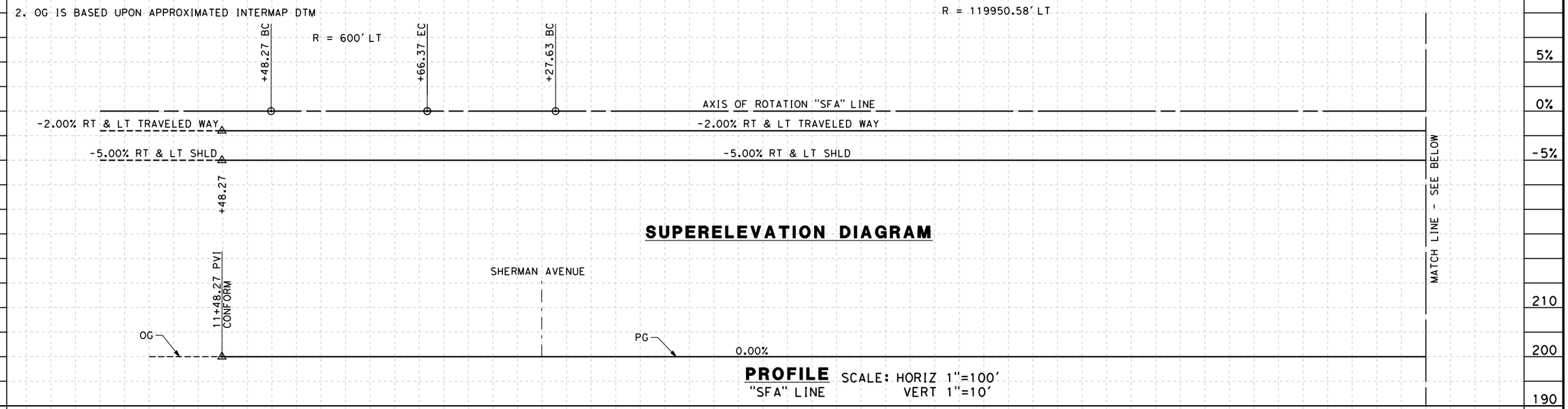
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
ORANGE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2202
SCALE AS SHOWN
SHEET NO. 30 OF 34

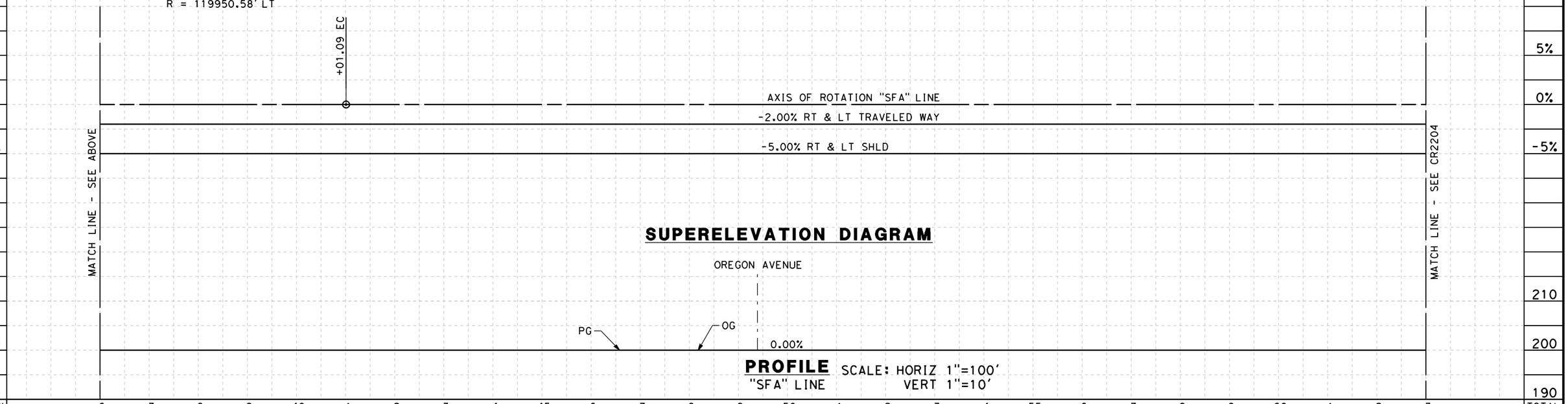
mark_polischuk 5/13/2011 1:48:10 PM HSTFB_C1_ORANGE_AVE_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

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



SUPERELEVATION DIAGRAM

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

STATION	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

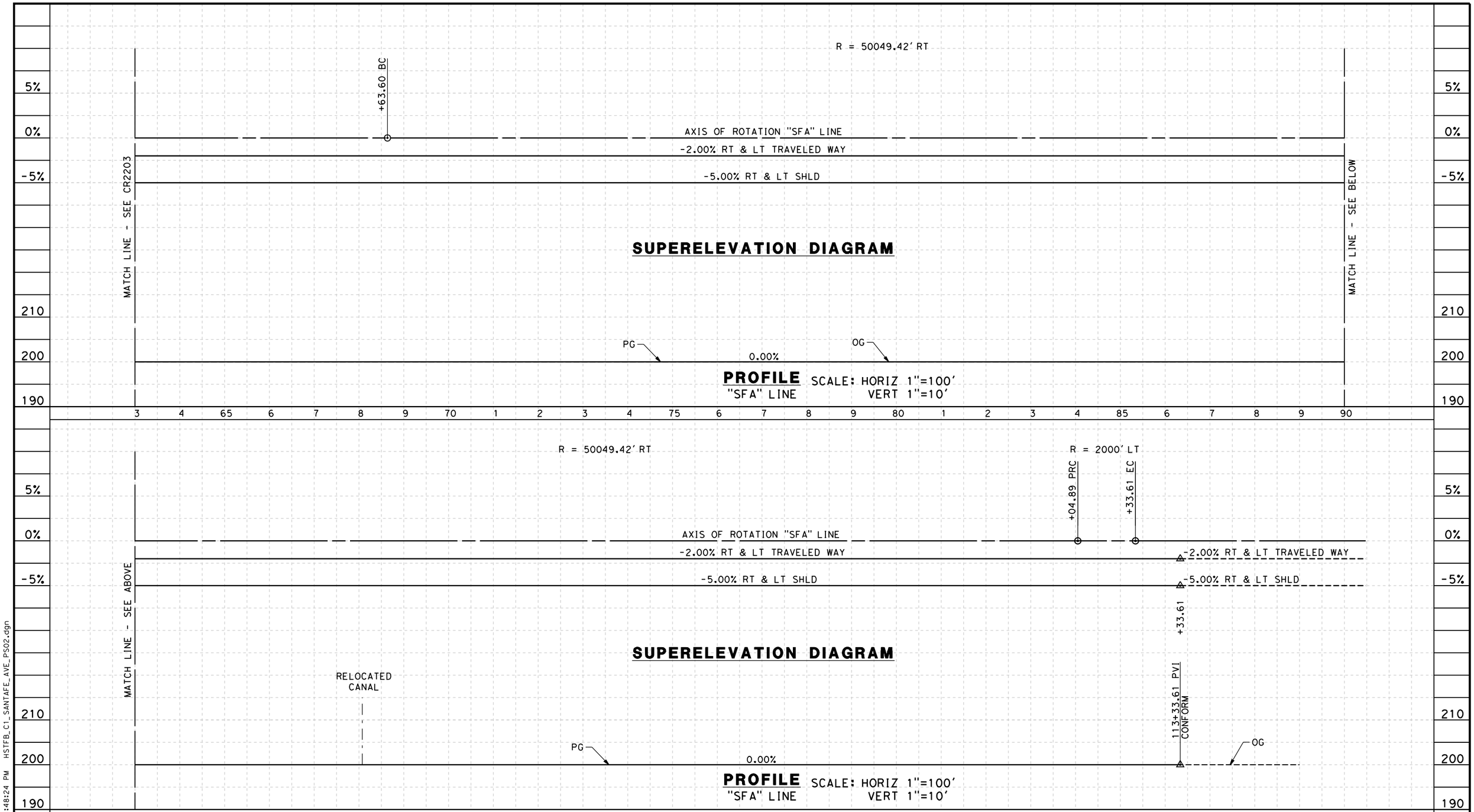
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2203
SCALE AS SHOWN
SHEET NO. 31 OF 34

mark_polischuk 5/13/2011 1:48:17 PM HSTFB_C1_SANTAFE_AVE_PS01.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
SANTA FE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2204
SCALE AS SHOWN
SHEET NO. 32 OF 34

mark_polischuk 5/13/2011 1:48:24 PM HSTFB_C1_SANTAFE_AVE_PS02.dgn

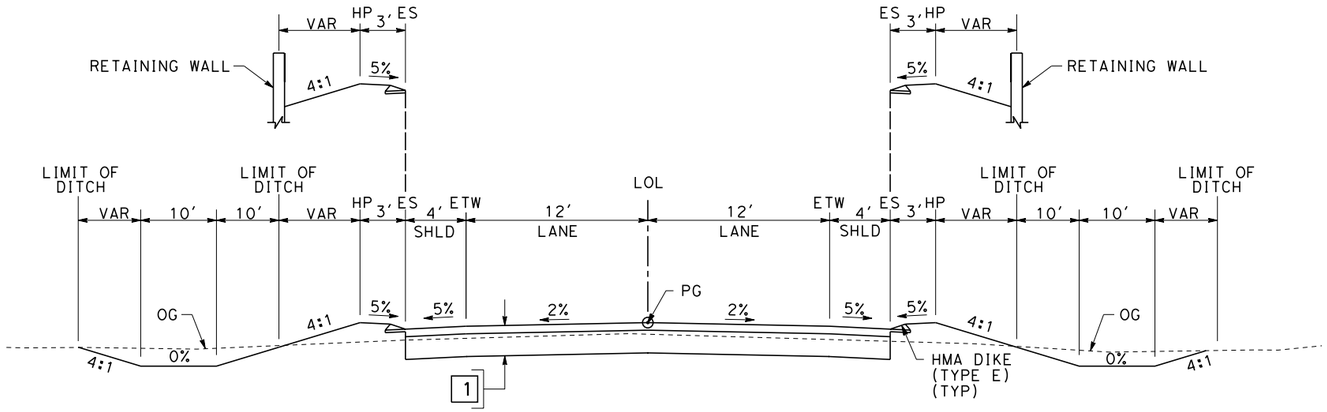
NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS

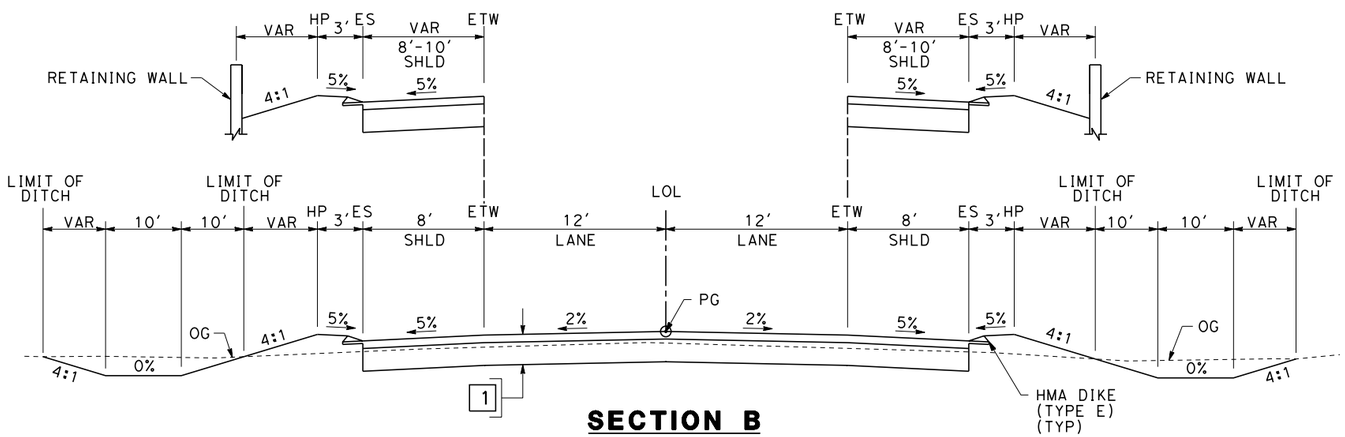
TYPICAL ROADWAY

1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB



SECTION A

"KID" 10+00.00 TO 26+67.65
"KID" 29+39.65 TO 46+00.00
"KKE" 13+00.00 TO 32+12.38
"KKE" 35+01.17 TO 50+00.00
"KKA" 19+00.00 TO 40+56.00
"KKA" 44+04.93 TO 71+00.00
"KNE" 07+00.00 TO 21+98.00
"KNE" 26+48.00 TO 43+81.76



SECTION B

"KJA" 10+00.00 TO 26+66.86
"KJA" 30+04.76 TO 46+00.00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY E. TANAKA
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

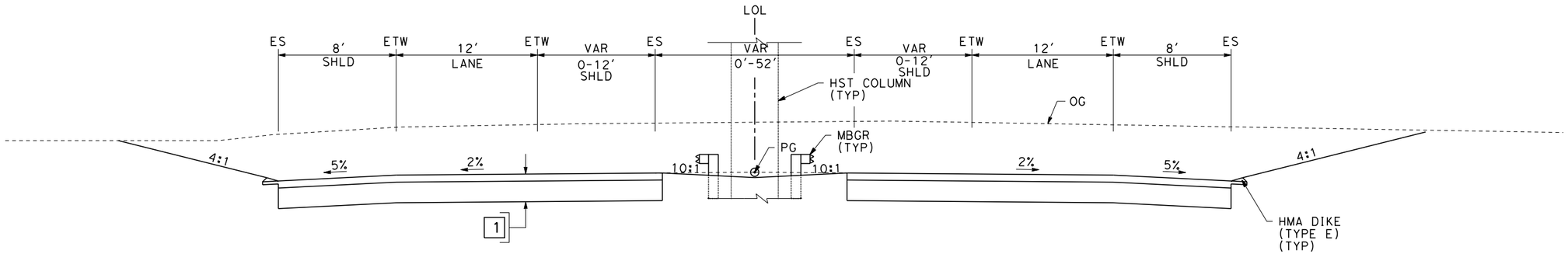
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3040
SCALE NO SCALE
SHEET NO. 33 OF 34

eron.sudhausen 6/28/2011 8:48:08 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Cross Sections\FB-CT-3040-C1.dgn



SECTION C

"SR43N" 9+08.16 TO 39+83.59

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY E. TANAKA
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

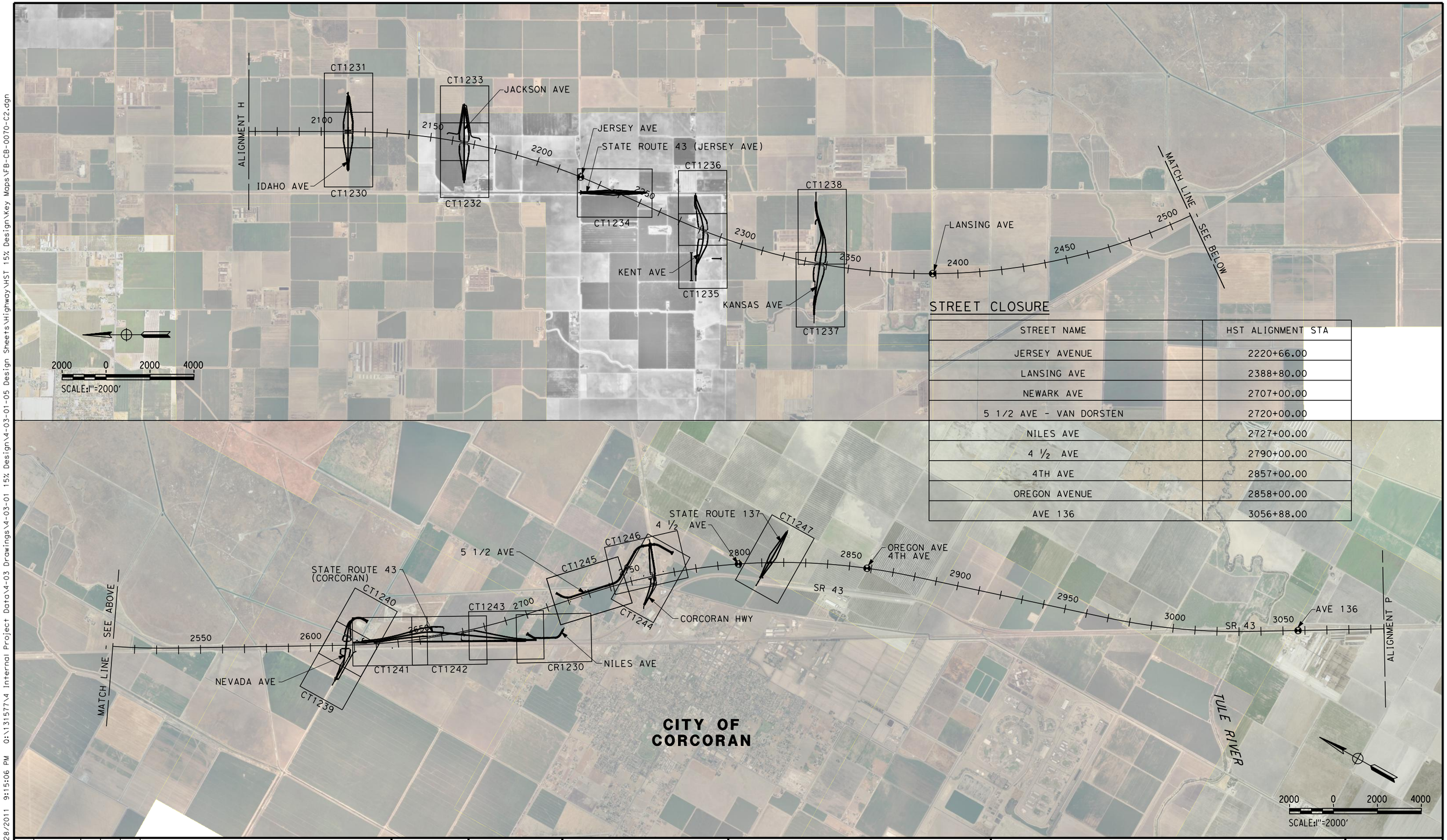
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C1
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3041
SCALE NO SCALE
SHEET NO. 34 OF 34

eron.sudhausen 6/28/2011 8:48:09 PM Q:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design Sheets\Highway\HST 15% Design\Cross Sections\FB-CT-3041-C1.dgn



STREET CLOSURE

STREET NAME	HST ALIGNMENT STA
JERSEY AVENUE	2220+66.00
LANSING AVE	2388+80.00
NEWARK AVE	2707+00.00
5 1/2 AVE - VAN DORSTEN	2720+00.00
NILES AVE	2727+00.00
4 ½ AVE	2790+00.00
4TH AVE	2857+00.00
OREGON AVENUE	2858+00.00
AVE 136	3056+88.00

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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0070
SCALE AS SHOWN
SHEET NO. 1 OF 42

eron.sudhausen 6/28/2011 9:15:06 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\Key Maps\FB-CB-0070-C2.dgn

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'

IDAHO AVE

"KID" 10+00.00 PI
CONFORM

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

"KID" 28+03.65 POT=
"C2" 2112+75.15 POT

1

32'

"KID" LINE

BB

EB

EP

MBGR
(TYP)

HST
ROW

"C2" LINE

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

MATCH LINE - SEE CT1231

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

CULVERT

RELOCATE
CANAL

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: S. DEO
DRAWN BY: B. BODIN
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

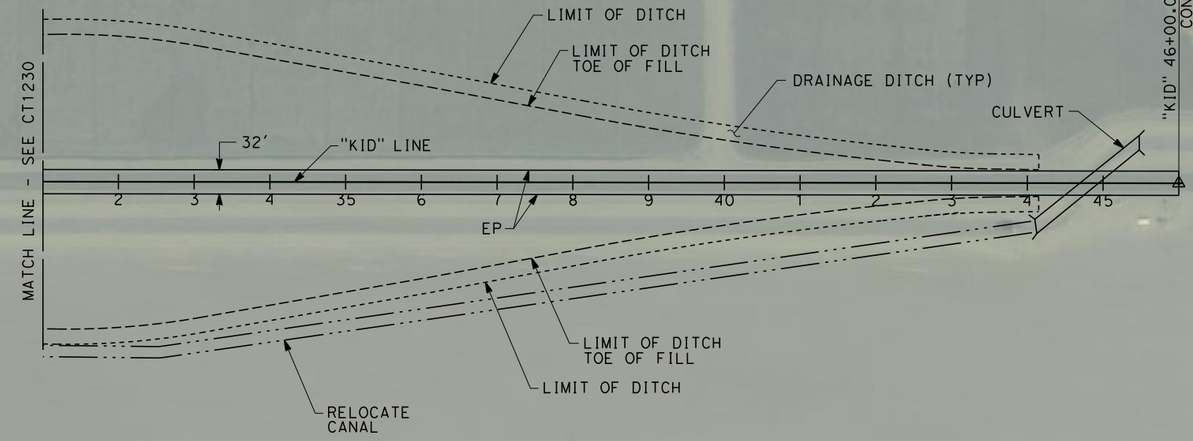
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1230
SCALE AS SHOWN
SHEET NO. 2 OF 42

LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'



100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1231
SCALE AS SHOWN
SHEET NO. 3 OF 42

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'

"KJA" 10+00.00 PI CONFORM

"KJA" 28+35.87 POT=
"C2" 2165+88.06 POT

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

JACKSON AVE

1

40'

"KJA" LINE

EP

BB

EB

MBGR (TYP)

MATCH LINE - SEE CT1233

TRACTION POWER FACILITY (NORTH OPTION)

"C2" LINE

ACCESS ROAD

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

2160

2165

2170

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

RELOCATE CANAL

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

HST ROW

ACCESS ROAD

TRACTION POWER FACILITY (SOUTH OPTION)

100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1232
SCALE AS SHOWN
SHEET NO. 4 OF 42

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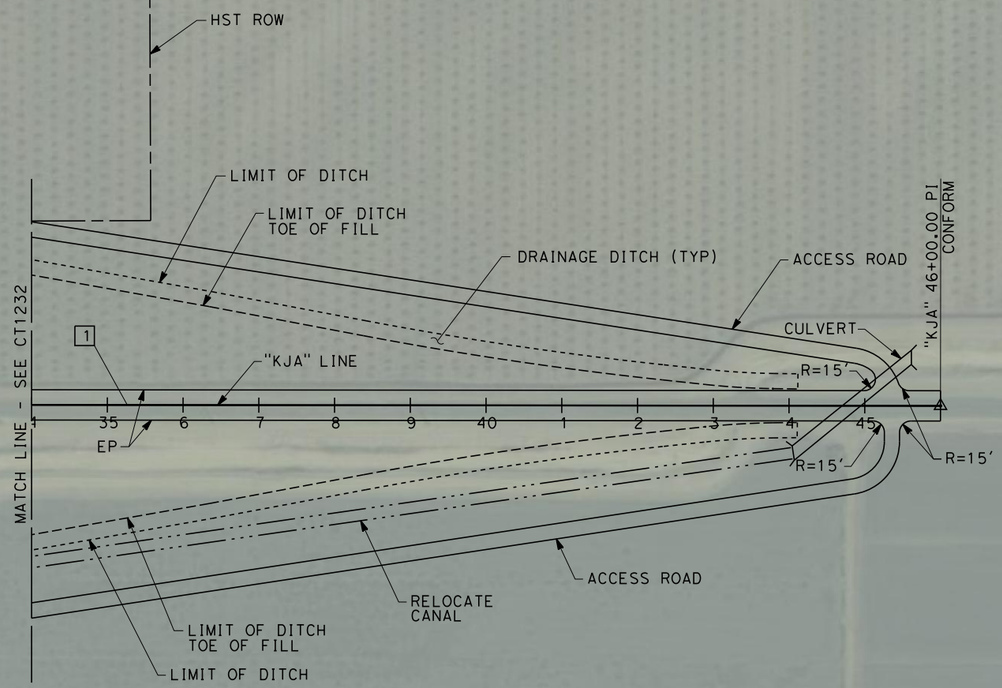
LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'



JACKSON AVE

100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1233
SCALE AS SHOWN
SHEET NO. 5 OF 42

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6/28/2011 9:19:27 PM
eron.sudhausen
4-03-01-05 Design

LINE DATA

NO.	BEARING	DISTANCE
1	S00°27'06"E	3100.00'

"C2" LINE
HST ROW
"SR43N" 9+00.00 PI
CONFORM
28.45' LT "F43" 12+64.05 PRC
21.73' RT "F43" 10+69.46 BC
7.00' LT "F43" 13+42.41
51.00' LT "F43" 22+14.03 EC
TOP OF CUT
R=20020'
R=7500'
R=60'
EP
"SR43N" LINE
25'
52'
130'
RETAINING WALL NO.1
RETAINING WALL NO.4
"SR43N" 26+40.16 POT= "C2" 2239+04.46 POT
51.00' LT "F43" 26+77.73 BC
MBGR (TYP)
28.45' LT "F43" 36+27.40 PRC
7.00' LT "F43" 35+49.35
20.00' LT "F43" 39+83.59 EC
"SR43N" 39+83.59 CONFORM
"SR43N" 40+00.00 PI
SR 43
JERSEY AVE
"SR43N" 10+00.00 CONFORM
21.73' RT "F43" 10+69.46 BC
28.45' RT "F43" 12+64.05 PRC
7.00' RT "F43" 13+42.41
51.00' RT "F43" 22+14.03 EC
CRASH CUSHION (TYP)
51.00' RT "F43" 26+77.73 BC
RETAINING WALL NO.2
RETAINING WALL NO.3
TOP OF CUT
7.00' RT "F43" 35+49.35
28.45' RT "F43" 36+27.40 PRC
20.00' RT "F43" 39+83.59 EC
2220 2225 2230 2235 2240 2245 2250
SCALE: 1"=100'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	23.50' RT "C2" 2235+85.27	23.50' RT "C2' 2236+80.78	96'	25'
2	23.50' RT "C2" 2240+22.56	23.50' RT "C2" 2241+11.32	89'	25'
3	23.50' LT "C2" 2241+28.11	23.50' LT "C2" 2242+23.60	96'	25'
4	23.50' LT "C2" 2236+97.63	23.50' LT "C2" 2237+86.38	89'	25'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (JERSEY AVE)

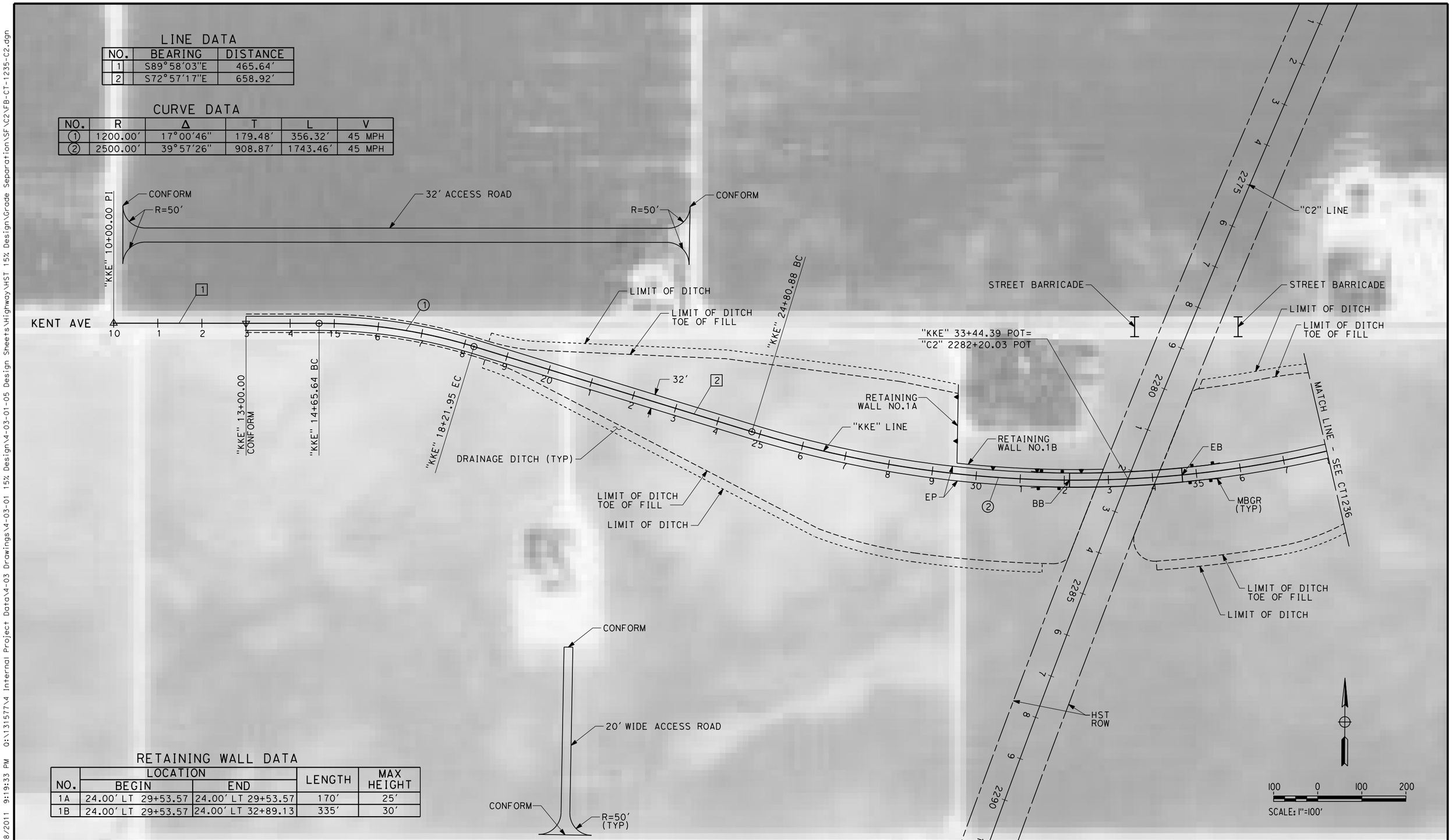
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1234
SCALE AS SHOWN
SHEET NO. 6 OF 42

LINE DATA

NO.	BEARING	DISTANCE
1	S89°58'03"E	465.64'
2	S72°57'17"E	658.92'

CURVE DATA

NO.	R	Δ	T	L	V
①	1200.00'	17°00'46"	179.48'	356.32'	45 MPH
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	24.00' LT 29+53.57	24.00' LT 29+53.57	170'	25'
1B	24.00' LT 29+53.57	24.00' LT 32+89.13	335'	30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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 FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1235
SCALE AS SHOWN
SHEET NO. 7 OF 42

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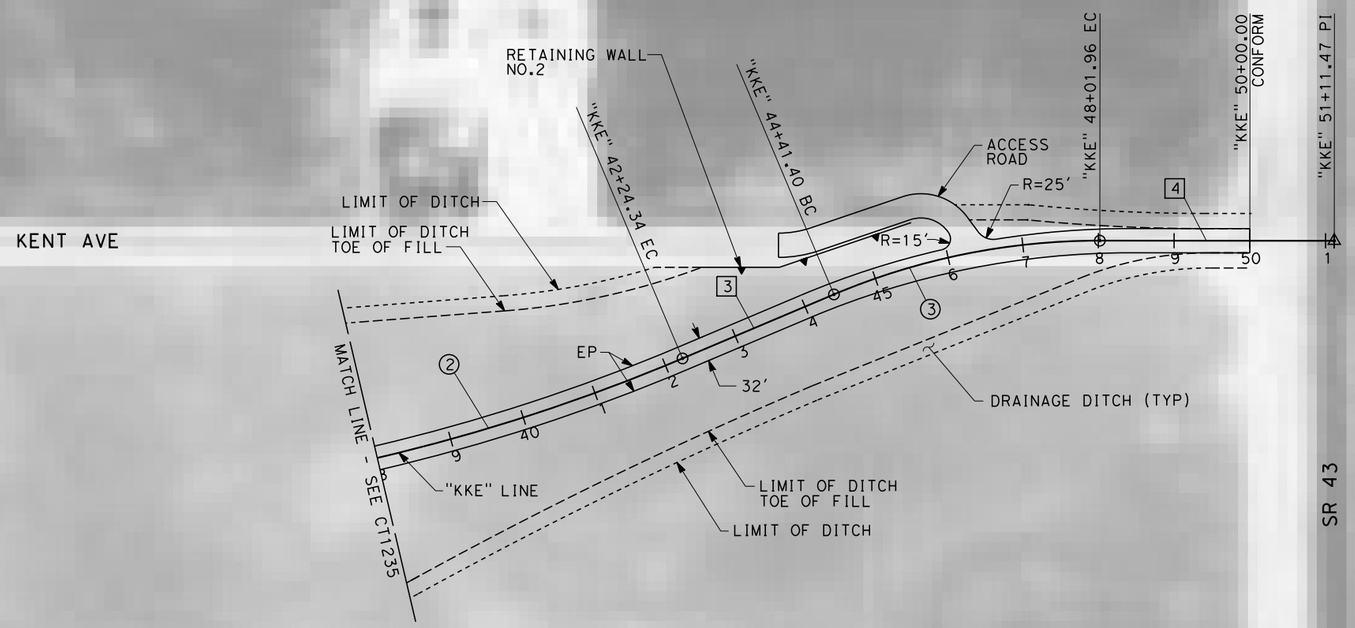
LINE DATA

NO.	BEARING	DISTANCE
3	S67°05'17"E	217.06'
4	S89°57'29"E	309.51'

CURVE DATA

NO.	R	Δ	T	L	V
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH
③	900.00'	06°21'58"	182.73'	360.56'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
2	100.82' LT 42+94.80	56.65' LT 45+64.91	286'	15'

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1236
SCALE AS SHOWN
SHEET NO. 8 OF 42

eron.sudhousen 6/28/2011 9:19:44 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\Grade Separation\SF\C2\FB-CT-1237-C2.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°27'36"E	530.02'
2	S81°45'53"E	2424.04'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	5000.00'	07°41'43"	336.28'	671.54'	45 MPH

"KKA" 15+00.00 PI
CONFORM

"KKA" 20+30.02 BC

"KKA" 19+00.00
CONFORM

"KKA" 27+01.56 EC

CONFORM

R=25'
(TYP)

R=25'

R=7'

CONFORM

20' ACCESS ROAD

CONFORM

RETAINING
WALL NO. 1

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

DRAINAGE DITCH (TYP)

KANSAS AVE

32'

"KKA" LINE

MBGR (TYP)

EP

BB

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

"C2" LINE

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

MATCH LINE - SEE CT1238

"KKA" 42+21.91 POT=
"C2" 2337+36.45 POT

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

HST
ROW

100 0 100 200
SCALE: 1"=100'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	20.00' 27+55.22	56.65' LT 34+10.42	629'	15'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
KANSAS AVE

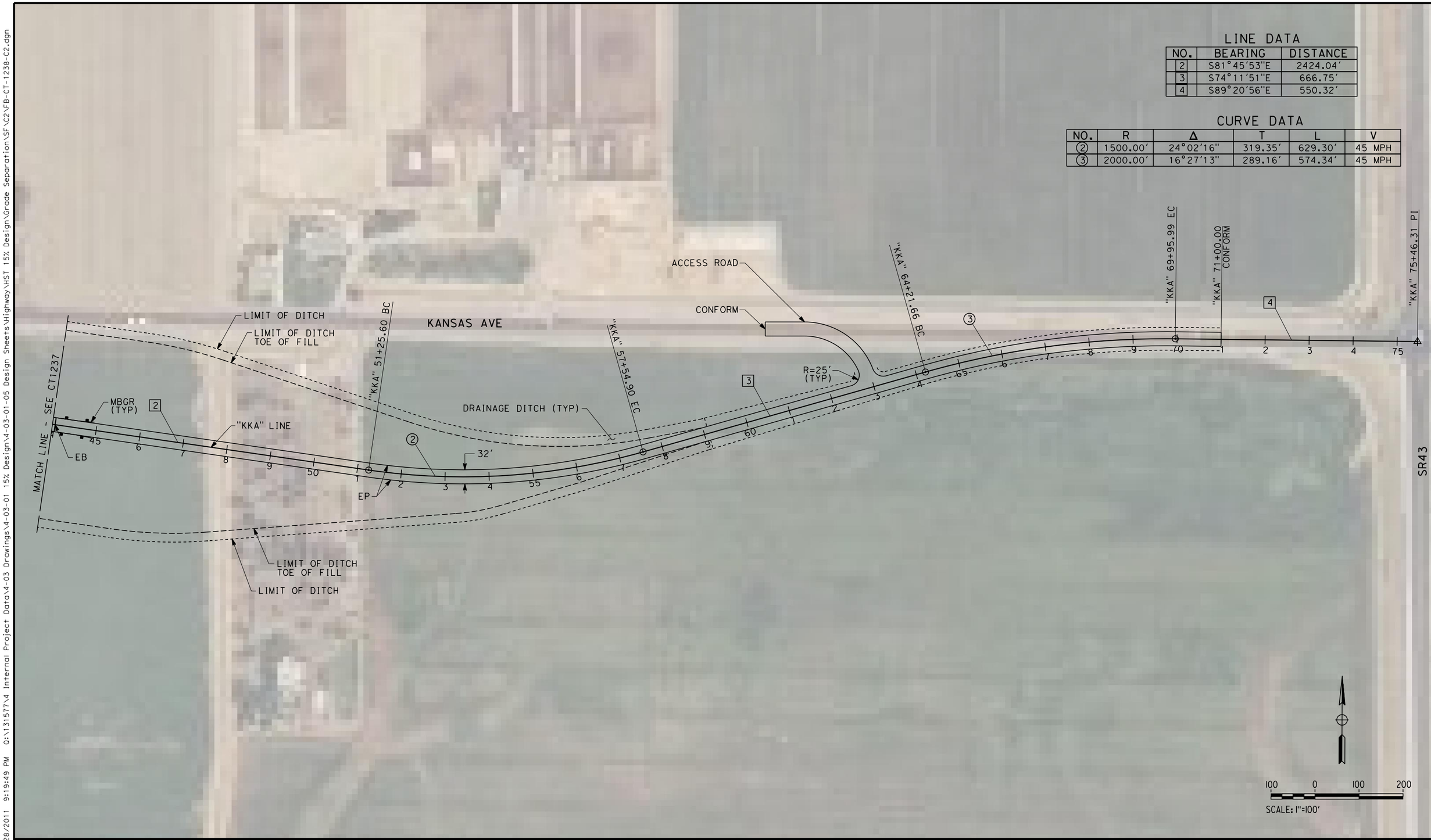
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1237
SCALE AS SHOWN
SHEET NO. 9 OF 42

LINE DATA

NO.	BEARING	DISTANCE
2	S81°45'53"E	2424.04'
3	S74°11'51"E	666.75'
4	S89°20'56"E	550.32'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	1500.00'	24°02'16"	319.35'	629.30'	45 MPH
(3)	2000.00'	16°27'13"	289.16'	574.34'	45 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1238
SCALE AS SHOWN
SHEET NO. 10 OF 42

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RETAINING WALL DATA

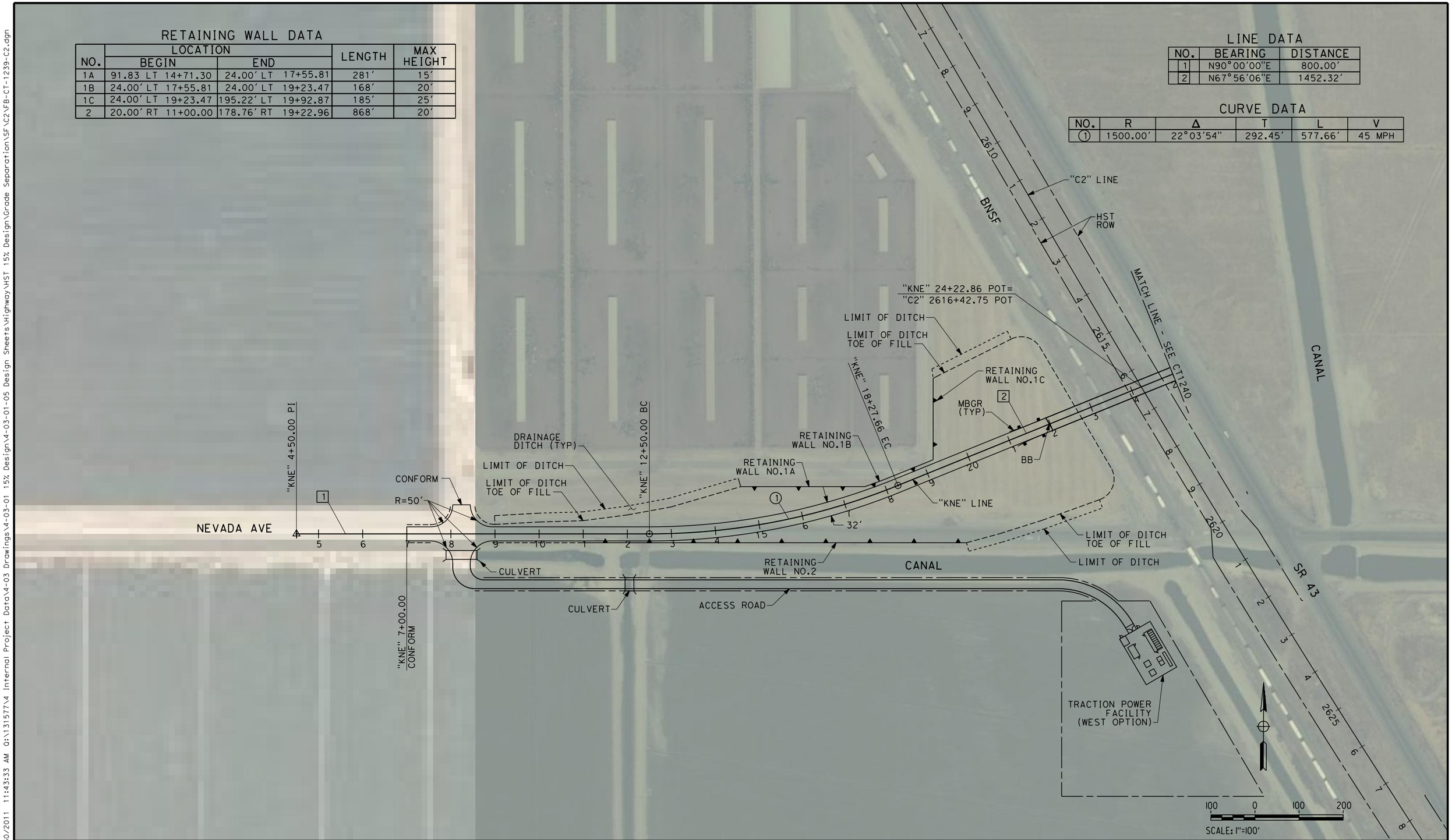
NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	91.83 LT 14+71.30	24.00' LT 17+55.81	281'	15'
1B	24.00' LT 17+55.81	24.00' LT 19+23.47	168'	20'
1C	24.00' LT 19+23.47	195.22' LT 19+92.87	185'	25'
2	20.00' RT 11+00.00	178.76' RT 19+22.96	868'	20'

LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	800.00'
2	N67°56'06"E	1452.32'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1500.00'	22°03'54"	292.45'	577.66'	45 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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 FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1239
SCALE AS SHOWN
SHEET NO. 11 OF 42

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LINE DATA

NO.	BEARING	DISTANCE
2	S67°56'06"E	1452.32'
3	S0°18'12"W	219.41'

CURVE DATA

NO.	R	Δ	T	L	V
②	450.00'	112°22'06"	671.80'	882.54'	35 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
NEVADA AVE

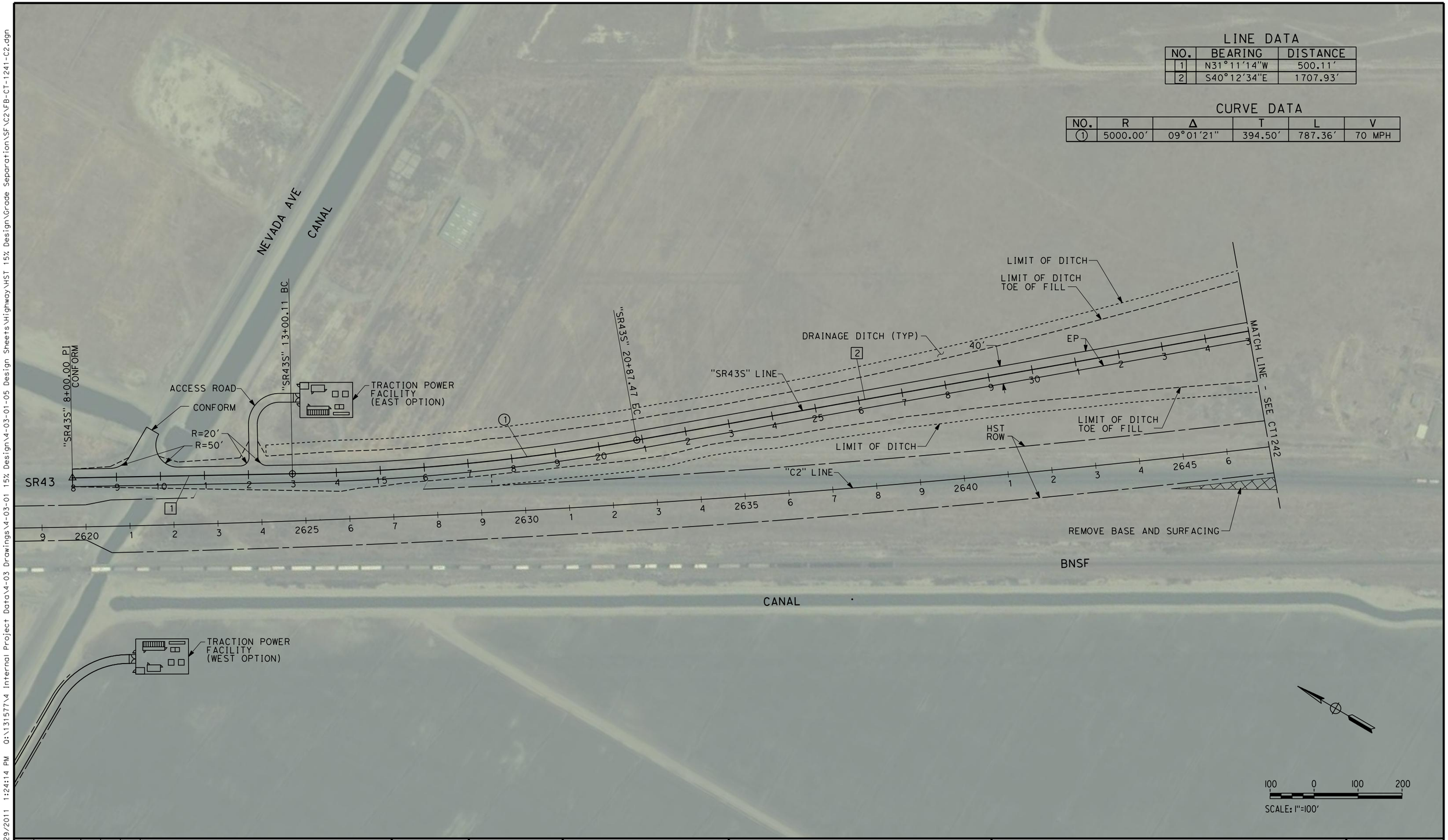
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1240
SCALE AS SHOWN
SHEET NO. 12 OF 42

LINE DATA

NO.	BEARING	DISTANCE
1	N31°11'14"W	500.11'
2	S40°12'34"E	1707.93'

CURVE DATA

NO.	R	Δ	T	L	V
①	5000.00'	09°01'21"	394.50'	787.36'	70 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1241
SCALE AS SHOWN
SHEET NO. 13 OF 42

eron.sudhausen 6/29/2011 1:24:14 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\Grade Separation\SF\C2\FB-CT-1241-C2.dgn

