

NOT FOR CONSTRUCTION



STATE OF CALIFORNIA

**CITY OF PLACERVILLE
ENGINEERING DEPARTMENT**

SPECIAL PROVISIONS

BOOK 2 OF 2

FOR CONSTRUCTION OF

WESTERN PLACERVILLE INTERCHANGES PROJECT

PHASE 2.2

CITY OF PLACERVILLE

PROJECT NO. 41918

APRIL 22, 2020

For use in Connection with California Department of Transportation Standard Specifications Dated **2018**, Revised Standard Specifications current as of April 17th, 2020, Standard Plans Dated **2018**, Revised Standard Plans current as of April 17th, 2020; City of Placerville Standard Plans; State of California Labor Surcharge and Equipment Rental Rates; and Director of Industrial Relations General Prevailing Wage Rates.

Bids Open: _____, 2020
@ 2:00 p.m.

Location: City Hall
Engineering Department
3101 Center Street,
3rd Floor
Placerville, CA 95667

NOT FOR CONSTRUCTION

CITY OF PLACERVILLE

WESTERN PLACERVILLE INTERCHANGES
PROJECT PHASE 2.2

PROJECT NO. 41918

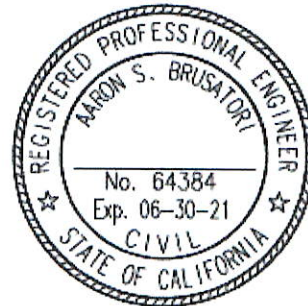
APRIL 22, 2020

The Special Provisions contained herein have been prepared by or under the direction of the following Registered Persons.

HIGHWAY



REGISTERED CIVIL ENGINEER



ELECTRICAL



REGISTERED CIVIL ENGINEER



**CITY OF PLACERVILLE, CALIFORNIA
ENGINEERING DEPARTMENT**

**WESTERN PLACERVILLE INTERCHANGES
PROJECT PHASE 2.2
PROJECT NO. 41918**

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APPENDIX A – GEOTECHNICAL REPORT

APPENDIX B – DRAINAGE REPORT

APPENDIX C – STORM WATER DATA REPORT

APPENDIX D – ENVIRONMENTAL COMMITMENTS RECORD

APPENDIX E – ENVIRONMENTAL PERMIT DOCUMENTS:

Regional Water Quality Control Board 401 Water Quality Certification

California Department of Fish and Wildlife 1602 Streambed Alteration Agreement

Army Corps 404 Letter of Permission

ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications* as revised by any revised standard specification.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* for any other reference to a paragraph of the *Standard Specifications*.

ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND

- A3A Abbreviations (Sheet 1 of 3)
- A3B Abbreviations (Sheet 2 of 3)
- A3C Abbreviations (Sheet 3 of 3)
- A10A Legend - Lines and Symbols (Sheet 1 of 5)
- A10B Legend - Lines and Symbols (Sheet 2 of 5)
- A10C Legend - Lines and Symbols (Sheet 3 of 5)
- A10D Legend - Lines and Symbols (Sheet 4 of 5)
- A10E Legend - Lines and Symbols (Sheet 5 of 5)

PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

- A20A Pavement Markers and Traffic Lines - Typical Details
- A20B Pavement Markers and Traffic Lines - Typical Details
- A20C Pavement Markers and Traffic Lines - Typical Details
- A20D Pavement Markers and Traffic Lines - Typical Details
- A24A Pavement Markings -Arros
- A24E Pavement Markings - Words, Limit and Yield Lines

EXCAVATION AND BACKFILL

- A62A Excavation and Backfill - Miscellaneous Details
- A62D Excavation and Backfill - Concrete Pipe Culverts
- A62DA Excavation and Backfill - Concrete Pipe Culverts - Indirect Design Method
- A62F Excavation and Backfill - Metal and Plastic Culverts

PORTABLE CONCRETE BARRIER

- A63A Portable Concrete Barrier (Type 60K)
- A63B Portable Concrete Barrier (Type 60K)

OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES

- A73A Object Markers
- A73B Markers
- A73C Delineators, Channelizers and Barricades

SURVEY MONUMENTS

- A74 Survey Monuments

MIDWEST GUARDRAIL SYSTEM - STANDARD RAILING SECTIONS

RSP A77L1 Midwest Guardrail System - Standard Railing Section (Wood Post with Wood Block)
A77M1 Midwest Guardrail System - Standard Hardware
RSP A77N1 Midwest Guardrail System - Wood Post and Wood Block Details
RSP A77N3 Midwest Guardrail System - Typical Line Post Embedment and Hinge Point Offset Details
A77N4 Midwest Guardrail System - Typical Railing Delineation and Dike Positioning Details

MIDWEST GUARDRAIL SYSTEM - TYPICAL VEGETATION CONTROL

A77N5 Midwest Guardrail System - Typical Vegetation Control Standard Railing Section
RSP A77N6 Midwest Guardrail System - Typical Vegetation Control for Terminal System End Treatments
A77N7 Midwest Guardrail System - Typical Vegetation Control at Structure Approach
A77N8 Midwest Guardrail System - Typical Vegetation Control at Fixed Object
A77N9 Midwest Guardrail System - Typical Vegetation Control at Fixed Object
A77N10 Midwest Guardrail System - Typical Vegetation Control at Fixed Object

MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR EMBANKMENTS

RSP A77P1 Midwest Guardrail System - Typical Layouts for Embankments
RSP A77P2 Midwest Guardrail System - Typical Layouts for Embankments
RSP A77P3 Midwest Guardrail System - Typical Layouts for Embankments
RSP A77P4 Midwest Guardrail System - Typical Layouts for Embankments
RSP A77P5 Midwest Guardrail System - Typical Layouts for Embankments
RSP A77P6 Midwest Guardrail System - Typical Layouts for Embankments

MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR STRUCTURES

RSP A77Q1 Midwest Guardrail System - Typical Layouts for Structure Approach
RSP A77Q2 Midwest Guardrail System - Typical Layouts for Structure Approach and Between Structures
RSP A77Q3 Midwest Guardrail System - Typical Layouts for Structure Approach
RSP A77Q4 Midwest Guardrail System - Typical Layouts for Structure Departure
A77Q5 Midwest Guardrail System - Typical Layouts for Structure Departure

MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR FIXED OBJECTS

RSP A77R1 Midwest Guardrail System - Typical Layouts for Fixed Objects Between Separate Roadbeds (Two-Way Traffic)
RSP A77R2 Midwest Guardrail System - Typical Layouts for Fixed Objects Between Separate Roadbeds (One-Way Traffic)
RSP A77R3 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects
RSP A77R4 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects
RSP A77R5 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects
RSP A77R6 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects
RSP A77R7 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects
RSP A77R8 Midwest Guardrail System - Typical Layouts for Roadside Fixed Objects

MIDWEST GUARDRAIL SYSTEM - END ANCHORAGE AND RAIL TENSIONING ASSEMBLY

A77S1 Midwest Guardrail System - End Anchor Assembly (Type SFT)
A77S2 Midwest Guardrail System - Rail Tensioning Assembly
A77S3 Metal Railing Anchor Cable and Anchor Plate Details
RSP A77T2 Midwest Guardrail System - Buried Post End Anchor

CRASH CUSHIONS

A81A Crash Cushion, Sand Filled (Unidirectional)

FENCES

RSP A85 Chain Link Fence
RSP A85A Chain Link Fence Details
A85B Chain Link Fence Details

CURBS, DRIVEWAYS, DIKES, CURB RAMPS, AND ACCESSIBLE PARKING

A87A Curbs and Driveways
RSP A87B Hot Mix Asphalt Dikes

PAVEMENTS

P70 Hot Mix Asphalt Paving (Longitudinal Tapered Notched Wedge Joint)
P74 Pavement Edge Treatments
P75 Pavement Edge Treatments - Overlays
P76 Pavement Edge Treatments - New Construction

DRAINAGE INLETS, PIPE INLETS AND GRATES

D71 Drainage Inlet Markers
RSP D72B CIP Drainage Inlets - Types G1, G2, G3, G4, G5 and G6
RSP D72C CIP Drainage Inlets - Types G1, G2, G3, G4, G5 and G6
RSP D72F CIP Drainage Inlets Notes
RSP D72G CIP Drainage Inlets Tables
RSP D73B Precast Drainage Inlets - Types G1, G2, G3, G4, G5 and G6
RSP D73C Precast Drainage Inlets - Types G2 and G4
RSP D73D Precast Drainage Inlets - Types GT1, GT2, GT3 and GT4
RSP D73E Precast Drainage Inlets - Types GO and GDO
RSP D73F Precast Drainage Inlets Notes
RSP D73G Precast Drainage Inlets Table
RSP D74 Drainage Inlet Details
D75A Steel Pipe Inlets
D75B Concrete Pipe Inlets
D77A Grate Details No. 1
D77B Grate Details No. 2

CONCRETE PIPE - DIRECT DESIGN METHOD

D79 Precast Reinforced Concrete Pipe - Direct Design Method
D79A Precast Reinforced Concrete Pipe - Direct Design Method

PIPE DOWNDRAINS, ANCHORAGE SYSTEMS AND OVERSIDE DRAINS

D87A Corrugated Metal Pipe Downdrain Details
D87D Overside Drains

CONSTRUCTION LOADS ON CULVERTS AND STRUT DETAILS

D88 Construction Loads on Culverts

FLARED END SECTIONS

D94A Metal and Plastic Flared End Sections
D94B Concrete Flared End Sections

PIPE COUPLING AND JOINT DETAILS

- D97H Reinforced Concrete Pipe or Non-Reinforced Concrete Pipe - Standard and Positive Joints
- D97I Corrugated Polyvinyl Chloride Pipe with Smooth Interior - Standard and Positive Joints

LANDSCAPE AND EROSION CONTROL

- RSP H1 Landscape and Erosion Control Symbols
- H9 Landscape Details
- H51 Erosion Control Details - Fiber Roll and Compost Sock
- H52 Rolled Erosion Control Product

TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN

- T1A Temporary Crash Cushion, Sand Filled (Unidirectional)
- T1B Temporary Crash Cushion, Sand Filled (Bidirectional)
- T2 Temporary Crash Cushion, Sand Filled (Shoulder Installations)
- T3A Temporary Railing (Type K)
- T3B Temporary Railing (Type K)

TEMPORARY TRAFFIC CONTROL SYSTEMS

- RSP T9 Traffic Control System Tables for Lane and Ramp Closures
- RSP T10 Traffic Control System for Lane Closure on Freeways and Expressways
- T10A Traffic Control System for Lane Closure on Freeways and Expressways
- T11 Traffic Control System for Lane Closure on Multilane Conventional Highways
- T11A Traffic Control System for Changeable Lane Closure on Multilane Conventional Highways and Expressways
- T14 Traffic Control System for Ramp Closure
- T15 Traffic Control System for Moving Lane Closure on Multilane Highways
- T16 Traffic Control System for Moving Lane Closure on Multilane Highways
- T17 Traffic Control System for Moving Lane Closure on Two Lane Highways

