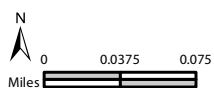
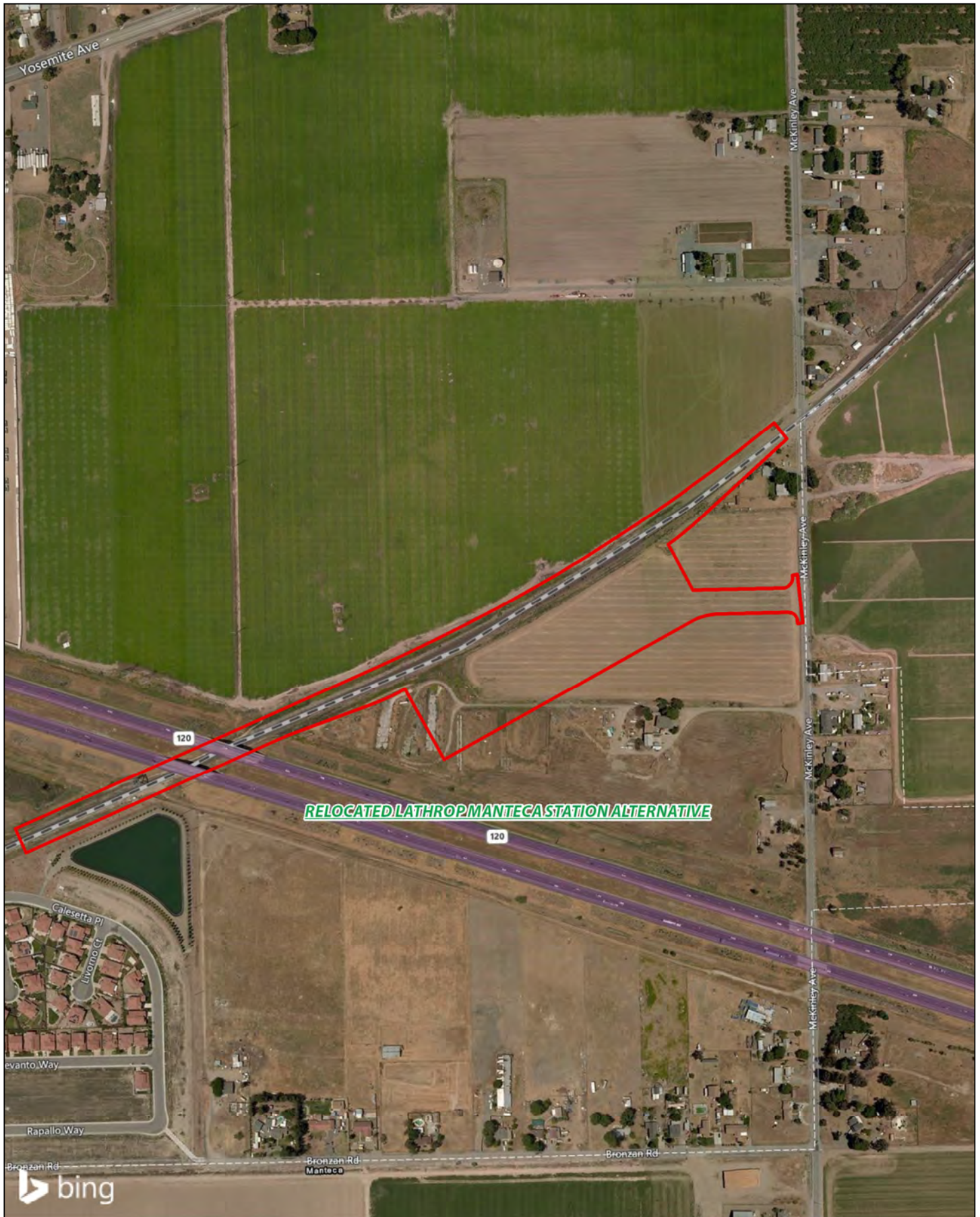
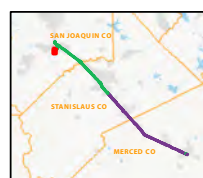


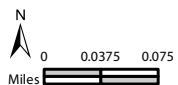
Updated ACE Extension Environmental Footprint



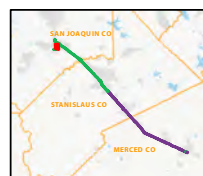
ACE Extension Environmental Footprint



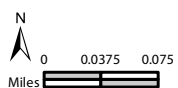
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



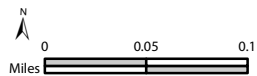
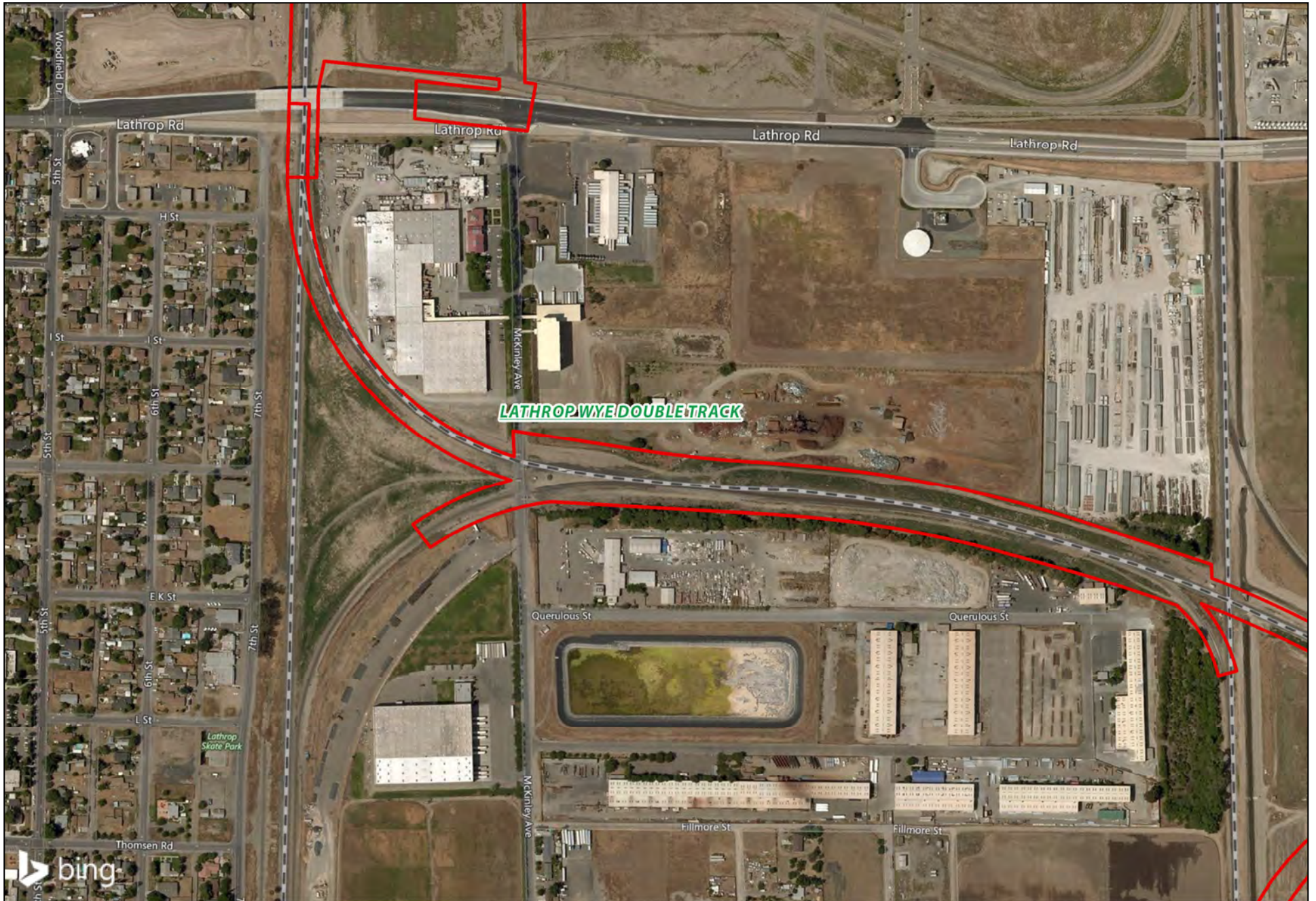
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



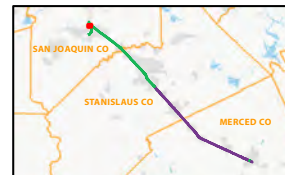
ACE Extension Environmental Footprint



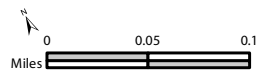
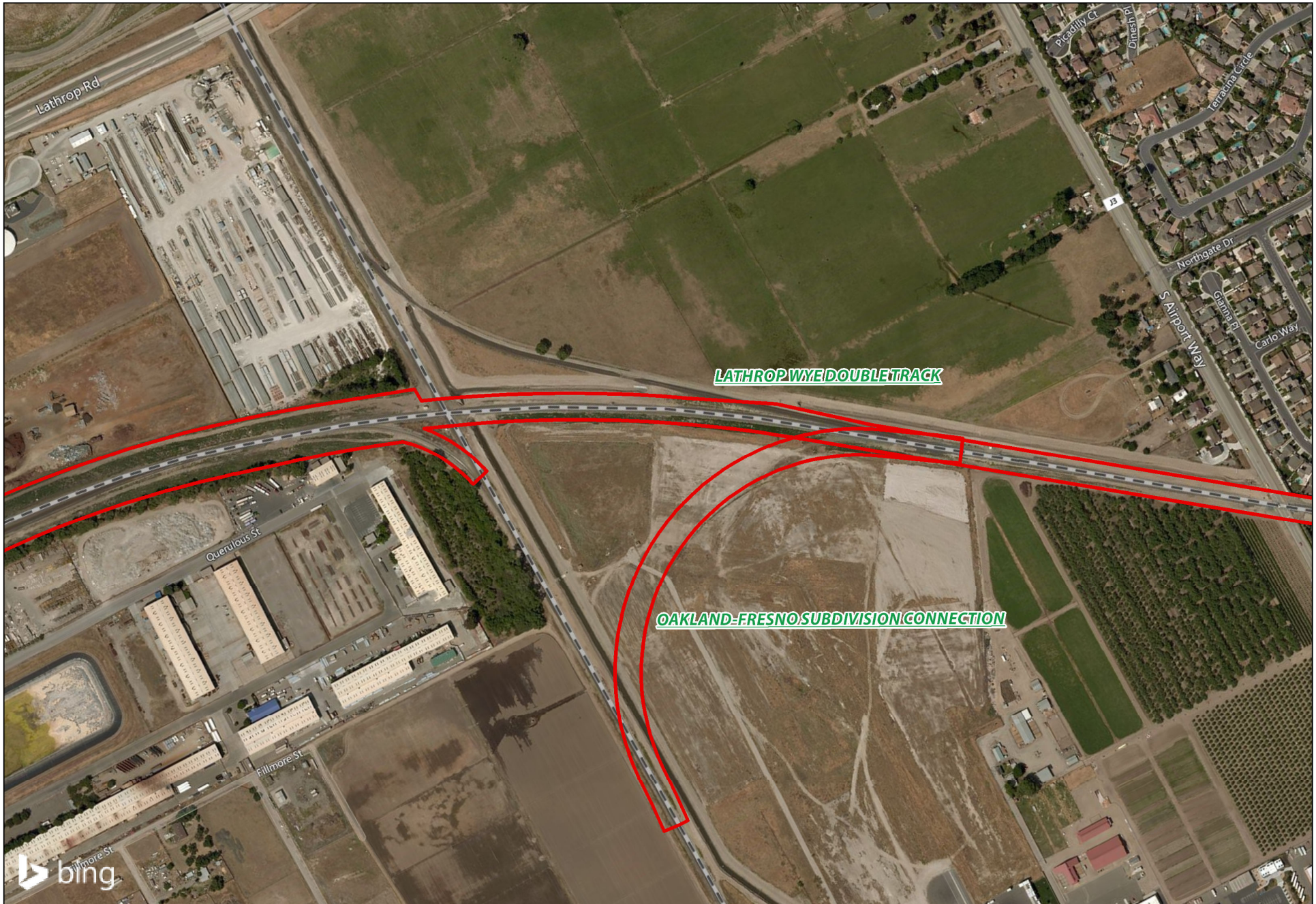
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



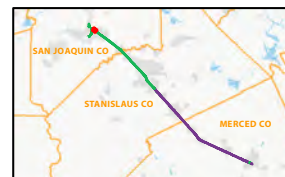
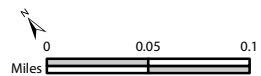
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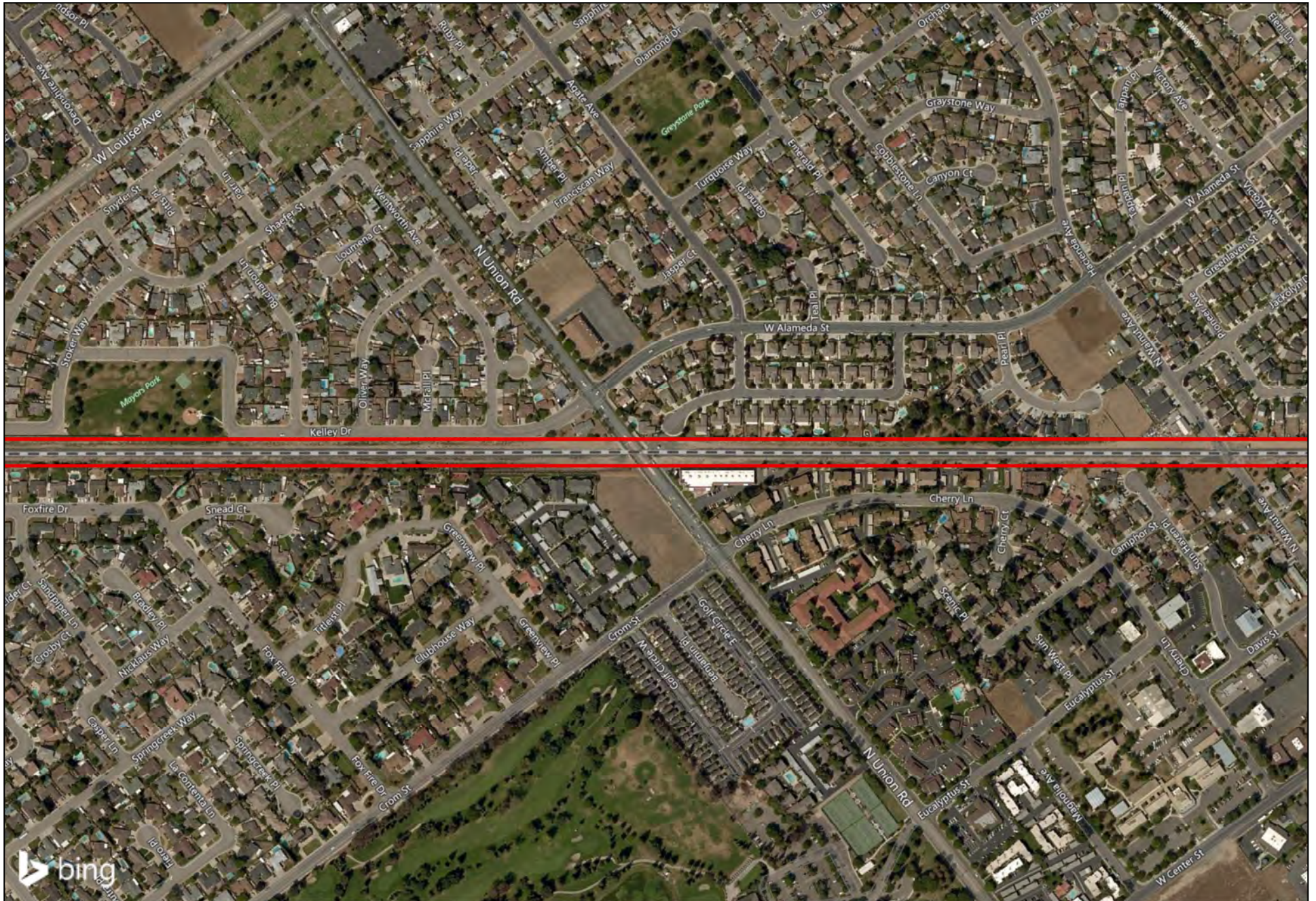
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




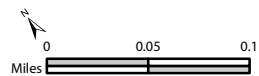
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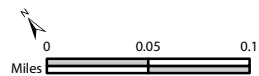
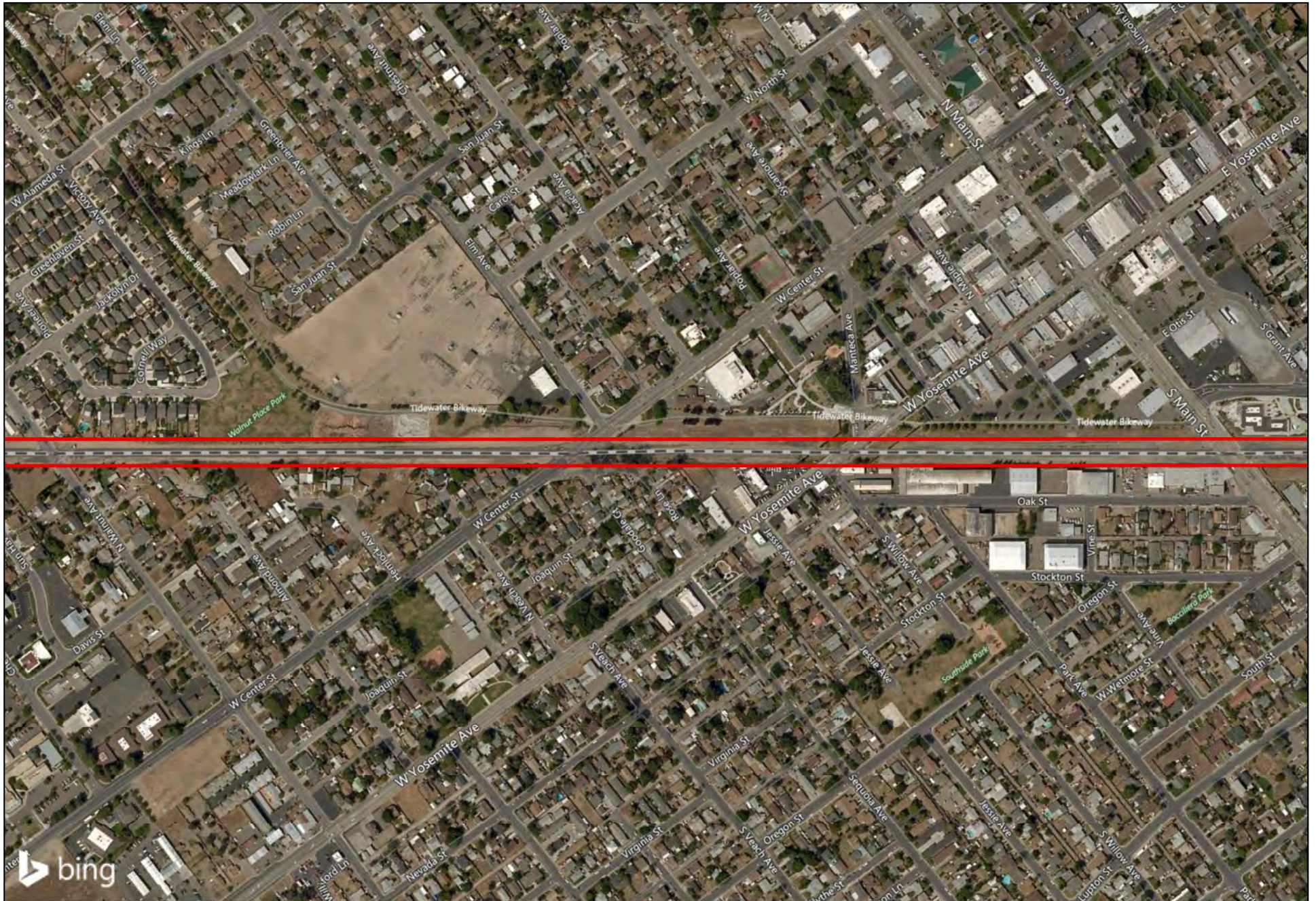
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



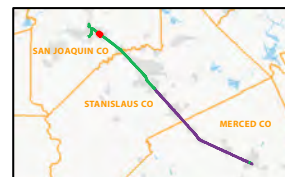
 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



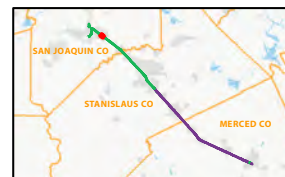
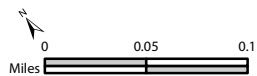
ACE Extension Environmental Footprint



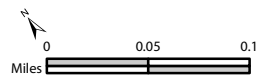
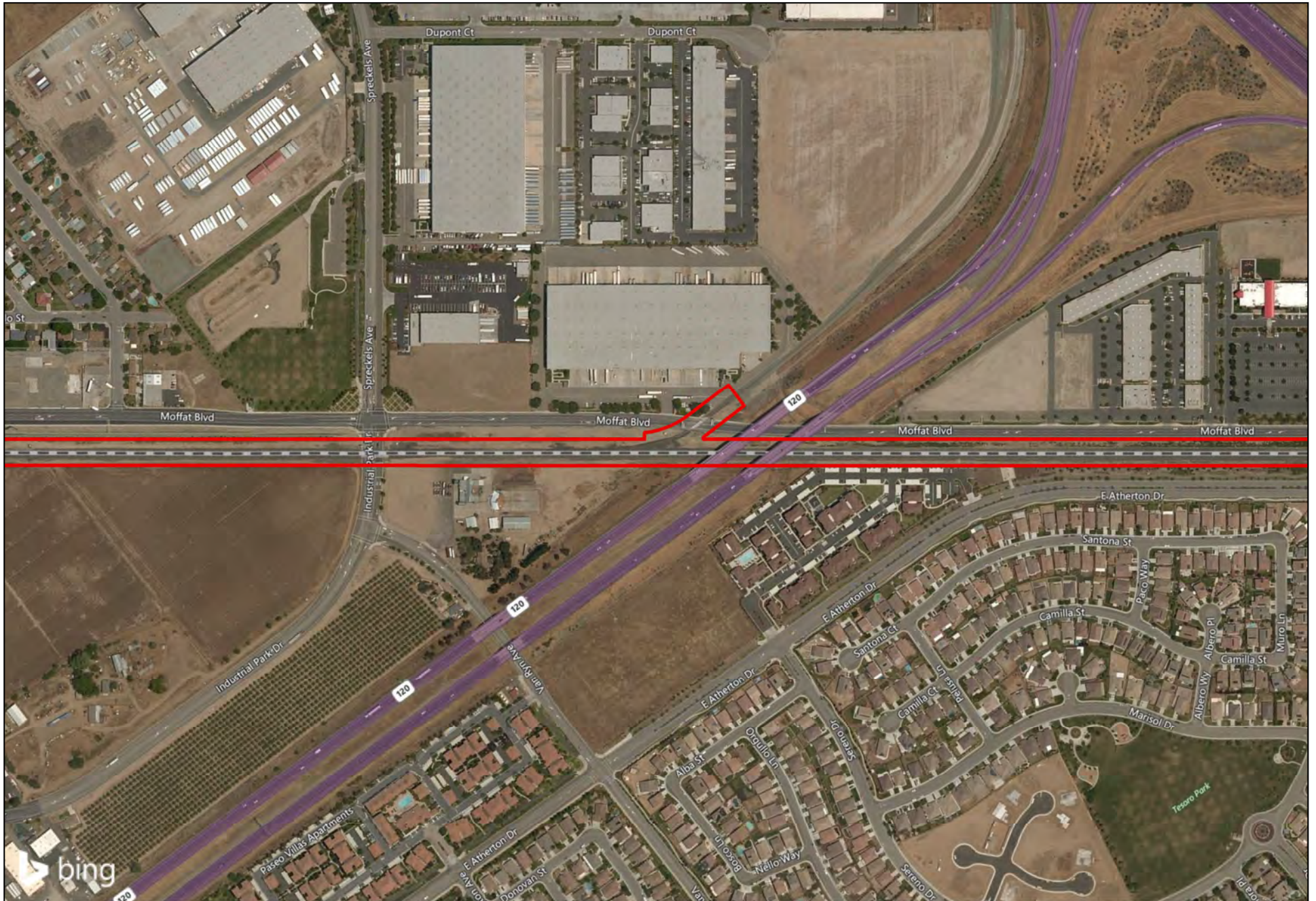
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



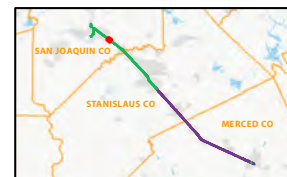
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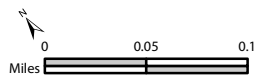
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ACE Extension Lathrop to Ceres/Merced

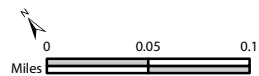



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

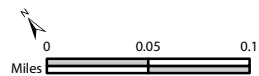




 ACE Extension Environmental Footprint



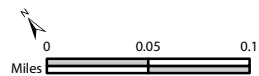
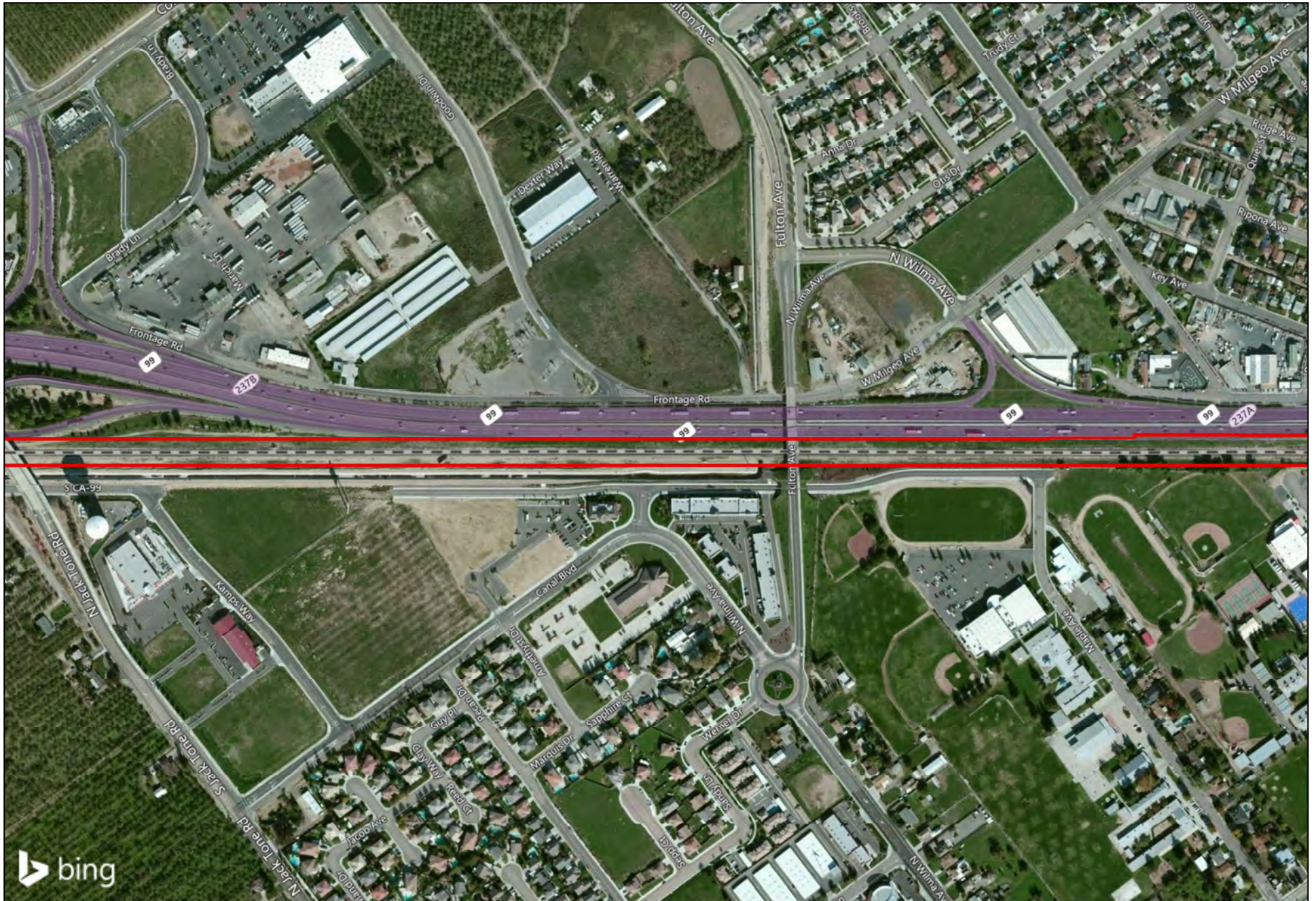
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



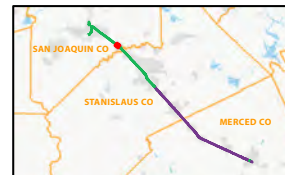
ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