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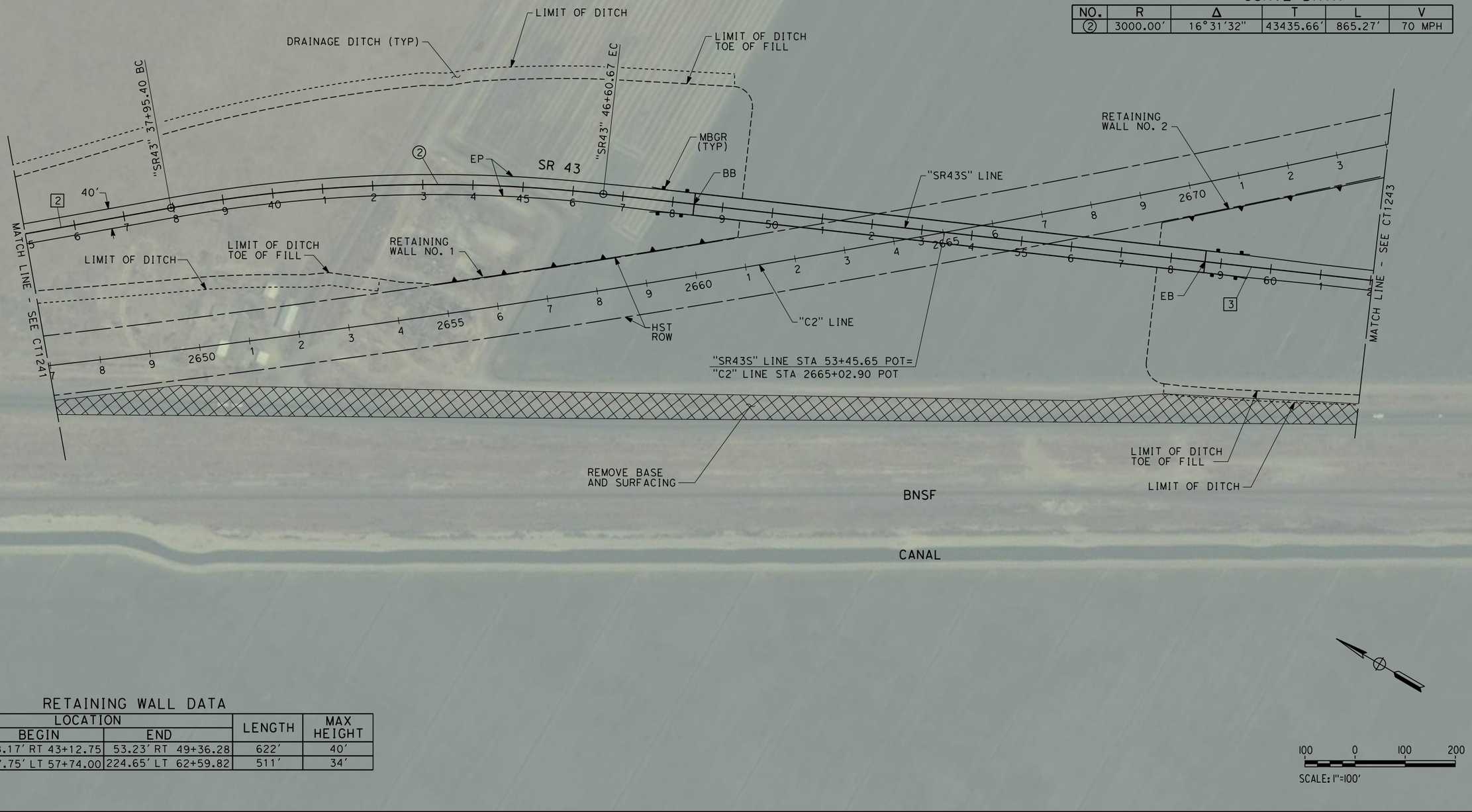
6/28/2011 9:20:09 PM
eron.sudhausen

LINE DATA

NO.	BEARING	DISTANCE
2	S40°12'34"E	1707.93'
3	S23°41'02"E	3451.11'

CURVE DATA

NO.	R	Δ	T	L	V
②	3000.00'	16°31'32"	43435.66'	865.27'	70 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	198.17' RT 43+12.75	53.23' RT 49+36.28	622'	40'
2	67.75' LT 57+74.00	224.65' LT 62+59.82	511'	34'

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

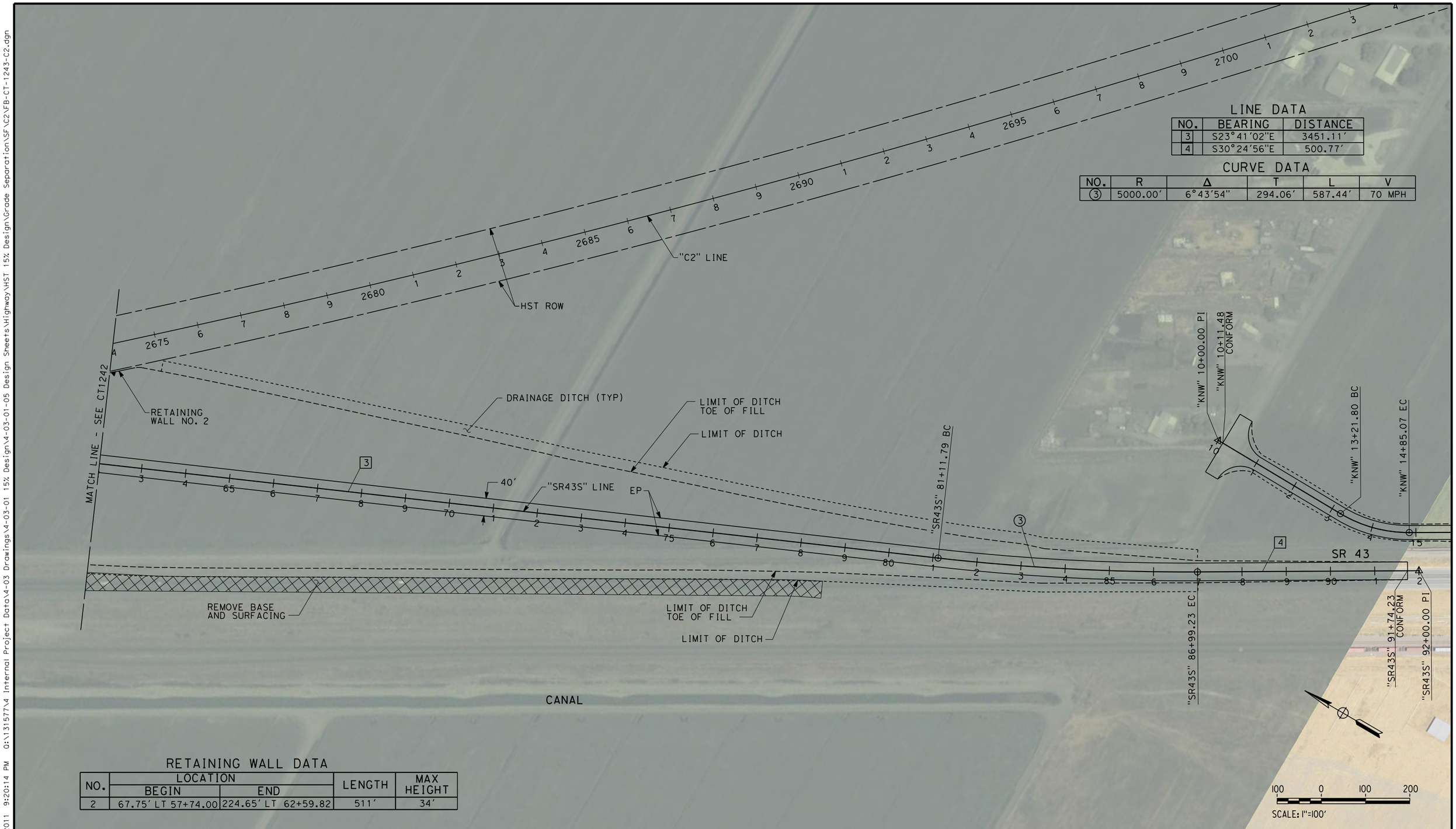
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1242
SCALE AS SHOWN
SHEET NO. 14 OF 42

eron.sudhausen 6/28/2011 9:20:14 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\Grade Separation\SF\C2\FB-CT-1243-C2.dgn



LINE DATA

NO.	BEARING	DISTANCE
3	S23°41'02"E	3451.11'
4	S30°24'56"E	500.77'

CURVE DATA

NO.	R	Δ	T	L	V
(3)	5000.00'	6°43'54"	294.06'	587.44'	70 MPH

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
2	67.75' LT 57+74.00	224.65' LT 62+59.82	511'	34'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1243
SCALE AS SHOWN
SHEET NO. 15 OF 42

LINE DATA

NO.	BEARING	DISTANCE
1	N89°15'55"E	375.70'
2	N51°34'07"E	1338.46'

CURVE DATA

NO.	R	Δ	T	L	V
①	325.00'	37°37'07"	110.70'	213.38'	35 MPH
②	2000.00'	39°09'58"	711.50'	1367.16'	45 MPH

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	23.50' RT 12+00.00	126.53' 22+17.97	1045'	20'
1B	112.0' RT 22+81.87	45.38' RT 25+67.04	303'	25'
1C	30.00' RT 26+84.33	30.00' RT 39+63.34	1280'	25'

5TH AVE
CANAL
MATCH LINE - SEE CT1246
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
"SR137" 29+61.54 EC
STREET BARRICADE
CORCORAN HWY
REMOVE BASE AND SURFACING
RETAINING WALL NO. 1C
DRAINAGE DITCH (TYP)
EB
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
"SR137" 15+94.39 BC
"SR137" 12+18.68 EC
MBGR (TYP)
BB
"KWA" 26+17.33 POT= "C2" 2760+86.98 POT
"SR137" 10+05.30 BC
CORCORAN HWY
40'
"KWA" LINE
RETAINING WALL NO. 1B
STREET BARRICADE
ORANGE AVE
RETAINING WALL NO. 1A
"SR137" 12+00.00 CONFORM
"C2" LINE
8TH AVE - SR 43
HST ROW

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
CORCORAN HWY

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1244
SCALE AS SHOWN
SHEET NO. 16 OF 42

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LINE DATA

NO.	BEARING	DISTANCE
1	S00°00'00"E	259.43'
2	S47°06'25"E	1967.29'

CURVE DATA

NO.	R	Δ	T	L	V
11	600.00'	47°06'25"	261.55'	493.30'	40 MPH
12	600.00'	42°53'35"	235.70'	449.17'	40 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
5½ 1/2 AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1245
SCALE AS SHOWN
SHEET NO. 17 OF 42

LINE DATA

NO.	BEARING	DISTANCE
2	N51°34'07"E	1338.46'
13	N90°00'00"E	1351.67'
14	S38°25'53"E	419.16'
15	S00°00'00"E	685.88'

CURVE DATA

NO.	R	Δ	T	L	V
(12)	600.00'	42°53'35"	235.70'	449.17'	40 MPH
(13)	525.00'	51°34'07"	253.62'	472.52'	40 MPH
(14)	525.00'	38°25'53"	182.99'	352.15'	40 MPH

"SR137" 43+00.00 PI
"K5H" 59+93.39 EC
"K5H" 64+12.55 BC
"SR137" 41+23.33 CONFORM
"K5H" 55+20.87 BC
"K5H" 67+64.70 EC
"K5H" LINE
"SR137" 40+43.34 POT = "K5H" 63+28.29 POT
MATCH LINE - SEE CT1244
R=60'
40'
CONFORM
"K5H" 74+50.57 PI CONFORM
"K5H" 41+69.20 EC
MATCH LINE - SEE CT1245
CORCORAN HWY
CANAL
5TH AVE
ORANGE AVE
STREET BARRICADE
HST ROW
"C2" LINE
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
5 1/2 AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1246
SCALE AS SHOWN
SHEET NO. 18 OF 42

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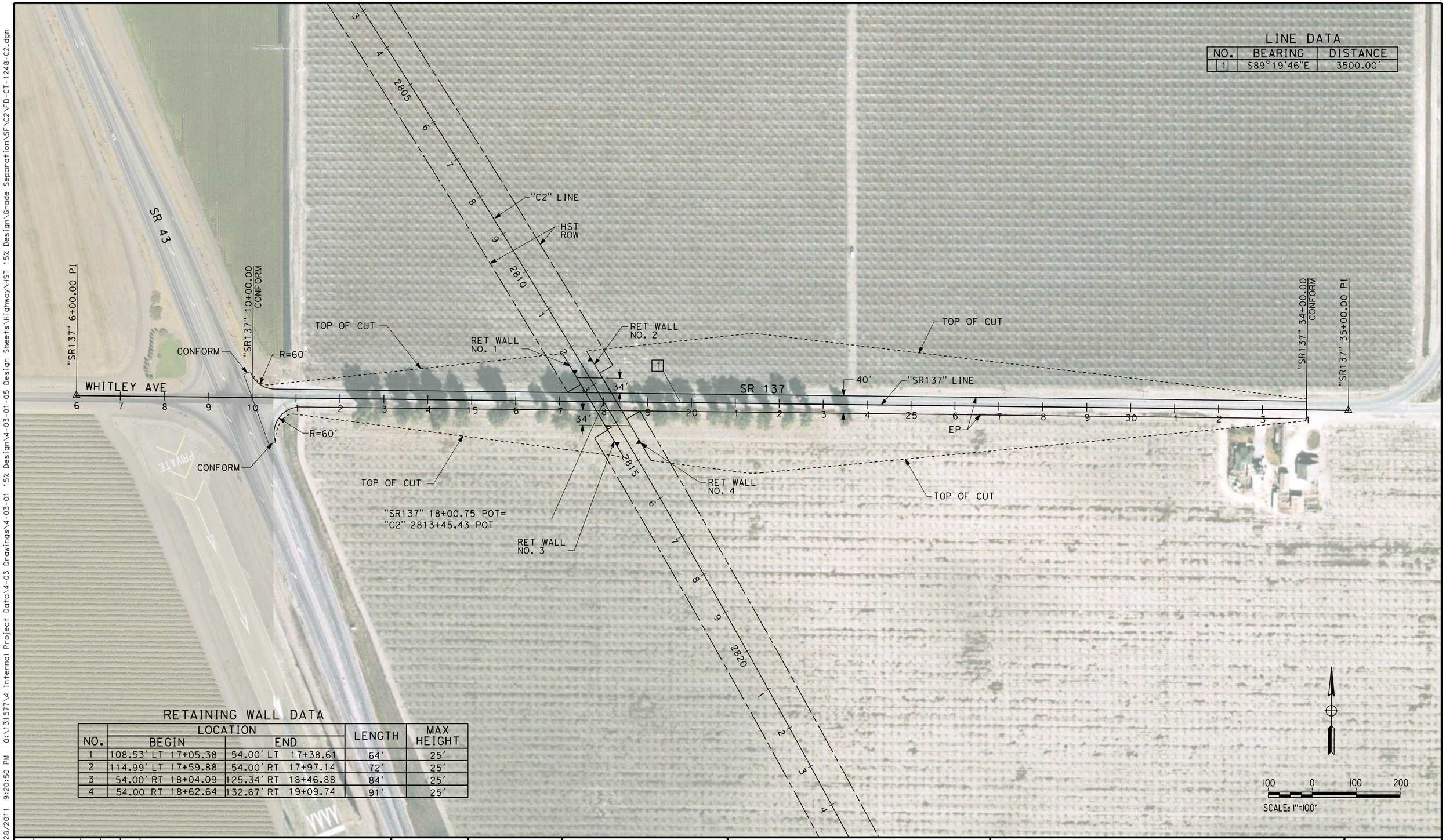


LINE DATA

NO.	BEARING	DISTANCE
1	S89°19'46"E	3500.00'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	108.53' LT 17+05.38	54.00' LT 17+38.61	64'	25'
2	114.99' LT 17+59.88	54.00' RT 17+97.14	72'	25'
3	54.00' RT 18+04.09	125.34' RT 18+46.88	84'	25'
4	54.00 RT 18+62.64	132.67' RT 19+09.74	91'	25'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

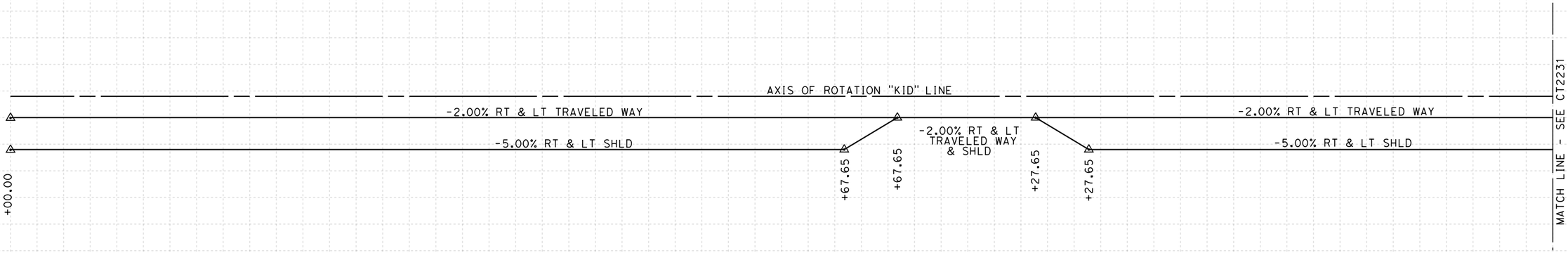
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

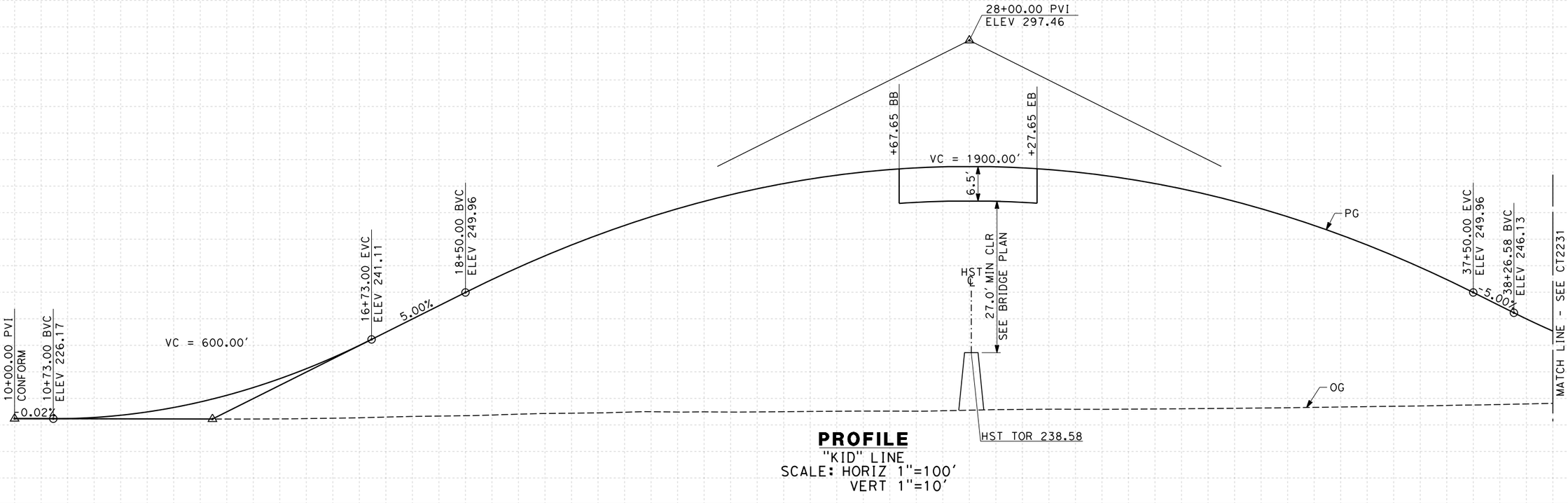
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
WHITNEY AVE/STATE ROUTE 137

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1248
SCALE AS SHOWN
SHEET NO. 19 OF 42

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2230
SCALE AS SHOWN
SHEET NO. 20 OF 42

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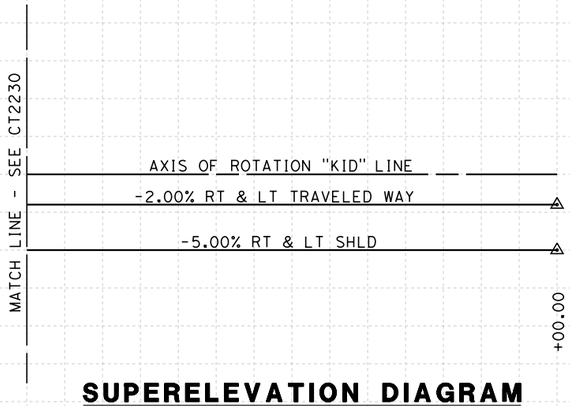
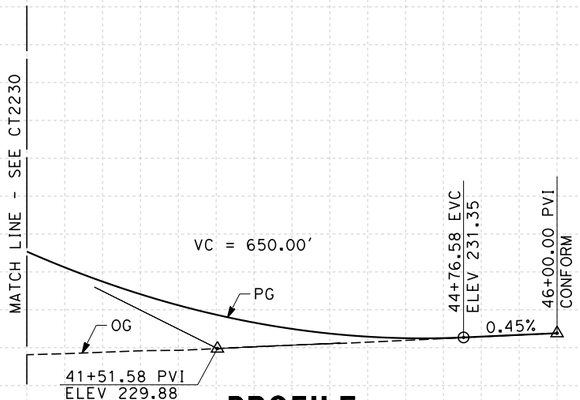


SUPERELEVATION DIAGRAM



PROFILE

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

STATION		9	40	1	2	3	4	45	6	TOTAL
CY	Exc									
	Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2231
SCALE AS SHOWN
SHEET NO. 21 OF 42

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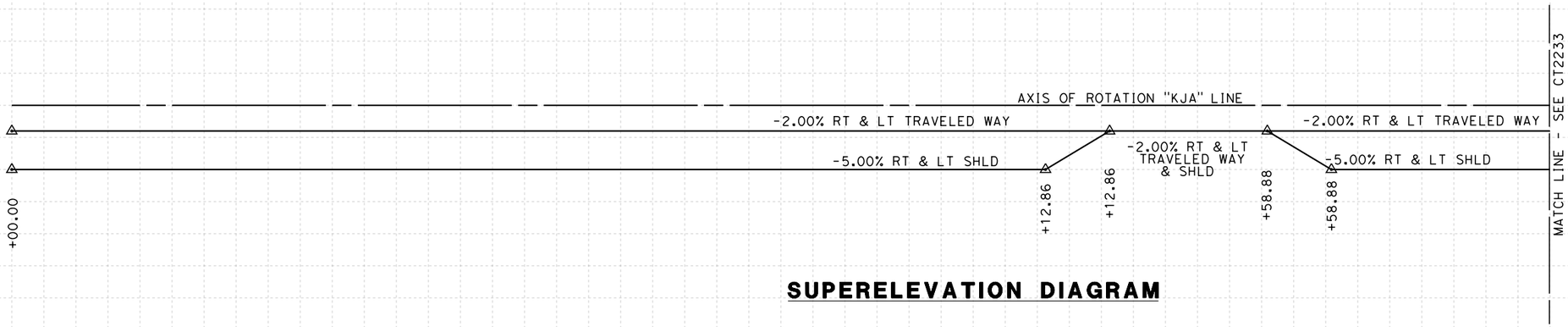
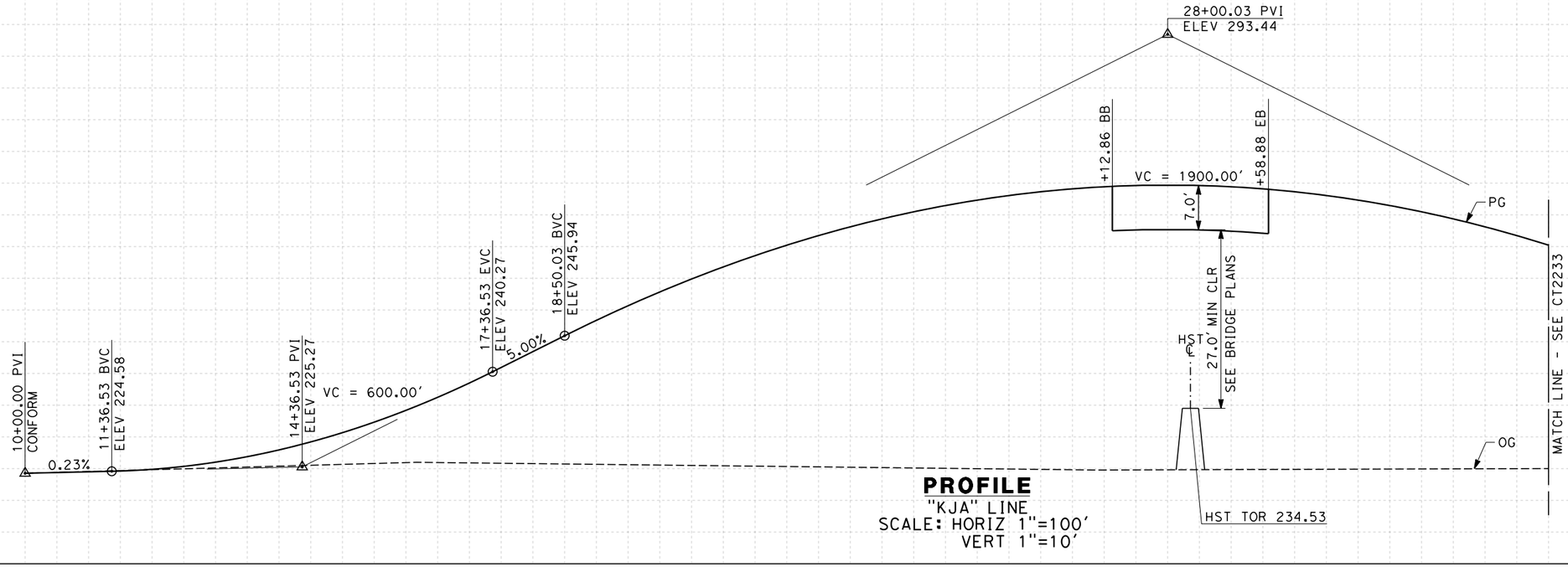
NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2232
SCALE AS SHOWN
SHEET NO. 22 OF 42

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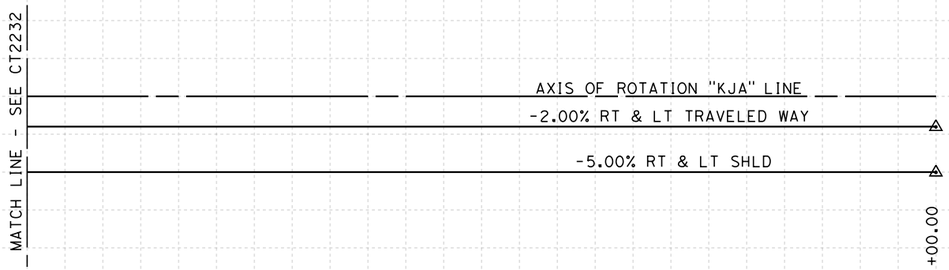
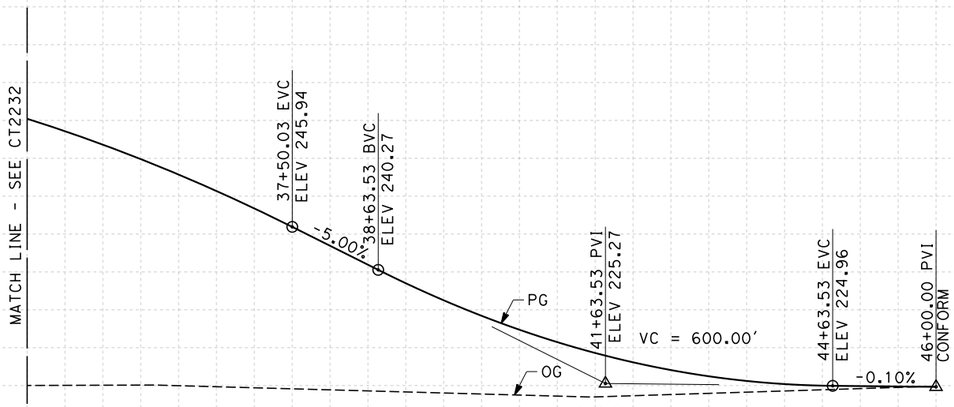


SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	TOTAL
CY Exc														
CY Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

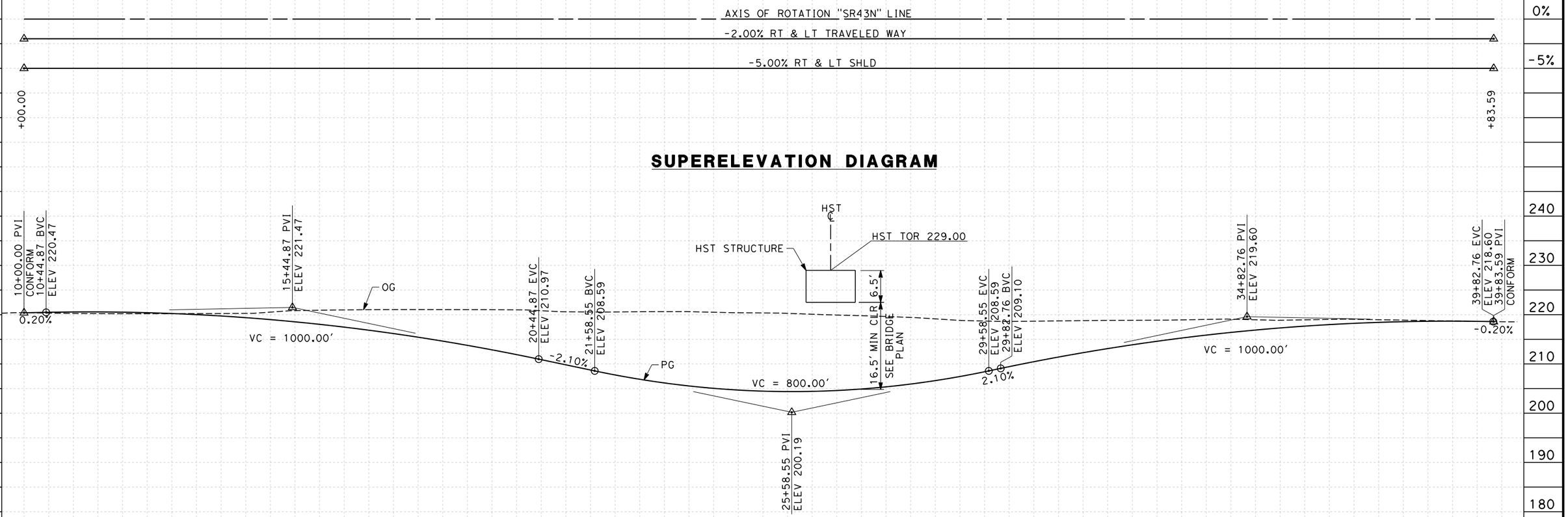
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2233
SCALE AS SHOWN
SHEET NO. 23 OF 42

eron.sudhausen 6/28/2011 9:21:01 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2233-C2.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 70 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE
"SR43N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	40	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (JERSEY AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2234
SCALE AS SHOWN
SHEET NO. 24 OF 42

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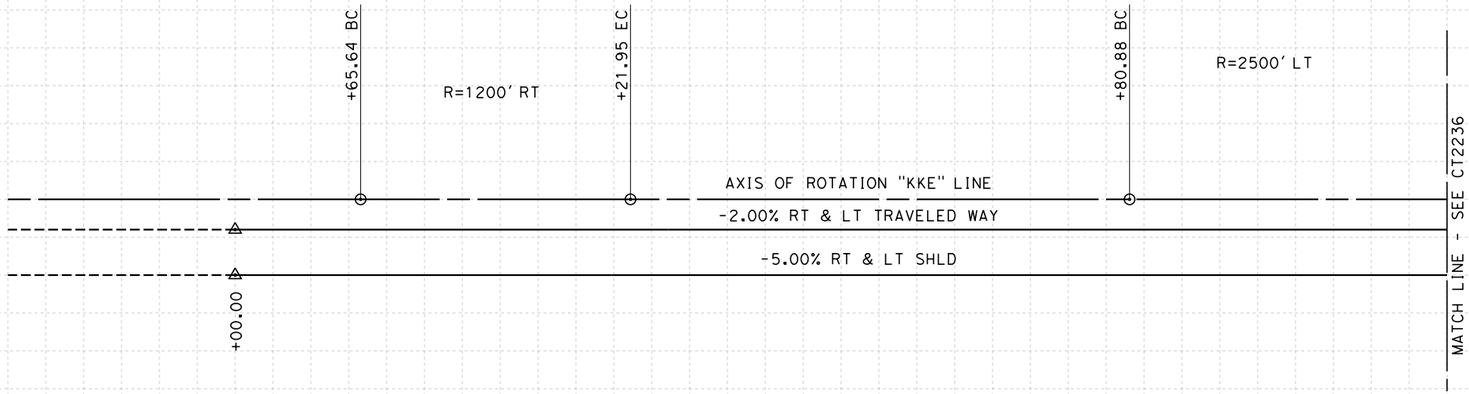
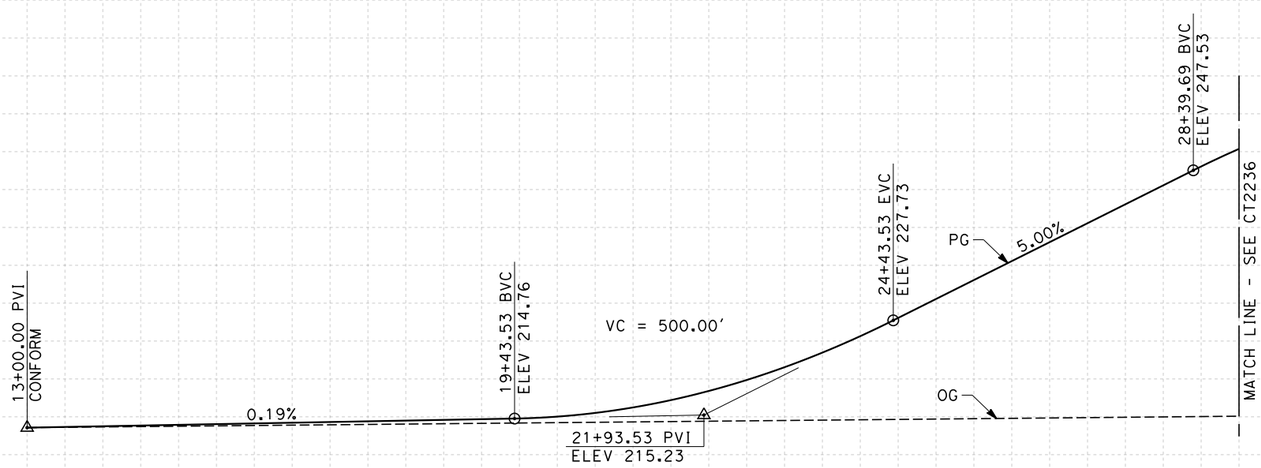
NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2235
SCALE AS SHOWN
SHEET NO. 25 OF 42

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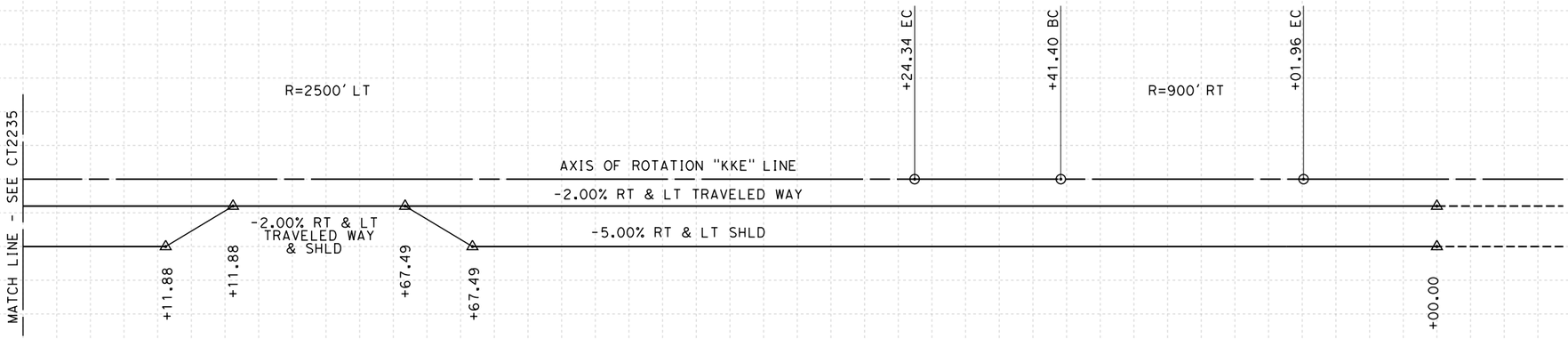
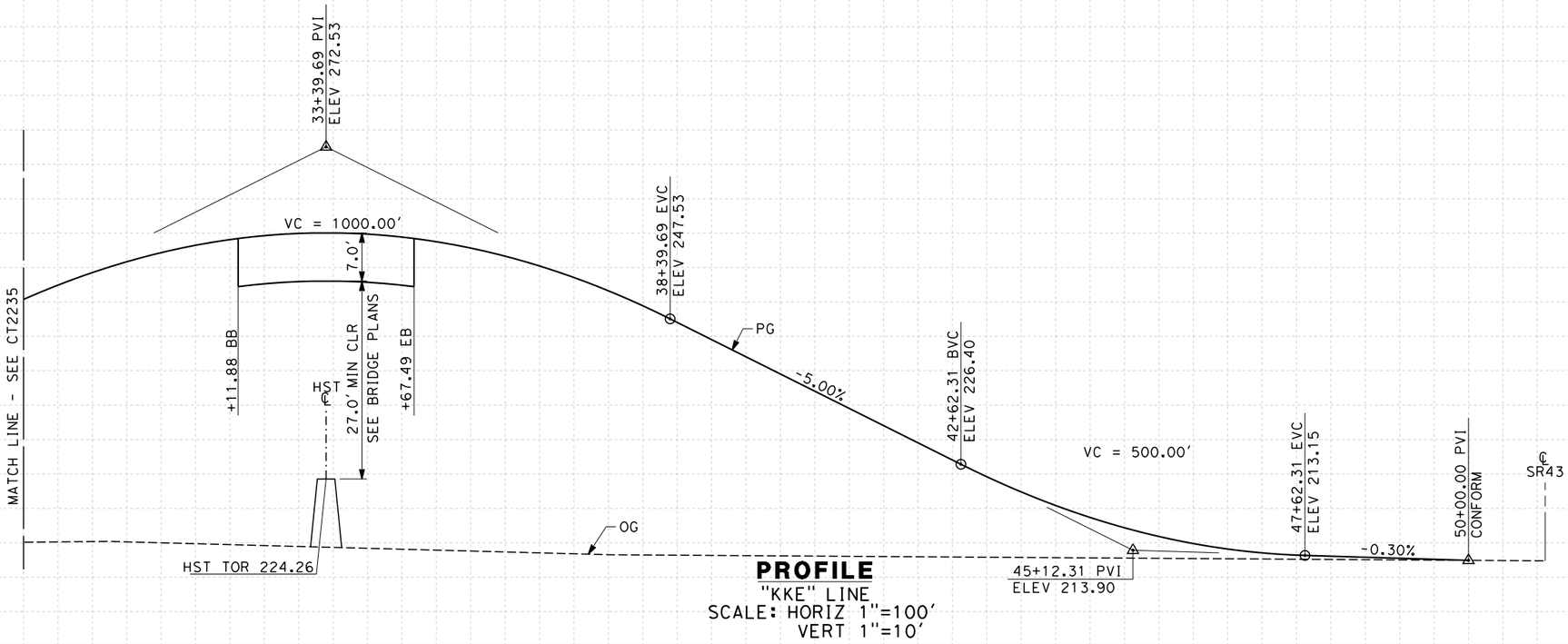


SUPERELEVATION DIAGRAM



PROFILE

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

STATION	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

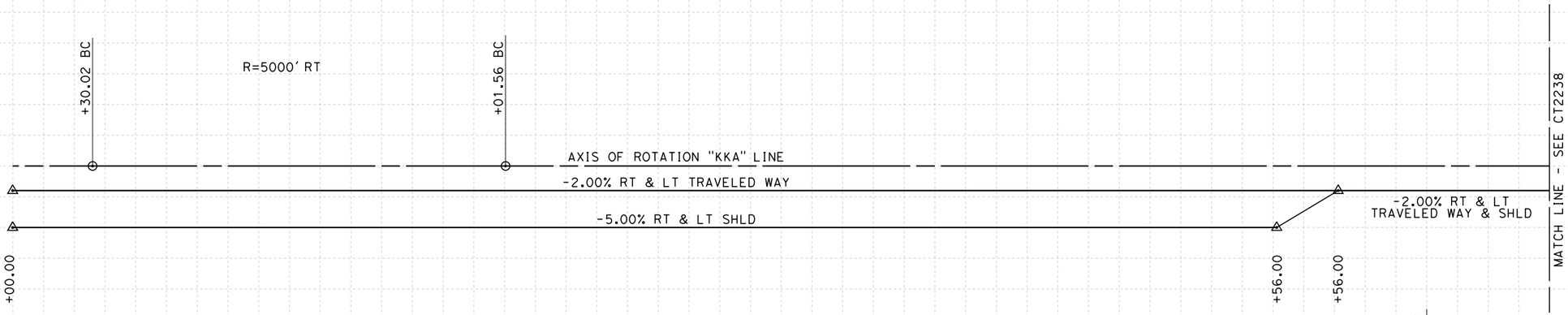
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2236
SCALE AS SHOWN
SHEET NO. 26 OF 42

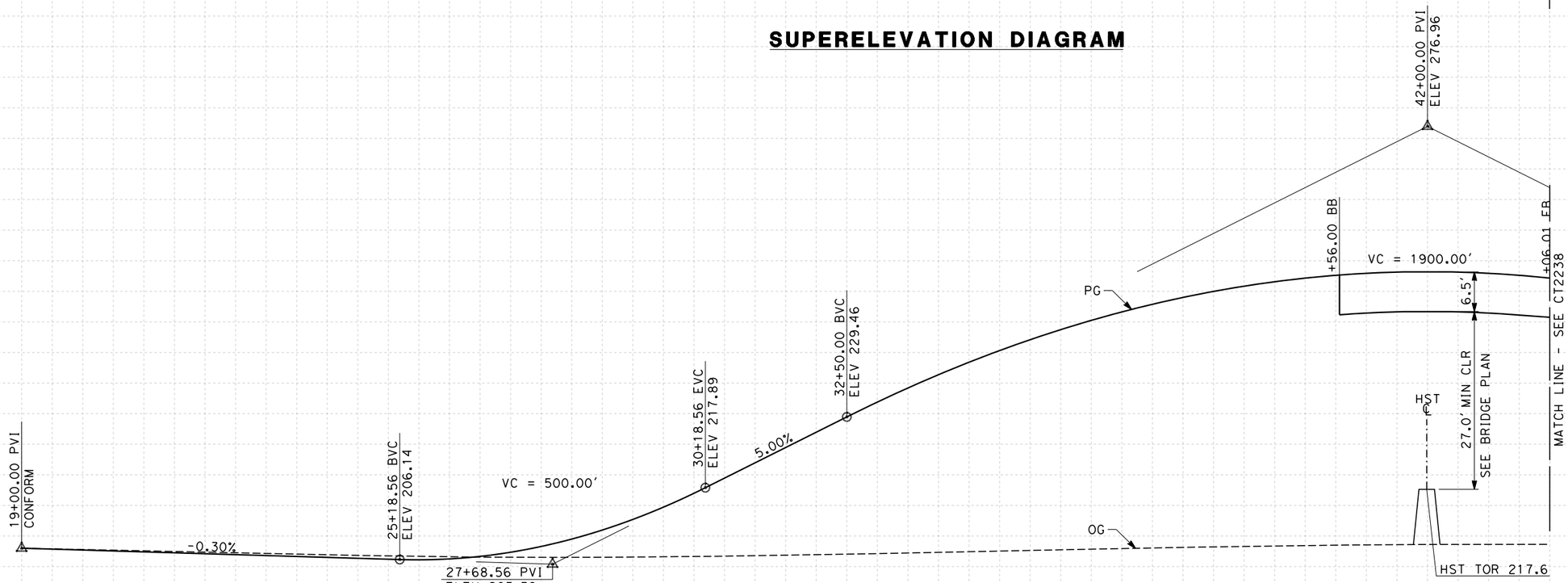
eron.sudhausen 6/28/2011 9:21:07 PM O:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design Sheets\Highway\HST 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2236-C2.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

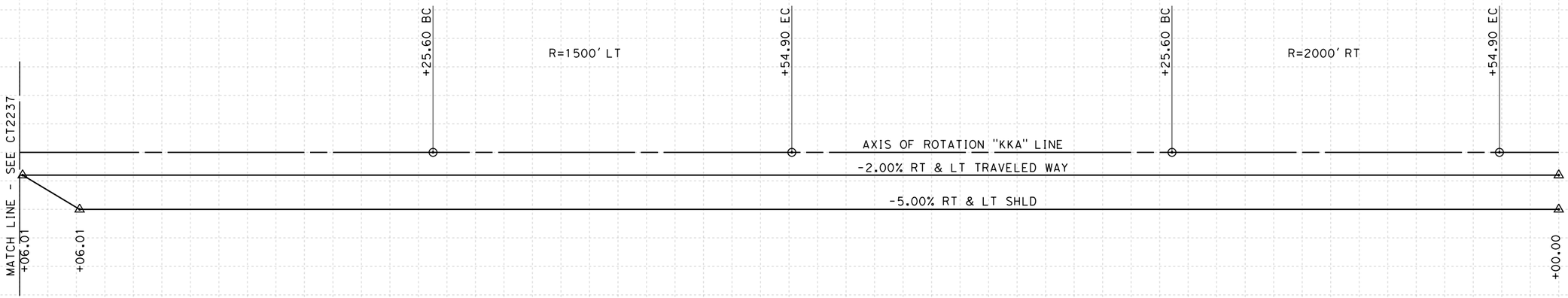
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

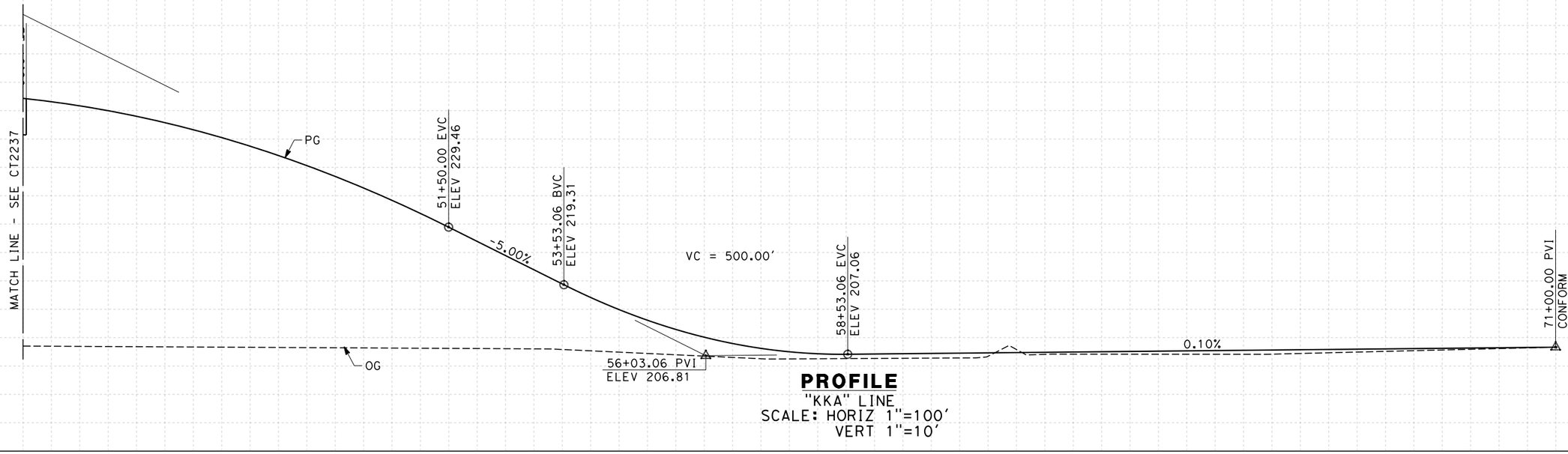
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2237
SCALE AS SHOWN
SHEET NO. 27 OF 42

eron.sudhausen 6/28/2011 9:40:57 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\Grade Separation\SF\C2\FB-CT-2237-C2.dgn

eron.sudhausen 6/28/2011 9:21:12 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\Grade Separation\SF\C2\FB-CT-2238-C2.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