TEMPORARY WATER POLLUTION CONTROL

- T51 Temporary Water Pollution Control Details (Temporary Silt Fence)
- T53 Temporary Water Pollution Control Details (Temporary Cover)
- T56 Temporary Water Pollution Control Details (Temporary Fiber Roll)
- T57 Temporary Water Pollution Control Details (Temporary Check Dam)
- T58 Temporary Water Pollution Control Details (Temporary Construction Entrance)
- T59 Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)
- T60 Temporary Water Pollution Control Details (Temporary Reinforced Silt Fence)
- T61 Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
- T62 Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
- T63 Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
- T64 Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)

ROADSIDE SIGNS

- RS1 Roadside Signs - Typical Installation Details No. 1
- RS2 Roadside Signs - Wood Post - Typical Installation Details No. 2
- RS4 Roadside Signs - Typical Installation Details No. 4

OVERHEAD AND ROADSIDE SIGNS PANELS

- S89 Roadside Sign - Formed Single Sheet Aluminum Panel
- S93 Framing Details for Framed Single Sheet Aluminum Signs, Rectangular Shape
- S94 Roadside Framed Single Sheet Aluminum Signs, Rectangular Shape
- S95 Roadside Single Sheet Aluminum Signs, Diamond Shape

ELECTRICAL SYSTEMS - LEGEND AND ABBREVIATIONS

- RSP ES-1A Electrical Systems (Legend)
- RSP ES-1B Electrical Systems (Legend)
- RSP ES-1C Electrical Systems (Legend and Abbreviations)

ELECTRICAL SYSTEMS - SERVICE EQUIPMENT AND WIRING DIAGRAMS

- ES-2A Electrical Systems (Service Equipment)
- ES-2C Electrical Systems (Service Equipment Enclosure Notes, Type III Series)
- RSP ES-2D Electrical Systems (Service Equipment Enclosure and Typical Wiring Diagram, Type III - A Series)

ELECTRICAL SYSTEMS – CONTROLLER CABINET

- RSP ES-3C Electrical Systems (Controller Cabinet Foundation and Pad Details)

ELECTRICAL SYSTEMS - TELEPHONE DEMARCATION CABINETS

- RSP ES-3E Electrical Systems (Telephone Demarcation Cabinet, Type B)

ELECTRICAL SYSTEMS - ELECTRONICS ASSEMBLY CONNECTION DIAGRAMS

- RSP ES-3I Electrical Systems (Electronics Assembly Connection Diagram, with Bypass Control Line)

ELECTRICAL SYSTEMS - SIGNAL HEADS, SIGNAL FACES AND MOUNTINGS

- RSP ES-4A Electrical Systems (Signal Heads and Mountings)
- ES-4C Electrical Systems (Signal Heads and Mountings)
- RSP ES-4D Electrical Systems (Signal Head Mounting)

ELECTRICAL SYSTEMS – DETECTORS

- ES-5A Electrical Systems (Loop Detectors)
- RSP ES-5B Electrical Systems (Detectors)
- RSP ES-5D Electrical Systems (Curb and Shoulder Termination, Trench, and Handhole Details)

ELECTRICAL SYSTEMS - LIGHTING STANDARDS

- ES-6E Electrical Systems (Lighting Standard, Types 30 and 31)
- RSP ES-6F Electrical Systems (Lighting Standard, Slip Base Plate)

ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARDS

- RSP ES-7B Electrical Systems (Signal and Lighting Standard, Type 1 and Equipment Identification Characters)

ELECTRICAL SYSTEMS – FLASHING BEACONS

- RSP ES-7J Electrical Systems (Flashing Beacon on a Type 1, Type 15-FBS and Type 40 Standard)

ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARD DETAILS

- RSP ES-7M Electrical Systems (Signal and Lighting Standard - Detail No. 1)
- ES-7N Electrical Systems (Signal and Lighting Standard - Detail No. 2)
- RSP ES-7O Electrical Systems (Signal and Lighting Standard - Detail No. 3)

ELECTRICAL SYSTEMS - PULL BOX

- RSP ES-8A Electrical Systems (Non-Traffic Pull Box)
- RSP ES-8B Electrical Systems (Traffic Pull Box)

ELECTRICAL SYSTEMS - ISOFOOTCANDLE CURVES AND FOUNDATION DETAILS

- ES-11 Electrical Systems (Foundation Installations)

ELECTRICAL SYSTEMS - SPLICE INSULATION METHODS, FUSE RATING, KINKING AND BANDING DETAILS

- ES-13A Electrical Systems (Splice Insulation Methods Details)
- RSP ES-13B Electrical Systems (Fuse Rating, Kinking, and Banding Detail)

AA

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

The work embraced herein shall be done in accordance with the Standard Specifications of the Department of Transportation dated 2018 supplemented by the Revised Standard Specifications of the Department of Transportation as of April 17th, 2020, hereinafter referred to as the Standard Specifications, and the Standard Plans of the Department of Transportation dated 2018 supplemented by the Revised Standard Plans of the Department of Transportation as of April 17th, 2020, hereinafter referred to as the Standard Plans, insofar as the same may apply and in accordance with the following Special Provisions.

The components of the Contract Documents are intended to supplement each other. In the event of a conflict in the Contract Documents, the following order of precedence will govern interpretation of the Contract:

1. Field instruction or other written directives
2. Addenda
3. Special Provisions
4. Project Plans
5. Standard Specifications
6. Standard Plans

Add to section 1-1.07B:

A term not defined in the Contract Documents or Standard Specifications has the meaning defined in Means Illustrated Construction Dictionary, Condensed Version, Second Edition.

Approval of the Contract: Execution of the Contract by the City Council of the City of Placerville.

Caltrans/Department of Transportation: Department of Transportation as defined in the St & Hwy Code § 20 and authorized in St & Hwy Cod § 90; its authorized representatives.

City: The City of Placerville, a municipal corporation of the State of California.

CCTV: Closed-circuit television.

City Council: City Council of the City of Placerville, State of California.

Contract: Written and executed Contract as approved by the City Council between the City of Placerville and the Contractor.

Contract Documents: Plans, Notice to Bidders, Special Provisions, and Proposal and Agreement

Contractor: Person or business or its legal representative approved by the City Council and entering into a Contract with the City of Placerville for performance of the work.

Department: The City of Placerville except that any reference to the Department's forms, websites, manuals, guides, and test methods shall be defined as forms, websites, manuals, guides, and test methods of Caltrans.

Design Engineer: R.E.Y. Engineers, Inc. and their subconsulting engineers.

Director: The City Engineer for the City of Placerville.

EID: El Dorado Irrigation District.

Engineer: The Resident Engineer of the City acting either directly or through properly authorized agents; such agents acting within the scope of the particular duties delegated to them.

Inspector or City Inspector: An authorized agent acting on behalf of the City Engineer and within the scope of the particular duties delegated to him/her.

Project Plans: The Project Plans are specific details and dimensions peculiar to the work and are supplemented by the Standard Plans insofar as they may apply.

Special Provisions: The Special Provisions are specific clauses required by the City setting forth conditions of requirements peculiar to the work and supplementary to the Standard Specifications of the State of California.

Standard Plans: 2018 Standard Plans of the State of California, Department of Transportation and the current Revised Standard Plans as of April 17th, 2020.

Standard Specifications: 2018 Standard Specifications of the State of California, Department of Transportation (Caltrans) and the current Revised Standard Specifications as of April 17th, 2020.

State: The State of California, including its agencies, departments or divisions whose conduct or action is related to the work or when referenced in the Standard Specifications "State" shall mean the City of Placerville, including its authorized officers, agents, consultants, and volunteers.

Project: The work as presented in these documents and the construction drawings.

Proposal: The un-approved offer as submitted to the City for the completion of the Project.

USDOT: The United States of America Department of Transportation.

Add to section 1-1.09:

This project is in a freeze-thaw area.

Add to section 1-1.11:

Web Sites, Addresses, and Telephone Numbers

Reference or agency or department unit	Web site	Address	Telephone no.
Public Purchase	http://www.publicpurchase.com	-	-
El Dorado County Fire Protection	http://www.eldoradocountyfire.com	4040 Carson Road Camino, CA	(530) 644-9630
Placerville Police Department	http://www.cityofplacerville.org/depts/police	730 Main Street Placerville, CA	(530) 642-5210
Placerville Downtown Association	http://www.placervilledowntown.org	-	(530) 672-3436
El Dorado Transit Authority	http://www.eldoradotransit.com/	6565 Commerce Way Diamond Springs, CA	(530) 642-5383

Replace the paragraph in section 1-1.12 with:

Make checks and bonds payable to the City of Placerville.

^^

2 BIDDING

Replace section 2-1.05 with:

2-1.05 FEDERAL LOBBYING RESTRICTIONS

Section 1352, Title 31, United States Code prohibits Federal funds from being expended by the recipient or any lower tier sub recipient of a Federal-aid contract to pay for any person for influencing or attempting to influence a Federal agency or Congress in connection with the awarding of any Federal aid contract, the making of any Federal grant or loan, or the entering into of any cooperative agreement.

If any funds other than Federal funds have been paid for the same purposes in connection with this Federal-aid contract, the recipient shall submit an executed certification and, if required, submit a completed disclosure form as part of the bid documents.

A certification for Federal-aid contracts regarding payment of funds to lobby Congress or a Federal agency is included in the Bid book. Standard Form - LLL, "Disclosure of Lobbying Activities," with instructions for completion of the Standard Form is also included in the Bid book. Signing the Bid book shall constitute signature of the Certification.

The above referenced certification and disclosure of lobbying activities shall be included in each subcontract and any lower-tier contracts exceeding \$100,000. All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the Engineer.

The Contractor, subcontractors and any lower-tier contractors shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by the Contractor, subcontractors and any lower-tier contractors. An event that materially affects the accuracy of the information reported includes:

- (1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
- (2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
- (3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal Action.

Replace the paragraphs in section 2-1.06A with:

Standard Specifications and Standard Plans may be viewed at the Caltrans Office Engineer Web Site and may be purchased at the Publication Distribution Unit.

The Notice to Bidders, Special Provisions, Proposal and Agreement, and any Project Plans may be viewed and obtained at the locations stated in the Notice to Bidders.

Replace Section 2-1.12B (2) with:

2-1.12B(2) Disadvantaged Business Enterprises Commitment submittal

Submit DBE information on the Local Agency Bidder - DBE - Commitment form (DBE commitment form) included in the Proposal and Agreement Section. If the form is not submitted with the bid, remove the form from the Proposal and Agreement Section before submitting your bid.

If the DBE commitment form is not submitted with the bid, the apparent low bidder, the 2nd low bidder, and the 3rd low bidder must complete and submit the form to the City of Placerville. The DBE commitment forms must be received by Rebecca Neves, City of Placerville Division of Engineering or email rneves@cityofplacerville.org no later than 4:00 p.m. on the 4th business day after bid opening.

