Appendix A

Updated ACE Extension Environmental Footprint











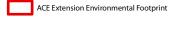












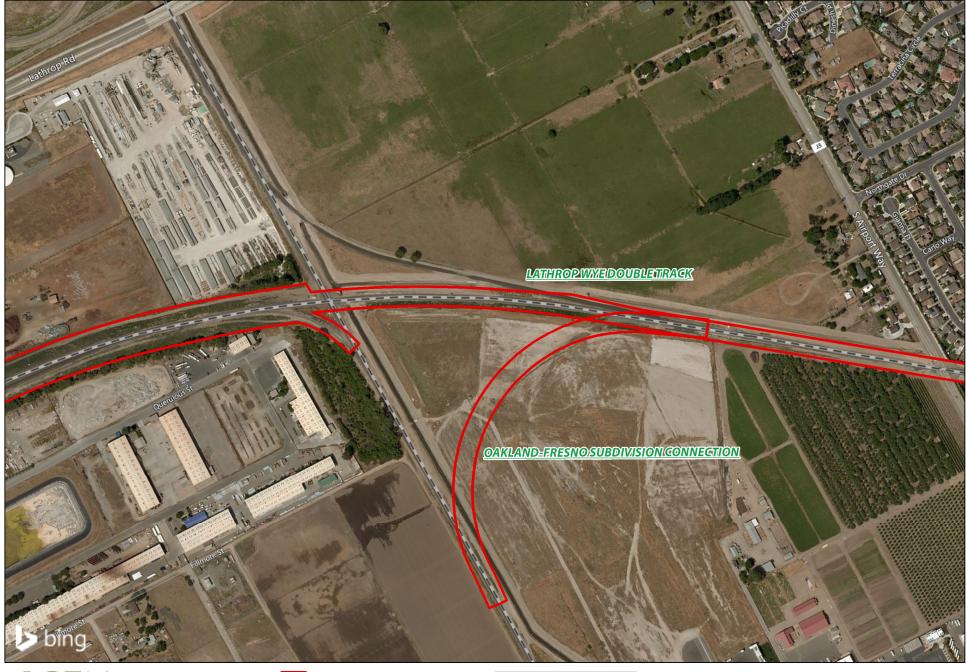




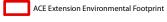






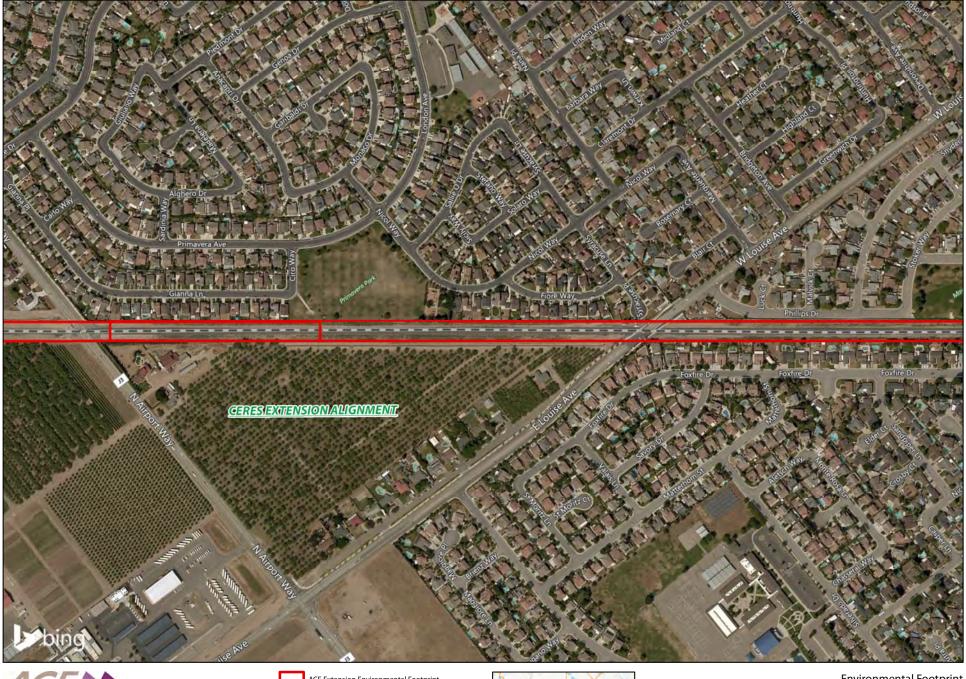








Environmental Footprint ACE Extension Lathrop to Ceres/Merced

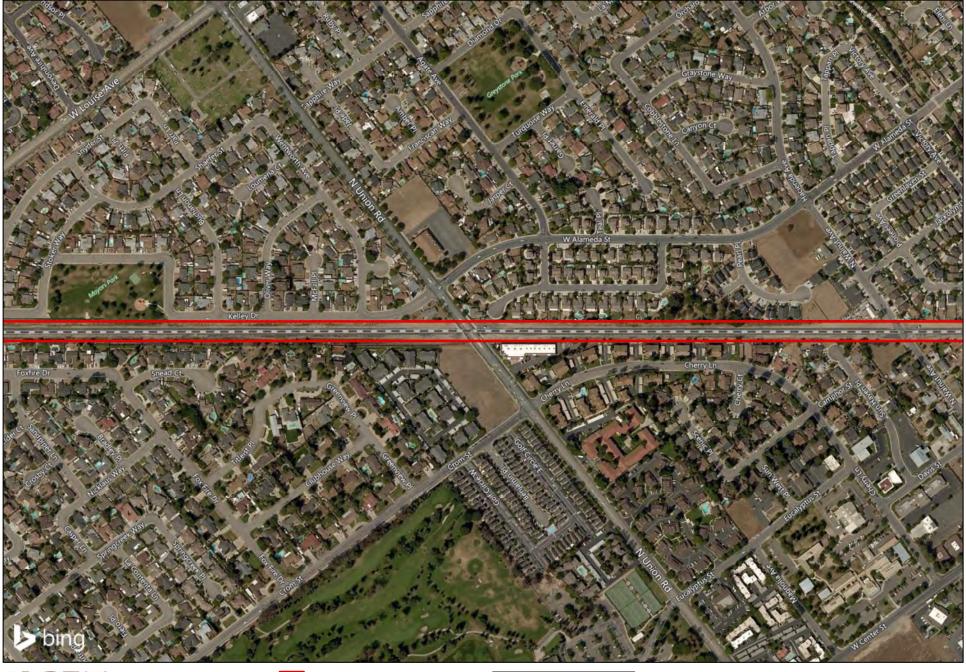








Environmental Footprint ACE Extension Lathrop to Ceres/Merced







Environmental Footprint ACE Extension Lathrop to Ceres/Merced

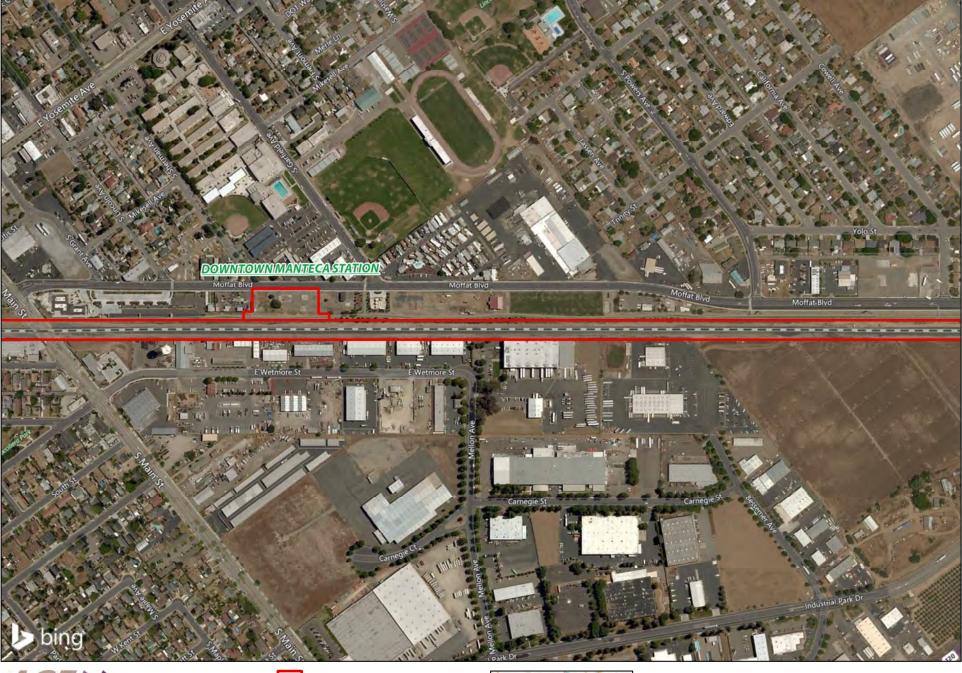








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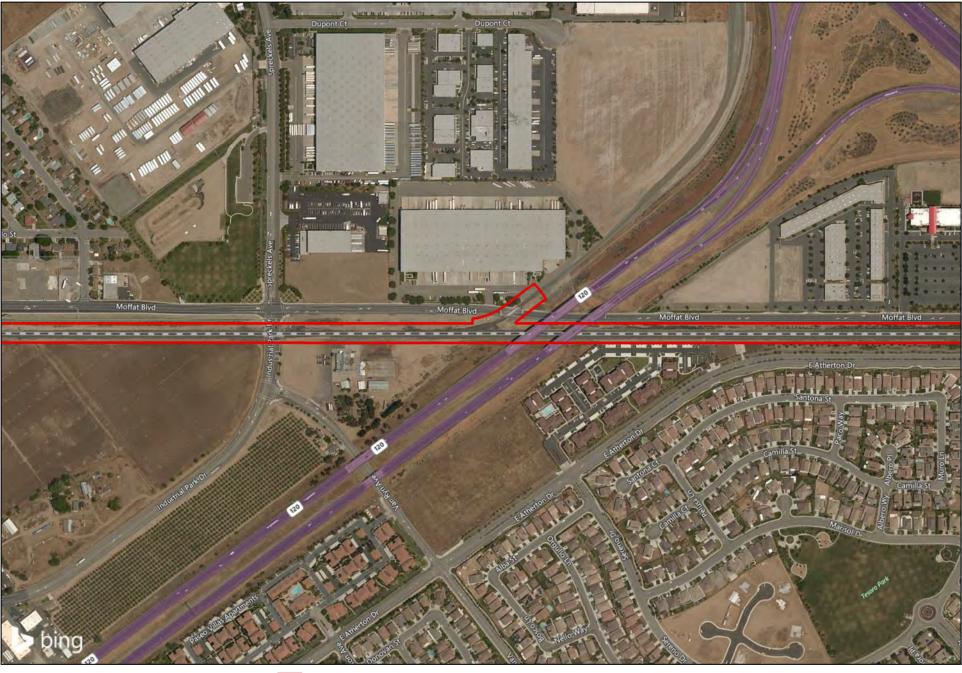








Environmental Footprint ACE Extension Lathrop to Ceres/Merced

















Environmental Footprint ACE Extension Lathrop to Ceres/Merced









Environmental Footprint ACE Extension Lathrop to Ceres/Merced









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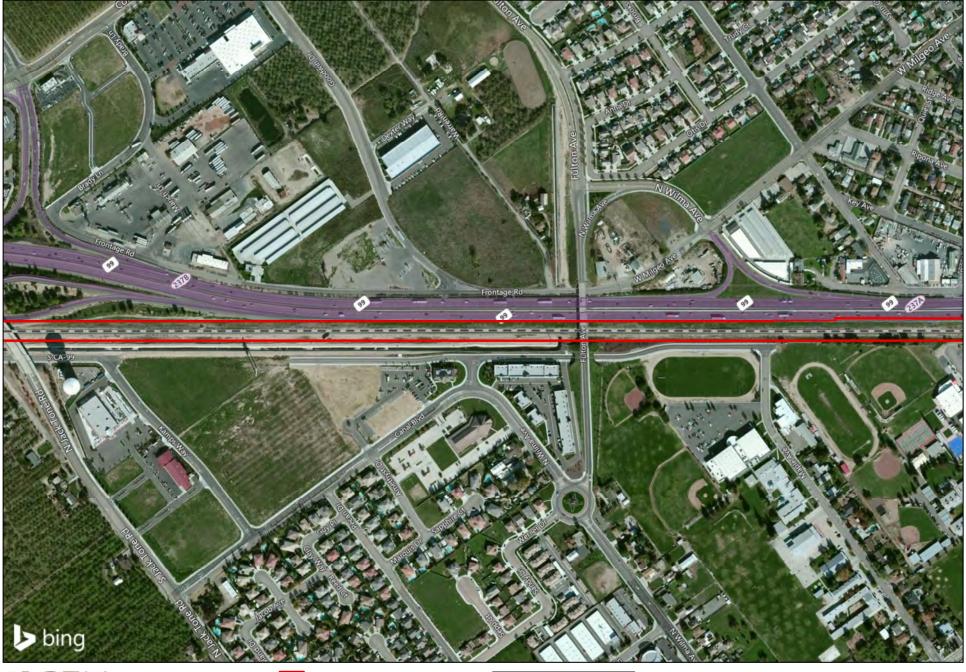








Environmental Footprint ACE Extension Lathrop to Ceres/Merced









Environmental Footprint ACE Extension Lathrop to Ceres/Merced









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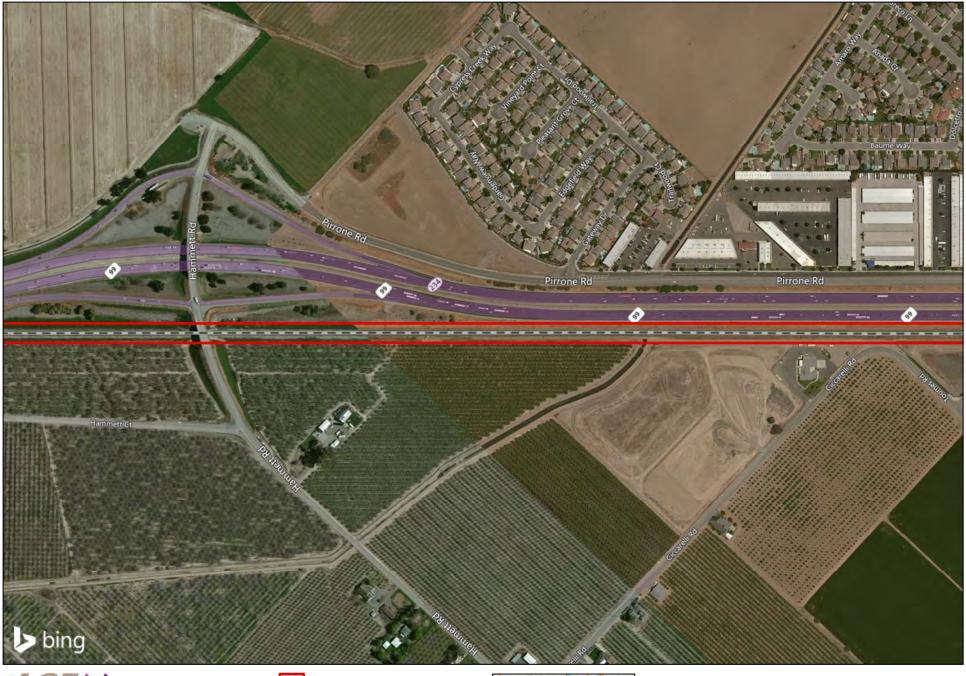








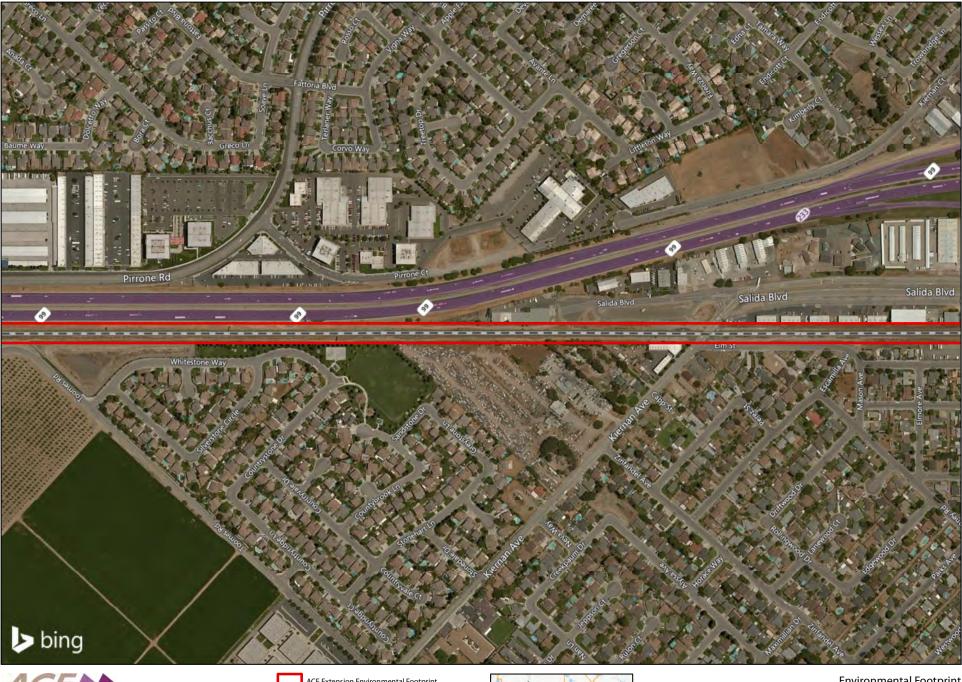
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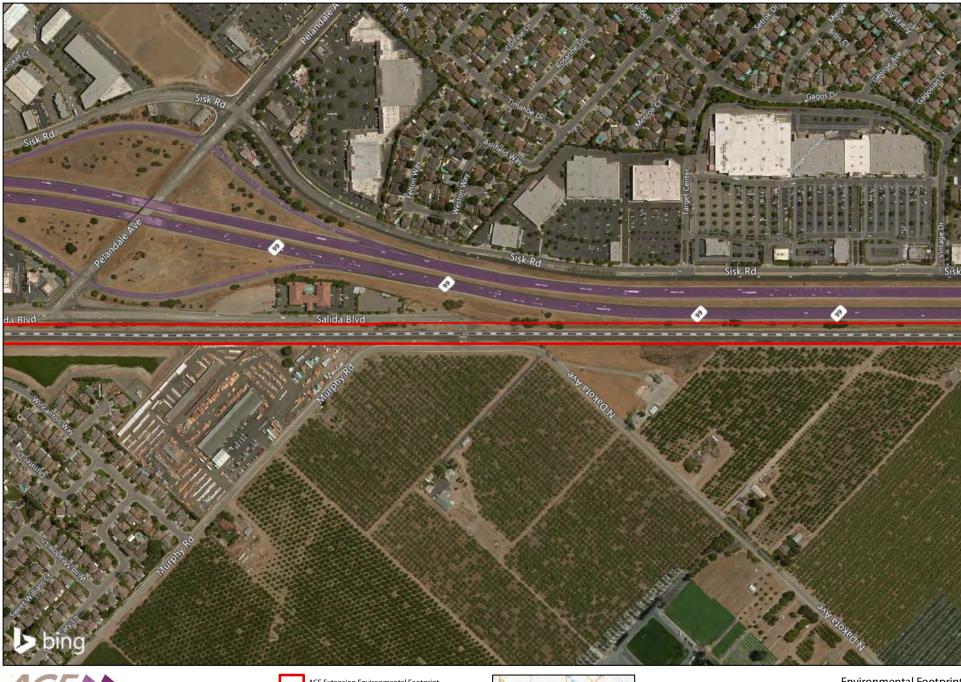








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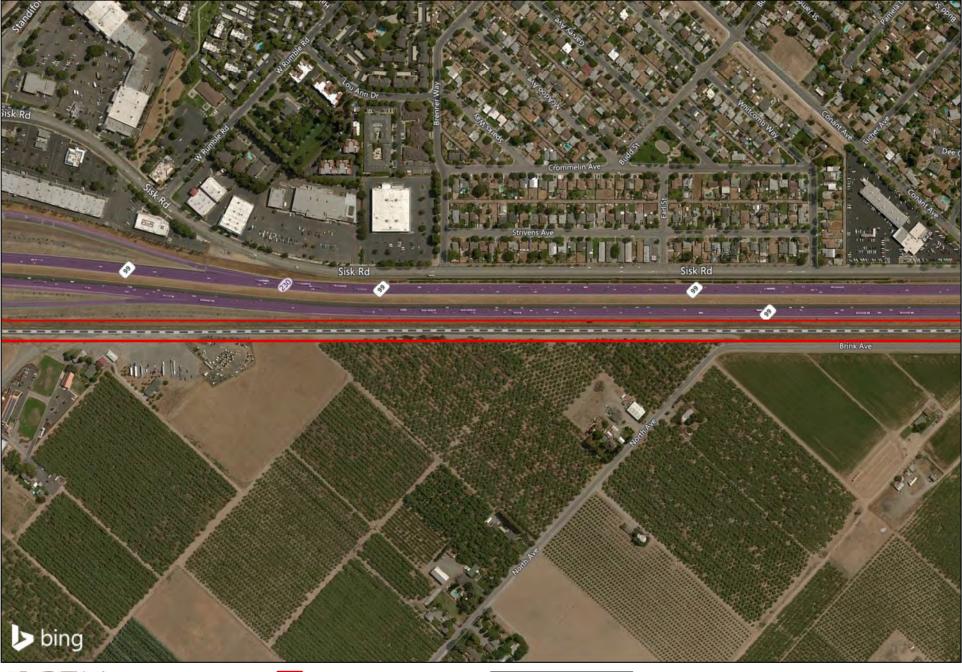








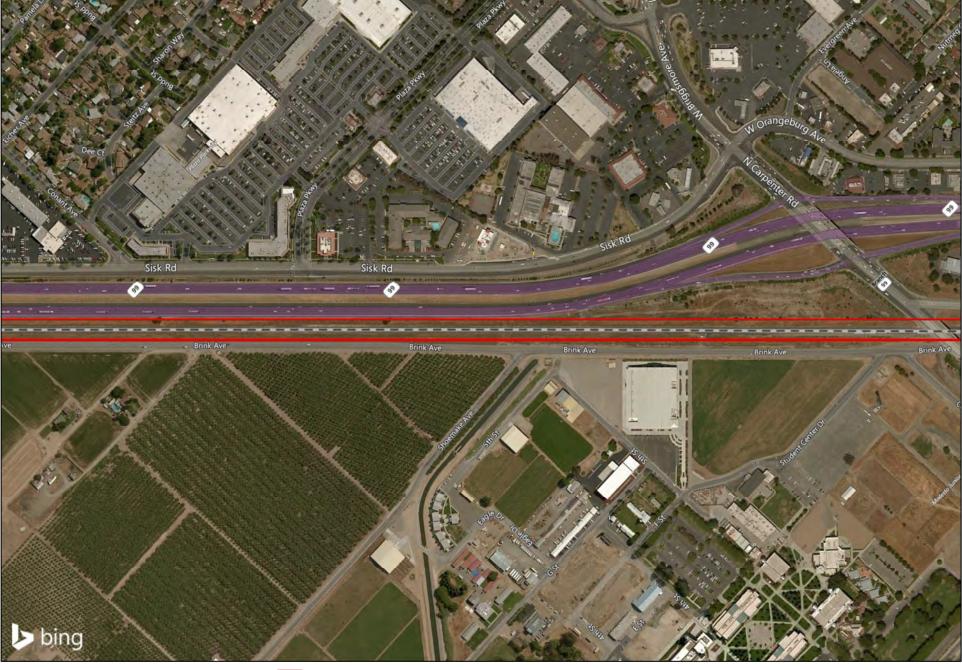
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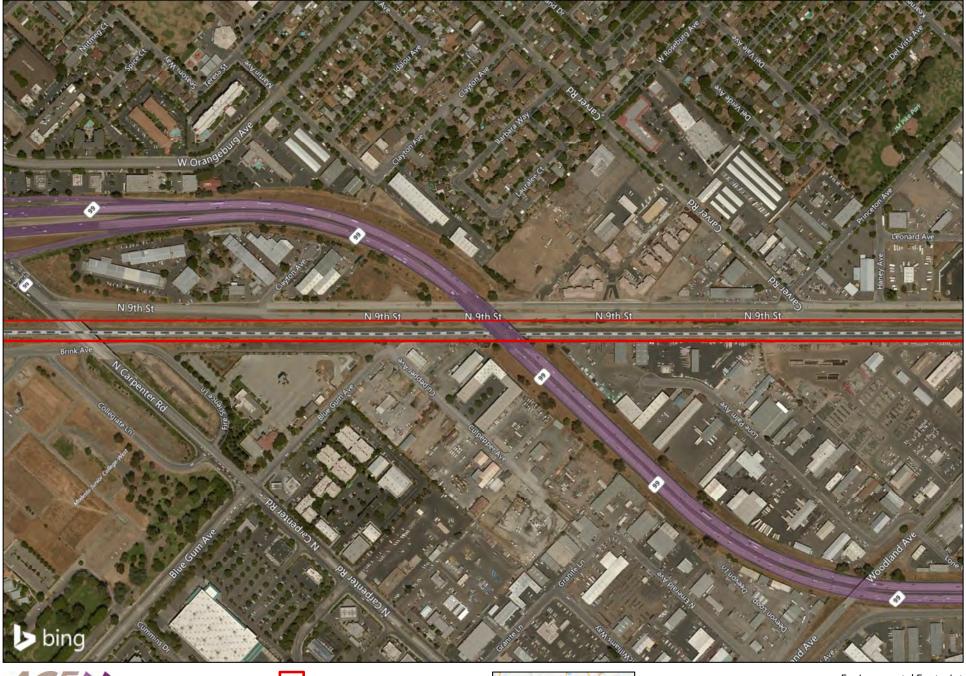








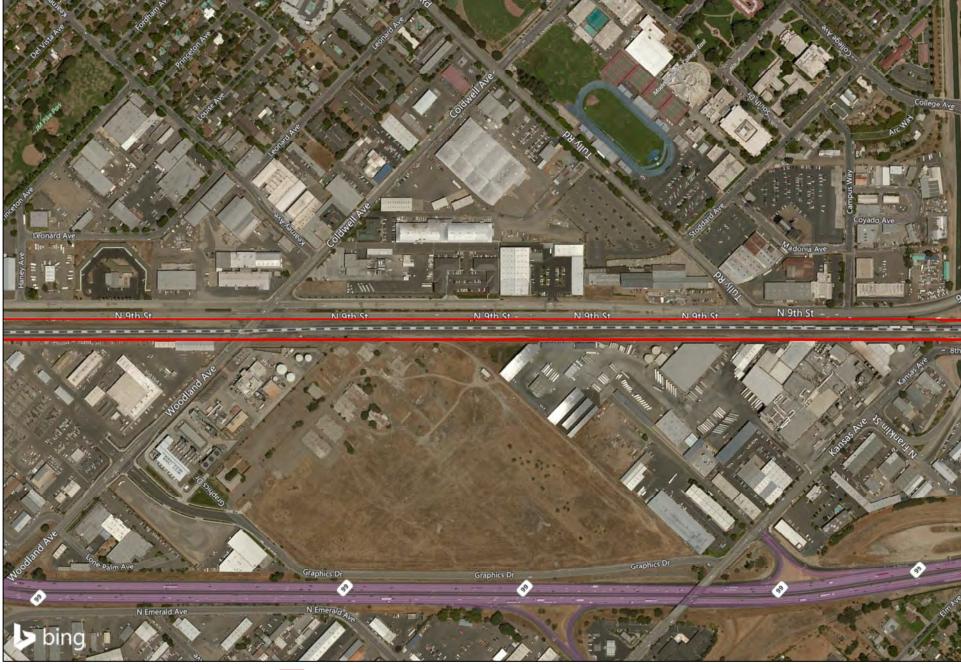








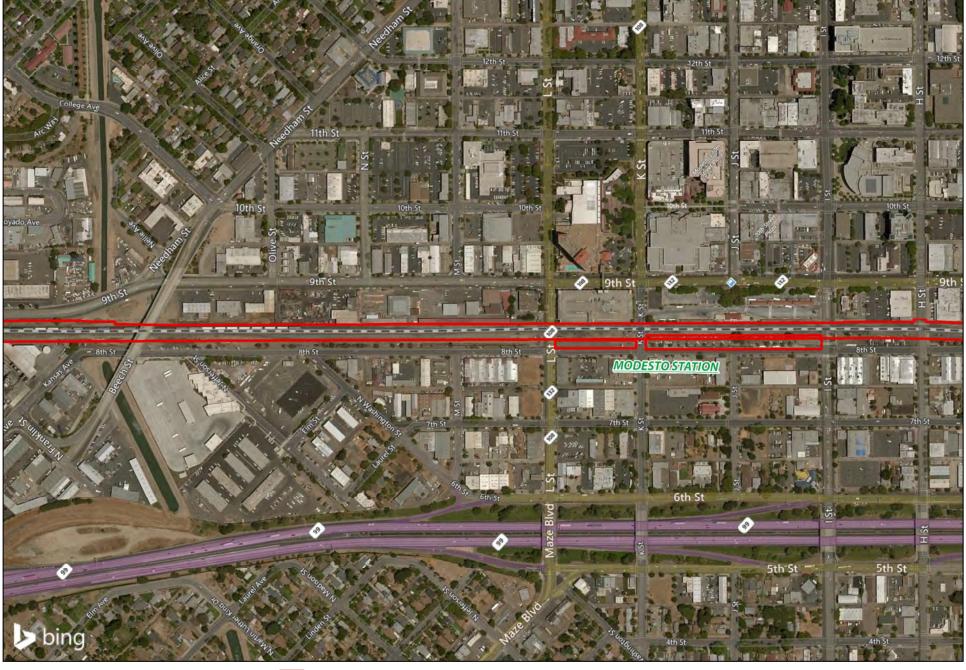


























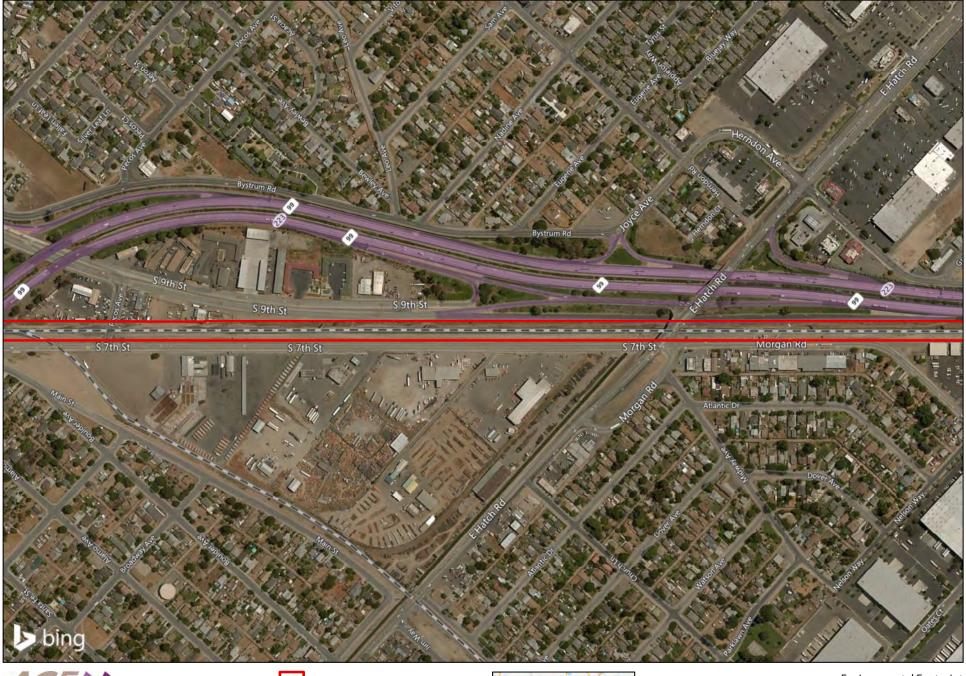








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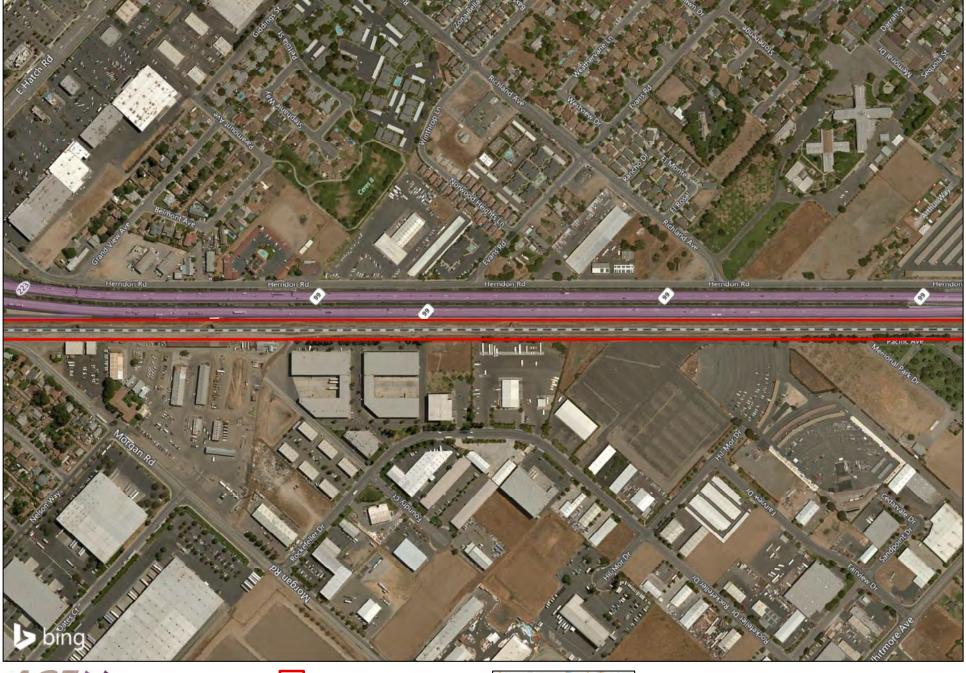








