

Appendix E

**ACE Ceres–Merced Extension
Opinion of Probable Cost Report**

ACE Ceres-Merced Extension Opinion of Probable Cost Report

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Prepared for: SJRRC

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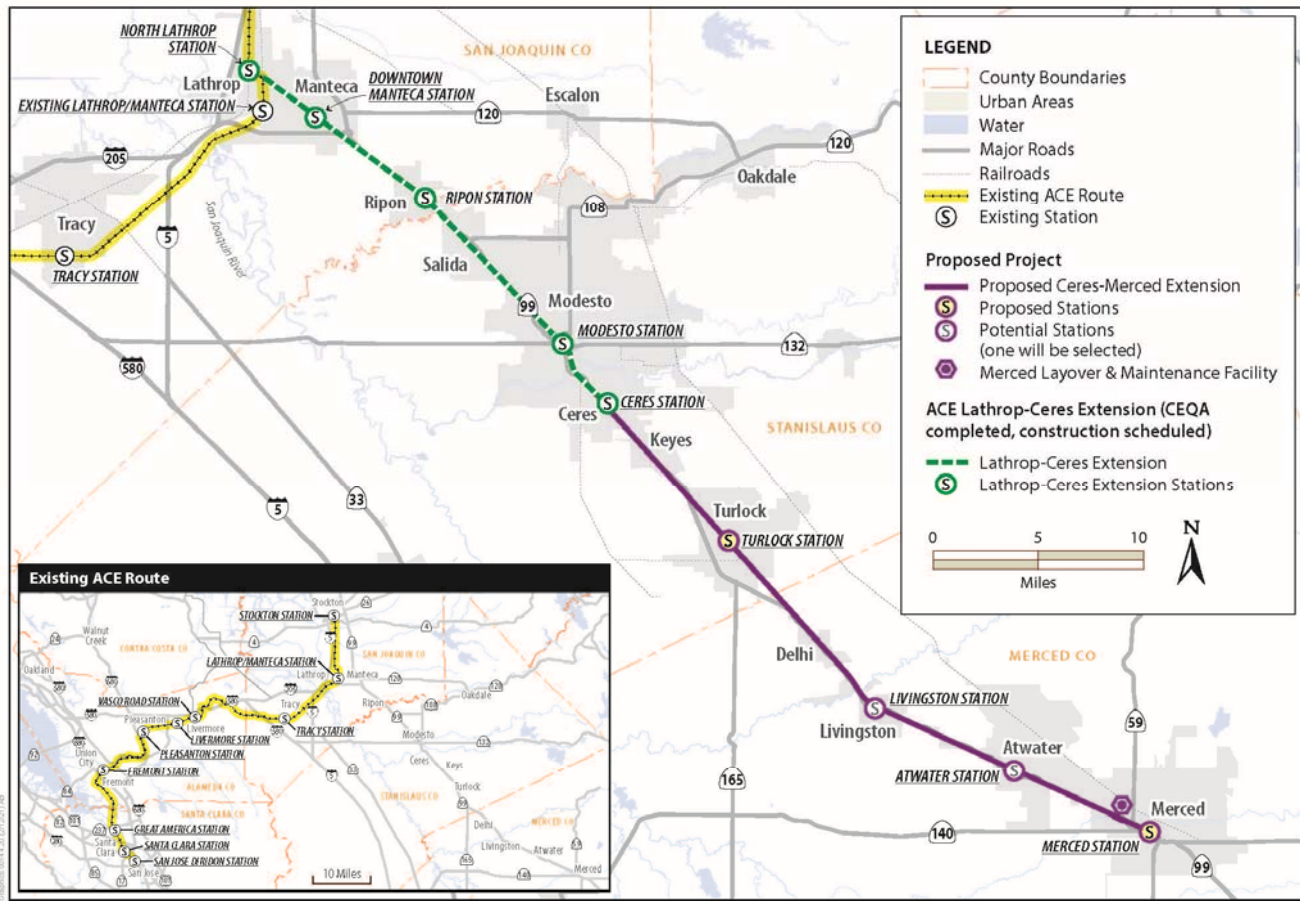
Table of Contents

Appendix E ACE Ceres–Merced Extension Opinion of Probable Cost Report.....	2
Section 1: Introduction to the Estimate.....	1
1.1 General Introduction.....	1
1.2 Overview of the Scope of Work.....	1
Section 2: Scope of the Estimate.....	1
Section 3: Development of Cost Estimate	2
3.1 Estimate Summary	2
3.2 Work Breakdown Structure	2
3.3 Work Categories	2
3.4 Estimate of Quantities	2
3.5 Estimate of Pricing	3
3.6 Construction Markups	3
Section 4: Estimate Methodology Reference Data	4
4.1 Opinion of Cost	4
4.2 Cost Resources.....	4
4.3 Labor Costs.....	5
4.4 Materials and Equipment	5
4.5 Escalation.....	5
Section 5: Assumptions, Inclusions, and Exclusions.....	5
5.1 General Assumptions and Inclusions	5
5.2 Major Assumptions.....	6
5.2.1 Geotechnical.....	6
5.2.2 Civil.....	6
5.2.3 Structural	6
5.2.4 Architectural.....	6
5.2.5 Railroad Signaling	7
5.3 Excluded Costs	7
Section 6: Cost Summary	8
Attachment A: Station Sections	
Attachment B: Signal Type Photos	
Attachment C: Cost Estimate Back-Up Tables	

List of Acronyms and Abbreviations

AC	Acres
ACE	Altamont Corridor Express
BART	Bay Area Rapid Transit
BCY	Bank Cubic Yard
CER	Conceptual Engineering Report
CY	Cubic Yard
Dog House	Signal house
EPC	Engineer-procure-construct
FCY	Fill Cubic Yard
HVAC	Heating, ventilation, and air conditioning
I&C	Instrumentation and controls
kV	Kilovolt(s)
LED	Light-emitting diode
LF	Lineal Feet
LS	Lump Sum
mW	Megawatt(s)
SF	Square Feet
SJRRC	San Joaquin Regional Rail Commission
TF	Track Feet
V	Volt(s)
WBS	Work Breakdown Structure
WC	Work Category

General Map of the Project



Section 1: Introduction to the Estimate

1.1 General Introduction

The AECOM team prepared a comprehensive cost estimate for the ACE Ceres-Merced Extension Project (Project).

This document is to summarize the costs from the 2021 15% preliminary engineering design for the improvements associated with the Merced Extension. The projects include rail improvements, stations and a layover and maintenance facility.

A master work breakdown structure (WBS) has been developed collectively by the AECOM team 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

The Project is proposed by the San Joaquin Regional Rail Commission (SJRRRC) to provide one element of the foundation for SJRRRC's short-term vision of passenger rail services.

The Project includes improvements to UPRR's Fresno Subdivision in order to provide passenger rail service between Ceres and Merced. In order to provide this service, there is a need for various track improvements, new stations, and a layover and maintenance facility.

Section 2: Scope of the Estimate

The Project is divided into station improvements, track improvements and a layover and maintenance facility. There are three stations planned for this segment, which are located in Turlock, Livingston or Atwater and Merced. The track improvements include a combination of siding upgrades and connecting sidings to provide a double track corridor.

Section 3: Development of Cost Estimate

The development of this estimate was an integrated process within the AECOM team in the development of a project design and capital cost estimate. The steps conducted in the development of the Project cost estimate are outlined below.

3.1 Estimate Summary

The Estimate Summary Sheet is a list of key elements that make up a project. It summarizes cost for each key element of work that makes up a project. It also provides the total estimated project cost. For the ACE Ceres-Merced Extension Project, key elements include trackwork, stations, and a layover and maintenance facility. Each key element has a related design and plans, take-off and unit rates worksheet showing the detailed cost development work included in each segment. The Estimate Summary Sheet for this is included in Attachment A.

3.2 Work Breakdown Structure

The Estimate Summary Sheet is based on the Work Break Down Structure (WBS). The WBS was set up to develop a line item identifier for each key element of work for the Project. The WBS is intended to develop integrated costs and schedule for each key element, which can be used for the development of future individual construction contracts or combined with other key elements to produce a construction package in the future.

3.3 Work Categories

Work Categories (WC) for the Project were 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 worksheets (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. The estimate worksheets can be found in Attachment D.

3.4 Estimate of Quantities

The quantities used to develop the cost estimate for the Project were produced from designs developed by the AECOM design team. AECOM produced work activity quantities from this design work and populated the quantity cells within the estimate worksheets 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 AECOM 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 (as described in Section 3.4) were integrated with standardized pricing based on methodology discussed in Section 4 below. 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.