Other bidders are not required to submit the DBE commitment form unless the Department requests it. If the Department requests a DBE commitment form from you, submit the completed form within 4 business days of the request.

Submit written confirmation from each DBE shown on the form stating that it will be participating in the Contract. Include confirmation with the DBE commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE will be participating in the Contract.

If you do not submit the DBE commitment form by the specified time, your bid is nonresponsive.

Replace the second and third paragraph of Section 2-1.12B(3) with:

If you have not met the DBE goal, complete and submit the Good Faith Efforts Documentation form with the bid showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed toward obtaining participation by DBEs are considered. If good faith efforts documentation is not submitted with the bid, it must be received by Rebecca Neves, City of Placerville Engineering Department or email rneves@cityofplacerville.org no later than 4:00 p.m. on the 4th business day after bid opening.

Replace the paragraphs in section 2-1.33A with:

Complete forms in Bid book. Submit forms with your bid.

Except where stated acceptable elsewhere, do not fax submittals.

Failure to submit the forms and information as specified may result in a non-responsive bid.

Add to section 2-1.33A:

On the Subcontractor List, you must submit each subcontractor's license number, each subcontracted bid item number and corresponding percentage with your bid. Failure to do so results in a nonresponsive bid.

You must either submit with your bid the BIDDER'S LIST OF SELECTED SUBCONTRACTORS and BIDDER'S LIST OF NON-SELECTED SUBCONTRACTORS or email to Rebecca Neves, City of Placerville Engineering Department, Rneves@cityofplacerville.org within 24 hours after bid opening. Failure to do so results in a nonresponsive bid.

Replace the last paragraph of section 2-1.34 with:

If using a bidder's bond, you must use the form in the Proposal section.

Replace the paragraph in section 2-1.47 with:

The Department may grant bid relief under Public Contracts Code § 5100 et seq. Submit any request for bid relief to Rebecca Neves, City of Placerville Engineering Department, 3101 Center Street, 3rd Floor Placerville, CA 95667 or email Rneves@cityofplacerville.org. The Relief of Bid Request form (form number DES-OE-0141) is available at the Caltrans website.

^^

3 CONTRACT AWARD AND EXECUTION

Replace the paragraphs in section 3-1.04 with:

The Department reserves the right to reject any or all bids or any parts thereof and waive any irregularities or informalities in any bid or in the bidding to the extent permitted by law and to make awards in all or part of the best interest of the Department. No bidder may withdraw his/her bid for a period of sixty (60) days after the date set for the bid opening. Bid protests must be submitted in writing to the attention of the City Clerk before 4:00 pm of the 3rd calendar day following the bid opening.

2. The Contractor must obtain a Temporary Water Use permit for construction water. This permit can be obtained from El Dorado Irrigation District 2890 Mosquito Road, Placerville, California 95667 Phone: (530) 622-4513. The permit fee is \$25.00. Construction meters require a three-thousand-dollar (\$3,000) deposit. The daily rental fee for the construction meter is five dollars (\$5) per day. The usage fee is a commodity charge of \$0.03566 per cubic foot.

The payment for the cost for this permit and water usage shall be included with the various items of the proposal and no separate payment will be made.

Replace the paragraphs in section 5-1.23A with:

5-1.23A GENERAL

5-1.23A(1) Submittal Procedure

Section 5-1.23 includes specifications for action and informational submittals.

Any submittal not specified as an informational submittal is an action submittal.

Accompany each submittal with a Submittal form, which contains the following information:

1. Contractor's name and the name of Subcontractor or supplier who prepared the submittal.
2. The project name and identifying number.
3. Description of the submittal and reference to the Contract requirement or technical specification section and paragraph number being addressed.

Electronic submittals are preferred. Provide original hard copies to the Engineer upon request. If hard copies are submitted in lieu of an electronic submittal, submit the number and type of copies for each submittal and follow the procedures described below or in other paragraphs in this Section. Submit three copies of submittals not covered in this Section.

1. Designation of Superintendent: Submit three copies for information. Include name, address, home telephone number, and a brief resume.
2. List of Subcontractors and Major Suppliers: Submit three copies for information. Include address, telephone number, and name of responsible party.
3. Subcontractors'/Suppliers'/Manufacturers' Affidavits. Submit three copies for items specified in the Technical Specifications.

The City or Engineer rejects a submittal if it has any error or any omission.

Failure to provide submittals requested by the Engineer constitutes contract noncompliance on that item of work and may be deducted in accordance with Sections 5-1.30 and 9-1.16E.

Convert foreign language documents to English and U.S. customary units.

5-1.23A(2) Schedule of Submittals

Submit three (3) copies for information. No copy will be returned.

At the pre-construction meeting, submit a Schedule of Submittals showing the date by which each submittal required for Product Review or Product Information will be made. Identify the items that will be included in each submittal by listing the item or group of items and the Specification Section and paragraph number under which they are specified. Indicate whether the submittal is required for Product Review of Proposed Equivalents, Shop Drawings, Product Data or Samples or required for Product Information only.

5-1.23A(3) Plan of Operations

Submit three (3) copies.

Before beginning on site work, submit a plan showing Contractor's intended use of the Work site, including on site storage of materials, on site handling of materials, and field offices.

5-1.23A(5) Shop Drawing, Product Data and Sample Submitted for Product Review

This paragraph covers submittal of Shop Drawings, Product Data and Samples required for the Engineer's review referred to as Product Review submittals for the Technical Specifications of the contract documents. Submittals required for information only are referred to as Product Information submittals in the Technical Specifications and are covered in section 5-1.23A(7).

Number and type of submittals:

1. Shop Drawings: Submit three (3) clear, sharp, high contrast copies one of which will be marked, stamped and returned to the Contractor. The Contractor shall make and distribute the required number of additional copies to its superintendent, subcontractors and suppliers. Shop drawings must comply with section 5-1.23B(2).
2. Product Data: Submit three (3) clear copies. One copy will be marked, stamped and returned. The Contractor shall make and distribute the required number of additional copies to its superintendent, subcontractors and suppliers.

The Contractor shall make all Product Review submittals early enough to allow adequate time for the Engineer's review, for manufacture and for delivery at the construction site without causing delay to the Work. Submittals shall be made early enough to allow for unforeseen delays such as:

1. Failure to obtain Favorable Review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.
2. Delays in manufacture.
3. Delays in delivery.

Content of Submittals:

1. Each submittal shall include all of the items and material required for a complete assembly, system or Specification Section.
2. Submittals shall contain all of the physical, technical and performance data required by the specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.
3. Provide verification that the physical characteristics of items submitted, including size, configuration, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are compatible with other interrelated items that are existing or have or will be submitted.
4. Label each Product Data Submittal, Shop Drawing and Sample with the information required in paragraph 5-1.23A (1)1. of this Section. Highlight or mark every page of every copy of all product Data submittals to show the specific items being submitted and all options included or choices offered.
5. Additional requirements for Product Review submittals are contained in the Technical Specification sections.
6. Designation of work as "by others" shown on Shop Drawings shall mean that the work will be the responsibility of the Contractor rather than the subcontractor or supplier who has prepared the Shop Drawings.

Requirements for Contractor Designed Items:

1. Verify that products delivered meet requirements of Contract Documents.

Compatibility of Equipment and Material:

1. Similar items, equipment, devices or products furnished under a single specification section shall all be made by the same maker and have interchangeable parts.

2. In addition, but only if so stated in each affected Specification Section, similar items furnished under two or more Specification Sections shall be made by the same maker and have interchangeable parts.
3. All similar materials or products that are interrelated or used together in an assembly shall be compatible with each other.

Requirements for the Contractor's review and stamping of submittals prepared by the Contractor or by Subcontractors or suppliers prior to submitting them to the Engineer. The Contractor warrants:

1. Work or items submitted are complete, accurate and meet the requirements of the Contract Documents, or else any deviations are identified and described in a separate letter accompanying the submittal form.
2. Work or items submitted have been coordinated with and meet the requirements of other submittals, field conditions and the Work as a whole and quantities and dimensions are correct.
3. Proposed Equivalent items are at least equal in quality, utility and appearance to the first specified item, or else any deviations are identified in a separate letter accompanying the submittal form.
4. Adjustments to other work required to accommodate Proposed Equivalent items including second named items have been delineated on the submittal and will be made at the Contractor's expense.
5. This submittal includes all items needed for a particular specification section or assembly for which submittals are required.

Submittals that contain deviations from the requirements of the Contract Documents shall be accompanied by a separate letter explaining the deviations. The Contractor's letter shall:

1. Cite the specific Contract requirement including the Specification Section and paragraph number for which approval of a deviation is sought.
2. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the Owner.
3. State the reduction in Contract Price if any that is offered to the Owner.

Engineer's Review Procedure and Meaning:

The Engineer will stamp and mark each Product Review submittal prior to returning it to the Contractor. The stamp will indicate whether or not the review was favorable and what action is required of the Contractor. Review categories "Approved" and "Approved as Corrected" both indicate Favorable Review.

The Engineer's Favorable Review is contingent on the Contractor's warranties. Favorable Review is also contingent on:

1. The compatibility of items included in a submittal with other related or interdependent items included in previous or future submittals.
2. Future submittal of items related to or required to be part of this submittal that were not included with this submittal.

Favorable Review of a submittal does not constitute approval or deletion of items required as part of the submittal but not included with the submittal. Favorable Review of items included in the submittal does not constitute deletion of specified features, options or accessories that were not included in the submittal or that are included as part of the contract.

The action required by the Contractor for each category of review is as follows:

1. **APPROVED. NO RESUBMITTAL REQUIRED.**
2. **APPROVED AS CORRECTED.** The submittal is approved as corrected by the reviewer. The contractor is responsible for incorporating the reviewer's corrections. The corrected submittal complies with the Contract Documents.
3. **REVISE & RESUBMIT.** The Contractor shall revise and resubmit the submittal as noted or required to comply with the Contract Documents.

4. **REJECTED.** The item submitted does not comply with the Contract Documents in a major way. Resubmit items that comply with the requirements of the Contract Documents.

The letter of transmittal accompanying the returned Product Review submittal may contain numbered notes. Marking a corresponding number on a Shop Drawing or Product Data submittal shall have the same effect as applying the entire note to the submittal.

Re-submittals that contain changes that were not requested by the Engineer on the previous submittal shall be accompanied by a letter explaining the revised items.

Favorable Review required prior to proceeding. Proceeding without a Favorable Review will be considered unauthorized work per section 5-1.30.

Do not proceed with manufacture, fabrication, delivery or installation of items prior to obtaining the Engineers Favorable Review of Product Review submittals.

Any work performed by the Contractor in advance of an approved submittal for said work is done so at the Contractor's sole risk.