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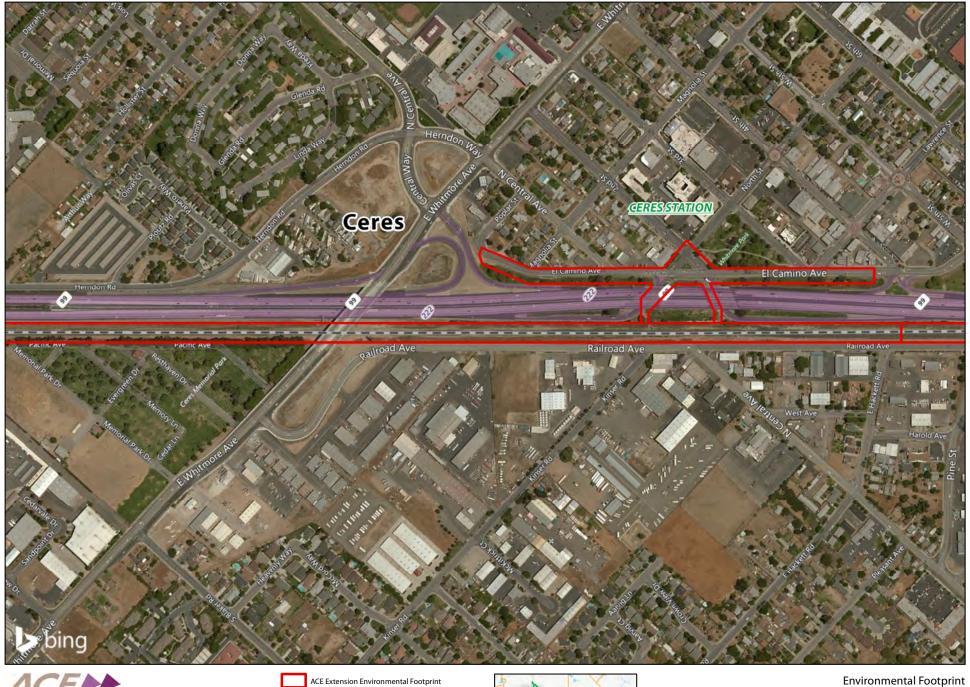








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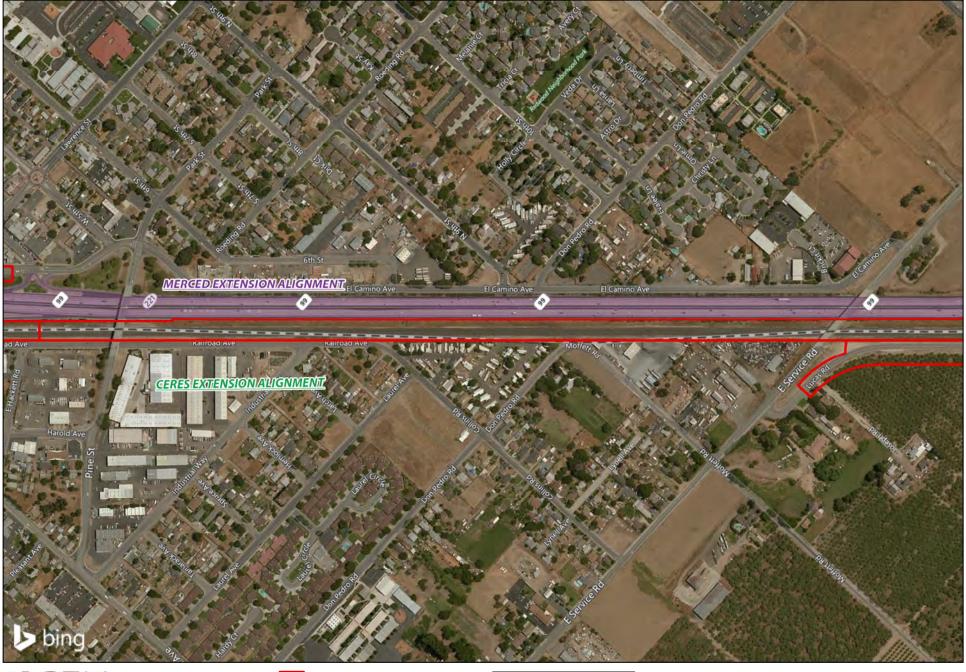








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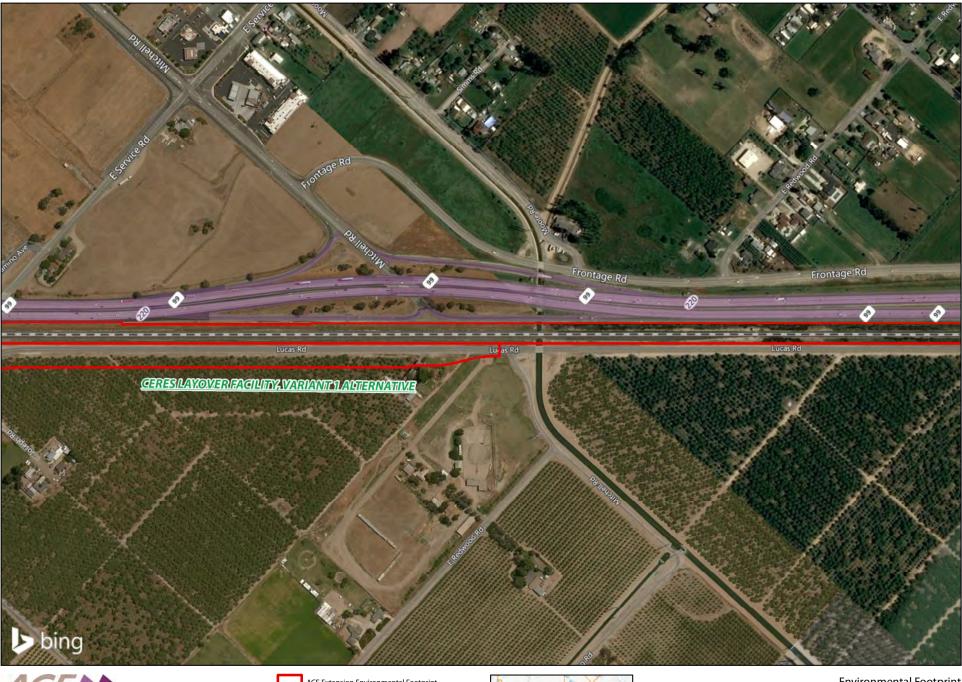








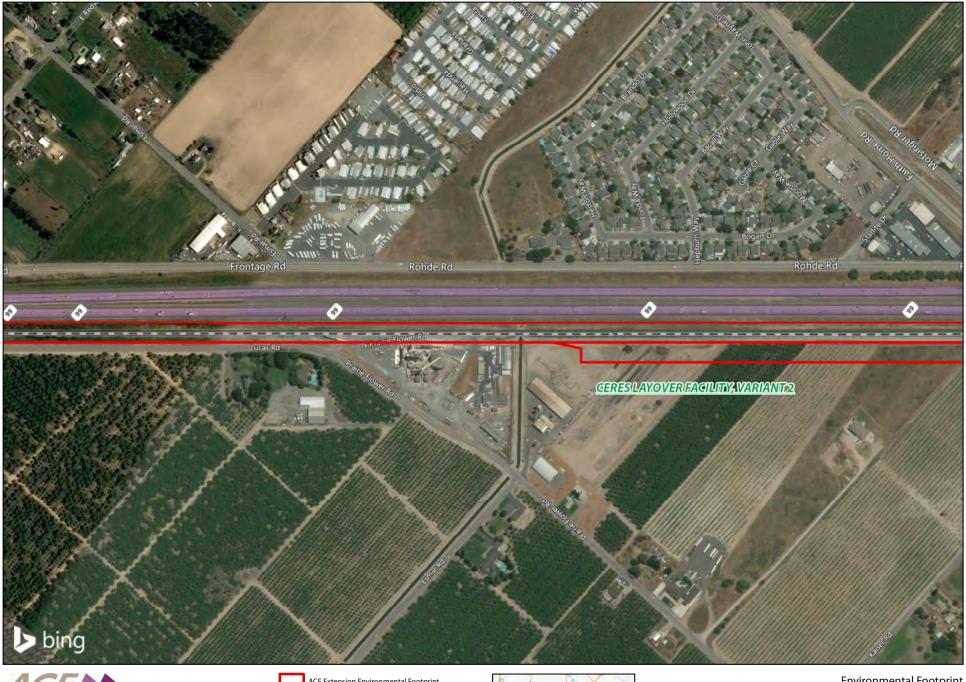
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Environmental Footprint ACE Extension Lathrop to Ceres/Merced







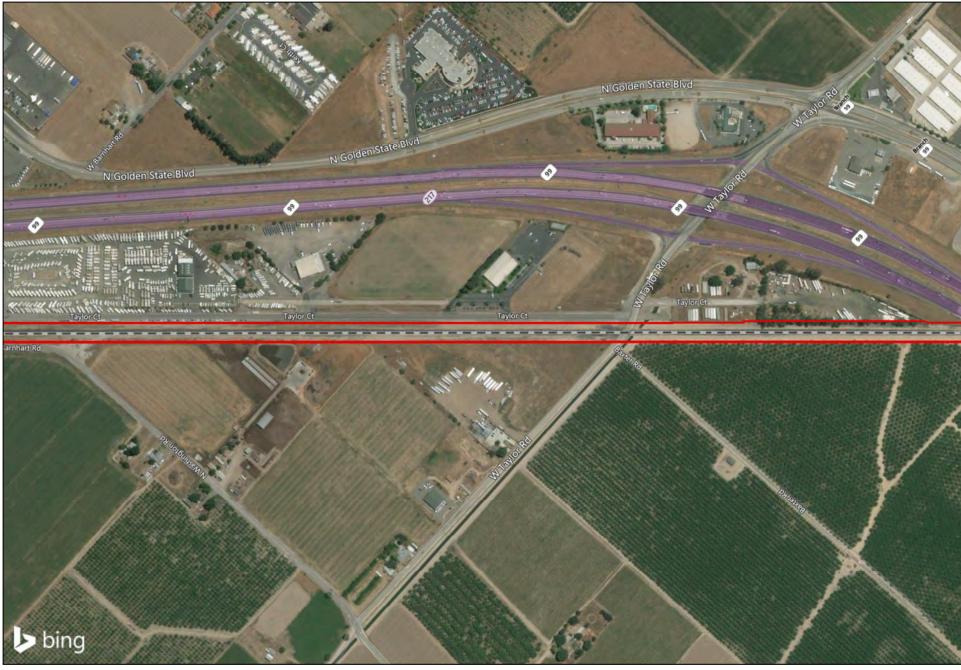








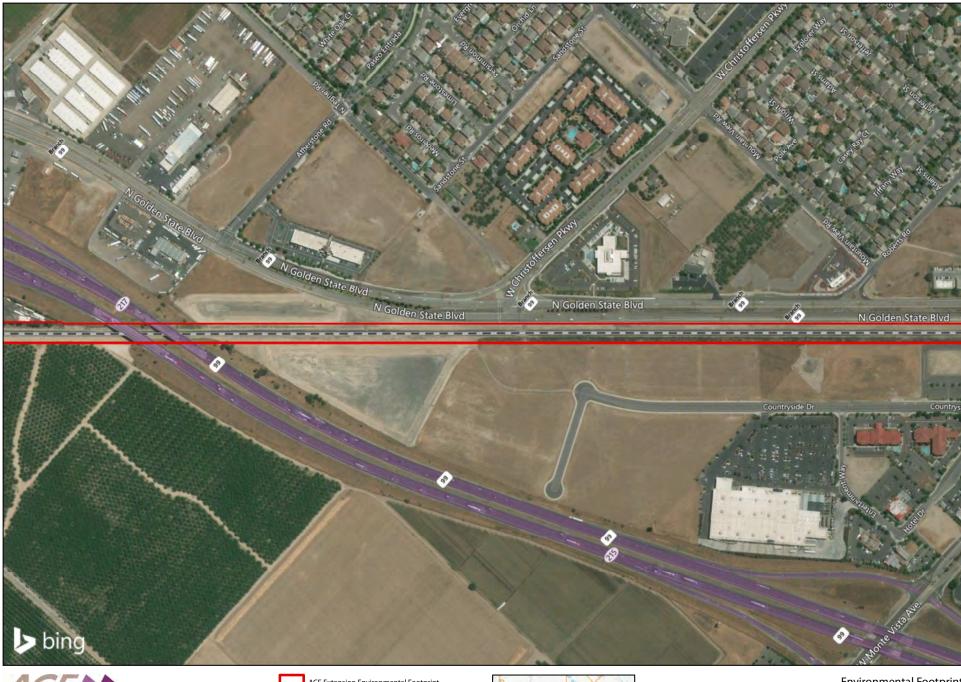








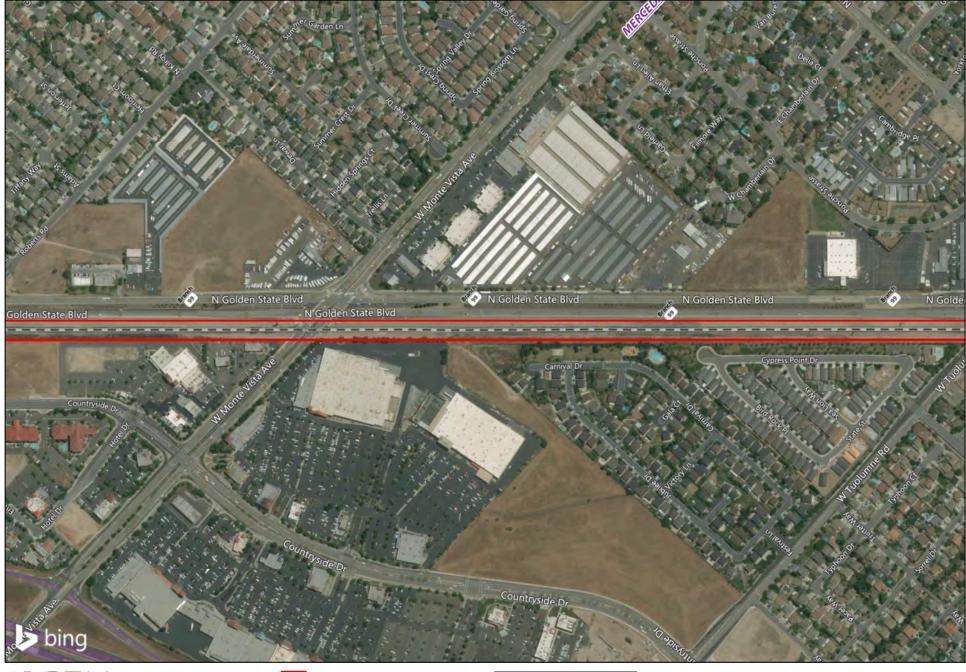








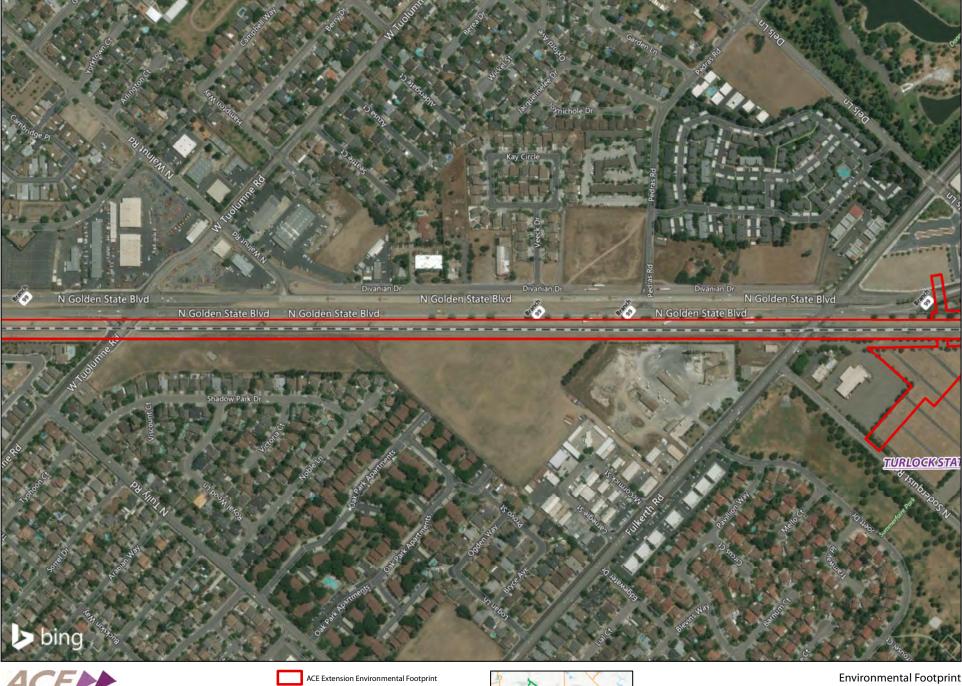






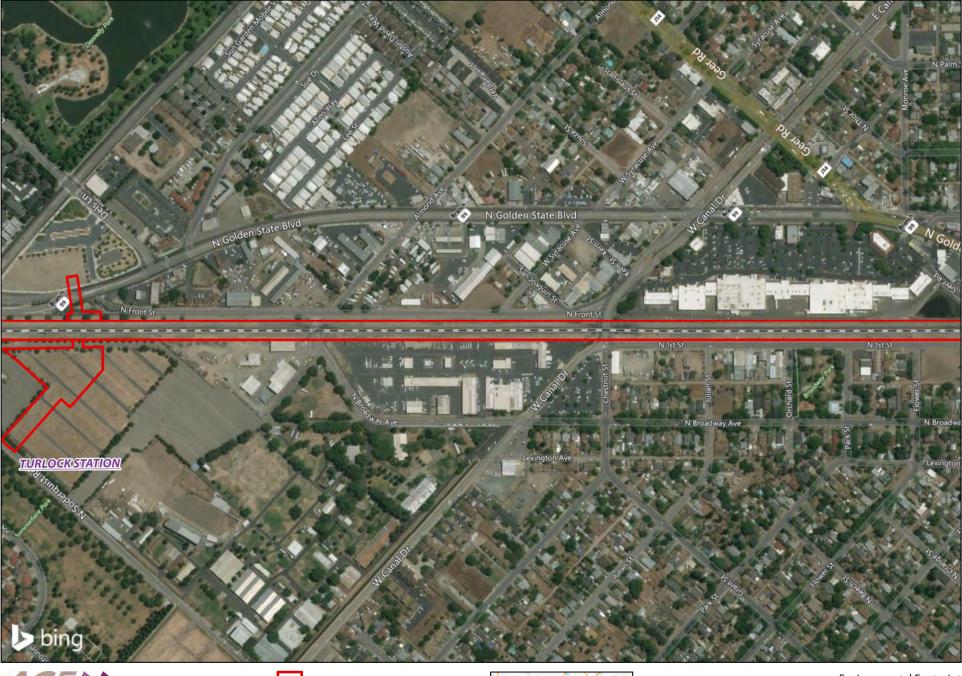


















Environmental Footprint ACE Extension Lathrop to Ceres/Merced













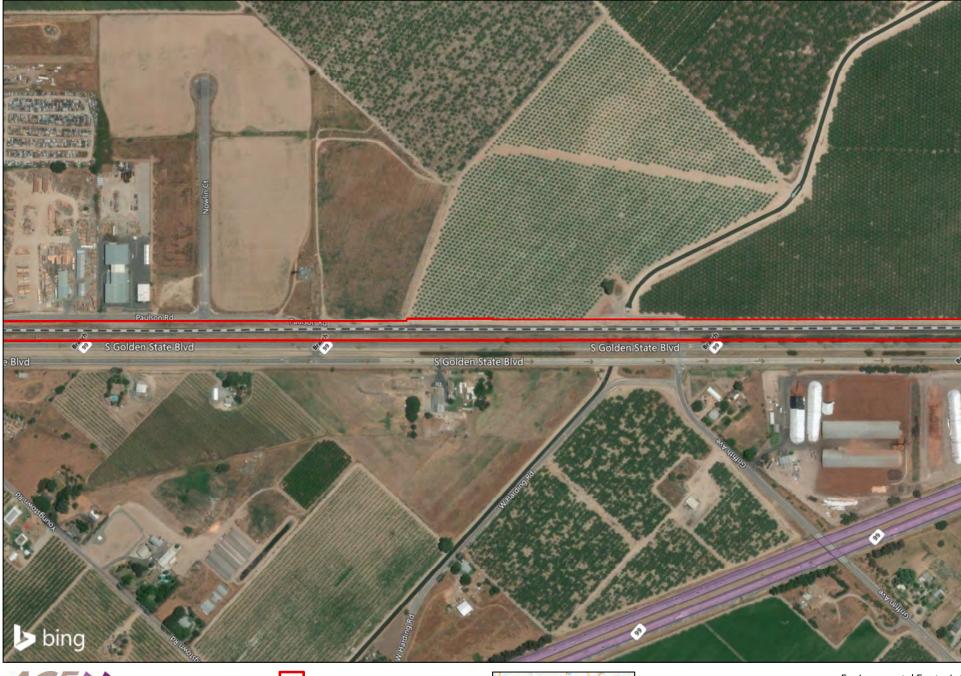


















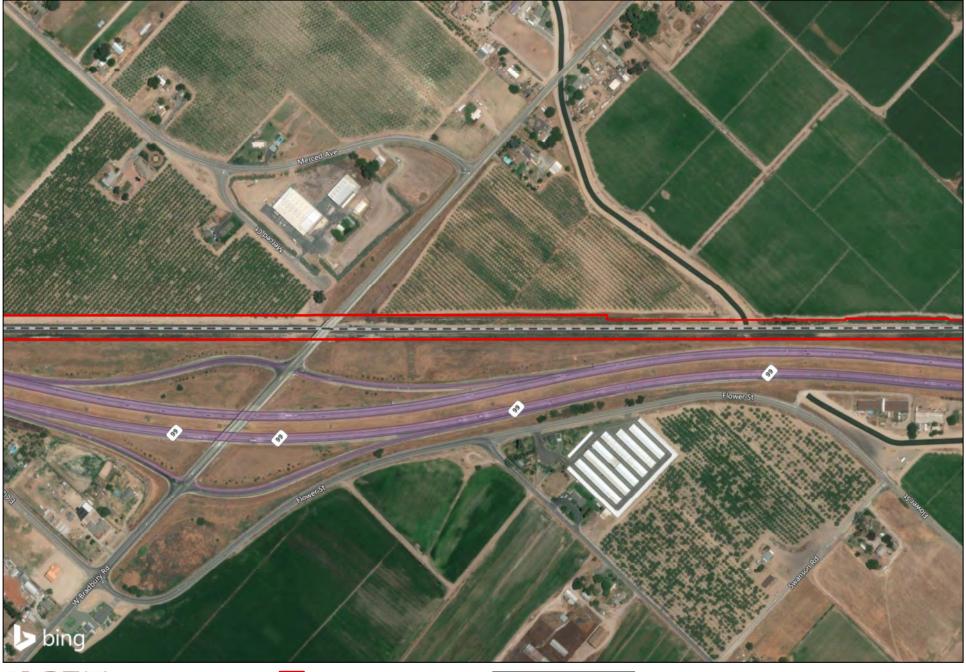








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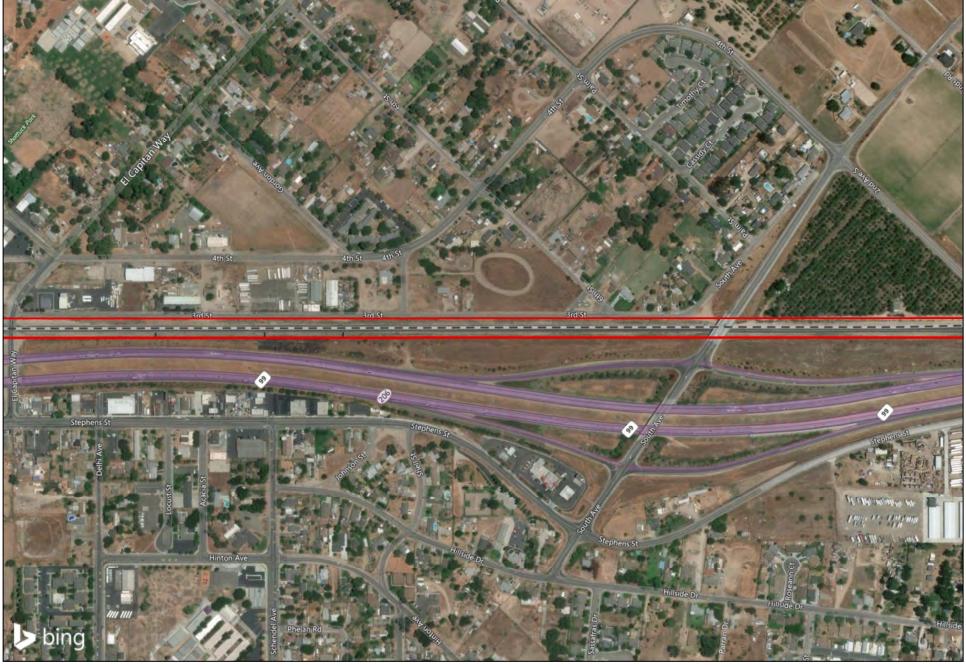


















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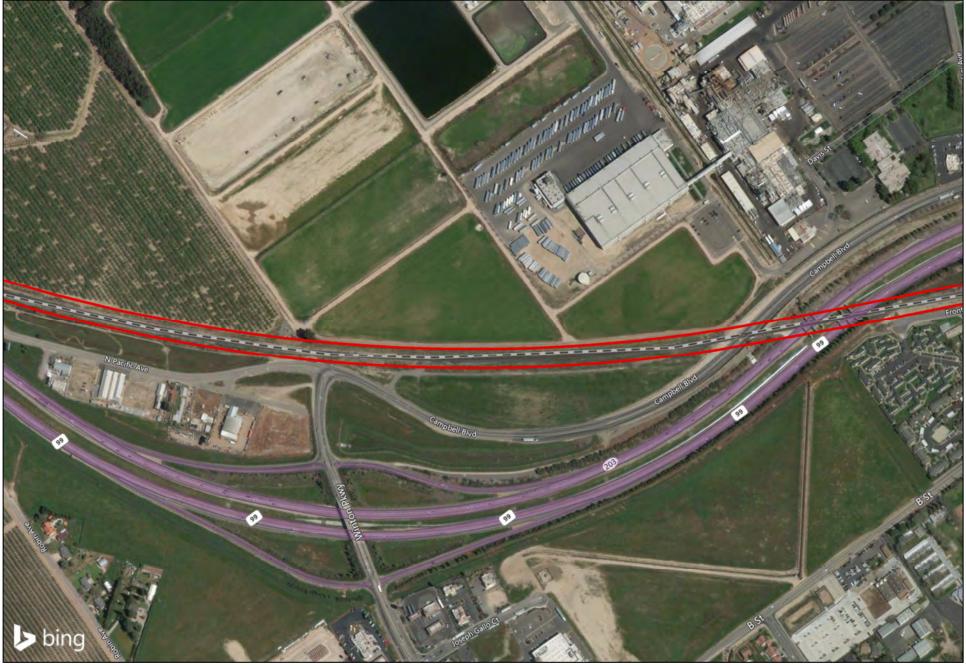


