3.6 Construction Markups

This section describes the basis for the inclusion of construction markups in the estimated cost of the Project.

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 at the 15 percent design level, such as used for detailed strategic planning, business development, project screening, alternative scheme analysis, confirmation of economic and/or technical feasibility, environmental clearance, 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
Design 65%	3.00
Design 90%	2.00
Design Bid Set	2.00
Construction Management	10.00

Table 3-1. CER Opinion of Probable Cost Markup	
Cost Description	Markup (%)
Program Management	2.00
Agency Administration	2.00
Design Services During Construction	2.00
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 No escalation is included for the midpoint of construction. Escalation will be added when a construction schedule is finalized.

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:

- 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

This Project 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.

4.4 Materials and Equipment

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

4.5 Escalation

The cost estimate unit costs are based on \$2021.

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 15% preliminary engineering design drawing packet for the Project.
- The existing operating facility will remain functional during construction.
- Adequate staging areas for office trailers, workforce parking, and staging of materials and laydown areas will be available.
- Contractor's temporary facilities and consumables are included as part of general requirements, including water, wash water, and electricity.
- Storm Water Pollution and Prevention Plan installation and management is included in the site estimate.
- The required road closures and site access points will be provided during construction according to the construction schedule.

5.2 Major Assumptions

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

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

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

5.2.1 Geotechnical

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

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

5.2.2 Civil

Civil assumptions used in the development of the Project estimate include site clearing and grading, temporary work for access to structures 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 (see Attachment B for typical cross sections of station platforms).

5.2.4 Architectural

Architectural assumptions used in the development of the estimate are pricing for architectural finishes for station facilities. Pricing allowances for streetscape landscaping

and irrigation systems have been included based on landscape areas provided at the stations. Allowances for landscaping are based on an allowance per square foot of surface area.

5.2.5 Railroad Signaling

Signal and signage are included as generally required by operating railroads (see signal types in Attachment C). Signal control buildings, or “dog houses,” are included as well as local power for the signal operation. Some of the signals have been located in 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

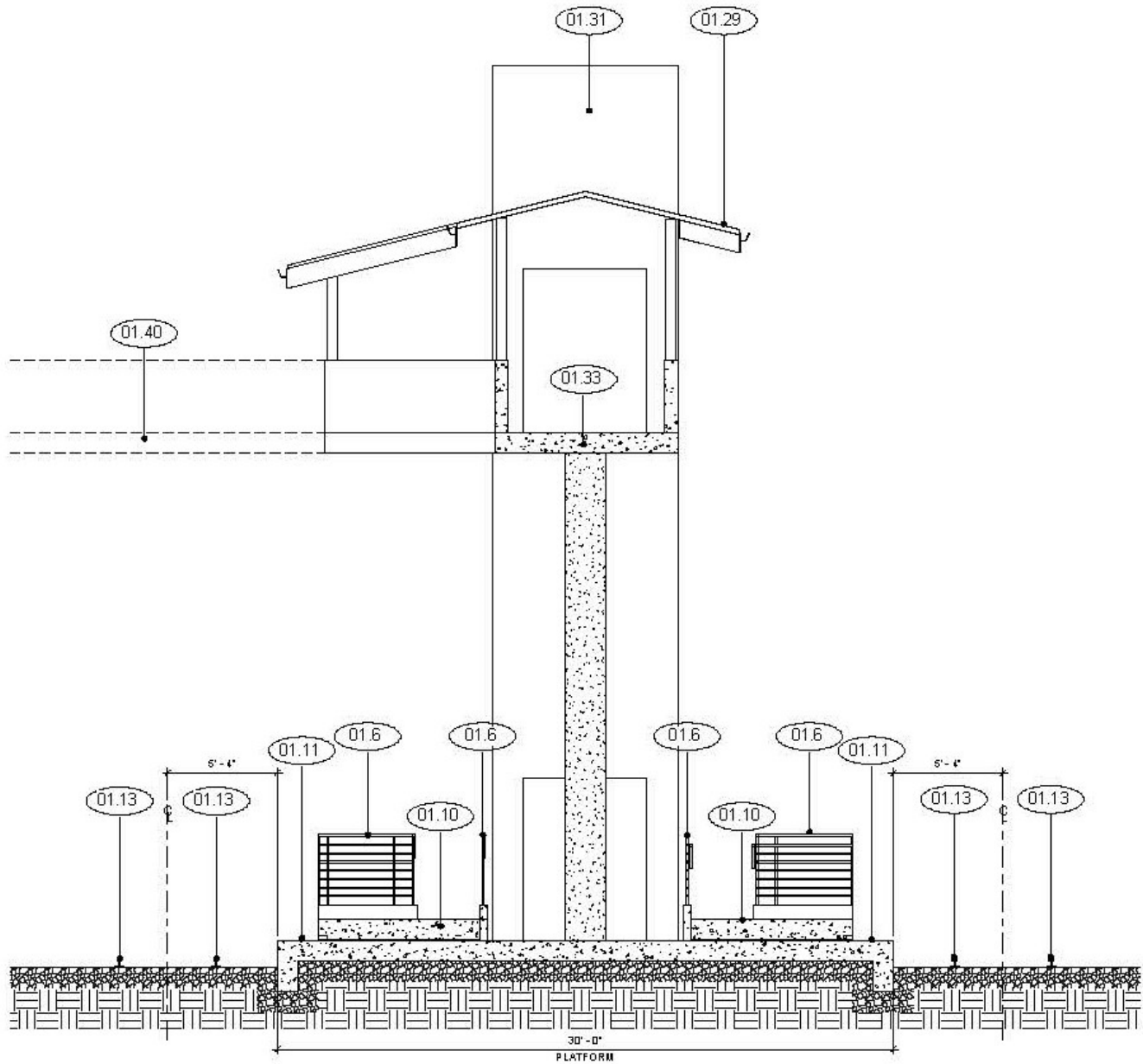
The cost estimate excludes the following costs:

