SPECIFICATIONS

PANOCHE ROAD SHOULDER IMPROVEMENTS SR 33 TO SAN BENITO AVENUE

FEDERAL PROJECT NO. CML-5942(255)

BUDGET / ACCOUNT: 4510 / 7370



Department of Public Works and Planning

Contract Number 17-15-C



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING STEVEN E. WHITE, DIRECTOR

March 6, 2018

Contract No. 17-15-C

ADDENDUM NO. 3 to the Bidding and Contract Documents for Panoche Road Shoulder Improvements, revising the Bidding and Contract Documents as follows:

COVER PAGE

No changes

TABLE OF CONTENTS

No changes

NOTICE TO BIDDERS

DELETE the following text:

2:00 P.M., (1400 hours and 00 seconds) Thursday, March 8, 2018

REPLACE with the following text:

2:00 P.M., (1400 hours and 00 seconds) Thursday, March 15, 2018

DELETE the following text:

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in General Decision Number CA180029, Dated 02/09/2018, which is incorporated in these special provisions by this reference as if fully set forth herein and which can be viewed at <u>http://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb</u>. Said Federal wage rates, as well as project plans, special provisions, and bid forms, may also be examined at the County of Fresno office described in the preceding paragraph. Addenda to modify the reference to Federal minimum wage rates to reflect revisions thereto, if necessary, will be issued to planholders of record.

REPLACE with the following text:

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in General Decision Number CA180029, Dated 03/02/2018, which is incorporated in these special provisions by this reference as if fully set forth herein and which can be viewed

Addendum No. 3 Contract No. 17-15-C at <u>http://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb</u>. Said Federal wage rates, as well as project plans, special provisions, and bid forms, may also be examined at the County of Fresno office described in the preceding paragraph. Addenda to modify the reference to Federal minimum wage rates to reflect revisions thereto, if necessary, will be issued to planholders of record.

SPECIAL PROVISIONS

No changes

PROPOSAL

No changes

AGREEMENT

No changes

PROJECT DETAILS

No changes

PLANS

No changes

BID BOOK

REPLACE Bid Item List page Proposal 2.1 with Proposal 2.1A

Attachments: Proposal 2.1A

END OF ADDENDUM NO. 2

Please attach this Addendum to the inside cover of the Specifications booklet. If you have given the Bidding and Contract Documents to someone else, please forward this Addendum.

Addendum No. 3 Contract No. 17-15-C



3 Date Signed

Design Engineer:

FRESNO COUNTY Department of Public Works and Planning m/a 2220 Tulare Street, Seventh Floor Fresno, CA 93721-2106 Mohammad Alimi, PE C67156 Lic. Expiration: 09/30/18

Addendum No. 3 Contract No. 17-15-C

COUNTY OF FRESNO DEPARTMENT OF PUBLIC WORKS AND PLANNING PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS FEDERAL PROJECT NO.: CML -5942(255) CONTRACT NO: 17-15-C

ALTERNATIVE BID

Estimated Quantity	Unit of Measure	F,S	Item Description	Item Price Total Price (In Figures) (In Figures)		
40000	\$		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$	40,000.00
2	EA		CONSTRUCTION PROJECT FUNDING SIGNS			
1	LS	s	TRAFFIC CONTROL SYSTEM			
1	LS		JOB SITE MANAGEMENT			
1000	\$		STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$1.00	\$	1,000.00
1	LS	s	PREPARE STORM WATER POLLUTION PREVENTION PLAN			
1	LS	s	STORM WATER ANNUAL REPORT			
1	LS		CLEARING AND GRUBBING			
4105	СҮ	F	ROADWAY EXCAVATION			
2090	CY	F	SHOULDER BACKING			
2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)			
1	LS		FINISHING ROADWAY			
2788	CY	F	CLASS 2 AGGREGATE BASE			
10455	SY		SUBGRADE ENHANCEMENT GEOGRID (BIAXIAL)			
3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)			
4	TON		TACK COAT			
3	EA		ROADSIDE SIGN - ONE POST			
1	LS		MOBILIZATION			
		TOTAL	ALTERNATIVE BID (ITEMS 1 THROUGH 18)			
	Quantity 40000 2 1 1 1 1000 1 1 1 1 1 1 1 1 1 1 1	Quantity Measure 40000 \$ 2 EA 1 LS 1 LS 1000 \$ 1 LS 1000 \$ 1 LS 2090 CY 2090 CY 1 LS 2788 CY 10455 SY 3781 TON 3 EA 1 LS	Quantity Measure F,S 40000 \$. 2 EA . 1 LS S 1 LS S 1 LS S 1000 \$. 1000 \$. 1 LS S 2090 CY F 2090 CY F 1 LS . 2788 CY F 10455 SY . 3 EA . 1 LS .	QuantityMeasureF,SItem Description40000SSUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)2EACONSTRUCTION PROJECT FUNDING SIGNS1LSSTRAFFIC CONTROL SYSTEM1LSJOB SITE MANAGEMENT10000SSTATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE1LSSPREPARE STORM WATER POLLUTION PREVENTION PLAN1LSSSTORM WATER ANNUAL REPORT1LSSCLEARING AND GRUBBING4105CYFROADWAY EXCAVATION2090CYFIMPORTED BORROW (SHOULDER BACKING MATERIAL)1LSFINISHING ROADWAY2788CYFCLASS 2 AGGREGATE BASE10455SYSUBGRADE ENHANCEMENT GEOGRID (BIAXIAL)3781TONHOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)4TONTACK COAT3EAROADSIDE SIGN - ONE POST	Quantity Measure FA Tem Description (In Figures) 40000 \$ S SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE \$1.00 2 EA CONSTRUCTION PROJECT FUNDING SIGNS 1 LS \$ TRAFFIC CONTROL SYSTEM 1 LS \$ TRAFFIC CONTROL SYSTEM 1000 \$ JOB SITE MANAGEMENT 1000 \$ S STATE WATER RESOURCES CONTROL BOARD NOTICE OF \$1.00 1 LS \$ PREPARE STORM WATER POLLUTION PREVENTION PLAN 1 LS \$ STORM WATER ANNUAL REPORT 1 LS \$ STORM WATER ANNUAL REPORT 1 LS \$ SHOULDER BACKING 2090 CY F INPORTED BORROW (SHOULDER BACKING MATERIAL) 1 LS \$ INPORTED BORROW (SHOULDER BACKING MATERIAL) 2090 CY F INDORTED BORROW (SHOULDER BACKING MATERIAL)	Quantity Measure F.3 Item Description (in Figures) (in Figures) 40000 \$

F - FINAL PAY ITEM

S - SPECIALTY ITEM



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING STEVEN E. WHITE, DIRECTOR

February 26, 2018

Contract No. 17-15-C

ADDENDUM NO. 2 to the Bidding and Contract Documents for Panoche Road Shoulder Improvements, revising the Bidding and Contract Documents as follows:

COVER PAGE

No changes

TABLE OF CONTENTS

No changes

ADDENDUM NO. 1

DELETE the following text:

ADDENDUM NO. 1 to the Bidding and Contract Documents for Kamm Avenue Shoulder Improvements, revising the Bidding and Contract Documents as follows:

<u>REPLACE</u> with the following text:

ADDENDUM NO. 1 to the Bidding and Contract Documents for Panoche Road Shoulder Improvements, revising the Bidding and Contract Documents as follows:

NOTICE TO BIDDERS

<u>DELETE</u> the following text:

2:00 P.M., (1400 hours and 00 seconds) Thursday, March 1, 2018

REPLACE with the following text:

2:00 P.M., (1400 hours and 00 seconds) Thursday, March 8, 2018

SPECIAL PROVISIONS

No changes

PROPOSAL

No changes

Addendum No. 2 Contract No. 17-15-C

AGREEMENT

No changes

PROJECT DETAILS

No changes

PLANS

No changes

END OF ADDENDUM NO. 2

Please attach this Addendum to the inside cover of the Specifications booklet. If you have given the Bidding and Contract Documents to someone else, please forward this Addendum.

BROFESSI 2. REGISS 2/26/18 1'0. 59670 Exp. 12-31-19 Date Signed CIVIN ATE OF CALIFOR Supervising Engineer:

FRESNO COUNTY Department of Public Works and Planning m/a 2220 Tulare Street, Seventh Floor Fresno, CA 93721-2106 Dale Siemer, PE 59670 Lic. Expiration: 12/31/19

Addendum No. 2 Contract No. 17-15-C Panoche Road Shoulder Improvements Page 2 of 2



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING STEVEN E. WHITE, DIRECTOR

February 23, 2018

Contract No. 17-15-C

ADDENDUM NO. 1 to the Bidding and Contract Documents for Kamm Avenue Shoulder Improvements, revising the Bidding and Contract Documents as follows:

COVER PAGE

No changes

TABLE OF CONTENTS

No changes

NOTICE TO BIDDERS

DELETE the following text:

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in **General Decision Number CA180029**, **Dated 01/26/2018**, which is incorporated in these special provisions by this reference as if fully set forth herein and which can be viewed at <u>http://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb</u>. Said Federal wage rates, as well as project plans, special provisions, and bid forms, may also be examined at the County of Fresno office described in the preceding paragraph. Addenda to modify the reference to Federal minimum wage rates to reflect revisions thereto, if necessary, will be issued to planholders of record.

REPLACE with the following text:

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in **General Decision Number CA180029**, **Dated 02/09/2018**, which is incorporated in these special provisions by this reference as if fully set forth herein and which can be viewed at <u>http://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb</u>. Said Federal wage rates, as well as project plans, special provisions, and bid forms, may also be examined at the County of Fresno office described in the preceding paragraph. Addenda to modify the reference to Federal minimum wage rates to reflect revisions thereto, if necessary, will be issued to planholders of record.

SPECIAL PROVISIONS

Section 19-5.03A

DELETE the following text:

Replace the 1st paragraph of Section 19-5.03A with:

Addendum No. 1 Contract No. 17-15-C Compact earthwork to a relative compaction of at least 95 percent for at least a depth of 2.5 feet below the finished grade for the entire width of the paved area.

Section 19-5.03B

ADD the following text:

Replace the 1st paragraph of Section 19-5.03B with:

Compact earthwork to a relative compaction of at least 95 percent for at least a depth of 2.5 feet below the finished grade for the entire width of the paved area.

When biaxial geogrid is placed between the subgrade and the pavement structure, compact earthwork to a relative compaction of at least 85 percent for at least a depth of 1.0 feet below the grading plane for the entire width of the paved area.

PROPOSAL

No changes

AGREEMENT

No changes

PROJECT DETAILS

No changes

PLANS

No changes

END OF ADDENDUM NO. 1

Please attach this Addendum to the inside cover of the Specifications booklet. If you have given the Bidding and Contract Documents to someone else, please forward this Addendum.



ZZZZ Date Signed

Supervising Engineer:

FRESNO COUNTY Department of Public Works and Planning m/a 2220 Tulare Street, Seventh Floor Fresno, CA 93721-2106 Dale Siemer, PE 59670 Lic. Expiration: 12/31/19

SUPPLEMENTAL INFORMATION – Not Part of the Contract Documents

The following list is comprised of paraphrased questions submitted by potential bidders or sub-bidders in writing via facsimile, email, or letter. These paraphrased questions and associated responses are not part of the contract documents and shall have no bearing whatsoever on the interpretation of the Standard Specifications, the Standard Plans, the Special Provisions, or the Plans. Nor shall they have any bearing whatsoever on the interpretation of other publications referenced therein.

1. Question: Are the cross sections available?

Response: Cross sections are now available on the County website.

2. Question: Will the County consider different compaction requirements for the alternative section that uses biaxial geogrid?

Response: See Addendum #1.

3. Question: Section 26-1.01D(2)(d) of the Revised Standard Specifications indicates the testing frequencies for quality control testing of aggregate base. Will this be the contractor's responsibility or the County's?

Response: The contractor should have their own independent quality control program that follows the testing frequencies listed in the RSS. The County, at its own discretion, may or may not verify these results.

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COVER SHEET

BOARD ADOPTION AND ACKNOWLEDGMENT

Engineer's Signature

NOTICE TO BIDDERS

BID ITEMS AND APPLICABLE SECTIONS

SPECIAL PROVISIONS

FEDERAL REQUIREMENTS

Attachment A – Federal Requirements for Federal Aid Construction Projects Attachment B – Required Contract Provisions for Federal-Aid Construction Contracts (Form 1273) Exhibit 12B, Bidder's List of Subcontractors CEM Forms

PROJECT DETAILS / DRAWINGS

Project Drawings/Details Self-Dealing Transactions Disclosure Form Revised Standard Specifications Dated 09-02-16 Contractor Request for Clarification

BID BOOK

Bidder's Declaration Bid Form Abbreviations Used Signature Page Non-Collusion Affidavit Public Contract Code Subcontractor List Certifications DBE Forms Opt-Out of Asphalt Concrete Price Fluctuations Form Guaranty

AGREEMENT

PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS

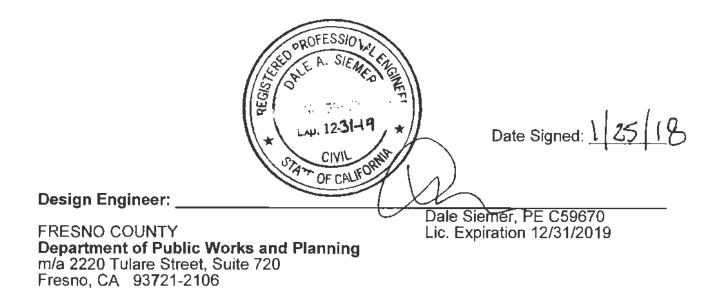
CONTRACT NUMBER: 17-15-C

Adopted by the Fresno County Board of Supervisors, February 28, 2017

Brian Pacheco, Chairman Sal Quintero, Vice Chairman Andreas Borgeas Ernest Buddy Mendes Nathan Magsig 1st District 3rd District 2nd District 4th District 5th District

Jean Rousseau, County Administrative Officer

Steven E. White, Director Department of Public Works and Planning



BOARD OF SUPERVISORS COUNTY OF FRESNO STATE OF CALIFORNIA

NOTICE TO BIDDERS

Sealed proposals will be received at the Fresno County Department of Public Works and Planning (Department), Office of the Design Engineer, Seventh Floor, Fresno County Plaza Building, 2220 Tulare Street, Fresno, CA 93721 until

2:00 P.M., (1400 hours and 00 seconds) Thursday, March 1, 2018

at which time the bidding will be closed. Promptly following the closing of the bidding all timely submitted bids will be publicly opened and read at the Department in said building, for construction in accordance with the project specifications therefor, to which special reference is made as follows:

PANOCHE ROAD SHOULDER IMPROVEMENTS

SR 33 TO SAN BENITO AVENUE

FEDERAL PROJECT NO. CML-5942(255)

CONTRACT NUMBER: 17-15-C

The work to be done consists, in general, of adding approximately four feet of new paved shoulder to each side of Panoche Road from SR 33 to San Benito Avenue, a distance of 1.63 miles. This will widen the existing 24-foot wide roadway to consist of two 12-foot wide travel lanes with four-foot wide paved shoulders on each side of the roadway. The project includes a base bid and an alternative bid. Under the base bid, the structural section will be comprised of asphalt concrete over aggregate base. Under the alternative bid, the structural section will consist of asphalt concrete over a reduced thickness of aggregate base with the installation of biaxial geogrid to allow the reduction in the thickness of the aggregate base.

The County of Fresno affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation. Bidders are advised that, as required by federal law, Disadvantaged Business Enterprise (DBE) requirements are included in Section 2, "Bidding," under subsection 2-1.12 "Disadvantaged Business Enterprises".

The DBE Contract Goal is <u>8</u> percent.

This project is subject to the "Buy America" provisions of the Surface Transportation Assistance Act of 1982 as amended by the Intermodal Surface Transportation Efficiency Act of 1991.

This project is subject to the Cargo Preference Act and implementing regulations (46 CFR Part 381) to the Federal Highway Program.

Planholder and exchange/publication names may be obtained from the Fresno County website at <u>http://www.co.fresno.ca.us/planholders</u>.

Electronic copies, in ".pdf" file format, of the official project specifications, as well as cross sections and such additional supplemental project information as may be provided, are available to view, download, and print at <u>http://www.co.fresno.ca.us/planholders</u>.

Bid books, which contain bid proposal sheets necessary to submit a bid, may be obtained at no charge by sending a request to <u>DesignServices@co.fresno.ca.us</u>. Upon receipt of the request, a bid book will be mailed to the requestor via First Class United States Mail and the requestor will then be listed as a planholder for the project.

Project specifications will not be sold to prospective bidders in hardcopy format except upon special written request to <u>DesignServices@co.fresno.ca.us</u>. Payment therefor will be \$30 for each set of specifications.

A Summary of Bids and a list of subcontractors for the apparent low bidder will be posted at the above listed website, generally within 24 hours of the Bid Opening.

All questions regarding this project shall be in writing and shall be received by the Department of Public Works and Planning, Design Division, no later than 2:00 P.M. on the seventh (7th) calendar day before bid opening. Any questions received after this deadline will not receive a response unless the Department of Public Works and Planning elects to issue an addendum to revise the bid opening date. In the event that the bid opening date is revised, the deadline for questions will be extended to no later than 2:00 P.M. on the seventh (7th) calendar day before the revised bid opening date. Questions shall be submitted on the "CONTRACTOR REQUEST FOR CLARIFICATION" form provided in the "Project Details" section of these project specifications. Fax questions to (559) 455-4609; e-mail to DesignServices@co.fresno.ca.us or mail to:

County of Fresno Department of Public Works and Planning 2220 Tulare Street, Sixth Floor Fresno, Ca. 93721-2104

Any changes to, or clarification of, the project specifications shall be in the form of a written addendum issued to planholders of record. Questions that prompt a change or clarification shall be included in the addendum with the subsequent answer.

Any oral explanation or interpretations given to this project are not binding.

Bids shall be submitted in a sealed envelope addressed to the Department and labeled with the name of the bidder, the name of the project and the statement 'Do Not Open Until The Time Of Bid Opening.'

Bid security in the amount of ten (10) percent of the amount of the bid, and in the form of a bid bond issued by an admitted surety insurer licensed by the California Department of Insurance, cash, cashier's check or certified check shall accompany the bid. Bid security shall be made in favor of the County of Fresno.

Contract Number 17-15-C Notice to Bidders - 2

No contract will be awarded to a contractor who has not been licensed in accordance with the provisions of the Contractors State License Law, California Business and Professions Code, Division 3, Chapter 9, as amended, or whose bid is not on the proposal form included in the contract document. A valid California Contractor's License, **Class A (General Engineering) or C12 (Earthwork and Paving)**, is required for this project.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at County of Fresno, Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno CA 93721-2104 and available from the California Department of Industrial Relations' Internet web site at http://www.dir.ca.gov/DLSR/PWD. Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in **General Decision Number CA180029**, **Dated xx/xx/20xx**, which is incorporated in these special provisions by this reference as if fully set forth herein and which can be viewed at <u>http://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb</u>. Said Federal wage rates, as well as project plans, special provisions, and bid forms, may also be examined at the County of Fresno office described in the preceding paragraph. Addenda to modify the reference to Federal minimum wage rates to reflect revisions thereto, if necessary, will be issued to planholders of record.

Attention is directed to the provisions in the "Federal Requirements" section of these specifications. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate minimum wage rate, which most closely approximates the duties of the employees in question.

Contract Number 17-15-C Notice to Bidders - 3

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Bids are required for the entire work described herein, including a bid for the base bid and a bid for the alternative bid. Failure to submit a complete bid, including a bid for the base bid and a bid for the alternative bid, will render your bid non-responsive. Bids will be compared, for purposes of identifying the apparent low bidder for proposed award of the project, on the basis of the lowest bid received without regard to whether said bid was for the base bid or was for the alternative bid; provided however, that the ultimate scope of the project, as subsequently determined by the Board of Supervisors at the time of award, may be either the base bid or the alternative bid.

The successful bidder shall furnish a faithful performance bond in the amount of 100 percent of the contract amount and a payment bond in the amount of 100 percent of the contract amount. Each bond specified in this Notice (bid bond, faithful performance bond and payment bond) shall meet the requirements of all applicable statutes, including but not limited to those specified in Public Contract Code section 20129 and Civil Code section 3248.

Each bond specified in this Notice shall be issued by a surety company designated as an admitted surety insurer in good standing with and authorized to transact business in this state by the California Department of Insurance, and acceptable to the County of Fresno. Bidders are cautioned that representations made by surety companies will be verified with the California Department of Insurance. Additionally, the County of Fresno, in its discretion, when determining the sufficiency of a proposed surety company, may require the surety company to provide additional information supported by documentation. The County generally requires such information and documentation whenever the proposed surety company has either a Best's Key Rating Guide of less than **A** and a financial size designation of less than **VIII**. Provided, however, that the County expressly reserves its right to require all information and documentation to which the County is legally entitled from any proposed surety company.

Pursuant to Public Contract Code Section 22300, substitution of securities for any moneys withheld by the County of Fresno to ensure performance under the contract shall be permitted.

The Board of Supervisors reserves the right to reject any or all bids.

Board of Supervisors, County of Fresno

Jean Rousseau, County Administrative Officer

Approved On: February 28, 2017 By: Bernice E. Seidel, Clerk to the Board

Issue Date: January 29, 2018

Bid Items and Applicable Sections

PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS CONTRACT NO. 17-15-C

Bid Items and Applicable Sections

ITEM NO	ITEM DESCRIPTION	UNIT	SECTION
090020A	SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$	9
120020	CONSTRUCTION PROJECT FUNDING SIGNS	EA	12
120100	TRAFFIC CONTROL SYSTEM	LS	12
130100	JOB SITE MANAGEMENT	LS	13
130100A	STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$	13
130300	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	13
130330	STORM WATER ANNUAL REPORT	EA	13
170103	CLEARING AND GRUBBING	LS	17
190101	ROADWAY EXCAVATION	CY	19
190185	SHOULDER BACKING	CY	19
198010	IMPORTED BORROW	CY	19
198215	SUBGRADE ENHANCEMENT GEOGRID	SY	19
220101	FINISHING ROADWAY	LS	22
260203	CLASS 2 AGGREGATE BASE	CY	26
390132	HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	TON	39
397005	TACK COAT	TON	39
820840	ROADSIDE SIGN - ONE POST	EA	82
999990	MOBILIZATION	LS	99

Special Provisions

SPECIAL PROVISIONS 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*.

DIVISION I GENERAL PROVISIONS 1 GENERAL

Add to the beginning of section 1-1.01:

The work is done in accordance with the 2015 Standard Specifications, 2015 Standard Plans and the following special provisions.

Where these special provisions indicate to replace, add to, delete, delete from, or otherwise modify a "section," or a portion thereof, the section or portion thereof to which such modification is to be applied is the section or portion thereof with the corresponding numbering in the 2015 Standard Specifications.

Except to the extent that they may conflict with these special provisions, revised standard specifications apply if included in the project details section of the book entitled "specifications."

Revised standard plans apply if listed on the "List of Revised Standard Plans," if any, in these special provisions; or if shown or referenced on the project plans or in the project details section of the specifications.

In case of conflict between the Standard Specifications and these special provisions, the special provisions shall take precedence over and be used in lieu of such conflicting portions.

In case of conflict between applicable Revised Standard Specifications and these special provisions, the special provisions shall take precedence over and be used in lieu of such conflicting portions.

APCD	air pollution control district		
AQMD	air quality management district		
CISS	cast-in-steel shell		
CSL	crosshole sonic logging		
GGL	gamma-gamma logging		

Add to the 1st table of section 1-1.06:

Add to section 1-1.06:

Abbreviations in the Bid Item List are also used in Proposal Sheet 2.

Replace the headings and paragraphs of Section 1-1.07 with:

1-1.07 DEFINITIONS

1-1.07A General

Interpret terms as defined in the Contract documents.

1-1.07B Glossary

abandon: Render unserviceable in place.

acts of God: Acts of God as defined in Pub Cont Code § 7105.

activity: Task, event, or other project element on a schedule that contributes to completing the project. An activity has a description, start date, finish date, duration, and one or more logic ties.

adjust: Raise or lower a facility to match a new grade line.

- **aerially deposited lead:** Lead primarily from vehicle emissions deposited within unpaved areas or formerly unpaved areas.
- **authorized laboratory:** Independent testing laboratory (1) not employed or compensated by any subcontractor or subcontractor's affiliate providing other services for the Contract and (2) authorized by the Department.
- **base:** Layer of specified material of planned thickness placed immediately below the pavement or surfacing.

basement material: Material in an excavation or embankment under the lowest layer to be placed.

bid item: Work unit for which the Bidder provides a price.

Bid Item List: List of bid items, units of measure, and the associated quantities. The verified Bid Item List is the Bid Item List with verified prices. The Contract Proposal (Proposal 2) of Low Bidder at the Department's website is the verified Bid Item List. After contract award, interpret a reference to the Bid Item List as a reference to the verified Bid Item List.

borrow: Fill acquired from an excavation source outside the described cut area.

- 1. **local borrow:** Material obtained by widening cuts or excavating from sources outside the planned or authorized cross section on the job site. The location of the local borrow is described or designated by the Engineer.
- 2. **imported borrow:** Borrow that is not local borrow.

bridge: Structure that:

- 1. Has a bridge number
- 2. Carries a (1) utility, (2) railroad, or (3) vehicle, pedestrian, or other traffic over, under, or around obstructions or waterways
- **building-construction contract:** Contract that has *Building Construction* on the cover of the *Notice to Bidders and Special Provisions.*
- **California Test:** Department-developed test for determining work quality. For California Tests, go to the METS website.

Caltrans: State of California Department of Transportation

certificate of compliance: Certificate stating the material complies with the Contract.

Certified Industrial Hygienist: Industrial hygienist certified in comprehensive practice by the American Board of Industrial Hygiene.

- **change order work:** Work described in a Change Order, including extra work and work described in the Contract as change order work.
- **closure:** Closure of a traffic lane or lanes, including shoulder, ramp, or connector lanes, within a single traffic control system.
- commercial quality: Quality meeting the best general practices.
- commercial source: Established business operating as a material source for the general public.
- Contract: Written and executed contract between the Department and the Contractor.
- Contract acceptance: Director's written acceptance of a completed Contract.
- Contract time: Number of original working days as adjusted by any time adjustment.
- **Contractor:** Person or business or its legal representative entering into a Contract with the Department for performance of the work.
- controlling activity: Construction activity that will extend the scheduled completion date if delayed.
- **critical path:** Longest continuous chain of activities for the project that has the least amount of total float of all chains. In general, a delay on the critical path extends the scheduled completion date.
- **critical path method:** Network-based planning technique using activity durations and relationships between activities to calculate a schedule for the entire project.
- culvert: Structure other than a bridge that provides an opening under a roadway.
- **data date:** Day after the date through which a schedule is current. Everything occurring earlier than the data date is as-built and everything on or after the data date is planned.

day: 24 consecutive hours running from midnight to midnight; calendar day.

- 1. **business day:** Day on the calendar except a Saturday and a holiday.
- 2. **working day:** Time measure unit for work progress. A working day is any 24-consecutive-hour period except:
 - 2.1. Saturday and a holiday.
 - 2.2. Day during which you cannot perform work on the controlling activity for at least 50 percent of the scheduled work shift with at least 50 percent of the scheduled labor and equipment due to any of the following:
 - 2.2.1. Adverse weather-related conditions.
 - 2.2.2. Traffic maintenance under the Contract.
 - 2.2.3. Suspension of a controlling activity that you and the Engineer agree benefits both parties.
 - 2.2.4. Unanticipated event not caused by either party, such as:
 - 2.2.4.1. Act of God
 - 2.2.4.2. Act of a public enemy.
 - 2.2.4.3. Epidemic.
 - 2.2.4.4. Fire.
 - 2.2.4.5. Flood.
 - 2.2.4.6. Governor-declared state of emergency.
 - 2.2.4.7. Landslide.
 - 2.2.4.8. Quarantine restriction.
 - 2.2.5. Issue involving a third party, including:
 - 2.2.5.1. Industry or area-wide labor strike.
 - 2.2.5.2. Material shortage.
 - 2.2.5.3. Freight embargo.
 - 2.2.5.4. Jurisdictional requirement of a law enforcement agency.

- 2.2.5.5. Workforce labor dispute of a utility or nonhighway facility owner resulting in a nonhighway facility rearrangement not described and not solely for the Contractor's convenience. Rearrangement of a nonhighway facility includes installation, relocation, alteration, or removal of the facility.
- 2.3. Day during a concurrent delay.

3. original working days:

- 3.1. Working days to complete the work shown on the *Notice to Bidders* for a non-cost-plus-timebased bid
- 3.2. Working days bid to complete the work for a cost-plus-time-based bid

Where working days is specified without the modifier *original* in the context of the number of working days to complete the work, interpret the number as the number of original working days as adjusted by any time adjustment.

deduction: Money permanently taken from a progress payment or the final payment. Deductions are cumulative and are not retentions under Pub Cont Code § 7107.

delay: Event that extends the completion of an activity.

- 1. **excusable delay:** Delay caused by the Department and not reasonably foreseeable when the work began, such as:
 - 1.1. Change in the work
 - 1.2. Department action that is not part of the Contract
 - 1.3. Presence of an underground utility main not described in the Contract or in a location substantially different from that specified
 - 1.4. Described facility rearrangement not rearranged as described, by the utility owner by the date specified, unless the rearrangement is solely for the Contractor's convenience
 - 1.5. Department's failure to obtain timely access to the right-of-way
 - 1.6. Department's failure to review a submittal or provide notification in the time specified
- 2. critical delay: Excusable delay that extends the scheduled completion date
- 3. **concurrent delay:** Occurrence of at least 2 of the following events in the same period of time, either partially or entirely:
 - 3.1. Critical delay
 - 3.2. Delay to a controlling activity caused by you
 - 3.3. Non–working day

Department: The Fresno County Board of Supervisors and its authorized representatives.

detour: Temporary route for traffic around a closed road part. A passageway through a job site is not a detour.

Director: Department's Chairman

disadvantaged business enterprise: Disadvantaged business enterprise as defined in 49 CFR 26.5.

dispose of: Remove from the job site.

divided highway: Highway with separated traveled ways for traffic, generally in opposite directions.

- **Engineer:** Resident Engineer responsible for the Contract's administration; Resident Engineer's authorized representatives.
- early completion time: Difference in time between an early scheduled completion date and the work completion date.
- **environmentally sensitive area:** Area within or near construction limits where access is prohibited or limited to protect environmental resources.

estimated cost: Estimated cost of the project as shown on the Notice to Bidders.

extra work: Any work, desired or performed, but not included in the original Contract.

federal-aid contract: Contract that has a federal-aid project number on the cover of the Notice to Bidders and Special Provisions.

final pay item: Bid item whose quantity shown on the Bid Item List is the quantity paid.

- **finished grade:** Final surface of the completed facility. If the work under the Contract includes stage construction, the relation between the finished grade and the work under the Contract is shown.
- **fixed cost:** Labor, material, or equipment cost directly incurred by the Contractor as a result of performing or supplying a particular bid item that remains constant regardless of the item's quantity.

float: Difference between the earliest and latest allowable start or finish times for an activity.

- 1. **Department-owned float:** Time saved on the critical path by actions of the Department. It is the last activity shown on the schedule before the scheduled completion date.
- **force account work:** Work ordered on a construction project without an existing agreement on its cost, and performed with the understanding that the contractor will bill the owner according to the cost of labor, materials, and equipment, plus a certain percentage for overhead and profit.
- grading plane: Basement material surface on which the lowest layer of subbase, base, pavement, surfacing, or other specified layer is placed.

highway: Whole right-of-way or area reserved for use in constructing the roadway and its appurtenances.

holiday: Holiday shown in the following table:

Holidays				
Holiday	Date observed			
Every Sunday	Every Sunday			
New Year's Day	January 1 st			
Birthday of Martin Luther King, Jr.	3rd Monday in January			
Presidents' Day	3rd Monday in February			
Cesar Chavez Day	March 31 st			
Memorial Day	Last Monday in May			
Independence Day	July 4 th			
Labor Day	1st Monday in September			
Veterans Day	November 11 th			
Thanksgiving Day	4th Thursday in November			
Day after Thanksgiving Day	Day after Thanksgiving Day			
Christmas Day	December 25 th			

If January 1st, March 31st, July 4th, November 11th, or December 25th fall on a Sunday, the Monday following is a holiday. If January 1st, March 31st, July 4th, November 11th, or December 25th fall on a Saturday, the preceding Friday is a holiday.

hours of darkness: Hours of darkness as defined in Veh Code § 280.

idle equipment: Equipment:

- 1. On the job site at the start of a delay
- 2. Idled because of the delay
- 3. Not operated during the delay

informal-bid contract: Contract that has *Informal Bid Authorized by Pub Cont Code* § 10122 on the cover of the *Notice to Bidders and Special Provisions*.

job site: Area within the defined boundaries of a project.

Labor Surcharge and Equipment Rental Rates: Department publication that lists labor surcharge and equipment rental rates.

landscaping: Practice of a landscaping contractor under 16 CA Code of Regs § 832.27.

material: Any product or substance specified for use in the construction of a project.

material shortage:

- 1. Shortage of raw or produced material that is area-wide and caused by an unusual market condition except if any of the following occurs:
 - 1.1. Shortage relates to a produced, nonstandard material
 - 1.2. Supplier's and the Contractor's priority for filling an order differs
 - 1.3. Event outside the United States for a material produced outside the United States
- 2. Unavailability of water that delays a controlling activity
- **material source facility audit:** Self-audit and a Department audit evaluating a facility's capability to consistently produce materials that comply with Department standards.
- median: Portion of a divided highway separating the traveled ways including inside shoulders.
- **milestone:** Event activity that has zero duration and is typically used to represent the start or end of a certain stage of the project.
- **mobilization:** Preparatory work that must be performed or costs incurred before starting work on the various items on the job site (Pub Cont Code § 10104).
- modify: Add to or subtract from an appurtenant part.
- **narrative report:** Document submitted with each schedule that discusses topics related to project progress and scheduling.
- **near critical path:** Chain of activities with total float exceeding that of the critical path but having not more than 10 working days of total float.
- obliterate: Place an earth cover over or root, plow, pulverize, or scarify.
- pavement: Uppermost layer of material placed on a traveled way or shoulder.

plans: Standard plans, revised standard plans, and project plans.

- 1. standard plans: Drawings standard to Department construction projects.
- 2. revised standard plans: New or revised standard plans.
- 3. project plans: Drawings specific to the project, including authorized shop drawings.

plant establishment period: Number of days shown on the Notice to Bidders for plant establishment.

- **quality characteristic:** Characteristic of a material that is measured to determine conformance with a given requirement.
- quality control plan: Contractor's plan to ensure QC.

reconstruct: Remove and disassemble and construct again at an existing or new location.

relocate: Remove and install or place in a new location.

remove: Remove and dispose of.

reset: Remove and install or place laterally at the same station location.

- **roadbed:** Roadway portion extending from the curb line to curb line or the shoulder line to shoulder line. A divided highway has 2 roadbeds.
- roadside: Area between the outside shoulder edge and the right-of-way limits.
- **roadway:** Portion of the highway within the outside lines of curbs, sidewalks, slopes, ditches, channels, or waterways. A roadway includes the structures and features necessary for safety, protection of facilities, and drainage.

salvage: Remove, clean, and haul to a specified location.

schedule:

- 1. **baseline schedule:** Initial schedule showing the original work plan starting on the date of Contract approval. This schedule shows no completed work to date and no negative float or negative lag to any activity.
- 2. **revised schedule:** Schedule that incorporates a proposed or past change to logic or activity durations.
- updated schedule: Current schedule developed from the accepted baseline and any subsequent accepted updated or revised schedules through regular monthly review to incorporate actual past progress.

scheduled completion date: Planned work completion date shown on the current schedule.

shoulder: Roadway portion contiguous with the traveled way for accommodation of a stopped vehicle, emergency use, and lateral support of base and surface courses.

small tool: Tool or piece of equipment not listed in Labor Surcharge and Equipment Rental Rates that has a replacement value of \$500 or less.

specifications: Standard specifications, revised standard specifications, and special provisions.

- 1. **standard specifications:** Specifications standard to Department construction projects. These specifications are in a book titled *Standard Specifications*.
- 2. **revised standard specifications:** New or revised standard specifications. These specifications are in a section titled *Revised Standard Specifications* of a book titled *Notice to Bidders and Special Provisions*.
- 3. **special provisions:** Specifications specific to the project. These specifications are in a section titled *Special Provisions* of a book titled *Notice to Bidders and Special Provisions*.
- State: State of California, including its agencies, departments or divisions whose conduct or action is related to the work.

Structure Design: Offices of Structure Design of the Department of Transportation.

subbase: Layer of material between a base and the basement material.

subgrade: Roadbed portion on which pavement, surfacing, base, subbase, or a layer of any other material is placed.

submittal:

- 1. **action submittal:** Written and graphic information and samples that require the Department's response.
- 2. informational submittal: Written information that does not require the Department's response.
- **substantial defects:** Defects plainly seen as damaged, displaced, or missing parts or improper functioning of materials, parts, equipment, or systems.

- **substructure:** Bridge parts below the bridge seats, pier tops, and haunches for rigid-framed bridges or spring lines for arched bridges; includes abutment backwalls, abutment parapets, and wingwalls.
- superstructure: Bridge parts except the substructure.
- **supplemental project information:** Information relevant to the project, specified as supplemental project information, and made available to bidders.
- surfacing: Uppermost layer of material placed on a traveled way or shoulders; pavement.
- **time impact analysis:** Analysis using a CPM schedule developed specifically to demonstrate the effect a proposed or past change or delay has on the current scheduled completion date.
- **time-scaled network diagram:** Graphic depiction of a CPM schedule comprised of activity bars with relationships for each activity represented by arrows. The tail of each arrow connects to the activity bar for the predecessor and points to the successor.
- total bid: Sum of the item totals as verified by the Department; original Contract price.
- **total float:** Amount of time that an activity or chain of activities can be delayed before extending the scheduled completion date.
- **traffic:** Pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other conveyances either singularly or together while using any highway for purposes of travel.
- traffic lane: Portion of traveled way used for the movement of a single line of vehicles.
- **traveled way:** Portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes.
- tunnel: Tunnel as defined in 8 CA Code of Regs § 8405 et seq.
- **unauthorized work:** Work performed beyond the lines and grades described in the Contract or established by the Engineer or extra work performed without Department authorization.
- **unsuitable material:** Material encountered below the natural ground surface in embankment areas or below the grading plane in excavation areas that the Engineer determines to be in any of the following conditions:
- 1. Of such unstable nature that it cannot be compacted to the specified density using ordinary methods at optimum moisture content.
- 2. Too wet to be properly compacted and cannot be dried before incorporating it into the work. Excessive moisture alone is not sufficient cause for determining that the material is unsuitable.
- 3. Inappropriate for the planned use.

withhold: Money temporarily or permanently taken from a progress payment.

work: Resources and activities required for Contract acceptance, including labor, materials, equipment, and the created product.

work plan: Detailed formulation of a program of action.

work zone: Area of a highway with construction, maintenance, or utility work activities.

Replace the first sentence in Section 1.08 with the following:

Caltrans' district composition and office addresses are as shown in the following table:

Add to the end of Section 1-1.09

This project is not in a freeze-thaw area.

Replace the headings and paragraphs of Section 1-1.10 with:

1-1.10 PAVEMENT CLIMATE REGIONS

To help account for the effects of various climatic conditions on pavement performance, the State has been divided into 9 climate regions. The project's pavement climate region is Inland Valley.

Replace the headings and paragraphs of Section 1-1.11 with: 1-1.11 WEBSITES, ADDRESSES, AND TELEPHONE NUMBERS

D	,		
Reference or			
agency or			Talantana
department unit	Website	Address	Telephone no.
Authorized Material Lists Authorized Material Source Lists	http://www.dot.ca.gov/hq/e sc/approved_products_list		
CA Unified Certification Program's list of certified DBEs	http://www.dot.ca.gov/hq/b ep/find_certified.htm		
California MUTCD	http://www.dot.ca.gov		
Department	http://www.co.fresno.ca.us	2220 TULARE STREET DESIGN DIVISION – 6 TH FLOOR FRESNO, CA 93721	(559) 600- 4501 or (559) 600-4528
Department of Conservation, Office of Mine Reclamation	http://www.conservation.c a.gov/omr/		
Department of Industrial Relations	http://www.dir.ca.gov	455 GOLDEN GATE AVE SAN FRANCISCO CA 94102	
Design Services - Contract Administration, Planholders, Bid Results	http://www.co.fresno.ca.us /departmentpage.aspx?id= 5818	2220 TULARE STREET, 7 TH FLOOR FRESNO, CA 93721	Tel: (559) 600- 4528 Fax: (559) 600-4399 Email: <u>DesignService</u> <u>s@co.fresno.c</u> a.us
Division of Accounting, Office of External Accounts Payable	http://www.dot.ca.gov/hq/a sc/oap/payments/contact.h tm#conpets1	MAJOR CONSTRUCTION PAYMENT AND INFORMATION UNIT OFFICE OF EXTERNAL ACCOUNTS PAYABLE DIVISION OF ACCOUNTING DEPARTMENT OF TRANSPORTATION P.O. BOX 168043 SACRAMENTO CA 95816-8043	(916) 227- 9013
Division of Construction	http://www.dot.ca.gov/hq/c onstruc/		
Geotechnical Services	http://www.dot.ca.gov/hq/e sc/geotech	GEOTECHNICAL SERVICES DEPARTMENT OF TRANSPORTATION 5900 FOLSOM BLVD SACRAMENTO CA 95819-4612	(916) 227- 7000

Websites, Addresses, and Telephone Numbers

METS	http://www.dot.ca.gov/hq/e sc/Translab/	MATERIALS ENGINEERING AND TESTING SERVICES DEPARTMENT OF TRANSPORTATION 5900 FOLSOM BLVD SACRAMENTO CA 95819-4612	(916) 227- 7000
MPQP	<u>http://www.dot.ca.gov/man</u> uals.htm		
Office Engineer		MSC 43 OFFICE ENGINEER DEPARTMENT OF TRANSPORTATION 1727 30TH ST SACRAMENTO CA 95816-7005	(916) 227- 6299
Offices of Structure Design, Documents Unit		MSC 9-4/4I DOCUMENTS UNIT OFFICES OF STRUCTURE DESIGN DEPARTMENT OF TRANSPORTATION 1801 30TH ST SACRAMENTO CA 95816-7006	(916) 227- 0716
Publication Distribution Unit		PUBLICATION UNIT DEPARTMENT OF TRANSPORTATION 1900 ROYAL OAKS DR SACRAMENTO CA 95815-3800	

Replace the headings and paragraphs of Section 1-1.12 with the following:

1-1.12 MISCELLANY

Make checks and bonds payable to the Fresno County Director of Department of Public Works and Planning.

^^^^

2 BIDDING

Replace the headings and paragraphs of Section 2 with the following:

2-1.01 GENERAL

Section 2 includes specifications related to bid eligibility and the bidding process.

2-1.02 BID INELIGIBILITY

A firm that has provided architectural or engineering services to the Department for this contract before bid submittal for this contract is prohibited from any of the following:

- 1. Submitting a bid
- 2. Subcontracting for a part of the work
- 3. Supplying materials

2-1.03 CONTRACTOR REGISTRATION

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor

Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

2-1.04-2-1.05 RESERVED

2-1.06 BID DOCUMENTS

2-1.06A General

The Bid book includes bid forms and certifications and may be requested from Design Services.

The Notice to Bidders and Special Provisions includes the Notice to Bidders, revised standard specifications, project details, and special provisions.

The *Notice to Bidders and Special Provisions*, project plans, and any addenda to these documents may be accessed at the Bidders' Exchange website.

The Standard Specifications and Standard Plans may be purchased at the Publication Distribution Unit.

2-1.06B Supplemental Project Information

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in Project Details	Encroachment permit
Available on Design Services webpage	Cross Sections

2-1.06C-2-1.06D Reserved

2-1.07 JOB SITE AND DOCUMENT EXAMINATION

Examine the job site and bid documents. Notify the Department of apparent errors and patent ambiguities in the plans, specifications, and Bid Item List. Failure to do so may result in rejection of a bid or rescission of an award.

Bid submission is your acknowledgment that you have examined the job site and bid documents and are satisfied with:

- 1. General and local conditions to be encountered
- 2. Character, quality, and scope of work to be performed
- 3. Quantities of materials to be furnished
- 4. Character, quality, and quantity of surface and subsurface materials or obstacles
- 5. Requirements of the contract

2-1.08 RESERVED

2-1.09 BID ITEM LIST

Submit a bid based on the bid item quantities the Department shows on Proposal 2.

2-1.10 SUBCONTRACTOR LIST

On the Subcontractor List form, list each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

For each subcontractor listed, the Subcontractor List form must show:

- 1. Business name and the location of its place of business.
- 2. California contractor license number for a non-federal-aid contract.
- 3. Public works contractor registration number.
- 4. Portion of work it will perform. Show the portion of the work by:
 - 4.1. Bid item numbers for the subcontracted work
 - 4.2. Percentage of the subcontracted work for each bid item listed

4.3. Description of the subcontracted work if the percentage of the bid item listed is less than 100 percent

2-1.11 RESERVED

2-1.12 DISADVANTAGED BUSINESS ENTERPRISES

2-1.12A General

Section 2-1.12 applies to a federal-aid contract.

Under 49 CFR 26.13(b):

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

Include this assurance in each subcontract you sign with a subcontractor.

2-1.12B Disadvantaged Business Enterprise Goal

2-1.12B(1) General

Section 2-1.12B applies if a DBE goal is shown on the *Notice to Bidders*.

The Department shows a goal for DBEs to comply with the DBE program objectives provided in 49 CFR 26.1.

Make work available to DBEs and select work parts consistent with the available DBEs, including subcontractors, suppliers, service providers, and truckers.

Meet the DBE goal shown on the *Notice to Bidders* or demonstrate that you made adequate good faith efforts to meet this goal.

You are responsible to verify at bid opening the DBE firm is certified as a DBE by the California Unified Certification Program and possess the work codes applicable to the type of work the firm will perform on the Contract.

Determine that selected DBEs perform a commercially useful function for the type of work the DBE will perform on the Contract as provided in 49 CFR 26.55(c)(1)-(4). Under 49 CFR 26.55(c)(1)-(4), the DBE must be responsible for the execution of a distinct element of work and must carry out its responsibility by actually performing, managing, and supervising the work.

All DBE participation will count toward Caltrans' federally mandated statewide overall DBE goal.

Credit for materials or supplies you purchase from DBEs will be evaluated on a contract-by-contract basis and counts toward the goal in the following manner:

- 1. 100 percent if the materials or supplies are obtained from a DBE manufacturer.
- 2. 60 percent if the materials or supplies are obtained from a DBE regular dealer.
- 3. Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies if they are obtained from a DBE that is neither a manufacturer nor a regular dealer. 49 CFR 26.55 defines *manufacturer* and *regular dealer*.

You receive credit toward the goal if you employ a DBE trucking company that is performing a commercially useful function. The Department uses the following factors in determining whether a DBE trucking company is performing a commercially useful function:

- The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
- The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a
 DBE. The DBE who leases trucks from another DBE receives credit for the total value of the
 transportation services the lessee DBE provides on the Contract.
- The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.
- A lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

[49 CFR 26.55(d)]

2-1.12B(2) DBE Commitment Submittal

Submit DBE information under section 2-1.33.

Submit a copy of the quote from each DBE shown on the DBE Commitment form that describes the type and dollar amount of work shown on the form. Submit a DBE Confirmation form for each DBE shown on the DBE Commitment form to establish that it will be participating in the Contract in the type and dollar amount of work shown on the form. If a DBE is participating as a joint venture partner, submit a copy of the joint venture agreement.

2-1.12B(3) DBE Good Faith Efforts Submittal

You can meet the DBE requirements by either documenting commitments to DBEs to meet the Contract goal or by documenting adequate good faith efforts to meet the Contract goal. An adequate good faith effort means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal that, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to meet the DBE goal.

If you have not met the DBE goal, complete and submit the DBE Good Faith Efforts Documentation form under section 2-1.33 showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed toward obtaining participation by DBEs are considered.

Submit good faith efforts documentation within the specified time to protect your eligibility for award of the contract in the event the Department finds that the DBE goal has not been met.

Refer to 49 CFR 26 app A for guidance regarding evaluation of good faith efforts to meet the DBE goal.

The Department considers DBE commitments of other bidders in determining whether the low bidder made good faith efforts to meet the DBE goal.

2-1.13-2-1.30 RESERVED

2-1.31 OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the payment adjustments for price index fluctuations specified in section 9-1.07. To opt out, submit a completed Opt Out of Payment Adjustments for Price Index Fluctuations form described under section 2-1.33.

2-1.32 RESERVED

2-1.33 BID DOCUMENT COMPLETION AND SUBMITTAL

2-1.33A General

Complete forms in the *Bid* book.

Submit your bid:

- 1. Under sealed cover
- 2. Marked as a bid
- 3. Identifying the contract number and the bid opening date

Certain bid forms must be submitted with the bid and properly executed.

Certain other forms and information must be submitted either with the bid or within the prescribed period after bid opening as specified elsewhere in these special provisions.

Failure to submit the forms and information as specified results in a nonresponsive bid.

If an agent other than the authorized corporation officer or a partnership member signs the bid, file a Power of Attorney with the Department either before opening bids or with the bid. Otherwise, the bid may be nonresponsive.

2-1.33B Bid Item List and Bid Comparison

Submit a bid based on the bid item quantities the Department shows on Proposal 2. Bids will be evaluated and the low bidder determined as indicated in the *Notice to Bidders*.

2-1.33C Bid Document Completion

Proposal sheets are identified by title and by the letter "P" followed by the number assigned to the proposal sheet in question. Proposal sheets are included in the *Bid Book.*

2-1.33C(1) Proposal 1 - Proposal to the Board of Supervisors of Fresno County

2-1.33C(2) Proposal 2 - Bid Proposal Sheet

One or more sheet(s) upon which the bidder completes the bid.

Fill out completely including a unit price and total for each unit price-based item and a total for each lump sum item.

Do not make any additions such as "plus tax", "plus freight", or conditions such as "less 2% if paid by 15th".

Use ink or typewriter.

2-1.33C(3) Proposal 3 - Evaluation of Bid Proposal Sheet

Describes how inconsistences and irregularities are evaluated and corrected when Design Services reviews the Bid Sheet.

2-1.33C(4) Proposal 4 - Bid Security and Signature

Submit one of the following forms of bidder's security equal to at least 10 percent of the bid:

- Cash
- Cashier's check
- Certified check
- Signed bidder's bond by an admitted surety insurer

Indicate type of bid security provided.

- Cash Acceptable but not recommended. Cash is deposited in a clearing account and is returned to bidders by County warrant. This process may take several weeks.
- Cashier's or Certified Checks. This type of security is held until the bid is no longer under consideration. If submitted by a potential awardee, they will be returned when the contract is fully executed by the bidder and bonds and insurance have been approved.
- Bid Bonds Must be signed by the bidder and by the attorney-in-fact for the bonding company. Provide notarized signature of attorney-in-fact accompanied by bonding company's affidavit authorizing attorney-in-fact to execute bonds. An unsigned bid bond will be cause for rejection.

Provide contractor's license information.

State business name and if business is a:

- Corporation list officers
- Partnership list partners
- Joint Venture list members; if members are corporations or partnerships, list their officers or partners.
- Individual list Owner's name and firm name style

Signature of Bidder - the following lists types of companies and corresponding authorized signers.

- Corporation by an officer
- Partnership by a partner
- Joint Venture by a member
- Individual by the Owner

If signature is by a Branch Manager, Estimator, Agent, etc., the bid must be accompanied by a power of attorney authorizing the individual to sign the bid in question or to sign bids more generally, otherwise the bid may be rejected.

Business Address - Firm's Street Address

Mailing Address - P.O. Box or Street Address

Complete, sign, and return with bid.

2-1.33C(5) Proposal 5 - Noncollusion Affidavit

Must be completed, signed, and returned with bid.

2-1.33C(6) Proposal 6 - Public Contract Code Section 10285.1 Statement

Check "has" or "has not" in accordance with instructions on form, return with completed for with bid. Note that signing the bid constitutes signing this statement.

2-1.33C(7) Proposal 7 - Public Contract Code Section 10162 Questionnaire And Public Contract Code 10232 Statement

Check: "yes" or "no" in accordance with instructions on form, include explanation if "yes" is checked. Return completed form with bid. Note that signing the bid constitutes signing this questionnaire and statement.

2-1.33C(8) Proposal 8(a) through Proposal 8(f) - Subcontractors

Sheet(s) upon which bidders list subcontractors. List each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

The *Subcontractor List* submitted with the bid must show the name, location of business, work portions to be performed, and the contractor's license number for each subcontractor listed.

- Use subcontractor's business name style as registered with the License Board.
- Specify the city in which the subcontractor's business is located and the state if other than California.
- Description of the work to be performed by the subcontractor. Indicate with bid item numbers from the bid sheet and/or work descriptions similar to those on bid sheet.
- List license number and Department of Industrial Relations registration number for each subcontractor.

Upon request from Design Services, provide the following additional information within 24 hours of bid opening if not included on the *Subcontractor List* submitted with the bid:

- Complete physical address for each subcontractor listed.
- Percentage of the total bid or dollar amount associated with each subcontractor listed.

2-1.33C(9) Proposal 9 - Certification With Regard To The Performance Of Previous Contracts Or Subcontracts Subject To The Equal Opportunity Clause And The Filing Of Required Reports

For a Federal-aid contract, complete, sign, and return with bid.

2-1.33C(10) Proposal 10 - Title 49, Code Of Federal Regulations, Part 29 Debarment And Suspension Certification

For a Federal-aid contract, complete, sign, and return with bid.

2-1.33C(11) Proposal 11 - Nonlobbying Certification For Federal-Aid Contracts

For a Federal-aid contract, complete, sign, and return with bid.

2-1.33C(12) Proposal 12(a) through Proposal 12(b) - Disclosure Of Lobbying Activities

For a Federal-aid contract, complete, sign, and return with bid.

2-1.33C (13) Proposal 13(a) through Proposal 13(b) - *Exhibit 15-G Local Agency Bidder DBE Commitment (Construction Contracts)*

For a Federal-aid contract, the apparent low, second-low, and third-low bidders must complete and submit so that it is received by Design Services, no later than 4:00 PM on the fourth business day after the bid opening if not submitted with the bid.

2-1.33C(14) Proposal 14(a) through proposal 14(c) - *Exhibit 15-H DBE Information* — Good Faith *Efforts*

For a Federal-aid contract, the apparent low, second-low, and third-low bidders must complete and submit so that it is received by Design Services no later than 4:00 PM on the fourth business day after the bid opening if not submitted with the bid.

2-1.33C(15) Proposal 15 - Opt out of payment adjustments for price index fluctuations

You may opt out of the payment adjustments for price index fluctuations specified in section 9-1.07. To opt out, submit a completed *Opt Out of Payment Adjustments for Price Index Fluctuations* form with your bid.

2-1.33C(16) Proposal 16 - Guaranty

Does not need to be signed with the bid. Part of the contract which must be signed by the contractor when contract is executed.

2-1.34 BIDDER'S SECURITY

Submit one of the following forms of bidder's security equal to at least 10 percent of the bid:

- 1. Cash
- 2. Cashier's check
- 3. Certified check
- 4. Signed bidder's bond by an admitted surety insurer

Submit cash, cashier's check, certified check, or bidder's bond with your bid.

2-1.35-2-1.39 RESERVED

2-1.40 BID WITHDRAWAL

- 1. An authorized agent may withdraw a bid before the bid opening date and time by submitting a written bid withdrawal request at the location where the bid was submitted. Withdrawing a bid does not prevent you from submitting a new bid. An authorized agent is an individual authorized to submit a bid.
- 2. After the bid opening time, you cannot withdraw a bid.

2-1.41-2-1.42 RESERVED

2-1.43 BID OPENING

The Department publicly opens and reads bids at the time and place shown on the Notice to Bidders.

2-1.44-2-1.45 RESERVED

2-1.46 DEPARTMENT'S DECISION ON BID

The Department's decision on the bid amount is final.

The Department may reject:

- 1. All bids
- 2. A nonresponsive bid

2-1.47 BID RELIEF

The Department may grant bid relief under Pub Cont Code § 5100 et seq. Submit any request for bid relief to Design Services.

2-1.48 RESERVED

2-1.49 SUBMITTAL FAILURE HISTORY

The Department considers a bidder's past failure to submit documents required after bid opening in determining a bidder's responsibility.

2-1.50 BID RIGGING

Section 2-1.50 applies to a federal-aid contract.

The US Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is (800) 424-9071. The service is available 24 hours 7 days a week and is confidential and anonymous.

The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

2-1.51 DISCLOSURE OF SELF-DEALING TRANSACTIONS

This provision is only applicable if the contractor is operating as a corporation (a for-profit or non-profit corporation) or if during the term of this agreement, the contractor changes its status to operate as a corporation.

Members of the contractor's Board of Directors shall disclose any self-dealing transactions that they are a party to while contractor is providing goods or performing services under this agreement. A self-dealing transaction shall mean a transaction to which the contractor is a party and in which one or more of its directors has a material financial interest. Members of the Board of Directors shall disclose any self-dealing transactions that they are a party to by completing and signing a Self-Dealing Transaction Disclosure Form which is included in *Project Details* of these special provisions.

In the event that the Contractor (to whom the project is awarded) is operating as a corporation or incorporates during the course of the construction contract, and any member of its board of directors is engaged or intends to become engaged in self-dealing transaction(s), each member of its board of directors who is engaged or intends to become engaged in a self-dealing transaction or transactions must complete and submit to the County a completed Self-Dealing Transaction Disclosure Form (in Project Details) for each such transaction prior to engaging therein or immediately thereafter.

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Replace the headings and paragraphs of Section 3 with:

The successful bidder must furnish 2 bonds conforming to the requirements in the *Agreement* of these special provisions.

The successful bidder must submit copies of its insurance policies conforming to the requirements in the *Agreement* of these special provisions.

The successful bidder must sign the Agreement.

Deliver to Design Services:

- 1. Signed Agreement including the attached form FHWA-1273
- 2. Contract bonds
- 3. Documents identified in section 3-1.07
- 4. For a federal-aid contract, Local Agency Bidder DBE Information form

Design Services must receive these documents before the 10th business day after the bidder receives the contract.