Intent and Limitation on Engineer's Review:

The Contractor has primary responsibility for submitting and providing work that complies with the requirements of the Contract Documents. That responsibility cannot be delegated in whole or in part to subcontractors or suppliers. Neither the Engineer's Favorable Review nor the Engineer's failure to notice or comment on deficiencies in the Contractor's submittals shall relieve the Contractor from the duty to provide work, which complies with the requirements of the Contract Documents.

5-1.23A(6) Proposed Equivalents

Submittal for Proposed Equivalent products or materials shall comply with the submittal requirements for Shop Drawings, Product Data, and Samples submitted for Product Review in this Section. Bidders wanting to use "or approved equal items" may submit a Substitution Request Form no later than five (5) days after the issuance of the Notice to Proceed.

Time of Submittal:

1. Submittal of Proposed Equivalents shall be received within five (5) days of the Notice to Proceed. The Engineer may agree to a later submittal date if requested in writing within five (5) days of the Notice to Proceed. The request shall identify the item, providing the Specification reference, and proposed manufacturer and model number of the item that will be submitted and the proposed submittal date.
2. The Engineer's agreement to a later submittal date shall be in writing and shall not be construed as Favorable Review or acceptance of the manufacturer or item proposed.

Content of submittals shall be the same as that required for Product Data, Shop Drawings and Samples submitted for Product Review in another paragraph of this Section. In addition, the Contractor shall provide information on several recent similar installations of the item to verify its suitability. The information shall include the project name and location, the Owner's name, address, telephone number and name of a knowledgeable person to contact for information on performance of the product.

When the Contractor has listed specific maker's products submitted with its Bid no changes will be permitted without submittal of acceptable evidence justifying the change and the Engineer's written approval.

If a non-equivalent substitute is submitted for review, it shall be accompanied by a proposed reduction in Contract Price which shall include the increased cost of Engineering service required to evaluate the proposed substitute (which shall be paid to the Owner whether or not the substitute is accepted) plus the greater of 1) the difference in price between the first specified item and the item submitted and 2) the difference in value to the Owner between the two items.

5-1.23A (7) Product Information Submittals

1. Submit three (3) copies. No copies will be returned.
2. Product Information submittals are required for the Owner's permanent records and will be used for future maintenance, repair, modification or replacement work. Product Information submittals will be examined only to verify that the required submittals have been made; they will NOT be reviewed for compliance with the Contract Documents.
3. Make Product Information submittals prior to delivering material, products or items for which Product Information submittals are required.
4. The Contractor has the sole and exclusive responsibility for furnishing products and work that meets the requirements of the Contract Documents.
5. The Engineer reserves the right to comment on any submittal and to reject any product or work delivered, installed or otherwise at any time that the Engineer become aware that it is defective or does not meet the requirements of the Contract Document.

5-1.23A(8) Manufacture Certificates

1. Submit three (3) copies.
2. When specified in Technical Specification section, submit manufacturers' certificate to Engineer for review. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be recent or previous test results on material or Product, but must be acceptable to the Engineer.

Replace Section 5-1.26 with:

5-1.26(A) CONSTRUCTION SURVEYS

The contractor must set construction stakes and markers to establish the lines and grades required for the completion of the work on the plans and as specified in the Standard Specifications and these Special Provisions and as necessary for the Engineer to check lines, grades, alignment and elevations.

All procedures, methods, and typical stake markings shall be in accordance with Chapter 12, Construction Surveys, of the Caltrans "Survey Manual." Copies of the "Survey Manual" may be purchased from Caltrans Publications Unit, 1900 Royal Oaks Drive, Sacramento, and California 95815, (916) 445-3520.

Staking must be performed under the direction of a licensed surveyor or registered civil engineer with the authority to perform land surveying.

5-1.26(B) GRADE QUALITY CONTROL

Use a GNSS rover, robotic total station equipment, or a level to check the grades at the frequencies shown in the following table:

Grade Checking Requirements

Type of work	Area or distance represented by the grade checking	Frequency (number of grade points)
Earthwork for cut and fill slopes ≤15 feet	200 feet	2
Earthwork for cut and fill slopes >15 feet	1,000 sq yd	1
Rough grading	1,000 sq yd	1
Trenching	100 feet	6
Subgrade	1 mi	30
Subbase layer	1 mi	50
Base layer	1 mi	100
Curb and gutter	100 feet	6
Concrete barrier	100 feet	5
Finishing roadway	1,000 sq yd	2

Increase the frequency of grade checking of a roadway:

1. Wherever its curve radius is 500 feet or less
2. In areas of a superelevation transition
3. At intersections

Notify the Engineer when an area is ready for line and grade inspection. Submit the grade checking results on a Grade Checking Report form as an informational submittal.

5-1.26C Payment

Construction surveys (contractor provided construction staking) shall be paid for under the Construction Staking bid item. Progress payments will be made based upon the percentage of work items requiring staking staked by that point. No additional compensation will be made for resetting stakes.

Replace the paragraphs in section 5-1.27E with:

Maintain separate records for change order work costs.

Submit change order bills to the Engineer.

Add to the end of section 5-1.32:

Personal vehicles of Contractor's employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

Replace the paragraphs in section 5-1.46 with:

When the work is complete, request the Engineer's final inspection. Contractor will be notified, in writing, of any defects or deficiencies to be remedied. Contractor to correct all defects and deficiencies within 5 working days of notification and notify the Engineer that all defects and deficiencies have been addressed. When notified that the work is complete, the Engineer will again inspect the work to ensure compliance with the Contract Documents.

If the Engineer determines that the work is complete, the Engineer recommends to the City Council that the Contract be accepted and the Notice of Completion be recorded to accept the Contract. Immediately after Contract acceptance, Contractor is relieved from:

1. Maintenance and protection duties.
2. Responsibility for injury to persons or property or damage to the work occurring after Contract acceptance except as specified in section 5-1.47.

^^

6 CONTROL OF MATERIALS

Add to section 6-1.01:

No materials are allowed to be stockpiled in the State or City Right of Way unless a written request is made to Caltrans or the City in advance. The Contractor is responsible for maintaining and final cleaning after work and restoring the Right of Way to its original condition.

The Contractor shall provide a list of all materials deemed hazardous per Health and Safety Code §25316 and §25317 to be used within the State Right of Way to Caltrans before materials are used.

The Contractor shall provide a list of all materials deemed hazardous per Health and Safety Code §25316 and §25317 to be used within the City Right of Way to the City before materials are used.

3. CA Department of Toxic Substances Control

Add to section 7-1.06F:

New certificates of insurance are subject to City approval.

^^

8 PROSECUTION AND PROGRESS

Add to section 8-1.02C(1):

Before or at the preconstruction conference, submit a CPM baseline schedule.

Replace the 1st paragraph of section 8-1.02C(6) with:

Submit an updated schedule at all weekly construction meetings that includes the status of work completed to date and the work yet to be performed as planned. Each updated schedule must comply with section 8-1.02B(3).

Replace the paragraphs in section 8-1.02D(10) with:

There is no specific bid item for project schedules and no additional payment will be made therefore.

Replace the 3rd sentence of the 1st paragraph of section 8-1.03 with:

You may not start work prior to the preconstruction conference.

Replace the 1st and 2nd paragraphs of section 8-1.04B with:

The contractor shall begin construction on the date specified on the Notice to Proceed (NTP), which is anticipated to be on or after February 1, 2021 with an allowance to begin tree removal activities in January 2021. All preconstruction submittals must be approved prior to starting job site activities, with the exception of tree removal. The Contractor is encouraged to submit preconstruction submittals prior to receiving the NTP to allow for proper review and approval of the submittals.

Tree removal must adhere to all applicable project permits. The six (6) items listed below must be received prior to beginning tree removal. In addition, a SWPPP, staging/sequencing plan, and all applicable traffic control plans and bicycle and pedestrian handling plans must be submitted and approved and prior to beginning tree removal activities. Working days will be counted during tree removal and will be suspended once tree removal is complete.

Add to section 8-1.06:

This project includes tree removal activities which may be performed prior to beginning construction to avoid the nesting season. Tree removal activities are anticipated to occur in January 2021 and a suspension of working days is anticipated to occur once tree removal activities are complete.

Add to section 8-1.10C:

Tree removal activities shall be completed prior to February 15, 2021, prior to the start of the nesting season.

^^

9 PAYMENT

Delete section 9-1.11.

Add to section 9-1.16D(1):

Mobilization is part of the Mobilization/Demonization bid item and includes, but is not limited to, preparing and maintaining a schedule per the Standard Specifications and these Special Provisions and construction and maintenance of staging area(s) and laydown yards(s). Demobilization is part of the Mobilization/Demobilization bid item and includes, but is not limited to, issuing a hard copy and/or digital set of as-built plans to the Engineer within 10 working days after substantial completion notification and restoring staging area(s) and laydown yard(s) to pre-construction conditions.

Add to section 9-1.16D(2):

Final compensation will be delayed until as-built plans are submitted and approved.

Add to section 9-1.16E(3):

The City returns performance-failure withholds in the progress payment following the correction of non-compliance.

Replace the paragraphs in section 9-1.16F with:

The City will withhold 5 percent of all progress payments as retention. Retention will be paid to the Contractor on Final Payment.

In accordance with Part 5 (§ 22300), Division 2 of the Public Contract Code, a Contractor may substitute securities for retention monies withheld by a public agency to ensure performance under this Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the City of Placerville, or with a state or federally chartered bank, as the escrow agent, who shall then pay such moneys to the Contractor, and upon satisfactory completion of the Contract, the securities shall be returned to the Contractor. No substitutes will be accepted until:

1. the City approves the securities and their value,
2. the parties have entered into an escrow agreement (if the securities are to be held in escrow) in a form substantially similar to that under § 22300,
3. all documentation necessary for assignment of the securities to the City or to the escrow agent are delivered in a form satisfactory to the City.

If the Contractor has substituted securities for any of the retention, the City may request that such securities be revalued from time to time, but not more often than monthly, at the expense of the Contractor. Such revaluation will be made by a person or entity designated by the City and approved by the Contractor. If such a revaluation results in a determination that the securities have a market value less than the amount of retention for which they were substituted, then the amount of the retention required under the Contract will be increased by such difference in market value.

Such increased retention will be withheld from the next progress payment(s) due to the Contractor under the Contract.

The Contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving retention payment with Final Payment. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the City's prior written approval. Any violation of this provision shall subject the violating Contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial, remedies otherwise available to the Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor, deficient subcontract performance, or noncompliance by a subcontractor.

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DIVISION II GENERAL CONSTRUCTION

10 GENERAL

Replace 10-1.02A General with:

10-1.02A Staging Area

The Contractor must locate and negotiate terms of use for his staging area.

Add to the end of section 10-1.02B:

Install loop detectors in the uppermost layer of the new pavement.