- 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

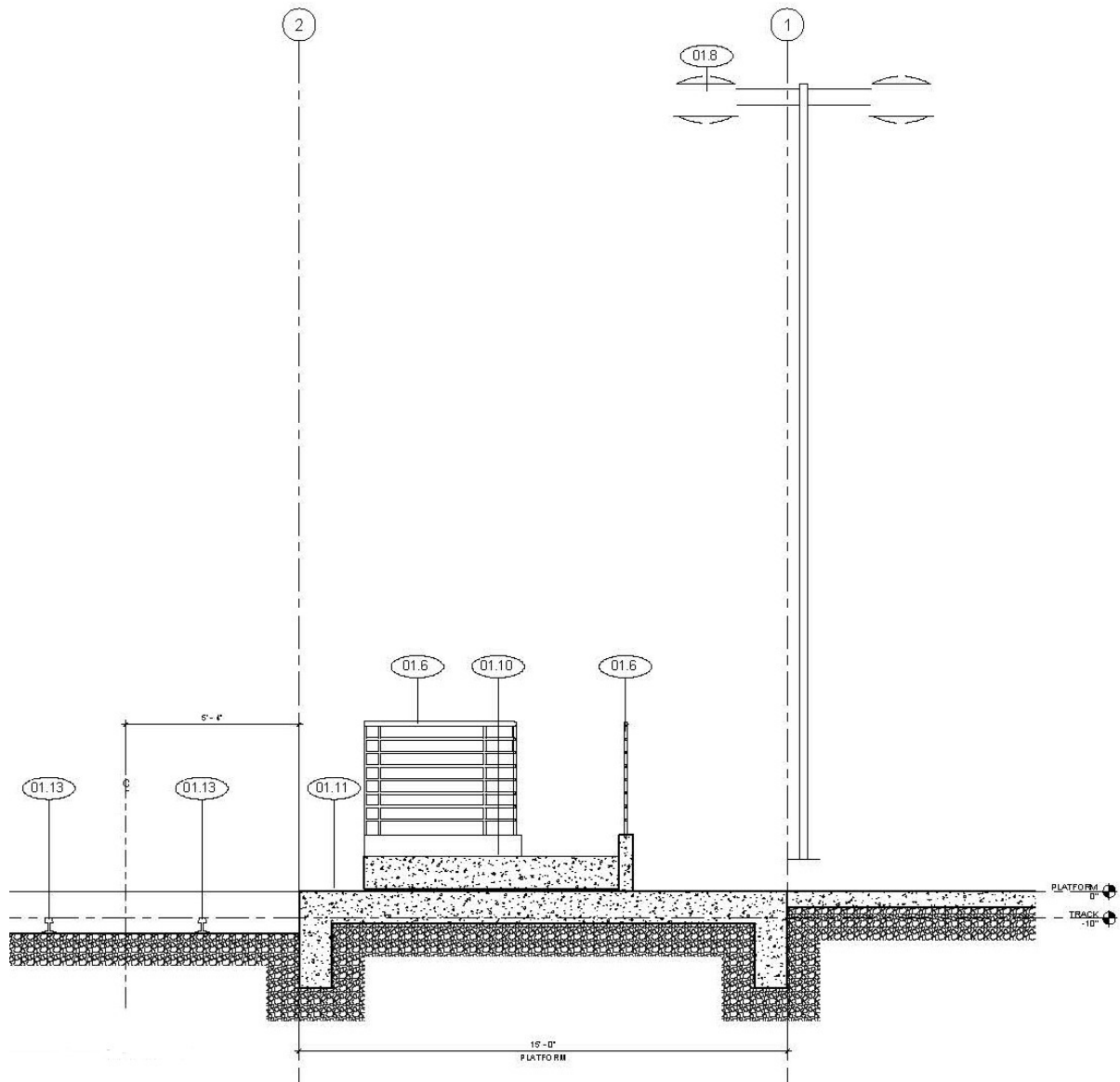
Section 6: Cost Summary

MERCED EXTENSION COST SUMMARY				
SEGMENT NUMBER	SEGMENT TITLE	PROJECT CONSTRUCTION COST	PROJECT ADD-ON PERCENTAGE	PROJECT TOTAL COST
<i>Trackwork</i>				
ME-T1	MERCED EXTENSION TRACK ALIGNMENT	\$262,830,687	1.318	\$346,410,846
<i>Stations</i>				
ME-S1	TURLOCK STATION	\$19,744,418	1.318	\$26,023,143
ME-S2	LIVINGSTON STATION	\$16,029,125	1.318	\$21,126,387
ME-S3	ATWATER STATION	\$20,908,988	1.318	\$27,558,046
ME-S4	MERCED STATION	\$10,951,665	1.318	\$14,434,294
<i>Layover & Maintenance Facility</i>				
ME-LM	MERCED LAYOVER & MAINTENANCE	\$55,763,258	1.318	\$73,495,973
TOTAL PROJECT WITH LIVINGSTON STATION				\$481,490,643
TOTAL PROJECT WITH ATWATER STATION				\$487,922,302

Attachment A: Station Sections



TYPICAL CENTER PLATFORM



TYPICAL SIDE PLATFORM

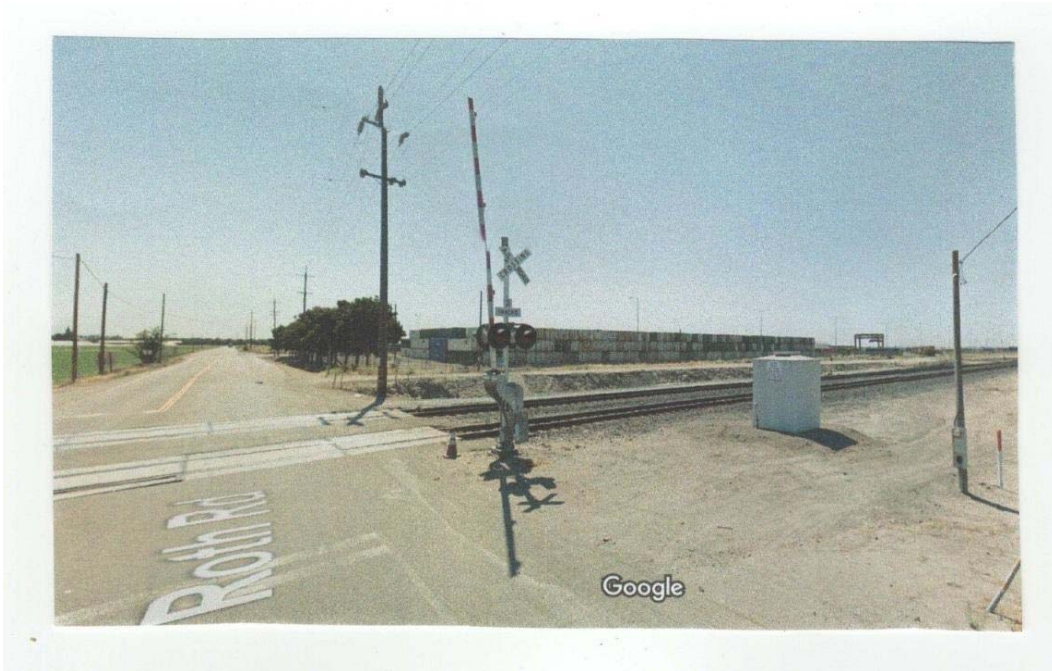
Attachment B: Signal Type Photos



CANTILEVER SIGNAL



CROSSOVER SIGNAL (ONE END)



GRADE CROSSING SIGNALS AND GATE



INTERMEDIATE SIGNALS (DOUBLE TRACK)



INTERMEDIATE SIGNALS (SINGLE TRACK)