The bidder's security may be forfeited for failure to execute the contract within the time specified (Pub Cont Code §§ 10181, 10182, and 10183).

^^^^

4 SCOPE OF WORK

Replace Section 4-1.02 with:

4-1.02 INTENT

The Contract intent is to provide for work completion using the best general practices.

Nothing in the specifications, special provisions, Standard Specifications, or in any other Contract document voids the Contractor's public safety responsibilities.

Replace the paragraphs of Section 4-1.07C with the following:

4-1.07C Reserved

Replace Section 4-1.13 with:

4-1.13 CLEANUP

Before final inspection, leave the job site neat and presentable and dispose of:

- 1. Rubbish
- 2. Excess materials
- 3. Falsework
- 4. Temporary structures
- 5. Equipment

Remove warning, regulatory, and guide signs when directed by the Engineer.

^^^^

5 CONTROL OF WORK

Delete the 9th Paragraph of Section 5-1.01 Add the following before the last sentence in Section 5-1.02

Caltrans Standard Plans, City of Fresno Standard Drawings, and any other other-agency Standard Drawings included in the "Project Details" section of the book entitled "specifications" have the same ranking as Standard Plans."

All other drawings in the "Project Details" section of the book entitled "specifications" have the same ranking as Project Plans.

Tables and other documents in the "Project Details" section of the book entitled "specifications" have the same ranking as Special Provisions. If a portion of a document in the Project Details section conflicts with the Special Provisions, the Special Provisions shall prevail.

Replace the headings and paragraphs of section 5-1.09 with:

5-1.09 RESERVED

Replace Section 5-1.12 with:

5-1.12 ASSIGNMENT

No third-party agreement relieves you or your surety of the responsibility to complete the work. Do not sell, transfer, or otherwise dispose of any Contract part without prior written consent from the Department.

If you assign the right to receive Contract payments, the Engineer accepts the assignment upon the Engineer's receipt of a notice. Assigned payments remain subject to deductions and withholds described in the Contract. The Department may use withheld payments for work completion whether payments are assigned or not.

A pending or disapproved request for assignment does not relieve you of the responsibility to commence and pursue work timely and in strict accordance with contract documents.

Replace the headings and paragraphs of section 5-1.13C with:

5-1.13C RESERVED

Replace the headings and paragraphs of section 5-1.13D with:

5-1.13D RESERVED

Replace the paragraphs of section 5-1.20B(4) with:

5-1.20B(4) Contractor–Property Owner Agreement

Before procuring material from or disposing or stockpiling of material on non-highway property:

- 1. Provide proof that the property where materials are to be stockpiled or equipment parked/stored is appropriately zoned and/or permitted for the use proposed by the Contractor.
- 2. Obtain written authorization from each and every owner of the property where materials are to be stockpiled or equipment parked/stored.
- 3. Provide proof that the signor(s) of the authorization are the owners of the property.
- 4. Provide an executed release from the property owner(s) absolving the Department from any and all responsibility in connection with the stockpiling of materials or parking/storage of equipment on said property.
- 5. Obtain written permission from the Engineer to stockpile materials or park/store equipment at the location designated in said authorization.

Before Contract acceptance, submit a document signed by the owner of the material source or disposal site stating that the Contractor has complied with the Contractor-owner agreement.

Failure by the Contractor to provide written authorization shall result in the withholding of all funds due to the Contractor until said authorization is received by the County.

Replace the paragraphs of section 5-1.23A with:

5-1.23A General

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

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

Submit action and informational submittals to the Engineer. Unless otherwise specified in these Specifications, submittals shall be provided via email in .pdf format.

Each submittal must have a cover sheet that must include:

- 1. Contract number
- 2. Project Name
- 3. Date
- 4. Submittals (and resubmittals if applicable) must be numbered sequentially
- 5. Structure number if applicable
- 6. Contractor
- 7. Person responsible for submitting the submittal
- 8. Signature of Contractor's representative sending submittal
- 9. Section number and/or item submittal is referencing
- 10. Pages of submittal, excluding cover sheet

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

If the last day for submitting a document falls on a Saturday or holiday, it may be submitted on the next business day with the same effect as if it had been submitted on the day specified.

Documents must be submitted in the English language.

Convert documents to US customary units.

Replace Section 5-1.26 with:

5-1.26 CONSTRUCTION SURVEYS

The Engineer places stakes and/or marks as the Engineer determines to be necessary to establish the lines and grades required for the work.

Submit your request for Engineer-furnished stakes:

- 1 Once staking area is ready for stakes
- 2. On a Request for Construction Stakes form

After your submittal, the Engineer starts staking within 2 working days.

Preserve stakes and marks placed by the Engineer. If the stakes or marks are destroyed, the Engineer replaces them at the Engineer's earliest convenience and deducts the cost.

Replace Section 5-1.27E with:

5-1.27E Change Order Bills

Maintain separate records for change order work costs.

Replace Section 5-1.32 with:

5-1.32 AREAS FOR USE

Occupy the highway only for purposes necessary to perform the work.

Defend, indemnify, and hold the Department harmless to the same extent as under section 7-1.05.

The Department does not allow temporary residences within the highway.

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6 CONTROL OF MATERIALS

Replace section 6-1.05 with:

6-1.05 SPECIFIC BRAND OR TRADE NAME AND SUBSTITUTION

Unless substitution is expressly precluded in the special provisions, a reference to a specific brand or trade name establishes a quality standard and is not intended to limit competition. Unless the Department has made a public interest finding expressly authorizing sole source procurement of a particular item, you may use a product that is equal to or better than the specified brand or trade name if authorized.

Submit a substitution request with a time period that:

- 1. Follows Contract award
- 2. Allows 30 days for review
- 3. Causes no delay

Include substantiating data with the substitution request that proves that substitution:

- 1. Causes no delay
- 2. Is of equal or better quality and suitability

If the special provisions disallow substitution of a particular item, provide the specified item and do not propose substitution.

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7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Replace the 2nd Paragraph of Section 7-1.02K(2) with:

The general prevailing wage rates and any applicable changes to these wage rates are available:

- 1. From Design Services
- 2. From the Department of Industrial Relations' Web site

Replace section 7-1.02K(3) with:

Keep accurate payroll records.

Submit a copy of your certified payroll records, weekly, including those of subcontractors. Include:

- 1. Each employee's:
 - 1.1. Full name
 - 1.2. Address
 - 1.3. Social security number
 - 1.4. Work classification
 - 1.5. Straight time and overtime hours worked each day and week
 - 1.6. Actual wages paid for each day to each:
 - 1.6.1. Journeyman
 - 1.6.2. Apprentice
 - 1.6.3. Worker
 - 1.6.4. Other employee you employ for the work
 - 1.7. Pay rate
 - 1.8. Itemized deductions made
 - 1.9. Check number issued
- 2. Apprentices and the apprentice-to-journeyman ratio

Each certified payroll record must include a Statement of Compliance form signed under penalty of perjury that declares:

- 1. Information contained in the payroll record is true, correct, and complete
- 2. Employer has complied with the requirements of sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project
- 3. Wage rates paid are at least those required by the Contract

Submitted certified payrolls for hauling and delivering ready-mixed concrete must be accompanied by a written time record. The time record must include:

- 1. Truck driver's full name and address
- 2. Name and address of the factory or batching plant
- 3. Time the concrete was loaded at the factory or batching plant
- 4. Time the truck returned to the factory or batching plant
- 5. Truck driver's signature certifying under penalty of perjury that the information contained in this written time record is true and correct

Make certified payroll records available for inspection at all reasonable hours at your main office on the following basis:

- 1. Upon the employee's request or upon request of the employee's authorized representative, make available for inspection a certified copy of the employee's payroll record.
- Refer the public's requests for certified payroll records to the Department. Upon the public's request, the Department makes available for inspection or furnishes copies of your certified payroll records. Do not give the public access to the records at your main office.

Make all payroll records available for inspection and copying or furnish a copy upon request of a representative of the:

- 1. Department
- 2. Division of Labor Standards Enforcement of the Department of Industrial Relations
- 3. Division of Apprenticeship Standards of the Department of Industrial Relations

Furnish the Department the location of the records. Include the street address, city, and county. Furnish the Department a notification of a location and address change within 5 business days of the change.

Comply with a request for the records within 10 days after you receive a written request. If you do not comply within this period, the Department withholds from progress payments a \$100 penalty for each day or part of a day for each worker until you comply. You are not assessed this penalty for a subcontractor's failure to comply with Labor Code § 1776.

The Department withholds from progress payments for delinquent or inadequate records (Labor Code § 1771.5). If you have not submitted an adequate record by the month's 15th day for the period ending on or before the 1st of that month, the Department withholds up to 10 percent of the monthly progress estimate, exclusive of mobilization. The Department does not withhold more than \$10,000 or less than \$1,000.

Replace Reserved in section 7-1.02K(6)(j)(iii) with:

Section 7-1.02K(6)(j)(iii) includes specifications for handling, removing, and disposing of earth material containing lead.

Lead is not present at a detectable level in earth material on the job site.

Replace the headings and paragraphs of Section 7-1.04 with:

7-1.04 PUBLIC SAFETY

7-1.04A GENERAL

You are responsible to provide for public safety.

Do not construct a temporary facility that interferes with the safe passage of traffic.

Control dust resulting from the work, inside and outside the right-of-way.

Move workers, equipment, and materials without endangering traffic.

Whenever your activities create a condition hazardous to the public, furnish, erect and maintain those fences, temporary railing, barricades, lights, signs, and other devices and take any other necessary protective measures to prevent damage or injury to the public.

Any fences, temporary railing, barricades, lights, signs, or other devices furnished, erected and maintained by you are in addition to those for which payment is provided elsewhere in the specifications.

Provide flaggers whenever necessary to ensure that the public is given safe guidance through the work zone. At locations where traffic is being routed through construction under one-way controls, move your equipment in compliance with the one-way controls unless otherwise ordered.

Use of signs, lights, flags, or other protective devices must comply with the *California MUTCD* and any directions of the Engineer. Signs, lights, flags or other protective devices must not obscure the visibility of, nor conflict in intent, meaning, and function of either existing signs, lights and traffic control devices, or any construction area signs.

Keep existing traffic signals and highway lighting in operation. Other forces within the Department will perform routine maintenance of these facilities during the work.

Cover signs that direct traffic to a closed area.

Install temporary illumination in a manner which the illumination and the illumination equipment does not interfere with public safety. The installation of general roadway illumination does not relieve you from furnishing and maintaining any protective devices.

Equipment must enter and leave the highway via existing ramps and crossovers and must move in the direction of traffic. All movements of workmen and construction equipment on or across lanes open to traffic must be performed in a manner that do not endanger the public. Your vehicles or other mobile equipment leaving an open traffic lane to enter the construction area must slow down gradually in advance of the location of the turnoff to give the traffic following an opportunity to slow down. When leaving a work area and entering a roadway carrying traffic, your vehicles and equipment must yield to traffic.

Immediately remove hauling spillage from a roadway lane or shoulder open to traffic. When hauling on roadways, trim loads and remove material from shelf areas to minimize spillage.

Notify the Engineer not less than 20 days and not more than 90 days before the anticipated start of an activity that will change the vertical or horizontal clearance available to traffic, including shoulders.

If vertical clearance is temporarily reduced to 15.5 feet or less, place low clearance warning signs in compliance with the *California MUTCD* and any directions of the Engineer. Signs must comply with the dimensions, color, and legend requirements of the *California MUTCD* and section 12-3.06 except that the signs must have black letters and numbers on an orange retroreflective background. W12-2P signs must be illuminated so that the signs are clearly visible.

Pave or provide full width continuous and cleared wood walks for pedestrian openings through falsework. Protect pedestrians from falling objects and concrete-curing water. Extend overhead protection for pedestrians at least 4 feet beyond the edge of the bridge deck. Illuminate all pedestrian openings through falsework. Temporary pedestrian facilities must comply with the *California MUTCD*, Part 6, Chapter 6D, "Pedestrian and Worker Safety."

Do not store vehicles, material, or equipment in a way that:

- 1. Creates a hazard to the public
- 2. Obstructs traffic control devices

Do not install or place temporary facilities used to perform the work which interfere with the free and safe passage of traffic.

Temporary facilities that could be a hazard to public safety if improperly designed must comply with design requirements described in the Contract for those facilities or, if none are described, with standard design criteria or codes appropriate for the facility involved. Submit shop drawings and design calculations for the temporary facilities and show the standard design criteria or codes used. Shop drawings and supplemental calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.

If you appear to be neglectful or negligent in furnishing warning devices and taking protective measures, the Engineer may direct your attention to the existence of a hazard. You must furnish and install the necessary warning devices. If the Engineer points out the inadequacy of warning devices and protective measures, that action on the part of the Engineer does not relieve you from your responsibility for public safety or abrogate your obligation to furnish and pay for these devices and measures.

Install Type K temporary railing or other authorized protective systems under any of the following conditions:

- 1. Excavations: Where the near edge of the excavation is within 15 feet from the edge of an open traffic lane
- 2. Temporarily unprotected permanent obstacles: When the work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and you elect to install the obstacle before installing the protective system; or you, for your convenience and as authorized, remove a portion of an existing protective railing at an obstacle and do not replace such railing completely the same day
- 3. Storage areas: When material or equipment is stored within 15 feet of the edge of an open traffic lane and the storage is not otherwise prohibited by the Contract
- 4. Height differentials: When construction operations create a height differential greater than 0.15 feet within 15 feet of the edge of traffic lane

Installation of Type K temporary railing is not required if an excavation within 15 feet from the edge of an open traffic lane is protected by any of the following:

- 1. Steel plate or concrete covers of adequate thickness to prevent accidental entry by traffic or the public
- 2. Side slope where the downhill slope is 4:1 (horizontal: vertical) or less unless a naturally occurring condition
- 3. Barrier or railing

Offset the approach end of Type K temporary railing a minimum of 15 feet from the edge of an open traffic lane. Install the temporary railing on a skew toward the edge of the traffic lane of not more than 1 foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 15-foot minimum offset cannot be achieved, the temporary railing must be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules must be installed at the approach end of the temporary railing.

Secure Type K temporary railing in place before starting work for which the temporary railing is required.

Where 2 or more lanes in the same direction are adjacent to the area where the work is being performed, including shoulders, the adjacent lane must be closed under any of the following conditions:

- 1. Work is off the traveled way but within 6 feet of the edge of the traveled way, and the approach speed is greater than 45 miles per hour
- 2. Work is off the traveled way but within 3 feet of the edge of the traveled way, and the approach speed is less than 45 miles per hour

Closure of the adjacent traffic lane is not required when performing any of the following:

- 1. Working behind a barrier
- 2. Paving, grinding, or grooving
- 3. Installing, maintaining, or removing traffic control devices except Type K temporary railing

Do not reduce an open traffic lane width to less than 10 feet. When traffic cones or delineators are used for temporary edge delineation, the side of the base of the cones or delineators nearest to traffic is considered the edge of the traveled way.

If a traffic lane is closed with channelizers for excavation work, move the devices to the adjacent edge of the traveled way when not excavating. Space the devices as specified for the lane closure.

Do not move or temporarily suspend anything over a traffic lane open to the public unless the public is protected.

7-1.04B WORK ZONE SAFETY AND MOBILITY

7-1.04B(1) POLICY

In order to ensure safe and efficient flow of traffic through work zones, the County of Fresno, via its General Plan, Transportation and Circulation Element, Policy TRA-1, has adopted the use of AASHTO Standards as supplemented by Caltrans and County Department of Public Works and Planning Standards.

7-1.04B(2) TRAFFIC MANAGEMENT PLAN

Perform traffic management shall be in accordance with Section 12, "TEMPORARY TRAFFIC CONTROL," of these special provisions.

7-1.04B(3) TEMPORARY TRAFFIC CONTROL PLAN

Prepare traffic control plan(s) in accordance with Section 12, "TEMPORARY TRAFFIC CONTROL," of these special provisions.

7-1.04B(4) PUBLIC INFORMATION

Provide notice to public agencies and others to the extent required, if any, elsewhere in these special provisions. The Engineer provides other noticing not identified to be performed by the Contractor.

Replace the headings and paragraphs of Section 7-1.06 with:

7-1.06 INSURANCE

7-1.06A General

Nothing in the Contract is intended to establish a standard of care owed to any member of the public or to extend to the public the status of a third-party beneficiary for any of these insurance specifications.

7-1.06B Casualty Insurance

Obtain and maintain insurance on all of your operations with companies acceptable to the Department as follows:

- 1. Keep all insurance in full force and effect from the start of the work through Contract acceptance.
- 2. All insurance must be with an insurance company with a rating from A.M. Best Financial Strength Rating of A or better and a Financial Size Category of VIII or better.
- 3. Maintain completed operations coverage with a carrier acceptable to the State through the expiration of the patent deficiency in construction statute of repose set forth in Civ Pro Code § 337.1.

7-1.06C Workers' Compensation and Employer's Liability Insurance

Under Labor Code § 1860, secure the payment of worker's compensation under Labor Code § 3700.

Submit to the Department the following certification before performing the work (Labor Code § 1861):

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Contract signing constitutes certification submittal.

Provide Employer's Liability Insurance in amounts not less than:

- 1. \$1,000,000 for each accident for bodily injury by accident
- 2. \$1,000,000 policy limit for bodily injury by disease
- 3. \$1,000,000 for each employee for bodily injury by disease

If there is an exposure of injury to your employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act, or under laws, regulations, or statutes applicable to maritime employees, coverage must be included for such injuries or claims.

7-1.06D Liability Insurance

7-1.06D(1) General

Carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of you providing insurance for bodily injury liability and property damage liability for the following limits and including coverage for:

- 1. Premises, operations and mobile equipment
- 2. Products and completed operations
- 3. Broad form property damage (including completed operations)
- 4. Explosion, collapse, and underground hazards
- 5. Personal injury
- 6. Contractual liability

7-1.06D(2) Liability Limits/Additional Insureds

Refer to the *Agreement* of these special provisions

Additional insured coverage must be provided by a policy provision or by an endorsement providing coverage at least as broad as *Additional Insured* (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO), or other form designated by the Department.

7-1.06D(3) Contractor's Insurance Policy is Primary

The policy must stipulate that the insurance afforded the additional insureds applies as primary insurance. Any other insurance or self-insurance maintained by the State is excess only and must not be called upon to contribute with this insurance.

7-1.06E Automobile Liability Insurance

Comply with requirements in the Agreement of these special provisions

7-1.06F Policy Forms, Endorsements, and Certificates

Provide your General Liability Insurance under Commercial General Liability policy form no. CG0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form no. CG0001.

7-1.06G NOT USED

7-1.06H Enforcement

The Department may assure your compliance with your insurance obligations. Ten days before an insurance policy lapses or is canceled during the Contract period you must submit to the Department evidence of renewal or replacement of the policy.

If you fail to maintain any required insurance coverage, the Department may maintain this coverage and withhold or charge the expense to you or terminate your control of the work.

You are not relieved of your duties and responsibilities to indemnify, defend, and hold harmless the State, its officers, agents, and employees by the Department's acceptance of insurance policies and certificates.

Minimum insurance coverage amounts do not relieve you for liability in excess of such coverage, nor do they preclude the State from taking other actions available to it, including the withholding of funds under this Contract.

7-1.061 Self-Insurance

Comply with the Agreement of these special provisions

Replace the headings and paragraphs of Section 7-1.07 with:

7-1.07 LEGAL ACTIONS AGAINST THE DEPARTMENT

7-1.07A General

If legal action is brought against the Department over compliance with a State or federal law, rule, or regulation applicable to highway work, then:

- 1. If the Department in complying with a court order prohibits you from performing work, the resulting delay is a suspension related to your performance, unless the Department terminates the Contract.
- 2. If a court order other than an order to show cause or the final judgment in the action prohibits the Department from requiring you to perform work, the Department may delete the prohibited work or terminate the Contract.

7-1.07B Seal Coat Claims

Pay for claims for personal property damage caused by screening and bituminous binder. Seal coat claims are limited to:

- 1. 10 percent of the total bid
- 2. Damage occurring between the 1st day of screening spreading and 4 days after the last day of screening spreading for each seal coat location

Within 30 days of the last screening spreading, do the following:

- 1. Process and resolve all claims reported or submitted to you by the public as follows:
 - 1.1. Within 3 business days of receipt of a claim, submit to the Department a copy of the claim, a written analysis of the claim, and a statement indicating whether or not you will pay the claim. If you reject a claim, provide the reasons for rejection in writing.
 - 1.2. If the claimant becomes dissatisfied with your handling of the claim, immediately refer the claimant to the local district claims office for assistance in resolving the claim.
- 2. Submit to the Department evidence of your paid claims.

All claims presented to the Department, any district claims office, or the State Board of Control (Govt Code § 900 et seq.) are processed and resolved by the Department as follows:

- 1. The claims are processed as formal government claims subject to all laws and policies and are resolved as the Department determines including referring the claim to you for handling.
- 2. If the Department or the State Board of Control approves settlement of a claim or is ordered to pay pursuant to a court order, the claim is paid from funds withheld from you.
- 3. Within 3 business days of the Department's determination that you are responsible for resolving the claim, the Department sends a copy of the claim to you for resolution or notifies you of the Department's decision to resolve the claim.

The Department withholds an amount not to exceed 5 percent of the total bid to resolve all claims. The amount is held no longer than 60 days following the last spreading of screenings so that the Department has ample time to resolve any pending claims. After 60 days, any remaining amount withheld is returned to you.

If no withheld funds remain or have been returned, the Department may pay any claims and seek reimbursement from you through an offset or any other legal means. Any reimbursement or offset to be recovered from you, including all other paid claims, is limited to 10 percent of the total bid.

Section 7-1.07B does not limit your obligation to defend and indemnify the Department.

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8 PROSECUTION AND PROGRESS

Replace the headings and paragraphs in Section 8 with:

8-1.01 GENERAL

Section 8 includes specifications related to prosecuting the Contract and work progress.

8-1.01A Work Hours

Perform all work on working days during daytime.

Plan work so that all construction operations performed each day, including cleanup of the project site, establishment of appropriate traffic control and any other work necessary for the safety of the public shall be completed within the daytime hours.

Do not perform work during nighttime unless approved by the Engineer

Request approval to work during nighttime in writing and include the appropriate traffic control plan(s) and work plan(s) which clearly identify all provisions for illuminating all portions of the work site, including any flagging operations.

If you work fail to complete work during the daytime hours, the Engineer may stop all work upon the onset of nighttime and order you to perform any and all work the Engineer deems necessary to ensure the safety of the public during the nighttime hours.

You are not entitled to any additional compensation or extension of the contract time as a result of the Engineer stopping the work due to the onset of nighttime.

8-1.02 SCHEDULE

8-1.02A General

Upon completion of all work, the Department returns the withholds associated with section 8-1.02 and makes a payment adjustment for work not performed in the same manner as work-character changes.

8-1.02B Level 1 Critical Path Method Schedule

8-1.02B(1) General

No pay item is provided for Level 1 Critical Path Project Schedule. Payment is considered to be included in the various items of work.

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

For each schedule, submit:

- 1. Plotted original, time-scaled network diagram on a sheet at least 8-1/2 by 11 inches with a title block and timeline
- 2. Read-only compact disc or other Engineer-authorized data-storage device containing the schedule data if software is used to make the schedule. Label the device with:
 - 2.1. Contract number
 - 2.2. CPM schedule number and date produced
 - 2.3. File name

8-1.02B(2) Schedule Format

On each schedule, show:

- 1. Planned and actual start and completion dates of each work activity, including applicable:
 - 1.1. Submittal development
 - 1.2. Submittal review and acceptance

- 1.3. Material procurement
- 1.4. Contract milestones and constraints
- 1.5. Equipment and plant setup
- 1.6. Interfaces with outside entities
- 1.7. Erection and removal of falsework and shoring
- 1.8. Test periods
- 1.9. Major traffic stage change
- 1.10. Final cleanup
- 2. Order that you propose to prosecute the work
- 3. Logical links between the time-scaled work activities
- 4. All controlling activities
- 5. Legible description of each activity
- 6. At least 1 predecessor and 1 successor to each activity except for project start and project end milestones
- 7. Duration of at least 1 working day for each activity
- 8. Start milestone date as the Contract approval date

8-1.02B(3) Updated Schedule

Submit a monthly updated schedule that includes the status of work completed to date and the work yet to be performed as planned.

You may include changes to updated schedules that do not alter a critical path or extend the scheduled completion date compared to the current schedule. Changes may include:

- 1. Adding or deleting activities
- 2. Changing activity constraints
- 3. Changing durations
- 4. Changing logic

If any proposed change in planned work would alter the critical path or extend the scheduled completion date, submit a revised schedule within 15 days of the proposed change.

8-1.02C-8-1.02F Reserved

8-1.03 PRECONSTRUCTION CONFERENCE

Attend a preconstruction conference with key personnel, including your assigned representative, at a time and location determined by the Engineer. Submit documents as required before the preconstruction conference.

Be prepared to discuss the topics and documents shown in the following table:

Торіс	Document
Potential claim and dispute	Potential claim forms
resolution	
Contractor's representation	Assignment of Contractor's representative
DBE	Final utilization reports
Equipment	Equipment list
Labor compliance and equal	Job site posters and benefit and payroll reports
employment opportunity	
Material inspection	Notice of Materials to be Used form
Materials on hand	Request for Payment for Materials on Hand form
Measurements	
Partnering	
Quality control	QC plans
Safety	Injury and Illness Prevention Program and job site posters
Schedule	Baseline schedule and Weekly Statement of Working Days form
Subcontracting	Subcontracting Request form
Surveying	Survey Request form
Traffic control	Traffic contingency plan and traffic control plans
Utility work	
Weight limitations	
Water pollution control	SWPPP or WPCP
Work restrictions	PLACs
Action submittals	

8-1.04 START OF JOB SITE ACTIVITIES

8-1.04A General

Provide signed contracts, bonds, and evidence of insurance timely as required.

This section, 8-1.04, "Start of Job Activities," does not modify remedies available to the Department should you fail to provide signed contracts, bonds, and insurance timely.

Submit a notice 72 hours before starting job site activities. If the project has more than 1 location of work, submit a separate notice for each location.

You may start job site activities before receiving notice of Contract approval if you:

- 1. Deliver the signed Contract, bonds, and evidence of insurance to the Department
- 2. Submit 72-hour notice
- 3. Obtain an encroachment permit from the Department
- 4. Are authorized by the Department to start
- 5. Perform work at your own risk
- 6. Perform work under the Contract

If the Contract is approved, work already performed that complies with the Contract is authorized.

If the Contract is not approved, leave the job site in a neat condition. If a facility has been changed, restore it to its former condition or an equivalent condition. The Department does not pay for the restoration.

8-1.04B Standard Start

Be prepared to begin work at the project site no later than the 20th business day after award of the Contract by the Department.

The Engineer may issue a notice to proceed as soon as the Contracts, including bonds and insurance certificates, have been approved.

Start work on the day shown in the notice to proceed, unless an early start has been approved.

The Engineer may issue a notice of commencement of contract time if you fail to provide Contracts, including bonds and insurance certificates or other required documents timely.

A notice of commencement of contract time does not authorize you to start work on the project site, but contract time begins to elapse on the date shown in the notice of commencement of contract time.

Complete work before the expiration of

THIRTY (30) WORKING DAYS

from the date shown in said Notice to Proceed, or in the Notice of Commencement of Contract Time, whichever comes first.

Complete all work, including corrective work and punch list work, prior to the expiration of the allotted working days. Working days continue to accrue until corrective work and punch list work is completed and accepted.

Pay to the County of Fresno the sum of

THREE THOUSAND FIVE HUNDRED DOLLARS (\$3500.00)

per day for each and every calendar day's delay in finishing the work, including corrective work and punch list work, in excess of the total number of working days prescribed above.

8-1.04C Long Lead Time Equipment Start

Reserved

8-1.05 TIME

Contract time starts on the day specified in the notice to proceed or in the notice of commencement of contract time as described in section 8-1.04 or on the day you start job site activities, whichever occurs first.

Complete the work within the Contract time.

Meet each specified interim work completion date.

The Engineer issues a Weekly Statement of Working Days by the end of the following week.

The Weekly Statement of Working Days shows:

- 1. Working days and non–working days during the reporting week
- 2. Time adjustments
- 3. Work completion date computations, including working days remaining
- 4. Controlling activities

8-1.06 SUSPENSIONS

The Engineer may suspend work wholly or in part due to conditions unsuitable for work progress. Provide for public safety and a smooth and unobstructed passageway through the work zone during the suspension as specified in sections 7-1.03 and 7-1.04. Providing the passageway is force account work. The Department makes a time adjustment for the suspension due to a critical delay.

The Engineer may suspend work wholly or in part due to your failure to (1) fulfill the Engineer's orders, (2) fulfill a Contract part, or (3) perform weather-dependent work when conditions are favorable so that weather-related unsuitable conditions are avoided or do not occur. The Department may provide for a smooth and unobstructed passageway through the work during the suspension and deduct the cost from payments. The Department does not make a time adjustment for the suspension.

Upon the Engineer's order of suspension, suspend work immediately. Resume work when ordered.

8-1.07 DELAYS

8-1.07A General

To request a delay-related time or payment adjustment, submit an RFI.

8-1.07B Time Adjustments

The Department may make a time adjustment for a critical delay. The Engineer uses information from the schedule to evaluate requests for time adjustments.

To request an adjustment, submit a revised schedule showing the delay's effect on the controlling activity. If the delay has:

- 1. Occurred, submit records of the dates and what work was performed during the delayed activity
- 2. Not occurred, submit the expected dates or duration of the delayed activity

Update the schedule to the last working day before the start of the delay if ordered.

8-1.07C Payment Adjustments

The Department may make a payment adjustment for an excusable delay that affects your costs.

Only losses for idle equipment, idle workers, and moving or transporting equipment are eligible for delayrelated payment adjustments.

The Engineer determines payment for idle time of equipment in the same manner as determinations are made for equipment used in the performance of force account work under section 9-1.04 with the following exceptions:

- 1. Delay factor in the *Labor Surcharge and Equipment Rental Rates* applies to each equipment rental rate.
- 2. Daily number of payable hours equals the normal working hours during the delay, not to exceed 8 hours per day.
- 3. Delay days exclude non-working days.
- 4. Markups are not added.

The Engineer determines payment adjustment for the idle workers under section 9-1.04B, but does not add markups.

The Engineer includes costs due to necessary extra moving or transporting of equipment.

The Department does not make a payment adjustment for overhead incurred during non–working days of additional construction seasons experienced because of delay.

8-1.08-8-1.09 RESERVED

8-1.10 LIQUIDATED DAMAGES

8-1.10A General

The Department specifies liquidated damages (Pub Cont Code § 10226). Liquidated damages, if any, accrue starting on the 1st day after the expiration of the working days through the day of Contract acceptance except as specified in sections 8-1.10B and 8-1.10C.

The Department withholds liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work.

Liquidated damages are specified in section 8-1.04.

8-1.10B Failure to Complete Work Parts within Specified Times

The Department may deduct specified damages from payments for each day needed to complete a work part in excess of the time specified for completing the work part.

Damages for untimely completion of work parts may not be equal to the daily amount specified as liquidated damages for the project as a whole, but the Department does not simultaneously assess damages for untimely completion of work parts and for the whole work.

Damages accrue starting the 1st day after a work part exceeds the specified time through the day the specified work part is complete.

8-1.10C Failure to Complete Work Parts by Specified Dates

The Department may deduct specified damages from payments for each day needed to complete a work part in excess of the specified completion date for the work part.

Damages for untimely completion of a work part may not be equal to the daily amount specified as liquidated damages for the project as a whole, but the Department does not simultaneously assess damages for untimely completion of a work part and the whole work.

Damages accrue starting the 1st day after an unmet completion date through the day the work part is complete.

8-1.10D Reserved

8-1.11-8-1.12 RESERVED

8-1.13 CONTRACTOR'S CONTROL TERMINATION

The Department may terminate your control of the work for failure to do any of the following (Pub Cont Code § 10253):

- 1. Supply an adequate workforce
- 2. Supply material as described
- 3. Pay subcontractors (Pub Cont Code §10262)
- 4. Prosecute the work as described in the Contract

The Department may also terminate your control for failure to maintain insurance coverage.

For a federal-aid project, the Department may terminate your control of the work for failure to include "Required Contract Provisions, Federal-Aid Construction Contracts" in subcontracts.

The Department gives notice to you and your surety at least 5 business days before terminating control. The notice describes the failures and the time allowed to remedy the failures. If failures are not remedied within the time provided, the Department takes control of the work.

The Department may complete the work if the Department terminates the Contractor's control or you abandon the project (Pub Cont Code § 10255). The Department determines the unpaid balance under Pub Cont Code § 10258 and the Contract.

At any time before final payment of all claims, the Department may convert a Contractor's control termination to a Contract termination.

8-1.14 CONTRACT TERMINATION

8-1.14A General

The Director may terminate the Contract if it serves the State's best interest. The Department issues you a written notice, implements the termination, and pays you.

8-1.14B Relief from Responsibility for Work

Upon receiving a termination notice:

- 1. Stop work
- 2. Notify subcontractors and suppliers of the Contract termination and stop Contract-related work
- 3. Perform the Engineer-ordered work to secure the job site for termination
- 4. Remove equipment

5. Subject to the Engineer's authorization, settle termination-related claims and liabilities involving subcontractors and suppliers; assign to the Department the rights, titles, or interests held by you with respect to these parties

8-1.14C Responsibility for Materials

Upon receiving a termination notice, protect unused material until:

- 1. You submit an inventory of materials already produced, purchased, or ordered but not yet used; include the location of the material.
- 2. The Engineer identifies materials that will be retained by the Department. Submit bills of sales or other records of material title.
- 3. The Engineer confirms that unused materials paid by progress payment and materials furnished by the State have been delivered and stored as ordered.
- 4. The titles are transferred for materials purchased by the Department.

Dispose of materials that will not be retained by the Department.

8-1.14D Contract Acceptance after Termination

The Engineer recommends Contract acceptance after determining the completion of:

- 1. Work ordered to be completed before termination
- 2. Other work ordered to secure the project before termination
- 3. Material delivery and title transfer

The Department pays you under section 9-1.17.

8-1.14E Payment Adjustment for Termination

If the Department issues a termination notice, the Engineer determines the payment for termination based on the following:

- 1. Direct cost for the work:
 - 1.1. Including:
 - 1.1.1. Mobilization.
 - 1.1.2. Demobilization.
 - 1.1.3. Securing the job site for termination.
 - 1.1.4. Losses from the sale of materials.
 - 1.2. Not including:
 - 1.2.1. Cost of materials you keep.
 - 1.2.2. Profit realized from the sale of materials.
 - 1.2.3. Cost of material damaged by:
 - 1.2.3.1. Act of God.
 - 1.2.3.2. Act of a public enemy.
 - 1.2.3.3. Fire.
 - 1.2.3.4. Flood.
 - 1.2.3.5. Governor-declared state of emergency.
 - 1.2.3.6. Landslide.
 - 1.2.3.7. Tsunami.
 - 1.2.4. Other credits.
- 2. Cost of remedial work, as estimated by the Engineer, is not reimbursed.
- 3. Allowance for profit not to exceed 4 percent of the cost of the work. Prove a likelihood of having made a profit had the Contract not been terminated.
- 4. Material handling costs for material returned to the vendor or disposed of as ordered.
- 5. Costs in determining the payment adjustment due to the termination, excluding attorney fees and litigation costs.

Termination of the Contract does not relieve the surety of its obligation for any just claims arising out of the work performed.

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9 PAYMENT

Add the following Section 9-1.01A

9-1.01A COMPENSATION

The bid items shown in the bid proposal sheet represent full compensation for performing all work. Full compensation for any work for which there is no bid item shall be considered to be included in the various items of work.

Replace the headings and paragraphs of Section 9-1.03 with:

9-1.03 PAYMENT SCOPE

The Department pays you for furnishing the resources and activities required to complete the work. The Department's payment is full compensation for furnishing the resources and activities, including:

- 1. Risk, loss, damage repair, or cost of whatever character arising from or relating to the work and performance of the work
- 2. PLACs and taxes
- 3. Any royalties and costs arising from patents, trademarks, and copyrights involved in the work

The Department does not pay for your loss, damage, repair, or extra costs of whatever character arising from or relating to the work that is a direct or indirect result of your choice of construction methods, materials, equipment, or manpower, unless specifically mandated by the Contract.

Payment is:

- 1. Full compensation for all work involved in each bid item shown on the Bid Item List by the unit of measure shown for that bid item
- 2. For the price bid for each bid item shown on the Bid Item List or as changed by change order with a specified price adjustment

Full compensation for work specified in divisions I, II, and X is included in the payment for the bid items unless:

- 1. Bid item for the work is shown on the Bid Item List
- 2. Work is specified as change order work

Work paid for under one bid item is not paid for under any other bid item.

Payment for a bid item includes payment for work in sections referenced by the section set forth by that bid item.

Notwithstanding anything to the contrary in these special provisions, full compensation for performing all work as shown, as specified, and as directed by the Engineer is considered to be included in the various bid items, and no additional payment will be made, except pursuant to a contract change order to perform work not shown and/or specified.

If one or more bid item(s) is/are not included, perform the work as shown and as specified and payment therefor is considered to be included in the various items of work.

If an alternative is described in the Contract, the Department pays based on the bid items for the details and specifications not described as an alternative unless the bid item is described as an alternative, in which case, the Department pays based on the details and specifications for that alternative.

The Department pays for change order work based on one or a combination of the following: **CONTRACT NO. 17-15-C**

- 1. Bid item prices
- 2. Force account
- 3. Agreed price
- 4. Specialist billing

If the Engineer chooses to pay for change order work based on an agreed price, but you and the Engineer cannot agree on the price, the Department pays by force account.

If a portion of extra work is covered by bid items, the Department pays for this work as changed quantities in those items. The Department pays for the remaining portion of the extra work by force account or agreed price.

If the amount of a deduction or withhold exceeds final payment, the Department invoices you for the difference, to be paid upon receipt.

Pay your subcontractors within 10 days of receipt of each progress payment under Pub Cont Code §§ 10262 and 10262.5.

Replace Section 9-1.07A with:

9-1.07A General

Section 9-1.07 applies to asphalt contained in materials for pavement structures and pavement surface treatments such as HMA, tack coat, asphaltic emulsions, bituminous seals, asphalt binders, and modified asphalt binders placed in the work. Section 9-1.07 does not apply if you opted out of payment adjustments for price index fluctuations at the time of bid.

The Engineer adjusts payment whenever the California statewide crude oil price index for the month the material is placed is more than 5 percent higher or lower than the price index at the time of bid.

The California Department of Transportation determines the California statewide crude oil price index each month on or about the 1st business day of the month using the average of the posted prices in effect for the previous month as posted by Chevron, ExxonMobil, and ConocoPhillips for the Buena Vista and Midway Sunset fields.

If a company discontinues posting its prices for a field, the Department determines the index from the remaining posted prices. The Department may include additional fields to determine the index.

For the California statewide crude oil price index, go to the California Department of Transportation Division of Construction Web site.

If the adjustment is a decrease in payment, the Department deducts the amount from the monthly progress payment.

The Department makes payment adjustments due to price index fluctuations for changed quantities under section 9-1.06.

If you do not complete the work within the Contract time, payment adjustments during the overrun period are determined using the California statewide crude oil price index in effect for the month in which the overrun period began.

If the price index at the time of placement increases:

- 1. 50 percent or more over the price index at bid opening, notify the Engineer.
- 2. 100 percent or more over the price index at bid opening, do not furnish material containing asphalt until the Engineer authorizes you to proceed with that work. The Department may decrease bid item quantities, eliminate bid items, or terminate the Contract.

Before placing material containing asphalt, submit the current sales and use tax rate in effect in the tax jurisdiction where the material is to be placed.

Submit a public weighmaster's certificate for HMA, tack coat, asphaltic emulsions, and modified asphalt binders, including those materials not paid for by weight. For slurry seals, submit a separate public weighmaster's certificate for the asphaltic emulsion.

Replace Section 9-1.16F with:

9-1.16F Retentions

The Department, once in each month, shall cause an estimate in writing to be made by the Engineer. The estimate shall include the total amount of work done and acceptable materials furnished, provided the acceptable materials are listed as eligible for partial payment as materials in the special provisions and are furnished and delivered by the Contractor on the ground and not used or are furnished and stored for use on the contract, if the storage is within the State of California and the Contractor furnishes evidence satisfactory to the Engineer that the materials are stored subject to or under the control of the Department, to the time of the estimate, and the value thereof. The estimate shall also include any amounts payable for mobilization. Daily extra work reports furnished by the Contractor less than 5 calendar days, not including Saturdays, Sundays and legal holidays, before the preparation of the monthly progress estimate shall not be eligible for payment until the following month's estimate.

The amount of any material to be considered in making an estimate will in no case exceed the amount thereof which has been reported by the Contractor to the Engineer on State-furnished forms properly filled out and executed, including accompanying documentation as therein required, less the amount of the material incorporated in the work to the time of the estimate. Only materials to be incorporated in the work will be considered. The estimated value of the material established by the Engineer will in no case exceed the contract price for the item of work for which the material is furnished.

The Department shall retain 5 percent of the estimated value of the work done and 5 percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the contract by the Contractor.

The Department shall pay monthly to the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the contract. No monthly estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the contract.

No monthly estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

Attention is directed to the prohibitions and penalties pertaining to unlicensed contractors as provided in Business and Professions Code Sections 7028.15(a) and 7031.

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work.

Add the following Section 9-1.23:

9-1.23 RESOLUTION OF CONTRACT CLAIMS

Public works contract claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a Contractor and a local public agency shall be resolved in accordance with the provisions of California Public Contract Code Sections 20104-20104.6, inclusive. In addition, California Public Contract Code Section 9204 requires that the procedure established therein shall apply to all claims (as therein defined) filed by a contractor in connection with a public works project. Accordingly, this contract expressly incorporates all of the terms and conditions of those statutory provisions, which are as follows:

California Public Contract Code Section 9204

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

California Public Contract Code Sections 20104 – 20104.6

Section 20104

(a)(1) This article applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b)(1) "Public work" means "public works contract" as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

Section 20104.2

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars (\$50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

(d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

Section 20104.4

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

Section 20104.6

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

Add the following Section 9-1.24:

9-1.24 SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)

This item is provided solely to provide funds necessary for adjustments to the prices of those oilcontaining materials expressly specified as eligible for such adjustments in "Payment Adjustments for Price Index Fluctuations," elsewhere in these special provisions.

The amount included for this item is an estimate only, and is a predetermined amount included in the bid proposal sheet(s) for the project.

This item, "Supplemental Work (Payment Adjustments for Price Index Fluctuations" is purely administrative in nature, is not intended to limit such payment adjustments to the number provided in the bid proposal sheet(s), nor is it intended to modify or supplement the provisions in "Payment Adjustments for Price Index Fluctuations," in any manner whatsoever. Any and all such adjustments shall be made in strict conformance with the requirements in said section.

The provisions in Section 9-1.06, "Changed Quantity Pay Adjustments" of the Standard Specifications shall not apply to the item "Supplemental Work (Payment Adjustments for Price Index Fluctuations)."

DIVISION II GENERAL CONSTRUCTION 10 GENERAL

Replace 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.

If a difference in excess of 0.15 foot exists between the elevation of the existing pavement and the elevation of an excavation within 8 feet of the traveled way at the end of each working day, place and compact material against the vertical cut adjacent to the traveled way. During the excavation, you may use native material for this purpose except you must use structural material once you start placing the structural section. 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.

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12 TEMPORARY TRAFFIC CONTROL

Replace section 12-1.04 with:

12-1.04 FLAGGING COSTS

You pay the cost of furnishing all flaggers, including transporting flaggers and furnishing stands and towers for flaggers to provide for the passage of traffic through the work as specified in sections 7-1.03 and 7-1.04.

Replace section 12-2 with: 12-2 CONSTRUCTION PROJECT FUNDING SIGNS

12-2.01 GENERAL

Details for construction project funding signs are in Project Details.

Keep construction project funding signs clean and in good repair at all times.

12-2.02 MATERIALS

Provide Construction project funding signs, posts, and mounting hardware.

Construction project funding signs must be wood post signs complying with section 82-3.

Sign panels for construction project funding signs must be framed, single sheet aluminum panels complying with section 82-2.

The background on construction project funding signs must be Type II retroreflective sheeting on the Authorized Material List for signing and delineation materials.

The legend must be retroreflective, except for nonreflective black letters and numerals. The colors blue and orange must comply with PR Color no. 3 and no. 6, respectively, as specified in the Federal Highway Administration's *Color Tolerance Chart*.

The size of the legend on construction project funding signs must be as described. Do not add any additional information unless authorized.

FEDERAL HIGHWAY TRUST FUNDS

FRESNO COUNTY ROAD FUNDS

12-2.03 CONSTRUCTION

Provide and Install a total of 2 construction project funding signs at the locations designated by the Engineer before starting major work activities visible to highway users.

Upon completion and acceptance of the work, the signs shall be removed and become the property of the Contractor.

12-2.04 PAYMENT

Not Used

Replace Section 12-3.01C With:

12-3.01C Construction

If channelizing devices are used on the project, perform all layout work necessary to place channelizing devices:

- 1. On the proper alignment
- 2. Uniformly at the location and spacing described
- 3. Straight on a tangent alignment
- 4. On a true arc in a curved alignment

If temporary traffic control devices are damaged, displaced, or stop operating or functioning as described from any cause during the progress of the work, immediately repair, repaint, or replace the components and restore them to their original locations and positions.

If ordered, furnish and place additional temporary traffic control devices. This work is not change order work if:

- 1. Required to conform with your traffic control plan
- 2. Required to conform with the MUTCD
- 3. Necessary for public safety or convenience as determined by the Engineer
- 4. Required to perform staged construction shown on the plans

Replace Section 12-3.03C With:

12-3.03C Construction

If plastic traffic drums are used on project, use 1 type of plastic traffic drum on the project.

Use the same type and brand of retroreflective sheeting for all plastic traffic drums used on the project.

Do not use sandbags or comparable ballast.

Moving plastic traffic drums from location to location if ordered after initial placement is not change order work if:

- 1. Required to conform with your traffic control plan
- 2. Required to conform with the MUTCD
- 3. Necessary for public safety or convenience as determined by the Engineer

Replace Section 12-3.10C With:

12-3.10C Construction

If barricades are used on the project, place each barricade such that the stripes slope downward in the direction road users are to pass.

Place each sand-filled bag near the ground level on the lower parts of the frame or stays to serve as ballast for the barricades. Do not place ballast on top of barricades or over any retroreflective barricade rail face that is facing traffic.

Do not remove barricades that are shown to be left in place at the time of work completion.

Moving a barricade from location to location is change order work if ordered after initial placement of the barricade unless.

- 1. Required to conform with your traffic control plan
- 2. Required to conform with the MUTCD
- 3. Necessary for public safety or convenience as determined by the Engineer
- 4. Required to perform staged construction shown on the plans

Replace Section 12-3.20C(1) With:

12-3.20C1 General

If type K temporary rail is used on the project, before placing Type K temporary railing on the job site, paint the exposed surfaces of the railing with white paint complying with the specifications for acrylic emulsion paint for exterior masonry.

Place Type K temporary railing on a firm, stable foundation. Grade the foundation to provide a uniform bearing surface throughout the entire length of the railing.

Structure excavation and backfill must comply with section 19-3 except compaction of earth fill placed behind Type K temporary railing in a curved layout is not required.

Place and maintain the abutting ends of PC concrete units in alignment without substantial offset from each other.

The drilling of holes and bonding of threaded rods or dowels must comply with the specifications for drilling and bonding dowels in section 51-1.

Install a reflector on the top or face of the rail of each rail unit placed within 10 feet of a traffic lane. Apply adhesive for mounting the reflector under the reflector manufacturer's instructions.

Install a Type P marker panel at each end of railing placed adjacent to a 2-lane, two-way highway and at the end facing traffic for railing installed adjacent to a one-way roadbed. If the railing is placed on a skew, install the marker at the end of the skew nearest the traveled way. Type P marker panels must comply with section 82 except you must furnish the marker panels.

After removing Type K temporary railing:

- 1. Restore the area to its previous condition or construct it to its planned condition if temporary excavation or embankment was used to accommodate the railing.
- 2. Remove all threaded rods or dowels to a depth of at least 1 inch below the surface of the concrete. Fill the resulting holes with mortar under section 51-1 except cure the mortar by the water method or by the curing compound method using curing compound no. 6.

If the Engineer orders a lateral move of Type K temporary railing and repositioning is not shown, the lateral move is change order work unless:

- 1. Required to conform with your traffic control plan
- 2. Required to conform with the MUTCD
- 3. Necessary for public safety or convenience as determined by the Engineer
- 4. Required to perform staged construction shown on the plans

Replace Section 12-3.22C With:

12-3.22C Construction

If crash cushion modules are used on the project, use the same type of crash cushion module for a single grouping or array.

Temporary crash cushion arrays must not encroach on the traveled way.

Secure the sand-filled modules in place before starting an activity requiring a temporary crash cushion.

Maintain sand-filled temporary crash cushions in place at each location, including times when work is not actively in progress. You may remove the crash cushions during the work shift for access to the work if the exposed fixed obstacle is 15 feet or more from the nearest lane carrying traffic. Reset the crash cushion before the end of the work shift.

Immediately repair sand-filled temporary crash cushion modules damaged due to your activities. Remove and replace any module damaged beyond repair. Repair and replacement of temporary crash cushion modules damaged by traffic are change order work.

You may place sand-filled temporary crash cushion modules on movable pallets or frames complying with the dimensions shown. The pallets or frames must provide a full-bearing base beneath the modules. Do not move the modules and supporting pallets or frames by sliding or skidding along the pavement or bridge deck.

Attach a Type R or Type P marker panel to the front of the temporary crash cushion if the closest point of the crash cushion array is within 12 feet of the traveled way. Firmly fasten the marker panel to the crash cushion with commercial quality hardware or by other authorized methods. Attach the Type R marker panel such that the top of the panel is 1 inch below the module lid. Attach the Type P marker panel such that the bottom of the panel rests upon the pallet or roadway surface if pallets are not used.

A lateral move of a temporary crash cushion module is change order work if ordered and the repositioning is not shown, unless required for staged construction.

Remove sand-filled temporary crash cushion modules, including sand, pallets or frames, and marker panels, at Contract acceptance. Do not install sand-filled temporary crash cushion modules in the permanent work.

Replace section 12-3.31C with:

12-3.31C Construction

If portable flashing beacons are used on the project, remove portable flashing beacons from the traveled way at the end of each night's work. You may store the flashing beacon at selected central locations within the highway where designated by the Engineer.

Moving portable flashing beacons from location to location if ordered after initial placement is change order work unless:

- 1. Required to conform with your traffic control plan
- 2. Required to conform with the MUTCD
- 3. Necessary for public safety or convenience as determined by the Engineer
- 4. Required to perform staged construction shown on the plans

Replace Section 12-3.35B(6) with:

12-3.35B(6) User Interface

If the project includes an AWIS, the system must have a user interface to control the AWIS PCMS communications. The interface must be (1) software compatible with a Windows environment or (2) a web service accessed by a web browser.

Provide any software on a CD or other Engineer-authorized data-storage device.

The user interface must, at a minimum, provide the user with a list of AWIS PCMSs in the field, location information for each AWIS PCMS, and a real-time on-board display of the message in the field. Control options must, at a minimum, provide the user the ability to change the on-board messages and flash rate.

Replace the headings and paragraphs of Section 12-4 with: 12-4 MAINTAINING TRAFFIC

12-4.01 GENERAL

12-4.01A General

Section 12-4.01 includes general specifications for maintaining traffic through construction work zones.

If local authorities regulate traffic, notify them at least 5 business days before the start of job site activities. Cooperate with the local authorities to handle traffic through the work zone and to make arrangements to keep the work zone clear of parked vehicles.

12-4.01B Materials

Not Used

12-4.01C CONSTRUCTION

Furnishing and operating pilot cars is not change order work.

12-4.01D Payment

Not Used

12-4.02 TRAFFIC CONTROL SYSTEMS

12-4.02A General

12-4.02A(1) Summary

Section 12-4.02 includes specifications for providing a traffic control system to close traffic lanes, shoulders, and roadways.

A traffic control system for a closure includes the temporary traffic control devices described as part of the traffic control system. Temporary traffic control devices must comply with section 12-3.

12-4.02A(2) Definitions

designated holidays: Designated holidays are shown as "holidays" in Section 1-1.07B.

12-4.02A(3) Submittals

12-4.02A(3)(a) General

The Contractor shall prepare and submit to the County Construction Engineer for approval, a traffic control system plan indicating the means and methods he will employ to institute and maintain traffic control for all phases of the work within the project. The traffic control system plan shall be submitted to the County Construction Engineer as early as possible, preferably **five (5) working days** prior to pre-construction meeting. The Engineer will require five (5) working days to review the initial submittal of the traffic control system plan and an additional five (5) working days for each successive review.

No work at the project site whatsoever, including preparatory work such as the installation of construction project funding signs, shall commence until the traffic control system plan has been approved in writing by the Engineer. In the event that the traffic control system plan is not submitted timely, the Engineer may issue a notice of commencement of contract time prior to approval of the traffic control system plan, and working days will begin to accrue against the allotted contract time.

Late submittal of the traffic control plan or revisions thereafter required, due to the inadequacy of the plan, shall not be accepted as justification for the delay in the start of the working days for the project.

It shall be the Contractor's responsibility to provide, install, maintain, and remove any and all detour signage and traffic control devices and to obtain all permits, including permits from Caltrans, as may be necessary to establish detours as part of the contractor's traffic control plan.

Traffic will not be allowed to be limited to one direction when construction activities are not actively in progress. Providing, installing, maintaining, and removing all traffic control, including portable changeable

message signs if required, obtaining and complying with all permits, and providing all traffic control operations shall be the responsibility of the contractor, and no additional compensation will be allowed therefor.

12-4.02A(3)(b) Closure Schedules

One-way traffic shall be controlled through the project in accordance with the California Manual MUTCD and Caltrans Standard Plans T-11 and T-13 entitled "Traffic Control System for Lane Closure on Multilane Conventional Highways" and "Traffic Control System for Lane Closure on Two Lane Conventional Highways," and these special provisions. Night closure will not be permitted.

When traffic is under one way control on unpaved areas, the cones shown along the centerline on the plan need not be placed.

Every Monday by noon, submit a closure schedule request for planned closures for the next week.

The next week is defined as Sunday at noon through the following Sunday at noon.

Submit a closure schedule request from 25 days to 125 days before the anticipated start of any job site activity that reduces:

- 1. Horizontal clearances of traveled ways, including shoulders, to 2 lanes or fewer due to activities such as temporary barrier placement and paving
- 2. Vertical clearances of traveled ways, including shoulders, due to activities such as pavement overlays, overhead sign installation, or falsework girder erection

Submit closure schedule changes, including additional closures, by noon at least 3 business days before a planned closure.

Cancel closure requests at least 48 hours before the start time of the closure.

The Department notifies you of unauthorized closures or closures that require coordination with other parties as a condition for authorization.

12-4.02A(3)(c) Contingency Plans for Closures

Submit a contingency plan for an activity that could affect a closure if a contingency plan is specified in the special provisions or if a contingency plan is requested.

If a contingency plan is requested, submit the contingency plan within 1 business day of the request.

The contingency plan must identify the activities, equipment, processes, and materials that may cause a delay in the opening of a closure to traffic. The plan must include:

- 1. List of additional or alternate equipment, materials, or workers necessary to ensure continuing activities and on-time opening of closures if a problem occurs. If the additional or alternate equipment, materials, or workers are not on the job site, specify their location, the method for mobilizing these items, and the required time to complete mobilization.
- 2. General time-scaled logic diagram displaying the major activities and sequence of the planned activities. For each activity, identify the critical event that will activate the contingency plan.

Submit revisions to a contingency plan at least 3 business days before starting the activity requiring the contingency plan. Allow 2 business days for review.

12-4.02A(4) Quality Assurance

Reserved

12-4.02B Materials

Not Used

12-4.02C Construction

12-4.02C(1) General

Traffic will be controlled by flagmen by eyesight, radio (walkie talkie) or baton. In the event these methods do not work satisfactorily, as determined by the Engineer, a pilot car will be required.

The Engineer may require a pilot car to be used during earthwork operations in preparation of the grading plane or other operations when the Contractor's operations cover an area beyond the line of sight, or beyond the range of radios or when the baton method does not function satisfactorily.

Full compensation for furnishing and operating the pilot car, (including driver, radios, and any other equipment and labor required) shall be considered as included in the contract lump sum price paid for traffic control system and no further payment will be made therefor.

Work that interferes with traffic is limited to the hours when closures are allowed.

12-4.02C(2) Lane Closure System Training

Not used.

12-4.02C(3) Closure Requirements and Charts

12-4.02C(3)(a) General

Where 2 or more lanes in the same direction, including the shoulders, are adjacent to the area where the work is being performed, close the adjacent lane under any of the following conditions:

- 1. Work is off the traveled way but within 6 feet of the edge of the traveled way, and the approach speed is greater than 45 mph
- 2. Work is off the traveled way but within 3 feet of the edge of the traveled way, and the approach speed is less than 45 mph

Closure of the adjacent traffic lane is not required during any of the following activities:

- 1. Work behind a barrier
- 2. Paving, grinding, or grooving
- 3. Installation, maintenance, or removal of traffic control devices except for temporary railing

12-4.02C(3)(b) -12-4.02C(3)(n)

Reserved

12-4.02C(3)(o) Closure of Conventional County Roads

The type and location of signs, lights, flags, flagmen, and other traffic control and safety devices shall be in accordance with the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) issued by the State of California, Department of Transportation (Caltrans).

Public traffic shall be permitted to pass through construction at all times unless otherwise specified herein.

Provide access to properties abutting the project site at all times.

When directed by the Engineer, traffic shall be routed through the work under one-way control.

Under one-way reversing traffic control operations, public traffic may be stopped in one direction for periods not to exceed 10 minutes.

Lane closure is defined as the closure of a traffic lane or lanes within a single traffic control system.

A minimum of one paved traffic lane, not less than 10 feet wide, shall be open for use by public traffic at all times.

The full width of the traveled way shall be open for use by public traffic on Fridays after 3:00 PM; and when construction operations are not actively in progress.

The Contractor's attention is directed to private driveways and access roads. The driveways and access roads shall remain accessible at all times.

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

When work vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed as shown on standard plan T-10.

The Contractor's equipment and materials shall not remain in a lane except when such lane is closed to traffic and the lane is being used for contract operations.

