Alameda Creek Bridge Replacement

Proposed Alternatives

December 5, 2013

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District Division Chief, Design East

Existing Bridge

- **Constructed 1928**
- **85 Years Old**
- **Narrow Bridge, No Shoulders**
- **Obsolete Bridge Rail, Non-Standard**
- **Concrete Spalls, Exposed Rebar, Throughout**
- **Classified “Functionally Obsolete”**
- **Poor Approach Alignment**
- **Poor Sight Distance**

Dumb Monkey

Niles Canyon Rd
84

Design Considerations

- **Service Life of Replacement Bridge: 100+ years**
- **Design Speed Standard (HDM): 50-60 mph**
- **Posted Speed Limit: 45 mph**
- **Operating Speed:**
  - **Critical Speed (85 percentile): 48 mph**
- **Roadway Safety Assessment Recommendation (FHWA)**
- **Bridge Replacement is a State and Federal Priority**

Viable Alternatives

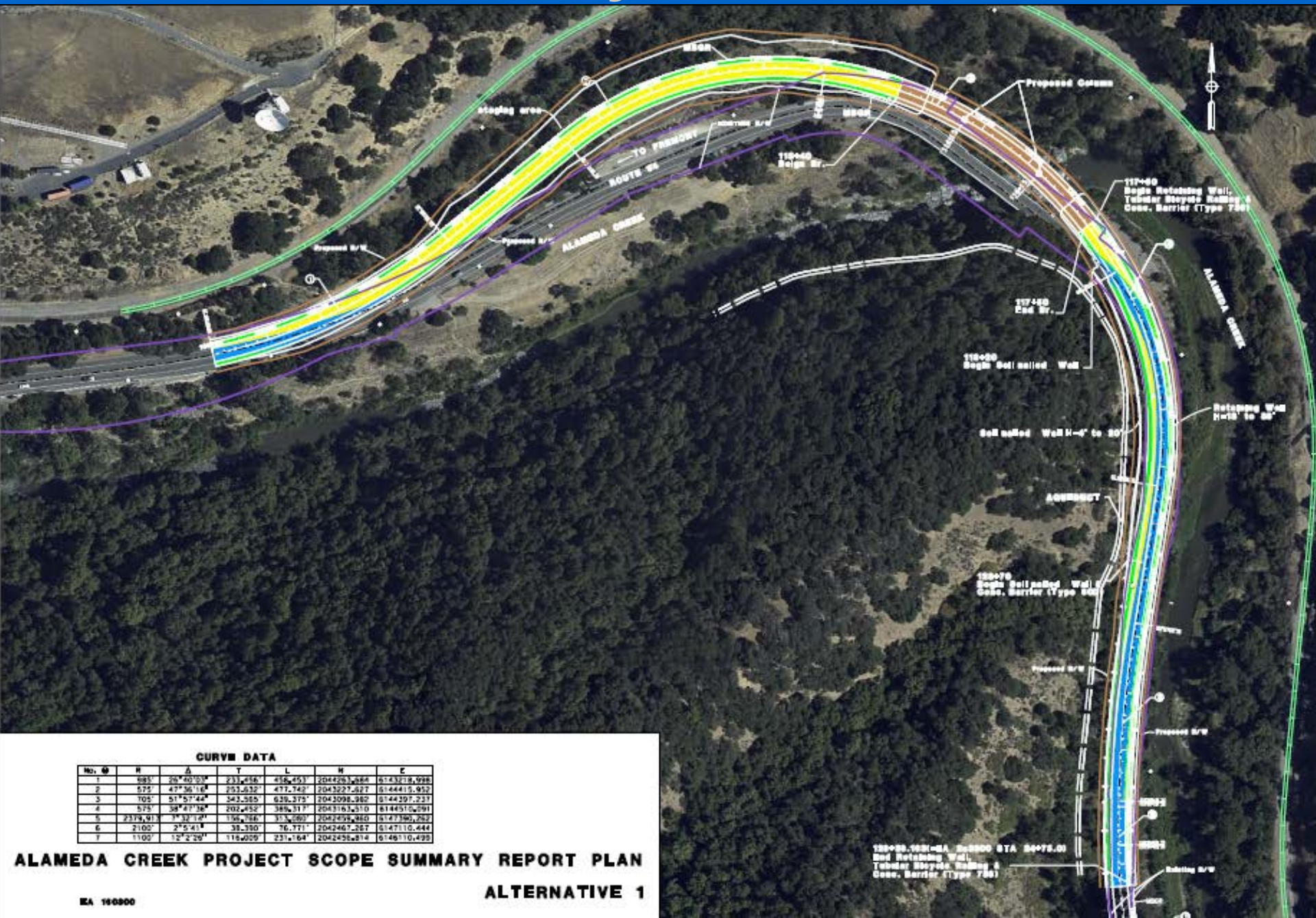
Alternative 1 – Project Initiation Document