PEDESTRIAN SIGNALS AND GATE

Attachment C: Cost Estimate Back-Up Tables

FRESNO SUBDIVISION						DATE	3/31/2021	
						Rev1	Rev 2	
ME-T1 MERCED EXTENSION TRACK ALIGNMENT								
SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS								\$54,481,387
40.01	133	CLEAR & GRUB LIGHT	AC	\$2,835	\$376,417	40.00%	\$526,984	
40.01	0	CLEAR & GRUB HEAVY	AC	\$5,670	\$0	30.00%	\$0	
40.01	114750	DEMOLITION	SF	\$10	\$1,147,500	30.00%	\$1,491,750	
40.01	144592	EARTHWORK COMMON	BCY	\$30	\$4,337,760	30.00%	\$5,639,088	
40.01	0	EARTHWORK (EXCAVATION ROCK)	BCY	\$60	\$0	30.00%	\$0	
40.01	0	EMBANKMENT	FCY	\$15	\$0	30.00%	\$0	
40.01	289184	BORROW	FCY	\$30	\$8,675,520	30.00%	\$11,278,176	
40.01	0	REMOVE HOV LANE CONTROLS SYSTEM	LF	\$450	\$0	30.00%	\$0	
40.07	0	RECONSTRUCT FREEWAY LANE 580	SF	\$115	\$0	50.00%	\$0	
40.01	0	STRUCTURE EXCAVATION	CY	\$45	\$0	25.00%	\$0	
40.05	0	RETAINING WALLS (1 TO 10 FEET TALL)	SF	\$40	\$0	20.00%	\$0	
40.05	0	RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$70	\$0	30.00%	\$0	
10.08	0	SOIL NAIL WALLS	SF	\$80	\$0	30.00%	\$0	
10.08	0	MSE WALL ROADWAY	SF	\$65	\$0	25.00%	\$0	
40.05	0	SOUND WALL	LF	\$105	\$0	50.00%	\$0	
40.02	340	BOX CULVERT	CY	\$1,500	\$510,000	30.00%	\$663,000	
40.02	111	CORRIGATED METAL CULVERT	LF	\$500	\$55,500	30.00%	\$72,150	
40.02	0	DRAINAGE (DIA-INCH-FOOT)	LF	\$15	\$0	40.00%	\$0	
40.02	0	DRAINAGE (DIA-INCH-FOOT)	LF	\$15	\$0	40.00%	\$0	
40.01	0	IMPORTED BORROW ROADWAY	CY	\$30	\$0	25.00%	\$0	
40.07	118550	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$30	\$3,556,500	25.00%	\$4,445,625	
40.07	0	AGGREGATE BASE ROADWAY	CY	\$50	\$0	25.00%	\$0	
40.07	0	ASPHALT CONCRETE ROADWAY	TONS	\$75	\$0	25.00%	\$0	
40.07	0	CONCRETE PAVEMENT	CY	\$240	\$0	20.00%	\$0	
40.07	0	GUARD RAIL ROADWAY	LF	\$35	\$0	25.00%	\$0	
40.07	0	ASPHALT DIKES ROADWAY	LF	\$5	\$0	25.00%	\$0	
40.07	0	STREET RESTORATIONS	SF	\$20	\$0	40.00%	\$0	
50.02	0	SIGNALLED STREET TRAFFIC CONTROL	EACH	\$225,000	\$0	20.00%	\$0	
50.02	0	MODIFIED TRAFFIC SIGNAL	EACH	\$115,000	\$0	20.00%	\$0	
40.02	0	STREET LIGHTING	EACH	\$5,100	\$0	20.00%	\$0	
	0	TRAFFIC CONTROL	DAYS	\$1,375	\$0	50.00%	\$0	
	0	MINOR CONCRETE	CY	\$450	\$0	30.00%	\$0	
	0	K RAIL TEMPORARY	LF	\$35	\$0	30.00%	\$0	
	10299	PIER PROTECTION	SF	\$1,500	\$15,448,749	30.00%	\$20,083,374	
	0	STRIPPING	LF	\$2	\$0	20.00%	\$0	
40.06	0	PERMANENT FENCING	LF	\$40	\$0	20.00%	\$0	
	0	VEHICULAR FENCE GATES	EACH	\$2,250	\$0	20.00%	\$0	
40.04	168385	SILT FENCE and ORANGE FENCE	LF	\$20	\$3,367,700	20.00%	\$4,041,240	
	0	EROSION CONTROL TEMPORARY	SF	\$10	\$0	30.00%	\$0	
	0	LANDSCAPING PERMANENT	SY	\$20	\$0	30.00%	\$0	
	1	UTILITY RELOCATIONS (10% OF CIVIL WORKS)	LS	\$4,800,000	\$4,800,000	30.00%	\$6,240,000	
40.02	0	DEVELOP PERMANENT WATER SUPPLY	LS	\$115,000	\$0	30.00%	\$0	
	0	YARD LIGHTING	EACH	\$3,000	\$0	20.00%	\$0	
TRACK WORK								\$129,659,804
40.01	6545	REMOVE EXISTING TRACK	TF	\$45	\$294,525	20.00%	\$353,430	
40.01	6	REMOVE EXISTING TURNOUTS	EACH	\$30,000	\$180,000	10.00%	\$198,000	
10.11	23793	SHIFT EXISTING TRACK	TF	\$115	\$2,736,195	20.00%	\$3,283,434	
10.11	43012	UPGRADE EXISTING TRACK	TF	\$350	\$15,054,200	20.00%	\$18,065,040	
10.11	0	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$570	\$0	25.00%	\$0	
10.11	144592	TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$510	\$73,741,920	25.00%	\$92,177,400	
10.12	2400	GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$850	\$2,040,000	20.00%	\$2,448,000	
10.12	0	TRACK PANELS	SF	\$85	\$0	30.00%	\$0	
10.12	0	CROSSOVER No.15	EACH	\$910,000	\$0	20.00%	\$0	
10.12	8	CROSSOVER No.20	EACH	\$1,135,000	\$9,080,000	20.00%	\$10,896,000	
10.12	0	TURNOUT (#7)	EACH	\$225,000	\$0	10.00%	\$0	
10.12	0	TURNOUT (#8)	EACH	\$240,000	\$0	10.00%	\$0	
10.12	2	TURNOUT (#9)	EACH	\$250,000	\$500,000	10.00%	\$550,000	
10.12	1	TURNOUT (#10)	EACH	\$285,000	\$285,000	10.00%	\$313,500	
10.12	0	TURNOUT (#14)	EACH	\$370,000	\$0	10.00%	\$0	
10.12	2	TURNOUT (#15)	EACH	\$400,000	\$800,000	10.00%	\$880,000	
10.12	1	TURNOUT (#20)	EACH	\$450,000	\$450,000	10.00%	\$495,000	
10.12	0	TURNOUT (#24)	EACH	\$510,000	\$0	10.00%	\$0	
10.12	0	DIAMOND CROSSING	EACH	\$570,000	\$0	10.00%	\$0	
10.12	0	DERAIL	EACH	\$115,000	\$0	10.00%	\$0	
10.12	0	BUMPING POST	EACH	\$30,000	\$0	20.00%	\$0	
10.11	0	UPGRADE MAINTRACK TO CLASS 6	TF	\$115	\$0	30.00%	\$0	
SIGNAL WORK								\$33,642,000
50.02	24	PEDESTRIAN GATES & SIGNALS	EACH	\$115,000	\$2,760,000	20.00%	\$3,312,000	

50.02	7	CANTILEVER SIGNAL	EACH	\$225,000	\$1,575,000	20.00%	\$1,890,000
50.01	17	DOG HOUSE (Signal House)	EACH	\$285,000	\$4,845,000	20.00%	\$5,814,000
40.02	17	NEW ELECTRIC SERVICE	EACH	\$25,000	\$425,000	20.00%	\$510,000
50.01	0	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$170,000	\$0	20.00%	\$0
50.01	0	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$340,000	\$0	20.00%	\$0
50.01	1	NEW TURNOUT SIGNAL	EACH	\$370,000	\$370,000	20.00%	\$444,000
50.01	8	NEW CROSSOVER SIGNALLING	EACH	\$570,000	\$4,560,000	20.00%	\$5,472,000
50.02	0	NEW GRADE CROSSING SIGNALS	EACH	\$285,000	\$0	20.00%	\$0
50.02	30	NEW CROSSING GATES & SIGNALS	EACH	\$450,000	\$13,500,000	20.00%	\$16,200,000
50.01	0	UPGRADE SIGNALS TO CLASS 6	MILE	\$225,000	\$0	30.00%	\$0

BRIDGE STRUCTURES

\$45,047,496

40.01	0	BRIDGE REMOVAL	SF	\$230	\$0	50.00%	\$0
10.04	0	RAILROAD SHORT BRIDGE CONCRETE	SF	\$450	\$0	30.00%	\$0
10.04	4952	RAILROAD BRIDGE CONCRETE	SF	\$1,025	\$5,075,800	30.00%	\$6,598,540
10.04	20680	RAILROAD BRIDGE STEEL	SF	\$1,155	\$23,885,400	30.00%	\$31,051,020
10.04	0	HIGHWAY BRIDGE CONCRETE	SF	\$450	\$0	50.00%	\$0
10.04	0	HIGHWAY BRIDGE STEEL	SF	\$570	\$0	30.00%	\$0
10.04	10162	TRESTLE BRIDGE STEEL	SF	\$560	\$5,690,720	30.00%	\$7,397,936
10.04	0	PEDESTRIAN BRIDGE	SF	\$450	\$0	30.00%	\$0
	0	BARRIER RAIL PERMANENT	LF	\$115	\$0	25.00%	\$0
10.06	0	UNDERPASS STRUCTURE	CY	\$850	\$0	25.00%	\$0

TRAIN CONTROL

\$0

50.01	0	POSITIVE TRAIN CONTROL	MILE	\$2,270,000	\$0	25.00%	\$0
50.01	0	TRAIN CONTROL SYSTEM	EACH	\$225,000	\$0	30.00%	\$0
50.01	0	TRAIN CONTROL CABLING	LF	\$15	\$0	30.00%	\$0
50.01	0	TRAIN CONTROL DIGITAL CBOSS	EACH	\$570,000	\$0	40.00%	\$0
50.01	0	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,700,000	\$0	30.00%	\$0
40.02	0	COMMERCIAL ELECTRICAL SERVICE	EACH	\$57,000	\$0	25.00%	\$0
40.02	0	LINE UTILITIES WITHIN TRACKWAY	LF	\$35	\$0	30.00%	\$0
40.02	0	LINE UTILITIES CROSSING TRACKS	EACH	\$2,835	\$0	30.00%	\$0
40.02	0	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$60	\$0	30.00%	\$0

STATIONS

\$0

20.01	0	STATION PLATFORM STRUCTURES NEW	SF	\$225	\$0	20.00%	\$0
20.01	0	STATION CANOPY	SF	\$85	\$0	20.00%	\$0
20.01	0	STATION PLATFORM STRUCTURES UPGRADE	SF	\$340	\$0	20.00%	\$0
40.02	0	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$57,000	\$0	25.00%	\$0
20.01	0	STATION AMENITIES	SF	\$75	\$0	30.00%	\$0
30.02	0	INSPECTION PIT	SF	\$100	\$0	30.00%	\$0
40.07	0	PARKING LOTS	SPACES	\$3,400	\$0	25.00%	\$0
20.06	0	PARKING STRUCTURES	SPACES	\$22,500	\$0	25.00%	\$0
40.07	0	BUS LANE AND UNLOADING	SF	\$30	\$0	25.00%	\$0
40.02	0	PARKING LOT LIGHTING	SPACES	\$225	\$0	30.00%	\$0
20.07	0	ELEVATORS	EACH	\$510,000	\$0	25.00%	\$0
20.07	0	ESCALATOR	EACH	\$340,000	\$0	25.00%	\$0