12-4.02C(3)(p)–12-4.02C(3)(s) Reserved 12-4.02C(4)–12.4.02C(6) Reserved 12-4.02C(7) Traffic Control System Requirements 12-4.02C(7)(a) General

Control traffic using stationary closures.

If components of the traffic control system are displaced or cease to operate or function as specified, immediately repair them to their original condition or replace them and place them back in their original locations.

Vehicles equipped with attenuators must comply with section 12-3.23.

Each vehicle used to place, maintain, and remove components of a traffic control system on a multilane highway must have a Type II flashing arrow sign that must operate whenever the vehicle is used for placing, maintaining, or removing thed components. For a stationary closure, vehicles with a Type II flashing arrow sign not involved in placing, maintaining, or removing the components must display only the caution display mode. If a flashing arrow sign is required for a closure, activate the sign before the closure is in place.

12-4.02C(7)(b) Stationary Closures

Except for channelizing devices placed along open trenches or excavations adjacent to the traveled way, remove the components of the traffic control system for a stationary closure from the traveled way and shoulders at the end of each work period. You may store the components at authorized locations within the limits of the highway.

If a traffic lane is closed with channelizing devices for excavation work, move the devices to the adjacent edge of the traveled way when not excavating. Space the devices as shown for the lane closure.

12-4.02C(7)(c) Moving Closures

For a moving closure, use a PCMS that complies with section 12-3.32 except the sign must be truck mounted. The full operational height to the bottom of the sign may be less than 7 feet above the ground but must be as high as practicable.

If you use a flashing arrow sign in a moving closure, the sign must be truck mounted. Operate the flashing arrow sign in the caution display mode if it is being used on a 2-lane, two-way highway.

12-4.02C(8) Traffic Control System Signs

12-4.02C(8)(a) General

Traffic control system signs must comply with section 12-3.11.

12-4.02C(8)(b) Connector and Ramp Closure Signs

Inform motorists of a temporary closing of a (1) connector or a (2) freeway or expressway entrance or exit ramp using:

- 1. SC6-3(CA) (Ramp Closed) sign for closures of 1 day or less
- 2. SC6-4(CA) (Ramp Closed) sign for closures of more than 1 day

SC6-3(CA) and SC6-4(CA) signs must be stationary mounted at the locations shown and must remain in place and visible to motorists during the connector or ramp closure.

Notify the Engineer at least 2 business days before installing the sign and install the sign from 7 to 15 days before the closure.

12-4.02C(9)-12-4.02C(11) Reserved

12-4.02C(12) Failure to Provide Traffic Control.

If the Contractor does not provide the traffic control and it becomes necessary for the Engineer to notify the Contractor of his duties according to the Standard Specifications and these special provisions, the Contractor shall pay \$200 per 15-minute period or portion thereof to the County for all the time required to acquire the traffic control, including pilot car.

Such payment shall commence at the time notice of the improper traffic control condition is given to the Contractor or his authorized representative by the Engineer and shall terminate when the condition is corrected. Such payment will be deducted from the Contractor's payment.

In addition thereto, when it is necessary for the Engineer to perform the work, the Contractor shall pay the actual cost for the performance thereof. Such amount will be deducted from the Contractor's payment. This will be in addition to any penalties imposed in these special provisions.

The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04, "Public Safety," of the Standard Specifications.

12-4.02D Payment

The Department pays for change order work for a traffic control system by force account for increased traffic control and uses a force account analysis for decreased traffic control.

Traffic control system for lane closure is paid for as traffic control system. Flagging costs are paid for as specified in section 12-1.03.

The requirements in section 4-1.05 for payment adjustment do not apply to traffic control system. Adjustments in compensation for traffic control system will be made for an increase or decrease in traffic control work if ordered and will be made on the basis of the cost of the necessary increased or decreased traffic control. The adjustment will be made on a force account basis for increased work and estimated on the same basis in the case of decreased work.

A traffic control system required by change order work is paid for as a part of the change order work.

12-4.03 FALSEWORK OPENINGS

Reserved

12-4.04 PEDESTRIAN FACILITIES

12-4.04A General

Section 12-4.04 includes specifications for providing temporary pedestrian facilities.

Temporary pedestrian facilities must comply with section 16-2.02.

12-4.04B Materials

Not Used

12-4.04C Construction

If pedestrian traffic is allowed to pass through work areas, provide a temporary pedestrian facility through the construction areas within the highway. Include a protective overhead covering as necessary to ensure protection from falling objects and drippings from overhead structures.

If an activity requires a closure of a walkway, provide another walkway nearby, off of the traveled way.

Where pedestrian openings through falsework are required, provide a temporary pedestrian facility with a protective overhead covering during all bridge construction activities.

12-4.04D Payment

Not Used

12-4.05 BRIDGE CLEANING AND PAINTING ACTIVITIES

12-4.05A General

Section 12-4.05 includes specifications for maintaining traffic during bridge cleaning and painting activities.

Signs must comply with section 12-3.11.

12-4.05B Materials

Not Used

12-4.05C Construction

For bridge cleaning and painting activities, place the signs shown in the following table in addition to those shown on the plans:

Sign no.	Sign description	Requirement
W20-1	Road Work Ahead	Place portable 30-by-30-inch signs at locations where traffic approaches a bridge with work underway. If the approach speed is greater than 50 mph, the sign must be 48 by 48 inches. The sign panel base material must not be plywood. Attach 2 orange, 16 sq in flags to each sign.
	Cleaning and Painting Operations	Place a 48-by-48-inch sign near each W20-1 sign. Use 4-inch- high black lettering and include your name, address, and telephone number on an orange background.

The Engineer determines the exact locations of the signs. Do not use signs until needed. Maintain the signs in place during bridge cleaning and painting activities. Remove the signs at the end of each work shift.

After each day's bridge cleaning and painting activities, remove obstructions from the roadway to allow for free passage for traffic. Remove blast cleaning residue from the traveled way before opening the area to traffic.

You may lay supply lines along the top of curbs adjacent to railing posts if the lines do not interfere with traffic. Remove the lines when work is not in progress.

12-4.05D Payment

Not Used

12-4.06-12-4.10 RESERVED

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13 WATER POLLUTION CONTROL

Add to Section 13-1.01

STATE WATER RESOURCES CONTROL BOARD (SWRCB) NOTICE OF INTENT (NOI) FILING FEE

Complete the NOI filing process started by the County on the SWRCB website using information available in the contract, field, and website. The Engineer will link your QSD to the project's NOI application on the SWRCB website.

The SWRCB NOI bid item is specifically provided to reimburse Contractor for payment of NOI filing fee charged by the SWRCB and paid by the Contractor after Contractor has completed the NOI filing process started by the County.

The amount paid will be the amount of the fee only. No payment will be made for overhead or processing costs. Full compensation for any overhead and processing costs will be considered to be included in the various items of work, and no separate compensation will be made therefor.

The provisions of section 9-1.06 for increased or decreased quantities shall not apply to the "State Water Resources Control Board Notice of Intent Filing Fee" bid item.

The SWRCB website can be found at:

https://smarts.waterboards.ca.gov/smarts/

The dollar amount shown in the Proposal is an estimate only, and shall be included in each bidder's proposal.

Replace 13-1.01A with:

13-1.01A Summary

Section 13-1 includes general specifications for preventing, controlling, and abating water pollution within waters of the State.

Information on forms, reports, and other documents is in the following Caltrans manuals:

- 1. Field Guide to Construction Site Dewatering
- 2. Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual
- 3. Construction Site Best Management Practices (BMPs) Manual
- 4. Construction Site Monitoring Program Guidance Manual

You may view these manuals at the Stormwater and Water Pollution Control Information link at the Caltrans Division of Construction website or purchase them at the Caltrans Publication Distribution Unit.

A WPCP and a SWPPP must comply with the Caltrans Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual and must be prepared using the latest template posted on the Construction stormwater website.

Replace Section 13-1.01D(2) with

13-1.01D(2) Regulatory Requirements

Comply with the discharge requirements in the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities; Order No. 2009-000 9-DWQ, CAS000002 (Construction General Permit) and any amendments thereto issued by the SWRCB. The Construction General Permit may be found at:

http://www.waterboards.ca.gov/water issues/programs/stormwater/constpermits.shtml

Discharges from manufacturing facilities, such as batch plants and crushing plants, must comply with the discharge requirements in the NPDES General Permit for Storm Water Discharges Associated with

Industrial Activities; Order No. 2014-0057-DWQ, CAS000001 (Industrial General Permit), issued by the SWRCB. For the Industrial General Permit, go to the SWRCB website.

For a batch plant and crushing plant outside a job site or within a job site that serves one or more contracts, obtain coverage under the Industrial General Permit before operating a batch plant to manufacture concrete, HMA, or other material or a crushing plant to produce rock or aggregate.

This Project disturbs 6.9 acres of soil.

Replace Section 13-1.01D(4)(b) with:

13-1.01D(4)(b) Qualifications

The WPC manager must:

- 1. Comply with the requirements provided in the Construction General Permit for:
 - 1.1. QSP if the project requires a WPCP
 - 1.2. QSD if the project requires a SWPPP
- 2. Complete the stormwater management training described at the Stormwater and Water Pollution Control Information link at the Caltrans Division of Construction website

Add to section 13-3.01A:

This project's risk level is 1.

Add between the 4th and 5th paragraphs of section 13-3.01C(2)(a):

The Central Valley Regional Water Quality Control Board will review the authorized SWPPP.

Replace Section 13-3.01C(2)(b)(iv) with:

13-3.01C(2)(b)(iv) Sampling and Analysis Plan

If a sampling and analysis plan is required, submit a sampling and analysis plan that complies with the Caltrans *Construction Site Monitoring Program Guidance Manual*.

The sampling and analysis plan must describe:

- 1. Sampling equipment and sample containers.
- 2. Preparation of samples.
- 3. Collection and holding times.
- 4. Field measurement methods.
- 5. Analytical methods.
- 6. Quality assurance and quality control.
- 7. Sample preservation and labeling.
- 8. Collection documentation, including the names of personnel collecting samples and their training.
- 9. Shipment of samples.
- 10. Chain of custody.
- 11. Data management and reporting.
- 12. Precautions from the construction site health and safety plan, including procedures for collecting samples during precipitation. List the conditions under which you are not required to collect samples, such as:
 - 12.1. Dangerous weather
 - 12.2. Flooding or electrical storms
 - 12.3. Times outside of normal working hours
- 13. Procedures for collecting and analyzing at least 3 samples for each day of each qualifying rain event for a risk level 2 or risk level 3 project.
- 14. Procedures for collecting effluent samples at all locations where the stormwater is discharged off the job site.

The sampling and analysis plan must identify the State-certified laboratory that will perform the analyses. For a list of State-certified laboratories, go to the SWRCB's website.

Submit a revised plan if discharges or sampling locations change because of changed work activities or knowledge of site conditions.

Replace Section 13-3.01C(5) with:

13-3.01C(5) Annual Certification

Submit an annual certification of compliance as described in the Caltrans Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual before July 15th of each year.

Replace Section 13-4.03G with:

13-4.03G Dewatering

Dewatering consists of discharging accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities.

If dewatering is required, perform dewatering work as specified for the work items involved, such as a temporary ATS or dewatering and discharge.

If dewatering and discharging activities are not specified for a work item and you perform dewatering activities:

- 1. Conduct dewatering activities under the Caltrans Field Guide for Construction Site Dewatering.
- 2. Ensure any dewatering discharge does not cause erosion, scour, or sedimentary deposits that could impact natural bedding materials.
- 3. Discharge the water within the project limits. Dispose of the water if it cannot be discharged within project limits due to site constraints or contamination.
- 4. Do not discharge stormwater or nonstormwater that has an odor, discoloration other than sediment, an oily sheen, or foam on the surface. Immediately notify the Engineer upon discovering any such condition.

Replace Section 13-5.04 with:

13-5.04 PAYMENT

The payment quantity for temporary soil stabilization bid items paid for by the area is the area measured parallel with the ground surface not including the additional quantity used for overlaps.

If there is no bid item for temporary soil stabilization, payment therefor is considered to be included in the bid item for prepare water pollution control program or in the bid item for prepare stormwater pollution prevention plan, as applicable.

13-6.04 PAYMENT

Replace 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, if any, 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.

If there are no bid items for installing or maintaining temporary sediment control payment therefor is considered to be included in the bid item for prepare water pollution control program or in the bid item for prepare stormwater pollution prevention plan, as applicable.

Replace Section 13-7.03D with:

13-7.03D Payment

The Department does not pay for the relocation of temporary construction entrances or roadways during work progress.

If there are no bid items for installing or maintaining temporary construction entrances or roadways, payment therefor is considered to be included in the bid item for prepare water pollution control program or in the bid item for prepare stormwater pollution prevention plan, as applicable.

14 ENVIRONMENTAL STEWARDSHIP

Add to the 1st paragraph of section 14-6.03A:

This project is within or near habitat for the regulated species shown in the following table:

Regulated Species

San Joaquin Kit Fox (Vulpes macrotis mutica)

Replace item 1 in the 2nd paragraph of section 14-6.03A with:

1. Stop all work within a 150-foot radius of the discovery.

Add to section 14-6.03A:

Species protection areas within the project limits are as specified in the following table:

Species Protection Areas

Identification	Location
Species Protection Area 1	Entire project limits

Comply with the following biological resource information requirements:

- 1. Construction personnel shall participate in a worker environmental awareness program provided by the County. The Contractor shall submit a written request to the Engineer 10 days prior to the performance of any work requesting training.
- 2. County shall conduct a pre-construction survey for the San Joaquin kit fox within 15 days prior to the commencement of construction activities.
- 3. Before commencing any operations, all of the Contractor's and subcontractor's personnel who will be working on-site shall view a training digital video disk (DVD) regarding the requirements for the protection of the San Joaquin Valley kit fox. One copy of said DVD will be provided by the County at no charge to the Contractor. The Contractor shall be responsible for providing all facilities necessary for workers to view said DVD, and shall maintain a log, signed by each employee of the Contractor and subcontractors working at the site, indicating that the training DVD has been viewed. Seven copies of the log and any updates thereto shall be provided to the Engineer. The Contractor shall maintain a copy of the training log and any updates thereto on site at all times when construction operations are actively in progress.
- 4. Nothing in these special provisions shall relieve the contractor of the contractor's responsibilities as specified in California Endangered Species Acts and Federal Endangered Species Acts.

Within Species Protection Area 1, implement the following protection measures:

1. Project related vehicles should observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways, especially at night when the San Joaquin kit fox is most active. Off-road traffic outside of designated project areas should be prohibited

- 2. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once daily from the project site.
- 3. To prevent harassment or mortality of San Joaquin kit foxes, or destruction of dens by dogs or cats, no pets shall be permitted on the project site.
- 4. Use of rodenticide and herbicides in the project area shall be restricted. This prevents poisoning of kit foxes and depletion of prey populations on which they depend.
- 5. Wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.
- 6. No firearms shall be allowed on the project site.
- 7. Excavation Inspections: At the end of each working day, the Contractor shall take measures to prevent the entrapment of kit foxes in all excavated, steep-walled holes or trenches more than or equal to 2 feet deep. Such measures shall include covering excavations with plywood or providing dirt or plank escape ramps from the trenches.
- 8. Material Inspections: The Contractor shall inspect all pipes and culverts with a diameter greater than or equal to 4 inches before burying, capping, or other use. If a kit fox is discovered during this inspection, the pipe or culvert shall not be disturbed (other than to move it to a safe location if necessary) until after the fox has escaped.
- 9. All construction pipes, culverts or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is buried, capped or otherwise moved in any way.
- 10. If a dead, injured or entrapped kit fox is found in County right-of-way the Contractor shall immediately notify the Engineer. All construction activity within specified protective radius of the kit fox shall be halted and may not resume until the Engineer provides written authorization. Any entrapped kit fox shall be permitted to escape. No injured or dead kit fox may be handled or otherwise disturbed.
- 11. Notify the Engineer immediately if a kit fox den is found within County right of way. Immediately stop all construction activity within the specified protective radius of the kit fox den. Do not resume construction activities until authorized.

Monitor regulated species according to the schedule shown in the following table:

Monitoring type	Schedule
Excavation Inspections	Daily
Material Inspections	Daily

Add Section 14-12.04:

14-12.04 RELATIONS WITH SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD)

You are responsible for compliance with all applicable SJVAPCD regulations and requirements. This section is provided for your information, and nothing herein or elsewhere within these special provisions shall be construed as limiting your responsibility for complying with all applicable rules and regulations.

In accordance with SJVAPCD Regulation VIII – Fugitive PM10 Prohibitions: Rule 8021, implementation of an SJVAPCD-approved dust control plan is required prior to commencement of any dust generating activities. The County has filed a dust control plan with the SJVAPCD and has paid the application fee. A copy of the dust control plan filed by the County is included in "Project Details" of these special provisions.

Prepare and submit proposed modifications to the dust control plan to provide any information which is identified as "to be determined" on the dust control plan filed by the County and to modify the dust control plan to the extent necessary to accurately reflect your proposed operations. The Engineer completes the

review within two working days after receipt thereof. In the event that the Engineer determines your submittal as incomplete or inadequate submit a corrected plan. The Engineer completes review of any resubmittal within two working days after receipt thereof.

Upon approval by the Engineer, submit the proposed modified dust control plan to the SJVAPCD. Pay to the SJVAPCD any fees which may be required for any modifications of the dust control plan. You are solely responsible for prompt preparation and submittal to the Engineer, and immediately upon approval by the Engineer, submittal to the SJVAPCD of all proposed modifications to the dust control plan.

Do not commence work until the SJVAPCD has approved or conditionally approved the dust control plan and the Engineer authorizes. When a modification to an approved dust control plan is under consideration do not perform work which is inconsistent with the approved dust control plan prior to receiving written approval.

Compensation for delays associated with review and approval of dust control plans is only considered in the event that: 1) the Engineer fails to review any modified dust control plan submitted by the Contractor within two working days after submittal thereof by the Contractor; or 2) the SJVAPCD fails to review and to either approve or disapprove a modified dust control plan within 30 calendar days after their receipt thereof. Disapproval of a proposed modification to the dust control plan by the Engineer or by the SJVAPCD shall not be considered as a basis for an extension of contract time nor as the basis for any additional compensation. Only in the event that it is determined by the Engineer that the Contractor was unreasonably delayed, through no fault of the Contractor, will compensation for delays be considered in conformance with the provisions in Section 8-1.07, "Delays," of the Standard Specifications.

It is your responsibility to be fully informed of the requirements of the Dust Control Plan and all rules, regulations, plans and conditions that may govern your operations and to conduct the work accordingly.

You must comply with the modifications to the Dust Control Plan approved by the SJVAPCD and accepted by the Engineer. Ensure the provisions of this section and SJVAPCD-approved modifications to the Dust Control Plan is made part of every subcontract executed pursuant to this contract.

Replace Section 14-12.04–14-12.08 With:

14-12.05-14-12.08 RESERVED

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DIVISION III EARTHWORK AND LANDSCAPE 17 GENERAL

Replace the 4th paragraph in section 17-2.03A with:

Clear and grub vegetation only within the excavation and embankment slope lines.

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19 EARTHWORK

Replace the 1st paragraph of Section 19-5.03A with:

Compact earthwork to a relative compaction of at least 95 percent for at least a depth of 2.5 feet below the finished grade for the entire width of the paved area.

Replace section 19-2.03B with:

All excavated material is considered surplus material. Dispose of surplus material outside of the road right-of-way. No additional compensation will be allowed therefor.

Replace section 19-7.02C with:

Material for imported borrow must comply with Section 19-9.02 of the State Standard Specifications.

DIVISION IV SUBBASES AND BASES

26 AGGREGATE BASES

Add to section 26-1.03C:

Biaxial geogrid must comply with the requirements in Section 96-1.02P.

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DIVISION V SURFACINGS AND PAVEMENTS

36 GENERAL

Replace the headings and paragraphs of Section 36-3 with:

36-3 PAVEMENT SMOOTHNESS

36-3.01 GENERAL

36-3.01A Summary

Section 36-3 includes specifications for measuring the smoothness of pavement surfaces.

36-3.01B Definitions

Reserved

36-3.01C Submittals

36-3.01C(1) General

Reserved

36-3.01C(2) Reserved

36-3.01C(3) Reserved

36-3.01C(4) Straightedge Measurements

Within 2 business days of measuring smoothness with a straightedge, submit a list of the areas requiring smoothness correction. Identify the areas by:

- 1. Location number
- 2. District-County-Route
- 3. Beginning station or post mile to the nearest 0.01 mile
- 4. For correction areas within a traffic lane:
 - 4.1. Lane direction, NB, SB, EB, or WB
 - 4.2. Lane number from left to right in the direction of travel
 - 4.3. Wheel path, *L* for left, *R* for right, or *B* for both
- 5. For correction areas not within a traffic lane:
 - 5.1. Identify the pavement area, such as shoulder, weigh station, or turnout
 - 5.2. Direction and distance from the centerline, *L* for left or *R* for right
- 6. Estimated size of correction area

36-3.01D Quality Assurance

36-3.01D(1) General

Reserved

36-3.01D(2) Reserved 36-3.01D(3) Quality Control 36-3.01D(3)(a) General Reserved

36-3.01D(3)(b) Smoothness

36-3.01D(3)(b)(i) General

Test pavement smoothness using a 12-foot straightedge for the pavement at:

- 1. Traffic lanes less than 1,000 feet in length, including ramps, turn lanes, and acceleration and deceleration lanes
- 2. Areas within 15 feet of manholes
- 3. Shoulders
- 4. Weigh-in-motion areas
- 5. Miscellaneous areas such as medians, gore areas, turnouts, and maintenance pullouts
- 6. Any other areas selected by the Engineer.

36-3.01D(3)(b)(ii) Reserved

36-3.01D(3)(b)(iii) Reserved

36-3.01D(4) Department Acceptance

The Department accepts pavement surfaces for smoothness based on compliance with the smoothness specifications for the type of pavement surface specified.

For areas that require pavement smoothness determined using a 12-foot straightedge, the pavement surface must not vary from the lower edge of the straightedge by more than:

- 1. 0.01 foot when the straightedge is laid parallel with the centerline
- 2. 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
- 3. 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

36-3.02 MATERIALS

Not Used

36-3.03 CONSTRUCTION

Perform pavement smoothness testing in areas selected by the Engineer in the presence of the Engineer.

36-3.04 PAYMENT

Not Used

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39 ASPHALT CONCRETE

Replace Section 39-2.01A(3)(d) with:

39-2.01A(3)(d) Test Results

For mix design, JMF verification, production start-up, and each 10,000 tons, submit AASHTO T 283 and AASHTO T 324 (Modified) test results to the Engineer.

Submit all QC test results, except AASHTO T 283 and AASHTO T 324 (Modified), within 3 business days of a request. Submit AASHTO T 283 QC tests within 15 days of sampling.

For tests performed under AASHTO T 324 (Modified), submit test data and 1 tested sample set within 5 business days of sampling.

If coarse and fine durability index tests are required, submit test results within 2 business days of testing.

If a tapered notched wedge is used, submit compaction test result values within 24 hours of testing.

Replace Section 39-2.01A(3)(f) with:

39-2.01A(3)(f) Liquid Antistrip Treatment

If liquid antistrip treatment is used, submit the following with your proposed JMF submittal:

- 1. One 1 pt sample
- 2. Infrared analysis, including copy of absorption spectra
- 3. Certified copy of test results
- 4. Certificate of compliance for each liquid antistrip shipment. On each certificate of compliance, include:
 - 4.1. Your signature and printed name
 - 4.2. Shipment number
 - 4.3. Material type
 - 4.4. Material specific gravity
 - 4.5. Refinery
 - 4.6. Consignee
 - 4.7. Destination
 - 4.8. Quantity
 - 4.9. Contact or purchase order number
 - 4.10. Shipment date
- 5. Proposed proportions for the liquid antistrip

For each delivery of liquid antistrip to the HMA production plant, submit a 1 pt sample to the Engineer. Submit shipping documents. Label each liquid antistrip sampling container with:

- 1. Liquid antistrip type
- 2. Application rate
- 3. Sample date
- 4. Contract number

At the end of each day's production shift, submit production data in electronic and printed media. Present data on electronic media in a tab delimited format. Use line feed carriage return with 1 separate record per line for each production data set. Allow enough fields for the specified data. Include data titles at least once per report. For each HMA mixing plant type, submit the following information in the order specified:

- 1. For batch plant mixing:
 - 1.1. Production date
 - 1.2. Time of batch completion
 - 1.3. Mix size and type
 - 1.4. Each ingredient's weight
 - 1.5. Asphalt binder content as a percentage of the total weight of mix
 - 1.6. Liquid antistrip content as a percentage of the asphalt binder weight
- 2. For continuous mixing plant:
 - 2.1. Production date
 - 2.2. Data capture time
 - 2.3. Mix size and type
 - 2.4. Flow rate of wet aggregate collected directly from the aggregate weigh belt
 - 2.5. Aggregate moisture content as a percentage of the dry aggregate weight
 - 2.6. Flow rate of asphalt binder collected from the asphalt binder meter

- 2.7. Flow rate of liquid antistrip collected from the liquid antistrip meter
- 2.8. Asphalt binder content as a percentage of the total weight of mix calculated from:
 - 2.8.1. Aggregate weigh belt output
 - 2.8.2. Aggregate moisture input
 - 2.8.3. Asphalt binder meter output
- 2.9. Liquid antistrip content as a percentage of the asphalt binder weight calculated from:
 - 2.9.1. Asphalt binder meter output
 - 2.9.2. Liquid antistrip meter output

Replace Section 39-2.01A(3)(I) with:

39-2.01A(3)(I) Data Cores

Section 39-2.01A(3)(I) applies if a bid item for a data core is shown on the Bid Item List.

Submit a summary of data cores taken and a photograph of each data core to the Engineer.

For each data core, the summary must include:

- 1. Project identification number
- 2. Date cored
- 3. Core identification number
- 4. Type of materials recovered
- 5. Type and approximate thickness of unstabilized material not recovered
- 6. Total core thickness
- 7. Thickness of each individual material to within:
 - 7.1. 1/2 inch for recovered material
 - 7.2. 1.0 inch for unstabilized material
- 8. Location, including:
 - 8.1. County
 - 8.2. Route
 - 8.3. Post mile
 - 8.4. Lane number
 - 8.5. Lane direction
 - 8.6. Station

Each data core digital photograph must include a ruler laid adjacent to the data core. Each photograph must include:

- 1. Core
- 2. Project identification number
- 3. Core identification number
- 4. Date cored
- 5. County
- 6. Route
- 7. Post mile
- 8. Lane number
- 9. Lane direction

Replace Section 39-2.01A(4)(f)(i) with:

39-2.01A(4)(f)(i) General

Laboratories testing aggregate and HMA qualities used to prepare the mix design and JMF must be qualified under AASHTO Materials Reference Laboratory program and the Caltrans Independent Assurance Program.

Replace Section 39-2.01A(4)(f)(ii) with:

39-2.01A(4)(f)(ii) Hot Mix Asphalt Plants

Before production, the HMA plant must have a current qualification under the Caltrans Material Plant Quality Program.

39-2.01B(8)(a) General

Do not start HMA production before verification and authorization of JMF.

The HMA plant must have a current qualification under the Caltrans Material Plant Quality Program.

Weighing and metering devices used for the production of HMA modified with additives must comply with the Caltrans *MPQP*. If a loss-in-weight meter is used for dry HMA additive, the meter must have an automatic and integral material delivery control system for the refill cycle.

Calibrate the loss-in-weight meter by:

- 1. Including at least 1 complete system refill cycle during each calibration test run
- 2. Operating the device in a normal run mode for 10 minutes immediately before starting the calibration process
- 3. Isolating the scale system within the loss-in-weight feeder from surrounding vibration
- 4. Checking the scale system within the loss-in-weight feeder for accuracy before and after the calibration process and daily during mix production
- 5. Using a minimum 15 minute or minimum 250 lb test run size for a dry ingredient delivery rate of less than 1 ton per hour.
- 6. Complying with the limits of Table B, "Conveyor Scale Testing Extremes," in the Caltrans MPQP

Proportion aggregate by hot or cold-feed control.

Aggregate temperature must not be more than 375 degrees F when mixed with the asphalt binder.

Asphalt binder temperature must be from 275 to 375 degrees F when mixed with aggregate.

Mix HMA ingredients into a homogeneous mixture of coated aggregates.

HMA must be produced at the temperatures shown in the following table:

HMA compaction	Temperature (°F)
HMA	
Density based	≤ 325
Method	305–325
HMA with WMA technology	
Density based	240–325
Method	260–325

HMA Production Temperatures

If you stop production for longer than 30 days, a production start-up evaluation is required.

Add to section 39-2.01C(3)(f):

Tack coat must be applied between all layers of HMA, even if the layers are placed on the same day.

Replace section 39-2.01C(5) with:

39-2.01C(5)(a) General

Construct edge treatment on the HMA pavement as shown.

For paving operations where the construction of a tapered edge is required, initial paving operations for each lift shall include the construction of a "test section" whereby the contractor shall demonstrate the

capability to produce a tapered edge of the required cross section and with adequate consolidation of the material.

If the tapered edge is to be constructed in conjunction with more than one lift of pavement, construct a test section for each lift that includes construction of the tapered edge.

The test section:

- 1. Must not be less than 0.1 mile in length.
- 2. Must have a width equal to the width of the pavement and tapered edge to be paved in one pass during production.
- 3. Locations shall be proposed by the Contractor and approved by the Engineer.

The test section must be constructed with asphalt paver fitted with one of the following FHWA-approved tapered edge devices:

- 1. **"Shoulder Wedge Maker"** manufactured by Transtech Systems, Inc.,1594 State Street, Schenectady, NY 12304, Telephone 1-800-724-6306 or 518-370-5558
- 2. **"Advant-Edger"** manufactured by Advant-Edge Paving Equipment LLC, 33 Old Niskayuna Road, Loudonville, NY 12211, Telephone 814-422-3343
- 3. **"Ramp Champ"** manufactured by Advant-Edge Paving Equipment LLC, 33 Old Niskayuna Road, Loudonville, NY 12211, Telephone 814-422-3343
- 4. **"SafeTSIope"** manufactured by Troxler Electronic Laboratories, Inc., 3008 E. Cornwallis Rd. Research Triangle Park, NC 27709, Telephone 877-876-9537

Comply with manufacturer's instructions for attaching the device(s) to the paver. The Engineer accepts the use of selected tapered edge device when edge shape and compaction of the test section are in compliance with plans and specifications. No further paving operations which include the construction of the tapered edge shall commence unless means and methods for constructing the tapered edge are approved by the Engineer.

39-2.01C(5)(b) Materials

Where a tapered edge is required according to the Plans or "Project Details," use the same type of HMA used for the adjacent lane or shoulder.

39-2.01C(5)(c) Construction

The edge of roadway where the tapered edge is to be placed must have a solid base, free of debris such as loose material, grass, weeds, or mud. Grade the areas to receive the tapered edge as required.

The tapered edge treatment must be placed monolithic with the adjacent lane or shoulder and shaped and compacted with a device attached to the paver.

The device must be capable of shaping and compacting HMA to the required cross section as shown. Compaction must be accomplished by constraining the HMA to reduce the cross sectional area by 10 to 15 percent. The device must produce a uniform surface texture without tearing, shoving, or gouging and must not leave marks such as ridges and indentations. The device must be capable of transitioning to cross roads, driveways, and obstructions.

The device must produce a uniform surface texture without tearing, shoving, or gouging and must not leave marks such as ridges and indentations. The device must be capable of transitioning to cross roads, driveways, and obstructions.

For the tapered edge, the angle of the slope must not deviate by more than ± 5 degrees from the angle shown. Measure the angle from the plane of the adjacent finished pavement surface.

If paving is done in multiple lifts, the tapered edge must be placed with each lift.

Short sections of hand work are allowed to construct tapered edge transitions.

39-2.01C(5)(d) Payment

Not Used

Add to section 39-2.01C(7):

New paving shall tie smoothly into previously resurfaced mats, existing pavement and to private drives. Place additional HMA along the pavement's edge to conform to private drives and private road connections as shown in *Project Details*.

Hand rake, if necessary, and compact the additional HMA to form a smooth conform taper.

Feather down the HMA to zero thickness at the approximate rate of 20 feet per 0.08-foot thickness at all match lines across the travel lanes including the beginning and end of construction and at all intersections unless otherwise shown or described in the Project Details and as directed by the Engineer.

Replace Section 39-2.01C(15)(b) with:

39-2.01C(15)(b) Method Compaction

Use method compaction.

HMA compaction coverage is the number of passes needed to cover the paving width. A pass is 1 roller's movement parallel to the paving in either direction. Overlapping passes are part of the coverage being made and are not a subsequent coverage. Do not start a coverage until completing the prior coverage.

Method compaction must consist of performing:

- 1. Breakdown compaction of each layer with 3 coverages using a vibratory roller. The speed of the vibratory roller in miles per hour must not exceed the vibrations per minute divided by 1,000. If the HMA layer thickness is less than 0.08 foot, turn the vibrator off.
- 2. Intermediate compaction of each layer of HMA with 3 coverages using a pneumatic-tired roller at a speed not to exceed 5 mph.
- 3. Finish compaction of HMA with 1 coverage using a steel-tired roller.

Start rolling at the lower edge and progress toward the highest part.

The Engineer may order fewer coverages if the layer thickness of HMA is less than 0.15 foot.

Replace Reserved in section 39-2.02B(3) with:

The grade of asphalt binder for Type A HMA must be 64-10.

Replace the 1st paragraph of Section 39-2.02B(5) with:

You may substitute RAP for part of the virgin aggregate in a quantity up to 15 percent of the aggregate blend.

DIVISION IX TRAFFIC CONTROL DEVICES 82 SIGNS AND MARKERS Replace Section 82-1.01A with:

82-1.01A Summary

Section 82-1 includes general specifications for fabricating and installing sign panels and markers and constructing roadside signs.

Signs and markers must comply with the *California MUTCD*, *California Sign Specifications*, and the FHWA publication *Standard Highway Signs and Markings*. For the *California Sign Specifications*, go to the Caltrans Traffic Operations website.

Replace Item 1 of the 2nd paragraph of section 82-2.02A with:

1. Phrase Property of The County of Fresno

Add to section 82-2.02B:

Signs must be 0.080 inch thick aluminum alloy and street name signs must be 0.125 inch thick alloy faced on both sides.

Add to section 82-2.02C:

Reflective sheeting on all signs shall be 3M Diamond Grade DG3 Series 4000 or equal, and must meet ASTM Type XI specifications.

Add to section 82-2.02D:

All signs must have the 3M 1160 graffiti resistant clear overlay film or equal.

Add to section 82-3.02A:

All new roadside signs must be square post 14 gauge steel.

Add to section 82-3.02B:

All post for traffic signs must be 2"X2"X10' square by 14 gauge steel, with 7/16 inch holes punched one inch on center on all four sides for the entire length of the post.

Welded Anchor (2 ¼"X2 ¼"X30") and sleeve (2 ½"X2 ½"X18") shall be used as a base to anchor post in the ground. Hole size and placement must be the same as the metal post.

All mounting hardware shall be either galvanized or stainless steel. Banding shall be 3/4 inch wide stainless steel with flare leg sign brackets. Hose clamps are not permitted. All signs shall be mounted using 3/8" aluminum drive rivets. Nuts and bolts are not permitted.

Replace Section 82-3.02D with:

82-3.02D Laminated Wood Box Posts

Furnish a laminated wood box post with an attached metal cap at the top of each post.

Replace the last line of section 82-3.04 with:

Full compensation for furnishing sign panels is included in the bid item price per each Roadside Sign - One Post and Roadside Sign - Two Post. One or more sign panels furnished and installed on a single post will be counted as (1) one Roadside Sign - One Post. One or more sign panels furnished and installed on two posts will be counted as (1) one Roadside Sign - Two Post.

Federal Requirements

General Decision Number: CA180029 03/02/2018 CA29

Superseded General Decision Number: CA20170029

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

Counties: Alameda, Calaveras, Contra Costa, Fresno, Kings, Madera, Mariposa, Merced, Monterey, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Stanislaus and Tuolumne Counties in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	01/12/2018
2	01/19/2018
3	01/26/2018
4	02/09/2018
5	03/02/2018

ASBE0016-004 01/01/2017

AREA 1: CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS & TOULMNE COUNTIES

AREA 2: ALAMEDA, CONTRA COSTA, SAN FRANSICO, SAN MATEO & SANTA CLARA COUNTIES

Rates Fringes

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not) Area 1.....\$ 28.20 8.95 Area 2.....\$ 32.98 8.95 _____ _____ ASBE0016-008 08/01/2017 AREA 1: ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN FRANSICO, SAN MATEO, SANTA CLARA, & SANTA CRUZ AREA 2: CALAVERAS, COLUSA, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAU, & TUOLUMNE Rates Fringes Asbestos Workers/Insulator (Includes the application of all insulating materials, Protective Coverings, Coatings, and Finishes to all types of mechanical systems) Area 1.....\$ 65.36 23.11 Area 2.....\$ 49.46 23.11 _____ BOIL0549-001 10/01/2016 AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO & SANTA CLARA COUNTIES AREA 2: REMAINING COUNTIES Rates Fringes BOILERMAKER Area 1.....\$ 43.28 37.91 Area 2.....\$ 39.68 35.71 _____ BRCA0003-001 08/01/2017 Rates Fringes MARBLE FINISHER.....\$ 32.60 15.31 BRCA0003-003 08/01/2017 Rates Fringes MARBLE MASON.....\$ 44.60 26.83 _____ BRCA0003-005 05/01/2017

:	Rates	Fringes
BRICKLAYER		
(1) Fresno, Kings,		
Madera, Mariposa, Merced\$ (7) San Francisco, San	38.45	21.22
Mateo\$	42.34	25.83
(8) Alameda, Contra		
Costa, San Benito, Santa Clara\$	11 16	21.71
(9) Calaveras, San	44.10	21.71
Joaquin, Stanislaus,		
Toulumne\$ (16) Monterey, Santa Cruz\$		20.76 23.49
(10) Monterey, Santa Ciuzş		23.49
BRCA0003-008 09/01/2017		
:	Rates	Fringes
TERRAZZO FINISHER\$		16.87
TERRAZZO WORKER/SETTER\$		26.36
BRCA0003-011 10/01/2017		
AREA 1: Alameda, Contra Costa, Mon	terey,	San Benito, San
Francisco, San Mateo, Santa Clara,		
AREA 2: Calaveras, San Joaquin, St	anislau	ıs, Tuolumne
AREA 3: Fresno, Kings, Madera, Mar	iposa,	Merced
	Rates	Fringes
		3 0.2
TILE FINISHER Area 1\$	07 40	14.05
Area 1\$ Area 2\$		14.85 14.30
Area 3\$		11.30
mea stritterterterterterter		14.18
Tile Layer	24.77	
Tile Layer Area 1\$	24.77 45.80	16.89
Tile Layer	24.77 45.80 42.67	
Tile Layer Area 1\$ Area 2\$ Area 3\$	24.77 45.80 42.67 36.20	16.89 16.81
Tile Layer Area 1\$ Area 2\$ Area 3\$	24.77 45.80 42.67 36.20	16.89 16.81 16.28
Tile Layer Area 1\$ Area 2\$ Area 3\$	24.77 45.80 42.67 36.20	16.89 16.81 16.28
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County	24.77 45.80 42.67 36.20	16.89 16.81 16.28
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County	24.77 45.80 42.67 36.20	16.89 16.81 16.28
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway	24.77 45.80 42.67 36.20 	16.89 16.81 16.28 Fringes
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway Carpenter\$	24.77 45.80 42.67 36.20 	16.89 16.81 16.28
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway	24.77 45.80 42.67 36.20 	16.89 16.81 16.28 Fringes
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway Carpenter\$ Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold &	24.77 45.80 42.67 36.20 	16.89 16.81 16.28 Fringes
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway Carpenter\$ Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw	24.77 45.80 42.67 36.20 Rates 46.40	16.89 16.81 16.28 Fringes 28.71
Tile Layer Area 1	24.77 45.80 42.67 36.20 Rates 46.40 46.55	16.89 16.81 16.28 Fringes 28.71 28.71
Tile Layer Area 1\$ Area 2\$ Area 3\$ CARP0022-001 07/01/2017 San Francisco County Carpenters Bridge Builder/Highway Carpenter\$ Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw	24.77 45.80 42.67 36.20 Rates 46.40 46.55 46.40	16.89 16.81 16.28 Fringes 28.71

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

CARP0034-001 07/01/2017

	Rates	Fringes	
Diver			
Assistant Tender, ROV			
Tender/Technician\$		31.91	
Diver standby\$		31.91	
Diver Tender\$		31.91	
Diver wet\$ Manifold Operator (mixed		31.91	
gas)\$ Manifold Operator (Standby).\$		31.91 31.91	
DEPTH PAY (Surface Diving): 050 to 100 ft \$2.00 per foot 101 to 150 ft \$3.00 per foot 151 to 220 ft \$4.00 per foot			
SATURATION DIVING:			
The standby rate shall apply unt saturation diving rate applies w pressure continuously until work complete. The diver rate shall b hours.	hen divers are task and deco	under mpression are	
DIVING IN ENCLOSURES:			
Where it is necessary for Divers to enter pipes or tunnels, or other enclosures where there is no vertical ascent, the following premium shall be paid: Distance traveled from entrance 26 feet to 300 feet: \$1.00 per foot. When it is necessary for a diver to enter any pipe, tunnel or other enclosure less than 48" in height, the premium will be \$1.00 per foot.			
NORV IN COMPINIATION OF CLACETCAR			
WORK IN COMBINATION OF CLASSIFICAT Employees working in any combina within the diving crew (except d are paid in the classification w that shift.	tion of classi live supervisor) in a shift	
CARP0034-003 07/01/2017			
	Rates	Fringes	
Piledriver\$	46.65	31.91	
CARP0035-007 07/01/2017			
AREA 1: Alameda, Contra Costa, San Clara counties	Francisco, Sa	n Mateo, Santa	
AREA 2: Monterey, San Benito, Sant	a Cruz Countie	S	
AREA 3: Calaveras, Fresno, Kings, Joaquin, Stanislaus, Tuolumne Coun		sa, Merced, San	

1	Rates 1	Fringes
Modular Furniture Installer		
Area 1		
Installer I\$		20.42
Installer II\$		20.42
Lead Installer\$		20.92
Master Installer\$	33.28	20.92
Area 2 Installer I\$	22.06	20.42
Installer II\$		20.42
Lead Installer\$		20.92
Master Installer\$		20.92
Area 3	27.00	20172
Installer I\$	22.01	20.42
Installer II\$	19.24	20.42
Lead Installer\$	24.81	20.92
Master Installer\$		20.92
CARP0035-008 08/01/2017		
AREA 1: Alameda, Contra Costa, San Clara counties	Francisco, San	Mateo, Santa
AREA 2: Monterey, San Benito, Santa	a Cruz Counties	
AREA 3: San Joaquin		
AREA 4: Calaveras, Fresno, Kings, M Stanislaus, Tuolumne Counties	Madera, Mariposa	a, Merced,
	Rates	Fringes
1	Rates	Fringes
Drywall Installers/Lathers:		-
Drywall Installers/Lathers: Area 1\$	46.40	29.15
Drywall Installers/Lathers: Area 1\$ Area 2\$	46.40 40.52	29.15 29.15
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$	46.40 40.52 41.02	29.15 29.15 29.15
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$	46.40 40.52 41.02	29.15 29.15
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper	46.40 40.52 41.02 39.67	29.15 29.15 29.15 29.15 29.15
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$	46.40 40.52 41.02 39.67 23.20	29.15 29.15 29.15 29.15 29.15 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$	46.40 40.52 41.02 39.67 23.20 20.26	29.15 29.15 29.15 29.15 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 3\$	46.40 40.52 41.02 39.67 23.20 20.26 20.51	29.15 29.15 29.15 29.15 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 3\$ Area 3\$ Area 3\$ Area 4\$	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 3\$ Area 3\$ Area 4\$	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 3\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County Carpenters Bridge Builder/Highway Carpenter\$ Hardwood Floorlayer, Shingler, Power Saw	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1\$ Area 2\$ Area 3\$ Area 4\$ Drywall Stocker/Scrapper Area 1\$ Area 2\$ Area 2\$ Area 3\$ Area 3\$ Area 4\$ CARP0152-001 07/01/2017 Contra Costa County	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84 Rates 1 46.40	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88
Drywall Installers/Lathers: Area 1	46.40 40.52 41.02 39.67 23.20 20.26 20.51 19.84 46.40	29.15 29.15 29.15 29.15 16.88 16.88 16.88 16.88 Fringes 28.71

Millwright	\$ 46.50	28.71
CARP0152-002 07/01/2017		
San Joaquin County		
	Rates	Fringes
Carpenters Bridge Builder/Highway		
Carpenter	\$ 46.40	28.71
Hardwood Floorlayer,		
Shingler, Power Saw		
Operator, Steel Scaffold &		
Steel Shoring Erector, Saw Filer	\$ 40 67	28.71
Journeyman Carpenter		28.71
Millwright		30.30
CARP0152-004 07/01/2017		
Calaveras, Mariposa, Merced, Stan	islaus and Tuolu	amne Counties
	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	\$ 46 40	28.71
Hardwood Floorlayer,	, 10.10	20.71
Shingler, Power Saw		
Operator, Steel Scaffold &		
Steel Shoring Erector, Saw		
Filer		28.71
Journeyman Carpenter Millwright		28.71 30.30
CARP0217-001 07/01/2017		
San Mateo County		
	Rates	Fringes
Carpenters		
Bridge Builder/Highway		
Carpenter	\$ 46.40	28.71
Hardwood Floorlayer,		
Shingler, Power Saw		
Operator, Steel Scaffold & Steel Shoring Erector, Saw		
Filer	5 46.55	28.71
Journeyman Carpenter		28.71
Millwright	\$ 46.50	30.30
CARP0405-001 07/01/2017		
Santa Clara County		
	Rates	Fringes
Carpenters		

Carpenters

Bridge Builder/Highway 28.71 Carpenter.....\$ 46.40 Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....\$ 46.55 28.71 Journeyman Carpenter.....\$ 46.40 28.71 Millwright.....\$ 46.50 30.30 _____ CARP0405-002 07/01/2017 San Benito County Rates Fringes Carpenters Bridge Builder/Highway Carpenter.....\$ 46.40 28.71 Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw 28.71 Filer....\$ 40.58 Journeyman Carpenter.....\$ 40.52 28.71 Millwright.....\$ 43.02 30.30 _____ CARP0505-001 07/01/2017 Santa Cruz County Rates Fringes Carpenters Bridge Builder/Highway Carpenter.....\$ 46.40 28.71 Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer.....\$ 40.67 28.71 Journeyman Carpenter.....\$ 40.52 28.71 Millwright.....\$ 43.02 30.30 _____ CARP0605-001 07/01/2017 Monterey County Rates Fringes Carpenters Bridge Builder/Highway Carpenter.....\$ 46.40 28.71 Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw 28.71 Filer.....\$ 40.67 Journeyman Carpenter.....\$ 40.52 28.71 30.30 Millwright.....\$ 43.02

Fresno and Madera Counties	
riesho and Madera Councies	
Rates	Fringes
Carpenters	
Bridge Builder/Highway	00 51
Carpenter\$ 46.40	28.71
Hardwood Floorlayer, Shingler, Power Saw	
Operator, Steel Scaffold &	
Steel Shoring Erector, Saw	
Filer\$ 39.32	28.71
Journeyman Carpenter\$ 39.17	28.71
Millwright\$ 41.67	30.30
CARP0713-001 07/01/2017	
Alameda County	
Rates	Fringes
Carpenters	
Bridge Builder/Highway	
Carpenter\$ 46.40	28.71
Hardwood Floorlayer,	
Shingler, Power Saw Operator, Steel Scaffold &	
Steel Shoring Erector, Saw	
Filer\$ 46.55	28.71
Journeyman Carpenter\$ 46.40	28.71
Millwright\$ 46.50	30.30
CARP1109-001 07/01/2017	
Kings County	
Rates	Fringes
Carpenters	
Bridge Builder/Highway	
Carpenter\$ 46.40	28.71
Hardwood Floorlayer,	
Shingler, Power Saw	
Operator, Steel Scaffold & Steel Shoring Erector, Saw	
Filer\$ 39.32	28.71
Journeyman Carpenter\$ 39.17	28.71
Millwright\$ 41.67	30.30
* ELEC0006-004 12/01/2017	
SAN FRANCISCO COUNTY	
Rates	Fringes
Sound & Communications	
Installer\$ 38.52	3%+18.05

Technician.....\$ 44.30 3%+18.05

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0006-007 06/01/2017

SAN FRANCISCO COUNTY		
	Rates	Fringes
ELECTRICIAN	\$ 66.00	3%+43.40
* ELEC0100-002 03/01/2018		
FRESNO, KINGS, AND MADERA COUNTIE	S	
	Rates	Fringes
ELECTRICIAN	\$ 37.50	22.18
ELEC0100-005 12/01/2016		
FRESNO, KINGS, MADERA		
	Rates	Fringes
Communications System Installer Technician		3%+17.86 3%+17.86
SCOPE OF WORK Includes the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave		

transmission, multi-media, multiplex, nurse call system,

radio page, school intercom and sound, burglar alarms, and low voltage master clock systems.

A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS Background foreground music, Intercom and telephone interconnect systems, Telephone systems Nurse call systems, Radio page systems, School intercom and sound systems, Burglar alarm systems, Low voltage, master clock systems, Multi-media/multiplex systems, Sound and musical entertainment systems, RF systems, Antennas and Wave Guide,

B. FIRE ALARM SYSTEMS Installation, wire pulling and testing

C. TELEVISION AND VIDEO SYSTEMS Television monitoring and surveillance systems Video security systems, Video entertainment systems, Video educational systems, Microwave transmission systems, CATV and CCTV

D. SECURITY SYSTEMS Perimeter security systems Vibration sensor systems Card access systems Access control systems, Sonar/infrared monitoring equipment

E. COMMUNICATIONS SYSTEMS THAT TRANSMIT OR RECEIVE INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS SCADA (Supervisory Control and Data Acquisition) PCM (Pulse Code Modulation) Inventory Control Systems, Digital Data Systems Broadband and Baseband and Carriers Point of Sale Systems, VSAT Data Systems Data Communication Systems RF and Remote Control Systems, Fiber Optic Data Systems

WORK EXCLUDED Raceway systems are not covered (excluding Ladder-Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 feet) may be installed on open wiring systems. Energy management systems. SCADA (Supervisory Control and Data Acquisition) when not intrinsic to the above listed systems (in the scope). Fire alarm systems when installed in raceways (including wire and cable pulling) shall be performed at the electrician wage rate, when either of the following two (2) conditions apply: 1. The project involves new or major remodel building trades construction.

2. The conductors for the fire alarm system are installed in conduit.

ELEC0234-001 12/25/2017

MONTEREY, SAN BENITO AND SANTA CRUZ COUNTIES

	Rates	Fringes
ELECTRICIAN		
Zone A\$	44.65	24.44
Zone B\$	49.67	25.47

Zone A: All of Santa Cruz, Monterey, and San Benito Counties within 25 air miles of Highway 1 and Dolan Road in Moss Landing, and an area extending 5 miles east and west of

Highway 101 South to the San Luis Obispo County Line

Zone B: Any area outside of Zone A

ELEC0234-003 12/01/2016

MONTEREY, SAN BENITO, AND SANTA CRUZ COUNTIES

Rates Fringes

Sound & Communications		
Installer	35.07	18.60
Technician\$	37.94	16.30

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

* ELEC0302-001 01/01/2018

CONTRA COSTA COUNTY

	Rates	Fringes	
CABLE SPLICER	•	26.59 26.59	

* ELEC0302-003 02/01/2017

CONTRA COSTA COUNTY

	Rates	Fringes
Sound & Communications Installer\$ Technician\$		18.66 18.83

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0332-001 05/29/2017

SANTA CLARA COUNTY

	Rates	Fringes
CABLE SPLICER	\$ 69.60	34.318
ELECTRICIAN	\$ 60.52	34.046

FOOTNOTES: Work under compressed air or where gas masks are required, orwork on ladders, scaffolds, stacks, "Bosun's chairs," or other structures and where the workers are not protected by permanent guard rails at a distance of 40 to 60 ft. from the ground or supporting structures: to be paid one and one-half times the straight-time rate of pay. Work on structures of 60 ft. or over (as described above): to be paid twice the straight-time rate of pay.

ELEC0332-003 12/01/2017

SANTA CLARA COUNTY

	Rates	Fringes
Sound & Communications		
Installer	\$ 38.02	18.69
Technician	\$ 43.72	18.86

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0595-001 06/01/2017

ALAMEDA COUNTY

	Rates	Fringes	
CABLE SPLICER		3%+34.10 3%+34.10	
ELEC0595-002 06/01/2017			

CALAVERAS AND SAN JOAQUIN COUNTIES

Rates	Fringes
CABLE SPLICER\$ 41.40 ELECTRICIAN	3%+28.83
(1) Tunnel work\$ 38.86	3%+28.83
(2) All other work\$ 36.00	3%+28.83

* ELEC0595-006 12/01/2017

ALAMEDA COUNTY

I	Rates	Fringes
Sound & Communications		
Installer\$	38.02	3%+17.96
Technician\$	43.72	3%+17.96

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for

which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

* ELEC0595-008 12/01/2017

CALAVERAS AND SAN JOAQUIN COUNTIES

]	Rates	Fringes
Communications System		
Installer\$	38.02	3%+17.96
Technician\$	43.72	3%+17.96

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0617-001 06/01/2017

SAN MATEO COUNTY

	Rates	Fringes
ELECTRICIAN	•	33.59
ELEC0617-003 12/01/2017		
SAN MATEO COUNTY		
	Rates	Fringes
Sound & Communications Installer Technician		19.27 19.27
SCOPE OF WORK: Including any	data system whos	e only function

is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0684-001 12/01/2017

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

	Rates	Fringes
ELECTRICIAN	.\$ 37.00	3%+21.33
CABLE SPLICER = 110% of Journeym	an Electrician	
ELEC0684-004 12/01/2016		

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

Ι	Rates	Fringes
Communications System		
Installer\$	30.64	3%+17.86
Technician\$	34.89	3%+17.86

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

_____ ELEC1245-001 06/01/2017 Rates Fringes LINE CONSTRUCTION (1) Lineman; Cable splicer..\$ 55.49 16.62 (2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution equipment).....\$ 44.32 3%+17.65 line (3) Groundman....\$ 33.89 3%+17.65 (4) Powderman.....\$ 49.55 3%+17.65 HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day _____ ELEV0008-001 01/01/2018 Rates Fringes ELEVATOR MECHANIC.....\$ 65.45 32.645 FOOTNOTE: PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service. PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day. _____ ENGI0003-008 07/01/2017 Rates Fringes Dredging: (DREDGING: CLAMSHELL & DIPPER DREDGING; HYDRAULIC SUCTION DREDGING:) AREA 1: (1) Leverman.....\$ 44.77 31.25 (2) Dredge Dozer; Heavy duty repairman.....\$ 39.81 31.25 (3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator.....\$ 38.69 31.25 (4) Bargeman; Deckhand; Fireman; Leveehand; Oiler..\$ 35.39 31.25 AREA 2: (1) Leverman.....\$ 46.77 31.25 (2) Dredge Dozer; Heavy

duty repairman.....\$ 41.81 31.25 (3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator.....\$ 40.69 31.25 (4) Bargeman; Deckhand; Fireman; Leveehand; Oiler..\$ 37.39 31.25 AREA DESCRIPTIONS AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES AREA 2: MODOC COUNTY THE REMAINGING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW: ALPINE COUNTY: Area 1: Northernmost part Area 2: Remainder CALAVERAS COUNTY: Area 1: Remainder Area 2: Eastern part COLUSA COUNTY: Area 1: Eastern part Area 2: Remainder ELDORADO COUNTY: Area 1: North Central part Area 2: Remainder FRESNO COUNTY: Area 1: Remainder Area 2: Eastern part GLENN COUNTY: Area 1: Eastern part Area 2: Remainder LASSEN COUNTY: Area 1: Western part along the Southern portion of border with Shasta County Area 2: Remainder MADERA COUNTY: Area 1: Except Eastern part Area 2: Eastern part MARIPOSA COUNTY Area 1: Except Eastern part Area 2: Eastern part MONTERREY COUNTY Area 1: Except Southwestern part

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Area 2: Southwestern part
NEVADA COUNTY:
 Area 1: All but the Northern portion along the border of
 Sierra County
Area 2: Remainder
PLACER COUNTY:
Area 1: Al but the Central portion
Area 2: Remainder
PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder
SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder
SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder
SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder
SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Remainder
TEHAMA COUNTY:
 Area 1: All but the Western border with Mendocino & Trinity
 Counties
Area 2: Remainder
TRINITY COUNTY:
 Area 1: East Central part and the Northeastern border with
 Shasta County
Area 2: Remainder
TUOLUMNE COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part
_____
ENGI0003-018 06/26/2017
"AREA 1" WAGE RATES ARE LISTED BELOW
"AREA 2" RECEIVES AN ADDITIONAL $2.00 PER HOUR ABOVE AREA 1
RATES.
SEE AREA DEFINITIONS BELOW
                                Rates
                                            Fringes
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OPERATOR: Power Equipment (AREA 1:)

GROUP 1\$ 44.67 GROUP 2\$ 43.14 GROUP 3\$ 41.66 GROUP 4\$ 40.28 GROUP 5\$ 39.01 CROUP 6\$ 40.28	30.39 30.39 30.39 30.39 30.39 30.39 30.39
GROUP 6\$ 37.69 GROUP 7\$ 36.55 GROUP 8\$ 35.41 GROUP 8-A\$ 33.20 OPERATOR: Power Equipment	30.39 30.39 30.39 30.39
(Cranes and Attachments - AREA 1:) GROUP 1	
Cranes\$ 46.30 Oiler\$ 36.63 Truck crane oiler\$ 39.20	30.39 30.39 30.39
GROUP 2 Cranes\$ 43.79 Oiler\$ 36.36 Truck crane oiler\$ 38.98	30.39 30.39 30.39
GROUP 3 Cranes\$ 42.05	30.39
Hydraulic\$ 38.32 Oiler\$ 36.14 Truck Crane Oiler\$ 38.71 GROUP 4	30.39 30.39 30.39
Cranes\$ 39.01 OPERATOR: Power Equipment (Piledriving - AREA 1:) GROUP 1	30.39
Lifting devices\$ 45.89 Oiler\$ 36.63 Truck crane oiler\$ 39.20 GROUP 2	30.39 30.39 30.39
Lifting devices\$ 44.07 Oiler\$ 36.36 Truck Crane Oiler\$ 38.98	30.39 30.39 30.39
GROUP 3 Lifting devices\$ 42.39 Oiler\$ 36.14 Truck Crane Oiler\$ 38.71	30.39 30.39 30.39
GROUP 4 Lifting devices\$ 40.62 GROUP 5	30.39
Lifting devices\$ 39.32 GROUP 6	30.39
Lifting devices\$ 37.98 OPERATOR: Power Equipment (Steel Erection - AREA 1:) GROUP 1	30.39
Cranes\$ 46.30 Oiler\$ 36.63 Truck Crane Oiler\$ 39.20 GROUP 2	30.39 30.39 30.39
Cranes\$ 43.79 Oiler\$ 36.36 Truck Crane Oiler\$ 38.98 GROUP 3	30.39 30.39 30.39
Cranes\$ 42.05 Hydraulic\$ 38.32	30.39 30.39

Oiler Truck Crane Oiler GROUP 4		30.39 30.39
Cranes	39.01	30.39
Cranes OPERATOR: Power Equipment	35.13	30.39
(Tunnel and Underground Work		
- AREA 1:)		
SHAFTS, STOPES, RAISES:		
GROUP 1	\$ 40.77	30.39
GROUP 1-A	\$ 43.24	30.39
GROUP 2	39.51	30.39
GROUP 3	38.18	30.39
GROUP 4		30.39
GROUP 5		30.39
UNDERGROUND:		
GROUP 1	\$ 40.67	30.39
GROUP 1-A		30.39
GROUP 2		30.39
		30.39
GROUP 3		
GROUP 4		30.39
GROUP 5	\$ 35.80	30.39

FOOTNOTE: Work suspended by ropes or cables, or work on a Yo-Yo Cat: \$.60 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Operator of helicopter (when used in erection work); Hydraulic excavator, 7 cu. yds. and over; Power shovels, over 7 cu. yds.