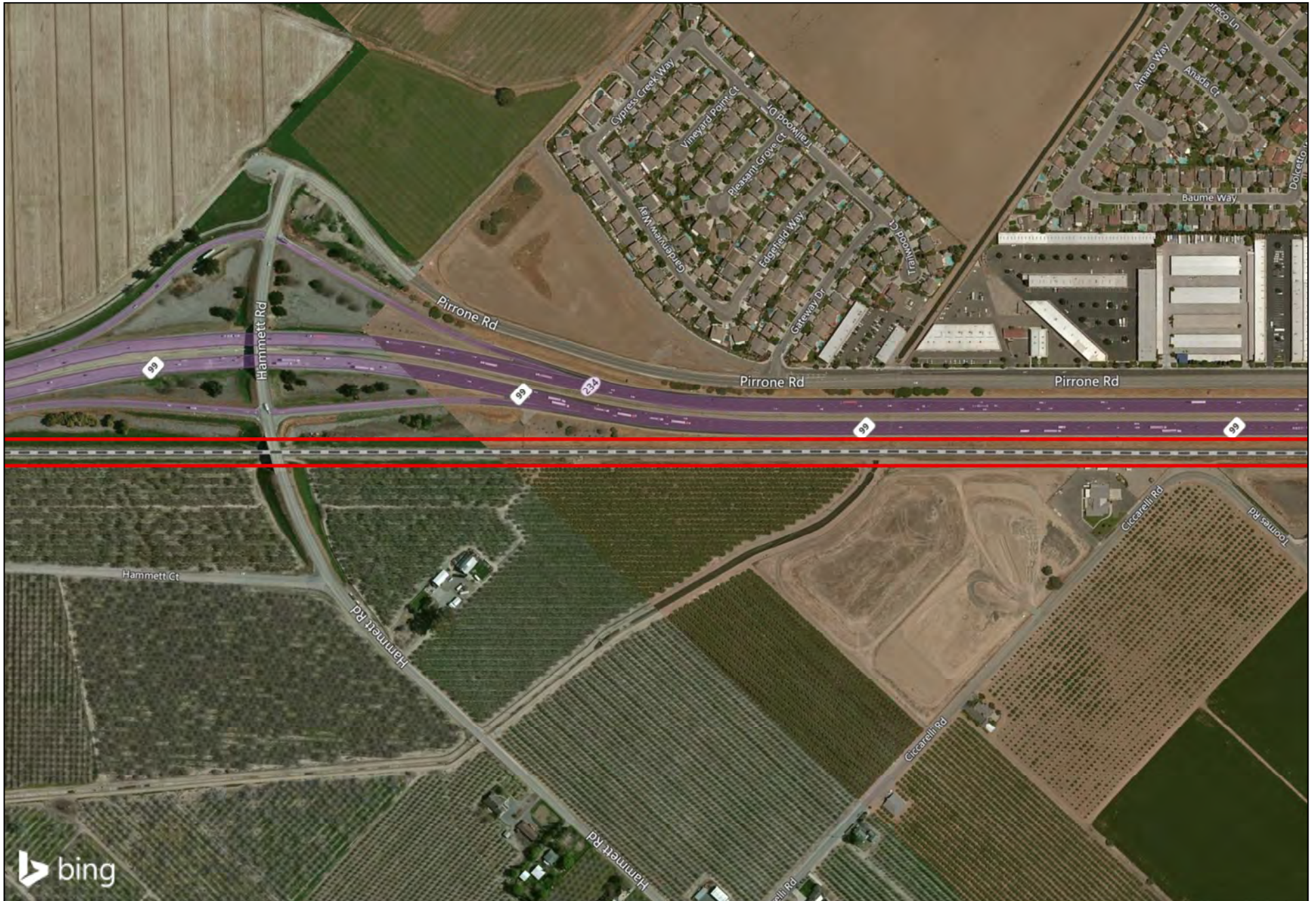



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



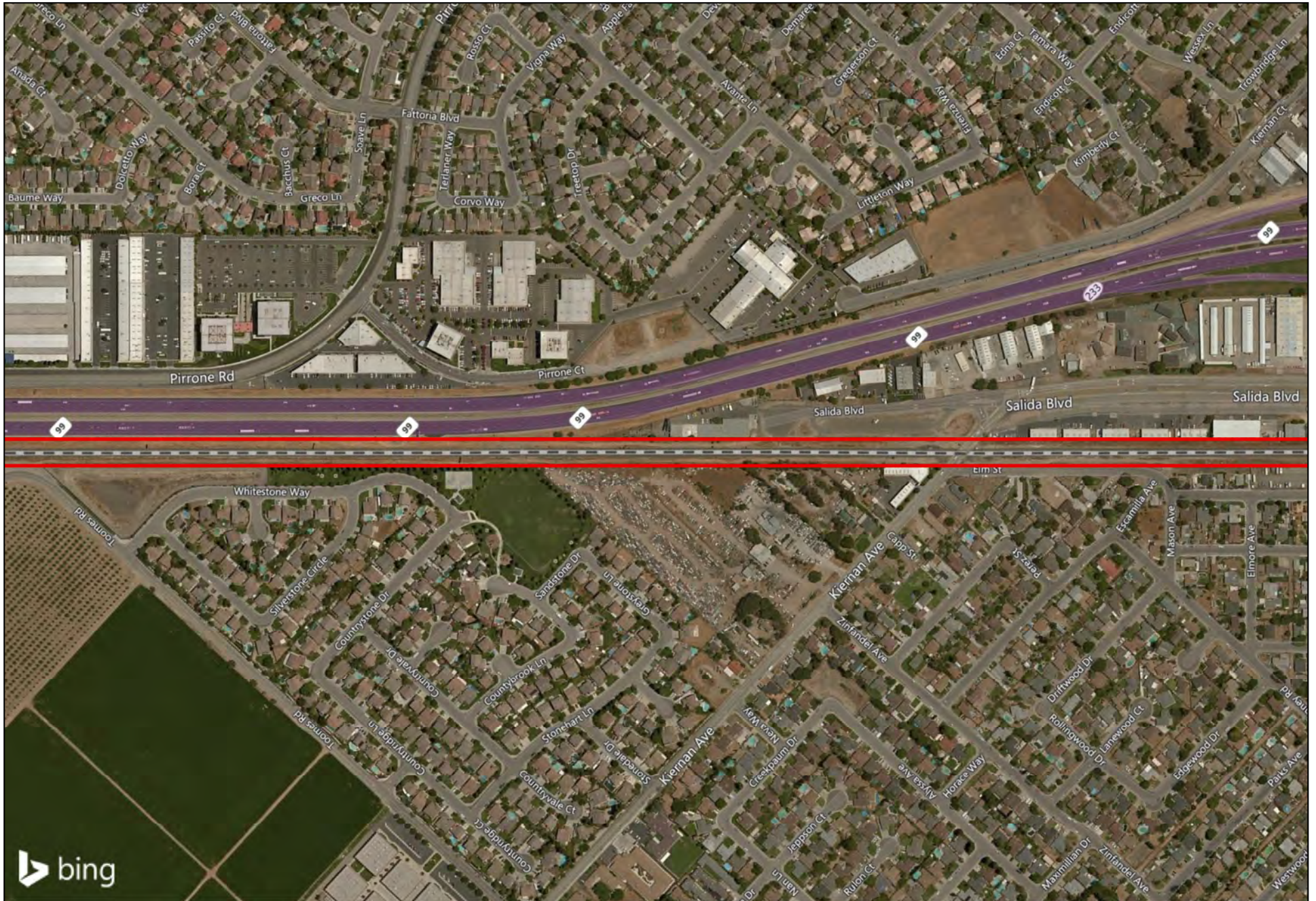


 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



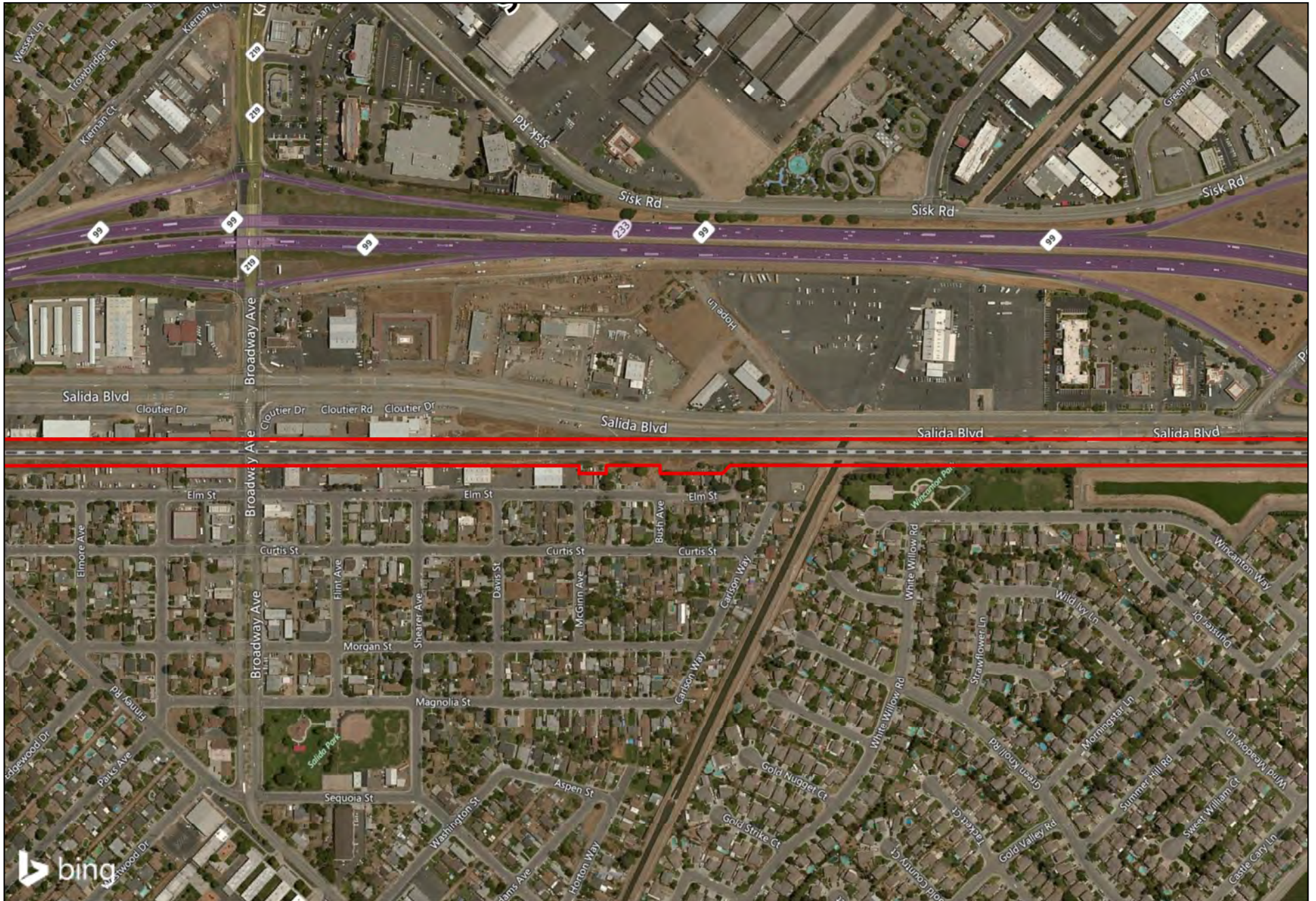


 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

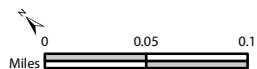


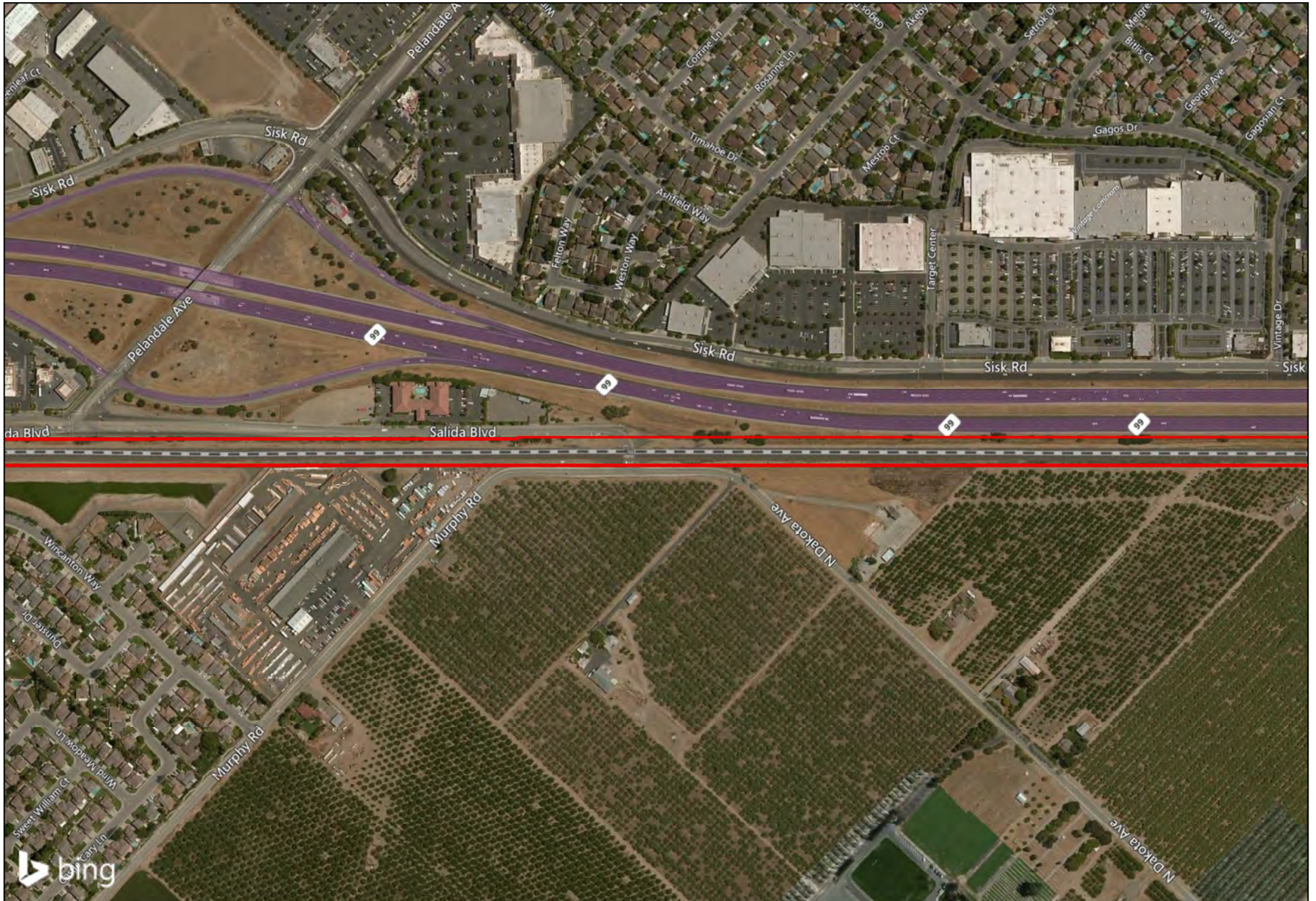


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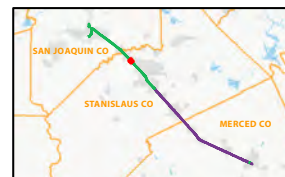


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

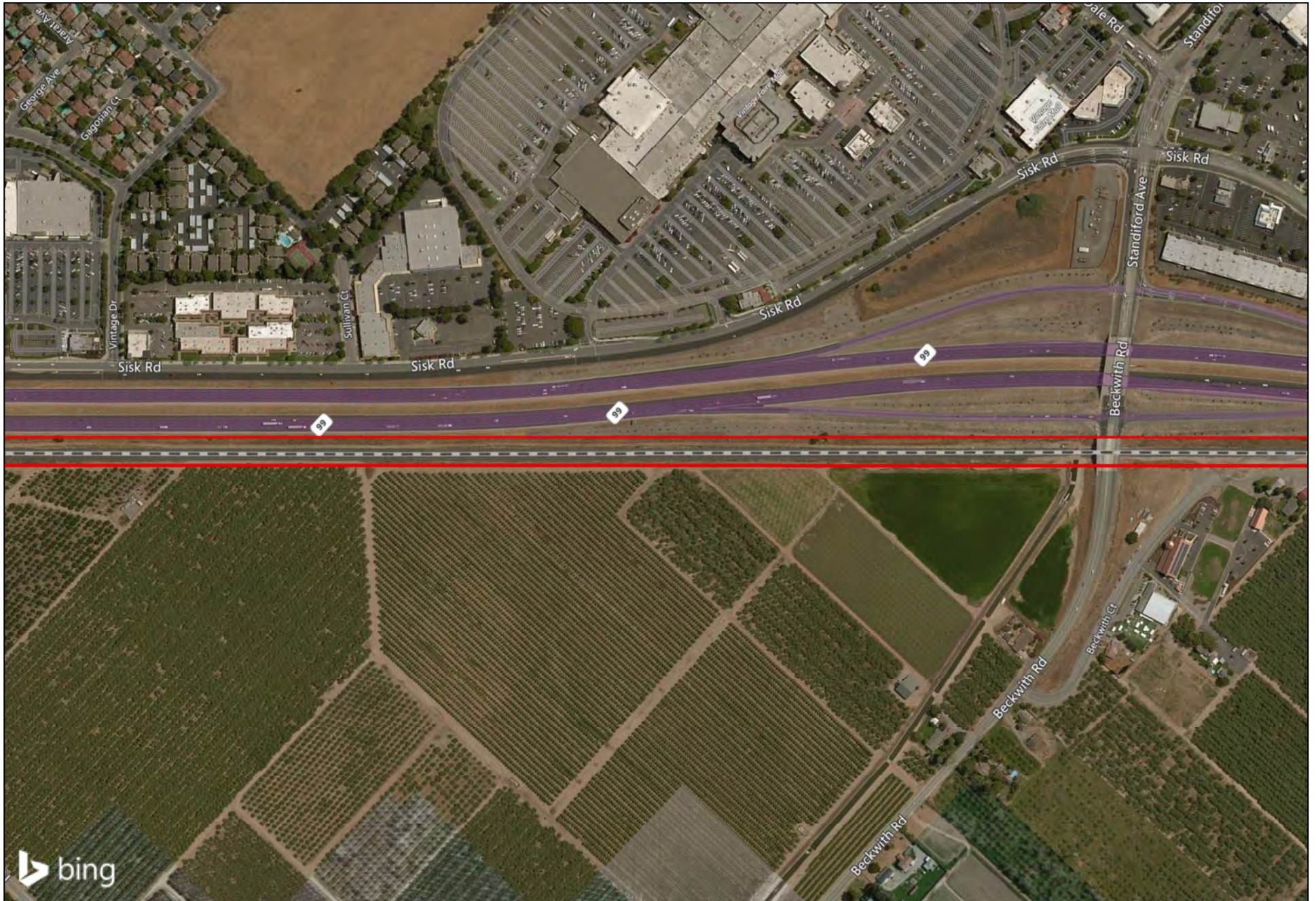




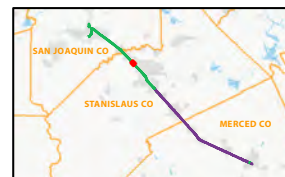
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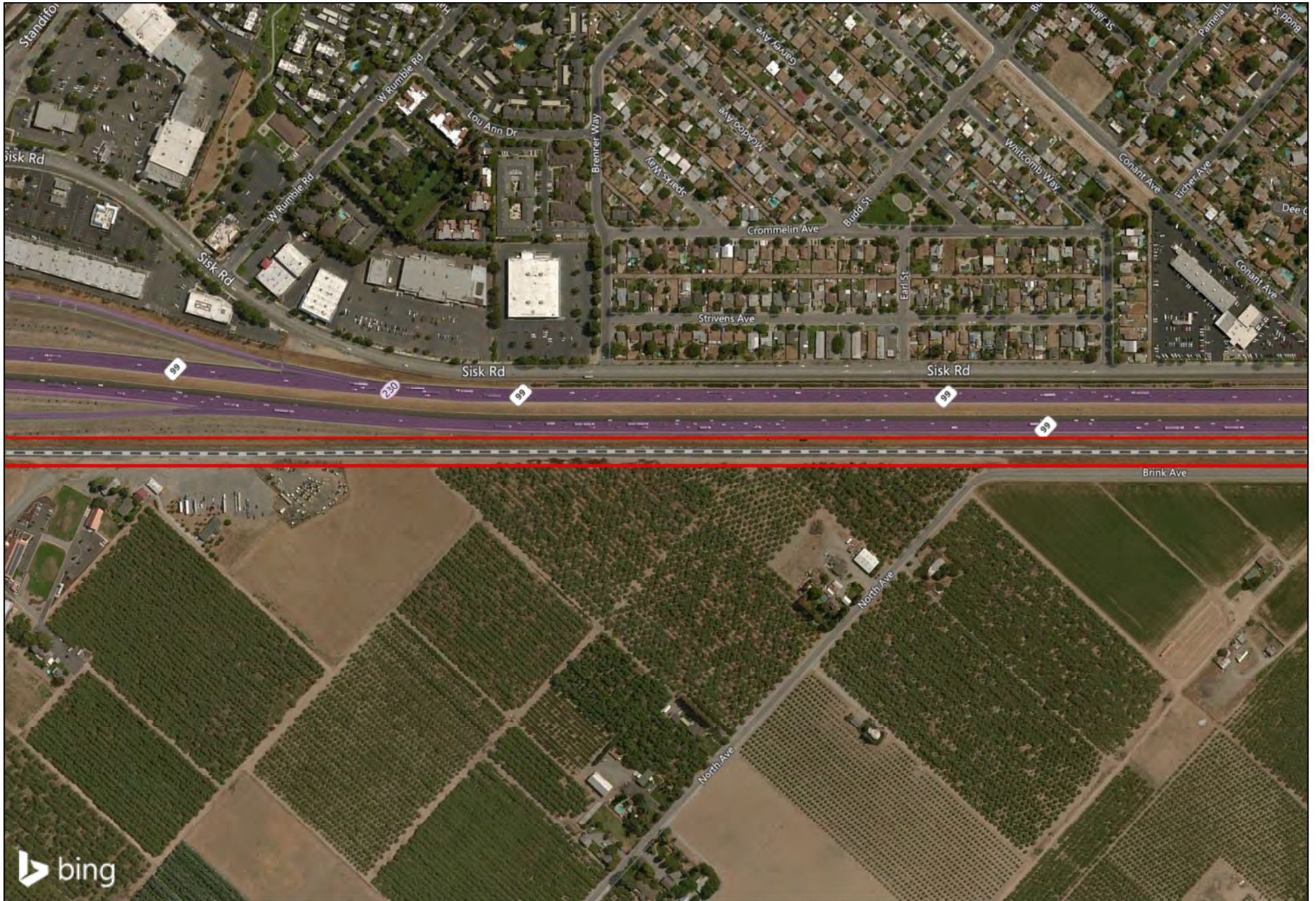
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ACE Extension Lathrop to Ceres/Merced



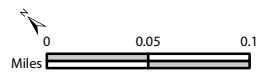
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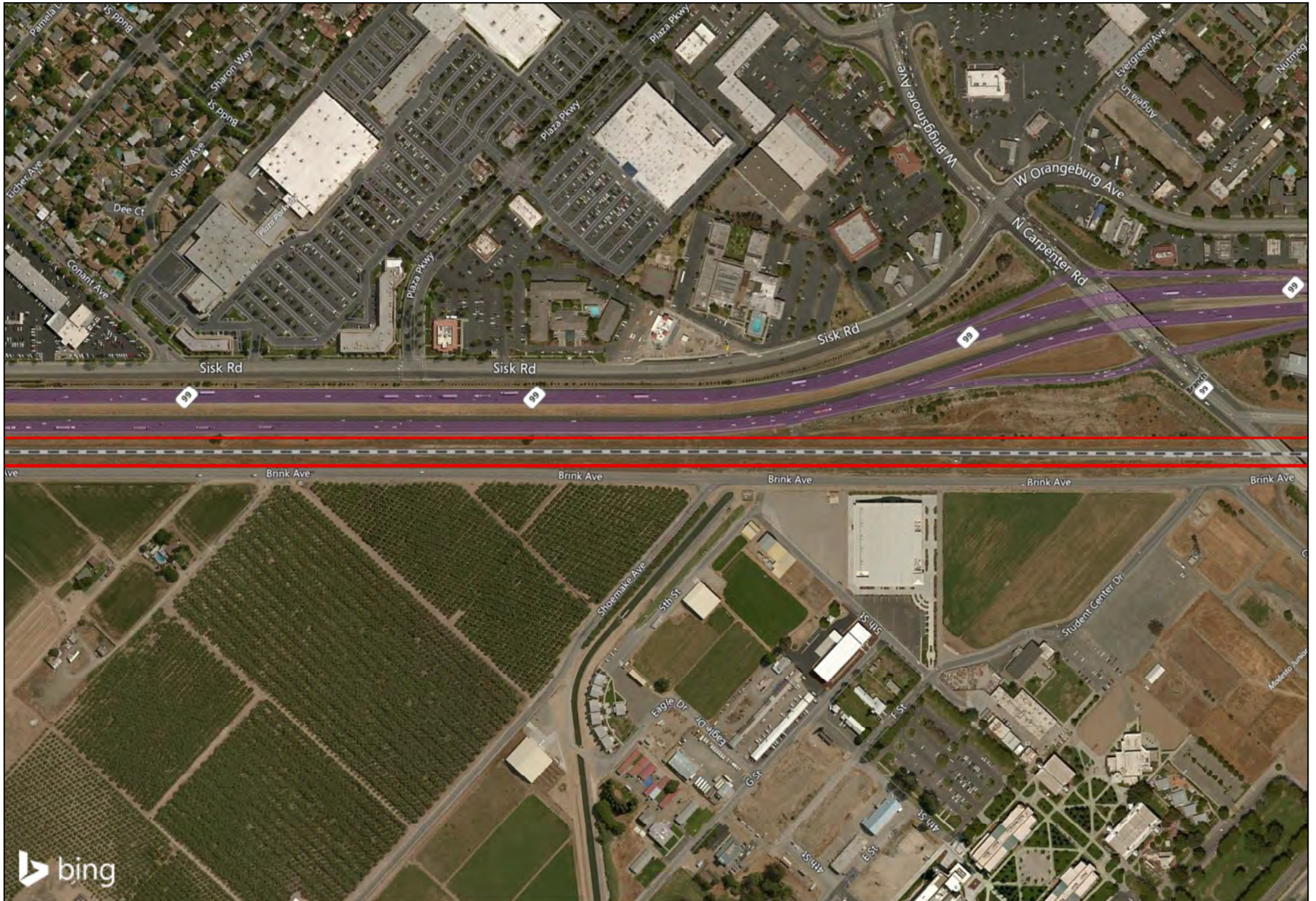
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ACE Extension Lathrop to Ceres/Merced



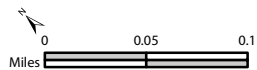
 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



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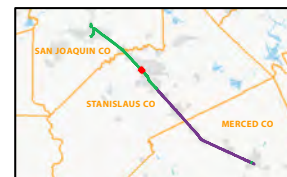
ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