Add to the beginning of section 10-1.02E:

Construct the new pavement structure adjacent to the existing traveled way by successively excavating, preparing subgrade, placing base materials, and paving. Perform these activities concurrently after you start paving. Excavation within 8 feet of the existing traveled way must not precede the paving operation by more than 5 working days unless:

1. Authorized
2. Material is placed and compacted against the vertical cuts within 8 feet of the existing traveled way. During excavation, you may use native material for this purpose except you must use structural material once you start placing the pavement structure. Place the material to the top of the existing pavement and taper at a slope of 4:1 (horizontal:vertical) or flatter to the bottom of the excavation. Do not use treated base for the taper.

Replace *Reserved* in section 10-1.03 with:

Complete clearing of trees to be removed before February 15, 2021.

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12 TEMPORARY TRAFFIC CONTROL

Add to section 12-1.01:

Contractor shall provide and maintain traffic control devices, flaggers and all other necessary items per this section, the Caltrans Traffic Manual, and California MUTCD where applicable. The Contractor will be responsible for the maintenance of all traffic control items and equipment during and outside of working hours.

The Contractor must maintain bicycle and pedestrian access on Ray Lawyer Drive. Bicycle and pedestrian circulation will be maintained during construction and any temporary facilities required to accommodate bicyclists and pedestrians will be equal to or better than the existing conditions.

Temporary pedestrian access routes per section 12-4 are only required where existing pedestrian facilities that meet those requirements are being affected by construction.

Replace the paragraph in section 12-1.04 with:

There is no separate bid item for flagging, so that work shall be included within the Traffic Control System bid item and no additional compensation will be allowed therefore. The Contractor shall be responsible for the entire cost of flagging and is responsible for including that cost in the Traffic Control System bid item.

The development of all traffic control plans, and bicycle and pedestrian handling plans shall be paid for under the Traffic Control System bid item and no additional compensation will be allowed therefore.

Replace the paragraph in section 12-3.11B(5) with:

Install one (1) Type 2 construction project funding sign at the location determined by the Engineer before starting major work activities visible to highway users.

The type 2 construction project funding sign is to be a 4-ft x 2.5-ft C48 (CA) sign and must comply with the details shown on the Department's Traffic Operations website. The upper left logo shall be City of Placerville, lower left logo shall be Caltrans, and lower right logo shall be FHWA. The sign must be a wood-post sign and must comply with Section 82-3.

Dispose of construction project funding signs upon completion of the project if authorized.

Replace the paragraph in section 12-3.11D with:

There is no separate bid item for the C48 sign, so that work shall be included within the Traffic Control System bid item and no additional compensation will be allowed therefore.

Add to section 12-4.02A(2):

Martin Luther King Jr. Day is a designated holiday that is observed on the 3rd Monday in January. The day after Thanksgiving is a designated holiday that is observed the day after Thanksgiving Day. Christmas Eve is a designated holiday that is observed on December 24th.

Add to section 12-4.02C(3)(a):

If you use an attenuator vehicle as a shadow vehicle, you are not required to close the adjacent traffic lane for the following activities:

1. Grinding
2. Grooving
3. Saw cutting of concrete slabs
4. Installing loop detectors

Replace the 3rd paragraph of section 12-4.04C with:

There is no separate bid item for construction of a temporary pedestrian access route. If a temporary pedestrian access route is required, it is considered incidental to the other items of work and no additional compensation is allowed therefore.

Replace "Reserved" in section 12-6.03D(1) with:

Temporary markers and/or markings shall be installed by the Contractor for any existing crosswalk line, limit line, arrow, and other legend or traffic lane line removed or damaged by the work activity prior to the end of the work shift and before opening the lanes for traffic.

Requirements for Placing Temporary Pavement Markings

Existing Striping	Temporary Striping
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Replace section 13-2 with:

A Stormwater Pollution Prevention Plan shall be prepared by the contractor for this project, see section 13-3. The contractor adhere to the 402 Construction General Permit.

Replace paragraphs in section 13-3.04 with:

The City pays for the Storm Water Pollution Prevention Plan bid item as follows:

1. Total of 75 percent of the item total upon authorization of the SWPPP.
2. Total of 100 percent of the item total upon Contract acceptance.

The City does not pay for the preparation, collection, laboratory analysis, and reporting of stormwater samples for nonvisible pollutants if WPC practices are not implemented before precipitation or if you fail to correct a WPC practice before precipitation.

The City pays:

1. \$250 for each authorized rain event action plan.
2. \$2,000 for each authorized stormwater annual report.

The City will not adjust the unit price for an increase or decrease in the quantity of:

1. Rain event action plan.
2. Storm water sampling and analysis day.
3. Storm water annual report.
4. Any temporary erosion control measures under Section 13.

Add to section 13-4.03G:

Dewatering must comply with the provisions of Order No. 2003-0003-DWQ adopted by the State Water Resource Control Board (Statewide General Waste Discharge Requirement for Discharges To Land With A Low Threat To Water Quality) or Resolution R5-2013-0145 adopted by the Central Valley RWQCB (Waiver Of Reports Of Waste Discharge And Waste Discharge Requirements For Specific Types Of Discharge Within The Central Valley Region), whichever is applicable. This permit or resolution is available at the State Water Resource Control Board or Central Valley RWQCB Web site.

Replace paragraphs in section 13-4.04 with:

Fugitive Dust Control, Street Sweeping, and Temporary Concrete Washout are included within the Job Site Management bid item and no additional compensation shall be allowed therefore.

BMP's shown on the contractor's approved SWPPP that differ from those shown on the Temporary Erosion Control Plans and do not have a specific bid item shall be paid for under the Job Site Management bid item and no additional compensation shall be allowed therefore.

Payment for maintenance of all installed temporary erosion control measures covered under Section 13 shall be included in the Job Site Management bid item and no additional compensation shall be allowed therefore.

Delete the last paragraph in section 13-5.04

Replace the paragraphs in section 13-6.04 with:

The payment quantity for temporary sediment control bid items paid for by the length is the length measured along the centerline of the installed material.

The payment quantity for temporary fiber roll does not include the additional quantity used for overlaps.

The Department does not pay for the relocation of temporary drainage inlet protection during work progress. The payment quantity for the Temporary Drainage Inlet Protection bid item is the number of inlets protected per the approved SWPPP. A single inlet with multiple openings is still counted as one (1) inlet.

Replace the paragraphs in section 13-7.03D with:

The payment quantity for the Temporary Construction Entrance bid item is the number of construction entrances per the approved SWPPP. The City does not pay for the relocation of temporary construction entrances or roadways during work progress.

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14 ENVIRONMENTAL STEWARDSHIP

Add to section 14-1.01:

The contractor shall comply with the requirements of all environmental permits and their requirements, including, but not limited to the Project's Army Corps 404 Letter of Permission, Regional Water Quality Control Board 401 Water Quality Certification, and California Department of Fish and Wildlife 1602 Streambed Alteration Agreement for all construction activities in or around the Phase 2 detention basin located in the southern quadrant of the Ray Lawyer Drive Interchange. These permit documents are included as Appendix E in these specifications. Drainage facilities in other areas of the project are not considered jurisdictional Waters of the U.S. or State and are not subject to these permit requirements.

The construction contractor shall be required to adhere to all construction related environmental measures and best management practices as provided in the attached Environmental Commitment Record (Appendix D). This includes but is not limited to the following:

- Air Quality – Measures AQ-1 through AQ-13
- Water Quality – Measures WQ-1 through WQ-9
- Biological Resources – Measures BIO-3 through BIO-8, BIO-13 through BIO-15, and BIO-20 through BIO-24. Additional measures are included in the environmental permits which are specific to work within jurisdictional Waters of the U.S. (see Appendix E)
- Hazardous Waste – Measures HAZ-6 through HAZ-12
- Cultural Resources – Measures CUL-1 through CUL-3

Water Quality Measure WQ-9 refers to a spill prevention and countermeasure plan. This plan is to comply with the requirements of section 13-4.03B of the Standard Specifications.

Add to section 14-1.02:

All native oak trees to remain in place and located within 25 ft of ground disturbances shall be temporarily fenced with orange plastic construction (exclusion) fencing throughout all grading and construction activities. The exclusion fencing shall be paid under the Temporary Fence bid item and be installed 6 ft outside the dripline of each specimen tree at the location(s) shown on the Project Plans, and shall be staked a minimum of every 6 ft. Refer to the Project Plans for location of temporary exclusion fencing. The fencing is intended to prevent equipment operations in the proximity of protected trees that may compact soil, crush roots, or collide with the tree trunk and/or overhanging branches.

Replace section 14-1.03 with:

14-1.03 PAYMENT

With the exception of the Temporary Fence and Lead Compliance Plan, there is no separate bid item for complying with the applicable permits and environmental mitigation measures. The work required to

comply with the applicable permits and the measures shall be considered included in all bid items and no additional compensation will be allowed therefore.

The Temporary Fence bid item shall be paid by linear foot of fencing installed. The payment quantity for Temporary Fence does not include the additional quantity used for overlaps.

Replace section 14-3 with:

14-3 BIOHAZARD REMEDIATION PLAN

14-3.01 GENERAL

14-3.01A Summary

This section governs the work to prepare a plan to safely identify and dispose of human waste.

14-3.01B Submittals

The Contractor shall prepare and submit a Biohazard Remediation Plan that addresses the identification and removal of human waste including the safe disposal of bloodborne pathogens and fecal matter hazards. The Biohazard Remediation Plan shall be prepared by a Certified Industrial Hygienist (CIH) and the plan shall conform to Cal/OSHA standards.

The Contractor shall submit a list of employees and subcontractors who attended the training signed by the CIH.

14-3.02 CONSTRUCTION

Prior to construction, the Contractor shall attend a training session performed by the CIH who prepared the plan. During construction, human waste must be safely disposed of per the approved Biohazard Remediation Plan.

14-3.03 PAYMENT

The payment quantity for the Biohazard Remediation Plan is lump sum and shall be paid in full once the plan is approved by the Engineer, training has been completed, and list of employees and subcontractors who attended the training signed by the CIH is submitted to the Engineer. Removal and disposal of human waste during construction shall be considered change order work and paid for per Section 9.

Add to section 14-6.03B:

Tree removal activities must be scheduled outside of bird nesting season (typically February 15 to August 31).

Disregard sections 14-6.03C and 14-6.03D.

Add after the 2nd paragraph of section 14-11.12A:

This project includes removal of Yellow Thermoplastic Traffic Stripe that will produce hazardous waste residue.

Add after the last paragraph of section 14-11.12A:

Contractor is to prepare a Lead Compliance Plan which complies with section 7-1.02K(6)(j)(ii) of the Standard Specifications.

Add after the 1st paragraph of 14-11.12E:

After the Engineer accepts the analytical test results, dispose of yellow thermoplastic and yellow paint hazardous waste residue at a Class 1 disposal facility located in California 60 days after accumulating 220 lb of residue.

If less than 220 lb of hazardous waste residue and dust is generated in total, dispose of it within 90 days after the start of accumulation of the residue.