GROUP 2: Highline cableway; Hydraulic excavator, 3-1/2 cu. yds. up to 7 cu. yds.; Licensed construction work boat operator, on site; Power blade operator (finish); Power shovels, over 1 cu. yd. up to and including 7 cu. yds. m.r.c.

GROUP 3: Asphalt milling machine; Cable backhoe; Combination backhoe and loader over 3/4 cu. yds.; Continuous flight tie back machine assistant to engineer or mechanic; Crane mounted continuous flight tie back machine, tonnage to apply; Crane mounted drill attachment, tonnage to apply; Dozer, slope brd; Gradall; Hydraulic excavator, up to 3 1/2 cu. yds.; Loader 4 cu. yds. and over; Long reach excavator; Multiple engine scraper (when used as push pull); Power shovels, up to and including 1 cu. yd.; Pre-stress wire wrapping machine; Side boom cat, 572 or larger; Track loader 4 cu. yds. and over; Wheel excavator (up to and including 750 cu. yds. per hour)

GROUP 4: Asphalt plant engineer/box person; Chicago boom; Combination backhoe and loader up to and including 3/4 cu. yd.; Concrete batch plant (wet or dry); Dozer and/or push cat; Pull- type elevating loader; Gradesetter, grade checker (GPS, mechanical or otherwise); Grooving and grinding machine; Heading shield operator; Heavy-duty drilling equipment, Hughes, LDH, Watson 3000 or similar; Heavy-duty repairperson and/or welder; Lime spreader; Loader under 4 cu. yds.; Lubrication and service engineer (mobile and grease rack); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); Miller Formless M-9000 slope paver or similar; Portable crushing and screening plants; Power blade support; Roller operator, asphalt; Rubber-tired scraper, self-loading (paddle-wheels, etc.); Rubber- tired earthmoving equipment (scrapers); Slip form paver (concrete); Small tractor with drag; Soil stabilizer (P & H or equal); Spider plow and spider puller; Tubex pile rig; Unlicensed constuction work boat operator, on site; Timber skidder; Track loader up to 4 yds.; Tractor-drawn scraper; Tractor, compressor drill combination; Welder; Woods-Mixer (and other similar Pugmill equipment)

GROUP 5: Cast-in-place pipe laying machine; Combination slusher and motor operator; Concrete conveyor or concrete pump, truck or equipment mounted; Concrete conveyor, building site; Concrete pump or pumpcrete gun; Drilling equipment, Watson 2000, Texoma 700 or similar; Drilling and boring machinery, horizontal (not to apply to waterliners, wagon drills or jackhammers); Concrete mixer/all; Person and/or material hoist; Mechanical finishers (concrete) (Clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical burm, curb and/or curb and gutter machine, concrete or asphalt); Mine or shaft hoist; Portable crusher; Power jumbo operator (setting slip-forms, etc., in tunnels); Screed (automatic or manual); Self-propelled compactor with dozer; Tractor with boom D6 or smaller; Trenching machine, maximum digging capacity over 5 ft. depth; Vermeer T-600B rock cutter or similar

GROUP 6: Armor-Coater (or similar); Ballast jack tamper; Boom- type backfilling machine; Assistant plant engineer; Bridge and/or gantry crane; Chemical grouting machine, truck-mounted; Chip spreading machine operator; Concrete saw (self-propelled unit on streets, highways, airports and canals); Deck engineer; Drilling equipment Texoma 600, Hughes 200 Series or similar up to and including 30 ft. m.r.c.; Drill doctor; Helicopter radio operator; Hydro-hammer or similar; Line master; Skidsteer loader, Bobcat larger than 743 series or similar (with attachments); Locomotive; Lull hi-lift or similar; Oiler, truck mounted equipment; Pavement breaker, truck-mounted, with compressor combination; Paving fabric installation and/or laying machine; Pipe bending machine (pipelines only); Pipe wrapping machine (tractor propelled and supported); Screed (except asphaltic concrete paving); Self- propelled pipeline wrapping machine; Tractor; Self-loading chipper; Concrete barrier moving machine

GROUP 7: Ballast regulator; Boom truck or dual-purpose A-frame truck, non-rotating - under 15 tons; Cary lift or similar; Combination slurry mixer and/or cleaner; Drilling equipment, 20 ft. and under m.r.c.; Firetender (hot plant); Grouting machine operator; Highline cableway signalperson; Stationary belt loader (Kolman or similar); Lift slab machine (Vagtborg and similar types); Maginnes internal full slab vibrator; Material hoist (1 drum); Mechanical trench shield; Pavement breaker with or without compressor combination); Pipe cleaning machine (tractor propelled and supported); Post driver; Roller (except asphalt); Chip Seal; Self-propelled automatically applied concrete curing mahcine (on streets, highways, airports and canals); Self-propelled compactor (without dozer); Signalperson; Slip-form pumps (lifting device for concrete forms); Tie spacer; Tower mobile; Trenching machine, maximum digging capacity up to and including 5 ft. depth; Truck- type loader

GROUP 8: Bit sharpener; Boiler tender; Box operator; Brakeperson; Combination mixer and compressor (shotcrete/gunite); Compressor operator; Deckhand; Fire tender; Forklift (under 20 ft.); Generator; Gunite/shotcrete equipment operator; Hydraulic monitor; Ken seal machine (or similar); Mixermobile; Oiler; Pump operator; Refrigeration plant; Reservoir-debris tug (selfpropelled floating); Ross Carrier (construction site); Rotomist operator; Self-propelled tape machine; Shuttlecar; Self-propelled power sweeper operator (includes vacuum sweeper); Slusher operator; Surface heater; Switchperson; Tar pot firetender; Tugger hoist, single drum; Vacuum cooling plant; Welding machine (powered other than by electricity)

GROUP 8-A: Elevator operator; Skidsteer loader-Bobcat 743 series or smaller, and similar (without attachments); Mini excavator under 25 H.P. (backhoe-trencher); Tub grinder wood chipper

ALL CRANES AND ATTACHMENTS

GROUP 1: Clamshell and dragline over 7 cu. yds.; Crane, over 100 tons; Derrick, over 100 tons; Derrick barge pedestal-mounted, over 100 tons; Self-propelled boom-type lifting device, over 100 tons

GROUP 2: Clamshell and dragline over 1 cu. yd. up to and including 7 cu. yds.; Crane, over 45 tons up to and including 100 tons; Derrick barge, 100 tons and under; Self-propelled boom-type lifting device, over 45 tons; Tower crane

GROUP 3: Clamshell and dragline up to and including 1 cu. yd.; Cranes 45 tons and under; Self-propelled boom-type lifting device 45 tons and under;

GROUP 4: Boom Truck or dual purpose A-frame truck, non-rotating over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) - under 15 tons;

PILEDRIVERS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshell over 7 cu. yds.; Self-propelled boom-type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons

GROUP 2: Derrick barge pedestal mounted 45 tons to and including 100 tons; Clamshell up to and including 7 cu. yds.; Self-propelled boom-type lifting device over 45 tons; Truck crane or crawler, land or barge mounted, over 45 tons up to and including 100 tons; Fundex F-12 hydraulic pile rig

GROUP 3: Derrick barge pedestal mounted under 45 tons; Selfpropelled boom-type lifting device 45 tons and under; Skid/scow piledriver, any tonnage; Truck crane or crawler, land or barge mounted 45 tons and under

GROUP 4: Assistant operator in lieu of assistant to engineer; Forklift, 10 tons and over; Heavy-duty repairperson/welder

GROUP 5: Deck engineer

GROUP 6: Deckhand; Fire tender

STEEL ERECTORS

GROUP 1: Crane over 100 tons; Derrick over 100 tons; Selfpropelled boom-type lifting device over 100 tons

GROUP 2: Crane over 45 tons to 100 tons; Derrick under 100 tons; Self-propelled boom-type lifting device over 45 tons to 100 tons; Tower crane

GROUP 3: Crane, 45 tons and under; Self-propelled boom-type lifting device, 45 tons and under

GROUP 4: Chicago boom; Forklift, 10 tons and over; Heavy-duty repair person/welder

GROUP 5: Boom cat

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TUNNEL AND UNDERGROUND WORK

GROUP 1-A: Tunnel bore machine operator, 20' diameter or more

GROUP 1: Heading shield operator; Heavy-duty repairperson; Mucking machine (rubber tired, rail or track type); Raised bore operator (tunnels); Tunnel mole bore operator

GROUP 2: Combination slusher and motor operator; Concrete pump or pumpcrete gun; Power jumbo operator

GROUP 3: Drill doctor; Mine or shaft hoist

GROUP 4: Combination slurry mixer cleaner; Grouting Machine

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

operator; Motorman GROUP 5: Bit Sharpener; Brakeman; Combination mixer and compressor (gunite); Compressor operator; Oiler; Pump operator; Slusher operator _____ AREA DESCRIPTIONS: POWER EQUIPMENT OPERATORS, CRANES AND ATTACHMENTS, TUNNEL AND UNDERGROUND [These areas do not apply to Piledrivers and Steel Erectors] AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES AREA 2 - MODOC COUNTY THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW: ALPINE COUNTY: Area 1: Northernmost part Area 2: Remainder CALAVERAS COUNTY: Area 1: Except Eastern part Area 2: Eastern part COLUSA COUNTY: Area 1: Eastern part Area 2: Remainder DEL NORTE COUNTY: Area 1: Extreme Southwestern corner Area 2: Remainder ELDORADO COUNTY: Area 1: North Central part Area 2: Remainder FRESNO COUNTY Area 1: Except Eastern part Area 2: Eastern part GLENN COUNTY: Area 1: Eastern part Area 2: Remainder HUMBOLDT COUNTY: Area 1: Except Eastern and Southwestern parts Area 2: Remainder LAKE COUNTY: Area 1: Southern part Area 2: Remainder LASSEN COUNTY:

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Area 1: Western part along the Southern portion of border
  with Shasta County
Area 2: Remainder
MADERA COUNTY
Area 1: Remainder
Area 2: Eastern part
MARIPOSA COUNTY
Area 1: Remainder
Area 2: Eastern part
MENDOCINO COUNTY:
Area 1: Central and Southeastern parts
Area 2: Remainder
MONTEREY COUNTY
Area 1: Remainder
Area 2: Southwestern part
NEVADA COUNTY:
 Area 1: All but the Northern portion along the border of
  Sierra County
Area 2: Remainder
PLACER COUNTY:
Area 1: All but the Central portion
Area 2: Remainder
PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder
SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder
SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder
SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder
SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Reaminder
TEHAMA COUNTY:
  Area 1: All but the Western border with mendocino & Trinity
  Counties
Area 2: Remainder
TRINITY COUNTY:
 Area 1: East Central part and the Northeaster border with
  Shasta County
Area 2: Remainder
TULARE COUNTY;
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Area 1: Remainder Area 2: Eastern part TUOLUMNE COUNTY: Area 1: Remainder Area 2: Eastern Part _____ ENGI0003-019 07/26/2017 SEE AREA DESCRIPTIONS BELOW Rates Fringes OPERATOR: Power Equipment (LANDSCAPE WORK ONLY) GROUP 1 AREA 1.....\$ 34.05 28.73 AREA 2.....\$ 36.05 28.73 GROUP 2 AREA 1.....\$ 30.45 28.73 AREA 2.....\$ 32.45 28.73 GROUP 3 AREA 1.....\$ 25.84 28.73 AREA 2.....\$ 27.84 28.73 GROUP DESCRIPTIONS: GROUP 1: Landscape Finish Grade Operator: All finish grade work regardless of equipment used, and all equipment with a rating more than 65 HP. GROUP 2: Landscape Operator up to 65 HP: All equipment with

a manufacturer's rating of 65 HP or less except equipment covered by Group 1 or Group 3. The following equipment shall be included except when used for finish work as long as manufacturer's rating is 65 HP or less: A-Frame and Winch Truck, Backhoe, Forklift, Hydragraphic Seeder Machine, Roller, Rubber-Tired and Track Earthmoving Equipment, Skiploader, Straw Blowers, and Trencher 31 HP up to 65 HP.

GROUP 3: Landscae Utility Operator: Small Rubber-Tired Tractor, Trencher Under 31 HP.

AREA DESCRIPTIONS:

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY: Area 1: Northernmost part Area 2: Remainder

CALAVERAS COUNTY: Area 1: Except Eastern part Area 2: Eastern part COLUSA COUNTY: Area 1: Eastern part Area 2: Remainder DEL NORTE COUNTY: Area 1: Extreme Southwestern corner Area 2: Remainder ELDORADO COUNTY: Area 1: North Central part Area 2: Remainder FRESNO COUNTY Area 1: Except Eastern part Area 2: Eastern part GLENN COUNTY: Area 1: Eastern part Area 2: Remainder HUMBOLDT COUNTY: Area 1: Except Eastern and Southwestern parts Area 2: Remainder LAKE COUNTY: Area 1: Southern part Area 2: Remainder LASSEN COUNTY: Area 1: Western part along the Southern portion of border with Shasta County Area 2: Remainder MADERA COUNTY Area 1: Remainder Area 2: Eastern part MARIPOSA COUNTY Area 1: Remainder Area 2: Eastern part MENDOCINO COUNTY: Area 1: Central and Southeastern parts Area 2: Remainder MONTEREY COUNTY Area 1: Remainder Area 2: Southwestern part NEVADA COUNTY: Area 1: All but the Northern portion along the border of Sierra County Area 2: Remainder PLACER COUNTY:

Area 1: All but the Central portion Area 2: Remainder PLUMAS COUNTY: Area 1: Western portion Area 2: Remainder SHASTA COUNTY: Area 1: All but the Northeastern corner Area 2: Remainder SIERRA COUNTY: Area 1: Western part Area 2: Remainder SISKIYOU COUNTY: Area 1: Central part Area 2: Remainder SONOMA COUNTY: Area 1: All but the Northwestern corner Area 2: Reaminder TEHAMA COUNTY: Area 1: All but the Western border with mendocino & Trinity Counties Area 2: Remainder TRINITY COUNTY: Area 1: East Central part and the Northeaster border with Shasta County Area 2: Remainder TULARE COUNTY; Area 1: Remainder Area 2: Eastern part TUOLUMNE COUNTY: Area 1: Remainder Area 2: Eastern Part _____ IRON0377-002 01/01/2017 Rates Fringes Ironworkers: Fence Erector.....\$ 29.58 21.59 Ornamental, Reinforcing and Structural.....\$ 36.00 30.15 PREMIUM PAY: \$6.00 additional per hour at the following locations: China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB \$4.00 additional per hour at the following locations: Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center \$2.00 additional per hour at the following locations: Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock _____ LABO0067-002 12/01/2017 AREA "A" - ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES AREA "B" - CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, STANISLAUS, AND TUOLUMNE COUNTIES Rates Fringes Asbestos Removal Laborer All Counties.....\$ 23.00 11.31 LABORER (Lead Removal) Area A.....\$ 30.70 22.17 Area B.....\$ 29.70 22.17 ASBESTOS REMOVAL-SCOPE OF WORK: Site mobilization; initial site clean-up; site preparation; removal of asbestos-containing materials from walls and ceilings; or from pipes, boilers and mechanical systems only if they are being scrapped; encapsulation, enclosure and disposal of asbestos-containing materials by hand or with equipment or machinery; scaffolding; fabrication of temporary wooden barriers; and assembly of decontamination stations. _____ LABO0073-002 06/26/2017 CALAVERAS AND SAN JOAQUIN COUNTIES Fringes Rates LABORER (TRAFFIC CONTROL/LANE CLOSURE)

ORE)		
Escort Driver, Flag Person\$	28.54	22.17
Traffic Control Person I\$	28.84	22.17
Traffic Control Person II\$	26.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

_____ LABO0073-003 07/01/2017 SAN JOAQUIN COUNTY Rates Fringes LABORER Mason Tender-Brick.....\$ 30.45 21.04 _____ _____ LABO0073-005 06/26/2017 Rates Fringes Tunnel and Shaft Laborers: GROUP 1.....\$ 36.60 21.72 GROUP 2.....\$ 36.37 21.72 GROUP 3.....\$ 36.12 21.72 GROUP 4.....\$ 35.67 21.72 21.72 GROUP 5.....\$ 35.13 Shotcrete Specialist.....\$ 37.12 21.72 TUNNEL AND SHAFT CLASSIFICATIONS GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level) GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house GROUP 4: Vibrator operator, pavement breaker; Bull gang muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method) GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman _____ LABO0073-007 06/27/2017 CALAVERAS AND SAN JOAQUIN COUNTIES Rates Fringes LABORER (CONSTRUCTION CRAFT LABORERS) Construction Specialist 22.38 Group.....\$ 29.49

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

GROUP 1\$ 28.79 GROUP 1-a\$ 29.01	22.38 22.38
GROUP 1-c\$ 28.84	22.38
GROUP 1-e\$ 29.34	22.38
GROUP 1-f\$ 29.37	22.38
GROUP 2\$ 28.64	22.38
GROUP 3\$ 28.54	22.38
GROUP 4\$ 22.23	22.38
See groups 1-b and 1-d under laborer classificat	ions.
LABORER (GARDENERS,	
HORTICULTURAL & LANDSCAPE	
LABORERS)	
(1) New Construction\$ 28.54	22.31
(2) Establishment Warranty	
Period\$ 22.23	22.31
LABORER (GUNITE)	
GROUP 1\$ 29.75	22.31
GROUP 2\$ 29.25	22.31
GROUP 3\$ 28.66	22.31
GROUP 4\$ 28.54	22.31
LABORER (WRECKING)	
GROUP 1\$ 28.79	22.31
GROUP 2\$ 28.64	22.31
	22.91

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions: A: at demolition site for the salvage of the material.

B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

LABO0073-009 07/01/2017		
CALAVERAS AND SAN JOAQUIN COUNTIES		
Ι	Rates	Fringes
LABORER (Plaster Tender)\$	31.02	22.52
Work on a swing stage scaffold: \$1		
LABO0261-003 06/26/2017		
SAN FRANCISCO AND SAN MATEO COUNTIN	ES	
Ι	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person\$		22.17
Traffic Control Person I\$ Traffic Control Person II\$		22.17 22.17
TRAFFIC CONTROL PERSON I: Layout cushions, construction area and r TRAFFIC CONTROL PERSON II: Insta temporary/permanent signs, marker cushions.	roadside signag llation and rem	ge. noval of
LABO0261-005 06/26/2017		
SAN FRANCISCO AND SAN MATEO COUNTIN	ES	
I	Rates	Fringes
Tunnel and Shaft Laborers:		5
GROUP 1\$	36.60	21.72
GROUP 2\$		21.72
GROUP 3\$ GROUP 4\$		21.72 21.72
GROUP 5\$		21.72
Shotcrete Specialist\$		21.72
TUNNEL AND SHAFT CLASSIFICATIONS		
GROUP 1: Diamond driller; Ground nozzlemen	men; Gunite and	l shotcrete
GROUP 2: Rodmen; Shaft work & ra: excavated ground level)	ise (below actu	al or
GROUP 3: Bit grinder; Blaster, dr Cherry pickermen - where car is i in tunnel; Concrete screedman; Gr Gunite & shotcrete gunman & potma pressure nozzleman; Miner - tunne bottom man on shaft and raise wor slick line; Sandblaster - potman	lifted; Concret rout pumpman ar an; Headermen; el, including t rk; Nipper; Noz	te finisher nd potman; High top and zzleman on

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house GROUP 4: Vibrator operator, pavement breaker; Bull gang muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method) GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman _____ LABO0261-009 06/26/2017 SAN FRANCISCO, AND SAN MATEO COUNTIES Rates Fringes LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:) Construction Specialist Group.....\$ 30.49 22.38 GROUP 1.....\$ 29.79 22.38 GROUP 1-a....\$ 30.01 22.38 GROUP 1-c....\$ 29.84 22.38 GROUP 1-e....\$ 30.34 22.38 GROUP 1-f....\$ 30.37 22.38 22.38 GROUP 2.....\$ 29.64 GROUP 3.....\$ 29.54 22.38 GROUP 4.....\$ 23.23 22.38 See groups 1-b and 1-d under laborer classifications. LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA A:) (1) New Construction.....\$ 29.54 22.31 (2) Establishment Warranty Period.....\$ 23.23 22.31 LABORER (WRECKING - AREA A:) GROUP 1.....\$ 29.79 22.31 GROUP 2.....\$ 29.64 22.31 Laborers: (GUNITE - AREA A:) GROUP 1.....\$ 30.75 22.31 GROUP 2.....\$ 30.25 22.31 GROUP 3....\$ 29.66 22.31 GROUP 4.....\$ 29.54 22.31 FOOTNOTES: Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below. _____ LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions: A: at demolition site for the salvage of the material. B: at the conclusion of a job where the material is to be

salvaged and stocked to be reused on another job. C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

_____ GUNITE LABORER CLASSIFICATIONS GROUP 1: Structural Nozzleman GROUP 2: Nozzleman, Gunman, Potman, Groundman GROUP 3: Reboundman GROUP 4: Gunite laborer _____ WRECKING WORK LABORER CLASSIFICATIONS GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building materials) _____ LABO0261-011 05/01/2017 SAN FRANCISCO AND SAN MATEO COUNTIES: Rates Fringes MASON TENDER, BRICK.....\$ 33.18 21.49 FOOTNOTES: Underground work such as sewers, manholes, catch basins, sewer pipes, telephone conduits, tunnels and cut trenches: \$5.00 per day additional. Work in live sewage: \$2.50 per day additional. _____ LABO0261-014 07/01/2017 SAN FRANCISCO AND SAN MATEO COUNTIES: Rates Fringes PLASTER TENDER.....\$ 34.70 23.11 Work on a swing stage scaffold: \$1.00 per hour additional. _____ LABO0270-003 06/26/2017 AREA A: SANTA CLARA AREA B: MONTEREY, SAN BENITO AND SANTA CRUZ COUNTIES Rates Fringes LABORER (TRAFFIC CONTROL/LANE CLOSURE) Escort Driver, Flag Person 22.17 Area A.....\$ 29.54

Area B\$	28.54	22.17
Traffic Control Person I		
Area A\$	29.84	22.17
Area B\$	28.84	22.17
Traffic Control Person II		
Area A\$	27.34	22.17
Area B\$	26.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0270-004 06/26/2017

MONTEREY, SAN BENITO, SANTA CLARA, AND SANTA CRUZ COUNTIES

		Rates	Fringes
	Shaft Laborers: 1	\$ 36 60	24.83
GROUP	3	\$ 36.37	24.83
GROUP	4	\$ 35.67	24.83
	5 ete Specialist		24.83 24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0270-005 07/01/2017

MONTEREY AND SAN BENITO COUNTIES

LABORER Mason Tender-Brick	\$ 30.45	
LABO0270-007 06/27/2017		
MONTEREY, SAN BENITO, AND SANTA C	RUZ, COUNTIES	
	Rates Fr	ringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B) Construction Specialist Group	\$ 28.79 \$ 29.01 \$ 28.84 \$ 29.34 \$ 29.37 \$ 28.64 \$ 28.54 \$ 22.23 porer classificati \$ 28.54	22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38 22.38
LABORER (GUNITE - AREA B) GROUP 1 GROUP 2 GROUP 3 GROUP 4 LABORER (WRECKING - AREA B) GROUP 1 GROUP 2	\$ 29.25 \$ 28.66 \$ 28.54 \$ 28.79	22.31 22.31 22.31 22.31 22.31 22.31 22.31
FOOTNOTES: Laborers working off or with or scaffolds, belts shall receive a applicable wage rate. This shall entitled to receive the wage rate below.	\$0.25 per hour abo 11 not apply to wo	ove the orkers
LABORER CLASSIFICATIONS		
CONSTRUCTION SPECIALIST GROUP: Chainsaw; Laser beam in connect: Cast-in- place manhole form set Davis trencher - 300 or similar trenchers); Blaster; Diamond dr: Hydraulic drill	ion with laborers' ter; Pressure pipe type (and all sma	work; elayer; ell
GROUP 1: Asphalt spreader boxes	(all types); Bark	o, Wacker

Rates Fringes

and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and riqqinq; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:A: at demolition site for the salvage of the material.B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman GROUP 3: Reboundman GROUP 4: Gunite laborer WRECKING WORK LABORER CLASSIFICATIONS GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building materials) _____ LABO0270-010 06/26/2017 SANTA CLARA COUNTY Rates Fringes LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:) Construction Specialist Group.....\$ 30.49 22.38 22.38 GROUP 1.....\$ 29.79 GROUP 1-a....\$ 30.01 22.38 GROUP 1-c....\$ 29.84 22.38 GROUP 1-e....\$ 30.34 22.38 GROUP 1-f.....\$ 30.37 22.38 GROUP 2....\$ 29.64 22.38 GROUP 3.....\$ 29.54 22.38 GROUP 4.....\$ 23.23 22.38 See groups 1-b and 1-d under laborer classifications. LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA A:) (1) New Construction.....\$ 29.54 22.31 (2) Establishment Warranty Period.....\$ 23.23 22.31 LABORER (GUNITE - AREA A:) GROUP 1.....\$ 30.75 22.31 GROUP 2.....\$ 30.25 22.31 GROUP 3.....\$ 29.66 22.31 GROUP 4.....\$ 29.54 22.31 LABORER (WRECKING - AREA A:) GROUP 1.....\$ 29.79 22.31 GROUP 2.....\$ 29.64 22.31 FOOTNOTES: Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below. _____

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions: A: at demolition site for the salvage of the material.

B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection". _____ GUNITE LABORER CLASSIFICATIONS GROUP 1: Structural Nozzleman GROUP 2: Nozzleman, Gunman, Potman, Groundman GROUP 3: Reboundman GROUP 4: Gunite laborer _____ WRECKING WORK LABORER CLASSIFICATIONS GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building materials) _____ LABO0270-011 07/01/2017 MONTEREY, SAN BENITO, SANTA CRUZ, SANTA CLARA COUNTIES Rates Fringes LABORER (Plaster Tender).....\$ 34.70 21.22 Work on a swing stage scaffold: \$1.00 per hour additional. LABO0294-001 07/01/2017 FRESNO, KINGS AND MADERA COUNTIES Rates Fringes LABORER (Brick) Mason Tender-Brick.....\$ 30.45 21.04 _____ LABO0294-002 06/26/2017 FRESNO, KINGS, AND MADERA COUNTIES Rates Fringes LABORER (TRAFFIC CONTROL/LANE CLOSURE) Escort Driver, Flag Person..\$ 28.54 22.17 Traffic Control Person I....\$ 28.84 22.17 Traffic Control Person II...\$ 26.34 22.17 TRAFFIC CONTROL PERSON I: Layout of traffic control, crash

cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0294-005 06/26/2017

FRESNO, KINGS, AND MADERA COUNTIES

]	Rates	Fringes
GROUP 1 GROUP 2 GROUP 3 GROUP 4	Shaft Laborers: \$ \$	36.60 36.37 36.12 35.67	24.83 24.83 24.83 24.83 24.83
	\$\$ ete Specialist\$		24.83 24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0294-008 06/30/2017

FRESNO, KINGS, AND MADERA COUNTIES

Rates Fringes

22.38

22.38

22.38

LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:) Construction Specialist Group.....\$ 29.49 GROUP 1.....\$ 28.79 GROUP 1-a....\$ 29.01

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

GROUP 1-c\$ 28.84 GROUP 1-e\$ 29.34 GROUP 1-f\$ 29.37 GROUP 2\$ 28.64 GROUP 3\$ 28.54 GROUP 4\$ 22.23	22.38 22.38 22.38 22.38 22.38 22.38 22.38
See groups 1-b and 1-d under laborer classificati	ons.
LABORER (GARDENERS,	
HORTICULTURAL & LANDSCAPE	
LABORERS - AREA B:)	
(1) New Construction\$ 28.54	22.31
(2) Establishment Warranty	
Period\$ 22.23	22.31
LABORER (GUNITE - AREA B:)	
GROUP 1\$ 29.75	22.31
GROUP 2\$ 29.25	22.31
GROUP 3\$ 28.66	22.31
GROUP 4\$ 28.54	22.31
LABORER (WRECKING - AREA B:)	22.91
	22.31
GROUP 1\$ 28.79	
GROUP 2\$ 28.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of

voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:A: at demolition site for the salvage of the material.B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

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LABO0294-010 07/01/2017

CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE Rates Fringes Plasterer tender.....\$ 31.02 22.52 Work on a swing stage scaffold: \$1.00 per hour additional. _____ _____ LABO0294-011 07/01/2017 FRESNO, KINGS, AND MADERA COUNTIES Rates Fringes LABORER (Plaster Tender).....\$ 31.02 22.52 Work on a swing stage scaffold: \$1.00 per hour additional. _____ LABO0304-002 06/26/2017 ALAMEDA COUNTY Rates Fringes LABORER (TRAFFIC CONTROL/LANE CLOSURE) Escort Driver, Flag Person..\$ 29.54 22.17 Traffic Control Person I....\$ 29.84 22.17 Traffic Control Person II...\$ 27.34 22.17 TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage. TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions. _____ LABO0304-003 06/26/2017 ALAMEDA COUNTY Rates Fringes Tunnel and Shaft Laborers: GROUP 1.....\$ 36.60 24.83 GROUP 2.....\$ 36.37 24.83 GROUP 3.....\$ 36.12 24.83 GROUP 4.....\$ 35.67 24.83 GROUP 5.....\$ 35.13 24.83 Shotcrete Specialist.....\$ 37.12 24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0304-004 06/27/2017

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ALAMEDA COUNTY
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	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist		
Group	\$ 30 49	22.38
GROUP 1	•	22.38
GROUP 1-a	•	22.38
GROUP 1-c		22.38
GROUP 1-e	•	22.38
GROUP 1-f	•	22.38
GROUP 2		22.38
GROUP 3		22.38
GROUP 4		22.38
See groups 1-b and 1-d under la		
LABORER (GARDENERS,	aborer classific	ations.
HORTICULTURAL & LANDSCAPE		
LABORERS - AREA A:)		
(1) New Construction	č 20 E1	22.31
(2) Establishment Warranty	.9 29.54	22.31
_	ė <u>12 12</u>	22.31
Period	. 22.23	22.31
LABORER (GUNITE - AREA A:)	¢ 20 75	22.31
GROUP 1		22.31
GROUP 2	•	
GROUP 3	•	22.31
GROUP 4	.\$ 29.54	22.31
LABORER (WRECKING - AREA A:)	*	00.01
GROUP 1		22.31
GROUP 2	.\$ 29.64	22.31
FOOTNOTES:		
Laborers working off or with o	r from bos'n cha	irs, swinging
scaffolds, belts shall receive		

applicable wage rate. This shall not apply to workers

entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:

 A: at demolition site for the salvage of the material. B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job. C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.
The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".
GUNITE LABORER CLASSIFICATIONS
GROUP 1: Structural Nozzleman
GROUP 2: Nozzleman, Gunman, Potman, Groundman
GROUP 3: Reboundman
GROUP 4: Gunite laborer
WRECKING WORK LABORER CLASSIFICATIONS GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building
materials)
LABO0304-005 05/01/2017
ALAMEDA COUNTY
Rates Fringes
Brick Tender\$ 33.18 21.49
FOOTNOTES: Work on jobs where heat-protective clothing is required: \$2.00 per hour additional. Work at grinders: \$.25 per hour additional. Manhole work: \$2.00 per day additional.
LABO0304-008 07/01/2017
ALAMEDA AND CONTRA COSTA COUNTIES:
Rates Fringes
Plasterer tender\$ 34.70 23.11
Work on a swing stage scaffold: \$1.00 per hour additional.
LABO0324-002 06/26/2017

CONTRA COSTA COUNTY

Rates Fringes

LABORER (TRAFFIC CONTROL/LANE CLOSURE) Escort Driver, Flag Person..\$ 29.54 22.17 Traffic Control Person I....\$ 29.84 22.17 Traffic Control Person II...\$ 27.34 22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions

LABO0324-006 06/26/2017

CONTRA COSTA COUNTY

	I	Rates	Fringes
Tunnel and	Shaft Laborers:		
GROUP	1\$	36.60	21.72
GROUP	2\$	36.37	21.72
GROUP	3\$	36.12	21.72
GROUP	4\$	35.67	21.72
GROUP	5\$	35.13	21.72
Shote	rete Specialist\$	37.12	21.72

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0324-012 06/27/2017

CONTRA COSTA COUNTY

I	Rates Fi	ringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:) Construction Specialist		
Group\$		22.38
GROUP 1\$		22.38
GROUP 1-a\$		22.38
GROUP 1-c\$		22.38
GROUP 1-e\$		22.38
GROUP 1-f\$		22.38
GROUP 1-g\$		22.38
GROUP 2\$		22.38
GROUP 3\$		22.38
GROUP 4\$		22.38
See groups 1-b and 1-d under labe	orer classificat:	lons.
LABORER (GARDENERS,		
HORTICULURAL & LANDSCAPE LABORERS - AREA A:)		
(1) New Construction\$	29.54	22.31
(2) Establishment Warranty	00.00	00 01
Period\$ LABORER (GUNITE - AREA A:)	23.23	22.31
GROUP 1\$	30.75	22.31
GROUP 2\$	30.25	22.31
GROUP 3\$	29.66	22.31
GROUP 4\$	29.54	22.31
LABORER (WRECKING - AREA A:)		
GROUP 1\$	29.79	22.31
GROUP 2\$	29.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of

excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 1-g, CONTRA COSTA COUNTY: Pipelayer (including grade checking in connection with pipelaying); Caulker; Bander; Pipewrapper; Conduit layer; Plastic pipe layer; Pressure pipe tester; No joint pipe and stripping of same, including repair of voids; Precast manhole setters, cast in place manhole form setters

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:A: at demolition site for the salvage of the material.B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS GROUP 1: Structural Nozzleman GROUP 2: Nozzleman, Gunman, Potman, Groundman GROUP 3: Reboundman GROUP 4: Gunite laborer _____ WRECKING WORK LABORER CLASSIFICATIONS GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building materials) GROUP 1-g, CONTRA COSTA COUNTY: Pipelayer (including grade checking in connection with pipelaying); Caulker; Bander; Pipewrapper; Conduit layer; Plastic pipe layer; Pressure pipe tester; No joint pipe and stripping of same, including repair of voids; Precast manhole setters, cast in place manhole form setters _____ LABO0324-014 05/01/2017 CONTRA COSTA COUNTY: Rates Fringes Brick Tender.....\$ 33.18 21.49 FOOTNOTES: Work on jobs where heat-protective clothing is required: \$2.00 per hour additional. Work at grinders: \$.25 per hour additional. Manhole work: \$2.00 per day additional. _____ LABO0324-018 07/01/2017 ALAMEDA AND CONTRA COSTA COUNTIES: Rates Fringes Plasterer tender....\$ 34.70 23.11 Work on a swing stage scaffold: \$1.00 per hour additional. _____ LABO1130-002 06/26/2017 MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES Rates Fringes LABORER (TRAFFIC CONTROL/LANE CLOSURE) Escort Driver, Flag Person..\$ 28.54 22.17 Traffic Control Person I....\$ 28.84 22.17 Traffic Control Person II...\$ 26.34 22.17 TRAFFIC CONTROL PERSON I: Layout of traffic control, crash

cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO1130-003 06/26/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:	t	
GROUP 1		24.83 24.83
GROUP 3		24.83
GROUP 4	\$ 35.67	24.83
GROUP 5		24.83
Shotcrete Specialist	\$ 37.12	24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LAB01130-005 07/01/2017

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

Rates Fringes
LABORER
Mason Tender-Brick.....\$ 30.45 21.04
LABO1130-007 06/26/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE , COUNTIES

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

F	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:) Construction Specialist		
Group\$	29.49	22.38
GROUP 1\$		22.38
GROUP 1-a\$		22.38
GROUP 1-c\$	28.84	22.38
GROUP 1-e\$	29.34	22.38
GROUP 1-f\$	29.37	22.38
GROUP 2\$	28.64	22.38
GROUP 3\$	28.54	22.38
GROUP 4\$	22.23	22.38
See groups 1-b and 1-d under labo	orer classifica	ations.
LABORER (GARDENERS,		
HORTICULTURAL & LANDSCAPE		
LABORERS - AREA B:)		
(1) New Construction\$	28.54	22.31
(2) Establishment Warranty		
Period\$	22.23	22.31
LABORER (GUNITE - AREA B:)		
GROUP 1\$	29.75	22.31
GROUP 2\$	29.25	22.31
GROUP 3\$	28.66	22.31
GROUP 4\$	28.54	22.31
LABORER (WRECKING - AREA B:)		
GROUP 1\$	28.79	22.31
GROUP 2\$	28.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive \$0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive \$4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive \$5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive \$.25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:A: at demolition site for the salvage of the material.B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.

C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials) GROUP 2: Semi-skilled wrecker (salvaging of other building materials) _____ LABO1130-008 07/01/2017 CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE Rates Fringes Plasterer tender.....\$ 31.02 22.52 Work on a swing stage scaffold: \$1.00 per hour additional. _____ LAB01130-009 07/01/2017 MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES Rates Fringes LABORER (Plaster Tender).....\$ 31.02 22.52 Work on a swing stage scaffold: \$1.00 per hour additional. _____ PAIN0016-001 01/01/2018 ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN MATEO, SANTA CLARA, AND SANTA CRUZ COUNTIES Rates Fringes Painters:....\$ 40.62 23.83 PREMIUMS: EXOTIC MATERIALS - \$0.75 additional per hour. SPRAY WORK: - \$0.50 additional per hour. INDUSTRIAL PAINTING - \$0.25 additional per hour [Work on industrial buildings used for the manufacture and processing of goods for sale or service; steel construction (bridges), stacks, towers, tanks, and similar structures] HIGH WORK: over 50 feet - \$2.00 per hour additional 100 to 180 feet - \$4.00 per hour additional Over 180 feet - \$6.00 per houir additional _____ PAIN0016-003 01/01/2018 AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO & SANTA CLARA COUNTIES

AREA 2: CALAVERAS, MARIPOA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS & TUOLUMNE COUNTIES

	Rates	Fringes
Drywall Finisher/Taper AREA 1 AREA 2	\$ 41.03	26.74 25.34
PAIN0016-012 01/01/2018		
ALAMEDA, CONTRA COSTA, MARIPOSA SAN FRANCISCO, SAN MATEO, SANTA		
	Rates	Fringes
SOFT FLOOR LAYER	\$ 48.00	26.03
PAIN0016-015 01/01/2018		
CALAVERAS, MARIPOSA, MERCED, SA COUNTIES	AN JOAQUIN, SI	FANISLAUS & TUOLUMNE
	Rates	Fringes
PAINTER Brush	\$ 32.91	19.26
FOOTNOTES: SPRAY/SANDBLAST: \$0.50 addition EXOTIC MATERIALS: \$1.00 addition HIGH TIME: Over 50 ft above additional per hour. 100 to level \$4.00 additional per ho or water level \$6.00 addition	onal per hour. ground or wat 180 ft above our. Over 180	ter level \$2.00 ground or water
PAIN0016-022 01/01/2018		
SAN FRANCISCO COUNTY		
	Rates	Fringes
PAINTER	\$ 44.24	23.83
PAIN0169-001 01/01/2018		
FRESNO, KINGS, MADERA, MARIPOSA	A AND MERCED (COUNTIES:
	Rates	Fringes
GLAZIER	\$ 35.00	26.26
PAIN0169-005 01/01/2018		
ALAMEDA CONTRA COSTA, MONTEREY, MATEO, SANTA CLARA & SANTA CRUZ		SAN FRANCISCO, SAN

	Rates	Fringes
GLAZIER	\$ 46.13	28.04
PAIN0294-004 01/01/2018		
FRESNO, KINGS AND MADERA COUNT	IES	
	Rates	Fringes
PAINTER Brush, Roller Drywall Finisher/Taper		18.11 23.68
FOOTNOTE: Spray Painters & Paperhangers hour. Painters doing Drywall additional per hour. Lead AU \$1.50 additional per hour. I not include work from a lift	Patching rece baters & Sandb High Time - ov	eive \$1.25 plasters receive ver 30 feet (does
PAIN0294-005 01/01/2018		
FRESNO, KINGS & MADERA		
	Rates	Fringes
SOFT FLOOR LAYER	\$ 31.49	20.48
PAIN0767-001 01/01/2018		
CALAVERAS, SAN JOAQUIN, STANIS	LAUS AND TUOLU	JMNE COUNTIES:
	Rates	Fringes
GLAZIER	\$ 34.57	28.25
PAID HOLIDAYS: New Year's Day President's Day, Memorial Day Veteran's Day, Thanksgiving D	y, Independenc	ce Day, Labor Day,
Employee rquired to wear a bo per hour above the basic hou:		
per hour above the basic hou		
per hour above the basic hou: PAIN1176-001 01/01/2017		
per hour above the basic hou: PAIN1176-001 01/01/2017	rly rate at ar	ny elevation.

CLASSIFICATIONS GROUP 1: Striper: Layout and application of painted traffic stripes and marking; hot thermo plastic; tape, traffic stripes and markings GROUP 2: Gamecourt & Playground Installer GROUP 3: Protective Coating, Pavement Sealing _____ PAIN1237-003 01/01/2018 CALAVERAS; SAN JOAQUIN COUNTIES; STANISLAUS AND TUOLUMNE COUNTIES: Rates Fringes SOFT FLOOR LAYER.....\$ 34.81 21.51 ------PLAS0066-002 07/01/2017 ALAMEDA, CONTRA COSTA, SAN MATEO AND SAN FRANCISCO COUNTIES: Rates Fringes PLASTERER.....\$ 40.51 27.13 _____ PLAS0300-001 07/01/2014 Rates Fringes PLASTERER AREA 188: Fresno.....\$ 29.44 22.26 AREA 224: San Benito, Santa Clara, Santa Cruz....\$ 31.59 22.26 AREA 295: Calaveras & San Joaquin Couonties.....\$ 31.41 22.26 AREA 337: Monterey County..\$ 30.52 22.26 AREA 429: Mariposa, Merced, Stanislaus, Tuolumne Counties.....\$ 31.41 22.26 _____ -----PLAS0300-005 07/01/2017 Rates Fringes CEMENT MASON/CONCRETE FINISHER...\$ 39.20 19.71 _____ PLUM0038-001 07/01/2017 SAN FRANCISCO COUNTY Rates Fringes PLUMBER (Plumber, Steamfitter, Refrigeration Fitter)....\$ 70.00 43.24 _____

https://www.wdol.gov/wdol/scafiles/davisbacon/CA29.dvb

PLUM0038-005 07/01/2017

SAN FRANCISCO COUNTY

	Rates	Fringes	
Landscape/Irrigation Fitter (Underground/Utility Fitter)	\$ 59.50	38.24	
* PLUM0062-001 01/01/2018			
MONTEREY AND SANTA CRUZ COUNTIES	5		
	Rates	Fringes	
PLUMBER & STEAMFITTER	\$ 42.30	31.69	
PLUM0159-001 07/01/2017			
CONTRA COSTA COUNTY			
	Rates	Fringes	
Plumber and steamfitter (1) Refrigeration (2) All other work		35.94 34.44	
* PLUM0246-001 01/01/2018			
FRESNO, KINGS & MADERA COUNTIES			
	Rates	Fringes	
PLUMBER & STEAMFITTER	\$ 39.40	30.89	
PLUM0246-004 01/01/2017			
FRESNO, MERCED & SAN JOAQUIN COU	JNIES		
	Rates	Fringes	
PLUMBER (PIPE TRADESMAN)	\$ 13.00	10.74	
<pre>PIPE TRADESMAN SCOPE OF WORK: Installation of corrugated metal piping for drainage, as well as installation of corrugated metal piping for culverts in connection with storm sewers and drains; Grouting, dry packing and diapering of joints, holes or chases including paving over joints, in piping; Temporary piping for dirt work for building site preparation; Operating jack hammers, pavement breakers, chipping guns, concrete saws and spades to cut holes, chases and channels for piping systems; Digging, grading, backfilling and ground preparation for all types of pipe to all points of the jobsite; Ground preparation including ground leveling, layout and planting of shrubbery, trees and ground cover, including watering, mowing, edging, pruning and fertilizing, the breaking of concrete, digging, backfilling and tamping for the preparation and completion of all work in connection with</pre>			

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lawn sprinkler and landscaping; Loading, unloading and

distributing materials at jobsite; Putting away materials in storage bins in jobsite secure storage area; Demolition of piping and fixtures for remodeling and additions; Setting up and tearing down work benches, ladders and job shacks; Clean-up and sweeping of jobsite; Pipe wrapping and waterproofing where tar or similar material is applied for protection of buried piping; Flagman

PLUM0342-001 07/01/2017

ALAMEDA & CONTRA COSTA COUNTIES

	Rates	Fringes
PIPEFITTER CONTRA COSTA COUNTY	\$ 58.10	42.45
PLUMBER, PIPEFITTER,		
STEAMFITTER		
ALAMEDA COUNTY	\$ 58.10	42.45
PLUM0355-004 07/01/2017		

ALAMEDA, CALAVERAS, CONTRA COSTA, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, STANISLAUS, AND TUOLUMNE COUNTIES:

Rates Fringes Underground Utility Worker 15.05 /Landscape Fitter.....\$ 26.85 _____ PLUM0393-001 07/01/2017 SAN BENITO AND SANTA CLARA COUNTIES Rates Fringes PLUMBER/PIPEFITTER.....\$ 60.91 39.58 -----_____ * PLUM0442-001 01/01/2018 CALAVERAS, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE COUNTIES Rates Fringes PLUMBER & STEAMFITTER.....\$ 41.00 29.37 _____ PLUM0467-001 07/01/2017 SAN MATEO COUNTY Rates Fringes Plumber/Pipefitter/Steamfitter...\$ 62.70 34.21 _____ ROOF0027-002 01/01/2017

FRESNO, KINGS, AND MADERA COUNTIES Rates Fringes ROOFER.....\$ 26.01 14.21 FOOTNOTE: Work with pitch, pitch base of pitch impregnated products or any material containing coal tar pitch, on any building old or new, where both asphalt and pitchers are used in the application of a built-up roof or tear off: \$2.00 per hour additional. _____ ROOF0040-002 08/01/2017 SAN FRANCISCO & SAN MATEO COUNTIES: Fringes Rates 18.22 ROOFER.....\$ 37.88 _____ ROOF0081-001 08/01/2017 ALAMEDA AND CONTRA COSTA COUNTIES: Rates Fringes Roofer.....\$ 38.20 16.81 _____ ROOF0081-004 08/01/2017 CALAVERAS, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS AND TUOLUMNE COUNTIES: Rates Fringes ROOFER.....\$ 38.20 16.81 ROOF0095-002 08/01/2017 MONTEREY, SAN BENITO, SANTA CLARA, AND SANTA CRUZ COUNTIES: Fringes Rates ROOFER Journeyman.....\$ 41.56 17.47 Kettle person (2 kettles); Bitumastic, Enameler, Coal Tar, Pitch and Mastic worker.....\$ 42.36 16.42 * SFCA0483-001 01/01/2018 ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES:

Rates

Fringes

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SPRINKLER FITTER (FIRE).....\$ 61.37 29.12 _____ SFCA0669-011 04/01/2017 CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS AND TUOLUMNE COUNTIES: Rates Fringes SPRINKLER FITTER.....\$ 37.20 15.84 _____ SHEE0104-001 01/01/2018 AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO, SANTA CLARA AREA 2: MONTEREY & SAN BENITO AREA 3: SANTA CRUZ Rates Fringes SHEET METAL WORKER AREA 1: Mechanical Contracts under \$200,000....\$ 50.29 37.16 All Other Work.....\$ 57.09 37.79 AREA 2.....\$ 46.97 32.08 AREA 3.....\$ 49.31 29.61 _ _ _ _ SHEE0104-003 07/01/2017 CALAVERAS AND SAN JOAQUIN COUNTIES: Rates Fringes SHEET METAL WORKER.....\$ 39.74 31.50 _____ SHEE0104-005 07/01/2017 MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES: Rates Fringes SHEET METAL WORKER (Excluding metal deck and siding).....\$ 37.67 34.10 _____ SHEE0104-007 07/01/2017 FRESNO, KINGS, AND MADERA COUNTIES: Rates Fringes SHEET METAL WORKER.....\$ 37.49 34.45 _____ -----SHEE0104-015 07/01/2017

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ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLARA AND SANTA CRUZ COUNTIES:

Rates Fringes SHEET METAL WORKER (Metal Decking and Siding only).....\$ 37.53 32.10 _____ SHEE0104-018 07/01/2017 CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS AND TUOLUMNE COUNTIES: Rates Fringes Sheet metal worker (Metal decking and siding only).....\$ 37.53 32.10 TEAM0094-001 07/01/2017 Rates Fringes Truck drivers: GROUP 1.....\$ 30.72 27.47 27.47 GROUP 2.....\$ 31.02 GROUP 3.....\$ 31.32 27.47 GROUP 4....\$ 31.67 27.47 GROUP 5....\$ 32.02 27.47FOOTNOTES: Articulated dump truck; Bulk cement spreader (with or without auger); Dumpcrete truck; Skid truck (debris box); Dry pre-batch concrete mix trucks; Dumpster or similar type; Slurry truck: Use dump truck yardage rate.

Heater planer; Asphalt burner; Scarifier burner; Industrial lift truck (mechanical tailgate); Utility and clean-up truck: Use appropriate rate for the power unit or the equipment utilized.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Dump trucks, under 6 yds.; Single unit flat rack (2axle unit); Nipper truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump machine; Fork lift and lift jitneys; Fuel and/or grease truck driver or fuel person; Snow buggy; Steam cleaning; Bus or personhaul driver; Escort or pilot car driver; Pickup truck; Teamster oiler/greaser and/or serviceperson; Hook tender (including loading and unloading); Team driver; Tool room attendant (refineries)

GROUP 2: Dump trucks, 6 yds. and under 8 yds.; Transit mixers, through 10 yds.; Water trucks, under 7,000 gals.; Jetting trucks, under 7,000 gals.; Single-unit flat rack (3-axle unit); Highbed heavy duty transport; Scissor truck; Rubber-tired muck car (not self-loaded); Rubber-tired truck jumbo; Winch truck and "A" frame drivers; Combination winch truck with hoist; Road oil truck or bootperson; Buggymobile; Ross, Hyster and similar straddle carriers; Small rubber-tired tractor

GROUP 3: Dump trucks, 8 yds. and including 24 yds.; Transit mixers, over 10 yds.; Water trucks, 7,000 gals. and over; Jetting trucks, 7,000 gals. and over; Vacuum trucks under 7500 gals. Trucks towing tilt bed or flat bed pull trailers; Lowbed heavy duty transport; Heavy duty transport tiller person; Self- propelled street sweeper with self-contained refuse bin; Boom truck - hydro-lift or Swedish type extension or retracting crane; P.B. or similar type self-loading truck; Tire repairperson; Combination bootperson and road oiler; Dry distribution truck (A bootperson when employed on such equipment, shall receive the rate specified for the classification of road oil trucks or bootperson); Ammonia nitrate distributor, driver and mixer; Snow Go and/or plow

GROUP 4: Dump trucks, over 25 yds. and under 65 yds.; Water pulls - DW 10's, 20's, 21's and other similar equipment when pulling Aqua/pak or water tank trailers; Helicopter pilots (when transporting men and materials); Lowbedk Heavy Duty Transport up to including 7 axles; DW10's, 20's, 21's and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers; Vacuum Trucks 7500 gals and over and truck repairman

GROUP 5: Dump trucks, 65 yds. and over; Holland hauler; Low bed Heavy Duty Transport over 7 axles

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

> Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage

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payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

ATTACHMENT A SECTION 14. FEDERAL REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION PROJECTS

GENERAL.—The work herein proposed will be financed in whole or in part with Federal funds, and therefore all of the statutes, rules and regulations promulgated by the Federal Government and applicable to work financed in whole or in part with Federal funds will apply to such work. The "Required Contract Provisions, Federal-Aid Construction Contracts, "Form FHWA 1273, are included in this Section 14. Whenever in said required contract provisions references are made to "SHA contracting officer," "SHA resident engineer," or "authorized representative of the SHA," such references shall be construed to mean "Engineer" as defined in Section 1-1.18 of the Standard Specifications.

PERFORMANCE OF PREVIOUS CONTRACT.—In addition to the provisions in Section II, "Nondiscrimination," and Section VII, "Subletting or Assigning the Contract," of the required contract provisions, the Contractor shall comply with the following:

The bidder shall execute the CERTIFICATION WITH RE-GARD TO THE PERFORMANCE OF PREVIOUS CON-TRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS located in the proposal. No request for subletting or assigning any portion of the contract in excess of \$10,000 will be considered under the provisions of Section VII of the required contract provisions unless such request is accompanied by the CERTIFICATION referred to above, executed by the proposed subcontractor.

NON-COLLUSION PROVISION.—The provisions in this section are applicable to all contracts except contracts for Federal Aid Secondary projects.

Title 23, United States Code, Section 112, requires as a condition precedent to approval by the Federal Highway Administrator of the contract for this work that each bidder file a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid. A form to make the non-collusion affidavit statement required by Section 112 as a certification under penalty of perjury rather than as a sworn statement as permitted by 28, USC, Sec. 1746, is included in the proposal.

PARTICIPATION BY DISADVANTAGED BUSINESS EN-TERPRISES IN SUBCONTRACTING.—Part 26, Title 49, Code of Federal Regulations applies to this Federal-aid project. Pertinent sections of said Code are incorporated in part or in its entirety within other sections of these special provisions.

Schedule B-Information for Determining Joint Venture Eligibility (This form need not be filled in if all joint venture firms are DBE owned.)

1. Name of joint venture _____

2. Address of joint venture

3. Phone number of joint venture

4. Identify the firms which comprise the joint venture. (The DBE partner must complete Schedule A.)

a. Describe the role of the DBE firm in the joint venture.

b. Describe very briefly the experience and business qualifications of each non-DBE joint venturer:

5. Nature of the joint venture's business

6. Provide a copy of the joint venture agreement.

7. What is the claimed percentage of DBE ownership?

8. Ownership of joint venture: (This need not be filled in if described in the joint venture agreement, provided by question 6.).

- a. Profit and loss sharing.
- b. Capital contributions, including equipment.
- c. Other applicable ownership interests.

9. Control of and participation in this contract. Identify by name, race, sex, and "firm" those individuals (and their titles) who are responsible for day-to-day management and policy decision making, including, but not limited to, those with prime responsibility for:

a. Financial decisions

b. Management decisions, such as:

1. Estimating

2. Marketing and sales

3. Hiring and firing of management personnel

4. Purchasing of major items or supplies

c. Supervision of field operations

Note.—If, after filing this Schedule B and before the completion of the joint venture's work on the contract covered by this regulation, there is any significant change in the information submitted, the joint venture must inform the grantee, either directly or through the prime contractor if the joint venture is a subcontractor.

Affidavit

"The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the terms and operation of our joint venture and the intended participation by each joint venturer in the undertaking. Further, the undersigned covenant and agree to provide to grantee current, complete and accurate information regarding actual joint venture work and the payment therefor and any proposed changes in any of the joint venture arrangements and to permit the audit and examination of the books, records and files of the joint venture, or those of each joint venturer relevant to the joint venture, by authorized representatives of the grantee or the Federal funding agency. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under Federal or State laws concerning false statements."

Name of Firm	Name of Firm
Signature	Signature
Name	Name
Title	Title
Date	Date
Date	
State of	
County of	
On this day of	. 19 before me
appeared (Name)	
known, who, being duly sworn, di	
davit, and did state that he or she	000
(Name of firm)	
affidavit and did so as his or her fre	
Notary Public	
Commission expires	
[Seal]	
Date	
State of	
County of	
On this day of	
appeared (Name)	
who, being duly sworn, did execute	
did state that he or she was prope	erly authorized by (Name of
firm)	to execute the affidavit
and did so as his or her free act and	
Notary Public	
Commission expires	

[Seal]

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid designbuild contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-thejob training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and nonminority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on <u>Form FHWA-1391</u>. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-ofway of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than guarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federallyassisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency...

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract. (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30. d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated

damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

 the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project, and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federalaid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

 Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<u>https://www.epls.gov/</u>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

The contractor agrees – (1) To utilize privately owned United State-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for

Use of United States –flag vessels:

dry bulk carriers, dry cargo liners, and tankers) involved,

whenever shipping any equipment, material, or commodities pursuant to this contract, to the

extent such vessels are available at fair and reasonable rates for Unites States-flag commercial

vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean billof-lading in English

for each shipment of cargo described in paragraph (1) of this section to both the Contracting

Officer (through the prime contractor in the case of subcontractor bills-of lading) and to the

Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Female and Minority Goals

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed \$10,000.