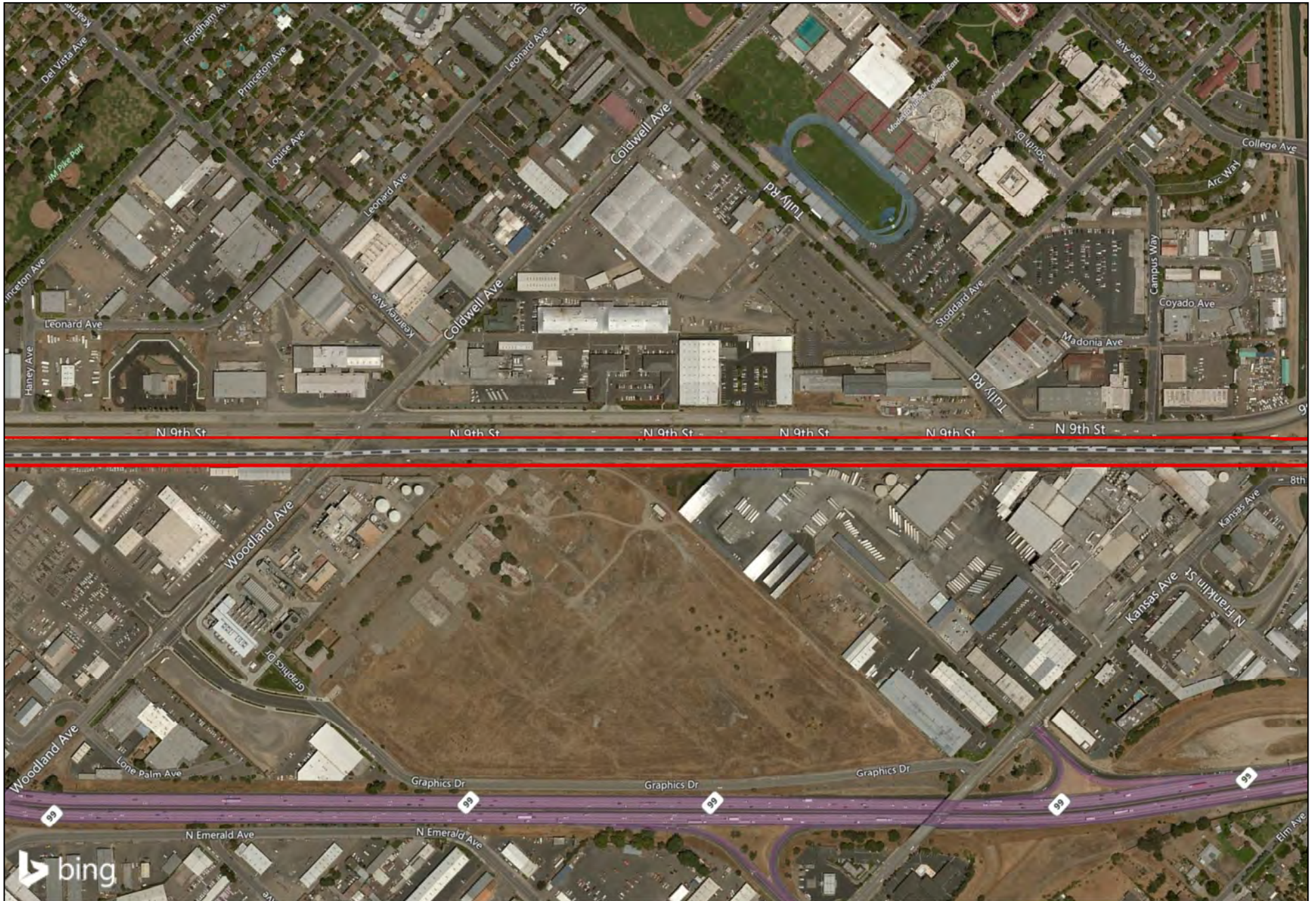


 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



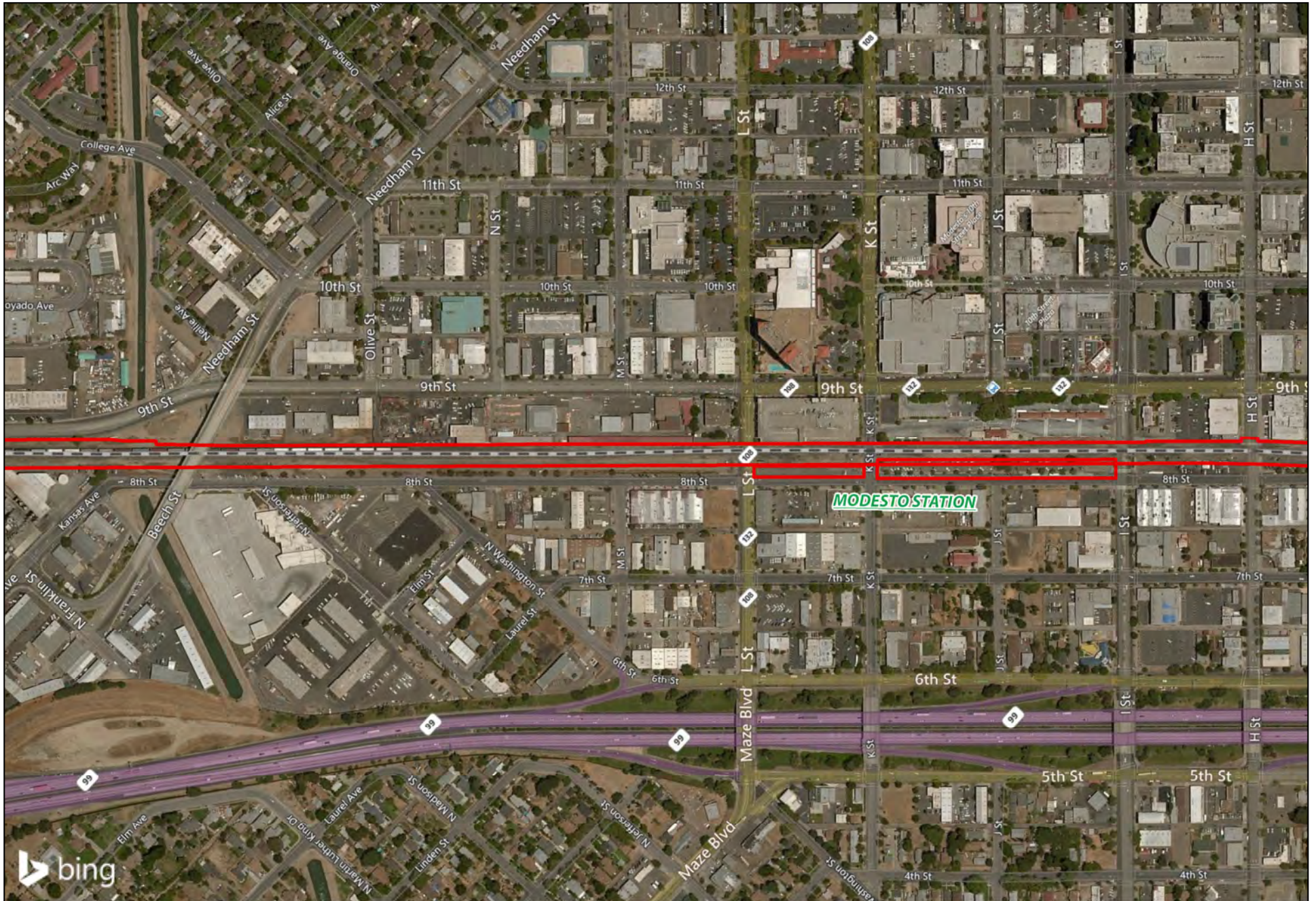



ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





 ACE Extension Environmental Footprint

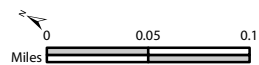


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

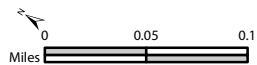




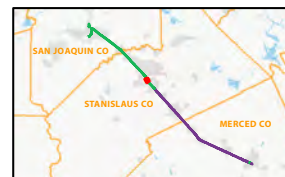
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Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



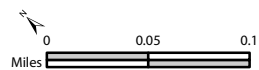
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Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



ACE Extension Environmental Footprint

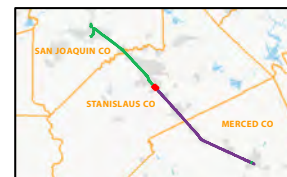


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

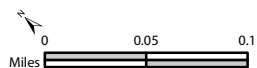


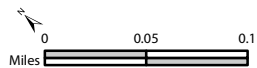
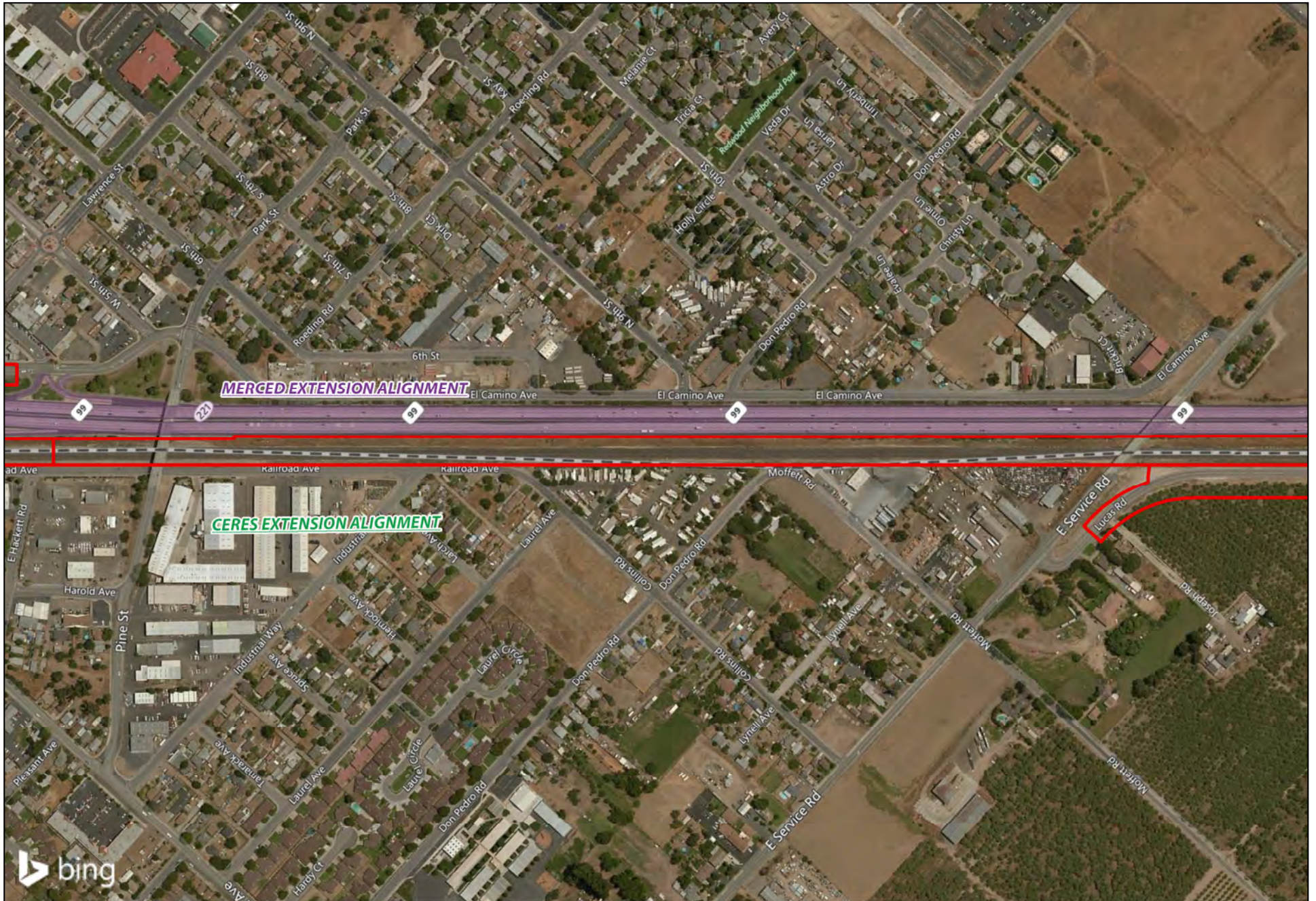



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

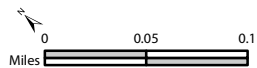
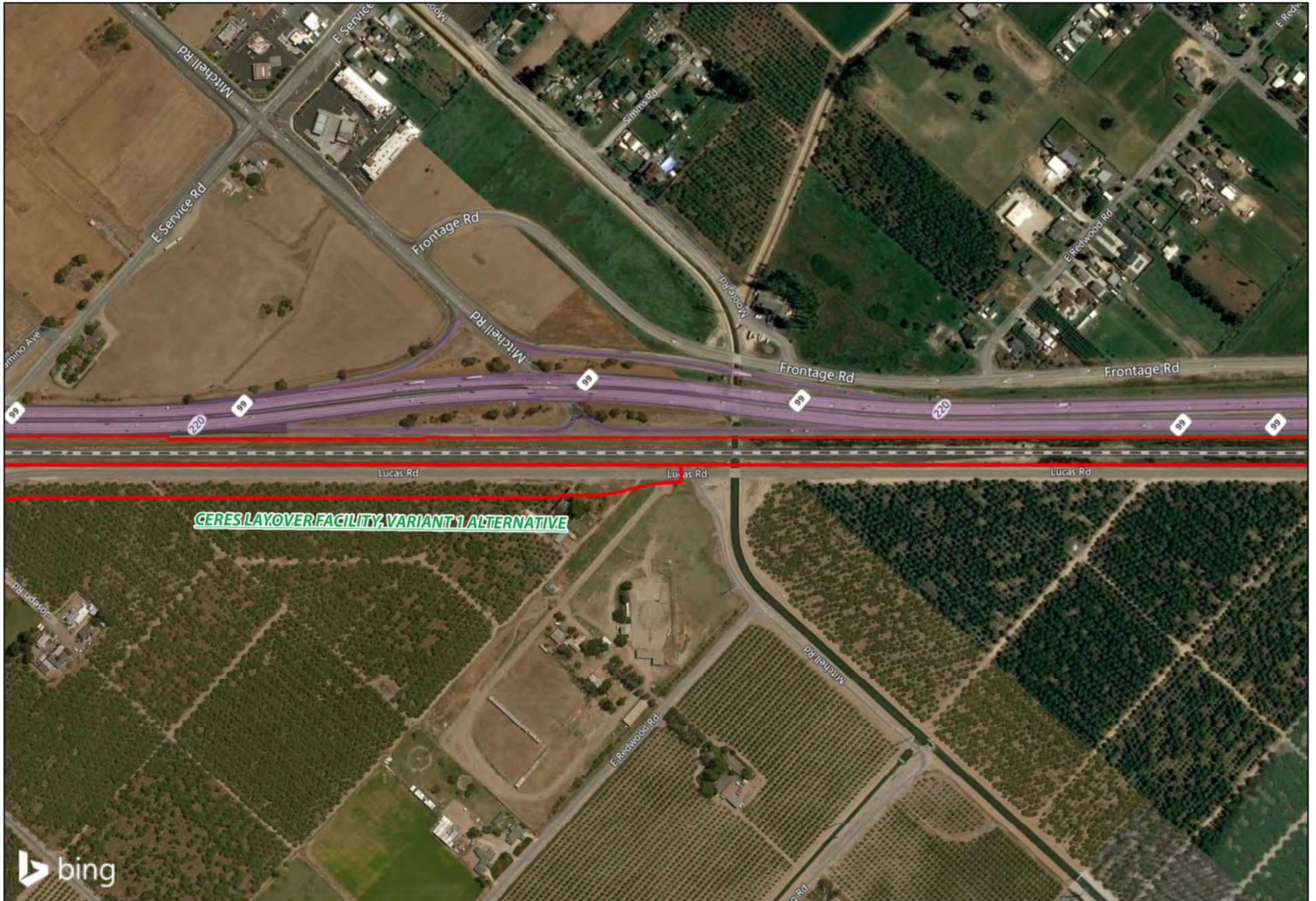





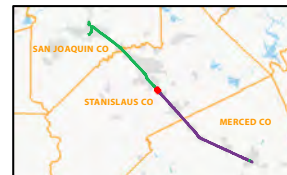
 ACE Extension Environmental Footprint



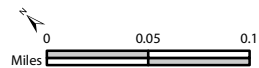
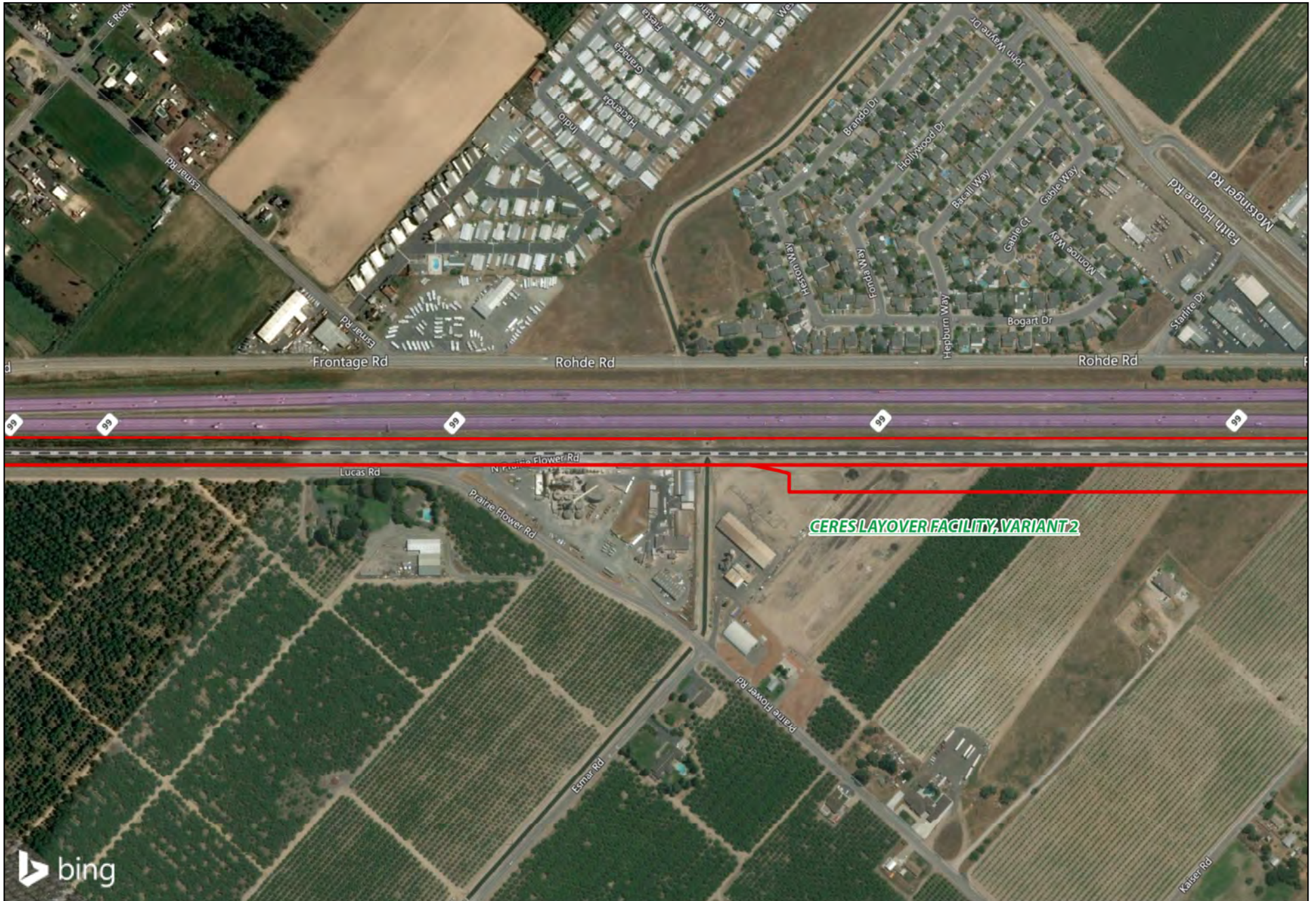
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




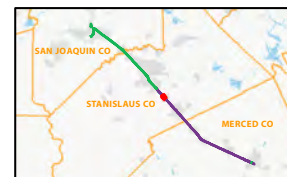
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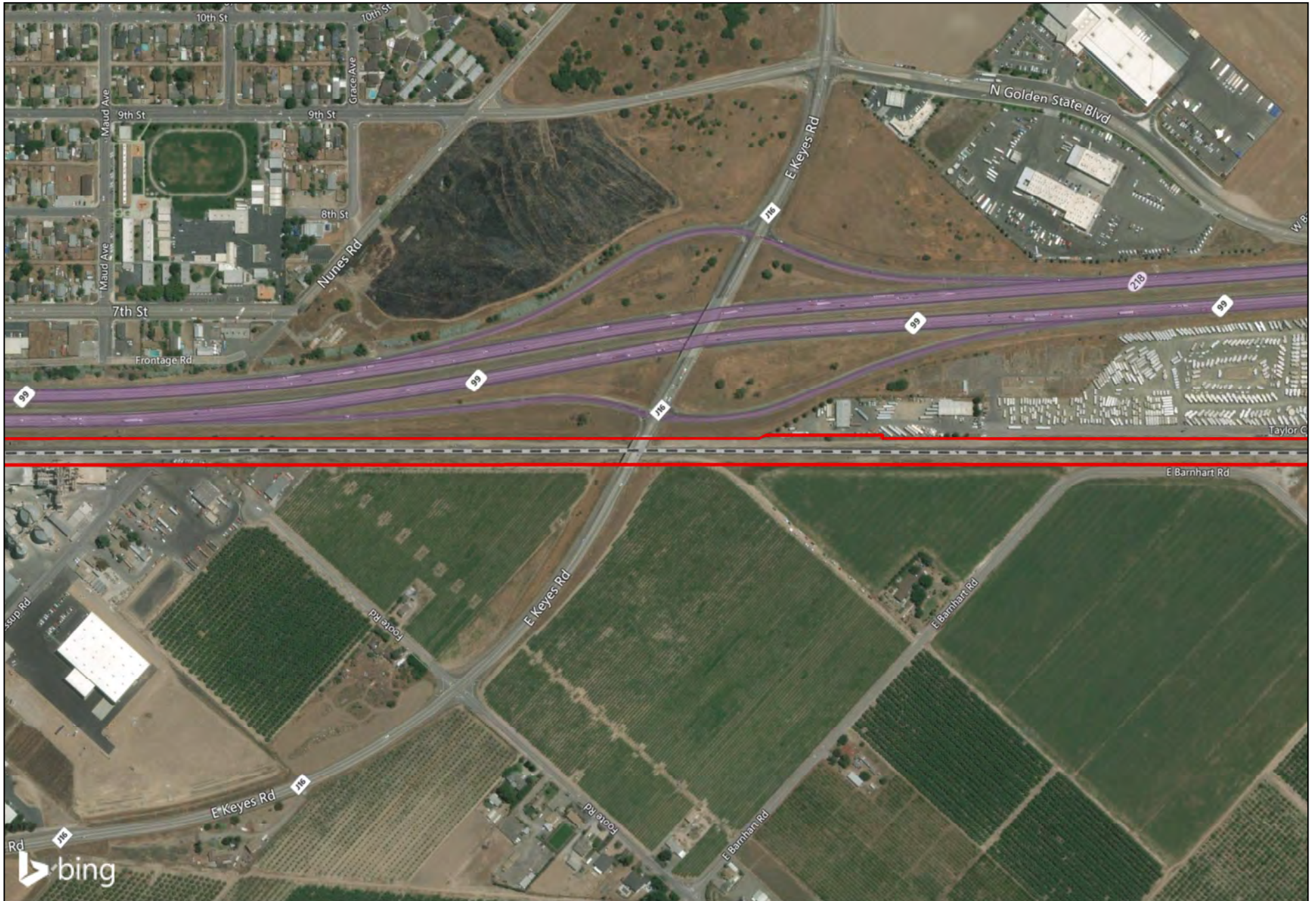
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

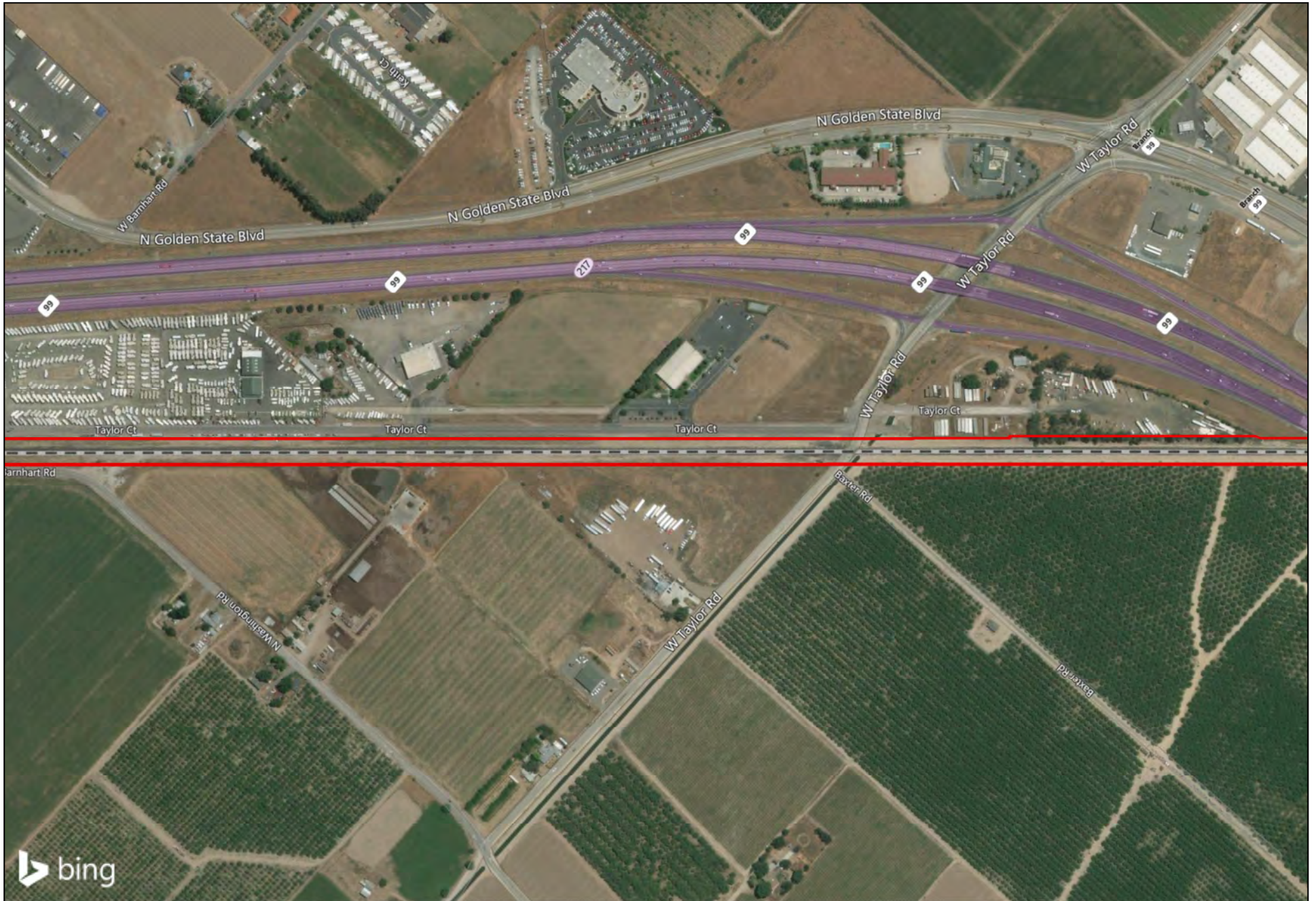



 ACE Extension Environmental Footprint

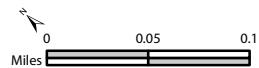


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





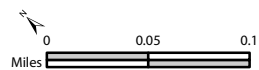
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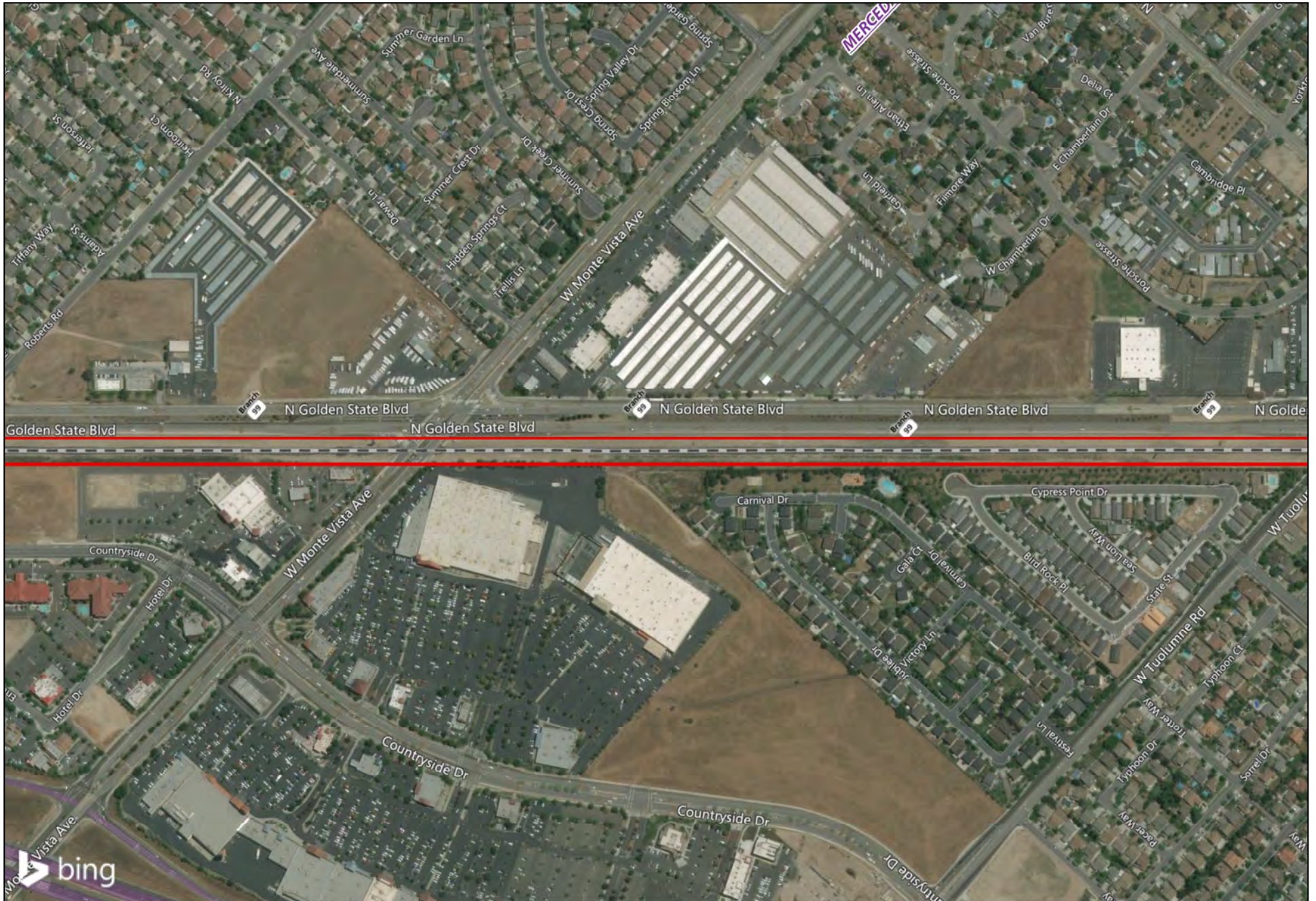
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ACE Extension Lathrop to Ceres/Merced



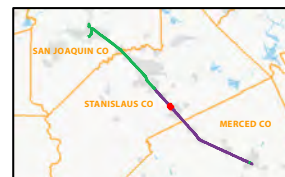
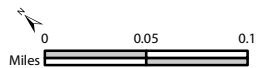
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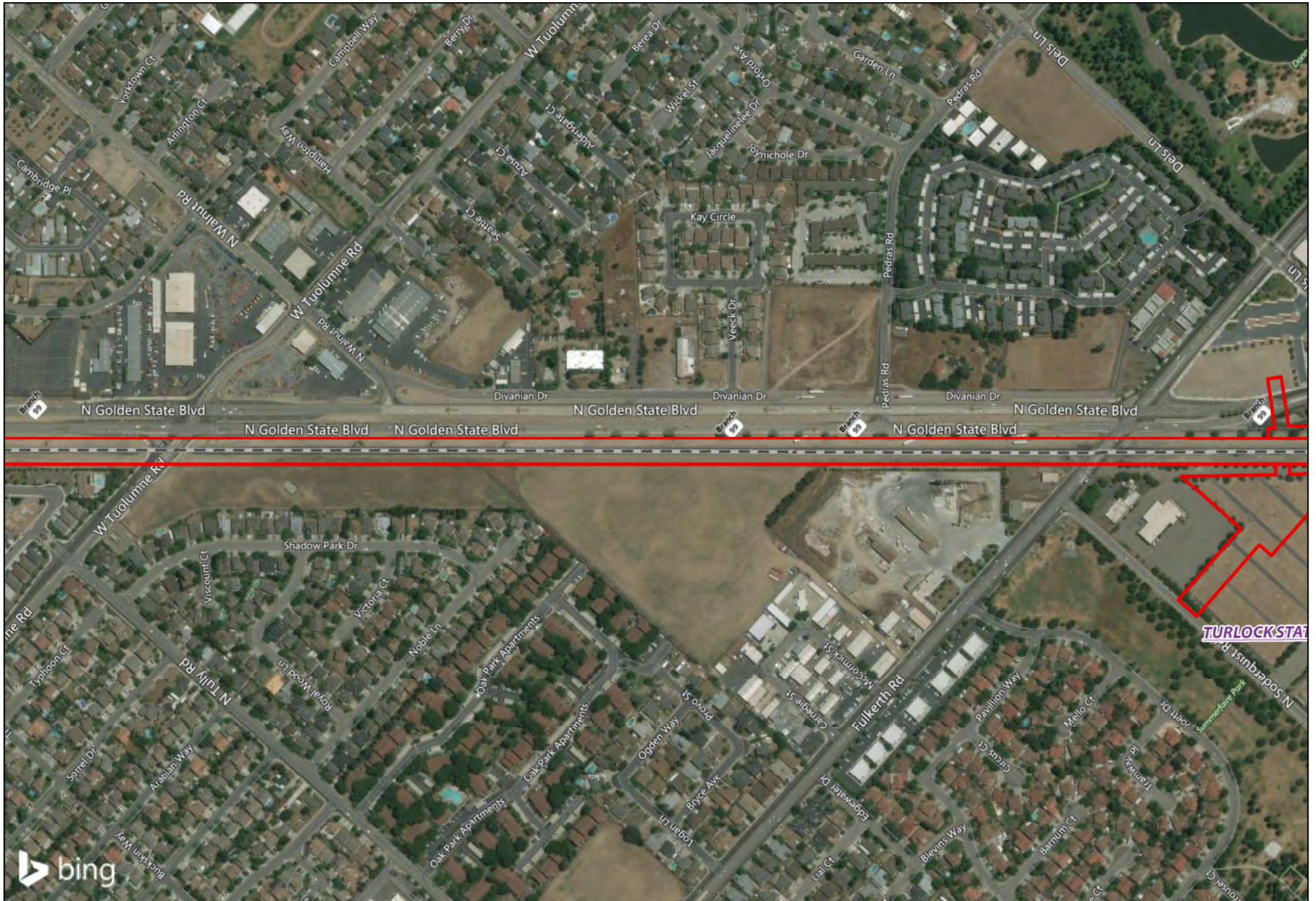
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