RIGHT OF WAY

\$0

60.01	0	ROW LAND ONLY	SF	\$5	\$0	25.00%	\$0
60.01	0	ROW AGRICULTURAL	SF	\$6	\$0	25.00%	\$0
60.01	0	ROW ORCHARDS	SF	\$7	\$0	25.00%	\$0
60.01	0	ROW PAVED AREAS	SF	\$9	\$0	25.00%	\$0
60.01	0	ROW RESIDENTIAL AREA	SF	\$11	\$0	25.00%	\$0
60.01	0	ROW LIGHT INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
60.01	0	ROW HEAVY INDUSTRIAL AREA	SF	\$18	\$0	25.00%	\$0
60.02	0	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0

TOTAL CONSTRUCTION COST

\$262,830,687

FRESNO SUBDIVISION

DATE 2/26/2021
Rev1 Rev 2 Rev 3

ME-S1 TURLOCK STATION

SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS								\$4,395,318
40.01	3.3	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,250	40.00%	\$11,550	
40.01		CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
40.01	33600	DEMOLITION	SF	\$8	\$268,800	30.00%	\$349,440	
40.01	4500	EARTHWORK COMMON	BCY	\$25	\$112,500	30.00%	\$146,250	
40.01		EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
40.01		EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
40.01		BORROW	FCY	\$25	\$0	30.00%	\$0	
40.01		REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
40.07		RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
40.01		STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
40.05		RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
40.05		RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
10.08		SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
10.08		MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
40.05		SOUND WALL	LF	\$90	\$0	50.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02	9703	DRAINAGE (DIA-INCH-FOOT) - Including Storm Water Management	LF	\$12	\$116,436	40.00%	\$163,010	
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
40.01		IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
40.07		ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0	
40.07		AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
40.07		ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
40.07	28224	SIDEWALK	SF	\$15	\$423,360	30.00%	\$550,368	
40.07		GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
40.07		ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
40.07	114200	STREET RESTORATIONS	SF	\$15	\$1,713,000	40.00%	\$2,398,200	
50.02		SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
50.02		MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
40.02		STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
		TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
		MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
		K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
		CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
		STRIPPING	LF	\$1	\$0	20.00%	\$0	
40.06	3400	PERMANENT FENCING	LF	\$35	\$119,000	20.00%	\$142,800	
		VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
40.04	3500	SILT FENCE and ORANGE FENCE	LF	\$15	\$52,500	20.00%	\$63,000	
40.04		EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
40.06		LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
40.02	1	UTILITY RELOCATIONS	LS	\$389,000	\$389,000	30.00%	\$505,700	
40.02	1	DEVELOP PERMANENT WATER SUPPLY	LS	\$50,000	\$50,000	30.00%	\$65,000	
40.02		YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK								\$0
40.01		REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
40.01		REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
10.11		SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
10.11		UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
10.11		TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
10.11		TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
10.12		GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
10.12		TRACK PANELS	SF	\$75	\$0	30.00%	\$0	
10.12		CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
10.12		CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
10.12		TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
10.12		TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
10.12		TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
10.12		TURNOUT (#10)	EACH	\$250,000	\$0	10.00%	\$0	
10.12		TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
10.12		TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
10.12		TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
10.12		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
10.12		DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
10.12		DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
10.12		BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
10.11		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK								\$240,000
50.02	2	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$200,000	20.00%	\$240,000	
50.02		CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
50.01		DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
40.02		NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	

50.01	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0
50.01	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0
50.01	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0
50.01	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0
50.02	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0
50.02	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0
50.01	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0
BRIDGE STRUCTURES						
\$2,646,875						
40.01	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
10.04	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
10.04	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
10.04	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
10.04	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
10.04	3 PEDESTRIAN BRIDGE ACCESS STRUCTURE	EA	\$500,000	\$1,500,000	25.00%	\$1,875,000
2470	PEDESTRIAN BRIDGE	SF	\$250	\$617,500	25.00%	\$771,875
10.06	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0
TRAIN CONTROL						
\$0						
50.01	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0
50.01	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0
50.01	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0
50.01	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0
50.01	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0
40.02	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
40.02	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0
40.02	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0
40.02	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0
STATIONS						
\$12,462,225						
20.01	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
20.01	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
20.01	28650 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$5,730,000	20.00%	\$6,876,000
20.01	1800 STATION CANOPY	SF	\$125	\$225,000	20.00%	\$270,000
20.01	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
40.01	1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
20.01	28650 STATION AMENITIES	SF	\$65	\$1,862,250	30.00%	\$2,420,925
30.02	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
40.07	262 PARKING LOTS	SPACES	\$3,000	\$786,000	25.00%	\$982,500
20.06	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
40.07	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
40.02	262 PARKING LOT LIGHTING	SPACES	\$500	\$131,000	30.00%	\$170,300
20.07	3 ELEVATORS	EACH	\$450,000	\$1,350,000	25.00%	\$1,687,500
20.07	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0
RIGHT OF WAY						
\$0						
60.01	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0
60.01	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
60.01	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
60.01	ROW PAVED AREAS	SF	\$8	\$0	25.00%	\$0
60.01	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
60.01	ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$0	25.00%	\$0
60.01	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
60.02	BUSINESS RELOCATIONS (Value of business, relocation,goodwill, legal,appraisal,etc.)	VALUE	\$1	\$0	0.00%	\$0
TOTAL CONSTRUCTION COST			\$19,744,418			

FRESNO SUBDIVISION

DATE 2/26/2021
Rev1 Rev 2 Rev 3

ME-S2 LIVINGSTON STATION

SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS								\$1,656,600
40.01	3.3	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,250	40.00%	\$11,550	
40.01		CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
40.01	33600	DEMOLITION	SF	\$8	\$268,800	30.00%	\$349,440	
40.01	8000	EARTHWORK COMMON	BCY	\$25	\$200,000	30.00%	\$260,000	
40.01		EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
40.01		EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
40.01		BORROW	FCY	\$25	\$0	30.00%	\$0	
40.01		REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
40.07		RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
40.01		STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
40.05		RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
40.05		RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
10.08		SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
10.08		MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
40.05		SOUND WALL	LF	\$90	\$0	50.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02	9703	DRAINAGE (DIA-INCH-FOOT) - Including Storm Water Management	LF	\$12	\$116,436	40.00%	\$163,010	
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
40.01		IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
40.07		ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0	
40.07		AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
40.07		ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
40.07	20900	SIDEWALK	SF	\$15	\$313,500	30.00%	\$407,550	
40.07		GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
40.07		ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
40.07		STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
50.02		SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
50.02		MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
40.02		STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
		TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
		MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
		K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
		CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
		STRIPPING	LF	\$1	\$0	20.00%	\$0	
40.06	3800	PERMANENT FENCING	LF	\$35	\$133,000	20.00%	\$159,600	
		VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
40.04	3500	SILT FENCE and ORANGE FENCE	LF	\$15	\$52,500	20.00%	\$63,000	
40.04		EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
40.06		LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
40.02	1	UTILITY RELOCATIONS	LS	\$136,500	\$136,500	30.00%	\$177,450	
40.02	1	DEVELOP PERMANENT WATER SUPPLY	LS	\$50,000	\$50,000	30.00%	\$65,000	
40.02		YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK								\$0
40.01		REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
40.01		REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
10.11		SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
10.11		UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
10.11		TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
10.11		TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
10.12		GRADE CROSSING TRACK COMPLETE (T+T+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
10.12		TRACK PANELS	SF	\$75	\$0	30.00%	\$0	
10.12		CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
10.12		CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
10.12		TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
10.12		TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
10.12		TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
10.12		TURNOUT (#10)	EACH	\$250,000	\$0	10.00%	\$0	
10.12		TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
10.12		TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
10.12		TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
10.12		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
10.12		DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
10.12		DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
10.12		BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
10.11		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK								\$240,000
50.02	2	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$200,000	20.00%	\$240,000	
50.02		CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
50.01		DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
40.02		NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	