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

	Minority Utilization Goals	
	Economic Area	Goal (Percent)
174	Redding CA: Non-SMSA Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehema	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA	28.9
	CA Monterey 7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo	25.6
	7400 San Jose, CA CA Santa Clara, CA	19.6
	7485 Santa Cruz, CA CA Santa Cruz 7500 Santa Rosa	14.9
	CA Sonoma 8720 Vallejo-Fairfield-Napa, CA	9.1
	CA Napa; CA Solano Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	17.1
1.77		
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA	16.1
	CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	14.3
178	Stockton-Modesto, CA:	
	SMSA Counties: 5170 Modesto, CA CA Stanislaus	12.3
	8120 Stockton, CA CA San Joaquin	24.3
	Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Toulumne	19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA	19.1
	CA Kern 2840 Fresno, CA CA Fresno	26.1
	Non-SMSA Counties:	23.6

	CA Kings; CA Madera; CA Tulare	
180	Los Angeles, CA:	
	SMSA Counties:	
	0360 Anaheim-Santa Ana-Garden Grove, CA	11.9
	CA Orange	
	4480 Los Angeles-Long Beach, CA	28.3
	CA Los Angeles	
	6000 Oxnard-Simi Valley-Ventura, CA	21.5
	CA Ventura	
	6780 Riverside-San Bernardino-Ontario, CA	19.0
	CA Riverside; CA San Bernardino	
	7480 Santa Barbara-Santa Maria-Lompoc, CA	19.7
	CA Santa Barbara	
	Non-SMSA Counties	24.6
	CA Inyo; CA Mono; CA San Luis Obispo	
181	San Diego, CA:	
	SMSA Counties	
	7320 San Diego, CA	16.9
	CA San Diego	
	Non-SMSA Counties	18.2
	CA Imperial	

For each July during which work is performed under the contract, you and each non-material-supplier subcontractor with a subcontract of \$10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

Training

This section applies if a number of trainees or apprentices is specified in the special provisions. As part of your equal opportunity affirmative action program, provide on-the-job training to develop full

journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a contract part, determine how many trainees or apprentices are to be trained by the subcontractor.

Include these training requirements in your subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area. Before starting work, submit to the City/County of :

- 1. Number of apprentices or trainees to be trained for each classification
- 2. Training program to be used
- 3. Training starting date for each classification

Obtain the City/County of _____'s approval for this submitted information before you start work. The City/County of _____ credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeymen status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

Do not employ as an apprentice or trainee an employee:

- 1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
- 2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

Ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions. In your training program, establish the minimum length and training type for each classification. The City/County of and FHWA approves a program if one of the following is met:

- 1. It is calculated to:
 - 1.1. Meet the your equal employment opportunity responsibilities
 - 1.2. Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
- 2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and it is administered in a way consistent with the equal employment responsibilities of federal-aid highway construction contracts

Obtain the State's approval for your training program before you start work involving the classification covered by the program.

Provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The City/County of ______ reimburses you 80 cents per hour of training given an employee on this contract under an approved training program:

- 1. For on-site training
- 2. For off-site training if the apprentice or trainee is currently employed on a federal-aid project and you do at least one of the following:
 - 2.1. Contribute to the cost of the training
 - 2.2. Provide the instruction to the apprentice or trainee
 - 2.3. Pay the apprentice's or trainee's wages during the off-site training period
- 3. If you comply with this section.

Each apprentice or trainee must:

- 1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
- 2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

Furnish the apprentice or trainee:

- 1. Copy of the program you will comply with in providing the training
- 2. Certification showing the type and length of training satisfactorily completed

Maintain records and submit reports documenting your performance under this section.

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(To be used, when applicable, in Federal-aid projects. Required for Federal Highway Projects with 100 or more working days. Calculate number of trainees as follows: Per LAPM, Chapter 12, Plans, Specs & Estimates

FEDERAL TRAINEES (ON-THE-JOB TRAINING)

On selected federal-aid highway construction projects, "Federal Trainee" or "On-the-Job (OJT) Training" special provisions (included in Exhibit 12-E, Attachment N) must be included in the contract provisions to establish the number of trainees for the construction contract.

The main objectives of the Federal Trainee/OJT Program are to:

- Provide training for women and minorities which will upgrade their job skills, thereby increasing their access to higher-paying trade jobs and journeyman-level positions and
- Ensure that a diverse work force will meet future labor needs in the construction industry.

Filling training positions on each project must focus on hiring women and minorities, but not exclude anyone. If a contractor cannot meet the OJT objectives, direct recruitment efforts must be documented to show an effort at OJT compliance.

The major components of an OJT program include:

- The local agency must include the required federal training special provisions in the PS&E package if the project size and duration warrant an OJT program.
- The local agency should select contracts that contribute to the "Contract Training Goals." These contracts must show the number of trainees, number of trainees upgraded to journeyman and level of skills.
- The local agency must review the training programs proposed by contractors. Approval or rejection is based on the legitimacy of the job-skill classifications proposed and the number of training hours specified.
- Caltrans must determine if statewide OJT is effective.
- The Contractor is responsible for recruitment and selection of trainees.
- The Contractor must evaluate training based on an approved training program.
- The contractor shall report the number of trainees and jobs using Form PR1391 "Federal-aid Highway Construction Contractors EEO Report" to the local agency. The local agency shall forward Form PR1391 to the Caltrans District Labor Compliance Officer (see Exhibit 16-O of this manual).
- OJT provision costs are reimbursed by the FHWA in accordance with the Federal Requirement Training Special Provisions" included in selected contracts. Required trainees/apprentices are to be funded on the bidding schedule or by change order at \$0.80/hour; or the training program can be a bid item with the same reimbursement ratio as the construction project. OJT support services include recruiting, counseling, remedial training, and OJT program administration by others.
- If the Contractor does not show a good faith effort to provide acceptable training to the trainees specified, a sanction may be applied. Sanctions may include withholding progress payments if effective on-the-job training is not provided.

In California, federal "trainees" are considered registered apprentices. There are relatively few crafts in highway work, which utilize apprentices—bricklayers, carpenters, cement masons, electricians, equipment operators, ironworkers, pile bucks, and a few others. There are no apprentice teamsters or laborers. The ratio of journeymen to apprentices is generally 5 to 1.

With these thoughts in mind, the number of trainees established for a project should be determined by examining the extent of only that work which will be done by the apprenticeable crafts. The following procedure may be used as a guide for establishing the number of trainees for a federal-aid project.

- 1. If the job has less than 100 working days---no trainees.
- 2. Add the individual totals for the following items in the Engineer's Estimate:
 - • Excavation of all kinds
 - • Embankment and backfill (but not imported borrow)
 - • Portland cement concrete, all classes except precast items
 - • Bar reinforcing steel and prestressing steel
 - • Drive piling
 - • Sound walls, masonry blocks
 - • Retaining walls, bin walls, etc.
 - • Concrete box culverts
 - • Highway lighting
 - • Signal systems, loop detectors
 - • Electrical work for pumps, landscaping, etc.
 - • Erect structural steel (but not "Furnish")
 - • L.S. items for buildings, restrooms, etc.
- 3. Using the total obtained above, determine the number of trainees from the following table:

Number of Federal Trainees

5 Value	No. Trainees	\$ Value	No. Trainees
Under \$200,000	0	\$3,000,000	7
400,000	1	4,000,000	8
700,000	2	5,000,000	9
1,000,000	3	6,500,000	10
1,500,000	4	8,000,000	11
2,000,000	5	10,000,000	12
2,500,000	6		

)

\$

*Insert number of trainees.

FEDERAL REQUIREMENT TRAINING SPECIAL PROVISIONS

FEDERAL REQUIREMENT TRAINING SPECIAL

PROVISION. -- As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training to develop full journeymen in the types of trades or job classification involved.

The goal for the number of trainees or apprentices to be trained under the requirements of this special provision will be

In the event the Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees or apprentices are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of trainees or apprentices in each occupation shall be in their first year of apprenticeship or training.

Over \$10,000,000 add 1 trainee per \$5,000,000

The number of trainees or apprentices shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing work, the Contractor shall submit to the Department for approval the number of trainees or apprentices to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee or apprentice employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees or apprentices as provided hereinafter.

Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority and women trainees or apprentices (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees or apprentices) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not. No employee shall be employed as a trainee or apprentice in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by both the Department and the Federal Highway Administration. The Department and the Federal Highway Administration will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee or apprentice for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with the State of California, Department of Industrial Relations, Division of Apprenticeship Standards recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerktypists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some

offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training. Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees or apprentices are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or apprentice or pays the trainee's or apprentice's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee or apprentice as a journeyman, is caused by the

Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee or apprentice will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees or apprentices be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees or apprentices specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Only trainees or apprentices registered in a program approved by the State of California's State Administrator of Apprenticeship may be employed on the project and said trainees or apprentices shall be paid the standard wage specified under the regulations of the craft or trade at which they are employed.

The Contractor shall furnish the trainee or apprentice a copy of the program he will follow in providing the training. The Contractor shall provide each trainee or apprentice with a certification showing the type and length of training satisfactorily completed. The Contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

EXHIBIT 12-B BIDDER'S LIST OF SUBCONTRACTORS (DBE AND NON-DBE)

The bidder shall list all subcontractors (both DBE and non-DBE) in accordance with Title 49, Section 26.11 of the Code of Federal Regulations. This listing is required in addition to listing DBE Subcontractors elsewhere in the proposal. Photocopy this form for additional firms.

Firm Name/ Address/ City, State, ZIP Name City State ZIP Name Address	Phone/ Fax Fax Phone Fax	Annual Gross Receipts < \$1 million < \$10 million < \$15 million > \$15 million < \$10 million < \$115 million < \$15 million	Description of Portion of Work to be Performed	Local Agency Use Only Certified DBE?) Certified DBE?) PSS If YES Age of Firm (Yrs.) Age of Firm (Vrs.) If YES Age of Firm (Vrs.)
	Phone	001100 C 16 C 10 C 10 C 10 C 10 C 10 C 1		The second secon
	Fax	< \$15 million		Age of Firm (Yrs.)
	Phone Fax	< \$31 million < \$5 million < \$10 million < \$15 million > \$15 million		If YES list DBE #: Age of Firm (Yrs.)

Distribution: 1) Original - Local Agency File

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EXHIBIT 17-F FINAL REPORT-UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE) AND FIRST-TIER SUBCONTRACTORS

1. Local Age	1. Local Agency Contract Number	2. Federal-	2. Federal-Aid Project Number	3. Local Agency	٨			4. Contract Completion Date	mpletion Date
5. Contractor/Consultant	r/Consultant		6. Business Address				7. Final Contract Amount	act Amount	
8. Contract	9. Description of Work, Service, or	c, or	10. Company Name and	pu	11. DBE	12. Contract Payments	Payments	13. Date	14. Date of
Item Number	Materials Supplied		Business Address		Certification Number	Non-DBE	DBE	work Completed	Final Payment
15. ORIGINA	15. ORIGINAL DBE COMMITMENT AMOUNT	\$			16. TOTAL				
List all first-tier award, provide	 subcontractors/subconsultants and DBE comments on an additional page. List a 	Es regardless of ctual amount pe	List all first-tier subcontractors/subconsultants and DBEs regardless of tier whether or not the firms were originally listed for goal credit. If actual DBE utilization (or item of work) was different than that approved at the time of award, provide comments on an additional page. List actual amount paid to each entity. If no subconsultants were used on the contract, indicate on the form.	lly listed for goal crec oconsultants were us	lit. If actual DBE utiliz: ed on the contract, in	ation (or item of wou dicate on the form.	rk) was different tl	han that approved :	at the time of
			I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT	MATION IS COMPL	ETE AND CORRECT				
17. Contracto	17. Contractor/Consultant Representative's Signature		18. Contractor/Consultant Representative's Name	tative's Name		19. Phone		20. Date	
	ICERI	ПЕҮ ТНАТ ТНЕ	I CERTIFY THAT THE CONTRACTING RECORDS AND ON-SITE PERFORMANCE OF THE DBE(S) HAS BEEN MONITORED	SITE PERFORMANC	E OF THE DBE(S) H	AS BEEN MONITO	RED		
21. Local Ag	21. Local Agency Representative's Signature		22. Local Agency Representative's Name	lame		23. Phone		24. Date	
DISTRIBUTIO	DISTRIBUTION: Original – Local Agency, Copy – Caltrans District Local Assistance	rans District Lo	cal Assistance Engineer. Include with Final Report of Expenditures	al Report of Expendi	ures				
ADA NOTICE:	ADA NOTICE: For individuals with sensory disabilities, this document is available in Management, 1120 N Street, MS-89, Sacramento, CA 95814.	, this document acramento, CA	is available in alternate formats. For information, call (916) 445-1233, Local Assistance Procedures Manual TTY 711, or write to Records and Forms 95814.	mation, call (916) 44	.5-1233, Local Assista	nce Procedures Ma	anual TTY 711, or	· write to Records a	nd Forms

INSTRUCTIONS – FINAL REPORT-UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE) AND FIRST-TIER SUBCONTRACTORS

1. Local Agency Contract Number - Enter the Local Agency contract number or identifier.

2. Federal-Aid Project Number - Enter the Federal-Aid Project Number.

3. Local Agency - Enter the name of the local or regional agency that is funding the contract.

4. Contract Completion Date - Enter the date the contract was completed.

5. Contractor/Consultant - Enter the contractor/consultant's firm name.

6. Business Address - Enter the contractor/consultant's business address.

7. Final Contract Amount - Enter the total final amount for the contract.

8. Contract Item Number - Enter contract item for work, services, or materials supplied provided. Not applicable for consultant contracts.

9. Description of Work, Services, or Materials Supplied - Enter description of work, services, or materials provided. Indicate all work to be performed by DBEs including work performed by the prime contractor/consultant's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.

10. Company Name and Business Address - Enter the name, address, and phone number of all subcontracted contractors/consultants. Also, enter the prime contractor/consultant's name and phone number, if the prime is a DBE.

11. DBE Certification Number - Enter the DBE's Certification Identification Number. Leave blank if subcontractor is not a DBE.

12. Contract Payments - Enter the subcontracted dollar amount of the work performed or service provided. Include the prime contractor/consultant if the prime is a DBE. The Non-DBE column is used to enter the dollar value of work performed by firms that are not certified DBE or for work after a DBE becomes decertified.

13. Date Work Completed - Enter the date the subcontractor/subconsultant's item work was completed.

14. Date of Final Payment - Enter the date when the prime contractor/consultant made the final payment to the subcontractor/subconsultant for the portion of work listed as being completed.

15. Original DBE Commitment Amount - Enter the "Total Claimed DBE Participation Dollars" from Exhibits 15-G or 10-O2 for the contract.

16. Total - Enter the sum of the "Contract Payments" Non-DBE and DBE columns.

17. Contractor/Consultant Representative's Signature - The person completing the form on behalf of the contractor/consultant's firm must sign their name.

18. Contractor/Consultant Representative's Name - Enter the name of the person preparing and signing the form.

19. Phone - Enter the area code and telephone number of the person signing the form.

20. Date - Enter the date the form is signed by the contractor's preparer.

21. Local Agency Representative's Signature - A Local Agency Representative must sign their name to certify that the contracting records and on-site performance of the DBE(s) has been monitored.

22. Local Agency Representative's Name - Enter the name of the Local Agency Representative signing the form.

23. Phone - Enter the area code and telephone number of the person signing the form.

24. Date - Enter the date the form is signed by the Local Agency Representative.

EXHIBIT 17-O DISADVANTAGED BUSINESS ENTERPRISES (DBE) CERTIFICATION STATUS CHANGE

4. Contract Completion Date	act Amount	13. Comments								17. Date		21. Date
	7. Final Contract Amount	13. 0								16. Phone	EEN MONITORED	20. Phone
		12. Certification/ Decertification Date (Letter Attached)							E AND CORRECT	lame	F THE DBE(S) HAS B	
3. Local Agency	_	11. Amount Paid While Certified							THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT	15. Contractor/Consultant Representative's Name	N-SITE PERFORMANCE O	presentative's Name
Number	6. Business Address	10. DBE Certification Number						indicate on the form.	/ THAT THE ABOVE INFC	15. Contractor/Consu	TING RECORDS AND ON	19. Local Agency Representative's Name
2. Federal-Aid Project Number	6. Bu	ormation						ocontractors/subconsultants	I CERTIFY	lature	I CERTIFY THAT THE CONTRACTING RECORDS AND ON-SITE PERFORMANCE OF THE DBE(S) HAS BEEN MONITORED	
1. Local Agency Contract Number	/Consultant	9. DBE Contact Information						If there were no changes in the DBE certification of subcontractors/subconsultants, i		14. Contractor/Consultant Representative's Signature	ICERT	18. Local Agency Representative's Signature
1. Local Age	5. Contractor/Consultant	8. Contract Item Number						If there were no		14. Contracto		18. Local Ag

ADA NOTICE: For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 445-1233, Local Assistance Procedures Manual TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

DISTRIBUTION: Original – Local Agency, Copy – Caltrans District Local Assistance Engineer. Include with Final Report of Expenditures

INSTRUCTIONS –DISADVANTAGED BUSINESS ENTERPRISES (DBE) CERTIFICATION STATUS CHANGE

1. Local Agency Contract Number - Enter the Local Agency contract number or identifier.

2. Federal-Aid Project Number - Enter the Federal-Aid Project Number.

3. Local Agency - Enter the name of the local or regional agency that is funding the contract.

4. Contract Completion Date - Enter the date the contract was completed.

5. Contractor/Consultant - Enter the contractor/consultant's firm name.

6. Business Address - Enter the contractor/consultant's business address.

7. Final Contract Amount - Enter the total final amount for the contract.

8. Contract Item Number - Enter contract item for work, services, or materials supplied provided. Not applicable for consultant contracts.

9. DBE Contact Information - Enter the name, address, and phone number of all DBE subcontracted contractors/consultants.

10. DBE Certification Number - Enter the DBE's Certification Identification Number.

11. Amount Paid While Certified - Enter the actual dollar value of the work performed by those subcontractors/subconsultants during the time period they are certified as a DBE.

12. Certification/Decertification Date (Letter Attached) - Enter either the date of the Decertification Letter sent out by the Office of Business and Economic Opportunity (OBEO) or the date of the Certification Certificate mailed out by OBEO.

13. Comments - If needed, provide any additional information in this section regarding any of the above certification status changes.

14. Contractor/Consultant Representative's Signature - The person completing the form on behalf of the contractor/consultant's firm must sign their name.

15. Contractor/Consultant Representative's Name - Enter the name of the person preparing and signing the form.

16. Phone - Enter the area code and telephone number of the person signing the form.

17. Date - Enter the date the form is signed by the contractor's preparer.

18. Local Agency Representative's Signature - A Local Agency Representative must sign their name to certify

that the contracting records and on-site performance of the DBE(s) has been monitored.

19. Local Agency Representative's Name - Enter the name of the Local Agency Representative signing the form.

20. Phone - Enter the area code and telephone number of the person signing the form.

21. Date - Enter the date the form is signed by the Local Agency Representative.

MONTHLY DBE TRUCKING VERIFICATION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CP-CEM-2404(F) (NEW 12/99)

NTRACT NO.			MONTH				YEAR	
Truck Owner	DBE Cert. No.	Company Name and Address	Truck No.	California Hwy. Patrol CA No.	Commission Or Amount Paid*	Date Paid	Lease Arrangement (\f if applicable)	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
					\$		Lease Agreement with Non-DBE with DBE	
			TOTAL	AMOUNT PAID	\$			
ME CONTRACTOR			BUSINESS ADDRI	ESS	L		BUSINESS PHONE NO	
lpon request all Leo	ase Agreements sh	all be made available, in acc	cordance with the S		CORRECT			
	TATIVE'S SIGNATURE		TITLE				DATE	-

Form CP-CEM 2404 (F)(NEW 12/99) MONTHLY DBE TRUCKING VERIFFICATION

The top of Form CEM-2404(F) contains boxes to put in the Contract Number, the Month of the reporting period and the Year of the reporting period.

The Form CEM-2404(F) has a column to enter the name of the Truck Owner, the DBE Cert. No. (if DBE certified) and the Name and Address of the trucking company. The Form CEM-2404(F) also requires the Truck No. and the California Highway Patrol CA No.

Form CEM-2404(F) is to be submitted prior to the 15th of each month and must show the dollar amount paid to the DBE trucking company(s) for trucking work performed by DBE certified trucks and for any fees or commissions of nonDBE trucks utilized each month on the project. The amount paid to each trucking company is to be entered in the column called "Commission or Amount Paid," in accordance with the Special Provisions Section 5-1.X.

Payment information is derived using the following:

- 1.) 100% for the trucking services provided by the DBE using trucks it owns, operates and insures.
- 2.) 100% for the trucking services provided by the trucks leased from other DBE firms.
- 3.) The fee or commission paid to nonDBEs for the lease of trucks. The Prime does not receive 100% credit for these services because they are not provided by a DBE company.

The total dollar figure of this column is to be placed in the box labeled "Total Amount Paid." The column "Date Paid" requires a date that each trucking company is paid for services rendered. The next column contains information that must be completed if a lease arrangement is applicable. Located at the bottom of the form is a space to put the name of the "Prime Contractor," their "Business Address" and their "Business Phone No."

At the bottom of the form there is a space for the Contractor or designee "Contractor Representative's Signature, Title and Date" certifying that the information provided on the form is complete and correct.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION SUBCONTRACTING REQUEST

CEM-1201 (REV. 5/2012)

REQUEST NUMBER

				COUNTY	R	DUTE
BUSINESS ADDRESS				CONTRACT NUM	MBER	
CITY AND STATE		ZIP	CODE	FEDERAI-AID PF	ROJECT NUMBER. (from special	provisions)
	NTRACTORS ess Address, Phone)	BID ITEM NUMBER(S)	PERCENTAGE OF BID ITEM SUBCONTRACTED	CHECK IF: (See Categories Below) 1 2 3	DESCRIBE WORK WHEN LESS THAN 100% OF WORK IS SUBCONTRACTI	DOLLAR AMOUNT BASED ON ED BID AMOUNT
-		_				
		-				
		-				
ategories	1 Specialty	21	isted Under Fair P	racticos Act	3 Certified DBE/UDB	E/DVBE
certify that: The <i>Standard Specif</i> If applicable, (federal	1 Specialty <i>fications</i> for labor set forth in 1-aid projects only) Section 1 ted in any lower-tier subcom	the contract appl 4 (federal require	ments) of the special p	vork. rovisions has been inse		E/DVBE
certify that: The <i>Standard Specif</i> If applicable, (federal and will be incorporal	<i>fications</i> for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont	the contract appl 4 (federal require	y to the subcontracted ments) of the special p	vork. rovisions has been inse	rted in the subcontracts d work noted above.	E/DVBE
certify that: The Standard Specif If applicable, (federal and will be incorporal ONTRACTOR'S SIGN/	<i>fications</i> for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont	the contract appl 4 (federal require tract. Written con	y to the subcontracted ments) of the special p	vork. rovisions has been inse	rted in the subcontracts d work noted above.	
eertify that: The Standard Specif If applicable, (federal and will be incorporal ONTRACTOR'S SIGN/ his section is to be c	<i>fications</i> for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE	the contract appl 4 (federal require tract. Written con	y to the subcontracted ments) of the special p	vork. rovisions has been inse	rted in the subcontracts d work noted above.	
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certify that: The Standard Specif If applicable, (federal and will be incorporat ONTRACTOR'S SIGNA his section is to be c Total of bid items Specialty items previ	fications for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE	the contract appl 4 (federal require tract. Written con t engineer. e, see Note in the	y to the subcontracted ments) of the special p tracts have been exect	work. rovisions has been inse ted for the subcontracte	rted in the subcontracts d work noted above.	
certify that: The Standard Specifi If applicable, (federal and will be incorporal ONTRACTOR'S SIGNA his section is to be c Total of bid items Specialty items previ Specialty items this r	fications for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE completed by the residen	the contract appl 4 (federal require tract. Written con t engineer. e, see Note in the	y to the subcontracted ments) of the special p tracts have been exect	work. rovisions has been inser ted for the subcontracte	rted in the subcontracts d work noted above.	
certify that: The Standard Specifi If applicable, (federal and will be incorporal ONTRACTOR'S SIGN/ his section is to be c Total of bid items Specialty items previ Specialty items this r Total (lines 2 + 3)	fications for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE completed by the residen	the contract appl 4 (federal require tract. Written con t engineer. e, see Note in the ote in the instruction	y to the subcontracted ments) of the special p tracts have been exect	vork. rovisions has been insei ted for the subcontracte \$ \$	rted in the subcontracts d work noted above.	
certify that: The Standard Specif If applicable, (federal and will be incorporat ONTRACTOR'S SIGNA his section is to be c Total of bid items Specialty items previ Specialty items this r Total (lines 2 + 3) Contractor must perfe	fications for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE completed by the residen iously approved (if applicable request (if applicable, see No	the contract appl 4 (federal require tract. Written con t engineer. e, see Note in the ote in the instruction	y to the subcontracted ments) of the special p tracts have been execu instructions)	vork. rovisions has been insei ted for the subcontracte \$ \$	tted in the subcontracts d work noted above.	
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If applicable, (federal and will be incorporat CONTRACTOR'S SIGNA This section is to be c 1. Total of bid items 2. Specialty items previ 3. Specialty items this r 4. Total (lines 2 + 3) 5. Contractor must perfe 5. Bid items previously 7. Bid items subcontrac 3. Total (lines 6 + 7)	fications for labor set forth in I-aid projects only) Section 1 ted in any lower-tier subcont ATURE completed by the residen cously approved (if applicable request (if applicable, see No form with own forces (lines 1 subcontracted cted (this request) tractor to perform (line 1 min	the contract appl 4 (federal require tract. Written con t engineer. e, see Note in the ote in the instruction minus 4) x	y to the subcontracted ments) of the special p tracts have been exect instructions) ons) %	vork. rovisions has been insei ted for the subcontracte \$	rted in the subcontracts ad work noted above.	

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS

All first-tier subcontractors must be included on a subcontracting request.

Before subcontracting work starts, the contractor will submit an original CEM-1201 according to the *Standard Specifications*. After approval, the RE returns the original to the contractor and complete the remaining distribution as listed on the bottom of the form.

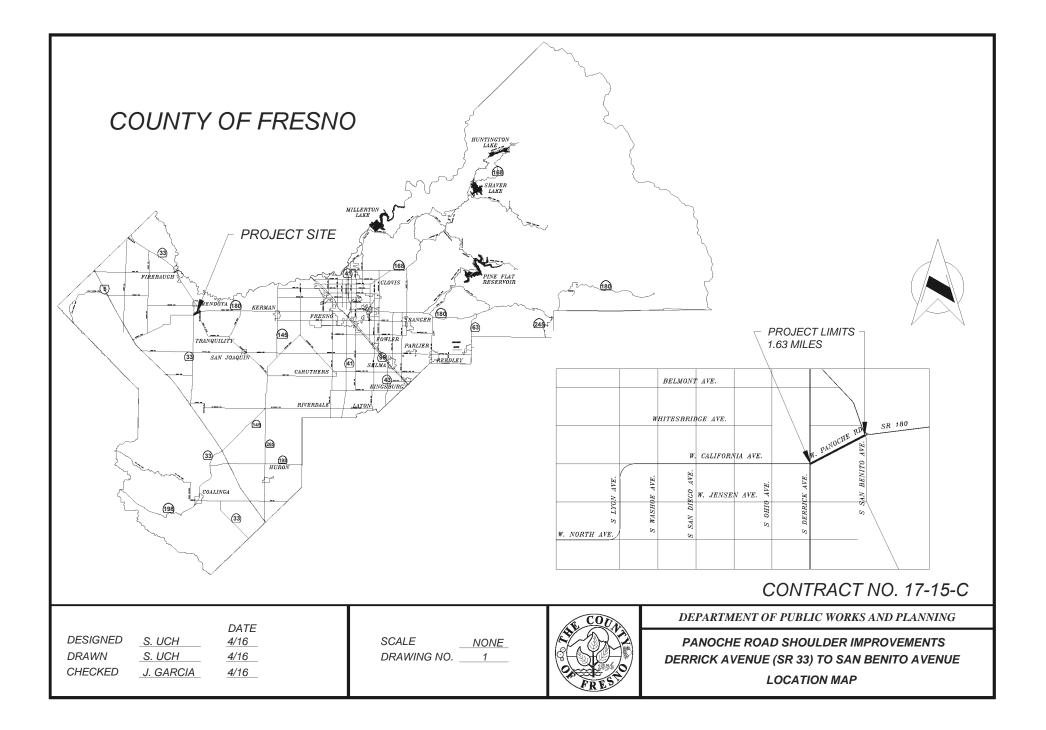
When an entire item is subcontracted, show the contractor's bid price.

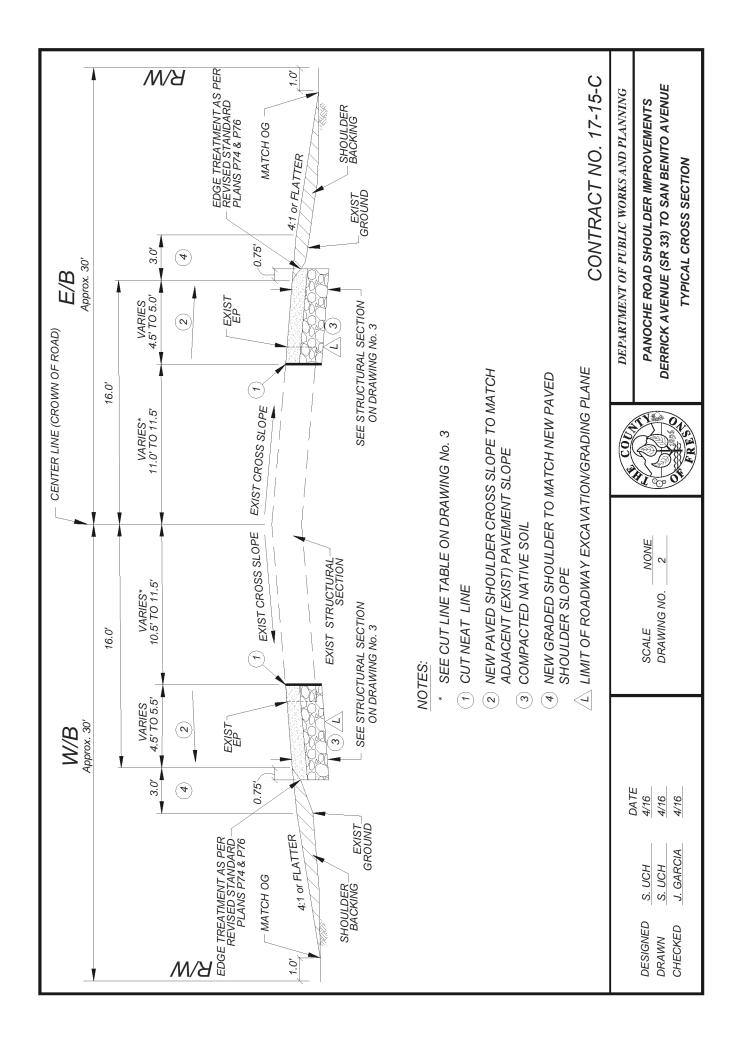
When a portion of an item is subcontracted, describe the portion and show the percentage of the bid item and value.

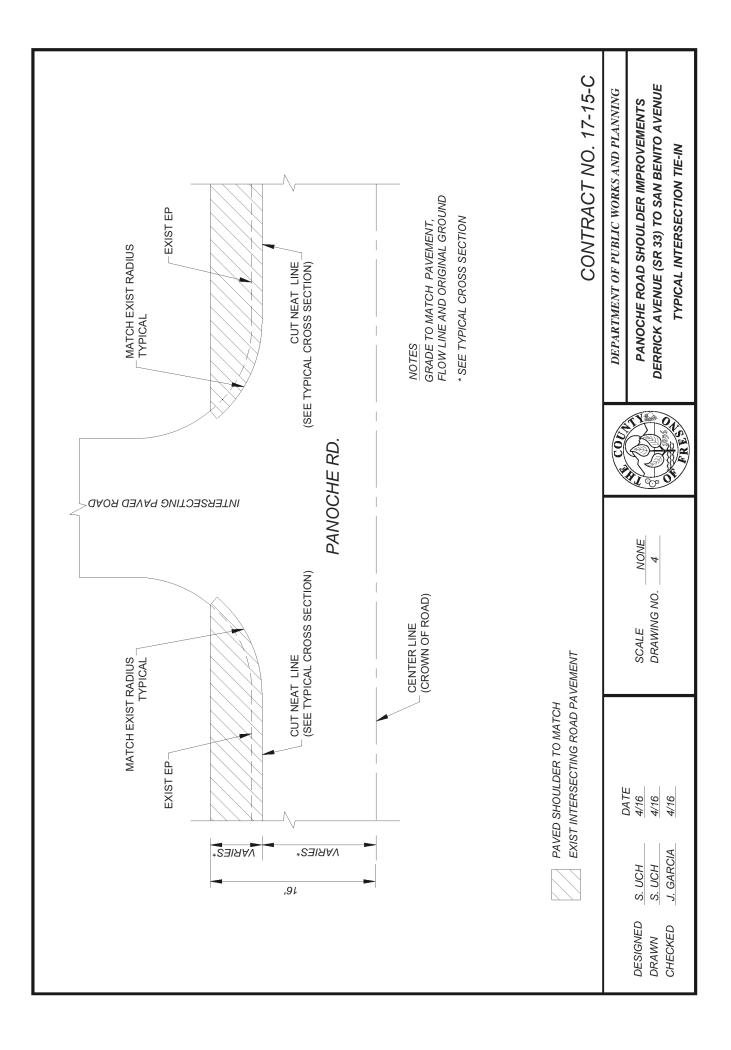
In August 2008, the *Standard Specifications* were amended to eliminate specialty items. Enter Zeros or applicable amounts for specialty items should be entered in lines 2 and 3 of this form, depending on whether the contract includes the amendment.

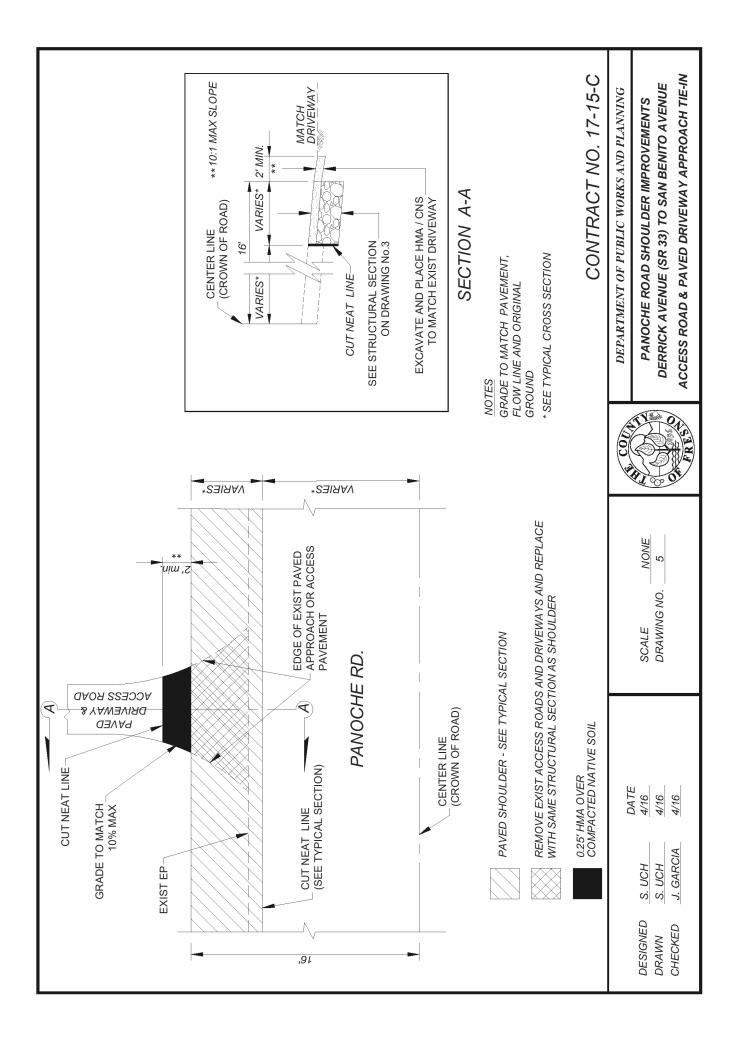
THIS FORM IS NOT TO BE USED FOR SUBSTITUTIONS OF SUBCONTRACTORS AND UDBE, DVBE OR SMALL BUSINESS ENTITIE

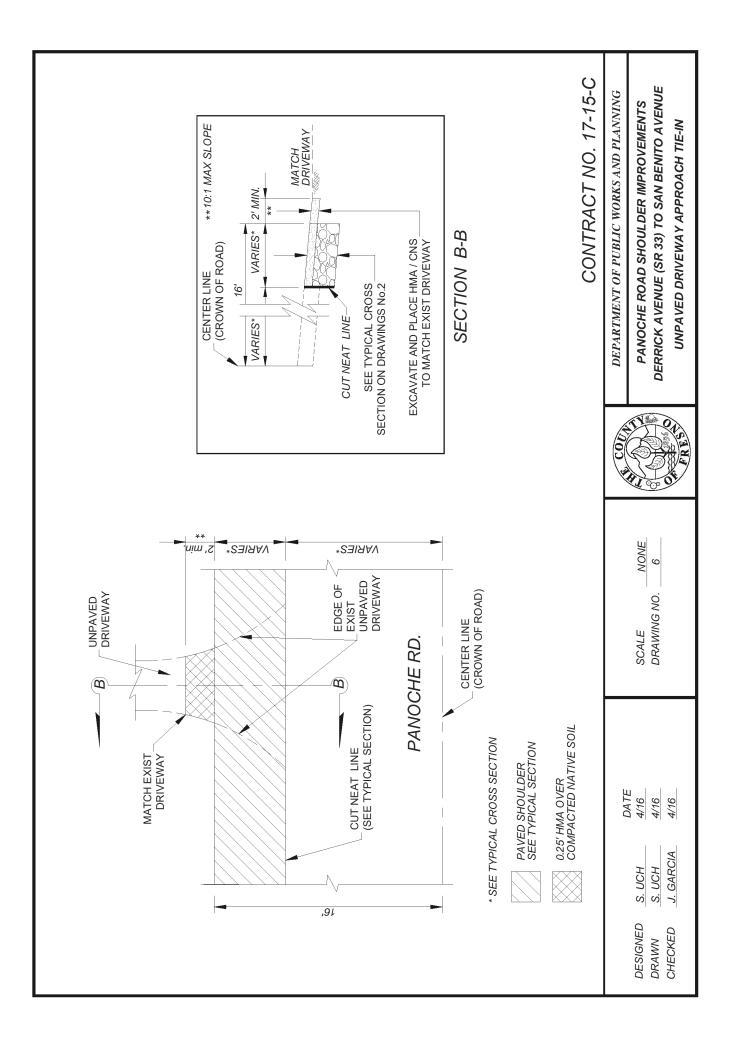
Project Details / Drawings

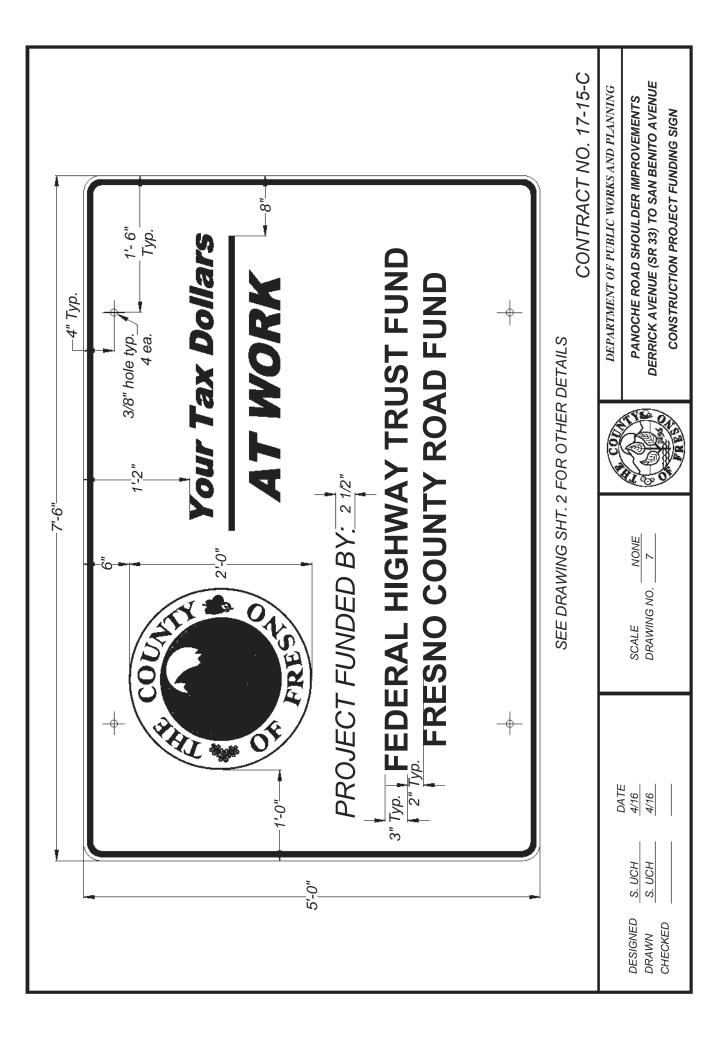


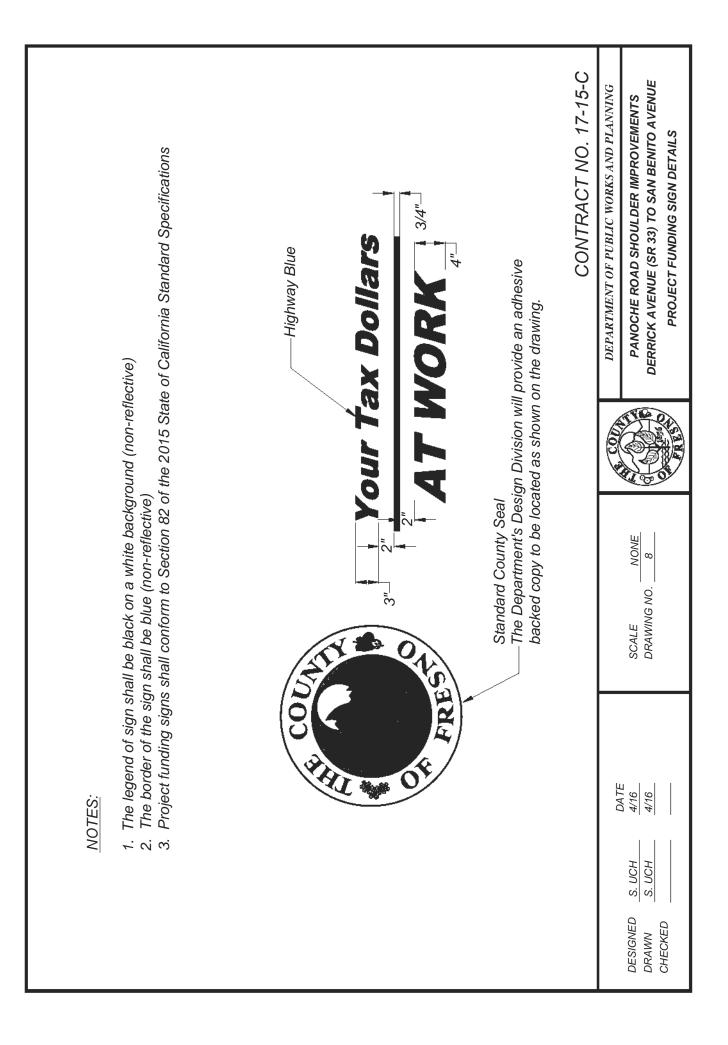


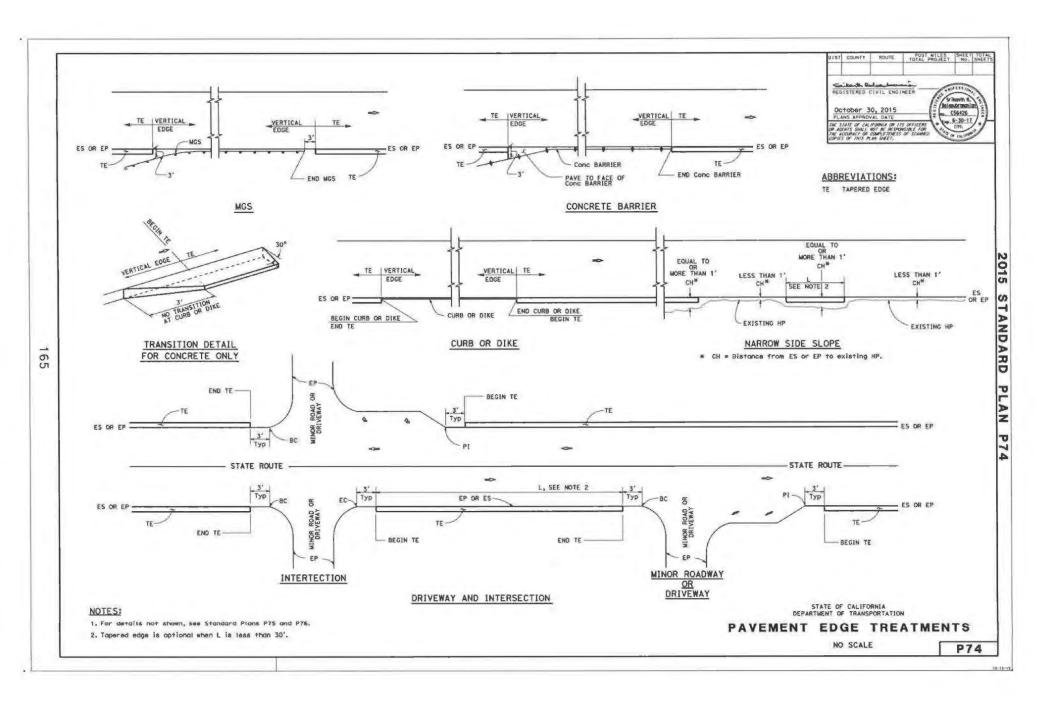


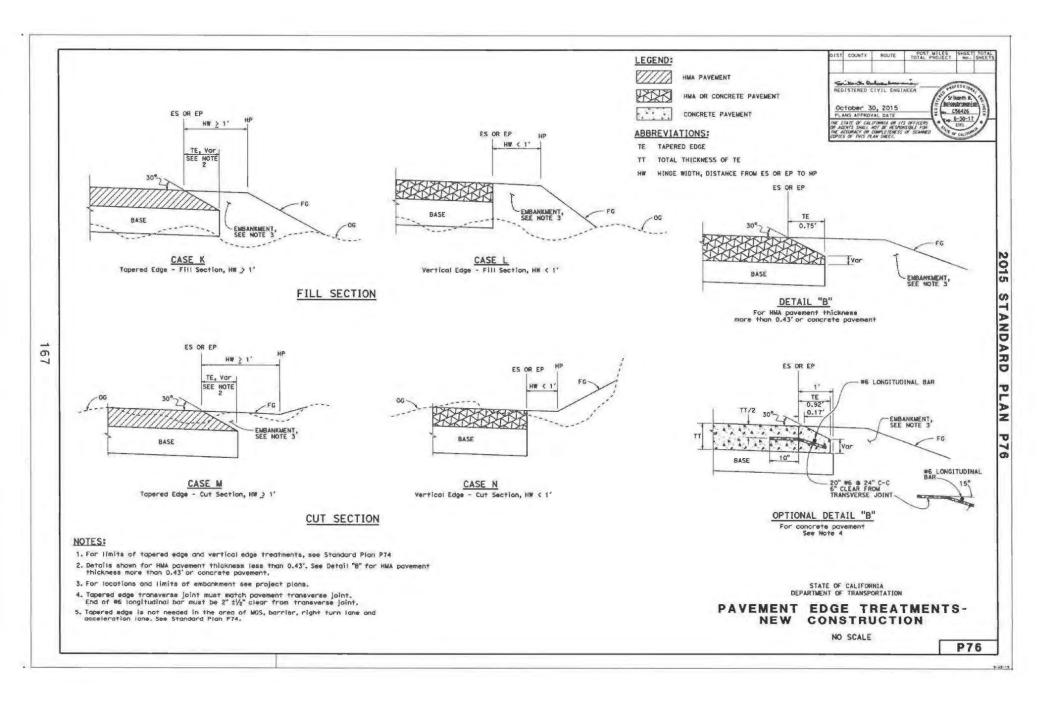


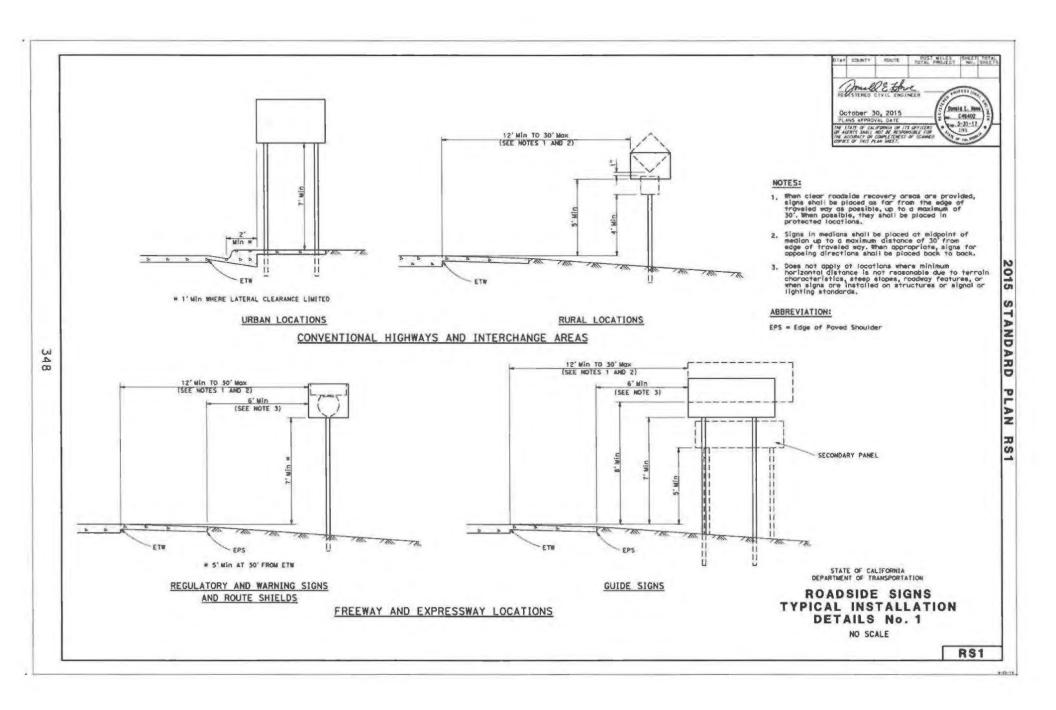


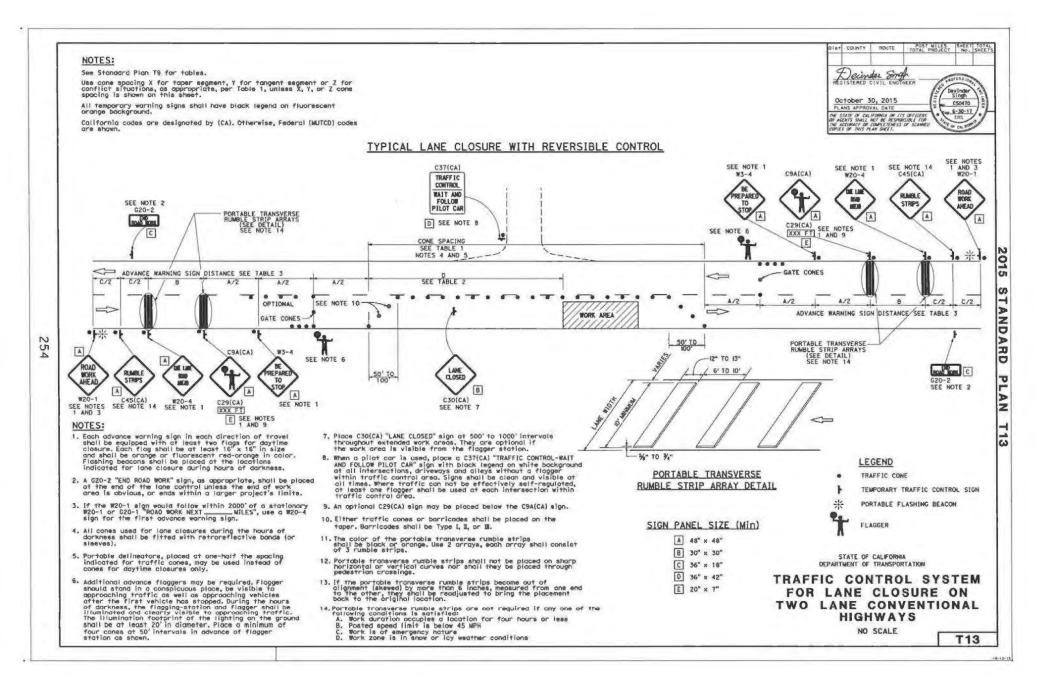












STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-01:	20 (REV. 2/96)		Permit No. 0616-NTK-0419			
in con	mpliance with (Cheo	ck one):	Dist/Co/Rie/PM 06/FRE/VAR/VAR			
\boxtimes	Your application of	May 3, 2016				
	Utility Notice No.	of	Date May 12, 2016	·		
			Fee Paid	Deposit		
	Agreement No.	of	EXEMPT	EXEMPT		
			Performance Bond Amount (1)	Payment Bond Amount (2)		
	Your Reference No.		\$ N/A	s N/A		
TO:						
	County Of Fresno 2220 Tulare Stree Fresno, Ca 93721	· ·	l Biennial Traffic	Control Permit		
	Attn: Randy Ishii Phone: (559) 600	-4240				
And s	ubject to the followi	ing, PERMISSION IS HEREBY GRANTED to:	, PERMITTEE			

enter upon State Highway Right of Way (ROW) on all State Highways in Fresno County within the limits of District 06 boundaries on various Routes and at various Post Miles (EXLUDING FREEWAYS AND EXPRESSWAYS), to setup, install, maintain and remove traffic control devices in conjunction with road work on adjacent County Roads, to overlay the existing pavement and to seal coat up to State ROW, to setup and maintain barricades and signs that do not involve traffic control or work within six (6) feet of a traveled way, to setup and maintain traffic control devices in emergencies if requested by a local governmental agency or utility company.

Notification: Two (2) working days prior to starting work or restarting of work under this Permit, Permittee shall notify:

Caltrans Inspector

Ramiro Hemandez

Ph.: (559) 445-6497

Failure to notify the Caltrans Inspector may result in suspension from future work in State ROW.

The following attachments are also included as part of this permit In addition to fee, the permittee will be billed						
(Check	applicabl	e):		General Provisions		actual costs for:
M	Yes		No			Yes No Review
	Yes	\boxtimes	No	Utility Maintenance Provisions		Yes No Inspection
	Yes	X	No	Special Provisions		Yes No Field Work
	Yes	\boxtimes	No	A Cal-OSHA permit required price	or to beginning work;	
						(If any Caltrans effort expended)
	Yes	\boxtimes	No	The information in the environme permit.	ental documentation has been reviewe	d and is considered prior to approval of this
This pe	rmit is voi	d unles	is the w	ork is complete before July 3	31, 2018	
					n specifically mentioned is hereby aut mits and environmental clearances ha	
					APPROVED:	
Cc: DO, RH, SDF (2),						
Sharri Bender, Ehlert, Director, District 6 – Central Region						
Altach: TR-0045, CRF, T9-14, TR-0400 BY:						
toper C Loo,					(and)	
Permit	Engineer:	Vladin	nir Kole	snikov (559) 445-6498	Joe O. Espinosa, District 6 Chi	ef Permit Branch

Notification of temporary lane closures or traffic detours shall be faxed WEEKLY into the Central Valley Traffic Management Center (CVTMC), FAX (559) 445-5100. Notification shall be submitted using the attached Closure Reporting Form (CRF) with the Permit No.0616-NTK-0419 entered under Additional Remarks. Notification shall be made by 5:00 PM the Monday (for work starting the following week) prior to the proposed closure or detour. The CVTMC will fax back a Confirmation Number to the sender to confirm receipt of the CRF.

A copy of this permit must be available at each work site.

Temporary traffic control: Traffic Control Plans shall conform of the State of California Department of Transportation Standard Plans 2015 RSP T9-T14 (see T9 Table 3 Advance Warning Sign Spacing for Freeway), the attached General Provisions TR-0045 item 6, and the Federal Highway Administration's (FHWA) California Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition. The Temporary Traffic Control designed with the applicable portions from the California "Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition Devices (MUTCD) 2014 Edition Shall be stamped by Professional Civil Engineer or Professional Traffic Engineer.

Work requiring traffic control will be conducted between 9:00 AM and 3:00 PM, Monday through Friday or as otherwise authorized by the **Caltrans Inspector**. The full width of the traveled way shall be opened for use by public traffic on Saturdays, Sundays and designated legal holidays, the day preceding designated legal holidays, and when construction operations are not actively in progress. Designated legal holidays are: January 1st, the third Monday in January, February 12th, the third Monday in February, March 31st, the last Monday in May, July 4th, the first Monday in September, the second Monday in October, November 11th, Thanksgiving Day and the day after, and December 25th. When a designated holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the proceeding Friday shall be a designated legal holiday. Any other holiday falling on a Saturday will be observed on that Saturday. Holiday work restrictions also apply to Fridays following Thursday holidays, Mondays preceding Tuesday holidays, and the days preceding and following extended holiday weekends.

No work shall be accomplished on, over or near the highway traveled ways or shoulders during inclement weather conditions (fog, rain, etc.)

Failure to provide proper traffic control and safety measures in accordance with Caltrans standards shall be grounds for revocation of this permit and/or denial of future permits.

A copy of this permit must be available at each work site. work shall be suspended if permit is not at job site as provided.

Miscellaneous: All cost incurred for work within State ROW pursuant to this Encroachment Permit shall be borne by the permittee, and the permittee hereby waives all claims for indemnification or contribution from the State for such work.