Do not leave objectionable material in or under embankments, including dikes.

Accumulation of flammable material is not allowed.

Add to section 17-2.04:

The payment quantity for the Clearing & Grubbing bid item is lump sum to be paid for based on the percent complete of the clearing and grubbing.

Replace section 17-3 with:

17-3 TREE REMOVAL

17-3.01 GENERAL

Section 17-2.02 includes specifications for removing existing trees.

Trees shall be removed in a manner that will not jeopardize the public safety or damage structures including utility lines or services, or adjacent trees. In most cases, trees shall be entirely removed.

Tree removal includes trees 6 inches in diameter at breast height and larger. Trees smaller than 6 inches in diameter at breast height shall be removed under clearing and grubbing. Contractor is to submit a report to the City detailing the trees removed that have a trunk 6 inches or greater in diameter at breast height.

17-3.02 MATERIALS

Not used.

17-3.03 CONSTRUCTION

17-3.03A General

To prevent the creation of hazards from partially removed trees, once work has commenced to remove a tree, this work shall be completed in a timely manner.

A tree will be considered completely removed when the stump is ground out up to 18 inches below grade.

17-3.03B Disposal of Wood

Disposal, use, or reuse of wood and woody debris from City or Street Trees is at the sole discretion of the City of Placerville including specific disposal methods for infected wood. Payment for tree disposal is included for the bid item Tree Removal.

17-3.04 PAYMENT

The payment quantity for the Remove Tree bid item is the number of trees removed which were marked for removal and approved by the Engineer.

^^

19 EARTHWORK

Replace 2nd sentence in 2nd paragraph under 19-1.01A with:

Excavation, embankment, and export required for other bid items shall be included in those bid items and no additional compensation shall be allowed therefore.

Add to section 19-1.01A:

Contractor is to conform to the grades and cross sections as indicated on the Project Plans.

Add between the 8th and 9th paragraph of section 19-2.03G:

Roughen embankment slopes to receive erosion control materials by either track-walking or rolling with a sheepfoot roller. Track-walk slopes by running track-mounted equipment perpendicular to the slope contours.

Add to section 19-7.02C:

Imported borrow placed within 4 feet of the finished grade must have an R-value of at least 40.

Process the imported borrow to comply with the grading requirements.
Strip materials that adversely affect the imported borrow properties.

^^

21 EROSION CONTROL

Add to section 21-2.02H:

Straw must be certified weed free under the Department of Food and Agriculture.

Replace section 21-2.02K with:

21-2.02K Compost

Compost must be derived from one or a combination of the following types of materials:

- 1. Green material consisting of chipped, shredded, or ground vegetation or clean, processed, recycled wood products
- 2. Biosolids
- 3. Manure
- 4. Mixed food waste

Compost must not be derived from mixed municipal solid waste and must not contain paint, petroleum products, pesticides, or other chemical residues harmful to plant or animal life. Metal concentrations in compost must not exceed the maximum listed under 14 CA Code of Regs § 17868.2.

Process compost materials under 14 CA Code of Regs § 17868.3.

Add to section 21-2.02P:

Straw for fiber roll must be certified weed free under the Department of Food and Agriculture. Fiber roll must be biodegradable and animal safe.

^^

DIVISION IV SUBBASES AND BASES

26 AGGREGATE BASES

Replace 2nd paragraph of section 26-1.02A with:

Unless otherwise noted on the plans or in these special provisions, aggregate used for Class 2 AB shall be ¾" and must comply with the ¾" maximum gradation in Section 26-1.02B.

Add to section 26-1.04 with:

Payment will not be made for any Class 2 AB outside of the limits determined by the Engineer. No additional payment will be made for Class 2 AB depths greater than what is indicated on the Project Plans unless otherwise directed or approved by the Engineer.

Class 2 AB placed under HMA for the construction of roadways shall be paid for under the AB bid item. Scarification and recompaction of the subgrade material, where necessary, to place the Class 2 AB under the HMA shall be included in the AB bid item. The payment quantity for the AB bid item is the theoretical volume of Class 2 AB placed under the HMA measured in cubic yards. Class 2 AB used for the construction of all other bid items is included in those bid items and no additional compensation shall be made therefore.

^^

DIVISION V SURFACINGS AND PAVEMENTS

36 GENERAL

Replace Reserved in section 36-4 with:

36-4.01 GENERAL

Section 36-4 includes specifications for performing work involving residue from grinding and cold planing that contains lead from paint and thermoplastic.

36-4.02 MATERIALS

Not Used.

36-4.03 CONSTRUCTION

The residue from water blasting or cold planing contains lead from paint and thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

- 1. Is a nonhazardous waste
- 2. Does not contain heavy metals in concentrations that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs
- 3. Is not regulated by the Federal Resource Conservation and Recovery Act, 42 USC § 6901 et seq.
- 4. Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan.

36-4.04 PAYMENT

Work resulting from paint removal shall be considered incidental to other items of work and no additional payment shall be made therefore.

^^

39 ASPHALT CONCRETE

Add to the list in the definition of *miscellaneous areas* in section 39-2.01A(2):

8. HMA (Textured Paving)

Replace Reserved in section 39-2.01A(3)(a):

For HMA (Textured Paving) use an 8" x 8" stamp pattern.

The color coating must be an integrally colored, polymer modified cementitious coating. The color must closely conform to the Federal Standard 595B, Color #30166.

Add to 1st paragraph of section 39-2.01C(4)(a):

If it is impractical or impossible for longitudinal joints to match the lane lines, then the Contractor shall limit the paving seams to the least amount practical.

Replace section 39-2.01D with:

39-2.01D Payment

Payment for tack coat is included in the payment for hot mix asphalt (HMA) under bid item Hot Mix Asphalt (Type A).

Type A HMA for the roadway shall be paid for under the Hot Mix Asphalt (Type A) bid item. The payment quantity for HMA shown on the Bid Item List is measured based on the combined mixture weight. If recorded batch weights are printed automatically, the bid item for HMA is measured by using the printed batch weights, provided:

1. Total aggregate and supplemental fine aggregate weight per batch is printed. If supplemental fine aggregate is weighed cumulatively with the aggregate, the total aggregate batch weight must include the supplemental fine aggregate weight.
2. Total virgin asphalt binder weight per batch is printed.
3. Each truckload's zero tolerance weight is printed before weighing the first batch and after weighing the last batch.
4. Time, date, mix number, load number and truck identification is correlated with a load slip.
5. Copy of the recorded batch weights is certified by a licensed weigh master and submitted.

Installation of HMA dikes shall be paid under the HMA dike type shown on the Bid Item List. The payment quantity for the HMA Dike bid items is the length measured parallel to the ground surface along the flowline of the dike. Payment for the HMA used to construct the HMA dike is included in the payment for the HMA Dike bid items and is not included in the HMA bid item.

The hot mix asphalt (miscellaneous areas) is shown on the Project Plans as HMA (Textured Paving). The payment quantity for place hot mix asphalt (miscellaneous areas) is the area measured for the in-place compacted area. Payment for the HMA used for miscellaneous areas is not included in the payment for place hot mix asphalt (miscellaneous areas).

The Engineer does not adjust the unit price for an increase or decrease in the prepaving grinding pay quantity.

The City will not adjust the unit price for an increase or decrease in the quantity of Hot Mix Asphalt (HMA).

Payment will not be made for any HMA outside of the limits determined by the Engineer. No additional payment will be made for HMA depths greater than what is indicated on the plans unless otherwise directed or approved by the Engineer.

Payment will not be made for any HMA used as temporary paving surface, tapers, or ramps.

Replace section 39-2.02B(3) with:

Asphalt binder used in HMA Type A must be PG 64-16.

Add after section 39-2.07

39-2.08 HMA (Textured Paving)

Section 39-2.08 includes specifications for hot mix asphalt for textured paving.

39-2.08A Summary

HMA for textured paving must comply with section 39-2.02 except as specified in this section 39-2.08.

For HMA (Textured Paving) place hot mix asphalt (textured paving) at the locations shown on the plans.

39-2.08B Materials

For HMA (Textured Paving) use an 8" x 8" stamp pattern.

The color coating must be an integrally colored, polymer modified cementitious coating. The color must closely conform to the Federal Standard 595B, Color #30166.

Complete a test plot of 2 feet x 2 feet for approval prior to constructing the stamped paving. The test plot must demonstrate the stamped pattern, color coating and sealer/hardener, and be inspected by the Engineer.

In the event more than three test plots are required by the Engineer, each additional test slab will be paid for as extra work.

39-2.08C Construction

39-2.08C(1) Site Preparation

Earthwork for stamped paving areas must comply with section 19.

Areas to receive stamped paving must be cleared, excavated to the depth shown, graded to a smooth surface, and compacted to not less than 90% relative compaction.

Prior to placing stamped paving, the aggregate base must be smooth, firm, stable and free of rocks, clods, foliage, roots, or other material greater than 1 inch in diameter.

39-2.08C(2) Application

Spread the hot mix asphalt at a temperature not less than 250°F. Spread using methods that will produce a surfacing of uniform smoothness, texture and density.

Compact the hot mix asphalt using power rollers. When power rollers cannot be operated in certain areas due to the size or shape of the area, compact the asphalt using hand rollers, impactors, or other approved methods.

When asphalt is not applied adjacent to pavement, curbs or dikes, the free edge of the asphalt should be tamped at a neat 45 degree angle. The free edge must be neat and follow predefined lines.

Immediately after compaction of asphalt to 91% relative density, apply the pattern while the asphalt is still in a warm to hot pliable state. Achieve consistent patterning using steel rollers and/or vibratory plate compactors to the desired pattern and depth. Remove the template once the desired pattern and depth are achieved.

Double printing caused by template misalignment or due to movement during printing is not acceptable and must be repaired prior to coating.

Gaps in grout lines that butt between two templates or between printed areas and non-printed areas will not be accepted and must be repaired prior to coating.

Color and seal the asphalt in a 2-step process in the following sequence:

- A. Colored surface coating must be evenly applied to the asphalt when it has cooled sufficiently per manufacturer's application instructions. The coating must be an integrally colored, polymer modified cementitious coating and be applied a minimum of 1/32 inch thick. The color coat must be applied when the air temperature is above 45 degrees F and precipitation is not expected within 24 hours.
- B. Color coat hardener must be diluted per manufacturer's recommendations and evenly applied by a spray method after the color coat surface has dried. After spray application, the surface may be lightly broomed to ensure an even application. A second coat of hardener must be applied after the first has dried.

Replace section 39-3.04B with:

Temporary tapers must be either HMA or CMA. No additional payment will be made for the placement of temporary tapers.

Replace section 39-3.04C(1) with:

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width unless a wider cutter head is authorized.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
 - 2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
 - 2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation
4. Operated such that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

If you do not complete placing the HMA surfacing before opening the area to traffic, you must:

1. Construct a temporary HMA or CMA taper to the level of the existing pavement.
2. Place final HMA surface within 5 working days of cold planing.