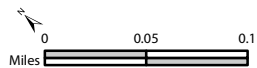
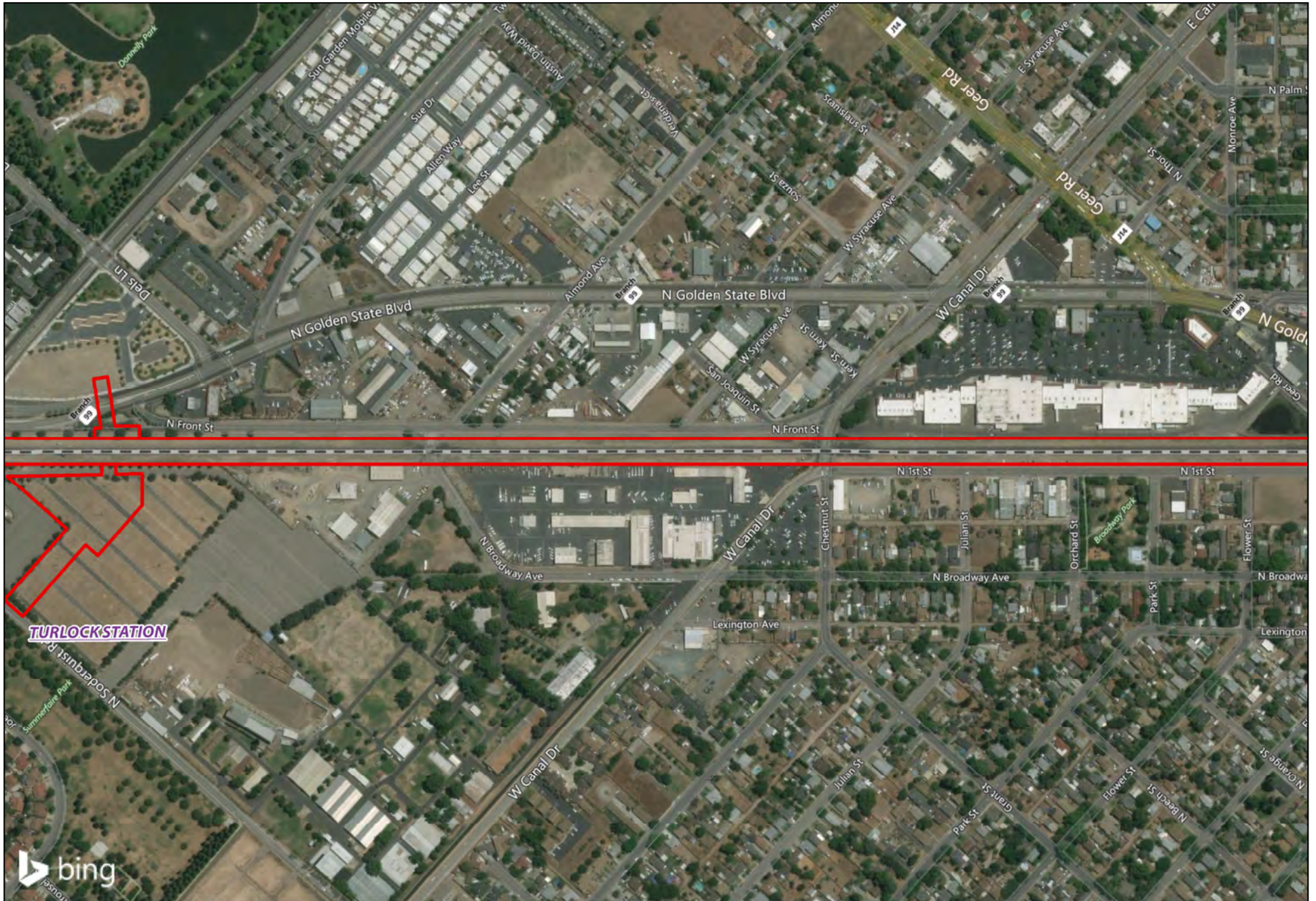



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced






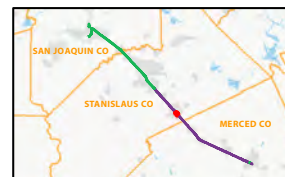
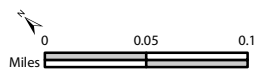
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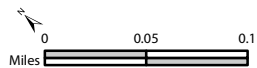
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



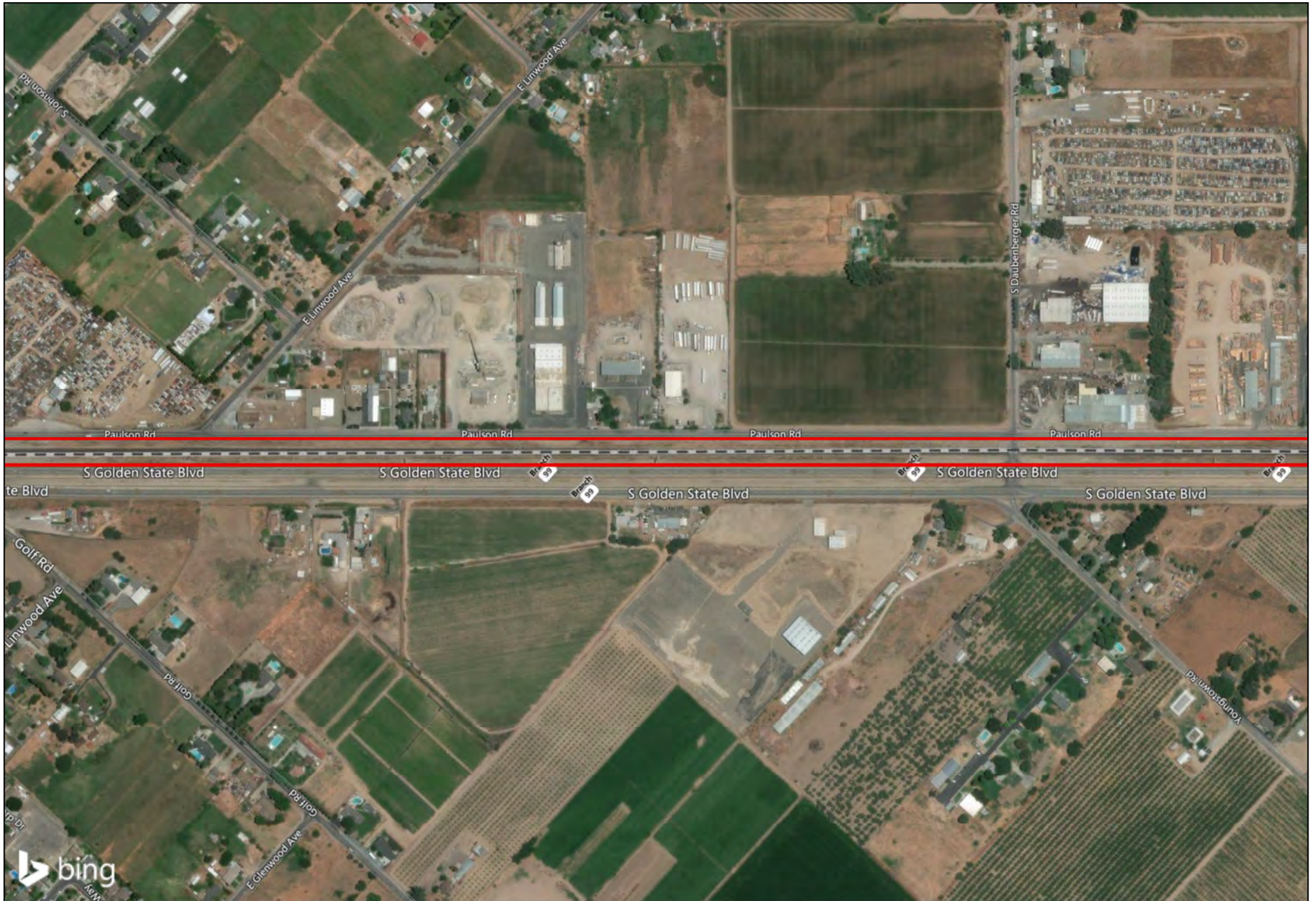
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




 ACE Extension Environmental Footprint

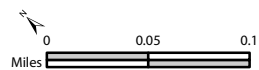


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

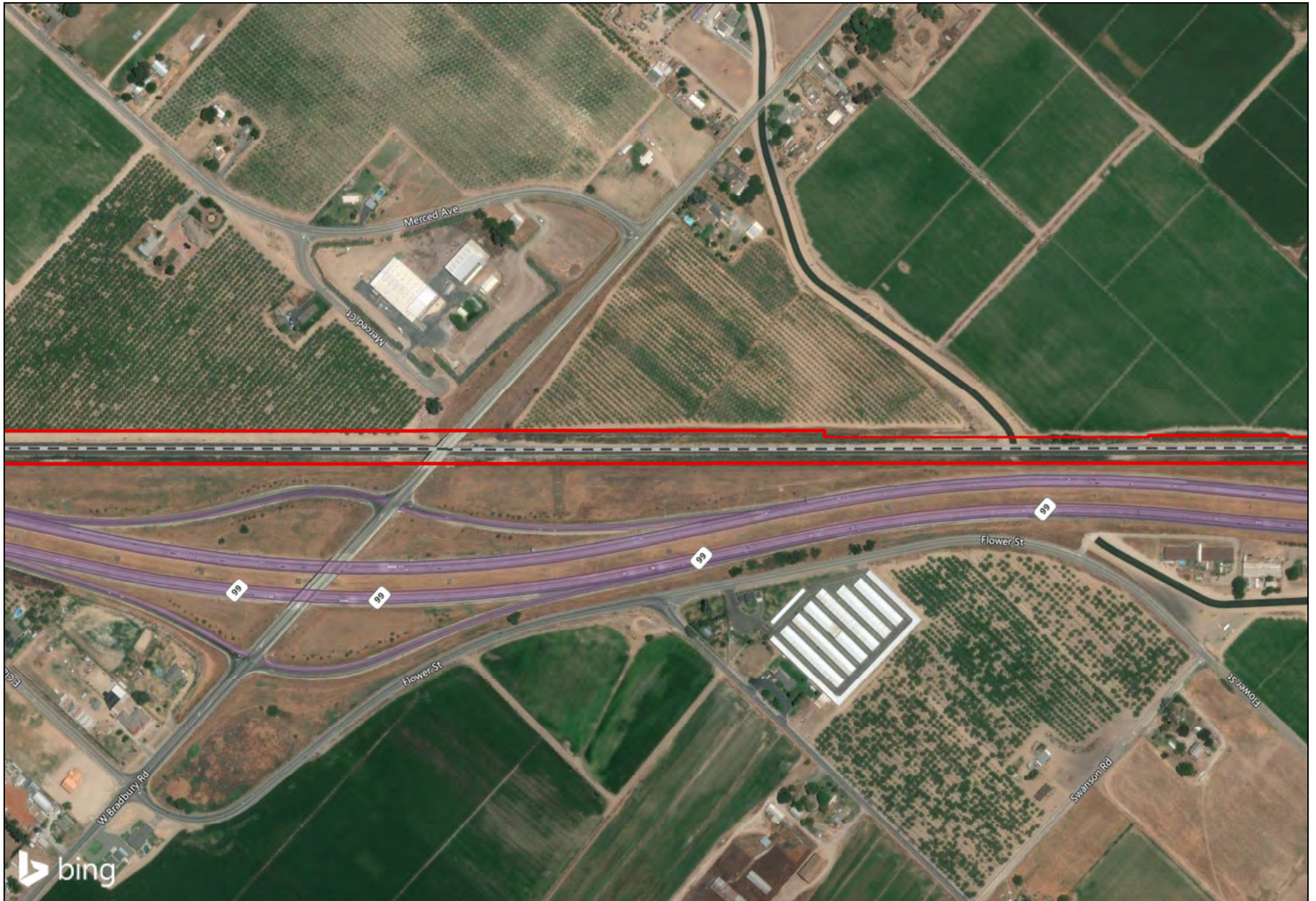


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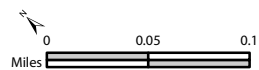


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





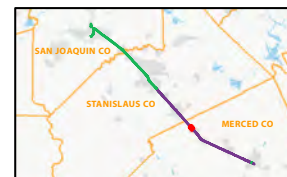
ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

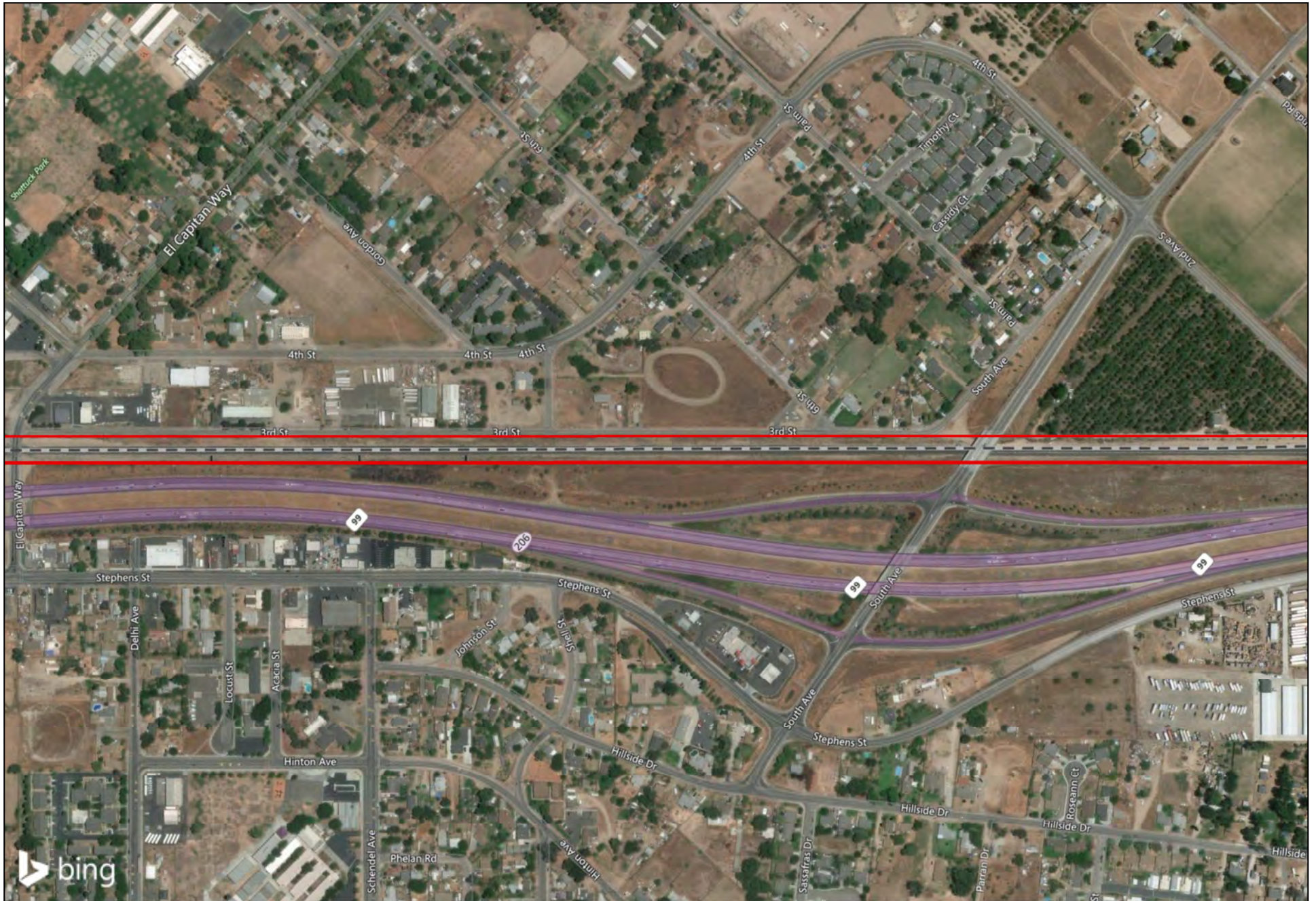


 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



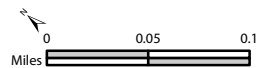
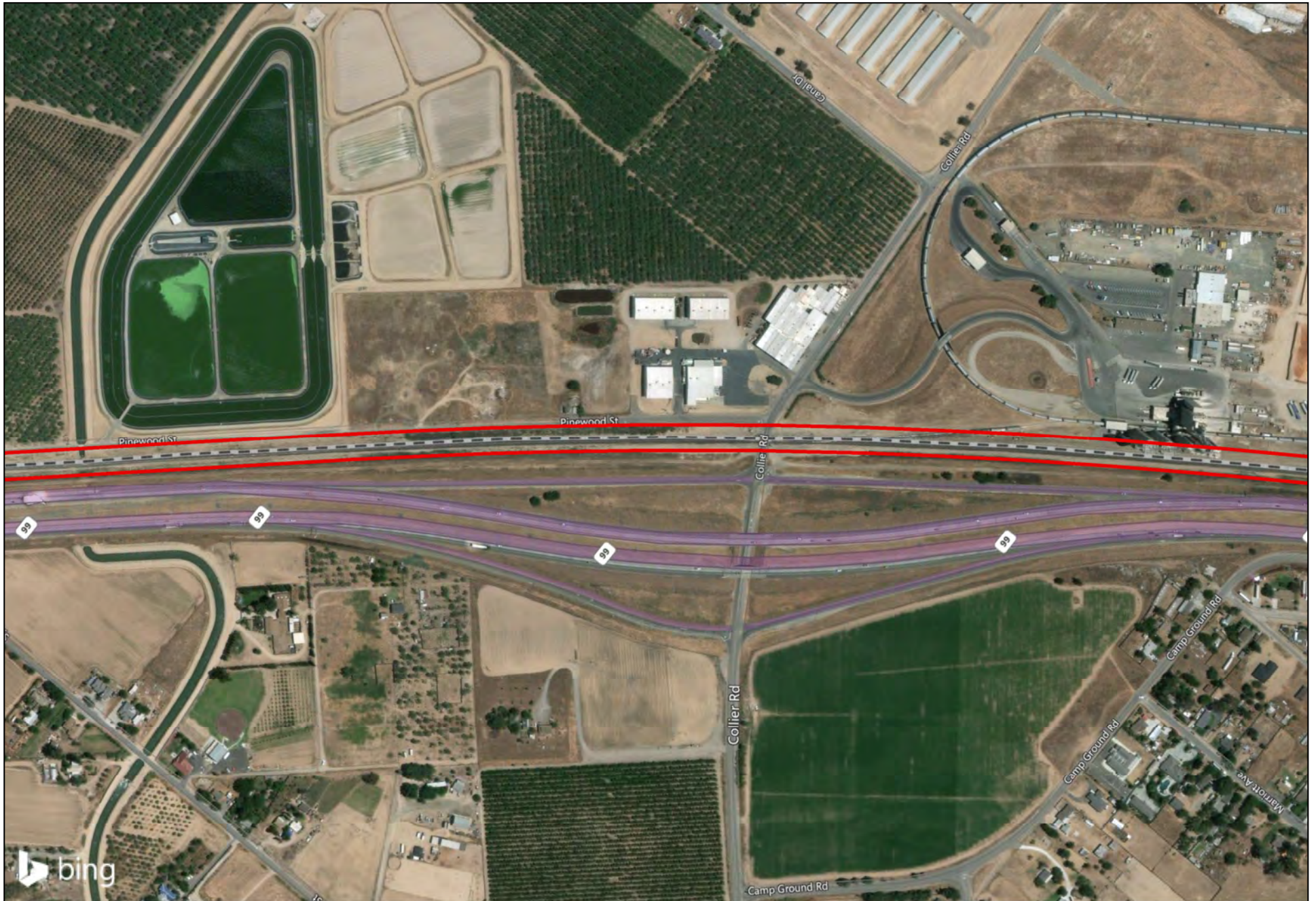



 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





 ACE Extension Environmental Footprint



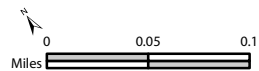
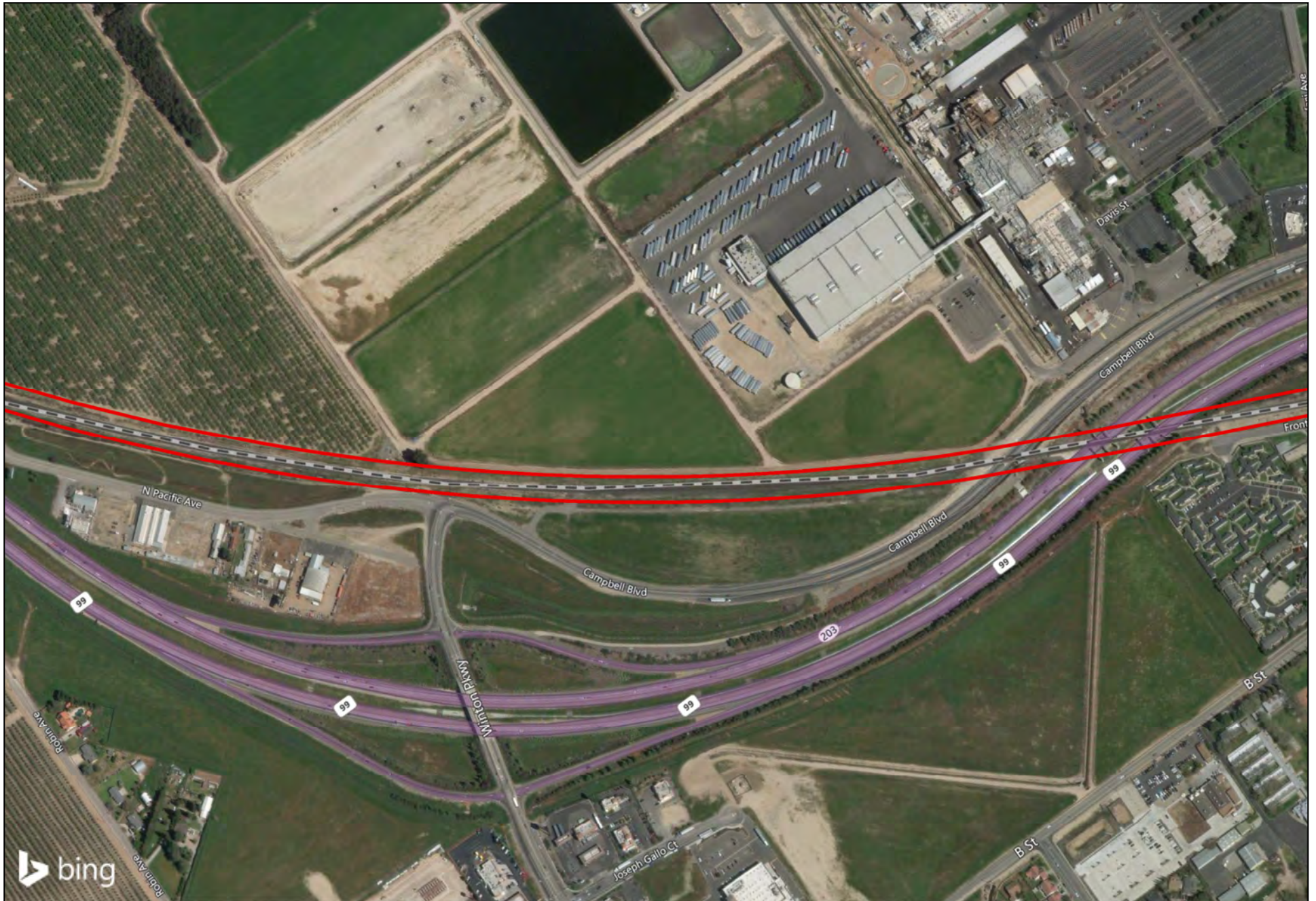
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




 ACE Extension Environmental Footprint



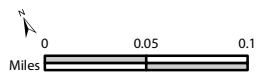
Environmental Footprint
ACE Extension Lathrop to Ceres/Merced

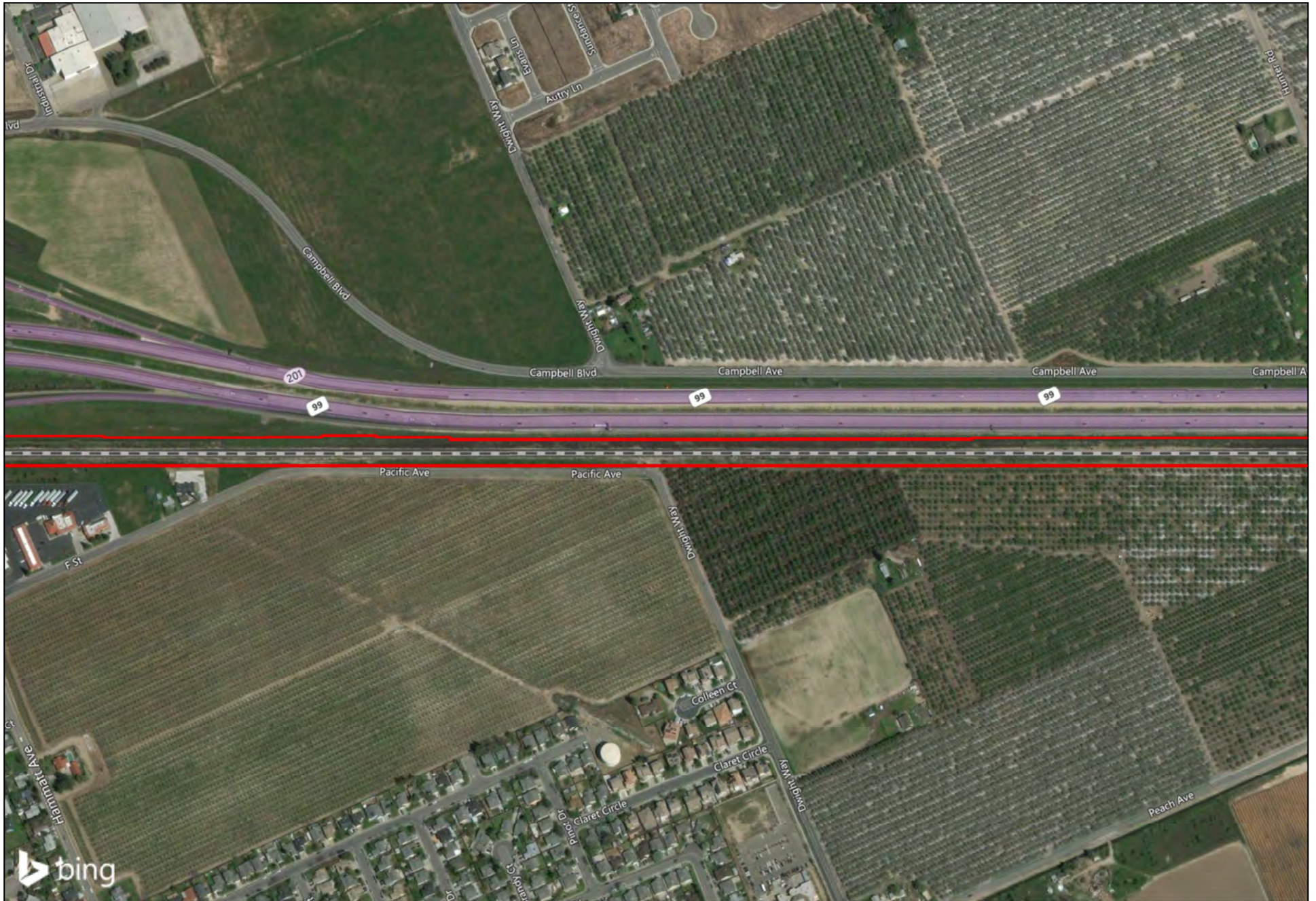



 ACE Extension Environmental Footprint

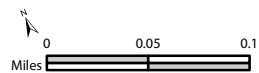


Environmental Footprint
ACE Extension Lathrop to Ceres/Merced





 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




 ACE Extension Environmental Footprint



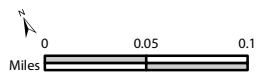
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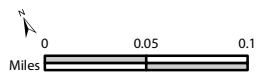





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ACE Extension Lathrop to Ceres/Merced

