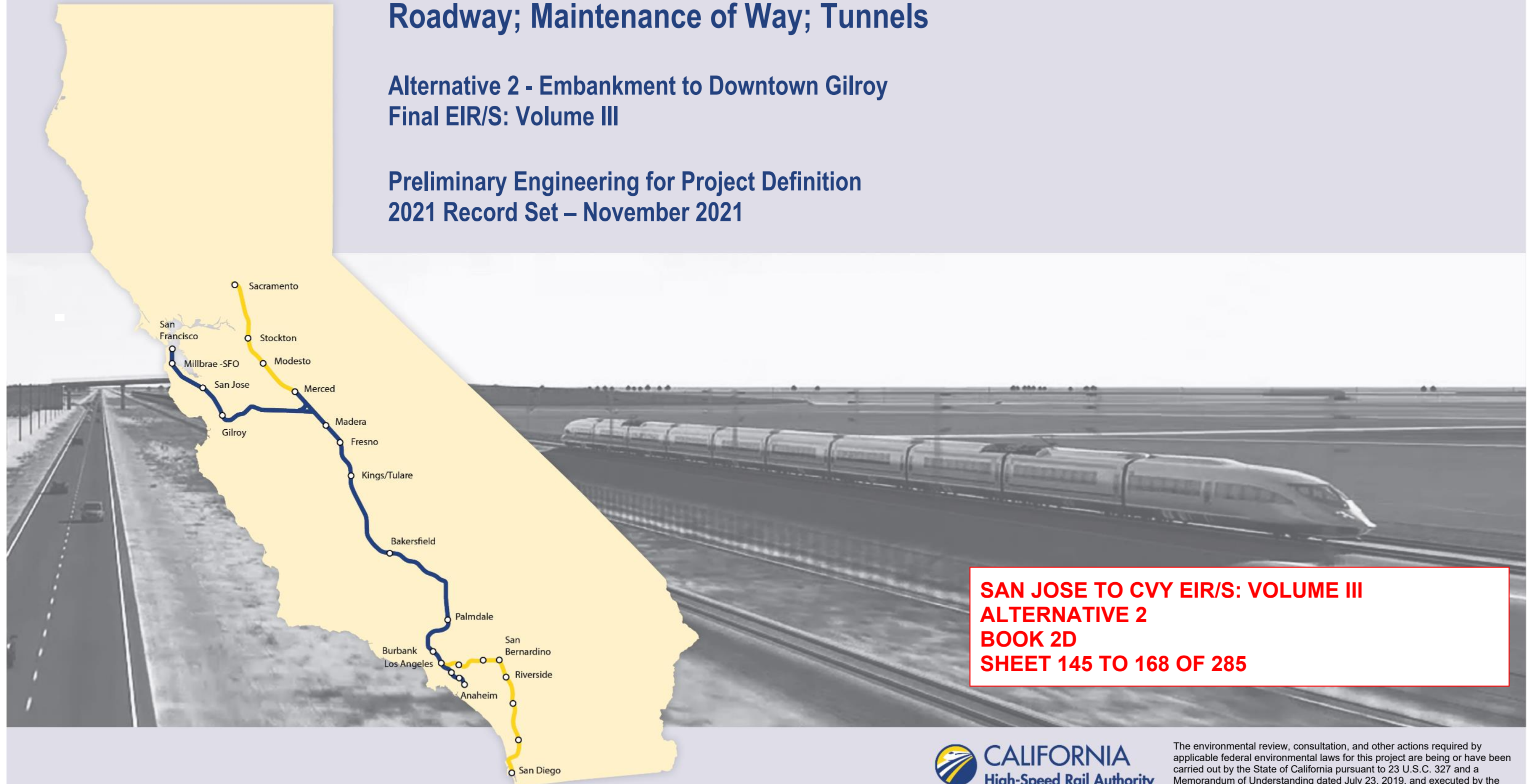


# San Jose to Merced Project Section: San Jose to Central Valley Wye

Roadway; Maintenance of Way; Tunnels

Alternative 2 - Embankment to Downtown Gilroy  
Final EIR/S: Volume III

Preliminary Engineering for Project Definition  
2021 Record Set – November 2021



**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 145 TO 168 OF 285**

**ALTERNATIVE 2 - EMBANKMENT TO DOWNTOWN GILROY**

BOOK	SHEET NO	DRAWING NO	SUBSECTION	GEOGRAPHIC LOCATION	ALIGNMENT OR FEATURE	SHEET DESCRIPTION	ADDITIONAL DESCRIPTION
<b>COVER, INDEX OF DRAWING AND KEY MAPS</b>							
BOOK 2D	A	COVER	SAN JOSE TO MERCED SECTION	N/A	SAN JOSE TO CENTRAL VALLEY WYE	ALTERNATIVE 2	EMBANKMENT TO DOWNTOWN GILROY
BOOK 2D	B	GE-A0205	ENTIRE ALTERNATIVE	GRADE SEPARATIONS, MAINTENANCE OF WAY, TUNNELS	INDEX OF DRAWING	SHEET 5 OF 8	
BOOK 2D	C	GE-D0201	GENERAL	ENTIRE ALTERNATIVE	KEY MAP	COMPOSITE PLAN	
BOOK 2D	D	GE-D0202	GENERAL	ENTIRE ALTERNATIVE	KEY MAP	SYSTEMS SITES	

**ROADWAY**

**ROADWAY - PACHECO PASS**

BOOK 2D	145	CV-S1401	PACHECO PASS	ROMERO RD, CA-152	TUNNEL	CIVIL DETAILS	
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**ROADWAY - SAN JOAQUIN VALLEY**

BOOK 2D	146	CV-S1601	SAN JOAQUIN VALLEY	MONTEREY RD, INGOMAR GRADE	HENRY MILLER ROAD	CIVIL DETAILS	
BOOK 2D	147	CV-T1603	SAN JOAQUIN VALLEY	VOLTA RD AT HENRY MILLER RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	HENRY MILLER ROAD
BOOK 2D	148	CV-T1604	SAN JOAQUIN VALLEY	HENRY MILLER ACCESS	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	HENRY MILLER ACCESS
BOOK 2D	149	CV-T1606	SAN JOAQUIN VALLEY	HENRY MILLER RD AT MERCY SPRINGS RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	MERCY SPRINGS ROAD
BOOK 2D	150	CV-T1609	SAN JOAQUIN VALLEY	DELTA RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	DELTA ROAD
BOOK 2D	151	CV-T1610	SAN JOAQUIN VALLEY	TURNER ISLAND RD AT HENRY MILLER RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	TURNER ROAD
BOOK 2D	152	CV-T1611	SAN JOAQUIN VALLEY	CARLUCCI RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	CARLUCCI ROAD
BOOK 2D	153	CV-T1612	SAN JOAQUIN VALLEY	HUTCHINS RD	HENRY MILLER ROAD	GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS	HUTCHINS ROAD

**MAINTENANCE OF WAY**

BOOK 2D	154	MY-B1007	MORGAN HILL AND GILROY	N/A	EMBANKMENT TO DOWNTOWN GILROY	MAINTENANCE OF WAY FACILITY	TYPICAL SECTIONS
BOOK 2D	155	MY-B1008	MORGAN HILL AND GILROY	N/A	EMBANKMENT TO DOWNTOWN GILROY	MAINTENANCE OF WAY FACILITY	UPRR PROFILE AND GEOMETRY FOR MOWF

**TUNNELS - PACHECO PASS**

BOOK 2D	156	TN-D1404	PACHECO PASS	N/A	TUNNEL	TUNNEL 2 - PORTAL 1	
BOOK 2D	157	TN-D1405	PACHECO PASS	ACCESS RD 1	TUNNEL	TUNNEL PORTAL 2 ACCESS ROAD	
BOOK 2D	158	TN-D1406	PACHECO PASS	CALIFORNIA AQUEDUCT	TUNNEL	TUNNEL PORTAL 2 ACCESS ROAD	
BOOK 2D	159	TN-D1407	PACHECO PASS	ACCESS RD 2	TUNNEL	TUNNEL PORTAL 2 ACCESS ROAD	
BOOK 2D	160	TN-D1408	PACHECO PASS	N/A	TUNNEL	LONGITUDINAL PROFILE	
BOOK 2D	161	TN-D1409	PACHECO PASS	N/A	TUNNEL	GRADING DETAIL	
BOOK 2D	162	TN-D1410	PACHECO PASS	N/A	TUNNEL	GRADING DETAIL	
BOOK 2D	163	TN-D1411	PACHECO PASS	N/A	TUNNEL	GRADING DETAIL	
BOOK 2D	164	TN-D1412	PACHECO PASS	N/A	TUNNEL	GRADING DETAIL	
BOOK 2D	165	TN-D1413	PACHECO PASS	I-5, FAHEY RD	TUNNEL	GRADING DETAIL	
BOOK 2D	166	TN-D1414	PACHECO PASS	N/A	TUNNEL	TUNNEL 2 - PORTAL 1	SECTIONS
BOOK 2D	167	TN-D1415	PACHECO PASS	N/A	TUNNEL	TUNNEL 2 - PORTAL 2	APPROACH 1
BOOK 2D	168	TN-D1416	PACHECO PASS	N/A	TUNNEL	TUNNEL 2 - PORTAL 2	APPROACH 2

**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET B**

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	

**2021 RECORD SET PEPP**  
NOVEMBER 30, 2021  
**NOT FOR CONSTRUCTION**

**HNTB** 1111 Broadway  
9th Floor  
Oakland, CA 94607



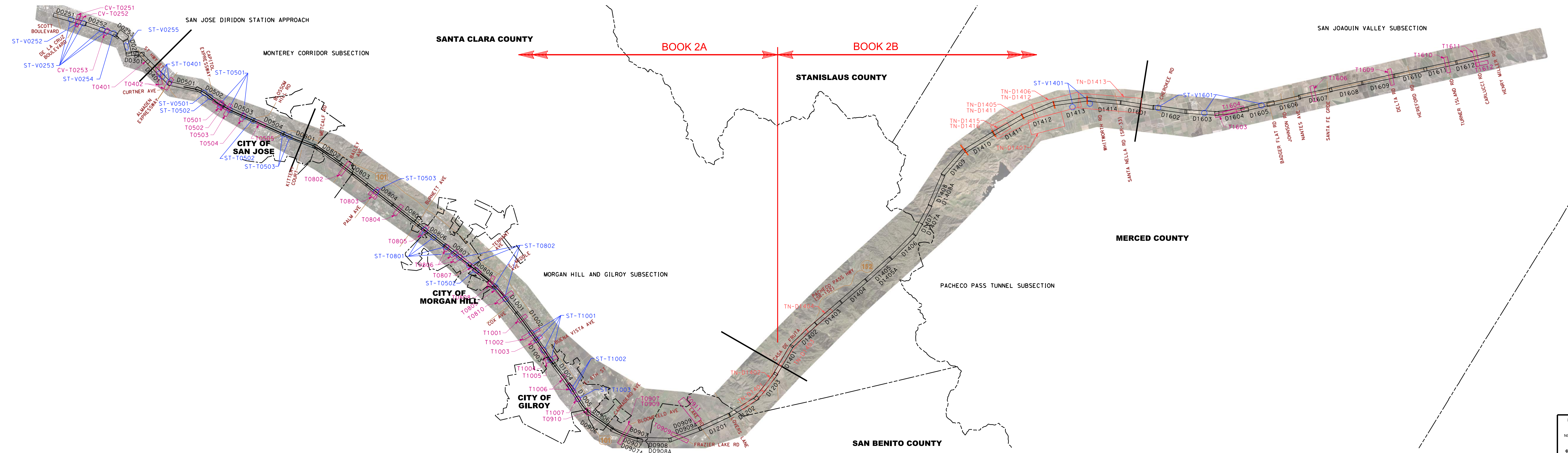
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SAN JOSE TO MERCED  
ALTERNATIVE 2  
INDEX OF DRAWING  
SHEET 5 OF 8**

CONTRACT NO.	HSR15-34
DRAWING NO.	GE-A0205
SCALE	NONE
SHEET NO.	



**ALTERNATIVE 2 BOOK INDEX**

- BOOK 2A: COMPOSITE PLAN, PROFILE AND CROSS SECTIONS
- BOOK 2B: COMPOSITE PLAN, PROFILE AND CROSS SECTIONS, STATIONS, STRUCTURES
- BOOK 2C: ROADWAY
- BOOK 2D: ROADWAY, MAINTENANCE OF WAY, TUNNELS - PACHECO PASS
- BOOK 2E: CONSTRUCTION STAGING, ALIGNMENT DATA TABLES

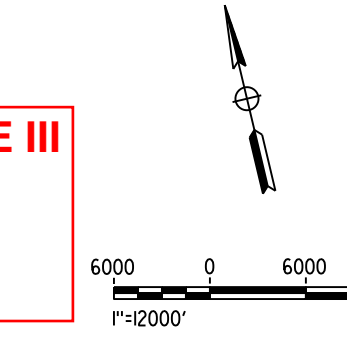


**NOTE:**  
ALTERNATIVE KEY MAP SHOWN SIDE BY SIDE FOR CLARITY.

**LEGEND**  
**KEY MAP LEGEND**

	AERIAL ORTHO-PHOTO
	COMPOSITE ROLL PLOTS
	GRADE SEPARATION ROLL PLOTS
	TUNNEL ROLL PLOTS
	STRUCTURES ROLL PLOTS
	SECTION BREAK
	CITY LIMITS
	COUNTY LINE
	EXISTING ROAD

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET C**

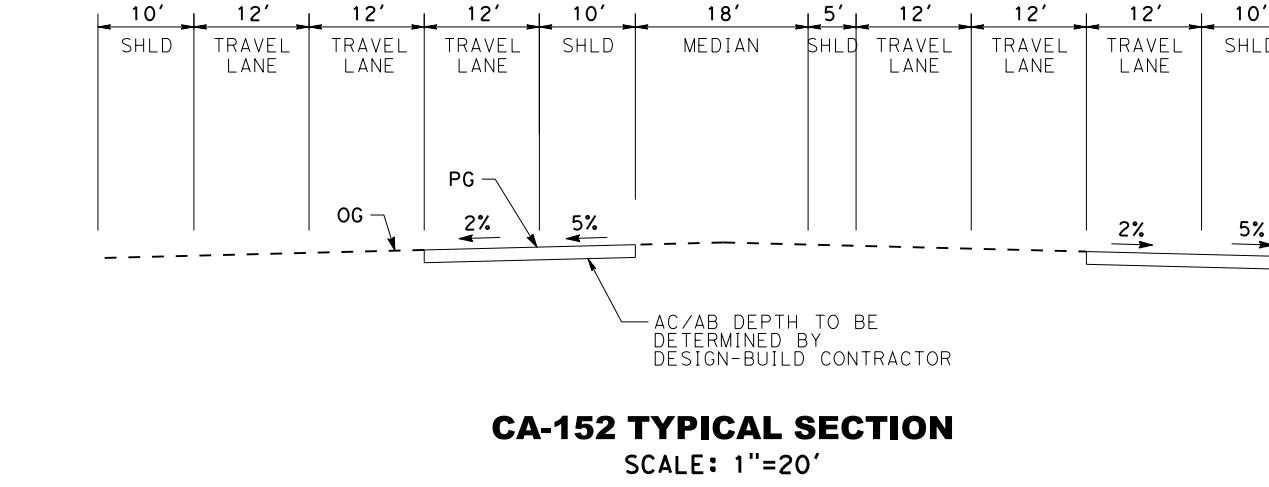
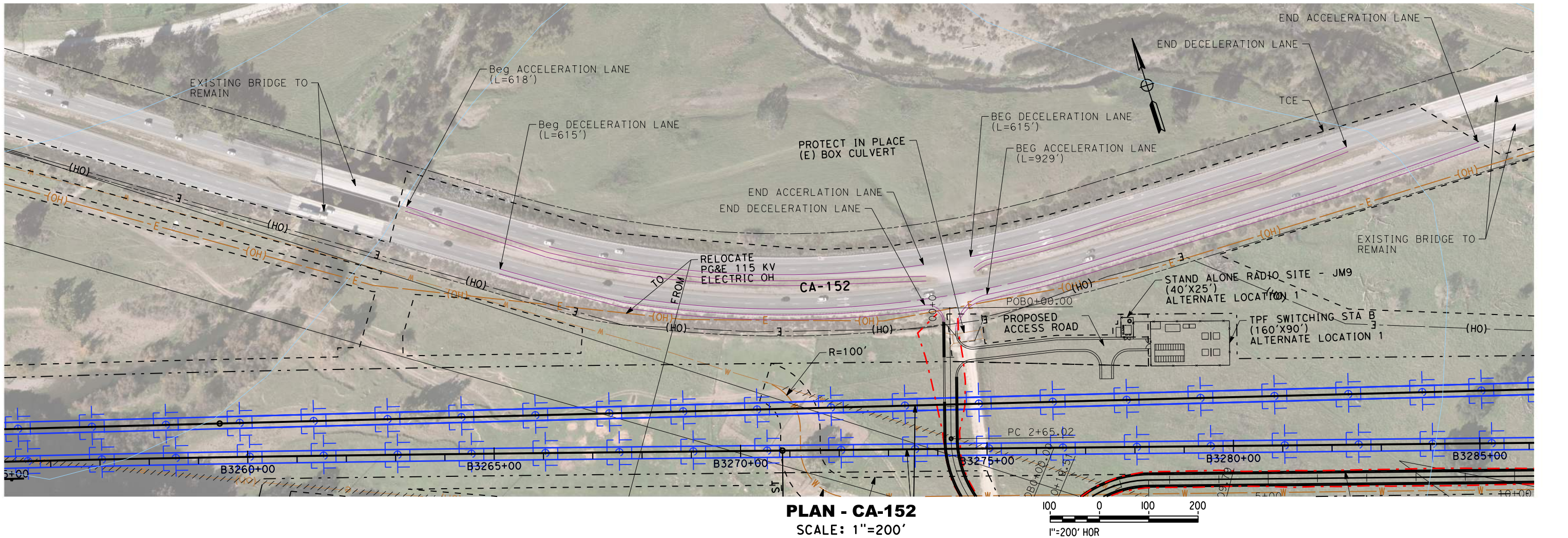
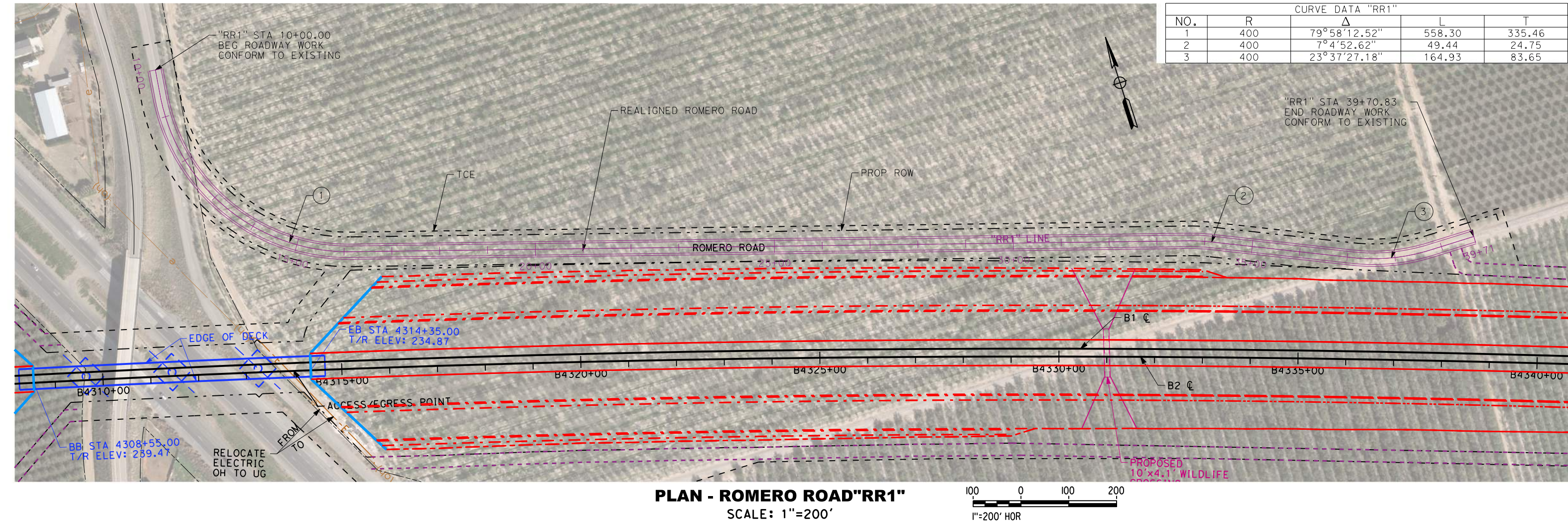


2021 RECORD SET PEPD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION		1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> ALTERNATIVE 2 KEY MAP COMPOSITE PLAN	CONTRACT NO. HSR15-34 GRAPHIC NO. GE-D0201 SCALE AS SHOWN SHEET NO.
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NOTE:  
1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.