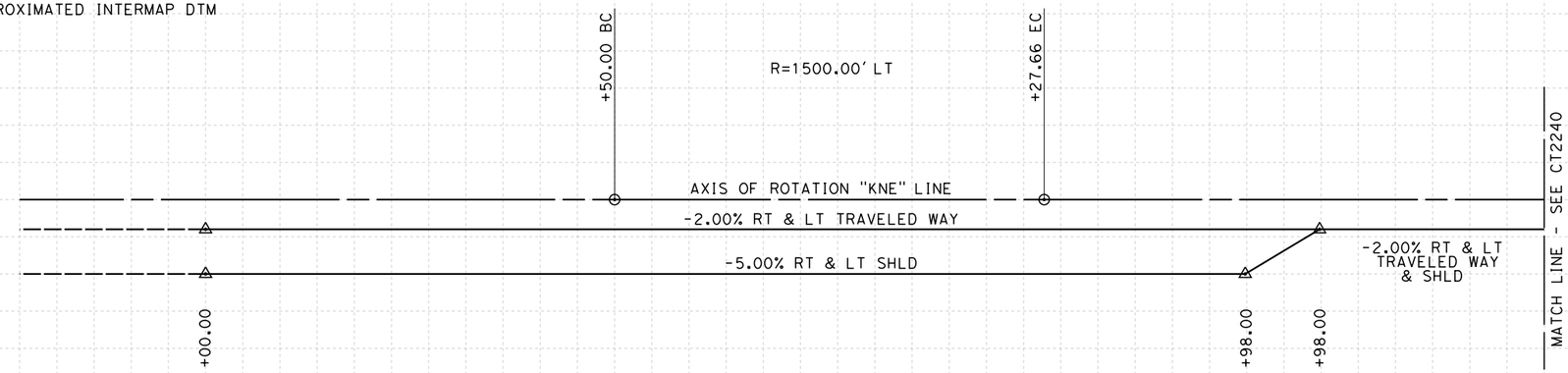
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

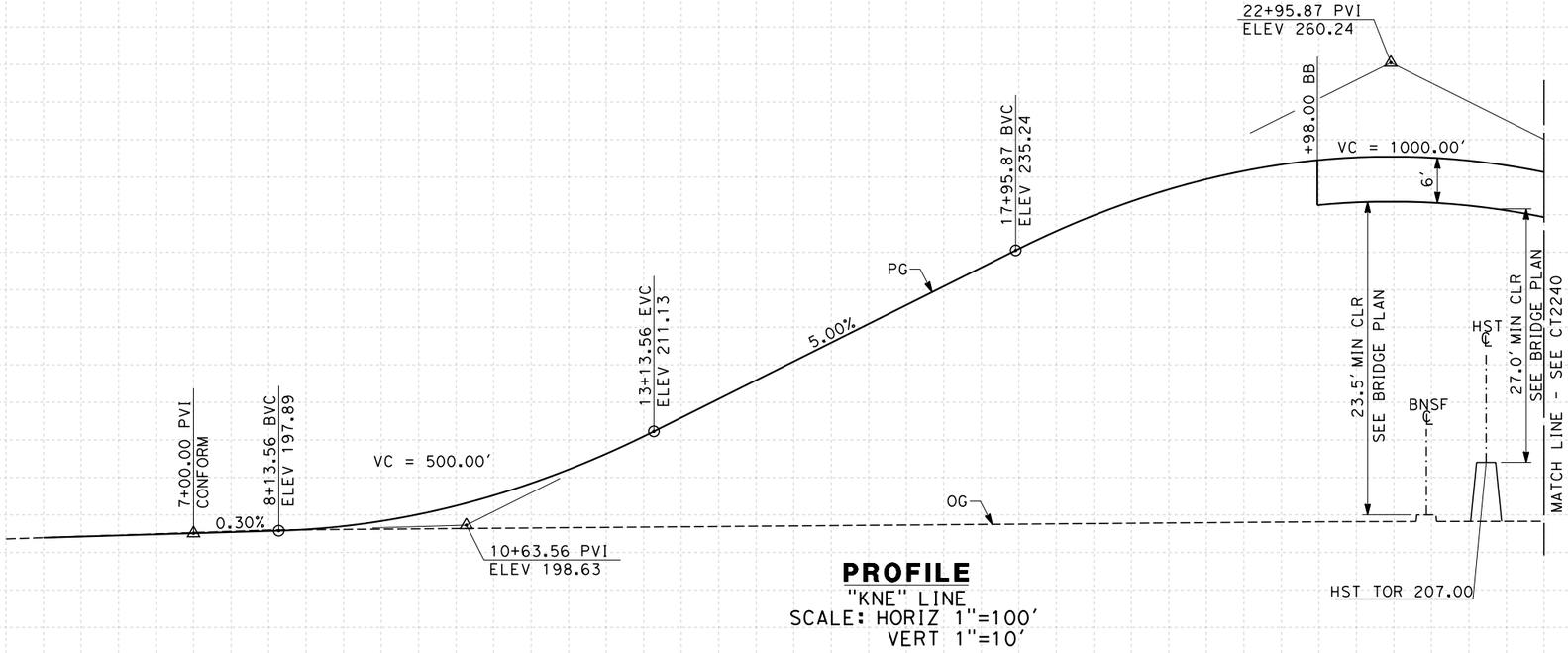
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2238
SCALE AS SHOWN
SHEET NO. 28 OF 42

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 BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
4. VERTICAL DESIGN SPEED = 45 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

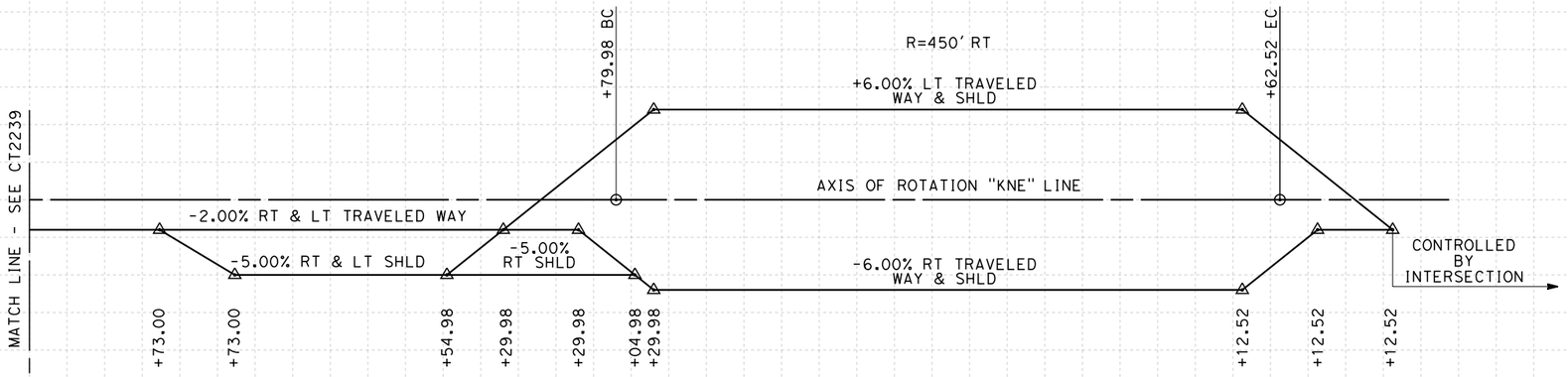
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

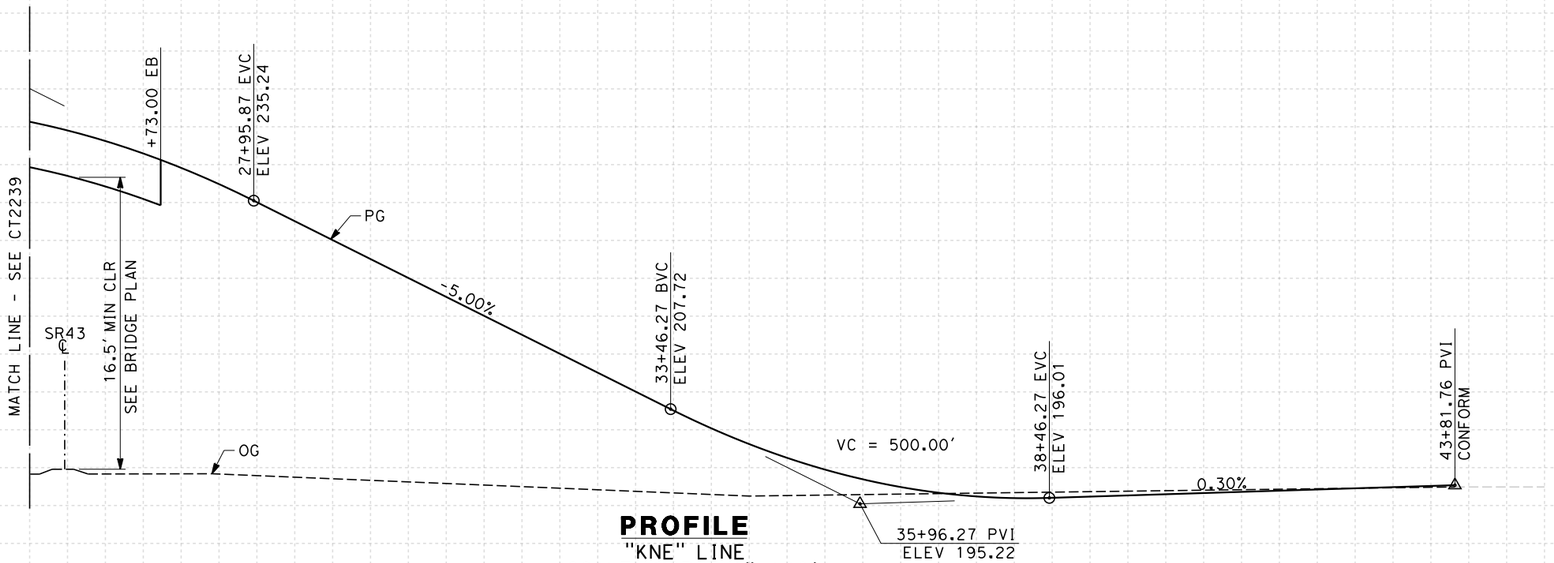
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2239
SCALE AS SHOWN
SHEET NO. 29 OF 42

eron.sudhausen 6/28/2011 9:21:14 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\Grade Separation\SF\C2\FB-CT-2239-C2.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	TOTAL
CY Exc																						
CY Emb																						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

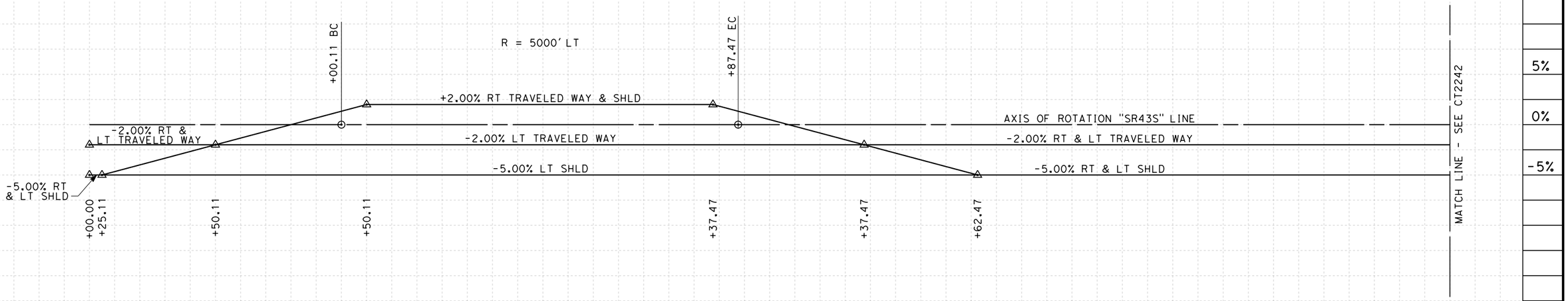
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

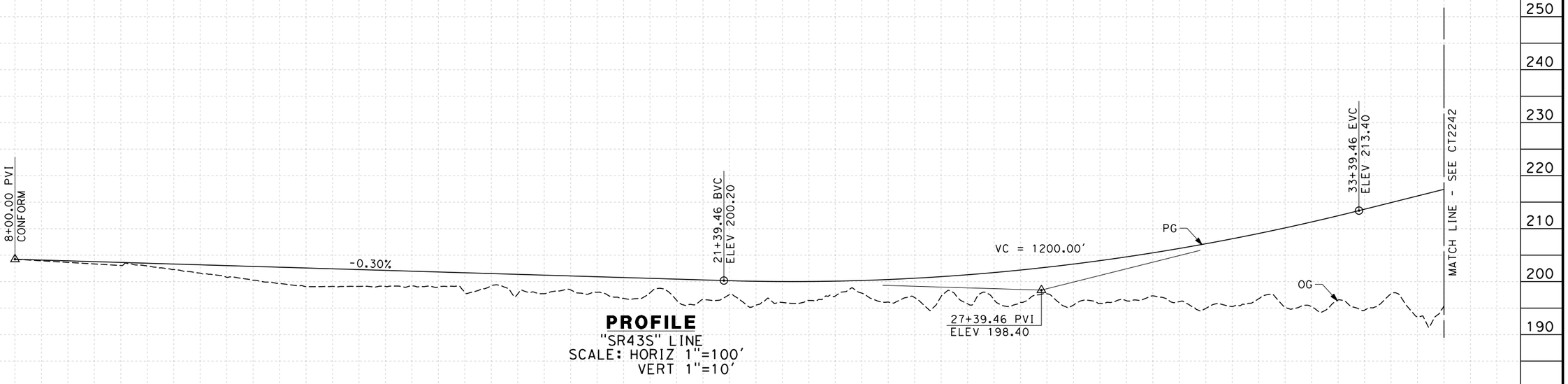
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2240
SCALE AS SHOWN
SHEET NO. 30 OF 42

eron.sudhausen 6/28/2011 9:21:16 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\Grade Separation\SF\C2\FB-CT-2240-C2.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 70 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE
"SR43S" 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	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

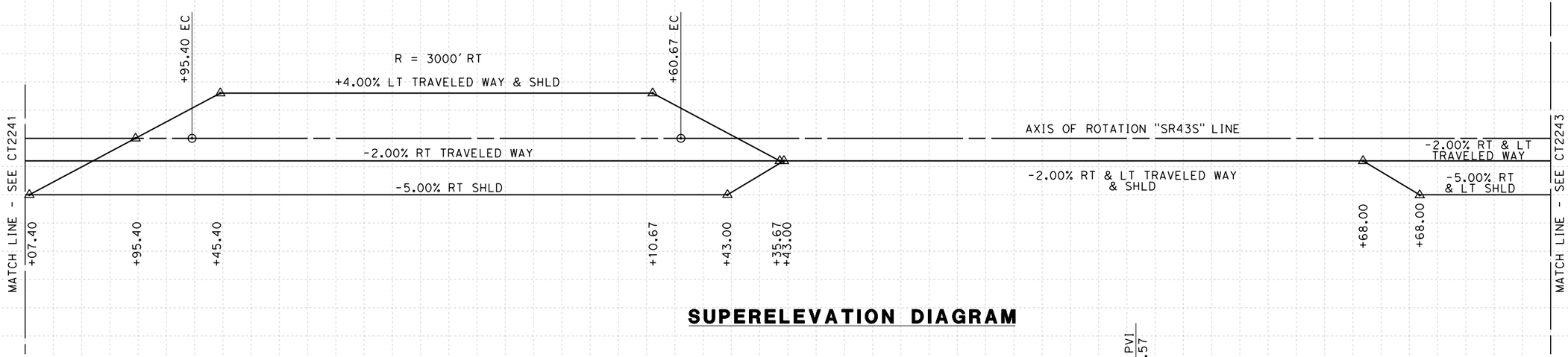
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

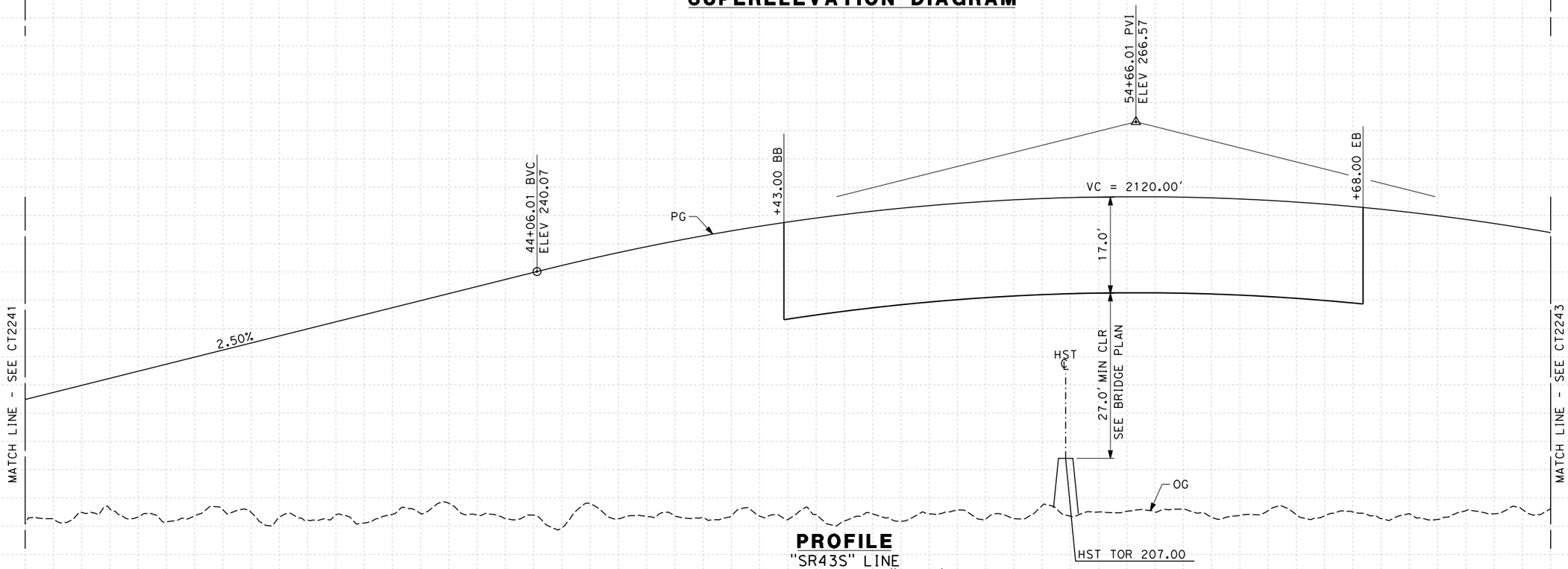
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2241
SCALE AS SHOWN
SHEET NO. 31 OF 42

eron.sudhausen 6/28/2011 9:21:18 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2241-C2.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

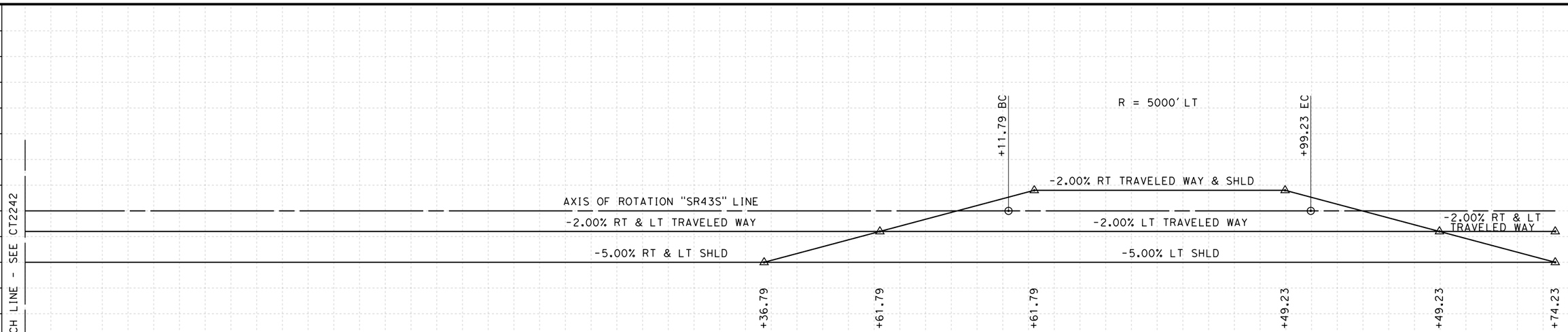
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

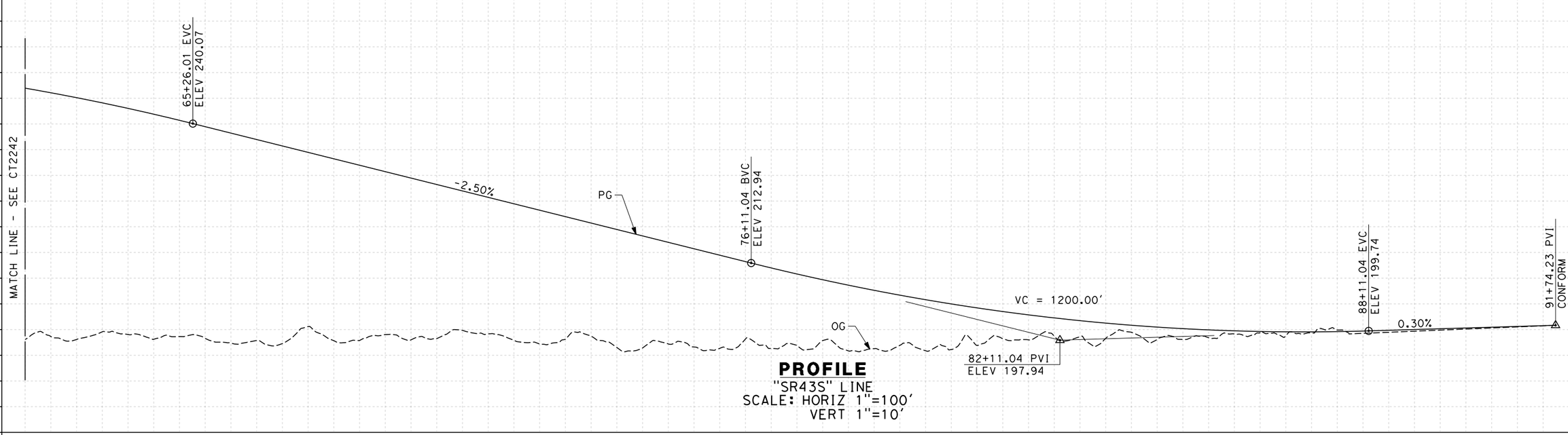
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2242
SCALE AS SHOWN
SHEET NO. 32 OF 42

eron.sudhausen 6/28/2011 9:21:20 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2242-C2.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	2	3	4	65	6	7	8	9	70	1	2	3	4	75	6	7	8	9	80	1	2	3	4	85	6	7	8	9	90	1	2	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

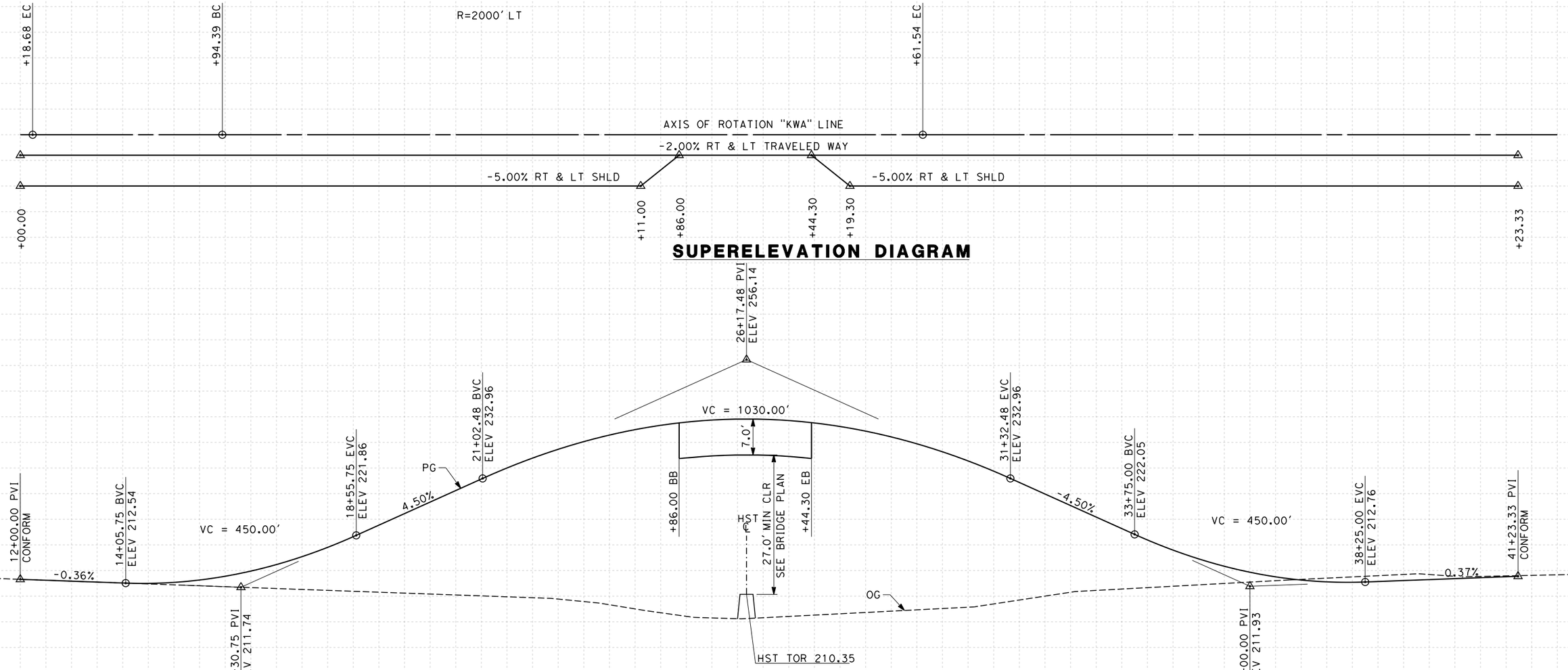
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (CORCORAN)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2243
SCALE AS SHOWN
SHEET NO. 33 OF 42

eron.sudhausen 6/28/2011 9:21:21 PM O:\1315774\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2243-C2.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



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

STATION	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	7	8	9	40	1	2	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

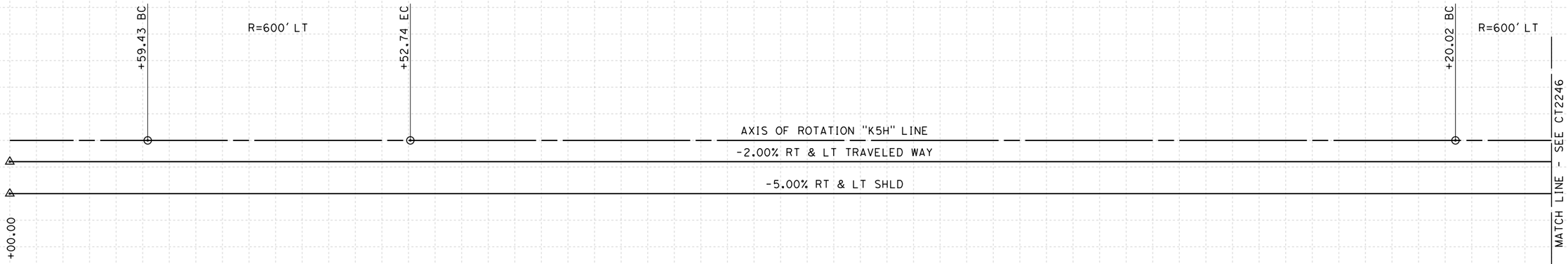
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CORCORAN HWY

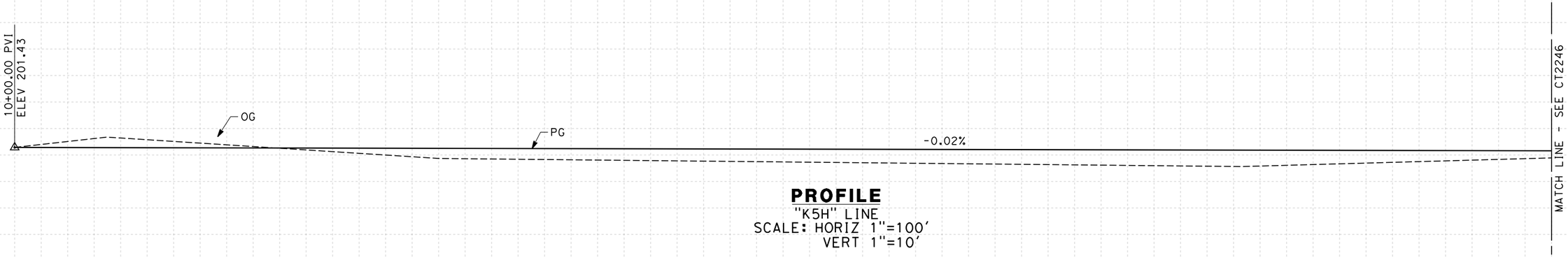
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2244
SCALE AS SHOWN
SHEET NO. 34 OF 42

eron.sudhausen 6/28/2011 9:21:23 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\Grade Separation\SF\C2\FB-CT-2244-C2.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE
"K5H" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

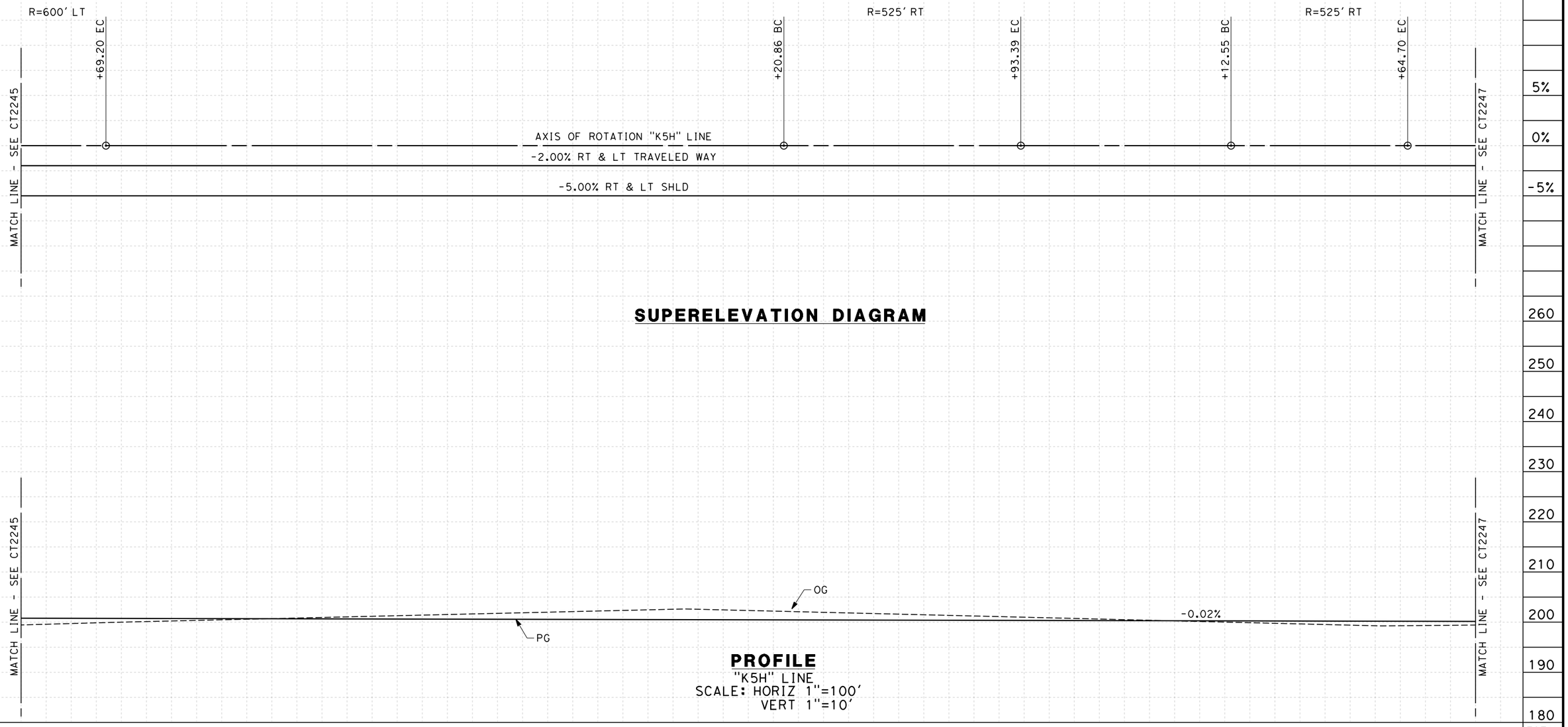
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
5 1/2 AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2245
SCALE AS SHOWN
SHEET NO. 35 OF 42

eron.sudhausen 6/28/2011 9:21:25 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2245-C2.dgn



SUPERELEVATION DIAGRAM

PROFILE

"K5H" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

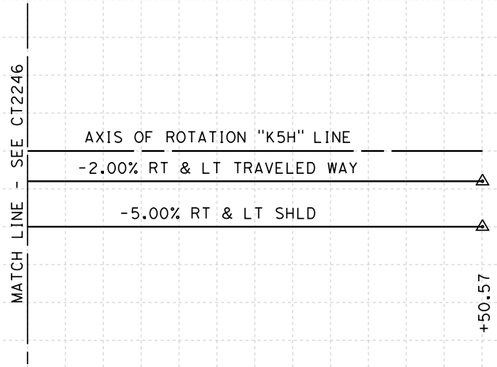
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

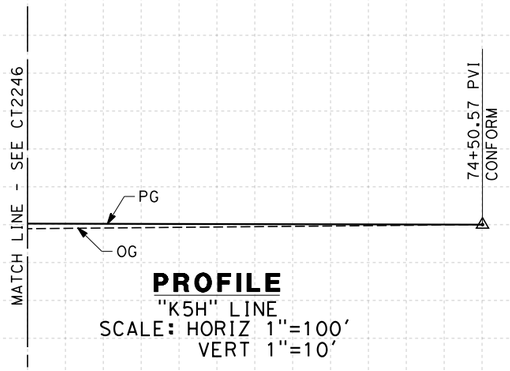
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
5 1/2 AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2246
SCALE AS SHOWN
SHEET NO. 36 OF 42

eron.sudhausen 6/28/2011 9:21:27 PM O:\13157\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2246-C2.dgn



SUPERELEVATION DIAGRAM



PROFILE

"K5H" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	9	70	1	2	3	4	75	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

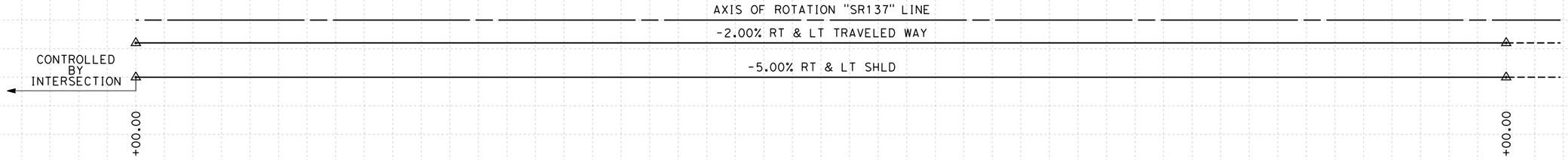
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
5 1/2 AVE

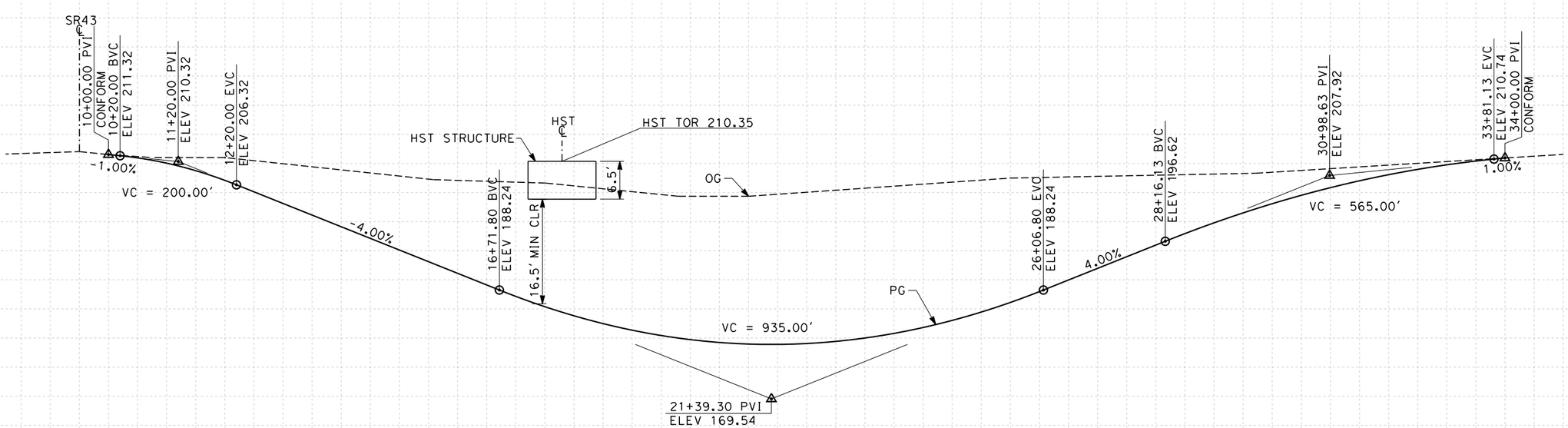
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2247
SCALE AS SHOWN
SHEET NO. 37 OF 42

eron.sudhausen 6/28/2011 9:21:30 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C2\FB-CT-2247-C2.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 55 MPH AND 25 MPH AT INTERSECTION
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE
"SR137" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	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	TOTAL
CY Exc																												
CY Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
WHITNEY AVE/STATE ROUTE 137

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2248
SCALE AS SHOWN
SHEET NO. 38 OF 42

eron.sudhausen 6/28/2011 9:21:32 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\Grade Separation\SF\C2\FB-CT-2248-C2.dgn

LINE DATA

NO.	BEARING	DISTANCE
51	S00°51'26"W	321.80'
52	S30°19'27"E	844.61'
53	S89°11'48"E	362.36'

CURVE DATA

NO.	R	Δ	T	L	V
51	300.00'	31°10'53"	83.71'	163.27'	25 MPH
52	300.00'	58°52'21"	169.29'	308.25'	25 MPH

"C2" LINE
HST ROW
STRRET BARRICADE
NEWARK AVE
NILES AVE
"KNW" 10+00.00 PI
"KNW" 10+11.48 CONFORM
CONFORM
R=60'
"KNW" 13+21.80 BC
"KNW" 14+85.07 EC
"KNW" 23+29.68 BC
"KNW" 26+37.93 EC
"KNW" 29+01.11 CONFORM
"KNW" 30+00.29 PI
"KNW" LINE
EP
32'
"SR43S" 81+11.79 BC
"SR43S" LINE
"SR43S" 86+99.23 EC
"SR43S" 91+74.23 CONFORM
"SR43S" 92+00.00 PI
SR 43
BNSF
OTIS AVE
NILES AVE

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

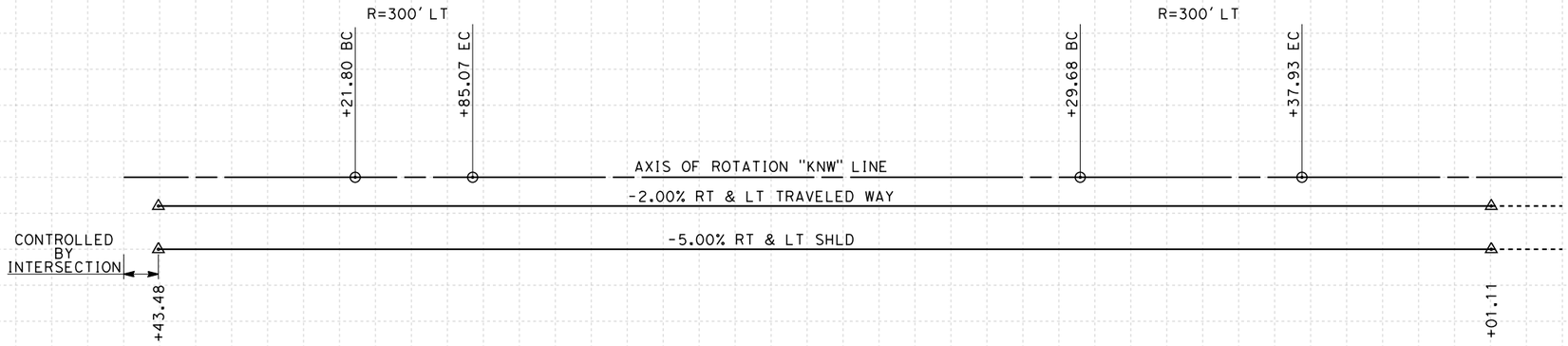
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY LAYOUT
NILES AVE

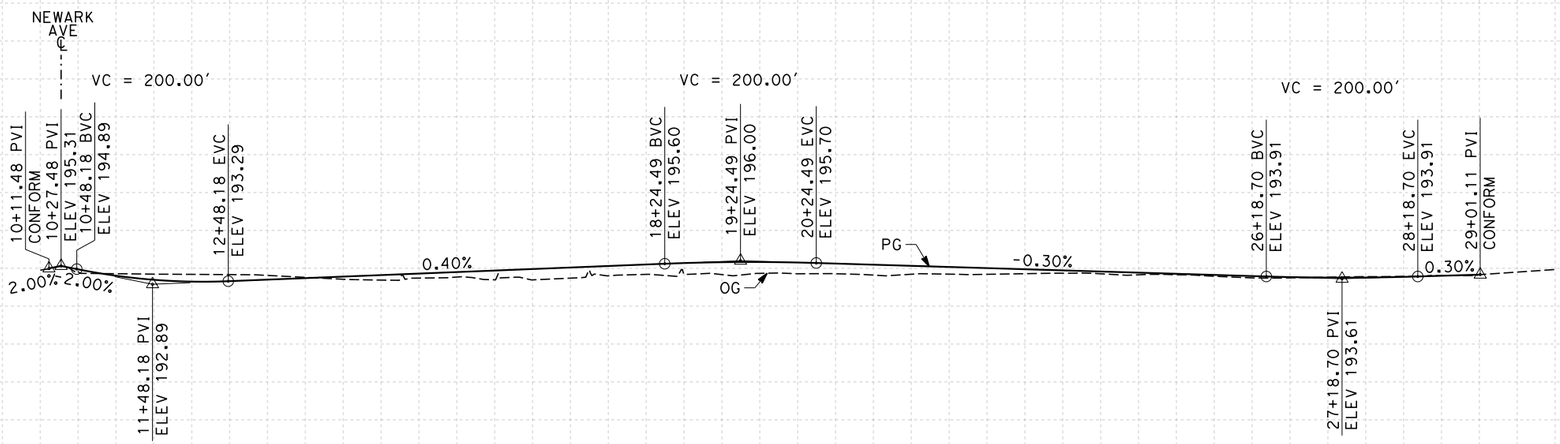
CONTRACT NO. HSR 06-0003
DRAWING NO. CR1230
SCALE AS SHOWN
SHEET NO. 39 OF 42

eron.sudhausen 6/28/2011 9:21:42 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\Roadway\C2\FB-CR-1230-C2.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 25 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY PROFILE & SUPERELEVATION DIAGRAM
NILES AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2230
SCALE AS SHOWN
SHEET NO. 40 OF 42

eron.sudhausen 6/28/2011 9:21:46 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\C2\FB-CR-2230-C2.dgn

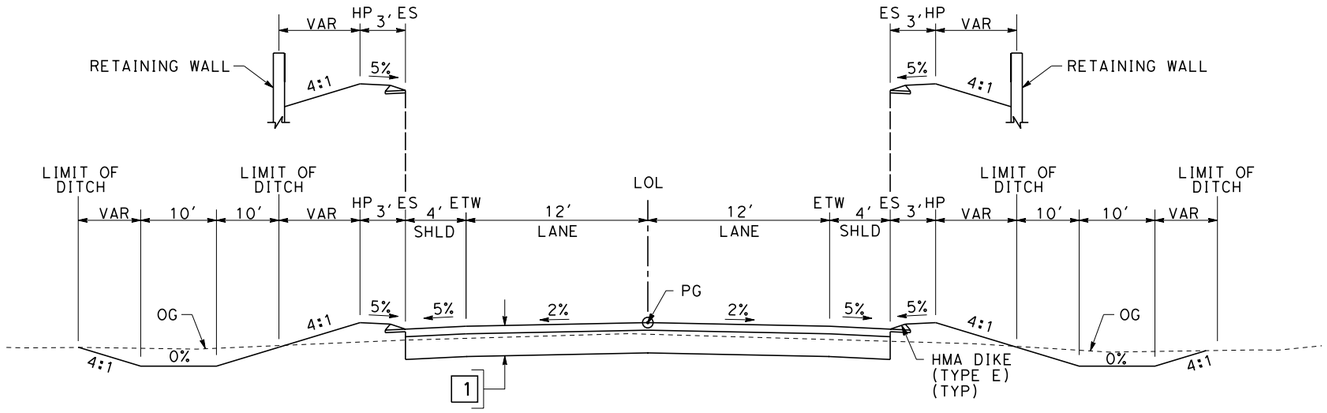
NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS

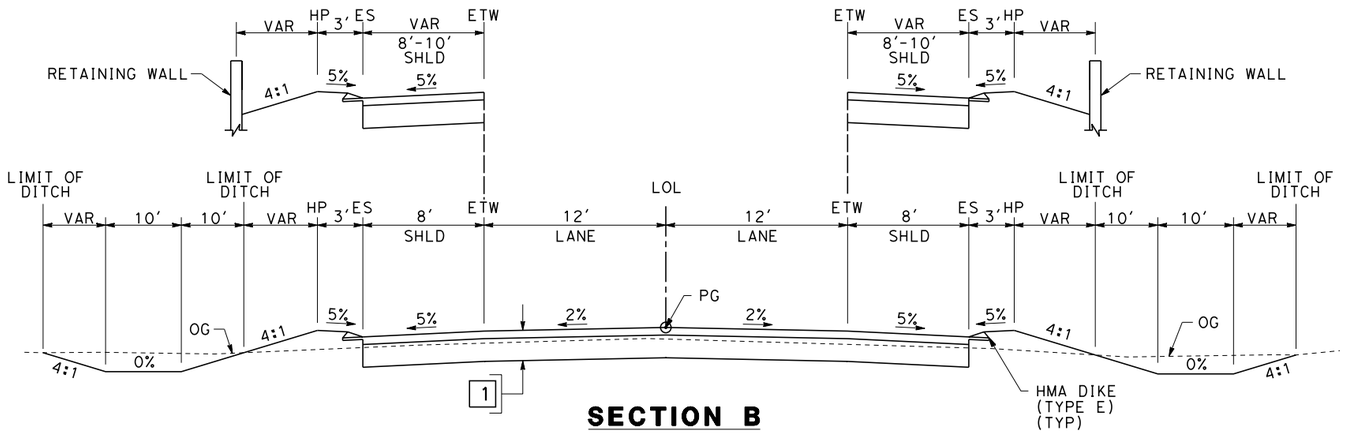
TYPICAL ROADWAY

1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB



SECTION A

"KID" 10+00.00 TO 26+67.65
"KID" 29+27.65 TO 46+00.00
"KKE" 13+00.00 TO 32+11.88
"KKE" 34+67.49 TO 50+00.00
"KKA" 19+00.00 TO 40+56.00
"KKA" 44+06.01 TO 71+00.00
"KNE" 07+00.00 TO 21+98.00
"KNE" 26+48.00 TO 43+81.76
"KWA" 12+00.00 TO 24+86.00
"KWA" 27+44.30 TO 41+23.33