50.01	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
50.01	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
50.01	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
50.01	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
50.02	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
50.02	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
50.01	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$2,812,500
40.01	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0	
10.04	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0	
10.04	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0	
10.04	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
10.04	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0	
10.04	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
10.04	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0	
10.04	1 PEDESTRIAN TUNNEL ACCESS STRUCTURE	EA	\$2,250,000	\$2,250,000	25.00%	\$2,812,500	
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0	
10.06	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0	
TRAIN CONTROL							\$0
50.01	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0	
50.01	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0	
50.01	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0	
50.01	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0	
50.01	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
40.02	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
40.02	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0	
40.02	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0	
40.02	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0	
STATIONS							\$10,743,025
20.01	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	
20.01	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0	
20.01	27150 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$5,430,000	20.00%	\$6,516,000	
20.01	1800 STATION CANOPY	SF	\$125	\$225,000	20.00%	\$270,000	
20.01	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0	
40.01	1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000	
20.01	27150 STATION AMENITIES	SF	\$65	\$1,764,750	30.00%	\$2,294,175	
30.02	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0	
40.07	239 PARKING LOTS	SPACES	\$3,000	\$717,000	25.00%	\$896,250	
20.06	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0	
40.07	17800 BUS LANE AND UNLOADING	SF	\$25	\$445,000	25.00%	\$556,250	
40.02	239 PARKING LOT LIGHTING	SPACES	\$500	\$119,500	30.00%	\$155,350	
20.07	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0	
20.07	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY							\$577,000
60.01	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
60.01	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0	
60.01	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
60.01	23950 ROW PAVED AREAS	SF	\$8	\$191,600	25.00%	\$239,500	
60.01	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0	
60.01	9000 ROW LIGHT INDUSTRIAL BUILDING	SF	\$30	\$270,000	25.00%	\$337,500	
60.01	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	
60.02							
TOTAL CONSTRUCTION COST							\$16,029,125

FRESNO SUBDIVISION

DATE 2/26/2021
Rev1 Rev 2 Rev 3

ME-S3 ATWATER STATION

SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS								\$2,323,500
40.01	3.3	CLEAR & GRUB LIGHT	AC	\$2,500	\$8,250	40.00%	\$11,550	
40.01		CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
40.01	33600	DEMOLITION	SF	\$8	\$268,800	30.00%	\$349,440	
40.01	4500	EARTHWORK COMMON	BCY	\$25	\$112,500	30.00%	\$146,250	
40.01		EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
40.01		EMBANKMENT	FCY	\$10	\$0	30.00%	\$0	
40.01		BORROW	FCY	\$25	\$0	30.00%	\$0	
40.01		REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
40.07		RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
40.01		STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
40.05		RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
40.05		RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
10.08		SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
10.08		MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
40.05		SOUND WALL	LF	\$90	\$0	50.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02	9703	DRAINAGE (DIA-INCH-FOOT) - Including Storm Water Management	LF	\$12	\$116,436	40.00%	\$163,010	
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
40.01		IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
40.07		ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0	
40.07		AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
40.07		ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0	
40.07	36700	SIDEWALK	SF	\$15	\$550,500	30.00%	\$715,650	
40.07		GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0	
40.07		ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0	
40.07		STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
50.02		SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
50.02		MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
40.02		STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
		TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
		MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0	
		K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0	
		CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0	
		STRIPPING	LF	\$1	\$0	20.00%	\$0	
40.06	3800	PERMANENT FENCING	LF	\$35	\$133,000	20.00%	\$159,600	
		VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0	
40.04	3500	SILT FENCE and ORANGE FENCE	LF	\$15	\$52,500	20.00%	\$63,000	
40.04		EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0	
40.06		LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
40.02	1	UTILITY RELOCATIONS	LS	\$500,000	\$500,000	30.00%	\$650,000	
40.02	1	DEVELOP PERMANENT WATER SUPPLY	LS	\$50,000	\$50,000	30.00%	\$65,000	
40.02		YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0	
TRACK WORK								\$0
40.01		REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0	
40.01		REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
10.11		SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
10.11		UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
10.11		TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0	
10.11		TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
10.12		GRADE CROSSING TRACK COMPLETE (T+T+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
10.12		TRACK PANELS	SF	\$75	\$0	30.00%	\$0	
10.12		CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
10.12		CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
10.12		TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
10.12		TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0	
10.12		TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
10.12		TURNOUT (#10)	EACH	\$250,000	\$0	10.00%	\$0	
10.12		TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
10.12		TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0	
10.12		TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
10.12		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
10.12		DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
10.12		DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
10.12		BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
10.11		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK								\$240,000
50.02	2	PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$200,000	20.00%	\$240,000	
50.02		CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
50.01		DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0	
40.02		NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0	

50.01	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0	
50.01	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0	
50.01	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0	
50.01	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0	
50.02	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0	
50.02	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0	
50.01	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0	
BRIDGE STRUCTURES							\$2,812,500
40.01	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0	
10.04	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0	
10.04	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0	
10.04	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
10.04	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0	
10.04	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0	
10.04	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0	
10.04	1 PEDESTRIAN TUNNEL ACCESS STRUCTURE	EA	\$2,250,000	\$2,250,000	25.00%	\$2,812,500	
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0	
10.06	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0	
TRAIN CONTROL							\$0
50.01	POSITIVE TRAIN CONTROL	MILE	\$2,000,000	\$0	25.00%	\$0	
50.01	TRAIN CONTROL SYSTEM	EACH	\$200,000	\$0	30.00%	\$0	
50.01	TRAIN CONTROL CABLING	LF	\$12	\$0	30.00%	\$0	
50.01	TRAIN CONTROL DIGITAL CBOSS	EACH	\$500,000	\$0	40.00%	\$0	
50.01	COMPUTER TRAFFIC MANAGEMENT	LS	\$1,500,000	\$0	30.00%	\$0	
40.02	COMMERCIAL ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0	
40.02	LINE UTILITIES WITHIN TRACKWAY	LF	\$30	\$0	30.00%	\$0	
40.02	LINE UTILITIES CROSSING TRACKS	EACH	\$2,500	\$0	30.00%	\$0	
40.02	LINE UTILITIES FIBER OPTIC PARALLEL TO TRACKS	LF	\$50	\$0	30.00%	\$0	
STATIONS							\$9,934,163
20.01	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0	
20.01	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0	
20.01	27150 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$5,430,000	20.00%	\$6,516,000	
20.01	1800 STATION CANOPY	SF	\$125	\$225,000	20.00%	\$270,000	
20.01	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0	
40.01	1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000	
20.01	27150 STATION AMENITIES	SF	\$65	\$1,764,750	30.00%	\$2,294,175	
30.02	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0	
40.07	172 PARKING LOTS	SPACES	\$3,000	\$516,000	25.00%	\$645,000	
20.06	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0	
40.07	1350 BUS LANE AND UNLOADING	SF	\$25	\$33,750	25.00%	\$42,188	
40.02	172 PARKING LOT LIGHTING	SPACES	\$500	\$86,000	30.00%	\$111,800	
20.07	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0	
20.07	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0	
RIGHT OF WAY							\$5,598,825
60.01	ROW LAND ONLY	SF	\$4	\$0	25.00%	\$0	
60.01	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0	
60.01	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0	
60.01	87320 ROW PAVED AREAS	SF	\$8	\$698,560	25.00%	\$873,200	
60.01	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0	
60.01	19350 ROW LIGHT INDUSTRIAL BUILDING	SF	\$30	\$580,500	25.00%	\$725,625	
60.01	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0	
	BUSINESS RELOCATIONS (Value of business, relocation,goodwill, 4 legal,appraisal,etc.)	VALUE	\$1,000,000	\$4,000,000	0.00%	\$4,000,000	
60.02							
TOTAL CONSTRUCTION COST							\$20,908,988