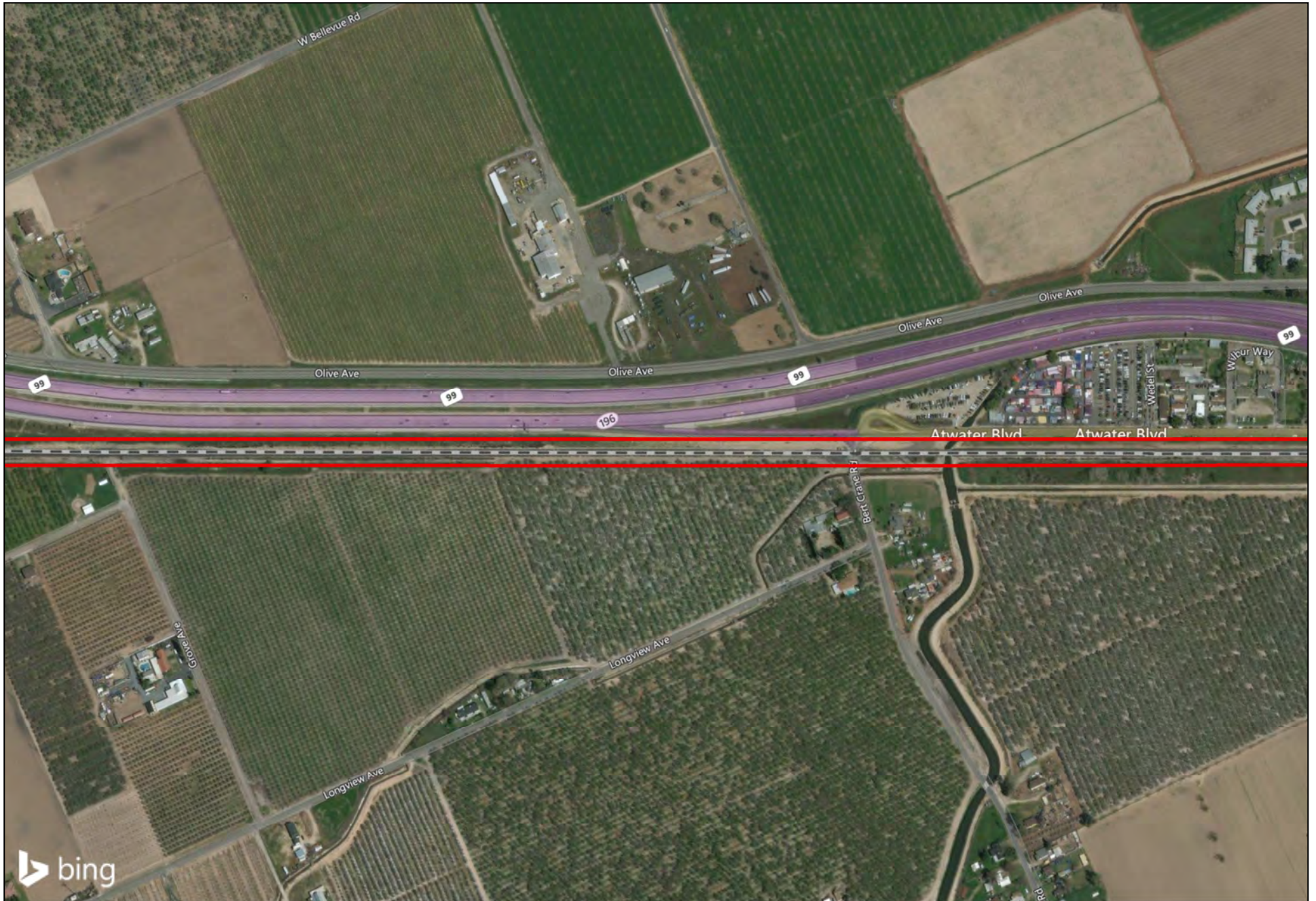





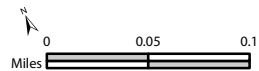
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ACE Extension Lathrop to Ceres/Merced




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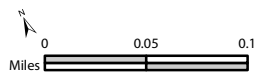
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ACE Extension Lathrop to Ceres/Merced




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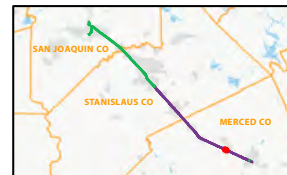


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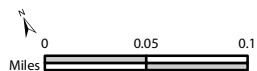




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Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



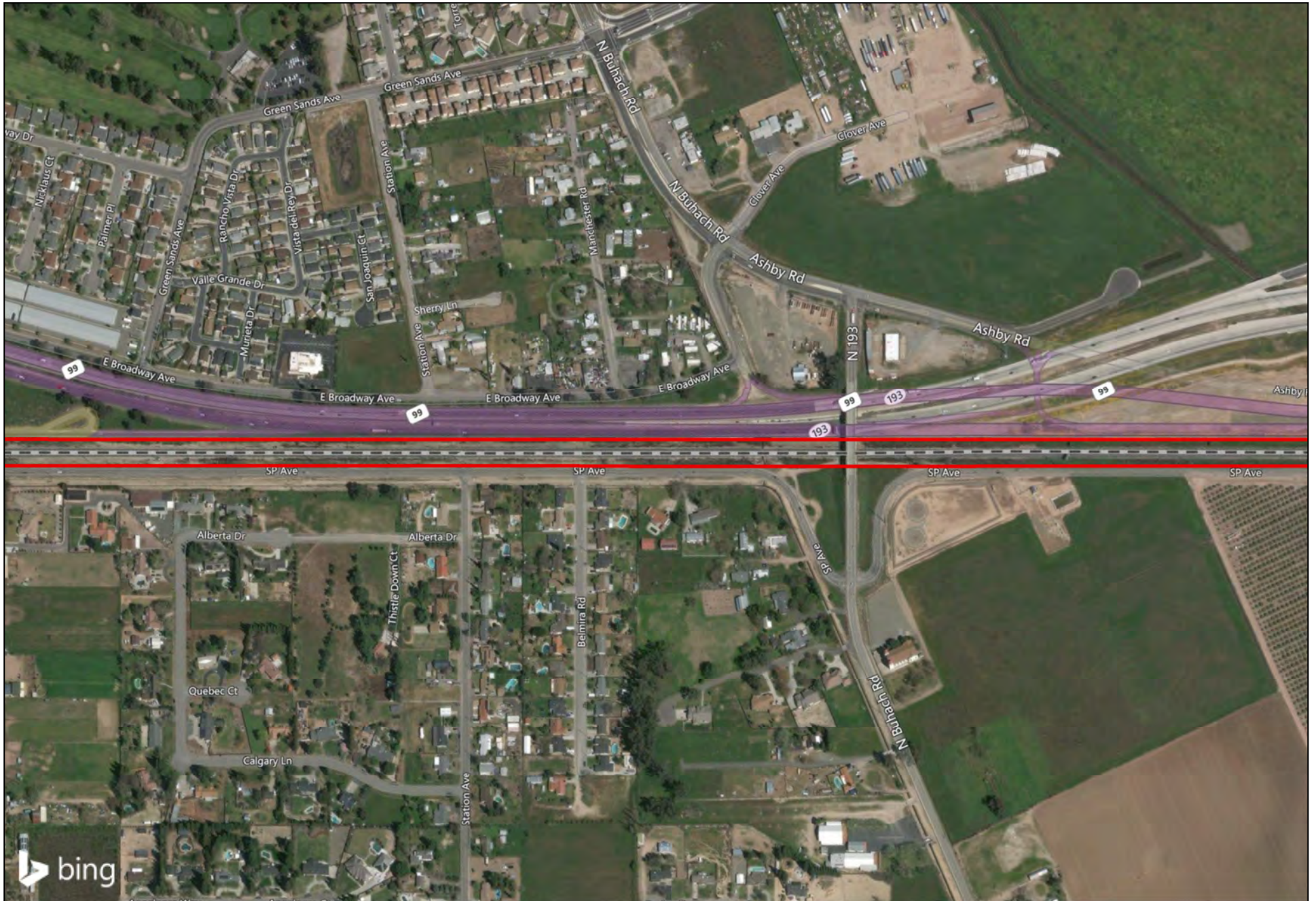


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Environmental Footprint
ACE Extension Lathrop to Ceres/Merced






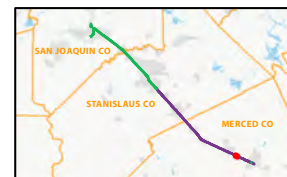
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Environmental Footprint
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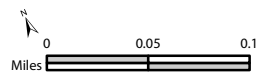


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 ACE Extension Environmental Footprint



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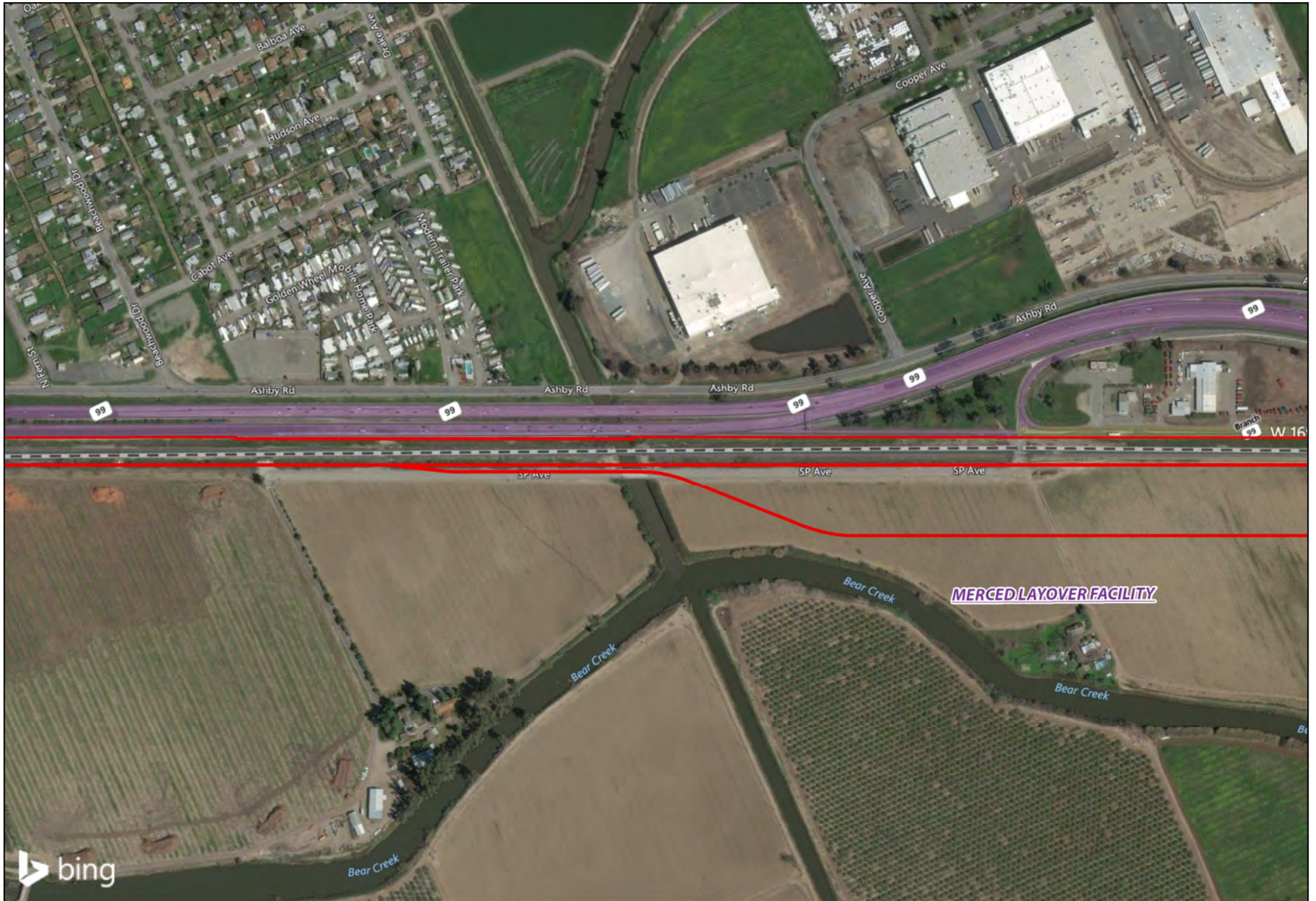


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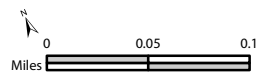


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ACE Extension Lathrop to Ceres/Merced





ACE Extension Environmental Footprint



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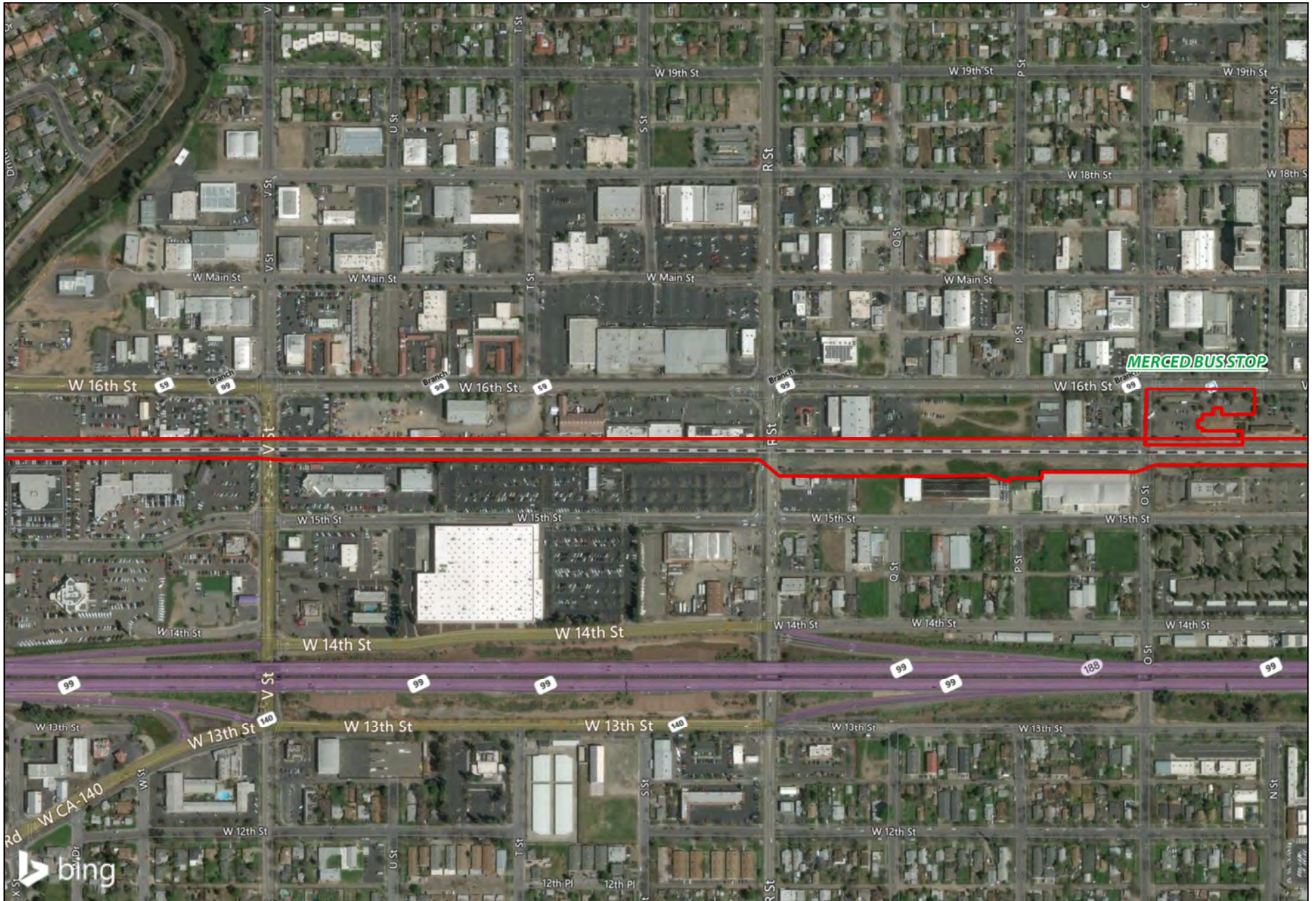


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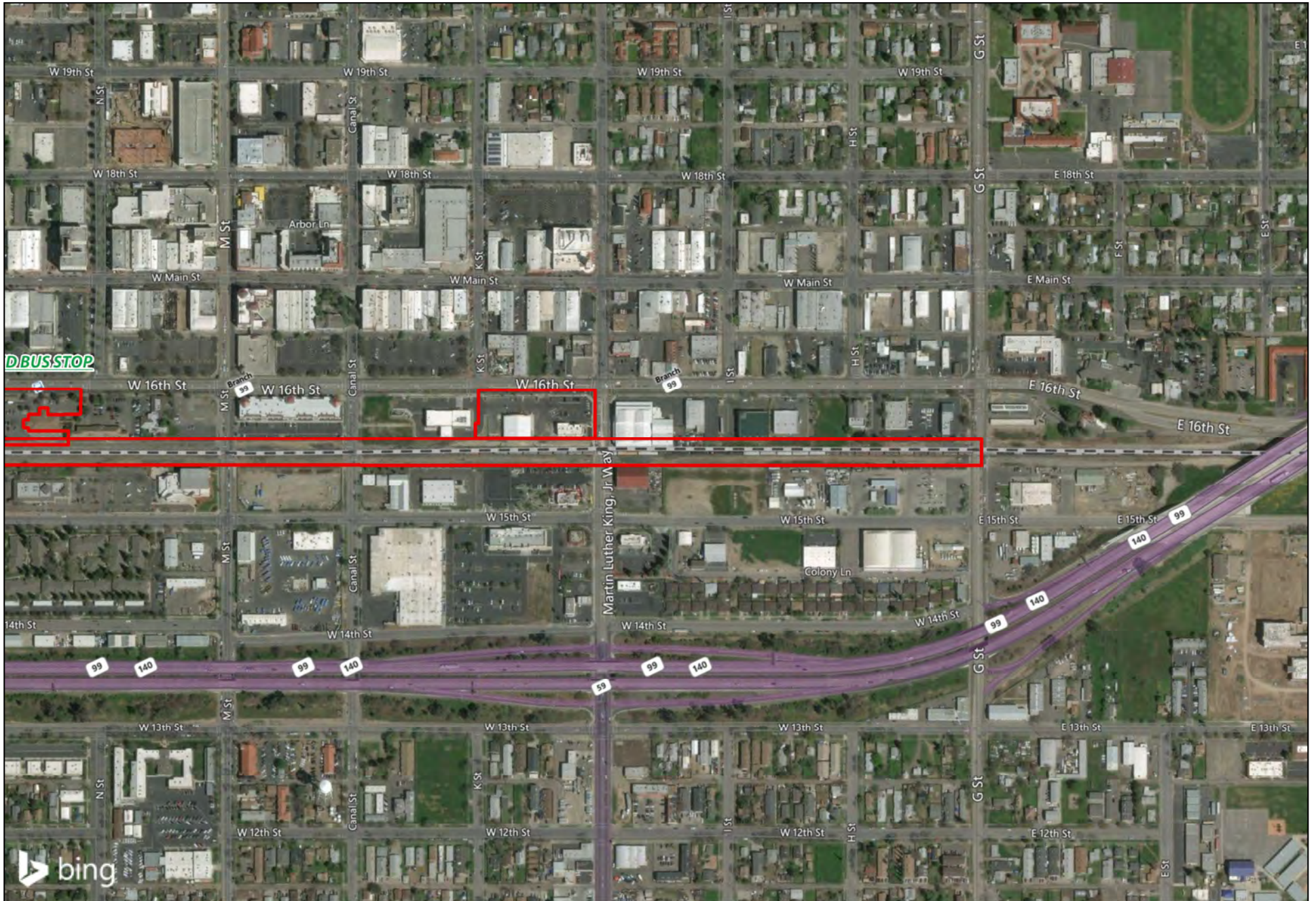





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Environmental Footprint
ACE Extension Lathrop to Ceres/Merced




 ACE Extension Environmental Footprint



Environmental Footprint
ACE Extension Lathrop to Ceres/Merced



 ACE Extension Environmental Footprint



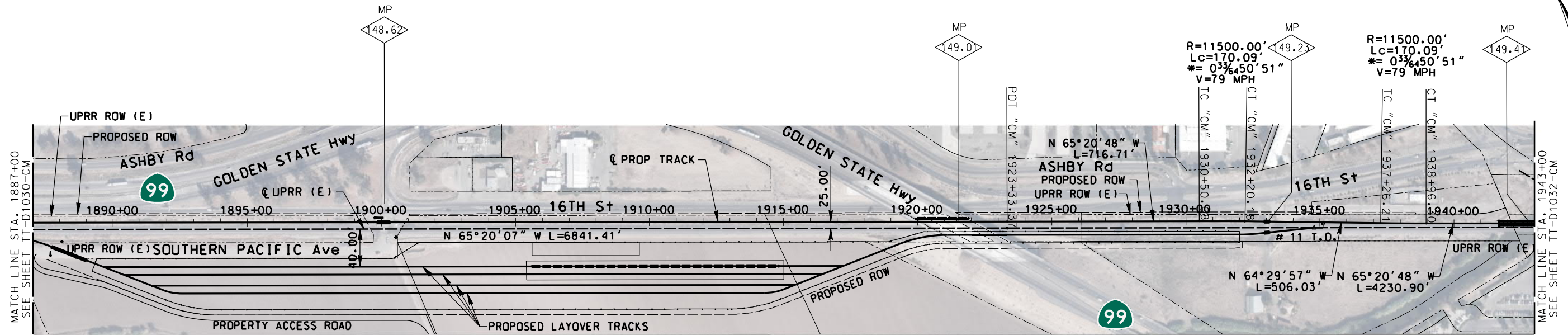
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Appendix B

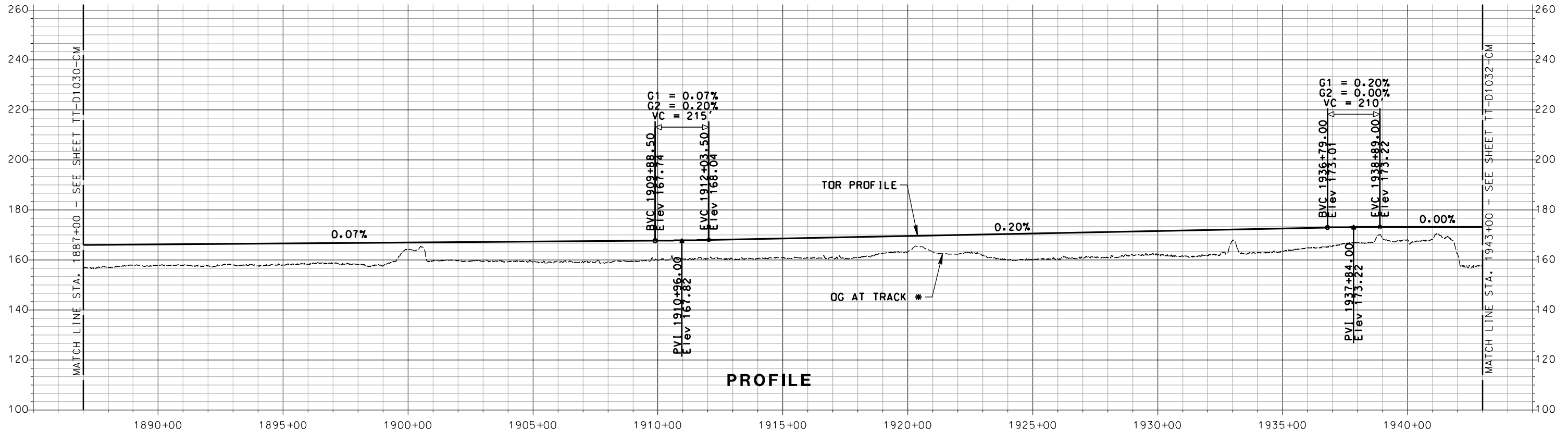
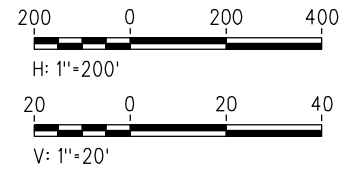
Updated ACE Extension 15% Preliminary Engineering Plans

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moggd



PLAN



PROFILE

NOT FOR CONSTRUCTION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. SHIELDS
DRAWN BY
A. SHIELDS
CHECKED BY
J. MAHER
IN CHARGE
D. COWIN
DATE
07-03-2018

TRANSPORTATION
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AECOM USA, Inc.
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T 510.893.3600 F 510.874.3268
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 SAN JOAQUIN
REGIONAL
RAIL COMMISSION
 **ACE**
ALTAMONT CORRIDOR EXPRESS
15% PRELIMINARY ENGINEERING

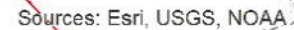
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ALTAMONT CORRIDOR EXPRESS
ACE *forward* VOLUME 2 – MERCED EXTENSION
CERES TO MERCED – TRACK ALIGNMENT
PLAN AND PROFILE
STA. 1887+00 TO STA. 1943+00

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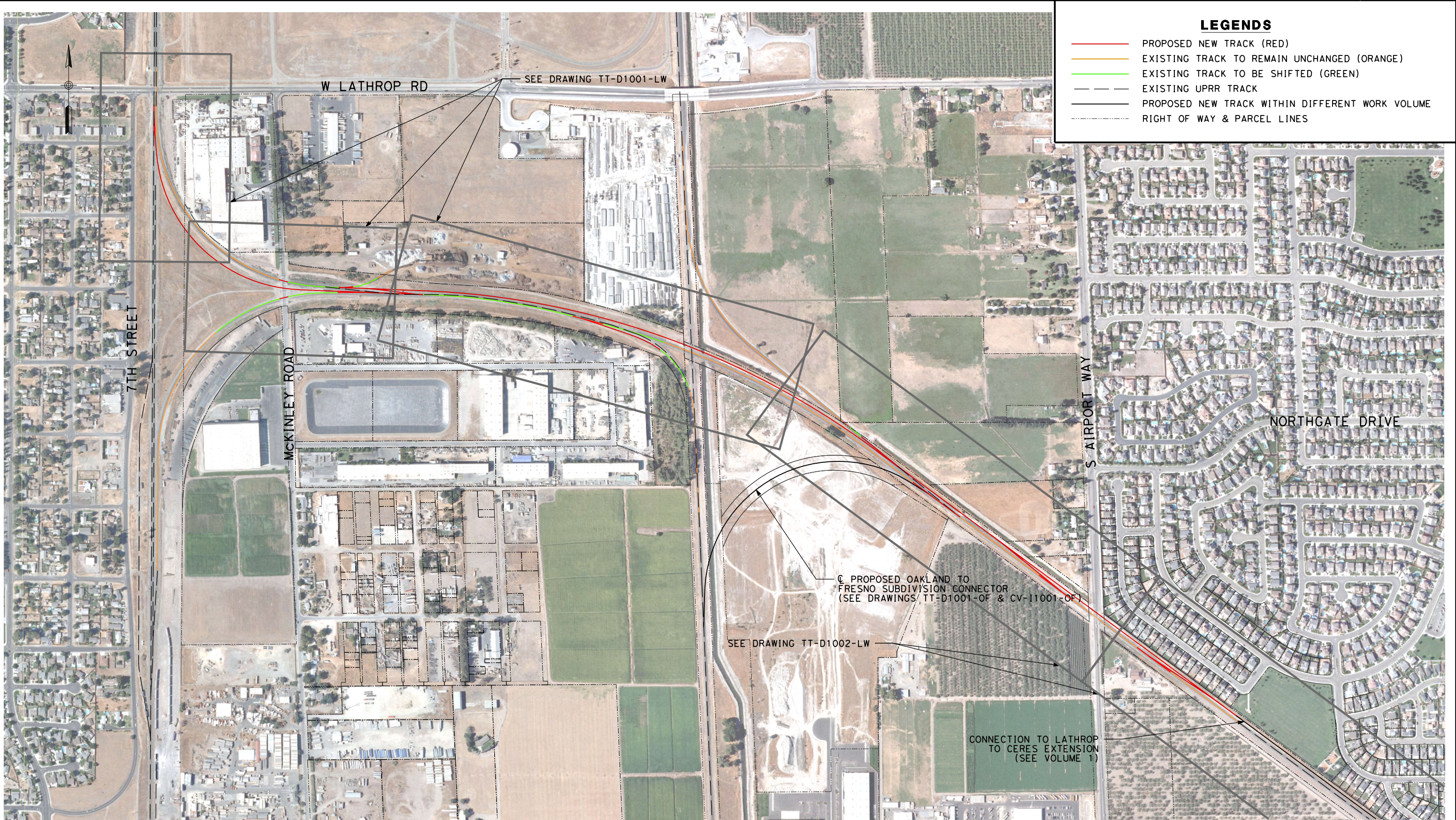
Appendix C

Lathrop Wye Double Track 15% Preliminary Engineering Plans

**15% PRELIMINARY ENGINEERING
VOLUME 1A - CERES EXTENSION**



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elliot.wong



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. WONG
DRAWN BY E. WONG
CHECKED BY D. HARTMAN
IN CHARGE D. HARTMAN
DATE 06-28-2018

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ALTAMONT CORRIDOR EXPRESS
ACE forward VOLUME 1A - CERES EXTENSION
LATHROP WYE - TRACK ALIGNMENTS
KEY MAP
STA 100+00 TO STA 190+00

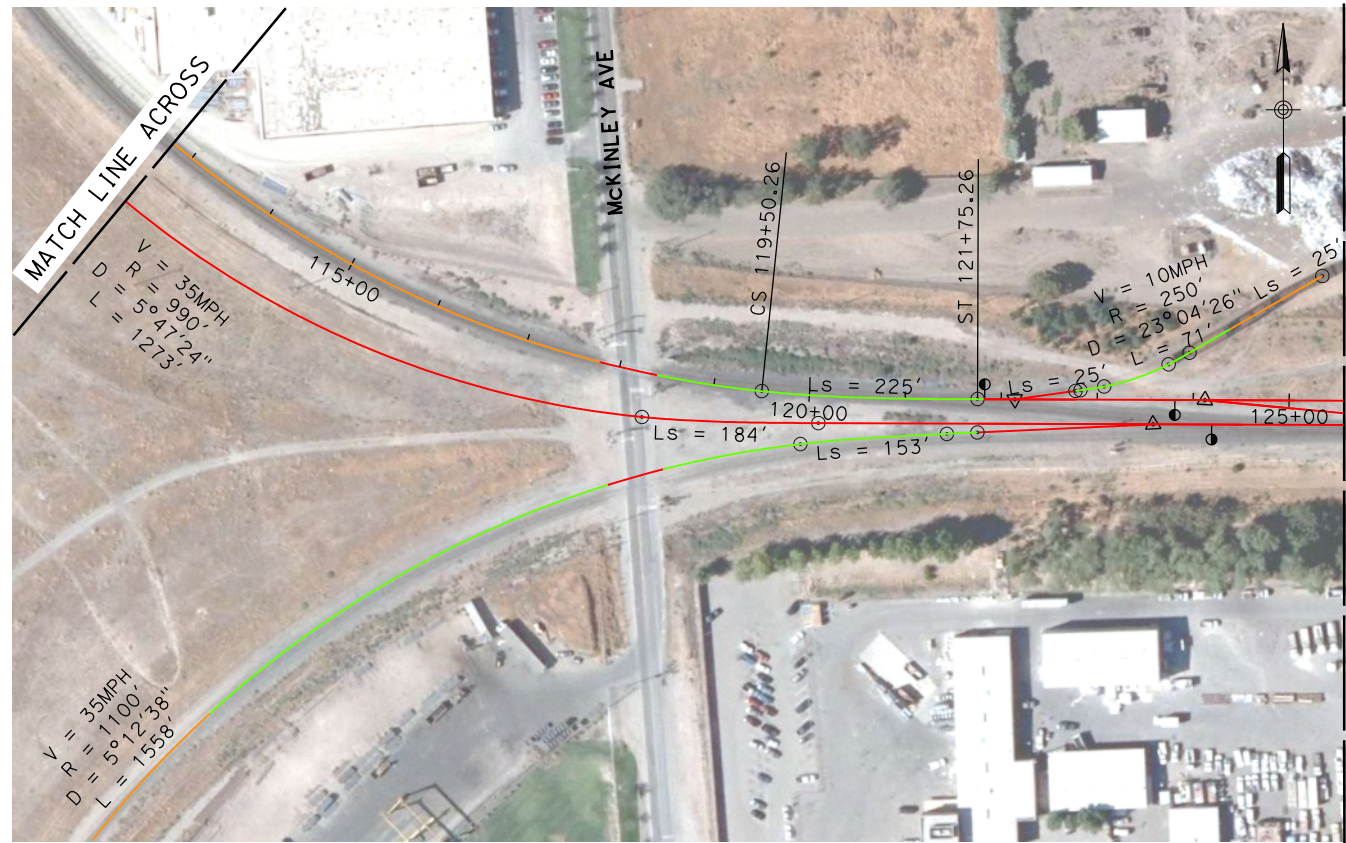
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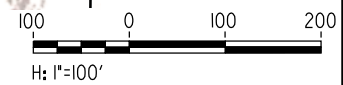
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IN CHARGE D. HARTMAN
DATE 06-28-2018

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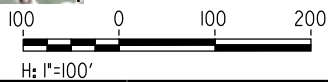
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ALTAMONT CORRIDOR EXPRESS
ACE forward VOLUME 1A - CERES EXTENSION
LATHROP WYE - TRACK ALIGNMENTS
PLAN
STA 100+00 TO STA 153+00

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CHECKED BY D. HARTMAN
IN CHARGE D. HARTMAN
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ALTAMONT CORRIDOR EXPRESS
ACE *forward* VOLUME 1A - CERES EXTENSION
LATHROP WYE - TRACK ALIGNMENTS
PLAN
STA 153+00 TO STA 190+00

ENVIRONMENTAL ALTERNATIVE CODE
DRAWING NO. TT-D1002-LW
SCALE AS SHOWN
SHEET NO. 3 OF 3

Appendix D

**Updated ACE Extension Opinion of Probable Cost
Report**

ACE Extension - Lathrop to Ceres and Merced Opinion of Probable Cost

July 2018

Prepared for: SJRRC

Authored by: AECOM & Leland Saylor Associates



ACE Extension – Lathrop to Ceres and Merced

Opinion of Probable Cost

Contract Reference for Deliverables

Task 2

Subtask 4 AECOM Design for the project

Acknowledgements

The people listed in the following table have provided significant input on this document.