**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 145 OF 285**

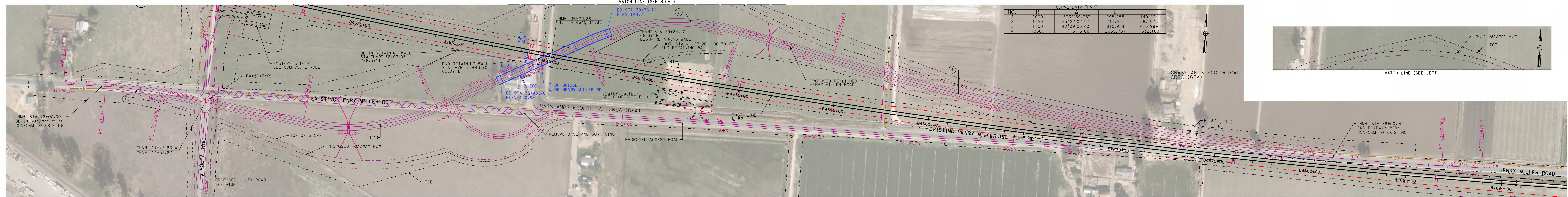
2021 RECORD SET PERP NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL CIVIL DETAILS	CONTRACT NO. HSR15-34 DRAWING NO. CV-S1401 SCALE AS SHOWN SHEET NO.
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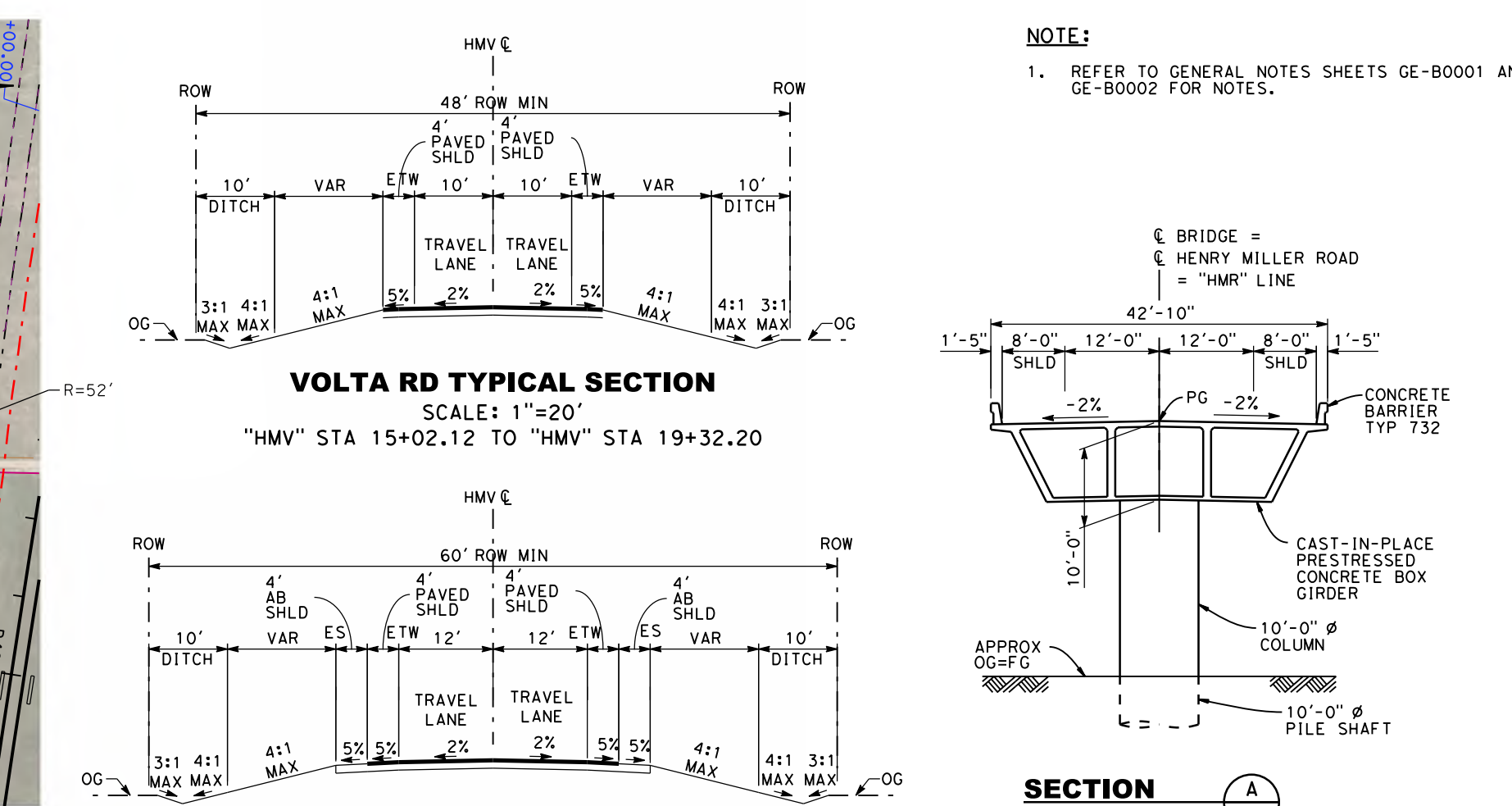
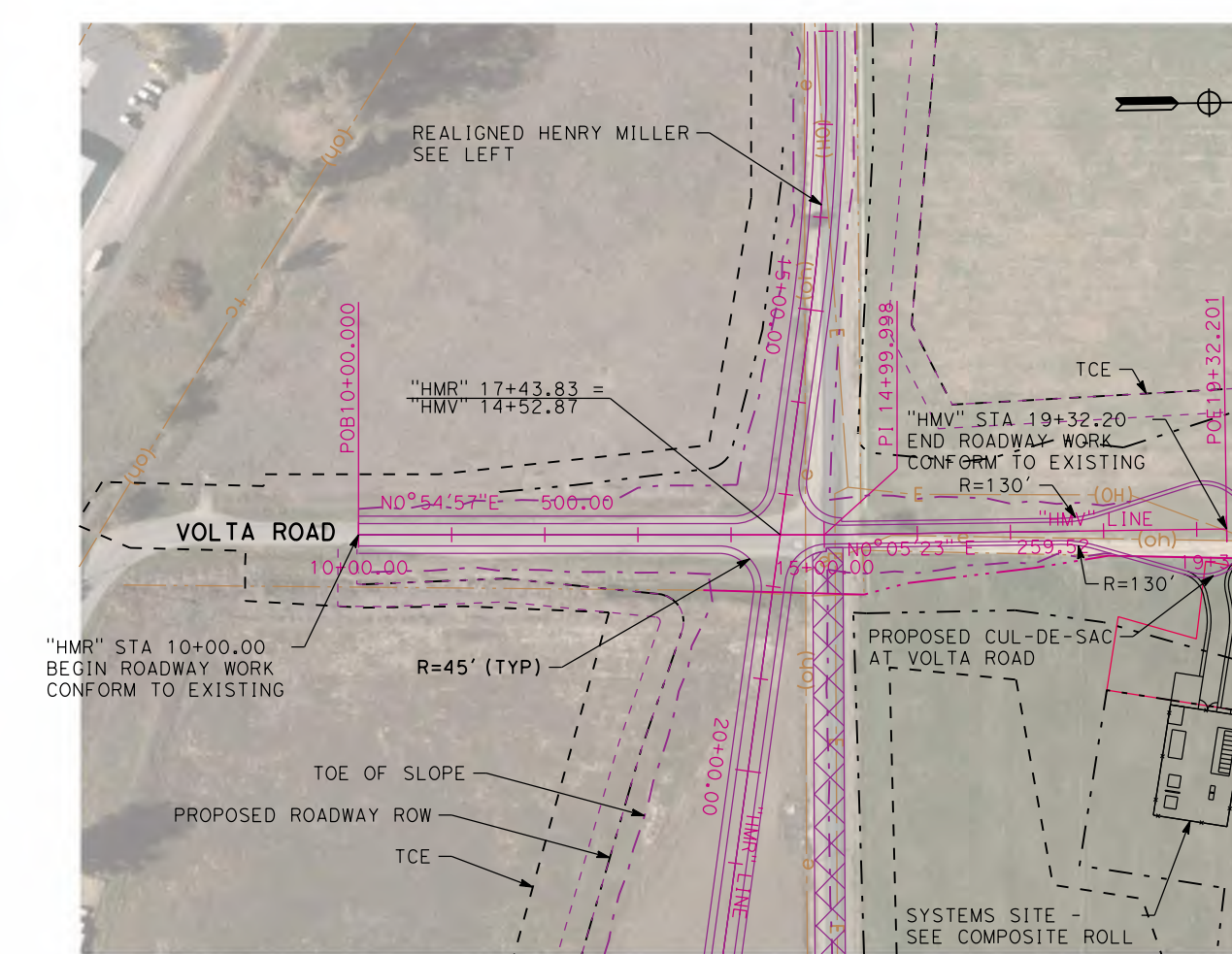




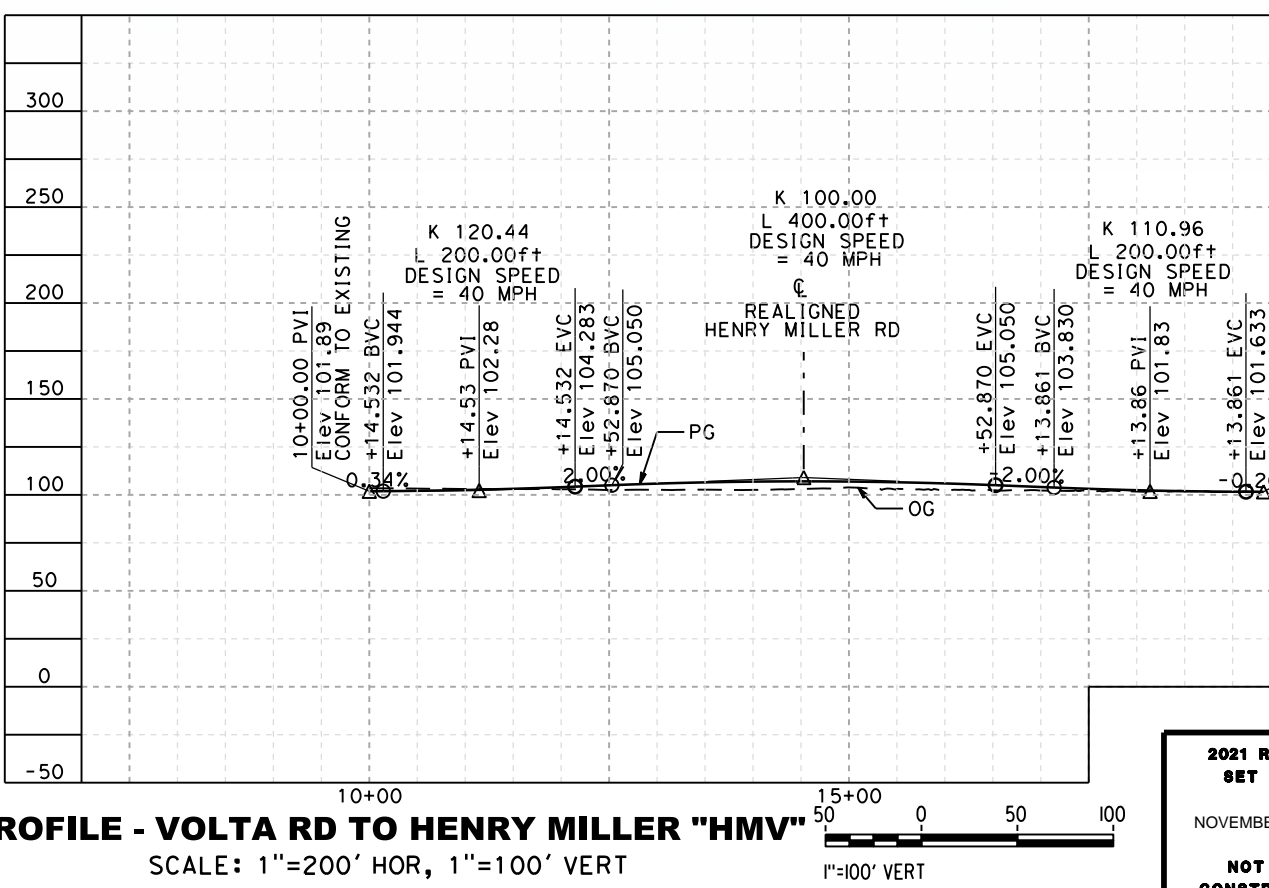
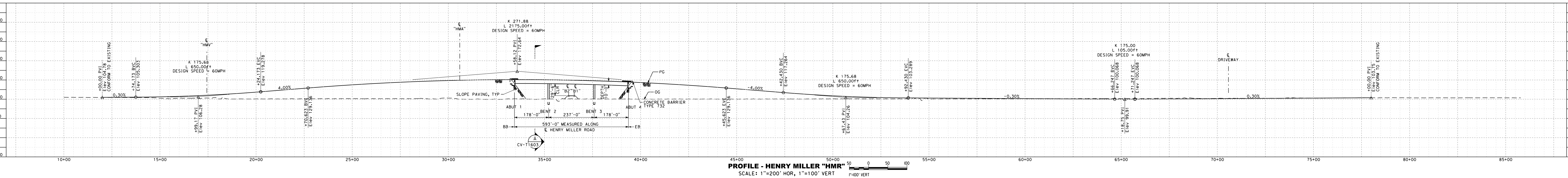




NO.	R	A	CHORD	AREA
1	2000	8° 32' 39.73"	298.255	149.404
2	1150	35° 27' 02.57"	711.541	367.573
3	1150	40° 39' 06.43"	815.934	425.989
4	13500	11° 16' 16.68"	2655.737	1332.168



**NOTE:**  
1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.



**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 147 OF 285**

**2021 RECORD SET PERM**  
NOVEMBER 30, 2021  
NOT FOR CONSTRUCTION

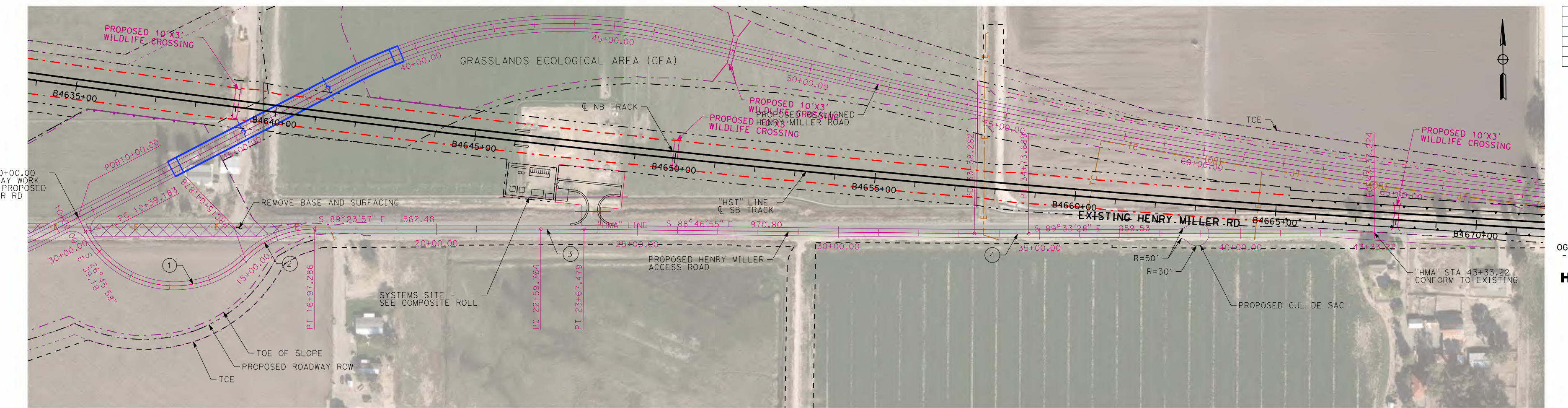
**HNTB**  
1111 Broadway  
9th Floor  
Oakland, CA 94607

**CALIFORNIA High-Speed Rail Authority**

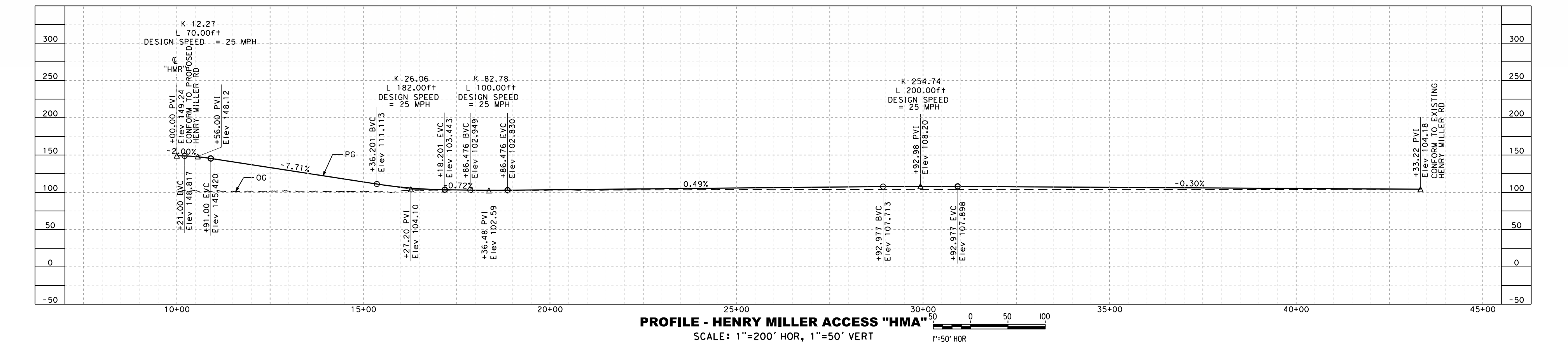
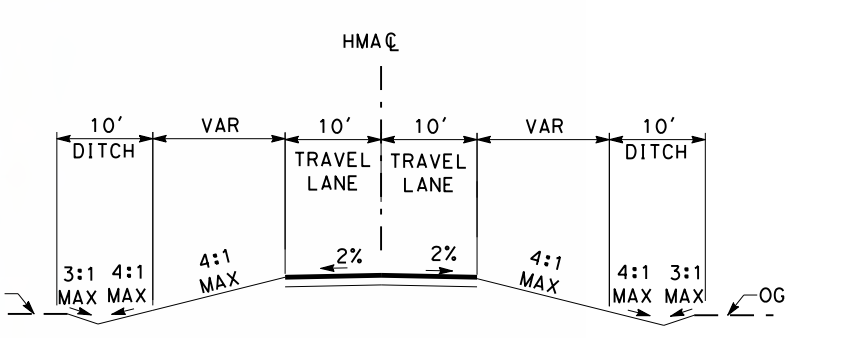
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SAN JOSE TO MERCED**  
HENRY MILLER VALLEY  
HENRY MILLER ROAD  
GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS  
HENRY MILLER ROAD

CONTRACT NO. HSR15-34  
DRAWING NO. CV-T1603  
SCALE AS SHOWN  
SHEET NO.





CURVE DATA "HMA"				
NO.	R	Δ	L	T
1	250	106°43'46.43"	465.696	336.193
2	250	44°05'47.68"	192.408	101.252
3	10000	0°37'01.77"	107.714	53.858
4	10000	0°46'32.98"	135.408	67.705