SECTION B

"KJA" 10+00.00 TO 27+12.86
"KJA" 29+58.88 TO 46+00.00
"SR43S" 08+00.00 TO 48+43.00
"SR43S" 58+68.00 TO 91+74.23

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: S. DEO
DRAWN BY: E. TANAKA
CHECKED BY: J. MONG
IN CHARGE: A. LUFT
DATE: 06/30/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

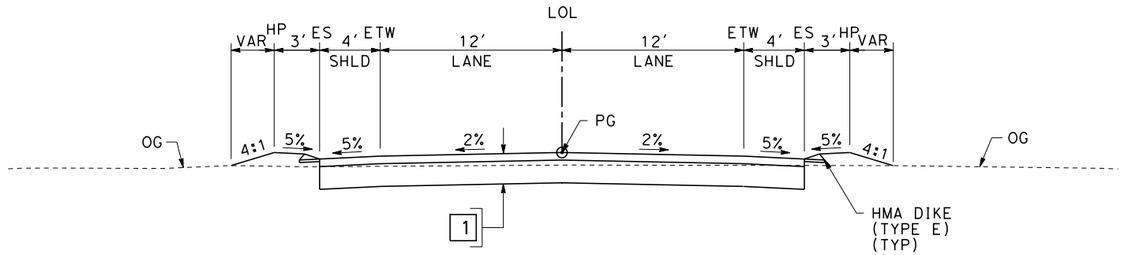
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

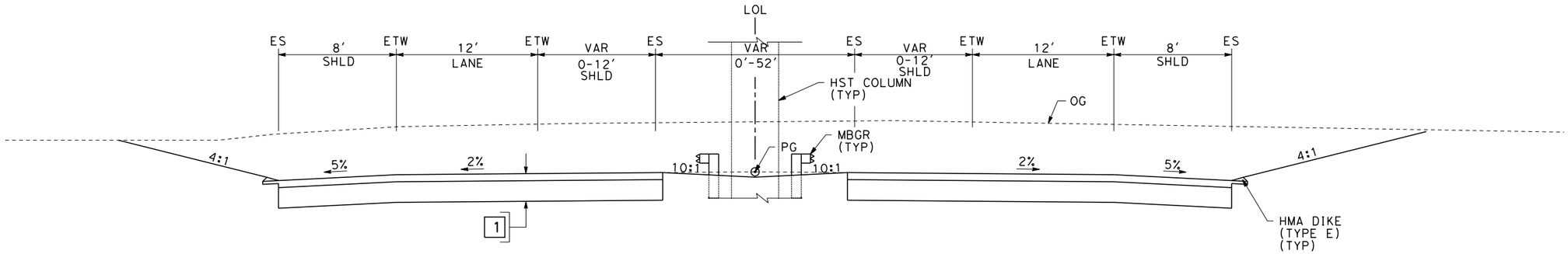
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3042
SCALE NO SCALE
SHEET NO. 41 OF 42

eron.sudhausen 6/28/2011 9:21:49 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Cross Sections\FB-CT-3042-C2.dgn



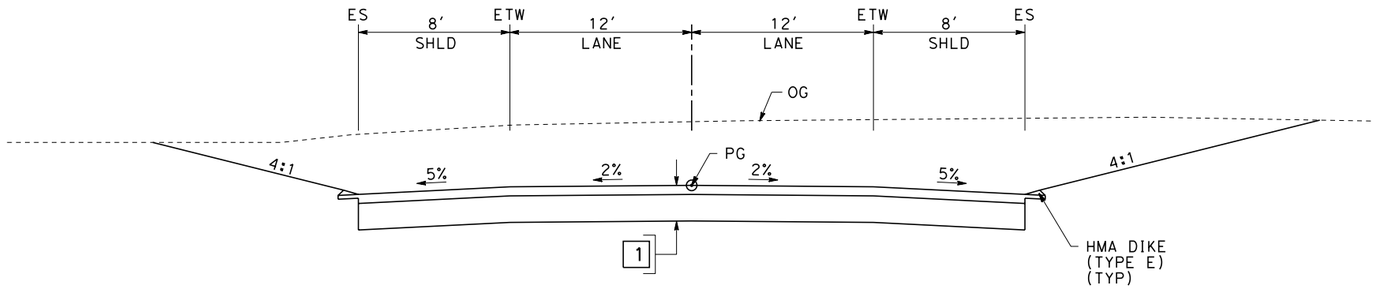
SECTION C

"K5H" 10+00.00 TO 74+50.57
"KNW" 10+11.48 TO 29+01.11



SECTION D

"SR43N" 9+08.16 TO 39+83.59



SECTION E

"SR137" 10+00.00 TO 34+00.00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: S. DEO
DRAWN BY: E. TANAKA
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
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3043
SCALE NO SCALE
SHEET NO. 42 OF 42

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STREET CLOSURE

STREET NAME	HST ALIGNMENT STA
JERSEY AVENUE	2220+66.00
LANSING AVE	2395+30.00
5TH AVENUE	2745+00.00
BROKAW AVE	2784+00.00
SHERMAN AVENUE	2811+50.00
SANTA FE AVENUE	2907+00.00
4TH AVENUE	2915+00.00
AVENUE 144	2995+00.00
AVENUE 136	3057+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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0080
SCALE AS SHOWN
SHEET NO. 1 OF 71

eron.sudhausen 6/29/2011 11:01:53 AM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Key Maps\FB-CB-0080-C3.dgn

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'

IDAHO AVE

"KID" 10+00.00 PI
CONFORM

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

"KID" 18+03.65 POT =
"C3" 2119+10.74 POT

1

32'

"KID" LINE

BB

EB

EP

MBGR
(TYP)

HST ROW

"C3" LINE

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

MATCH LINE - SEE CT1261

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

CULVERT

RELOCATE
CANAL

2110 2115 2120 2125

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

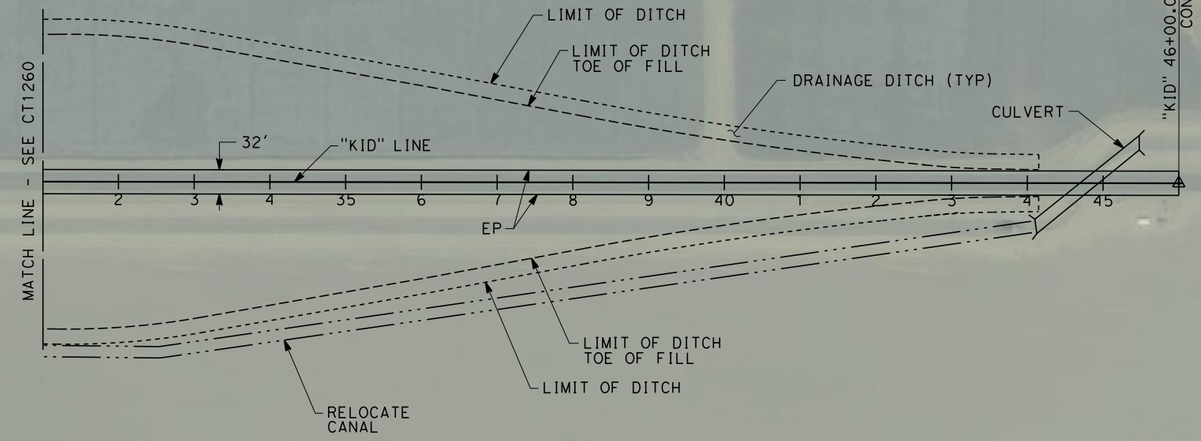
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1260
SCALE AS SHOWN
SHEET NO. 2 OF 71

eron.sudhausen 6/28/2011 9:56:07 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\Grade Separation\SF\C3\FB-CT-1261-C3.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°41'49"E	3600.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1261
SCALE AS SHOWN
SHEET NO. 3 OF 71

LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'

"KJA" 10+00.00 PI CONFORM

"KJA" 28+35.86 POT =
"C3" 2172+23.66 POT

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

"KJA" LINE

40'

JACKSON AVE

EP

BB

EB

MBGR (TYP)

TRACTION POWER FACILITY (NORTH OPTION)

"C3" LINE

ACCESS ROAD

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

MATCH LINE - SEE CT1263

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

RELOCATE CANAL

ACCESS ROAD

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

HST ROW

TRACTION POWER FACILITY (SOUTH OPTION)

100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1262
SCALE AS SHOWN
SHEET NO. 4 OF 71

eron.sudhausen 6/28/2011 9:56:17 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\Grade Separation\SF\C3\FB-CT-1262-C3.dgn

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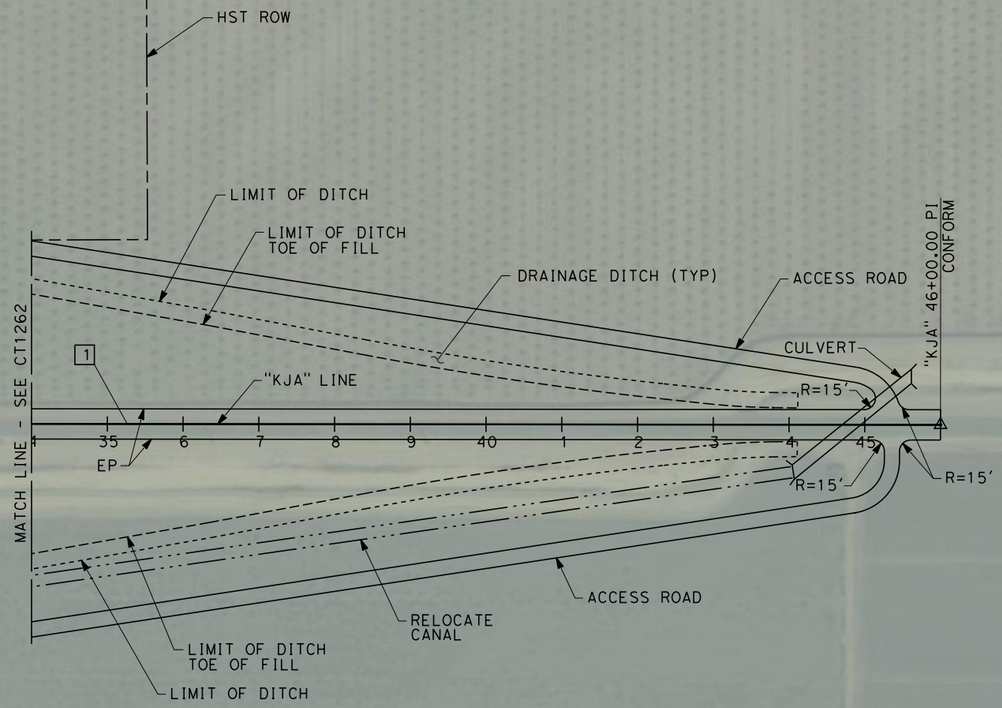
LINE DATA

NO.	BEARING	DISTANCE
1	S89°43'04"E	3600.00'



JACKSON AVE

100 0 100 200

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1263
SCALE AS SHOWN
SHEET NO. 5 OF 71

eron.sudhausen 6/28/2011 9:56:27 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\Grade Separation\SF\C3\FB-CT-1264-C3.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°27'06"E	3100.00'

"C3" LINE
HST ROW
"SR43N" 9+00.00 PI
"SR43N" 10+00.00
CONFORM
"SR43N" 39+83.59
CONFORM
"SR43N" 40+00.00 PI
JERSEY AVE
SR-43
CONFORM
28.45' LT "F43" 12+64.05
PRC
21.73' RT
"F43" 10+69.46
BC
R=7500'
R=60'
7.00' LT "F43" 13+42.41
51.00' LT "F43" 22+14.03
EC
TOP OF CUT
R=20020'
25'
51'
RETAINING WALL NO.1
RETAINING WALL NO.3
"SR43" 26+38.16 POT =
"C3" 2245+38.22 POT
51.00' LT "F43" 26+77.73
BC
RETAINING WALL NO.4
TOP OF CUT
R=20020'
EP
20.00' LT "F43" 39+83.59
EC
7.00' LT "F43" 35+49.35
28.45' LT "F43" 36+27.70
PRC
28.45' RT
"F43" 12+64.05
PRC
7.00' RT "F43" 13+42.41
"SR43N" LINE
R=20020'
TOP OF CUT
25'
EP
MBGR
R=20020'
TOP OF CUT
28.45' RT "F43" 36+27.70
PRC
7.00' RT "F43" 35+49.35
20.00' RT "F43" 39+83.59
EC
51.00' RT "F43" 22+14.03
EC
CRASH CUSHION (TYP)
51.00' RT "F43" 26+77.73
BC
RETAINING WALL NO.2
2230
2235
2240
2250
2255
2260
100 0 100 200
SCALE: 1"=100'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	23.18' RT "C3" 2242+19.02	23.34' RT "C3" 2243+14.53	96'	25'
2	23.51' RT "C3" 2246+56.31	23.49' RT "C3" 2247+45.07	89'	25'
3	23.64' LT "C3" 2243+31.40	23.55' LT "C3" 2244+20.14	89'	25'
4	23.51' LT "C3" 2247+61.86	23.54' LT "C3" 2248+57.36	96'	25'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (JERSEY AVE)

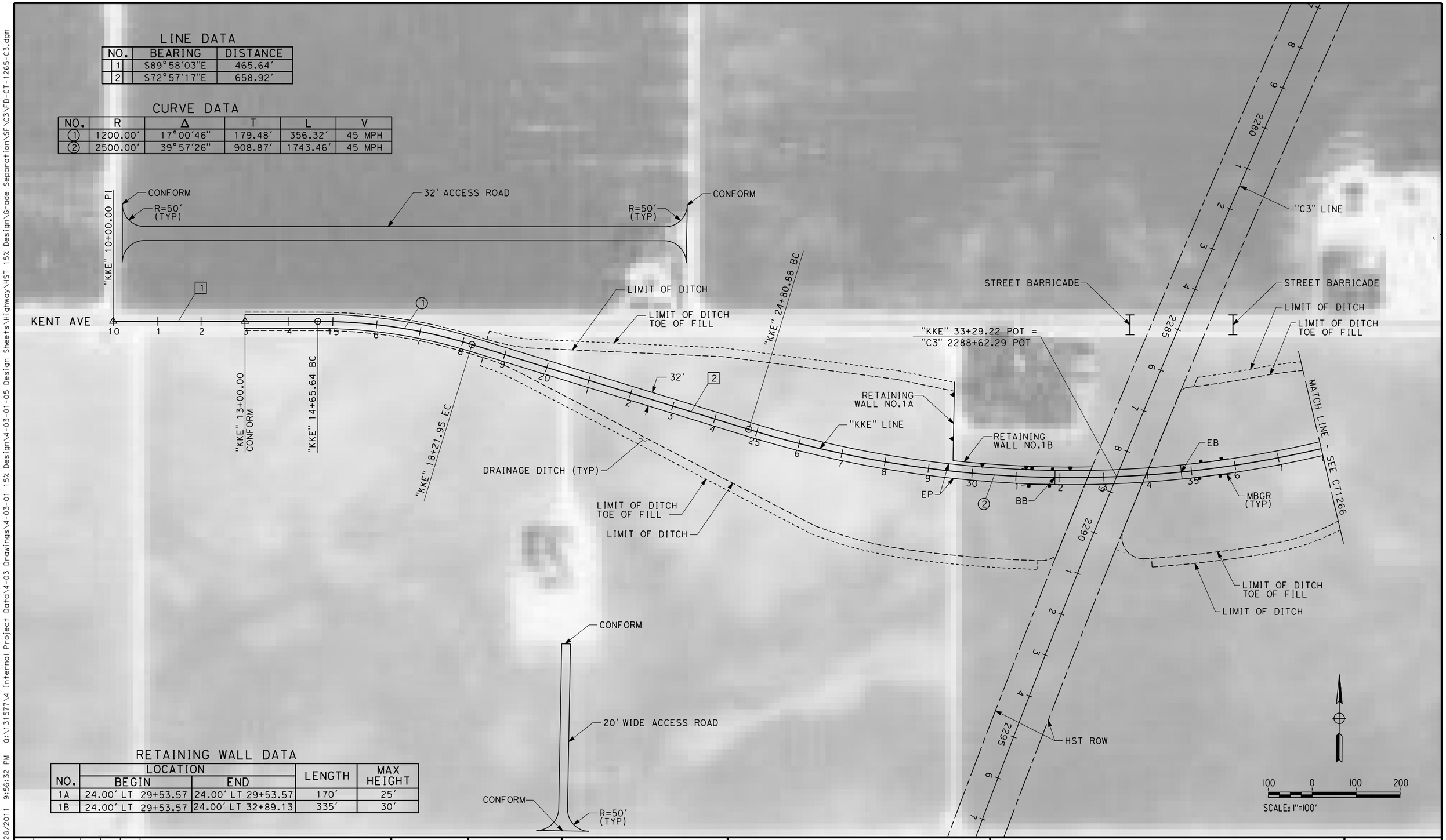
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1264
SCALE AS SHOWN
SHEET NO. 6 OF 71

LINE DATA

NO.	BEARING	DISTANCE
1	S89°58'03"E	465.64'
2	S72°57'17"E	658.92'

CURVE DATA

NO.	R	Δ	T	L	V
①	1200.00'	17°00'46"	179.48'	356.32'	45 MPH
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	24.00' LT 29+53.57	24.00' LT 29+53.57	170'	25'
1B	24.00' LT 29+53.57	24.00' LT 32+89.13	335'	30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S.DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1265
SCALE AS SHOWN
SHEET NO. 7 OF 71

eron.sudhausen 6/28/2011 9:56:32 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\Grade Separation\SF\C3\FB-CT-1265-C3.dgn

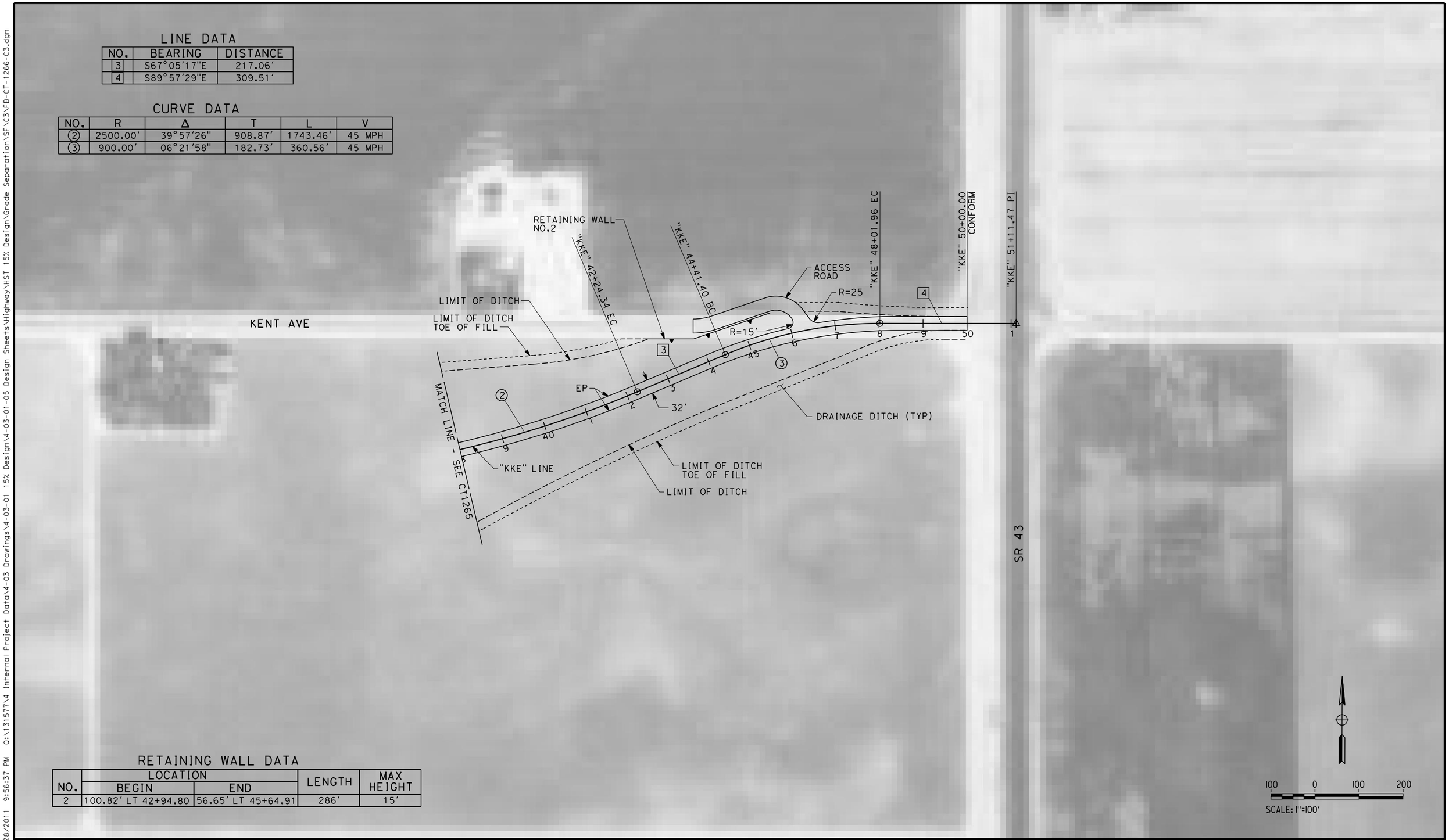
eron.sudhausen 6/28/2011 9:56:37 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-1266-C3.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	S67°05'17"E	217.06'
4	S89°57'29"E	309.51'

CURVE DATA

NO.	R	Δ	T	L	V
②	2500.00'	39°57'26"	908.87'	1743.46'	45 MPH
③	900.00'	06°21'58"	182.73'	360.56'	45 MPH



RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
2	100.82' LT 42+94.80	56.65' LT 45+64.91	286'	15'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1266
SCALE AS SHOWN
SHEET NO. 8 OF 71

LINE DATA

NO.	BEARING	DISTANCE
1	S89°27'36"E	530.02'
2	S81°45'53"E	2424.04'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	5000.00'	07°41'43"	336.28'	671.54'	45 MPH

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	20.00' 27+55.22	56.65' LT 34+10.42	629'	15'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1267
SCALE AS SHOWN
SHEET NO. 9 OF 71

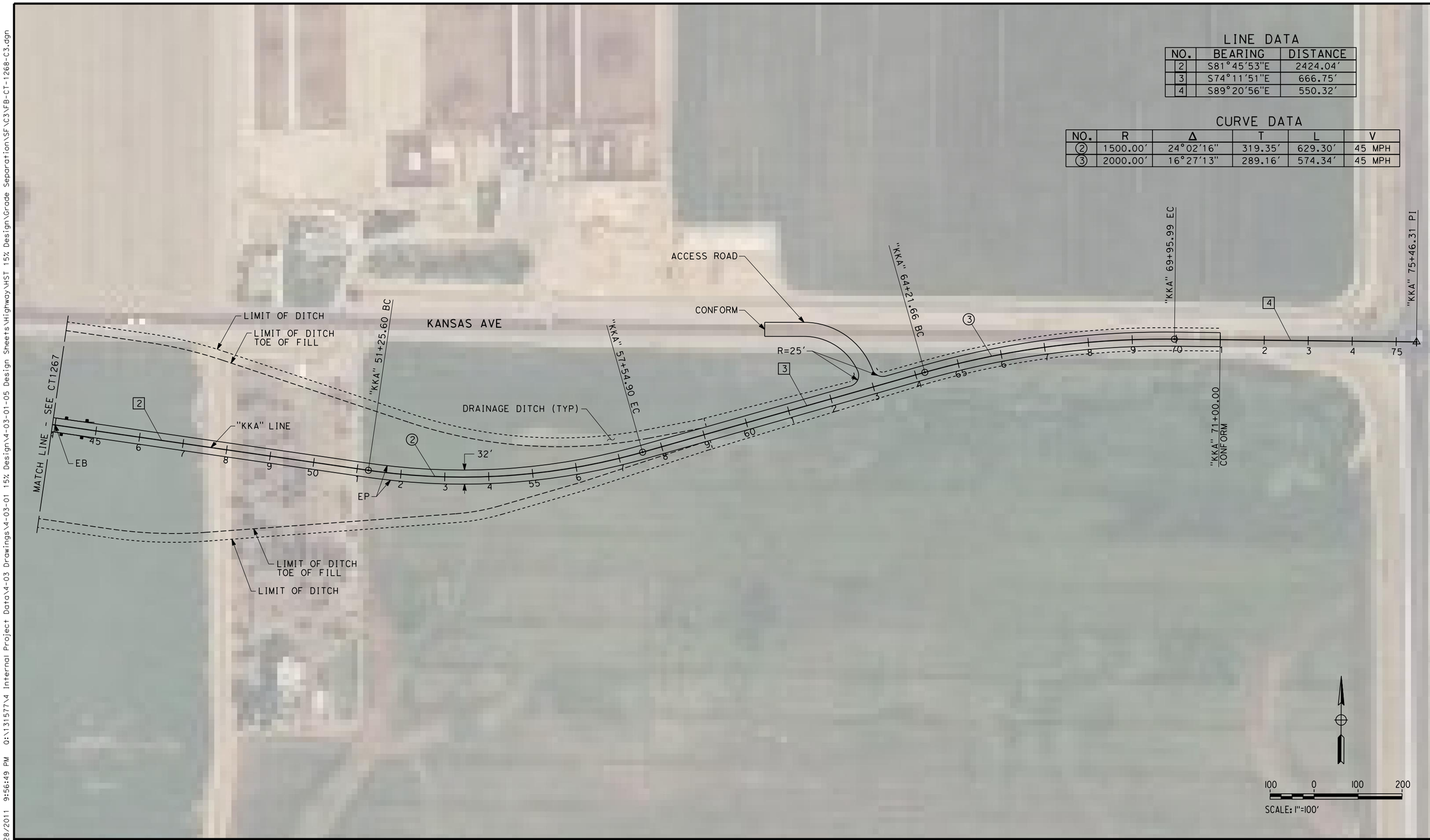
eron.sudhausen 6/28/2011 9:56:44 PM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-1267-C3.dgn

LINE DATA

NO.	BEARING	DISTANCE
2	S81°45'53"E	2424.04'
3	S74°11'51"E	666.75'
4	S89°20'56"E	550.32'

CURVE DATA

NO.	R	Δ	T	L	V
②	1500.00'	24°02'16"	319.35'	629.30'	45 MPH
③	2000.00'	16°27'13"	289.16'	574.34'	45 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1268
SCALE AS SHOWN
SHEET NO. 10 OF 71

eron.sudhausen 6/28/2011 9:56:49 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\Grade Separation\SF\C3\FB-CT-1268-C3.dgn

RETAINING WALL DATA

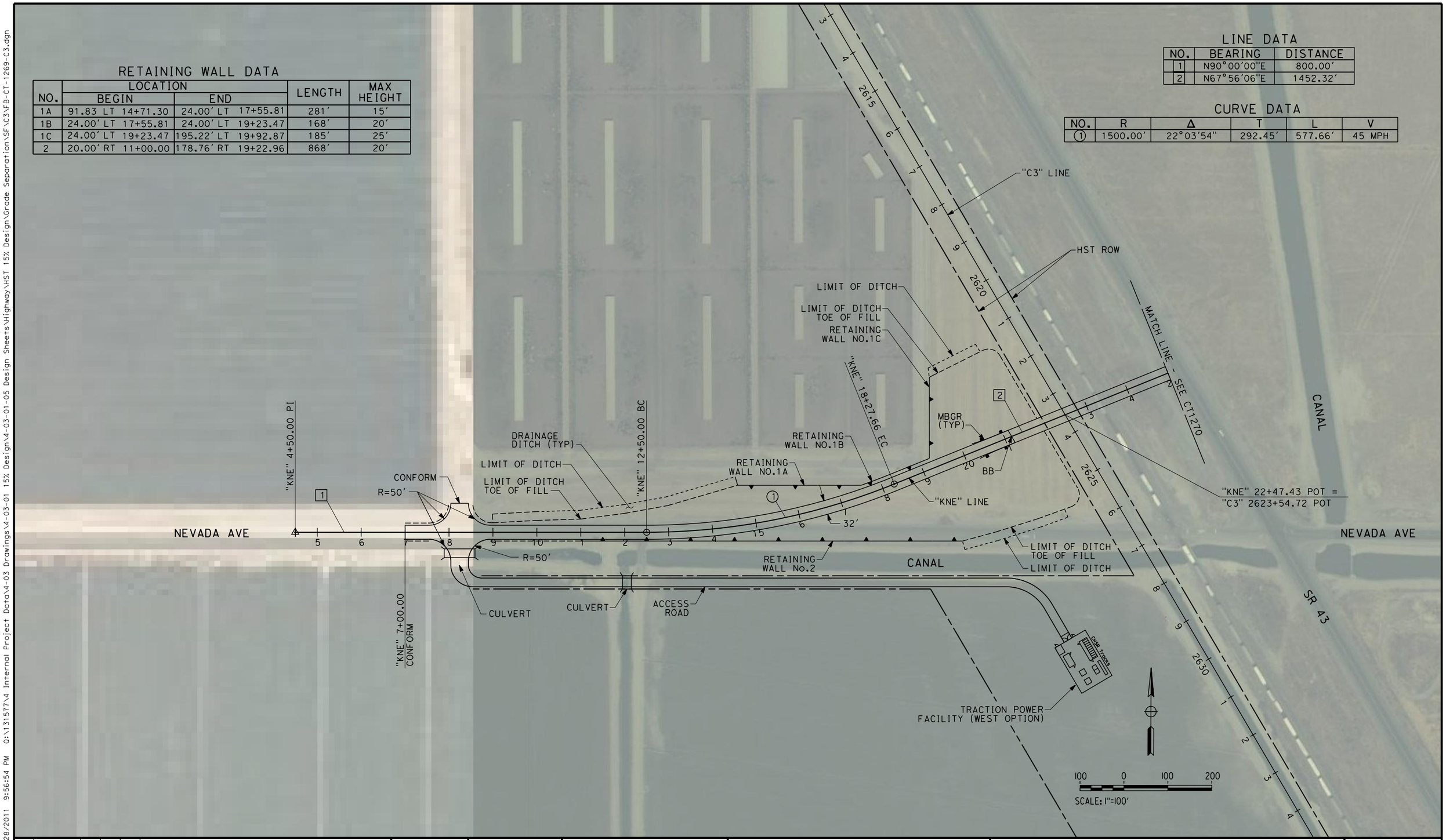
NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1A	91.83 LT 14+71.30	24.00' LT 17+55.81	281'	15'
1B	24.00' LT 17+55.81	24.00' LT 19+23.47	168'	20'
1C	24.00' LT 19+23.47	195.22' LT 19+92.87	185'	25'
2	20.00' RT 11+00.00	178.76' RT 19+22.96	868'	20'

LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	800.00'
2	N67°56'06"E	1452.32'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	1500.00'	22°03'54"	292.45'	577.66'	45 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1269
SCALE AS SHOWN
SHEET NO. 11 OF 71

eron.sudhausen 6/28/2011 9:56:54 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\Grade Separation\SF\C3\FB-CT-1269-C3.dgn

eron.sudhausen 6/29/2011 1:31:22 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-1270-C3.dgn

LINE DATA

NO.	BEARING	DISTANCE
2	S67°56'06"E	1452.32'
3	S00°18'12"W	219.41'

CURVE DATA

NO.	R	Δ	T	L	V
②	450.00'	112°22'06"	671.80'	882.54'	35 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 06/30/11

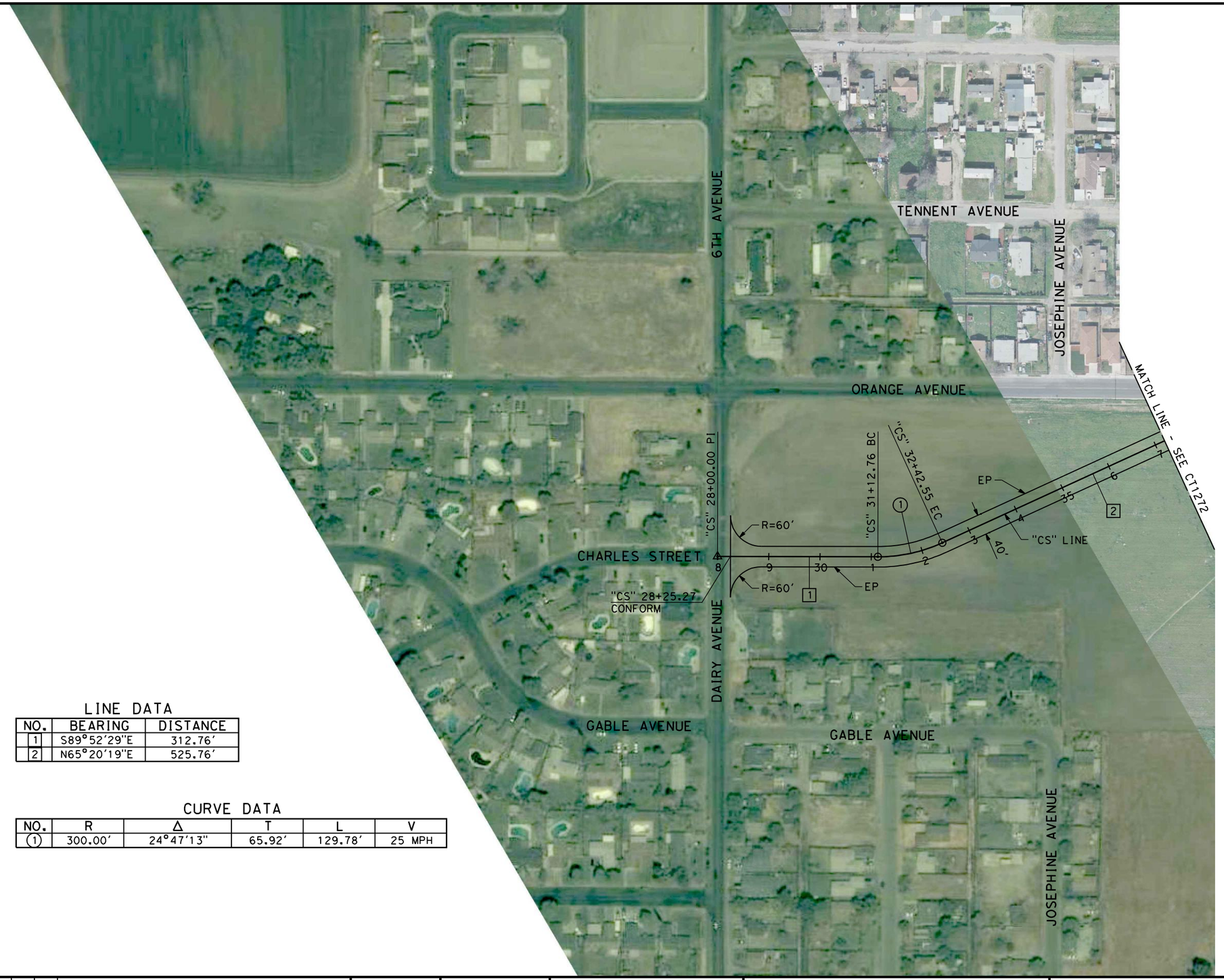
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1270
SCALE AS SHOWN
SHEET NO. 12 OF 71



LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'29"E	312.76'
2	N65°20'19"E	525.76'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	300.00'	24°47'13"	65.92'	129.78'	25 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
CHARLES ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1271
SCALE AS SHOWN
SHEET NO. 13 OF 71

mark_polischuk 5/13/2011 3:05:07 PM HSTFB_C3_CHARLES_L01.dgn

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	22.00' LT "CS" 37+80.39	22.00' LT "CS" 48+44.99	1,073'	28'
2	22.00' RT "CS" 37+82.65	22.00' RT "CS" 48+71.51	1,080'	28'

LINE DATA

NO.	BEARING	DISTANCE
2	N65°20'19"E	525.76'
3	S89°20'18"E	2,476.96'
4	S61°42'33"E	77.48'
11	S30°44'52"E	100.00'
12	S34°28'41"E	706.90'
13	N00°39'42"E	95.37'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	300.00'	25°19'23"	67.40'	132.59'	25 MPH
(3)	300.00'	27°37'45"	73.77'	144.67'	25 MPH
(11)	2,000.00'	3°43'49"	65.13'	130.21'	45 MPH
(12)	300.00'	144°51'37"	947.45'	758.49'	25 MPH

TENNENT AVENUE
LETTS AVENUE
SANTA FE AVENUE
5 1/2 AVENUE
SR 43
ORANGE AVENUE
CHARLES STREET
OTIS AVENUE
BNSF
MATCH LINE - SEE CT1271
"CS" 37+68.31 BC
"CS" 39+00.90 EC
RETAINING WALL NO.1
RETAINING WALL NO.2
"CS" LINE
EP
BB
REMOVE BASE & SURFACING
"CS" 50+00.00 POT=
"C3" 2749+84.47 POT
"OA" 10+00.00 BC
CONFORM
"OA" 11+57.27 EC
PI "OA" 12+33.37
"SFA" 10+00.00 PI
"SFA" 11+00.00 BC
CONFORM
"SFA" 12+30.21 EC
REMOVE BASE & SURFACING
R=25'
CONFORM
R=25'
REMOVE EXIST AT-GRADE CROSSING
REMOVE BASE & SURFACING
TOE OF FILL
"SFA" 16+09.33 POT=
"CS" 52+15.15 POT
EB
EP
REMOVE BASE & SURFACING
"SFA" 27+90.97 PI=
"CS" 59+49.14 POT
"CS" 65+22.52 EC
"CS" 66+00.00 PI
R=60'
"SFA" 26+95.60 EC
TOE OF FILL
"SFA" 19+37.11 BC
EP
32'
"SFA" LINE
EP
"CS" 63+77.86 BC
R=25'
CONFORM
"CS" 65+22.52
CONFORM
SEE CT1273 TO CT1275 FOR LAYOUT DETAILS OF OTIS AVENUE
HST ROW
"C3" LINE
SEE CT1275 FOR EXTENSION OF LETTS AVENUE
100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
CHARLES ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1272
SCALE AS SHOWN
SHEET NO. 14 OF 71

mark_polischuk 5/13/2011 3:34:19 PM HSTFB_C3_CHARLES_L02.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°26'17"E	1,504.58'
2	S88°24'45"E	600.90'
3	S89°33'51"E	382.13'
11	S04°17'32"W	100.00'
12	S25°36'15"E	395.87'
13	S89°08'46"E	123.54'
21	S30°24'41"E	6,059.61'
22	S00°25'19"W	322.53'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	15,000.00'	1°01'32"	134.25'	268.50'	35 MPH
(11)	1,050.00'	29°53'47"	280.33'	547.88'	35 MPH
(12)	300.00'	63°32'31"	185.80'	332.71'	25 MPH
(21)	300.00'	30°57'27"	83.08'	162.09'	25 MPH

RETAINING WALL DATA

NO	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	109.51' RT "PAT" 44+75.62	110.23' RT "PAT" 48+36.77	361'	10'

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
PATTERSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1273
SCALE AS SHOWN
SHEET NO. 15 OF 71

mark_polischuk 5/13/2011 3:06:11 PM HSTFB_C3_PATTERSON_L01.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°38'45"E	296.56'
2	S30°24'41"E	6,059.61'
11	N59°35'19"E	75.47'
21	N59°35'19"E	75.60'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	300.00'	59°14'04"	170.54'	310.15'	25 MPH
(11)	290.00'	30°20'05"	78.61'	153.54'	25 MPH
(21)	290.00'	31°05'12"	80.66'	157.34'	25 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
OTIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1274
SCALE AS SHOWN
SHEET NO. 16 OF 71

mark_polischuk 5/13/2011 2:31:53 PM HSTFB_C3_OTIS_L01.dgn

LINE DATA

NO.	BEARING	DISTANCE
2	S30°24'41"E	6,059.61'
31	N59°35'19"E	76.10'
41	N59°35'19"E	65.74'
51	S00°00'00"E	600.00'

CURVE DATA

NO.	R	Δ	T	L	V
(31)	290.00'	31°04'23"	80.62'	157.27'	25 MPH
(41)	290.00'	31°05'12"	80.66'	157.34'	25 MPH

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD

CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
OTIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1275
SCALE AS SHOWN
SHEET NO. 17 OF 71

mark_polischuk 5/13/2011 2:32:49 PM HSTFB_C3_OTIS_L02.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S08°58'51"E	200.00'
2	N00°37'06"E	734.21'
11	S90°00'00"W	90.52'
12	N81°45'07"E	886.86'
13	S30°24'24"E	160.36'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	290.00'	80°29'10"	245.44'	407.38'	30 MPH
(2)	550.00'	170°24'03"	6,550.39'	1,635.73'	35 MPH
(11)	150.00'	171°45'07"	2,080.38'	449.65'	25 MPH
(12)	150.00'	67°50'29"	100.87'	177.61'	25 MPH

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	26.70' LT "WH" 37+76.28	26.70' LT "WH" 48+50.00	1,077'	10'
2	26.70' RT "WH" 37+76.28	26.70' LT "WH" 48+50.00	1,071'	10'

CONFORM
R=60'
CONC SW
EP
"WH" 66+69.56 PI
CONFORM
"WH" 59+35.35 EC
TOE OF FILL
"BOS" 57+51.14 EC
CONFORM
"BOS" 59+11.49 PI
"BOS" 55+73.53 BC
EB
"WH" LINE
"BOS" LINE
REMOVE BASE & SURFACING
REMOVE EXIST AT-GRADE CROSSING
"WH" 50+00.00 POC=
"C3" 2810+34.05 POT
"BOS" 50+00.00 POT=
"C3" 2811+65.50 POT
BB
"BOS" 41+46.50 PI
"BOS" 42+31.02 BC
CONFORM
HST ROW
BNSF
"C3" LINE
"WH" 42+99.62 BC
RETAINING WALL NO.1
RETAINING WALL NO.2
"WH" 40+99.62 EC
"WH" 36+94.55
CONFORM
"WH" 36+92.24 BC
"BOS" 46+86.67 EC
R=290'
R=60'
GARDNER AVENUE
WHITLEY AVENUE
PICKERELL AVENUE
SANTA FE AVENUE
OTIS AVENUE
KING AVENUE
FLORY AVENUE
HALL AVENUE
SHERMAN AVENUE
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
WHITLEY AVE & BOSWELL PRIVATE RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1277
SCALE AS SHOWN
SHEET NO. 18 OF 71

mark_polischuk 5/13/2011 2:33:50 PM HSTFB_C3_WHITLEY_L01.dgn

CURVE DATA

No.	R	Δ	T	L	V
(11)	20,000.00′	3°42′50"	648.41′	1,296.38′	65 MPH
(12)	20,000.00′	3°42′50"	648.41′	1,296.38′	65 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S22°06′52"E	3,968.21′

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1280
SCALE AS SHOWN
SHEET NO. 19 OF 71

mark_polischuk 5/13/2011 2:34:53 PM HSTFB_C3_SR43_L01.dgn

MATCH LINE - SEE CT1280

MATCH LINE - SEE CT1282

"SR43_N" 35+92.75 EC

34.00' LT "SR43_N" 48+72.95
END TAPER

22.00' LT "SR43_N" 40+92.83
BEG TAPER

"SR43_N" LINE

34.00' LT "SR43_N" 60+10.81
BEG TAPER

TOE OF FILL

EP

27'

39'

5.00' LT "SR43_S" 49+68.14
BEG TAPER

"SR43_S" LINE

"SR43_S" 49+68.21 PI

"SR43_S" 57+48.31 PI

5.00' LT "SR43_S" 57+48.31
END TAPER

REMOVE BASE & SURFACING

REMOVE EXIST AT-GRADE CROSSING

SANTA FE AVENUE

BNSF

"C3" LINE

HST ROW

STREET BARRICADE

4TH AVENUE

SCALE: 1"=100'

CURVE DATA

No.	R	Δ	T	L	V
(12)	20,000.00'	3°42'50"	648.41'	1296.38'	65 MPH

LINE DATA

NO.	BEARING	DISTANCE
1	S22°06'52"E	3968.21'
2	S22°59'45"E	780.09'
3	S22°06'52"E	6592.00'
11	S22°06'52"E	8506.71'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1281
SCALE AS SHOWN
SHEET NO. 20 OF 71

mark_polischuk 5/13/2011 2:35:53 PM HSTFB_C3_SR43_L02.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	S22°06'52"E	6592.79'
12	S22°06'52"E	8506.71'
21	S23°15'37"E	300.06'
22	S26°27'21"E	750.00'
23	S38°47'32"E	425.98'
24	S22°06'52"E	320.95'
31	S22°06'52"E	320.94'
41	S17°14'44"E	700.00'
42	S10°08'30"E	688.07'
43	S22°07'00"E	299.90'
51	S22°06'52"E	299.94'
62	N67°53'08"E	3750.71'

CURVE DATA

NO.	R	Δ	T	L	V
(21)	3000.00'	3°11'44"	83.68'	167.32'	55 MPH
(22)	1900.00'	12°20'11"	205.34'	409.09'	45 MPH
(23)	1350.00'	16°40'40"	197.88'	392.96'	35 MPH
(31)	1350.00'	18°39'17"	221.73'	439.54'	35 MPH
(41)	1900.00'	7°6'15"	117.94'	235.58'	45 MPH
(42)	1350.00'	11°58'31"	141.59'	282.16'	35 MPH
(51)	1350.00'	12°2'58"	142.48'	283.91'	35 MPH

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	243.97' RT "SB2" 30+50.12	163.51' RT "SB1" 14+54.79	635'	5'

MATCH LINE - SEE CT1281

MATCH LINE - SEE CT1295

MATCH LINE - SEE CT1283

MATCH LINE - SEE CT1294

"NB1" 10+00.00 PI= 24.00' LT "SR43_N" 66+12.21

44.00' LT "SR43_N" 66+11.81 END TAPER

"NB1" 13+00.06 BC

"NB1" 14+67.38 EC

"NB1" 22+17.38 BC

"NB1" 26+26.47 EC

"NB1" 30+52.46 BC

"NB1" 34+45.42 EC

20.00' LT "A148" 63+56.69 END TAPER

26.00' LT "A148" 60+86.69 BEG TAPER

20.00' RT "A148" 63+56.69 END TAPER

26.00' RT "A148" 60+86.69 BEG TAPER

"NB2" 13+20.94 BC

"NB2" 10+00.00 PI = "NB1" 37+66.36 PI = "A148" 60+48.69 POT

"NB2" LINE

"NB1" LINE

"SR43_N" LINE

"SR43_S" LINE

"SR43_S" 95+81.56 POT= "A148" 56+28.41 POT

"SR43_N" 93+45.06 POT= "A148" 57+00.41 POT

34.00' RT "SR43_S" 72+79.79

AVE 152

"SB2" 10+00.00 PI= 24.00' RT "SR43_S" 73+98.03

"SB2" 17+00.00 BC

"SB2" 19+35.58 EC

"SB2" 26+23.71 BC

"SB2" 29+05.87 EC

"SB1" 12+99.94 BC

"SB2" LINE

"SB1" LINE

"A148" LINE

"SB2" 32+05.76 PI = "SB1" 10+00.00 PI = "A148" 53+38.41 POT

TOE OF FILL

EP

EB

BB

R=60'