Alternative 2 – Value Analysis Study

Alternative 3A – Value Analysis Modified

Alternative 3B – 3A Design Variation

Alternative 1 – Project Initiation, 2003



CURVE DATA

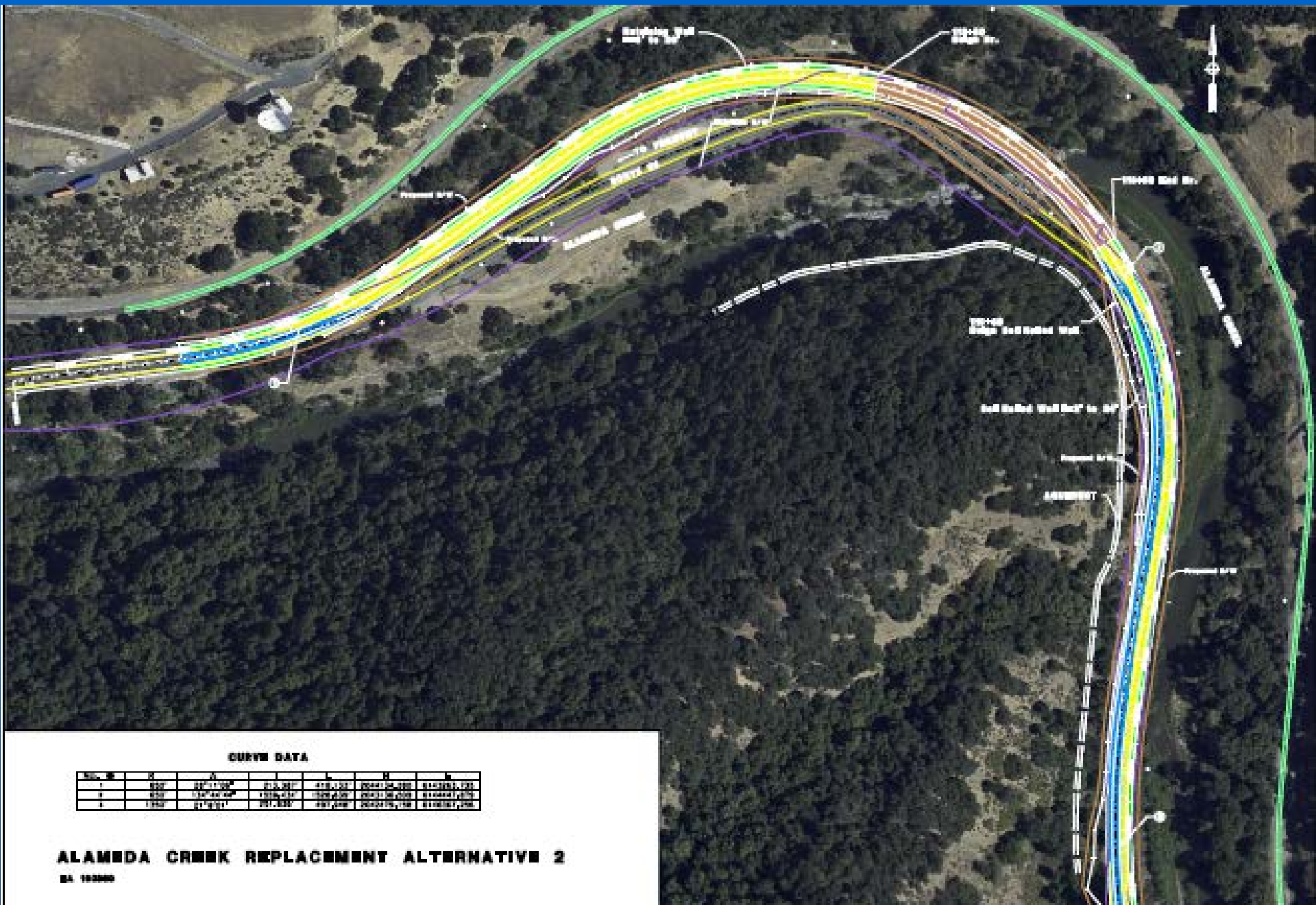
No. @	R	Δ	T	L	N	E
1	985'	26°40'03"	233.456'	458.453'	2044263.684	6143218.998
2	575'	47°36'16"	253.632'	477.742'	2043227.627	6144415.952
3	705'	51°57'44"	343.565'	639.375'	2043098.982	6144397.237
4	575'	38°47'36"	202.452'	389.317'	2043163.510	6144510.091
5	2379.913'	7°32'14"	156.766'	313.080'	2042459.960	6147390.262
6	2100'	2°5'41"	38.390'	76.771'	2042467.267	6147110.444
7	1100'	12°2'26"	116.009'	231.164'	2042456.814	6146110.499