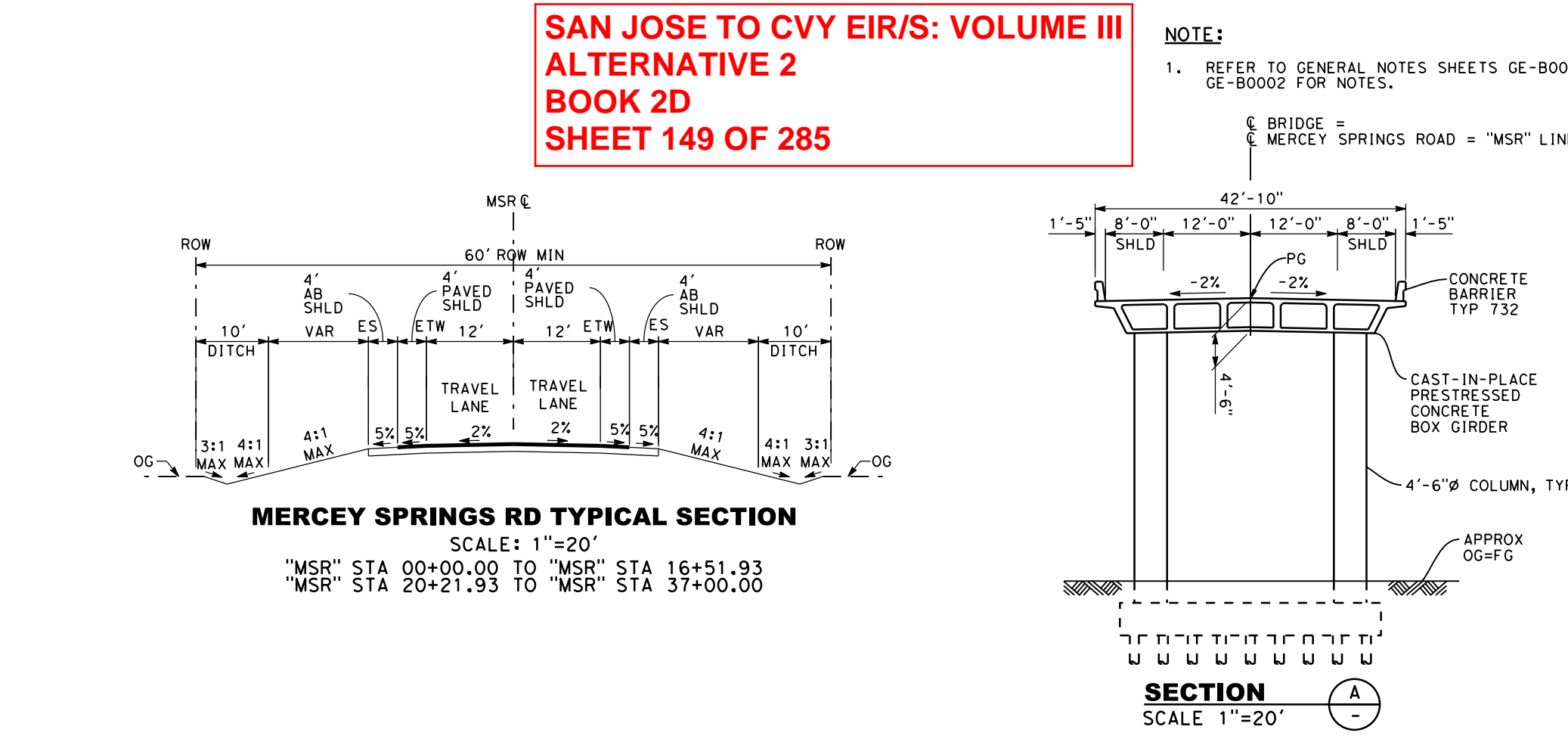
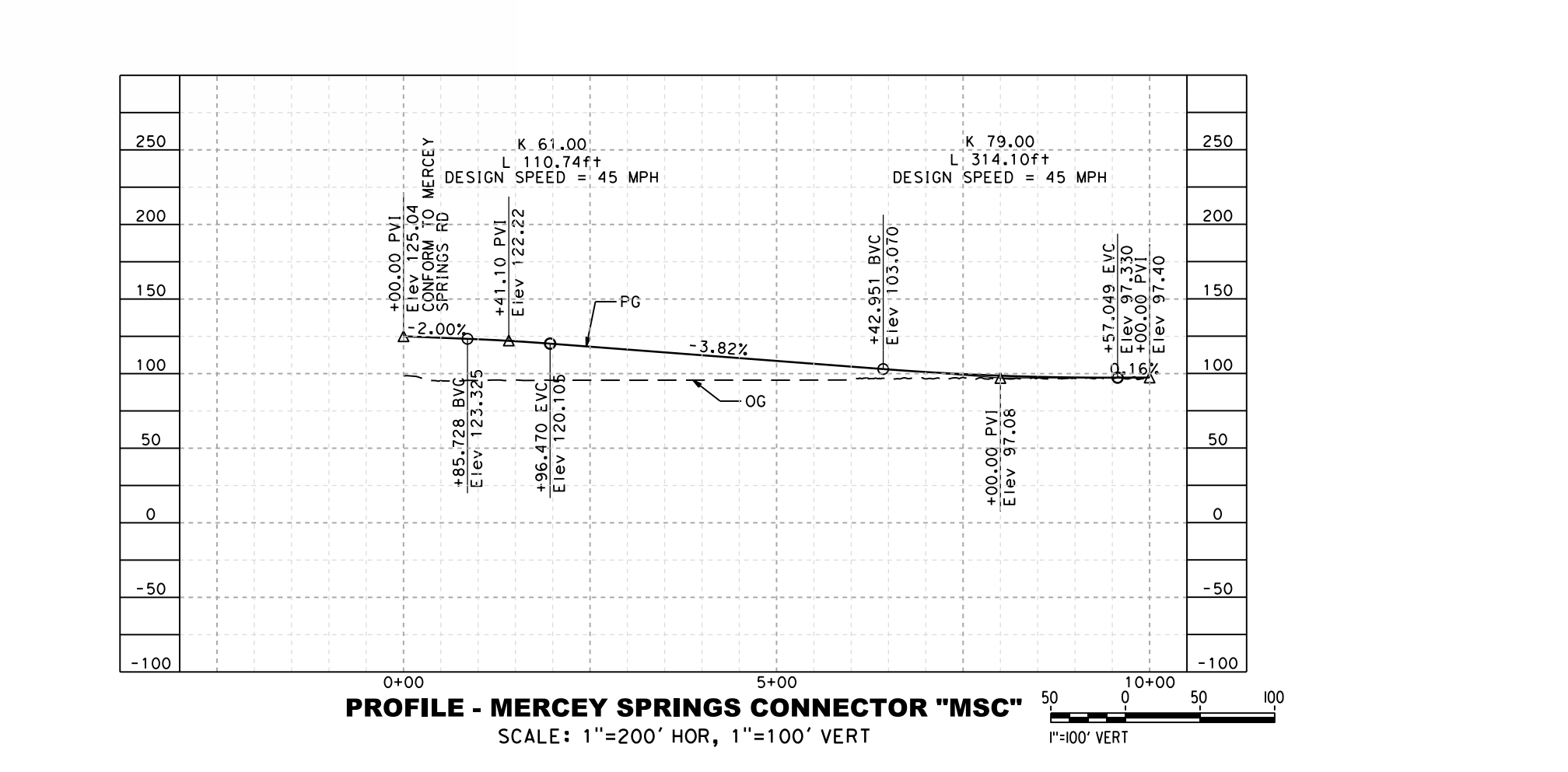
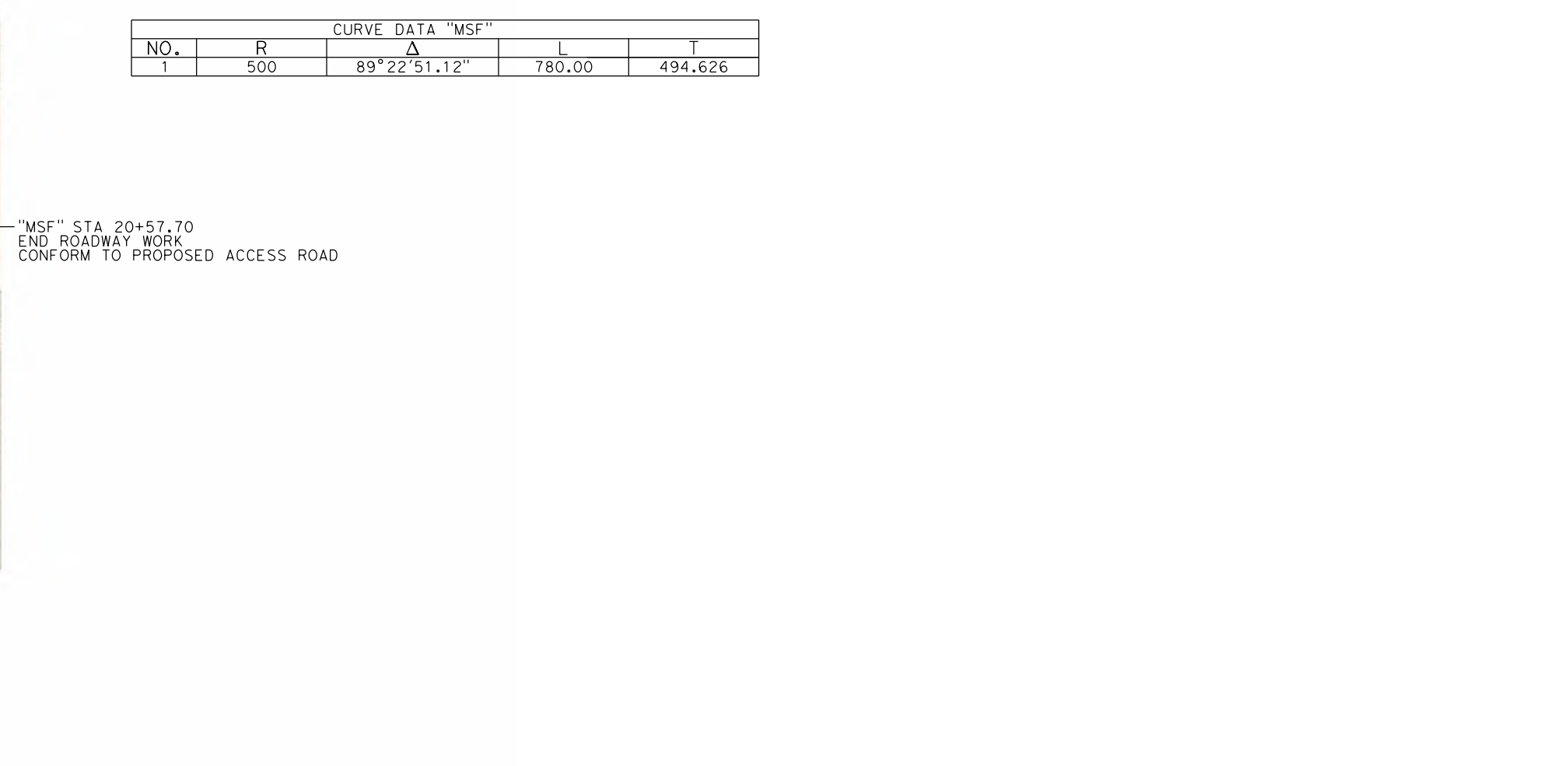
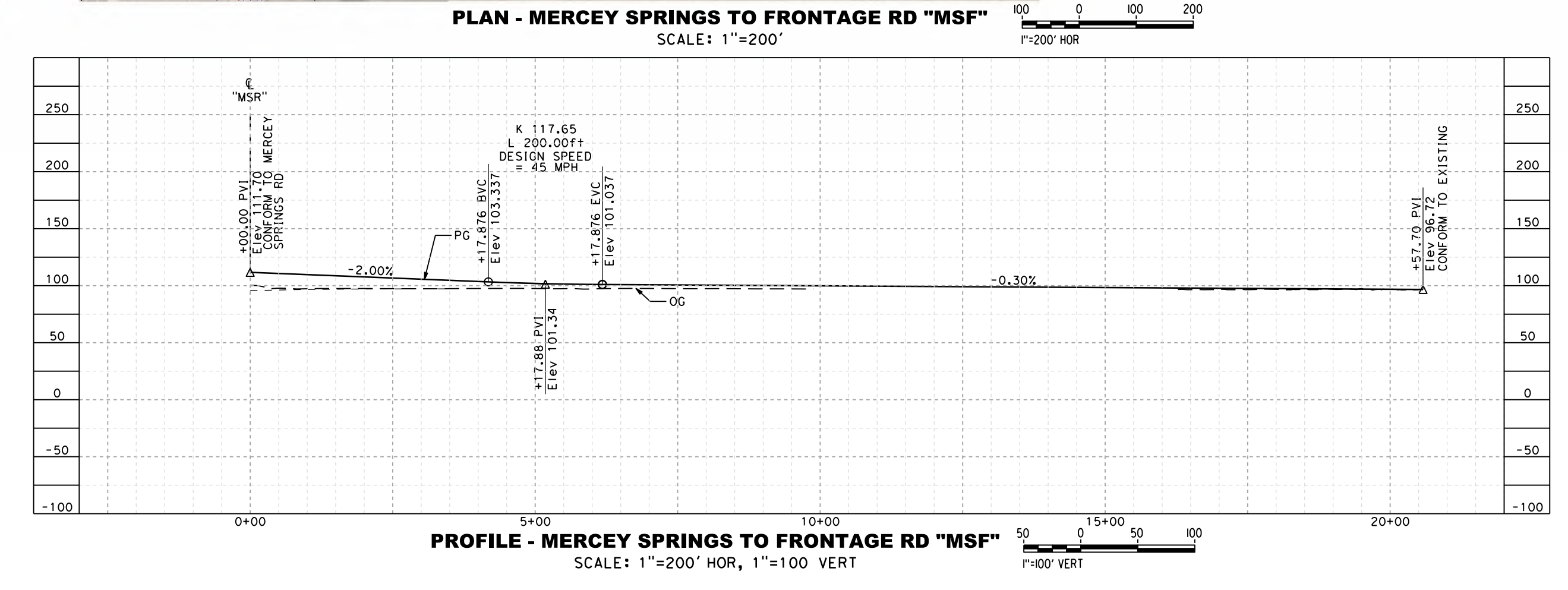
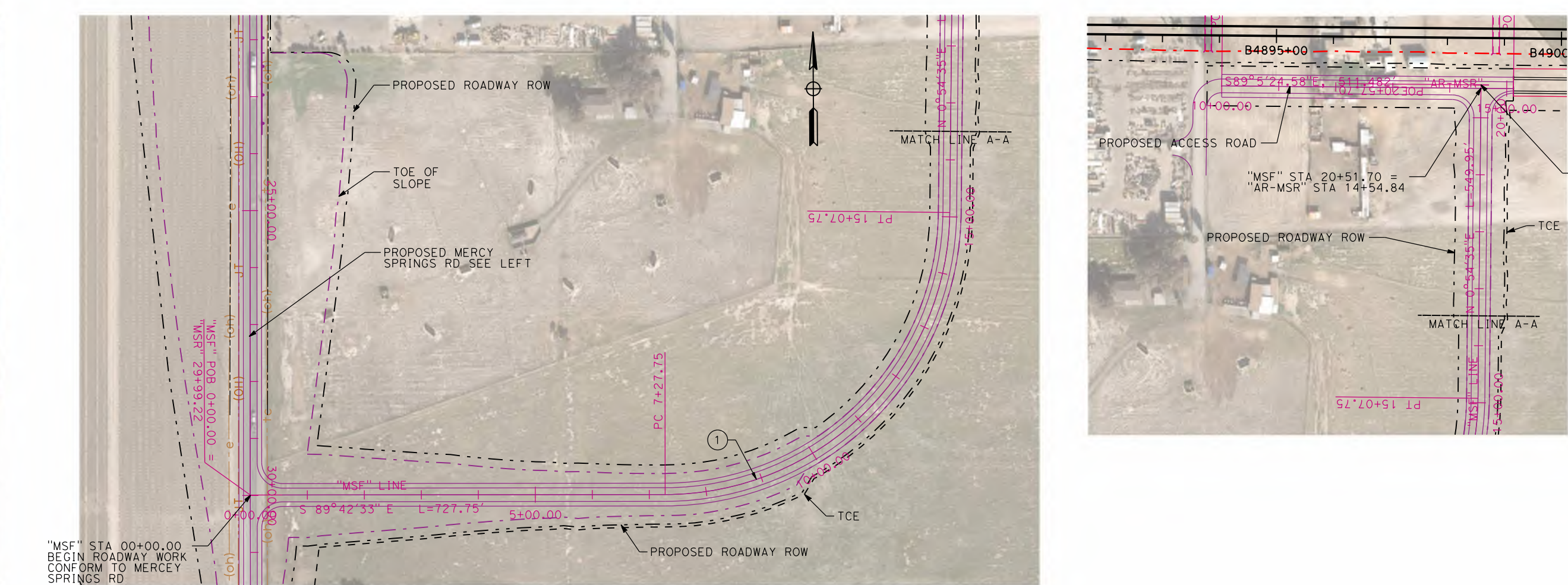
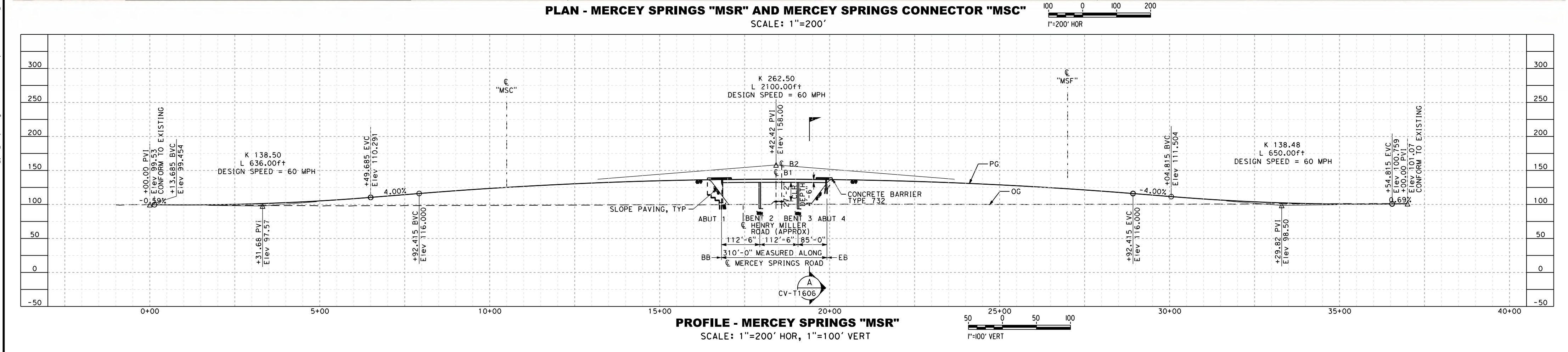
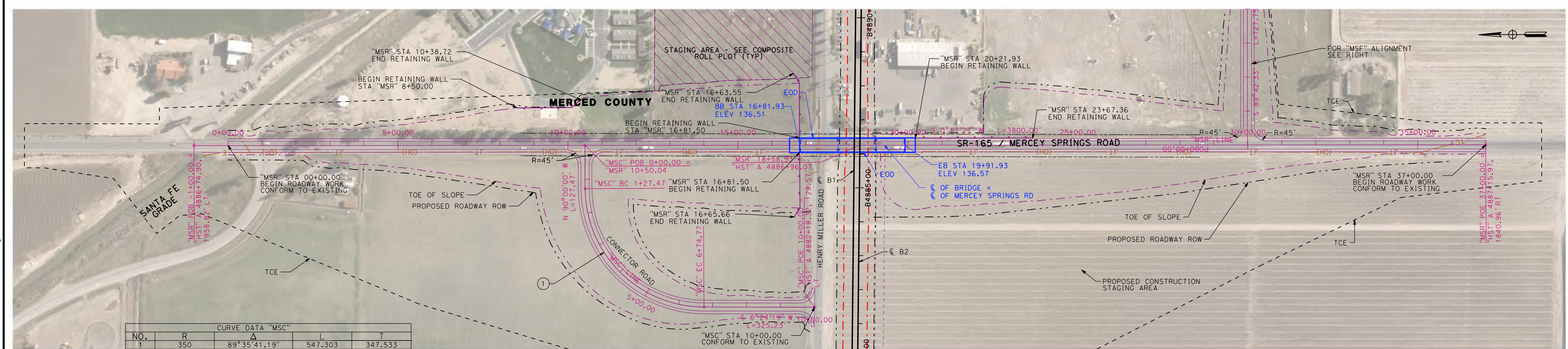


NOTE:  
1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.

SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 148 OF 285

2021 RECORD SET PERP NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607	<b>CALIFORNIA</b> High-Speed Rail Authority	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> SAN JOAQUIN VALLEY HENRY MILLER ROAD GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS HENRY MILLER ACCESS	CONTRACT NO. HSR15-34 DRAWING NO. CV-T1604 SCALE AS SHOWN SHEET NO.
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**2021 RECORD SET PERMITS**  
NOVEMBER 30, 2021  
NOT FOR CONSTRUCTION

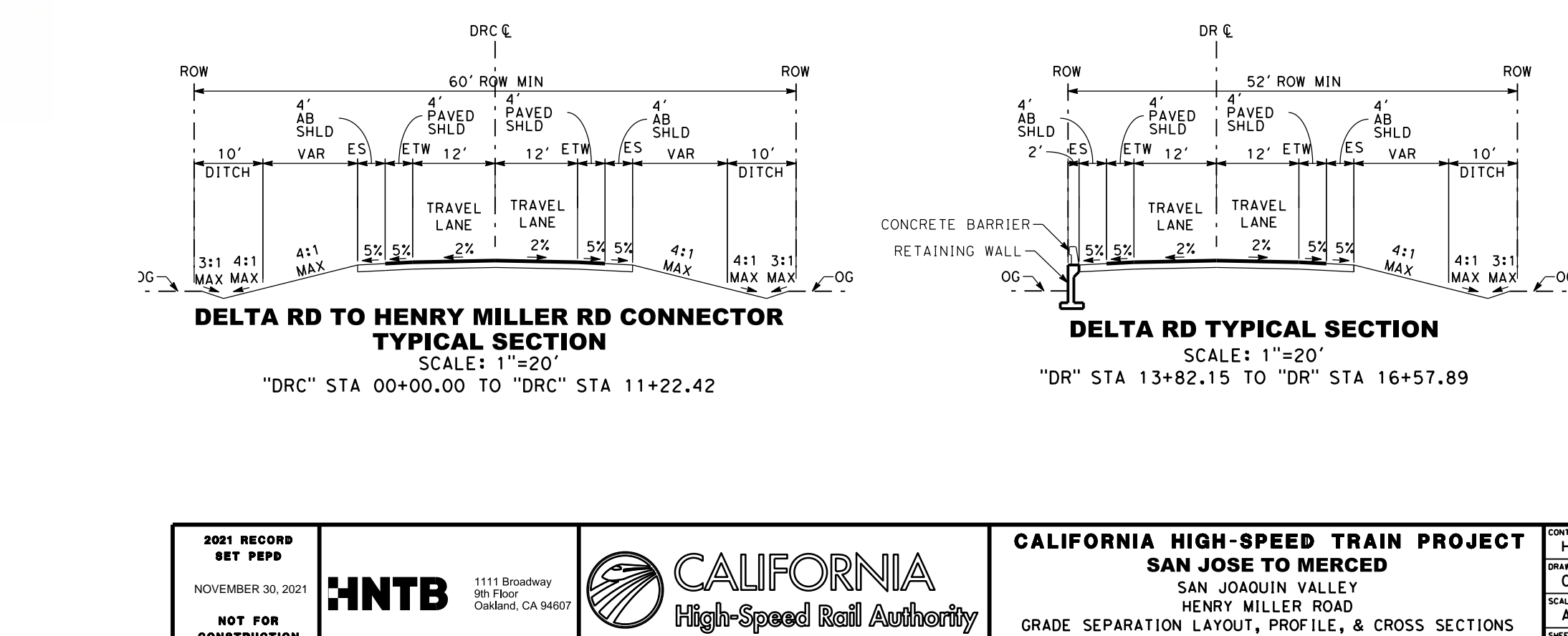
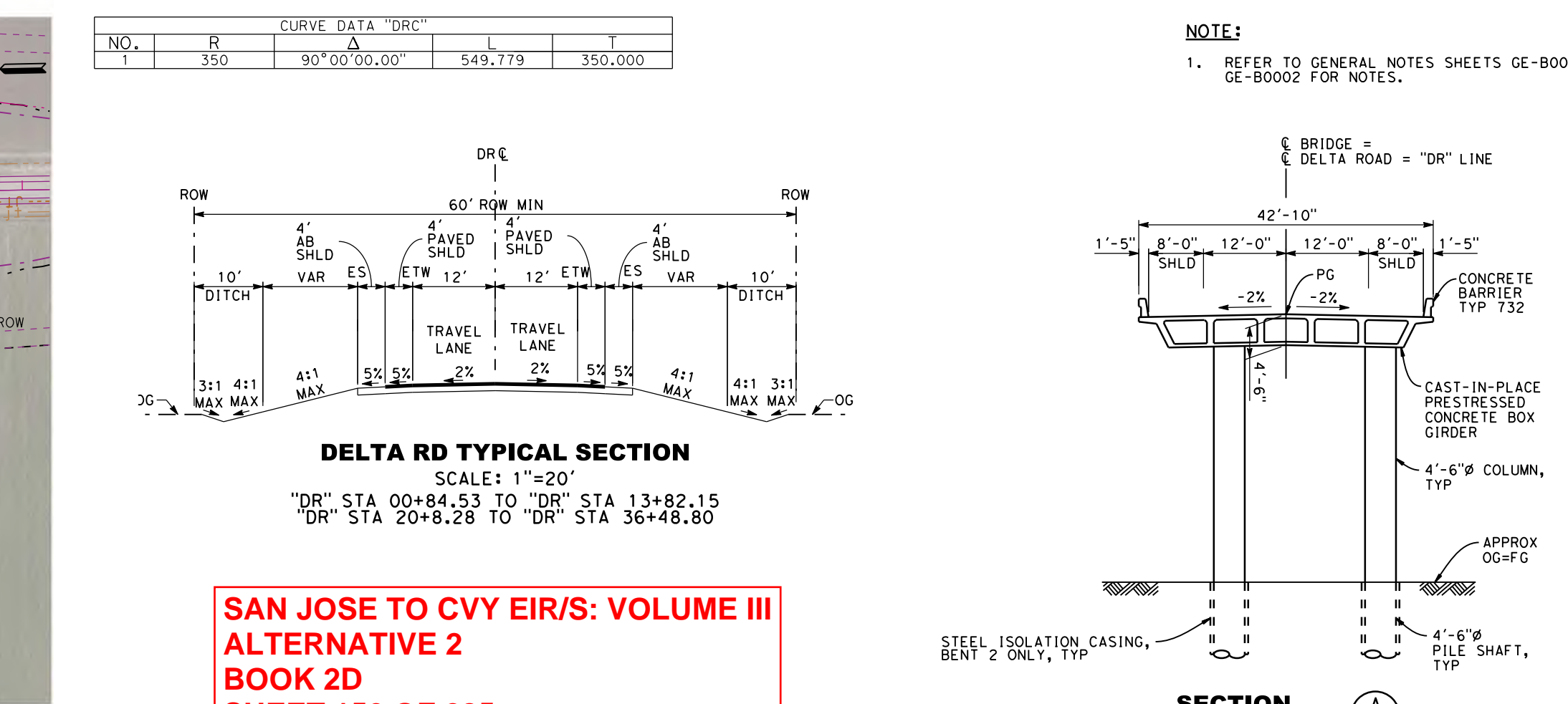
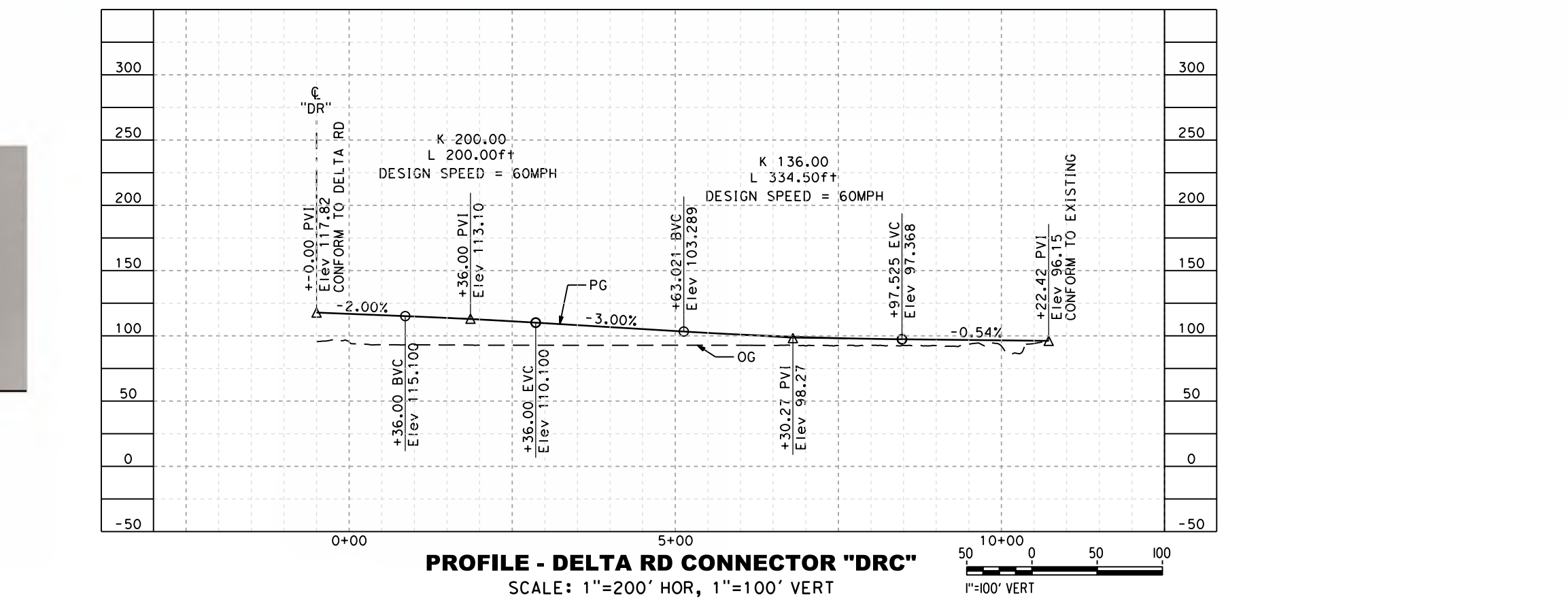
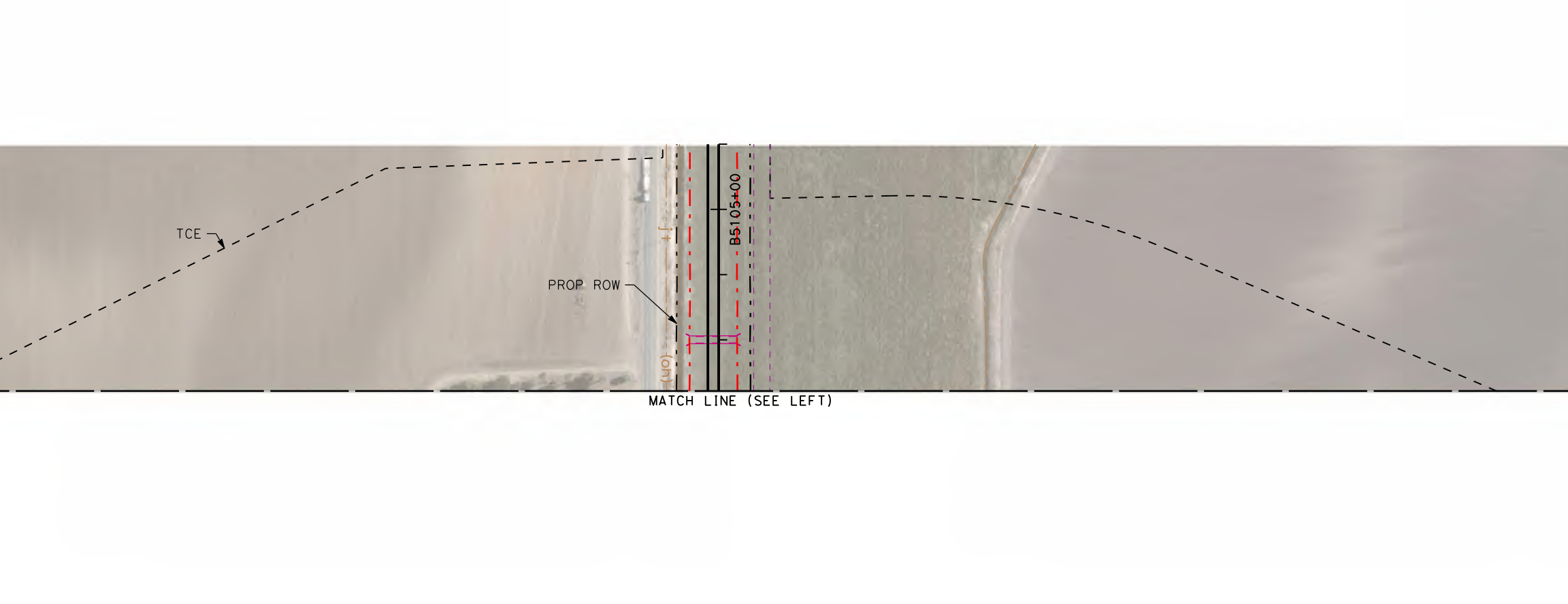
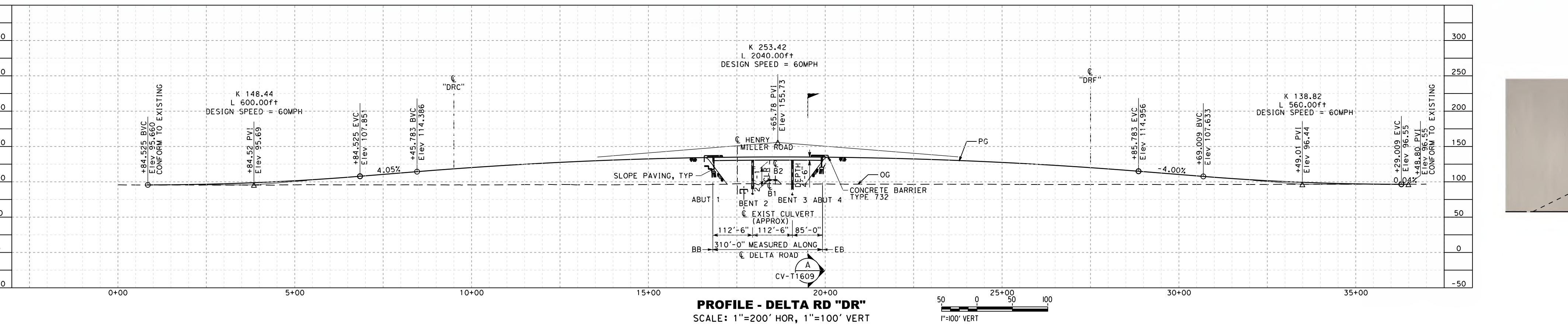
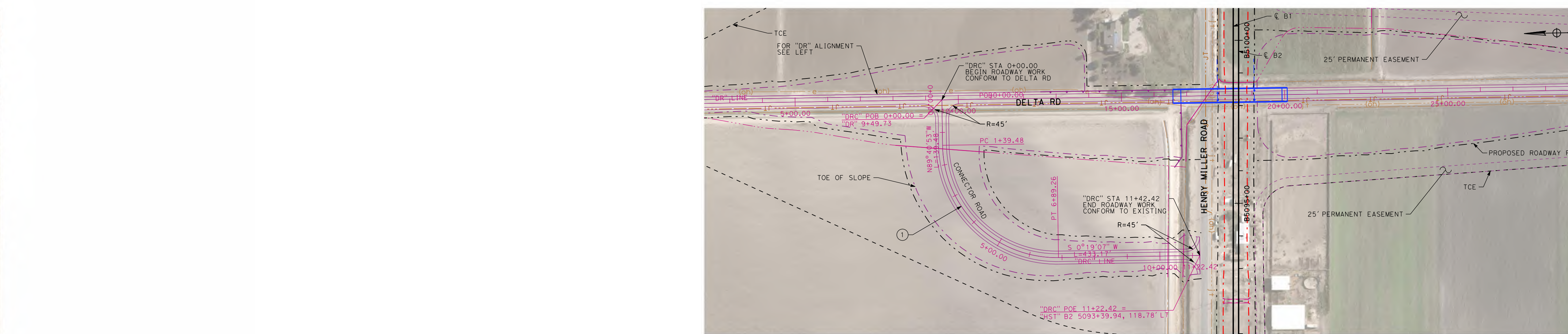
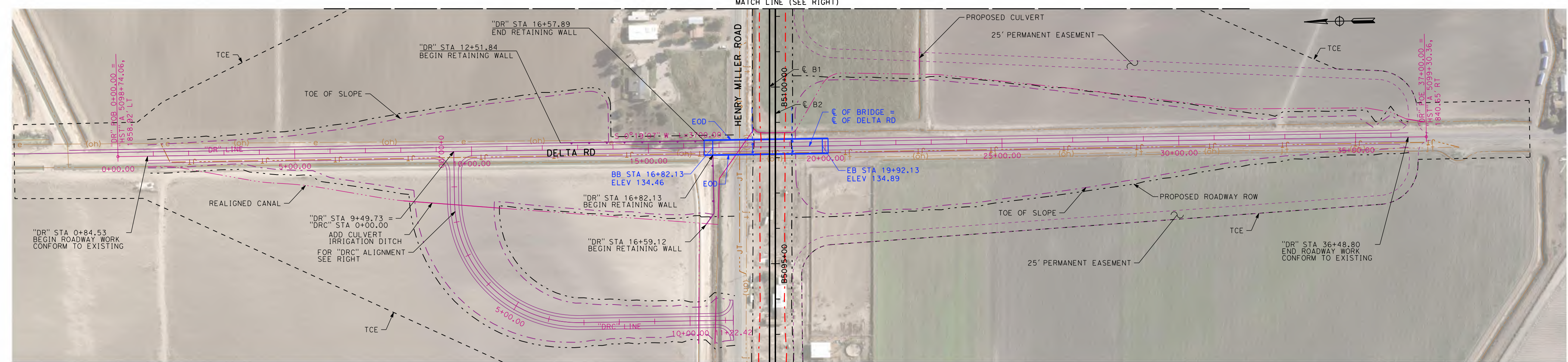
**HNTB**  
1111 Broadway  
9th Floor  
Oakland, CA 94607