Environmental Footprint ACE Extension Lathrop to Ceres/Merced

























Environmental Footprint ACE Extension Lathrop to Ceres/Merced









Environmental Footprint ACE Extension Lathrop to Ceres/Merced









Environmental Footprint ACE Extension Lathrop to Ceres/Merced







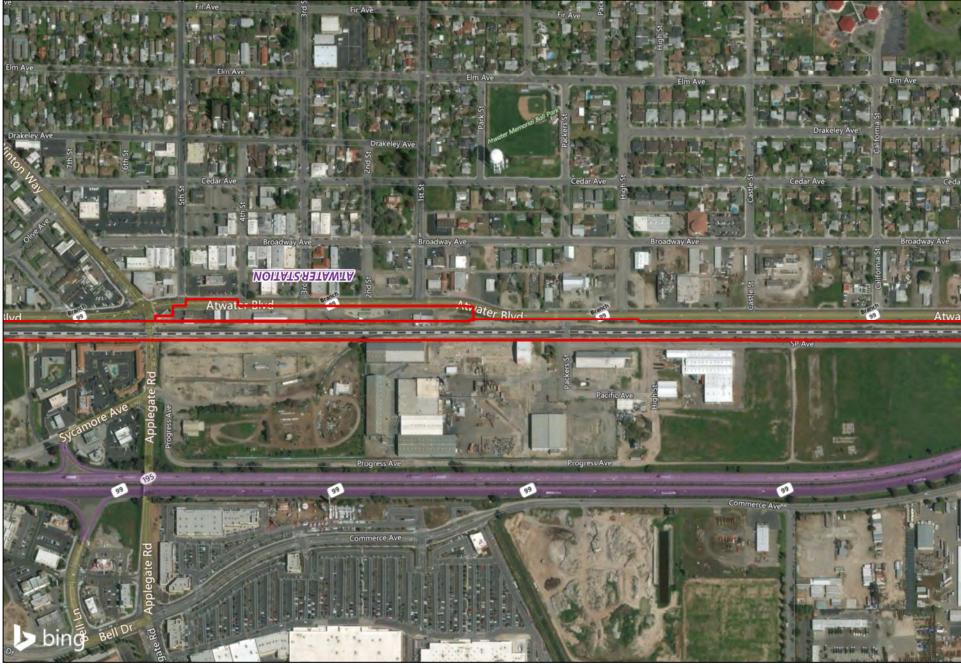


















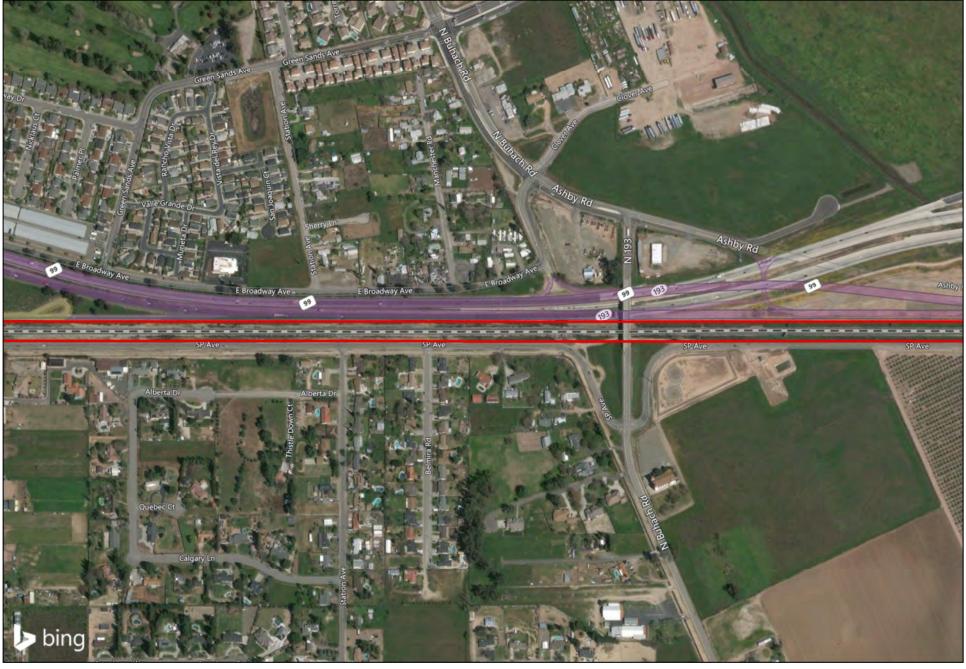








Environmental Footprint ACE Extension Lathrop to Ceres/Merced

























Environmental Footprint ACE Extension Lathrop to Ceres/Merced









Environmental Footprint ACE Extension Lathrop to Ceres/Merced







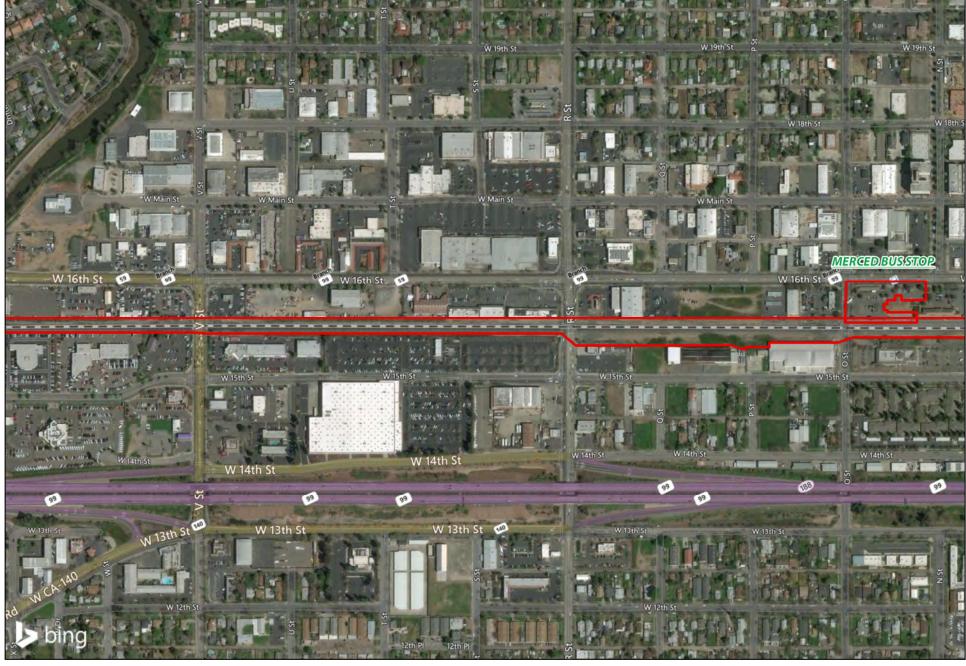








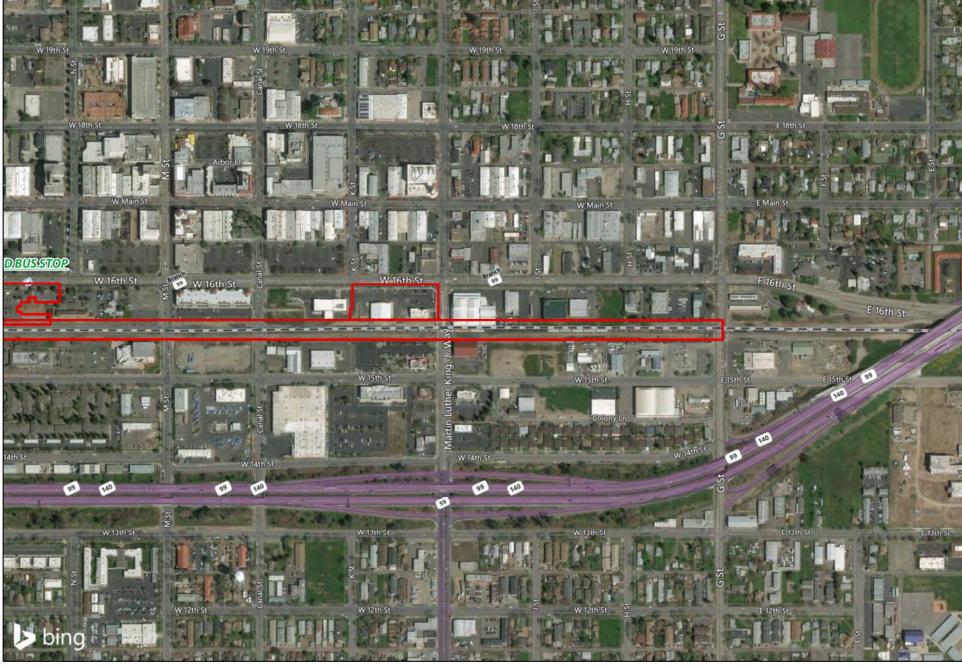


















Environmental Footprint ACE Extension Lathrop to Ceres/Merced





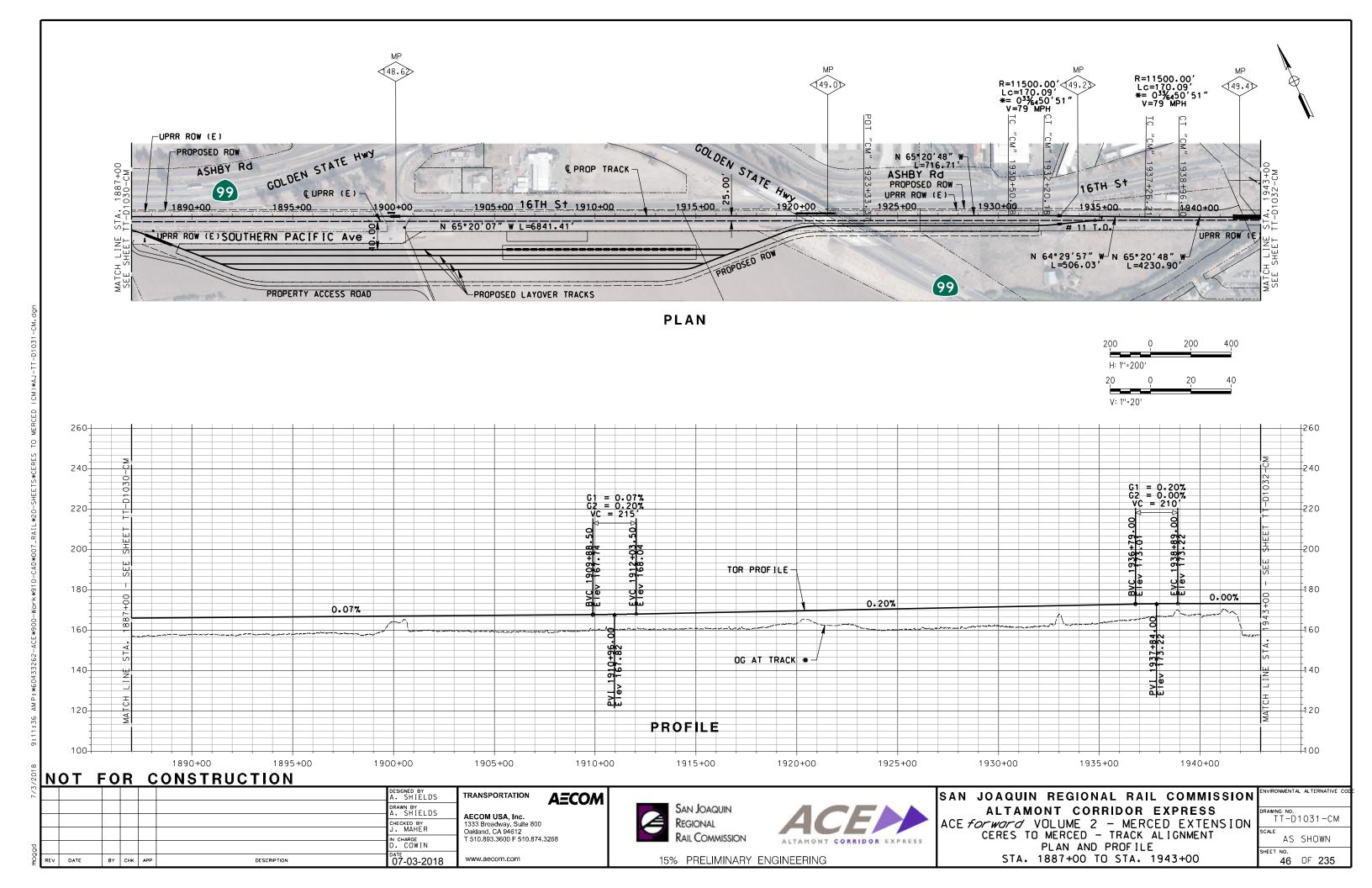


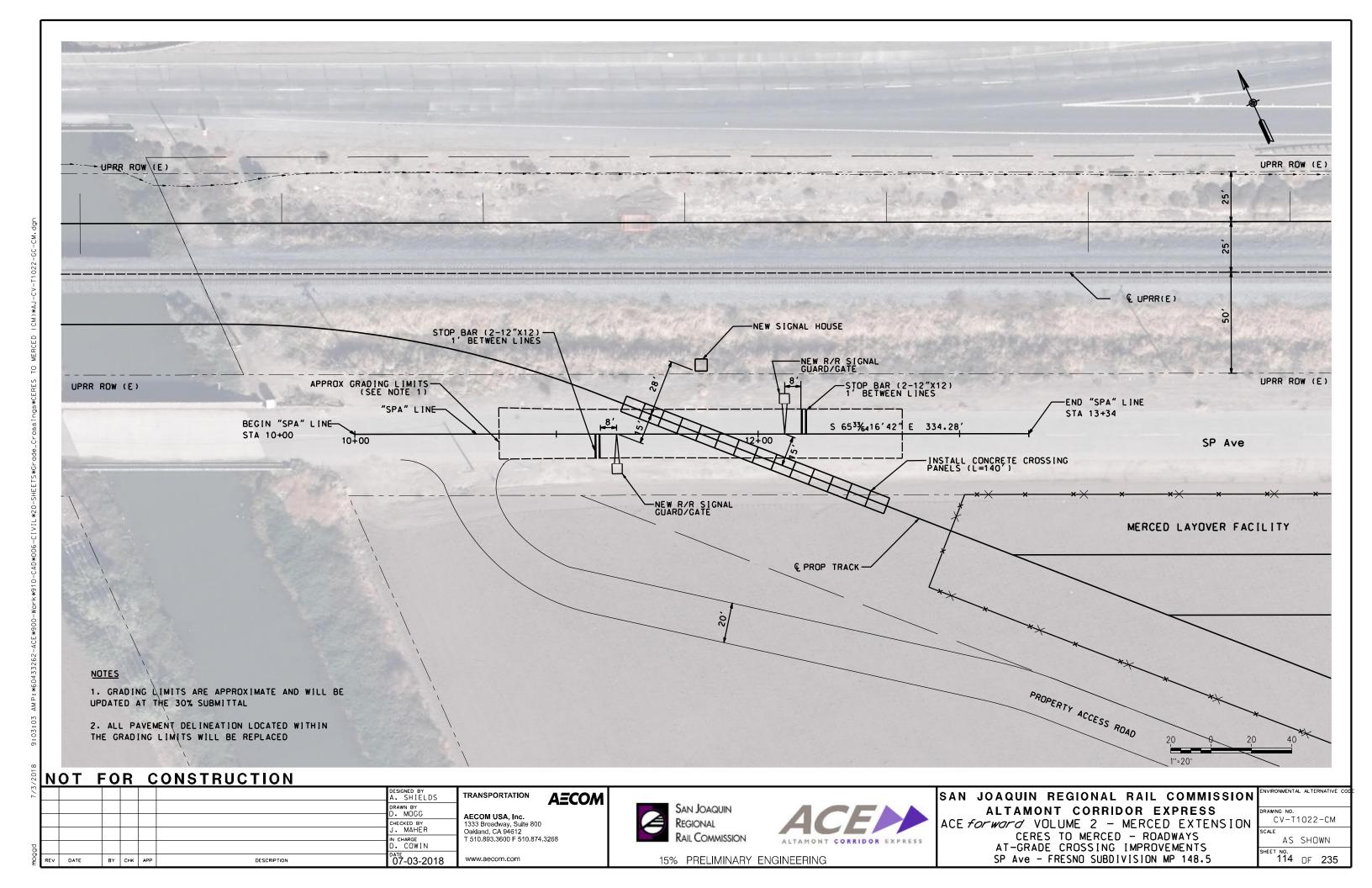


Environmental Footprint ACE Extension Lathrop to Ceres/Merced

Appendix B

Updated ACE Extension 15% Preliminary Engineering Plans





Appendix C

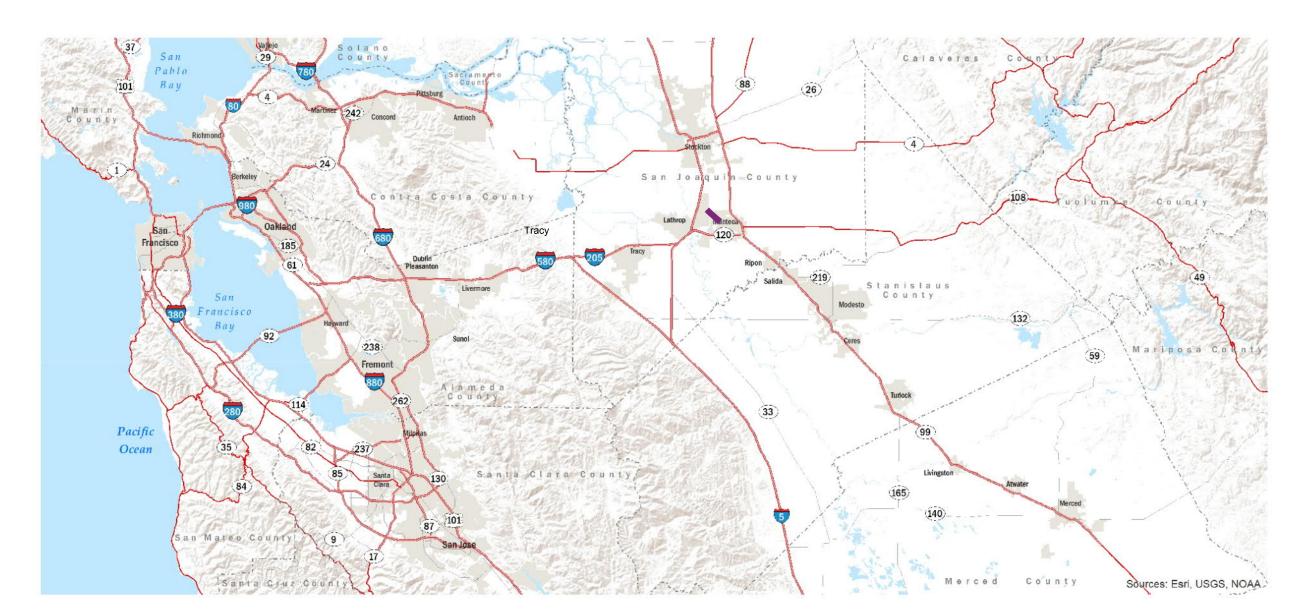
Lathrop Wye Double Track 15% Preliminary Engineering Plans

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ALTAMONT CORRIDOR EXPRESS

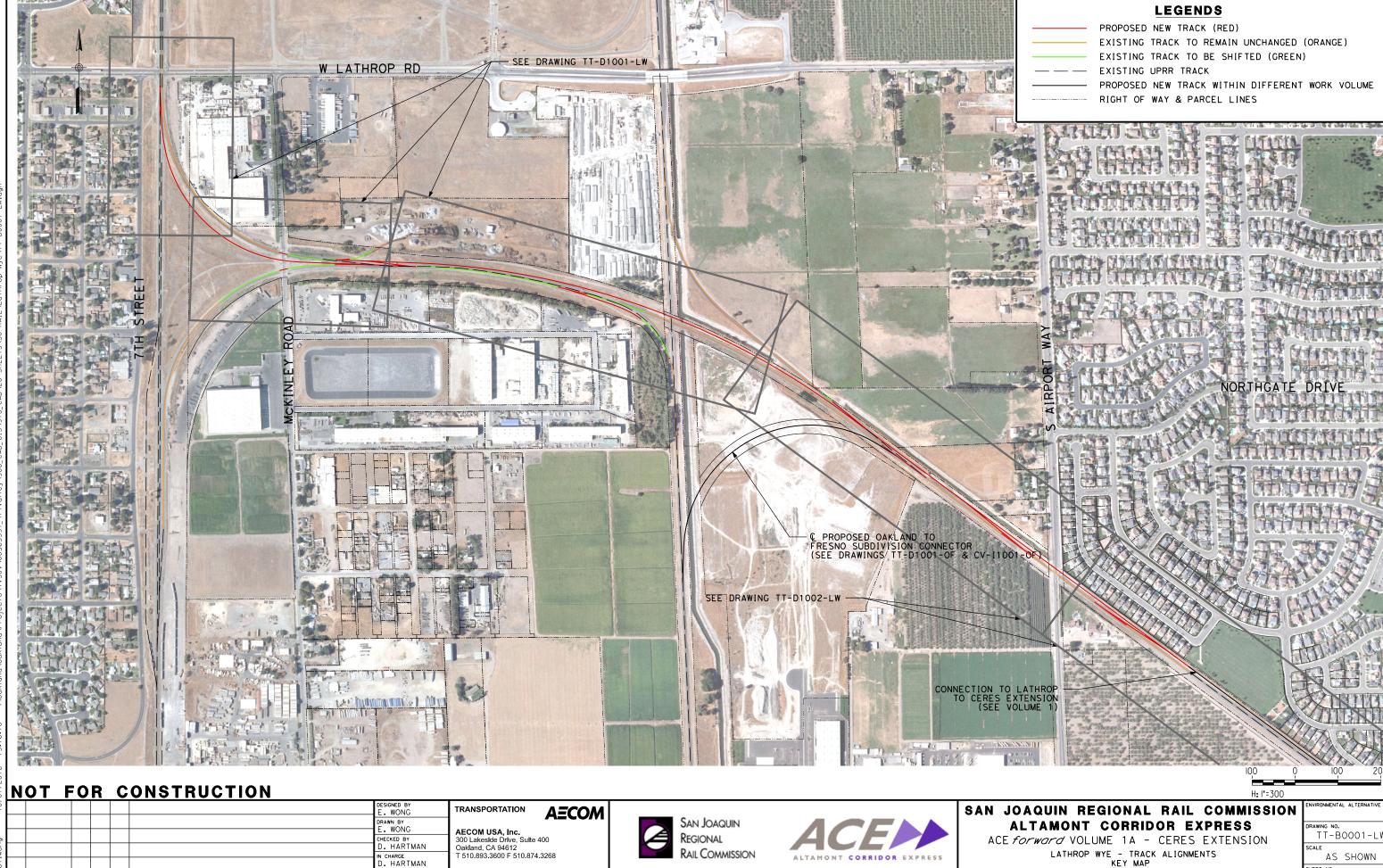
ACE forward

15% PRELIMINARY ENGINEERING VOLUME 1A - CERES EXTENSION









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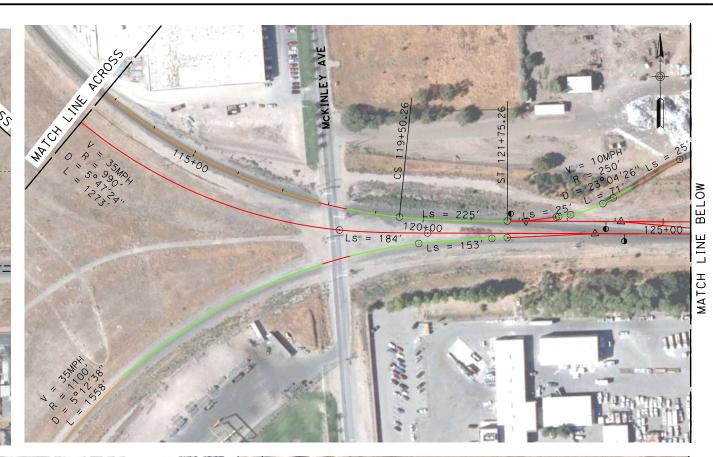




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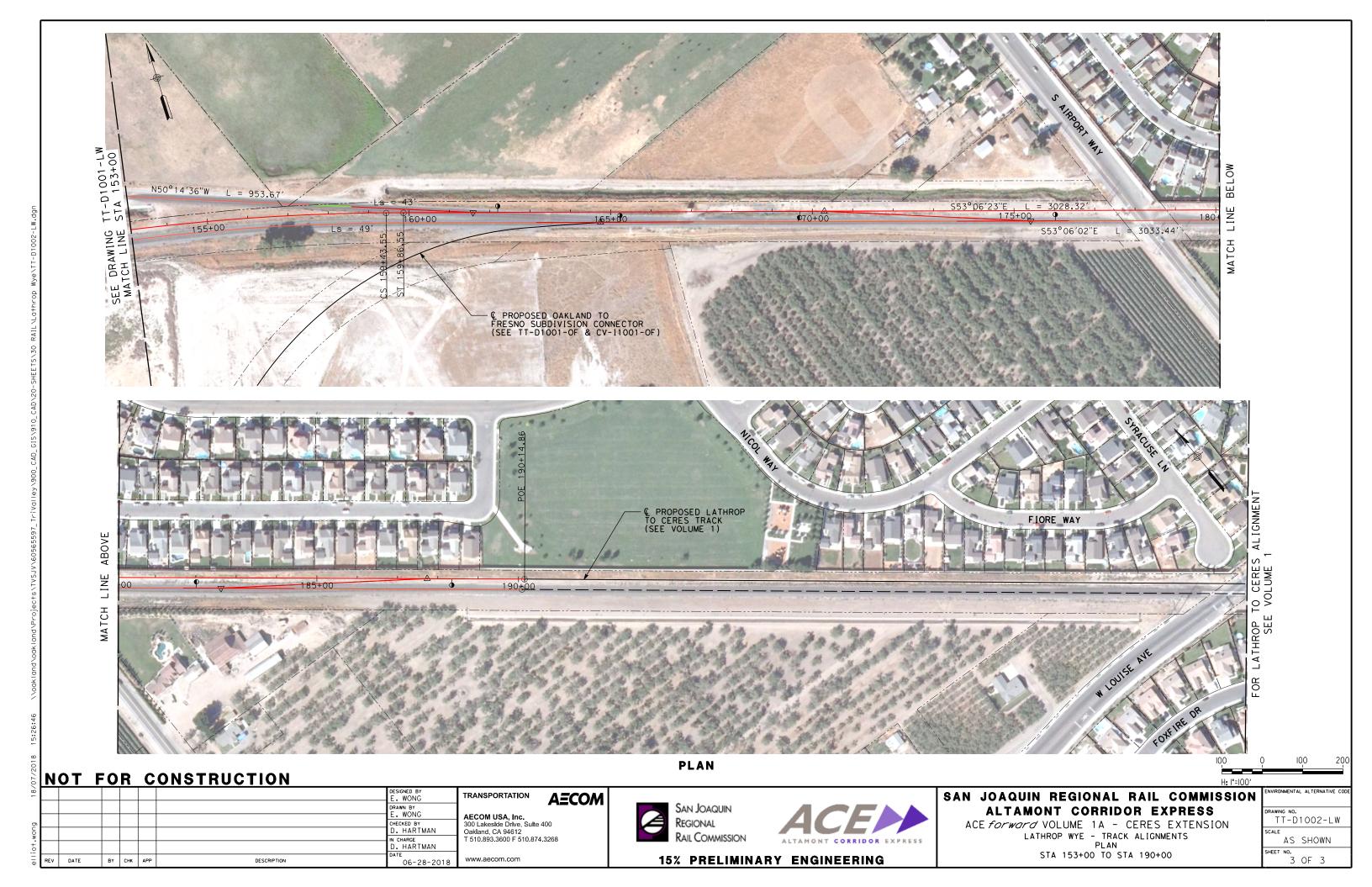
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Appendix D

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.

Acknowle	edgements
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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Appendix A: Cost Summary Appendix B: Station Sections Appendix C: Signal Type Photos

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)

light-emitting diode LED

LF Lineal Feet LS Lump Sum mW megawatt(s)

Saylor

SF Square Feet

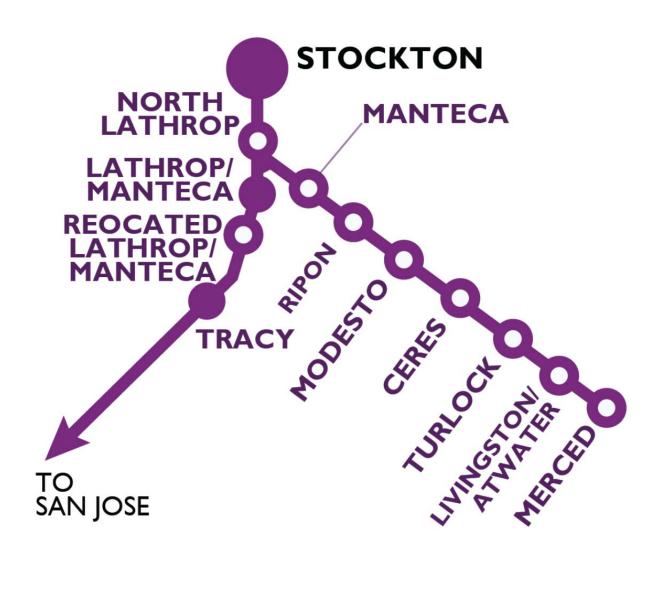
San Joaquin Regional Rail Commission SJRRC

Track Feet TF V volt(s)

WBS Work Breakdown Structure

WC **Work Category**

General Map of the Project



Section 1: Introduction to the Estimate

General Introduction 1.1

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 Lathrop/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 – Lathrop 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 Lathrop/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 Lathrop 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.

Estimate of Quantities 3.4

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	То	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%
Ashpalt 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	м	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 INDI	×							
	\$/Minimum							
21 Basic In-Place Materials	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	4.5396
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	1.4796
Glass, Roat, 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	2.7096
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	3.7796
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	3.0396
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	1.4596
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	2.2296
Wire #12, THHN, Pulled in conduit	10,000 & up	LF	0.94	0.92	88.0	0.89	0.91	2.25%
Wood Stud walls, 2x4	10,000 & up	BF	2.85	2.82	2.98	3.15	3.34	6.0096
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 multifragmented 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

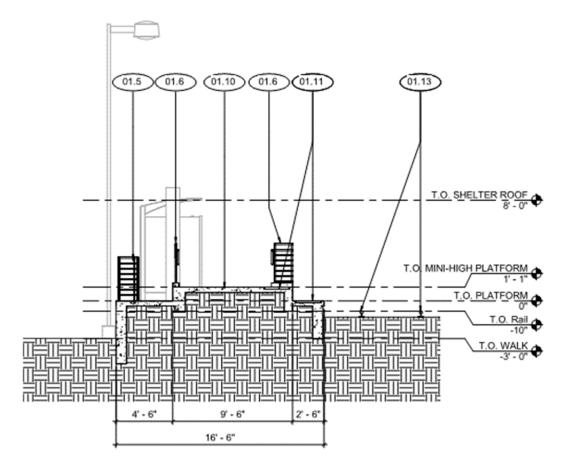
ACE EXTENSION LATHROP TO CERES / MERCED COST SUMMARY

SEGMENT NUMBER	SEGMENT TITLE	PROJECT CONSTRUCTION COST	PROJECT ADD- ON PERCENTAGE	PROJECT TOTAL COST
Lathrop Area				
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
Ceres Extens	ion			
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
Merced Exter	nsion			
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					
Lathrop to Ceres						
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

19-1a	RELOCATED LATHROP / MANTECA STATION PROJECT						ı
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 DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
5000) EARTHWORK COMMON	BCY	\$25	\$125,000	30.00%	\$162,500	
500	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
5000) EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$50,000 \$0	30.00% 30.00%	\$65,000 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL)	CY SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS	SF SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY SOUND WALL	LF	\$55 \$90	\$0 \$0	25.00% 50.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY LF	\$1,000	\$0 \$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT)	LF	\$12 \$12	\$0 \$0	40.00% 40.00%	\$0 \$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 ASPHALT CONCRETE ROADWAY	SF TONS	\$18 \$65	\$0 \$0	25.00% 25.00%	\$0 \$0	
	CONCRETE PAVEMENT	CY	\$210	\$0 \$0	20.00%	\$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY STREET RESTORATIONS	LF SF	\$4 \$15	\$0 \$0	25.00% 45.00%	\$0 \$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0 \$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING TRAFFIC CONTROL	EACH DAYS	\$4,500 \$1,200	\$0 \$0	20.00% 50.00%	\$0 \$0	
	MINOR CONCRETE	CY	\$400	\$0 \$0	30.00%	\$0 \$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER STRIPPING	LF LF	\$50 \$1	\$0 \$0	30.00% 20.00%	\$0 \$0	
1200) PERMANENT FENCING	LF	\$35	\$42,000	20.00%	\$50,400	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
	I SILT FENCE and ORANGE FENCE S SWPP MANAGEMENT, OPERATION & COMPLIANCE	LF MO	\$15 \$2,000	\$349,410 \$12,000	30.00% 30.00%	\$454,233 \$15,600	
,	LANDSCAPING PERMANENT	SY	\$15	\$12,000	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$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 TF	\$100	\$0 \$0	10.00%	\$0	
2397	UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$300 \$500	\$0 \$1,198,500	20.00% 25.00%	\$0 \$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) TRACK PANELS	TF LF	\$750 \$75	\$0 \$0	20.00% 30.00%	\$0 \$0	
	CROSSOVER No.15	EACH	\$800,000	\$0 \$0	20.00%	\$0 \$0	
	CROSSOVER No.20	EACH	\$800,000	\$0	20.00%	\$0	
	TURNOUT (#7) TURNOUT (#8)	EACH EACH	\$200,000 \$210,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#9)	EACH	\$220,000	\$0 \$0	10.00%	\$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
,	TURNOUT (#14) 2 TURNOUT (#15)	EACH EACH	\$325,000 \$350,000	\$0 \$700,000	10.00% 10.00%	\$0 \$770,000	
	TURNOUT (#15)	EACH	\$975,000	\$975,000	10.00%	\$1,072,500	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING DERAIL	EACH EACH	\$500,000 \$100,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	BUMPING POST	EACH	\$25,000	\$0 \$0	20.00%	\$0 \$0	
	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 2 DOG HOUSE (Signal House)	EACH EACH	\$200,000 \$200,000	\$0 \$400,000	20.00% 20.00%	\$0 \$480,000	
	P NEW ELECTRIC SERVICE	EACH	\$20,000	\$400,000	20.00%	\$48,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
4	NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL	EACH EACH	\$300,000 \$325,000	\$0 \$975,000	20.00% 30.00%	\$0 \$1,267,500	
`	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$975,000	30.00%	\$1,207,500	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH MILE	\$400,000 \$200,000	\$0 \$0	20.00%	\$0 \$0	
		IVIILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						\$0

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT PEDESTRIAN UNDERPASS STRUCTURE	SF SF SF SF SF LF LF EA	\$200 \$400 \$500 \$500 \$400 \$550 \$550 \$5,000 \$100 \$2,000,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$7,861,640
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 15000 STATION PLATFORM STRUCTURES NEW 600 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE 15000 STATION AMENITIES INSPECTION PIT 534 PARKING LOTS PARKING STRUCTURES 10000 BUS LANE AND UNLOADING 534 PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$71 \$90 \$3,000 \$20,000 \$40 \$200 \$450,000 \$300,000	\$0 \$3,000,000 \$45,000 \$0 \$50,000 \$1,065,000 \$0 \$1,602,000 \$0 \$4400,000 \$106,800 \$0	20.00% 50.00% 15.00% 40.00% 20.00% 30.00% 40.00% 25.00% 30.00% 30.00% 25.00% 30.00% 25.00% 25.00%	\$0 \$0 \$3,450,000 \$63,000 \$0 \$62,500 \$1,384,500 \$0 \$2,242,800 \$520,000 \$138,840 \$0 \$0	
RIGHT OF WAY						\$1,680,000
300000 ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16	\$1,200,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$1,680,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						¢40,000,040
TOTAL CONSTRUCTION COST						\$18,889,818

19-1b	RELOCATED LATHROP / MANTECA STATION PROJECT WITH TAIL	L TRACK				
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TOTAL PRIC	SUB TOTAL WORK ELEMENT
	CIVIL WORKS					\$4,625,183
6000	5 CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION DEARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) DEMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM	AC AC SF BCY BCY FCY FCY LF	\$2,500 \$5,000 \$8 \$25 \$50 \$10 \$25 \$400	\$8,750 \$0 \$0 \$150,000 \$0 \$60,000	40.00% \$12,25/ 30.00% \$ 30.00% \$195,00/ 30.00% \$195,00/ 30.00% \$78,00/ 30.00% \$30,00% \$	0 0 0 0 0 0
	RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (0 TO 10 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SHAPP LASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT GUARD RAIL ROADWAY ASPHALT DIKES ROADWAY STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL	SF CY SF SF SF CY LF CY LF CY SF SF TONS CY LF	\$100 \$40 \$35 \$60 \$70 \$55 \$90 \$1,000 \$1,000 \$12 \$12 \$12 \$12 \$12 \$12 \$25 \$25 \$25 \$210 \$30 \$4 \$15 \$300,000 \$100,000 \$4,500 \$1,200	\$0 \$0 \$0 \$294,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% \$ 50.00% \$ 50.00% \$ 25.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 40.00% \$ 25.00% \$ 25.00% \$ 25.00% \$ 25.00% \$ 25.00% \$ 25.00% \$ 25.00% \$ 30.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
23294	MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING D PERMANENT FENCING VEHICULAR FENCE GATES SILT FENCE AND CANGE FENCE SWPP MANAGEMENT, OPERATION & COMPLIANCE LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LF LF LF EACH LF MO SY LF LS EACH	\$400 \$30 \$50 \$1 \$35 \$2,000 \$15 \$2,000 \$15 \$30 \$100,000	\$0 \$0 \$0 \$0 \$0 \$42,000 \$349,410 \$12,000 \$0 \$0	30.00% \$ 30.00% \$ 30.00% \$ 30.00% \$ 20.00% \$ 20.00% \$ 20.00% \$ 30.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	TRACK WORK					\$4,121,945
3573	D REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPCRADE EXISTING TRACK B TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER No.15 CROSSOVER No.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#11) TURNOUT (#15) I TURNOUT (#15) I TURNOUT (#15 CURVE) TURNOUT (#24) DIAMOND CROSSING DERAIL I BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$75 \$800,000 \$200,000 \$210,000 \$220,000 \$250,000 \$325,000 \$350,000 \$975,000 \$450,000 \$500,000 \$100,000 \$25,000	\$13,600 \$0 \$0 \$0 \$1,786,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% \$16,32(10.00% \$ 10.00% \$ 20.00% \$2,233,12(30.00% \$2,00% \$ 20.00% \$30,00% \$ 20.00% \$10,00% \$10	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	SIGNAL WORK					\$1,795,500
2	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL 2 DOG HOUSE (Signal House) 2 NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK 3 NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$200,000 \$20,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$0 \$400,000 \$40,000 \$0 \$975,000 \$0 \$0	20.00% \$ \$ 20.00% \$ 4480,000 20.00% \$ 488,000 20.00% \$ 30.00% \$ 1,267,500 30.00% \$ 20.00% \$ 20.00% \$ 3	0 0 0 0 0 0 0 0 0 0 0
	BRIDGE STRUCTURES					\$0

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT PEDESTRIAN UNDERPASS STRUCTURE	SF SF SF SF SF LF LF EA	\$200 \$400 \$500 \$500 \$400 \$550 \$550 \$5,000 \$100 \$2,000,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$7,861,640
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 15000 STATION PLATFORM STRUCTURES NEW 600 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE 15000 STATION AMENITIES INSPECTION PIT 534 PARKING LOTS PARKING STRUCTURES 10000 BUS LANE AND UNLOADING 534 PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES SF SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$71 \$90 \$3,000 \$20,000 \$40 \$200 \$450,000 \$300,000	\$0 \$3,000,000 \$45,000 \$0 \$50,000 \$1,065,000 \$0 \$1,602,000 \$0 \$400,000 \$106,800 \$0	20.00% 50.00% 15.00% 40.00% 20.00% 25.00% 30.00% 40.00% 25.00% 30.00% 25.00% 25.00%	\$0 \$0 \$3,450,000 \$63,000 \$0 \$62,500 \$1,384,500 \$0 \$2,242,800 \$0 \$520,000 \$138,840 \$0 \$0	
RIGHT OF WAY						\$1,680,000
300000 ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16	\$1,200,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$1,680,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						# 00 00 1 000
TOTAL CONSTRUCTION COST						\$20,084,268

19-2	LATHROP / MANTECA STATION PROJECT						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$508,945
0.5	CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY	AC	\$2,500	\$1,250	40.00%	\$1,750	
	DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
10000	EARTHWORK COMMON	BCY	\$25	\$250,000	30.00%	\$325,000	
2000	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0 \$20.000	30.00%	\$0	
2000) EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$20,000 \$0	30.00% 30.00%	\$26,000 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION	SF	\$100	\$0	50.00%	\$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	CY SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS MSE WALL ROADWAY	SF SF	\$70 \$55	\$0 \$0	30.00% 25.00%	\$0 \$0	
	SOUND WALL	LF	\$90	\$0 \$0	50.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT DRAINAGE (DIA-INCH-FOOT)	CY LF	\$1,000 \$12	\$0 \$0	30.00% 40.00%	\$0 \$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) ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc	SF SF	\$25 \$18	\$0 \$0	25.00% 25.00%	\$0 \$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0 \$0	25.00%	\$0 \$0	
	CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	GUARD RAIL ROADWAY ASPHALT DIKES ROADWAY	LF LF	\$30 \$4	\$0 \$0	25.00% 25.00%	\$0 \$0	
	STREET RESTORATIONS	SF	\$15	\$0 \$0	45.00%	\$0 \$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL STREET LIGHTING	EACH EACH	\$100,000 \$4,500	\$0 \$0	20.00% 20.00%	\$0 \$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY CONCRETE BARRIER	LF LF	\$30 \$50	\$0 \$0	30.00% 30.00%	\$0 \$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00%	\$0	
8010	VEHICULAR FENCE GATES) SILT FENCE and ORANGE FENCE	EACH LF	\$2,000 \$15	\$0 \$120,150	20.00% 30.00%	\$0 \$156,195	
	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT UTILITY RELOCATIONS	SY LF	\$15 \$30	\$0 \$0	30.00%	\$0 \$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
	TRACK WORK						\$4,729,815
	REMOVE EXISTING TRACK	TF	\$40	\$21,200	20.00%	\$25,440	
1	REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK	EACH TF	\$25,000 \$100	\$25,000 \$0	10.00% 10.00%	\$27,500 \$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0 \$0	20.00%	\$0 \$0	
5295	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$2,647,500	25.00%	\$3,309,375	
5.0	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF TF	\$450 \$750	\$0 \$37,500	30.00% 20.00%	\$0 \$45,000	
30	TRACK PANELS	LF	\$75 \$75	\$0	30.00%	\$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00%		
	CROSSOVER No.20 TURNOUT (#7)	EACH EACH	\$800,000 \$200,000	\$0 \$0	20.00% 10.00%		
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
1	TURNOUT (#10 CURVE) TURNOUT (#11)	EACH EACH	\$775,000 \$250,000	\$775,000 \$0	10.00% 10.00%		
	TURNOUT (#11)	EACH	\$325,000	\$0 \$0	10.00%		
	TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
1	TURNOUT (#20) TURNOUT (#24)	EACH EACH	\$400,000 \$450,000	\$400,000 \$0	10.00% 10.00%	\$440,000 \$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0 \$0	10.00%		
	DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
1	BUMPING POST UPGRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$25,000 \$0	20.00% 30.00%	\$30,000 \$0	
	SIGNAL WORK						\$1,913,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$200,000	20.00%	\$240,000	
	2 DOG HOUSE (Signal House) 2 NEW ELECTRIC SERVICE	EACH EACH	\$200,000 \$20,000	\$400,000 \$40,000	20.00% 20.00%	\$480,000 \$48,000	
2	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$40,000	20.00%		
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
2	NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING	EACH EACH	\$325,000 \$500,000	\$650,000 \$0	30.00% 30.00%		
1	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$250,000	20.00%	\$300,000	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%		
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						\$0