ALAMEDA CREEK PROJECT SCOPE SUMMARY REPORT PLAN

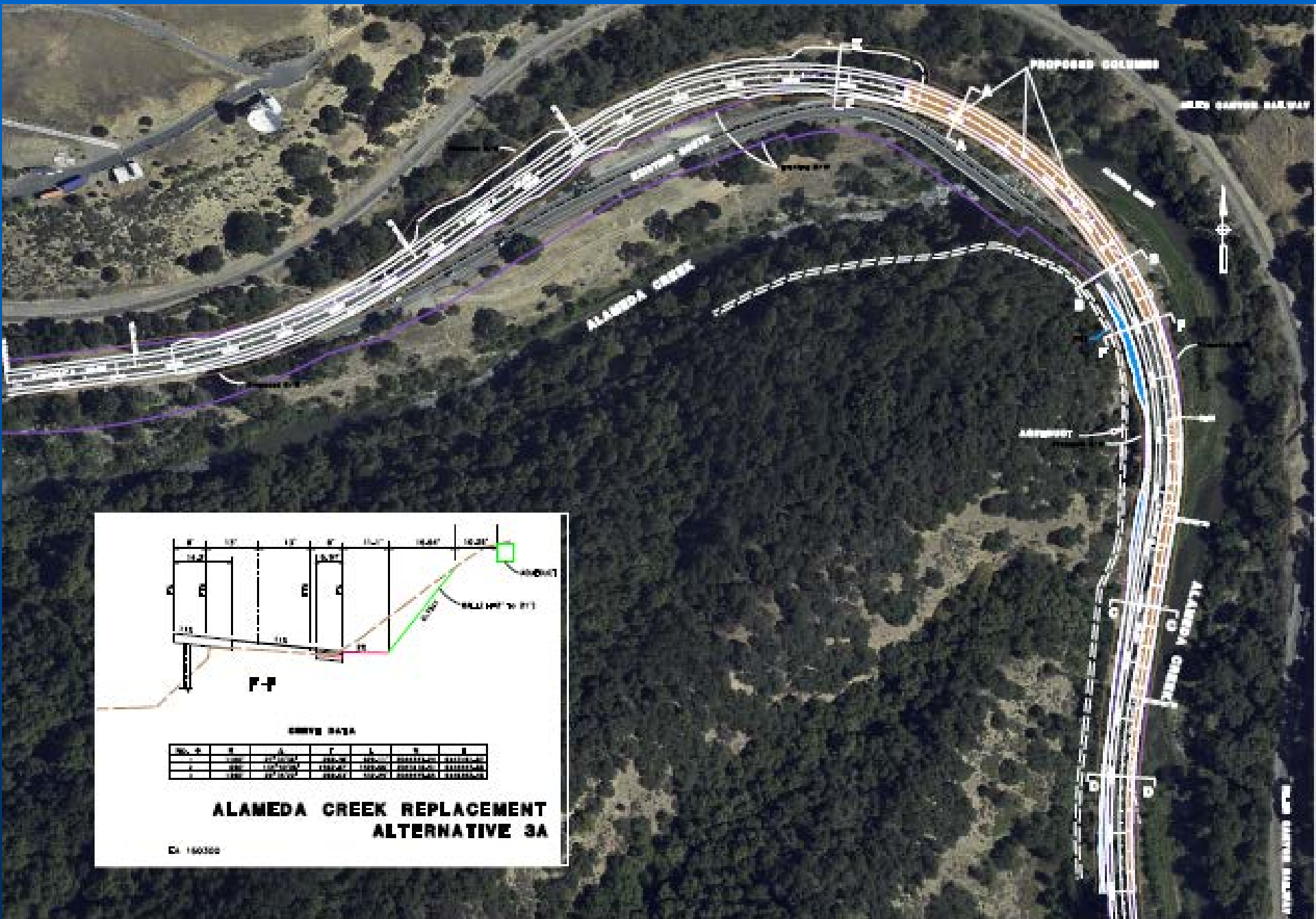
ALTERNATIVE 1

EA 160900

Alternative 2 – Value Analysis Study, 2010



Alternate 3A – VA w/Viaduct & Rock Cut



35 mph Design Speed

w/45 mph Bridge

Alternative 3B – Revised East Tie-In

Conceptual Rendering