The permittee's employees are the only ones authorized to perform work under the provisions of this permit and will not be required to obtain any other permit, provided the work is strictly limited to that outlined herein and/or as provided in the valid concurrent State Encroachment Permit.

Permittee shall report all work requiring traffic control or the proposed use of traffic control devices to be performed under this permit to the Caltrans Inspector assigned to the specific area as specified on page one (1) of this permit, stating this permit number and the permit number of the concurrent valid Caltrans Encroachment Permit.

Reference to standard plans and specifications. The use of the wording "Standard Plan" and "Standard Specification" in this Permit refers to the 2010 Editions of the State of California, Department of Transportation publications, **Standard Plans** and **Standard Specifications**. These documents can be accessed by the link on the Department's web page, **www.dot.ca.gov**.

Damages. Any damages to private or public facilities shall be immediately reported to the Caltrans Field Representative, and repaired or replaced to Caltrans Standards, and/or as requested by the facility owner, at the expense of the Permittee.

Conflict with state contracts: If for any reason this work comes in conflict with work in progress under State Contract and both operations cannot be accomplished at the same time, the State Contract work shall take precedence.

If at any Permittee installation becomes in conflict with any expansion or improvements of the State highway facilities, Permittee will relocate these facilities as required by Caltrans at their expenses and with no cost or other claims to Caltrans.

Acceptance of conditions. Beginning work on this permit constitutes full agreement and acceptance of all conditions, terms and provisions contained herein, attached hereto, or incorporated by reference.

Notice of completion. Immediately following completion of the work permitted herein, the Permittee shall fill out and mail the Notice of Completion attached to this permit.



Email: D6Permit.LCS@dot.ca.gov FAX (559) 445-5100

All requests are due by Monday, 5PM for work starting the following week.

Caltrans District 6 Closure Request Form for Encroachment Permits

1 1 m 1 m 1	100 Top 100			
ontact Name and Company	Office Phone	Cell Phone	Fax	
oute Direction Direction		Begin PM	Begin Date B	Begin Time (HH:MM) : 24 Hr
End Location		End PM	End Date E	End Time (HH:MM) : 24 Hr
Connector Conventional Mainline	Type of Closure (Check on Lane / Shidr Alternate I Full Moving One-water	anes Stndrd		Existing # of Lane(s) in One Direction
Ine(s) to be Closed (Check All that Apply) Lane 1 Lane 2 Lane 3 Lane 4	Description of Work			
Aux Ln 🗌 Rt Shidr 🗌 Lt Shidr 🗌 Rt Turn Li	n 🗌 Lt Turn Ln			
dditional Remarks				

* Standard is lasting less than 24 hours // Long-Term is lasting at least 24 hours // Intermittent is lasting no more than 10 minutes at a time Updated: March 1, 2014

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION								Page 1 of 3	
STANDAR TR-0100 (REV		TPER	RMIT A	PPLICATION	PER	FOR CAL	IRANS USE		
	print clearly you		e. DIST	DIST/CO/RTE/PM					
Permission is requested to encroach on the State Highway right-of-way as follows:						SIM	SIMPLEX STAMP		
1. COUNTY			2. ROUTE 3. POSTMILE						
4. ADDRESS OR STREET NAME 5. CIT				5. CITY					
6. CROSS STRE	ET (Distance and o	direction from pro	ject site)	7. PORT	ION OF RIGHT-OF-WAY	DAT	E OF SIMPLEX STAM	P	
			9. EST	IMATED S	TART DATE	10. E	10. ESTIMATED COMPLETION DATE		
11. EXCAVATION	MAX_DEPTH	AVG. DEPTH	AVG. W	VG. WIDTH LENGTH		SUR	FACE TYPE		
12. ESTIMATED	COST WITHIN STA	ATE HIGHWAY R	IGHT-OF-V	VAY	FUNDING SOURCE(S)	STATE	LOCAL		
13. PIPES	PRODUCT TYPE	E	DIAMETER		VOLTAGE / PSIG	14. 0	CALTRANS' PROJECT	CODE (ID)	
15. Double I	Permit Parent Reference Numb	Permit Number	Order Nur	nber					
	lans been reviewe		P. 100			ES") Who	0?		
17. Completely	describe work to	be done within \$	STATE Hig	hwav righ	t-of-wav:				

Attach 6 complete sets of plans (folded to 8.5" x 11") and any applicable specifications, calculations, maps. etc.

 18. Is a City, County or other public agency involved in the approval of this project?

 YES
 (If "YES", check type of project AND attach environmental documentation and conditions of approval)

 COMMERCIAL DEVELOPMENT
 BUILDING
 GRADING
 OTHER

 CATEGORICALLY EXEMPT
 NEGATIVE DECLARATION
 ENVIRONMENTAL IMPACT REPORT
 OTHER

 NO
 (If "NO", please check the category below which best describes the project AND answer questions A - K on page 2)
 DRIVEWAY OR ROAD APPROACH, RECONSTRUCTION, MAINTENANCE OR RESURFACING
 FENCE

 PUBLIC UTILITY MODIFICATIONS, EXTENSIONS, HOOKUPS
 MAILBOX
 MAILBOX

 FLAGS, SIGNS, BANNERS, DECORATIONS, PARADES AND CELEBRATIONS
 EROSION CONTROL

 OTHER
 LANDSCAPING
 Intended and approach approach and approach approac

ADA NOTICE: For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 445-1233, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

PERMIT NO.

The following questions must be completed when a City, County or other public agency IS NOT involved in the approval of this project.

Your answers to these questions will assist Departmental staff in identifying any physical, biological, social or economic resources that may be affected by your proposed project within State Highway right-of-way and to determine which type of environmental studies may be required to approve your application for an encroachment permit.

It is the applicant's responsibility for the production of all required environmental documentation and supporting studies and in some cases this may be costly and time consuming. If possible, attach photographs of the location of the proposed project. Please answer these questions to the best of your ability. Provide a description of any "YES" answers (type, name, number, etc.)

A. Will any existing vegetation and/or landscaping within State Highway right-of-way be disturbed?

B. Are there waterways (e.g. river, creek, pond, natural pool or dry streambed) adjacent to or within the limits of the project or State Highway right-of-way?

C. Is the proposed project located within five miles of the coast line?

D. Will the proposed project generate construction noise levels greater than 86 dBA (e.g. jack-hammering, pile driving)?

E. Will the proposed project incorporate land from a public park, recreation area or wildlife refuge open to the public?

F. Are there any recreational trails or paths within the limits of the proposed project or State Highway right-of-way?

G. Will the proposed project impact any structures, buildings, rail fines or bridges within State Highway nght-of-way?

H. Will the proposed project impact access to any businesses or residences?

I. Will the proposed project impact any existing public utilities or public services?

J. Will the proposed project impact existing pedestrian facilities, such as sidewalks, crosswalks or overcrossings?

K. Will new lighting be constructed within or adjacent to State Highway right-of-way?

19. Will this project cause a substantial change in the significance of a historical resource (45 years or older), or cultural resource?	YES NO
(If "YES", provide a description)	

20. Is this project on an existing State Highway or street wh	nere the activity involves removal of a scenic resource including a significant tree or stand of trees, a
rock outcropping or a historic building?	(If "YES", provide a description)

21. Is work being done on the applicant's property?	YES NO	(If "YES*, attacl	6 complete sets of site and grad	ing plans.)
22. Will the proposed project require the disturbance of soil	?	VES	NO	
If "YES", estimate the area within State Highway right	of-way in square feet	AND acres	(ft ²) AND	(acres)
estimate the area outside of State Highway right	of-way in square leet	AND acres:	(ft²) AND	(acres)
23. Will the proposed project require dewatering?		YES NO		
If "YES", estimate total gailons AND gallons/month.		(gallons)	AND	(gallons/month)
SOURCE*: STORM WATER NON-STOR	WATER			
("See Caltrans SWMP for definitions of non-storm wai	er discharge: http://w	ww.dot.ca.gov/hq/e	nv/stormwater/index.htm)	
24. How will any storm water or ground water be disposed	of from within or near	the limits of the pro	posed project?	
Storm Drain System Combined Sewer / Storn	n System	Storm Water Reter	ntion Basin	
Other (explain):				

PERMIT NO.

PLEASE READ THE FOLLOWING CLAUSES PRIOR TO SIGNING THIS ENCROACHMENT PERMIT APPLICATION.

The applicant, understands and herein agrees that an encroachment permit can be denied, and/or a bond required for non-payment of prior or present encroachment permit fees. Encroachment Permit fees may still be due when an application is withdrawn or denied, and that a denial may be appealed, in accordance with the California Streets and Highways Code, Section 671.5. All work shall be done in accordance with the California Department of Transportation's (Department) rules and regulations subject to inspection and approval.

The applicant, understands and herein agrees to the general provisions, special provisions and conditions of the encroachment permit, and to indemnify and hold harmless the State, its officers, directors, agents, employees and each of them (Indemnitees) from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, judgments, losses and liabilities of every kind and nature whatsoever (Claims) arising out of or in connection with the issuance and/or use of this encroachment permit and the placement and subsequent operation and maintenance of said encroachment for: 1) bodily injury and/or death to persons including but not limited to the Applicant, the State and its officers, directors, agents and employees, the Indemnities, and the public; and 2) damage to property of anyone. Except as provided by law, the indemnification provisions stated above shall apply regardless of the existence or degree of fault of Indemnities. The Applicant, however, shall not be obligated to indemnify indemnities for Claims arising from the sole negligence and willful misconduct of State, its officers, directors, agents or employees.

An encroachment permit is not a property right and does not transfer with the property to a new owner.

<u>COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990</u>: All work within State Highway right-of-way shall be conducted in compliance with all applicable Federal, State and Local Access laws, regulations and guidelines including but not limited to the Americans with Disabilities Act Accessibility Guidelines (ADAAG), the Public Rights-of-Way Guidelines (PROWG), the Department's current Design Information Bulletin 82, "Pedestrian Accessibility Guidelines for Highway Projects", the Department's Encroachment Permits Manual and encroachment permit.

DISCHARGES OF STORM WATER AND NON-STORM WATER: All work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Department, to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. Compliance with the Department's NPDES permit requires amongst other things, the preparation and submission of a Storm Water Pollution Protection Plan (SWPPP), or a Water Pollution Control Program (WPCP), and the approval of same by the appropriate reviewing authority prior to the start of any work. Information on the requirements may also be reviewed on the Department's Construction Website at:

http://www.dot.ca.gov/hg/construc/stormwater

25. NAME OF APPLICANT OR ORGANIZATION

ADDRESS OF APPLICANT OR ORGANIZATION WHERE PERMIT IS TO BE MAILED (In	clude City and Zip C	ode)		
E-MAIL ADDRESS	PHONE NUMBER		FAX NUMBER	
26. NAME OF AUTHORIZED AGENT / ENGINEER (A "Letter of authorization" is require	d if different from A			ATION ATTACHED?
ADDRESS OF AUTHORIZED AGENT / ENGINEER (Include City and Zip Code)				
E-MAIL ADDRESS	PHONE NUMBER		FAX NUMBER	
27. NAME OF BILLING CONTACT (Same as #25 Same as #26)	k			
BILLING ADDRESS WHERE INVOICE(S) IS/ARE TO BE MAILED (Include City and Zip C	ode)			
E-MAIL ADDRESS	PHONE NUMBER		FAX NUMBER	
28. SIGNATURE OF APPLICANT OR AUTHORIZED AGENT 29. PRINT OR TYPE NAME		30.TITLE		31. DATE



San Joaquin Valley Air Pollution Control District Regulation VIII – Fugitive PM10 Prohibitions Dust Control Plan

Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities requires the owner or operator of a construction project to submit a Dust Control Plan to the District if at anytime the project involves:

- · Residential developments of ten or more acres of disturbed surface area,
- Non-residential developments of five or more acres of disturbed surface area, or
- Moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project.

A Dust Control Plan identifies the fugitive dust sources at the construction site and describes all of the dust control measures to be implemented before, during, and after any dust generating activity for the duration of the project. The District will review and approve, conditionally approve, or disapprove the Dust Control Plan within 30 days of submittal. **Construction activities shall not commence until the Dust Control Plan has been approved or conditionally approved**. An owner or operator must also provide written notification to the District via fax or mail within 10 days prior to the commencement of earthmoving activities. A copy of the approved Dust Control Plan must be retained at the project site and made available upon request by a District inspector.

Pursuant to <u>Rule 3135</u> – *Dust Control Plan Fee*, payment must accompany each Dust Control Plan submitted to the District. A separate fee is charged for any major modification made to an approved plan, such as modifying the size and scope of the project or making significant changes to the types of control or preventative measures. No fees are charged for administrative changes to an approved plan.

At least one key individual representing the owner or operator, or any person who prepares a Dust Control Plan must complete a Dust Control Training Course presented by the District. Please contact the District to find out when courses are being offered.

Regardless of whether a District-approved Dust Control Plan is in place or not, the owner or operator is required to comply with all requirements of the applicable rules under Regulation VIII and the District's Rules and Regulations at all times.

Submit the Dust Control Plan to the District's Compliance Division at the office listed below:

For San Joaquin, Stanislaus, and Merced Counties:	Northern Region Office 4800 Enterprise Way Modesto, CA 95356 (209) 557-6400 FAX (209) 557-6475
For Madera, Fresno, and Kings Counties:	Central Region Office 1990 East Gettysburg Avenue Fresno, CA 93726 (559) 230-5950 FAX (559) 230-6062
For Tulare County and the valley portion of Kern County	Southern Region Office 34946 Flyover Court Bakersfield, CA 93308 (661) 392-5500 FAX (661) 392-5585
www.valleyair.org	(001) 382-3300 1 POV (001) 382-3303

Dust Control Plan Section 1 – General Information – Page 1

1-A Project Name ar	nd Location				
Project Name: Pano	che Avenue Shoulder Improve	ements			
Project Address: SR 3	3 to San Benito Avenue				
Major X-Streets: San E	Benito Avenue / SR 33				
City:	(County: F	resno		
Section(s):	Tov	wnship: <u>1</u> 4	4S	Range:	15E
Expected Construction St	tart Date: <u>April 2018</u>	E	ind Date:	June 2018	
1-B Contacts					
preparation, submittal, a	ses, and phone numbers of pand implementation of the D dust control applications. (Rule f	Dust Contro	bi Plan ai		
Property Owner: <u>Co</u>	ounty of Fresno				
Address: 22	20 Tulare St 6th Floor				
City / State / Zip: _Fr	esno, CA 93721				
Phone: <u>(5</u>	59) 600-4109	Fax:	(559) 600)-4399	
Developer:					
Phone:		Fax:			
General Contractor: <u>To</u>	be determined				
Address:					
This Dust Control Plan w	as prepared by:				
Name: Da	ale Siemer	Title:	Supervisi	ng Engineer	
Company Name: <u>Co</u>	ounty of Fresno, Department	t of Public	Works an	d Planning	
Address: 22	20 Tulare St – 6 th floor				
City / State / Zip: _ Fr	esno, CA 93721				
Phone: (5	59) 600-4327	Fax:	(559) 600)-4399	
Date training completed:	8/13/14 Xttach	a copy of t	he course	certificate	
I would like additional	information about opportunitie	es to reduc	e water us	age on the proj	ect site.

Section 1 -- General Information -- Page 2

Proje	Project Name: Panoche Avenue Shoulder Improvements					
1-C	Contractor	'S				
		addresses, and phone numbers of the contractors involved in dust generating activities control as part of this project (Rule 8021 Sec. 6.3.6.1). A supplemental list may be attached.				
1	To be determ	ined				
2.						
3.						
4						
_						
1-D	Who will have a construct the work of the	ave the primary responsibility for implementing this Dust Control Plan?				
	Property Ow	ner Developer 🛛 General / Prime Contractor				
	Sub-Contract	tor(s) Other:				
Prim		ontact: To be determined				
	Title:					
Com		· · · · · · · · · · · · · · · · · · ·				
		Fax:				
	obile Phone:	Pager:				
Date	training comp	leted: Attach a copy of the course certificate				
1-E	Indirect So	urce Review (ISR) (Rule 9510)				
An Air	Impact Asses	sment application was submitted to the District on:				
Discret	tionary Approv	val: Received on: Approval is pending.				
🛛 Exe	empt from ISR	Explain: Rule 9510, Section 4.4.2.1				
1-F	Provide a b	prief description of the project's operations.				

The project's operations will generally involve clearing and grubbing, cold planning existing pavement, excavating and grading existing dirt shoulder, placing hot mix asphalt and shoulder backing.

Dust Control Plan Section 2 – Plot Plan – Page 1

Project Name: Panoche Avenue Shoulder Improvements	
2-A Plot Plan	
A plot plan identifies the type and location of each project. Attach project boundaries outlined or use the space in sections 2-B or 2-C may include tract maps, site maps, and topographic maps. Use the ch have been identified on the plot plan. (Rule 8021 Sec. 6.3.6.2 & 6.3.6.5)	to draw a plot plan. Attached maps
Identify the relative locations of actual and potential sources of full Bulk material handling and storage areas. Paved and unpaved access roads, haul roads, traffic areas, and equip Exit points where carryout and trackout onto paved public roads may of Water supply locations if water application will be used for controlling will be used for control will be used	oment storage yards. occur. visible dust emissions. of the project. (Rule 4102 Sec. 4.1) lities, commercial, retail, etc.
2-B Draw Plot Plan (if one is not attached)	May use the back of this form Include a North Arrow
➢ Plot plan is attached (Skip to 3-A).	

-C Drav	v Plot I	Plan (if on	e is not atta	ached)	 	Includ	e a North Arrov

Dust Control Plan Section 3 – Fugitive PM10 Sources – Page 1

Project Name: Panoche Avenue Shoulder Imp	provements			
3-A Disturbed Surface Area				
Report the total area of land surface to be disturbed, the daily throughput volume of earthmoving in cubic yards, and the total area in acres of the entire project site. (Rule 8021 Sec. 6.3.6.3)				
Total area of land surf	ace to be disturbed: _6	5.39	Acres	
Daily maximum throughput volu	me of earthmoving:	300	Cubic Yards	
Daily average throughput volume of earthmoving: 300		300	Cubic Yards	
Total area of entire project site: 11.85			Acres	
Total disturbed areas that will be left inactive for more than seven days: _0 Acres			Acres	
3-B Dust Generating Activity Dates				
The expected start and completion dates of dust generating activities and soil disturbance activities to be performed on site. For phased projects, it may be necessary to report expected start and completion dates separately. (Rule 8021 Sec. 6.3.6.4)				
Expected start date: April 2018	_ Completion Date:	June 201	8	
Phase Project Start – A:	Completion A:			
Phase Project Start – B:	Completion B:			
Phase Project Start – C:				
3-C Other Locations				
Identify whether any other locations should be included with this plan that are involved with this project. An example may include listing any site where materials will be imported from or exported to. (Rule 8021 Sec. 6.3.2)				
No other locations are included with this project. (Skip to 3-D)				
Location 1:				
No Dust Control Plan Required	I with this plan 🗌 Inc	cluded with	another plan	

Location 2:		· · · · · · · · · · · · · · · · · · ·
No Dust Control Plan Required	Included with this plan	Included with another plan
Location 3:		
🗌 No Dust Control Plan Required	Included with this plan	Included with another plan

Project Na	me: Panoche Avenue Shoulder Improvements
3-D Sour	rces of Fugitive Dust
	describes the minimum requirements for limiting visible dust emissions from activities that redust emissions. (Rule 8021 Sec. 6.3.6.5) Check at least one box under each category.
No As	Demolition. (Rule 8021 Sec. 5.1, 6.3.3, & 6.3.6.5) o demolitions are planned for this project. bestos NESHAP notification and fees have been submitted to the District. (Rule 3050 and Rule 4002). ater will be applied to the following areas for the duration of the demolition activities: Building exterior surfaces; Unpaved surface areas where equipment will operate; Razed building materials; and Water or dust suppressants will be applied to unpaved surface areas within 100 feet of structure during demolition.
Pre-Activit	V. (Rule 8021 Sec. 5.2)
	t applicable for this project (Please explain why in Section 3-F).
🖾 Th	e site will be pre-watered and work will be phased to reduce the amount of disturbed surface area at y one time (Complete Section 4-A).
Active Ope	rations. (Rule 8021 Sec. 5.2)
Se	ater will be applied to dry areas during leveling, grading, trenching, and earthmoving activities (Complete ction 4-A).
dis	nd barriers will be constructed and maintained, and water or dust suppressants will be applied to the turbed surface areas (Complete Sections 4-A or 4-B, and 4-C).
· · ·	perations, including after work hours, weekends, and holidays. (Rule 8021 Sec. 5.2)
	t applicable for this project (Please explain why in Section 3-F).
aco	ater or dust suppressants will be applied on disturbed surface areas to form a visible crust, and vehicle cess will be restricted to maintain the visible crust. (Complete Section 4-A or 4-B, and 4-C)
· · ·	stabilization of areas that remain unused for seven or more days. (Rule 8021 Sec. 5.2)
	t applicable for this project (Please explain why in Section 3-F)
veç	hicular access will be restricted and water or dust suppressants will be applied and maintained at all un- getated areas (Complete Section 4-A or 4-B, and 4-C). getation will be established on all previously disturbed areas (Complete Section 4-C).
	avel will be applied and maintained at all previously disturbed areas (Complete Section 4-C).
	eviously disturbed areas will be paved (Complete Section 4-C).
· · _	ccess and Haul Roads, Traffic and Equipment Storage Areas. (Rule 8021 Sec. 5.2 and 5.3)
	t applicable for this project (Please explain why in Section 3-F)
	ply water or dust suppressants to unpaved haul and access roads (Complete Section 4-A or 4-B)
(Co □ Wa	st speed limit signs of not more than 15 miles per hour at each entrance, and again every 500 feet. omplete Section 4-C) iter or dust suppressants will be applied to vehicle traffic and equipment storage areas (Complete ction 4-A or 4-B).
Wind Event	ts. (Rule 8021 Sec. 5.4)
do	ter application equipment will apply water to control fugitive dust during wind events, unless unsafe to so. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions anot be effectively controlled.

3-E Bulk Materials (Rule 8021 Sec. 6.3.6.6 and Rule 8031)
 Outdoor Handling of Bulk Materials. (Rule 8031 Sec. 5.0 A) No bulk materials will be handled during this project. Water or dust suppressants will be applied when handling bulk materials. Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
 Outdoor Storage of Bulk Materials. (Rule 8031 Sec. 5.0 B) No bulk materials will be stored during this project. Water or dust suppressants will be applied to storage piles. Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action. Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied. A three-sided structure (< 50% porosity) will be used that is at least as high as the storage piles.
 On-Site Transporting of Bulk Materials. (Rule 8031 Sec. 5.0 C) No bulk materials will be transported on the project site. Vehicle speed will be limited on the work site. All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road. A sufficient amount of water will be applied to the top of the load to limit visible dust emissions. Haul trucks will be covered with a tarp or other suitable cover.
 Off-Site Transporting of Bulk Materials. (Rule 8031 Sec. 5.0 D) No bulk materials will be transported to or from the project site. The following practices will be performed: (complete Section 5-B) The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site. Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented. Haul trucks will be covered with a tarp or other suitable cover or will be loaded such that the freeboard is not less than six inches when transported on any paved public access road to or from the project site and a sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
Outdoor Transport using a Chute or Conveyor. (Rule 8031 Sec. 5.0 E) No chutes or conveyors will be used. Chute or conveyor will be fully enclosed. Water spray equipment will be used to sufficiently wet the materials. Transported materials will be washed or screened to remove fines (PM10 or smaller).
3-F Comments

Dust Control Plan Section 4 – Dust Control Methods – Page 1

Project Name: Panoche Avenue Shoulder Improvements					
4-A Water Application					
Complete this section if water application will be used as a control method for limiting visible dust emissions and stabilizing surface areas. Check and answer everything that applies to this project. (Rule 8021 Sec. 6.3.6.6)					
Water Application Equipment:					
Sprinklers: Describe the activities that will utilize sprinklers:					
Minimum treated area:					
Maximum treated area:					
Minimum water flow rate: Gallons/minute Duration:					
🔀 Water Truck, 🗌 Water Trailer, 🗌 Water Wagon, 🔛 Other:					
Describe the activities that will utilize this equipment:					
Number of application equipment available:					
Application equipment capacity:					
Application frequency:					
Application rate: Gallons per acre per application					
Hours of operation:					
Water application equipment is available to operate after normal working hours, on weekends, and holidays.					
After-hours contact: Phone No.:					
After-hours contact: Phone No.:					
Water Supply: Include the relative locations of these sources on the plot plan in Section 2.					
Fire hydrants					
Number of hydrants available On-Site: Off-Site:					
Approval granted by the owner or public agency to use their fire hydrants for this project.					
Owner or Agency:					
Contact: Phone No.:					
Storage tanks Number and capacity:					
Wells Number and flow rate:					
Canal, River, Pond, Lake, etc. Describe:					
Approval granted by the owner or public agency to use their water source for this project.					
Owner or Agency:					
Contact: Phone No.:					
Other: To be determined					

Project Name: Pano	che Avenue Shoulder Improvements		
4-B Dust Suppressant Products			
Complete this section if a dust suppressant product will be used. These materials include, but are not limited to: hygroscopic suppressants (road salts), adhesives, petroleum emulsions, polymer emulsions, and bituminous materials (road oils). (Rule 8021 Sec. 6.3.6.6)			
Copy this page if more than one dust suppressant product will be used.			
Not Applicable. Only water application will be the control method used. Skip to 4-C.			
Application Area:			
	Phone No:		
Application Rate:	Gallons of undiluted material per 🗌 mile or 🗌 acre treated.		
Application Frequency:	Applications per 🗌 week, 🛄 month, 🛄 year		
Application Equipment:			
Number of Application Equipment Available:			
Application Equipment Capacity:			
Attach each of the following information that fully describes this product. Use the checklist below to make sure all information is submitted with this plan.			
Product Specifications (MSDS, Product Safety Data Sheet, etc.)			
Manufacturer's Usa	Manufacturer's Usage Instructions (method, frequency, and intensity of application)		
Environmental impacts and approvals or certifications related to the appropriate and safe use for ground application.			

Section 4 – Dust Control Methods – Page 3

Project Name: Panoche Avenue Shoulder Improvements		
4-C Other Dust Control Methods		
Check below the other types of dust control methods that will be employed at the construction site. (Rule 8021 Sec. 5.2)		
Physical barriers for restricting unauthorized vehicle access: Fences Gates Posts Berms Concrete Barriers Other:		
Wind barriers Describe: Posted speed limit signs meet State and Federal Department of Transportation standards. (Rule 8021 Sec. 5.3)		
Posted at 15 miles per hour, Posted at miles per hour (less than 15 MPH) Re-establish vegetation for temporarily stabilizing previously disturbed surfaces.		
Explain:		
Explain:		
Apply pavement:		
Explain:		
Other: To be determined		
4-D Contingencies		
Contingencies to be implemented if application equipment becomes inoperable, more equipment is needed to effectively control fugitive dust emissions during active and inactive periods, accessibility limitations occur at the water sources, or staff is not available to operate the application equipment. Describe the contingencies that will be in place and when they will be implemented. Attach any additional information if needed. (Rule 4102 and Rule 8021 Sec. 6.3.6.6)		
To be determined after contract award. Contingencies generally involve suspending operations if		
weather conditions or equipment failure necessitates.		
4-E Record keeping (Rule 8011 Sec. 6.2)		
Records and any other supporting documents for demonstrating compliance must be maintained, but only for those days when a control measure is implemented. The District has developed record keeping forms that may be used for complying with this requirement. Check one or both below:		
Records will be maintained using the forms developed by the District.		
Records will be maintained using documents or forms developed by the owner or operator.		
Explain and include copies:		

Dust Control Plan Section 5 – Carryout and Trackout – Page 1

Project Name: Panoche Avenue Shoulder Improvements
5-A Treatments for Preventing Trackout
Select the control devices that will be used for preventing trackout from occurring onto paved public roads. Trackout is any material that adheres to vehicle tires and is deposited onto a paved public road or the paved shoulder of a paved public road. Check one or a combination that will apply to this project.
Grizzly: Rails, pipes, or grates used to dislodge debris off of vehicles before exiting the site. Extends from the intersection with the paved public road surface for the full width of the unpaved exit surface for a distance of at least 25 feet. (Rule 8041 Sec. 5.9.1)
Describe:
Gravel Pad: A layer of washed gravel at least one (1) inch or larger in diameter, three (3) inches deep, and extends from the intersection with the public paved road surface for the full width of the unpaved exit surface for a distance of at least 50 feet. (Rule 8041 Sec. 5.9.2)
Gravel Size: Inches
Pad Width: Feet Length: Feet Depth: Inches
Paved Surface: Extends from the intersection with the paved public road surface for the full width of the unpaved access road for at least 100 feet to allow mud and dirt to drop off of vehicles before exiting the site. (Rule 8041 Sec. 5.9.3)
Width: Feet Length: Feet Mud and dirt deposits accumulating on paved interior roads will be removed with sufficient frequency, but not less frequently than once per workday. Cleanup will commence within ½ hour of generating any carryout and trackout. (Rule 8041 Sec. 5.8.2 and 5.9.3)
Clean-up Frequency:
Wheel Washer: Uses water to dislodge debris from tires and vehicle undercarriage. (Rule 8011 Sec. 3.73) Describe:
Other: (Rule 8041 Sec. 5.8.1.2) To be determined
5-B Treatments for Preventing Carryout
Report the required treatments that will be used for preventing carryout from occurring on paved public roads. Carryout occurs when materials from emptied or loaded haul trucks, vehicles, or trailers falls onto a paved public road or paved shoulder of a paved public road.
 No haul trucks will be routinely entering or leaving the project site. Emptied Haul Trucks: (Rule 8031 Sec 5.0) M Interior cargo compartments will be cleaned before leaving the project site. M Cargo compartment will be covered with a tarp or suitable cover before leaving the project site.
 Loaded Haul Trucks: Spillage or loss of materials from holes or other opening in the cargo compartment will be prevented when material is transported onto any paved public access road. (Rule 8031 Sec 5.0) Select one or both of the required applications: Maul trucks will be loaded such that the freeboard is not less than six inches with water applied to the top of the load before leaving the project site.
Cargo compartment and load will be covered with a tarp or suitable cover before leaving the project site.

Project Name: Panoche Avenue Shoulder Improvements		
5-C Cleaning up Carryout and Trackout		
Check and report below the methods and frequency for cleaning up carryout and trackout from the surface and paved shoulders of paved public roads.		
The use of blower devices, or dry rotary brushers or brooms, for removal of carryout and trackout from paved public roads is prohibited. (Rule 8041 Sec. 5.0).		
In the event the control device becomes ineffective due to an accumulation of mud and dirt, material must be removed within ½ hour of the generation of carryout and trackout. (Rule 8041 Sec. 5.8.2.)		
The project is located in:		
 An Urban Area, within an incorporated city boundary or an unincorporated area surrounded by a city. Minimum cleanup frequency will be at the end of the workday and removed immediately if carryout and trackout extends beyond 50 feet. (Rule 8041 Sec. 5.4) A Rural Area, located within an unincorporated area and not surrounded by an incorporated city. 		
 The construction project is less than 10 acres in size: minimum cleanup frequency is at the end of the workday. (Rule 8041 Sec. 5.1) Construction projects 10 or more acres in size: minimum cleanup frequency is end of the workday and immediately if carryout and trackout extends beyond 50 feet. (Rule 8041 Sec. 5.5) 		
Clean up Method: Check the method below that will be used for cleaning carryout and trackout.		
 Manually sweeping and picking up. (Rule 8041 Sec. 5.7.1) Mechanical sweeping with a rotary brush or broom accompanied or preceded by water. (Rule 8041 Sec. 5.7.2) Describe the types of equipment that will used: 		
To be determined		
Operating a PM10-efficient street sweeper. (Rule 8041 Sec. 5.7.3)		
Make and Model:		
 Flushing with water: allowed if: (Rule 8041 Sec. 5.7.4) No curbs or gutters are present. 		
 Using water will not result as a source of trackout and carryout. 		
 Using water will not result in adverse impacts on storm water drainage systems. Using water will not violate any National Pollutant Discharge Elimination System permit program. 		
5-D Record keeping for Cleanup of Carryout and Trackout (Rule 8011 Sec. 6.2)		
Records and any other supporting documents for demonstrating compliance must be maintained. The District has developed a record keeping form specific for cleaning carryout and trackout from paved public roads and may be used for complying with this requirement. Check one or both below:		
Records will be maintained using the form developed by the District.		
Records will be maintained using documents or forms developed by the owner or operator.		
Explain and include copies:		

Dust Control Plan Section 6 – Certification

Project Name: Panoche Avenue Shoulder Improvements		
6-A Certification		
	· · · · · · · · · · · · · · · · · · ·	nenting must certify the plan (Rule 8021 Sec 6.3). de the certification (Rule 2520 Sec. 3.28 and 10.0).
		mation submitted in the attachments to this
documents are true and o		
Dale Siemer, PE		Supervising Engineer
Print Name		Title
	\frown	1 16/18
Signature		Date
(559) 600-4327	(559) 600-4399	
Phone Number	Fax Number	Cell Number

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT COMPLIANCE DIVISION

Presents this Certificate of Completion to

Dale Siemer

On August 13, 2014, at Fresno, California for

REGULATION VIII — DUST CONTROL TRAINING



San Joaquin Valley Air Pollution Control District

Signature 8-13-14 Date

SELF-DEALING TRANSACTION DISCLOSURE FORM

(1)	Company Board Member Information:	
	Name:	Date:
	Job Title:	
(2)	Company/Agency Name and Address:	
(3)	Disclosure (Please describe the nature of the self-dealing	transaction you are a party to)
(4)	Explain why this self-dealing transaction is consistent with Code 5233 (a)	the requirements of Corporations
(5)	Authorized Signature	
	Signature:	Date:

SELF-DEALING TRANSACTION DISCLOSURE FORM INSTRUCTIONS

In order to conduct business with the County of Fresno (hereinafter referred to as "County"), members of a contractor's board of directors (hereinafter referred to as "County Contractor"), must disclose any self-dealing transactions that they are a party to while providing goods, performing services, or both for the County. A self-dealing transaction is defined below:

"A self-dealing transaction means a transaction to which the corporation is a party and which one or more of its directors has a material financial interest"

The definition above will be utilized for purposes of completing the disclosure form.

- (1) Enter board member's name, job title (if applicable), and date this disclosure is being made.
- (2) Enter the board member's company/agency name and address.
- (3) Describe in detail the nature of the self-dealing transaction that is being disclosed to the County. At a minimum, include a description of the following:
 - a. The name of the agency/company with which the corporation has the transaction; and
 - b. The nature of the material financial interest in the Corporation's transaction that the board member has.
- (4) Describe in detail why the self-dealing transaction is appropriate based on applicable provisions of the Corporations Codes.
- (5) Form must be signed by the board member that is involved in the self-dealing transaction described in Sections (3) and (4).

REVISED STANDARD SPECIFICATIONS DATED 09-02-16

ORGANIZATION

Revised standard specifications 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*. A date under a main-section heading is the date of the latest revision to the section.

Each revision to the *Standard Specifications* begins with a revision clause that describes or introduces a revision to the *Standard Specifications*. For a revision clause that describes a revision, the date on the right above the clause is the publication date of the revision. For a revision clause that introduces a revision, the date on the right above a revised term, phrase, clause, paragraph, or section is the publication date of the revision, the date on the right above a paragraph, or section. For a multiple-paragraph or multiple-section revision, the date on the right above a paragraph or section is the publication date of the revision.

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*.

DIVISION I GENERAL PROVISIONS

1 GENERAL

07-15-16 Add to the 1st table of section 1-1.06:

APCD	air pollution control district	
AQMD	MD air quality management district	
CISS	cast-in-steel shell	
CSL	crosshole sonic logging	
GGL	GGL gamma-gamma logging	

^^^^

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

07-15-16

Replace the paragraphs in section 7-1.02I(2) with:

Under 2 CA Code of Regs § 11105:

 During the performance of this contract, the recipient, contractor, and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. Contractor shall insure that the

05-06-16

evaluation and treatment of employees and applicants for employment are free of such discrimination.

- 2. Contractor shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, § 12900 et seq.), the regulations promulgated thereunder (Cal. Code Regs., tit. 2, § 11000 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code, §§ 11135-11139.5), and the regulations or standards adopted by the awarding state agency to implement such article.
- 3. Contractor or recipient shall permit access by representatives of the Department of Fair Employment and Housing and the awarding state agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause.
- 4. Recipient, contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- 5. The contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

Under 2 CA Code of Regs § 11122:

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE SECTION 12990)

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000 or more.

- 1. As used in the specifications:
 - a. "Act" means the Fair Employment and Housing Act.
 - b. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
- 2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.
- 3. The contractor shall implement the specific nondiscrimination standards provided in paragraphs 6(a) through (e) of these specifications.
- 4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer members of any group protected by the Act shall excuse the contractor's obligations under these specifications, Government Code section 12990, or the regulations promulgated pursuant thereto.5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
- 5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
- 6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under steps a. through e. below:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment.

- b. Provide written notification within seven days to the director of the DFEH when the referral process of the union or unions with which the contractor has a collective bargaining agreement has impeded the contractor's efforts to meet its obligations.
- c. Disseminate the contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
- d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
- e. Ensure that seniority practices, job classifications, work assignments, and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the contractor's obligations under these specifications are being carried out.
- 7. Contractors are encouraged to participate in voluntary associations that assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on equal employment opportunity in the industry, ensures that the concrete benefits of the program are reflected in the contractor's workforce participation, and can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's.
- 8. The contractor is required to provide equal employment opportunity for all persons. Consequently, the contractor may be in violation of the Fair Employment and Housing Act (Government Code section 12990 et seq.) if a particular group is employed in a substantially disparate manner.
- 9. The contractor shall not use the nondiscrimination standards to discriminate against any person because race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status.
- 10. The contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code section 12990.
- 11. The contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code section 12990 and its implementing regulations by the awarding agency. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code section 12990.
- 12. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

Add to the end of the 2nd sentence in the 1st paragraph of section 7-1.02K(1):

, and hauling and delivery of ready-mixed concrete.

Add between the 4th and 5th paragraphs of section 7-1.02K(3):

Submitted certified payrolls for hauling and delivering ready-mixed concrete must be accompanied by a written time record. The time record must include:

- 1. Truck driver's full name and address
- 2. Name and address of the factory or batching plant
- 3. Time the concrete was loaded at the factory or batching plant
- 4. Time the truck returned to the factory or batching plant
- 5. Truck driver's signature certifying under penalty of perjury that the information contained in this written time record is true and correct

Add between the 9th and 10th paragraphs of section 7-1.03:

07-15-16

If a height differential of more than 0.04 foot is created by construction activities at a joint transverse to the direction of traffic on the traveled way or a shoulder subject to public traffic, construct a temporary taper at the joint with a slope complying with the requirements shown in the following table:

Tomporary rapore		
Height differential	Slope (horizo	ontal:vertical)
(foot)	Taper use of 14 days or less	Taper use of more than 14 days
Greater than 0.08	100:1 or flatter	200:1 or flatter
0.04–0.08	70:1 or flatter	70:1 or flatter

Temporary Tapers

For a taper on existing asphalt concrete or concrete pavement, construct the taper with minor HMA under section 39-2.07.

Grind existing surfaces to accommodate a minimum taper thickness of 0.10 foot under either of the following conditions:

- 1. HMA material such as rubberized HMA, polymer-modified bonded wearing course, or open-graded friction course is unsuitable for raking to a maximum 0.02 foot thickness at the edge
- 2. Taper will be in place for more than 14 days

For a taper on a bridge deck or approach slab, construct the taper with polyester concrete under section 60-3.04B.

The completed surface of the taper must be uniform and must not vary more than 0.02 foot from the lower edge of a 12-foot straightedge when placed on its surface parallel and perpendicular to traffic.

If authorized, you may use alternative materials or methods to construct the required taper.

Replace § 337.15 in the 3rd item in the list in the paragraph of section 7-1.06B with:

05-06-16

§ 337.1

Add between the 1st and 2nd paragraphs of section 7-1.11A:

02-12-16

Comply with 46 CFR 381.7(a)–(b).

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04-22-16

8 PROSECUTION AND PROGRESS

07-15-16 Replace the table in the 3rd paragraph of section 8-1.10A with:

Linuidated Demonso

Liquidated Damages		
Total bid		Liquidated damages
From over	То	per day
\$0	\$60,000	\$1,400
\$60,000	\$200,000	\$2,900
\$200,000	\$500,000	\$3,200
\$500,000	\$1,000,000	\$3,500
\$1,000,000	\$2,000,000	\$4,000
\$2,000,000	\$5,000,000	\$4,800
\$5,000,000	\$10,000,000	\$6,800
\$10,000,000	\$20,000,000	\$10,000
\$20,000,000	\$50,000,000	\$13,500
\$50,000,000	\$100,000,000	\$19,200
\$100,000,000	\$250,000,000	\$25,300

^^^^

9 PAYMENT

01-15-16

Replace may withhold in the 1st paragraph of section 9-1.16E(4) with:

withholds

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DIVISION II GENERAL CONSTRUCTION 10 GENERAL

04-15-16 Replace section 10-1.02B with:

10-1.02B Traffic Elements

Before starting the operational test of a traffic management system that directly impacts traffic, the system must be ready for operation, and all signs, pavement delineation, and pavement markings must be in place at the system's location.

If maintaining existing traffic management system elements during construction is shown on the Bid Item List, a list of the systems shown within the project limits and their operational status is included in the *Information Handout*. Before starting job site activities, conduct a preconstruction operational status check of the existing system's elements and each element's communication status with the transportation management center to which it communicates. If an existing system element is discovered and has not been identified, the Department adds the element to the list of systems. The pre- and postconstruction operational status check of the discovered elements is change order work.

If maintaining existing traffic management system elements during construction is not shown on the Bid Item List and an existing system element is discovered during the work, notify the Engineer. The Engineer orders a pre- and postconstruction operational status check of the discovered elements. The status check of the discovered elements is change order work.

04-15-16

07-15-16

Conduct the status check with the Engineer and an electrical representative from the traffic operations office of the district in which the work is located. The Department provides you a list of the preconstruction operational status-check results, including:

- 1. Existing traffic management system elements and their locations within the project limits
- 2. Fully functioning elements
- 3. Nonoperational elements

Before Contract acceptance, conduct a postconstruction operational status check of all elements shown on the list with the Engineer and an electrical representative from the traffic operations office of the district in which the work is located.

Replace 10-3 of section 10 with:

04-15-16

10-2-10-3 RESERVED

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12 TEMPORARY TRAFFIC CONTROL

07-15-16 Replace section 12-3.32 with:

12-3.32 PORTABLE CHANGEABLE MESSAGE SIGNS

12-3.32A General

12-3.32A(1) Summary

Section 12-3.32A includes specifications for placing portable changeable message signs.

12-3.32A(2) Definitions

Reserved

12-3.32A(3) Submittals

If requested, submit a certificate of compliance for each PCMS.

Submit your cell phone number before starting the first activity that requires a PCMS.

12-3.32A(4) Quality Assurance

Reserved

12-3.32B Materials

Each PCMS must have a message board, controller unit, power supply, and a structural support system. The unit must be assembled to form a complete self-contained PCMS that can be delivered to the job site and placed into immediate operation. The sign unit must be capable of operating at an ambient air temperature from -4 to 158 degrees F and must be unaffected by mobile radio transmissions other than those required to control the PCMS.

A PCMS must be permanently mounted on a trailer, truck bed, or truck cab under the manufacturer's instructions. The PCMS must be securely mounted on the support vehicle such that it remains attached during any impact to the vehicle. If it is mounted on a trailer, the trailer must be capable of being leveled and plumbed.

A minimum of 3 feet of retroreflective material must be permanently affixed on all 4 sides of the trailer. The retroreflective material need not be continuous but must be visible on the same plane.

The sign panel must be capable of displaying a 3-line message with at least 7 characters per line. The characters must be at least 18 inches in height where the useable shoulder area is at least 15 feet wide.

To prevent encroachment onto the traveled way where the useable shoulder area is less than 15 feet wide, you may use a smaller message panel with at least 12-inch-high characters.

The message displayed on the sign must be visible from a distance of 1,500 feet and legible from a distance of 750 feet at noon on a cloudless day and during the night by persons with 20/20 vision or vision corrected to 20/20.

The characters on a sign panel may be 10 inches in height if:

- 1. PCMS is mounted on a service patrol truck or other incident response vehicle or used for traffic control operations on a highway facility where the posted speed limit is less than 40 mph
- 2. Message is legible from a distance of at least 650 feet at noon on a cloudless day and during the night by persons with 20/20 vision or vision corrected to 20/20

A matrix sign must provide a complete alphanumeric selection.

A PCMS must automatically adjust its brightness under varying light conditions to maintain the legibility of the message. The sign must be equipped with an automatic-dimming mode that automatically compensates for the influence of temporary light sources or abnormal lighting conditions. The sign must have 3 or more manual dimming modes of different intensities.

During the hours of darkness, a matrix sign not using lamps must be either internally or externally illuminated.

The controller must be an all solid-state unit containing the necessary circuitry for the storage of at least 5 preprogrammed messages. The controller must be installed at a location that allows the operator to perform all functions from a single position. The controller must have a keyboard entry system that allows the operator to generate an infinite number of additional messages in addition to the preprogrammed stored messages. The keyboard must be equipped with a security lockout feature to prevent unauthorized use of the controller.

The controller must have:

- 1. Nonvolatile memory that stores keyboard-created messages during periods when the power is not activated
- 2. Variable display rate that allows the operator to match the information display to the speed of approaching traffic
- 3. Screen upon which messages may be reviewed before being displayed on the sign

The flashing-off time must be adjustable from within the control cabinet.

12-3.32C Construction

Place a PCMS as far from the traveled way as practicable where it is legible to approaching traffic without encroaching on the traveled way. Where the vertical roadway curvature restricts the sight distance of approaching traffic, place the sign on or before the crest of the curvature where it is most visible to the approaching traffic. Where the horizontal roadway curvature restricts the sight distance of approaching traffic, place the sign at or before the curve where it is most visible to approaching traffic. Where the horizontal roadway curvature restricts the sight distance of approaching traffic, place the sign at or before the curve where it is most visible to approaching traffic. Where practicable, place the sign behind guardrail or Type K temporary railing.

Make a taper consisting of 9 traffic cones placed 25 feet apart to delineate the location of a PCMS except where the sign is placed behind guardrail or Type K temporary railing.

When in full operation, the bottom of a sign must be at least 7 feet above the roadway in areas where pedestrians are anticipated and 5 feet above the roadway elsewhere, and the top of the sign must be not more than 14.5 feet above the roadway.

Operate the PCMS under the manufacturer's instructions.

Keep the PCMS clean to provide maximum visibility.

If multiple signs are needed, place each sign on the same side of the road at least 1,000 feet apart on freeways and expressways and at least 500 feet apart on other types of highways.

If more than one PCMS is simultaneously visible to traffic, only 1 sign may display a sequential message at any time. Do not use dynamic message displays, such as animation, rapid flashing, dissolving, exploding, scrolling, horizontal movement, or vertical movement of messages. The message must be centered within each line of the display.

You may use an additional PCMS if more than 2 phases are needed to display a message.

Display only messages shown or ordered.

Repeat the entire message continuously in not more than 2 phases of at least 3 seconds per phase. The sum of the display times for both of the phases must be a maximum of 8 seconds. If more than 2 phases are needed to display a message, use an additional PCMS.

You must be available by cell phone during activities that require a sign. Be prepared to immediately change the displayed message if ordered. You may operate the sign with a 24-hour timer control or remote control if authorized.

After the initial placement, move a sign from location to location as ordered.

When a PCMS is not in use, move it to an area at least 15 feet from the edge of the traveled way or remove it from the job site away from traffic.

12-3.32D Payment

Not Used

Add between the 1st sentence and 2nd sentences in the 1st paragraph of section 12-4.02A(3)(a):

For a project in District 7, submit the request at least 15 days before the proposed closure date.

Replace section 12-4.02C(2) with:

12-4.02C(2) Lane Closure System

12-4.02C(2)(a) General

The Department provides LCS training. Request the LCS training at least 30 days before submitting the 1st closure request. The Department provides the training within 15 days after your request.

LCS training is web-based or held at a time and location agreed upon by you and the Engineer. For webbased training, the Engineer provides you the website address to access the training.

With 5 business days after completion of the training, the Department provides LCS accounts and user IDs to your assigned, trained representatives.

Each representative must maintain a unique password and current user information in the LCS.

The project is not accessible in LCS after Contract acceptance.	04-15-16
12-4.02C(2)(b) Status Updates for Authorized Closures Update the status of authorized closures using the LCS Mobile web page.	01-15-16
For a stationary closure, use code:	

- 1. 10-97 immediately before you place the 1st advance warning sign
- 2. 10-98 immediately after you remove all of the advance warning signs

For a moving closure, use code:

- 1. 10-97 immediately before the actual start time of the closure
- 2. 10-98 immediately after the actual end time of the closure

01-15-16

Cancel an authorized closure by using code 10-22 within 2 hours after the authorized start time.

If you are unable to access the LCS Mobile web page, immediately notify the Engineer of the closure's status.

Replace the 1st sentence in the 3rd paragraph of section 12-6.03A with:

07-15-16

When the Engineer determines the temporary pavement delineation is no longer required for the direction of traffic, remove the temporary pavement delineation, including any underlying adhesive for temporary pavement markers, from the final layer of surfacing and from the pavement to remain in place.

^^^^

13 WATER POLLUTION CONTROL

09-02-16

Replace *General Industrial Permit* in the 2nd item in the list in the paragraph of section 13-1.01C(3) with:

Industrial General Permit

Replace the 2nd paragraph of section 13-1.01D(2) with:

05-06-16

05-06-16

Discharges from manufacturing facilities, such as batch plants and crushing plants, must comply with the discharge requirements in the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities; Order No. 2014-0057-DWQ, CAS000001 (Industrial General Permit), issued by the SWRCB. For the Industrial General Permit, go to the SWRCB website.

Replace General Industrial Permit in the 3rd paragraph of section 13-1.01D(2) with:

Industrial General Permit

Replace the 2nd paragraph of section 13-3.01D(2) with:

09-02-16

05-06-16

For a project in the Lake Tahoe Hydrologic Unit, discharges of stormwater from the project must comply with the NPDES General Permit for General Waste Discharge Requirements and National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer, (Order No. R6T-2016-0010 and NPDES No. CAG616002). You may view the General Permit for the Lake Tahoe Hydrologic Unit at the Construction Storm Water Program page of the SWRCB website.

Replace the 2nd paragraph of section 13-8.01D(2) with:

09-02-16

For a project within the Lake Tahoe Hydrologic Unit, the design, installation, operation, and monitoring of the temporary ATS and monitoring of the treated effluent must comply with Attachment E of the NPDES General Permit for General Waste Discharge Requirements and National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer, (Order No. R6T-2016-0010 and NPDES No. CAG616002). You may view the General Permit for the Lake Tahoe Hydrologic Unit at the Construction Storm Water Program page of the SWRCB website.

^^^^

16 TEMPORARY FACILITIES

04-15-16

Add between the 1st and 2nd sentences of section 16-2.03A(1):

04-15-16 Constructing a high-visibility fence includes the installation of any signs specified in the special provisions.

^^^^

DIVISION III EARTHWORK AND LANDSCAPE **20 LANDSCAPE**

07-15-16

Replace 86 in the 1st paragraph of section 20-2.01C(2) with:

87

Replace the 8th paragraph of section 20-2.01C(2) with:

Trenches for irrigation supply lines and conduits 3 inches and larger in diameter must be a minimum of 18 inches below the finished grade, measured to the top of the installed pipe.

Replace 86 in the 1st paragraph of section 20-2.01C(3) with:

87

Replace section 20-2.04A(4) with:

Perform conductors test. The test must comply with the specifications in section 87.

Where the conductors are installed by trenching and backfilling, perform the test after a minimum of 6 inches of backfill material has been placed and compacted over the conductors.

Replace the 1st paragraph of section 20-2.04C(4) with:

Splice low voltage control and neutral conductors under section 87, except do not use Method B.

Replace the 3rd paragraph of section 20-2.05B with:

The impeller must be glass reinforced nylon on a tungsten carbide shaft.

Replace 86 in the 2nd paragraph of section 20-2.06C with:

04-15-16

07-15-16

04-15-16

04-15-16

04-15-16

04-15-16

Replace section 20-2.07B(5) with:

20-2.07B(5) PVC Pipe Conduit Sleeve

PVC pipe conduit sleeves must be schedule 40 complying with ASTM D1785.

Fittings must be schedule 80.

Replace section 20-2.07C(3) with:

20-2.07C(3) PVC Pipe Conduit Sleeve

Where PVC pipe conduit sleeves 2 inches or less in outside diameter is installed under surfacing, you may install by directional boring under section 20-2.07C(2)(b).

For sleeves 2 inches or less in diameter, the top of the conduit must be a minimum of 18 inches below surfacing.

Extend sleeves 6 inches beyond surfacing. Cap ends of conduit until used.

Replace sections 20-2.09B and 20-2.09C with:

07-15-16

20-2.09B Materials 20-2.09B(1) General

Swing joints must match the inlet connection size of the riser.

Where shown, a sprinkler assembly must include a check valve.

Threaded nipples for swing joints and risers must be schedule 80, PVC 1120 or PVC 1220 pipe, and comply with ASTM D1785. Risers for sprinkler assemblies must be UV resistant.

Fittings for sprinkler assemblies must be injection-molded PVC, schedule 40, and comply with ASTM D2466.

Flexible hose for sprinkler assemblies must be leak-free, non-rigid and comply with ASTM D2287, cell Type 6564500. The hose must comply with ASTM D2122 and have the thickness shown in the following table:

Nominal hose diameter	Minimum wall thickness
(inch)	(inch)
1/2	0.127
3/4	0.154
1	0.179

Solvent cement and fittings for flexible hose must comply with section 20-2.08B(5).

20-2.09B(2) Pop-Up Sprinkler Assemblies

Each pop-up sprinkler assembly must include a body, nozzle, swing joint, pressure reducing device, fittings, and sprinkler protector where shown.

20-2.09B(3) Riser Sprinkler Assemblies

Each riser sprinkler assembly must include a body, flexible hose, threaded nipple, nozzle, swing joint (except for a Type V riser), pressure reducing device, fittings, and riser support where shown.

20-2.09B(4) Tree Well Sprinkler Assemblies

Each tree well sprinkler assembly must include a threaded nipple, nozzle, swing joint, fittings, perforated drainpipe, and drain grate.

04-15-16

The perforated drainpipe must be commercial-grade, rigid PVC pipe with holes spaced not more than 6 inches on center on 1 side of the pipe.

The drain grate must be a commercially-available, 1-piece, injection-molded grate manufactured from structural foam polyolefins with UV light inhibitors. Drain grate must be black.

Gravel for filling the drainpipe must be graded such that 100 percent passes the 3/4-inch sieve and 100 percent is retained on the 1/2-inch sieve. The gravel must be clean, washed, dry, and free from clay or organic material.

20-2.09C Construction

Where shown, install a flow shut-off device under the manufacturer's instructions, unless you use equipment with a preinstalled flow shut-off device.

Where shown, install a pressure reducing device under the manufacturer's instructions, unless you use equipment with a preinstalled pressure reducing device.

Install pop-up and riser sprinkler assembly:

- 1. From 6-1/2 to 8 feet from curbs, dikes, and sidewalks
- 2. At least 10 feet from paved shoulders
- 3. At least 3 feet from fences and walls

If sprinkler assembly cannot be installed within these limits, the location will be determined by the Engineer.

Set sprinkler assembly riser on slopes perpendicular to the plane of the slope.

Replace the paragraph of section 20-2.10B(3) with:

Each check valve must be one of the following:

- 1. Schedule 80 PVC with a factory setting to withstand a minimum 7-foot head on risers
- 2. Class 200 PVC if used on a nonpressurized plastic irrigation supply line
- 3. Internal to the sprinkler body with a factory setting to withstand a minimum 7-foot head

Replace the paragraph of section 20-2.10C(3) with:

Install check valves as necessary to prevent low-head drainage.

Replace the paragraphs of section 20-3.01B(10) with:

Each plant stake for vines must be nominal 1 by 1 inch and 18 inches long.

Each plant stake for trees must be nominal 2 by 2 inches or nominal 2 inches in diameter and long enough to keep the tree in an upright position.

Replace the paragraph of section 20-3.01B(11) with:

Each plant tie for vines must be extruded vinyl-based tape, 1 inch wide and at least 8 mils thick.

Each plant tie for trees must be a (1) minimum 3/4-inch-wide, UV-resistant, flexible vinyl tie complying with ASTM D412 for tensile and elongation strength, or (2) lock-stitch, woven polypropylene with a minimum 900 lb tensile strength.

07-15-16

07-15-16

07-15-16

Add between the 7th and 8th paragraphs of section 20-3.02C(3)(b):

Spread the vine shoots and tie them with a plant tie to each stake above the crossing point.

Replace the 8th paragraph of section 20-3.02C(3)(b) with:

07-15-16

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Tie trees to the stakes with 2 tree ties, 1 tie to each stake. Each tie must form a figure eight by crossing the tie between the tree and the stake. Install ties at the lowest position that will support the tree in an upright position. Install the ties such that they provide trunk flexibility but do not allow the trunk to rub against the stakes. Wrap each end of the tie 1-1/2 turns around the stake and securely tie or nail it to the stake.

Replace the 1st paragraph of section 20-5.02C(1) with:

Where edging is used to delineate the limits of inert ground cover or wood mulch areas, install the edging before installing the inert ground cover or wood mulch.

Delete AND MULCHES in the heading of section 20-5.03.	07-15-16
Delete and mulches in the paragraph of section 20-5.03A(1)(a).	07-15-16
Replace the paragraph of section 20-5.03A(3)(a) with:	
Before installing inert ground cover, remove plants and weeds to the ground level.	07-15-16
Delete or mulch at each occurrence in sections 20-5.03A(3)(c) and 20-5.03A(3)(d).	07-15-16
Replace section 20-5.03E with:	07-15-16
20-5.03E Reserved	07-15-16
Replace section 20-5.04 with:	07-15-16
20-5.04 WOOD MULCH 20-5.04A General 20-5.04A(1) Summary Section 20-5.04 includes specifications for placing wood mulch.	07-13-10
20-5.04A(2) Definitions Reserved	
20-5.04A(3) Submittals Submit a certificate of compliance for wood mulch.	