REINGER REMOVAL SF \$200 \$0 50.00% \$0 \$0.00% \$0 \$0.00% \$							
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM EACH \$20,000 \$0 0 30,00% \$0	RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT	SF SF SF SF SF LF	\$400 \$500 \$500 \$400 \$500 \$550 \$5,000 \$100	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL SYSTEM	TRAIN CONTROL						\$0
TYPE A SMALL INTERMODEL STATION	TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS	EACH LF EACH LS EACH LF EACH	\$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500	\$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% 30.00% 40.00% 30.00% 25.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TYPE K LARGE INTERMODEL STATION	STATIONS						\$0
ROW LAND ONLY	TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PLATFORM STRUCTURES UPGRADE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS	EACH SF SF EACH SF SF SPACES SPACES SPACES SF SPACES EACH	\$32,000,000 \$200 \$75 \$300 \$50,000 \$71 \$90 \$3,000 \$20,000 \$40 \$200 \$450,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 15.00% 40.00% 20.00% 25.00% 30.00% 40.00% 25.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
ROW AGRICULTURAL SF \$5	RIGHT OF WAY						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill,	SF SF SF SF SF	\$5 \$6 \$8 \$10 \$14 \$16	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) LF \$12,000 \$0 30.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0 \$0 30.00% \$0 \$0 \$0 30.00% \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	TUNNEL CONSTRUCTION						\$0
BART INTERFACE CALTRANS INTERFACE WORK DAYS DAYS \$900 \$900 \$0 \$0 20.00% \$0 \$0 ROLLING STOCK & CAPITAL INVESTMENTS \$0 ROLLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0	TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA)	LF LF		\$0 \$0	30.00% 30.00%	\$0 \$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	GENERAL SUPPORT ITEMS						\$0
ROLLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0							
	ROLLING STOCK & CAPITAL INVESTMENTS						\$0
TOTAL CONSTRUCTION COST \$7,151,760	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
	TOTAL CONSTRUCTION COST						\$7,151,760

TL-19-6	NORTH LATHROP STATION PROJECT						1
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 DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
100	D EARTHWORK COMMON	BCY	\$25	\$2,500	30.00%	\$3,250	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$0 \$0	30.00% 30.00%	\$0 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0 \$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL)	CY SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (0 TO 10 TEET TALL)	SF	\$60	\$0 \$0	30.00%	\$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY SOUND WALL	SF LF	\$55 \$90	\$0 \$0	25.00% 50.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT)	LF LF	\$12 \$12	\$0 \$0	40.00% 40.00%	\$0 \$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0 \$0	25.00%	\$0 \$0	
	3 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$1,720,825	25.00%	\$2,151,031	
1886	3 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc		\$18	\$339,534	25.00%	\$424,418	
	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	TONS CY	\$65 \$210	\$0 \$0	25.00% 20.00%	\$0 \$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
2504	ASPHALT DIKES ROADWAY	LF	\$4	\$0 \$275 240	25.00%	\$0	
	6 STREET RESTORATIONS 1 SIGNALLED STREET TRAFFIC CONTROL	SF EACH	\$15 \$300,000	\$375,240 \$300,000	45.00% 20.00%	\$544,098 \$360,000	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL MINOR CONCRETE	DAYS CY	\$1,200 \$400	\$0 \$0	50.00% 30.00%	\$0 \$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF LF	\$50	\$0	30.00%	\$0	
3902	STRIPPING 2 PERMANENT FENCING	LF	\$1 \$35	\$0 \$136,570	20.00% 20.00%	\$0 \$163,884	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
	7 SILT FENCE and ORANGE FENCE 2 SWPP MANAGEMENT, OPERATION & COMPLIANCE	LF MO	\$15 \$2,000	\$30,855 \$24,000	30.00% 30.00%	\$40,112 \$31,200	
12	LANDSCAPING PERMANENT	SY	\$2,000 \$15	\$24,000	30.00%	\$31,200	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK						\$4,587,895
380	O 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 UPGRADE EXISTING TRACK	TF TF	\$100 \$300	\$0 \$0	10.00%	\$0	
	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500 \$500	\$0 \$0	20.00% 25.00%	\$0 \$0	
4243	3 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) TRACK PANELS	TF LF	\$750 \$75	\$0 \$0	20.00% 30.00%	\$0 \$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) TURNOUT (#8)	EACH EACH	\$200,000 \$210,000	\$0 \$0	10.00% 10.00%	\$0 \$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) TURNOUT (#15)	EACH EACH	\$325,000 \$350,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING DERAIL	EACH EACH	\$500,000 \$100,000	\$0 \$0	10.00% 10.00%	\$0 \$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 2 DOG HOUSE (Signal House)	EACH EACH	\$200,000 \$200,000	\$0 \$400,000	20.00% 20.00%	\$0 \$480,000	
	4 NEW ELECTRIC SERVICE	EACH	\$20,000	\$80,000	20.00%	\$96,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0 \$0	20.00%	\$0 \$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK 4 NEW TURNOUT SIGNAL	EACH EACH	\$300,000 \$325,000	\$0 \$1,300,000	20.00% 30.00%	\$0 \$1,690,000	
	1 NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	30.00%	\$650,000	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0 \$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH MILE	\$400,000 \$200,000	\$0 \$0	20.00% 30.00%	\$0 \$0	
	BRIDGE STRUCTURES		\$250,000	Q O	20.0070	Ψ0	# E 005 000
	PUIDGE STRUCTURES						\$5,005,000

TOTAL CONSTRUCTION COST						\$33,033,007
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
GENERAL SUPPORT ITEMS						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
RIGHT OF WAY 573600 ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$3 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$1,720,800 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$2,409,120 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$2,409,120
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 32000 STATION PLATFORM STRUCTURES NEW 1200 STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE 32000 STATION AMENITIES INSPECTION PIT 599 PARKING LOTS PARKING STRUCTURES 27050 BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SP SPACES SPACES SPACES SF SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$71 \$90 \$3,000 \$20,000 \$40 \$200 \$450,000 \$300,000	\$0 \$0 \$6,400,000 \$90,000 \$0 \$0 \$2,272,000 \$0 \$1,797,000 \$0 \$1,082,000 \$0 \$0	20.00% 50.00% 15.00% 40.00% 20.00% 25.00% 30.00% 40.00% 25.00% 30.00% 30.00% 25.00% 25.00%	\$0 \$0 \$7,360,000 \$126,000 \$0 \$0 \$0 \$2,953,600 \$2,515,800 \$0 \$1,406,600 \$0 \$0 \$0	
STATIONS						\$14,362,000
TRAIN CONTROL POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0
PEDESTRIAN UNDERPASS STRUCTURE	EA	\$2,000,000	\$0	25.00%	\$0	
BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL. 770 PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT	SF SF SF SF SF SF LF	\$200 \$400 \$500 \$500 \$400 \$500 \$550 \$5,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	

TL-19-7	LATHROP WYE PROJECT					
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS					\$930,995
650	4 CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION DEARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) DEMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS	AC AC SF BCY BCY FCY FCY SF CY SF SF SF	\$2,500 \$5,000 \$8 \$25 \$50 \$10 \$25 \$400 \$100 \$40 \$35 \$60 \$70	\$10,000 \$0 \$162,500 \$65,000 \$0 \$0 \$0 \$0	40.00% \$14,000 30.00% \$0 30.00% \$0 30.00% \$211,250 30.00% \$0 30.00% \$84,500 30.00% \$0 50.00% \$0 25.00% \$0 20.00% \$0 30.00% \$0 30.00% \$0	
12	MSE WALL ROADWAY SOUND WALL BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) Sharp Depc ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT GUARD RAIL ROADWAY	SF LF CY CY LF CY SF SF TONS CY LF	\$55 \$90 \$1,000 \$1,000 \$12 \$12 \$25 \$25 \$25 \$18 \$65 \$210	\$0 \$0 \$120,000 \$0 \$0 \$0 \$0 \$0 \$0	25.00% \$0 50.00% \$0 30.00% \$0 30.00% \$156,000 40.00% \$0 25.00% \$0 25.00% \$0 25.00% \$0 25.00% \$0 25.00% \$0	
	ASPHALT DIKES ROADWAY D STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING	LF SF EACH EACH EACH DAYS CY LF LF	\$30 \$4 \$15 \$300,000 \$100,000 \$4,500 \$1,200 \$400 \$30 \$50 \$1	\$0 \$63,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% \$0 25.00% \$0 45.00% \$91,350 20.00% \$0 20.00% \$0 20.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0 20.00% \$0	
	PERMANENT FENCING VEHICULAR FENCE GATES D SILT FENCE and ORANGE FENCE ENCED SWPP MANAGEMENT, OPERATION & COMPLIANCE LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING TRACK WORK	LF EACH LF MO SY LF LS EACH	\$35 \$2,000 \$15 \$2,000 \$15 \$30 \$100,000 \$2,500	\$0 \$262,500 \$24,000 \$0 \$0 \$0 \$0	20.00% \$0 20.00% \$0 30.00% \$341,250 30.00% \$31,200 30.00% \$0 30.00% \$0 30.00% \$0 20.00% \$0	
282 878 26	D REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS 1 CROSSOVER No. 7 2 CROSSOVER No. 20 1 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#14) 1 TURNOUT (#15) 3 TURNOUT (#20) TURNOUT (#24) 1 DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF LF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$75 \$600,000 \$200,000 \$220,000 \$250,000 \$350,000 \$450,000 \$450,000 \$100,000 \$100,000 \$100,000 \$100,000	\$64,000 \$50,000 \$282,000 \$0 \$4,390,000 \$0 \$195,000 \$1,600,000 \$200,000 \$200,000 \$1,200,000 \$1,200,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% \$76,800 10.00% \$55,000 10.00% \$310,200 20.00% \$0 25.00% \$5,487,500 30.00% \$234,000 20.00% \$7220,000 20.00% \$1,920,000 10.00% \$0 10.00% \$0 10.00% \$0 10.00% \$0 10.00% \$0 10.00% \$385,000 10.00% \$1,320,000 10.00% \$0 10.00%	
	SIGNAL WORK PEDESTRIAN GATES & SIGNALS 3 CANTILEVER SIGNAL 7 DOG HOUSE (Signal House) 7 NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK 5 NEW TURNOUT SIGNAL 3 NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS 3 NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$200,000 \$220,000 \$150,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$600,000 \$1,400,000 \$140,000 \$0 \$1,625,000 \$1,500,000 \$0 \$1,200,000	20.00% \$0 20.00% \$720,000 20.00% \$1,680,000 20.00% \$0 20.00% \$0 30.00% \$2,112,500 30.00% \$1,950,000 20.00% \$0 20.00% \$1,440,000 30.00% \$0	
	BRIDGE STRUCTURES					\$0

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT PEDESTRIAN UNDERPASS STRUCTURE	SF SF SF SF SF LF LF	\$200 \$400 \$500 \$500 \$400 \$500 \$550 \$5,000 \$100 \$2,000,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 50.00% 30.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25 00%	\$0	\$0
TRAIN CONTROL SYSTEM TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF EACH SF SF SPACES SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$71 \$90 \$3,000 \$20,000 \$40 \$200 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 15.00% 40.00% 20.00% 25.00% 30.00% 40.00% 25.00% 30.00% 25.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$3 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	

TOTAL CONSTRUCTION COST \$20,279,995

Ceres Extension

Cost Estimate Back-up Tables

MO-21 OA	AKLAND TO FRESNO SUBDIVISION						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEME
	CIVIL WORKS						\$1,801,370
	EAR & GRUB LIGHT	AC	\$2,500	\$4,400	40.00%	\$6,160	
	EAR & GRUB HEAVY	AC SF	\$5,000	\$0	30.00%	\$0	
	MOLITION ARTHWORK COMMON	BCY	\$8 \$25	\$0 \$125,000	30.00% 30.00%	\$0 \$162,500	
	RTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	MBANKMENT	FCY	\$10	\$16,000	40.00%	\$22,400	
	DRROW EMOVE HOV LANE CONTROLS SYSTEM	FCY LF	\$25 \$400	\$0 \$0	30.00% 30.00%	\$0 \$0	
	CONSTRUCT FREEWAY LANE 580	SF	\$100	\$0 \$0	50.00%	\$0	
	RUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
	TAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	ETAINING WALLS (10 TO 20 FEET TALL) DIL NAIL WALLS	SF SF	\$60 \$70	\$0 \$0	30.00% 30.00%	\$0 \$0	
	SE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	OUND WALL	LF	\$90	\$0	50.00%	\$0	
	OX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DX CULVERT DOUBLE CELL RAINAGE (DIA-INCH-FOOT)	CY LF	\$1,000 \$12	\$1,167,000 \$0	30.00% 40.00%	\$1,517,100 \$0	
	RAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	PORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	DADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	GGREGATE BASE ROADWAY SPHALT CONCRETE ROADWAY	CY TONS	\$45 \$65	\$0 \$0	25.00% 25.00%	\$0 \$0	
	DNCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
	JARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	SPHALT DIKES ROADWAY	LF SF	\$4	\$0 \$0	25.00%	\$0	
	REET RESTORATIONS GNALLED STREET TRAFFIC CONTROL	EACH	\$15 \$300,000	\$0 \$0	40.00% 20.00%	\$0 \$0	
	ODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	REET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	AFFIC CONTROL NOR CONCRETE	DAYS CY	\$1,200 \$400	\$0 \$0	50.00% 30.00%	\$0 \$0	
	RAIL TEMPORARY	LF	\$30	\$0 \$0	30.00%	\$0	
	ONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	RIPPING	LF	\$1	\$0	20.00%	\$0	
	RMANENT FENCING HICULAR FENCE GATES	LF EACH	\$35 \$2,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	LT FENCE and ORANGE FENCE	LF	\$15	\$71,700	30.00%	\$93,210	
	ROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	NDSCAPING PERMANENT	SY LF	\$15 \$20	\$0 \$0	30.00%	\$0	
	ILITY RELOCATIONS EVELOP PERMANENT WATER SUPPLY	LF	\$30 \$100,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
	ARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
	TRACK WORK						\$2,063,
340 RE	MOVE EXISTING TRACK	TF	\$40	\$13,600	20.00%	\$16,320	
	MOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	IIFT EXISTING TRACK PGRADE EXISTING TRACK	TF TF	\$100 \$300	\$0 \$0	20.00% 20.00%	\$0 \$0	
	RACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500 \$500	\$1,025,000	30.00%	\$1,332,500	
	RACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
	RADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF LF	\$750	\$0 \$0	20.00%	\$0 \$0	
	RACK PANELS ROSSOVER No.15	EACH	\$75 \$800.000	\$0 \$0	30.00% 20.00%	\$0 \$0	
	ROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	JRNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	JRNOUT (#8) JRNOUT (#9)	EACH EACH	\$210,000 \$220,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	IRNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	JRNOUT (#14)	EACH	\$325,000	\$650,000	10.00%	\$715,000	
	JRNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
	JRNOUT (#20) JRNOUT (#24)	EACH EACH	\$400,000 \$450,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	AMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	RAIL	EACH	\$100,000	\$0	10.00%	\$0	
	JMPING POST GRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$0 \$0	20.00% 30.00%	\$0 \$0	
SI	IGNAL WORK						\$1,373
	DESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	NTILEVER SIGNAL OG HOUSE (Signal House)	EACH EACH	\$200,000 \$200,000	\$0 \$400,000	20.00% 20.00%	\$0 \$480,000	
	EW ELECTRIC SERVICE	EACH	\$20,000	\$400,000	20.00%	\$480,000	
NE	W INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	W INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	EW TURNOUT SIGNAL EW CROSSOVER SIGNALLING	EACH EACH	\$325,000 \$500,000	\$650,000 \$0	30.00% 20.00%	\$845,000 \$0	
	W GRADE CROSSING SIGNALS	EACH	\$250,000	\$0 \$0	20.00%	\$0 \$0	
NE	W CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
UP	PGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						
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BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE TRAIN CONTROL	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY 4 LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 20.00% 20.00% 20.00% 30.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0
RIGHT OF WAY ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0
TUNNEL CONSTRUCTION TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	\$0
GENERAL SUPPORT ITEMS BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	\$0
ROLLING STOCK & CAPITAL INVESTMENTS ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	\$0
TOTAL CONSTRUCTION COST						\$5,251,190

MMO-22	SECOND MAIN TRACK LATHROP TO MANTECA						
Estimate	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY T	OTAL PRICE	SUB TOTAL
Quantity							WORK ELEMENT
	CIVIL WORKS						\$1,567,715
12.03	3 CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY	AC AC	\$2,500 \$5,000	\$30,075 \$0	40.00% 30.00%	\$42,105 \$0	
4700	DEMOLITION	SF	\$8	\$0	30.00%	\$0	
17300) EARTHWORK COMMON EARTHWORK (EXCAVATION ROCK)	BCY BCY	\$25 \$50	\$432,500 \$0	30.00% 30.00%	\$562,250 \$0	
	EMBANKMENT	FCY	\$10	\$229,000	30.00%	\$297,700	
5600) BORROW REMOVE HOV LANE CONTROLS SYSTEM	FCY LF	\$25 \$400	\$140,000 \$0	30.00% 30.00%	\$182,000 \$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
	STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL)	CY SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS MSE WALL ROADWAY	SF SF	\$70 \$55	\$0 \$0	30.00% 25.00%	\$0 \$0	
	SOUND WALL	LF CV	\$90	\$0	50.00%	\$0 \$0	
	BOX CULVERT BOX CULVERT	CY CY	\$1,000 \$1,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
	DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT)	LF	\$12 \$12	\$0 \$0	40.00% 40.00%	\$0 \$0	
	IMPORTED BORROW ROADWAY	LF CY	\$12 \$25	\$0 \$0	40.00% 25.00%	\$0 \$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY	SF	\$15	\$0	25.00%	\$0 \$0	
	ASPHALT CONCRETE ROADWAY	CY TONS	\$45 \$65	\$0 \$0	25.00% 25.00%	\$0 \$0	
	CONCRETE PAVEMENT	CY LF	\$210	\$0 \$0	20.00%	\$0 \$0	
	GUARD RAIL ROADWAY ASPHALT DIKES ROADWAY	LF	\$30 \$4	\$0 \$0	25.00% 25.00%	\$0 \$0	
	STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL	SF EACH	\$15 \$300,000	\$0 \$0	40.00% 20.00%	\$0 \$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0 \$0	20.00%	\$0 \$0	
	STREET LIGHTING TRAFFIC CONTROL	EACH DAYS	\$4,500 \$1,200	\$0 \$0	20.00% 50.00%	\$0 \$0	
	MINOR CONCRETE	CY	\$400	\$0 \$0	30.00%	\$0 \$0	
	K RAIL TEMPORARY CONCRETE BARRIER	LF LF	\$30 \$50	\$0 \$0	30.00% 30.00%	\$0 \$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING VEHICULAR FENCE GATES	LF EACH	\$35 \$2,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
26870	SILT FENCE and ORANGE FENCE	LF	\$15	\$403,050	20.00%	\$483,660	
	EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT	SF SY	\$7 \$15	\$0 \$0	30.00% 30.00%	\$0 \$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK						\$8,566,720
265	REMOVE EXISTING TRACK	TF	\$40	\$10,600	20.00%	\$12,720	
	REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK	EACH TF	\$25,000 \$100	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
12920) TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF TF	\$500 \$450	\$6,460,000 \$0	15.00% 25.00%	\$7,429,000 \$0	
700	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$525,000	20.00%	\$630,000	
	TRACK PANELS CROSSOVER No.15	LF EACH	\$75 \$800,000	\$0 \$0	30.00% 20.00%	\$0 \$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7) TURNOUT (#8)	EACH EACH	\$200,000 \$210,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11) TURNOUT (#14)	EACH EACH	\$250,000 \$325,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#15) TURNOUT (#20)	EACH EACH	\$350,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
1	TURNOUT (#20)	EACH	\$450,000	\$450,000	10.00%	\$495,000	
	DIAMOND CROSSING DERAIL	EACH EACH	\$500,000 \$100,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	BUMPING POST UPGRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$0 \$0	20.00% 30.00%	\$0 \$0	
	SIGNAL WORK		ψ.00	Ų.	00.0070	40	\$4,590,000
	DEDESTRIAN GATES & SIGNIALS	EACH	\$400.000	6 0	20.000/	6 0	
3	PEDESTRIAN GATES & SIGNALS 3 CANTILEVER SIGNAL	EACH EACH	\$100,000 \$200,000	\$0 \$600,000	20.00% 20.00%	\$0 \$720,000	
	5 DOG HOUSE (Signal House) 5 NEW ELECTRIC SERVICE	EACH EACH	\$200,000 \$20,000	\$1,000,000 \$100,000	20.00% 20.00%	\$1,200,000 \$120,000	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	I NEW INTERMEDIATE SIGNALS DOUBLE TRACK I NEW TURNOUT SIGNAL	EACH EACH	\$300,000 \$325,000	\$300,000 \$325,000	20.00% 20.00%	\$360,000 \$390,000	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
6	NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS	EACH EACH	\$250,000 \$400,000	\$1,500,000 \$0	20.00% 20.00%	\$1,800,000 \$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						\$0
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BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE TRAIN CONTROL	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$500 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 50.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
	MU E	\$2,000,000	r o	25.00%	¢o.	\$120,250
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY 24 LINE UTILITIES CROSSING TRACKS 650 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$32,500	25.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 50.00% 20.00% 20.00% 25.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$14,844,685

MMO-23	MANTECA STATION PROJECT						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$93,700
	CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION DEMOLITION DEARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) EMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT GUARD RAIL ROADWAY ASPHALT DIKES ROADWAY STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING PERMANENT FENCING	AC AC SF BCY BCY FCY FCY FCY LF SF SF SF SF LF CY CY LF LF CY TONS CY LF EACH DAYS CY LF	\$2,500 \$5,000 \$8 \$25 \$50 \$100 \$400 \$1000 \$440 \$35 \$60 \$70 \$1,000	\$7,500 \$0 \$0 \$25,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 25.00% 30.00% 30.00% 40.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$10,500 \$0 \$0 \$32,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$93,700
	VEHICULAR FENCE GATES USHITULAR FENCE GATES USHIT FENCE and ORANGE FENCE USHIT FENCE AND OPERATION & COMPLIANCE UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	EACH LF MO SY LF LS EACH	\$33 \$2,000 \$15 \$2,000 \$15 \$30 \$100,000 \$2,500	\$0 \$19,500 \$12,000 \$7,500 \$0 \$0	20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 20.00%	\$0 \$25,350 \$15,600 \$9,750 \$0 \$0	
	TRACK WORK						\$0
	REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER No.15 CROSSOVER No.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#11) TURNOUT (#15) TURNOUT (#15) TURNOUT (#20) TURNOUT (#20) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF LF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$75 \$800,000 \$200,000 \$210,000 \$225,000 \$350,000 \$450,000 \$350,000 \$450,000 \$100,000 \$100,000 \$100,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 10.00% 20.00% 20.00% 25.00% 25.00% 20.00% 30.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 30.00% 10.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
	SIGNAL WORK						\$0
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL DOG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$250,000 \$25,000 \$150,000 \$300,000 \$500,000 \$250,000 \$400,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	BRIDGE STRUCTURES						\$0

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

MMO-24	SECOND MAIN TRACK MANTECA TO RIPON						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$8,142,924
31.28	8 CLEAR & GRUB LIGHT	AC	\$5,000	\$156,400	30.00%	\$203,320	
	CLEAR & GRUB HEAVY DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
58700	0 EARTHWORK COMMON	BCY	\$25	\$1,467,500	30.00%	\$1,907,750	
3990	EARTHWORK (EXCAVATION ROCK) 0 EMBANKMENT	BCY FCY	\$50 \$10	\$0 \$399,000	30.00% 30.00%	\$0 \$518,700	
00000	BORROW	FCY	\$25	\$0	30.00%	\$0	
	REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580	LF SF	\$400 \$100	\$0 \$0	30.00% 50.00%	\$0 \$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0 \$0	25.00%	\$0 \$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
5160	RETAINING WALLS (10 TO 20 FEET TALL) 0 SOIL NAIL WALLS	SF SF	\$60 \$70	\$0 \$361,200	30.00% 30.00%	\$0 \$469,560	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL BOX CULVERT	LF CY	\$90 \$1,000	\$0 \$0	50.00% 30.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY	LF CY	\$12 \$25	\$0 \$0	40.00% 25.00%	\$0 \$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY	CY TONS	\$45 \$65	\$0 \$0	25.00% 25.00%	\$0 \$0	
	CONCRETE PAVEMENT	CY	\$210	\$0 \$0	20.00%	\$0 \$0	
196	1 CIVIL WORK TYPE G	LF	\$1,500	\$2,941,500	30.00%	\$3,823,950	
	ASPHALT DIKES ROADWAY STREET RESTORATIONS	LF SF	\$4 \$15	\$0 \$0	25.00% 40.00%	\$0 \$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
	MODIFIED TRAFFIC SIGNAL STREET LIGHTING	EACH EACH	\$100,000 \$4,500	\$0 \$0	20.00% 20.00%	\$0 \$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0 \$0	50.00%	\$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
	K RAIL TEMPORARY CONCRETE BARRIER	LF LF	\$30 \$50	\$0 \$0	30.00% 30.00%	\$0 \$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING VEHICULAR FENCE GATES	LF EACH	\$35 \$2,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
67758	8 SILT FENCE and ORANGE FENCE	LF	\$15	\$1,016,370	20.00%	\$1,219,644	
	EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT	SF SY	\$7 \$15	\$0 \$0	30.00% 30.00%	\$0 \$0	
	UTILITY RELOCATIONS	LF	\$30	\$0 \$0	30.00%	\$0 \$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK						\$20,992,835
170	0 REMOVE EXISTING TRACK	TF	\$40	\$6,800	20.00%	\$8,160	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK UPGRADE EXISTING TRACK	TF TF	\$100 \$300	\$0 \$0	20.00% 20.00%	\$0 \$0	
33749	9 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$16,874,500	15.00%	\$19,405,675	
000	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
200	0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS	TF LF	\$750 \$75	\$195,000 \$0	20.00% 30.00%	\$234,000 \$0	
	1 CROSSOVER No.15	EACH	\$800,000	\$800,000	20.00%	\$960,000	
	CROSSOVER No.20 TURNOUT (#7)	EACH EACH	\$1,000,000 \$200,000	\$0 \$0	20.00% 10.00%	\$0 \$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9) TURNOUT (#11)	EACH EACH	\$220,000 \$250,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
•	1 TURNOUT (#15)	EACH EACH	\$350,000	\$350,000	10.00% 10.00%	\$385,000	
	TURNOUT (#20) TURNOUT (#24)	EACH	\$400,000 \$450,000	\$0 \$0	10.00%	\$0 \$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL BUMPING POST	EACH EACH	\$100,000 \$25,000	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
	SIGNAL WORK						\$3,930,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0 \$0	20.00%	\$0	
	CANTILEVER SIGNAL 5 DOG HOUSE (Signal House)	EACH EACH	\$200,000 \$200,000	\$0 \$1,000,000	20.00% 20.00%	\$0 \$1,200,000	
	5 NEW ELECTRIC SERVICE	EACH	\$20,000	\$100,000	20.00%	\$120,000	
•	NEW INTERMEDIATE SIGNALS SINGLE TRACK 2 NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH EACH	\$150,000 \$300,000	\$0 \$600,000	20.00% 20.00%	\$0 \$720,000	
	1 NEW TURNOUT SIGNAL	EACH	\$325,000	\$325,000	20.00%	\$390,000	
	1 NEW CROSSOVER SIGNALLING 3 NEW GRADE CROSSING SIGNALS	EACH EACH	\$500,000 \$250,000	\$500,000 \$750,000	20.00% 20.00%	\$600,000 \$900,000	
•	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$750,000 \$0	20.00%	\$900,000	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						\$0

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

DESCRIPTION	O-25 RIPON STATION PROJECT						
3.5 CLEAR & GRUB LICHT AC	Ectimate	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTA WORK ELEM
CLEAR & GRUB HEAVY DEDUCTION DEDUCTION DEDUCTION DEDUCTION DEDUCTION DESCRIPTION DESCRIPT	CIVIL WORKS						\$126,000
DENOLITION SF \$8 \$50 \$50,000 \$90 DENOLITION COMMON CONTROL	3.5 CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
### STATING COMMON BOOK SECOND SECO							
EARTHWORK (EXCAVATION ROCK) EMBANKENI FVY \$10 \$10 \$30 30.00%, \$0 EMBANGO F HOV LANE (CONTROLS SYSTEM IF \$400 \$10 30.00%, \$0 STRUCTIVE EXCAVATION SETTALL) SF \$100 \$30 \$30.00%, \$0 STRUCTIVE EXCAVATION SETTALL) SF \$100 \$10 \$10.00%, \$0 STRUCTIVE EXCAVATION SETTALLS SF \$10 \$10.00%, \$0 STRUCTIVE EXCAVATION SETTALLS SF \$100 \$10 \$10.00%, \$0 STRUCTIVE EXCAVATION SETTALLS SF \$100 \$10 \$10.00%, \$0 STRUCTIVE EXCAVATION SETTALLS STRUCTIVE							
BRIANDOWN AND CONTROLS SYSTEM FCV \$25 \$30 \$30,00% \$0							
REMOVE HOV LAME CONTROLS SYSTEM RECOMSTRUCT FREEWAY LAME 500 SO S	,	FCY	\$10		30.00%		
RECONSTRUCT RECENTAL NAE 580 SF STOUCH STOUC							
STRUCTURE EXCAVATION REPARKS WALLS OF 10 FEET TALL) SP							
RETAINING WALLS (10 TO JO FEET TALL) RETAINING WALLS (10 TO JO FEET T							
SOL NAIL WALLS MSE WALL ROOWAY SP	RETAINING WALLS (0 TO 10 FEET TALL)		\$35	\$0			
MSE WALL ROADWAY							
SOLND WALL SOLND							
BOX CULVERT							
DRAINAGE (DIA-NICH-FOOT)							
DRIANAGE (OLA-MICH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) F S15 30 25,00% 50 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) ROADWAY CONSTRUCTION (BASE, PAVE,							
MPORTED BORROW ROADWAY							
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY ASPHALT CONCRETE ROADWAY TONS SSO 30 2000 ASPHALT CONCRETE ROADWAY LF SSO SSO ASPHALT DIKES ROADWAY LF SSO SSO ASPHALT DIKES ROADWAY LF SSO SSO ASPHALT DIKES ROADWAY LF SSO SSIGNALED STREET RESTORATIONS SF SITERET RESTORATIONS SF SIGNALED STREET ITAFFIC CONTROL EACH SSOO, DIVIDING SSO SIGNALED STREET ITAFFIC CONTROL EACH SSOO, DIVIDING SSOO, DIVIDING SSO SIGNALED STREET ITAFFIC CONTROL DAYS STREET ITAFFIC CONTROL DAYS TRAFFIC CONTROL DAYS K RAIL TEMPORARY LF SSO SSO CONCRETE CY SSO MINOR CONCRETE CY SSO SSOO, DIVIDING SSO SSOO, DIVIDING SSO SSOO, DIVIDING SSOO, DIVIDING SSO TRAFFIC CONTROL PERMANENT FENCING LF SSO SSOO, DIVIDING SSOO, DIVIDING SSOO, DIVIDING SSO SSOO, DIVIDING SSOO, DIVIDING SSOO, DIVIDING SSO SSOO, DIVIDING SSOO, DIVI							
ASPHALT CONCRETE ROADWAY CONCRETE PAYEMENT CY S210 GUARD RAIL ROADWAY LF S30 S0 25.00% S0 GUARD RAIL ROADWAY LF S30 S0	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15		25.00%		
CONCRETE PAYEMENT GUAND RAIL ROADWAY LF \$30 ASPHALT DIKES ROADWAY ASPHALT DIKES ROADWAY ASPHALT DIKES ROADWAY LF \$30 ASPHALT DIKES ROADWAY							
GUARD RAIL ROADWAY ASPHALT DIKES ROADWAY STREET RESTORATIONS STREET RESTORATIONS SIGNALLED STREET PRAFFIC CONTROL EACH SIGNALED STREET PRAFFIC CONTROL EACH STREET RESTORATIONS SEP \$ 15 5 30 40,00% 50 20,00% 50 STREET LIGHTING BACH STREET STREE							
ASPHALT DIKES ROADWAY STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL EACH STOOD SIGNALLED STREET TRAFFIC CONTROL EACH STOOD SIGNALLED STREET TRAFFIC CONTROL EACH STOOD STREFT STOOD STOOD STREFT STOOD STOOD STREFT STOOD							
SIGNALLED STREET TRAFFIC CONTROL	ASPHALT DIKES ROADWAY	LF					
MODIFIED TRAFFIC SIGNAL STREET LIGHTING EACH \$4,500 \$0 \$0 20.00% \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 \$0 \$50 \$0,00% \$0 \$0 MINOR CONCRETE CY \$4,000 \$0 \$0 \$0 \$0,00% \$0 \$0 K RAIL TEMFORARY LF \$3,000 \$0 \$0 \$0,00% \$0 \$0 K RAIL TEMFORARY LF \$3,000 \$0 \$0 \$0,00% \$0 \$0 \$0 K RAIL TEMFORARY LF \$3,000 \$0 \$0 \$0,00% \$0 \$0 \$0 \$0 K RAIL TEMFORARY LF \$3,000 \$0 \$0 \$0,00% \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0							
STREET LIGHTING TRAFFIC CONTROL DAYS \$1,200 \$0 \$0, 20,00% \$0 MINOR CONCRETE CY \$400 \$0, 30, 30, 00% \$0 CONCRETE LIGHTING K RAIL TEMPORARY LF \$30 \$0, 30, 00% \$0 CONCRETE BARRIER LF \$31 \$0, 30, 00% \$0 CONCRETE BARRIER LF \$32, 000 \$0 CONCRETE BARRIER LF \$31 \$32, 000 \$0 CONCRETE BARRIER LF \$31 \$32, 000 \$0 CONCRETE BARRIER LF \$31 \$32, 000 \$0 CONCRETE BARRIER LF \$32, 000 \$0 CONCRETE BARRIER LF \$31 \$32, 000 \$0 CONCRETE BARRIER LF \$34 \$0 CONCRETE BARRIER LF \$35 CONCRETE BR \$35 CONCRETE CONCRETE BR \$35 CONCRETE BR \$35 CONCRETE BR \$35 CONCRETE BR \$3							
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K RAIL TEMPORARY CONCRETE BARRIER LF \$50 \$0 \$0 30.00% \$0 STRIPPING LF \$1 \$0 20.00% \$0 VEHICULAR FENCING LF \$1 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$2.000 \$0 30.00% \$23.400 B SWPP MANAGEMENT, OPERATION & COMPLIANCE BY \$2.000 \$0 \$12.000 \$0 30.00% \$15.600 SOLUTION SENTING THE SENTING THE SENTING THE SENTING TRACK TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 20.00% \$0 VERNING THE SENTING THE SEN							
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STRIPPING PERMANENT FENCING LF \$35 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$15 \$1,000 30.00% \$23,400 6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 30.00% \$23,400 10 SUNDEAPH OPERAM SERVICE HE \$15 \$1,000 30.00% \$23,400 10 SUNDEAPH OPERAM SERVICE HE \$15 \$1,000 30.00% \$23,400 10 LANDEAPH OPERAM SERVICE HE \$25,000 \$12,000 30.00% \$9,750 UTILITY RELOCATIONS LF \$300 \$30 \$30.00% \$9,750 UTILITY RELOCATIONS LIFE \$330 \$30 \$30.00% \$9,750 UTILITY RELOCATIONS TRACK WORK REMOVE EXISTING TRACK TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 \$0 \$0.00% \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 \$2.500% \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$750 \$0 \$0.00% \$0 TRACK PANELS CROSSOVER NO.50 CROSSOVE							
PERMANENT FENCING							
1200 SILT FENCE and ORANGE FENCE LF \$15 \$18,000 \$0.000% \$23,400 \$6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$10,000% \$31,5600 \$00 LANDSCAPING PERMANENT SY \$15 \$7,500 \$30,000% \$36,500 \$10,000% \$10	PERMANENT FENCING	LF				\$0	
6 SWPP MANAGEMENT, OPERATION & COMPLIANCE 500 LANDSCAPING PERMANENT V SY \$15 \$7.500 30.00% \$9.750 UTILITY RELOCATIONS LF \$30 \$3.00 \$30.00% \$0.00%							
SOU LANDSCAPING PERMANENT SY \$15 \$7.500 \$0.00% \$9.00							
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TURNOUT (#24)							
DIAMOND CROSSING							
DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6 EACH EACH \$100,000 \$25,000 \$0 10.00% \$0 \$0 SIGNAL WORK 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 TURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$0 NEW CROSSOVER SIGNALLING EACH \$325,000 \$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 NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$0							
UPGRADE MAINTRACK TO CLASS 6							
PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL DOG HOUSE (Signal House) EACH \$200,000 \$0 20.00% \$0 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 \$150,000 \$0 20.00% \$0 NEW TURNOUT SIGNAL 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 \$500,000 \$0 20.00% \$0 NEW GRADE SIGNALS EACH \$250,000 \$0 20.00% \$0 NEW GRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 SO SO SO SO SO SO SO SO SO S							
CANTILEVER SIGNAL	SIGNAL WORK						
CANTILEVER SIGNAL	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%		
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 SIGNALING 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						\$0	
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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							
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UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30.00% \$0							
RDIDGE STRUCTURES							
	BRIDGE STRUCTURES						\$3,125

RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL 500 PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF LF LF	\$400 \$500 \$500 \$400 \$500 \$550 \$5,000 \$100	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,500,000 \$0	30.00% 30.00% 30.00% 50.00% 30.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$5,246,650
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 15000 STATION PLATFORM STRUCTURES NEW 600 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE 15000 STATION AMENITIES INSPECTION PIT 197 PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$50,000 \$20,000 \$20,000 \$25 \$200 \$450,000 \$300,000	\$0 \$3,000,000 \$45,000 \$0 \$50,000 \$750,000 \$0 \$591,000 \$0 \$0 \$0 \$0	20.00% 50.00% 15.00% 15.00% 20.00% 10.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$3,450,000 \$51,750 \$0 \$55,000 \$862,500 \$0 \$827,400 \$0 \$0 \$0 \$0	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$8,497,650

MMO-26A	SECOND MAIN TRACK RIPON TO MODESTO						ı
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY T	OTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$1,908,856
4300 19500 15200 21490	CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION EARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) EMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT BOX CULVERT BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY ASPHALT DIKES ROADWAY ASPHALT DIKES ROADWAY STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING PERMANENT FENCING VEHICULAR FENCE GATES	AC AC SF BCY FCY FCY SF SF SF SF SF CY CY FONS CY TONS CY EACH DAY CY EACH EACH EACH	\$2,500 \$5,000 \$8 \$25 \$50 \$10 \$25 \$400 \$100 \$40 \$335 \$60 \$770 \$55 \$90 \$1,000 \$1,000 \$1,000 \$1,000 \$45 \$45 \$65 \$210 \$330 \$4 \$15 \$300,000 \$1,000	\$6,950 \$0 \$107,500 \$380,000 \$380,000 \$0 \$0 \$752,150 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 50.00% 25.00% 20.00% 30.00% 40.00% 25.00% 25.00% 20.00% 25.00% 20.00%	\$9,730 \$0 \$139,750 \$253,500 \$494,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$1,908,856
6072	VEHICULAR FINCE GATES SILT FENCE and ORANGE FENCE EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LF SF SY LF LS EACH	\$2,000 \$15 \$7 \$15 \$30 \$100,000 \$2,500	\$91,080 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 30.00% 30.00% 30.00% 20.00%	\$109,296 \$0 \$0 \$0 \$0 \$0	
	TRACK WORK						\$1,745,700
3036	REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER NO.15 CROSSOVER NO.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#14) TURNOUT (#15) TURNOUT (#20) TURNOUT (#20) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$750 \$1,000,000 \$220,000 \$220,000 \$250,000 \$350,000 \$450,000 \$450,000 \$100,000 \$100,000 \$100,000 \$100,000	\$0 \$0 \$0 \$1,518,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 10.00% 20.00% 25.00% 25.00% 20.00% 30.00% 20.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$1,745,700 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
	SIGNAL WORK						\$0
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL DOG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$250,000 \$20,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$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 SF	\$500	\$0	30.00%	\$0	
RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE	SF	\$500 \$400	\$0 \$0	30.00% 50.00%	\$0 \$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						\$195,00
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 ©0	40.00%	\$0	
COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE	LS EACH	\$1,500,000 \$50,000	\$0 \$0	30.00% 25.00%	\$0 \$0	
LINE UTILITIES WITHIN TRACKWAY	LF	\$30,000	\$0	30.00%	\$0 \$0	
LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$5,000	30.00%	\$6,500	
LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$145,000	30.00%	\$188,500	
STATIONS						Ş
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 STATION AMENITIES	EACH SF	\$50,000	\$0 \$0	25.00%	\$0 \$0	
INSPECTION PIT	SF	\$65 \$90	\$0 \$0	30.00% 30.00%	\$0 \$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 ESCALATOR	EACH EACH	\$450,000 \$300,000	\$0 \$0	25.00% 25.00%	\$0 \$0	
RIGHT OF WAY		,,				\$
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
ROW LAND ONLY ROW AGRICULTURAL	SF	\$5	\$0 \$0	25.00%	\$0 \$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	ψ12,000	\$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						:
			¢0	0.00%	\$0	
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	ΨΟ	

CIVIL WORKS CIVIL WORKS 40.15 CLEAR & GRUB HEATY AC \$2.00 \$100,375 40,00% \$760 PEMOLITOR COMMON SF \$3.50 \$5.000 \$0.00% \$760 PEMOLITOR COMMON SF \$3.50 \$0.00% \$2.000 \$3.00% \$6.700 PEMOLITOR COMMON SF \$3.50 \$0.00% \$2.000 \$3.00% \$2.000 PEMOLITOR COMMON SF \$3.50 \$0.00% \$2.000 \$3.00% \$2.000 PEMOLITOR COMMON SF \$3.50 \$0.00% \$2.000 \$3.00% \$2.000 PEMOLITOR COMMON PEMO	D-26B SECOND MAIN TRACK RIPON TO MODESTO						
## CEAPE SOUR STORT ## ACC \$2.015 \$10.000 \$1.40.0000 \$1.40.0000 \$1.40.0000 \$1.40.0000 \$1.40.0000 \$1.40.0000 \$1.40.0000	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TO	OTAL PRICE	SUB TOT WORK ELEM
1.04 CLEAR & CRIBB HEAVY AC	CIVIL WORKS						\$22,201,5
DENOLITION SP						\$140,525	
SEARTH-WORK COMMON SCY \$25 \$2,265,000 \$30,000 \$2,264,500 \$10,0							
EARTHWORK (EXCAVATION ROCK) ## 2700 DARBAMENT ## 1070 STATE STATEMENT ## 1070 STATEMEN							
BORROW REMOVE HOLASE CONTROLS SYSTEM REMOVE HOLASE CONTROLS REMO							
REMOVE HOVLANE CONTROLS SYSTEM RECOMPRICED FREEVRY LUMBE 500 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SF \$ 300 RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALL) SE \$ 300 RETAINING RETAINING WALLS (07 10 PEET TALLS (07 10 PEE							
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STRUCTURE EXCAVATION RETAINING WALLS OT 10 FEET TALL) SE							
RETAINING WALLS (10 TO 20 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) RESIDENT WALL WALLS RESIDENT WALL WALLS RESIDENT WALL WALLS RESIDENT WALL	STRUCTURE EXCAVATION	CY		\$0			
14745 SOIL NAIL WALLS SF \$70	,						
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250 DRAPMAGE (DIA-MICHFOOT)							
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY AGPHALI CONGRETE ROADWAY ASPHALI CONGRETE ROADWAY TONS SIGNAL STATE STAT							
AGGREGATE BASE ROADWAY ASPHALT CONCRETE PACIMENT CY \$415 \$0 25.00% \$0 CONCRETE PACIMENT CY \$211 \$1,994,720 20.00% \$0 CONCRETE PACIMENT CY \$211 \$1,994,720 20.00% \$0 ES \$7,124 \$1,994,72							
ASPHALT CONCRETE RADWAY CONCRETE PAYEMENT CY 280 CIVIL WORK TYPE C LF \$7,124 \$1,96,97,120 \$30,000 \$2,2593,30 \$1,000 \$2,2593,30 \$1,000 \$1,							
CONCRETE PAYMENT CY \$210 \$00 DIL WORK TYPE G FIT ALL WORK TYPE G SIFE \$1,500 \$10,071,000 \$30,000% \$2,593,396 FIT CAULL WORK TYPE G SIFE \$1,500 \$10,071,000 \$30,000% \$13,002,300 SIRGET RESTORATIONS WORK TYPE G SIFE \$1,500 \$10,071,000 \$30,000% \$13,002,300 WORK TYPE G SIFE \$1,500 \$10,071,000 \$30,000% \$10,000% \$00 WORK TYPE G SIFE \$1,500 \$10,071,000 \$30,000% \$10,000% \$00 SIFE T LIGHTING EACH \$4,500 \$00 \$20,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$20,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$20,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$20,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$20,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$4,500 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$5,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 WORK TYPE G SIFE T LIGHTING EACH \$2,000 \$00 \$00,000% \$00 SIFE T LIGHTING EACH \$2,							
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TRAIN CONTROL						\$338,000
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$135,000 \$125,000	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$175,500 \$162,500	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SP SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 20.00% 20.00% 25.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
						\$0
ROLLING STOCK & CAPITAL INVESTMENTS						

CIVIL WORKS	40.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00%	\$12,250 \$0 \$0 \$32,500 \$0 \$32,500 \$0 \$0 \$58,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	SUB TOTAL WORK ELEMENT \$185,150
3.5 CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY AC \$5.000 SP \$8 \$0 DEMOLITION SF \$8 \$0 1000 EARTH-WORK COMMON EARTH-WORK (EXCAVATION ROCK) EMBANKMENT FCY BORROW FCY \$35 \$25.000 EARTH-WORK (EXCAVATION ROCK) EMBANKMENT FCY BORROW FCY \$30 REMOVE SHORT WALL (3' HIGH) RECONSTRUCT FREEWAY LAINE 580 RECONSTRUCT FREEWAY LAINE 580 RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SF \$35 SOIL NAIL WALLS SF \$370 SOIL NAIL WALLS SF \$370 SOIL NAIL WALLS BOX CULIVERT CY \$1,000 DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CY \$25 SIGNALLED STREET TREFFIC CONTROL BASE STRUCTH SAME SAME SAME SAME SAME SAME SAME SAME	30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 25.00% 30.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$32,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$185,150
CLEAR & GRUB HEAVY AC	30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 25.00% 30.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$32,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
DEMOLITION	30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 30.00% 30.00% 40.00% 25.00% 25.00% 20.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$32,500 \$0 \$0 \$0 \$58,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
EARTH-WORK (EXCAVATION ROCK) BCY \$50 \$0	30.00% 30.00% 30.00% 50.00% 25.00% 30.00% 30.00% 30.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 26.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
EMBANKMENT	30.00% 30.00% 30.00% 25.00% 20.00% 30.00% 30.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00% 30.00% 30.00%	\$0 \$0 \$58,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
BORROW	30.00% 30.00% 50.00% 25.00% 30.00% 30.00% 50.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$58,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
RECONSTRUCT FREEWAY LANE 580 SF \$100 S0 STRUCTURE EXCAVATION CY \$40 \$0 RETAINING WALLS (0 TO 10 FEET TALL) SF \$55 \$35 \$0 RETAINING WALLS (10 TO 20 FEET TALL) SF \$50 \$30 SOL NAIL WALLS (10 TO 20 FEET TALL) SF \$50 \$30 SOL NAIL WALLS (10 TO 20 FEET TALL) SF \$50 \$30 SOL NAIL WALLS (10 TO 20 FEET TALL) SF \$50 \$30 MSE WALL ROADWAY SF \$570 \$30 MSE WALL ROADWAY SF \$55 \$30 SOUND WALL LF \$90 \$0 BOX CULVERT CY \$1,000 \$0 BOX CULVERT CY \$1,000 \$0 DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 MPORTED BORROW ROADWAY CY \$25 \$0 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SF \$15 \$0 AGGREGATE BASE ROADWAY CY \$45 \$0 AGGREGATE BASE ROADWAY TONS \$65 \$0 CONCRETE PAVEMENT CY \$210 \$0 GUARD RAIL ROADWAY LF \$30 \$0 ASPHALT CONCRETE ROADWAY LF \$30 \$0 ASPHALT DIKES ROADWAY LF \$30 \$0 ASPHALT DIKES ROADWAY LF \$44 \$0 STREET RESTORATIONS SF \$15 \$0 SIGNALLED STREET TRAFFIC CONTROL BACH \$400 \$0 MODIFIED TRAFFIC SIGNAL EACH \$400 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$4500 \$0 MNORCETE PAVEMENT LF \$30 \$0 MNORCETE PAVEMENT LF \$30 \$0 MNORCETE ARRIER LF \$30 \$0 MNORCETE BARRIER LF \$30 \$0 STREET BARRIER LF \$30 \$0 SO CONCRETE BARRIER LF \$31 \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 STREET BARRIER LF \$30 \$0 SO DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 SO DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 SO SHIFT EXISTING TRACK TF \$300 \$0 UPGRADE EXISTING TRACK COMPLETE (T+T+B-SEP+PAC-TC) TF \$750 \$0 UPGRADE EXISTING TRACK	50.00% 25.00% 30.00% 30.00% 30.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
STRUCTURE EXCAVATION	25.00% 20.00% 30.00% 30.00% 50.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00% 20.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
RETAINING WALLS (10 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SF \$50 SOL NAIL WALLS SF \$70 MSE WALL ROADWAY SF \$55 SOUND WALL LF \$90 SO SOUND WALL LF \$110 BOX CULVERT CY \$11,000 SO BOX CULVERT CY \$1,000 MPORTION BORROW ROADWAY CY \$25 SOUND WALL MPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SF \$15 SO GONGREGATE BASE ROADWAY CY \$45 SO SOUND WALL CONCRETE PAVEMENT CY \$210 SO SOUND WALL LF \$30 SO SOUND WALL STREET RESTORATIONS SF \$15 SO SOUND WALL STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL BACH SIGNALED STREET TRAFFIC CONTROL EACH SIGNALED STREET IRAFFIC SIGNAL STREET LIGHTING EACH SOUND SO MODIFIED TRAFFIC SIGNAL EACH SADOO MINOR CONCRETE CY \$400 SO K RAIL TEMPORARY CONCRETE BARRIER LF \$30 SO WERNAMER LF \$30 SO WERNAMER LF \$30 SO STREET RESTORATIONS STREET RESTORATION STREET RESTORATION STREET BARRIER LF \$30 SO WERNAMENT FENCING LF \$35 SO VEHICULAR FENCE GATES EACH SADOO SO STRIPPING LF \$35 SO VEHICULAR FENCE GATES EACH SADOO SO STREET LIGHTING FERNAMENT FENCING UF \$35 SO VEHICULAR FENCE GATES EACH SADOO SO STREET LIGHTING SO SO SO SO SHIFT EXISTING TRACK REMOVE EXISTING TRACK TF \$40 SO SHIFT EXISTING TRACK TF \$50 SO TRACK (NOCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$50 CROSSOVER NO. 15 EACH SOONO SO CROSSOVER NO. 15 EACH SOONO SO CROSSOVER NO. 15 EACH SOONO SO SO SO CROSSOVER NO. 15	20.00% 30.00% 30.00% 25.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 20.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
SOIL NAIL WALLS SF \$70 \$0	30.00% 25.00% 30.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 20.00% 30.00% 30.00% 20.00% 30.00% 30.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
MSE WALL ROADWAY LF	25.00% 50.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
SOUND WALL	50.00% 30.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 20.00% 25.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
BOX CULVERT	30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00% 30.00% 30.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 IMPORTED BORROW ROADWAY CY \$25 \$0 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SF \$15 \$0 AGGREGATE BASE ROADWAY CY \$45 \$0 ASPHALT CONCRETE ROADWAY TONS \$65 \$0 CONCRETE PAVEMENT CY \$210 \$0 GUARD RAIL ROADWAY LF \$30 \$0 ASPHALT DIKES ROADWAY LF \$4 \$0 STREET RESTORATIONS SF \$15 \$0 SIGNALLED STREET TRAFFIC CONTROL EACH \$300,000 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$4,500 \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 CONCRETE BARRIER LF \$1 \$0<	40.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 20.00% 20.00% 30.00% 30.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
DRAINAGE (DIA-INCH-FOOT) LF \$12 \$0 IMPORTED BORROW ROADWAY CY \$25 \$0 ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SF \$15 \$0 AGGREGATE BASE ROADWAY CY \$45 \$0 ASPHALT CONCRETE ROADWAY TONS \$65 \$0 CONCRETE PAVEMENT CY \$210 \$0 GUARD RAIL ROADWAY LF \$30 \$0 ASPHALT DIKES ROADWAY LF \$4 \$0 STREET RESTORATIONS SF \$15 \$0 SIGNALLED STREET TRAFFIC CONTROL EACH \$300,000 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$1,000 \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 CONCRETE BARRIER LF \$35 \$0 VEHICULAR FENCE GATES EACH \$2,000	40.00% 25.00% 25.00% 25.00% 20.00% 25.00% 20.00% 20.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	25.00% 25.00% 25.00% 20.00% 25.00% 40.00% 20.00% 20.00% 30.00% 30.00% 20.00% 20.00% 30.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY TONS S65 S0 CONCRETE PAVEMENT CY \$210 \$0 GUARD RAIL ROADWAY LF \$30 ASPHALT DIKES ROADWAY LF \$44 \$0 STREET RESTORATIONS SF \$15 \$0 SIGNALLED STREET TRAFFIC CONTROL EACH S300,000 MODIFIED TRAFFIC SIGNAL EACH EACH S44 \$300,000 S0 TRAFFIC CONTROL DAYS K RAIL TEMPORARY LF \$300,000 S0 TRAFFIC CONTROL DAYS K RAIL TEMPORARY LF \$300,000 S0 TRAFFIC CONTROL DAYS K RAIL TEMPORARY LF \$300 CONCRETE BARRIER LF \$300 S0 STRIPPING LF \$300 S0 STRIPPING LF \$300 VEHICULAR FENCE GATES EACH \$2000 \$300 \$100 S100 S11 FENCE and ORANGE FENCE LF \$35 S0 VEHICULAR FENCE GATES EACH S2000 \$300 S12,000 S12,000 S12,000 S12,000 S12,000 S12,000 S14,000 S0 TRAFIC CATIONS LF \$300 DEVELOP PERMANENT WATER SUPPLY LS S1100,000 S0 TRACK WORK TF \$40 \$0 S0 TRACK WORK TF \$300 \$0 S0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSINE TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 CROSSOVER No.15 EACH \$800,000 \$0 TRACK PANELS LF \$755 \$0 CROSSOVER No.15 EACH \$800,000 \$0 S0 TRACK PANELS LF \$755 S0 CROSSOVER No.15	25.00% 25.00% 25.00% 25.00% 40.00% 20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT CY \$210 \$0 CONCRETE PAVEMENT CY \$210 \$0 GUARD RAIL ROADWAY LF \$30 \$0 ASPHALT DIKES ROADWAY LF \$4 \$0 STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL EACH \$300,000 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$4,500 \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 K RAIL TEMPORARY LF \$30 \$0 STRIPPING LF \$30 \$0 STRIPPING LF \$31 \$0 PERMANENT FENCING LF \$35 \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 SICH FENCE and ORANGE FENCE LF \$15 \$28,500 SO SUPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 SO DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 STRIPPING LF \$30 \$0 SO DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 STRIPPING TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TRACK TF \$300 \$0 SO S	25.00% 20.00% 25.00% 40.00% 20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
GUARD RAIL ROADWAY	20.00% 25.00% 40.00% 20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
ASPHALT DIKES ROADWAY STREET RESTORATIONS STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL EACH \$300,000 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$4,500 \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 CONCRETE BARRIER LF \$50 \$0 STRIPPING LF \$1 \$0 STRIPPING LF \$1 \$0 PERMANENT FENCING LF \$1 \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 SO SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 SID UNIDSCAPING PERMANENT SY \$15 \$22,500 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 TRACK WORK REMOVE EXISTING TRACK TF \$10 \$0 SUPGRADE EXISTING TRACK TF \$10 \$0 SO SHIFT EXISTING TRACK TF \$10 \$0 SO TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK PANELS CROSSOVER No.15 EACH \$800,000 \$0 SO CROSSOVER No.15	25.00% 40.00% 20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
STREET RESTORATIONS SF \$15 \$0 SIGNALLED STREET TRAFFIC CONTROL EACH \$300,000 \$0 MODIFIED TRAFFIC SIGNAL EACH \$100,000 \$0 STREET LIGHTING EACH \$4,500 \$0 TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 CONCRETE BARRIER LF \$50 \$0 STRIPPING LF \$1 \$0 PERMANENT FENCING LF \$35 \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 1900 SILT FENCE AND ORANGE FENCE LF \$15 \$28,500 6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 1500 LANDSCAPING PERMANENT SY \$15 \$22,500 UTILITY RELOCATIONS LF \$30 \$0 TRACK WORK **REMOVE EXISTING TRACK **REMOVE EXISTING TRACK TF \$40 \$0	40.00% 20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
MODIFIED TRAFFIC SIGNAL	20.00% 20.00% 50.00% 30.00% 30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$15,600	
STREET LIGHTING	20.00% 50.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$15,600	
TRAFFIC CONTROL DAYS \$1,200 \$0 MINOR CONCRETE CY \$400 \$0 K RAIL TEMPORARY LF \$30 \$0 CONCRETE BARRIER LF \$50 \$0 STRIPPING LF \$1 \$0 PERMANENT FENCING LF \$1 \$0 PERMANENT FENCING LF \$15 \$28,500 \$0 SULT FENCE and ORANGE FENCE LF \$15 \$22,500 \$1900 SILT FENCE and ORANGE FENCE LF \$15 \$22,500 \$1900 SILT FENCE and ORANGE FENCE LF \$15 \$22,500 \$1500 LANDSCAPING PERMANENT SY \$15 \$22,500 UTILITY RELOCATIONS LF \$30 \$0 DEVELOP PERMANENT SY \$15 \$22,500 YARD LIGHTING EACH \$2,500 \$0 STRACK WORK TF \$40 \$0 SULT FENCE SITTING TRACK TF \$40 \$0 SULT FENCE SITTING TRACK TF \$300 \$0 SULT FENCE SU	50.00% 30.00% 30.00% 30.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$37,050 \$15,600	
MINOR CONCRETE	30.00% 30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$37,050 \$15,600	
CONCRETE BARRIER CONCRETE BARRIER STRIPPING PERMANENT FENCING VEHICULAR FENCE GATES EACH S2000 S0 1900 SILT FENCE and ORANGE FENCE SWPP MANAGEMENT, OPERATION & COMPLIANCE MO S2,000 S12,000 S12,000 S12,000 S12,000 S12,000 LF S30 DEVELOP PERMANENT SY S15 S22,500 UTILITY RELOCATIONS LF S30 DEVELOP PERMANENT WATER SUPPLY LS S100,000 VARD LIGHTING TRACK WORK REMOVE EXISTING TRACK REMOVE EXISTING TRACK REMOVE EXISTING TRACK TF S100 S0 SHIFT EXISTING TRACK TF S300 CONCRETE BARRIER S50 S0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK CONSSOVER No.15 EACH S800,000 S0 CROSSOVER No.15	30.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$37,050 \$15,600	
STRIPPING	20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$37,050 \$15,600	
VEHICULAR FENCE GATES EACH \$2,000 \$0 1900 SILT FENCE and ORANGE FENCE LF \$15 \$28,500 6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 1500 LANDSCAPING PERMANENT SY \$15 \$22,500 UTILITY RELOCATIONS LF \$30 \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 YARD LIGHTING EACH \$2,500 \$0 TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TRACK TF \$100 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF	20.00% 30.00%	\$0 \$37,050 \$15,600	
1900 SILT FENCE and ORANGE FENCE 6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 1500 LANDSCAPING PERMANENT SY \$15 \$22,500 UTILITY RELOCATIONS LF \$30 \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 YARD LIGHTING EACH \$2,500 \$0 TRACK WORK REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK PANELS CROSSOVER NO.15 EACH \$800,000 \$0	30.00%	\$37,050 \$15,600	
6 SWPP MANAGEMENT, OPERATION & COMPLIANCE MO \$2,000 \$12,000 1500 LANDSCAPING PERMANENT SY \$15 \$22,500 UTILITY RELOCATIONS LF \$30 \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 YARD LIGHTING EACH \$2,500 \$0 TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TURNOUTS EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$300 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANALS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0		\$15,600	
UTILITY RELOCATIONS LF \$30 \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 YARD LIGHTING EACH \$2,500 \$0 TRACK WORK REMOVE EXISTING TRACK REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0		\$29,250	
DEVELOP PERMANENT WATER SUPPLY	30.00%		
YARD LIGHTING EACH \$2,500 \$0 TRACK WORK REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TRACK EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	30.00% 30.00%	\$0 \$0	
REMOVE EXISTING TRACK TF \$40 \$0 REMOVE EXISTING TURNOUTS EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	20.00%	\$0	
REMOVE EXISTING TURNOUTS EACH \$25,000 \$0 SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0			\$0
SHIFT EXISTING TRACK TF \$100 \$0 UPGRADE EXISTING TRACK TF \$300 \$0 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	20.00% 10.00%	\$0 \$0	
TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$0 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	20.00%	\$0 \$0	
TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	20.00%	\$0	
GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$0 TRACK PANELS LF \$75 \$0 CROSSOVER No.15 EACH \$800,000 \$0	25.00% 25.00%	\$0 \$0	
CROSSOVER No.15 EACH \$800,000 \$0	20.00%	\$0 \$0	
	30.00%	\$0	
	20.00% 20.00%	\$0 \$0	
TURNOUT (#7) EACH \$200,000 \$0	10.00%	\$0	
TURNOUT (#8) EACH \$210,000 \$0	10.00%	\$0	
TURNOUT (#9)	10.00% 10.00%	\$0 \$0	
TURNOUT (#11)	10.00%	\$0 \$0	
TURNOUT (#15)	10.00%	\$0	
TURNOUT (#20)	10.00%	\$0 \$0	
TURNOUT (#24)	10.00% 10.00%	\$0 \$0	
DERAIL EACH \$100,000 \$0	10.00%	\$0	
BUMPING POST EACH \$25,000 \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0	20.00% 30.00%	\$0 \$0	
SIGNAL WORK			\$0
PEDESTRIAN GATES & SIGNALS EACH \$100,000 \$0	20.00%	\$0	
CANTILEVER SIGNAL EACH \$200,000 \$0 DOG HOUSE (Signal House) EACH \$250,000 \$0	20.00%	\$0 \$0	
NEW ELECTRIC SERVICE EACH \$20,000 \$0		\$0 \$0	
NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0	20.00% 20.00%	\$0	
NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$300,000 \$0	20.00% 20.00%	\$0 \$0	
NEW TURNOUT SIGNAL EACH \$325,000 \$0 NEW CROSSOVER SIGNALLING EACH \$500,000 \$0	20.00% 20.00% 20.00%	\$0	
NEW GRADE CROSSING SIGNALS EACH \$250,000 \$0	20.00% 20.00% 20.00% 20.00%	0.2	
NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0	20.00% 20.00% 20.00%	\$0 \$0	
UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0	20.00% 20.00% 20.00% 20.00% 20.00%		

BRIDGE STRUCTURES						\$0
BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY	SF SF SF	\$200 \$400 \$500	\$0 \$0 \$0	50.00% 30.00% 30.00%	\$0 \$0 \$0	
RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE	SF SF	\$500 \$400	\$0 \$0	30.00% 50.00%	\$0 \$0	
HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL	SF SF	\$500 \$550	\$0 \$0	30.00% 30.00%	\$0 \$0	
PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF LF CY	\$400 \$100 \$750	\$0 \$0 \$0	30.00% 25.00% 25.00%	\$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM	MILE EACH	\$2,000,000 \$200,000	\$0 \$0	25.00% 30.00%	\$0 \$0	
TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS	LF EACH	\$12 \$500,000	\$0 \$0	30.00% 40.00%	\$0 \$0	
COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY	EACH LF	\$50,000 \$30	\$0 \$0	25.00% 30.00%	\$0 \$0	
LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	EACH LF	\$2,500 \$50	\$0 \$0 \$0	30.00% 30.00%	\$0 \$0	
STATIONS		•	•			\$4,522,788
TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	. , ,
TYPE K LARGE INTERMODEL STATION 25 STATION PLATFORM STRUCTURES NEW	EACH SF	\$32,000,000 \$200	\$0 \$2,625,000	50.00% 15.00%	\$0 \$3,018,750	
00 STATION CANOPY	SF	\$75	\$45,000	15.00%	\$51,750	
STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE	SF EACH	\$300 \$50,000	\$0 \$50,000	20.00% 10.00%	\$0 \$55,000	
25 STATION AMENITIES	SF	\$50	\$656,250	15.00%	\$754,688	
INSPECTION PIT 53 PARKING LOTS	SF SPACES	\$90 \$3,000	\$0 \$459,000	30.00% 40.00%	\$0 \$642,600	
PARKING STRUCTURES	SPACES	\$20,000	\$459,000	25.00%	\$042,000	
BUS LANE AND UNLOADING PARKING LOT LIGHTING	SF SPACES	\$25 \$200	\$0 \$0	25.00% 30.00%	\$0 \$0	
ELEVATORS	EACH	\$450,000	\$0 \$0	25.00%	\$0	
ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL	SF SF	\$4 \$5	\$0 \$0	25.00% 25.00%	\$0 \$0	
ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
ROW PAVED AREAS ROW RESIDENTIAL AREA	SF SF	\$8 \$10	\$0 \$0	25.00% 25.00%	\$0 \$0	
ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0	
ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation, goodwill,	SF VALUE	\$16 \$1	\$0 \$0	25.00% 0.00%	\$0 \$0	
legal,appraisal,etc.)						
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF LF	\$12,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
SINGLE BORE RESTORE (DIA)	LF	\$12,000	\$0 \$0	30.00%	\$0	
TWIN BORE RESTORE (DIA)	LF		\$0	30.00%	\$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	

IO-28B	CERES STATION						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEME
	CIVIL WORKS						\$2,312,450
3.	5 CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
100	EARTHWORK COMMON	BCY	\$25	\$25,000	30.00%	\$32,500	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$0 \$0	30.00% 30.00%	\$0 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
96	STRUCTURE EXCAVATION ORETAINING WALLS (0 TO 10 FEET TALL)	CY LF	\$40 \$1,200	\$0 \$1,152,000	25.00% 30.00%	\$0 \$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 SOUND WALL	SF LF	\$55 \$90	\$0 \$0	25.00% 50.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT)	LF LF	\$12 \$12	\$0 \$0	40.00% 40.00%	\$0 \$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 TONS	\$45	\$0 \$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	CY	\$65 \$210	\$0 \$0	25.00% 20.00%	\$0 \$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
000	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
) STREET RESTORATIONS 1 SIGNALLED STREET TRAFFIC CONTROL	SF EACH	\$25 \$250,000	\$225,000 \$250,000	45.00% 20.00%	\$326,250 \$300,000	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL MINOR CONCRETE	DAYS CY	\$1,200 \$400	\$0 \$0	50.00% 30.00%	\$0 \$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
100	STRIPPING DEFINATION OF STRIPPING DEFINATION OF STRIPPING	LF LF	\$1 \$35	\$0 \$63,000	20.00%	\$0 \$75,600	
100	VEHICULAR FENCE GATES	EACH	\$2,000	\$63,000	20.00% 20.00%	\$75,600	
	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	
50	D LANDSCAPING PERMANENT UTILITY RELOCATIONS	SY LF	\$15 \$30	\$7,500 \$0	30.00% 30.00%	\$9,750 \$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK		4 _,	**			
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
	REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
	SHIFT EXISTING TRACK	TF TF	\$100 \$300	\$0 \$0	20.00%	\$0	
	UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$300 \$500	\$0 \$0	20.00% 25.00%	\$0 \$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 LF	\$750	\$0 \$0	20.00%	\$0	
	TRACK PANELS CROSSOVER No.15	EACH	\$75 \$800,000	\$0 \$0	30.00% 20.00%	\$0 \$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8) TURNOUT (#9)	EACH EACH	\$210,000 \$220,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15) TURNOUT (#20)	EACH EACH	\$350,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL BUMPING POST	EACH EACH	\$100,000 \$25,000	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
	SIGNAL WORK						
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL DOG HOUSE (Signal House)	EACH EACH	\$200,000 \$250,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$0 \$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL	EACH EACH	\$300,000 \$325,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0 \$0	20.00%	\$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0 \$0	20.00%	\$0	
	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
	BRIDGE STRUCTURES						

TYPE A SMALL INTERMODEL STATION	\$0 906,450
TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING LF S12 S0 30.00% \$0 TRAIN CONTROL DIGITAL CBOSS EACH \$500,000 \$0 40.00% \$0 COMPUTER TRAFFIC MANAGEMENT LS S1,500,000 \$0 25.00% \$0 COMPUTER TRAFFIC MANAGEMENT LS S1,500,000 \$0 25.00% \$0 LINE UTILITIES WITHIN TRACKWAY LF S30 \$0 30.00% \$0 LINE UTILITIES WITHIN TRACKWAY LF S30 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES ROSSING TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES CROSSING TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES CROSSING TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 \$50 0000 \$0 LINE UTILITIES RIVE S50 \$0 LINE UTILITIES RIVE	906,450
TYPE A SMALL INTERMODEL STATION	906,450
TYPE K LARGE INTERMODEL STATION EACH \$32,000,000 \$0 \$0 \$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% \$3,450,000 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 AMENTIES SF \$50 \$750,000 15.00% \$862,500 INSPECTION PIT SF \$90 \$0 30.00% \$0 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.	
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	
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	\$0
BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$1 \$0 0.00% \$0 legal,appraisal,etc.)	
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 \$7,21	