**CALIFORNIA High-Speed Rail Authority**

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
SAN JOSE TO MERCY  
HENRY MILLER ROAD  
GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS  
MERCY SPRINGS ROAD

CONTRACT NO. HSR15-34  
DRAWING NO. CV-T1606  
SCALE AS SHOWN  
SHEET NO.





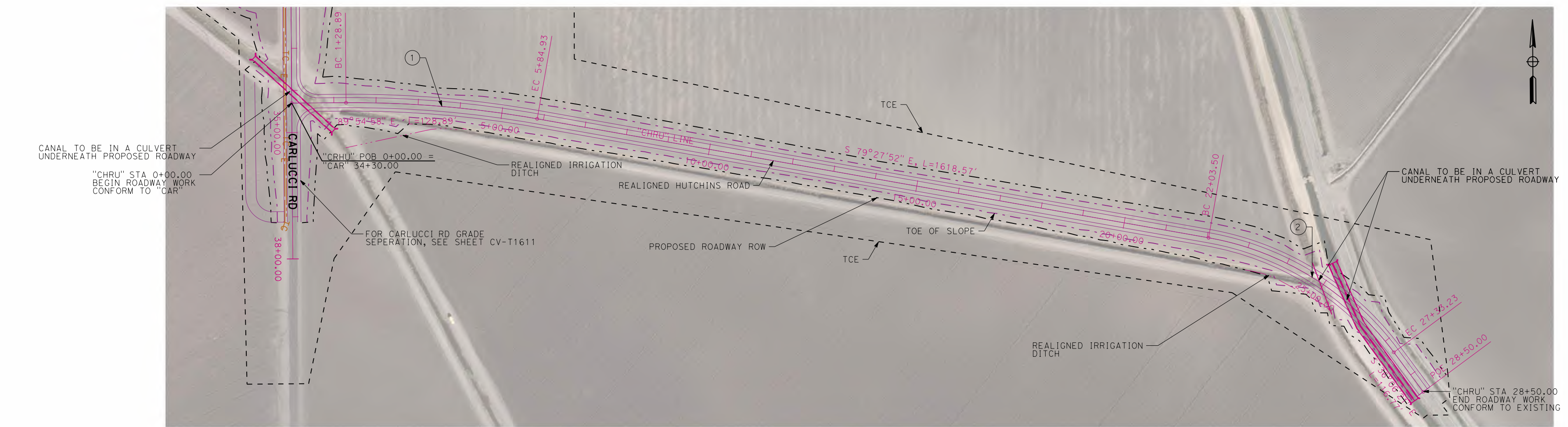






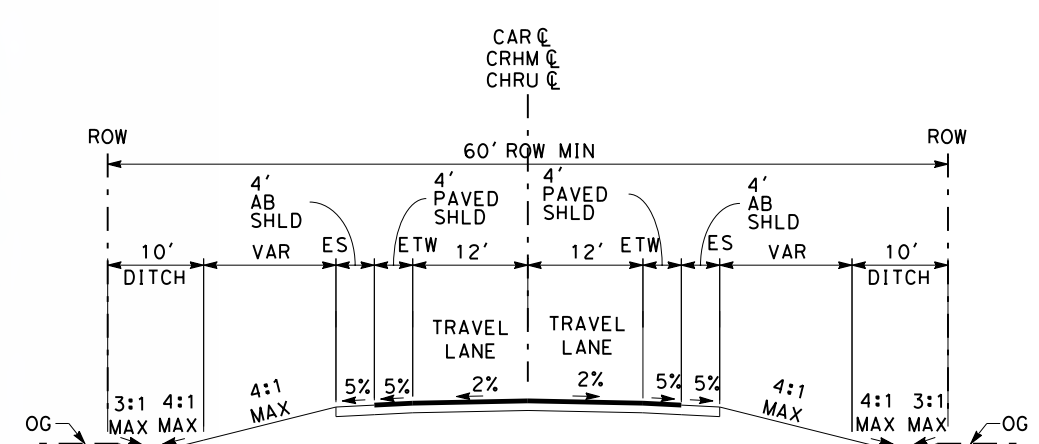






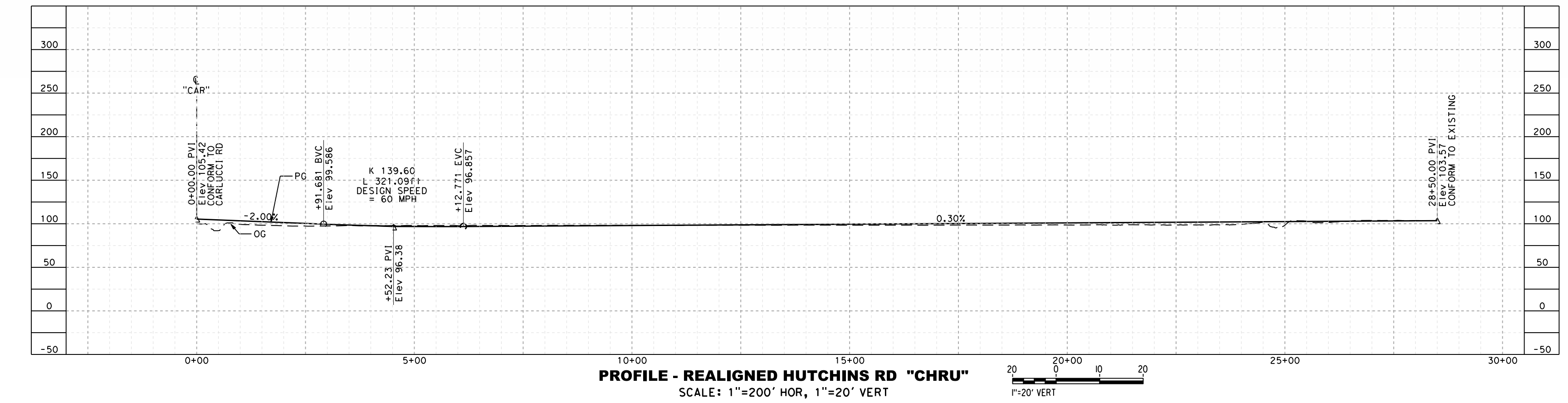
**PLAN - REALIGNED HUTCHINS ROAD "CHRU"**  
SCALE: 1"=200'

CURVE DATA "CHRU"				
NO.	R	A	L	T
1	2500	10°27'05.95"	456.039	228.654
2	700	43°21'31.47"	529.727	278.272



**CARLUCCI RD/ HENRY MILLER TO CARLUCCI RD/ REALIGNED HUTCHINS RD TYPICAL SECTION**  
SCALE: 1"=20'

"CAR" STA 00+56.10 TO "CAR" STA 17+18.58  
 "CAR" STA 20+62.58 TO "CAR" STA 37+12.59  
 "CRHM" STA 00+81.59 TO "CRHM" STA 18+00.00  
 "CHRU" STA 00+00.00 TO "CHRU" STA 28+00.00



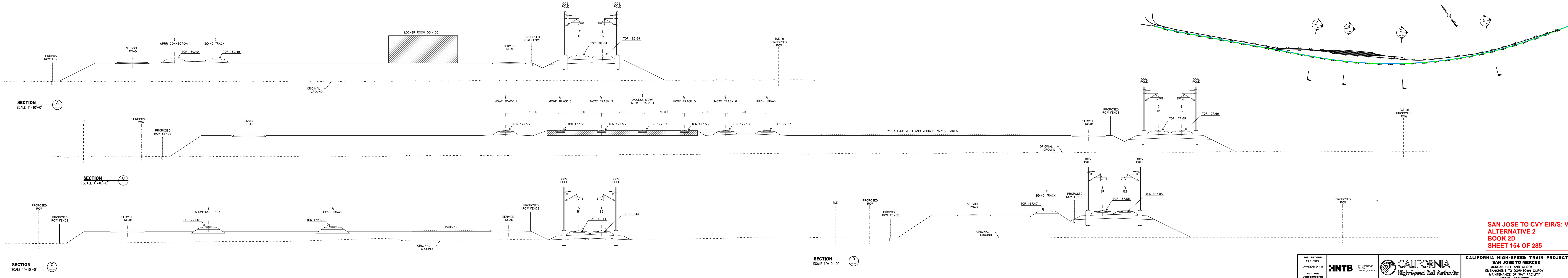
**PROFILE - REALIGNED HUTCHINS RD "CHRU"**  
SCALE: 1"=200' HOR, 1"=20' VERT

**NOTE:**  
1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 153 OF 285**

2021 RECORD SET PEPD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> SAN JOAQUIN VALLEY HENRY MILLER ROAD GRADE SEPARATION LAYOUT, PROFILE, & CROSS SECTIONS HUTCHINS ROAD	CONTRACT NO. HSR15-34 DRAWING NO. CV-T1612 SCALE AS SHOWN SHEET NO.
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SECTION A  
SCALE 1"=10'-0"

SECTION B  
SCALE 1"=10'-0"

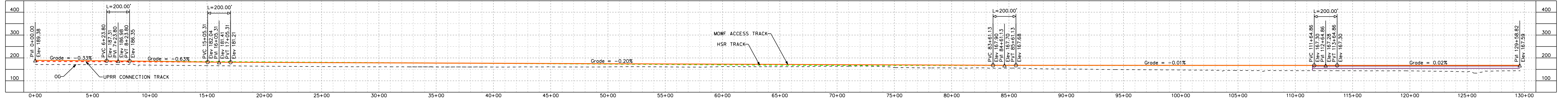
SECTION C  
SCALE 1"=10'-0"

SECTION D  
SCALE 1"=10'-0"

**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 154 OF 285**

2021 RECORD SET PERD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SAN JOSE TO MERCED</b> MORGAN HILL AND GILROY EMBANKMENT TO DOWNTOWN GILROY MAINTENANCE OF WAY FACILITY TYPICAL SECTIONS	CONTRACT NO. HSR15-34 DRAWING NO. M7-B1007 SCALE AS SHOWN SHEET NO.
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**MOWF TRANSITION TRACK PROFILE**

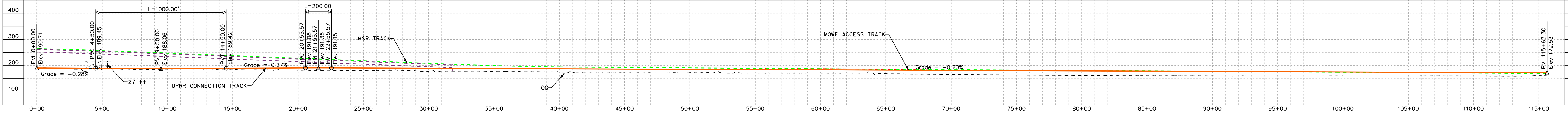
Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Tangent	POB	0+00.00	1816309.47	6256326.95						
Tangent	TS	3+73.51	1816045.46	6256591.16						
Clothoid	TS	3+73.51	1816045.46	6256591.16						
Clothoid	SPI	4+63.51	1815981.84	6256654.82	135		0°58'01"	Left	67.5	0.19
Clothoid	SC	5+08.51	1815950.57	6256687.19						
Arc	SC	5+08.51	1815950.57	6256687.19						
Arc	PI	7+52.28	1815781.20	6256862.51	4000	486.93	6°58'29"	Left		
Arc	CC		1818827.36	6259466.41						
Arc	CS	9+95.44	1815634.37	6257057.09						
Clothoid	CS	9+95.44	1815634.37	6257057.09						
Clothoid	SPI	10+40.44	1815607.27	6257093.02	135		0°58'01"	Left	67.5	0.19
Clothoid	ST	11+30.44	1815554.28	6257165.76						
Tangent	ST	11+30.44	1815554.28	6257165.76						
Tangent	TS	15+37.30	1815314.72	6257494.63						
Clothoid	TS	15+37.30	1815314.72	6257494.63						
Clothoid	SPI	16+27.31	1815261.73	6257567.38	135		0°58'01"	Right	67.5	0.19
Clothoid	SC	16+72.30	1815234.63	6257603.30						
Arc	SC	16+72.30	1815234.63	6257603.30						
Arc	PI	18+05.34	1815154.49	6257709.50	4000	265.97	3°48'35"	Right		
Arc	CC		1812041.64	6255193.98						
Arc	CS	19+38.27	1815067.48	6257810.14						
Clothoid	CS	19+38.27	1815067.48	6257810.14						
Clothoid	SPI	19+83.27	1815038.05	6257844.18	135		0°58'01"	Right	67.5	0.19
Clothoid	ST	20+73.27	1814978.05	6257911.26						
Tangent	ST	20+73.27	1814978.05	6257911.26						
Tangent	TS	22+96.78	1814829.03	6258077.84						

**MOWF TRANSITION TRACK HORIZONTAL ALIGNMENT**

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Clothoid	TS	22+96.78	1814829.03	6258077.84						
Clothoid	SPI	23+86.78	1814769.03	6258144.32	135		0°58'01"	Right	67.5	0.19
Clothoid	SC	24+31.78	1814738.46	6258177.95						
Arc	SC	24+31.78	1814738.46	6258177.95						
Arc	PI	25+85.52	1814634.04	6258290.79	4000	307.33	4°24'08"	Right		
Arc	CC		1811802.62	6255461.18						
Arc	CS	27+39.11	1814521.27	6258395.28						
Clothoid	CS	27+39.11	1814521.27	6258395.28						
Clothoid	SPI	27+84.11	1814488.26	6258425.87	135		0°58'01"	Right	67.5	0.19
Clothoid	ST	28+74.11	1814421.22	6258485.92						
Tangent	ST	28+74.11	1814421.22	6258485.92						
Tangent	TS	29+62.32	1814355.51	6258544.77						
Clothoid	TS	29+62.32	1814355.51	6258544.77						
Clothoid	SPI	30+52.32	1814288.47	6258604.82	135		0°58'01"	Left	67.5	0.19
Clothoid	SC	30+97.32	1814255.46	6258635.40						
Arc	SC	30+97.32	1814255.46	6258635.40						
Arc	PI	32+51.06	1814142.69	6258739.90	4000	307.33	4°24'08"	Left		
Arc	CC		1816974.11	6261569.51						
Arc	CS	34+04.64	1814038.27	6258852.74						
Clothoid	CS	34+04.64	1814038.27	6258852.74						
Clothoid	SPI	34+49.64	1814007.70	6258885.77	135		0°58'01"	Left	67.5	0.19
Clothoid	ST	35+39.64	1813947.70	6258952.85						
Tangent	ST	35+39.64	1813947.70	6258952.85						
Tangent	TS	62+64.00	1812131.34	6260983.36						
Clothoid	TS	62+64.00	1812131.34	6260983.36						
Clothoid	SPI	63+24.00	1812091.34	6261028.08	90		0°30'56"	Left	45	0.07
Clothoid	SC	63+54.00	1812071.54	6261050.61						

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Arc	SC	63+54.00	1812071.54	6261050.61						
Arc	PI	68+19.10	1811764.58	6261400.04	5000	927.53	10°37'43"	Left		
Arc	CC		1815827.97	6264350.49						
Arc	CS	72+81.51	1811527.35	6261800.08						
Clothoid	CS	72+81.51	1811527.35	6261800.08						
Clothoid	SPI	73+11.51	1811512.04	6261825.88	90		0°30'56"	Left	45	0.07
Clothoid	ST	73+71.51	1811481.90	6261877.77						
Tangent	ST	73+71.51	1811481.90	6261877.77						
Tangent	TS	85+56.62	1810886.60	6262902.51						
Clothoid	TS	85+56.62	1810886.60	6262902.51						
Clothoid	SPI	86+23.29	1810853.11	6262960.15	100		0°15'21"	Left	50	0.04
Clothoid	SC	86+56.62	1810836.49	6262989.05						
Arc	SC	86+56.62	1810836.49	6262989.05						
Arc	PI	96+63.12	1810334.80	6263861.60	11200	2007.61	10°16'13"	Left		
Arc	CC		1820545.95	6268571.75						
Arc	CS	106+64.23	1809996.71	6264809.62						
Clothoid	CS	106+64.23	1809996.71	6264809.62						
Clothoid	SPI	106+97.56	1809985.51	6264841.02	100		0°15'21"	Left	50	0.04
Clothoid	ST	107+64.23	1809963.40	6264903.91						
Tangent	ST	107+64.23	1809963.40	6264903.91						
Tangent	POE	129+64.22	1809233.67	6266979.35						
Tangent	PT	6+40.41	1819981.96	6253102.25						
Tangent	PC	6+40.41	1819981.96	6253102.25						
Arc	PC	7+84.88	1819877.56	6253202.11						
Arc	PI	8+10.15	1819859.29	6253219.58	620	52.50	4°40'09"	Right		
Arc	CC		1819449.02	6252754.05						
Arc	PT	8+35.40	1819839.66	6253235.5						
Tangent	PT	8+35.40	1819839.66	6253235.5						
Tangent	TS	12+76.76	1819496.93	6253513.59						

**UPRR CONNECTION TRACK PROFILE**



**UPRR CONNECTION TRACK PROFILE**

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Tangent	POB	0+00.00	1820404.29	6252631.81						
Tangent	PI	0+43.18	1820367.66	6252654.67						
Tangent	PC	0+43.18	1820367.66	6252654.67						
Tangent	PC	1+43.67	1820287.58	6252715.38						
Arc	PC	1+43.67	1820287.58	6252715.38						
Arc	PI	2+88.11	1820172.48	6252802.65	620	283.82	26°13'43"	Left		
Arc	CC		1820662.18	6253209.43						
Arc	CS	4+27.49	1820107.81	6252931.81						
Clothoid	CS	4+27.49	1820107.81	6252931.81						
Clothoid	SPI	5+35.01	1820059.66	6253027.94	620	212.92	19°40'34"	Right		
Clothoid	SC	5+35.01	1819553.44	6252654.18						
Clothoid	ST	6+40.41	1819981.96	6253102.25						
Tangent	ST	6+40.41	1819981.96	6253102.25						
Tangent	PC	7+84.88	1819877.56	6253202.11						
Arc	PC	7+84.88	1819877.56	6253202.11						
Arc	PI	8+10.15	1819859.29	6253219.58	620	52.50	4°40'09"	Right		
Arc	CC		1819449.02	6252754.05						
Arc	PT	8+35.40	1819839.66	6253235.5						
Tangent	PT	8+35.40	1819839.66	6253235.5						
Tangent	TS	12+76.76	1819496.93	6253513.59						