Submit a 2 cu ft mulch sample with the mulch source shown on the bag. Obtain authorization before delivering the mulch to the job site.

20-5.04A(4) Quality Assurance

Reserved

20-5.04B Materials

20-5.04B(1) General

Mulch must not contain more than 0.1 percent of deleterious materials such as rocks, glass, plastics, metals, clods, weeds, weed seeds, coarse objects, sticks larger than the specified particle size, salts, paint, petroleum products, pesticides or chemical residues harmful to plant or animal life.

20-5.04B(2) Tree Bark Mulch

Tree bark mulch must be derived from cedar, Douglas fir, or redwood species.

The mulch must be ground such that at least 95 percent of the material by volume is less than 2 inches long in any dimension and no more than 30 percent by volume is less than 1 inch long in any dimension.

20-5.04B(3) Wood Chip Mulch

Wood chip mulch must:

- 1. Be derived from clean wood
- 2. Not contain leaves or small twigs
- 3. Contain at least 95 percent by volume of wood chips with a width and thickness from 1/16 to 3/8 inch and a length from 1/2 to 3 inches

20-5.04B(4) Shredded Bark Mulch

Shredded bark mulch must:

- 1. Be derived from trees
- 2. Be a blend of loose, long, thin wood, or bark pieces
- 3. Contain at least 95 percent by volume of wood strands with a width and thickness from 1/8 to 1-1/2 inches and a length from 2 to 8 inches

20-5.04B(5) Tree Trimming Mulch

Tree trimming mulch must:

- 1. Be derived from chipped trees and may contain leaves and small twigs
- 2. Contain at least 95 percent by volume of material less than 3 inches long for any dimension and not more than 30 percent by volume of material less than 1 inch long for any dimension

20-5.04B(6)-20-5.04B(11) Reserved

20-5.04C Construction

Before placing wood mulch, remove plants and weeds to the ground level.

Maintain the planned flow lines, slope gradients, and contours of the job site. Grade the subgrade to a smooth and uniform surface.

Place mulch after the plants have been planted.

Place mulch in the plant basin at the rate described. Mulch must not come in contact with the plant crown and stem.

Place mulch as shown in areas outside of plant basins to a uniform thickness.

Spread mulch from the outside edge of the plant basin to the adjacent edges of shoulders, paving, retaining walls, dikes, edging, curbs, sidewalks, walls, fences, and existing plantings. If the plant is 12 feet or more from the adjacent edges of any of these elements, spread the mulch 6 feet beyond the outside edge of the plant basin.

Do not place mulch within 4 feet of:

- 1. Flow line of earthen drainage ditches
- 2. Edge of paved ditches
- 3. Drainage flow lines

20-5.04D Payment

The payment quantity for wood mulch is the volume measured in the vehicle at the point of delivery.

21 EROSION CONTROL

07-15-16

Add between *tube* and *12* in the 1st paragraph of section 21-2.02Q:

8 or

07-15-16

^^^^

DIVISION IV SUBASES AND BASES

23 GENERAL

07-15-16

Replace the headings and paragraphs in section 23 with:

23-1 GENERAL

07-15-16

23-1.01 GENERAL

23-1.01A Summary

Section 23 includes general specifications for constructing subbases and bases.

23-1.01B Definitions

Reserved

23-1.01C Submittals

Submit a QC plan for the types of subbases or bases where described.

23-1.01D Quality Assurance

23-1.01D(1) General

23-1.01D(1)(a) General

Take samples under California Test 125.

23-1.01D(1)(b) Test Result Disputes

You and the Engineer must work together to avoid potential conflicts and to resolve disputes regarding test result discrepancies. Notify the Engineer within 5 business days of receiving the test result if you dispute the test result.

If you or the Engineer dispute each other's test results, submit your test results and copies of paperwork including worksheets used to determine the disputed test results. An independent third party performs referee testing. Before the independent third party participates in a dispute resolution, it must be qualified under AASHTO Materials Reference Laboratory program and the Department's Independent Assurance Program. The independent third party must have no prior direct involvement with this Contract. By mutual agreement, the independent third party is chosen from:

1. Department laboratory in a district or region not in the district or region the project is located

- 2. Transportation Laboratory
- 3. Laboratory not currently employed by you or your material producer

If split acceptance samples are not available, the independent third party uses any available material representing the disputed material for evaluation.

If the independent third party determines the Department's test results are valid, the Engineer deducts the independent third party testing costs from payments. If the independent third party determines your test results are valid, the Department pays the independent third party testing costs.

23-1.01D(2) Quality Control

23-1.01D(2)(a) General

Provide a QC manager when the quantity of subbase or base is as shown in the following table:

Subbase or base	Requirement
Stabilized soil (sq yd)	≥ 20,000
Aggregate subbases (cu yd)	≥ 20,000
Aggregate bases (cu yd)	≥ 20,000
CTB (cu yd)	≥ 10,000
Lean concrete base (cu yd)	≥ 2,000
Rapid strength concrete base (cu yd)	≥ 1,000
Lean concrete base rapid setting (cu yd)	≥ 1,000
Concrete base (cu yd)	≥ 1,000
Treated permeable bases (cu yd)	≥ 2,000
Reclaimed pavements (sq yd)	≥ 10,000

QC Manager Requirements

Provide a testing laboratory to perform quality control tests. Maintain sampling and testing equipment in proper working condition.

You are not entitled to compensation for the suspension of work resulting from noncompliance with quality control requirements, including those identified within the QC plan.

23-1.01D(2)(b) Quality Control Plan

The QC plan must describe the organization and procedures used to:

- 1. Control the production process
- 2. Determine if a change to the production process is needed
- 3. Implement a change

The QC plan must include action and suspension limits and details of corrective action to be taken if any process is outside of those limits. Suspension limits must not exceed specified acceptance criteria.

The QC plan must describe how test results will be submitted including times for sampling and testing for each quality characteristic.

23-1.01D(2)(c) Qualifications

Testing laboratories and testing equipment must comply with the Department's Independent Assurance Program.

Personnel performing sampling and testing must be qualified under the Department's Independent Assurance Program for the sampling and testing performed.

23-1.01D(3) Department Acceptance

Reserved

23-1.02 MATERIALS

Not Used

23-1.03 CONSTRUCTION Not Used

23-1.04 PAYMENT Not Used

23-2-23-7 RESERVED

^^^^

24 STABILIZED SOILS

07-15-16 Add to section 24-1.01C(1):

Submit a stabilized soil quality control plan.

Add to section 24-1.01D(1):

Construct test pads for compaction tests by scraping away material to the depth ordered. If a compaction test fails, corrective action must include the layers of material already placed above the test pad elevation.

Replace section 24-1.01D(2) with:

24-1.01D(2) Quality Control 24-1.01D(2)(a) General Reserved

24-1.01D(2)(b) Quality Control Plan Reserved

24-1.01D(2)(c) Qualifications

Reserved

24-1.01D(2)(d) Preparing Basement Material

After preparing an area for soil stabilization, verify the surface grades.

24-1.01D(2)(e) Mixing

Except for clods larger than 1 inch, randomly test the adequacy of the mixing with a phenolphthalein pH indicator solution.

Replace the 1st paragraph of section 24-1.03C with:

The Engineer orders the application rate as pounds of stabilizing agent per square yard of basement material to be stabilized.

Delete section 24-2.01D(1)(c)

Replace 250 in the 2nd sentence in the 2nd paragraph of section 24-2.01D(2)(c) with:

07-15-16

07-15-16

500

07-15-16

07-15-16

07-15-16

Add to section 24-2.01D(2):

24-2.01D(2)(d) Quality Control Testing

Lime stabilized soil quality control must include testing the quality characteristics at the frequencies shown in the following table:

QC Testing Frequencies				
Quality characteristic	Test method	Sampling location	Minimum frequency	
Ground surface temperature before adding lime and full depth ground temperature during mixing operations		Each temperature location	1 test per 20,000 sq ft, minimum 1 per day	
Lime application rate	Calibrated tray or equal	Roadway	1 test per 40,000 sq ft, minimum 2 per day	
Gradation on mixed material	California Test 202	Roadway	1 per 500 cu yd, minimum 1 per day	
Moisture content	California Test 226	Roadway	1 per 500 cu yd on each layer, each day during mixing and mellowing periods, minimum 1 per day	
Relative compaction	California Test 231	Roadway	1 per 500 cu yd on each layer, minimum 1 per day	

^^^^

25 AGGREGATE SUBBASES

07-15-16

Replace Reserved in section 25-1.01C with:

Submit an aggregate subbase QC plan.

Replace Reserved in section 25-1.01D(2) with:

25-1.01D(2)(a) General

Reserved

25-1.01D(2)(b) Quality Control Plan Reserved

25-1.01D(2)(c) Qualifications

Reserved

25-1.01D(2)(d) Quality Control Testing

AS quality control must include testing the quality characteristics at the frequencies shown in the following table:

07-15-16

07-15-16

QC Testing Frequencies			
Quality	Test method	Sampling location	Minimum frequency
characteristic			
R-value	California Test	Stockpiles,	1 test before beginning work and
	301	transportation units,	every 2000 cu yd thereafter ^a
		windrows, or	
		roadways	
Aggregate	California Test	Stockpiles,	
gradation	202	transportation units,	
		windrows, or	
		roadways	1 per 500 cu yd but at least one per
Sand equivalent	California Test	Stockpiles,	day of placement
	217	transportation units,	
		windrows, or	
		roadways	
Relative	California Test	Roadway	1 per 500 sq yd on each layer
compaction	231		

^aAdditional R-value frequency testing will not be required when the average of 4 consecutive sand equivalent tests is 4 or more above the specified operating range value.

Add between the 2nd and 3rd paragraphs of section 25-1.01D(3):

The Engineer takes aggregate subbase samples for R-value, aggregate gradation, and sand equivalent from any of the following locations:

- 1. Windrow
- 2. Roadway

07-15-16

07-15-16

Delete for each noncompliant test result in the 4th paragraph of section 25-1.01D(3).

07-15-16

Delete *a* in the 5th paragraph of section 25-1.01D(3).

^^^^

26 AGGREGATE BASES

07-15-16

Replace Reserved in section 26-1.01C with:

Submit an aggregate base QC plan.

Replace Reserved in section 26-1.01D(1) with:

07-15-16

07-15-16

Aggregate samples must not be treated with lime, cement, or chemicals before testing for durability index. Aggregate from untreated reclaimed processed AC, PCC, LCB, or CTB is not considered treated.

Replace Reserved in section 26-1.01D(2) with:

26-1.01D(2)(a) General

Reserved

26-1.01D(2)(b) Quality Control Plan

Reserved

26-1.01D(2)(c) Qualifications

Reserved

26-1.01D(2)(d) Quality Control Testing

AB quality control must include testing the quality characteristics at the frequencies shown in the following table:

QC Testing Frequencies				
Quality characteristic	Test method	Sampling location	Minimum frequency	
R-value	California Test 301	Stockpiles,	1 test before starting work and	
		transportation units,	every 2,000 cu yd thereafter ^a	
		windrows, or		
		roadways		
Aggregate gradation	California Test 202	Stockpiles,	1 per 500 cu yd but at least	
		transportation units,	one per day of placement	
		windrows, or		
		roadways		
Sand equivalent	California Test 217	Stockpiles,		
		transportation units,		
		windrows, or		
		roadways		
Durability index ^b	California Test 229	Stockpiles,	1 per project	
		transportation units,		
		windrows, or		
		roadways		
Relative compaction	California Test 231	Roadway	1 per 500 sq yd on each layer	

^aAdditional R-value frequency testing will not be required when the average of 4 consecutive sand equivalent tests is 29 or greater for Class 2 AB or 25 or greater for Class 3 AB. ^bApplies if section 26-1.02 contains an applicable requirement for durability index

Add between *requirements*, and *and* in the 1st paragraph of section 26-1.01D(3):

durability,

Add between the 2nd and 3rd paragraphs of section 26-1.01D(3):

The Engineer takes aggregate base samples for R-value, aggregate gradation, sand equivalent, and durability index from any of the following locations:

- 1. Windrow
- 2. Roadway

27 CEMENT TREATED BASES

07-15-16 Add to section 27-1.01C:

Submit cement treated base QC plan.

Replace the headings and paragraphs in section 27-1.01D with:

27-1.01D Quality Assurance

27-1.01D(1) General

After the CTB has been spread on the subgrade and before initial compaction, the cement content of the completed mixture of CTB must not vary from the specified cement content by more than 0.6 percent of the weight of the dry aggregate when tested under California Test 338.

For Class A CTB, compaction is tested under California Test 312 or 231.

The relative compaction of CTB must be at least 95 percent. Each layer of CTB may be tested for compaction, or all layers may be tested together at the option the Engineer. If all layers are tested together, you are not relieved of the responsibility to achieve the required compaction in each layer placed.

27-1.01D(1)(a) Aggregate

When tested under California Test 301, aggregate for Class B CTB must have (1) an R-value of at least 60 before mixing with cement and (2) an R-value of at least 80 when aggregate is mixed with an amount of cement that does not exceed 2.5 percent by weight of the dry aggregate.

Before sand equivalent testing, aggregate samples must not be treated with lime, cement, or chemicals.

If the aggregate gradation test results, the sand equivalent test results, or both comply with contract compliance requirements but not operating range requirements, you may continue placing CTB for the remainder of the work day. Do not place additional CTB until you demonstrate to the Engineer that the CTB to be placed complies with the operating range requirements.

If the aggregate gradation test results, sand equivalent test results, or both do not comply with contract compliance requirements, remove the CTB or request a payment deduction. If your request is authorized, \$2.50/cu yd is deducted. If CTB is paid for by weight, the Engineer converts tons to cubic yards for the purpose of reducing payment for noncompliant CTB left in place. An aggregate gradation and a sand equivalent test represents up to (1) 500 cu yd or (2) 1 day's production if less than 500 cu yd.

27-1.01D(1)(b) Road-Mixed Cement Treated Base Moisture Content

Just before initial compaction the moisture content of the completed mixture must be at least the optimum moisture content less 1 percent. The moisture content is determined under California Test 226 and optimum moisture content is determined under California Test 312.

27-1.01D(1)(c) Plant-Mixed Cement Treated Base Moisture Content

At the point of delivery to the work, the moisture content of the completed mixture must be at least the optimum moisture content less 1 percent. The moisture content is determined under California Test 226 and optimum moisture content under California Test 312.

27-1.01D(2) Quality Control 27-1.01D(2)(a) General Reserved 27-1.01D(2)(b) Quality Contr

27-1.01D(2)(b) Quality Control Plan Reserved 07-15-16

27-1.01D(2)(c) Qualifications

Reserved

27-1.01D(2)(d) Quality Control Testing

CTB quality control must include testing the quality characteristics at the frequencies shown in the following table:

QC Testing Frequencies				
Quality characteristic	Test method	Sampling location	Minimum frequency	
Aggregate gradation	California Test 202 modified	Stockpiles, plant, transportation units, windrow, or roadway	1 per 500 cu yd but at	
Sand equivalent	California Test 217	Stockpiles, plant, transportation units, windrow, or roadway	least one per day of placement	
R-value ^a	California Test 301	Stockpiles, plant, transportation units, windrows, or roadway	1 test before starting work and every 2000 cu yd thereafter ^b	
Optimum moisture content	California Test 312	Plant, transportation units, windrow, or roadway	1 per day of placement	
Moisture content	California Test 226	Roadway	1 per 500 cu yd but at least one per day of placement	
Cement content	California Test 338	Windrows or roadway	1 per 1000 cu yd but at least one per day of placement	
Relative compaction	California Test 312 or 231	Roadway	1 per 2000 sq yd but at least one per day of placement	
Compressive strength ^c	California Test 312	Windrow or roadways	1 per day of placement	

OC Testing Frequencies

^aR-value is required for Class B CTB only

^bAdditional R-value frequency testing will not be required while the average of 4 consecutive sand equivalent tests is 4 or more above the specified operating range value.

°Compressive strength is required for Class A CTB only when specified

27-1.01D(3) Department Acceptance

The Department's acceptance testing includes testing the CTB guality characteristics shown in the following table:

Quality characteristic	Test method		
Aggregate gradation	California Test 202 modified		
Sand equivalent	California Test 217		
R-value ^a	California Test 301		
Optimum moisture content	California Test 312		
Moisture content	California Test 226		
Cement content	California Test 338		
Relative compaction	California Test 312 or 231		
Compressive strength ^b	California Test 312		

CTB Requirements for Acceptance

^aR-value is required for Class B CTB only

^bCompressive strength is required for Class A CTB only when specified

The Engineer takes samples for aggregate gradation and sand equivalent from any of the following locations:

- 1. Plant
- 2. Truck
- 3. Windrow, for road-mixed only
- 4. Roadbed, for road-mixed only

Add to section 27-1.02:

Water must comply with section 90-1.02D.

Add to section 27-1.03F:

The relative compaction of CTB must be at least 95 percent.

^^^^

28 CONCRETE BASES

07-15-16

Replace the headings and paragraphs in section 28-1.01D with:

28-1.01D Quality Assurance

28-1.01D(1) General

Aggregate samples must not be treated with lime, cement, or chemicals before testing for sand equivalent.

Stop concrete base activities and immediately notify the Engineer whenever:

- 1. Any QC or QA test result does not comply with the specifications
- 2. Visual inspection shows a noncompliant concrete base

If concrete base activities are stopped, before resuming activities:

- 1. Notify the Engineer of the adjustments you will make
- 2. Remedy or replace the noncompliant concrete base
- 3. Field qualify or construct a new test strip as specified for the concrete base involved to demonstrate compliance with the specifications
- 4. Obtain authorization

28-1.01D(2) Quality Control

28-1.01D(2)(a) General

Reserved

28-1.01D(2)(b) Quality Control Plan

Reserved

28-1.01D(2)(c) Qualifications

Reserved

28-1.01D(3) Department Acceptance Reserved 07-15-16

07-15-16

Submit a lean concrete base QC plan.

Replace the headings and paragraphs in section 28-2.01D with:

07-15-16

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28-2.01D Quality Assurance

28-2.01D(1) General

28-2.01D(1)(a) General

The molds for compressive strength testing under ASTM C31 or ASTM C192 must be 6 by 12 inches.

If the aggregate gradation test results, sand equivalent test results or both comply with the contract compliance requirements but not the operating range requirements, you may continue placing LCB for the remainder of the work day. Do not place additional LCB until you demonstrate the LCB to be placed complies with the operating range requirements.

28-2.01D(1)(b) Qualifications

Field qualification tests and calculations must be performed by an ACI certified "Concrete Laboratory Technician, Grade I.

28-2.01D(1)(c) Aggregate Qualification Testing

Qualify the aggregate for each proposed aggregate source and gradation. The qualification tests include (1) a sand equivalent and (2) an average 7-day compressive strength under ASTM C39 of 3 cylinders manufactured under ASTM C192 except cure cylinders in molds without lids after initial curing.

For the compressive strength test, the cement content for each cylinder must be 300 lb/cu yd. The 7-day average compressive strength must be at least 610 psi. The cement must be Type II portland cement.

LCB must have from 3 to 4 percent air content during aggregate qualification testing.

28-2.01D(1)(d) Field Qualification Testing

Before placing LCB, you must perform field qualification testing and obtain authorization for each mix design. Retest and obtain authorization for changes to the authorized mix designs.

Notify the Engineer at least 5 business days before field qualification. Perform the field qualification at the job site or an authorized location.

Field qualification testing includes tests for compressive strength, air content, and penetration or slump.

For compressive strength field qualification testing:

- 1. Prepare 12 cylinders under ASTM C31 except final cure cylinders in molds without lids from a single batch.
- 2. Perform 3 tests; each test consists of determining the average compressive strength of 2 cylinders at 7 days under ASTM C39. The average compressive strength for each test must be at least 530 psi

If you submitted a notice to produce LCB qualifying for a transverse contraction joint waiver, manufacture additional specimens and test the LCB for compressive strength at 3 days. Prepare the compressive strength cylinders under ASTM C31 except final cure cylinders in molds without lids at the same time using the same material and procedures as the 7-day compressive strength cylinders except do not submit 6 additional test cylinders. The average 3-day compressive strength for each test must be not more than 500 psi.

28-2.01D(2) Quality Control 28-2.01D(2)(a) General Reserved

28-2.01D(2)(b) Quality Control Manager Reserved

28-2.01D(2)(c) Quality Control Testing

Test the LCB under the test methods and at the locations and frequencies shown in the following table:

Test method	Sampling location	Minimum sampling and testing frequency	
ASTM D2419	Source		
ASTM C136	Source		
ASTM C231		1 per 500 cubic yards	
ASTM C360		but at least 1 per day of	
ASTM C143	Job site	production	
ASTM C39 ^b			
	Test method ASTM D2419 ASTM C136 ASTM C231 ASTM C360 ASTM C143	Test methodSampling locationASTM D2419SourceASTM C136SourceASTM C231ASTM C360ASTM C143Job site	

LCB Sampling Location and Testing Frequencies

^aTest for either penetration or slump

^bPrepare cylinders under ASTM C31 except final cure cylinders in molds without lids.

28-2.01D(3) Department Acceptance

The Department accepts LCB based on compliance with the requirements shown in the following table:

LCB Requirements for Acceptance

Quality characteristic	Test method	Requirement	
Compressive strength (min, psi at 7 days)	ASTM C39 ^a	530 ^b	

^a Cylinders prepared under ASTM C31 except final cure cylinders in molds without lids. ^b A compressive strength test represents up to (1) 1,000 cu yd or (2) 1 day's production if less than 1,000 cu yd.

Replace section 28-2.01D(4) in item 3 of the 5th paragraph in section 28-2.03D with:

07-15-16

section 28-2.01D(1)(c)

Replace the 1st paragraph in section 28-2.03F with:

07-15-16

After finishing LCB, cure LCB with pigmented curing compound under section 90-1.03B(3) and 40-1.03I. Apply curing compound:

- 1. In 2 separate applications
- 2. Before the atmospheric temperature falls below 40 degrees F
- 3. At a rate of 1 gal/150 sq ft for the first application
- 4. At a rate of 1 gal/200 sq ft for the second application

Replace *Reserved* in section 28-3.01C(3) with:

Submit a rapid strength concrete base QC plan.

Replace the headings and paragraphs in section 28-3.01D with:

28-3.01D Quality Assurance

28-3.01D(1) General

28-3.01D(1)(a) General

At the preconstruction meeting be prepared to discuss the project specifications and methods of performing each item of work. Items discussed must include the processes for:

- 1. Production
- 2. Transportation
- 3. Placement
- 4. QC plan, if specified in the special provisions
- 5. Contingency plan
- 6. QC sampling and testing
- 7. Acceptance criteria

Beams for modulus of rupture testing must be fabricated and tested under California Test 524. The beams may be fabricated using an internal vibrator under ASTM C31. For each test, 3 beam must be fabricated and the test results averaged. No single test represents more than that day's production or 130 cu yd, whichever is less.

For early age testing, beams must be cured so the monitored temperatures in the beams and the test strip are always within 5 degrees F. The internal temperatures of the RSC base and early age beams must be monitored and recorded at intervals of at least 5 minutes. Thermocouples or thermistors connected to strip-chart recorders or digital data loggers must be installed to monitor the temperatures. Temperature recording devices must be accurate to within ±2 degrees F. Until early age testing is completed, internal temperatures must be measured at 1 inch from the top, 1 inch from the bottom, and no closer than 3 inches from any edge.

For other age testing, beams must be cured under California Test 524 except beams must be placed into sand at a time that is the earlier of either from 5 to 10 times the final set time, or 24 hours.

RSC base must have an opening age modulus of rupture of not less than 400 psi and a 7-day modulus of rupture of not less than 600 psi.

28-3.01D(1)(b) Preconstruction Meeting

Reserved

28-3.01D(1)(c) Test Strip Reserved

28-3.01D(2) Quality Control 28-3.01D(2)(a) General Reserved

28-3.01D(2)(b) Quality Control Manager

Reserved

28-3.01D(2)(c) Quality Control Testing

Test the rapid strength concrete base under the test methods and at the locations and frequencies shown in the following table:

Rapid Strength Concrete Base Sampling Location and Testing Frequencies				
Quality characteristic	Test method	Sample Location	Minimum testing frequency ^a	
Cleanness value	California Test 227		1 per 500 cubic yards but at	
Sand equivalent	California Test 217	Source	least 1 per shift	
Aggregate gradation	California Test 202			
Air content	California Test 504		1 per 130 cu yd but at least 1 per shift	
Yield	California Test 518		1 per shift	
Slump or penetration	ASTM C143 or California		1 per 2 hours of placement	
	Test 533	Job site		
Density	California Test 518	JOD SILE	1 per shift	
Aggregate moisture	California Test 223 or		1 per shift	
meter calibration ^b	California Test 226			
Modulus of rupture	California Test 524		1 per 130 cu yd but at least 1 per	
			shift	

Rapid Strength Concrete Base Sampling Location and Testing Frequencies

^aTest at the most frequent interval.

^bCheck calibration of the plant moisture meter by comparing moisture meter readings with California Test 223 or California Test 226 test results.

Notify the Engineer at least 2 business days before any sampling and testing. Submit testing results within 15 minutes of testing completion. Record inspection, sampling, and testing on the forms accepted with the QC plan and submit them within 48 hours of completion of each day of production and within 24 hours of 7-day modulus of rupture tests.

During the placement of RSC base, fabricate beams and test for the modulus of rupture:

- 1. At opening age
- 2. At 7 days after placing the first 30 cu yd
- 3. At least once every 130 cu yd
- 4. Within the final truckload

Opening age tests must be performed in the presence of the Engineer.

28-3.01D(3) Department Acceptance

The Department accepts RSC base based on compliance with the requirements shown in the following table:

RSC base Requirements for Acceptance				
Quality characteristic	Test method	Requirement		
Modulus of rupture (min, psi at 7 days)	California Test 524	600		

RSC Base Requirements for Acceptance

The Engineer adjust payment for RSC base for the 7-day modulus of rupture as follows:

- 1. Payment for a base with a modulus of rupture of 600 psi or greater is not adjusted.
- 2. Payment for a base with a modulus of rupture of less than 600 and greater than or equal to 550 psi is reduced by 5 percent.
- 3. Payment for a base with a modulus of rupture of less than 550 and greater than or equal to 500 psi is reduced by 10 percent.
- 4. Payment for a base with a modulus of rupture of less than 500 psi is not adjusted and no payment is made. Remove and replace this base.

Add to section 28-4.01C(1):

Submit a lean concrete base rapid setting QC plan.

Replace the headings and paragraphs in section 28-4.01D with:

28-4.01D Quality Assurance

28-4.01D(1) General

28-4.01D(1)(a) General

For compressive strength testing, prepare 6 cylinders under California Test 540. Test cylinders must be 6 by 12 inches. As an alternative to rodding, a vibrator may be used under California Test 524. Test cylinders under California Test 521 and perform 3 tests with each test consisting of 2 cylinders. The test result is the average from the 2 cylinders.

28-4.01D(1)(b) Field Qualification

Before placing lean concrete base rapid setting, you must perform field qualification testing and obtain authorization for each mix design. Retest and obtain authorization for changes to authorized mixed designs.

Proposed mix designs must be field qualified before you place the base represented by those mix designs. The technician performing the field test must hold current ACI certification as a Concrete Field Testing Technician-Grade I.

Notify the Engineer at least 5 days before field qualification. Perform field qualification within the job site or a location authorized.

Field qualification testing includes compressive strength, air content, and penetration or slump in compliance with the table titled "Lean Concrete Base Rapid Setting Requirements."

Field qualification must comply with the following:

- 1. Test for compressive strength at opening age and 7 days of age
- 2. At opening age, the compressive strength for each test must be at least 180 psi and the average strength for the 3 tests must be at least 200 psi
- 3. At 7 days age, the compressive strength for each test must be at least 600 psi and the average strength for the 3 tests must be at least 725 psi

28-4.01D(2) Quality Control

28-4.01D(2)(a) General

Reserved

28-4.01D(2)(b) Quality Control Manager

Reserved

28-4.01D(2)(c) Quality Control Testing

Test the base under the test methods and at the locations and frequencies shown in the following table:

LCB Rapid Setting Sampling Location and Testing Frequencies

Lob Rapia County Camping Location and Tooting Trequencies				
Quality characteristic	Test method	Sampling	Minimum sampling and testing	
		location	frequency	
Sand equivalent	ASTM D2419	Source	1 per 500 cu yd, minimum 1 per day	
Aggregate gradation	ASTM C136	Source	of production	
Air content	ASTM C231			
Penetration ^a	ASTM C360		1 per 4 hours of placement work,	
Slump ^a	ASTM C143	Job site	plus one in the last hour of	
Compressive	California Test 521		placement work	
strength				

^aTest either penetration or slump

During placement of lean concrete base rapid setting, fabricate cylinders and test compressive strength for opening age and 7 days. Opening age tests must be performed in the presence of the Engineer.

28-4.01D(3) Department Acceptance

The Department accepts LCB rapid setting based on compliance with the requirement shown in the following table:

LCB Rapid Setting Requirements for Acceptance				
Quality characteristic Test method Requirement				
Compressive strength (min, psi at 7 days)	California Test 521ª	725		
^a Cylinders made under California Test 540				

·y

Replace the 2nd and 3rd paragraphs in section 28-4.03A with:

07-15-16

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Concrete paving operations with equipment not supported by the base may start before opening age. Do not open pavement for traffic before opening age of the LCB rapid setting.

Any other paving operations must start after the final set time of the base. The base must have a compressive strength of at least 450 psi under California Test 521 before:

- 1. Placing HMA
- 2. Placing other base material
- 3. Operating equipment on the base

Replace Reserved in section 28-5.01C with:

Submit a concrete base QC plan.

Replace the headings and paragraphs in section 28-5.01D(2) with:

28-5.01D(2) Quality Control 28-5.01D(2)(a) General Reserved

28-5.01D(2)(b) Quality Control Manager

Reserved

28-5.01D(2)(c) Quality Control Testing

Test the concrete base under the test methods and at the locations and frequencies shown in the following table:

Co	Concrete Base Sampling Location and Testing Frequencies				
Quality characteristic	Test method	Sample location	Minimum testing frequency ^a		
Cleanness value	California Test 227		1 per 500 cubic yards but at		
Sand equivalent	California Test 217	Source	least 1 per shift		
Aggregate gradation	California Test 202				
Air content	California Test 504		1 per 500 cu yd but at least 1 per shift		
Yield	California Test 518		1 per shift		
Slump or penetration	ASTM C143 or California		1 per 2 hours of placement		
	Test 533	Job site			
Density	California Test 518	JOD SILE	1 per shift		
Aggregate moisture	California Test 223 or		1 per shift		
meter calibration ^b	California Test 226				
Modulus of rupture	California Test 524		1 per 500 cu yd but at least 1 per		
			shift		

^aTest at the most frequent interval.

^bCheck calibration of the plant moisture meter by comparing moisture meter readings with California Test 223 or California Test 226 test results.

28-5.01D(3) Department Acceptance

The Department accepts a concrete base based on compliance with the requirements shown in the following table:

Concrete Base Requirements for Acceptance

Quality characteristic	Test method	Requirement
Modulus of rupture (min, psi at 28 days)	California Test 523	570

Acceptance for the modulus of rupture is on a lot basis. The Department provides the molds and machines for the modulus of rupture acceptance testing. Provide any material and labor the Engineer may require for the testing.

^^^^

29 TREATED PERMEABLE BASES

07-15-16

Replace the headings and paragraphs in section 29-1.01 with:

29-1.01 GENERAL

29-1.01A Summary

Section 29-1 includes general specifications for constructing treated permeable bases.

29-1.01B Definitions

Reserved

29-1.01C Submittals

Submit a treated permeable base quality control plan.

29-1.01D Quality Assurance

29-1.01D(1) General

Reserved

07-15-16

29-1.01D(2) Quality Control 29-1.01D(2)(a) General Reserved

29-1.01D(2)(b) Quality Control Plan Reserved

29-1.01D(2)(c) Qualifications Reserved

29-1.01D(3) Department Acceptance

Reserved

Replace the headings and paragraphs in section 29-2.01D with:

29-2.01D Quality Assurance

29-2.01D(1) General

The Engineer determines the asphalt content of the asphalt mixture under California Test 382. The bitumen ratio, pounds of asphalt per 100 lb of dry aggregate, must not vary more than 0.5 lb of asphalt above or below the quantity designated by the Engineer. Samples used to determine the bitumen ratio are obtained from trucks at the plant or from the mat behind the paver before rolling. If the sample is taken from the mat behind the paver, the bitumen ratio must not be less than the quantity designated by the Engineer, less 0.7 lb of asphalt per 100 lb of dry aggregate.

29-2.01D(2) Quality Control

29-2.01D(2)(a) General

Reserved

29-2.01D(2)(b) Quality Control Testing

ATPB quality control must include testing the quality characteristics at the frequencies shown in the following table:

	40 1000	ing riequencies	
Quality characteristic	Test method	Sampling location	Minimum frequency
Gradation	California Test	Stockpiles or plant	1 for every 4 hours of
	202		production but at least one
			per day of placement
Cleanness value	California Test	Stockpiles or plant	1 for every 4 hours of
	227		production but at least one
			per day
Percentage of crushed	California Test	Stockpiles or plant	1 test before production and
particles	205		one every 5,000 cu yd
			thereafter
Los Angeles rattler loss at	California Test	Stockpiles or plant	1 test before production and
500 rev	211		one every 5,000 cu yd
			thereafter
Film stripping	California Test	Plant	1 test before production and
	302		one every 5000 cu yd
			thereafter
Asphalt content of the	California Test	Plant, transportation	1 for every 4 hours of
asphalt mixture	382	units, windrows, or	production but at least one
		roadway	per day

QC Testing Frequencies

07-15-16

29-2.01D(3) Department Acceptance

The Department accepts ATPB based on aggregate gradation, cleanness value, percent of crushed particles, Los Angeles rattler, film stripping and asphalt content requirements specified in section 29-2.02 and section 29-2.01D(1).

The Engineer takes samples for aggregate gradation, cleanness value, percent of crushed particles, Los Angeles rattler, and film stripping from the plant.

The Engineer takes samples for asphalt content of the asphalt mixture from any of the following locations:

- 1. Plant
- 2. Truck
- 3. Windrow
- 4. Roadbed

Replace the headings and paragraphs in section 29-3.01 with:

29-3.01 GENERAL

07-15-16

29-3.01A Summary

Section 29-3 includes specifications for constructing cement treated permeable bases.

29-3.01B Definitions

Reserved

29-3.01C Submittals

Reserved

29-3.01D Quality Assurance

29-3.01D(1) General

Reserved

29-3.01D(2) Quality Control 29-3.01D(2)(a) General

Reserved

29-3.01D(2)(b) Quality Control Testing

CTPB quality control must include testing the quality characteristics at the frequencies shown in the following table:

QC Testing Frequencies

Quality characteristic	Test method	Sampling location	Minimum frequency
Gradation	California Test 202	Stockpiles or plant	1 for every 4 hours of production but at least one per day of placement
Cleanness value	California Test 227	Stockpiles or plant	1 for every 4 hours of production but at least one per day
Los Angeles rattler loss at 500 rev	California Test 211	Stockpiles or plant	1 test before production and one every 5,000 cu yd thereafter
Soundness	California Test 214	Stockpiles or plant	1 test before production and one every 5,000 cu yd thereafter

29-3.01D(3) Department Acceptance

The Department accepts CTPB based on aggregate gradation, cleanness value, Los Angeles rattler and soundness requirements in section 29-3.02.

The Engineer takes samples for aggregate gradation, cleanness value, Los Angeles rattler and soundness from the plant.

Add to section 29-3.02A:

Water must comply with section 90-1.02D.

Replace 3rd in the 2nd paragraph in section 29-3.03 with:

4th

^^^^

30 RECLAIMED PAVEMENT

07-15-16

Replace section 30-1.01C(2)(c) in the 1st paragraph of section 30-3.01C(2)(c) with:

section 30-1.01C(3)(c)

07-15-16

07-15-16

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Replace the table in section 30-3.02A with:

Quality characteristic	Test method	Requirement
Moisture content before HMA paving	California Test 226	< 50% of OMC
Asphalt binder expansion ratio (min, %)	Note a	10
Asphalt binder half-life (seconds, min)	Note a	12
Gradation (%, passing) Sieve Size: 3 inch 2 inch 1-1/2 inch	California Test 202	100 95–100 85–100
Moisture content Maximum Minimum	California Test 226	OMC OMC - 2%
In-place wet density (lb/cu ft)	California Test 216	Report only
Relative compaction (min, %)	California Test 231	98
Indirect dry tensile strength (psi) ^b	California Test 371	90% of mix design value
Indirect wet tensile strength (psi) ^b	California Test 371	90% of mix design value
Tensile strength ratio (%)	California Test 371	90% of mix design value

FDR—Foamed Asphalt Quality Characteristic Requirements

^aTest at the foaming temperature and percentage of foaming water by dry weight of FDR—foamed asphalt material designated in the mix design. To test asphalt binder expansion ratio and half-life, use a pail of known volume and a dipstick calibrated for the pail. From the inspection nozzle on the asphalt binder spray bar, inject foamed asphalt into the pail without exceeding the pail's capacity. With the dipstick, immediately measure and record the level of foamed asphalt in the pail. Record the half-life in seconds from the time the injection of foamed asphalt in the pail is turned off to half the dip stick reading after peak. Calculate the expansion ratio as the volume of the foamed asphalt upon injection divided by the volume of the unfoamed asphalt binder.

^bFrom material passing the 1-inch sieve, compact 6 specimens under California Test 304, Part 2. Cure the specimens at 100 °F for 72 hours and allow the specimens to cool to room temperature. Test 3 specimens for dry tensile strength under California Test 371. Test 3 specimens for wet tensile strength under California Test 371 after moisture conditioning.

Replace section 30-4.01D(3) in the 2nd paragraph of section 30-4.01D(1) with:

section 30-4.01D(4)

Replace section 30-4.01D(1)(a) in the table in section 30-4.02A with:

section 30-4.01D(2)

^^^^

07-15-16

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DIVISION V SURFACINGS AND PAVEMENTS

37 BITUMINOUS SEALS

07-15-16 **Replace section 37 with**:

07-15-16

37 SEAL COATS

37-1 GENERAL

37-1.01 GENERAL

37-1.01A Summary

Section 37-1 includes general specifications for applying seal coats.

37-1.01B Definitions

Reserved

37-1.01C Submittals

At least 10 days before the preconstruction meeting submit a list of participants in the preconstruction meeting. Provide each participant's name, employer, title, and role in the production and placement of the seal coats.

At least 10 days before starting seal coat activities, submit the names of the authorized laboratories for quality control testing.

For each delivery of asphalt binder or asphaltic emulsion to the job site, submit a certificate of compliance and a copy of the specified test results.

For a seal coat that uses crumb rubber modifier, submit a Crumb Rubber Usage Report form monthly and at the end of project.

37-1.01D Quality Assurance

37-1.01D(1) General

For aggregate testing, quality control laboratories must be in compliance with the Department's Independent Assurance Program to be an authorized laboratory. Quality control personnel must be qualified under the Department's Independent Assurance Program.

For emulsion testing, quality control laboratories must participate in the AASHTO Material's Reference Laboratory proficiency sample program.

37-1.01D(2) Preconstruction Meeting

Hold a preconstruction meeting within 5 days before start of seal coat work at a mutually agreed time and place with the Engineer and your:

- 1. Project superintendent
- 2. Project foreman
- 3. Traffic control foreman

Make arrangements for the conference facility. Preconstruction meeting participants must sign an attendance sheet provided by the Engineer. Be prepared to discuss:

- 1. Quality control testing
- 2. Acceptance testing
- 3. Seal coat placement
- 4. Proposed application rates for asphaltic emulsion or asphalt binder and aggregate.
- 5. Training on placement methods
- 6. Checklist of items for proper placement
- 7. Unique issues specific to the project, including:
 - 7.1. Weather
 - 7.2. Alignment and geometrics
 - 7.3. Traffic control requirements

- 7.4. Haul distances
- 7.5. Presence and absence of shaded areas
- 7.6. Any other local conditions
- 8. Contingency plan for material deliveries, equipment breakdowns, and traffic handling
- 9. Who in the field has authority to adjust application rates and how adjustments will be documented
- 10. Schedule of sweepings

37-1.02 MATERIALS

Not Used

37-1.03 CONSTRUCTION

37-1.03A General

If seal coat activities affect access to public parking, residential property, or commercial property, post signs at 100-foot intervals on the affected streets. Signs must display *No Parking – Tow Away*. Signs must state the dates and hours parking or access will be restricted. Notify residents, businesses, and local agencies at least 24 hours before starting activities. The notice must:

- 1. Describe the work to be performed
- 2. Detail streets and limits of activities
- 3. Indicate dates and work hours
- 4. Be authorized

Asphaltic emulsion or asphalt binder for seal coats may be reheated if necessary. After loading the asphaltic emulsion or asphalt binder into a truck for transport to the job site, do not heat asphaltic emulsion above 160 degrees F and asphalt rubber binder above 425 degrees F. During reheating, circulate or agitate the asphaltic emulsion or asphalt binder to prevent localized overheating.

Except for fog seals, apply quick setting Grade 1 asphaltic emulsions at a temperature from 75 to 130 degrees F and apply quick setting Grade 2 asphaltic emulsions at a temperature from 110 to 185 degrees F.

You determine the application rates for asphaltic emulsion or asphalt binder and aggregate and the Engineer authorizes the application rates.

37-1.03B Equipment

A self-propelled distributor truck for applying asphaltic emulsion or asphalt binder must be equipped with:

- 1. Pressure-type system with insulated tanks with circulating unit
- 2. Spray bars:
 - 2.1. With minimum length of 9 feet and full-circulating type
 - 2.2. With full-circulating-type extensions if needed to cover a greater width
 - 2.3. Adjustable to allow positioning at various heights above the surface to be treated
 - 2.4. Operated by levers such that 1 or all valves may be quickly opened or closed in one operation
- 3. Devices and charts to provide for accurate and rapid determination and control of asphaltic emulsion or asphalt binder quantities being applied. Include an auxiliary wheel type meter that registers:
 - 3.1. Speed in ft/min
 - 3.2. Trip by count
 - 3.3. Total distance in feet
- 4. Distribution system:
 - 4.1. Capable of producing a uniform application of asphaltic emulsion or asphalt binder in controlled quantities ranging from 0.02 to 1 gal/sq yd of surface and at a pressure ranging from 25 to 75 psi
 - 4.2. Pumps that spray asphaltic emulsion or asphalt binder within 0.02 gal/sq yd of the set rate
 - 4.3. With a hose and nozzle for application of asphaltic emulsion to areas inaccessible to the spray bar
 - 4.4. With pressure gauges and a thermometer for determining temperatures of the asphaltic emulsion or asphalt binder

You may use cab-controlled valves for the application of asphaltic emulsion or asphalt binder. The valves controlling the flow from nozzles must act positively to provide a uniform unbroken application of asphaltic emulsion or asphalt binder.

Maintain distributor and storage tanks at all times to prevent dripping.

37-1.04 PAYMENT

Not Used

37-2 CHIP SEALS

37-2.01 GENERAL

37-2.01A General

37-2.01A(1) Summary

Section 37-2.01 includes general specifications for applying chip seals.

37-2.01A(2) Definitions

Reserved

37-2.01A(3) Submittals

At least 15 days before starting placement of chip seal, submit:

- 1. Samples for:
 - 1.1. Asphaltic emulsion chip seal, two 1-quart wide mouth plastic containers with screw top lid of asphaltic emulsion
 - 1.2. Polymer modified asphaltic emulsion chip seal, two 1-quart wide mouth plastic containers with screw top lid of polymer modified asphaltic emulsion
 - 1.3. Asphalt rubber binder chip seal, two 1-quart cans of base asphalt binder
 - 1.4. Asphalt rubber binder chip seal, five 1-quart cans of asphalt rubber binder
- 2. Asphaltic emulsion, polymer modified asphaltic emulsion, asphalt binder or asphalt rubber binder data as follows:
 - 2.1. Supplier and Type/Grade of asphaltic emulsion or asphalt binder
 - 2.2. Type of modifier used including polymer or crumb rubber or both
 - 2.3. Percent of crumb rubber, if used as modifier
 - 2.4. Copy of the specified test results for asphaltic emulsion or asphalt binder
- 3. 50 lb of uncoated aggregate
- 4. Aggregate test results for the following:
 - 4.1. Gradation
 - 4.2. Los Angeles Rattler
 - 4.3. Percent of crushed particles
 - 4.4. Flat and elongated particles
 - 4.5. Film stripping
 - 4.6. Cleanness value
 - 4.7. Durability
- 5. Vialit test results

Submit quality control test results for the quality characteristics within the reporting times allowance after sampling shown in the following table:

Quality characteristic	Maximum reporting time allowance		
Los Angeles Rattler loss (max, %)	48 hours		
Percent of crushed particles (min, %)	48 hours		
Flat and elongated particles (max by weight at 3:1, %)	48 hours		
Film stripping (max, %)	48 hours		
Durability (min)	48 hours		
Gradation (percentage passing)	24 hours		
Cleanness value (min)	24 hours		
Asphaltic emulsion spread rate (gal/sq yd)	24 hours		

Quality Control Test Result Reporting

Within 3 days after taking asphaltic emulsion or asphalt binder quality control samples, submit the authorized laboratory's test results.

37-2.01A(4) Quality Assurance 37-2.01A(4)(a) General

Reserved

37-2.01A(4)(b) Quality Control 37-2.01A(4)(b)(i) General Reserved

37-2.01A(4)(b)(ii) Aggregate

All tests must be performed on uncoated aggregate except for film stripping which must be performed on precoated aggregate.

For aggregate, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Quality characteristic	Test method	Minimum sampling and testing frequency	Location of sampling
Los Angeles Rattler loss (max, %) At 100 revolutions At 500 revolutions	California Test 211	1st day of production	See California Test 125
Percent of crushed particles Coarse aggregate (min, %) One-fractured face Two-fractured faces Fine aggregate (min, %) (Passing No. 4 sieve and retained on No. 8 sieve) One fractured face	AASHTO T 335	1st day of production	See California Test 125
Flat and elongated particles (max by weight at 3:1, %)	ASTM D4791	1st day of production	See California Test 125
Film stripping (max, %)	California Test 302	1st day of production	See California Test 125
Durability (min)	California Test 229	1st day of production	See California Test 125
Gradation (% passing)	California Test 202	2 per day	See California Test 125
Cleanness value (min)	California Test 227	2 per day	See California Test 125

Aggregate Quality Control Requirements

37-2.01A(4)(b)(iii) Chip Seals

For a chip seal, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Chip Seal Quality Control Requirements				
Quality characteristic	Test method	method Minimum sampling Location		
		and testing frequency	sampling	
Asphaltic emulsion binder spread rate	California	1 per day per	Pavement surface	
(gal/sq yd)	Test 339	distributor truck	Faveillenit Sullace	

Chip Seal Quality Control Requirements

37-2.01A(4)(c) Department Acceptance

Department Acceptance shall not apply to identified areas where the existing surfacing before application of chip seal, contains defective areas as determined by the Engineer and Contractor. At least 7 days

before starting placement of the chip seal, the Contractor shall submit a written list of existing defective areas, identifying the lane direction, lane number, starting and ending highway post mile locations, and defect type. The Engineer must agree on which of the identified areas are defective.

Defective areas are defined as one of the following:

- 1. Areas with wheel path rutting in excess of 3/8 inch when measured by placing a straightedge 12 feet long on the finished surface perpendicular to the center line and measuring the vertical distance between the finished surface and the lower edge of the straightedge
- 2. Areas exhibiting flushing

For a chip seal, acceptance is based on visual inspection for the following:

- 1. Uniform surface texture
- 2. Raveling, which consists of the separation of the aggregate from the asphaltic emulsion or asphalt binder
- 3. Flushing, which consists of the occurrence of a film of asphaltic material on the surface of the chip seal.
- 4. Streaking, which consists of alternating longitudinal bands of asphaltic emulsion or asphalt binder without uniform aggregate retention, approximately parallel with the lane line.

Areas of raveling, flushing or streaking that are greater than 0.5 sq ft shall be considered defective and must be repaired.

Raveling and streaking must be repaired by placing an additional layer of chip seal over the defective area.

For asphaltic emulsion or asphalt binder, acceptance is based on the Department's sampling and testing for compliance with the requirements for the quality characteristics specified.

For aggregate, acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirements
Los Angeles Rattler loss (max, %)		
At 100 revolutions	California Test 211	10
At 500 revolutions		40
Percent of crushed particles:	AASHTO T 335	
Coarse aggregate (min, %)		
One-fractured face		95
Two-fractured faces		90
Fine aggregate (min, %)		
(Passing No. 4 sieve and retained on No. 8 sieve)		
One fractured face		70
Flat and elongated particles (max by weight at 3:1, %)	ASTM D4791	10
Film stripping (max, %)	California Test 302	25
Durability (min)	California Test 229	52
Gradation (% passing by weight)	California Test 202	Aggregate Gradation
		table shown under
		Materials for the chip
		seal type specified.
Cleanness value (min)	California Test 227	80

Chip Seal Aggregate Acceptance Criteria

If test results for the aggregate gradation do not comply with specifications, you may remove the chip seal represented by these tests or request that it remain in place with a payment deduction. The deduction is \$1.75 per ton for the aggregate represented by the test results.

If test results for aggregate cleanness value do not comply with the specifications, you may remove the chip seal represented by these tests or you may request that the chip seal remain in place with a pay deduction corresponding to the cleanness value shown in the following table:

Cleanness value	Deduction
80 or over	None
79	\$2.00 /ton
77–78	\$4.00 /ton
75–76	\$6.00 /ton

Chip Seal Cleanness Value Deductions

If the aggregate cleanness value is less than 75, remove the chip seal.

37-2.01B Materials

37-2.01B(1) General

Reserved

37-2.01B(2) Asphaltic Emulsions and Asphalt Binders

Reserved

37-2.01B(3) Aggregate

37-2.01B(3)(a) General

Aggregate must be broken stone, crushed gravel, or both.

Aggregate must comply with the requirements shown in the following table:

Quality characteristic	Test method	Requirements
Los Angeles Rattler loss (max, %)		
At 100 revolutions	California Test 211	10
At 500 revolutions		40
Percent of crushed particles	AASHTO T 335	
Coarse aggregate (min, %)		
One-fractured face		95
Two-fractured faces		90
Fine aggregate (min, %)		
(Passing No. 4 sieve and retained on No. 8 sieve)		
One fractured face		70
Flat and elongated particles (max by weight at 3:1, %)	ASTM D4791	10
Film stripping (max, %)	California Test 302	25
Durability (min)	California Test 229	52
Gradation (% passing by weight)	California Test 202	Aggregate Gradation
		table shown under
		Materials for the chip
		seal type specified.
Cleanness value (min)	California Test 227	80

Chip Seal Aggregate Requirements

The authorized laboratory must conduct the Vialit test using the proposed asphaltic emulsion or asphalt binder and aggregate for compliance with the requirements shown in the following table:

Chip Retention Requirements

Quality characteristic	Test method	Requirement
Chip retention (%)	Vialit test method for aggregate in chip seals, French chip (Modified)ª	95

^aThe asphaltic emulsion or asphalt binder must be within the field placement temperature range and application rate during specimen preparation. For asphalt binder cure the specimen for first 2 hours at 100 °F.

37-2.01B(3)(b) Precoated Aggregate

Precoating of aggregate must be performed at a central mixing plant. The plant must be authorized under the Department's *MPQP*.

When precoating aggregate, do not recombine fine materials collected in dust control systems.

Precoated aggregate must be preheated from 260 to 325 degrees F. Coat with any of the asphalts specified in the table titled "Performance Graded Asphalt Binder" in section 92. The asphalt must be from 0.5 to 1.0 percent by weight of dry aggregate. You determine the exact asphalt rate for precoating of aggregate.

Do not stockpile precoated aggregate.

37-2.01C Construction

37-2.01C(1) General

For chip seals on 2-lane, 2-way roadways, place a W8-7 (LOOSE GRAVEL) sign and a W13-1 (35) plaque at 2,000-foot maximum intervals along each side of the traveled way where aggregate is spread on a traffic lane and at public roads or streets entering the chip seal area. Place the 1st W8-7 sign in each direction where traffic first encounters the loose aggregate, regardless of which lane the aggregate is spread on. A W13-1 (35) plaque is not required where the posted speed limit is less than 40 mph.

For chip seals on freeways, expressways, and multilane conventional highways, place a W8-7, (LOOSE GRAVEL) sign and a W13-1 (35) plaque at 2,000-foot maximum intervals along the outside edge of the traveled way nearest to the lane worked on, at on ramps, and at public roads or streets entering the chip seal area. Place the 1st W8-7 sign where the aggregate starts with respect to the direction of travel on that lane. A W13-1 (35) plaque is not required where the posted speed limit is less than 40 mph.

Pilot cars must have cellular or radio contact with other pilot cars and personnel in the work zone. The maximum speed of the pilot cars convoying or controlling traffic through the traffic control zone must be 15 mph on 2-lane, two-way highways and 25 mph on multilane divided and undivided highways. Pilot cars must only use traffic lanes open to traffic.

On the days that closures are not allowed, you may use a moving closure to maintain the seal coat surface. The moving closure is only allowed during daylight hours when traffic will be the least inconvenienced and delayed. The Engineer determines the hours for the moving closure.

Maintain signs in place at each location until the final sweeping of the chip seal surface for that location is complete. Signs may be set on temporary portable supports with the W13-1 sign below the W8-7 sign or on barricades with the W13-1 sign alternating with the W8-7 sign.

Schedule chip seal activities so that the chip seals are placed on both lanes of the traveled way each work shift.

If traffic is routed over a surface where a chip seal application is intended, the chip seal must not be applied to more than half the width of the traveled way at a time, and the remaining width must be kept free of obstructions and open to traffic until the previously applied width is ready for traffic use.

Wherever maintenance sweeping of the chip seal surface is complete, place permanent traffic stripes and pavement markings within 10 days.

If you fail to place the permanent traffic stripes and pavement markings within the specified time, the Department withholds 50 percent of the estimated value of the chip seal work completed that has not received permanent traffic stripes and pavement markings.

37-2.01C(2) Equipment

Equipment for chip seals must include and comply with the following:

- 1. Aggregate haul trucks must have:
 - 1.1. Tailgate that discharge aggregate
 - 1.2. Device to lock onto the rear aggregate spreader hitch
 - 1.3. Dump bed that will not push down on the spreader when fully raised
 - 1.4. Dump bed that will not spill aggregate on the roadway when transferred to the spreader hopper
 - 1.5. Tarpaulin to cover precoated aggregate when haul distance exceeds 30 minutes or ambient temperature is less than 65 degrees F
- 2. Self-propelled aggregate spreaders must have:
 - 2.1. Aggregate hopper in the rear
 - 2.2. Belt conveyor that carries the aggregate to the front
 - 2.3. Spreading hopper capable of providing a uniform aggregate spread rate over the entire width of the traffic lane in 1 application.
- 3. Self-propelled power brooms must:
 - 3.1. Not be steel-tined brooms on emulsion chip seals
 - 3.2. Be capable of removing loose aggregate adjacent to barriers that prevent aggregate from being swept off the roadway, including curbs, gutters, dikes, berms, and railings
- 4. Pneumatic or foam filled rubber tired rollers must:
 - 4.1. Be an oscillating type at least 4 feet wide
 - 4.2. Be self-propelled and reversible
 - 4.3. Have tires of equal size, diameter, type, and ply
 - 4.4. Carry at least 3,000 lbs of load on each wheel
 - 4.5 Have tires with an air pressure of 100 ± 5 psi or be foam filled

37-2.01C(3) Surface Preparation

Before applying chip seals, cover manholes, valve and monument covers, grates, or other exposed facilities located within the area of application, using a plastic or oil resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with enough control points to relocate the facilities after the application of the chip seal.

Immediately before applying chip seals, clean the surface to receive a chip seal by removing any extraneous material affecting adhesion of the chip seal with the existing surface and drying. Use self-propelled power brooms to clean the existing pavement.

37-2.01C(4) Placement

37-2.01C(4)(a) General

Schedule the operations so that chip seals are placed on both lanes of the traveled way each work shift. At the end of the work shift, the end of the chip seals on both lanes must generally match.

37-2.01C(4)(b) Applying Asphaltic Emulsions or Asphalt Binders

Prevent spraying on existing pavement not intended for chip seals or on previously applied chip seals using a material such as building paper. Remove the material after use.

Align longitudinal joints between chip seal applications with designated traffic lanes.

For asphaltic emulsion or asphalt binder, overlap longitudinal joints by not more than 4 inches. You may overlap longitudinal joints up to 8 inches if authorized.

For areas not accessible to a truck distributor bar apply:

- 1. Asphaltic emulsions by hand spraying
- 2. Asphalt binders with a squeegee or other authorized means

You may overlap the asphaltic emulsion or asphalt binder applications before the application of aggregate at longitudinal joints.

Do not apply the asphaltic emulsion or asphalt binder unless there is sufficient aggregate at the job site to cover the asphaltic emulsion or asphalt binder.

Discontinue application of asphaltic emulsion or asphalt binder early enough to comply with lane closure requirements. Apply to 1 lane at a time and cover the lane width entirely in 1 operation.

37-2.01C(4)(c) Spreading Aggregates 37-2.01C(4)(c)(i) General

Prevent vehicles from driving on asphaltic emulsion or asphalt binder before spreading aggregate.

Spread aggregate within 10 percent of your determined rate.

Spread aggregate at a uniform rate over the full lane width in 1 application. Apply to 1 lane at a time.

Sweep excess aggregate at joints before spreading adjacent aggregate.

Operate the spreader at speeds slow enough to prevent aggregate from rolling over after dropping.

If the spreader is not moving, aggregate must not drop. If you stop spreading and aggregate drops, remove the excess aggregate before resuming activities.

37-2.01C(4)(c)(ii) Precoated Aggregate Application

During transit, cover precoated aggregate with tarpaulins if the ambient air temperature is below 65 degrees F or the haul time exceeds 30 minutes.

When applied, precoated aggregate must be from 225 to 325 degrees F.

37-2.01C(4)(d) Finishing

37-2.01C(4)(d)(i) General

Remove piles, ridges, or unevenly distributed aggregate. Repair permanent ridges, bumps, streaks or depressions in the finished surface. Spread additional aggregate and roll if aggregate is picked up by rollers or vehicles.

Chip seal joints between adjacent applications of a chip seal must be smooth, straight, uniform, and completely covered.