Replace the 2nd paragraph of 39-3.04A with:

Cold plane asphalt concrete pavement includes the removal of pavement markers, traffic stripes, and pavement markings.

Add to section 39-3.04C(4):

Remove, transport, and appropriately dispose of cold planed material.

All drainage inlet markers shall be stamped concrete imprints for all new drainage inlets. Any existing drainage inlets that do not have stamped concrete drainage inlet markers shall have prefabricated thermoplastic or medallion drainage inlet markers installed.

Replace paragraph in section 70-5.05D:

Drainage inlet markers installed per Standard Plan D71 and as shown on the Project Plans shall be paid for under the Drainage Inlet Marker bid item. The payment quantity for Drainage Inlet Marker bid item is the actual number of drainage inlet markers installed.

^^

71 EXISTING DRAINAGE FACILITIES

Add to section 71-1.03:

Existing drainage facilities not scheduled for removal shall be protected in place. Any damage done to existing drainage facilities not scheduled for removal due to the Contractor's operations shall be repaired to the satisfaction of the City Engineer at the Contractor's expense.

Add to section 71-2.04:

The 6" dual PPP shown on the Project Plans to be removed is considered one culvert. The payment quantity for Remove Culvert bid item is the linear foot of the culvert removed measured parallel to the ground along the centerline of the dual pipes. Remove Culvert bid item includes all work involved in cutting existing pipes, removing existing risers and grates, and removing existing pipe.

^^

DIVISION VIII MISCELLANEOUS CONSTRUCTION

72 SLOPE PROTECTION

Add to section 72-2.04:

The payment quantity for the Rock Slope Protection bid item is the theoretical volume in cubic yards per the dimensions shown on the project plans.

Add to section 72-11.01D:

The payment quantity for Slope Paving (Concrete) bid item is the theoretical volume in cubic yards per the dimensions shown on the project plans.

^^

73 CONCRETE CURBS AND SIDEWALKS

Add to section 73-1.01:

Project is in a freeze thaw area and requires air entrained concrete.

Add to section 73-1.02A:

Concrete must be minor concrete complying with section 90-2 and may contain returned plastic concrete complying with section 90-2.

Replace paragraph in section 73-2.04 with:

Minor concrete shall be paid under the Minor Concrete type shown on the Bid Item List. Class 2 aggregate base required for the construction of Minor Concrete type shown on the Bid Item List shall be included in the unit price for each type. Recompaction of the existing base and/or subbase material below the Class 2 aggregate base required for the construction of Minor Concrete types shown on the Bid Item List shall be included in the unit price for each type.

Replace the paragraph in section 73-3.01D(3) with:

For locations shown, perform a preconstruction survey to verify that forms and site constraints will allow the design dimensioning and slope requirements to be achieved. Upon completing construction of these facilities, perform a post-construction survey and verify that design dimensioning and slope requirements were achieved. The post-construction survey must include a minimum of three (3) measurements for each dimension and slope requirement shown. Individual measurements must be equally distributed across the specified slope or dimensional surface.

Within two (2) business days of performing the surveys, submit pre-construction and post-construction surveys sealed and signed by one of the following:

1. Land surveyor licensed in the State
2. Civil engineer licensed in the State before January 1, 1982

Add to the beginning of section 73-3.03:

Before placing concrete, verify that forms and site constraints allow the required dimensioning and slopes shown. Immediately notify the Engineer if you encounter site conditions that will not accommodate the design details.

^^

75 MISCELLANEOUS METAL

Replace section 75-1.04 with:

There is no specific bid item for miscellaneous metal material. Miscellaneous metal materials shall be paid under the various bid items requiring miscellaneous metal materials and no additional compensation will be allowed therefore.

^^

80 FENCES

Replace “Reserved” in section 80-11 with:

80-12 TEMPORARY PROTECTIVE FENCE

80-11.01 General

80-11.01A Summary

Section 80-11 includes specifications for constructing temporary protective fences.

80-11.01B Submittals

The Contractor shall submit the manufacturer and model for temporary protective fences to the City no later than 10 business days before installation of temporary protective fences.

80-11.03 Construction

Contractor shall install tree protective fences around all trees within 10 feet of the project area not designated for removal on the Project Plans.

80-11.04 Payment

Temporary Protective Fence shall be paid under the Temporary Fence (Type ESA) bid item and shall be paid by linear foot of fence installed. The payment quantity is the length measured parallel to the ground surface along the centerline of the fence, not including additional quantity used for overlap.

^^

DIVISION IX TRAFFIC CONTROL DEVICES

84 MARKINGS

Add to 3rd paragraph in section 84-9.03A:

Removal of traffic stripes and pavement markings shall be by water blasting only. Grinding of the traffic stripes and pavement markings will not be allowed.

Replace the 4th paragraph in section 84-9.03A with:

Remove pavement markings such that the old message cannot be identified. Make any area removed by water blasting rectangular. Water must not puddle in the ground areas. Fog seal ground areas on asphalt concrete pavement.

Replace the last paragraph in section 84-9.04 with:

Pavement markings to be removed as shown on the Project Plans shall be paid for under the Remove Thermoplastic Pavement Marking bid item. The payment quantity for Remove Thermoplastic Pavement Marking bid item is the area in square feet of the marking removed measured parallel to the ground.

^^

DIVISION X ELECTRICAL WORK

86 GENERAL

Replace the 1ST paragraph of section 86-1.01D(3) with:

Deliver the material and equipment for testing to the following location:

CALTRANS MATERIAL ENGINEERING AND TESTING SERVICE (METS)
5900 FOLSOM BLVD
SACRAMENTO, CA 95819
(916) 227-7196

Add to the list in the 2nd paragraph of section 86-1.01C(1):

Add to the end of section 86-1.02F(2)(a):

All conductors must be copper.

Replace *insulated* in the 2nd paragraph of section 86-1.02F(2)(c)(ii) with:

bare

Replace section 86-1.02Q(2) with:

86-1.02Q(2) Department Furnished Controller Cabinets

86-1.02Q(2)(a) General

A Department-furnished controller assembly consists of a model 2070E controller unit and a wired controller cabinet. The Department does not furnish anchor bolts.

Install the following components inside the controller cabinet:

1. Multiple AC outlet strip
2. RJ-11 modular jack
3. RJ-45 modular jack
4. DC terminal block
5. Ethernet extender switch combination unit
6. Remote ethernet power controller switch
7. Data surge suppressor
8. Standard half shelf
9. 24V DC power supply
10. 4G LTE wireless modern assembly

86-1.02Q(2)(b) Multiple AC Outlet Strip

The multiple AC outlet strip must:

1. Be 19 inch, rack mountable
2. Have a minimum of 6 receptacle outlets
3. Be rated for 15 A, 125 V(ac)
4. Have internal 12 A, 125 V(ac) circuit breaker
5. Be rated for 36,000 A surge current protection from Hot to Neutral
6. Have a UL 1449 rating for a minimum 400 V
7. Have a minimum 6-foot-long cord

86-1.02Q(2)(c) RJ-11 Modular Jack

The RJ-11 modular jack must:

1. Be DIN rail mounting
2. Have 6 interface positions
3. Be rated for 120V and 1A
4. Have dimensions of 2 inches (D) by 1.5 inches (W) by 3.25 inches (H)
5. Have a crew clamp connection

86-1.02Q(2)(d) RJ-45 Modular Jack

The RJ-45 modular jack must:

1. Be DIN rail mounting
2. Have 8 interface positions
3. Be rated for 120V and 1A

4. Have dimensions of 2 inches (D) by 1.5 inches (W) by 3.25 inches (H)
5. Have a crew clamp connection

86-1.02Q(2)(e) DC Terminal Block

The DC terminal block must:

1. Be rated for 250 V(ac)/DC voltage and 30 A current
2. Have an operating temperature from -13 to 122 degrees F
3. Have a maximum size of 3.9 inches (D) by 2.7 inches (W) by 2.7 inches (H)
4. Have a wire size for the input terminals of 26-10 AWG solid/strand
5. Have a wire size for the output terminals of 26-12 AWG solid/strand
6. Have a torque of at least 4.4 in-lb

86-1.02Q(2)(f) Ethernet Extender Switch Combination Unit

The Ethernet extender switch combination unit must meet the following requirements:

1. Provide a hardened managed 6-port 10/100Base Fast Ethernet switch and 2-port copper pair Ethernet extender and 2-Gigabit Ethernet combo switch ports. Two Single-Mode (1310/1550 nm) high-temperature-rated (185 Fahrenheit) SFPs must be included with each Ethernet extender switch combination unit. These SFPs must be fully compatible with the switch into which they will be inserted for operation.
2. Include everything needed to quickly deploy a 6-port switch and two high-speed point-to-point Ethernet links over extended distances to deliver data to remotely located networked devices
3. Be compact, industrial grade and designed for outdoor applications
4. Utilize existing phone lines or any network-grade twisted pair cable and only require one (1) twisted pair (2 wires) to operate
5. Plug and play ready at default extender line rate of 1 Mbps up to 100Mbps
6. Connect to network equipment on both sides of the link
7. Establish link automatically on power up when both units are connected to the power source

Description	Specifications
Ethernet Interface	10/100Base-TX
Ports	(6 Min) RJ-45 auto-cross, (2 Min) RJ-11, (2 Min) Terminal Block, DB9 TIA-232 console port, (2 Min) Gigabit Ethernet combo switch ports. 2 Single-Mode (1310/1550nm) SFP gbics.
LED Indicators	Unit Power; Ports: Link, Activity, Speed
Memory	2Mbits packet buffer
Manage Functions	SNMP/v1/v2/v3, VLAN, QoS, RSTP, IGMP, LACP
Security	MAC address filtering, port enable/disable
Alarm Contact	One relay contact (1A @ 24Vdc
Input Voltage	12 - 48V(dc) Terminal Block; 12 V(dc) (DC Jack)
Protection	Over current and Reverse polarity
Installation	DIN Rail mount
Dimensions (max)	3.0" (W) x 5.0" (D) x 6" (H)
Weight (max)	3.0 lbs
Operating Temp	-40°F to +167°F
Ambient Relative Humidity	5% to 95% (non-condensing)
Agency Compliance	FCC Part 15B, Class A

86-1.02Q(2)(g) Remote Ethernet Power Controller Switch

The Ethernet power controller switch must provide Remote Power Management and Control using two methods for accessing configuration and switching functions:

1. The Web Browser Interface method which consist of a series of simple, easy-to-use web page menus that allow the selection of configuration parameters or initiation of switching operations using the Ethernet network.
2. The Command Line Interface must be an ASCII menu system, which allows configuration and operation of the Ethernet power controller switch via telnet over TCP/IP network, via modem connection or via local PC using a terminal program such as Hyperterminal or Tera Term.