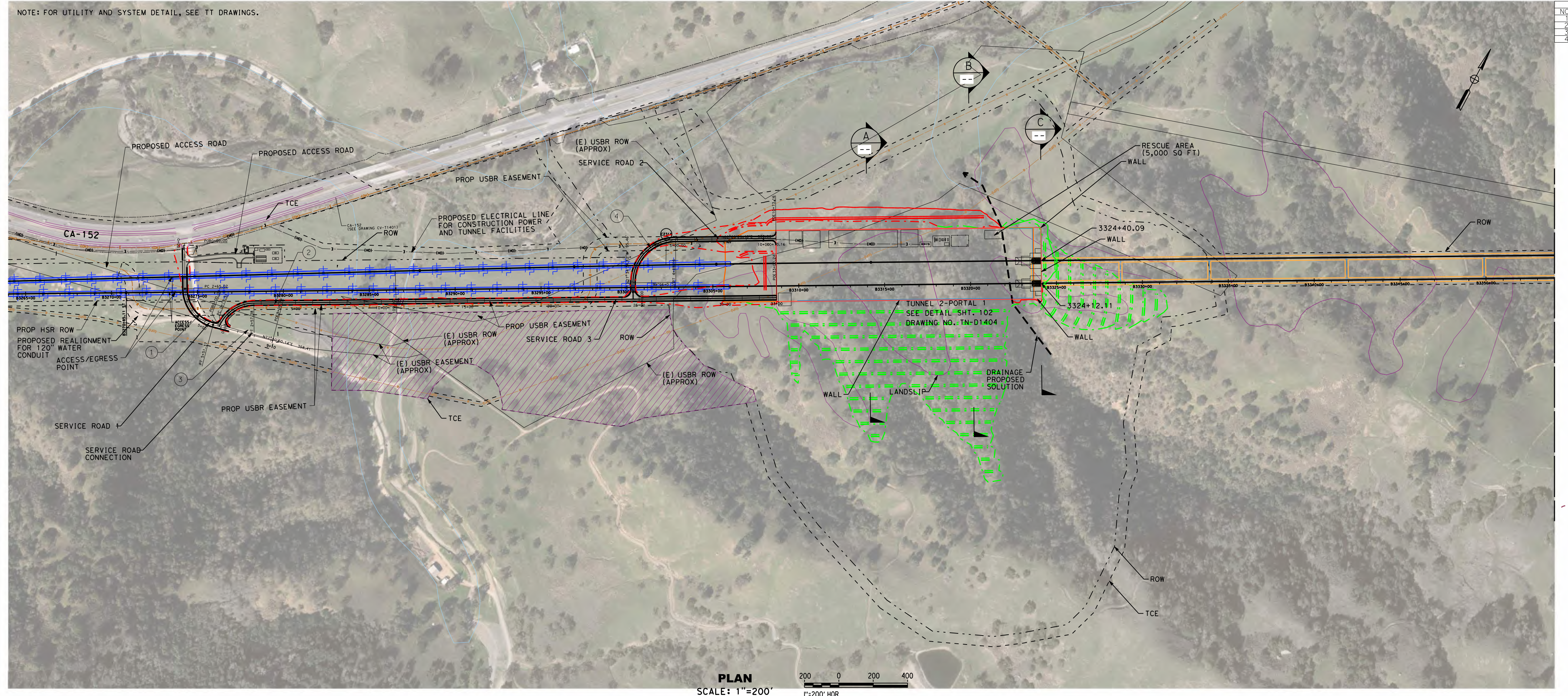
**UPRR CONNECTION TRACK HORIZONTAL ALIGNMENT**

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Clothoid	TS	12+76.76	1819496.93	6253513.59						
Clothoid	SPI	13+66.76	1819427.04	6253570.29	135		0°46'25"	Left	67.50	0.15
Clothoid	SC	14+11.76	1819392.48	6253599.11						
Arc	SC	14+11.76	1819392.48	6253599.11						
Arc	PI	14+97.11	1819326.93	6253653.78	5000	170.69	1°57'21"	Left		
Arc	CC		1822594.92	6257438.95						
Arc	CS	15+82.44	1819263.29	6253710.65						
Clothoid	CS	15+82.44	1819263.29	6253710.65						
Clothoid	SPI	16+27.44	1819229.73	6253740.64	135		0°46'25"	Left	67.50	0.15
Clothoid	ST	17+17.44	1819163.44	6253801.51						
Tangent	ST	17+17.44	1819163.44	6253801.51						
Tangent	PI	24+93.22	1818592	6254326.2						
Tangent	TS	25+92.93	1818592	6254326.2						
Clothoid	TS	57+92.93	1816161.45	6256557.89						
Clothoid	SPI	58+85.93	1816092.95	6256620.79	139.50		1°14'56"	Left	69.75	0.25
Clothoid	SC	59+32.43	1816059.39	6256652.98						
Arc	SC	59+32.43	1816059.39	6256652.98						
Arc	PI	61+81.57	1815879.58	6256825.45	3200	497.30	8°54'15"	Left		
Arc	CC		1818274.51	6258962.36						
Arc	CS	64+29.72	1815728.64	6257023.67						

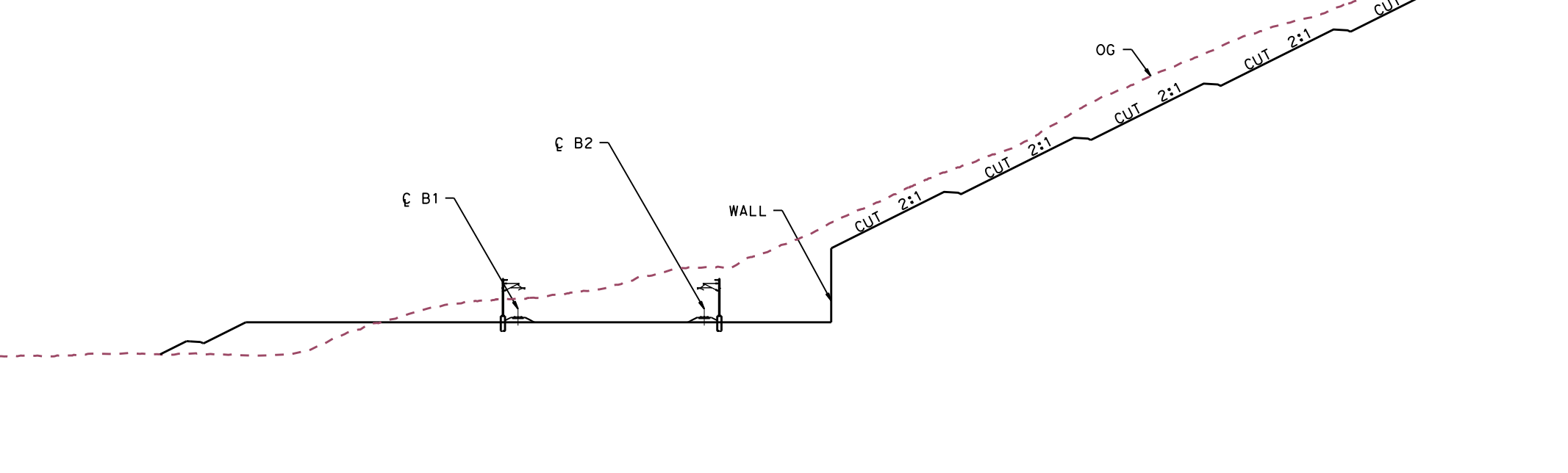
**MOWF TRANSITION TRACK PROFILE**

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	K	P
Clothoid	CS	64+29.72	1815728.64	6257023.67						
Clothoid	SPI	64+76.22	1815700.46</							

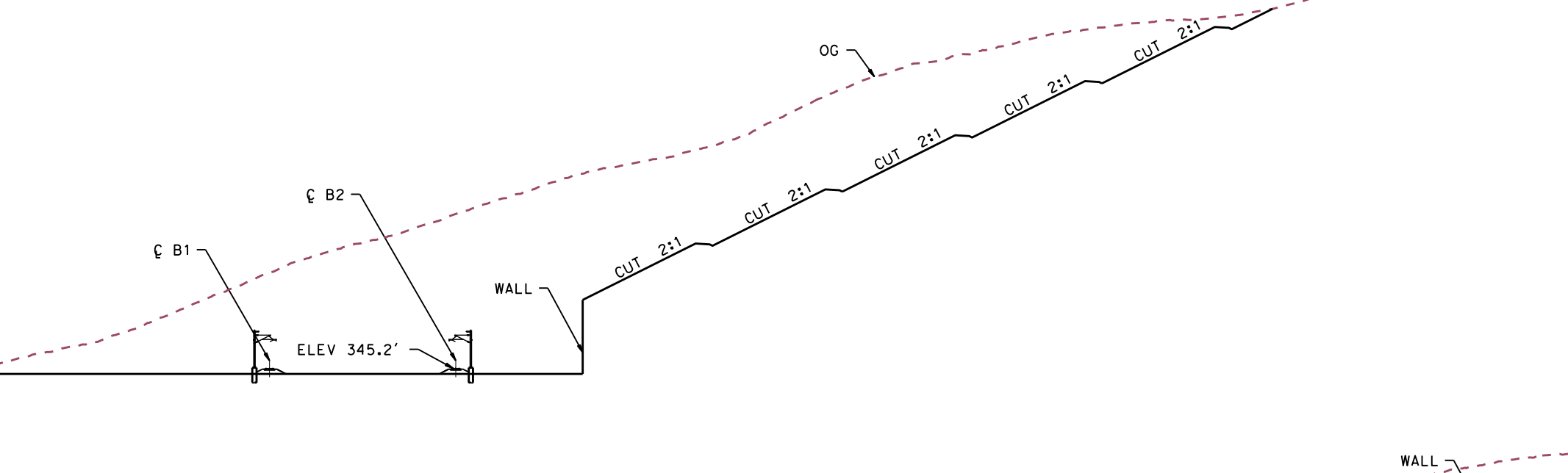




CURVE DATA SERVICE ROAD					
NO.	R	Δ	L	PVI	T
1	220	136° 35' 22.20"	524.466	552.688	
2	220	101° 35' 51.55"	178.830	162.014	
3	250	89° 53' 59.55"	392.699	249.999	



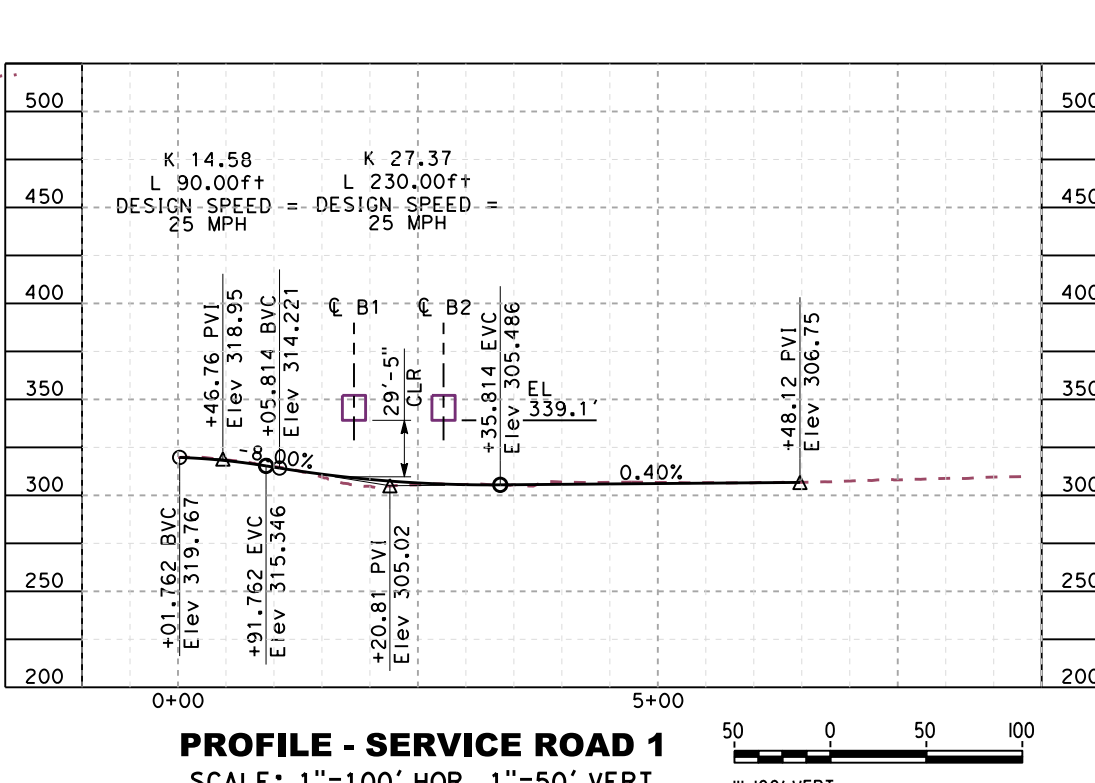
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SCALE 1"=50'



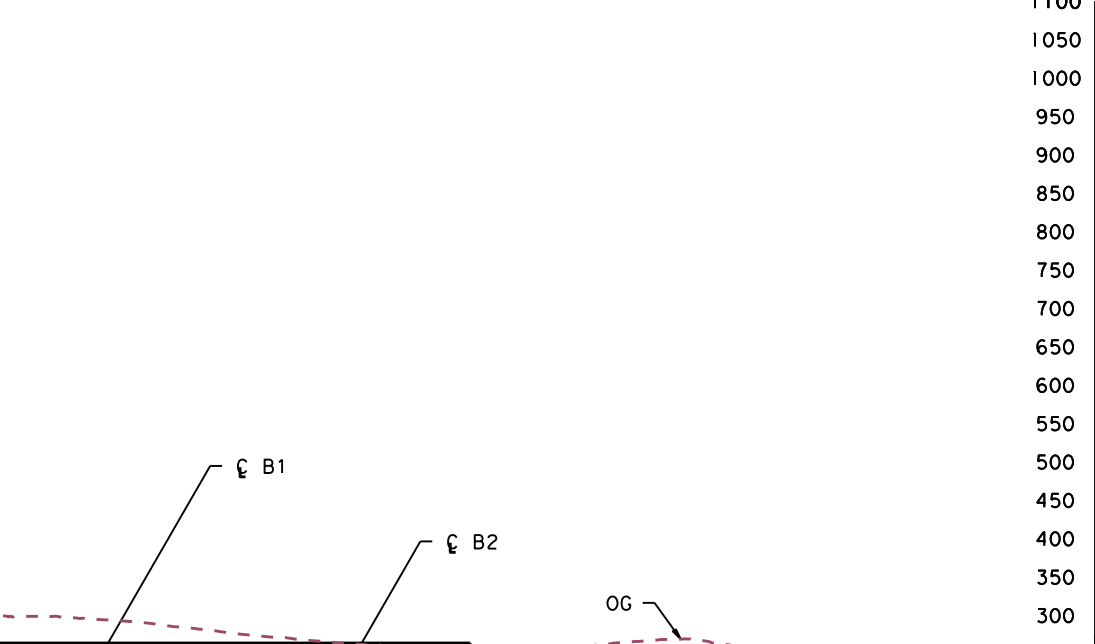
(B) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



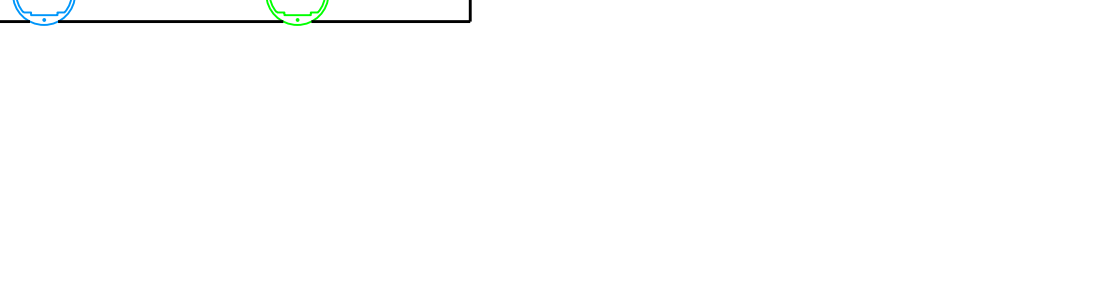
(C) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



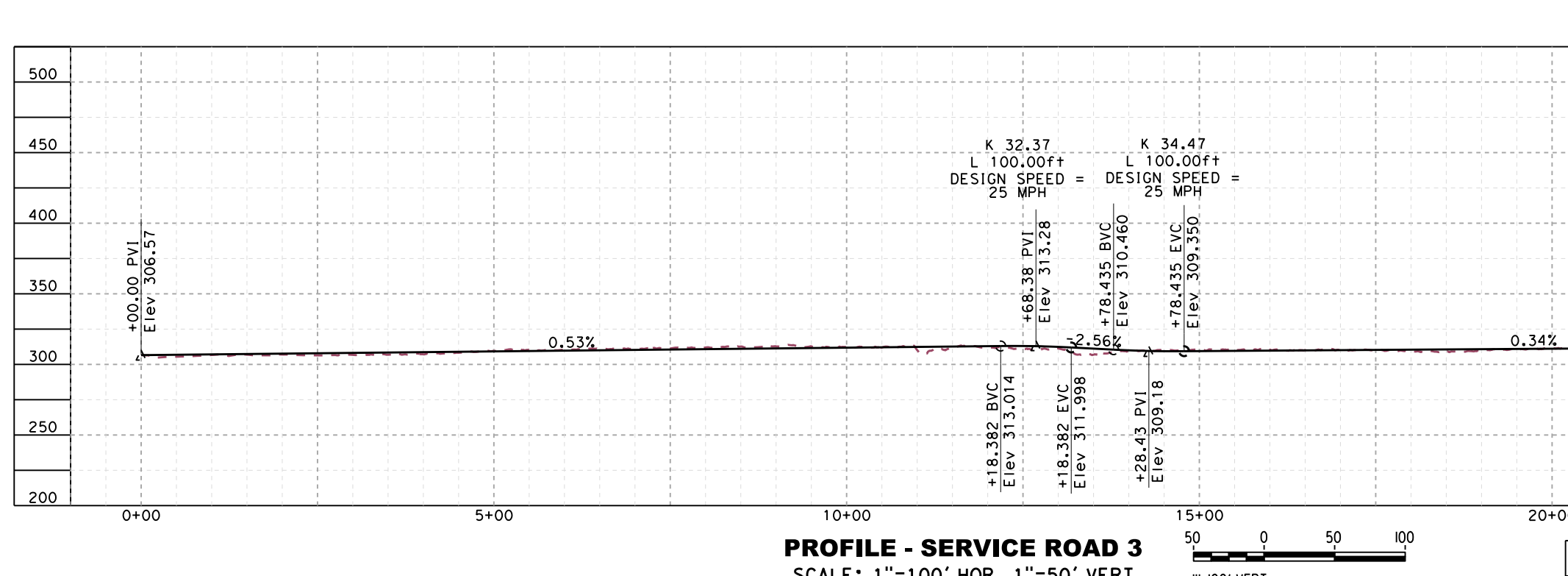
(A) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



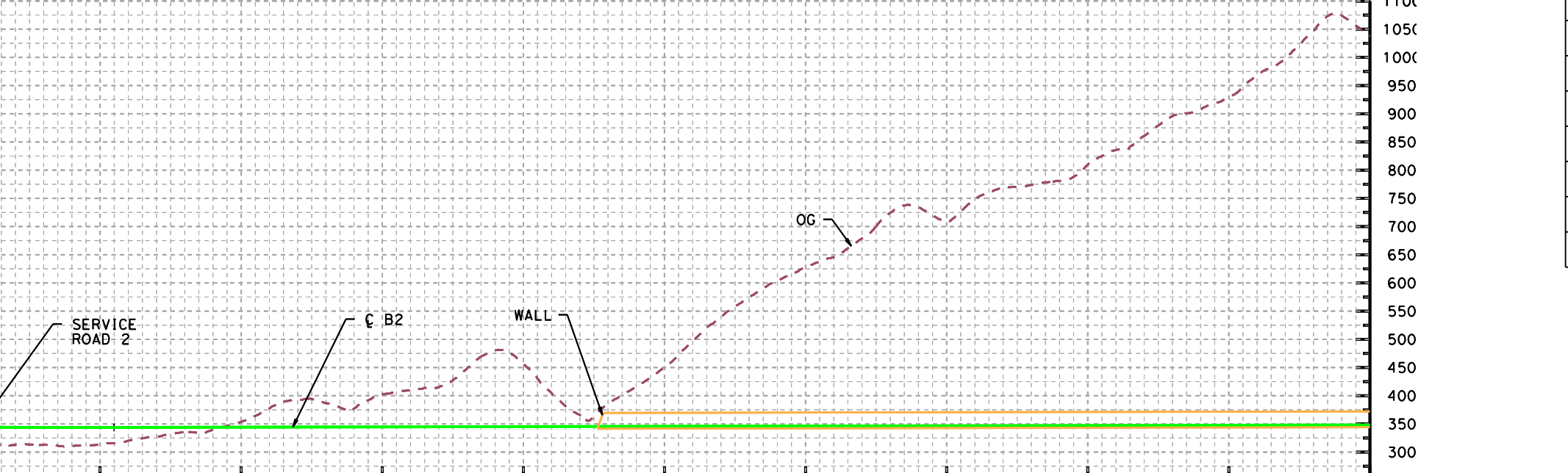
(B) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



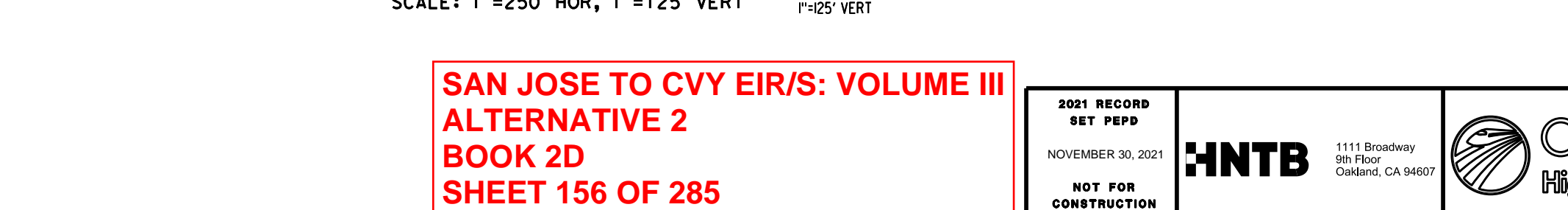
(C) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



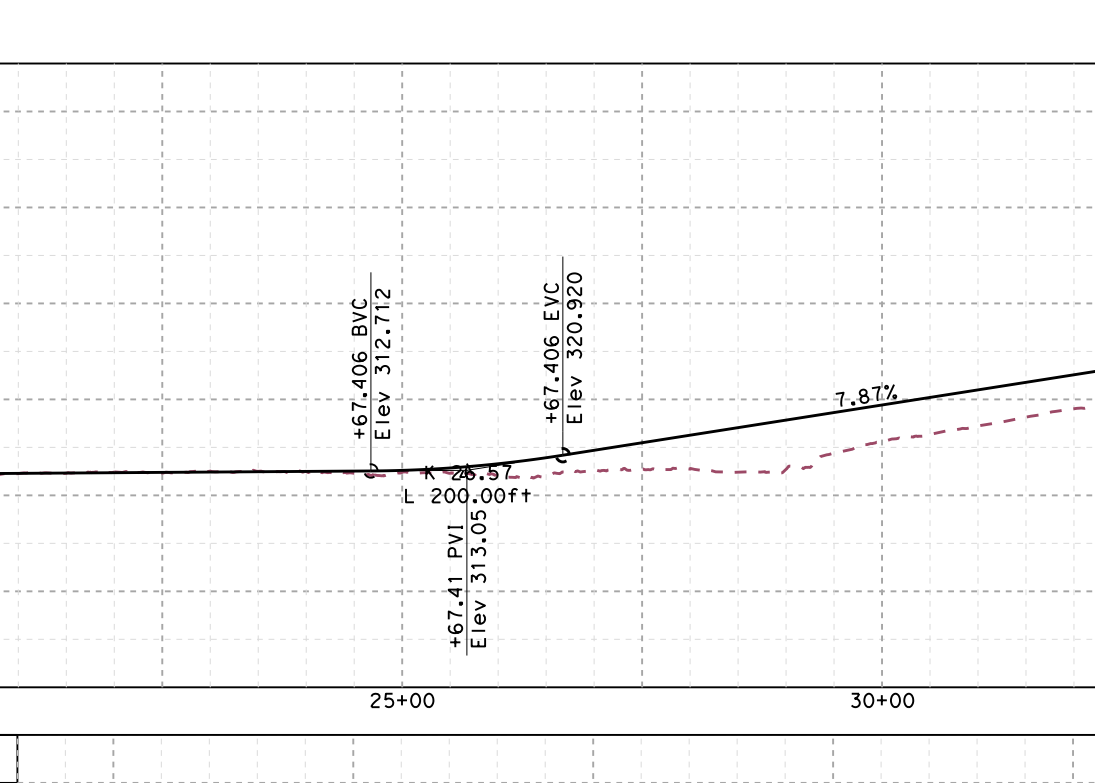
(A) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