Acknowledgements	
Name	Organization
Ed Ritchie	Leland Saylor Associates
Ken McFarland	Leland Saylor Associates

Program Quality Assurance and Quality Control Review

Reviewers listed in the following table have completed an internal quality review check and approval process that is consistent with procedures and directives previously identified.

Identification of Technical and Administrative Reviewers			
Subtask	Deliverable (list both Draft and Final versions)	Technical Reviewer	Complete
	Estimate quantities and cost development 2015	Ken McFarland/ Ed Ritchie	9 December 2015
	Estimate Quantities 2016	Ken McFarland	1 August 2016
	Estimate cost development	Ed Ritchie	1 August 2016
	Final Cost Report	Tyson Tano	12 February 2018

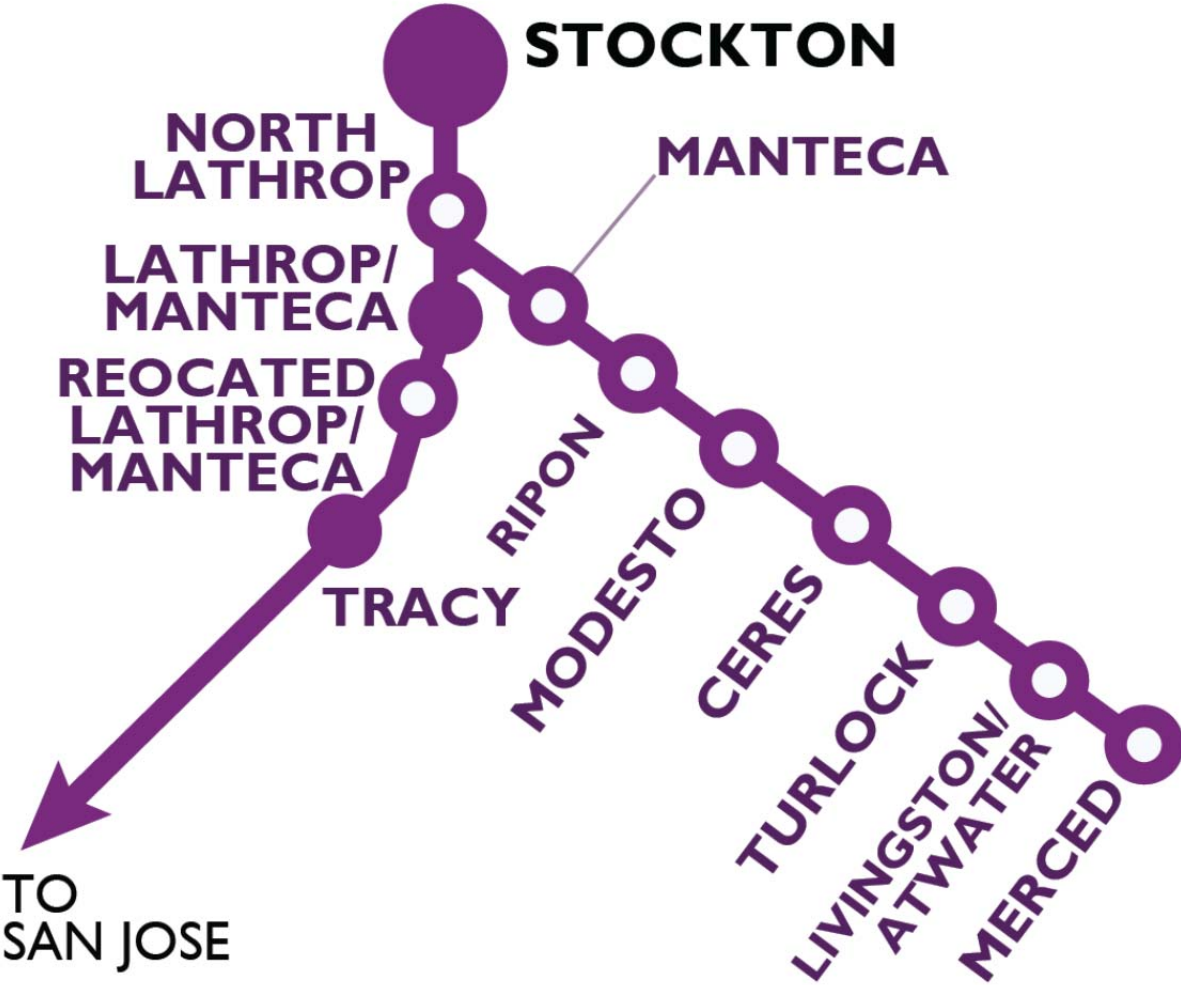
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List of Acronyms and Abbreviations

AC	Acres
ACE	Altamont Corridor Express
BCY	Bank Cubic Yard
CER	Conceptual Engineering Report
CY	Cubic Yard
Dog House	Signal house
EPC	engineer-procure-construct
FCY	Fill Cubic Yard
HVAC	heating, ventilation, and air conditioning
I&C	instrumentation and controls
kV	kilovolt(s)
LED	light-emitting diode
LF	Lineal Feet
LS	Lump Sum
mW	megawatt(s)
Saylor	
SF	Square Feet
SJRRC	San Joaquin Regional Rail Commission
TF	Track Feet
V	volt(s)
WBS	Work Breakdown Structure
WC	Work Category

General Map of the Project



Section 1: Introduction to the Estimate

1.1 General Introduction

Saylor Consulting Group (Saylor) was retained by AECOM to prepare a comprehensive cost estimate and schedule for the Altamont Corridor Rail Improvement Project.

This document is to update the costs from the 2015 Phase 1 conceptual design for the Lathrup (San Joaquin County) to Merced (Merced County) segments to the updated 2017 design. This document also includes alternatives to the Lathrup/Manteca Station.

The objective is to formalize and develop a detailed baseline cost estimate to evaluate construction planning and project funding for the future expansion of services of the Altamont Corridor Express (ACE) train system. Each cost segment stands alone for the purpose of establishing a cost for each independent feature of the project or program. In addition, by combining segments as a “stand alone “or as a “group,” mixed construction packages can be developed for long-range planning.

A master work breakdown structure (WBS) has been developed collectively by ACE and Saylor to provide a tracking framework for design, planning, scheduling, funding, and partnering as the Projects move forward. Work items are introduced with reference to the CSI coding system.

1.2 Overview of the Scope of Work

ACE Extension – Lathrup to Ceres and Merced is a project to expand the ACE service by providing new service down the Central Valley to Merced. This plan would provide the foundation for SJRRC’s long-term vision of intercity passenger rail services.

The project contains both near-term and longer-term improvements. The near term includes the extension of ACE service to Ceres and several alternatives for the Lathrup/Manteca Station. The longer-term includes the extension of ACE service to Merced.

Section 2: Scope of the Estimate

2.1 2017 Program

This phase of the project development focused on the rail corridor from Lathrup to Merced. It provided for expansion of the trackway into a full double track configuration with a third track limited to where there is an existing UPRR siding.

Stations were developed including parking facilities, station access, and platform amenities at the following locations: Manteca, Ripon, Modesto, Ceres, Turlock, Livingston or Atwater, and Merced.

Layover facilities were developed and located at Ceres and Merced and an electric bus charging station provided in Merced.

Section 3: Development of Cost Estimate

The development of this estimate was an integrated process between the ACE design team and Saylor team to collaborate in the development and review process of the design and costing. The steps to produce a complete package of reliable cost and budget to support the design are outlined below.

3.1 Estimate Summary

The Estimate Summary Sheet uses the WBS for the Project and cost segments to produce the cost summary sheets. This is the list of the key activities that make up the Project. It summarizes the line item cost for each key element of work that makes up the Project. Each key element has a related design and plans, take-off and unit rates work sheet showing the detailed cost development work included in each segment. These Estimate Summary Sheets are included in Appendix A.

3.2 Work Breakdown Structure (WBS)

The WBS was set up to develop a line item identifier for each key element of work on the Project. It is intended to develop integrated cost and schedule for each key element that can be used as a future individual construction contract or combined with other key elements to produce a construction package in the future.

3.3 Work Categories (WC)

The WC for the Project was developed to provide a systematic framework to develop and track the cost and schedule for the project. It focuses on the key elements for railroad construction. The estimate work sheets (tabs on the Summary Estimate) integrate the descriptions of work elements with the estimate of quantities take-off to develop the cost for each segment of the design.

3.4 Estimate of Quantities

The quantities used to develop the cost for this estimate were produced from designs developed by the AECOM design team. Saylor produced work activity quantities from this design and produced quantity summary sheets for each work activity. Specific track items such as track hardware, switches, and signals were quantified for pricing.

Quantities from design sheets were back checked by Saylor to ensure that all quantities were accounted for throughout the estimate.

3.5 Estimate of Pricing

To develop the pricing for the cost estimate, the quantities developed in Section 3.4 were integrated with a standardized pricing sheet (tabs within the Microsoft Excel spreadsheets) listing all of the possible work activities that would be encountered in each work area of each of the Project segments. Each item is assigned a consistent unit rate for each of the activities to be used throughout the estimate. A factor was provided to adjust the standard cost rate for the work activities depending upon any differences from the standard rates, allowing for efficiency, markup, and difficulty of the work. This is a judgment based upon a review of the design documents and minimal field review of the work sites. Costs developed here are automatically transferred from the Estimate Summary Sheet into the Major Work Activity.

3.6 Contractor Markups

This section describes the basis of the cost estimate Scope of Work.

This Opinion of Probable Cost is classified as a Class 4 estimate as defined by the Association for the Advancement of Cost Engineers (AACE international). Class 4 estimates are prepared based on information where the preliminary engineering is from 15 percent complete, such as used for detailed strategic planning, business development, project screening, alternative scheme analysis, confirmation of economic and/or technical feasibility, and preliminary budget approval.

The Class 4 estimating methodology is parametric using equipment and/or system process factors, budgetary vendor quotes, scale-up factors, and parametric and modeling techniques. The expected accuracy ranges for this class of estimate are -15 percent to -30 percent on the low end and +20 percent to +50 percent on the high end.

Table 3-1 lists the probable cost markup to address the specific items listed in the table. The markups are indirect costs incurred by the contractor in the execution of the project.

Table 3-1. CER Opinion of Probable Cost Markup	
Cost Description	Markup (%)
Inter-Agency Fees	0.80
Environmental Mitigation	3.00
Preliminary Engineering	0.00
Design 35%	3.00

Table 3-1. CER Opinion of Probable Cost Markup

Cost Description	Markup (%)
Design 65%	3.00
Design 90%	2.00
Design Bid Set	2.00
Construction Management	10.00
Program Management	2.00
Agency Administration	4.00
Design Services During Construction	0.00
Railroad Flagging	2.00
Escalation allowance ^a	0.00
Add for whole unit factor	1.000
Total markup factor	1.318
Financing Costs	0.00

^a Escalation is based on 0% per year compounded annually, to midpoint of construction. Escalation will be added when a construction schedule can be finalized.

Escalation is not included in this estimate. The construction cost in year of expenditure should be based on the project schedule. The annual escalation of 4 percent from the time of the estimate (2016) needs to be added to establish the cost for construction in later years. The total escalation determination is as shown in Table 3-2. Based on the escalation determination, an escalation allowance will need to be added to the Project Cost of Construction.

Table 3-2. Escalation Determination

From	To	Month	Annual Escalation Rate (%)	Escalation for the Period (%)
01/01/2016	12/31/2016	12	4.0	1.00
01/01/2017	12/31/2017	12	4.0	1.08
01/01/2018	12/31/2018	12	4.0	1.13
01/01/2019	12/31/2019	12	4.0	1.17
01/01/2020	12/31/2020	12	4.0	1.21
01/01/2021	12/31/2021	12	4.0	1.26

Section 4: Estimate Methodology Reference Data

4.1 Opinion of Cost

This Opinion of Probable Cost has been prepared from the information available at the time of the estimate. The final construction costs and the total cost of implementation will depend on actual labor and material costs, competitive market conditions, implementation schedule, and other variable factors. As a result, the final costs could vary from the estimate presented in this document. Because of this variance, to help ensure proper evaluation and adequate funding, feasibility and funding needs must be carefully reviewed prior to making specific financial decisions.

4.2 Cost Resources

The following is a list of the various cost resources used in the development of this cost estimate:

- Leland Saylor current construction costs
- R.S. Means cost data manuals, 2015
- Recent bids and costs for local projects
- 50 plus years of construction experience
- Historical data from the design teams' similar completed projects
- Vendor and/or supplier quotes on equipment and materials where appropriate
- Estimator judgement

4.3 Labor Costs

The estimate reflects local area labor rates. The published prevailing trade labor rates are used for the counties that are included in the local area and other California involved counties.

Prevailing labor prices are a burdened rate, including employer payments such as worker's compensation, state taxes, fringe benefits, health and welfare, pensions, vacations/holidays, and training.

A 5 percent allowance for incidental overtime has been included. This calculation has been blended in with the unit rates of line items of work. Pricing includes local hire and SBE participation meeting current standards.

Labor Wage Rate Recap

The base wage and total fringe of 29 select trades are sourced from the Department of Industrial Relations' Prevailing Wage Determinates. Total wage accounts for various federal and state taxes, payroll, supervision, workers' compensation, and overhead and profit rates, as paid by the employer. Inside the main Current Construction Costs section of this book, this total wage rate is multiplied by column Labor Hours to obtain column Labor Cost.

Trade	Base Wage \$	Total Fringe \$	Payroll Tax %	Supervision %	Workers' Comp %	Workers' Comp \$	Subtotal \$	Overhead, Profit %	Overhead, Profit \$	Total Wage Rate \$
Asbestos Worker	59.48	19.84	5.86	2.97	11.59%	6.89	95.04	22%	20.91	115.95
Bricklayer	36.56	28.44	3.76	1.83	14.55%	5.32	75.91	27%	20.49	96.40
Carpenter, Drywall/Lather	40.35	28.50	4.11	2.02	13.71%	5.53	80.51	33%	26.57	107.07
Carpenter, General	40.20	27.87	4.09	2.01	26.81%	10.78	84.95	27%	22.94	107.89
Carpenter, Hardwood Floorer	40.35	27.72	4.11	2.02	26.81%	10.82	85.01	27%	22.95	107.96
Cement Mason	30.00	23.66	3.16	1.50	14.55%	4.37	62.68	27%	16.92	79.61
Electrician	49.56	31.05	4.95	2.48	10.20%	5.06	93.09	20%	18.62	111.71
Elevator Constructor	59.19	30.64	5.83	2.96	5.77%	3.42	102.03	33%	33.67	135.71
Glazier	41.83	22.72	4.24	2.09	18.55%	7.76	78.64	24%	18.87	97.52
Hod Carrier	32.84	19.69	3.42	1.64	14.55%	4.78	62.37	27%	16.84	79.21
Laborer, Demolition	28.14	20.13	2.99	1.41	12.72%	3.58	56.25	15%	8.44	64.68
Laborer, General	29.09	20.13	3.08	1.45	28.28%	8.23	61.98	15%	9.30	71.27
Operating Engineer, General	38.43	28.38	3.93	1.92	17.80%	6.84	79.50	15%	11.93	91.43
Operating Engineer, Oiler	34.07	28.28	3.53	1.70	17.80%	6.06	73.65	15%	11.05	84.70
Painter, Drywall (Taper)	40.32	20.41	4.10	2.02	18.12%	7.31	74.64	25%	18.66	93.29
Painter, General	38.45	21.17	3.93	1.92	18.12%	6.97	72.44	25%	18.11	90.55
Pile Driver	39.59	28.38	4.04	1.98	17.83%	7.06	81.04	15%	12.16	93.20
Plasterer	37.48	25.11	3.84	1.87	19.29%	7.23	75.54	33%	24.93	100.46
Plumber	54.40	35.80	5.39	2.72	13.43%	7.31	105.62	15%	15.84	121.46
Resilient Floorer	29.55	18.37	3.12	1.48	10.99%	3.25	53.96	27%	14.57	68.53
Roofer	31.66	17.76	3.31	1.58	54.51%	17.26	71.57	22%	15.75	87.32
Sheet Metal Worker, Deck & Siding	33.86	31.83	3.51	1.69	14.44%	4.89	75.78	15%	11.37	87.15
Sheet Metal Worker, Mechanical	54.85	36.79	5.43	2.74	14.44%	7.92	107.74	22%	23.70	131.44
Sprinkler Fitter	52.42	25.77	5.21	2.62	9.19%	4.82	90.84	15%	13.63	104.46
Structural Iron Worker	33.50	28.20	3.48	1.68	32.87%	11.01	77.87	21%	16.35	94.22
Teamster, 4 yard	27.96	24.81	2.97	1.40	28.28%	7.91	65.05	15%	9.76	74.80
Teamster, 9.5 yard	28.91	24.81	3.06	1.45	28.28%	8.18	66.40	15%	9.96	76.36
Terrazzo Mechanic	40.42	25.58	4.11	2.02	7.74%	3.13	75.26	27%	20.32	95.58
Tile Setter	38.24	17.82	3.91	1.91	11.24%	4.30	66.18	25%	16.55	82.73

Cost Indices

MATERIAL COST INDEX										
23 Selected Materials	\$/Unit	2008	2009	2010	2011	2012	2013	2014	YOY Change	
Aluminum Sheet 48"x96"	CWT	190.73	189.00	183.00	175.00	202.25	193.26	201.19	4.10%	
Asphalt Felt, 4 squares	ROLL	21.12	21.51	21.00	23.85	24.90	24.68	24.07	-2.47%	
Block, Concrete 8x8x16	EA	1.43	1.42	1.47	1.47	1.55	1.57	1.62	3.18%	
Brick, Standard Modular	M	348.97	351.00	368.00	348.00	356.00	362.21	367.50	1.46%	
Cement, Portland	TON	101.76	102.00	98.95	98.09	101.24	102.99	107.34	4.22%	
Concrete, Readymix 3000 PSI	CY	92.26	93.80	85.00	84.15	85.46	90.37	94.00	4.02%	
Copper Pipe, 1/2" type L	MLF	2,130.62	2,217.00	1,638.00	1,766.00	1,799.00	1,760.00	1,677.89	-4.67%	
Glass, 1/4"	SF	5.15	5.31	5.09	5.25	5.52	5.58	5.75	3.05%	
Gypsum Wall Board, 1/2" 4x8	MSF	253.03	238.34	234.37	251.03	255.00	265.85	290.96	9.45%	
Insulation, Fiberglass batts, r13	MSF	274.80	279.80	307.00	312.50	351.00	363.90	354.28	-2.64%	
Insulation, rigid, 1", poly iso	MSF	303.98	310.72	461.23	478.75	481.00	495.91	532.54	7.39%	
Lath, Metal, 3/4", Galvanized	CSY	210.13	215.74	208.80	222.23	236.00	232.85	263.74	13.26%	
Lumber, framing, 2x4, 2x6	MBF	427.74	411.13	388.75	341.90	444.00	457.20	469.23	2.63%	
Mason's Lime, 50# bags	TON	205.46	203.36	215.00	210.53	219.00	229.00	233.04	1.76%	
PG 64 liquid bulk shipped	TON	274.79	286.04	477.50	557.00	570.00	570.00	558.59	-2.00%	
Pipe, 8" c-900 PVC water	LF	8.85	8.82	8.93	9.55	9.26	9.15	9.30	1.59%	
Pipe, Reinforced Concrete, 24"	LF	24.96	26.60	22.00	22.99	24.70	25.82	26.95	4.37%	
Plywood 19/32" 4x8 CD exterior T+G	MSF	597.32	578.65	499.90	504.28	643.38	610.00	628.75	3.07%	
Steel sheets, Stainless, 304, 4x8	CWT	198.17	179.74	176.00	183.95	144.50	157.25	159.95	1.72%	
Steel, Reinforcing	CWT	40.90	40.36	40.30	42.06	36.20	35.80	36.79	2.77%	
Steel, Structural Shapes	CWT	44.67	43.21	42.10	43.39	42.55	42.50	44.71	5.21%	
Coal Tar Pitch, modified	TON	643.50	644.29	445.00	488.54	486.22	480.25	483.56	0.69%	
Titanium Dioxide pigment	CWT	126.09	126.09	137.00	154.21	162.50	162.24	168.75	4.01%	
Total Average Change (Non-weighted)									2.88%	

Cost Indices

LABOR COST INDEX

9 Selected Trades, \$/hour	2008	2009	2010	2011	2012	2013	2014	YoY Change
Carpenters	47.13	50.89	52.87	53.75	55.08	56.77	58.39	2.85%
Bricklayers	47.66	51.17	53.27	54.10	55.07	56.18	57.93	3.11%
Iron Workers (Structural)	51.97	55.75	58.81	59.68	60.80	61.41	62.76	2.19%
Laborers (Building)	37.84	41.85	43.64	44.49	44.99	47.02	49.68	5.67%
Operating Engineers (Crane Operators)	51.06	54.92	57.01	57.85	58.89	60.27	64.55	7.10%
Plasterers	44.18	48.15	50.10	50.83	51.26	52.85	54.68	3.47%
Plumbers	53.78	59.14	61.09	62.16	62.97	64.65	67.66	4.65%
Electricians	54.89	57.21	59.29	59.68	61.00	62.07	64.50	3.91%
Teamsters	40.89	41.51	43.02	43.76	44.97	45.80	48.00	4.80%
Total Average Wage (Non-weighted)	47.71	51.18	53.23	54.03	55.00	56.34	58.68	4.20%

SUBCONTRACTS COST INDEX

21 Basic In-Place Materials	\$/Minimum Quantity	Unit	2010	2011	2012	2013	2014	Change
Acoustic Ceiling, Incl grid, tiles	20,000 & up	SF	3.31	3.46	3.62	3.75	3.92	4.53%
Brick veneer, common, commercial	2,000 & up	SF	14.61	14.87	15.15	15.29	15.44	1.00%
Ceramic Tile 4x4, Mortar set	1,000 & up	SF	10.89	11.02	11.31	11.52	11.81	2.52%
Copper pipe, 1/2" Type L	2,000 & up	LF	12.15	11.89	12.31	12.55	12.79	1.91%
Ductwork, Galvanized iron, 16 ga	10,000 & up	#	8.27	8.31	8.79	8.89	8.93	0.45%
Flooring, Terrazzo, Cementitious	3,000 & up	SF	15.75	16.15	16.79	17.01	17.26	1.47%
Glass, Float, 1/4"	1,000 & up	SF	9.87	9.97	10.15	10.40	10.71	2.98%
Glue Laminated beams, installed	10,000 & up	MBF	2,880.00	2,895.00	3,355.00	3,489.00	3,583.20	2.70%
Gypsum Wall Board, 5/8" 4x8	20,000 & up	SF	2.12	2.16	2.29	2.36	2.43	3.10%
Insulation, 1 1/2" rigid, poly iso	5,000 & up	SF	1.55	1.60	1.67	1.85	2.01	8.50%
Metal Roof Deck 1 1/2", 20 Ga., painted	10,000 & up	SF	3.15	3.16	3.35	3.45	3.58	3.77%
Paint, Interior, 3 coat over GWB, roll	10,000 & up	SF	0.71	0.78	0.81	0.82	0.83	1.10%
Piles, concrete, precast, 12"	2,000 & up	LF	43.59	43.15	43.41	44.56	45.91	3.09%
Plywood 19/32", 4x8, cd exterior, T&G, floor	10,000 & up	SF	2.25	2.19	2.28	2.45	2.63	7.35%
Roofing, 4 ply, built up, 20 year	5,000 & up	SF	3.89	4.16	4.24	4.14	4.20	1.45%
Steel, Reinforcing	20,000 & up	#	0.82	0.80	0.82	0.84	0.87	3.57%
Steel, Structural Shapes	250,000 & up	#	1.54	1.49	1.41	1.55	1.68	8.39%
Stucco, Exterior, Production Residential	2,000 & up	SY	36.51	36.12	36.27	36.49	36.87	1.04%
Vinyl Composition Tile, 3/32"	10,000 & up	SF	2.89	3.05	3.09	3.15	3.22	2.22%
Wire #12, THHN, Pulled in conduit	10,000 & up	LF	0.94	0.92	0.88	0.89	0.91	2.25%
Wood Stud walls, 2x4	10,000 & up	BF	2.85	2.82	2.98	3.15	3.34	6.00%
Total Average Change (Non-weighted)								3.30%

4.4 Materials and Equipment

Materials and equipment costs include the California state sales tax rate of 9.38 percent on materials, both temporary and permanent, and purchased equipment and/or subcontracted services that are deemed taxable.

Section 5: Assumptions, Inclusions, and Exclusions

5.1 General Assumptions and Inclusions

The following general assumptions were used in the development of the estimate:

- The estimate is based on the information contained in the partial June 2015 drawing packet and the updated August 2016 10 percent design, including preliminary drawings, unit process fact sheets, discipline fact sheets, and preliminary site plans.
- The existing operating facility will remain functional during construction.
- Adequate staging areas for office trailers, workforce parking, and staging of materials and laydown areas will be available.
- Contractor's temporary facilities and consumables are included as part of general requirements, including water, wash water, and electricity.

- Storm Water Pollution and Prevention Plan installation and management is included in the site estimate.
- The required road closures and site access points will be provided during construction according to the construction schedule.

5.2 Major Assumptions

The estimate is based on the assumptions that the work will be done on a multi-fragmented general contractor basis, and the contractor will have a reasonable amount of time to complete the work.

It is assumed that the fabricated equipment will be manufactured in the United States. Manufacturing facilities for the track and rail hardware are assumed to be from a U.S. supplier.

The assumed method of procurement is General Contractor. A project of this nature and extent will likely be bid by several specialty major engineer-procure-construct (EPC) contractors qualified to execute a project of this size. Therefore, it will be critical to keep informed of bidding backlog and other market conditions to ensure competitive bids. The timing of the advertisement of the bids and subsequent execution of the successful EPC contractor should be a major priority of the development team.

5.2.1 Geotechnical

Geotechnical assumptions used in the development of the estimate are presented below:

- Class 1 contaminated excavated material, not yet identified, will be hauled to a licensed hazardous waste disposal facility; cost not specifically calculated but included in the “rate” for excavation.
- Asphalt, demolition, and new paving are included.
- Embankment will be from a local borrow source near the construction fill site.