The Ethernet power controller switch must meet or exceed the following requirements:

1. Web Browser Access for easy setup and operation
2. Encrypted password security
3. Expandable to five individual outlets
4. Each Outlet can Switch a 15 Amp Load
5. On/Off/Reboot switching
6. IP addressed, 10Base-T interface
7. EIA-232 Modem / Console Port
8. Network Security features
9. Manual power control button
10. Telephone Control through phone keypads with access for control
11. Power Input / Output:
 - 11.1. AC Inputs: 15 Amperes (maximum)
 - 11.2. Voltage: 105 - 120 V(ac), 60 Hz
 - 11.3. Connectors: IEC-320 Inlet, Line Cord (supplied)
 - 11.4. AC Outputs: One, Expandable to five
 - 11.5. Connector: NEMA 5-15 Outlet
 - 11.6. Load: 15 Amperes (total)
12. Console / Modem Port Interface
 - 12.1 Connector: DB9M, EIA232C, DTC (9-to-9 Pin provided)
 - 12.2 Coding: Serial ASCII, 8 Bits, No Parity
13. Physical / Environmental:
 - 13.1. Size:
 - 13.1.1. Width: 19"
 - 13.1.2. Height: 3.5"
 - 13.1.3. Depth: 7.00"
 - 13.2. Operation Temperature:
32°F to 122°F
 - 13.3. Humidity:
10 percent to 90 percent (relative humidity)

86-1.02Q(2)(h) Data Surge Suppressor

Category 6 Data Surge Suppressor must meet or exceed the following requirements:

Description	Specification
Ethernet Connection Ports	8-RJ45 ports
Degree of Protection	IP20
Arrester rated voltage	≤3.3VDC
Arrester rated voltage	≤3.3VDC (±60VDC/ PoE) [core-core]
Arrester rated voltage	≤180VDC (core-earth)
Surge Suppression	<26 Vpk @ 100 A 10/1000µs
Suppression Response Time	≤1 ns (core -core); ≤100 ns (core-earth)
Total Surge Current (8/20) µs	10kA
Nominal Discharge surge current (8/20)µs	2kA (core-earth); 100A (core-core)
Operating Temperature	-40° F to + 185° F
Dimension (approximate)	5.5" (H) X 6" (W) X 1.5" (D)

86-1.02Q(2)(i) Standard Half Shelf

Shelf must be:

1. Gray, 15"(D) x 5"(H), half shelf, single sided, and rack mountable for communication equipment.
2. Made of sturdy 0.090 in thick aluminum with airflow vents.
3. Capable of holding at least 50.7 lbs.
4. Capable of holding equipment up to 1.72 inches wide.

86-1.02Q(2)(j) 4G LTE Wireless Modem Assembly

The wireless modem assembly consists of a modem, power supply, mounting bracket and hardware, serial communication cable, and antenna. The wireless modem must be carrier approved to be deployed over the AT&T or Verizon communication network system.

86-1.02Q(2)(j)(i) Modem

The modem must:

1. Have remote device management and be configurable either remotely through the wireless network or through the modem serial port
2. Be configured before acceptance.
3. Have minimum 60Mbps raw data transfer rate.
4. Have full duplex transceiver.
5. Have 700MHz Band 1700 AWS LTE as well as 850/1900/2100 MHz HSPA+ dual band networking (for fallback).
6. Have integrated Transmission Control Protocol (TCP)/Internet Protocol (IP) stack with User Datagram Protocol (UDP).
7. Have user configurable password protected access.
8. Includes a DC power cable at least 3 feet long with a connector compatible with the modem power connector, two Ethernet ports, one RS-232 serial port, one USB port, two digital I/O, and two cellular antenna connectors (all SMA female).
9. Have packet buffering and forwarding feature that provides discipline to the output of the serial port. The packet forwarding time interval must be configurable from a rate of 0 (undisciplined) to 400 ms in increments of 100 ms or less.
10. Comply with Portable Computer and Communications Association (PCCA) STD-101.
11. Have operating temperature range from -22 to 158 degrees F, with 90% relative humidity at 140 degrees F.
12. Weigh about 1.5 Lbs and have overall dimensions of about 5 in. x 3.5 in. x 2 in. The housing must be water resistant aluminum casing and IP 64 rated.
13. Have the following status indicators:
 - 13.1. Power on
 - 13.2. Channel acquired
 - 13.3. Link status
 - 13.4. Network registration

- 13.5. Received signal strength indicator
- 13.6. Transmit and receive data
- 13.7. Block errors
- 14. Have the following standard interfaces:
 - 14.1. The AT command serial character stream using TCP/IP.
 - 14.2. Host communicates with modem using either UDP or TCP packet modes.
 - 14.3. Computer terminal platform using Windows 7 or later and Dial-Up Networking communicates with the modem using point to point protocol (PPP).

Provide the Engineer with the modem serial, Subscriber Identity Module (SIM) and International Mobile Equipment Identification (IMEI) numbers 30 days prior to requiring the Packet Data Protocol (PDP) context. The Engineer will provide the PDP context comprising the IP (assigned) and Access Point Name (APN) obtained from service provider.

The modem and associated firmware, software, hardware, protocol, and other features must be fully compatible with the existing 4G LTE network. The existing network utilizes the AT&T and Verizon Wireless cellular system (band compatible with this modem). Demonstrate the compatibility to the Engineer by actual installation or other methods approved by the Engineer.

86-1.02Q(2)(j)(ii) Power Supply

The power supply must:

- 1. Be vertically mountable on a 19-inch standard Din Rail.
- 2. Have provisions to attach the modem power cable securely without the need for modifying the cable.
- 3. Meet the requirements as shown in the following table:

Characteristics	Requirements
Power cord	Standard 120 V(ac), 3 prong cord, at least 3 feet long (may be added by Contractor)
Type	Switching mode type
Power rated	40 W minimum with no minimum load required
Operating humidity range	From 5 to 95 percent non-condensing
Input voltage	From 9 to 36 V (dc)
Working temperature ^a	-22°F to 158°F
Safety standards	UL 1012,

86-1.02Q(2)(j)(iii) Mounting Bracket and Hardware

The mounting bracket must:

- 1. Be stainless steel.
- 2. Be spring loaded and securely hold the modem in a vertical position with all cables and conductors installed.
- 3. Contain the modem using a method that allows the removal of the modem without tools or without removing the bracket from its attachment to the cabinet frame.

86-1.02Q(2)(j)(iv) Serial Communication Cable

The wireless modem connector must meet EIA-232 standard using a 9 pin Type D connector

86-1.02Q(2)(j)(v) Antenna

The antenna must:

- 1. Be configured for a multiple-input-multiple-output type operation with four cables in a single mounting hole.

2. Be made of ASA UV-stable plastic radome.
3. Meet the requirements as shown in the following table:

Parameter	Requirements
VSWR (at resonant point)	2:1 or less
Frequency	694-960 MHz, 3 dBi; 1710-2170 MHz, 4 dBi; 2400-2500 MHz, 5 dBi; 4900-6000 MHz, 5 dBi; 1575.42+/- 2 MHz, 26 dB, 5 dBi
Nominal Impedance	50 Ω
Maximum Power	10 Watt
Radiation Pattern	Omni-directional
Polarization	Vertical

86-1.02Q(2)(k) 24V DC Regulated Power Supply

Description	Specifications
Input Voltage	85~264 VAC
Rated Current	15.0 A
Rated Power	360 Watt
Regulated Output Voltages	24 VDC
Output Current Range	0 – 15.0 A
LED Indicators	Power
Protections	Short Circuit / Overload / Over Voltage
Operating Temperature	-13°F to +158°F
Max Weight	< 2 lb
Max Size	5.00" D x 3.00" W x 5.00" H

The regulated power supply must be DIN rail mounted, and the following:

1. Have LED indicator to indicate power-on status
2. Be Industrial Control Equipment (UL 508) approved
3. An AC power cord that meets the following requirements:

Description	Specifications
Cable Type	Outdoor AC power cord
Cable Length Range	5 feet to 8 feet
Cable Ends	1 X NEMA 5 - 15P 1 X Pigtails/Insulated copper wire
Voltage Rating	120 VAC
Current Rating	15 A
Conductor Gauge Range	12 AWG to 14 AWG
Number of Conductors	3 (Hot, Neutral, GND)
Wire Colors	Black for hot wire White for neutral wire Green for GND
Conductor Material	Copper/Stranded copper
Cord Type	SJTW

Add to the list in the 2nd paragraph of section 86-1.02R(4):

4. Be made of metal

AA

87 ELECTRICAL SYSTEMS

Replace the 1st sentence in the 9th paragraph of section 87-1.03A with:

The shutdown of traffic signal systems is allowed only between the hours of 9:00 a.m. and 3:00 p.m.

Add between the 22nd and 23rd paragraphs of section 87-1.03A with:

Where a Type A loop detector is shown, a Type E loop detector may be substituted. Use only one type loop detector per system.

Where a Type D loop detector is shown, a Type F loop detector may be substituted. Use only one type of loop detector per system.

Add to the beginning of section 87-1.03B(3)(a):

Use Type 3 conduit for underground installation.

The steel lid for a traffic pull box must be welded to a Z-bar frame.

Replace the 3rd paragraph of section 87-1.03C(1) with:

Install a pull box on a bed of crushed rock.

Replace the 1st paragraph of section 87-1.03F(2)(c)(ii) with:

Install a Type B loop detector lead-in cable in conduit.

Replace the 1st paragraph of the RSS for section 87-1.03F(3)(c)(ii) with:

Use a Type 2 loop wire. Use only Type 2 loop wire for Type E and F loop detectors.

Replace the 2nd paragraph of section 87-1.03H(2) with:

Use Method B to insulate a splice.

Add to the end of section 87-1.03T:

Add between the 1st and 2nd sentences in the 2nd paragraph of section 87-1.03V(2):

Saw the slots to allow a minimum of 2 inches of sealant above the top of the uppermost loop wire in the slot.

Add between the 10th and 11th paragraphs of section 87-1.03V(2):

Use hot-melt rubberized sealant to fill slots.

Add to the end of section 87-21.03C:

Modifying a lighting system includes removing, adjusting, or adding:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Standards
6. Luminaires
7. Fuse splice connectors

Modifying a signal and lighting system includes removing, adjusting, or adding:

1. Conductors

2. Signal heads

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DIVISION XI MATERIALS

90 CONCRETE

Add to section 90-1.01A:

All concrete shall be air entrained as this project is located within a freeze-thaw area.

Replace “Reserved” in section 90-1.01C(1) with:

For each load of concrete delivered to the job site, the contractor shall submit quality control records from the concrete supplier identifying air content per California Test 504 or comparable ASTM test method. The concrete supplier shall have an authorized representative on-site during concrete pours to check and/or dose the concrete to ensure air content meets project specifications.

Replace the 4th sentence in the 1st paragraph of section 90-4.01C(3) with:

Allow 15 days for review.