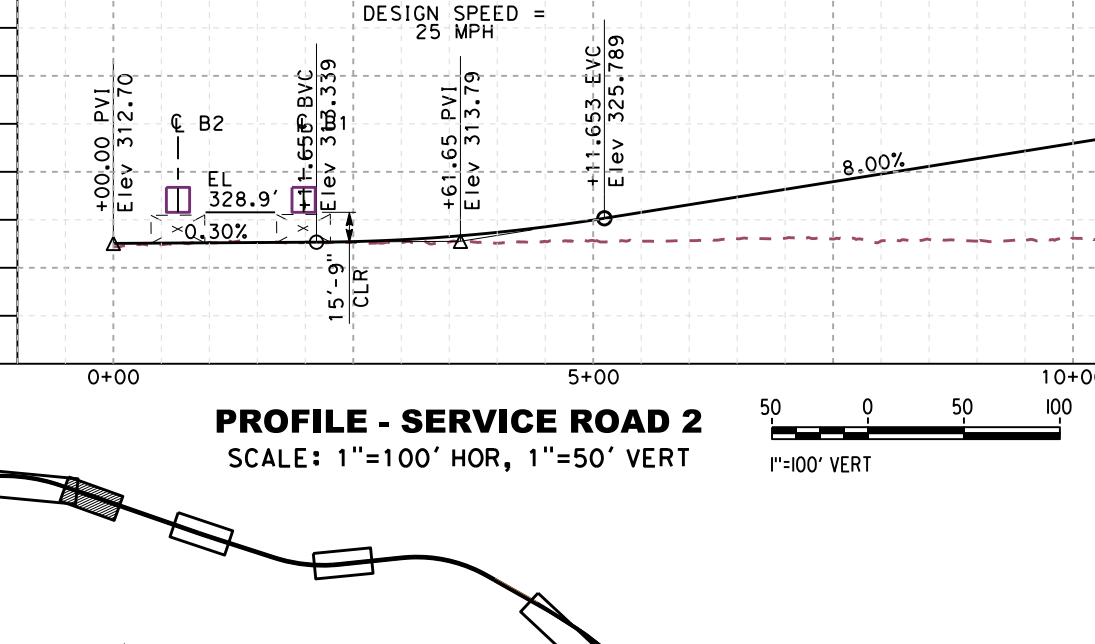
(B) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



(C) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



(A) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



(B) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'



(C) TUNNEL 2-PORTAL 1 SECTION  
SCALE 1"=50'

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 156 OF 285**

2021 RECORD SET PERP  
NOVEMBER 30, 2021  
NOT FOR CONSTRUCTION

**HNTB**  
1111 Broadway  
9th Floor  
Oakland, CA 94607

**CALIFORNIA**  
High-Speed Rail Authority

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SAN JOSE TO MERCED**  
PACHECO PASS TUNNEL  
TUNNEL 2 - PORTAL 1

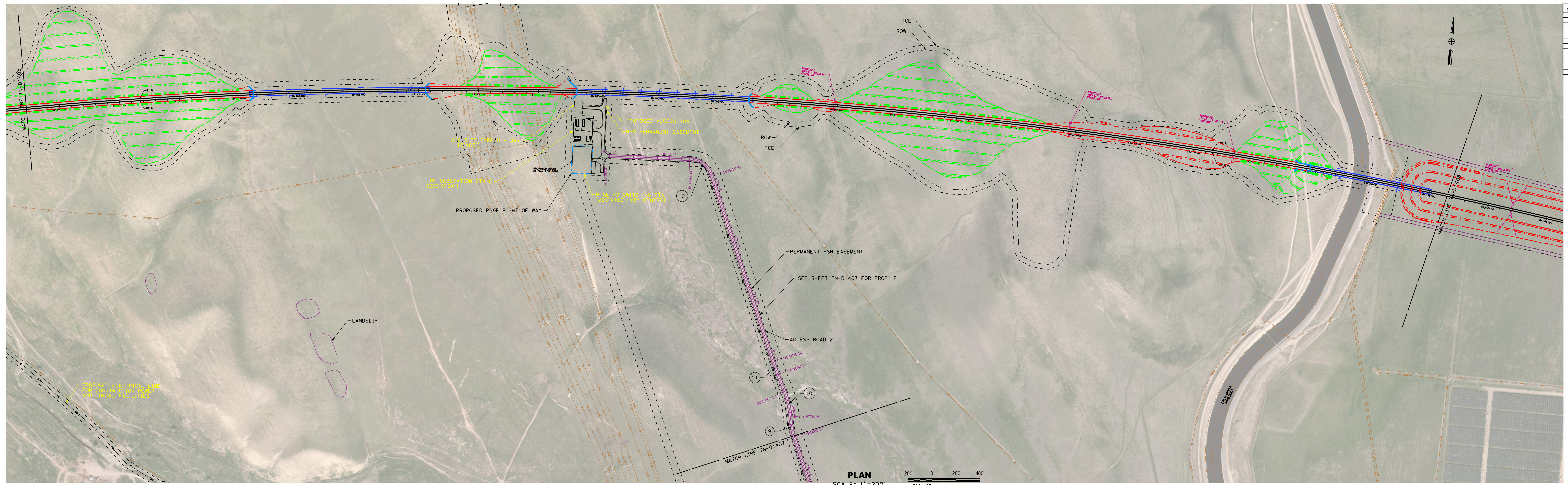
CONTRACT NO. HSR15-34  
DRAWING NO. TN-D1404  
SCALE AS SHOWN  
SHEET NO.







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CURVE DATA ACCESS ROAD 2				
NO.	R	Δ	L	T
1	50	17°35'37.70"	15.353	7.738
2	500	7°18'48.17"	63.821	31.954
3	500	12°26'28.27"	109.57	54.499
4	500	10°56'19.97"	95.460	47.875
5	500	15°46'2.20"	137.695	69.235
6	500	10°01'23.13"	81.468	43.846
7	292	19°16'47.16"	98.278	49.608
8	2000	3°40'22.16"	203.837	102.007
9	700	13°54'36.03"	189.943	85.391
10	700	17°43'12.56"	216.493	109.117
11	2000	3°10'18.39"	122.351	61.195
12	200	69°44'2.74"	243.418	139.351

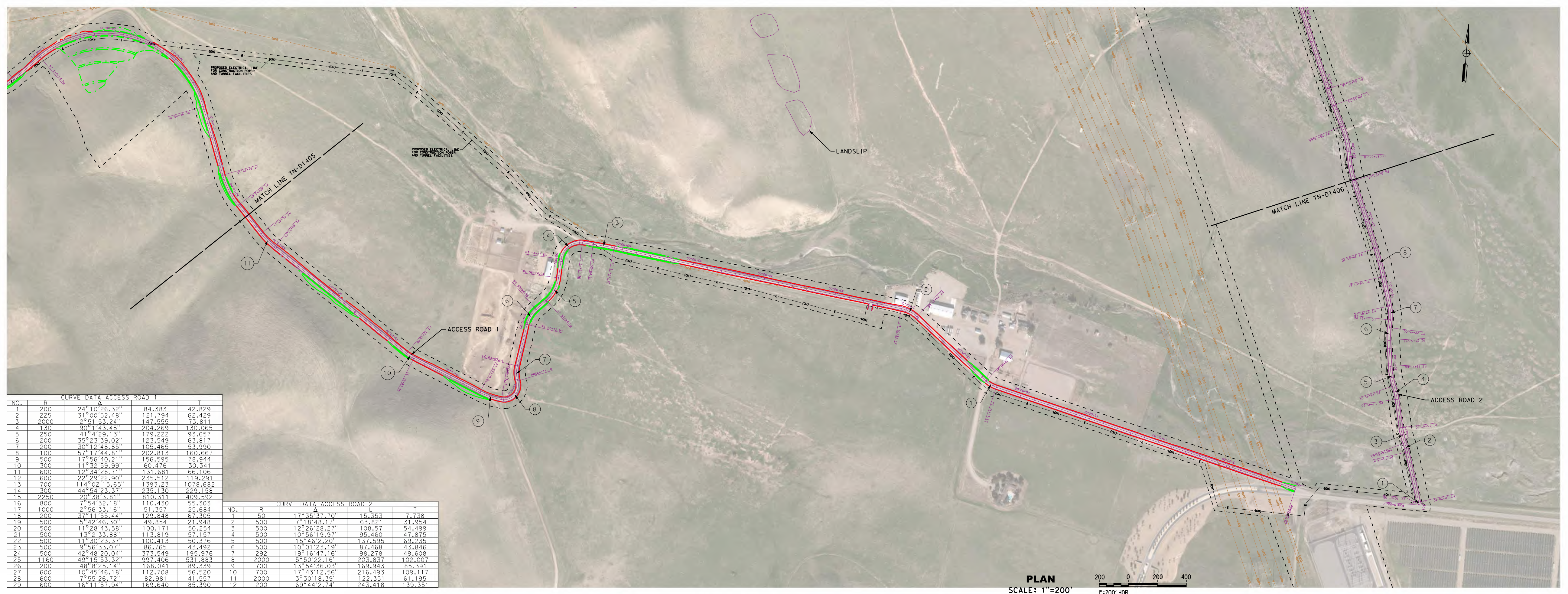
**NOTE:**  
 1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 158 OF 285**

2021 RECORD SET PERD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION		1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL TUNNEL PORTAL 2 ACCESS ROAD	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1406 SCALE AS SHOWN SHEET NO.
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**PLAN**  
 SCALE: 1"=200'  
 1"=200' HOR



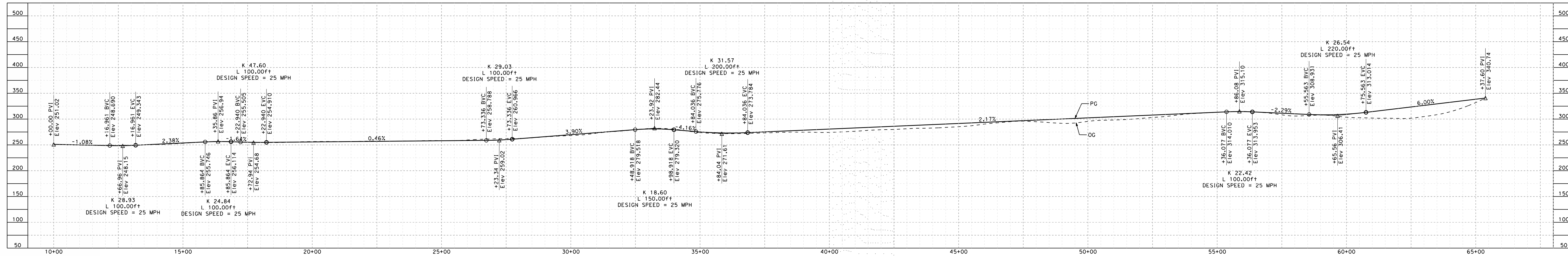


CURVE DATA ACCESS ROAD 1			
NO.	R	Δ	L
1	200	24°10'26.32"	84.383
2	225	31°00'52.48"	121.794
3	2000	2°51'53.24"	147.459
4	130	90°14'43.45"	204.269
5	250	41°42'29.33"	179.222
6	200	35°23'39.02"	123.549
7	200	30°12'48.85"	105.465
8	100	57°17'44.81"	202.813
9	500	17°56'46.21"	156.439
10	300	11°32'59.99"	60.476
11	600	17°54'28.11"	131.684
12	600	22°29'22.90"	235.312
13	700	114°02'15.65"	1393.23
14	300	41°54'23.37"	235.130
15	2250	2°58'3.81"	810.311
16	800	7°54'32.18"	110.430
17	1000	2°56'33.16"	51.357
18	200	37°11'55.44"	129.848
19	500	5°42'26.30"	49.854
20	500	11°29'23.58"	100.171
21	500	13°23'33.88"	113.819
22	500	11°30'23.37"	100.413
23	500	9°56'33.07"	86.195
24	500	42°48'20.04"	373.849
25	1160	48°15'53.32"	991.406
26	200	48°18'25.14"	168.041
27	600	10°45'46.18"	112.708
28	600	17°53'46.72"	122.351
29	600	16°11'37.94"	169.640

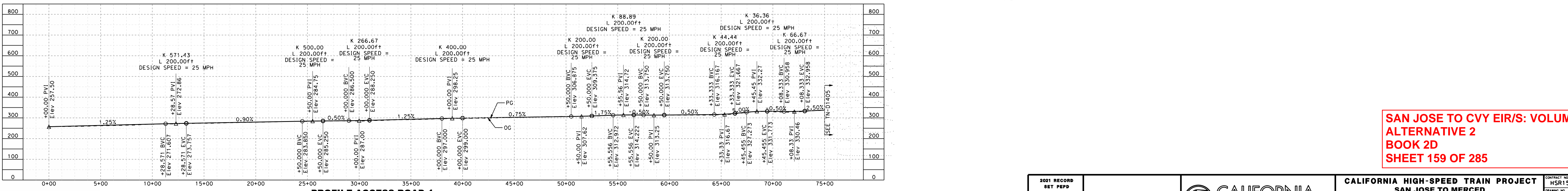
CURVE DATA ACCESS ROAD 2			
NO.	R	Δ	L
1	50	17°35'37.70"	15.353
2	500	7°18'48.17"	63.821
3	500	12°28'28.27"	108.57
4	500	10°56'19.97"	95.460
5	500	15°46'22.20"	137.595
6	500	10°01'23.19"	87.468
7	292	19°16'47.16"	98.278
8	2000	5°50'22.16"	203.837
9	700	13°54'36.03"	169.943
10	700	17°43'12.56"	216.493
11	2000	3°30'18.39"	122.351
12	200	69°24'27.24"	245.218

**PLAN**  
SCALE: 1"=200'  
1"=200' HOR



**PROFILE - ACCESS ROAD 2**  
SCALE: 1"=100' HOR, 1"=50' VERT  
1"=50' VERT

**NOTE:**  
1. REFER TO GENERAL NOTES SHEETS GE-B0001 AND GE-B0002 FOR NOTES.



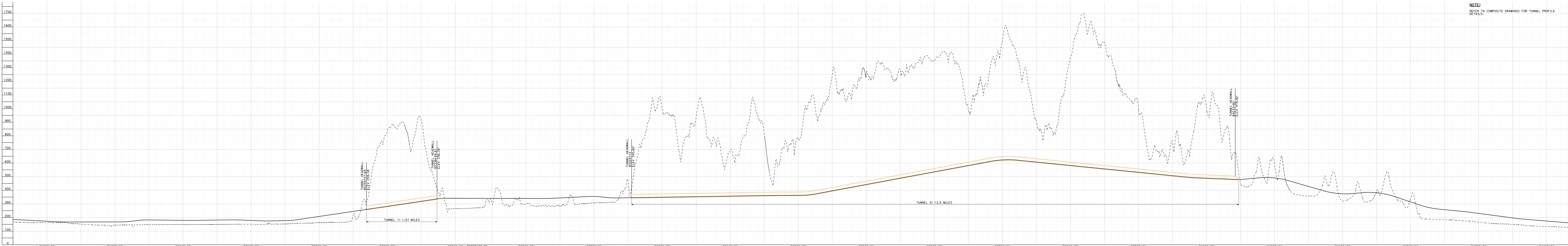
**PROFILE ACCESS ROAD 1**  
SCALE: 1"=250' HOR, 1"=125' VERT

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 159 OF 285**

2021 RECORD SET PERD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION		1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL TUNNEL PORTAL 2 ACCESS ROAD	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1407 SCALE: AS SHOWN SHEET NO.
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NOTE:  
REFER TO COMPOSITE DRAWINGS FOR TUNNEL PROFILE  
DETAILS.



**PROFILE**  
SCALE: 1"=1600' HOR, 1"=100' VERT

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 160 OF 285**

2021 RECORD  
SET PEP  
NOVEMBER 30, 2021  
NOT FOR  
CONSTRUCTION

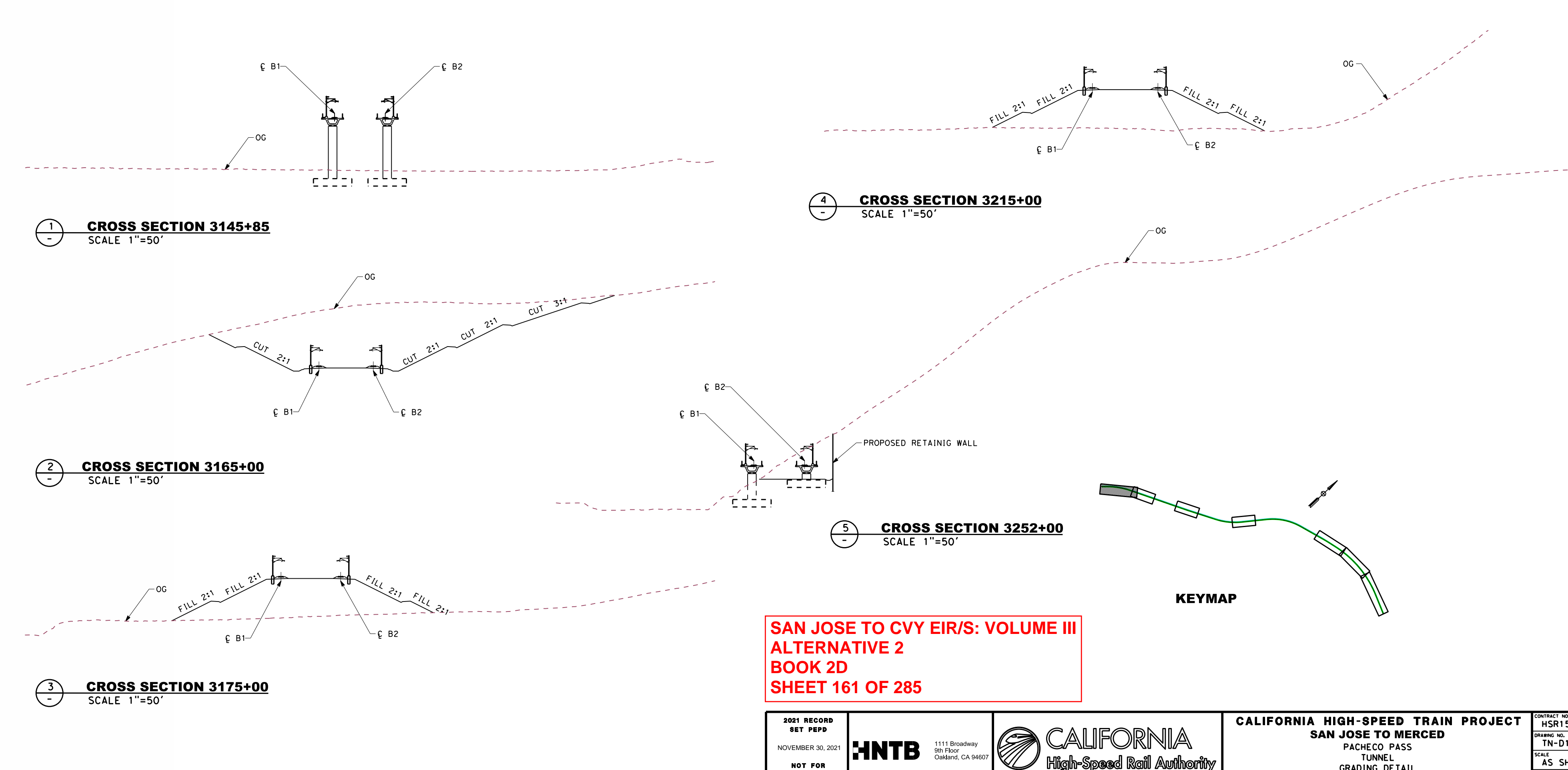
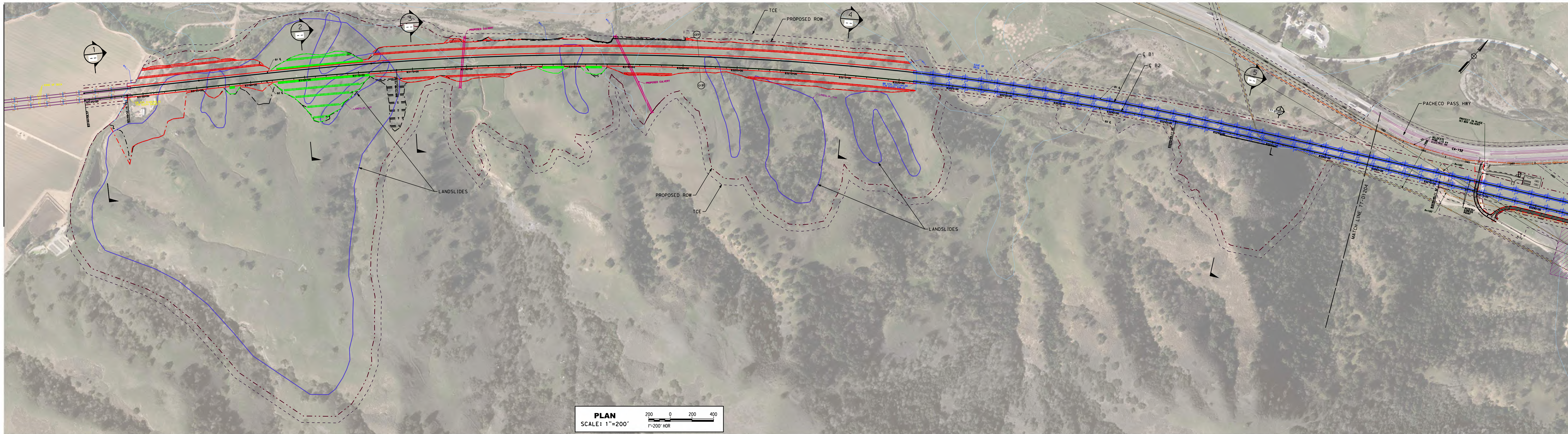
**HNTB**  
1111 Broadway  
9th Floor  
Oakland, CA 94607



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SAN JOSE TO MERCED**  
PACHECO PASS  
TUNNEL  
LONGITUDINAL PROFILE

CONTRACT NO.  
HSR15-34  
DRAWING NO.  
TN-D1408  
SCALE  
AS SHOWN  
SHEET NO.