MMO-28C	CERES LAYOVER						
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 DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
10000	EARTHWORK COMMON	BCY	\$25	\$250,000	30.00%	\$325,000	
2000	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0 \$60.000	30.00%	\$0 \$84.000	
2000	EMBANKMENT BORROW	FCY FCY	\$30 \$25	\$60,000	40.00% 30.00%	\$84,000	
90000	AC PAVEMENT REMOVAL	SF	\$2	\$180,000	45.00%	\$261,000	
	RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION	SF CY	\$100 \$40	\$0 \$0	50.00% 25.00%	\$0 \$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
	RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS	SF SF	\$60 \$70	\$0 \$0	30.00% 30.00%	\$0 \$0	
	MSE WALL ROADWAY	SF	\$55	\$0 \$0	25.00%	\$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT BOX CULVERT	CY CY	\$1,000 \$1,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	CY SF	\$25 \$15	\$0 \$0	25.00% 25.00%	\$0 \$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
120000	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	SF CY	\$4 \$210	\$480,000 \$0	45.00% 20.00%	\$696,000 \$0	
	GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
	ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
	STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL	SF EACH	\$15 \$300,000	\$0 \$0	40.00% 20.00%	\$0 \$0	
	MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
	STREET LIGHTING TRAFFIC CONTROL	EACH DAYS	\$4,500 \$1,200	\$0 \$0	20.00% 50.00%	\$0 \$0	
400	SHOP BUILDINGS	SF	\$50	\$20,000	45.00%	\$29,000	
	CONTAINER INSPECTION DITS	EACH	\$7,500	\$7,500	45.00%	\$10,875	
3200	INSPECTION PITS STRIPPING	SF LF	\$90 \$1	\$288,000 \$0	45.00% 20.00%	\$417,600 \$0	
	PERMANENT FENCING	LF	\$35	\$175,000	20.00%	\$210,000	
	VEHICULAR FENCE GATES SILT FENCE and ORANGE FENCE	EACH LF	\$5,000 \$15	\$20,000 \$52,500	45.00% 30.00%	\$29,000 \$68,250	
0000	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
	LANDSCAPING PERMANENT UTILITY RELOCATIONS	SY LF	\$15	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY	LS	\$30 \$100,000	\$0 \$0	30.00% 30.00%	\$0 \$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 SHIFT EXISTING TRACK	EACH TF	\$25,000 \$100	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
5260	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF TF	\$500 \$450	\$2,630,000 \$0	15.00%	\$3,024,500	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750 \$750	\$0 \$0	25.00% 20.00%	\$0 \$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
1	CROSSOVER No.15 CROSSOVER No.20	EACH EACH	\$800,000 \$1.000.000	\$800,000 \$0	20.00% 20.00%	\$960,000 \$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
5	TURNOUT (#8) TURNOUT (#10)	EACH EACH	\$210,000 \$350,000	\$0 \$1,750,000	10.00% 10.00%	\$0 \$1,925,000	
J	TURNOUT (#11)	EACH	\$250,000	\$1,730,000	10.00%	\$1,923,000	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15) TURNOUT (#20)	EACH EACH	\$350,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING DERAIL	EACH EACH	\$500,000 \$100,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	BUMPING POST UPGRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$0 \$0	20.00% 30.00%	\$0 \$0	
	SIGNAL WORK		ψ100	Ψ	00.0070	Ψο	\$2,562,000
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	. , ,
	CANTILEVER SIGNAL	EACH	\$200,000	\$0 \$0	20.00%	\$0 \$0	
	DOG HOUSE (Signal House)	EACH	\$200,000	\$600,000	20.00%	\$720,000	
3	NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH EACH	\$20,000 \$150,000	\$60,000 \$0	20.00% 20.00%	\$72,000 \$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING	EACH EACH	\$325,000	\$975,000	20.00% 20.00%	\$1,170,000	
1	NEW GRADE CROSSING SIGNALS	EACH	\$500,000 \$250,000	\$500,000 \$0	20.00%	\$600,000 \$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 RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 50.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$55,000
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR RIGHT OF WAY ROW LAND ONLY ROW AGRICULTURAL 210000 ROW ORCHARDS	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES SPACES SF SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$20 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$50,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 50.00% 20.00% 20.00% 10.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 40.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$1,764,000
ROW PAVED AREAS ROW RESIDENTIAL AREA	SF SF	\$8 \$10	\$0 \$0	25.00% 25.00%	\$0 \$0	
ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF VALUE	\$14 \$16 \$1	\$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$12,662,205

stimate	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TOTAL PRICE	SUB TOTAL
Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TOTAL PRICE	WORK ELEME
	CIVIL WORKS					\$15,853,799
	2 CLEAR & GRUB LIGHT 7 CLEAR & GRUB HEAVY	AC AC	\$2,500 \$5,000	\$40,800 \$5,350	40.00% \$57,120 30.00% \$6,955	
1.07	DEMOLITION	SF	\$5,000 \$8	\$5,330 \$0	30.00% \$6,955	
32500	EARTHWORK COMMON	BCY	\$25	\$812,500	30.00% \$1,056,250	
23800	EARTHWORK (EXCAVATION ROCK)) EMBANKMENT	BCY FCY	\$50 \$10	\$0 \$238.000	30.00% \$0 30.00% \$309,400	
	BORROW	FCY	\$25	\$0	30.00% \$0	
	REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580	LF SF	\$400 \$100	\$0 \$0	30.00% \$0 50.00% \$0	
	STRUCTURE EXCAVATION	CY	\$40	\$0 \$0	25.00% \$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00% \$0	
	RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS	SF SF	\$60 \$70	\$0 \$0	30.00% \$0 30.00% \$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00% \$0	
	SOUND WALL BOX CULVERT	LF CY	\$90 \$1,000	\$0 \$0	50.00% \$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) IMPORTED BORROW ROADWAY	LF CY	\$12 \$25	\$0 \$0	40.00% \$0 25.00% \$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00% \$0	
	AGGREGATE BASE ROADWAY	CY TONS	\$45 \$65	\$0 \$0	25.00% \$0	
	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	CY	\$65 \$210	\$0 \$0	25.00% \$0 20.00% \$0	
) CIVIL WORK TYPE C	LF	\$7,124	\$2,849,600	30.00% \$3,704,480	
5169	OCIVIL WORK TYPE G STREET RESTORATIONS	SF SF	\$1,500 \$15	\$7,753,500 \$0	30.00% \$10,079,550 40.00% \$0	
	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00% \$0	
	MODIFIED TRAFFIC SIGNAL STREET LIGHTING	EACH	\$100,000	\$0	20.00% \$0	
	TRAFFIC CONTROL	EACH DAYS	\$4,500 \$1,200	\$0 \$0	20.00% \$0 50.00% \$0	
	MINOR CONCRETE	CY	\$400	\$0	30.00% \$0	
	K RAIL TEMPORARY CONCRETE BARRIER	LF LF	\$30 \$50	\$0 \$0	30.00% \$0 30.00% \$0	
	STRIPPING	LF	\$1	\$0	20.00% \$0	
	PERMANENT FENCING	LF	\$35	\$0	20.00% \$0	
35558	VEHICULAR FENCE GATES 3 SILT FENCE and ORANGE FENCE	EACH LF	\$2,000 \$15	\$0 \$533,370	20.00% \$0 20.00% \$640,044	
	EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00% \$0	
	LANDSCAPING PERMANENT UTILITY RELOCATIONS	SY LF	\$15 \$30	\$0 \$0	30.00% \$0 30.00% \$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% \$0 20.00% \$0	
	TRACK WORK	ENOT	ΨΣ,000	Ψ0	20.0070 40	\$12,563,
115	5 REMOVE EXISTING TRACK	TF	\$40	\$17,800	20.00% \$21,360	
	2 REMOVE EXISTING TICADORS	EACH	\$25,000	\$50,000	10.00% \$21,300	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00% \$0	
19170	UPGRADE EXISTING TRACK) TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF TF	\$300 \$500	\$0 \$9,585,000	20.00% \$0 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) TRACK PANELS	TF LF	\$750 \$75	\$97,500 \$0	20.00% \$117,000 30.00% \$0	
	CROSSOVER No.15	EACH	\$800,000	\$0	20.00% \$0	
	CROSSOVER No.20 TURNOUT (#7)	EACH EACH	\$1,000,000 \$200,000	\$0 \$0	20.00% \$0 10.00% \$0	
	TURNOUT (#8)	EACH	\$210,000	\$0 \$0	10.00% \$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00% \$0	
1	I TURNOUT (#11) TURNOUT (#14)	EACH EACH	\$250,000 \$325,000	\$250,000 \$0	10.00% \$275,000 10.00% \$0	
1	TURNOUT (#15 CURVE)	EACH	\$975,000	\$975,000	10.00% \$1,072,500	
	TURNOUT (#20) TURNOUT (#24)	EACH EACH	\$400,000 \$450,000	\$0 \$0	10.00% \$0 10.00% \$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0 \$0	10.00% \$0	
	DERAIL BUMPING POST	EACH	\$100,000	\$0	10.00% \$0	
	BUMPING POST UPGRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$0 \$0	20.00% \$0 30.00% \$0	
	SIGNAL WORK					\$2,796,
		EACH	\$100,000	\$0	20.00% \$0	
	PEDESTRIAN GATES & SIGNALS	EACH	\$200,000 \$200,000	\$0	20.00% \$0	
	CANTILEVER SIGNAL			\$800,000	20.00% \$960,000	
		EACH EACH	\$20,000	\$80,000	20.00% \$96,000	
4	CANTILEVER SIGNAL I DOG HOUSE (Signal House) I NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH EACH EACH	\$20,000 \$150,000	\$0	20.00% \$0	
4	CANTILEVER SIGNAL I DOG HOUSE (Signal House) I NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK I NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH EACH EACH	\$20,000 \$150,000 \$300,000	\$0 \$300,000	20.00% \$0 20.00% \$360,000	
4	CANTILEVER SIGNAL I DOG HOUSE (Signal House) I NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH EACH EACH	\$20,000 \$150,000 \$300,000 \$325,000 \$500,000	\$0 \$300,000 \$650,000 \$0	20.00% \$0 20.00% \$360,000 20.00% \$780,000 20.00% \$0	
4 1 2	CANTILEVER SIGNAL 1 DOG HOUSE (Signal House) 4 NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK 1 NEW INTERMEDIATE SIGNALS DOUBLE TRACK 2 NEW TURNOUT SIGNAL 1 NEW CROSSOVER SIGNALLING 2 NEW GRADE CROSSING SIGNALS	EACH EACH EACH EACH EACH EACH	\$20,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000	\$0 \$300,000 \$650,000 \$0 \$500,000	20.00% \$0 20.00% \$360,000 20.00% \$780,000 20.00% \$0 20.00% \$600,000	
4 1 2	CANTILEVER SIGNAL DOG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING	EACH EACH EACH EACH EACH	\$20,000 \$150,000 \$300,000 \$325,000 \$500,000	\$0 \$300,000 \$650,000 \$0	20.00% \$0 20.00% \$360,000 20.00% \$780,000 20.00% \$0	

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY 180 RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$500 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 50.00% 30.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$7,917,000 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$341,250
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY 19 LINE UTILITIES CROSSING TRACKS 300 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$215,000	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$61,750 \$279,500	
STATIONS						\$0
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SP SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 20.00% 20.00% 25.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$39,471,659

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

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$550 \$550 \$400 \$1100	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$127,500
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION PLATFORM STRUCTURES UPGRADE 1 CHARGE STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS 1 ELECTRIC BUS CHARGING STATION	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$25,000 \$50 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000 \$80,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 15.00% 15.00% 20.00% 10.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$27,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
RIGHT OF WAY						\$0
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW COMMERCIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$30 \$16 \$3,565,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$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

MMO-29B	SECOND MAIN TRACK CERES TO TURLOCK					
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS					\$16,084,578
60200 53300	C CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION DEARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) EMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (10 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS	AC AC SF BCY FCY FCY LF SF CY SF SF SF	\$2,500 \$5,000 \$8 \$25 \$50 \$10 \$25 \$400 \$100 \$40 \$35 \$60	\$94,550 \$0 \$1,505,000 \$0 \$533,000 \$0 \$0 \$0 \$0 \$1,151,360	40.00% \$132,370 30.00% \$0 30.00% \$1,956,500 30.00% \$692,900 30.00% \$0 50.00% \$0 25.00% \$0 20.00% \$0 30.00% \$0 21.00% \$0 21.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0	
	MSE WALL ROADWAY SOUND WALL 5 BOX CULVERT 5 BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT CIVIL WORK TYPE C	SF LF CY CY LF LF CY SF CY TONS CY LF	\$55 \$90 \$1,000 \$1,000 \$12 \$12 \$25 \$15 \$45 \$65 \$210 \$7,124	\$0 \$55,000 \$115,000 \$0 \$0 \$0 \$0 \$0 \$0	25.00% \$0 50.00% \$0 30.00% \$71,500 30.00% \$149,500 40.00% \$0 25.00% \$0 25.00% \$0 25.00% \$0 25.00% \$0 20.00% \$0 30.00% \$0	
518£	CIVIL WORK TYPE G STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING PERMANENT FENCING	SF SF EACH EACH EACH DAYS CY LF LF LF	\$1,500 \$15 \$300,000 \$100,000 \$4,500 \$1,200 \$400 \$30 \$50 \$1	\$7,782,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% \$10,116,600 40.00% \$0 20.00% \$0 20.00% \$0 20.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0 20.00% \$0 20.00% \$0	
81580	VEHICULAR FENCE GATES SILT FENCE and ORANGE FENCE EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING TRACK WORK	EACH LF SF SY LF LS EACH	\$2,000 \$15 \$7 \$15 \$30 \$100,000 \$2,500	\$0 \$1,223,700 \$0 \$0 \$0 \$0 \$0	20.00% \$0 20.00% \$1,468,440 30.00% \$0 30.00% \$0 30.00% \$0 30.00% \$0 20.00% \$0	\$24,197,250
	REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER NO.15 CROSSOVER NO.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#14) TURNOUT (#14) TURNOUT (#15 CURVE) TURNOUT (#20) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF LF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$75 \$800,000 \$1,000,000 \$220,000 \$220,000 \$250,000 \$325,000 \$400,000 \$400,000 \$400,000 \$100,000 \$100,000	\$0 \$0 \$0 \$20,595,000 \$0 \$427,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% \$0 10.00% \$0 20.00% \$0 20.00% \$0 21.00% \$23,684,250 25.00% \$513,000 30.00% \$0 20.00% \$0 1	
2	SIGNAL WORK PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL 1 DOG HOUSE (Signal House) 1 NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK 2 NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$200,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$800,000 \$80,000 \$0 \$600,000 \$0 \$2,500,000	20.00% \$0 20.00% \$960,000 20.00% \$96,000 20.00% \$0 20.00% \$720,000 20.00% \$0 20.00% \$0 20.00% \$0 20.00% \$0 20.00% \$0 20.00% \$0 30.00% \$0	\$4,776,000
	BRIDGE STRUCTURES					\$0

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

MMO-30	TURLOCK STATION						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$111,700
3.	5 CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION	AC AC SF	\$2,500 \$5,000 \$8	\$8,750 \$0 \$0	40.00% 30.00% 30.00%	\$12,250 \$0 \$0	
120	0 EARTHWORK COMMON	BCY	\$25	\$30,000	30.00%	\$39,000	
	EARTHWORK (EXCAVATION ROCK) EMBANKMENT	BCY FCY	\$50 \$10	\$0 \$0	30.00% 30.00%	\$0 \$0	
	BORROW REMOVE HOV LANE CONTROLS SYSTEM	FCY LF	\$25 \$400	\$0 \$0	30.00% 30.00%	\$0 \$0	
	RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0 \$0	
	STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL)	CY SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS MSE WALL ROADWAY	SF SF	\$70 \$55	\$0 \$0	30.00% 25.00%	\$0 \$0	
	SOUND WALL BOX CULVERT	LF CY	\$90 \$1,000	\$0 \$0	50.00% 30.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT)	LF LF	\$12 \$12	\$0 \$0	40.00% 40.00%	\$0 \$0	
	IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY	SF CY	\$15 \$45	\$0 \$0	25.00% 25.00%	\$0 \$0	
	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	TONS CY	\$65 \$210	\$0 \$0	25.00% 20.00%	\$0 \$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
	CIVIL WORK TYPE G STREET RESTORATIONS	SF SF	\$1,500 \$15	\$0 \$0	30.00% 40.00%	\$0 \$0	
	SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL	EACH	\$300,000	\$0	20.00%	\$0	
	STREET LIGHTING	EACH EACH	\$100,000 \$4,500	\$0 \$0	20.00% 20.00%	\$0 \$0	
	TRAFFIC CONTROL MINOR CONCRETE	DAYS CY	\$1,200 \$400	\$0 \$0	50.00% 30.00%	\$0 \$0	
	K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
	CONCRETE BARRIER STRIPPING	LF LF	\$50 \$1	\$0 \$0	30.00% 20.00%	\$0 \$0	
	PERMANENT FENCING VEHICULAR FENCE GATES	LF EACH	\$35 \$2,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	0 SILT FENCE and ORANGE FENCE	LF	\$15	\$30,000	30.00%	\$39,000	
	6 SWPP MANAGEMENT, OPERATION & COMPLIANCE D LANDSCAPING PERMANENT	MO SY	\$2,000 \$15	\$12,000 \$4,500	30.00% 30.00%	\$15,600 \$5,850	
	UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY	LF LS	\$30 \$100,000	\$0 \$0	30.00% 30.00%	\$0 \$0	
	YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0 \$0	
	TRACK WORK						\$0
	REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS	TF EACH	\$40 \$25,000	\$0 \$0	20.00% 10.00%	\$0 \$0	
	SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
	UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF TF	\$300 \$500	\$0 \$0	20.00% 15.00%	\$0 \$0	
	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF TF	\$450 \$750	\$0 \$0	25.00% 20.00%	\$0 \$0	
	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15 CROSSOVER No.20	EACH EACH	\$800,000 \$1,000,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	TURNOUT (#7) TURNOUT (#8)	EACH EACH	\$200,000 \$210,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
	TURNOUT (#11) TURNOUT (#14)	EACH EACH	\$250,000 \$325,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#15 CURVE) TURNOUT (#20)	EACH EACH	\$975,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
	DIAMOND CROSSING DERAIL	EACH EACH	\$500,000 \$100,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	BUMPING POST UPGRADE MAINTRACK TO CLASS 6	EACH TF	\$25,000 \$100	\$0 \$0	20.00% 30.00%	\$0 \$0	
	SIGNAL WORK						\$0
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL DOG HOUSE (Signal House)	EACH EACH	\$200,000 \$200,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH EACH	\$20,000 \$150,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
	NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING	EACH EACH	\$325,000 \$500,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
	NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH MILE	\$400,000 \$200,000	\$0 \$0	20.00% 30.00%	\$0 \$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 \$0	50.00%	\$0	
HIGHWAY BRIDGE STEEL.	SF	\$500	\$0 \$0		\$0	
				30.00%		
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						\$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		\$0 \$0			
		\$12		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						\$5,391,550
TVDE A CMALL INTERMODEL CTATION	EAGU	£40,000,000	*	00.000/	00	
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	\$730,000	30.00%	\$02,300	
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						\$1,375,000
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	
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,	VALUE	\$1	\$0	0.00%	\$0	
legal,appraisal,etc.)						
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	LF	\$12,000	\$0	30.00%	\$0	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA)	LF	Ψ12,000	\$0 \$0	30.00%	\$0	
		¢40.000				
SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF	\$12,000	\$0 \$0	30.00%	\$0 \$0	
TWIN BORE RESTORE (DIA)	LF		20	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						\$11,565,750

MMO-31A	SECOND MAIN TRACK TURLOCK TO LIVINGSTON						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$1,789,380
14.98	3 CLEAR & GRUB LIGHT	AC	\$2,500	\$37,450	40.00%	\$52,430	
	CLEAR & GRUB HEAVY DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
27500) EARTHWORK COMMON	BCY	\$25	\$687,500	30.00%	\$893,750	
4000	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
18200) EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$182,000 \$0	30.00% 30.00%	\$236,600 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
	RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION	SF CY	\$100	\$0 \$0	50.00%	\$0 \$0	
	RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$40 \$35	\$0 \$0	25.00% 20.00%	\$0 \$0	
	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
	SOIL NAIL WALLS MSE WALL ROADWAY	SF SF	\$70 \$55	\$0 \$0	30.00% 25.00%	\$0 \$0	
	SOUND WALL	LF	\$90	\$0	50.00%	\$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	BOX CULVERT DRAINAGE (DIA-INCH-FOOT)	CY LF	\$1,000 \$12	\$0 \$0	30.00% 40.00%	\$0 \$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) AGGREGATE BASE ROADWAY	SF CY	\$15 \$45	\$0 \$0	25.00% 25.00%	\$0 \$0	
	ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
	CONCRETE PAVEMENT	CY LF	\$210	\$0	20.00%	\$0	
	CIVIL WORK TYPE C CIVIL WORK TYPE G	SF	\$7,124 \$1,500	\$0 \$0	30.00% 30.00%	\$0 \$0	
	STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL	EACH EACH	\$300,000 \$100,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE K RAIL TEMPORARY	CY LF	\$400 \$30	\$0 \$0	30.00% 30.00%	\$0 \$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING PERMANENT FENCING	LF LF	\$1 \$35	\$0 \$0	20.00% 20.00%	\$0 \$0	
	VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
33700) SILT FENCE and ORANGE FENCE EROSION CONTROL TEMPORARY	LF SF	\$15 \$7	\$505,500 \$0	20.00% 30.00%	\$606,600 \$0	
	LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
	UTILITY RELOCATIONS	LF	\$30	\$0	30.00%	\$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK						\$10,624,440
530	REMOVE EXISTING TRACK	TF	\$40	\$21,200	20.00%	\$25,440	
	REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK	EACH	\$25,000	\$0	10.00%	\$0	
	UPGRADE EXISTING TRACK	TF TF	\$100 \$300	\$0 \$0	20.00% 20.00%	\$0 \$0	
16320	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$8,160,000	15.00%	\$9,384,000	
250	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF TF	\$450 \$750	\$0 \$187,500	25.00% 20.00%	\$0 \$225,000	
200	TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
	CROSSOVER No.15 CROSSOVER No.20	EACH EACH	\$800,000 \$1,000,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	TURNOUT (#7)	EACH	\$200,000	\$0 \$0	10.00%	\$0 \$0	
	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
	TURNOUT (#9) TURNOUT (#11)	EACH EACH	\$220,000 \$250,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE) TURNOUT (#20)	EACH EACH	\$975,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
2	2 TURNOUT (#24)	EACH	\$450,000	\$900,000	10.00%	\$990,000	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL BUMPING POST	EACH EACH	\$100,000 \$25,000	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
	SIGNAL WORK						\$4,224,000
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL	EACH EACH	\$100,000 \$200,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
6	6 DOG HOUSE (Signal House)	EACH	\$200,000	\$1,200,000	20.00%	\$1,440,000	
	NEW ELECTRIC SERVICE	EACH	\$20,000	\$120,000	20.00%	\$144,000	
1	NEW INTERMEDIATE SIGNALS SINGLE TRACK I NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH EACH	\$150,000 \$300,000	\$0 \$300,000	20.00% 20.00%	\$0 \$360,000	
	2 NEW TURNOUT SIGNAL	EACH	\$325,000	\$650,000	20.00%	\$780,000	
	NEW CROSSOVER SIGNALLING 5 NEW GRADE CROSSING SIGNALS	EACH EACH	\$500,000 \$250,000	\$0 \$1,250,000	20.00% 20.00%	\$0 \$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 STRUCTURES						\$0

MILE EACH LF EACH LF EACH SF SF SF EACH SF SPACES SPACES SPACES SPACES EACH EACH	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50 \$50 \$13,000,000 \$2,000 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$60,000 \$595,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00% 30.00% 20.00% 20.00% 20.00% 20.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$78,000 \$773,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$851,500 \$0
EACH LF EACH LF EACH SF SF EACH SF SPACES SPACES SPACES SPACES EACH	\$200,000 \$12 \$500,000 \$1,500,000 \$30 \$2,500 \$50 \$50 \$13,000,000 \$22,000 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$20,000 \$25 \$200 \$450,000	\$0 \$0 \$0 \$0 \$0 \$595,000 \$595,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% 30.00% 40.00% 40.00% 30.00% 30.00% 30.00% 50.00% 20.00% 20.00% 20.00% 25.00% 30.00% 25.00% 25.00% 30.00% 25.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$78,000 \$773,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0
EACH SF SF EACH SF SPACES SPACES SPACES SPACES SEPACES EACH	\$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 20.00% 20.00% 20.00% 25.00% 30.00% 30.00% 25.00% 25.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$ C
EACH SF SF EACH SF SPACES SPACES SPACES SPACES SEPACES EACH	\$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 20.00% 20.00% 20.00% 25.00% 30.00% 30.00% 25.00% 25.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	φοσο,σσο	\$0	25.00%	\$0	
					\$0
SF SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$14 \$16 \$1	\$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
					\$0
LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
					\$0
DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
					\$0
EACH	\$8,000,000	\$0	0.00%	\$0	
	SF SF SF SF VALUE	SF \$6 SF \$8 SF \$10 SF \$14 SF \$16 VALUE \$1 LF \$12,000 LF LF \$12,000 LF DAYS \$900 DAYS \$900 DAYS \$900	SF \$6 \$0 SF \$8 \$0 SF \$10 \$0 SF \$14 \$0 SF \$16 \$0 VALUE \$1 \$0 LF \$12,000 \$0 LF \$0 LF \$12,000 \$0 LF \$0 DAYS \$900 \$0 DAYS \$900 \$0 DAYS \$900 \$0	SF \$6 \$0 25.00% SF \$8 \$0 25.00% SF \$10 \$0 25.00% SF \$11 \$0 25.00% SF \$14 \$0 25.00% SF \$14 \$0 25.00% VALUE \$1 \$0 0.00% LF \$12,000 \$0 30.00% LF \$0 30.00% LF \$0 30.00% LF \$12,000 \$0 30.00% LF \$12,000 \$0 30.00% LF \$0 30.00% LF \$12,000 \$0 30.00	SF \$5 \$0 25.00% \$0 SF \$6 \$0 25.00% \$0 SF \$8 \$0 25.00% \$0 SF \$10 \$0 25.00% \$0 SF \$114 \$0 25.00% \$0 SF \$14 \$0 25.00% \$0 SF \$14 \$0 25.00% \$0 SF \$16 \$0 25.00% \$0 VALUE \$1 \$0 0.00% \$0 LF \$12,000 \$0 30.00% \$0 LF \$0 30.00% \$0 LF \$12,000 \$0 30.00% \$0 LF \$0 30.00% \$0 LF \$12,000 \$0 30.00% \$0 DAYS \$900 \$0 20.00% \$0 DAYS \$900 \$0 20.00% \$0 DAYS \$900 \$0 20.00% \$0