5.2.2 Civil

Civil assumptions used in the development of the estimate include site clearing and grading, temporary work for access to the wetlands area and other structures and are included in the rates for the work items. Site improvements will include roads, storm water management, lighting, fencing, station amenities, and landscaping where shown on the plans or as required.

5.2.3 Structural

Cost for the bridges and stations will be in accordance with good engineering practices or designs where available.

5.2.4 Architectural

Architectural assumptions used in the development of the estimate are pricing for architectural finishes for building exterior walls, cladding, and roofs. Pricing allowances for streetscape landscaping and irrigation systems have been included based on a concept landscape. Allowances for landscaping are based on an allowance per square foot of surface area.

5.2.5 Underground

Underground tunnel linear-foot costs were developed based on recent experience. The alternatives are based on relatively good geotechnical studies and sound ground. Costs are based on the cross section shown on the drawings and the length of the design. End tie-ins are included.

5.2.6 Railroad Signaling

Signal and signage are included as generally required by operating railroads. Signal control buildings, “dog houses,” are included as well as local power for the signal operation. Some of the signals have been located on the design but additional signals or signage has been provided as necessary. The location of these signals is based on reasonable assumptions of their need. However, the Union Pacific Railroad will have the final say as to the required signal layout.

5.3 Excluded Costs

The cost estimate excludes the following costs:

- Escalation (cost in 2016 dollars)
- Remediation and/or mitigation of hazardous waste, unless specifically noted otherwise
- Land acquisition, other than for specific off-site facilities that will require land for those facilities
- Material adjustment allowances above and beyond what is included at the time of the cost estimate

Appendix A: Cost Summaries

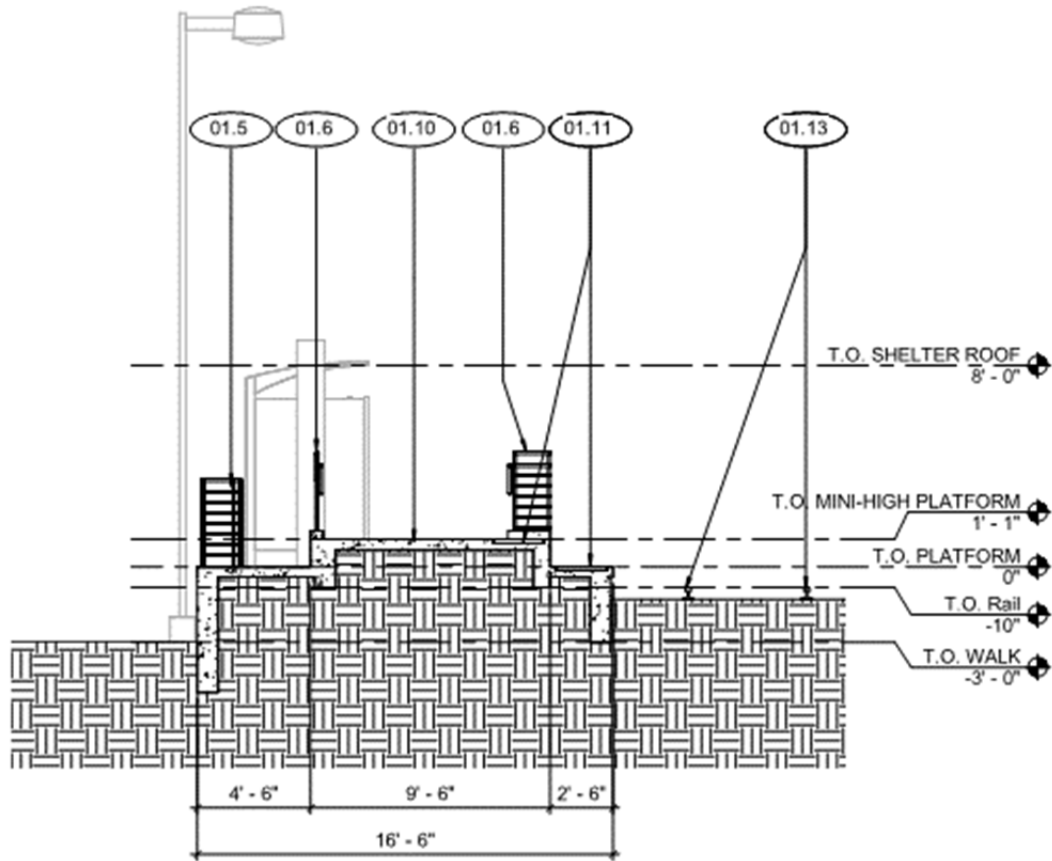
ACE EXTENSION LATHROP TO CERES / MERCED COST SUMMARY

SEGMENT NUMBER	SEGMENT TITLE	PROJECT CONSTRUCTION COST	PROJECT ADD-ON PERCENTAGE	PROJECT TOTAL COST
<i>Lathrop Area</i>				
19-1a	RELOCATED LATHROP / MANTECA STATION PROJECT	\$18,889,818	1.318	\$24,896,780
19-1b	RELOCATED LATHROP / MANTECA STATION PROJECT WITH TAIL TRACK	\$20,084,268	1.318	\$26,471,065
19-2	LATHROP / MANTECA STATION PROJECT	\$7,151,760	1.318	\$9,426,020
TL-19-6	NORTH LATHROP STATION PROJECT	\$33,033,007	1.318	\$43,537,504
TL-19-7	LATHROP WYE PROJECT	\$20,279,995	1.318	\$26,729,033
<i>Ceres Extension</i>				
MMO-21	OAKLAND TO FRESNO SUBDIVISION	\$5,251,190	1.318	\$6,921,068
MMO-22	SECOND MAIN TRACK LATHROP TO MANTECA	\$14,844,685	1.318	\$19,565,295
MMO-23	MANTECA STATION PROJECT	\$5,515,000	1.318	\$7,268,770
MMO-24	SECOND MAIN TRACK MANTECA TO RIPON	\$33,283,509	1.318	\$43,867,665
MMO-25	RIPON STATION PROJECT	\$8,497,650	1.318	\$11,199,903
MMO-26A	SECOND MAIN TRACK RIPON TO MODESTO	\$3,849,556	1.318	\$5,073,715
MMO-26B	SECOND MAIN TRACK RIPON TO MODESTO	\$61,614,798	1.318	\$81,208,304
MMO-27	MODESTO STATION PROJECT	\$4,707,938	1.318	\$6,205,062
MMO-28B	CERES STATION	\$7,218,900	1.318	\$9,514,510
MMO-28C	CERES LAYOVER	\$12,662,205	1.318	\$16,688,786
MMO-29A	SECOND MAIN TRACK MODESTO TO CERES	\$39,471,659	1.318	\$52,023,647
MMO-36	MERCED ELECTRIC BUS STOP	\$143,750	1.318	\$189,463
<i>Merced Extension</i>				
MMO-29B	SECOND MAIN TRACK CERES TO TURLOCK	\$46,660,078	1.318	\$61,497,983
MMO-30	TURLOCK STATION	\$11,565,750	1.318	\$15,243,659
MMO-31A	SECOND MAIN TRACK TURLOCK TO LIVINGSTON	\$17,489,320	1.318	\$23,050,924
MMO-31B	SECOND MAIN TRACK TURLOCK TO LIVINGSTON	\$54,670,405	1.318	\$72,055,594
MMO-32A	LIVINGSTON STATION	\$7,336,890	1.318	\$9,670,021
MMO-32B	ATWATER STATION	\$10,015,470	1.318	\$13,200,389
MMO-33	SECOND MAIN TRACK LIVINGSTON / ATWATER TO MERCED	\$89,872,074	1.318	\$118,451,394
MMO-34	MERCED STATION	\$9,897,830	1.318	\$13,045,340
MMO-35	MERCED LAYOVER	\$27,845,360	1.318	\$36,700,184

ACE EXTENSION LATHROP TO CERES / MERCED ROLLING STOCK COST SUMMARY

PHASE	PHASE DESCRIPTION	FLEET COST (2017\$)
<i>Lathrop to Ceres</i>		
1A - 2020	4 TRAINS STOCKTON TO SAN JOSE, 4 TRAINS CERES TO NORTH LATHROP	\$66,000,000
1B - 2020	3 TRAINS STOCKTON TO SAN JOSE, 3 TRAINS MERCED TO NORTH LATHROP, 1 TRAIN MERCED TO SAN JO	\$66,000,000

Appendix B: Station Sections



TYPICAL MINI-HIGH PLATFORM

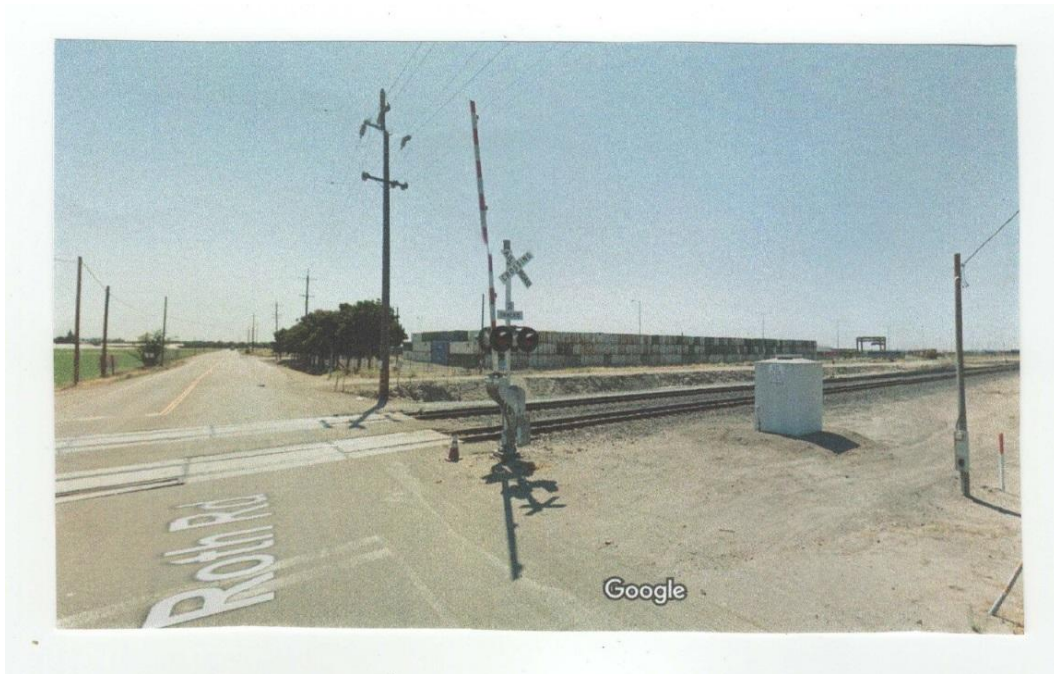
Appendix C: Signal Type Photos



CANTILEVER SIGNAL



CROSSOVER SIGNAL (ONE END)



GRADE CROSSING SIGNALS AND GATE



INTERMEDIATE SIGNALS (DOUBLE TRACK)



INTERMEDIATE SIGNALS (SINGLE TRACK)



PEDESTRIAN SIGNALS AND GATE

Lathrop Area Stations

Cost Estimate Back-up Tables

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$4,195,733
	3 CLEAR & GRUB LIGHT	AC	\$2,500	\$7,500	40.00%	\$10,500	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
5000	EARTHWORK COMMON	BCY	\$25	\$125,000	30.00%	\$162,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
5000	EMBANKMENT	FCY	\$10	\$50,000	30.00%	\$65,000	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
110000	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$2,750,000	25.00%	\$3,437,500	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF	\$18	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	45.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
1200	PERMANENT FENCING	LF	\$35	\$42,000	20.00%	\$50,400	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
23294	SILT FENCE and ORANGE FENCE	LF	\$15	\$349,410	30.00%	\$454,233	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$3,356,945
340	REMOVE EXISTING TRACK	TF	\$40	\$13,600	20.00%	\$16,320	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	10.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
2397	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$1,198,500	25.00%	\$1,498,125	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	30.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$800,000	\$0	20.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	LF	\$5,000	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$7,861,640
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	40.00%	\$63,000
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	25.00%	\$62,500
15000 STATION AMENITIES	SF	\$71	\$1,065,000	30.00%	\$1,384,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
534 PARKING LOTS	SPACES	\$3,000	\$1,602,000	40.00%	\$2,242,800
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
10000 BUS LANE AND UNLOADING	SF	\$40	\$400,000	30.00%	\$520,000
534 PARKING LOT LIGHTING	SPACES	\$200	\$106,800	30.00%	\$138,840
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$1,680,000
300000 ROW LAND ONLY	SF	\$4	\$1,200,000	40.00%	\$1,680,000
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$18,889,818

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$4,625,183
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
6000	EARTHWORK COMMON	BCY	\$25	\$150,000	30.00%	\$195,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
6000	EMBANKMENT	FCY	\$10	\$60,000	30.00%	\$78,000	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
4200	SOIL NAIL WALLS	SF	\$70	\$294,000	30.00%	\$382,200	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
110000	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$2,750,000	25.00%	\$3,437,500	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF	\$18	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	45.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
1200	PERMANENT FENCING	LF	\$35	\$42,000	20.00%	\$50,400	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
23294	SILT FENCE and ORANGE FENCE	LF	\$15	\$349,410	30.00%	\$454,233	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$4,121,945
340	REMOVE EXISTING TRACK	TF	\$40	\$13,600	20.00%	\$16,320	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	10.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
3573	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$1,786,500	25.00%	\$2,233,125	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	30.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$800,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
2	TURNOUT (#15)	EACH	\$350,000	\$700,000	10.00%	\$770,000	
1	TURNOUT (#15 CURVE)	EACH	\$975,000	\$975,000	10.00%	\$1,072,500	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
1	BUMPING POST	EACH	\$25,000	\$25,000	20.00%	\$30,000	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$1,795,500
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
2	DOG HOUSE (Signal House)	EACH	\$200,000	\$400,000	20.00%	\$480,000	
2	NEW ELECTRIC SERVICE	EACH	\$20,000	\$40,000	20.00%	\$48,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
3	NEW TURNOUT SIGNAL	EACH	\$325,000	\$975,000	30.00%	\$1,267,500	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	30.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	LF	\$5,000	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$7,861,640
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	40.00%	\$63,000
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	25.00%	\$62,500
15000 STATION AMENITIES	SF	\$71	\$1,065,000	30.00%	\$1,384,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
534 PARKING LOTS	SPACES	\$3,000	\$1,602,000	40.00%	\$2,242,800
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
10000 BUS LANE AND UNLOADING	SF	\$40	\$400,000	30.00%	\$520,000
534 PARKING LOT LIGHTING	SPACES	\$200	\$106,800	30.00%	\$138,840
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$1,680,000
300000 ROW LAND ONLY	SF	\$4	\$1,200,000	40.00%	\$1,680,000
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$20,084,268

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$508,945
0.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$1,250	40.00%	\$1,750	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
10000	EARTHWORK COMMON	BCY	\$25	\$250,000	30.00%	\$325,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
2000	EMBANKMENT	FCY	\$10	\$20,000	30.00%	\$26,000	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF	\$18	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	45.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
8010	SILT FENCE and ORANGE FENCE	LF	\$15	\$120,150	30.00%	\$156,195	
	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$4,729,815
530	REMOVE EXISTING TRACK	TF	\$40	\$21,200	20.00%	\$25,440	
1	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$25,000	10.00%	\$27,500	
	SHIFT EXISTING TRACK	TF	\$100	\$0	10.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
5295	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$2,647,500	25.00%	\$3,309,375	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	30.00%	\$0	
50	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$37,500	20.00%	\$45,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$800,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
1	TURNOUT (#10 CURVE)	EACH	\$775,000	\$775,000	10.00%	\$852,500	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
1	TURNOUT (#20)	EACH	\$400,000	\$400,000	10.00%	\$440,000	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
1	BUMPING POST	EACH	\$25,000	\$25,000	20.00%	\$30,000	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$1,913,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
1	CANTILEVER SIGNAL	EACH	\$200,000	\$200,000	20.00%	\$240,000	
2	DOG HOUSE (Signal House)	EACH	\$200,000	\$400,000	20.00%	\$480,000	
2	NEW ELECTRIC SERVICE	EACH	\$20,000	\$40,000	20.00%	\$48,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
2	NEW TURNOUT SIGNAL	EACH	\$325,000	\$650,000	30.00%	\$845,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	30.00%	\$0	
1	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$250,000	20.00%	\$300,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	LF	\$5,000	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0

TRAIN CONTROL

\$0

POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0

STATIONS

\$0

TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	15.00%	\$0
STATION CANOPY	SF	\$75	\$0	40.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$71	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	40.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$40	\$0	30.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0

RIGHT OF WAY

\$0

ROW LAND ONLY	SF	\$4	\$0	40.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0

TUNNEL CONSTRUCTION

\$0

TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0

GENERAL SUPPORT ITEMS

\$0

BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0

ROLLING STOCK & CAPITAL INVESTMENTS

\$0

ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
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TOTAL CONSTRUCTION COST

\$7,151,760

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$3,752,992
10	CLEAR & GRUB LIGHT	AC	\$2,500	\$25,000	40.00%	\$35,000	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
100	EARTHWORK COMMON	BCY	\$25	\$2,500	30.00%	\$3,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
68833	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$1,720,825	25.00%	\$2,151,031	
18863	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF	\$18	\$339,534	25.00%	\$424,418	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
25016	STREET RESTORATIONS	SF	\$15	\$375,240	45.00%	\$544,098	
1	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$300,000	20.00%	\$360,000	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
3902	PERMANENT FENCING	LF	\$35	\$136,570	20.00%	\$163,884	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
2057	SILT FENCE and ORANGE FENCE	LF	\$15	\$30,855	30.00%	\$40,112	
12	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$24,000	30.00%	\$31,200	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$4,587,895
380	REMOVE EXISTING TRACK	TF	\$40	\$15,200	20.00%	\$18,240	
1	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$25,000	10.00%	\$27,500	
	SHIFT EXISTING TRACK	TF	\$100	\$0	10.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
4243	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$1,909,350	30.00%	\$2,482,155	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
1	CROSSOVER No.20	EACH	\$800,000	\$800,000	20.00%	\$960,000	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
4	TURNOUT (#11)	EACH	\$250,000	\$1,000,000	10.00%	\$1,100,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$2,916,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
2	DOG HOUSE (Signal House)	EACH	\$200,000	\$400,000	20.00%	\$480,000	
4	NEW ELECTRIC SERVICE	EACH	\$20,000	\$80,000	20.00%	\$96,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
4	NEW TURNOUT SIGNAL	EACH	\$325,000	\$1,300,000	30.00%	\$1,690,000	
1	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	30.00%	\$650,000	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$5,005,000

	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
770	PEDESTRIAN BRIDGE	LF	\$5,000	\$3,850,000	30.00%	\$5,005,000
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
	PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0
	TRAIN CONTROL					
	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
	STATIONS					
	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
32000	STATION PLATFORM STRUCTURES NEW	SF	\$200	\$6,400,000	15.00%	\$7,360,000
1200	STATION CANOPY	SF	\$75	\$90,000	40.00%	\$126,000
	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
32000	STATION AMENITIES	SF	\$71	\$2,272,000	30.00%	\$2,953,600
	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
599	PARKING LOTS	SPACES	\$3,000	\$1,797,000	40.00%	\$2,515,800
	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
27050	BUS LANE AND UNLOADING	SF	\$40	\$1,082,000	30.00%	\$1,406,600
	PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
	RIGHT OF WAY					
573600	ROW LAND ONLY	SF	\$3	\$1,720,800	40.00%	\$2,409,120
	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
	ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
	ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
	BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal, appraisal,etc.)	VALUE	\$1	\$0	0.00%	\$0
	TUNNEL CONSTRUCTION					
	TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
	SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
	GENERAL SUPPORT ITEMS					
	BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
	CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
	ROLLING STOCK & CAPITAL INVESTMENTS					
	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
	TOTAL CONSTRUCTION COST					
						\$33,033,007

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$930,995
	4 CLEAR & GRUB LIGHT	AC	\$2,500	\$10,000	40.00%	\$14,000	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
6500	EARTHWORK COMMON	BCY	\$25	\$162,500	30.00%	\$211,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
6500	EMBANKMENT	FCY	\$10	\$65,000	30.00%	\$84,500	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
120	BOX CULVERT	CY	\$1,000	\$120,000	30.00%	\$156,000	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF	\$18	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
4200	STREET RESTORATIONS	SF	\$15	\$63,000	45.00%	\$91,350	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
1505	STRIPPING	LF	\$1	\$1,204	20.00%	\$1,445	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
17500	SILT FENCE and ORANGE FENCE	LF	\$15	\$262,500	30.00%	\$341,250	
12	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$24,000	30.00%	\$31,200	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$11,278,500
1600	REMOVE EXISTING TRACK	TF	\$40	\$64,000	20.00%	\$76,800	
2	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$50,000	10.00%	\$55,000	
2820	SHIFT EXISTING TRACK	TF	\$100	\$282,000	10.00%	\$310,200	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
8780	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$4,390,000	25.00%	\$5,487,500	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	30.00%	\$0	
260	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$195,000	20.00%	\$234,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
1	CROSSOVER No.7	EACH	\$600,000	\$600,000	20.00%	\$720,000	
2	CROSSOVER No.20	EACH	\$800,000	\$1,600,000	20.00%	\$1,920,000	
1	TURNOUT (#7)	EACH	\$200,000	\$200,000	10.00%	\$220,000	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
1	TURNOUT (#15)	EACH	\$350,000	\$350,000	10.00%	\$385,000	
3	TURNOUT (#20)	EACH	\$400,000	\$1,200,000	10.00%	\$1,320,000	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
1	DIAMOND CROSSING	EACH	\$500,000	\$500,000	10.00%	\$550,000	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$8,070,500
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
3	CANTILEVER SIGNAL	EACH	\$200,000	\$600,000	20.00%	\$720,000	
7	DOG HOUSE (Signal House)	EACH	\$200,000	\$1,400,000	20.00%	\$1,680,000	
7	NEW ELECTRIC SERVICE	EACH	\$20,000	\$140,000	20.00%	\$168,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
5	NEW TURNOUT SIGNAL	EACH	\$325,000	\$1,625,000	30.00%	\$2,112,500	
3	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$1,500,000	30.00%	\$1,950,000	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
3	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$1,200,000	20.00%	\$1,440,000	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	LF	\$5,000	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0

TRAIN CONTROL

\$0

POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0

STATIONS

\$0

TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	15.00%	\$0
STATION CANOPY	SF	\$75	\$0	40.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$71	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	40.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$40	\$0	30.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0

RIGHT OF WAY

\$0

ROW LAND ONLY	SF	\$3	\$0	40.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0

TUNNEL CONSTRUCTION

\$0

TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0

GENERAL SUPPORT ITEMS

\$0

BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0

ROLLING STOCK & CAPITAL INVESTMENTS

\$0

ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
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TOTAL CONSTRUCTION COST

\$20,279,995

Ceres Extension

Cost Estimate Back-up Tables

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$1,801,370
1.76	CLEAR & GRUB LIGHT	AC	\$2,500	\$4,400	40.00%	\$6,160	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
5000	EARTHWORK COMMON	BCY	\$25	\$125,000	30.00%	\$162,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
1600	EMBANKMENT	FCY	\$10	\$16,000	40.00%	\$22,400	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
1167	BOX CULVERT DOUBLE CELL	CY	\$1,000	\$1,167,000	30.00%	\$1,517,100	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
4780	SILT FENCE and ORANGE FENCE	LF	\$15	\$71,700	30.00%	\$93,210	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$2,063,820
340	REMOVE EXISTING TRACK	TF	\$40	\$13,600	20.00%	\$16,320	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
2050	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$1,025,000	30.00%	\$1,332,500	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
2	TURNOUT (#14)	EACH	\$325,000	\$650,000	10.00%	\$715,000	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$1,373,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
2	DOG HOUSE (Signal House)	EACH	\$200,000	\$400,000	20.00%	\$480,000	
2	NEW ELECTRIC SERVICE	EACH	\$20,000	\$40,000	20.00%	\$48,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
2	NEW TURNOUT SIGNAL	EACH	\$325,000	\$650,000	30.00%	\$845,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0	
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0	0.00
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0	0.00
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	0.00
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0	0.00
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	0.00
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0	0.00
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0	0.00
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0	0.00
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0	0.00
TRAIN CONTROL						\$13,000
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0	
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0	
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0	
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0	
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0	
4 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$10,000	30.00%	\$13,000	
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0	
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0	
STATION CANOPY	SF	\$75	\$0	20.00%	\$0	
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0	
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0	
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0	
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0	
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0	
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0	
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0	
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0	
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY						\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0	
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0	
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0	
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0	
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0	
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0	
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0	
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$5,251,190

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$1,567,715
12.03	CLEAR & GRUB LIGHT	AC	\$2,500	\$30,075	40.00%	\$42,105	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
17300	EARTHWORK COMMON	BCY	\$25	\$432,500	30.00%	\$562,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
22900	EMBANKMENT	FCY	\$10	\$229,000	30.00%	\$297,700	
5600	BORROW	FCY	\$25	\$140,000	30.00%	\$182,000	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
26870	SILT FENCE and ORANGE FENCE	LF	\$15	\$403,050	20.00%	\$483,660	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$8,566,720
265	REMOVE EXISTING TRACK	TF	\$40	\$10,600	20.00%	\$12,720	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
12920	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$6,460,000	15.00%	\$7,429,000	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
700	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$525,000	20.00%	\$630,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
1	TURNOUT (#24)	EACH	\$450,000	\$450,000	10.00%	\$495,000	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$4,590,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
3	CANTILEVER SIGNAL	EACH	\$200,000	\$600,000	20.00%	\$720,000	
5	DOG HOUSE (Signal House)	EACH	\$200,000	\$1,000,000	20.00%	\$1,200,000	
5	NEW ELECTRIC SERVICE	EACH	\$20,000	\$100,000	20.00%	\$120,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
1	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$300,000	20.00%	\$360,000	
1	NEW TURNOUT SIGNAL	EACH	\$325,000	\$325,000	20.00%	\$390,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
6	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$1,500,000	20.00%	\$1,800,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0	
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0	0.00
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0	0.00
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	0.00
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0	0.00
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	0.00
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0	0.00
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0	0.00
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0	0.00
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0	0.00
TRAIN CONTROL						\$120,250
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0	
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0	
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0	
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0	
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0	
24 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$60,000	30.00%	\$78,000	
650 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$32,500	30.00%	\$42,250	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0	
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0	
STATION CANOPY	SF	\$75	\$0	20.00%	\$0	
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0	
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0	
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0	
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0	
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0	
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0	
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0	
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0	
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY						\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0	
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0	
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0	
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0	
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0	
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0	
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0	
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$14,844,685

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$93,700
3	CLEAR & GRUB LIGHT	AC	\$2,500	\$7,500	40.00%	\$10,500	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
1000	EARTHWORK COMMON	BCY	\$25	\$25,000	30.00%	\$32,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
1300	SILT FENCE and ORANGE FENCE	LF	\$15	\$19,500	30.00%	\$25,350	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
500	LANDSCAPING PERMANENT	SY	\$15	\$7,500	30.00%	\$9,750	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$4,940,050
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
124 PARKING LOTS	SPACES	\$3,000	\$372,000	40.00%	\$520,800
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$481,250
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
35000 ROW USABLE AREA	SF	\$11	\$385,000	25.00%	\$481,250
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$5,515,000

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$8,142,924
31.28	CLEAR & GRUB LIGHT	AC	\$5,000	\$156,400	30.00%	\$203,320	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
58700	EARTHWORK COMMON	BCY	\$25	\$1,467,500	30.00%	\$1,907,750	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
39900	EMBANKMENT	FCY	\$10	\$399,000	30.00%	\$518,700	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
5160	SOIL NAIL WALLS	SF	\$70	\$361,200	30.00%	\$469,560	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
1961	CIVIL WORK TYPE G	LF	\$1,500	\$2,941,500	30.00%	\$3,823,950	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
67758	SILT FENCE and ORANGE FENCE	LF	\$15	\$1,016,370	20.00%	\$1,219,644	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$20,992,835
170	REMOVE EXISTING TRACK	TF	\$40	\$6,800	20.00%	\$8,160	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
33749	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$16,874,500	15.00%	\$19,405,675	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
260	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$195,000	20.00%	\$234,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
1	CROSSOVER No.15	EACH	\$800,000	\$800,000	20.00%	\$960,000	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
1	TURNOUT (#15)	EACH	\$350,000	\$350,000	10.00%	\$385,000	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$3,930,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
5	DOG HOUSE (Signal House)	EACH	\$200,000	\$1,000,000	20.00%	\$1,200,000	
5	NEW ELECTRIC SERVICE	EACH	\$20,000	\$100,000	20.00%	\$120,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
2	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$600,000	20.00%	\$720,000	
1	NEW TURNOUT SIGNAL	EACH	\$325,000	\$325,000	20.00%	\$390,000	
1	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	20.00%	\$600,000	
3	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$750,000	20.00%	\$900,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$217,750
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
22 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$55,000	30.00%	\$71,500
2250 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$112,500	30.00%	\$146,250
STATIONS					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$33,283,509

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$126,000
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
2000	EARTHWORK COMMON	BCY	\$25	\$50,000	30.00%	\$65,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
1200	SILT FENCE and ORANGE FENCE	LF	\$15	\$18,000	30.00%	\$23,400	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
500	LANDSCAPING PERMANENT	SY	\$15	\$7,500	30.00%	\$9,750	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$3,125,000

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
500 PEDESTRIAN BRIDGE	LF	\$5,000	\$2,500,000	25.00%	\$3,125,000
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0

TRAIN CONTROL

\$0

POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0

STATIONS

\$5,246,650

TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
197 PARKING LOTS	SPACES	\$3,000	\$591,000	40.00%	\$827,400
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0

RIGHT OF WAY

\$0

ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0

TUNNEL CONSTRUCTION

\$0

TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0

GENERAL SUPPORT ITEMS

\$0

BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0

ROLLING STOCK & CAPITAL INVESTMENTS

\$0

ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
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TOTAL CONSTRUCTION COST