R=30'

REMOVE BASE AND SURFACING

BNSF

RETAINING WALL NO.1

HST ROW

"C3" LINE

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1282
SCALE AS SHOWN
SHEET NO. 21 OF 71

mark_polischuk 5/13/2011 3:35:21 PM HSTFB_C3_SR43_L03.dgn

LINE DATA

NO.	BEARING	DISTANCE
3	S22°06'52"E	6592.79'
4	S30°20'08"E	1077.12'
12	S22°06'52"E	8506.71'
13	S30°20'08"E	1324.46'
32	S03°27'35"E	320.06'
33	S17°14'44"E	683.51'
52	S34°09'50"E	574.00'
53	S26°27'21"E	872.26'
54	S23°15'37"E	300.06'

CURVE DATA

NO.	R	Δ	T	L	V
(1)	4500.00'	8°13'15"	323.39'	645.66'	65 MPH
(11)	4500.00'	8°13'16"	323.39'	645.67'	65 MPH
(31)	1350.00'	18°39'17"	221.73'	439.54'	35 MPH
(32)	1900.00'	13°47'09"	229.69'	457.16'	45 MPH
(51)	1350.00'	12°02'58"	142.48'	283.91'	35 MPH
(52)	1900.00'	7°42'29"	128.00'	255.61'	45 MPH
(53)	3000.00'	3°11'44"	83.68'	167.32'	55 MPH

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	243.97' RT "SB2" 30+50.12	163.51' RT "SB1" 14+54.79	635'	5'

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1283
SCALE AS SHOWN
SHEET NO. 22 OF 71

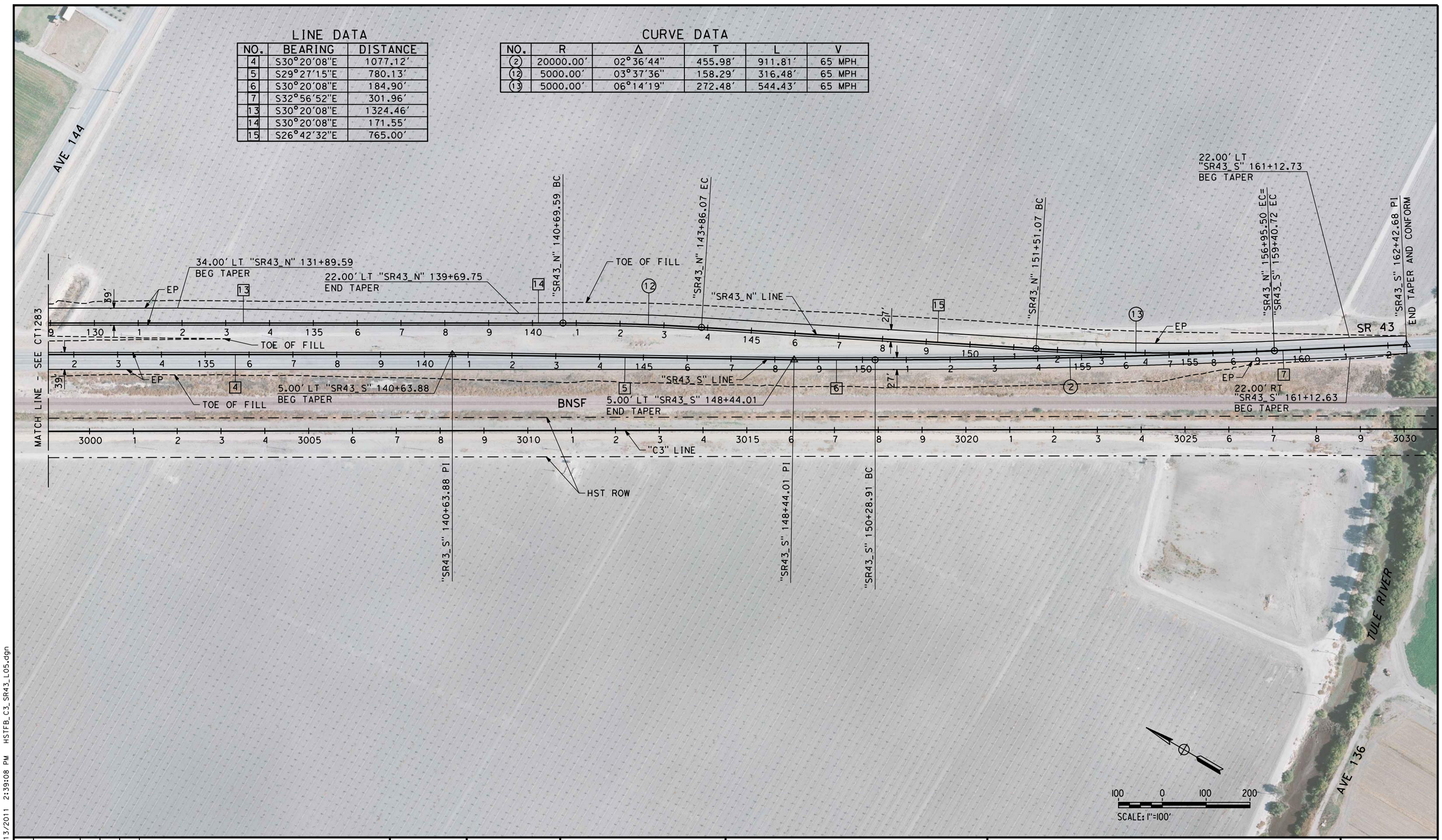
mark_polischuk 5/13/2011 2:38:05 PM HSTFB_C3_SR43_L04.dgn

LINE DATA

NO.	BEARING	DISTANCE
4	S30°20'08"E	1077.12'
5	S29°27'15"E	780.13'
6	S30°20'08"E	184.90'
7	S32°56'52"E	301.96'
13	S30°20'08"E	1324.46'
14	S30°20'08"E	171.55'
15	S26°42'32"E	765.00'

CURVE DATA

NO.	R	Δ	T	L	V
(2)	20000.00'	02°36'44"	455.98'	911.81'	65 MPH
(12)	5000.00'	03°37'36"	158.29'	316.48'	65 MPH
(13)	5000.00'	06°14'19"	272.48'	544.43'	65 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: C. ALLEN
DRAWN BY: M. POLISCHUK
CHECKED BY: J. LABANOWSKI
IN CHARGE: G. HORTON
DATE: 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
STATE ROUTE 43

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1284
SCALE AS SHOWN
SHEET NO. 23 OF 71

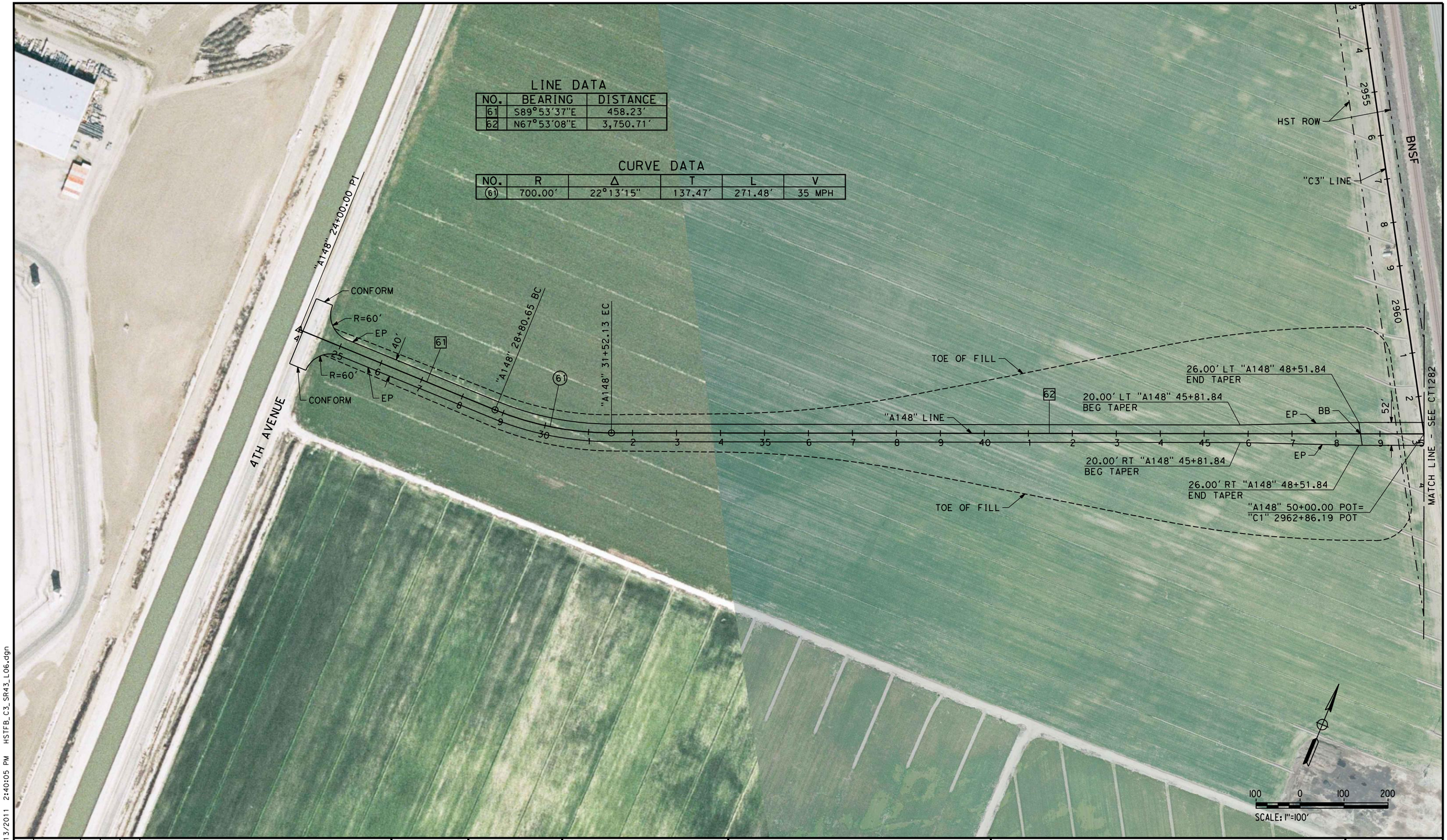
mark_polischuk 5/13/2011 2:39:08 PM HSTFB_C3_SR43_L05.dgn

LINE DATA

NO.	BEARING	DISTANCE
61	S89°53'37"E	458.23'
62	N67°53'08"E	3,750.71'

CURVE DATA

NO.	R	Δ	T	L	V
(61)	700.00'	22°13'15"	137.47'	271.48'	35 MPH



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
AVE 148

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1294
SCALE AS SHOWN
SHEET NO. 24 OF 71

mark_polischuk 5/13/2011 2:40:05 PM HSTFB_C3_SR43_L06.dgn

LINE DATA

NO.	BEARING	DISTANCE
62	N67°53'08"E	3,750.71'
63	S89°45'51"E	890.77'
71	S00°14'09"W	3,817.83'

CURVE DATA

NO.	R	Δ	T	L	V
(62)	700.00'	22°21'01"	138.29'	273.06'	35 MPH

"RD24" 10+00.00 PI

"A148" 80+66.67 PI

"RD24" 11+00.00 CONFORM

R=60'

EP

40'

"RD24" LINE

ROAD 24

"A148" LINE

"A148" 71+75.90 EC

"A148" 69+02.84 BC

TOE OF FILL

MATCH LINE - SEE CT1296

MATCH LINE - SEE CT1282

SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

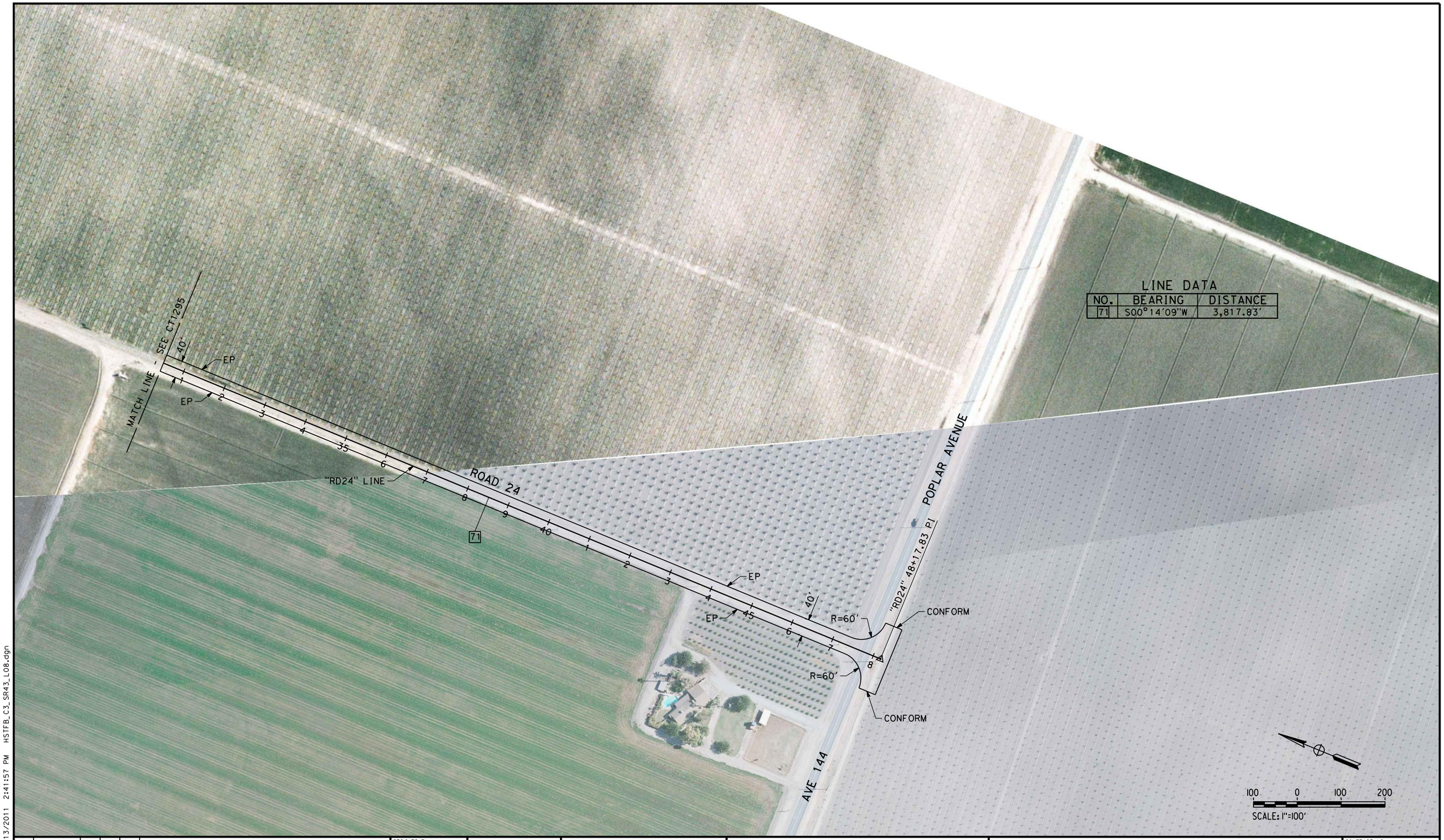
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
AVE 148 & RD 24

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1295
SCALE AS SHOWN
SHEET NO. 25 OF 71

mark_polischuk 5/13/2011 2:40:59 PM HSTFB_C3_SR43_L07.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

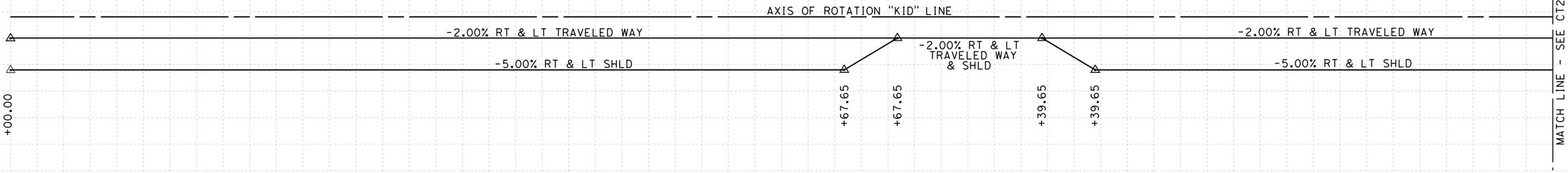
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEPARATION LAYOUT
RD 24

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1296
SCALE AS SHOWN
SHEET NO. 26 OF 71

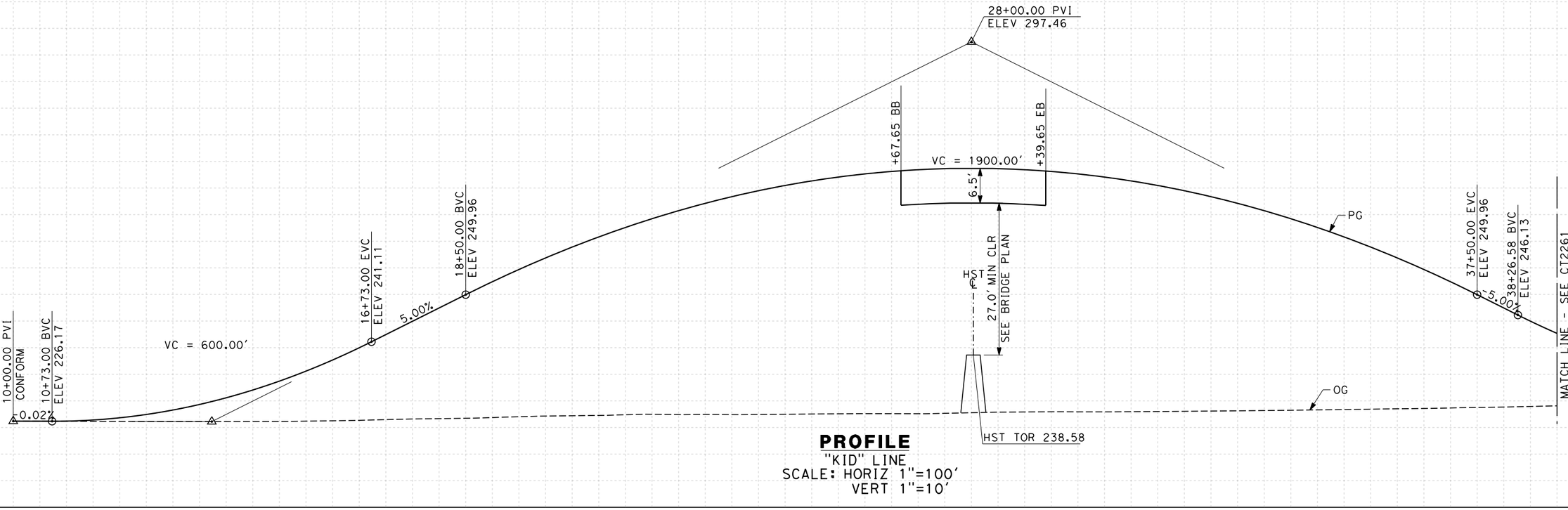
mark_polischuk 5/13/2011 2:41:57 PM HSTFB_C3_SR43_L08.dgn

NOTES:

1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

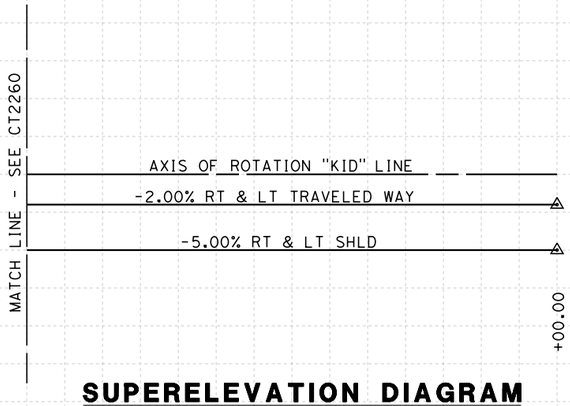
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

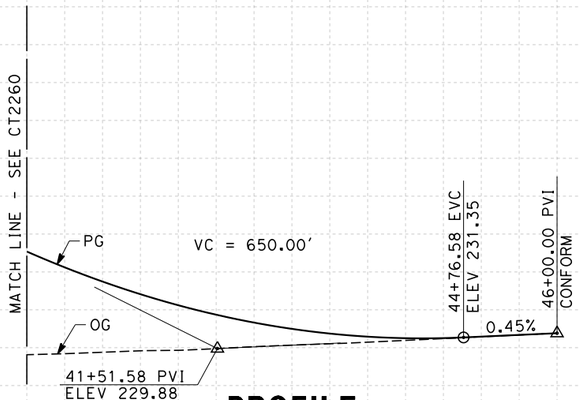
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2260
SCALE AS SHOWN
SHEET NO. 27 OF 71

eron.sudhausen 6/28/2011 10:17:39 PM Q:\131577\V4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2260-C3.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		9	40	1	2	3	4	45	6	TOTAL
CY	Exc									
	Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

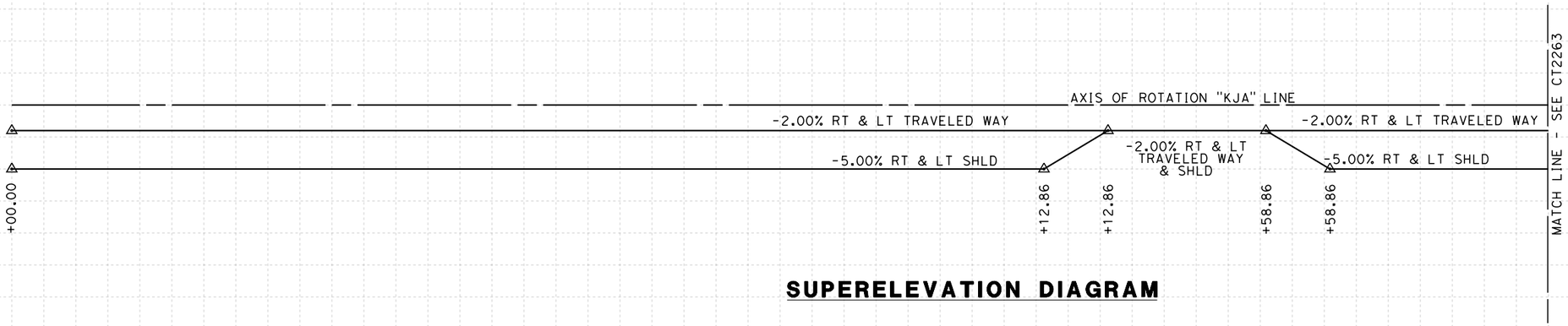
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
IDAHO AVE

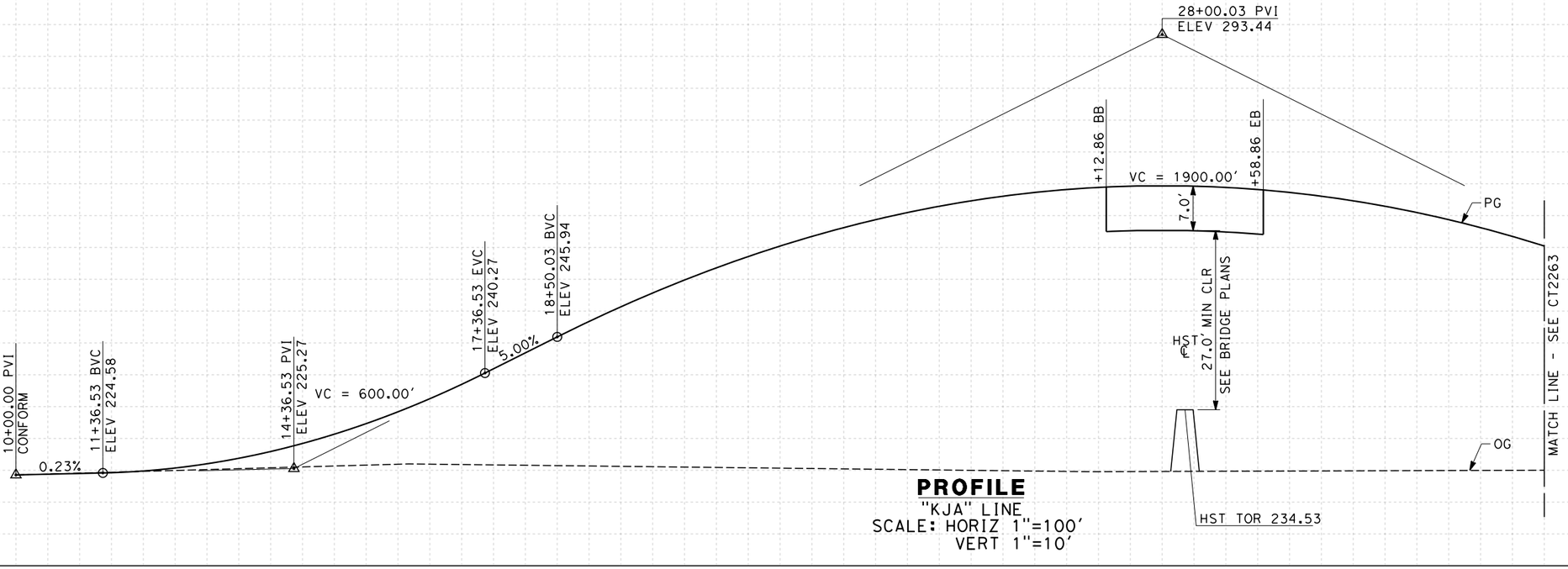
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2261
SCALE AS SHOWN
SHEET NO. 28 OF 71

eron.sudhausen 6/28/2011 9:57:03 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design\V4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2261-C3.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

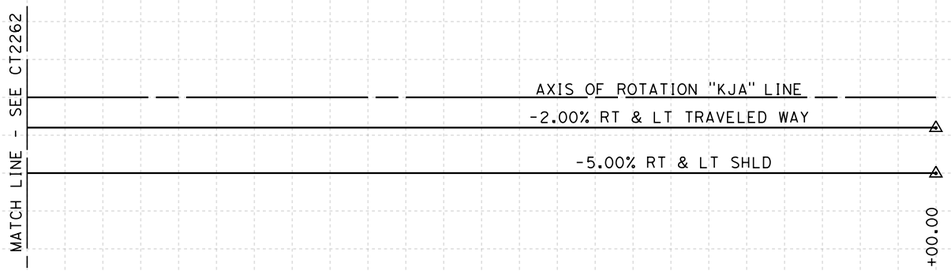
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

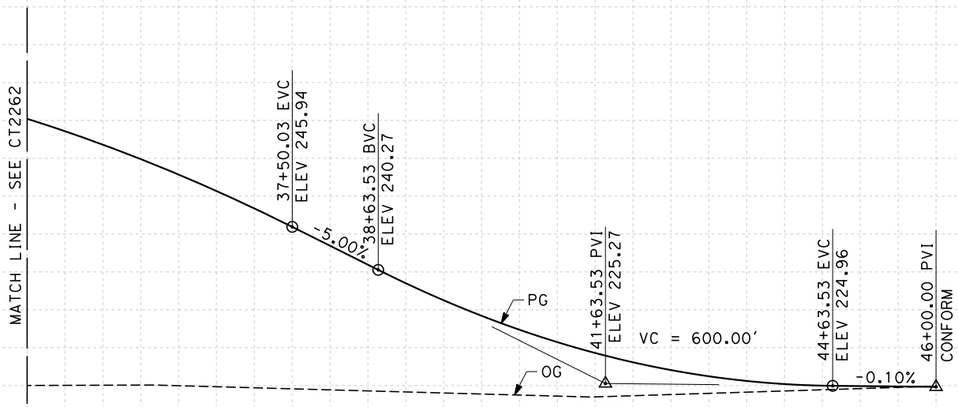
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2262
SCALE AS SHOWN
SHEET NO. 29 OF 71

eron.sudhausen 6/28/2011 9:57:05 PM O:\1315774 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2262-C3.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	TOTAL
CY Exc														
CY Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

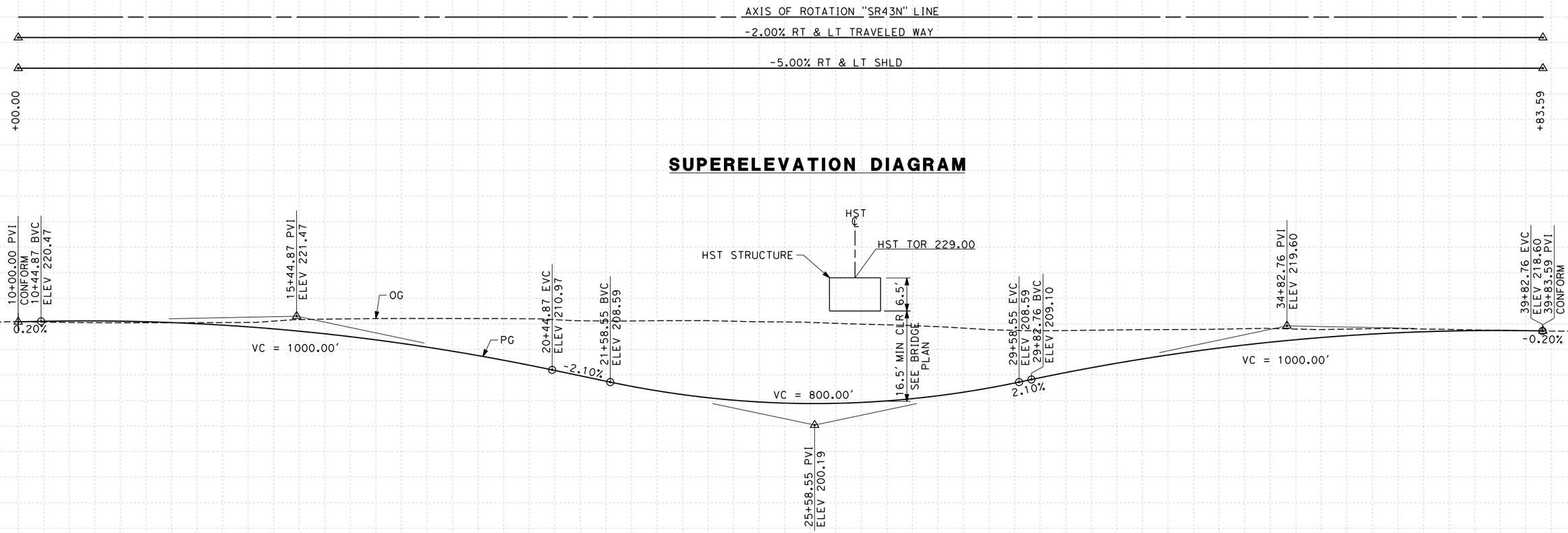
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2263
SCALE AS SHOWN
SHEET NO. 30 OF 71

eron.sudhausen 6/28/2011 9:57:07 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\Grade Separation\SF\C3\FB-CT-2263-C3.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
2. VERTICAL DESIGN SPEED = 70 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE
"SR43N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	40	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (JERSEY AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2264
SCALE AS SHOWN
SHEET NO. 31 OF 71

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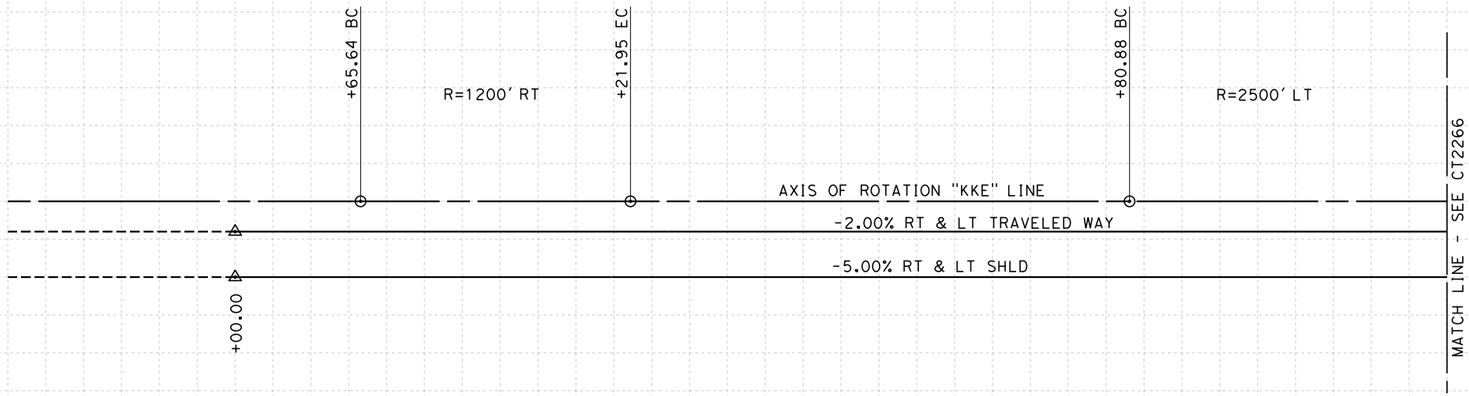
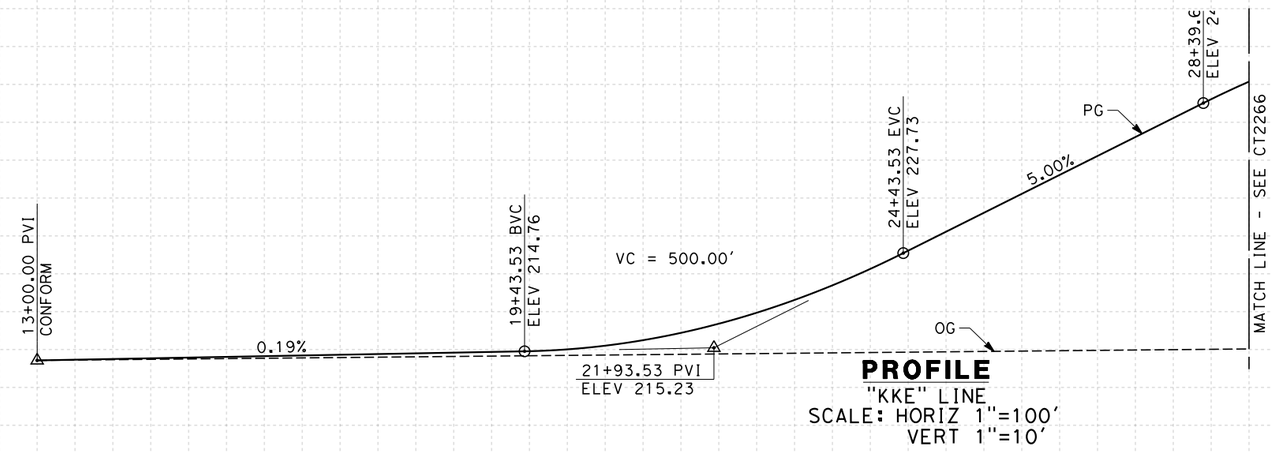
NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
CHECKED BY J. MONG
IN CHARGE A. LUFT
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

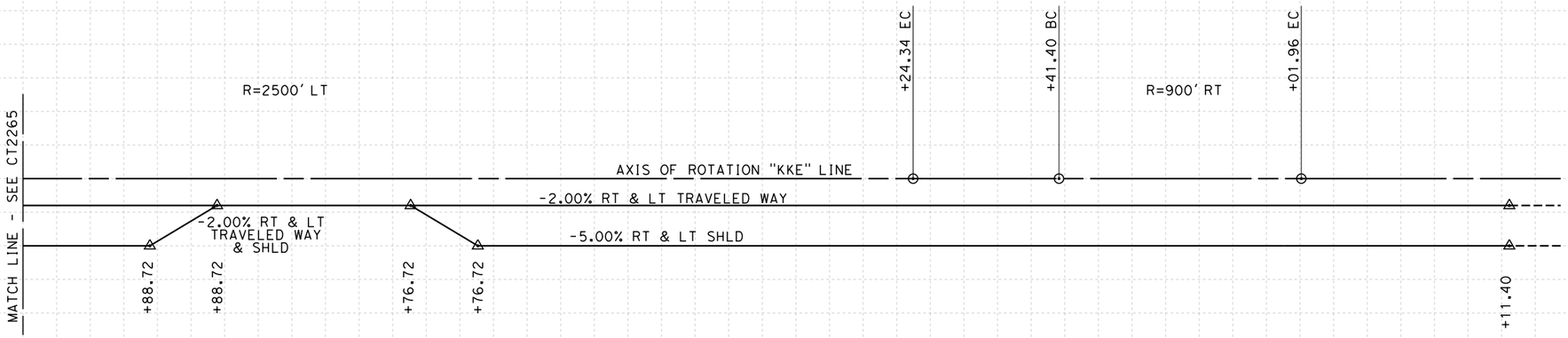
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

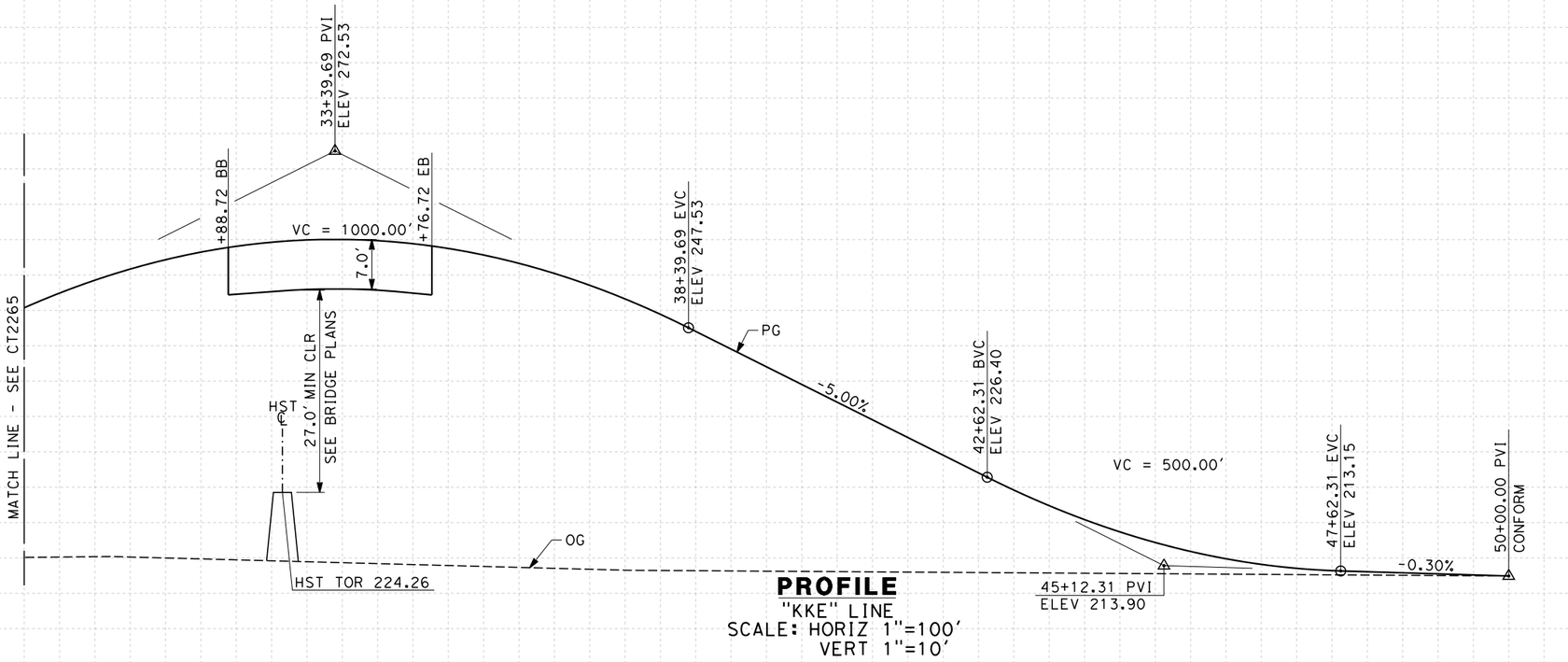
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2265
SCALE AS SHOWN
SHEET NO. 32 OF 71

eron.sudhausen 6/28/2011 9:57:10 PM D:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2265-C3.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

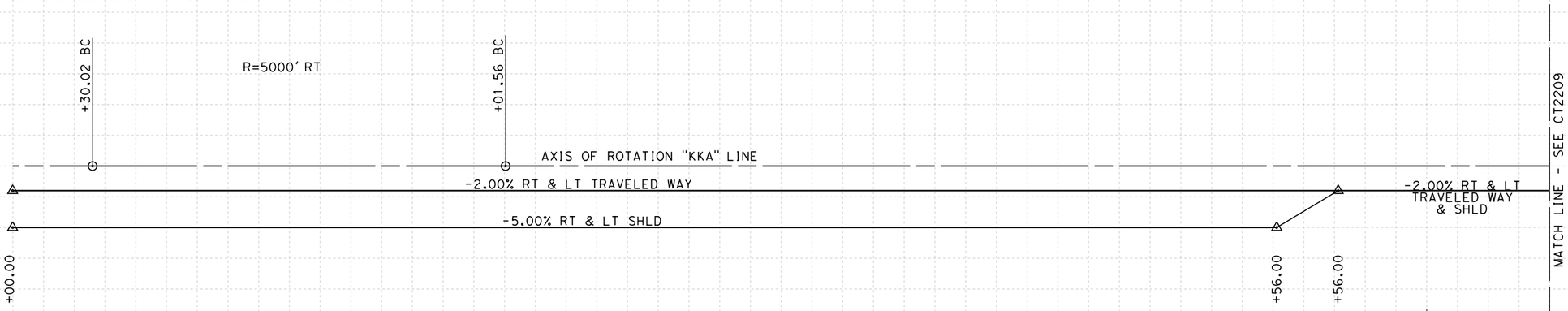
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KENT AVE

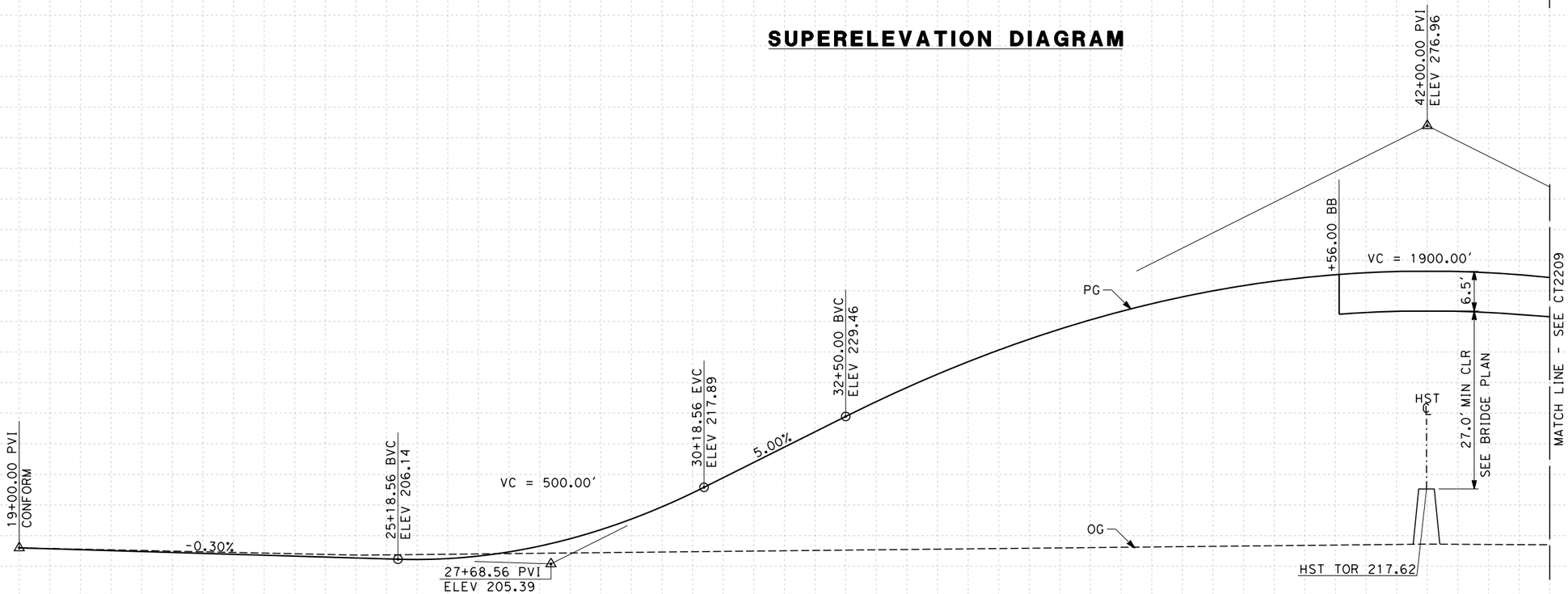
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2266
SCALE AS SHOWN
SHEET NO. 33 OF 71

eron.sudhausen 6/28/2011 9:57:12 PM D:\131577\V4 Internal Project Data\V4-03 Drawings\V4-03-01 15% Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2266-C3.dgn

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. VERTICAL DESIGN SPEED = 45 MPH
3. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

STATION	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

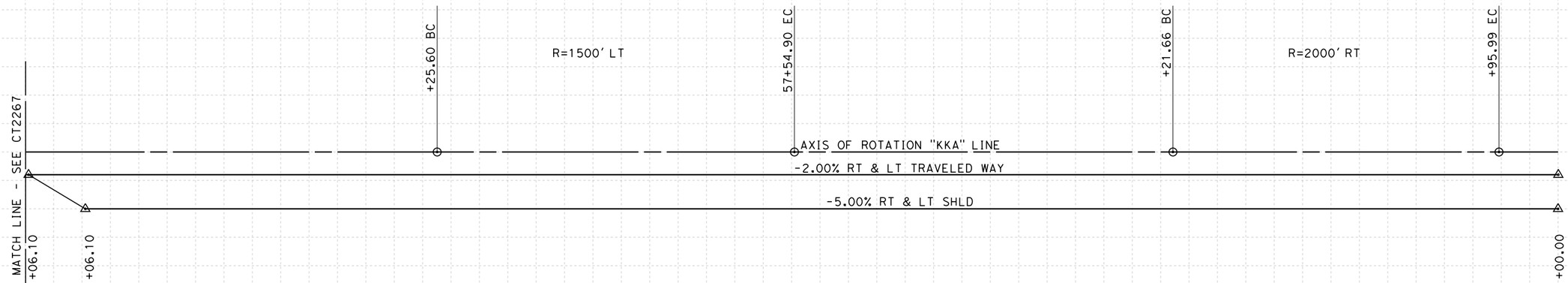
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

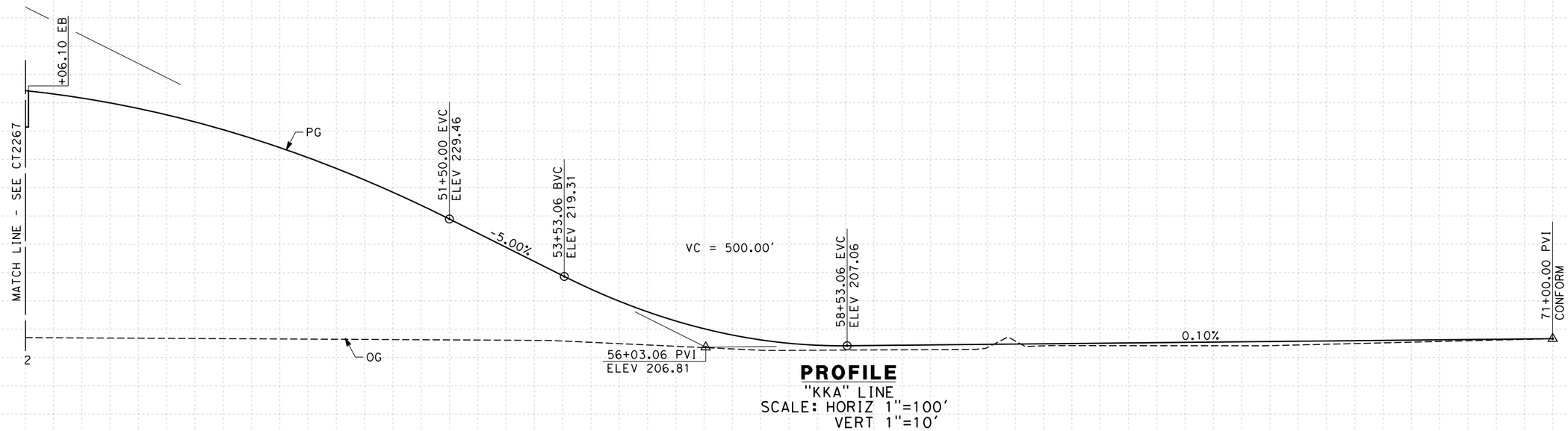
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2267
SCALE AS SHOWN
SHEET NO. 34 OF 71

eron.sudhausen 6/28/2011 9:57:13 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\Grade Separation\SF\C3\FB-CT-2267-C3.dgn

eron.sudhausen 6/28/2011 9:57:15 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2268-C3.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