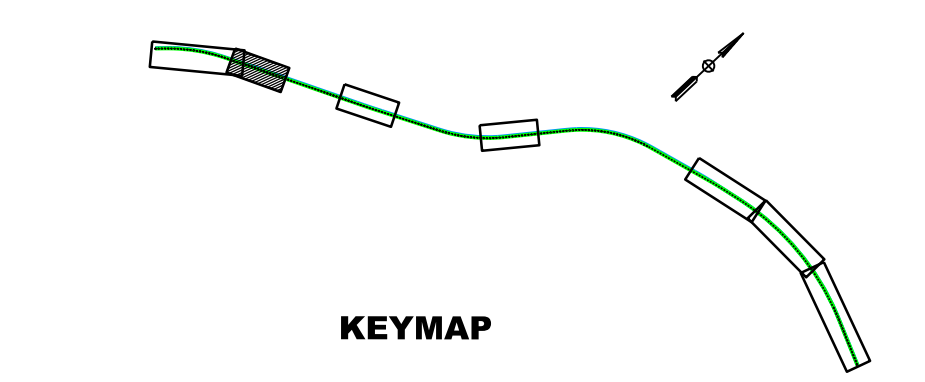
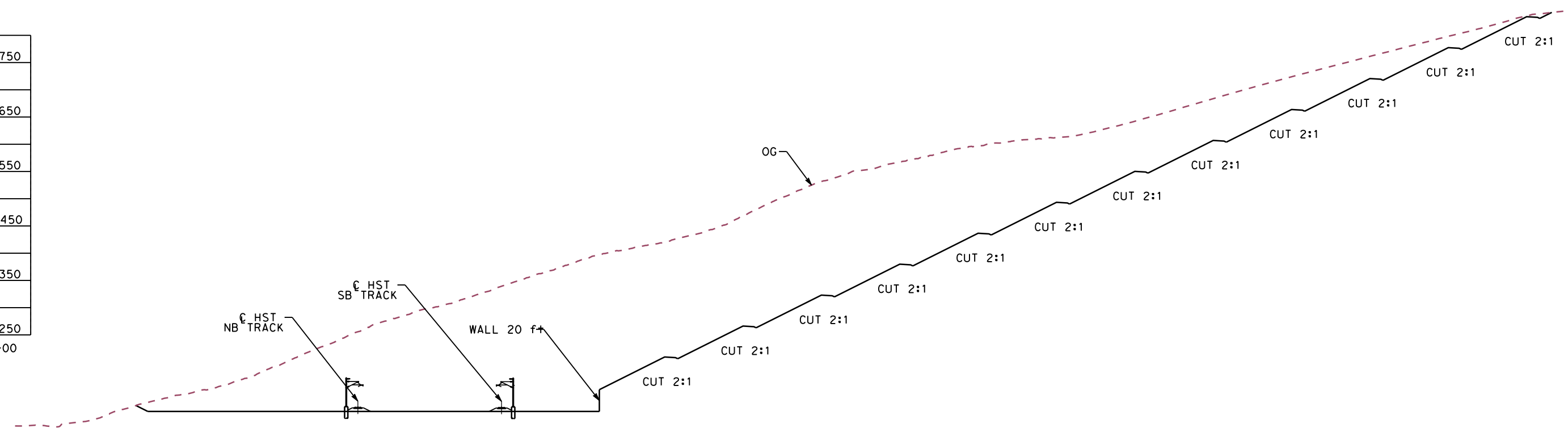
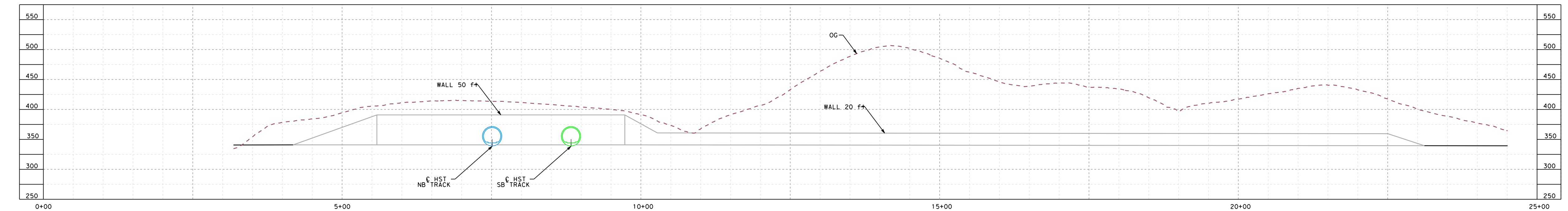
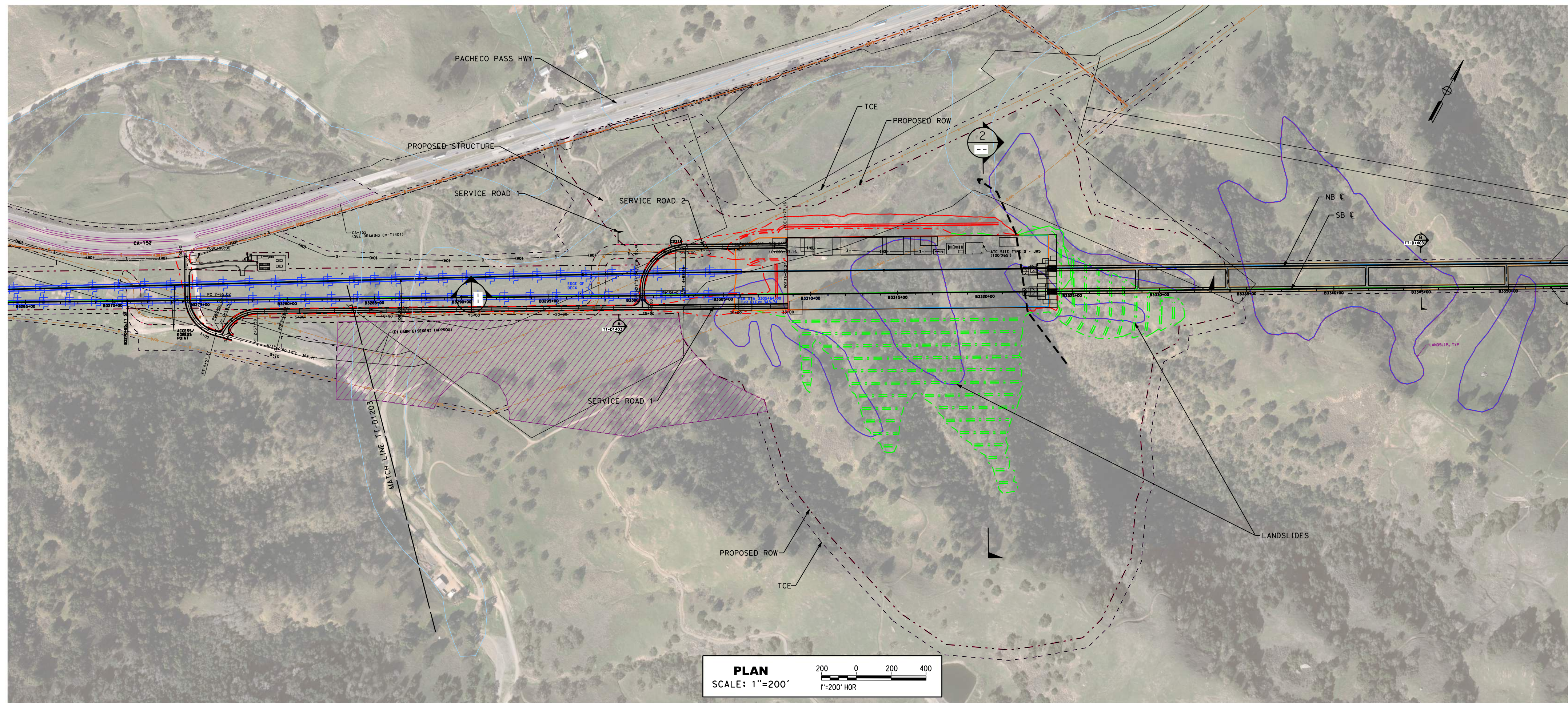


**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 161 OF 285**

2021 RECORD SET PERP NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL GRADING DETAIL	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1409 SCALE: AS SHOWN SHEET NO.
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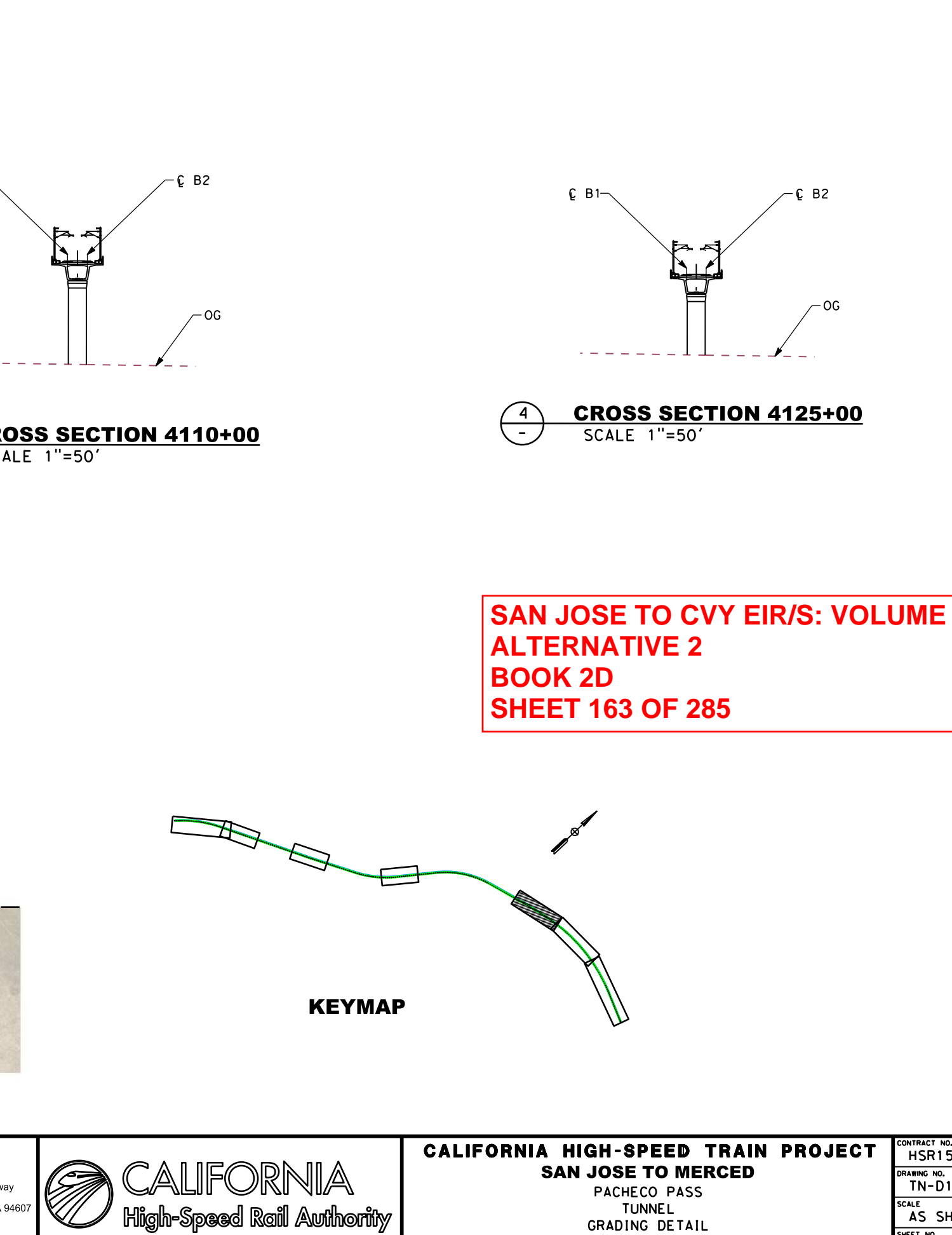
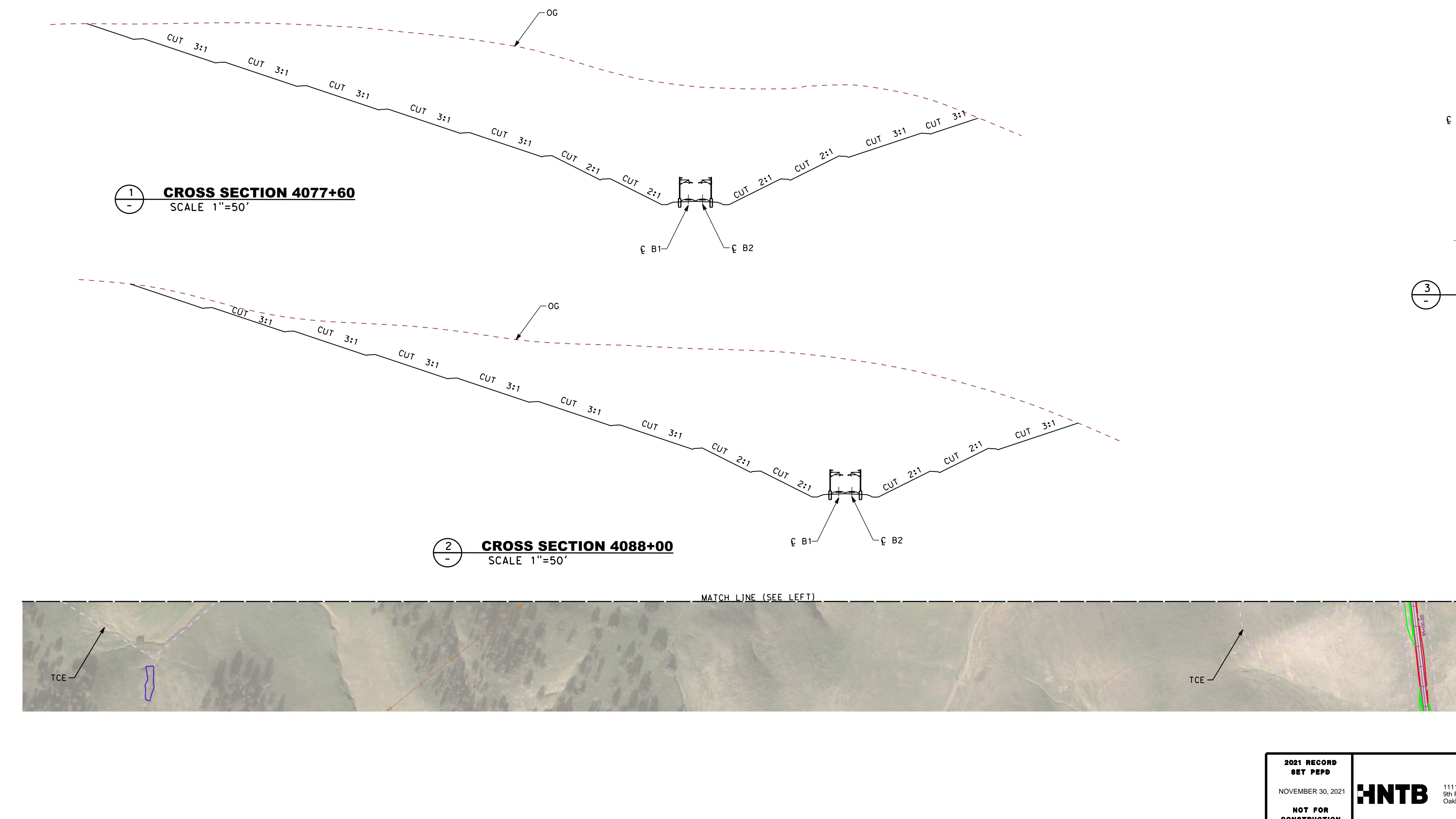
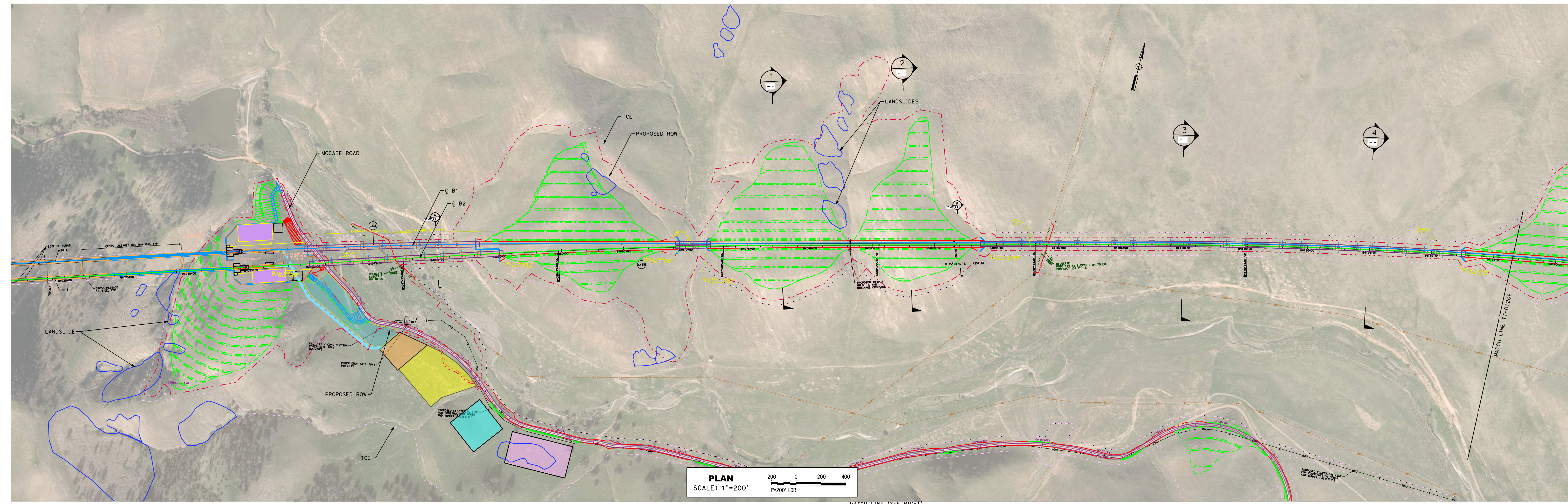


**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 162 OF 285**

2021 RECORD SET PERP NOVEMBER 30, 2021 NOT FOR CONSTRUCTION		1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL GRADING DETAIL	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1410 SCALE AS SHOWN SHEET NO.
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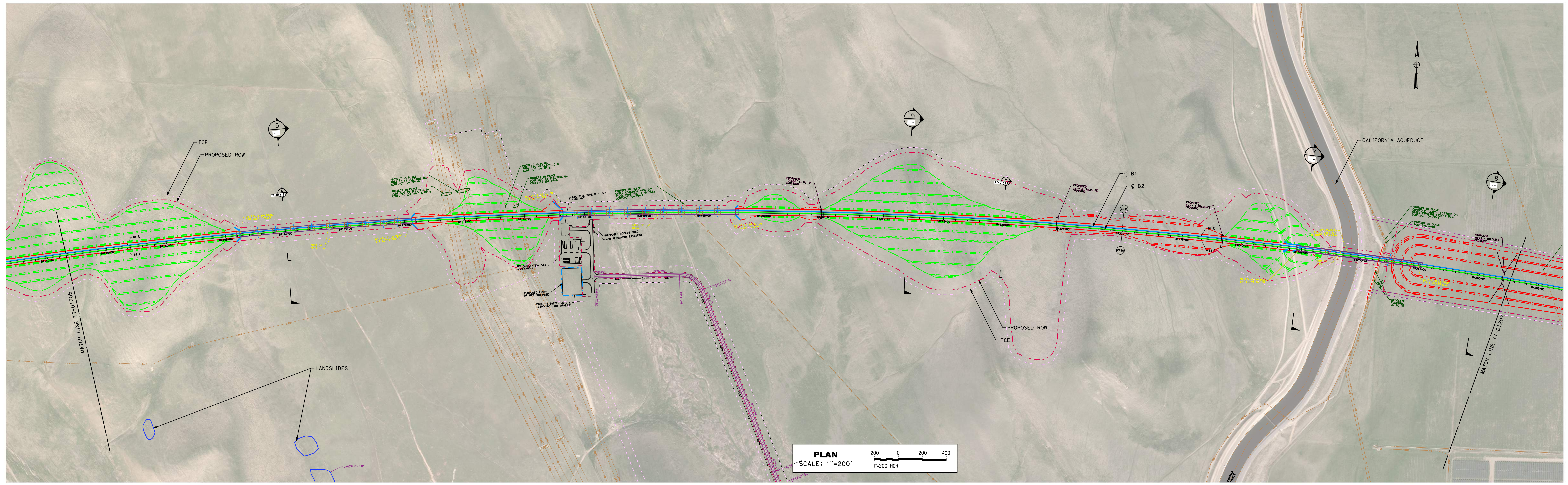


**SAN JOSE TO CVY EIR/S: VOLUME III  
ALTERNATIVE 2  
BOOK 2D  
SHEET 163 OF 285**

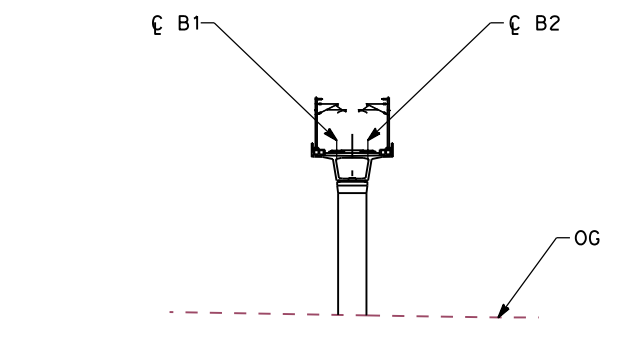
2021 RECORD SET PERD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607	<b>CALIFORNIA</b> High-Speed Rail Authority	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL GRADING DETAIL	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1411 SCALE AS SHOWN SHEET NO.
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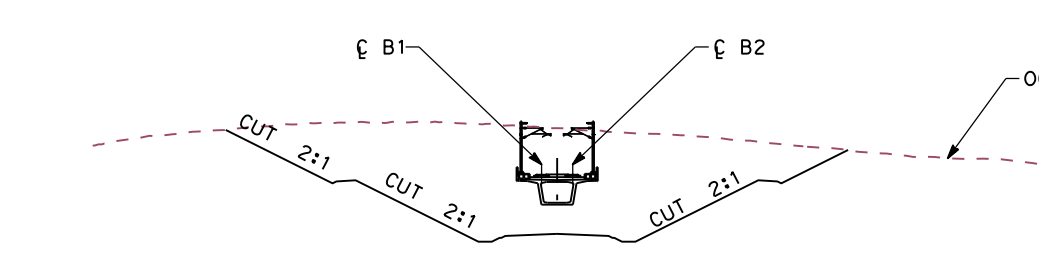
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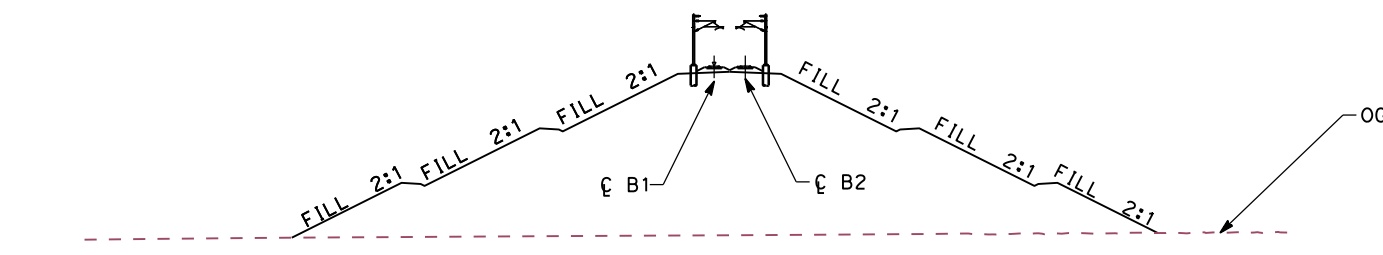
**PLAN**  
SCALE: 1"=200'  
200 0 200 400  
1"=200' HOR



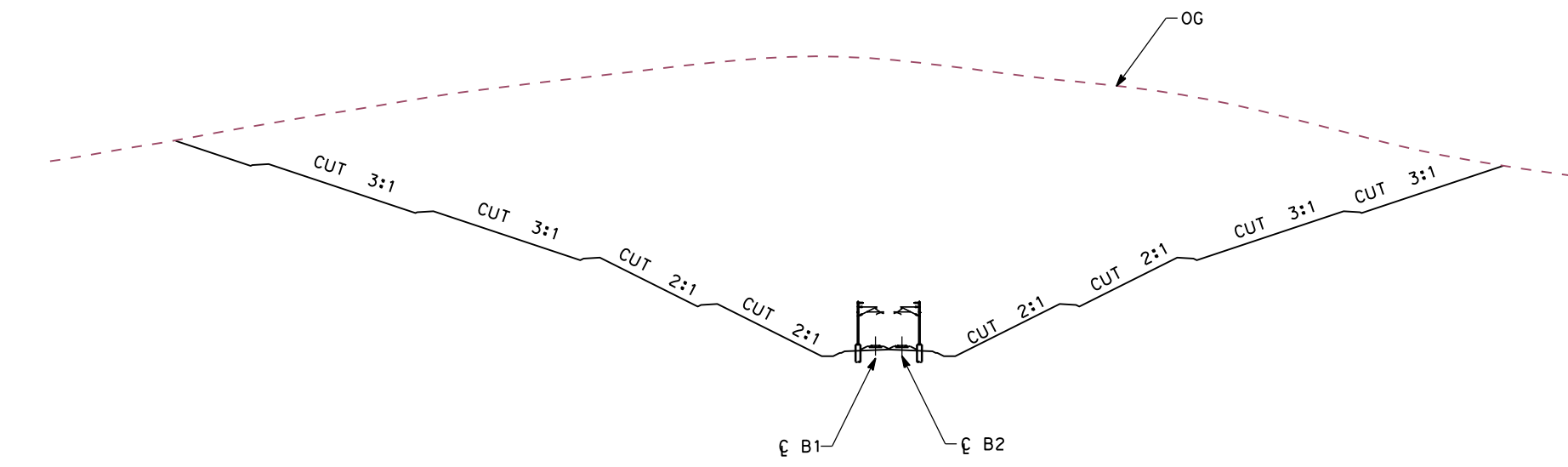
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SCALE 1"=50'