FRESNO SUBDIVISION					DATE		2/26/2021	SUB TOTAL WORK ELEMENT	
					Rev1	Rev 2	Rev 3		
ME-S4 MERCED STATION									
SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE		
CIVIL WORKS								\$1,190,602	
40.01	1	CLEAR & GRUB LIGHT	AC	\$2,500	\$2,500	40.00%	\$3,500		
40.01		CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0		
40.01	28000	DEMOLITION	SF	\$8	\$224,000	30.00%	\$291,200		
40.01	7250	EARTHWORK COMMON	BCY	\$25	\$181,250	30.00%	\$235,625		
40.01		EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0		
40.01		EMBANKMENT	FCY	\$10	\$0	30.00%	\$0		
40.01		BORROW	FCY	\$25	\$0	30.00%	\$0		
40.01		REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0		
40.07		RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0		
40.01		STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0		
40.05		RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0		
40.05		RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0		
10.08		SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0		
10.08		MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0		
40.05		SOUND WALL	LF	\$90	\$0	50.00%	\$0		
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0		
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0		
40.02	2940	DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$35,284	40.00%	\$49,397		
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0		
40.01		IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0		
40.07		ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$25	\$0	25.00%	\$0		
40.07		AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0		
40.07		ASPHALT CONCRETE ROADWAY	TONS	\$65	\$0	25.00%	\$0		
40.07	15500	SIDEWALK	SF	\$15	\$232,500	30.00%	\$302,250		
40.07		GUARD RAIL ROADWAY	LF	\$30	\$0	25.00%	\$0		
40.07		ASPHALT DIKES ROADWAY	LF	\$4	\$0	25.00%	\$0		
40.07		STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0		
50.02		SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0		
50.02		MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0		
40.02		STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0		
		TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0		
		MINOR CONCRETE	CY	\$400	\$0	30.00%	\$0		
		K RAIL TEMPORARY	LF	\$30	\$0	30.00%	\$0		
		CONCRETE BARRIER	LF	\$50	\$0	30.00%	\$0		
		STRIPPING	LF	\$1	\$0	20.00%	\$0		
40.06	1115	PERMANENT FENCING	LF	\$35	\$39,025	20.00%	\$46,830		
		VEHICULAR FENCE GATES	EACH	\$2,000	\$0	20.00%	\$0		
40.04	3350	SILT FENCE and ORANGE FENCE	LF	\$15	\$50,250	20.00%	\$60,300		
		EROSION CONTROL TEMPORARY	SF	\$7	\$0	30.00%	\$0		
		LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0		
	1	UTILITY RELOCATIONS	LS	\$105,000	\$105,000	30.00%	\$136,500		
40.02	1	DEVELOP PERMANENT WATER SUPPLY	LS	\$50,000	\$50,000	30.00%	\$65,000		
		YARD LIGHTING	EACH	\$2,500	\$0	20.00%	\$0		
TRACK WORK								\$0	
40.01		REMOVE EXISTING TRACK	TF	\$40	\$0	20.00%	\$0		
40.01		REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0		
10.11		SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0		
10.11		UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0		
10.11		TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$0	25.00%	\$0		
10.11		TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0		
10.12		GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0		
10.12		TRACK PANELS	SF	\$75	\$0	30.00%	\$0		
10.12		CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0		
10.12		CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0		
10.12		TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0		
10.12		TURNOUT (#8)	EACH	\$210,000	\$0	10.00%	\$0		
10.12		TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0		
10.12		TURNOUT (#10)	EACH	\$250,000	\$0	10.00%	\$0		
10.12		TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0		
10.12		TURNOUT (#15)	EACH	\$350,000	\$0	10.00%	\$0		
10.12		TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0		
10.12		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0		
10.12		DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0		
10.12		DERAIL	EACH	\$100,000	\$0	10.00%	\$0		
10.12		BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0		
10.11		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0		
SIGNAL WORK								\$0	
50.02		PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0		
50.02		CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0		
50.01		DOG HOUSE (Signal House)	EACH	\$250,000	\$0	20.00%	\$0		
40.02		NEW ELECTRIC SERVICE	EACH	\$20,000	\$0	20.00%	\$0		

50.01	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0
50.01	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0
50.01	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0
50.01	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0
50.02	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0
50.02	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0
50.01	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0

BRIDGE STRUCTURES

\$0

40.01	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
10.04	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
10.04	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
10.04	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
10.04	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
10.04	PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
10.06	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0

TRAIN CONTROL

\$0

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

STATIONS

\$6,425,063

20.01	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
20.01	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
20.01	14325 STATION PLATFORM STRUCTURES NEW	SF	\$200	\$2,865,000	20.00%	\$3,438,000
20.01	600 STATION CANOPY	SF	\$75	\$45,000	20.00%	\$54,000
20.01	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
40.02	1 STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$50,000	10.00%	\$55,000
20.01	14325 STATION AMENITIES	SF	\$65	\$931,125	30.00%	\$1,210,463
30.02	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
40.07	379 PARKING LOTS	SPACES	\$3,000	\$1,137,250	25.00%	\$1,421,250
20.06	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
40.07	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
40.02	379 PARKING LOT LIGHTING	SPACES	\$500	\$189,500	30.00%	\$246,350
20.07	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
20.07	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0

RIGHT OF WAY

\$3,336,000

60.01	23800	ROW LAND ONLY	SF	\$4	\$95,200	25.00%	\$119,000
60.01		ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
60.01		ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
60.01	66700	ROW PAVED AREAS	SF	\$8	\$533,600	25.00%	\$667,000
60.01		ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
60.01	28000	ROW LIGHT INDUSTRIAL BUILDING	SF	\$30	\$840,000	25.00%	\$1,050,000
60.01		ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
	1500000	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$1,500,000	0.00%	\$1,500,000
60.02							