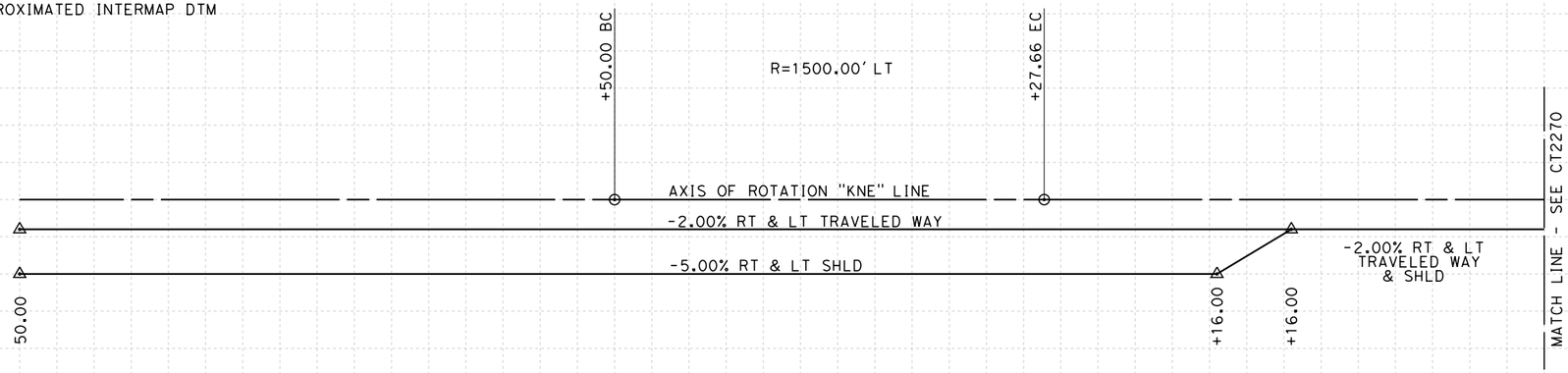
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
KANSAS AVE

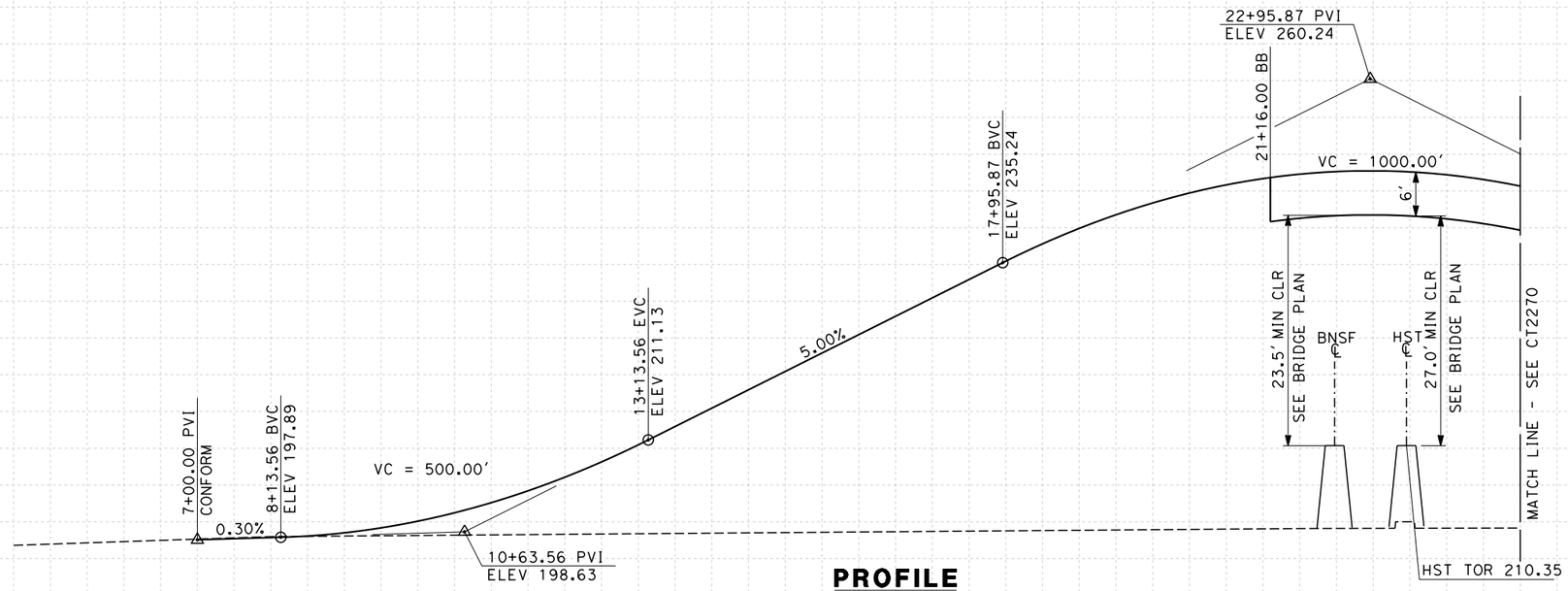
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2268
SCALE AS SHOWN
SHEET NO. 35 OF 71

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 BELOW HST STRUCTURE IS 16.5' FROM ROADWAY
4. VERTICAL DESIGN SPEED = 45 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2269
SCALE AS SHOWN
SHEET NO. 36 OF 71

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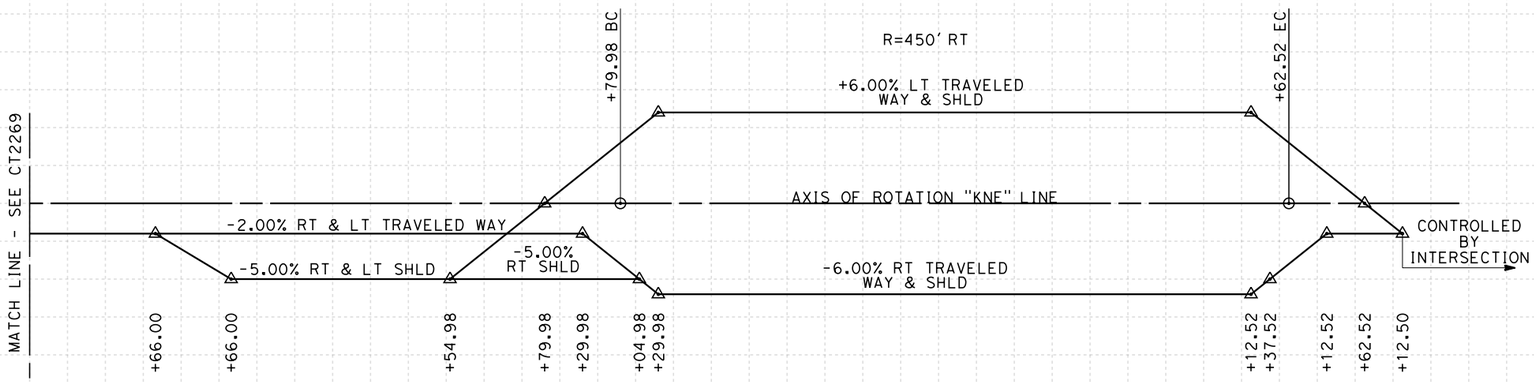
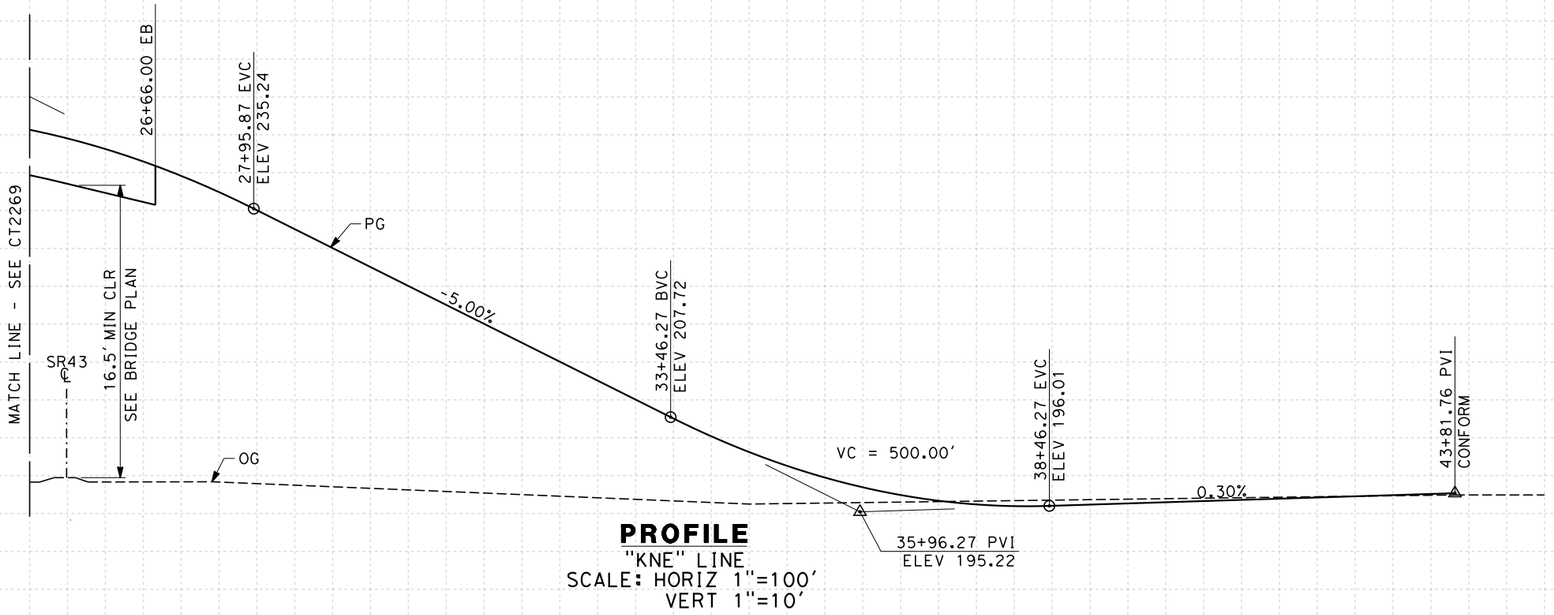


SUPERELEVATION DIAGRAM



PROFILE

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

STATION	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	TOTAL
CY Exc																						
CY Emb																						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. DEO
DRAWN BY B. BODIN
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

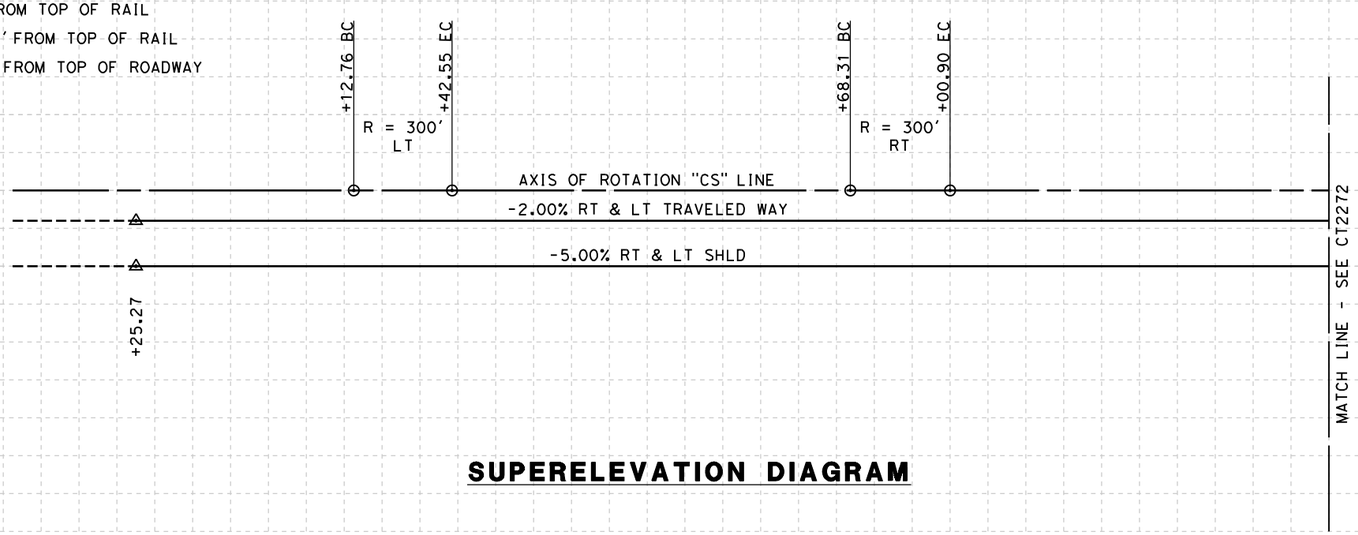
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2270
SCALE AS SHOWN
SHEET NO. 37 OF 71

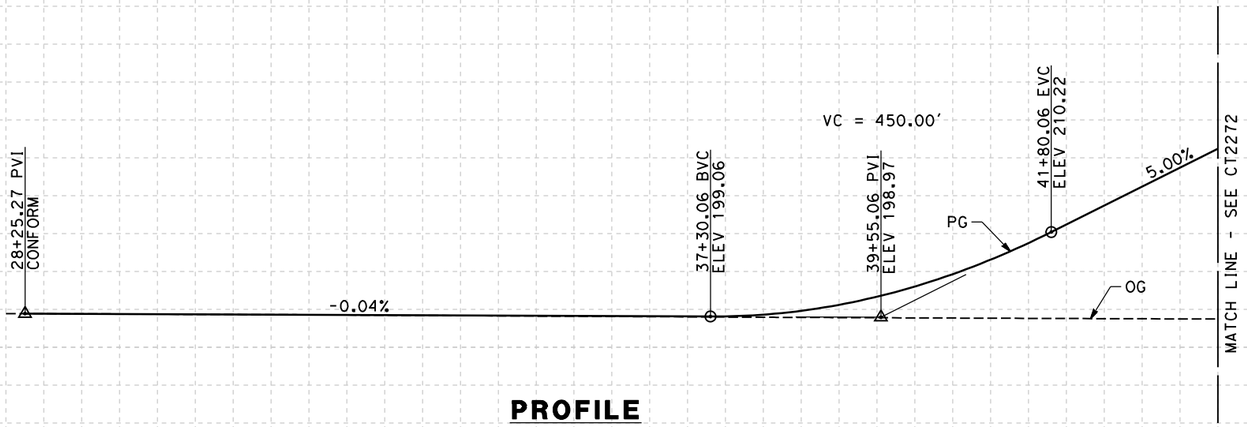
eron.sudhausen 6/28/2011 9:57:18 PM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Highway\HST 15% Design\Grade Separation\SF\C3\FB-CT-2270-C3.dgn

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 FOR HST IS 16.5' FROM TOP OF ROADWAY
4. VERTICAL DESIGN SPEED = 45 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
CY Exc																		
CY Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

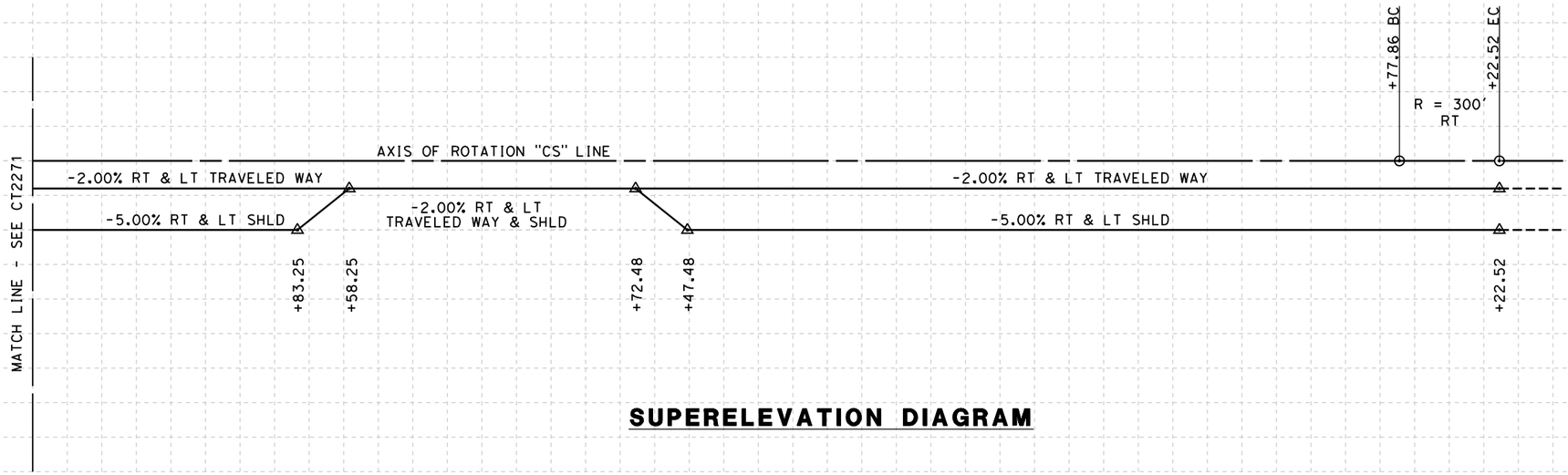
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

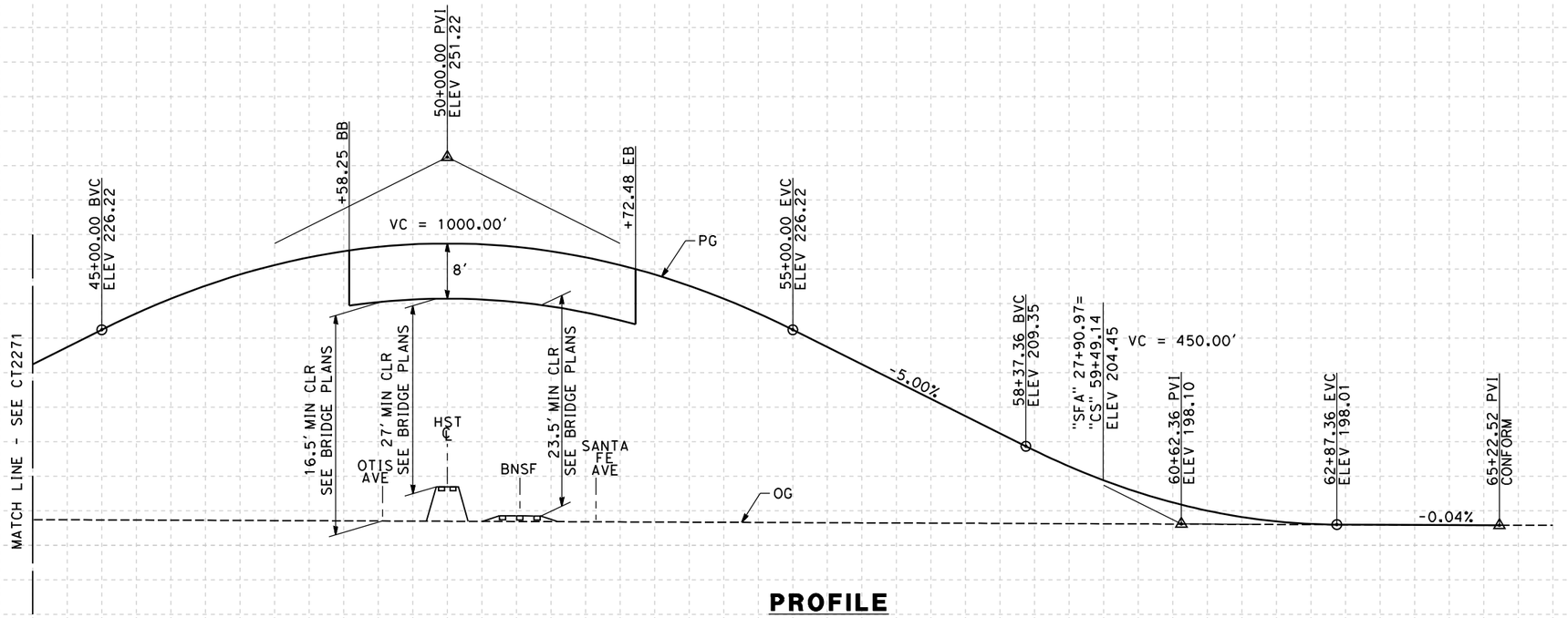
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CHARLES ST

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2271
SCALE AS SHOWN
SHEET NO. 38 OF 71

mark_polischuk 5/13/2011 2:42:06 PM HSTFB_C3_CHARLES_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	TOTAL
CY	Exc																								
	Emb																								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

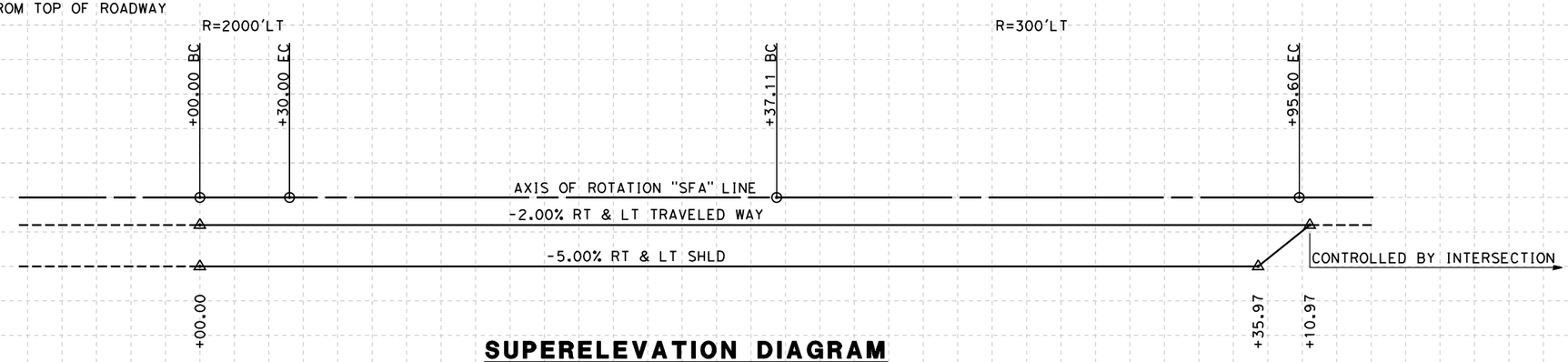
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CHARLES ST

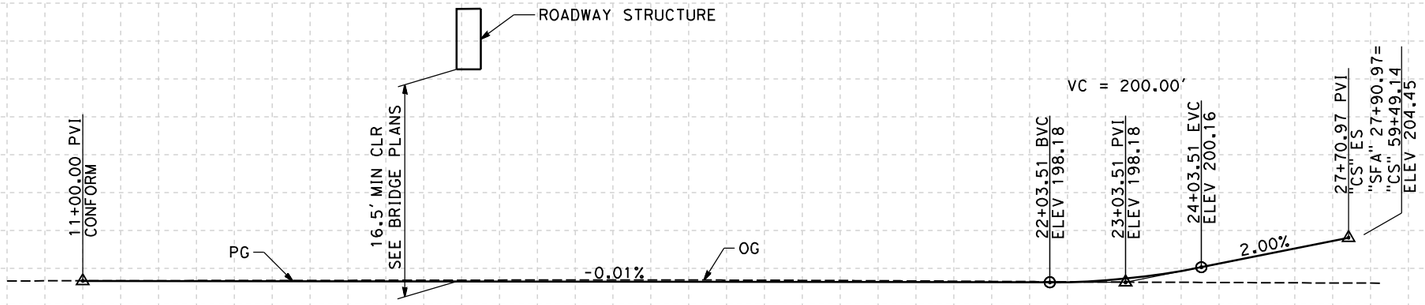
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2272
SCALE AS SHOWN
SHEET NO. 39 OF 71

mark_polischuk 5/13/2011 2:42:13 PM HSTFB_C3_CHARLES_PS02.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. SEE SHEET CT1272 FOR LAYOUT VIEW
4. MINIMUM VERTICAL CLEARANCE IS 16.5' FROM TOP OF ROADWAY



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		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: C. ALLEN
DRAWN BY: M. POLISCHUK
CHECKED BY: J. LABANOWSKI
IN CHARGE: G. HORTON
DATE: 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

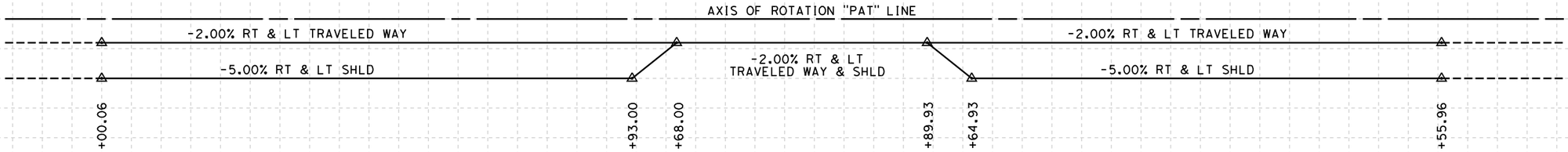
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
SANTA FE AVE

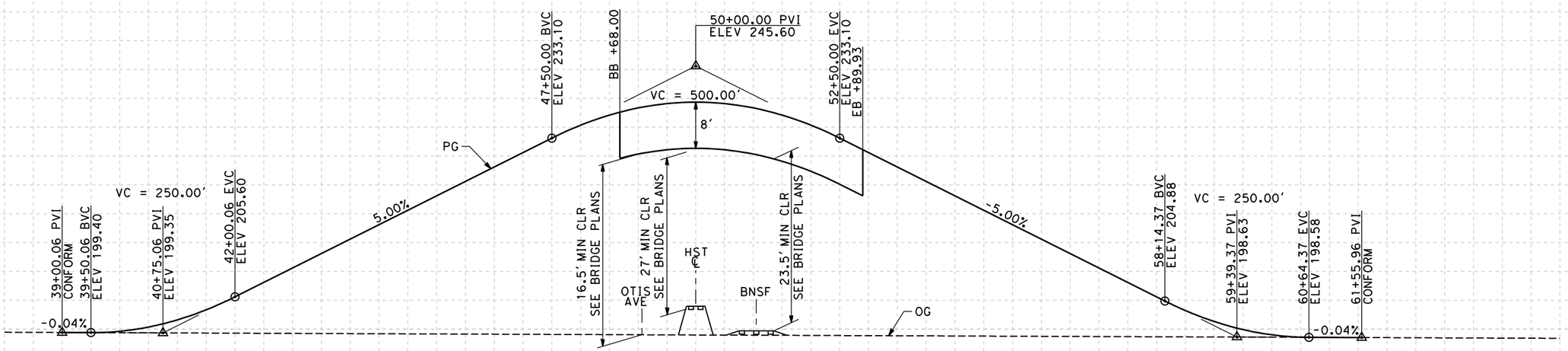
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2273
SCALE AS SHOWN
SHEET NO. 40 OF 71

mark_polischuk 5/13/2011 2:42:20 PM HSTFB_C3_SANTAFE_PS01.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 FOR HST IS 16.5' FROM TOP OF ROADWAY
4. VERTICAL DESIGN SPEED = 35 MPH
5. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



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

STATION	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

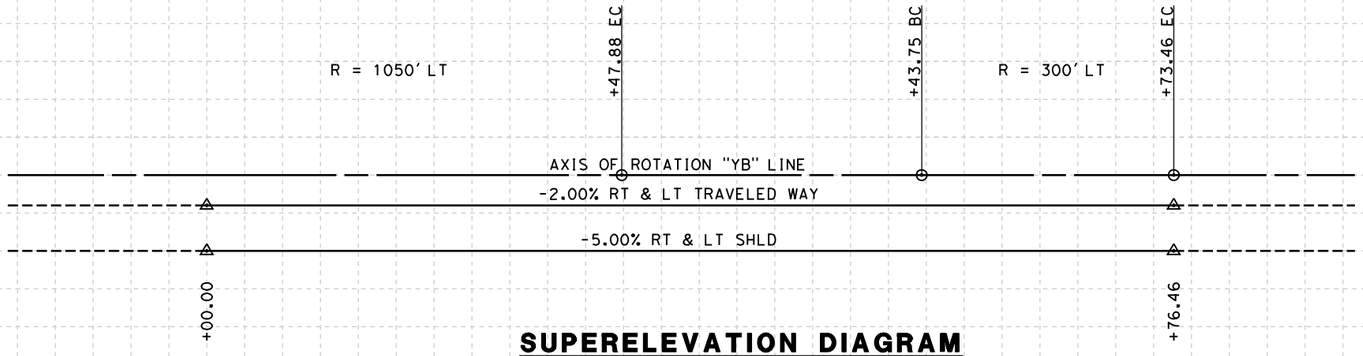
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
PATTERSON AVE

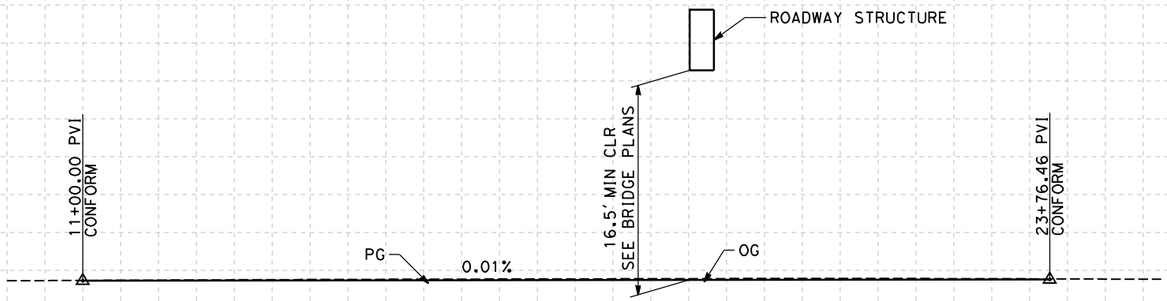
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2274
SCALE AS SHOWN
SHEET NO. 41 OF 71

mark_polischuk 5/13/2011 2:42:26 PM HSTFB_C3_PATTERSON_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. SEE SHEET CT1273 FOR LAYOUT VIEW
4. MINIMUM VERTICAL CLEARANCE IS 16.5' FROM TOP OF ROADWAY



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

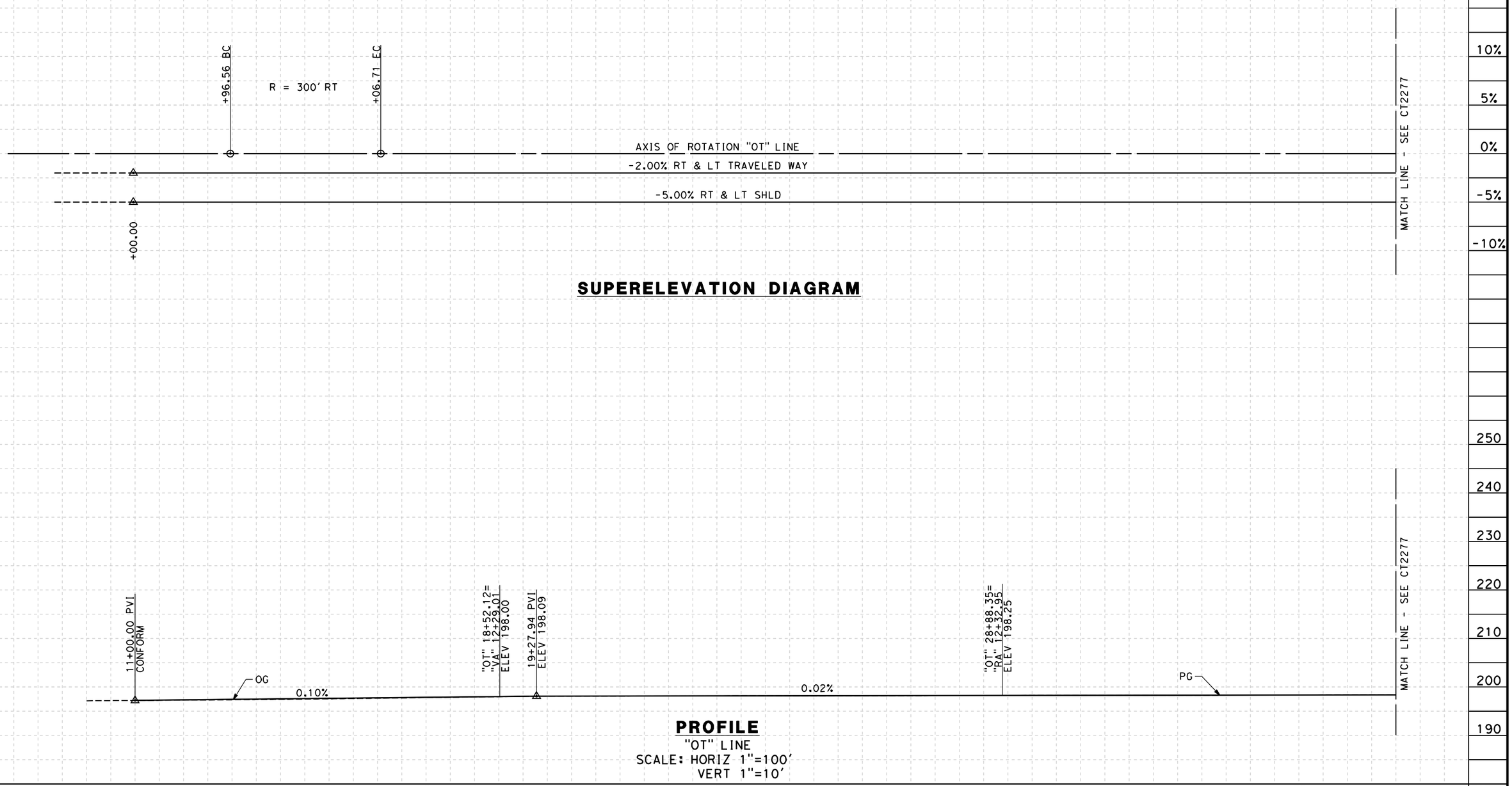
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
YODER BLVD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2275
SCALE AS SHOWN
SHEET NO. 42 OF 71

mark_polischuk 5/13/2011 2:42:33 PM HSTFB_C3_YODER_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 35 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE

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

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	4	35	6	7	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

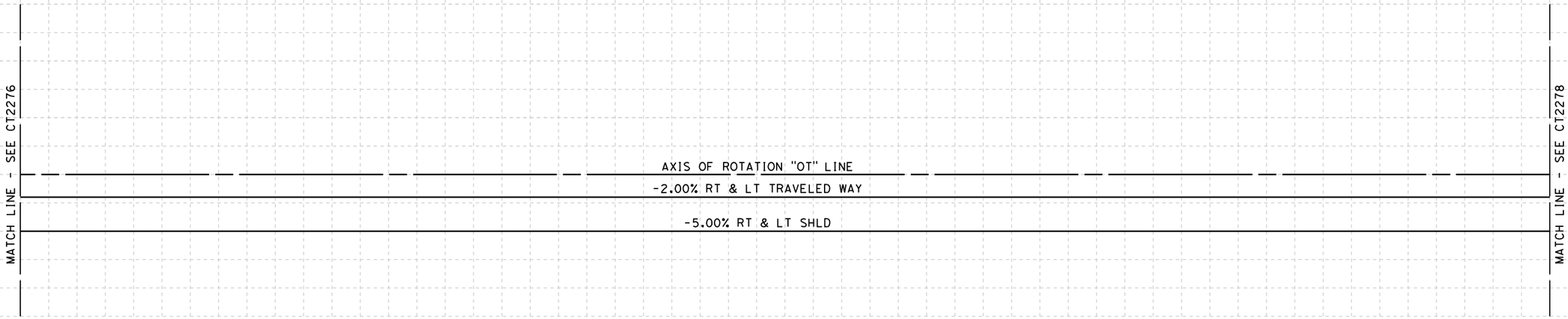
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

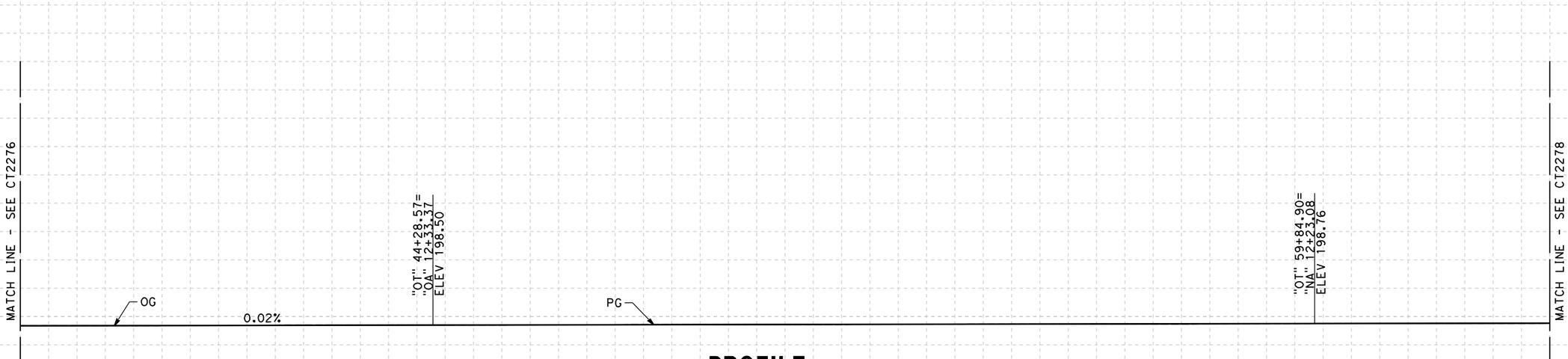
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
OTIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2276
SCALE AS SHOWN
SHEET NO. 43 OF 71

mark_polischuk 5/13/2011 2:42:40 PM HSTFB_C3_OTIS_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

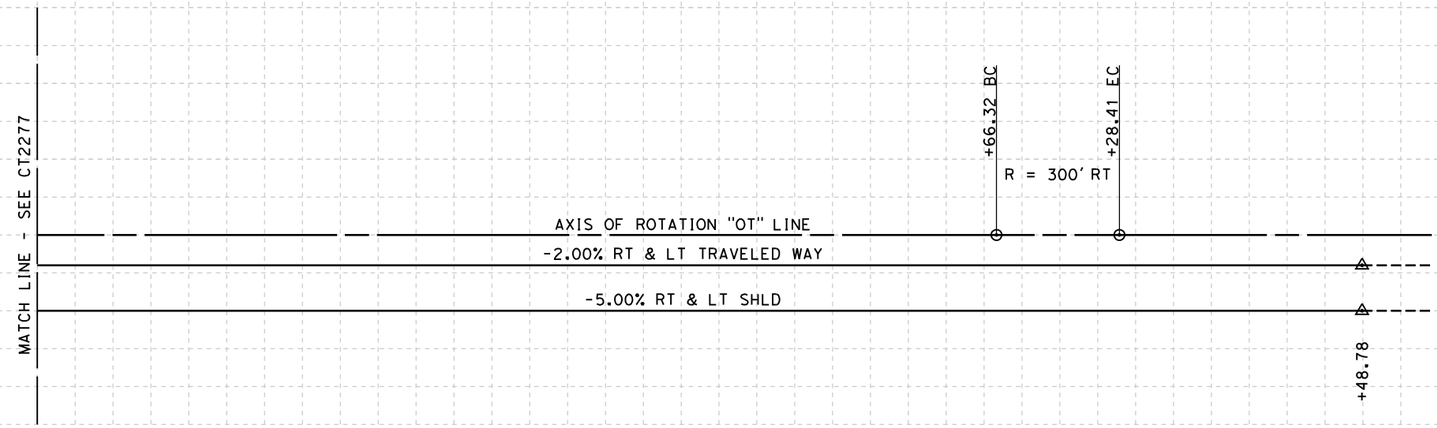
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

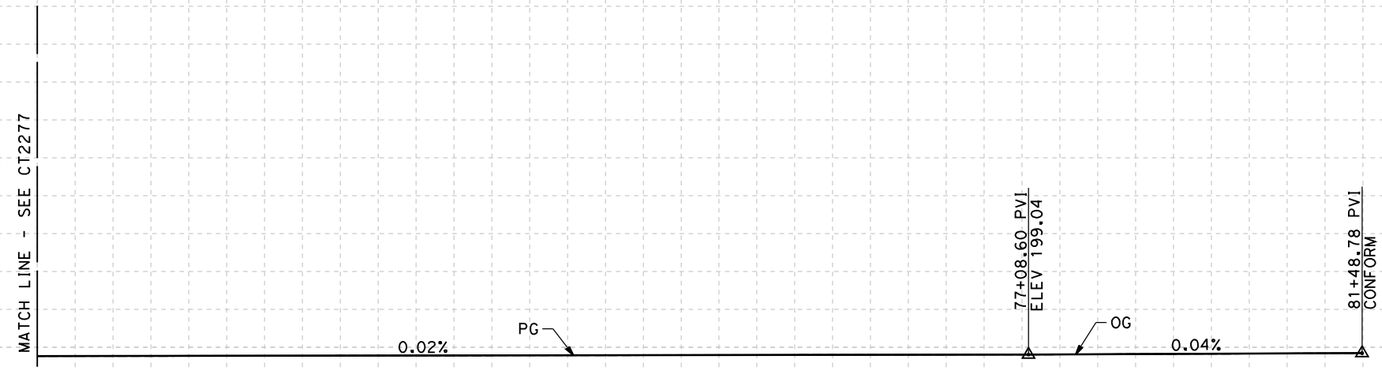
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
OTIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2277
SCALE AS SHOWN
SHEET NO. 44 OF 71

mark_polischuk 5/13/2011 2:42:46 PM HSTFB_C3_OTIS_PS02.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	65	6	7	8	9	70	1	2	3	4	75	6	7	8	9	80	1	2	TOTAL
CY Exc																				
CY Emb																				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

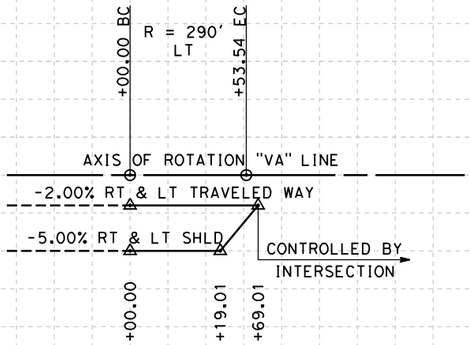
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
OTIS AVE

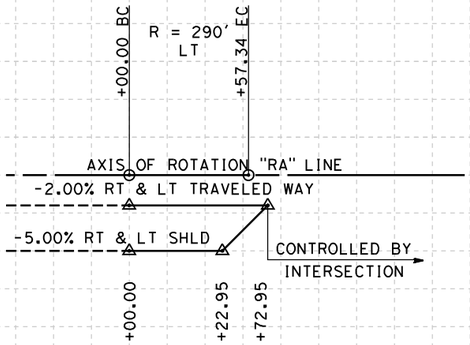
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2278
SCALE AS SHOWN
SHEET NO. 45 OF 71

mark_polischuk 5/13/2011 2:42:52 PM HSTFB_C3_OTIS_PS03.dgn

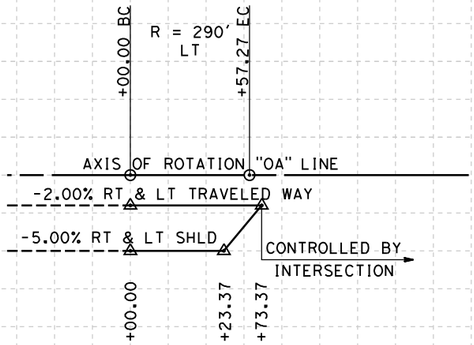
NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. SEE SHEETS CT1274 AND CT1275 FOR LAYOUT VIEWS



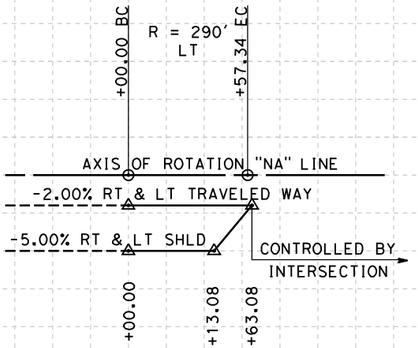
SUPERELEVATION DIAGRAM



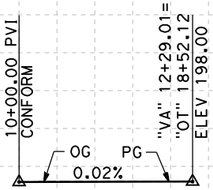
SUPERELEVATION DIAGRAM



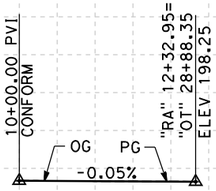
SUPERELEVATION DIAGRAM



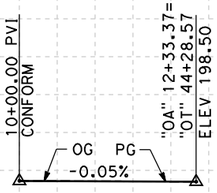
SUPERELEVATION DIAGRAM



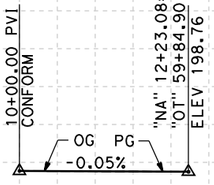
PROFILE
"VA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



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



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



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

STATION	10	1	2	3	10	1	2	3	10	1	2	3	10	1	2	3	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

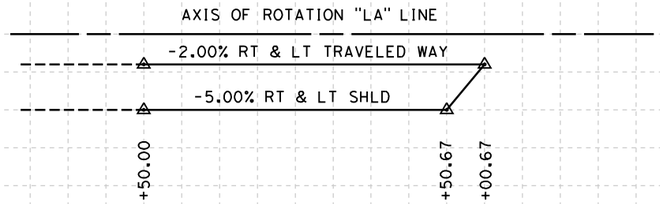
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
CONNECTIONS TO OTIS AVE

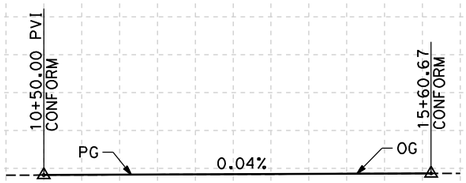
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2279
SCALE AS SHOWN
SHEET NO. 46 OF 71

mark_polischuk 5/13/2011 3:10:49 PM HSTFB_C3_VA_RA_OA_NA_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM
3. SEE SHEET CT1275 FOR LAYOUT VIEW