DESCRIPTION	IO-31B	SECOND MAIN TRACK TURLOCK TO LIVINGSTON						
3-3-7-CLEAR A GRISE LIGHT		DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTA WORK ELEM
22 CEARS GRUB HEAVY		CIVIL WORKS						\$10,019,30
DEBOLITION SF 38 80 50 500 5								
SETTINGENER (PACAMITON ROCK)								
EATHWORK (EXCAVATION ROCK) SEOD EMBANGHETT FOR \$10 \$500, 00 \$300, 00 \$760, 50 \$500, 00 \$760, 50 \$500, 00 \$760, 50 \$500, 00 \$760, 50 \$500, 00 \$760, 50 \$500, 00 \$760, 50 \$760								
BORROW REMOVE TO LINEAR CONTROLS SYSTEM REMOVE TO LINEAR CONTROLS SYSTEM REMOVE TO LINEAR CONTROLS SYSTEM REMOVE TO SERVICE STANDAY LINE 500 STRICTURE EXCAVATIVALE 500 FOR THE TOP STRICTURE EXCAVATIVALE 500 RETAINING WALLS (10 TO DETET TALL) SET SISS 500 RETAINING WALLS (10 TO DETET TALL) SET SISS 500 RETAINING WALLS (10 TO DETET TALL) SET SISS 500 SERVICE STANDAY SET SISS 500				\$50	\$0	30.00%	\$0	
REMOVE HOV LANE CONTROLS SYSTEM RECOMPRICED TREEVAY LANE 800 RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RETAINING WALLS (0.70 OF SET TALL) SET SUBJECT RECOVERY CONTROLS SYSTEM RECOVERY SYSTEM RECOVERY CONTROLS SYSTEM RECOVERY SYSTEM RECO								
RECONSTRUCT PREVIOUS AND SOURCE STATULUS STATUTURE EXCAVATION (S. S. S								
RETANING WALLS (OT DO FEET TALL) SE STATEMENT WALLS (OT DO FEET TALL)								
RETAINING WALLS (I) TO 20 FEET TALL) SP								
SAGE SOIL NAIL WALLS SF \$70 \$269,220 30,00% \$340,986		,						
SOUND WALL 28 BOX CULVERT C								
28 BOX CULVERT								
BOX CULVERT 1728 DRAINGE (DIA-MICH-POOT) 1								
DRAINAGE (DIA-NOCH-FOOT)								
MPORTED 60RROW ROADWAY								
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGREECATE BASE ROADWAY ASPHALT CONCRETE ROADWAY ASPHALT CONCRETE ROADWAY TONS SIGNALED STREET TRAFFIC CONTROL EACH SIGNALED STREET TRAFFIC CONTROL SIGNALED STREET TRAFFIC CONTROL EACH SIGNALED STREET TRAFFIC CONTROL EACH SIGNALED STREET		· · · · · · · · · · · · · · · · · · ·						
AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY ASPHALT CONCRETE ROADWAY TONS \$55 505 25.00% 505 CONCRETTE PAYIMENT CY \$210 \$55 CONCRETTE PAYIMENT CY \$210 \$55 S55 S57 S57 S57 S57 S57 S57								
CONCRETE PAYMENT CY \$210 \$0 20,00% \$0 270 CIVIL WORK TYPE G SF \$1,500 \$2,051,000 30,00% \$2,500,524 134 CIVIL WORK TYPE G SF \$1,500 \$2,051,000 30,00% \$2,500,524 135 CIVIL WORK TYPE G SF \$1,500 \$2,051,000 30,00% \$2,600,524 STREET RESTORATION MODIFIED TRAFFIC SIGNAL EACH STREET LIGHTING EACH STREET LIGHTING EACH STREET LIGHTING TRAFFIC CONTROL DAYS STREET LIGHTING TRAFFIC CONTROL TRAFFIC CONTROL TRAFFIC CONTROL DAYS STREET LIGHTING TRAFFIC CONTROL TRAFFIC CONTROL DAYS STREET LIGHTING TRAFFIC CONTROL T		, , , , ,						
270 CIVIL WORK TYPE C 18								
1354 CIVIL_WORK TYPE G STRETE RSTORATIONS SIGNALLED STREET TRAFFIC CONTROL EACH MODIFIED TRAFFIC SIGNAL EACH STRENGE TRAFFIC SIGNAL EACH TRAFFIC CONTROL MINOR CONCRETE CV SA00 S0 S								
SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL EACH \$4,000 \$0 20.00% \$0 STREET LIGHTING EACH \$4,500 \$0 20.00% \$0 STREET LIGHTING EACH \$4,500 \$0 20.00% \$0 MINOR CONCRETE CY \$400 \$0 30 20.00% \$0 MINOR CONCRETE CY \$400 \$0 30 30.00% \$0 MINOR CONCRETE WITH \$100,000 \$0 20.00% \$0 MINOR CONCRETE WITH \$10 \$0 30 30.00% \$0 CONCRETE BARRIER LF \$50 \$0 30 30.00% \$0 STRIPPING LF \$11 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 30.00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 20.00% \$0 VEHICULAR FENCE GA								
MODIFIED TRAFFIC SIGNAL								
STREET LIGHTING								
MINOR CONCRETE K RAIL TEMPORARY LF \$30 \$0 \$0,00% \$0 CONCRETE BARRIER LF \$50 \$0 \$0,00% \$0 STRIPPING LF \$1 \$0 \$0 \$0,00% \$0 PERMANENT PENCING LF \$31 \$0 \$0 \$0,00% \$0 PERMANENT PENCING LF \$35 \$0 \$0,00% \$0 PERMANENT PENCING LF \$35 \$0 \$0,00% \$0 PERMANENT PENCING LF \$35 \$0 \$0,00% \$0 PENCING PENCING LF \$35 \$1,196,100 \$0 \$1,435,200 ENGINE PENCING PENCING LF \$30 \$0 \$0,00% \$0 PENCING PENCING PENCING LANDSCAPING PERMANENT LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$30 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$72,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$72,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,00% \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0 \$0 \$0,000 \$0 PENCING PERMANENT WATER SUPPLY LF \$40 \$10,000 \$0								
K RAIL TEMPORARY CONCRETE BARRIER LF \$50 \$0 \$0 \$0,00% \$0 STRIPPING LF \$1 \$0 20,00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 30,00% \$0 VEHICULAR FENCE GATES VEHICLER FENCE GATES			DAYS	\$1,200	\$0	50.00%	\$0	
CONCRETE BARRIER LF \$1 \$0 0 30 00% \$0 PERMANENT FROING LF \$1 \$0 2000% \$0 PERMANENT FROING LF \$31 \$0 2000% \$0 PERMANENT FROING LF \$35 \$0 2000% \$0 PERMANENT FROING LF \$35 \$1,196,100 2000% \$1,435,320 PERMANENT FROING LF \$17 \$19 \$1,196,100 2000% \$1,435,320 PERMANENT FROING LF \$17 \$19 \$1,196,100 2000% \$1,435,320 PERMANENT FROING LF \$18 \$1,196,100 2000% \$1,435,320 PERMANENT FROING LF \$19 \$17 \$10 30 30,00% \$0 PERMANENT WATER SUPPLY LS \$100 EVELOP PERMANENT WATER SUPPLY LF \$100 EVELOP PERMANENT WATER SUPPLY								
STRIPPING PERMANENT FENCING LF S35 S0 20.00% S0 VEHICULAR FENCE GATES LF S15 S15 S10,000 S0 20.00% S0 VEHICULAR FENCE GATES LF S15 S17 S0 30.00% S1,435,320 ERGOSION CONTROL TEMPORARY SF S7 S17 S17 S19 LANDSCAPING PERMANENT SY S15 S0 30.00% S0 UTILITY RELOCATIONS LF S30 S0 S0 S0,000% S0 UTILITY RELOCATIONS LF S30 S0								
VEHICULAR FENCE ACTES (FAC) (FAC) (FAC) (FENCE) (FON			LF					
18794 SILT FENCE and ORANGE FENCE LF								
EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT SY UTILITY RELOCATIONS LF S30 030.00% S0 UTILITY RELOCATIONS LF S30 030.00% S0 040.00% S0 SIMIPT EXISTING TRACK TF S100 S0 S								
UTILITY RELOCATIONS								
DEVELOP PERMANENT WATER SUPPLY								
TRACK WORK TRACK WORK TRACK WORK TRACK WORK TF \$40 \$72,000 20,00% \$86,400 Shift Existing Track REMOVE EXISTING TRACK SHIFT EXISTIN								
1800 REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS THE STORM SOLUTION SOLUTIO								
REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK TF \$1100 \$0 20.09% \$0 UPGRADE EXISTING TRACK TF \$300 \$0 20.09% \$0 40870 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$20,435,000 \$0 20.09% \$0 20.00% \$0 20.09% \$0 20.00% \$0 20.09% \$0 20.00% \$0 20.09% \$0 20.00% \$0 20.09% \$0 20.00% \$0		TRACK WORK						\$24,334
SHIFT EXISTING TRACK UPGRADE EXISTING TRACK TF \$300 \$0 20.00% \$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 22.00 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$165,000 20.00% \$190,000 TRACK PARELS CROSSOVER No.15 EACH \$500,000 \$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 (#19) 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 (#14) EACH \$325,000 \$0 10.00% \$0 TURNOUT (#16) EACH \$325,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$450,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$450,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$325,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$450,000 \$0 10.00% \$0 TURNOUT (#20)								
UPGRADE EXISTING TRACK 40870 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$20,435,000 \$15,00% \$23,500,250 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$450 \$0 \$25,00% \$0 \$20,435,000 \$15,00% \$23,500,250 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 \$25,00% \$0 \$25,00% \$0 \$20,00% \$0 \$								
### 40970 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)								
220 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	40870							
TRACK PANELS CROSSOVER No.15 CROSSOVER No.15 CROSSOVER No.20 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 \$220,000 \$0 10,00% \$0 TURNOUT (#9) EACH \$220,000 \$0 10,00% \$0 TURNOUT (#11) EACH \$220,000 \$0 10,00% \$0 TURNOUT (#11) EACH \$250,000 \$500,000 10,00% \$550,000 TURNOUT (#14) EACH \$325,000 \$0 10,00% \$550,000 TURNOUT (#14) EACH \$325,000 \$0 10,00% \$550,000 TURNOUT (#20) EACH \$375,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$400,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$400,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$450,000 \$0 10,00% \$0 DIAMOND CROSSING EACH \$450,000 \$0 10,00% \$0 DERAIL BUMPING POST EACH \$100,000 \$0 10,00% \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30,00% \$0 SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$200,000 \$1,000,000 \$0,000 \$0 SO 20,00% \$0 SO 5 DOG HOUSE (Signal House) EACH \$200,000 \$1,000,000 \$0,000 \$0 SO 5 NEW ELECTRIC SERVICE EACH \$200,000 \$1,000,000 \$0 20,00% \$1,200,000 NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0 20,00% \$10,000 SO 20,00% \$120,000 NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$325,000 \$650,000 20,00% \$720,000 NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$325,000 \$650,000 20,00% \$780,000 SO 20,00% \$780,000 NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING EACH \$325,000 \$650,000 20,00% \$780,000 NEW GRADE CROSSING SIGNALLS EACH \$325,000 \$650,000 20,00% \$780,000 NEW GRADE CROSSING SIGNALS EACH \$325,000 \$650,000 20,00% \$780,000 NEW GRADE CROSSING SIGNALS EACH \$325,000 \$650,000 20,00% \$780,000 NEW GRADE CROSSING SIGNALS EACH \$200,000 \$750,000 \$0 20,00% \$780,000 NEW GRADE CROSSING SIGNALS EACH \$250,000 \$750,000 \$0 20,00% \$780,000 NEW GRADE CROSSING SIGNALS EACH \$250,000 \$750,000 \$0 20,00% \$0 00,000 UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30,000 \$0 20,00% \$0 00,000 NEW GRADE CROSSING SIGNALS EACH \$250,000 \$750,000 \$0 20,00% \$0 00,000 NEW GRADE CROSSING SIGNALS EACH \$250,000 \$750,000 \$0 20,00% \$0 00,000 NEW GRADE CROSSING SIGNALS EACH \$250,000 \$750,000 \$0 20,00% \$0 00,000 NEW GRADE CROSSING SIGNALS EACH \$250,000					* -			
CROSSOVER No.15 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 EACH \$250,000 \$500,000 10.00% \$550,000 TURNOUT (#11) EACH \$250,000 \$500,000 10.00% \$550,000 TURNOUT (#15 CURVE) EACH \$325,000 \$0 10.00% \$0 EACH \$400,000 \$0 10.00% \$0 EACH \$400,000 \$0 10.00% \$0 EACH \$400,000 \$0 10.00% \$0 EACH \$450,000 \$0 10.00% \$0 EACH \$450,000 \$0 10.00% \$0 EACH \$500,000 \$0 20.00% \$1,200,000 EACH EACH \$500,000 \$1,000,000 20.00% \$1,200,000 EACH EACH \$500,000 \$0 20.00% \$1,200,000 EACH								
TURNOUT (#7)						20.00%		
TURNOUT (#8)								
TURNOUT (#9)								
TURNOUT (#14)								
TURNOUT (#15 CURVE) TURNOUT (#20) EACH \$975,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$400,000 \$0 10.00% \$0 DIAMOND CROSSING DIAMOND CROSSING EACH \$500,000 \$0 10.00% \$0 DERAIL BUMPING POST EACH \$100,000 \$0 10.00% \$0 DERAIL BUMPING POST EACH \$25,000 \$0 20.00% \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$0 SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$100,000 \$0 20.00% \$0 CANTILEVER SIGNAL EACH \$200,000 \$0 20.00% \$0 SO		, ,						
TURNOUT (#20)								
DIAMOND CROSSING								
DERAIL BUMPING POST BUMPING POST UPGRADE MAINTRACK TO CLASS 6 EACH \$100,000 \$0 \$0 \$20.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 <		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
BUMPING POST								
SIGNAL WORK SIGNALS								
PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL 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 \$200,000 \$100,000 20.00% \$120,000 NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0 20.00% \$0 2 NEW TURNOUT SIGNAL EACH \$300,000 \$600,000 20.00% \$720,000 2 NEW TURNOUT SIGNAL EACH \$325,000 \$650,000 20.00% \$780,000 NEW CROSSOVER SIGNALING EACH \$500,000 \$0 20.00% \$0 3 NEW GRADE CROSSING SIGNALS EACH \$500,000 \$750,000 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS EACH \$400,000 \$0 20.00% \$0 EACH \$500,000 \$0 20.00% \$0 EACH \$500,000 \$0 20.00% \$0 EACH \$500,000 \$750,000 20.00% \$0 EACH \$500,000 \$0 \$		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
CANTILEVER SIGNAL		SIGNAL WORK						\$3,720
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 2 NEW TURNOUT SIGNAL EACH \$325,000 \$650,000 20.00% \$780,000 NEW CROSSOVER SIGNALING EACH \$500,000 \$0 20.00% \$0 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								
5 NEW ELECTRIC SERVICE								
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 2 NEW TURNOUT SIGNAL EACH \$325,000 \$650,000 20.00% \$780,000 NEW CROSSOVER SIGNALLING EACH \$500,000 \$0 20.00% \$0 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								
2 NEW TURNOUT SIGNAL EACH \$325,000 \$650,000 20.00% \$780,000 NEW CROSSOVER SIGNALING EACH \$500,000 \$0 20.00% \$0 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		NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
NEW CROSSOVER SIGNALLING EACH \$500,000 \$0 20.00% \$0 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								
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								
UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30.00% \$0	3	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$750,000	20.00%	\$900,000	
DRIDGE OTRUGTURES								
BRIDGE STRUCTURES \$14,85		OFGRADE SIGNALS TO CLASS 6	IVIILE	\$∠00,000	\$0	30.00%	\$0	
		BRIDGE STRUCTURES						\$14,857

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

1O-32A	LIVINGSTON STATION						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL
	CIVIL WORKS						\$150,700
	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
	CLEAR & GRUB HEAVY DEMOLITION	AC SF	\$5,000 \$8	\$0 \$0	30.00% 30.00%	\$0 \$0	
2400	EARTHWORK COMMON	BCY	\$25	\$60,000	30.00%	\$78,000	
	EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
	EMBANKMENT BORROW	FCY FCY	\$10 \$25	\$0 \$0	30.00%	\$0 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0 \$0	30.00% 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) RETAINING WALLS (10 TO 20 FEET TALL)	SF SF	\$35 \$60	\$0 \$0	20.00% 30.00%	\$0 \$0	
	SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
	MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
	SOUND WALL BOX CULVERT	LF CY	\$90 \$1,000	\$0 \$0	50.00% 30.00%	\$0 \$0	
	BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
	DRAINAGE (DIA INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
	DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY	LF CY	\$12 \$25	\$0 \$0	40.00% 25.00%	\$0 \$0	
	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$0	25.00%	\$0	
	AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
	ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT	TONS CY	\$65 \$210	\$0 \$0	25.00% 20.00%	\$0 \$0	
	CIVIL WORK TYPE C	LF	\$7,124	\$0 \$0	30.00%	\$0	
	CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
	STREET RESTORATIONS	SF	\$15	\$0 \$0	40.00%	\$0	
	SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL	EACH EACH	\$300,000 \$100,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
	MINOR CONCRETE K RAIL TEMPORARY	CY LF	\$400 \$30	\$0 \$0	30.00% 30.00%	\$0 \$0	
	CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
	STRIPPING	LF	\$1	\$0	20.00%	\$0	
	PERMANENT FENCING VEHICULAR FENCE GATES	LF EACH	\$35 \$2,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	SILT FENCE and ORANGE FENCE	LF	\$15	\$30,000	30.00%	\$39,000	
	SWPP MANAGEMENT, OPERATION & COMPLIANCE	MO	\$2,000	\$12,000	30.00%	\$15,600	
	LANDSCAPING PERMANENT UTILITY RELOCATIONS	SY LF	\$15 \$30	\$4,500 \$0	30.00% 30.00%	\$5,850 \$0	
	DEVELOP PERMANENT WATER SUPPLY YARD LIGHTING	LS EACH	\$100,000 \$2,500	\$0 \$0	30.00% 20.00%	\$0 \$0	
	TRACK WORK	2,1011	Ψ2,000	ΨΟ	20.0070	Ψ	
	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 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF TF	\$300 \$500	\$0 \$0	20.00% 15.00%	\$0 \$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 CROSSOVER No.15	LF EACH	\$75 \$800.000	\$0 \$0	30.00% 20.00%	\$0 \$0	
	CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
	TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
	TURNOUT (#8) TURNOUT (#9)	EACH EACH	\$210,000 \$220,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
	TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
	TURNOUT (#15 CURVE) TURNOUT (#20)	EACH EACH	\$975,000 \$400,000	\$0 \$0	10.00% 10.00%	\$0 \$0	
	TURNOUT (#24)	EACH	\$450,000	\$0 \$0	10.00%	\$0	
	DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
	DERAIL BUMPING POST	EACH EACH	\$100,000 \$25,000	\$0 \$0	10.00% 20.00%	\$0 \$0	
	UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
	SIGNAL WORK						
	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
	CANTILEVER SIGNAL	EACH	\$200,000	\$0 \$0	20.00%	\$0 \$0	
	DOG HOUSE (Signal House) NEW ELECTRIC SERVICE	EACH EACH	\$200,000 \$20,000	\$0 \$0	20.00% 20.00%	\$0 \$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 \$0	
	NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING	EACH EACH	\$325,000 \$500,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0 \$0	20.00%	\$0 \$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						
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POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM EACH \$20,00,000 \$0 25.00% \$0 TRAIN CONTROL SYSTEM EACH \$200,000 \$0 30.00% \$0 TRAIN CONTROL SYSTEM EACH \$200,000 \$0 30.00% \$0 TRAIN CONTROL DIGITAL CBOSS EACH \$500,000 \$0 40.00% \$0 COMMERCIAL ELECTRICAL SERVICE EACH \$500,000 \$0 30.00% \$0 COMMERCIAL ELECTRICAL SERVICE EACH \$50,000 \$0 25.00% \$0 LINE UTILITIES WITHIN TRACKWAY LF \$30 \$0.00% \$0 LINE UTILITIES CROSSING TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$2,500 \$0 30.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$30,00,000 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$30,00,000 \$0 50.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$30,00,000 \$0 50.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$30,00,000 \$0 50.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$30,00,000 \$0 50.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$50,000 \$0 50.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$50,000 \$0 20.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$50,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS EACH \$450,000 \$0 25.00% \$0 LINE U	RAILROAD SHORT BRIDGE CONCRETE SP \$400 RAILROAD BRIDGE STEEL SP \$500 30.00% 30.00							
HIGHWAY BRIDGE STEEL	HIGHWAY BRIDGE STEEL SF \$500 S0 30.00% \$0 TRESTLE BRIDGE STEEL SF \$5500 \$0 30.00% \$0 TRESTLE BRIDGE STEEL SF \$5500 \$0 30.00% \$0 DEPOSITION BRIDGE STEEL SF \$400 \$0 \$0 30.00% \$0 DEPOSITION BRIDGE STEEL SF \$400 \$0 \$0 30.00% \$0 DEPOSITION STRUCTURE SET \$1 \$100.000 \$0 \$2.00% \$0 DEPOSITION STRUCTURE SET \$1 \$100.000 \$0 DEPOSITION SET \$1 \$100.0000 \$1 \$100.000 \$1 \$100.000 \$1 \$100.000 \$1 \$100.000 \$1 \$100.000	RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL	SF SF SF	\$400 \$500 \$500	\$0 \$0 \$0	30.00% 30.00% 30.00%	\$0 \$0 \$0	
TRESTLE BRIDGE STELL PEDSTRIAN BRIDGE PEDSTRIAN BRIDGE SF \$400 \$0 30 00% \$0 UNDERPASS STRUCTURE CV \$750 \$0 25,00% \$0 UNDERPASS STRUCTURE POSITIVE TRAIN CONTROL TRAIN CONTROL. POSITIVE TRAIN CONTROL MILE S2,000,000 \$0 25,00% \$0 UNDERPASS STRUCTURE SITE STRUCTURE UNDERPASS LF \$150,000 \$0 30,00% \$0 UNDERPASS STRUCTURE UNDERPASS COMMERÇAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LF \$350 \$0 30,00% \$0 UNDERPASS STRUCTURE UNDERPASS STRUCTURE SITE SITE SITE SITE SITE SITE SITE SIT	TRESTLE BRIDGE STEEL SF \$500 \$0 30.00% \$0 50 PEDESTRIAN BRIDGE SF \$4400 \$0 30.00% \$0 50 PEDESTRIAN BRIDGE SF \$4400 \$0 25.00% \$0 10.00% \$0							
BARRIER RAIL PERMANENT	BARRIER RAIL PERMANENT LF \$100 \$0 25.00% \$0 \$0 \$0 \$0 \$0 \$0 \$0							
UNDERPASS STRUCTURE TRAIN CONTROL TRAIN CONTROL POSITIVE TRAIN CONTROL TRAIN CONTROL POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM EACH \$200,000 \$0 \$0 \$0.00% \$0 TRAIN CONTROL SYSTEM TRAIN CONTROL SYSTEM TRAIN CONTROL BIGITAL CBOSS EACH \$500,000 \$0 \$0.00% \$0 COMPUTER TRAFFIC MANAGEMENT LS \$150,000 \$0 \$0.00% \$0 COMPUTER TRAFFIC MANAGEMENT LINE UTILITIES WITHIN TRACKOVAY LINE UTILITIES WITHIN TRACKOVAY LINE UTILITIES FIBER OPIC PARALLEL TO TRACKS EACH \$2,500 \$0 \$0.00% \$0 COMPUTER SYSTEM TYPE A SMALL INTERMODEL STATION TYPE A SMALL INTERMODEL STATION TYPE A SMALL INTERMODEL STATION TYPE A LARGE INTERMODEL STATION EACH \$32,000,000 \$0 COS TATATON CANOPY TYPUCTURES UTILITIES FIBER OPIC TURES UPGRADE SF \$200 \$3,000,000 \$1,000% \$0 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$200 \$3,000,000 \$1,000% \$5,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$1,000% \$50,000 COS TATATON CANOPY TYPUCTURES UPGRADE SF \$50 \$750,000 \$50,000 \$50,000 \$50,000 COS TATATON CANOPY TYPUCTURES CONTROLL SUBJECT OR TOTAL CANOPY TOTAL CONTROLL CONTR	UNDERPRASS STRUCTURES TRAIN CONTROL **TRAIN CONTROL** **POSITIVE TRAIN CONTROL** **POSITIVE TRAIN CONTROL** **POSITIVE TRAIN CONTROL O							
POSITIVE TRAIN CONTROL TRAIN CONTROL TRAIN CONTROL TRAIN CONTROL SYSTEM EACH \$20,000 \$0 \$0,000 \$0 \$0,000 \$0 \$0,000 \$0 \$0 \$0,000 \$0 \$0 \$0,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM EACH \$20,000 \$0 \$30,00% \$0 TRAIN CONTROL CABLING LF \$12 \$0 \$30,00% \$0 TRAIN CONTROL CABLING COMMERCIAL ELECTROL SERVICE LEGAL ELECTROL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES CROSSING TRACKS LINE UTILITIES CROSS							
TRAIN CONTROL SYSTEM	TRAIN CONTROL SYSTEM	TRAIN CONTROL						\$6
TRAIN CONTROL CABLING	TRAIN CONTROL CABLING							
TRAIN CONTROL DIGITAL CBOSS EACH \$500,000 \$0 40,00% \$0 \$0 \$0 \$0 \$0 \$0 \$0	TRAIN CONTROL DIGITAL CBOSS							
COMMUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE EACH \$50,000 \$0 25.00% \$0 LINE UTILITIES WITHIN TRACKWAY LF \$30 \$0 30.00% \$0 LINE UTILITIES WITHIN TRACKWAY LF \$30 \$0 30.00% \$0 LINE UTILITIES CROSSING TRACKS LINE UTILITIES CROSSING TRACKS LINE UTILITIES PRIBER OPTIC PARALLEL TO TRACKS LF \$50 \$0 30.00% \$0 STATIONS TYPE A SMALL INTERMODEL STATION FOR KLARGE MTERMODEL STATION FOR KLARGE MTERMODEL STATION FOR KLARGE MTERMODEL STATION FACH STATION SERVICES SERVICE STATION SERVICES SERVICE STATION PRIMARY ELECTRICAL SERVICE EACH \$32,000,000 \$0 50 50,000% \$0 50 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 15.00% \$51,750 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 15.00% \$66,200 INSPECTION PIT SERVICES SERVICE SERVICES SAVOR SERVICES SAVOR SERVICES SPACES \$300 \$50 30.00% \$0 SID STATION AMENINIES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SPACES \$300 \$52,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SPACES \$20,000 \$50 \$25,000% \$0 SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SUS ANDREAD SERVICES SAVOR SERVICES SAVOR SERVICES SUS ANDREAD SERVICES SAVOR SER	COMPUTER TRAFFIC MANAGEMENT							
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LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLELTO TRACKS LF \$5.0 STATIONS STATIONS TYPE A SMALL INTERMODEL STATION EACH \$13,000,000 \$0 20,00% \$0 1500.00 STATION BLATEORY TYPE K LANGE INTERMODEL STATION EACH \$32,000,000 \$0 50,00% \$0 1500.00 STATION PLATFORM STRUCTURES NEW \$F SF \$200 \$3,000,000 \$15,00% \$3,450,000 600 STATION PLATFORM STRUCTURES NEW \$F SF \$7.5 \$45,000 \$15,00% \$0,501,750 STATION PLATFORM STRUCTURES UPGRADE \$F STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$0,501,750 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,000 \$10,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$42,000 \$0,00% \$50,000 1 STATION PRIMARY ELECTRICAL SERVICE EACH \$50,000 \$50,00% \$0,000 PARKING STRUCTURES SPACES \$20,000 \$0,00% \$50,000 214 PARKING LOTS EACH \$50,000 \$0,00% \$0,000 214 PARKING LOTS EACH \$50,000 \$0,00% \$0,000 \$0,000 214 PARKING LOT LICHTING SPACES \$20,000 \$0,00% \$0,000 ESCALATOR EACH \$50,000 \$0,000 \$0,000 \$0,000 \$0,000 ESCALATOR EACH \$50,000 \$	LINE UTILITIES GROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS STATIONS STATIONS TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 15000 STATION PLATOGET STRUCTURES NEW SF \$200 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,00000 \$30,000000 \$30,000000 \$30,000000 \$30,000000 \$30,000000 \$30,000000 \$30,000000 \$30,00000 \$30,00000 \$30,000000 \$30,000000 \$30,0000000 \$30,00000000 \$30,000000000 \$30,0000000000							
STATIONS	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS LF S50 S0 30.00% S0							
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TYPE K LARGE INTERMODEL STATION	TYPE K LARGE INTERMODEL STATION	STATIONS						\$5,373,69
15000 STATION PLATFORM STRUCTURES NEW SF \$200 \$3,000,000 \$3,400,000 \$3,460,000 \$3,	15000 STATION PLATFORM STRUCTURES NEW SF \$200 \$3,000.000 15,00% \$3,450.000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.0000 \$3,000.000							
600 STATION CANOPY SF	600 STATION CANOPY SF							
STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY LECTRICAL SERVICE EACH 1 SSO,000 S	STATION PLATFORM STRUCTURES UPGRADE SF \$300 \$0 20.00% \$50							
15000 STATION AMENITIES SF	15000 STATION AMENITIES			\$300	\$0	20.00%		
INSPECTION PIT	INSPECTION PIT							
214 PARKING LOTS	214 PARKING LOTS PARKING STRUCTURES SPACES SA 30.000 S0 25.00% S0 BUS LANE AND UNLOADING SF \$25 S0 25.00% S0 ELEVATORS ELEVATORS ESCALATOR EACH \$450,000 S0 25.00% S0 ESCALATOR EACH \$50,000 S0 25.00% S0 ESCALATOR EACH \$5 \$0 25.00% S0 ESCALATOR EACH \$5 \$10 \$0 25.00% S0 EACH \$6 \$0 25.0							
PARKING STRUCTURES SPACES \$20,000 \$0 25,00% \$0 \$0 \$0 \$0 \$0 \$0 \$0	PARKING STRUCTURES BUS LANG AND OUNLOADING SF \$25 \$0 25.00% \$0 214 PARKING LOT LIGHTING ELEVATORS ELEVATORS ESCALATOR EROUNDONLY RIGHT OF WAY ROW LAND ONLY ROW GRICULTURAL SF \$5 \$0 25.00% \$0 25.00% \$0 80 81.812,50 ROW GROW AGRICULTURAL SF \$5 \$0 25.00% \$0 80 800 80 25.00% \$0 80 800 800 25.00% \$0 80 800 800 25.00% \$0 800 800 800 800 80 800 800 800 800 800							
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ELEVATORS ESCALATOR EACH \$450,000 \$0 25,00% \$0 ESCALATOR EACH \$300,000 ESCALATOR EACH	ELEVATORS EACH \$450,000 \$0 25.00% \$0 ESCALATOR EACH \$300,000 \$0 25.00% \$0 ESCALATOR EACH \$300,000 \$0 25.00% \$0 \$0 \$1.812,50 \$							
RIGHT OF WAY	RIGHT OF WAY RIGHT OF WAY ROW LAND ONLY ROW AGRICULTURAL SF SF S5 S0 25,00% S0 ROW ORCHARDS SF S6 S0 25,00% S0 S000 ROW PAVED AREAS ROW RESIDENTIAL AREA SF SF S10 S0 S000 ROW PAVED AREAS ROW RESIDENTIAL AREA SF S14 SF S16 S0 SE SF S16 S0 SE SE S0 SE S0							
ROW LAND ONLY	ROW LAND ONLY ROW AGRICULTURAL SF \$5 \$0 25.00% \$0 ROW AGRICULTURAL SF \$5 \$0 25.00% \$0 ROW ORCHARDS SF \$6 \$0 25.00% \$0 ROW ORCHARDS SF \$6 \$0 25.00% \$0 ROW RESIDENTIAL AREA SF \$10 \$0 25.00% \$350,000 ROW RESIDENTIAL AREA SF \$10 \$0 25.00% \$350,000 ROW RESIDENTIAL AREA SF \$10 \$0 25.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 25.00% \$525,000 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 \$0 30.00% \$0 ROW HEAVY INDUSTRIAL AREA SF \$10 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0							
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ROW ORCHARDS SF \$6	ROW ORCHARDS ROW PAYED AREAS SF \$8 \$280,000 25,00% \$0 35000 ROW PAYED AREAS SF \$10 \$0 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, VALUE \$937,500 \$937,500 \$0 BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 \$0 **TUNNEL CONSTRUCTION** **TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) LF \$0 30,00% \$0 SINGLE BORE RESTORE (DIA) LF \$0 30,00% \$0 SINGLE BORE RESTORE (DIA) LF \$0 30,00% \$0 **TWIN BORE RESTORE (DIA) LF \$0 30,00% \$0 **GENERAL SUPPORT ITEMS** **BART INTERFACE DAYS \$900 \$0 20,00% \$0 **ROW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **CALTRANS INTERFACE WORK DAYS \$900 \$0 20,00% \$0 **ROW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **ROW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$14,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$14,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$420,000 \$0 30,00% \$0 **SOW HEAVY INDUSTRIAL AREA SF \$14 \$14,000 \$0 30,00% \$0 **SOW H							
35000 ROW PAVED AREAS ROW RESIDENTIAL AREA SF \$10 \$0 25.00% \$350,000 ROW RESIDENTIAL AREA SF \$110 \$0 25.00% \$0 30000 ROW LIGHT INDUSTRIAL AREA SF \$144 \$420,000 25.00% \$525,000 ROW LIGHT INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 80 80 80 80 80 SINCESS RELOCATIONS (Value of business, relocation,goodwill, VALUE) 8937,500 \$1 legal,appraisal,etc.) **TUNNEL CONSTRUCTION** **TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) LF \$12,000 SINGLE BORE RESTORE (DIA) LF \$12,000 S0 30.00% S0 SINGLE BORE RESTORE (DIA) LF \$12,000 S0 30.00% S0 TWIN BORE RESTORE (DIA) LF \$12,000 S0 30.00% S0 ROBERAL SUPPORT ITEMS **ROLLING STOCK & CAPITAL INVESTMENTS** **SHORT STOCK & STOCK	35000 ROW PAVED AREAS							
ROW RESIDENTIAL AREA	ROW RESIDENTIAL AREA SF \$10 \$0 25.00% \$0 30000 ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 \$0 1 legal,appraisal,etc.) TUNNEL CONSTRUCTION TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) LF \$12,000 \$0 30.00% \$0 SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) LF \$12,000 \$0 30.00% \$0 SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) LF \$12,000 \$0 30.00% \$0 SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) CENERAL SUPPORT ITEMS BART INTERFACE DAYS \$900 \$0 20.00% \$0 ROLLING STOCK & CAPITAL INVESTMENTS ROLLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0							
ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 \$937,500 1 legal,appraisal,etc.)	ROW HEAVY INDUSTRIAL AREA SF \$16 \$0 25.00% \$0 BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 \$937,500 1 legal,appraisal,etc.) TUNNEL CONSTRUCTION							
BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 0.00% \$937,500 1 legal,appraisal,etc.) **TUNNEL CONSTRUCTION** **TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA)	BUSINESS RELOCATIONS (Value of business, relocation,goodwill, VALUE \$937,500 \$937,500 0.00% \$937,500 1 legal,appraisal,etc.) 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 \$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							
TUNNEL CONSTRUCTION STUNNELING CONSTRUCTION SUBJECT CONSTRUCTION SUBJECT CONSTRUCTION NEW SINGLE BORE (DIA) LF \$12,000 \$0 30.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0.00% \$0 \$0 \$0 \$0 \$0 \$0 \$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 SINGLE BORE RESTORE (DIA) SINGLE BORE RESTORE (DIA) LF \$0 30.00% \$0 SINGLE BORE RESTORE (DIA) SINGLE BORE RE	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 SINGLE BORE RESTORE SINGLE BORE SI		VALUE	φ937,300	φ937,300	0.00%	\$937,500	
TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA) GENERAL SUPPORT ITEMS BART INTERFACE CALTRANS INTERFACE WORK CALLING STOCK & CAPITAL INVESTMENTS LF \$12,000 \$0 30.00% \$0 30.00% \$0 30.00% \$0 \$0 20.00% \$0 20.00% \$0 20.00% \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$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	TUNNEL CONSTRUCTION						\$
SINGLE BORE RESTORE (DIA) LF \$12,000 \$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 \$900 \$0 20.00% \$0	SINGLE BORE RESTORE (DIA)			\$12,000				
TWIN BORE RESTORE (DIA)	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			¢40.000				
BART INTERFACE DAYS \$900 \$0 20.00% \$0 CALTRANS INTERFACE WORK DAYS \$900 \$0 20.00% \$0 ROLLING STOCK & CAPITAL INVESTMENTS	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			\$12,000				
CALTRANS INTERFACE WORK DAYS \$900 \$0 20.00% \$0 ROLLING STOCK & CAPITAL INVESTMENTS \$	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	GENERAL SUPPORT ITEMS						\$
ROLLING STOCK & CAPITAL INVESTMENTS	ROLLING STOCK & CAPITAL INVESTMENTS ROLLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0							
	ROLLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0		DAYS	\$900	\$0	∠0.00%	\$0	
RULLING STOCK DMU EQUIPMENT EACH \$8,000,000 \$0 0.00% \$0			E4.0	00.000				\$
	TOTAL CONSTRUCTION COST \$7,336,89	ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
	TOTAL CONSTRUCTION COST \$7,336,89							

MMO-32B	ATWATER STATION	l					l
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY T	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$150,700
2400	CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION DEMOLITION DEARTHWORK (CXCAVATION ROCK) EARTHWORK (EXCAVATION ROCK) EMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT CIVIL WORK TYPE C CIVIL WORK TYPE C CIVIL WORK TYPE G STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL MINOR CONCRETE K RAIL TEMPORARY CONCRETE BARRIER STRIPPING PERMANENT FENCING VEHICULAR FENCE GATES DILT FENCE and ORANGE FENCE	AC AC SF BCY FCY FCY FCY FCY SF CY SF SF SF SF SF SF CY CY SF CY SF SF SF CY CY LF CY SF EACH EACH DAYS CY LF LF LF LF LF LF LF LF	\$2,500 \$5,000 \$8 \$25 \$50 \$10 \$25 \$400 \$100 \$40 \$35 \$60 \$77 \$55 \$90 \$1,000 \$11,000 \$11,000 \$12 \$12 \$12 \$12 \$12 \$15 \$45 \$65 \$210 \$7,124 \$1,500 \$15,500 \$11,200 \$400 \$300,000 \$100,000 \$4,500 \$1,200 \$400 \$300 \$50 \$11 \$35 \$2,000 \$15	\$8,750 \$0 \$0 \$0 \$60,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	40.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 20.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 30.00%	\$12,250 \$0 \$0 \$78,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$150,700
(6 SWPP MANAGEMENT, OPERATION & COMPLIANCE) LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY	MO SY LF LS	\$2,000 \$15 \$30 \$100,000	\$12,000 \$4,500 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$15,600 \$5,850 \$0 \$0	
	YARD LIGHTING TRACK WORK	EACH	\$2,500	\$0	20.00%	\$0	¢o.
	REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER No.15 CROSSOVER No.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#11) TURNOUT (#15 CURVE) TURNOUT (#15 CURVE) TURNOUT (#20) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF LF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$75 \$800,000 \$1,000,000 \$220,000 \$220,000 \$250,000 \$450,000 \$450,000 \$500,000 \$100,000 \$100,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 10.00% 20.00% 25.00% 20.00% 20.00% 20.00% 20.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0
	SIGNAL WORK						\$0
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL DOG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$200,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	BRIDGE STRUCTURES						\$0

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$550 \$450 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE LINE UTILITIES WITHIN TRACKWAY LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIONS						\$5,364,770
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION 15000 STATION PLATFORM STRUCTURES NEW 600 STATION PLATFORM STRUCTURES UPGRADE 1 STATION PRIMARY ELECTRICAL SERVICE 15000 STATION AMENITIES INSPECTION PIT 212 PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING 212 PARKING LOT LIGHTING ELEVATORS ESCALATOR RIGHT OF WAY ROW LAND ONLY ROW AGRICULTURAL	EACH EACH SF SF SF EACH SF SPACES SPACES SPACES SF SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$50 \$90 \$3,000 \$22,000 \$25 \$20 \$450,000 \$300,000	\$0 \$0 \$3,000,000 \$45,000 \$50,000 \$750,000 \$0 \$636,000 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 50.00% 15.00% 20.00% 10.00% 15.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$3,450,000 \$51,750 \$0 \$55,000 \$862,500 \$0 \$90,400 \$0 \$0 \$0 \$55,120 \$0 \$0 \$0	\$4,500,000
ROW ORCHARDS ROW PAVED AREAS 120000 ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, 1 legal,appraisal,etc.)	SF SF SF SF VALUE	\$6 \$8 \$10 \$14 \$16 \$3,000,000	\$0 \$0 \$1,200,000 \$0 \$0 \$3,000,000	25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$0 \$0 \$1,500,000 \$0 \$0 \$3,000,000	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAPITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMENT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION COST						\$10,015,470