TOTAL CONSTRUCTION COST

\$10,951,665

FRESNO SUBDIVISION - TRACK 135

DATE 3/31/2021
Rev1 Rev 2 Rev 3

ME-LM MERCED LAYOVER & MAINTENANCE

SCC Codes	Estimate Quantity	DESCRIPTION	UNITS	UNIT COSTS	BASE COST	CONTINGENCY	TOTAL PRICE	SUB TOTAL WORK ELEMENT
CIVIL WORKS								\$23,718,048
40.01	5	CLEAR & GRUB LIGHT	AC	\$2,500	\$12,500	40.00%	\$17,500	
40.01		CLEAR & GRUB HEAVY	AC	\$5,000	\$0	30.00%	\$0	
40.01	155000	DEMOLITION	SF	\$8	\$1,240,000	30.00%	\$1,612,000	
40.01		EARTHWORK COMMON	BCY	\$25	\$0	30.00%	\$0	
40.01		EARTHWORK (EXCAVATION ROCK)	BCY	\$50	\$0	30.00%	\$0	
40.01	70000	EMBANKMENT	FCY	\$10	\$700,000	30.00%	\$910,000	
40.01	70000	BORROW	FCY	\$25	\$1,750,000	30.00%	\$2,275,000	
40.01		REMOVE HOV LANE CONTROLS SYSTEM	LF	\$400	\$0	30.00%	\$0	
40.07		RECONSTRUCT FREEWAY LANE 580	SF	\$100	\$0	50.00%	\$0	
40.01		STRUCTURE EXCAVATION	CY	\$40	\$0	25.00%	\$0	
40.05		RETAINING WALLS (0 TO 10 FEET TALL)	SF	\$35	\$0	20.00%	\$0	
40.05		RETAINING WALLS (10 TO 20 FEET TALL)	SF	\$60	\$0	30.00%	\$0	
10.08		SOIL NAIL WALLS	SF	\$70	\$0	30.00%	\$0	
10.08		MSE WALL ROADWAY	SF	\$55	\$0	25.00%	\$0	
40.05		SOUND WALL	LF	\$90	\$0	50.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02		BOX CULVERT	CY	\$1,000	\$0	30.00%	\$0	
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
40.02		DRAINAGE (DIA-INCH-FOOT)	LF	\$12	\$0	40.00%	\$0	
40.01		IMPORTED BORROW ROADWAY	CY	\$25	\$0	25.00%	\$0	
40.07	128650	ROADWAY CONSTRUCTION (BASE, PAVE, FINISHES)	SF	\$15	\$1,929,750	25.00%	\$2,412,188	
40.07		AGGREGATE BASE ROADWAY	CY	\$45	\$0	25.00%	\$0	
40.07		ASPHALT CONCRETE ROADWAY	SF	\$4	\$0	25.00%	\$0	
40.07		CONCRETE PAVEMENT	CY	\$210	\$0	20.00%	\$0	
10.08		CIVIL WORK TYPE C	LF	\$7,124	\$0	30.00%	\$0	
10.08		CIVIL WORK TYPE G	SF	\$1,500	\$0	30.00%	\$0	
40.07		STREET RESTORATIONS	SF	\$15	\$0	40.00%	\$0	
50.02		SIGNALLED STREET TRAFFIC CONTROL	EACH	\$300,000	\$0	20.00%	\$0	
50.02		MODIFIED TRAFFIC SIGNAL	EACH	\$100,000	\$0	20.00%	\$0	
40.02		STREET LIGHTING	EACH	\$4,500	\$0	20.00%	\$0	
40.02		TRAFFIC CONTROL	DAYS	\$1,200	\$0	50.00%	\$0	
30.02	210000	SHOP BUILDINGS	SF	\$50	\$10,500,000	30.00%	\$13,650,000	
30.02		CONTAINER	EACH	\$7,500	\$0	30.00%	\$0	
30.02	8120	INSPECTION PITS	SF	\$90	\$730,800	30.00%	\$950,040	
		STRIPPING	LF	\$1	\$0	20.00%	\$0	
40.06	10560	PERMANENT FENCING	LF	\$35	\$369,600	20.00%	\$443,520	
40.06		3 VEHICULAR FENCE GATES	EACH	\$5,000	\$15,000	20.00%	\$18,000	
40.04	11100	SILT FENCE and ORANGE FENCE	LF	\$15	\$166,500	20.00%	\$199,800	
40.04		1 TRAIN WASH	LS	\$250,000	\$250,000	30.00%	\$325,000	
40.06		LANDSCAPING PERMANENT	SY	\$15	\$0	30.00%	\$0	
40.02		1 UTILITY RELOCATIONS	LS	\$250,000	\$250,000	30.00%	\$325,000	
40.02		1 DEVELOP PERMANENT WATER SUPPLY	LS	\$100,000	\$100,000	30.00%	\$130,000	
40.02		150 YARD LIGHTING	EACH	\$2,500	\$375,000	20.00%	\$450,000	
TRACK WORK								\$15,514,050
40.01	100	REMOVE EXISTING TRACK	TF	\$40	\$4,000	20.00%	\$4,800	
40.01		REMOVE EXISTING TURNOUTS	EACH	\$25,000	\$0	10.00%	\$0	
10.11		SHIFT EXISTING TRACK	TF	\$100	\$0	20.00%	\$0	
10.11		UPGRADE EXISTING TRACK	TF	\$300	\$0	20.00%	\$0	
10.11	21750	TRACK (INCL RAIL, CONCRETE TIES, BALLAST & SUBBALLAST)	TF	\$500	\$10,875,000	15.00%	\$12,506,250	
10.11		TRACK (INCL RAIL, WOOD TIES, BALLAST & SUBBALLAST)	TF	\$450	\$0	25.00%	\$0	
10.12		GRADE CROSSING TRACK COMPLETE (T+T+B+SB+P+AC+TC)	TF	\$750	\$0	20.00%	\$0	
10.12		TRACK PANELS	LF	\$75	\$0	30.00%	\$0	
10.12		CROSSOVER No.15	EACH	\$800,000	\$0	20.00%	\$0	
10.12		CROSSOVER No.20	EACH	\$1,000,000	\$0	20.00%	\$0	
10.12		TURNOUT (#7)	EACH	\$200,000	\$0	10.00%	\$0	
10.12	13	TURNOUT (#8)	EACH	\$210,000	\$2,730,000	10.00%	\$3,003,000	
10.12		TURNOUT (#9)	EACH	\$220,000	\$0	10.00%	\$0	
10.12		TURNOUT (#11)	EACH	\$250,000	\$0	10.00%	\$0	
10.12		TURNOUT (#14)	EACH	\$325,000	\$0	10.00%	\$0	
10.12		TURNOUT (#15 CURVE)	EACH	\$975,000	\$0	10.00%	\$0	
10.12		TURNOUT (#20)	EACH	\$400,000	\$0	10.00%	\$0	
10.12		TURNOUT (#24)	EACH	\$450,000	\$0	10.00%	\$0	
10.12		DIAMOND CROSSING	EACH	\$500,000	\$0	10.00%	\$0	
10.12		DERAIL	EACH	\$100,000	\$0	10.00%	\$0	
10.12		BUMPING POST	EACH	\$25,000	\$0	20.00%	\$0	
10.11		UPGRADE MAINTRACK TO CLASS 6	TF	\$100	\$0	30.00%	\$0	
SIGNAL WORK								\$264,000
50.02		PEDESTRIAN GATES & SIGNALS	EACH	\$100,000	\$0	20.00%	\$0	
50.02		CANTILEVER SIGNAL	EACH	\$200,000	\$0	20.00%	\$0	
50.01	1	DOG HOUSE (Signal House)	EACH	\$200,000	\$200,000	20.00%	\$240,000	

40.02	1 NEW ELECTRIC SERVICE	EACH	\$20,000	\$20,000	20.00%	\$24,000
50.01	NEW INTERMEDIATE SIGNALS SINGLE TRACK	EACH	\$150,000	\$0	20.00%	\$0
50.01	NEW INTERMEDIATE SIGNALS DOUBLE TRACK	EACH	\$300,000	\$0	20.00%	\$0
50.01	NEW TURNOUT SIGNAL	EACH	\$325,000	\$0	20.00%	\$0
50.01	NEW CROSSOVER SIGNALLING	EACH	\$500,000	\$0	20.00%	\$0
50.02	NEW GRADE CROSSING SIGNALS	EACH	\$250,000	\$0	20.00%	\$0
50.02	NEW CROSSING GATES & SIGNALS	EACH	\$400,000	\$0	20.00%	\$0
50.01	UPGRADE SIGNALS TO CLASS 6	MILE	\$200,000	\$0	30.00%	\$0

BRIDGE STRUCTURES

40.01	BRIDGE REMOVAL	SF	\$200	\$0	50.00%	\$0
10.04	RAILROAD SHORT BRIDGE CONCRETE	SF	\$400	\$0	30.00%	\$0
10.04	RAILROAD AERIAL GUIDEWAY	SF	\$500	\$0	30.00%	\$0
10.04	RAILROAD BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	HIGHWAY BRIDGE CONCRETE	SF	\$400	\$0	50.00%	\$0
10.04	HIGHWAY BRIDGE STEEL	SF	\$500	\$0	30.00%	\$0
10.04	TRESTLE BRIDGE STEEL	SF	\$550	\$0	30.00%	\$0
10.04	PEDESTRIAN BRIDGE	SF	\$400	\$0	30.00%	\$0
	BARRIER RAIL PERMANENT	LF	\$100	\$0	25.00%	\$0
10.06	UNDERPASS STRUCTURE	CY	\$750	\$0	25.00%	\$0

TRAIN CONTROL

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

STATIONS

20.01	TYPE A SMALL INTERMODEL STATION	EACH	\$13,000,000	\$0	20.00%	\$0
20.01	TYPE K LARGE INTERMODEL STATION	EACH	\$32,000,000	\$0	50.00%	\$0
20.01	STATION PLATFORM STRUCTURES NEW	SF	\$200	\$0	20.00%	\$0
20.01	STATION CANOPY	SF	\$75	\$0	20.00%	\$0
20.01	STATION PLATFORM STRUCTURES UPGRADE	SF	\$300	\$0	20.00%	\$0
40.01	STATION PRIMARY ELECTRICAL SERVICE	EACH	\$50,000	\$0	25.00%	\$0
20.01	STATION AMENITIES	SF	\$65	\$0	30.00%	\$0
30.02	INSPECTION PIT	SF	\$90	\$0	30.00%	\$0
40.07	316 PARKING LOTS	SPACES	\$3,000	\$948,000	25.00%	\$1,185,000
20.06	PARKING STRUCTURES	SPACES	\$20,000	\$0	25.00%	\$0
40.07	BUS LANE AND UNLOADING	SF	\$25	\$0	25.00%	\$0
40.02	316 PARKING LOT LIGHTING	SPACES	\$200	\$63,200	30.00%	\$82,160
20.07	ELEVATORS	EACH	\$450,000	\$0	25.00%	\$0
20.07	ESCALATOR	EACH	\$300,000	\$0	25.00%	\$0

RIGHT OF WAY

60.01	1300000 ROW LAND ONLY	SF	\$4	\$5,200,000	25.00%	\$6,500,000
60.01	ROW AGRICULTURAL	SF	\$5	\$0	25.00%	\$0
60.01	ROW ORCHARDS	SF	\$6	\$0	25.00%	\$0
60.01	500000 ROW PAVED AREAS	SF	\$8	\$4,000,000	25.00%	\$5,000,000
60.01	ROW RESIDENTIAL AREA	SF	\$10	\$0	25.00%	\$0
60.01	200000 ROW LIGHT INDUSTRIAL AREA	SF	\$14	\$2,800,000	25.00%	\$3,500,000
60.01	ROW HEAVY INDUSTRIAL AREA	SF	\$16	\$0	25.00%	\$0
60.02	BUSINESS RELOCATIONS (Value of business, relocation, goodwill, legal, appraisal, etc.)	VALUE	\$1	\$0	0.00%	\$0

TOTAL CONSTRUCTION COST

\$55,763,258