SUPERELEVATION DIAGRAM



PROFILE

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

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

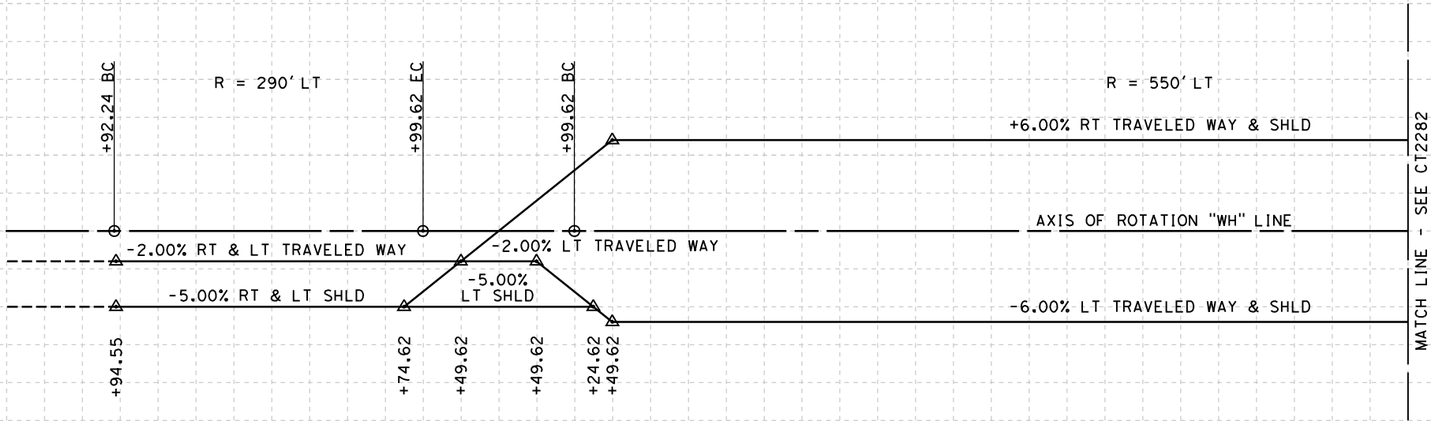
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
LETTS AVE

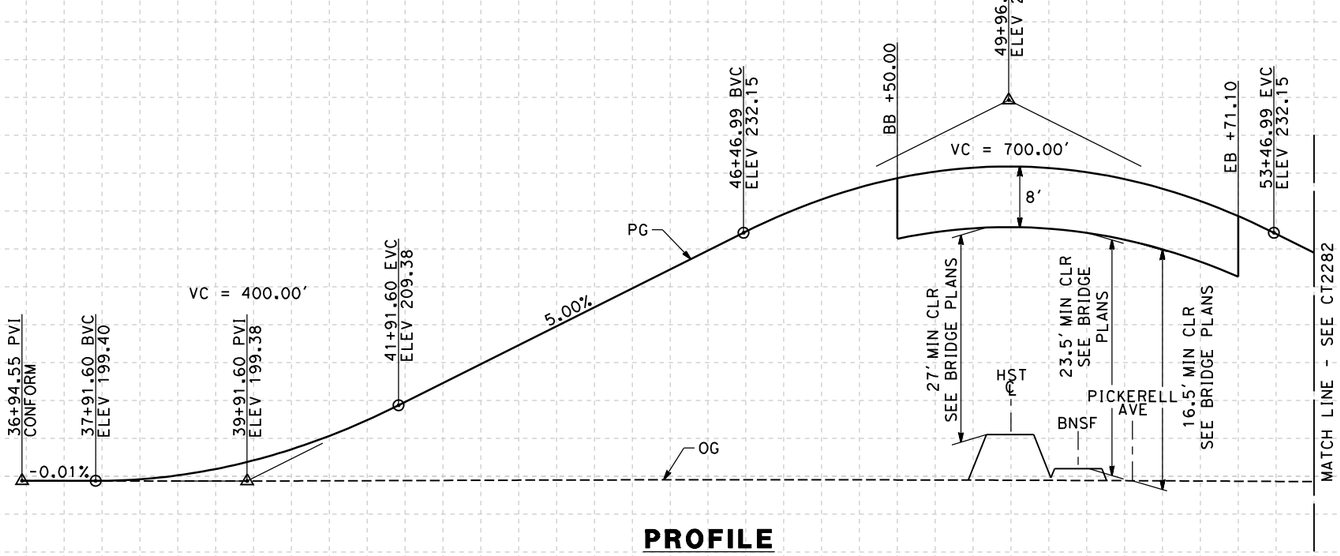
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2280
SCALE AS SHOWN
SHEET NO. 47 OF 71

mark_polischuk 5/13/2011 2:43:06 PM HSTFB_C3_LETTS_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 25 - 40 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	TOTAL
CY Exc																					
CY Emb																					

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

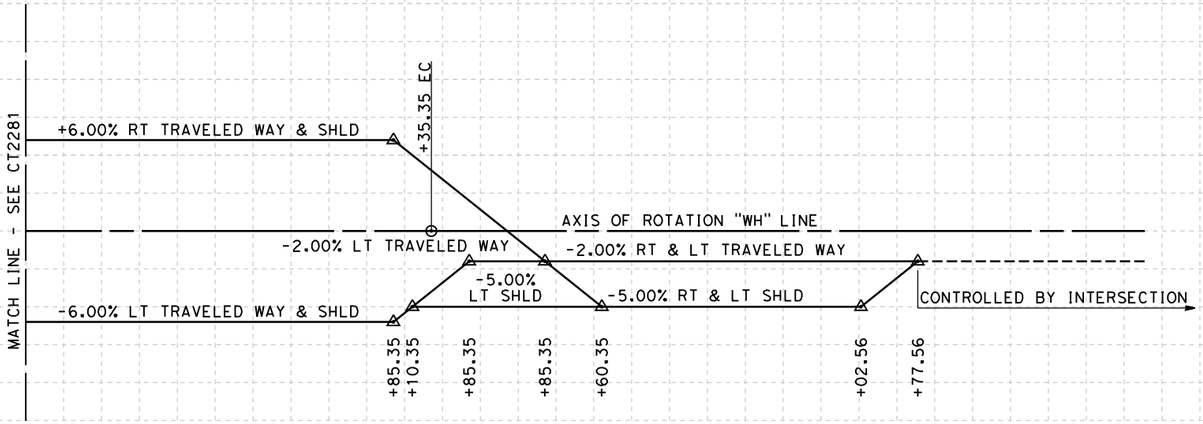
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

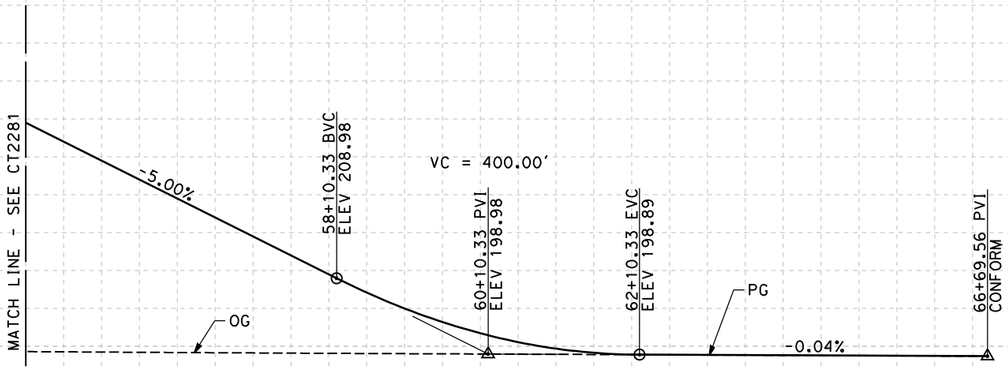
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
WHITLEY AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2281
SCALE AS SHOWN
SHEET NO. 48 OF 71

mark_polischuk 5/13/2011 2:43:12 PM HSTFB_C3_WHITLEY_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE

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

STATION	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

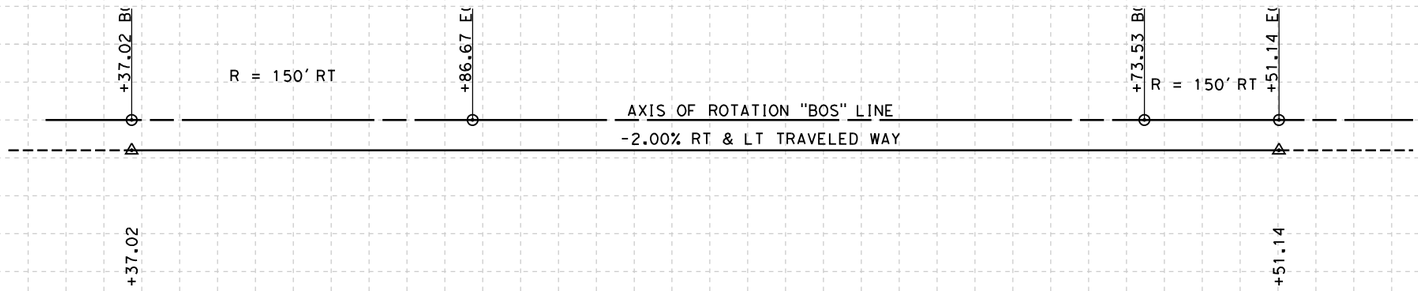
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
WHITLEY AVE

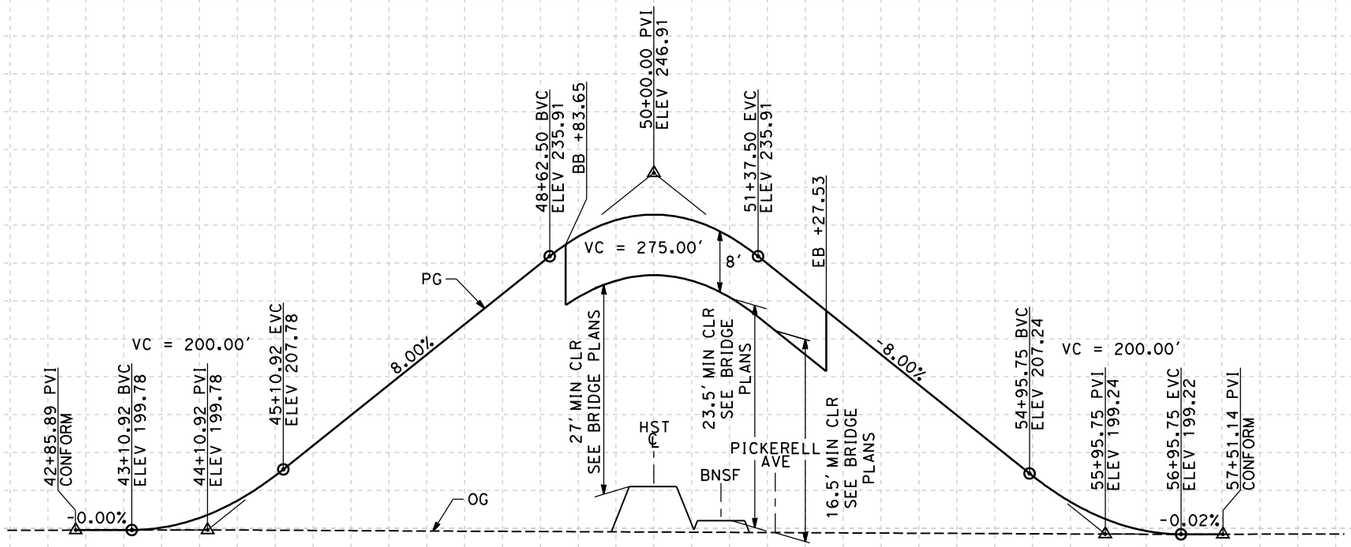
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2282
SCALE AS SHOWN
SHEET NO. 49 OF 71

mark_polischuk 5/13/2011 2:43:19 PM HSTFB_C3_WHITLEY_PS02.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 15 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

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

STATION		1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	TOTAL
CY	Exc																			
	Emb																			

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

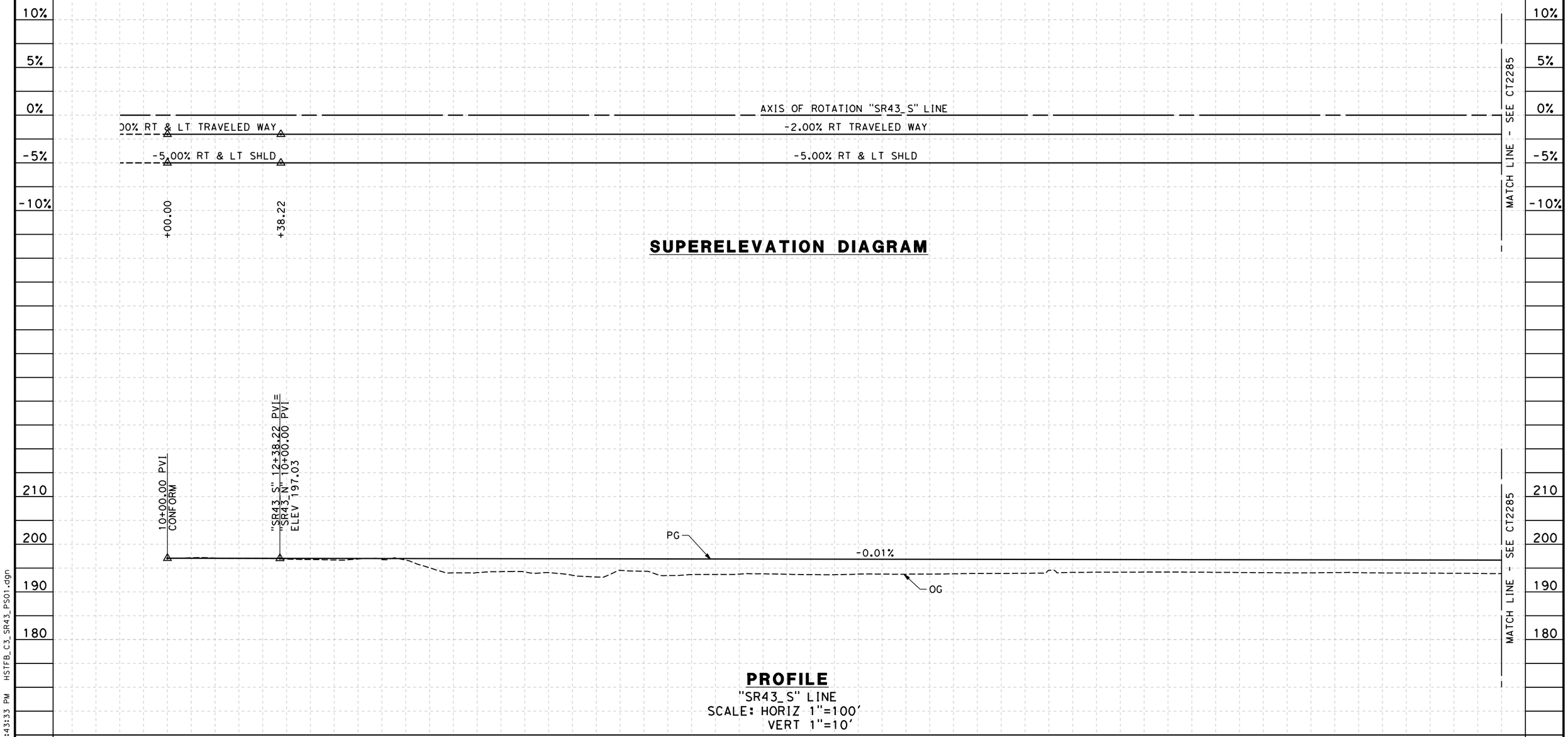
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
BOSWELL PRIVATE RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2283
SCALE AS SHOWN
SHEET NO. 50 OF 71

mark_polischuk 5/13/2011 2:43:26 PM HSTFB_C3_BOSWELL_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 65 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

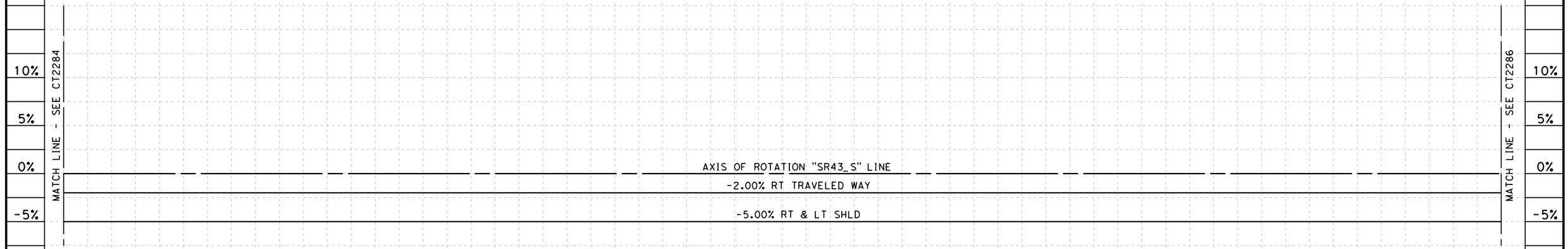
LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

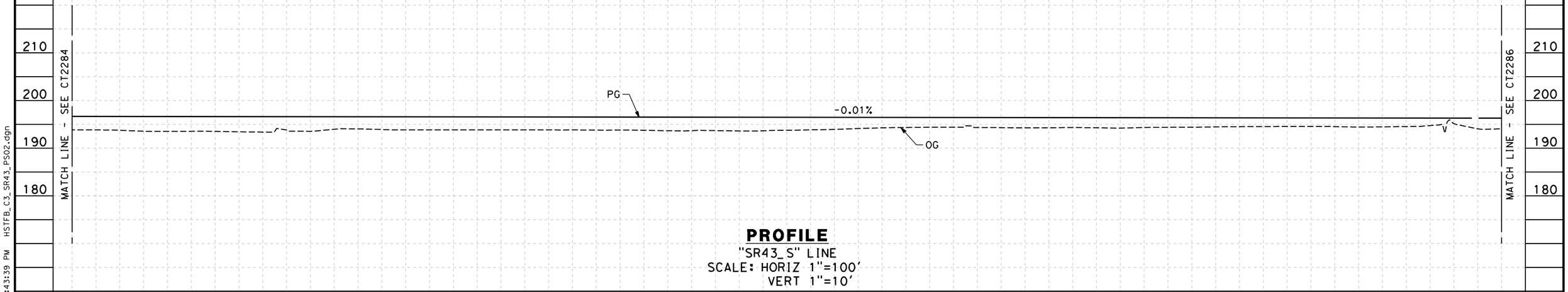
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (SB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2284
SCALE AS SHOWN
SHEET NO. 51 OF 71

mark_polischuk 5/13/2011 2:43:33 PM HSTFB_C3_SR43_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

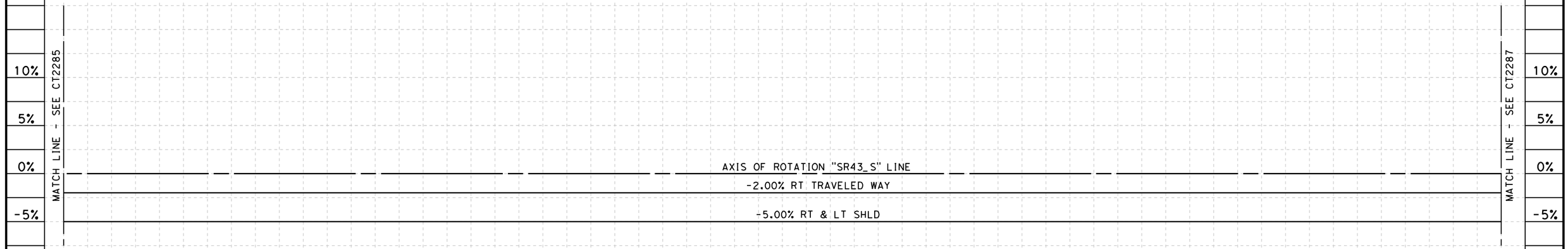
IRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

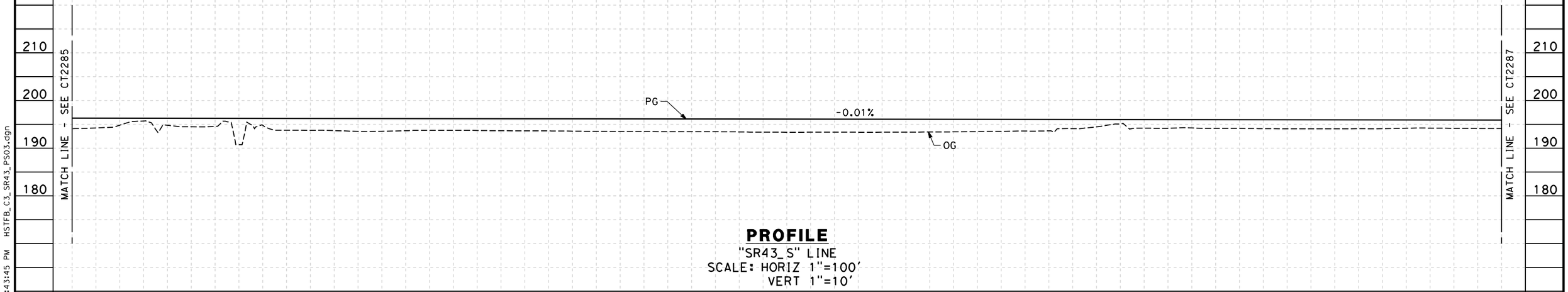
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (SB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2285
SCALE AS SHOWN
SHEET NO. 52 OF 71

mark_polischuk 5/13/2011 2:43:39 PM HSTFB_C3_SR43_PS02.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	70	1	2	3	4	75	6	7	8	9	80	1	2	3	4	85	6	7	8	9	90	1	2	3	4	95	6	7	8	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

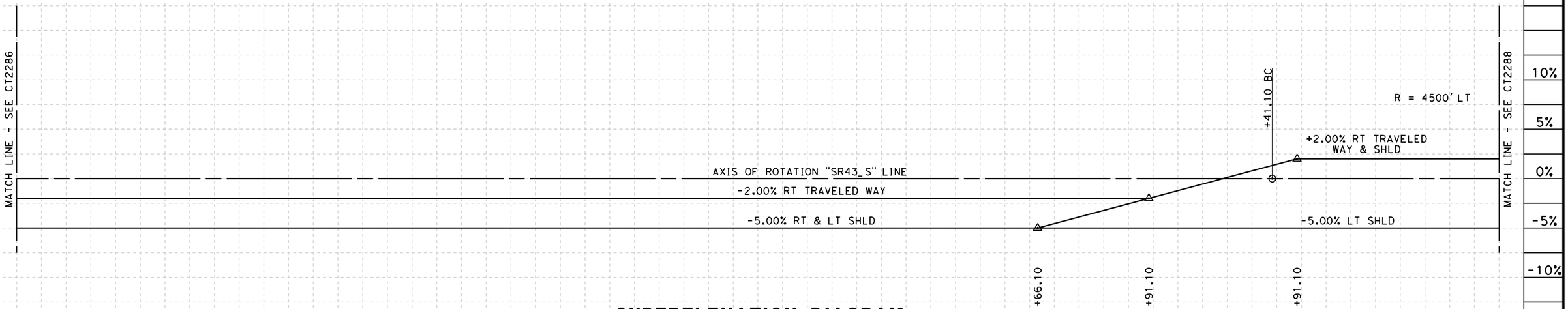
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

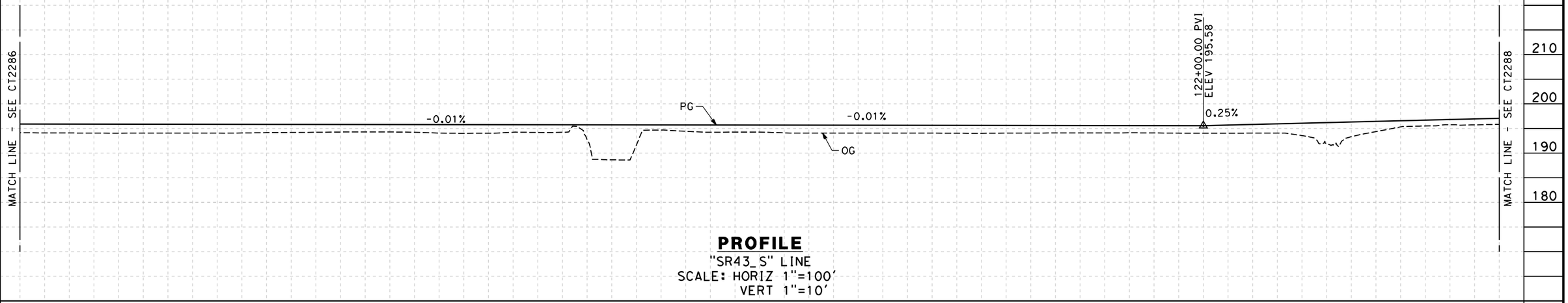
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (SB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2286
SCALE AS SHOWN
SHEET NO. 53 OF 71

mark_polischuk 5/13/2011 2:43:45 PM HSTFB_C3_SR43_PS03.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	115	6	7	8	9	120	1	2	3	4	125	6	7	8	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

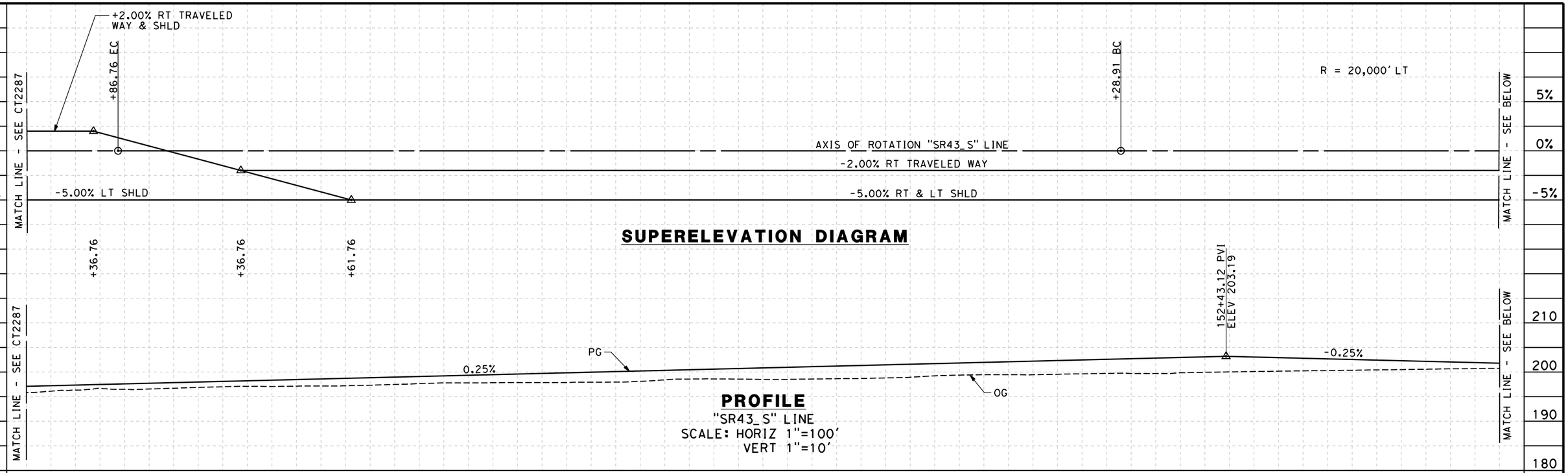
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (SB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2287
SCALE AS SHOWN
SHEET NO. 54 OF 71

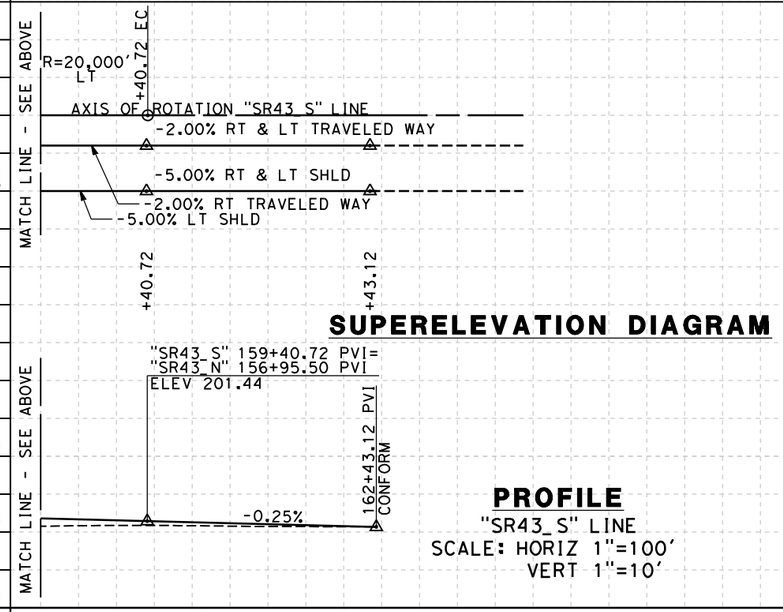
mark_polischuk 5/13/2011 2:43:51 PM HSTFB_C3_SR43_PS04.dgn



SUPERELEVATION DIAGRAM

PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



SUPERELEVATION DIAGRAM

PROFILE

"SR43_S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

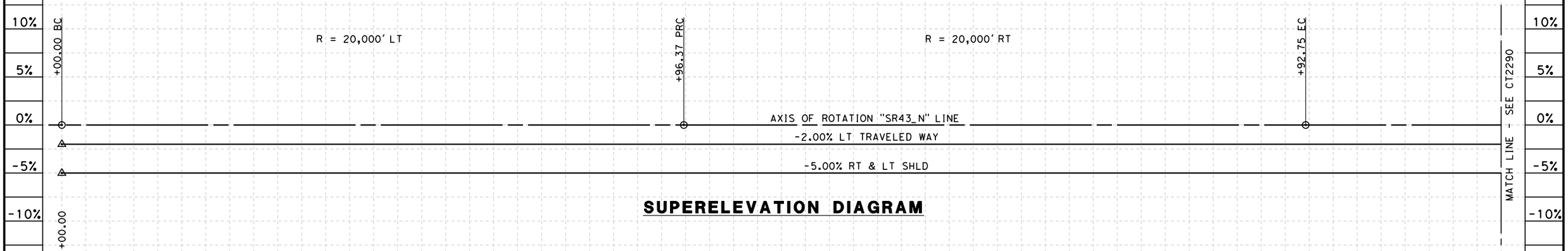
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (SB)

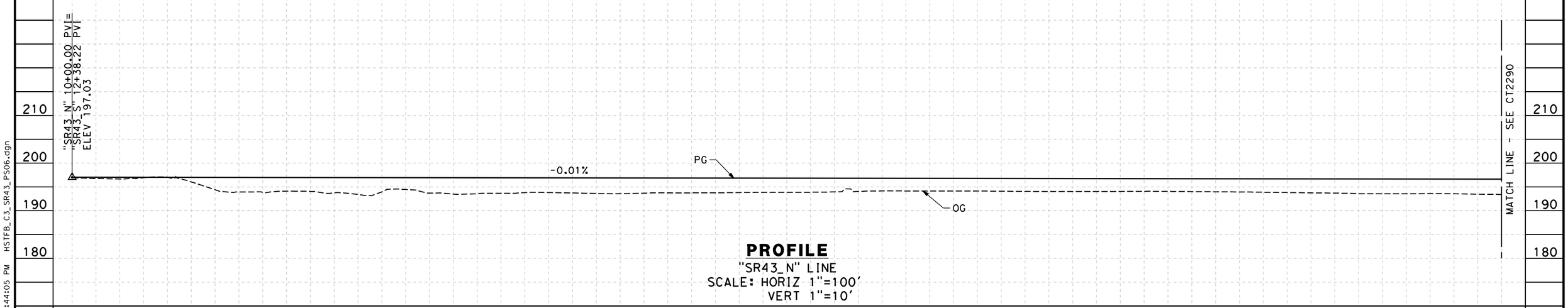
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2288
SCALE AS SHOWN
SHEET NO. 55 OF 71

mark_polischuk 5/13/2011 2:43:58 PM HSTFB_C3_SR43_PS05.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 65 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"SR43_N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	40	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

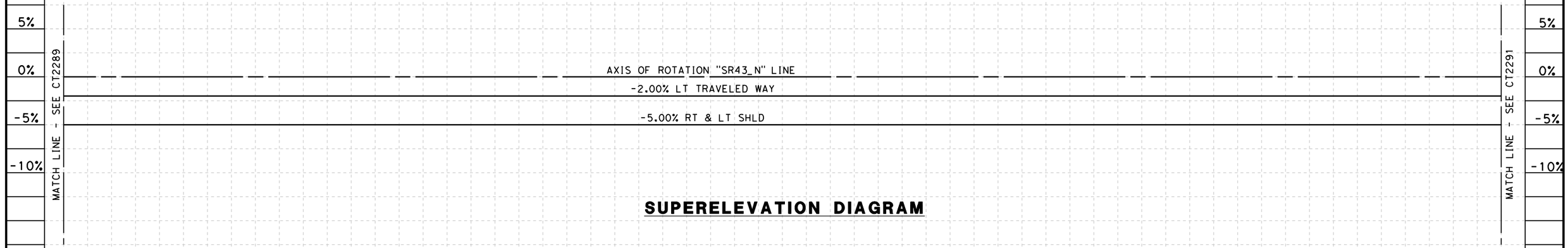
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

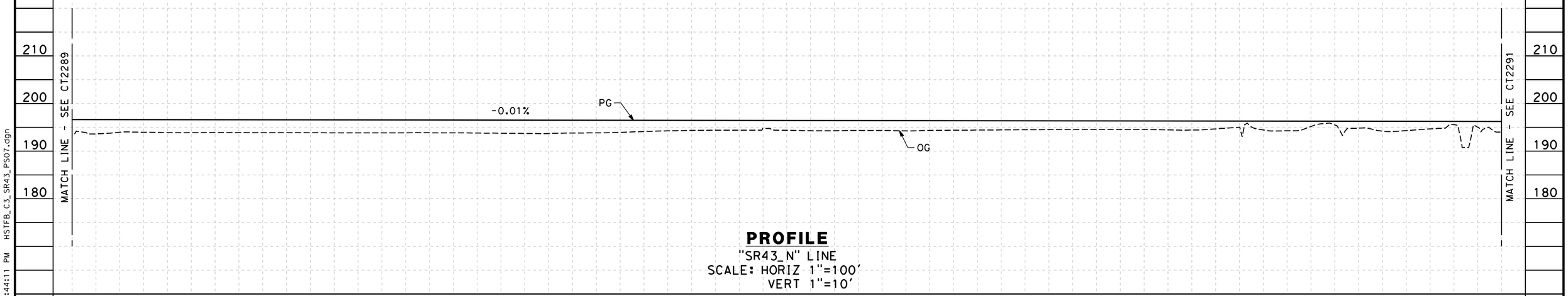
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (NB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2289
SCALE AS SHOWN
SHEET NO. 56 OF 71

mark_polischuk 5/13/2011 2:44:05 PM HSTFB_C3_SR43_PS06.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

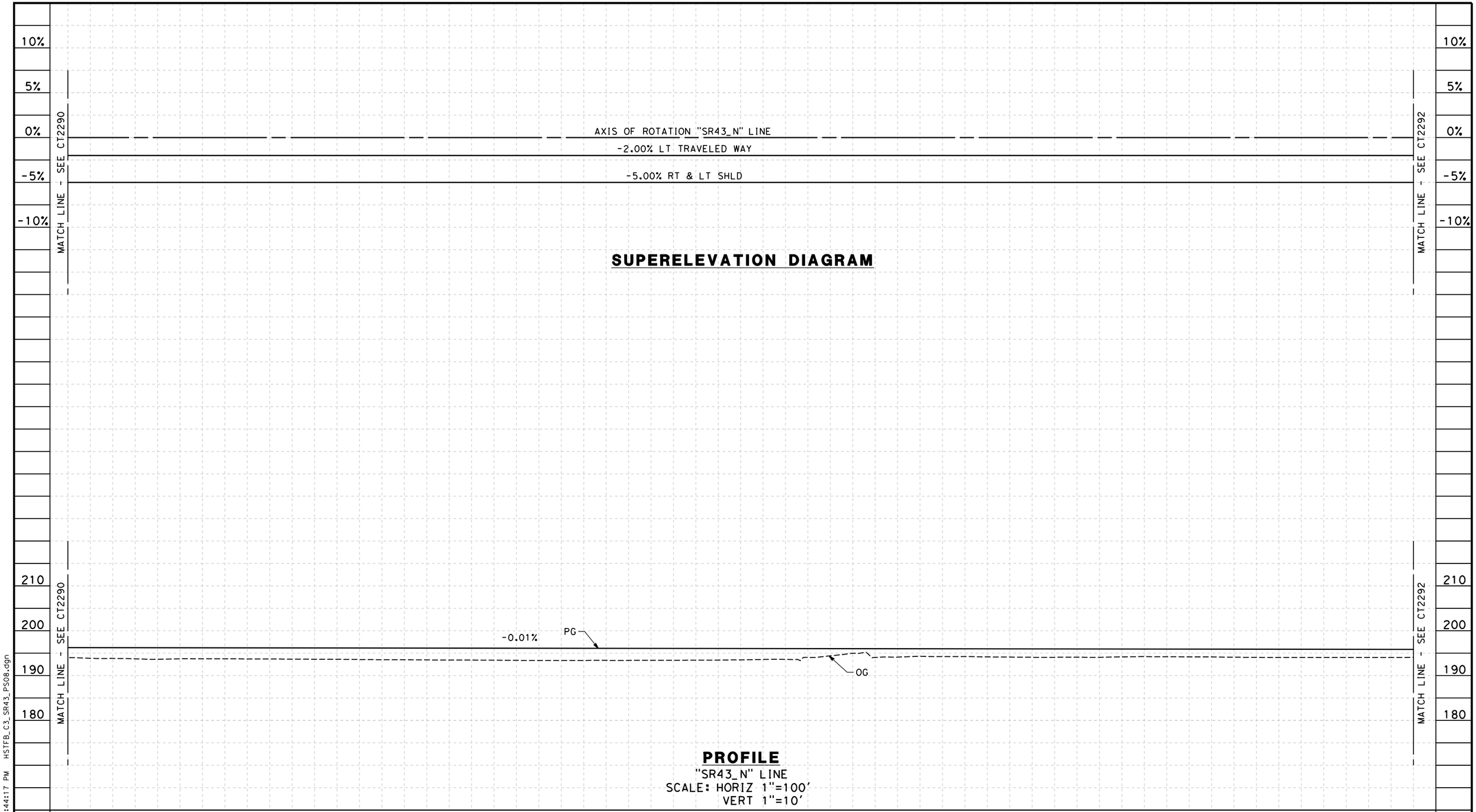
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (NB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2290
SCALE AS SHOWN
SHEET NO. 57 OF 71

mark_polischuk 5/13/2011 2:44:11 PM HSTFB_C3_SR43_PS07.dgn



SUPERELEVATION DIAGRAM

PROFILE

"SR43_N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	70	1	2	3	4	75	6	7	8	9	80	1	2	3	4	85	6	7	8	9	90	1	2	3	4	95	6	7	8	9	100	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

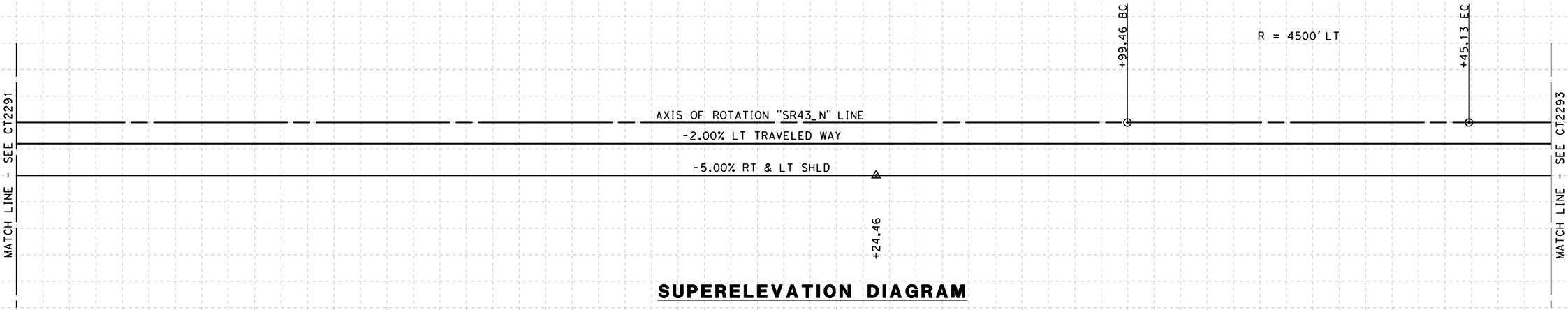
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

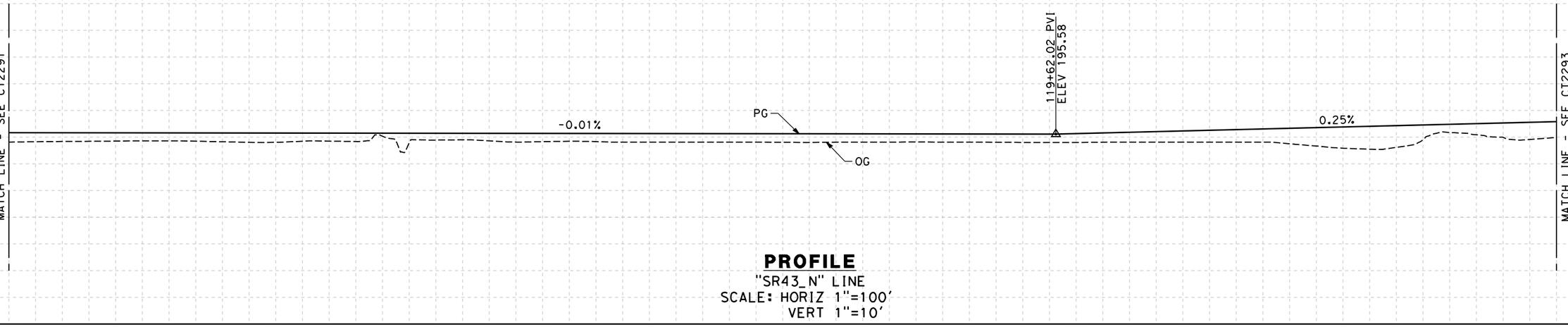
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (NB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2291
SCALE AS SHOWN
SHEET NO. 58 OF 71

mark_polischuk 5/13/2011 2:44:17 PM HSTFB_C3_SR43_PS08.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	115	6	7	8	9	120	1	2	3	4	125	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

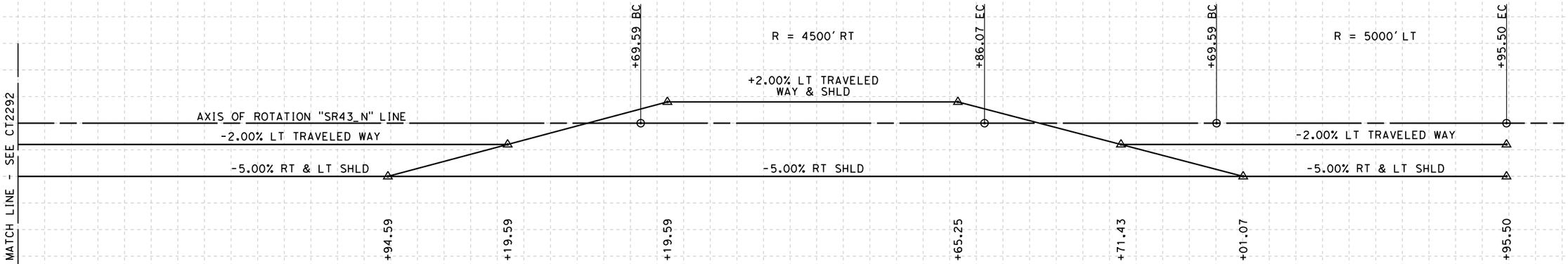
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

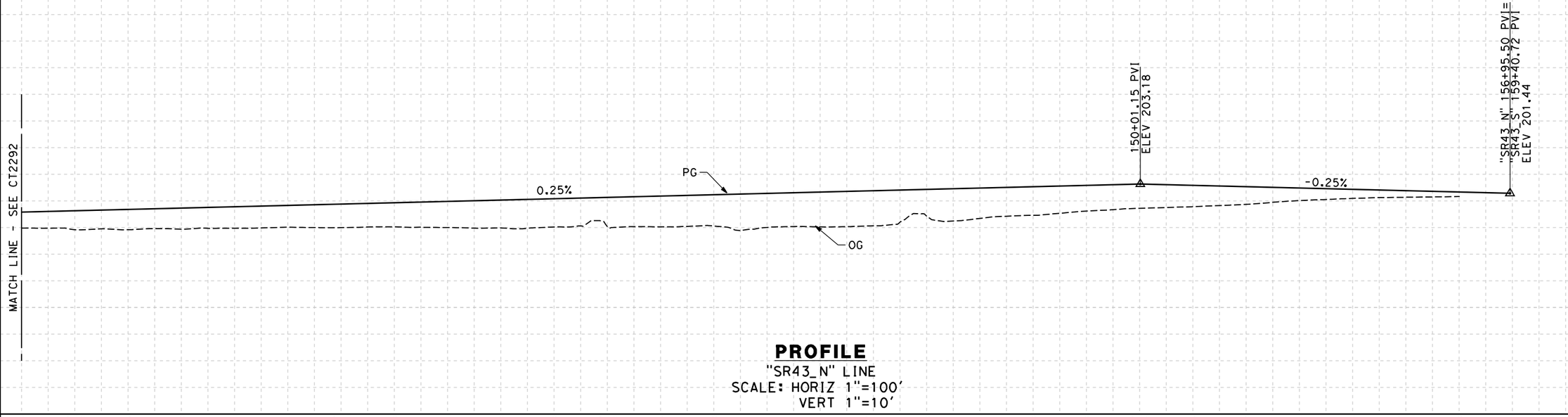
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (NB)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2292
SCALE AS SHOWN
SHEET NO. 59 OF 71

mark_polischuk 5/13/2011 2:44:23 PM HSTFB_C3_SR43_PS09.dgn



SUPERELEVATION DIAGRAM



PROFILE

"SR43_N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	9	130	1	2	3	4	135	6	7	8	9	140	1	2	3	4	145	6	7	8	9	150	1	2	3	4	155	6	7	8	9	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

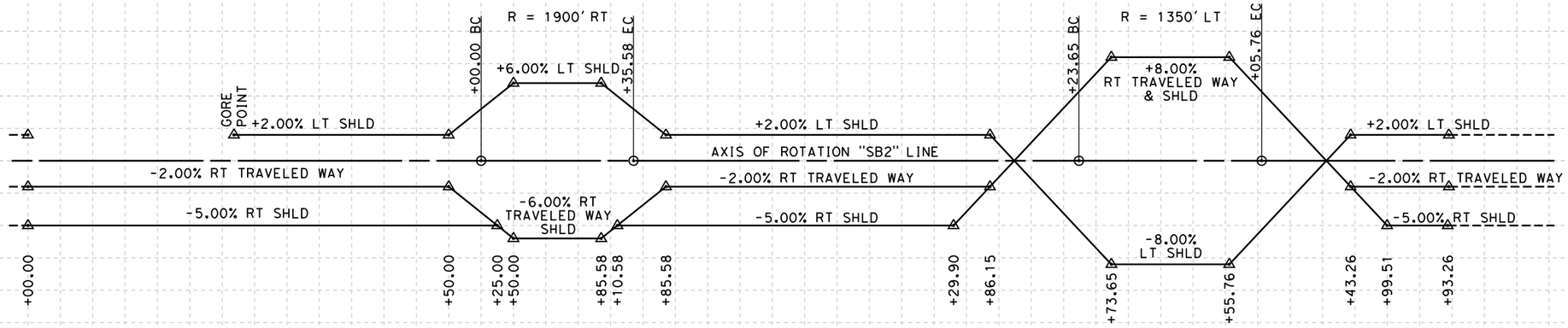
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 MAINLINE (NB)