### COUNT OF THE PART OF THE TALL SP ## SECURE CONTROL STATE OF THE TALL SP ## SECURE CONTROL STATE OF THE PART OF THE TALL SP ## SECURE CONTROL STATE OF THE PART OF THE TALL SP ## SECURE CONTROL STATE OF THE PART OF THE P	D-33 SECOND MAIN TRACK LIVINGSTON TO MERCED						
### CHAIN CONTROL STATE AC \$2.500 \$188.075 \$40.00% \$225.305 \$2.500 \$2.	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTA
GLEAR A GRUPHEAVY DEADLIFE COMMON SEV 88 82,859,800 STATEMORK COMMON SEV 88 83,800 STATEMORK COMMON SEV	CIVIL WORKS						\$29,273,34
DEMOLITION SF 38 30 30.0% 33.483.750							
ANTH-MORK COMAND BCY S35 \$2.69.75.00 \$30.00% \$4,49.750							
BOTHON PATENDAY	,			\$0		\$0	
REMOVE HOVLANE CONTROLS SYSTEM RECOMSTRUCT REFEWAY LANE 550 SO \$0 \$0.00%, \$0.0							
STRUCTURE EXCAVATION RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 30 20.00% \$ 30 SOUND WALL LE \$ 50 \$ 50 \$ 25.00% \$ 30 SOUND WALL LE \$ 50 \$ 50 \$ 00 SOUND WALL LE \$ 50 \$ 50 \$ 00 SOUND WALL LE \$ 50 \$ 50 \$ 00 SOUND WALL LE \$ 50 \$ 50 \$ 00 SOUND WALL LE \$ 50 \$ 50 \$ 00 RETAINING WALLS (OT 00 FEET TAIL) SE \$ 50 \$ 00 RETAINING WALLS (OT 00 F							
RETAINING WALLS (10 TO JO FEET TALL) SEF \$30 \$20,00% \$0 404 SOL MIL WALLS SEF \$400 \$30 \$00.00% \$50 404 SOL MIL WALLS SEF \$50 \$30 \$00.00% \$50 405 SOL MIL WALLS SEF \$50 \$30 \$00.00% \$50 406 SOL MIL WALLS SOL MIL WALLS SOL MIL WALLS SEF \$50 \$30 \$00.00% \$50 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$00.00% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000 400 \$10.000% \$10.000% \$10.000% \$10.000 400 \$10.000% \$10.0000% \$10.0000% \$10.000% \$10.000% \$10.0000% \$10.000% \$10.000% \$10.000% \$10.000% \$10.000%							
RETAINING WALLS (10 TO 20 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SF							
MSE WALL ROADWAY SOUND WALL LEF SS0 SOUND WALL LEF SS0 SOUND WALL LEF SS0 SOUND SOUN	,						
SOUND WALL 70 BOX CLUVERT 1 CY \$1,000 \$50,000 \$30,000							
79 BOX CULVERT							
DRAINAGE (DMANCH-FOOT)		CY					
DRAINAGE (DA-NICH-POOT)							
ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) SF							
AGGREGATE BASE ROADWAY ASPHALT CONCERT E PAVEMENT CY \$210 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$5							
ASPHALT CONCRETE RAZMENT CONCRETE PAYMENT CY S10 S0 CVIL WORK TYPE C LF S71,24 S213,720 S0 CONC, WORK TYPE C LF S71,24 S213,720 S0 CONCRETE PAYMENT CY S150 S1,770,000 S0 S1,770,000 S0 S1,770,000 S0 S1,770,000							
30 CIVIL_WORK TYPE C							
9184 CIVIL WORK TYPE G STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL EACH SIGNALLED STREET TRAFFIC CONTROL EACH MODIFIED TRAFFIC SIGNAL EACH SIGNALLED STREET LIGHTING EACH SIGNALL							
STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL ACH ACH S10,000 MODIFIED TRAFFIC SIGNAL EACH S10,000 S10 S10 S10 S10 S10 S10				, .		. ,	
MODIFIED TRAFFIC SIGNAL							
STREET LIGHTING TRAFFIC CONTROL DAYS \$12.00 \$0 \$0 \$0.00% MINOR CONCRETE CY \$400 \$0 \$30.00% \$0 \$0 \$0 \$0.00% \$0 \$0 \$0 \$0.00% \$0 \$0 \$0 \$0.00% \$0 \$0 \$0 \$0.00% \$0 \$0 \$0 \$0 \$0.00% \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0							
TRAFFIC CONTROL MINOR CONCRETE CY \$400 \$0 \$0 0.00% \$0 K RAIL TEMPORARY LF \$30 \$0 30.00% \$0 STRIPPING LF \$50 \$0 30.00% \$0 STRIPPING STRIPPING LF \$50 \$0 30.00% \$0 STRIPPING STRIPPING LF \$15 \$0 20.00% \$0 STRIPPING STRIPPING LF \$15 \$0 20.00% \$0 STRIPPING STRIPPING LF \$15 \$0 20.00% \$0 STRIPPING STRIPPING STRIPPING LF \$15 \$0 20.00% \$0 STRIPPING STRIPPING STRIPPING LF \$15 \$0 20.00% \$0 STRIPPING STRIP							
K RAIL TEMPORARY CONCRETE BARRIER LF \$50 \$0 \$0 000% \$0 STRIPPING LF \$1 \$1 \$0 2000% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 20.00% \$0 VEHICULAR FENCE GATES EACH \$2,500 \$0 20.00% \$0 VEHICULAR FENCE GATES VEHICLE SENCE CATES VEHICLE	TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
CONCRETE BARRIER LF \$1 \$0 20,00% \$0 PERMANENT FENCING LF \$1 \$1 \$0 20,00% \$0 VEHICULAR FENCE GATES EACH \$2,000 \$0 20,00% \$0 146798 SILT FENCE and ORANGE FENCE LF \$16 \$2,201,970 20,00% \$0 LANDSCAPIND PERMANENT SF \$7 \$50 30,00% \$0 LANDSCAPIND PERMANENT SY \$15 \$0 30,00% \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30 30,00% \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30 30,00% \$0 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30 30,00% \$0 TRACK WORK REMOVE EXISTING TRACK TF \$40 \$50 20,00% \$0 27399 TRACK (INCL BAIL WOOD TES) BALLAST & SUBBALLAST) TRACK (INCL BAIL WOOD TIES BALLAST & SUBBALLAST) TO GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS 1 CROSSOVER No.20 1 TURNOUT (#9) EACH \$200,000 \$0 10,00% \$0 TURNOUT (#9) EACH \$							
PERMANENT FENCING							
VEHICULAR FENCE GATES							
146798 SILT FENCE and ORANGE FENCE LF \$15 \$2,201,970 \$20,00% \$2,642,364 EROSION CONTROL TEMPORARY \$5 \$7 \$0 \$30,00% \$50 LANDSCAPING PERMANENT \$Y \$15 \$0 \$30,00% \$50 DEVELOP PERMANENT \$E \$100,000 \$0 \$30,00% \$50 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 \$30,00% \$50 VARD LIGHTING EACH \$2,500 \$50 \$20,00% \$50 VARD LIGHTING EACH \$2,500 \$50 \$20,00% \$50 VARD LIGHTING EACH \$2,500 \$50 \$20,00% \$50 VARD LIGHTING EACH \$2,500 \$75,000 \$10,00% \$50 VARD LIGHTING \$10,00% \$20,00%							
LANDSCAPING PERMANENT UTILITY RELOCATIONS LF \$30 00,00% 50 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30,00% 50 DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30,00% 50 TRACK WORK REMOVE EXISTING TRACK TF \$40 \$5,000 \$75,000 \$10,00% \$22,500 3 REMOVE EXISTING TURNOUTS EACH \$25,000 \$75,000 \$10,00% \$22,500 3 REMOVE EXISTING TURNOUTS EACH \$25,000 \$75,000 \$10,00% \$22,500 3 REMOVE EXISTING TURNOUTS EACH \$25,000 \$75,000 \$10,00% \$22,500 2730 UPGRADE EXISTING TRACK TF \$100 \$0 20,00% \$0,00% 2730 UPGRADE EXISTING TRACK TF \$300 \$819,000 \$20,00% \$0,00% 2730 UPGRADE EXISTING TRACK TF \$300 \$819,000 \$20,00% \$0,00% 2730 UPGRADE EXISTING TRACK TF \$300 \$819,000 \$20,00% \$0,00% 2730 UPGRADE EXISTING TRACK TF \$500 \$36,884,500 \$15,00% \$24,417,175 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$36,884,500 \$15,00% \$24,417,175 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$36,884,500 \$10,00% \$00,00% TRACK PANELS LF \$75 \$50 \$30,00% \$0,00% TRACK PANELS LF \$75 \$50 \$30,00% \$0,00% CROSSOVER No.15 CROSSOVER No.15 CROSSOVER No.20 EACH \$10,000,000 \$0,00% \$0,000 CROSSOVER No.20 CROSSOVER No.20 EACH \$10,000,000 \$0,000 \$20,00% \$0,000 TURNOUT (#8) EACH \$200,000 \$0,000 \$10,00% \$0,000 TURNOUT (#8) EACH \$200,000 \$0,000 \$10,00% \$0,000 TURNOUT (#11) EACH \$250,000 \$250,000 \$10,00% \$0,000 TURNOUT (#14) EACH \$250,000 \$0,000 \$10,00% \$0,000 TURNOUT (#24) EACH \$375,000 \$0,000 \$10,00% \$0,000 TURNOUT (#24) EACH \$450,000 \$0,000 \$0,000 TURNOUT (#24) EACH \$450,000 \$0,000 \$0,000 TURNOUT (#24) EACH \$450,000 \$0,000 TURNOUT (#24) TURNOUT \$60,000 TURNOUT \$60,000 TURNOUT \$60,000 TURNOUT \$60,000	146798 SILT FENCE and ORANGE FENCE	LF	\$15	\$2,201,970	20.00%	\$2,642,364	
UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY LS \$100,000 \$0 30,00% \$0 TRACK WORK TRACK WORK REMOVE EXISTING TRACK TF \$40 \$2,500 \$0 20,00% \$0 SHET EXISTING TRACK TF \$40 \$2,500 \$0 20,00% \$0 SHET EXISTING TRACK TF \$40 \$2,500 \$0 20,00% \$0 SHET EXISTING TRACK TF \$300 \$110,00% \$2,500 SHIFT EXISTING TRACK TF \$300 \$110,00% \$2,500 SHIFT EXISTING TRACK TF \$300 \$110,00% \$2,00% SHIFT EXISTING TRACK TF \$300 \$110,00% \$2,000% SHIFT EXISTING TRACK TF \$300 \$110,00% \$20,00% SHIFT EXISTING TRACK TF \$300 \$310,000 THE \$300 \$110,00% \$20,00% SHIFT EXISTING TRACK TF \$300 \$310,000 THE \$300 \$300,000 THE \$300,000 THE \$300,000 THE \$300 \$300,000 THE							
TRACK WORK S2,500							
REMOVE EXISTING TRACK 3 REMOVE EXISTING TURNOUTS 4 REMOVE EXISTING TURNOUTS 5 REMCH 5 REM							
3 REMOVE EXISTING TURNOUTS 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) 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 \$25,000 20.00% \$30,000 TRACK PANELS TR	TRACK WORK						\$45,377
SHIFT EXISTING TRACK 2730 UPGRADE EXISTING TRACK TF \$300 \$819,000 20,00% \$0 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 \$500 \$36,884,500 15,00% \$42,417,175 TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TF \$450 \$0 25,00% \$0 7070 GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TF \$750 \$525,000 20,00% \$630,000 TRACK PANELS LF \$755 \$0 30,00% \$0 1 CROSSOVER No.15 EACH \$900,000 \$800,000 20,00% \$600,000 CROSSOVER No.20 EACH \$1,000,000 \$0 20,00% \$600,000 TURNOUT (#1) EACH \$200,000 \$0 10,00% \$0 TURNOUT (#9) EACH \$210,000 \$0 10,00% \$0 TURNOUT (#9) EACH \$220,000 \$0 11,00% \$0 TURNOUT (#14) EACH \$220,000 \$0 110,00% \$275,000 TURNOUT (#14) EACH \$220,000 \$0 10,00% \$0 TURNOUT (#15 CURVE) EACH \$325,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$375,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$450,000 \$0 10,00% \$0 TURNOUT (#20) EACH \$200,000 \$0 10,	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
2730 UPGRADE EXISTING TRACK							
73769 TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TF \$500 \$36,884,500 15,00% \$42,417,175 \$100							
TOO GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)				* /	15.00%		
TRACK PANELS 1 CROSSOVER No.15 1 CROSSOVER No.20 2 CROSSOVER No.20 3 DEACH \$10,000,000 \$800,000 \$20.00% \$960,000 \$9000,000 \$900,000 \$900,000 \$900,000 \$900,000 \$9						* * *	
CROSSOVER No.20 TURNOUT (#7) EACH \$200,000 \$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 \$220,000 \$250,000 10.00% \$0 TURNOUT (#11) EACH \$250,000 \$250,000 10.00% \$275,000 TURNOUT (#14) EACH \$325,000 \$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 \$440,000 \$0 10.00% \$0 TURNOUT (#24) EACH \$450,000 \$0 10.00% \$0 TURNOUT (#24) EACH \$450,000 \$0 10.00% \$0 DIAMOND CROSSING EACH \$500,000 \$0 10.00% \$0 DIAMOND CROSSING EACH \$500,000 \$0 10.00% \$0 DERAIL EACH \$100,000 \$0 10.00% \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$0 SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$200,000 \$0 20.00% \$30,000 TO CANTILEVER SIGNAL EACH \$200,000 \$0 20.00% \$72,000 SO CONTINUED EACH \$200,000 \$0 20.00% \$72,000 SO GO HOUSE (Signal House) EACH \$200,000 \$60,000 20.00% \$72,000 SO GO HOUSE (Signal House) EACH \$200,000 \$60,000 20.00% \$72,000 NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$200,000 \$60,000 20.00% \$72,000 NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$300,000 \$1,200,000 \$0 SO 20.00% \$30,000 TO NEW CROSSING SIGNALING EACH \$300,000 \$1,200,000 \$30,000 TO NEW CROSSING SIGNALING EACH \$250,000 \$250,000 20.00% \$340,000 TO NEW CROSSING SIGNALS EACH \$300,000 \$1,200,000 \$00,000 TO NEW CROSSING SIGNALS EACH \$250,000 \$2,500,000 20.00% \$30,000 TO NEW CROSSING SIGNALS EACH \$250,000 \$2,500,000 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$30,000 TO							
TURNOUT (#7) TURNOUT (#8) EACH \$200,000 \$0 10.00% \$0 TURNOUT (#8) EACH \$220,000 \$0 10.00% \$0 TURNOUT (#19) EACH \$220,000 \$0 10.00% \$0 TURNOUT (#11) EACH \$250,000 \$250,000 10.00% \$0 TURNOUT (#14) EACH \$325,000 \$250,000 10.00% \$0 TURNOUT (#14) EACH \$325,000 \$250,000 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 \$400,000 \$0 10.00% \$0 TURNOUT (#24) EACH \$450,000 \$0 10.00% \$0 DERAIL EACH \$500,000 \$0 10.00% \$0 DERAIL EACH \$100,000 \$0 10.00% \$0 DERAIL EACH \$100,000 \$0 10.00% \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$25,000 20.00% \$30,000 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$0 SO SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$200,000 \$0 20.00% \$0 SO 3 DOC HOUSE (Signal House) EACH \$200,000 \$600,000 20.00% \$720,000 SO NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0 20.00% \$720,000 TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$720,000 TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$720,000 TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$720,000 TOURN TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$720,000 TOURN TOURN TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$300,000 TOURN TOURN TOURNOUT SIGNAL EACH \$300,000 \$0 20.00% \$300,000 TOURN TOURN CONSING SIGNALS EACH \$300,000 \$250,000 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$300,000 \$250,000 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$0 20.00% \$300,000 TO NEW GRADE CROSSING SIGNALS EACH \$400,000 \$			* /				
TURNOUT (##) TURNOUT (#9) EACH \$210,000 \$0 10.00% \$0 TURNOUT (#11) EACH \$250,000 \$250,000 10.00% \$275,000 TURNOUT (#11) EACH \$250,000 \$250,000 10.00% \$275,000 TURNOUT (#14) EACH \$325,000 \$0 10.00% \$275,000 TURNOUT (#15) EACH \$325,000 \$0 10.00% \$0 TURNOUT (#16) EACH \$375,000 \$0 10.00% \$0 TURNOUT (#20) EACH \$400,000 \$0 10.00% \$0 TURNOUT (#24) 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 DERAIL EACH \$100,000 \$0 10.00% \$0 DERAIL EACH \$100,000 \$0 10.00% \$0 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$30,000 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 20.00% \$30,000 TORNOUT (#20) TURNOUT (#20) TURNOU							
1 TURNOUT (#11)	TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
TURNOUT (#14)							
TURNOUT (#15 CURVE) 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 DIAMOND CROSSING EACH \$500,000 \$0 10.00% \$0 DERAIL EACH \$500,000 \$0 10.00% \$0 DERAIL BUMPING POST EACH \$25,000 \$25,000 20.00% \$30,000 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$0 SIGNAL WORK 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 SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$200,000 \$0 20.00% \$0 DOG HOUSE (Signal House) EACH \$200,000 \$600,000 20.00% \$720,000 EACH \$200,000 \$0 20.00% \$720,000 EACH \$200,000 \$200,000 \$1,440,000 EACH \$200,000 \$200,000 \$1,440,000 EACH \$200,000 \$200,000 \$1,440,000 EACH \$200,000 \$200,000 \$300,000 EACH \$200,000 \$200,000 \$200,000 EACH \$200,000 \$200,000 \$200,000 EACH \$200,000 \$200,000 EACH \$200,000 \$200,000 EACH \$20							
TURNOUT (#24) DIAMOND CROSSING DERAIL EACH \$500,000 \$0 10.00% \$0 DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6 EACH \$100,000 \$0 10.00% \$0 DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6 EACH \$25,000 \$25,000 20.00% \$30,000 UPGRADE MAINTRACK TO CLASS 6 TF \$100 \$0 30.00% \$0 SIGNAL WORK PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL EACH \$200,000 \$0 20.00% \$0 CANTILEVER SIGNAL EACH \$200,000 \$0 20.00% \$0 SO SIGNAL WORK PEDESTRIAN GATES & SIGNALS EACH \$200,000 \$0 20.00% \$0 SO CANTILEVER SIGNAL EACH \$200,000 \$0 20.00% \$0 SO		EACH	\$975,000	\$0	10.00%	\$0	
DIAMOND CROSSING							
1 BUMPING POST							
UPGRADE MAINTRACK TO CLASS 6							
PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL 3 DOG HOUSE (Signal House) 3 NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK 4 NEW INTERMEDIATE SIGNALS DOUBLE TRACK 50 A NEW TURNOUT SIGNAL 1 NEW CROSSOVER SIGNALLING 1 NEW CROSSING SIGNALS EACH \$200,000 \$60,000 \$600,							
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 \$200,000 \$600,000 20.00% \$720,000 NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0 20.00% \$0 4 NEW INTERMEDIATE SIGNALS DOUBLE TRACK EACH \$150,000 \$0 20.00% \$1,440,000 1 NEW TURNOUT SIGNAL EACH \$300,000 \$1,200,000 20.00% \$390,000 1 NEW TURNOUT SIGNAL EACH \$300,000 \$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	SIGNAL WORK						\$6,222
3 DOG HOUSE (Signal House) EACH \$200,000 \$600,000 20.00% \$720,000 3 NEW ELECTRIC SERVICE EACH \$200,000 \$600,000 20.00% \$72,000 NEW INTERMEDIATE SIGNALS SINGLE TRACK EACH \$150,000 \$0.000 20.00% \$1,200,000 20.00% \$1,440,000 1 NEW TURNOUT SIGNAL EACH \$300,000 \$1,200,000 20.00% \$1,440,000 1 NEW TURNOUT SIGNAL EACH \$325,000 \$325,000 20.00% \$3990,000 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% \$0.00% \$0.000 UPGRADE SIGNALS EACH \$400,000 \$0 30.00% \$0.000 \$0.00% \$0.000 \$0.0							
3 NEW ELECTRIC SERVICE							
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% \$3,000,000 UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30.00% \$0 \$0	3 NEW ELECTRIC SERVICE	EACH	\$20,000	\$60,000	20.00%	\$72,000	
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 \$0							
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NEW CROSSING GATES & SIGNALS EACH \$400,000 \$0 20.00% \$0 UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30.00% \$0	1 NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$500,000	20.00%	\$600,000	
UPGRADE SIGNALS TO CLASS 6 MILE \$200,000 \$0 30.00% \$0							
BRIDGE STRUCTURES s	BDIDGE STRUCTURES						\$5,050

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

MMO-34	MERCED STATION						
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
Quantity	CIVIL WORKS						\$70,750
3.5	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,750	40.00%	\$12,250	
3.5	CLEAR & GRUB HEAVY DEMOLITION EARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) EMBANKMENT BORROW REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (10 TO 20 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT BOX CULVERT DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT CIVIL WORK TYPE G STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONCRETE K RAIL TEMPORARY CONCRETE BARRIER	AC SF BCY FCY FCY LF SF SF SF SF SF SF SF SF CY CY LF CY SF CY LF CY SF CY LF LF CY LF	\$5,000 \$8 \$25 \$50 \$10 \$25 \$400 \$100 \$40 \$35 \$60 \$77 \$55 \$90 \$1,000 \$11,000 \$112 \$25 \$15 \$45 \$65 \$210 \$7,124 \$1,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$100,000 \$44,500 \$11,200 \$400 \$300 \$550	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 25.00% 25.00% 25.00% 40.00% 30.00% 40.00% 25.00% 25.00% 25.00% 25.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
6	STRIPPING PERMANENT FENCING VEHICULAR FENCE GATES SILT FENCE and ORANGE FENCE SWPP MANAGEMENT, OPERATION & COMPLIANCE LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY	LF LF EACH LF MO SY LF LS	\$1 \$35 \$2,000 \$15 \$2,000 \$15 \$30 \$100,000	\$0 \$0 \$0 \$28,500 \$12,000 \$4,500 \$0	20.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$37,050 \$15,600 \$5,850 \$0	
	YARD LIGHTING TRACK WORK	EACH	\$2,500	\$0	20.00%	\$0	\$0
	REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	φυ
	REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC) TRACK PANELS CROSSOVER No.15 CROSSOVER No.20 TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#14) TURNOUT (#14) TURNOUT (#15 CURVE) TURNOUT (#20) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6 SIGNAL WORK	EACH TF TF TF TF TF EACH EACH EACH EACH EACH EACH EACH EACH	\$25,000 \$100 \$300 \$500 \$450 \$750 \$1,000,000 \$200,000 \$211,000 \$225,000 \$325,000 \$400,000 \$450,000 \$450,000 \$500,000 \$100,000 \$100,000 \$100,000 \$100,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	10.00% 20.00% 20.00% 15.00% 25.00% 20.00% 30.00% 20.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL	EACH EACH	\$100,000 \$200,000	\$0 \$0	20.00% 20.00%	\$0 \$0	
	CANTILEVER SIGNAL DOG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$200,000 \$200,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	

BRIDGE STRUCTURES

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONC RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	RETE	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$400 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 50.00% 30.00% 30.00% 30.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CO	NTROL						\$0
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEME COMMERCIAL ELECTRICAL SERV LINE UTILITIES WITHIN TRACKWA LINE UTILITIES CROSSING TRACK LINE UTILITIES FIBER OPTIC PAF	:NT ICE Y (S	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
STATIO	ONS						\$5,190,830
TYPE A SMALL INTERMODEL STATYPE K LARGE INTERMODEL STATION PLATFORM STRUCTURI 600 STATION PLATFORM STRUCTURE 1 STATION PLATFORM STRUCTURE 1 STATION PRIMARY ELECTRICAL STATION AMENITIES INSPECTION PIT 173 PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING 173 PARKING LOT LIGHTING ELEVATORS ESCALATOR	ATION ES NEW ES UPGRADE	EACH EACH SF SF SF EACH SF SP SPACES SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$50 \$90 \$3,000 \$20,000 \$25 \$200 \$450,000	\$0 \$0 \$3,000,000 \$45,000 \$50,000 \$750,000 \$0 \$519,000 \$0 \$34,600 \$0 \$0	20.00% 50.00% 15.00% 15.00% 20.00% 10.00% 30.00% 40.00% 25.00% 30.00% 25.00% 25.00%	\$0 \$0 \$3,450,000 \$51,750 \$0 \$55,000 \$862,500 \$0 \$726,600 \$0 \$0 \$44,980 \$0 \$0	
RIGHT O	F WAY						\$4,636,250
ROW LAND ONLY ROW AGRICULTURAL ROW ORCHARDS 56500 ROW PAVED AREAS ROW RESIDENTIAL AREA 13500 ROW COMMERCIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of	of business, relocation,goodwill,	SF SF SF SF SF VALUE	\$4 \$5 \$6 \$8 \$10 \$30 \$16 \$3,565,000	\$0 \$0 \$0 \$452,000 \$0 \$405,000 \$0 \$3,565,000	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$565,000 \$0 \$506,250 \$0 \$3,565,000	
70000 TUNNEL CONS	STRUCTION						\$0
TUNNELING CONSTRUCTION NE TUNNELING CONSTRUCTION NE SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)		LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUP	PORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK		DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$0	
ROLLING STOCK & CAI	PITAL INVESTMENTS						\$0
ROLLING STOCK DMU EQUIPMEN	NT	EACH	\$8,000,000	\$0	0.00%	\$0	
TOTAL CONSTRUCTION	COST						\$9,897,830

MMO-35	MERCED LAYOVER						I
Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
	CIVIL WORKS						\$12,155,180
70000	CLEAR & GRUB LIGHT CLEAR & GRUB HEAVY DEMOLITION EARTHWORK COMMON EARTHWORK (EXCAVATION ROCK) DEMBANKMENT DEMBANKMENT DEMBON	AC AC SF BCY BCY FCY	\$2,500 \$5,000 \$8 \$25 \$50 \$10	\$50,100 \$0 \$0 \$0 \$0 \$0 \$700,000	40.00% 30.00% 30.00% 30.00% 30.00% 30.00%	\$70,140 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	REMOVE HOV LANE CONTROLS SYSTEM RECONSTRUCT FREEWAY LANE 580 STRUCTURE EXCAVATION RETAINING WALLS (0 TO 10 FEET TALL) RETAINING WALLS (10 TO 20 FEET TALL) SOIL NAIL WALLS MSE WALL ROADWAY SOUND WALL BOX CULVERT BOX CULVERT DRAINAGE (DIA-INCH-FOOT) DRAINAGE (DIA-INCH-FOOT) IMPORTED BORROW ROADWAY ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES) AGGREGATE BASE ROADWAY ASPHALT CONCRETE ROADWAY CONCRETE PAVEMENT CIVIL WORK TYPE C	FCY LF ST CY SF SF SF LF CY LF LF CY SF CY LF LF CY LF LF CY LF	\$25 \$400 \$100 \$40 \$35 \$60 \$70 \$55 \$90 \$1,000 \$1,000 \$12 \$12 \$12 \$25 \$15 \$45 \$45 \$210 \$7,124	\$1,750,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% 30.00% 50.00% 25.00% 30.00% 30.00% 30.00% 30.00% 40.00% 40.00% 25.00% 25.00% 25.00% 20.00% 30.00%	\$2,275,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
86000	CIVIL WORK TYPE G STREET RESTORATIONS SIGNALLED STREET TRAFFIC CONTROL MODIFIED TRAFFIC SIGNAL STREET LIGHTING TRAFFIC CONTROL SHOP BUILDINGS CONTAINED	SF SF EACH EACH DAYS SF	\$1,500 \$15 \$300,000 \$100,000 \$4,500 \$1,200 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30.00% 40.00% 20.00% 20.00% 50.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
8120	CONTAINER INSPECTION PITS	EACH SF LF	\$7,500 \$90	\$0 \$730,800	30.00% 30.00%	\$0 \$950,040	
8700 1	STRIPPING) PERMANENT FENCING 3 VEHICULAR FENCE GATES) SILT FENCE and ORANGE FENCE EROSION CONTROL TEMPORARY LANDSCAPING PERMANENT UTILITY RELOCATIONS DEVELOP PERMANENT WATER SUPPLY) YARD LIGHTING	LF LF EACH LF SF SY LF LS EACH	\$1 \$35 \$5,000 \$15 \$7 \$15 \$30 \$100,000 \$2,500	\$0 \$304,500 \$15,000 \$130,500 \$0 \$0 \$0 \$100,000 \$200,000	20.00% 20.00% 20.00% 30.00% 30.00% 30.00% 30.00% 20.00%	\$0 \$365,400 \$18,000 \$156,600 \$0 \$0 \$0 \$130,000 \$240,000	
	TRACK WORK						\$10,664,290
1451(REMOVE EXISTING TRACK REMOVE EXISTING TURNOUTS SHIFT EXISTING TRACK UPGRADE EXISTING TRACK UPGRADE EXISTING TRACK UPGRADE EXISTING TRACK TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST) TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST) TRACK PANELS CROSSOVER NO.15 CROSSOVER NO.20 TURNOUT (#7) TURNOUT (#7) TURNOUT (#8) TURNOUT (#9) TURNOUT (#14) TURNOUT (#14) TURNOUT (#15 CURVE) TURNOUT (#24) DIAMOND CROSSING DERAIL BUMPING POST UPGRADE MAINTRACK TO CLASS 6	TF EACH TF TF TF TF LF EACH EACH EACH EACH EACH EACH EACH EACH	\$40 \$25,000 \$100 \$300 \$500 \$450 \$750 \$1,000,000 \$220,000 \$225,000 \$255,000 \$400,000 \$450,000 \$500,000 \$100,000 \$100,000 \$100,000	\$9,200 \$0 \$0 \$7,255,000 \$0 \$0 \$0 \$1,600,000 \$0 \$500,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	20.00% 10.00% 20.00% 25.00% 25.00% 20.00% 30.00% 20.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 30.00%	\$11,040 \$0 \$0 \$0 \$0 \$8,343,250 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	SIGNAL WORK						\$528,000
	PEDESTRIAN GATES & SIGNALS CANTILEVER SIGNAL POG HOUSE (Signal House) NEW ELECTRIC SERVICE NEW INTERMEDIATE SIGNALS SINGLE TRACK NEW INTERMEDIATE SIGNALS DOUBLE TRACK NEW TURNOUT SIGNAL NEW CROSSOVER SIGNALLING NEW CROSSOVER SIGNALLING NEW GRADE CROSSING SIGNALS NEW CROSSING GATES & SIGNALS UPGRADE SIGNALS TO CLASS 6	EACH EACH EACH EACH EACH EACH EACH EACH	\$100,000 \$200,000 \$200,000 \$150,000 \$300,000 \$325,000 \$500,000 \$250,000 \$400,000 \$200,000	\$0 \$0 \$400,000 \$40,000 \$0 \$0 \$0 \$0 \$0	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00%	\$0 \$0 \$480,000 \$48,000 \$0 \$0 \$0 \$0 \$0 \$0	
	BRIDGE STRUCTURES						\$0

BRIDGE REMOVAL RAILROAD SHORT BRIDGE CONCRETE RAILROAD AERIAL GUIDEWAY RAILROAD BRIDGE STEEL HIGHWAY BRIDGE CONCRETE HIGHWAY BRIDGE STEEL. TRESTLE BRIDGE STEEL PEDESTRIAN BRIDGE BARRIER RAIL PERMANENT UNDERPASS STRUCTURE	SF SF SF SF SF SF CY	\$200 \$400 \$500 \$500 \$500 \$550 \$400 \$100 \$750	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50.00% 30.00% 30.00% 30.00% 50.00% 30.00% 30.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
TRAIN CONTROL						\$585,390
POSITIVE TRAIN CONTROL TRAIN CONTROL SYSTEM TRAIN CONTROL CABLING TRAIN CONTROL DIGITAL CBOSS COMPUTER TRAFFIC MANAGEMENT COMMERCIAL ELECTRICAL SERVICE 14510 LINE UTILITIES WITHIN TRACKWAY 6 LINE UTILITIES CROSSING TRACKS LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	MILE EACH LF EACH LS EACH LF EACH LF	\$2,000,000 \$200,000 \$12 \$500,000 \$1,500,000 \$50,000 \$30 \$2,500 \$50	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	25.00% 30.00% 30.00% 40.00% 30.00% 25.00% 30.00% 30.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$565,890 \$19,500 \$0	
STATIONS						\$125,000
TYPE A SMALL INTERMODEL STATION TYPE K LARGE INTERMODEL STATION STATION PLATFORM STRUCTURES NEW STATION CANOPY STATION PLATFORM STRUCTURES UPGRADE 2 STATION PRIMARY ELECTRICAL SERVICE STATION AMENITIES INSPECTION PIT PARKING LOTS PARKING STRUCTURES BUS LANE AND UNLOADING PARKING LOT LIGHTING ELEVATORS ESCALATOR	EACH EACH SF SF SF EACH SF SF SPACES SPACES SPACES EACH EACH	\$13,000,000 \$32,000,000 \$200 \$75 \$300 \$50,000 \$65 \$90 \$3,000 \$20,000 \$25 \$20 \$450,000 \$300,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	20.00% 50.00% 20.00% 20.00% 25.00% 30.00% 25.00% 25.00% 25.00% 25.00% 25.00% 25.00%	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$3,787,500
ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	ψο,ι σι ,σσσ
606000 ROW AGRICULTURAL ROW ORCHARDS ROW PAVED AREAS ROW RESIDENTIAL AREA ROW LIGHT INDUSTRIAL AREA ROW HEAVY INDUSTRIAL AREA BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	SF SF SF SF SF VALUE	\$5 \$6 \$8 \$10 \$14 \$16 \$1	\$3,030,000 \$0 \$0 \$0 \$0 \$0 \$0	25.00% 25.00% 25.00% 25.00% 25.00% 25.00% 0.00%	\$3,787,500 \$0 \$0 \$0 \$0 \$0 \$0	
TUNNEL CONSTRUCTION						\$0
TUNNELING CONSTRUCTION NEW SINGLE BORE (DIA) TUNNELING CONSTRUCTION NEW TWIN BORE (DIA) SINGLE BORE RESTORE (DIA) TWIN BORE RESTORE (DIA)	LF LF LF	\$12,000 \$12,000	\$0 \$0 \$0 \$0	30.00% 30.00% 30.00% 30.00%	\$0 \$0 \$0 \$0	
GENERAL SUPPORT ITEMS						\$0
BART INTERFACE CALTRANS INTERFACE WORK	DAYS DAYS	\$900 \$900	\$0 \$0	20.00% 20.00%	\$0 \$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	9	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	2	1	0	4	1	0
Stockon	Spare	1	14	2	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	rement			4	4	33	8	0
	Existing Fleet	et			9	0	24	8	0
	Adjustment [BAAQMD =-2]	(MD =-2]			-2	0	0	0	0
	Procurement	nt			0	4	6	0	0
	Unit Cost (2017 \$ est.)	\$ est.)			- \$	\$ 7,500,000.00	\$ 4,000,000.00	\$ 5,000,000.00	
	Total Estimate (2017 \$)	:017 \$)			- \$	30,000,000,08 \$	\$ 36,000,000.00	- \$	
	Grand Total Cost Estimate (2017 \$)	nate (2017 \$)			\$				00:000'000'99
	Grand Total Cost Estimate (2018 \$)	nate (2018 \$)			\$				68,112,000.00
Existing Fun	Existing Funding $(2017 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \)+3.5M$	arlMoyer]+ 3	.5M [CMAQ])	(\$				18,500,000.00
	Funding Need (2018 \$)	:018 \$)			\$				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	14	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	2	1	0	4	1	0
Stockon	Spare	1	T4	2	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	irement			4	4	33	8	0
	Existing Fleet	et			9	0	24	8	0
	Adjustment [BAAQMD =-2]	JMD =-2]			-2	0	0	0	0
	Procurement	nt			0	4	6	0	0
	Unit Cost (2017 \$ est.)	\$ est.)			- \$	\$ 7,500,000.00	\$ 4,000,000.00	\$ 5,000,000.00	
	Total Estimate (2017 \$)	2017 \$)			- \$	\$ 30,000,000,00	\$ 36,000,000.00	- \$	
	Grand Total Cost Estimate (2017 \$)	nate (2017 \$)			\$				00:000'000'99
	Grand Total Cost Estimate (2018 \$)	nate (2018 \$)			\$				68,112,000.00
Existing Fun	Existing Funding $(2017 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \)+3.5M$	arlMoyer]+ 3	.5M [CMAQ]))	\$				18,500,000.00
	Funding Need (2018 \$)	2018 \$)			\$				49,612,000.00