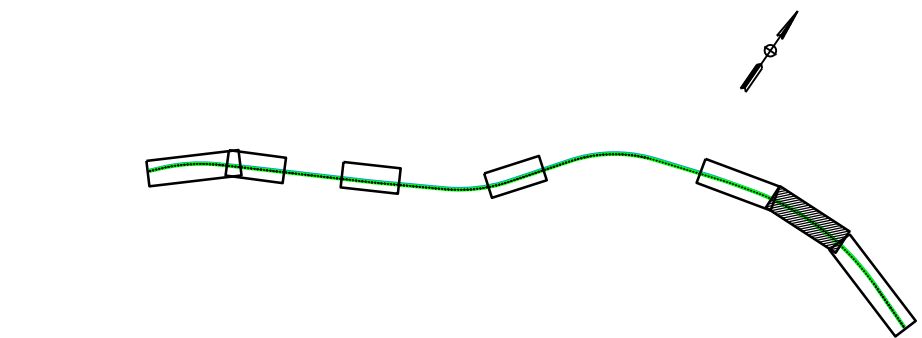
**7**  
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**8**  
**CROSS SECTION 4260+00**  
SCALE 1"=50'



**6**  
**CROSS SECTION 4212+00**  
SCALE 1"=50'



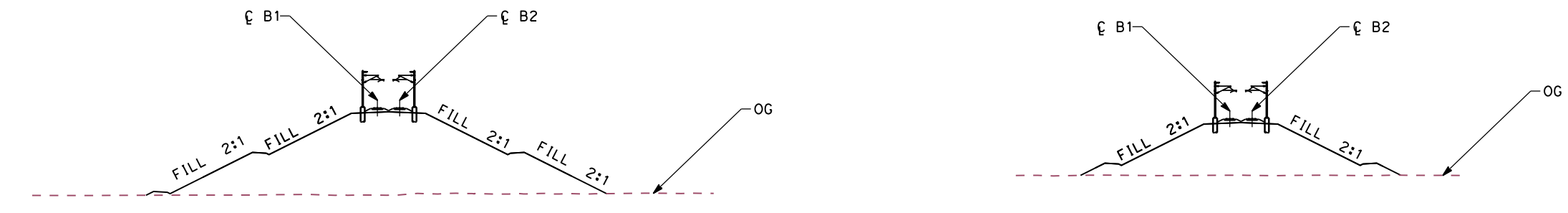
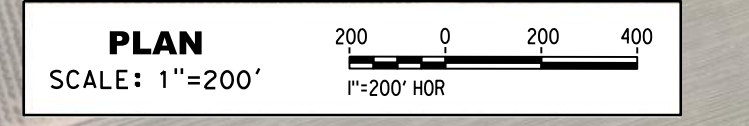
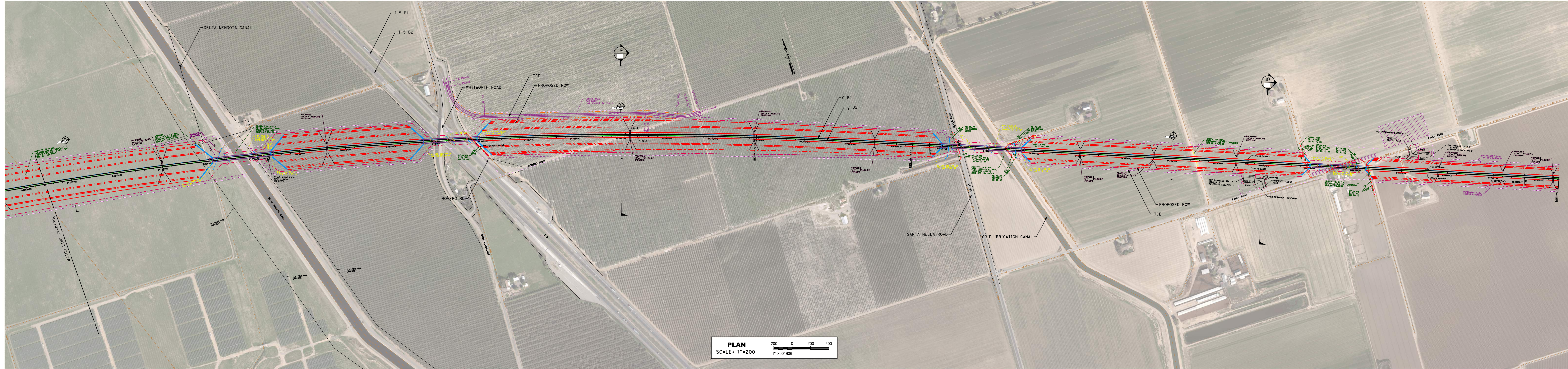
**KEYMAP**

**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 164 OF 285**

2021 RECORD SET PEPD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION	<b>HNTB</b> 1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL GRADING DETAIL	CONTRACT NO.: HSR15-34 DRAWING NO.: TN-D1412 SCALE: AS SHOWN SHEET NO.:
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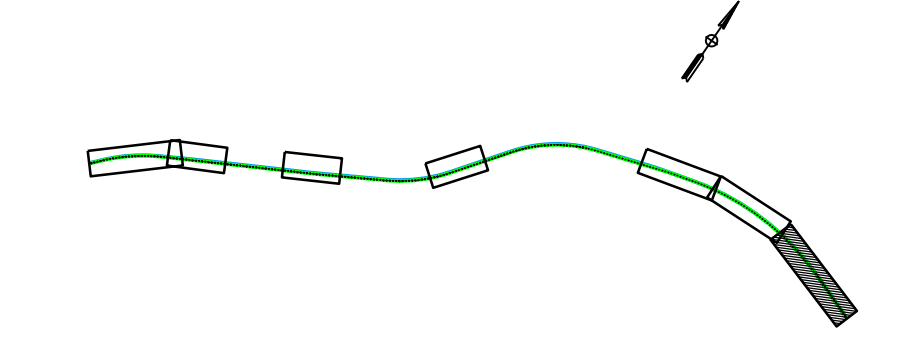


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9 CROSS SECTION 4330+00  
SCALE 1"=50'

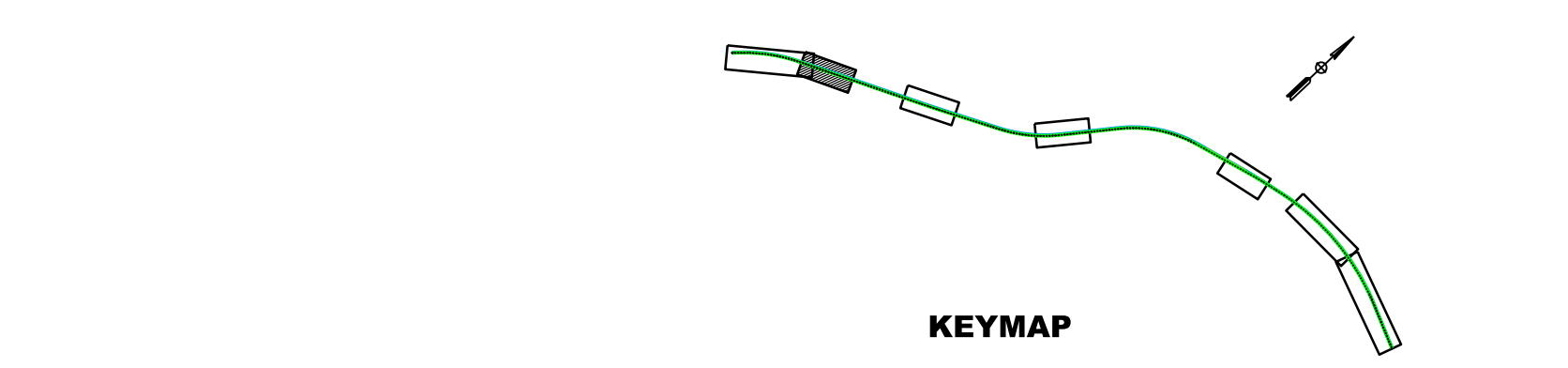
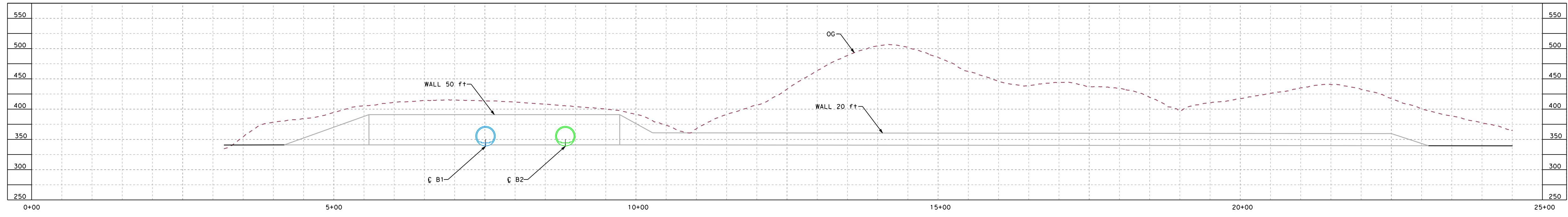
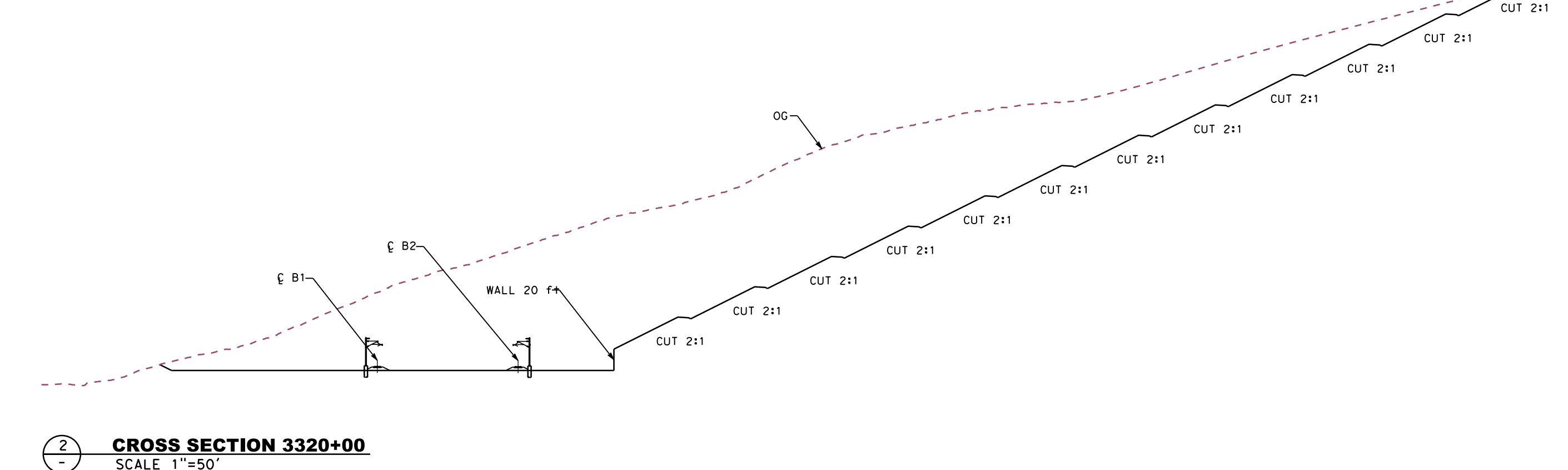
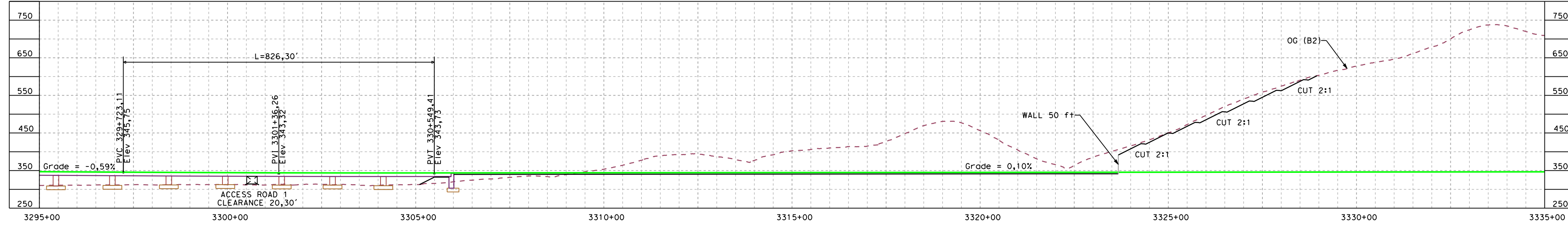
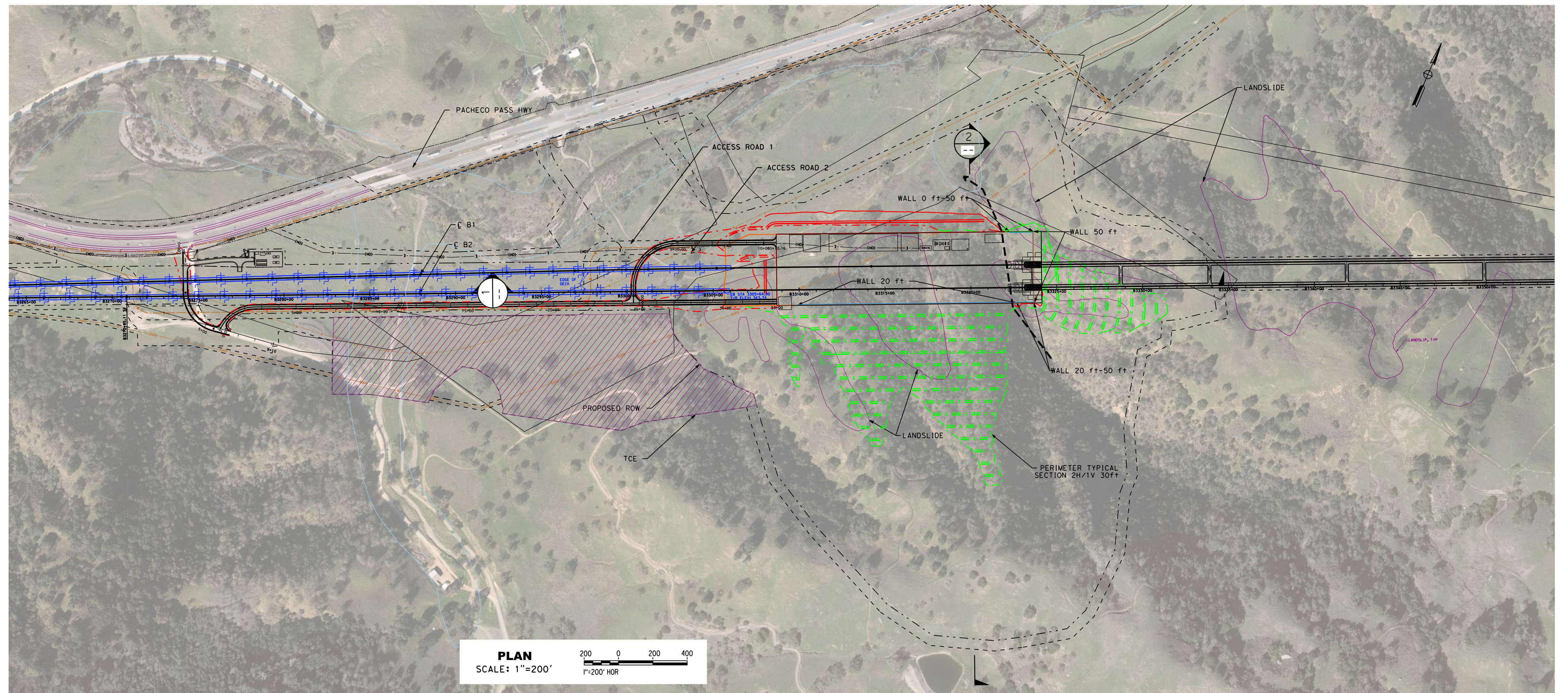
10 CROSS SECTION 4400+00  
SCALE 1"=50'



**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 165 OF 285**

2021 RECORD SET PERD NOVEMBER 30, 2021 NOT FOR CONSTRUCTION		1111 Broadway 9th Floor Oakland, CA 94607		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SAN JOSE TO MERCED</b> PACHECO PASS TUNNEL GRADING DETAIL	CONTRACT NO. HSR15-34 DRAWING NO. TN-D1413 SCALE AS SHOWN SHEET NO.
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**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 166 OF 285**

2021 RECORD SET PERD  
NOVEMBER 30, 2021  
NOT FOR CONSTRUCTION

**HNTB**  
1111 Broadway  
9th Floor  
Oakland, CA 94607

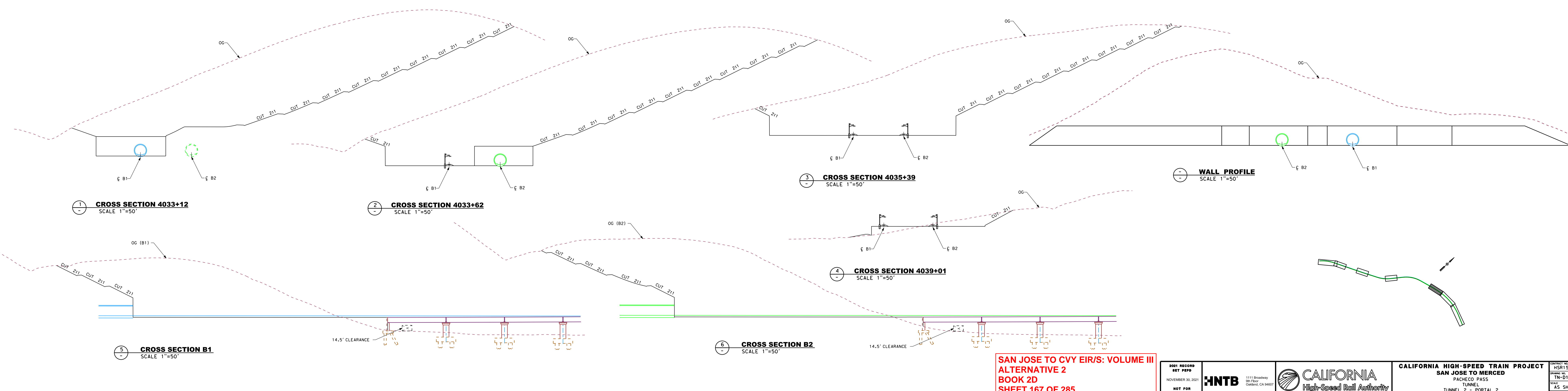
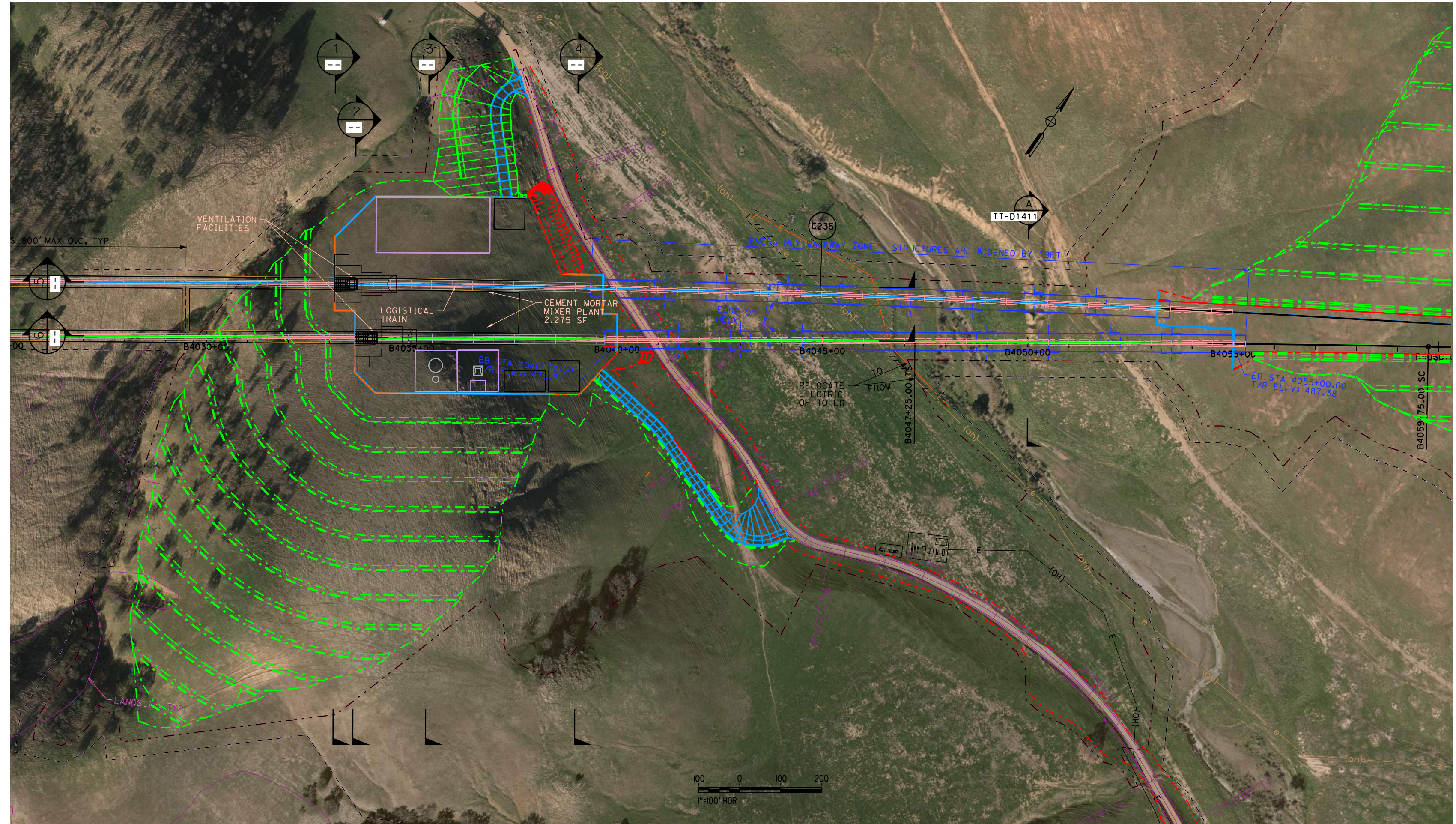
**CALIFORNIA**  
High-Speed Rail Authority

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SAN JOSE TO MERCED**  
PACHECO PASS  
TUNNEL  
TUNNEL 2 - PORTAL 1  
SECTIONS

CONTRACT NO. HSR15-34  
DRAWING NO. TN-D1414  
SCALE AS SHOWN  
SHEET NO.



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**SAN JOSE TO CVY EIR/S: VOLUME III**  
**ALTERNATIVE 2**  
**BOOK 2D**  
**SHEET 167 OF 285**

2021 RECORD SET PERP  
 NOVEMBER 30, 2021  
 NOT FOR CONSTRUCTION

**HNTB**  
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**CALIFORNIA**  
 High-Speed Rail Authority

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SAN JOSE TO MERCED**  
 PACHECO PASS  
 TUNNEL  
 TUNNEL 2 - PORTAL 2  
 APPROACH 1

CONTRACT NO.  
 HSR15-34  
 DRAWING NO.  
 TN-D1415  
 SCALE  
 AS SHOWN  
 SHEET NO.