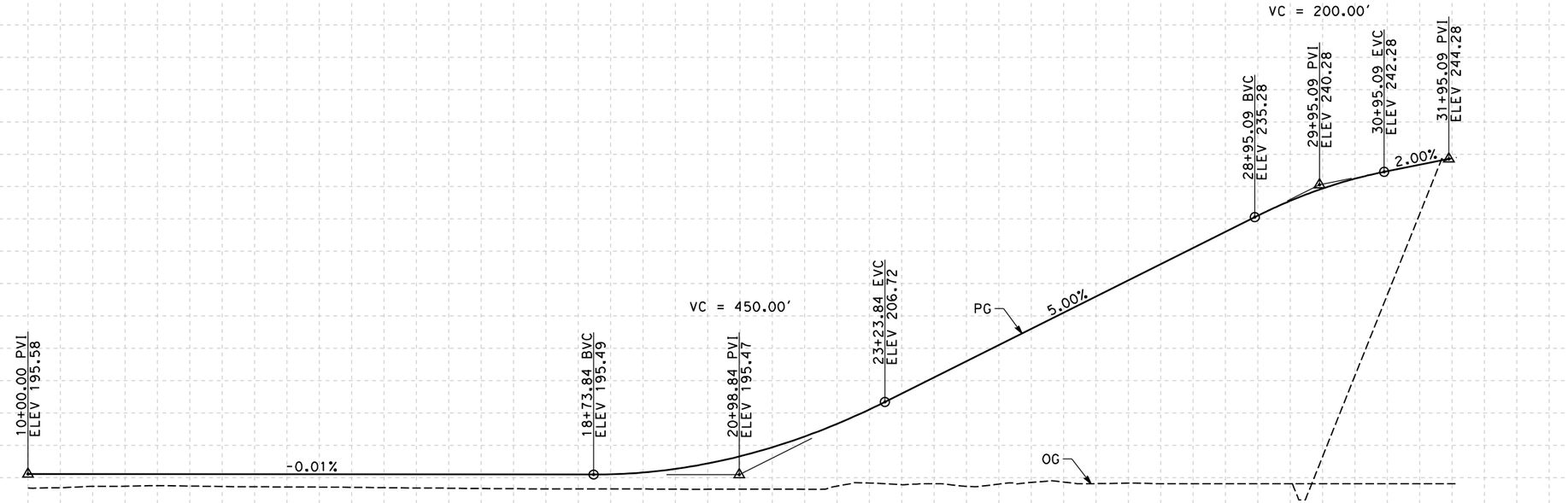
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2293
SCALE AS SHOWN
SHEET NO. 60 OF 71

mark_polischuk 5/13/2011 2:44:28 PM HSTFB_C3_SR43_PS10.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH IN SAG
   VERTICAL DESIGN SPEED = 25 MPH AT CREST
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE
"SB2" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

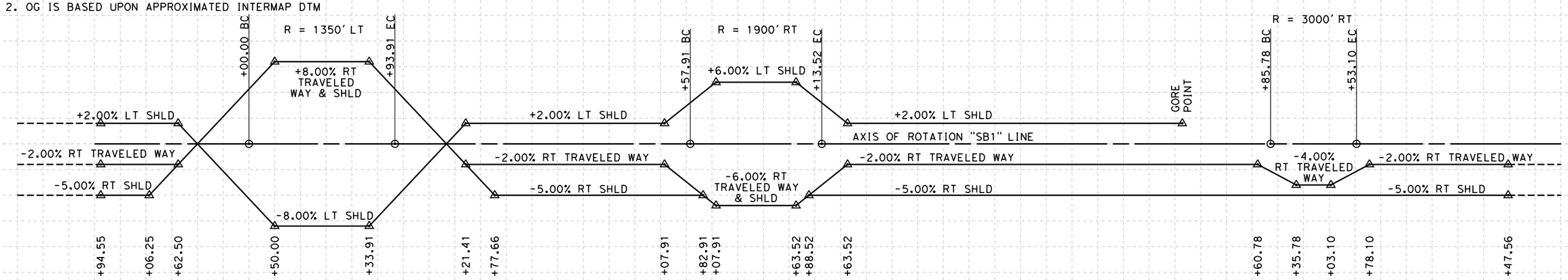
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 SB OFF RAMP

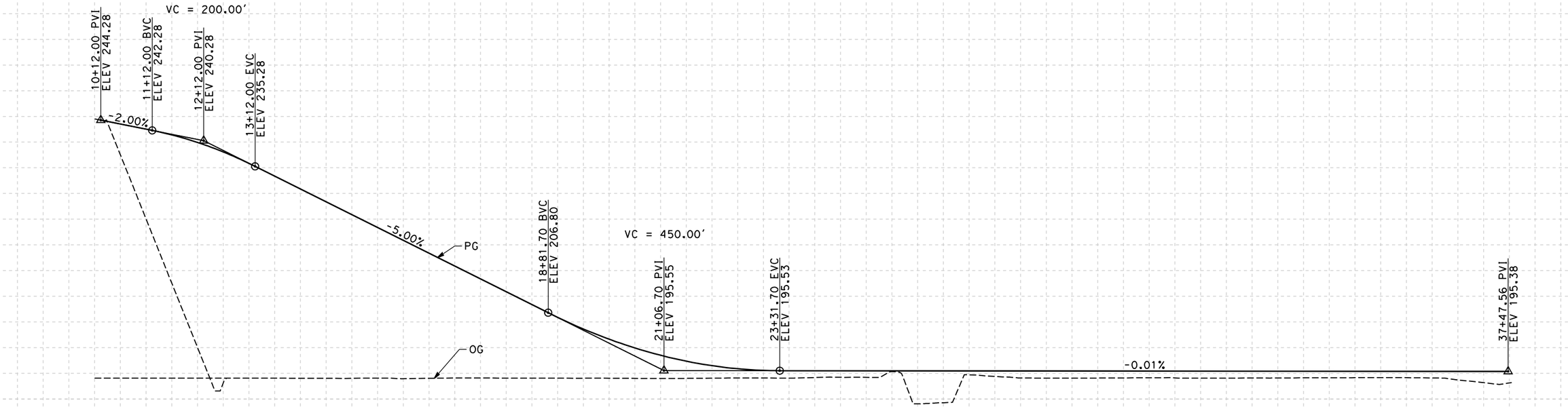
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2294
SCALE AS SHOWN
SHEET NO. 61 OF 71

mark_polischuk 5/13/2011 2:44:43 PM HSTFB_C3_SB2_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH IN SAG
   VERTICAL DESIGN SPEED = 25 MPH AT CREST
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"SB1" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	TOTAL
CY	Exc																														
	Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

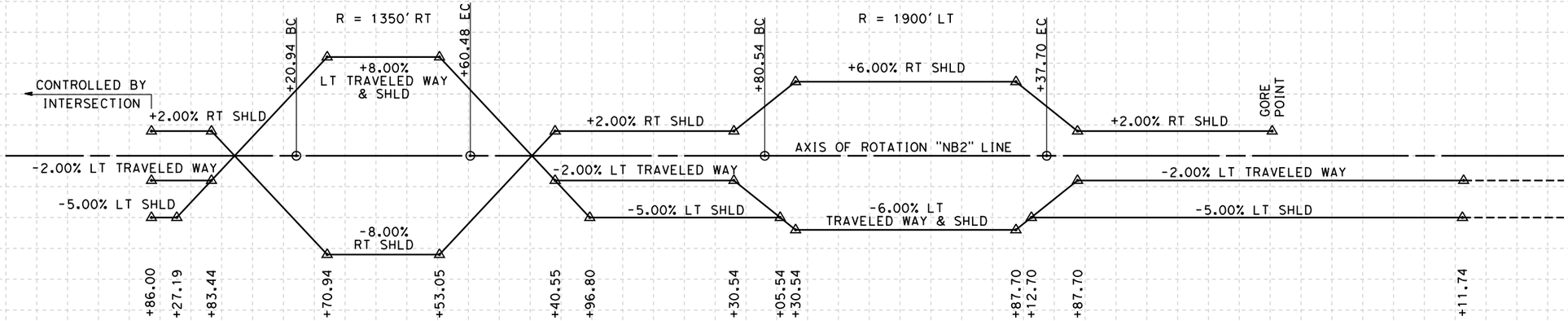
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 SB ON RAMP

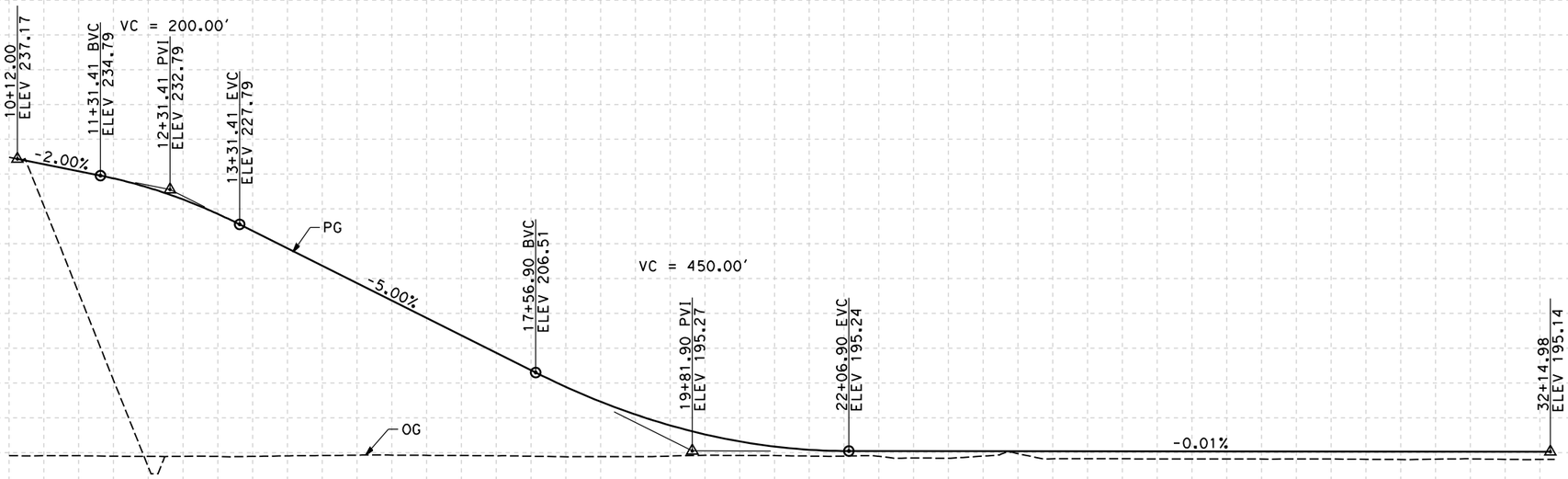
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2295
SCALE AS SHOWN
SHEET NO. 62 OF 71

mark_polischuk 5/13/2011 2:44:35 PM HSTFB_C3_SB1_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH IN SAG
   VERTICAL DESIGN SPEED = 25 MPH AT CREST
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"NB2" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

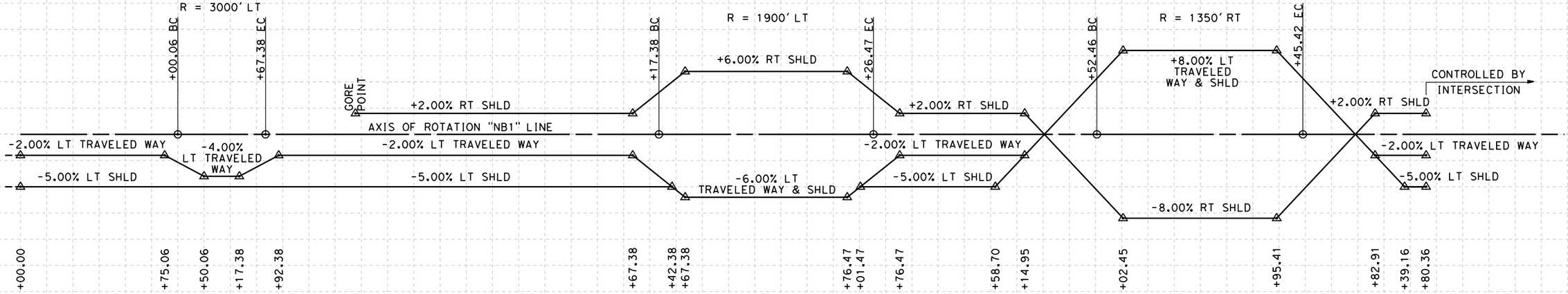
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 NB OFF RAMP

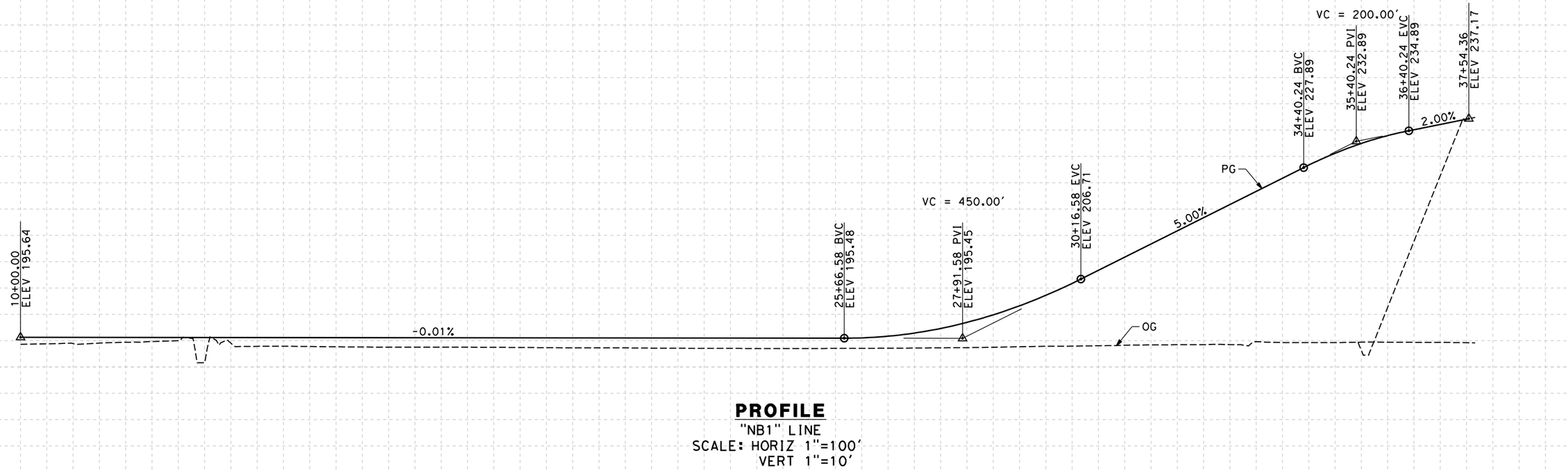
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2296
SCALE AS SHOWN
SHEET NO. 63 OF 71

mark_polischuk 5/13/2011 2:44:58 PM HSTFB_C3_NB2_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH IN SAG
   VERTICAL DESIGN SPEED = 25 MPH AT CREST
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"NB1" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

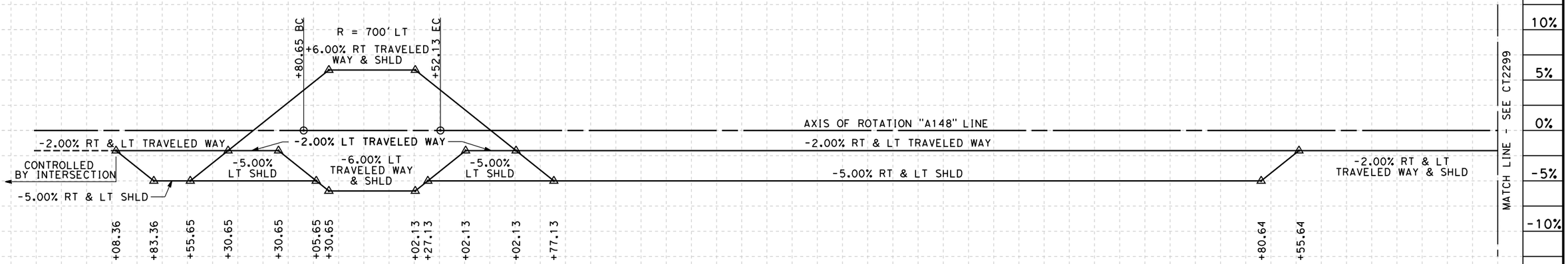
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 NB ON RAMP

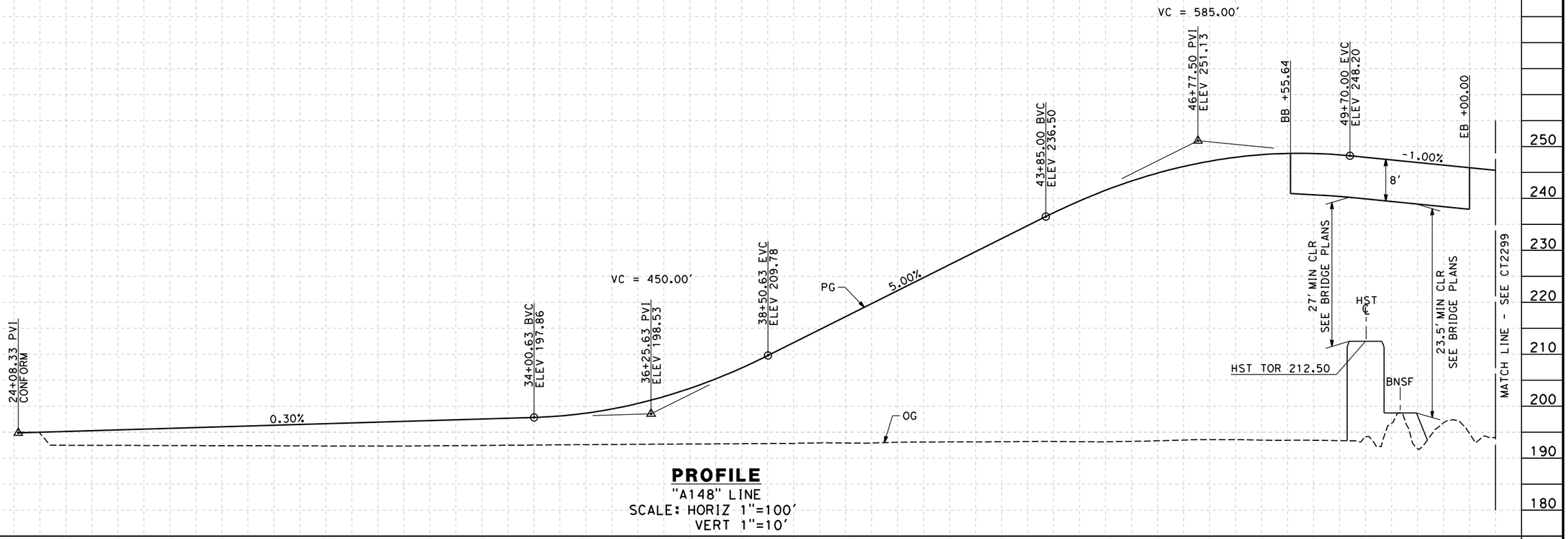
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2297
SCALE AS SHOWN
SHEET NO. 64 OF 71

mark_polischuk 5/13/2011 2:44:50 PM HSTFB_C3_NB1_PS01.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 45 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM



PROFILE

"A148" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

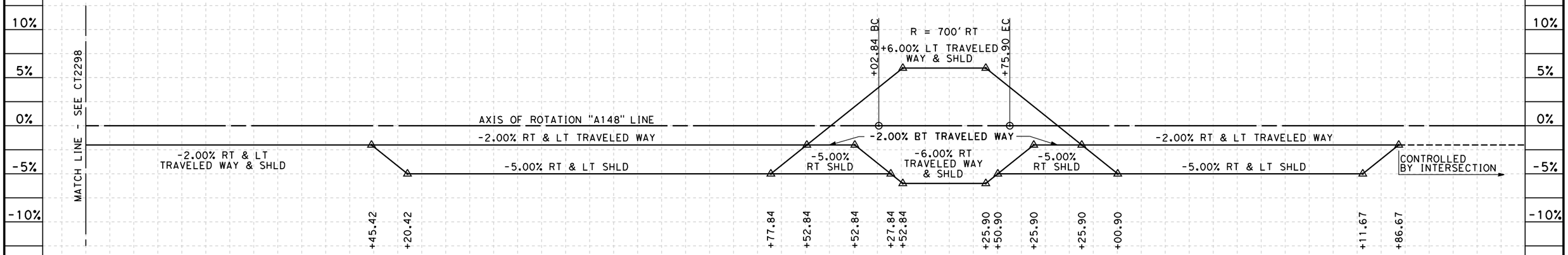
LIRS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

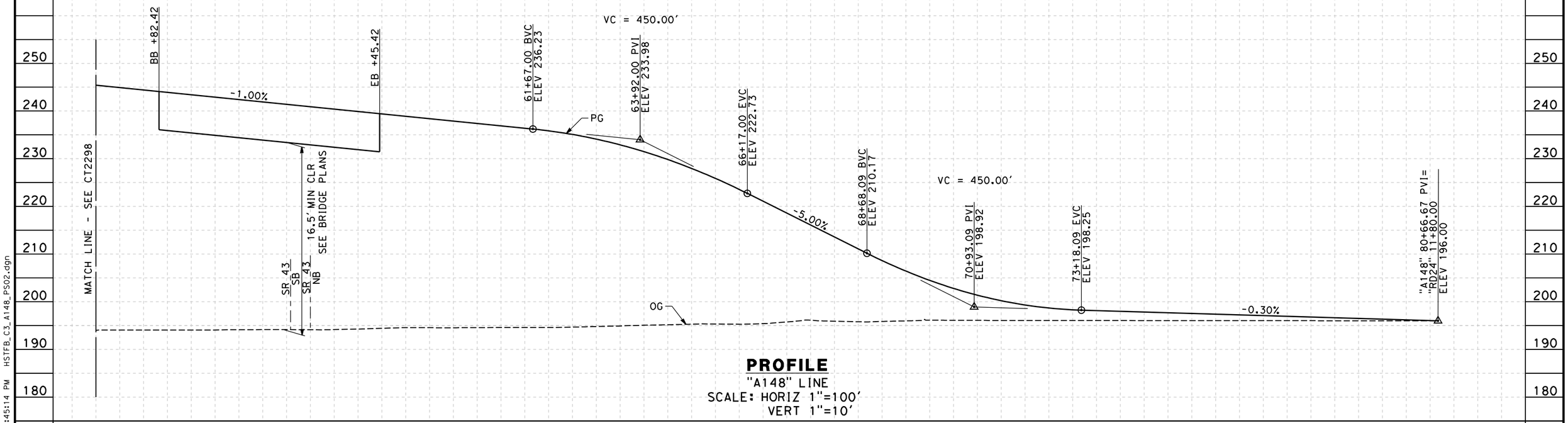
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
AVE 148

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2298
SCALE AS SHOWN
SHEET NO. 65 OF 71

mark_polischuk 5/13/2011 2:45:06 PM HSTFB_C3_A148_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE

"A148" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	3	4	75	6	7	8	9	80	1	2	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

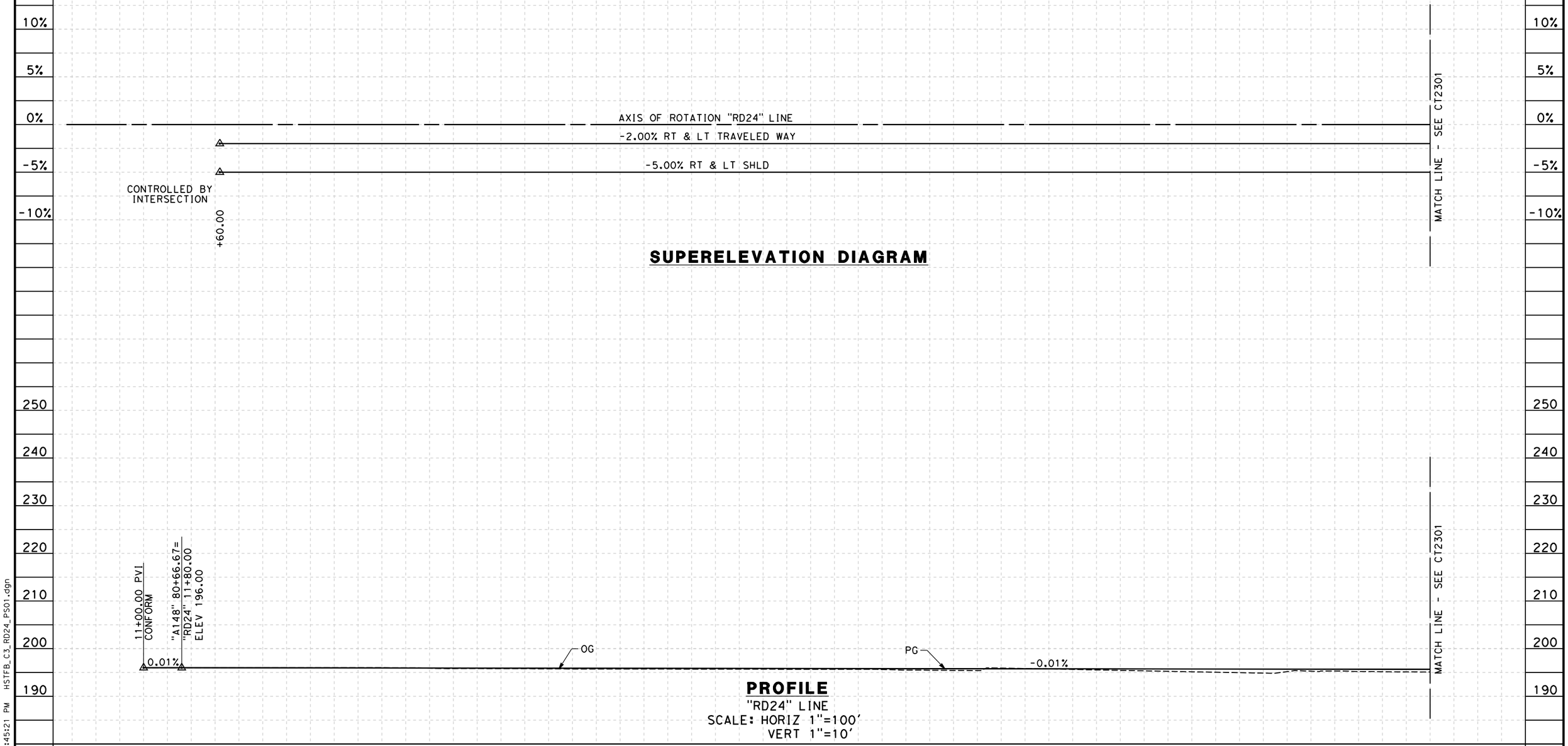
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
AVE 148

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2299
SCALE AS SHOWN
SHEET NO. 66 OF 71

mark_polischuk 5/13/2011 2:45:14 PM HSTFB_C3_A148_PS02.dgn

NOTES:
1. VERTICAL DESIGN SPEED = 55 MPH
2. OG IS BASED UPON APPROXIMATED INTERMAP DTM



SUPERELEVATION DIAGRAM

PROFILE

"RD24" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

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	4	35	6	7	8	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 05/13/11

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

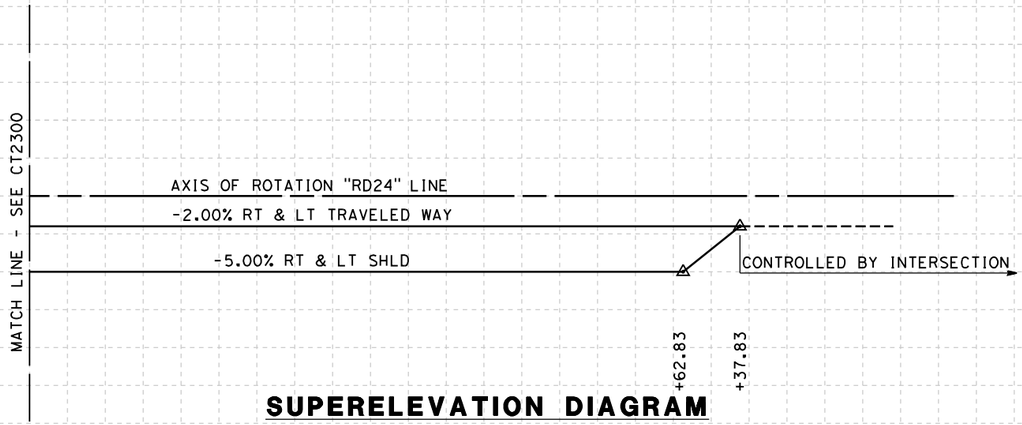
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

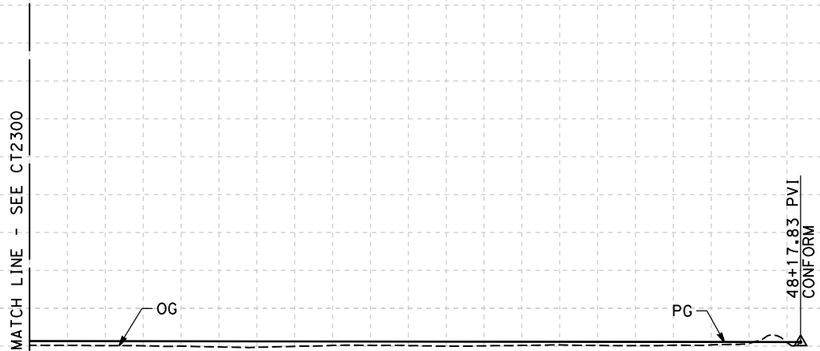
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
RD 24

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2300
SCALE AS SHOWN
SHEET NO. 67 OF 71

mark_polischuk 5/13/2011 2:45:21 PM HSTFB_C3_RD24_PS01.dgn



SUPERELEVATION DIAGRAM



PROFILE
"RD24" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	40	1	2	3	4	45	6	7	8	9	TOTAL
CY Exc													
CY Emb													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY M. POLISCHUK
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
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
FRESNO TO BAKERSFIELD
CORCORAN SEGMENT
ALIGNMENT C3
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
RD 24

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2301
SCALE AS SHOWN
SHEET NO. 68 OF 71

mark_polischuk 5/13/2011 2:45:27 PM HSTFB_C3_RD24_PS02.dgn

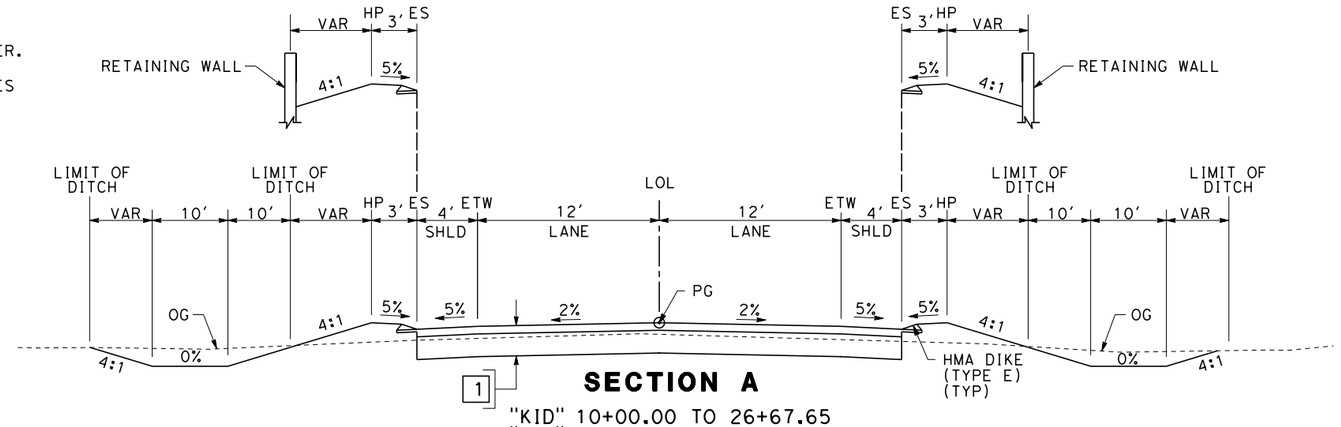
NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS

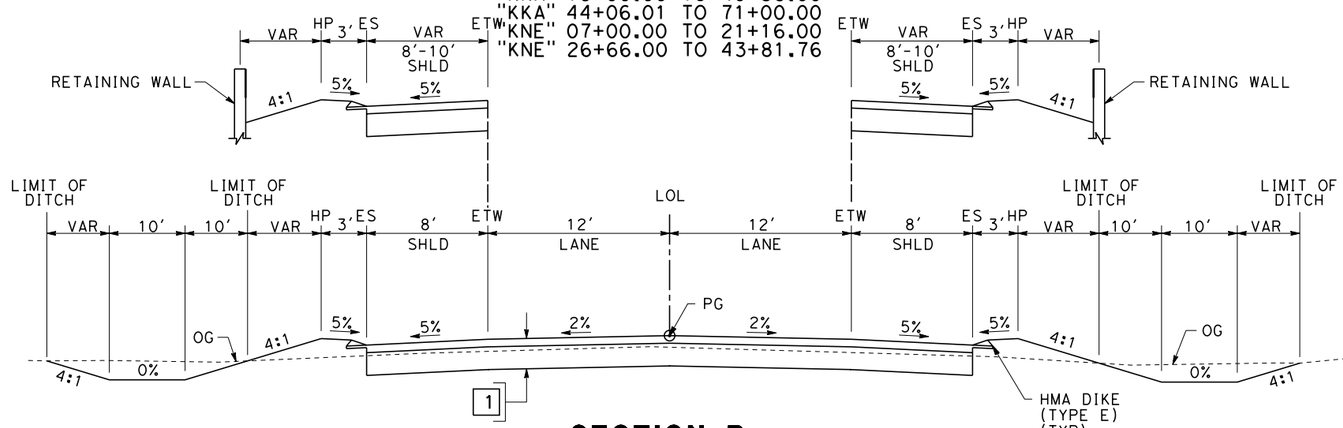
TYPICAL ROADWAY

1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB



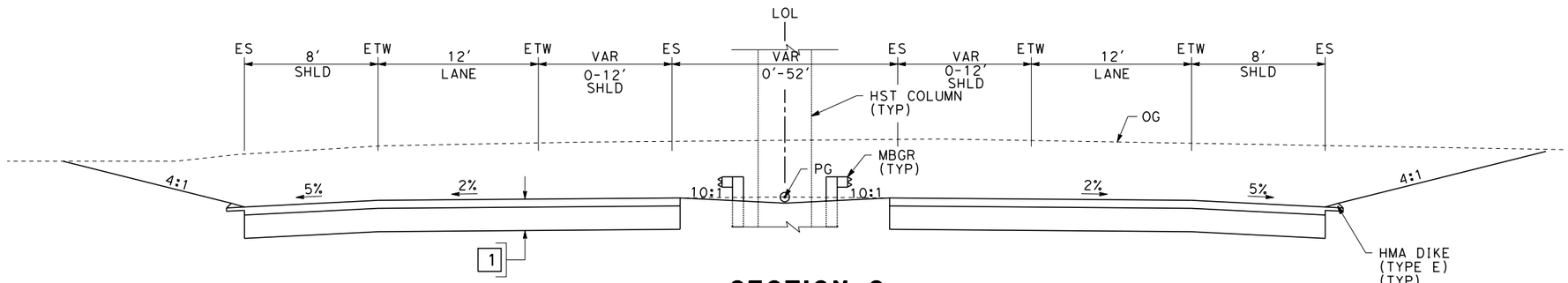
SECTION A

"KID" 10+00.00 TO 26+67.65
"KID" 29+39.65 TO 46+00.00
"KKE" 13+00.00 TO 31+88.72
"KKE" 34+76.72 TO 50+00.00
"KKA" 19+00.00 TO 40+56.00
"KKA" 44+06.01 TO 71+00.00
"KNE" 07+00.00 TO 21+16.00
"KNE" 26+66.00 TO 43+81.76



SECTION B

"KJA" 10+00.00 TO 27+12.86
"KJA" 29+58.86 TO 46+00.00



SECTION C

"SR43N" 9+08.16 TO 39+83.59

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: S. DEO
DRAWN BY: E. TANAKA
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
FRESNO TO BAKERSFIELD
CORCORAN SUBSECTION
ALIGNMENT C3
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3044
SCALE NO SCALE
SHEET NO. 69 OF 71

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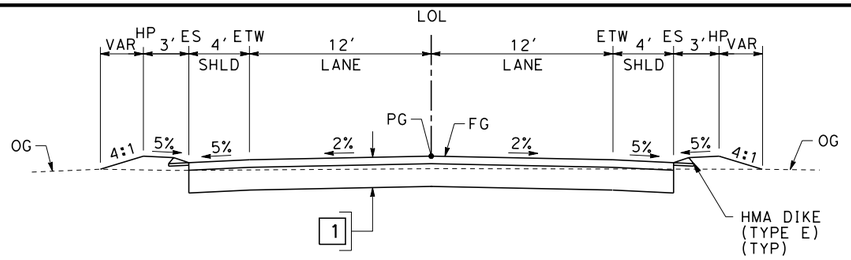
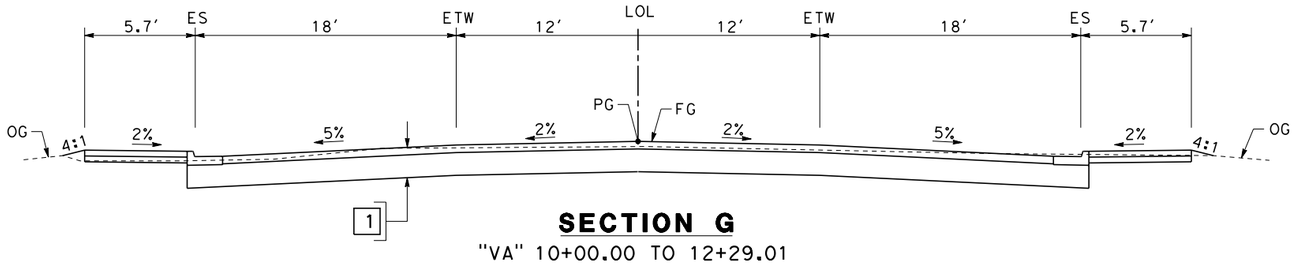


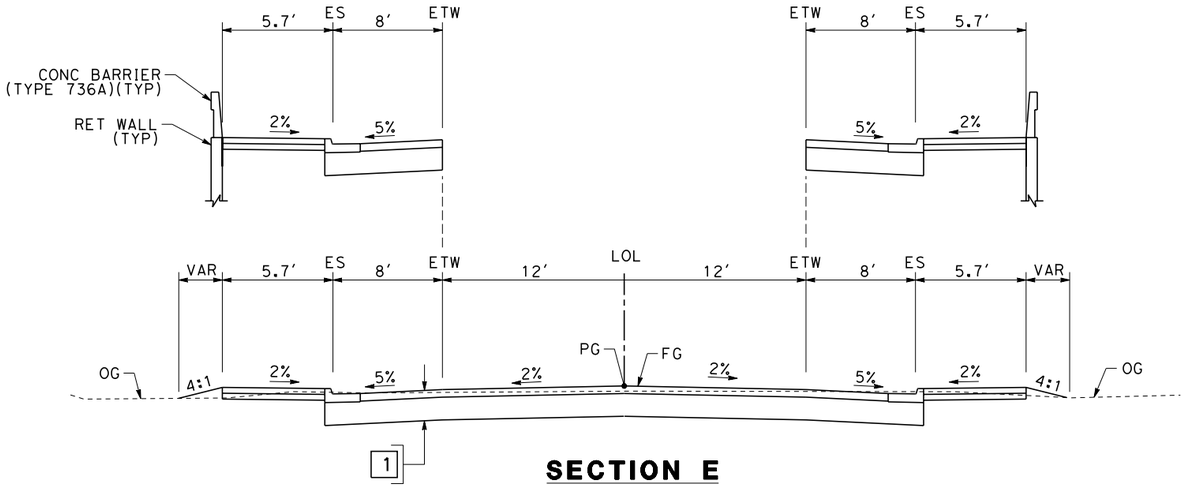
SECTION D

"SFA" 10+51.49 TO 26+00.00



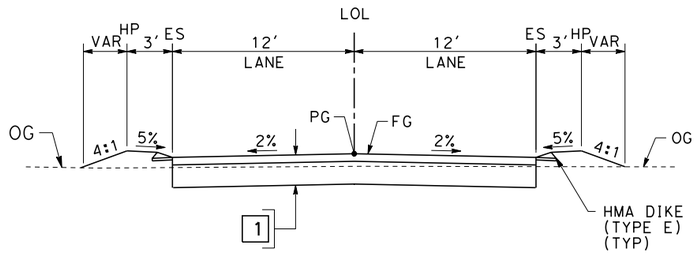
SECTION G

"VA" 10+00.00 TO 12+29.01



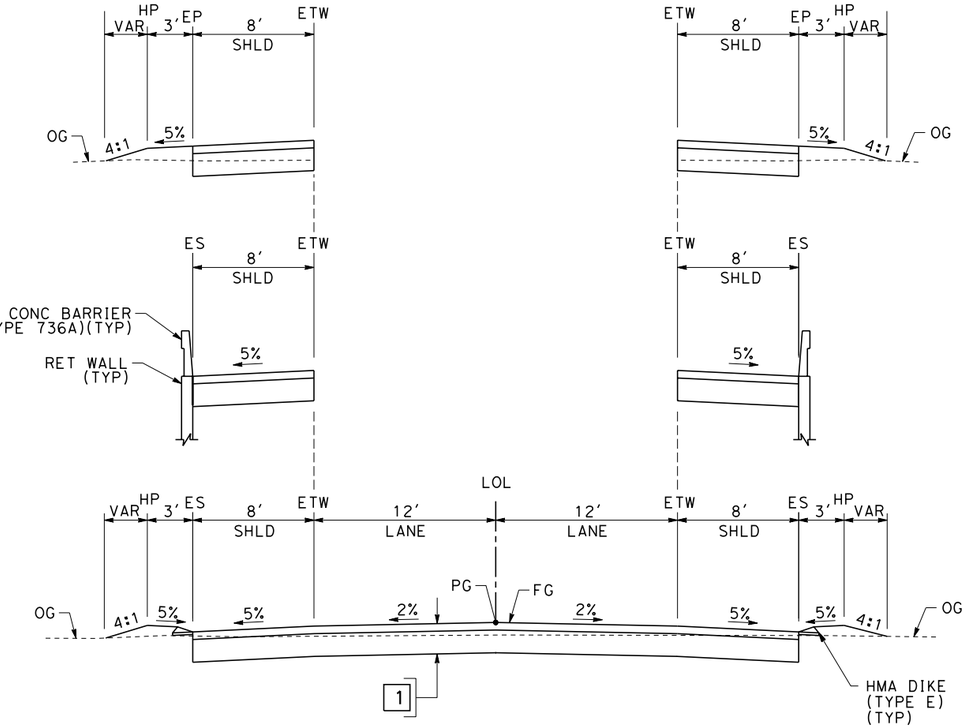
SECTION E

"OT" 11+00.00 TO 79+45.76
"RA" 10+00.00 TO 12+32.95
"OA" 10+00.00 TO 12+33.37
"NA" 10+00.00 TO 12+23.08
"PAT" 39+00.00 TO 61+55.96
"WH" 26+94.75 TO 66+69.56
"LA" 10+50.00 to 15+60.67



SECTION F

"BOS" 42+37.02 TO 57+51.14



SECTION H

"CS" 28+25.27 TO 65+22.52
"YB" 10+91.54 TO 24+07.78
"A148" 41+08.33 TO 80+66.67

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: C. ALLEN
DRAWN BY: M. POLISCHUK
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3045
SCALE NO SCALE
SHEET NO. 70 OF 71

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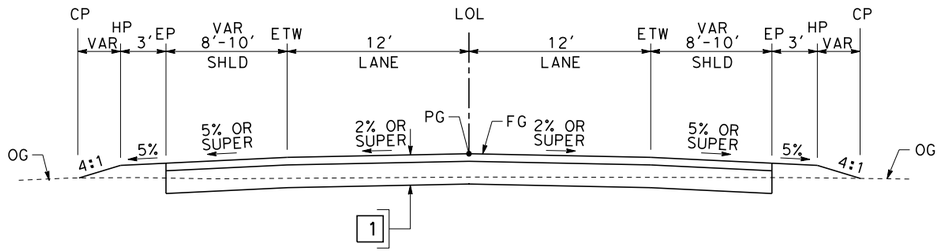
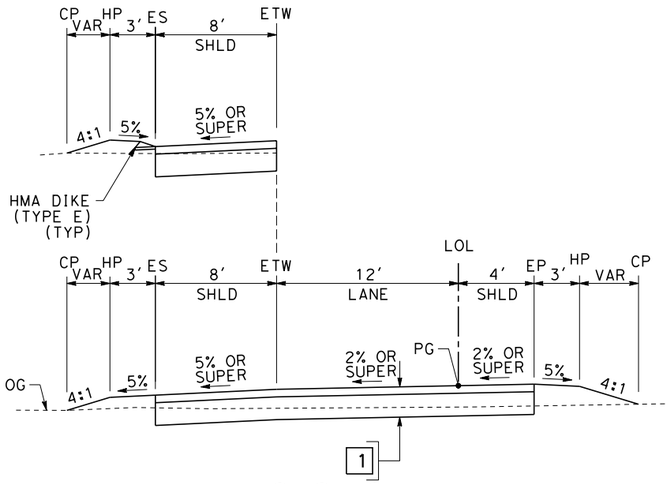


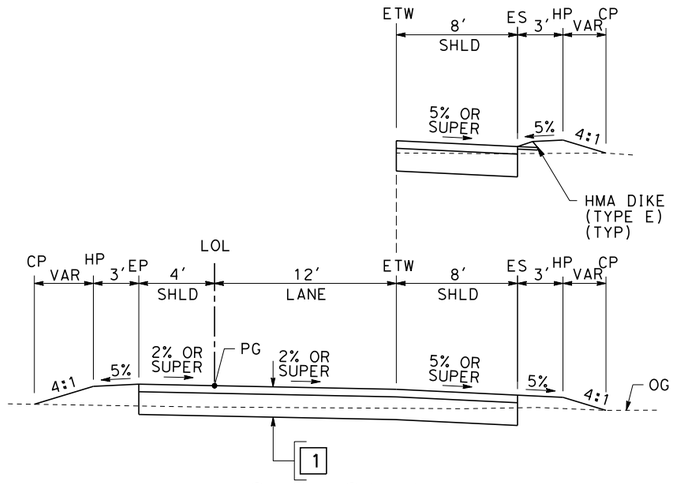
SECTION I

"SR43_S" 10+00.00 TO 12+38.22
"SR43_S" 159+40.72 TO 162+42.68



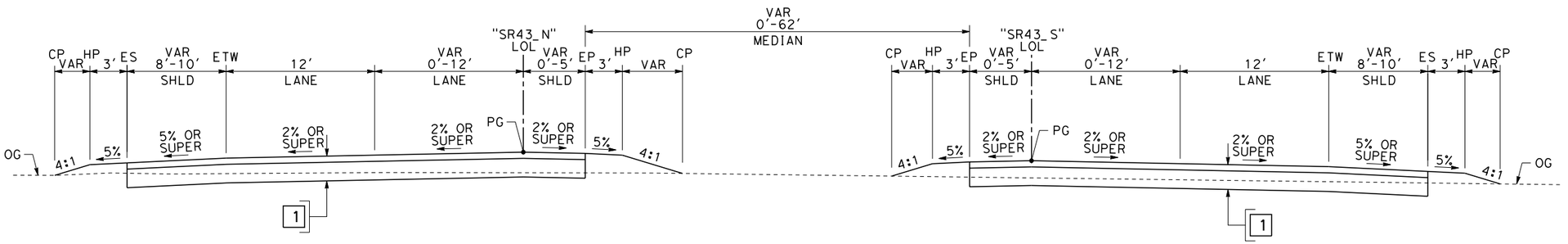
SECTION J

"NB1" 10+00.00 TO 37+66.36
"NB2" 10+00.00 TO 32+21.21



SECTION K

"SB1" 10+00.00 TO 37+53.10
"SB2" 10+00.00 TO 32+05.76



SECTION L

"SR43_N" 10+00.00 TO 156+95.50
"SR43_S" 12+38.22 TO 159+40.72

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: C. ALLEN
DRAWN BY: M. POLISCHUK
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
FRESNO TO BAKERSFIELD

CORCORAN SUBSECTION
ALIGNMENT C3
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3046
SCALE NO SCALE
SHEET NO. 71 OF 71

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