\$8,497,650

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$1,908,856
2.78	CLEAR & GRUB LIGHT	AC	\$2,500	\$6,950	40.00%	\$9,730	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
4300	EARTHWORK COMMON	BCY	\$25	\$107,500	30.00%	\$139,750	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
19500	EMBANKMENT	FCY	\$10	\$195,000	30.00%	\$253,500	
15200	BORROW	FCY	\$25	\$380,000	30.00%	\$494,000	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
21490	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$752,150	20.00%	\$902,580	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
6072	SILT FENCE and ORANGE FENCE	LF	\$15	\$91,080	20.00%	\$109,296	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$1,745,700
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
3036	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$1,518,000	15.00%	\$1,745,700	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					
					\$195,000
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
2 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$5,000	30.00%	\$6,500
2900 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$145,000	30.00%	\$188,500
STATIONS					
					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					
					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					
					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					
					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					
					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					
					\$3,849,556

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$22,201,528
40.15	CLEAR & GRUB LIGHT	AC	\$2,500	\$100,375	40.00%	\$140,525	
1.04	CLEAR & GRUB HEAVY	AC	\$5,000	\$5,200	30.00%	\$6,760	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
82600	EARTHWORK COMMON	BCY	\$25	\$2,065,000	30.00%	\$2,684,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
43700	EMBANKMENT	FCY	\$10	\$437,000	30.00%	\$568,100	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
14745	SOIL NAIL WALLS	SF	\$70	\$1,032,150	30.00%	\$1,341,795	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
101	BOX CULVERT	CY	\$1,000	\$101,000	30.00%	\$131,300	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
2520	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$30,240	40.00%	\$42,336	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
280	CIVIL WORK TYPE C	LF	\$7,124	\$1,994,720	30.00%	\$2,593,136	
6714	CIVIL WORK TYPE G	SF	\$1,500	\$10,071,000	30.00%	\$13,092,300	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
88932	SILT FENCE and ORANGE FENCE	LF	\$15	\$1,333,980	20.00%	\$1,600,776	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$28,425,270
390	REMOVE EXISTING TRACK	TF	\$40	\$15,600	20.00%	\$18,720	
2	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$50,000	10.00%	\$55,000	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
3270	UPGRADE EXISTING TRACK	TF	\$300	\$981,000	20.00%	\$1,177,200	
44378	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$22,189,000	15.00%	\$25,517,350	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
680	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$510,000	20.00%	\$612,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
2	TURNOUT (#11)	EACH	\$250,000	\$500,000	10.00%	\$550,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
1	TURNOUT (#24)	EACH	\$450,000	\$450,000	10.00%	\$495,000	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$6,282,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
1	CANTILEVER SIGNAL	EACH	\$200,000	\$200,000	20.00%	\$240,000	
8	DOG HOUSE (Signal House)	EACH	\$200,000	\$1,600,000	20.00%	\$1,920,000	
8	NEW ELECTRIC SERVICE	EACH	\$20,000	\$160,000	20.00%	\$192,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
1	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$300,000	20.00%	\$360,000	
3	NEW TURNOUT SIGNAL	EACH	\$325,000	\$975,000	20.00%	\$1,170,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
8	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$2,000,000	20.00%	\$2,400,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$4,368,000

	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
6720	RAILROAD BRIDGE STEEL	SF	\$500	\$3,360,000	30.00%	\$4,368,000
	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
	PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
	TRAIN CONTROL					
	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
54	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$135,000	30.00%	\$175,500
2500	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$125,000	30.00%	\$162,500
	STATIONS					
	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
	STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
	STATION CANOPY	SF	\$75	\$0	20.00%	\$0
	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
	PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
	PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
	RIGHT OF WAY					
	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
	ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
	ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
	TUNNEL CONSTRUCTION					
	TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
	SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
	GENERAL SUPPORT ITEMS					
	BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
	CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
	ROLLING STOCK & CAPITAL INVESTMENTS					
	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
	TOTAL CONSTRUCTION COST					
						\$61,614,798

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$185,150
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
1000	EARTHWORK COMMON	BCY	\$25	\$25,000	30.00%	\$32,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
750	REMOVE SHORT WALL (3' HIGH)	LF	\$60	\$45,000	30.00%	\$58,500	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
1900	SILT FENCE and ORANGE FENCE	LF	\$15	\$28,500	30.00%	\$37,050	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
1500	LANDSCAPING PERMANENT	SY	\$15	\$22,500	30.00%	\$29,250	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES						\$0
BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0	
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0	
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0	
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0	
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0	
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0	
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0	
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0	
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0	
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0	
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0	
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0	
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0	
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0	
STATIONS						\$4,522,788
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0	
13125 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$2,625,000	15.00%	\$3,018,750	
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750	
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0	
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000	
13125 STATION AMENITIES	SF	\$50	\$656,250	15.00%	\$754,688	
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0	
153 PARKING LOTS	SPACES	\$3,000	\$459,000	40.00%	\$642,600	
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0	
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0	
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0	
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0	
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY						\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0	
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0	
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0	
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0	
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0	
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0	
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0	
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$4,707,938

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$2,312,450
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
1000	EARTHWORK COMMON	BCY	\$25	\$25,000	30.00%	\$32,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
960	RETAINING WALLS (0 TO 10 FEET TALL)	LF	\$1,200	\$1,152,000	30.00%	\$1,497,600	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
9000	STREET RESTORATIONS	SF	\$25	\$225,000	45.00%	\$326,250	
1	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$250,000	\$250,000	20.00%	\$300,000	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
1800	PERMANENT FENCING	LF	\$35	\$63,000	20.00%	\$75,600	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
2200	SILT FENCE and ORANGE FENCE	LF	\$15	\$33,000	30.00%	\$42,900	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
500	LANDSCAPING PERMANENT	SY	\$15	\$7,500	30.00%	\$9,750	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$4,906,450
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
116 PARKING LOTS	SPACES	\$3,000	\$348,000	40.00%	\$487,200
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$7,218,900

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$2,338,825
4.6	CLEAR & GRUB LIGHT	AC	\$2,500	\$11,500	40.00%	\$16,100	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
10000	EARTHWORK COMMON	BCY	\$25	\$250,000	30.00%	\$325,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
2000	EMBANKMENT	FCY	\$30	\$60,000	40.00%	\$84,000	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
90000	AC PAVEMENT REMOVAL	SF	\$2	\$180,000	45.00%	\$261,000	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
120000	ASPHALT CONCRETE ROADWAY	SF	\$4	\$480,000	45.00%	\$696,000	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
400	SHOP BUILDINGS	SF	\$50	\$20,000	45.00%	\$29,000	
1	CONTAINER	EACH	\$7,500	\$7,500	45.00%	\$10,875	
3200	INSPECTION PITS	SF	\$90	\$288,000	45.00%	\$417,600	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
5000	PERMANENT FENCING	LF	\$35	\$175,000	20.00%	\$210,000	
4	VEHICULAR FENCE GATES	EACH	\$5,000	\$20,000	45.00%	\$29,000	
3500	SILT FENCE and ORANGE FENCE	LF	\$15	\$52,500	30.00%	\$68,250	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
64	YARD LIGHTING	EACH	\$2,500	\$160,000	20.00%	\$192,000	
TRACK WORK							\$5,942,380
685	REMOVE EXISTING TRACK	TF	\$40	\$27,400	20.00%	\$32,880	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
5260	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$2,630,000	15.00%	\$3,024,500	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
1	CROSSOVER No.15	EACH	\$800,000	\$800,000	20.00%	\$960,000	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
5	TURNOUT (#10)	EACH	\$350,000	\$1,750,000	10.00%	\$1,925,000	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$2,562,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
3	DOG HOUSE (Signal House)	EACH	\$200,000	\$600,000	20.00%	\$720,000	
3	NEW ELECTRIC SERVICE	EACH	\$20,000	\$60,000	20.00%	\$72,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
3	NEW TURNOUT SIGNAL	EACH	\$325,000	\$975,000	20.00%	\$1,170,000	
1	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	20.00%	\$600,000	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$55,000
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$1,764,000
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
210000 ROW ORCHARDS	SF	\$6	\$1,260,000	40.00%	\$1,764,000
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$12,662,205

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$15,853,799
16.32	CLEAR & GRUB LIGHT	AC	\$2,500	\$40,800	40.00%	\$57,120	
1.07	CLEAR & GRUB HEAVY	AC	\$5,000	\$5,350	30.00%	\$6,955	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
32500	EARTHWORK COMMON	BCY	\$25	\$812,500	30.00%	\$1,056,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
23800	EMBANKMENT	FCY	\$10	\$238,000	30.00%	\$309,400	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
400	CIVIL WORK TYPE C	LF	\$7,124	\$2,849,600	30.00%	\$3,704,480	
5169	CIVIL WORK TYPE G	SF	\$1,500	\$7,753,500	30.00%	\$10,079,550	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
35558	SILT FENCE and ORANGE FENCE	LF	\$15	\$533,370	20.00%	\$640,044	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$12,563,610
445	REMOVE EXISTING TRACK	TF	\$40	\$17,800	20.00%	\$21,360	
2	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$50,000	10.00%	\$55,000	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
19170	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$9,585,000	15.00%	\$11,022,750	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
130	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$97,500	20.00%	\$117,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
1	TURNOUT (#11)	EACH	\$250,000	\$250,000	10.00%	\$275,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
1	TURNOUT (#15 CURVE)	EACH	\$975,000	\$975,000	10.00%	\$1,072,500	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$2,796,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
4	DOG HOUSE (Signal House)	EACH	\$200,000	\$800,000	20.00%	\$960,000	
4	NEW ELECTRIC SERVICE	EACH	\$20,000	\$80,000	20.00%	\$96,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
1	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$300,000	20.00%	\$360,000	
2	NEW TURNOUT SIGNAL	EACH	\$325,000	\$650,000	20.00%	\$780,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
2	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$500,000	20.00%	\$600,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$7,917,000

	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
12180	RAILROAD BRIDGE STEEL	SF	\$500	\$6,090,000	30.00%	\$7,917,000
	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
	PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL						
						\$341,250
	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
19	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$47,500	30.00%	\$61,750
4300	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$215,000	30.00%	\$279,500
STATIONS						
						\$0
	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
	STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
	STATION CANOPY	SF	\$75	\$0	20.00%	\$0
	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
	PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
	PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY						
						\$0
	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
	ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
	ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION						
						\$0
	TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
	SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS						
						\$0
	BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
	CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS						
						\$0
	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST						
						\$39,471,659

CIVIL WORKS						\$16,250
CLEAR & GRUB LIGHT	AC	\$2,500	\$0	40.00%	\$0	
CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
DEMOLITION	SF	\$8	\$0	30.00%	\$0	
EARTHWORK COMMON	BCY	\$25	\$0	30.00%	\$0	
EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
BORROW	FCY	\$25	\$0	30.00%	\$0	
REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
SOUND WALL	LF	\$90	\$0	50.00%	\$0	
BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
STRIPPING	LF	\$1	\$0	20.00%	\$0	
PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
SILT FENCE and ORANGE FENCE	LF	\$15	\$0	30.00%	\$0	
SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$0	30.00%	\$0	
LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
250 UTILITY RELOCATIONS	LF	\$50	\$12,500	30.00%	\$16,250	
DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK						\$0
REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	15.00%	\$0	
TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK						\$0
PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
DOG HOUSE (Signal House)	EACH	\$200,000	\$0	20.00%	\$0	
NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$127,500
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	15.00%	\$0
STATION CANOPY	SF	\$75	\$0	15.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 CHARGE STATION PRIMARY ELECTRICAL SERVICE	EACH	\$25,000	\$25,000	10.00%	\$27,500
STATION AMENITIES	SF	\$50	\$0	15.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	40.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
1 ELECTRIC BUS CHARGING STATION	EACH	\$80,000	\$80,000	25.00%	\$100,000
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW COMMERCIAL AREA	SF	\$30	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$3,565,000	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$143,750

Merced Extension

Cost Estimate Back-up Tables

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$16,084,578
37.82	CLEAR & GRUB LIGHT	AC	\$2,500	\$94,550	40.00%	\$132,370	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
60200	EARTHWORK COMMON	BCY	\$25	\$1,505,000	30.00%	\$1,956,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
53300	EMBANKMENT	FCY	\$10	\$533,000	30.00%	\$692,900	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
16448	SOIL NAIL WALLS	SF	\$70	\$1,151,360	30.00%	\$1,496,768	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
55	BOX CULVERT	CY	\$1,000	\$55,000	30.00%	\$71,500	
115	BOX CULVERT	CY	\$1,000	\$115,000	30.00%	\$149,500	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
5188	CIVIL WORK TYPE G	SF	\$1,500	\$7,782,000	30.00%	\$10,116,600	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
81580	SILT FENCE and ORANGE FENCE	LF	\$15	\$1,223,700	20.00%	\$1,468,440	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$24,197,250
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
41190	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$20,595,000	15.00%	\$23,684,250	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
570	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$427,500	20.00%	\$513,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$4,776,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
4	DOG HOUSE (Signal House)	EACH	\$200,000	\$800,000	20.00%	\$960,000	
4	NEW ELECTRIC SERVICE	EACH	\$20,000	\$80,000	20.00%	\$96,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
2	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$600,000	20.00%	\$720,000	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
10	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$2,500,000	20.00%	\$3,000,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$1,602,250
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
25 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$62,500	30.00%	\$81,250
23400 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$1,170,000	30.00%	\$1,521,000
STATIONS					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$46,660,078

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$111,700
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
1200	EARTHWORK COMMON	BCY	\$25	\$30,000	30.00%	\$39,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
2000	SILT FENCE and ORANGE FENCE	LF	\$15	\$30,000	30.00%	\$39,000	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
300	LANDSCAPING PERMANENT	SY	\$15	\$4,500	30.00%	\$5,850	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
	TRACK WORK						\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	15.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
	SIGNAL WORK						\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$200,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						\$4,687,500

	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
750	PEDESTRIAN BRIDGE	LF	\$5,000	\$3,750,000	25.00%	\$4,687,500
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
	TRAIN CONTROL					
	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
	STATIONS					
	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000	STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600	STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000	STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
212	PARKING LOTS	SPACES	\$3,000	\$636,000	40.00%	\$890,400
	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
315	PARKING LOT LIGHTING	SPACES	\$200	\$63,000	30.00%	\$81,900
	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
	RIGHT OF WAY					
	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
100000	ROW PAVED AREAS	SF	\$11	\$1,100,000	25.00%	\$1,375,000
	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
	ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
	TUNNEL CONSTRUCTION					
	TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF	\$0	\$0	30.00%	\$0
	SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
	TWIN BORE RESTORE (DIA)	LF	\$0	\$0	30.00%	\$0
	GENERAL SUPPORT ITEMS					
	BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
	CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
	ROLLING STOCK & CAPITAL INVESTMENTS					
	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
	TOTAL CONSTRUCTION COST					
						\$11,565,750

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$1,789,380
14.98	CLEAR & GRUB LIGHT	AC	\$2,500	\$37,450	40.00%	\$52,430	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
27500	EARTHWORK COMMON	BCY	\$25	\$687,500	30.00%	\$893,750	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
18200	EMBANKMENT	FCY	\$10	\$182,000	30.00%	\$236,600	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
33700	SILT FENCE and ORANGE FENCE	LF	\$15	\$505,500	20.00%	\$606,600	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$10,624,440
530	REMOVE EXISTING TRACK	TF	\$40	\$21,200	20.00%	\$25,440	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
16320	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$8,160,000	15.00%	\$9,384,000	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
250	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$187,500	20.00%	\$225,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
2	TURNOUT (#24)	EACH	\$450,000	\$900,000	10.00%	\$990,000	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$4,224,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
6	DOG HOUSE (Signal House)	EACH	\$200,000	\$1,200,000	20.00%	\$1,440,000	
6	NEW ELECTRIC SERVICE	EACH	\$20,000	\$120,000	20.00%	\$144,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
1	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$300,000	20.00%	\$360,000	
2	NEW TURNOUT SIGNAL	EACH	\$325,000	\$650,000	20.00%	\$780,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
5	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$1,250,000	20.00%	\$1,500,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$851,500
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
24 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$60,000	30.00%	\$78,000
11900 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$595,000	30.00%	\$773,500
STATIONS					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$17,489,320

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$10,019,305
34.37	CLEAR & GRUB LIGHT	AC	\$2,500	\$85,925	40.00%	\$120,295	
2.2	CLEAR & GRUB HEAVY	AC	\$5,000	\$11,000	30.00%	\$14,300	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
65700	EARTHWORK COMMON	BCY	\$25	\$1,642,500	30.00%	\$2,135,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
58500	EMBANKMENT	FCY	\$10	\$585,000	30.00%	\$760,500	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
3846	SOIL NAIL WALLS	SF	\$70	\$269,220	30.00%	\$349,986	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
26	BOX CULVERT	CY	\$1,000	\$26,000	30.00%	\$33,800	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
1728	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$20,736	40.00%	\$29,030	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
270	CIVIL WORK TYPE C	LF	\$7,124	\$1,923,480	30.00%	\$2,500,524	
1354	CIVIL WORK TYPE G	SF	\$1,500	\$2,031,000	30.00%	\$2,640,300	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
79740	SILT FENCE and ORANGE FENCE	LF	\$15	\$1,196,100	20.00%	\$1,435,320	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$24,334,650
1800	REMOVE EXISTING TRACK	TF	\$40	\$72,000	20.00%	\$86,400	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
40870	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$20,435,000	15.00%	\$23,500,250	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
220	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$165,000	20.00%	\$198,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	</

BRIDGE STRUCTURES

\$14,857,700

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
20680 RAILROAD BRIDGE STEEL	SF	\$500	\$10,340,000	30.00%	\$13,442,000
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL.	SF	\$500	\$0	30.00%	\$0
1980 TRESTLE BRIDGE STEEL	SF	\$550	\$1,089,000	30.00%	\$1,415,700
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$1,738,750
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
13 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$32,500	30.00%	\$42,250
26100 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$1,305,000	30.00%	\$1,696,500
STATIONS					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$54,670,405

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$150,700
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
2400	EARTHWORK COMMON	BCY	\$25	\$60,000	30.00%	\$78,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED STREET SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
2000	SILT FENCE and ORANGE FENCE	LF	\$15	\$30,000	30.00%	\$39,000	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
300	LANDSCAPING PERMANENT	SY	\$15	\$4,500	30.00%	\$5,850	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	15.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$200,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$5,373,690
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
214 PARKING LOTS	SPACES	\$3,000	\$642,000	40.00%	\$898,800
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
214 PARKING LOT LIGHTING	SPACES	\$200	\$42,800	30.00%	\$55,640
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$1,812,500
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
35000 ROW PAVED AREAS	SF	\$8	\$280,000	25.00%	\$350,000
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
30000 ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$420,000	25.00%	\$525,000
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, 1 legal, appraisal, etc.)	VALUE	\$937,500	\$937,500	0.00%	\$937,500
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$7,336,890

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$150,700
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
2400	EARTHWORK COMMON	BCY	\$25	\$60,000	30.00%	\$78,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
2000	SILT FENCE and ORANGE FENCE	LF	\$15	\$30,000	30.00%	\$39,000	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
300	LANDSCAPING PERMANENT	SY	\$15	\$4,500	30.00%	\$5,850	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	15.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$200,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$5,364,770
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
212 PARKING LOTS	SPACES	\$3,000	\$636,000	40.00%	\$890,400
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
212 PARKING LOT LIGHTING	SPACES	\$200	\$42,400	30.00%	\$55,120
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$4,500,000
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
120000 ROW RESIDENTIAL AREA	SF	\$10	\$1,200,000	25.00%	\$1,500,000
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, 1 legal, appraisal, etc.)	VALUE	\$3,000,000	\$3,000,000	0.00%	\$3,000,000
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$10,015,470

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$29,273,349
67.23	CLEAR & GRUB LIGHT	AC	\$2,500	\$168,075	40.00%	\$235,305	
0.32	CLEAR & GRUB HEAVY	AC	\$5,000	\$1,600	30.00%	\$2,080	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
107500	EARTHWORK COMMON	BCY	\$25	\$2,687,500	30.00%	\$3,493,750	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
168600	EMBANKMENT	FCY	\$10	\$1,686,000	30.00%	\$2,191,800	
61100	BORROW	FCY	\$25	\$1,527,500	30.00%	\$1,985,750	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
4048	SOIL NAIL WALLS	SF	\$70	\$283,360	30.00%	\$368,368	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
70	BOX CULVERT	CY	\$1,000	\$70,000	30.00%	\$91,000	
30	BOX CULVERT	CY	\$1,000	\$30,000	30.00%	\$39,000	
2220	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$26,640	40.00%	\$37,296	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
30	CIVIL WORK TYPE C	LF	\$7,124	\$213,720	30.00%	\$277,836	
9184	CIVIL WORK TYPE G	SF	\$1,500	\$13,776,000	30.00%	\$17,908,800	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
146798	SILT FENCE and ORANGE FENCE	LF	\$15	\$2,201,970	20.00%	\$2,642,364	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$45,377,475
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
3	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$75,000	10.00%	\$82,500	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
2730	UPGRADE EXISTING TRACK	TF	\$300	\$819,000	20.00%	\$982,800	
73769	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$36,884,500	15.00%	\$42,417,175	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
700	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$525,000	20.00%	\$630,000	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
1	CROSSOVER No.15	EACH	\$800,000	\$800,000	20.00%	\$960,000	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
1	TURNOUT (#11)	EACH	\$250,000	\$250,000	10.00%	\$275,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
1	BUMPING POST	EACH	\$25,000	\$25,000	20.00%	\$30,000	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$6,222,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
3	DOG HOUSE (Signal House)	EACH	\$200,000	\$600,000	20.00%	\$720,000	
3	NEW ELECTRIC SERVICE	EACH	\$20,000	\$60,000	20.00%	\$72,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
4	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$1,200,000	20.00%	\$1,440,000	
1	NEW TURNOUT SIGNAL	EACH	\$325,000	\$325,000	20.00%	\$390,000	
1	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	20.00%	\$600,000	
10	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$2,500,000	20.00%	\$3,000,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$5,050,500

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
7770 RAILROAD BRIDGE STEEL	SF	\$500	\$3,885,000	30.00%	\$5,050,500
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					
					\$3,948,750
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
63 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$157,500	30.00%	\$204,750
57600 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$2,880,000	30.00%	\$3,744,000
STATIONS					
					\$0
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					
					\$0
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					
					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					
					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					
					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					
					\$89,872,074

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$70,750
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
	EARTHWORK COMMON	BCY	\$25	\$0	30.00%	\$0	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
1900	SILT FENCE and ORANGE FENCE	LF	\$15	\$28,500	30.00%	\$37,050	
6	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
300	LANDSCAPING PERMANENT	SY	\$15	\$4,500	30.00%	\$5,850	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0	30.00%	\$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK							\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	15.00%	\$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
	DOG HOUSE (Signal House)	EACH	\$200,000	\$0	20.00%	\$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$0
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$5,190,830
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
15000 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$3,000,000	15.00%	\$3,450,000
600 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
15000 STATION AMENITIES	SF	\$50	\$750,000	15.00%	\$862,500
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
173 PARKING LOTS	SPACES	\$3,000	\$519,000	40.00%	\$726,600
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
173 PARKING LOT LIGHTING	SPACES	\$200	\$34,600	30.00%	\$44,980
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$4,636,250
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
56500 ROW PAVED AREAS	SF	\$8	\$452,000	25.00%	\$565,000
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
13500 ROW COMMERCIAL AREA	SF	\$30	\$405,000	25.00%	\$506,250
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, 1 legal, appraisal, etc.)	VALUE	\$3,565,000	\$3,565,000	0.00%	\$3,565,000
TUNNEL CONSTRUCTION					\$0
70000 TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$9,897,830

Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS							\$12,155,180
20.04	CLEAR & GRUB LIGHT	AC	\$2,500	\$50,100	40.00%	\$70,140	
	CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
	EARTHWORK COMMON	BCY	\$25	\$0	30.00%	\$0	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
70000	EMBANKMENT	FCY	\$10	\$700,000	30.00%	\$910,000	
70000	BORROW	FCY	\$25	\$1,750,000	30.00%	\$2,275,000	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
290000	ASPHALT CONCRETE ROADWAY	SF	\$4	\$1,160,000	25.00%	\$1,450,000	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
86000	SHOP BUILDINGS	SF	\$50	\$4,300,000	30.00%	\$5,590,000	
	CONTAINER	EACH	\$7,500	\$0	30.00%	\$0	
8120	INSPECTION PITS	SF	\$90	\$730,800	30.00%	\$950,040	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
8700	PERMANENT FENCING	LF	\$35	\$304,500	20.00%	\$365,400	
3	VEHICULAR FENCE GATES	EACH	\$5,000	\$15,000	20.00%	\$18,000	
8700	SILT FENCE and ORANGE FENCE	LF	\$15	\$130,500	20.00%	\$156,600	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
1	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$100,000	30.00%	\$130,000	
80	YARD LIGHTING	EACH	\$2,500	\$200,000	20.00%	\$240,000	
TRACK WORK							\$10,664,290
230	REMOVE EXISTING TRACK	TF	\$40	\$9,200	20.00%	\$11,040	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
14510	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$7,255,000	15.00%	\$8,343,250	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
8	TURNOUT (#7)	EACH	\$200,000	\$1,600,000	10.00%	\$1,760,000	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
2	TURNOUT (#11)	EACH	\$250,000	\$500,000	10.00%	\$550,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
	BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK							\$528,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
2	DOG HOUSE (Signal House)	EACH	\$200,000	\$400,000	20.00%	\$480,000	
2	NEW ELECTRIC SERVICE	EACH	\$20,000	\$40,000	20.00%	\$48,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	

BRIDGE STRUCTURES

\$0

BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL					\$585,390
POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
14510 LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$435,300	30.00%	\$565,890
6 LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$15,000	30.00%	\$19,500
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS					\$125,000
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
STATION CANOPY	SF	\$75	\$0	20.00%	\$0
STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
2 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$100,000	25.00%	\$125,000
STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
PARKING LOTS	SPACES	\$3,000	\$0	25.00%	\$0
PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
PARKING LOT LIGHTING	SPACES	\$200	\$0	30.00%	\$0
ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY					\$3,787,500
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
606000 ROW AGRICULTURAL	SF	\$5	\$3,030,000	25.00%	\$3,787,500
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0
TUNNEL CONSTRUCTION					\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF		\$0	30.00%	\$0
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0	30.00%	\$0
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0
GENERAL SUPPORT ITEMS					\$0
BART INTERFACE	DAYS	\$900	\$0	20.00%	\$0
CALTRANS INTERFACE WORK	DAYS	\$900	\$0	20.00%	\$0
ROLLING STOCK & CAPITAL INVESTMENTS					\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST					\$27,845,360

Rolling Stock

Cost Estimate Back-up Tables

Origin	Destination	Trips	Loco	Consist Cars	F40 Locomotive	T4 Locomotives	Coach Cars	Cab Cars	DMU Flirt 160
Stockton ACE 01/04	San Jose	1	T4	7	0	1	6	1	0
Stockton ACE 03/06	San Jose	1	T4	8	0	1	7	1	0
Stockton ACE 05/08	San Jose	1	T4	8	0	1	7	1	0
Stockton ACE 07/10	San Jose	1	F40	5	1	0	4	1	0
Stockton	Spare	1	T4	5	0	1	4	1	0
Ceres XX	San Jose	0	0	0	0	0	0	0	0
Ceres ACE 11/15/12/16	North Lathrop	1	F40	4	1	0	3	1	0
Ceres ACE 13/17/14/18	North Lathrop	1	F40	3	1	0	2	1	0
Ceres	Spare	1	F40	0	1	0	0	1	0
Natomas	San Jose	0		0	0	0	0	0	
Natomas	Spare	0		0	0	0	0	0	
Total Fleet Requirement									
					4	4	33	8	0
Existing Fleet									
					6	0	24	8	0
Adjustment [BAAQMD =-2]									
					-2	0	0	0	0
Procurement									
					0	4	9	0	0
Unit Cost (2017 \$ est.)					\$ -	\$ 7,500,000.00	\$ 4,000,000.00	\$ 5,000,000.00	
Total Estimate (2017 \$)					\$ -	\$ 30,000,000.00	\$ 36,000,000.00	\$ -	
Grand Total Cost Estimate (2017 \$)					\$				66,000,000.00
Grand Total Cost Estimate (2018 \$)					\$				68,112,000.00
Existing Funding (2017 \$ = \$15M [CarlMoyer]+ 3.5M [CMAQ])					\$				18,500,000.00
Funding Need (2018 \$)					\$				49,612,000.00

Origin	Destination	Trips	Loco	Consist Cars	F40 Locomotive	T4 Locomotives	Coach Cars	Cab Cars	DMU Flirt 160
Stockton XX	San Jose	0	0	0	0	0	0	0	0
Stockton ACE 03/06	San Jose	1	T4	8	0	1	7	1	0
Stockton ACE 05/08	San Jose	1	T4	8	0	1	7	1	0
Stockton ACE 07/10	San Jose	1	F40	5	1	0	4	1	0
Stockton	Spare	1	T4	5	0	1	4	1	0
Ceres ACE 01/04	San Jose	1	T4	8	0	1	7	1	0
Ceres ACE 15/16	North Lathrop	1	F40	3	1	0	2	1	0
Ceres ACE 13/17/14/18	North Lathrop	1	F40	3	1	0	2	1	0
Ceres	Spare	1	F40	0	1	0	0	1	0
Natomas	San Jose	0		0	0	0	0	0	
Natomas	Spare	0		0	0	0	0	0	
Total Fleet Requirement									
					4	4	33	8	0
Existing Fleet									
					6	0	24	8	0
Adjustment [BAAQMD =-2]									
					-2	0	0	0	0
Procurement									
					0	4	9	0	0
Unit Cost (2017 \$ est.)					\$ -	\$ 7,500,000.00	\$ 4,000,000.00	\$ 5,000,000.00	
Total Estimate (2017 \$)					\$ -	\$ 30,000,000.00	\$ 36,000,000.00	\$ -	
Grand Total Cost Estimate (2017 \$)					\$				66,000,000.00
Grand Total Cost Estimate (2018 \$)					\$				68,112,000.00
Existing Funding (2017 \$ = \$15M [CarlMoyer]+ 3.5M [CMAQ])					\$				18,500,000.00
Funding Need (2018 \$)					\$				49,612,000.00