A coverage is 1 roller movement over the entire width of lane. A pass is 1 roller movement parallel to the chip seal application in either direction. Overlapping passes are part of the coverage being made and are not part of a subsequent coverage. Do not start a new coverage until completing the previous coverage.

Before opening to traffic, finish the chip seals in the following sequence:

- 1. Perform initial rolling consisting of 1 coverage with a pneumatic-tired roller
- 2. Perform final rolling consisting of 2 coverages with a pneumatic-tired roller
- 3. Sweep excess aggregate from the roadway and adjacent abutting areas
- 4. Apply a flush coat if specified
- 5. Remove covers from the facilities

37-2.01C(4)(d)(ii) Traffic Control With Pilot Car

For 2-lane 2-way roadways under 1-way traffic control, upon completion of final rolling, traffic must be controlled with pilot cars and routed over the new chip seal for a period of 2 to 4 hours before opening the lane to traffic not controlled with pilot cars.

For multilane roadways, when traffic is controlled with pilot cars, a maximum of 1 lane in the direction of travel must be open to traffic. Traffic must be controlled with pilot cars and be routed on the new chip seal surface of the lane for a minimum of 2 hours after completion of the initial sweeping and before opening the lane to traffic not controlled with pilot cars. Once traffic controlled with pilot cars is routed over the chip seal at a particular location, continuous control must be maintained at that location until the chip seal placement and sweeping on adjacent lanes to receive a chip seal is completed.

37-2.01C(4)(d)(iii) Sweeping

Sweeping must be performed after the chip seal has set and there is no damage or dislodging of aggregate from the chip seal surface. As a minimum, sweeping is required at the following times:

- 1. On 2-lane 2-way roadways, from 2 to 4 hours after traffic, controlled with pilot cars, has been routed on the chip seal
- 2. On multilane roadways, from 2 to 4 hours after aggregate have been placed
- 3. In addition to previous sweeping, perform final sweeping immediately before opening any lane to public traffic, not controlled with pilot cars

37-2.01C(4)(d)(iv) Excess Aggregate

Dispose of excess aggregate. If ordered, salvaging and stockpiling of excess aggregate is change order work.

37-2.01C(4)(e) Chip Seal Maintenance

Perform sweeping on the morning following the application of aggregate on any lane that has been open to traffic not controlled with pilot cars and before starting any other activities.

Chip seal surfaces must be maintained for 4 consecutive days from the day aggregate is applied. Maintenance must include sweeping to maintain a surface free of loose aggregate and to prevent formation of corrugations. Sweeping must not dislodge aggregate set in asphaltic emulsion or asphalt binder.

After 4 consecutive days, excess aggregate must be removed from the paved areas.

37-2.01D Payment

If there is no bid item for traffic control system, furnishing and using a pilot car is included in the various items of the work involved in applying the chip seal.

The payment quantity for precoated aggregate is the weight measured after the aggregate is preheated and precoated with asphalt binder.

If recorded batch weights are printed automatically, the payment quantity for aggregate is the weight determined from the printed batch weights if:

- 1. Total weight for the precoated aggregate per batch is printed
- 2. Total asphalt binder weight per batch is printed
- 3. Zero tolerance weight is printed before weighing the first batch and after weighing the last batch for each truckload
- 4. Time, date, mix number, load number, and truck identification are correlated with a load slip
- 5. Copy of the recorded batch weights is certified by a licensed weighmaster

37-2.02 ASPHALTIC EMULSION CHIP SEALS

37-2.02A General

37-2.02A(1) Summary

Section 37-2.02 includes specifications for applying asphaltic emulsion chip seals. An asphaltic emulsion chip seal includes applying an asphaltic emulsion, followed by aggregate, and then a flush coat.

A double asphaltic emulsion chip seal is the application of an asphaltic emulsion followed by aggregate, applied twice in sequence and then a flush coat.

37-2.02A(2) Definitions

Reserved

37-2.02A(3) Submittals

Immediately after sampling, submit two 1-quart plastic containers of asphaltic emulsion taken in the presence of the Engineer. Samples must be submitted in insulated shipping container.

37-2.02A(4) Quality Assurance 37-2.02A(4)(a) General

Reserved

37-2.02A(4)(b) Quality Control 37-2.02A(4)(b)(i) General

Reserved

37-2.02A(4)(b)(ii) Asphaltic Emulsions

Circulate asphaltic emulsion in the distributor truck before sampling. Take samples from the distributor truck at mid load or from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer, take two 1-quart samples in a plastic container with lined sealed lid for acceptance testing.

For asphaltic emulsion, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

. ... _

Asphaltic Emulsion					
Quality characteristic	Test method	Minimum sampling and	Sampling location		
		testing frequency			
Saybolt Furol Viscosity, at 25 °C					
(Saybolt Furol seconds)					
Sieve Test (%)	AASHTO T 59 Minimum 1 per day per		Distributor truck		
Storage stability, 1 day (%)					
Residue by distillation (%)]				
Particle charge ^a]				
Tests on Residue from Distillation Test:					
Penetration, 25 °C	AASHTO T 49	Minimum 1 per dev per			
Ductility	AASHTO T 51	Minimum 1 per day per delivery truck	Distributor truck		
Solubility in trichloroethylene	AASHTO T 44				

^aIf the result of the particle charge is inconclusive, the asphaltic emulsion must be tested for pH under ASTM E70. Grade QS1h asphaltic emulsion must have a minimum pH of 7.3. Grade CQS1h asphaltic emulsion must have a maximum pH of 6.7.

37-2.02A(4)(c) Department Acceptance

Aggregate acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirement			
Gradation (% passing by weight) Sieve size:		3/8"	5/16"	1/4"	
3/4"					
1/2"	California Test 202	100			
3/8"		85–100	100	100	
No. 4		0–15	0–50	60–85	
No. 8		0–5	0–15	0–25	
No. 16			0–5	0–5	
No. 30			0–3	0–3	
No. 200		0–2	0–2	0–2	

Aggregate Gradation Acceptance Criteria

37-2.02B Materials 37-2.02B(1) General Reserved

37-2.02B(2) Asphaltic Emulsions

Reserved

37-2.02B(3) Aggregate

Aggregate gradation for an asphaltic emulsion chip seal must comply with the requirements shown in the following table:

Quality characteristic	Test method	Requirement		
Gradation (% passing by weight) Sieve size:		3/8"	5/16"	1/4"
3/4"				
1/2"	-	100		
3/8"	California Test	85–100	100	100
No. 4	202	0–15	0–50	60–85
No. 8		0–5	0–15	0–25
No. 16			0–5	0–5
No. 30			0–3	0–3
No. 200		0–2	0–2	0–2

Asphaltic Emulsion Chip Seal Aggregate Gradation

37-2.02C Construction

37-2.02C(1) General

Reserved

37-2.02C(2) Asphaltic Emulsions

Asphaltic emulsions must be applied within the application rate ranges shown in the following table:

Asphaltic Emulsion Application Rates			
Aggregate gradation Application rate range			
(gal/sq yd)			
3/8"	0.30-0.45		
5/16" 0.25–0.35			
1/4"	0.20–0.30		

Asphaltic Emulsion Application Rates

For double asphaltic emulsion chip seals, the asphaltic emulsions must be applied within the application rates shown in the following table:

Asphaltic Emulsion Application Rates			
Double chip seals Application rate range			
(gal/sq yd)			
1st application	0.30–0.45		
2nd application	0.20-0.30		

Asphaltic Emulsion Application Rates

When applied, the temperature of the asphaltic emulsions must be from 130 to 180 degrees F.

Apply asphaltic emulsions when the ambient air temperature is from 65 to 110 degrees F and the pavement surface temperature is at least 80 degrees F.

Do not apply asphaltic emulsions when weather forecasts predict the ambient air temperature will fall below 39 degrees F within 24 hours after application.

37-2.02C(3) Spreading Aggregates

Aggregate must be spread within the spread rate ranges shown in the following table:

Aggregate Spread Rates			
Aggregate gradation Spread rate range			
	(lb/sq yd)		
3/8"	20–30		
5/16"	16–25		
1/4"	12–20		

For double asphaltic emulsion chip seals, aggregate must be spread within the spread rate ranges shown in the following table:

Aggregate Spread Rates			
Double chip seal	Spread rate range		
	(lb/sq yd)		
1st application	23–30		
2nd application	12–20		

Aggregate Spread Rates

Remove excess aggregate on the 1st application before the 2nd application of asphaltic emulsion.

You may stockpile aggregate for asphaltic emulsion chip seals if you prevent contamination. Aggregate must have a damp surface at spreading. If water visibly separates from the aggregate, do not spread. You may re-dampen aggregate in the delivery vehicle.

Spread aggregate before an asphaltic emulsion sets or breaks.

Do not spread aggregate more than 2,500 feet ahead of the completed initial rolling.

37-2.02D Payment

Not Used

37-2.03 POLYMER MODIFIED ASPHALTIC EMULSION CHIP SEALS

37-2.03A General

37-2.03A(1) Summary

Section 37-2.03 includes specifications for applying polymer modified asphaltic emulsion chip seals. A polymer modified asphaltic emulsion chip seal includes applying a polymer modified asphaltic emulsion, followed by aggregate, and then a flush coat.

A double polymer modified asphaltic emulsion chip seal is the application of a polymer modified asphaltic emulsion followed by aggregate, applied twice in sequence and then a flush coat.

37-2.03A(2) Definitions

Reserved

37-2.03A(3) Submittals

Immediately after sampling, submit two 1-quart cans of polymer modified asphaltic emulsion taken in the presence of the Engineer. A sample must be submitted in an insulated shipping container.

37-2.03A(4) Quality Assurance

37-2.03A(4)(a) General

Reserved

37-2.03A(4)(b) Quality Control

37-2.03A(4)(b)(i) General

Reserved

37-2.03A(4)(b)(ii) Polymer Modified Asphaltic Emulsions

Circulate polymer modified asphaltic emulsions in the distributor truck before sampling. Take samples from the distributor truck at mid load or from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer, take two 1-quart samples for acceptance testing.

For polymer modified asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Polymer Modified Asphalic Emulsion				
Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling location	
Saybolt Furol Viscosity, at 50 °C (Saybolt Furol seconds)				
Settlement, 5 days (max, %)				
Storage stability test, 1 day (max, %)	AASHTO T 59	Minimum 1	Distributor	
Sieve test (max, %)		per day per	truck	
Demulsibility (min, %)		delivery truck	lluck	
Particle charge				
Ash content (max, %)	ASTM D3723			
Residue by evaporation (min, %)	California Test 331			
Tests on residue from evaporation test:				
Penetration, 25 °C	AASHTO T 49			
Penetration, 4 °C, 200g for 60 seconds	AASHTO T 49	Minimum 1	Distributor	
Ductility, 25 °C (min, mm)	AASHTO T 51	per day per	truck	
Torsional recovery (min, %)	California Test 332	delivery truck	UUCK	
Ring and Ball Softening Point (min, °F)	AASHTO T 53			

Polymer Modified Asphaltic Emulsion

37-2.03A(4)(c) Department Acceptance

Aggregate acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Aggregate Gradation	Acceptance Criteria
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Quality characteristic	Test method	R	equirement	
Gradation (% passing by weight) Sieve size:		3/8"	5/16"	1/4"
3/4"				
1/2"	California Test 202	100		
3/8"		85–100	100	100
No. 4		0–15	0–50	60–85
No. 8		0–5	0–15	0–25
No. 16			0–5	0–5
No. 30			0–3	0–3
No. 200		0–2	0–2	0–2

37-2.03B Materials

37-2.03B(1) General

Reserved

37-2.03B(2) Polymer Modified Asphaltic Emulsions

A polymer modified asphaltic emulsion must include elastomeric polymer.

A polymer modified asphaltic emulsion must be Grade PMRS2, PMRS2h, PMCRS2, or PMCRS2h. Polymer content in percent by weight does not apply.

A polymer modified asphaltic emulsion must comply with section 94 and the quality characteristic requirements in the following table:

Polymeric Asphaltic Emulsion				
Quality characteristicTest methodRequirement				
Penetration, 4 °C, 200g for 60 seconds (min)	AASHTO T 49	6		
Ring and Ball Softening Point (min, °F)	AASHTO T 53	135		

37-2.03B(3) Aggregate

The aggregate gradation for a polymer modified asphaltic emulsion chip seal must comply with the requirements shown in the following table:

Asphaltic Entrision Chip Sear Aggregate Gradation				
Quality characteristic	Test method	Requirement		
Gradation (% passing by weight) Sieve Size		3/8"	5/16"	1/4"
3/4"				
1/2"	Colifornia Toot	100		
3/8"	California Test	85–100	100	100
No. 4	202	0–15	0–50	60–85
No. 8		0–5	0–15	0–25
No. 16			0–5	0–5
No. 30			0–3	0–3
No. 200		0–2	0–2	0–2

Asphaltic Emulsion Chip Seal Aggregate Gradation

37-2.03C Construction

Polymer modified asphaltic emulsions must be applied within the application rate ranges shown in the following table:

Forymer woulded Asphanic Emulsion Application Rates		
Aggregate gradation	Application rate range	
	(gal/sq yd)	
3/8"	0.30–0.45	
5/16"	0.25–0.35	
1/4"	0.20-0.30	

Polymer Modified Asphaltic Emulsion Application Rates

For double polymer modified asphaltic emulsion chip seals, polymer modified asphaltic emulsions must be applied within the application rates shown in the following table:

Polymer Modified Asphaltic Emulsion Application Rates

Double application	Application rate range
	(gal/sq yd)
1st application	0.30–0.45
2nd application	0.20-0.30

Apply polymer modified asphaltic emulsions when the ambient air temperature is from 60 to 105 degrees F and the pavement surface temperature is at least 80 degrees F.

Do not apply polymer modified asphaltic emulsions when weather forecasts predict the ambient air temperature will fall below 39 degrees F within 24 hours after application.

Aggregate must be spread within the spread rate ranges shown in the following table:

Aggregate Spread Rates			
Chip seal type Spread rate range			
	(lb/sq yd)		
3/8"	20–30		
5/16"	16–25		
1/4"	12–20		

For double chip seals, aggregate must be spread within spread rate ranges shown in the following table:

Aggregate Spread Rates		
Double application Spread rate range		
	(lb/sq yd)	
1st application	23–30	
2nd application	12–20	

Aggregate Spread Rates

Remove excess aggregate on the 1st application before the 2nd application of asphaltic emulsion.

You may stockpile aggregate for the polymer modified asphaltic emulsion chip seals if you prevent contamination. Aggregate must have damp surfaces at spreading. If water visibly separates from the aggregate, do not spread. You may redampen aggregate in the delivery vehicle.

Spread aggregate before the polymer modified asphaltic emulsion sets or breaks.

Do not spread aggregate more than 2,500 feet ahead of the completed initial rolling.

37-2.03D Payment

Not Used

37-2.04 ASPHALT RUBBER BINDER CHIP SEALS

37-2.04A General

37-2.04A(1) Summary

Section 37-2.04 includes specifications for applying asphalt rubber binder chip seals.

An asphalt rubber binder chip seal consists of applying asphalt rubber binder followed by heated aggregate precoated with asphalt binder followed by a flush coat.

37-2.04A(2) Definitions

- **crumb rubber modifier:** Combination of ground or granulated high natural scrap tire crumb rubber and scrap tire crumb rubber derived from waste tires described in Pub Res Code § 42703.
- **descending viscosity reading:** Subsequent viscosity reading at least 5 percent lower than the previous viscosity reading.

high natural scrap tire crumb rubber: Material containing 40 to 48 percent natural rubber.

scrap tire crumb rubber: Any combination of vehicle tires or tire buffing.

37-2.04A(3) Submittals

At least 5 business days before use, submit the permit issued by the local air district for asphalt rubber binder field blending equipment and application equipment. If an air quality permit is not required by the local air district for producing asphalt rubber binder, submit verification from the local air district that an air quality permit is not required.

For each delivery of asphalt rubber binder ingredients to the job site, submit a certificate of compliance with a copy of the specified test results.

Submit a certified volume or weight slip for each delivery of asphalt rubber binder ingredients and asphalt rubber binder.

Submit a SDS for each asphalt rubber binder ingredient and the asphalt rubber binder.

At least 15 days before use, submit:

- 1. Samples of each asphalt rubber binder ingredient:
 - 1.1. 2 lbs of scrap tire crumb rubber
 - 1.2. 2 lbs of high natural scrap tire crumb rubber
 - 1.3. Two 1-quart cans of base asphalt binder
 - 1.4. Two 1-quart cans of asphalt modifier
- 2. Asphalt rubber binder formulation and data as follows:
 - 2.1. For asphalt modifier, include:
 - 2.1.1. Source of asphalt modifier
 - 2.1.2. Type of asphalt modifier
 - 2.1.3. Percentage of asphalt modifier by weight of asphalt binder
 - 2.1.4. Percentage of combined asphalt binder and asphalt modifier by weight of asphalt rubber binder
 - 2.1.5. Test results for the specified quality characteristics
 - 2.2. For crumb rubber modifier, include:
 - 2.2.1. Each source and type of scrap tire crumb rubber and high natural scrap tire crumb rubber
 - 2.2.2. Percentage of scrap tire crumb rubber and high natural scrap tire crumb rubber by total weight of asphalt rubber binder
 - 2.2.3. Test results for the specified quality characteristics
 - 2.3. For asphalt rubber binder, include minimum reaction time and temperature

Immediately after sampling, submit five 1-quart cans of asphalt rubber binder taken in the presence of the Engineer. Sample must be submitted in insulated shipping containers.

Submit notification 15 minutes before each viscosity test or submit a schedule of testing times.

Submit the log of asphalt rubber binder descending viscosity test results within 1 business day after sampling.

Submit asphalt rubber binder quality control viscosity test results within 1 business day after sampling.

37-2.04A(4) Quality Assurance

37-2.04A(4)(a) General

The equipment used in producing asphalt rubber binder and the equipment used in spreading asphalt rubber binder must be permitted for use or exempted by the local air district.

37-2.04A(4)(b) Quality Control

37-2.04A(4)(b)(i) General

Reserved

37-2.04A(4)(b)(ii) Asphalt Modifiers

For asphalt modifiers, the authorized laboratory must perform quality control sampling and testing at the specified frequency for the following quality characteristics:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Frequency	
Viscosity	ASTM D445	1 per shipment	
Flash point	ASTM D92		
Molecular Analysis:			
Asphaltenes	ASTM D2007	- 1 per shipment	
Aromatics	ASTM D2007		

37-2.04A(4)(b)(iii) Crumb Rubber Modifiers

Sample and test scrap tire crumb rubber and high natural scrap tire crumb rubber separately.

Perform quality control sampling and testing at the specified frequency for the following quality characteristics:

Crumb Rubber Modifier			
Quality characteristic	Test method	Frequency	
Scrap tire crumb rubber gradation	California Test 385	1 per 10,000	
High natural scrap tire crumb rubber gradation	California Test 385	1 per 3,400 lb	
Wire in CRM	California Test 385		
Fabric in CRM	California Test 385	1 per 10,000 lb	
CRM particle length			
CRM specific gravity	California Test 208		
Natural rubber content in high natural scrap tire crumb rubber	ASTM D297	1 per 3,400 lb	

37-2.04A(4)(b)(iv) Asphalt Rubber Binders

For asphalt rubber binders, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Asphalt Rubber Binder Quarty Control Requirements				
Quality characteristic	Test method	Sampling location	Frequency	
Descending viscosity ^a at 375 °F (Pa•s x 10 ⁻³)	ASTM D7741	Reaction vessel	1 per lot ^ь	
Viscosity at 375 °F (Pa•s x 10 ⁻³)	ASTM D7741	Distribution truck	15 minutes before use per lot ^b	
Cone penetration at 25 °C (0.10 mm)	ASTM D217			
Resilience at 25 °C (% rebound)	ASTM D5329	Distribution truck	1 per lot ^b	
Softening point (°C)	ASTM D36			

Asphalt Rubber Binder Quality Control Requirements

^aStart taking viscosity readings at least 45 minutes after adding crumb rubber modifier and continue taking viscosity readings every 30 minutes until 2 consecutive descending viscosity readings have been obtained and the final viscosity complies with the specification requirement. ^bA lot is defined in the *MPQP*.

Retain samples from each lot. Test samples for cone penetration, resilience, and softening point for the first 3 lots and if all 3 lots pass, the testing frequency may be reduced to once for every 3 lots.

If QC test results indicate that the asphalt rubber binder does not comply with the specifications, take corrective action and notify the Engineer.

37-2.04A(4)(c) Department Acceptance

37-2.04A(4)(c)(i) General

Reserved

37-2.04A(4)(c)(ii) Asphalt Modifiers

The Department accepts asphalt modifier based on compliance with the requirements shown in the following table:

Test method	Requirement		
ASTM D445	X ± 3ª		
ASTM D92	207		
ASTM D2007	0.1		
ASTM D2007	55		
	ASTM D445 ASTM D92 ASTM D2007		

Asphalt Modifier for Asphalt Rubber Binder

^aThe symbol "X" is the asphalt modifier viscosity.

37-2.04A(4)(c)(iii) Crumb Rubber Modifiers

Scrap tire CRM and high natural CRM are sampled and tested separately.

The Department accepts scrap tire CRM and high natural CRM based on compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirement
Wire in CRM (max, %)	California Test 385	0.01
Fabric in CRM (max, %)	California Test 385	0.05
CRM particle length (max, in)		3/16
CRM specific gravity	California Test 208	1.1–1.2
Natural rubber content in high natural CRM (%)	ASTM D297	40.0-48.0

Crumb Rubber Modifier for Asphalt Rubber Binder

The Department accepts CRM gradation based on the requirements shown in the following table:

Test Requirement Quality characteristic method Gradation (% passing by Scrap tire crumb rubber High natural scrap tire weight) crumb rubber Sieve size: Contract Operating Contract Operating range complianc range compliance е No. 8 California 100 100 No. 10 95–100 90-100 100 100 Test 385 No. 16 35–85 32-88 92-100 85–100 No. 30 2–25 1-30 25-95 20-98 No. 50 0–10 0–15 6–35 2–40 No. 100 0–5 0–10 0-7 0-10 0–2 No. 200 0–5 0–3 0–5

Crumb Rubber Modifier Gradation Requirements

If a test result for CRM gradation does not comply with the specifications, the Department deducts the corresponding amount for each gradation test as shown in the following table:

Material	Gradation test result ^a	Deduction
Scrap tire crumb rubber	Operating range < TR < Contract compliance	\$250
Scrap tire crumb rubber	TR > Contract compliance	\$1,100
High natural scrap tire crumb rubber	Operating range < TR < Contract compliance	\$250
High natural scrap tire crumb rubber	TR > Contract compliance	\$600

^aTest Result = TR

Each gradation test for scrap tire crumb rubber represents 10,000 lb or the quantity used in that day's production, whichever is less.

Each gradation test for high natural scrap tire crumb rubber represents 3,400 lb or the quantity used in that day's production, whichever is less.

37-2.04A(4)(c)(iv) Asphalt Rubber Binders

For Department acceptance testing, take a sample of asphalt rubber binder in the Engineer's presence every 5 lots or once a day, whichever is greater. Each sample must be in five 1-quart cans with an open top and friction lid.

For an asphalt rubber binder, acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Asphalt Rubber Bilder			
Quality characteristic	Test method	Requirement	
Cone penetration at 25 °C (0.10 mm)	ASTM D217	25–60	
Resilience at 25 °C (% rebound)	ASTM D5329	18–50	
Softening point (°C)	ASTM D36	55–88	
Viscosity at 375 °F (Pa•s x 10 ⁻³)ª	ASTM D7741	1,500–2,500	

Asphalt Rubber Binder

^aPrepare sample for viscosity test under California Test 388.

37-2.04A(4)(c)(v) Precoated Aggregate

The Department accepts precoated aggregate based on compliance with the requirements shown in the following table:

Quality Characteristic	Test method	Requirement
1/2" gradation (% passing by weight)	California Test 202	
Sieve size:		
3/4"		100
1/2"		85–90
3/8"		0–30
No. 4		0–5
No. 8		
No. 200		0—1
3/8" gradation (% passing by weight)	California Test 202	
Sieve size:		
3/4"		100
1/2"		95–100
3/8"		70–85
No. 4		0–15
No. 8		0–5
No. 200		0–1

Precoated Aggregate Gradation Acceptance Criteria

37-2.04B Materials

37-2.04B(1) General

Reserved

37-2.04B(2) Asphalt Binders

Asphalt binder used as the base binder for asphalt rubber binder must comply with the specifications for asphalt binder. Do not modify asphalt binder with polymer.

37-2.04B(3) Asphalt Modifiers

An asphalt modifier must be a resinous, high flash point, and aromatic hydrocarbon. An asphalt modifier must comply with the requirements shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder					
Quality characteristic	Test method	Requirement			
Viscosity at 100 °C (m²/s x 10 ⁻⁶)	ASTM D445	X ± 3ª			
Flash point (min, CL.O.C., °C)	ASTM D92	207			
Molecular analysis:					
Asphaltenes by mass (max, %)	ASTM D2007	0.1			
Aromatics by mass (min, %)	ASTM D2007	55			

Asphalt Modifier for Asphalt Rubber Binder

^aX denotes the proposed asphalt modifier viscosity from 19 to 36. A change in X requires a new asphalt rubber binder submittal.

37-2.04B(4) Crumb Rubber Modifiers

The CRM to be used must be on the Authorized Materials List for crumb rubber modifier.

The CRM must be ground or granulated at ambient temperature.

Scrap tire crumb rubber and high natural scrap tire crumb rubber must be delivered to the asphalt rubber binder production site in separate bags.

Steel and fiber must be separated. If steel and fiber are cryogenically separated, it must occur before grinding and granulating. Cryogenically-produced CRM particles must be large enough to be ground or granulated.

The CRM must be dry, free-flowing particles that do not stick together. A maximum of 3 percent calcium carbonate or talc by weight of CRM may be added. The CRM must not cause foaming when combined with the asphalt binder and asphalt modifier.

The CRM must comply with the requirements shown in the following table:

Cruind Rubber Modifier for Asphalt Rubber Binder					
Quality characteristic	Test method	Requirement			
Wire in CRM (max, %)	California Test 385	0.01			
Fabric in CRM (max, %)	California Test 385	0.05			
CRM particle length (max, in)		3/16			
CRM specific gravity	California Test 208	1.1–1.2			

Crumb Rubber Modifier for Asphalt Rubber Binder

The CRM must comply with the requirements shown in the following table:

Crumb Rubber Modifier Requirements

		Requirement	
Quality characteristic	Test method	Scrap tire crumb rubber	High natural scrap
			tire crumb rubber
Acetone extract (%)		6.0–16.0	4.0–16.0
Rubber hydrocarbon (min, %)		42.0-65.0	50.0
Natural rubber content (%)	ASTM D297	22.0–39.0	40.0-48.0
Carbon black content (%)		28.0–38.0	
Ash content (max, %)		8.0	

Scrap tire crumb rubber gradation must comply with the gradation requirements shown in the following table:

Scrap Tire Crumb Rubber Gradation	Scrap	Tire Crumb	Rubber	Gradation
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Quality characteristic	Test	Requirement			
	method				
Gradation (% passing by weight) Sieve size:		Gradation limit	Operating range	Contract compliance	
No. 8		100	100	100	
No. 10	California	98–100	95–100	90–100	
No. 16	Test 385	45–75	35–85	32–88	
No. 30		2–20	2–25	1–30	
No. 50		0–6	0–10	0–15	
No. 100		0–2	0–5	0–10	
No. 200		0	0–2	0–5	

High natural scrap tire crumb rubber gradation must comply with the gradation requirements shown in the following table:

Hig	h Natural Sc	rap Tire Crumb Ru	ibber Gradation	
Quality characteristic	Test		Requirement	
-	method		-	
Gradation (% passing by		Gradation limit	Operating range	Contract
weight)				compliance
Sieve size:				
No. 10	O a life main	100	100	100
No. 16	California	95–100	92–100	85–100
No. 30	Test 385	35–85	25–95	20–98
No. 50		10–30	6–35	2–40
No. 100		0–4	0–7	0–10
No. 200		0–1	0–3	0–5

High Natural Scrap Tire Crumb Rubber Gradation

37-2.04B(5) Asphalt Rubber Binders

An asphalt rubber binder must be a combination of:

- 1. Asphalt binder
- 2. Asphalt modifier
- 3. Crumb rubber modifier

Asphalt rubber binder blending equipment must be authorized under the Department's MPQP.

The blending equipment must allow the determination of weight percentages of each asphalt rubber binder ingredient.

An asphalt rubber binder must be 79 ± 1 percent by weight asphalt binder and 21 ± 1 percent by weight of CRM. The minimum percentage of CRM must be 20.0 percent and lower values must not be rounded up.

The CRM must be 75 \pm 2 percent by weight scrap tire crumb rubber and 25 \pm 2 percent by weight high natural scrap tire crumb rubber.

An asphalt modifier and asphalt binder must be blended at the production site. An asphalt modifier must be from 2.5 to 6.0 percent by weight of the asphalt binder in the asphalt rubber binder. The asphalt rubber binder supplier determines the exact percentage.

If blended before adding CRM, the asphalt binder must be from 375 to 440 degrees F when an asphalt modifier is added and the mixture must circulate for at least 20 minutes. An asphalt binder, asphalt modifier, and CRM may be proportioned and combined simultaneously.

The blend of an asphalt binder and an asphalt modifier must be combined with the CRM at the asphalt rubber binder production site. The asphalt binder and asphalt modifier blend must be from 375 to 440 degrees F when the CRM is added. Combined ingredients must be allowed to react at least 45 minutes at temperatures from 375 to 425 degrees F except the temperature must be at least 10 degrees F below the flash point of the asphalt rubber binder.

After reacting, the asphalt rubber binder must comply with the requirements shown in the following table:

	Quality characteristic	Test method	Requirement
Ē	Cone penetration at 25 °C (0.10 mm)	ASTM D217	25–60
[Resilience at 25 °C (% rebound)	ASTM D5329	18–50
ſ	Softening point (°C)	ASTM D36	55–88
	Viscosity at 375 °F (Pa•s x 10 ⁻³) ^a	ASTM D7741	1,500–2,500
		· · · · · · · · · · · · · · · · · · ·	

Asphalt Rubber Binder

^aPrepare sample for viscosity test under California Test 388.

Maintain asphalt rubber binder at a temperature from 375 to 415 degrees F.

Stop heating unused asphalt rubber binder 4 hours after the 45-minute reaction period. Reheating asphalt rubber binder that cools below 375 degrees F is a reheat cycle. Do not exceed 2 reheat cycles. If reheating, the asphalt rubber binder must be from 375 to 415 degrees F before use.

During reheating, you may add CRM. The CRM must not exceed 10 percent by weight of the asphalt rubber binder. Allow added CRM to react for at least 45 minutes. Reheated asphalt rubber binder must comply with the specifications for asphalt rubber binder.

37-2.04B(6) Precoated Aggregate

Before precoating with asphalt binder, aggregate for an asphalt rubber binder chip seal must comply with the gradation requirements shown in the following table:

Quality characteristic	Test method	Requi	rement
Gradation (% passing by weight) Sieve size:		1/2"	3/8"
3/4"		100	100
1/2"	California Test	85–90	95–100
3/8"	202	0–30	70–85
No. 4		0–5	0–15
No. 8			0–5
No. 200		0–1	0–1

Asphalt Rubber Binder Chip Seal Aggregate Gradation

37-2.04C Construction

37-2.04C(1) General

Reserved

37-2.04C(2) Equipment

Distributor trucks must be equipped with:

- 1. Mixing and heating unit
- 2. Observation platform on the rear of the truck for an observer on the platform to see the nozzles and unplug them if needed

37-2.04C(3) Asphalt Rubber Binder Application

Apply the asphalt rubber binder when the ambient temperature is from 60 to 105 degrees F and the pavement surface temperature is at least 55 degrees F.

Do not apply the asphalt rubber binder unless enough aggregate is available at the job site to cover the asphalt rubber binder within 2 minutes. Intersections, turn lanes, gore points, and irregular areas must be covered within 15 minutes.

Do not apply asphalt rubber binder when pavement is damp or during high wind conditions. If authorized, you may adjust the distributor bar height and distribution speed and use shielding equipment during high wind conditions.

When applied, the temperature of the asphalt rubber binder must be from 385 to 415 degrees F.

Apply the asphalt rubber binder at a rate from 0.55 to 0.65 gal/sq yd. You may reduce the application rate by 0.050 gal/sq yd in the wheel paths.

37-2.04C(4) Precoated Aggregate Spreading

Spread aggregate at a rate from 28 to 40 lb/sq yd. Do not spread aggregate more than 200 feet ahead of the completed initial rolling.

37-2.04C(5) Rolling and Sweeping

Perform initial rolling within 90 seconds of spreading aggregate. If authorized for final rolling, you may use a steel-wheeled roller weighing from 8 to 10 tons in static mode only.

Perform a final sweeping before Contract acceptance. The final sweeping must not dislodge aggregate.

37-2.04D Payment

Asphalt rubber binder is measured as specified for asphalt binder.

37-2.05 STRESS ABSORBING MEMBRANE INTERLAYERS

37-2.05A General

Section 37-2.05 includes specifications for placing stress absorbing membrane interlayers (SAMI).

Comply with section 37-2.04 except a flush coat is not required.

Traffic must not be allowed on a SAMI.

37-2.05B Materials

For a SAMI, aggregate must comply with the 3/8-inch gradation.

37-2.05C Construction

If a SAMI is overlaid in the same work shift, section 37-2.01C(4)(e) does not apply.

Final sweeping is not required for a SAMI.

37-2.05D Payment

Not Used

37-2.06 MODIFIED ASPHALT BINDER CHIP SEALS

Reserved

37-2.07 SCRUB SEALS

Reserved

37-3 SLURRY SEALS AND MICRO-SURFACINGS

37-3.01 GENERAL

37-3.01A General

37-3.01A(1) Summary

Section 37-3.01 includes general specifications for applying slurry seals and micro-surfacings.

37-3.01A(2) Definitions

Reserved

37-3.01A(3) Submittals

At least 15 days before starting placement of a slurry seal or micro-surfacing, submit:

- 1. Samples for:
 - 1.1. Asphaltic emulsion slurry seal, two 1-quart wide mouth plastic containers with screw top lid of asphaltic emulsion
 - 1.2 Polymer modified asphaltic emulsion slurry seal, two 1-quart wide mouth plastic containers with screw top lid of polymer modified asphaltic emulsion
 - 1.3. Micro-surfacing, two 1-quart wide mouth plastic containers with screw top lid of micro-surfacing emulsion
- Asphaltic emulsion, polymer modified asphaltic emulsion, or micro-surfacing emulsion data as follows:
 - 2.1. Supplier and Type/Grade of asphaltic emulsion
 - 2.2. Type of modifier polymer for polymer modified asphaltic emulsion or micro-surfacing emulsion
 - 2.3. Copy of the specified test results for asphaltic emulsion, polymer modified asphaltic emulsion, or micro-surfacing emulsion
- 3. 50 lb of aggregate
- 4. Aggregate test results for the followings:
 - 4.1. Gradation
 - 4.2. Los Angeles Rattler
 - 4.3. Percent of crushed particles

- 4.4 Sand equivalent
- 4.5 Durability

At least 10 days before starting placement of a slurry seal or micro-surfacing, submit a laboratory report of test results and the proposed mix design from an authorized laboratory. The authorized laboratory must sign the laboratory report and mix design.

The report must include:

- 1. Test results used in the mix design compared with specification requirements
- 2. Proportions based on the dry weight of aggregate, including ranges, for:
 - 2.1. Aggregate
 - 2.2. Water
 - 2.3. Additives
 - 2.4. Mineral filler
 - 2.5. Slurry seal emulsion or micro-surfacing emulsion residual asphalt content
- Recommended changes to the proportions based on heating the mixture to 100 degrees F and mixing for 60 seconds, if atmospheric temperatures during application will be 90 degrees F or above, for:
 - 3.1. Water
 - 3.2. Additives
 - 3.3. Mineral filler
- 4. Quantitative moisture effects on the aggregate's unit weight determined under ASTM C29M

If the mix design consists of the same materials covered by a previous laboratory report, you may submit the previous laboratory report that must include material testing data performed within the previous 12 months for authorization.

If you change any of the materials in the mix design, submit a new mix design and laboratory report at least 10 days before starting slurry seal or micro-surfacing work.

Submit a certificate of compliance as specified for asphaltic emulsion in section 94-1.01C with each shipment of asphaltic emulsion, polymer modified asphaltic emulsion or micro-surfacing emulsion.

Submit quality control test results for the quality characteristics within the reporting times allowance after sampling shown in the following table:

Quality characteristic	Maximum reporting time
	allowance
Los Angeles Rattler loss (max, %)	2 business days
Percent of crushed particles (min, %)	2 business days
Durability (min)	2 business days
Resistance of fine aggregate to	
degradation by abrasion in the Micro-	2 business days
Deval Apparatus (% loss by weight)	
Gradation (% passing by weight)	48 hours
Sand equivalent (min)	48 hours
Moisture content (%)	48 hours

Quality Control Test Reporting Requirements

Within 3 days after taking asphaltic emulsion, polymer modified asphaltic emulsion or micro-surfacing emulsion quality control samples, submit the authorized laboratory's test results.

37-3.01A(4) Quality Assurance

37-3.01A(4)(a) General

Your authorized laboratory must be able to perform International Slurry Surfacing Association tests and mix design.

37-3.01A(4)(b) Quality Control 37-3.01A(4)(b)(i) General

Reserved

37-3.01A(4)(b)(ii) Aggregate

For aggregate, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Test method	NAL: L	
restmentou	Minimum	Location of
	sampling and	sampling
	testing frequency	
California Tost 211	1st day of	See California
	production	Test 125
AASHTO T 335	1st day of	See California
	production	Test 125
California Test 217	1 per working	See California
	stockpile per day	Test 125
ASTM D7428		
	1 per working	See California
	stockpile per day	Test 125
California Test 202	1 per working	See California
	stockpile per day	Test 125
AASHTO T 255 ^a	1 per working	See California
	stockpile per day	Test 125
	California Test 217 ASTM D7428 California Test 202 AASHTO T 255 ^a	testing frequencyCalifornia Test 2111st day of productionAASHTO T 3351st day of productionCalifornia Test 2171 per working stockpile per dayASTM D74281 per working stockpile per dayCalifornia Test 2021 per working stockpile per dayCalifornia Test 2021 per working stockpile per dayASHTO T 255a1 per working stockpile per day

Aggregate Quality Control

^aTest aggregate moisture at field stockpile every 2 hours if you are unable to maintain the moisture content to within a maximum daily variation of ± 0.5 percent.

37-3.01A(4)(b)(iii) Slurry Seals and Micro-surfacings

Reserved

37-3.01A(4)(c) Department Acceptance

Slurry Seal and micro-surfacing acceptance is based on:

- 1. Visual inspection for the following:
 - 1.1. Uniform surface texture throughout the work limits.
 - 1.2. Marks in the surface:
 - 1.2.1. Up to 4 marks in the completed slurry seal or micro-surfacing surface that are up to 1 inch wide and up to 6 inches long per 1000 square feet of slurry seal or micro-surfacing placed.
 - 1.2.2. No marks in the completed slurry seal or micro-surfacing surface that are over 1 inch wide or 6 inches long.
 - 1.3. Excessive raveling consisting of the separation of the aggregate from the asphaltic emulsion, polymer modified asphaltic emulsion or micro-surfacing emulsion.
 - 1.4. Bleeding consists of the occurrence of a film of asphaltic material on the surface of the slurry seal or micro-surfacing.
 - 1.5. Delaminating of slurry seal or micro-surfacing from the existing pavement.
 - 1.6. Rutting or wash-boarding.
- 2. Department's sampling and testing for compliance with the requirements for aggregate shown in the following table:

Quality characteristic	Test method	R	equiremen	ts
Gradation (% passing by weight) Sieve Size:		Type I	Type II	Type III
3/8"			100	100
No. 4	California Test	100	94–100	70–90
No. 8	202	90–100	65–90	45–70
No. 16		60–90	40–70	28–50
No. 30		40–65	25–50	19–34
No. 200		10–20	5–15	5–15

Aggregate Gradation Acceptance Criteria

An aggregate gradation test represents 300 tons or 1 day's production, whichever is less.

If test results for aggregate gradation do not comply with the specifications, you may remove the slurry seal or micro-surfacing represented by the test results or request it remain in place with a payment deduction. If your request is authorized, the Department deducts:

- 1. \$1.75 per ton of slurry seal for each noncompliant aggregate gradation
- 2. \$2.00 per ton of micro-surfacing for each noncompliant aggregate gradation

37-3.01B Materials

37-3.01B(1) General

Additional water must not cause separation of the asphaltic emulsion, polymer modified asphaltic emulsion or micro-surfacing emulsion from the aggregate before placement.

You may use an additive that does not adversely affect the slurry seal or micro-surfacing.

37-3.01B(2) Aggregate

Aggregate must be rock dust. Aggregate must be free from vegetable matter, deleterious substances, caked or clay lumps, and oversized particles.

Aggregate for a slurry seal and micro-surfacing must comply with the gradations shown in the following table:

Quality characteristic		Test method	Requirements					
	Gradation (%		ght)		Type I	Type II		Type III
Sieve size:								
	3/8"					100		100
No. 4 No. 8 No. 16 No. 30 No. 200			Califor	California Test 202	100	94–100		70–90
			Test 2		90–100	65–90		45–70
					60–90	40–70		28–50
					40–65	25–50		19–34
					10–20	5–15		5–15

Aggregate Gradation

37-3.01C Construction

37-3.01C(1) General

Before applying slurry seals or micro-surfacings, cover manholes, valve and monument covers, grates, and other exposed facilities located within the area of application using plastic or oil resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with enough control points to relocate the facilities after application of the slurry seals or micro-surfacings.

37-3.01C(2) Proportioning

Proportion slurry seal and micro-surfacing ingredients in compliance with the authorized mix design.

37-3.01C(3) Mixing and Spreading Equipment

37-3.01C(3)(a) General

Mixing and spreading equipment for slurry seals and micro-surfacings must proportion the asphaltic emulsions, water, aggregate, and any additives by volume and mix them in continuous pug mill mixers.

Introduce emulsions into the mixer with a positive displacement pump. If you use a variable-rate pump, the adjusting unit must be sealed in its calibrated position.

Introduce water into the mixer through a meter that measures gallons.

Choose a truck mounted mixer-spreader or continuous self-loading mixer spreader.

37-3.01C(3)(b) Truck Mounted Mixer Spreaders

Truck mounted mixer spreaders must comply with:

- 1. Rotating and reciprocating equipment must be covered with metal guards.
- 2. Proportion aggregate using a belt feeder with an adjustable cutoff gate. The Engineer verifies the height of the gate opening.
- 3. Belt feeder must have a depth monitor device. The depth monitor device must automatically shut down power to the belt feeder when the aggregate depth is less than 70 percent of the target depth.
- 4. Separate monitor device must detect the revolutions of the belt feeder. This device must automatically shut down power to the belt feeder if it detects no revolutions. If the belt feeder is an integral part of the equipment's drive chain, the monitor device is not required.
- 5. Aggregate belt feeder must be connected directly to the drive on the emulsion pump. The aggregate feeder drive shaft must have a revolution counter reading the nearest 0.10 revolution for micro-surfacing, and nearest 1 revolution for slurry seal.
- 6. Emulsion storage must be equipped with a device that automatically shuts down power to the emulsion pump and aggregate belt feeder when the level of stored emulsion is lowered. To allow for normal fluctuations, there may be a delay of 3 seconds between detection of low emulsion storage levels or low aggregate depths and automatic power shut down.
- 7. Emulsion storage must be located immediately before the emulsion pump.
- 8. Emulsion storage tank must have a temperature indicator at the pump suction level. The indicator must be accurate to ±5 degrees F.
- 9. No-flow and revolution warning devices must be in working condition. Low-flow indicators must be visible while walking alongside the equipment.

37-3.01C(3)(c) Continuous Self-Loading Mixer Spreaders

Continuous self-loading mixer spreaders must be automatically sequenced and self-propelled. The mixing machine must deliver each material to a double shafted mixer and discharge the mixed material on a continuous flow basis. The mixing machines must have sufficient storage capacity to maintain a continuous supply of material to the proportioning controls. The mixing machine operators must have full control of forward and reverse speeds during placement.

37-3.01C(3)(d) Spreader Boxes

The spreader boxes used to spread slurry seals and micro-surfacings must be:

- 1. Capable of spreading the slurry seal or micro-surfacing a minimum of 12 feet wide and preventing the loss of slurry seal or micro-surfacing.
- 2. Equipped with flexible rubber belting on each side. The belting must contact the pavement to prevent the loss of slurry seal or micro-surfacing from the box.
- 3. Equipped to uniformly apply the slurry seal or micro-surfacing on superelevated sections and shoulder slopes. Micro-surfacing spreader box must be equipped with reversible motor driven augers.
- 4. Equipped with a series of strike-off devices at its rear.
 - 4.1. The leading strike off device must be:
 - 4.1.1. Fabricated of a suitable material such as steel or stiff rubber
 - 4.1.2. Designed to maintain close contact with the pavement during spreading
 - 4.1.3. Capable of obtaining the specified thickness
 - 4.1.4. Capable of being adjusted to the various pavement cross sections
 - 4.2. The final strike-off device must be:
 - 4.2.1. Fabricated of flexible material that produces a uniform texture in the finished surface

- 4.2.2. Cleaned daily and changed if longitudinal scouring occurs in the slurry seal of microsurfacing
- 5. Clean and free of slurry seal or micro-surfacing at the start of each work shift.

37-3.01C(3)(e) Shoulder Equipment

Spread the slurry seal or micro-surfacing on shoulders with a device such as an edge box that forms clean and straight joints and edges.

37-3.01C(3)(f) Equipment Calibration

Equipment calibration must comply with the *MPQP*. Notify the Engineer at least 5 business days before calibrating.

If the Department authorizes a truck or continuous mixer spreader, its calibration is valid for 6 months provided you:

- 1. Use the same truck or continuous mixer spreader verified with a unique identifying number
- 2. Use the same materials in compliance with the authorized mix design
- 3. Do not perform any repair or alteration to the proportioning systems

Calibrate the adjustable cut-off gate settings of each truck or continuous mixer spreader on the project to achieve the correct delivery rate of aggregate and emulsion per revolution of the aggregate feeder under the *MPQP*.

Checks must be performed for each aggregate source using an authorized vehicle scale.

Individual checks of the aggregate belt feeder's delivery rate to the pug mill mixer must not vary more than 2 percent from the average of 3 runs of at least 3 tons each.

Before using a variable-rate emulsion pump, the pump must be calibrated and sealed in the calibrated condition under the *MPQP*.

Individual checks of the emulsion pump's delivery rate to the pug mill mixer must not vary more than 2 percent from the average of 3 runs of at least 500 gal each.

37-3.01C(4) Surface Preparation

Immediately before applying slurry seals or micro-surfacings, clean the surface to receive slurry seals or micro-surfacings by removing any extraneous material affecting adhesion of the slurry seal or micro-surfacing with the existing surface. Use self-propelled power brooms or other methods such as flushing to clean the existing pavement.

37-3.01C(5) Placement

37-3.01C(5)(a) General

If truck-mounted mixer-spreaders are used, keep at least 2 operational spreaders at the job site during placement.

Spread slurry seals and micro-surfacings uniformly and do not spot, rehandle, or shift the mixture. However in areas inaccessible to spreading equipment, spread the slurry seal or micro-surfacing mixtures with hand tools or other authorized methods. If placing with hand tools, lightly dampen the area first.

You may fog the roadway surface with water ahead of the spreader box. The fog spray must be adjusted for pavement:

- 1. Temperature
- 2. Surface texture
- 3. Dryness

You determine the application rates for slurry seals or micro-surfacings and the Engineer authorizes the application rates. Spread within 10 percent of authorized rate.

The mixtures must be uniform and homogeneous after spreading, and there must not be separation of the emulsion and aggregate after setting.

37-3.01C(5)(b) Weather Conditions

Only place slurry seals or micro-surfacings if both the pavement and air temperatures are at least 50 degrees F and rising. The expected high temperature must be at least 65 degrees F within 24 hours after placement.

Do not place slurry seals or micro-surfacings if rain is imminent or the air temperature is expected to be below 36 degrees F within 24 hours after placement.

37-3.01C(5)(c) Joints

Transverse and longitudinal joints must be:

- 1. Uniform
- 2. Straight
- 3. Neat in appearance
- 4. Without material buildup
- 5. Without uncovered areas

Transverse joints must be butt-type joints.

Prevent double placement at transverse joints over previously placed slurry seals or micro-surfacings.

Place longitudinal joints:

- 1. On centerlines, lane lines, edge lines, or shoulder lines
- 2. With overlaps not more than 4 inches

You may request other longitudinal joint patterns if they do not adversely affect the slurry seals or microsurfacings.

The maximum difference between the pavement surface and the bottom edge of a 12-foot straightedge placed perpendicular to the longitudinal joint must be 0.04 foot.

37-3.01C(5)(d) Finished Surfaces

Finished slurry seals or micro-surfacings must be smooth and free of irregularities such as scratch or tear marks. You may leave up to 4 marks that are up to 1 inch wide and 6 inches long per 75 linear feet of slurry seal or micro-surfacing placed. Do not leave any marks that are over 1 inch wide or 6 inches long.

37-3.01C(5)(e) Maintenance Sweeping

Sweep the slurry seals or micro-surfacings 24 hours after placement without damaging the slurry seals or micro-surfacings. For 4 days afterwards, sweep the slurry seals or micro-surfacings daily unless determined otherwise by the Engineer.

37-3.01C(5)(f) Repair of Early Distress

The slurry seals or micro-surfacings must not show bleeding, raveling, separation, or other distresses for 15 days after placing. If bleeding, raveling, delaminating, rutting, or wash-boarding occurs after placing the slurry seals or micro-surfacings, make repairs using an authorized method.

37-3.01D Payment

Not Used

37-3.02 SLURRY SEALS

37-3.02A General

37-3.02A(1) Summary

Section 37-3.02 includes specifications for applying slurry seals.

Applying a slurry seal consists of spreading a mixture of asphaltic emulsion or polymer modified asphaltic emulsion, aggregate, additives, and water on a surface or pavement.

37-3.02A(2) Definitions

Reserved

37-3.02A(3) Submittals

Immediately after sampling, submit two 1-quart wide mouth plastic containers of asphaltic emulsion or polymer modified asphaltic emulsion taken in the presence of the Engineer. Samples must be submitted in insulated shipping containers.

37-3.02A(4) Quality Assurance

37-3.02A(4)(a) General

Reserved

37-3.02A(4)(b) Quality Control

37-3.02A(4)(b)(i) General

Take samples of asphaltic emulsion and polymer modified asphaltic emulsion from the tank truck at mid load or from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer take two 1-quart samples in wide mouth plastic containers with lined, sealed lids for acceptance testing.

37-3.02A(4)(b)(ii) Asphaltic Emulsion

For asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Asphaltic Emulsion				
Quality characteristic	Test method	Minimum sampling and	Sampling location	
		testing frequency		
Saybolt Furol Viscosity, at 25				
°C (Saybolt Furol seconds)				
Sieve Test (%)	AASHTO T 59	Minimum 1 per day per	Delivery	
Storage stability, 1 day (%)	AASHIUI 59	delivery truck	Delivery truck	
Residue by distillation (%)				
Particle charge ^a				
Tests on Residue from Distillation Test:				
Penetration, 25 °C	AASHTO T 49	Minimum 1 per dev per		
Ductility	AASHTO T 51	Minimum 1 per day per	Delivery truck	
Solubility in tricloroethylene	AASHTO T 44	delivery truck	-	

Asphaltic Emulsion

^aIf the result of the particle charge is inconclusive, the asphaltic emulsion must be tested for pH under ASTM E70. Grade QS1h asphaltic emulsion must have a minimum pH of 7.3. Grade CQS1h asphaltic emulsion must have a maximum pH of 6.7.

37-3.02A(4)(b)(iii) Polymer Modified Asphaltic Emulsion

For polymer modified asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Polymer Modified Asphaltic Emulsion

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling Location
Tests on emulsion:			
Saybolt Furol Viscosity at 25 °C	AASHTO T 59		
(Saybolt Furol seconds)		Minimum 1 nor	
Sieve test (%)	AASHTO T 59	Minimum 1 per	Delivery truek
Storage stability after 1 day (%)	AASHTO T 59	day per delivery truck	Delivery truck
Residue by evaporation (min, %)	California Test 331	lluck	
Particle charge	AASHTO T 59		
Tests on residue by evaporation:			
Penetration at 25 °C	AASHTO T 49		
Ductility at 25 °C (min, mm)	AASHTO T 51		
Torsional recovery (min, %)	California Test 332	Minimum 1 per	
Or		day per delivery truck	Delivery truck
Polymer content based on residual asphalt (min, %)	California Test 401		

37-3.02A(4)(c) Department Acceptance

For a slurry seal asphaltic emulsion and polymer modified asphaltic emulsion, acceptance is based on the Department's sampling and testing for compliance with the requirements for the quality characteristics specified.

Aggregate acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirement	
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211ª	35	
Percent of crushed particles (min, %)	California Test 205	95	
Durability (min)	California Test 229	55	
Sand equivalent (min) Type I Type II Type III	California Test 217	45 55 60	

Aggregate Acceptance Criteria

^aCalifornia Test 211 must be performed on the source aggregate before crushing.

A sand equivalent test represents 300 tons or 1 day's production, whichever is less.

If test results for sand equivalent do not comply with the specifications, you may remove the slurry seal represented by the test results or request it remain in place with a payment deduction. If your request is authorized, the Department deducts \$1.75 per ton of slurry seal for each noncompliant sand equivalent test.

37-3.02B Materials

37-3.02B(1) General

Reserved

37-3.02B(2) Asphaltic Emulsions

An asphaltic emulsion must comply with the requirements in Section 94. The asphaltic emulsion must be Grade CQS1h.

37-3.02B(3) Polymer Modified Asphaltic Emulsions

A polymer modified asphaltic emulsion must:

- 1. Consist of an elastomeric polymer mixed with an asphaltic material uniformly emulsified with water and an emulsifying or stabilization agent.
- 2. Use either neoprene polymer or butadiene and styrene copolymer. The polymer must be homogeneous and milled into the asphaltic emulsion at the colloid mill.
- 3. Be Grade PMCQS1h and must comply with the requirements shown in the following table:

Polymer Modified Asphaltic Emulsion Requirements			
Quality characteristic	Test method	Requirement	
Tests on emulsion:			
Saybolt Furol Viscosity at 25 °C (Saybolt Furol	AASHTO T 59	15–90	
seconds)			
Sieve test (%)	AASHTO T 59	0–0.3	
Storage stability after 1 day (%)	AASHTO T 59	0–1	
Residue by evaporation (min, %)	California Test 331	60	
Particle charge	AASHTO T 59	Positive	
Tests on residue by evaporation:			
Penetration at 25 °C	AASHTO T 49	40–90	
Ductility at 25 °C (min, mm)	AASHTO T 51	400	
Torsional recovery (min, %)	California Test 332	18	
Or			
Polymer content based on residual asphalt (min, %)	California Test 401	2.5	

37-3.02B(4) Aggregate

Aggregate must comply with the quality characteristic requirements shown in the following table:

Aggregate Requirements				
Quality characteristic	Test method	Requirement		
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211ª	35		
Percent of crushed particles (min, %)	California Test 205	95		
Durability (min)	California Test 229	55		
Sand equivalent (min) Type I Type II Type III	California Test 217	45 55 60		

Aggregate Requirements

^aCalifornia Test 211 must be performed on the source aggregate before crushing. The aggregate supplier must certify that the crushed aggregate being used on the project is manufactured from the source aggregate complying with the LA rattler requirements.

37-3.02B(5) Slurry Seal Mix Design

The slurry seal mix design, using project source aggregate, an asphaltic emulsion, and set-control agents if any, must comply with the requirements shown in the following table:

Slurry Seal Mix Design Requirements				
Test method ^a	Requirement			
Technical Bulletin 106	30			
Technical Bulletin 114	Pass			
Technical Bulletin 115	Pass⁵			
Technical Bulletin 139	200			
Technical Bulletin 100	810			
	Test method ^a Technical Bulletin 106 Technical Bulletin 114 Technical Bulletin 115 Technical Bulletin 139			

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^aTest methods are by the International Slurry Surfacing Association.

^bMixing test must pass at the maximum expected air temperature at the job site during placement.

The mix design must have the percent of asphaltic residue, based on percentage by weight of the dry aggregate, within the ranges shown in the following table:

Slurry seal type	Residue range
Type I	10–16
Type II	7.5–13.5
Type III	6.5–12.0

Determine the exact percentage based on the design asphalt binder content and the asphalt residual content of the asphaltic emulsion furnished.

37-3.02C Construction

37-3.02C(1) General

Reserved

37-3.02C(2) Proportioning

After proportioning, slurry seal mixtures must be workable.

37-3.02C(3) Mixing and Spreading Equipment

Reserved

37-3.02C(4) Placement

The slurry seal spread rates must be within the ranges shown in the following table:

olariy	
Slurry seal type	Application range
	(lb of dry aggregate/sq yd)
Туре І	8–12
Type II	10–18
Type III	20–25

Slurry Seal Spread Rates

Within 4 hours after placement, slurry seals must be set enough to allow traffic without pilot cars. Protect slurry seals from damage until it has set and will not adhere or be picked up by vehicle tires. Slurry seals must not exhibit distress from traffic such as bleeding, raveling, separation or other distresses.

37-3.02D Payment

The payment quantity for slurry seal is the weight determined by combining the weights of the aggregate and asphaltic emulsion or polymeric asphaltic emulsion. The payment quantity for slurry seal does not include the weights of the added water and set-control additives.

37-3.03 MICRO-SURFACINGS

37-3.03A General

37-3.03A(1) Summary

Section 37-3.03 includes specifications for applying micro-surfacings.

Applying a micro-surfacing consists of spreading a mixture of a micro-surfacing emulsion, water, additives, mineral filler, and aggregate on the pavement.

37-3.03A(2) Definitions

Reserved

37-3.03A(3) Submittals

Immediately after sampling, submit two 1-quart wide mouth plastic containers of micro-surfacing emulsion taken in the presence of the Engineer. Samples must be submitted in insulated shipping container.

37-3.03A(4) Quality Assurance 37-3.03A(4)(a) General Reserved

37-3.03A(4)(b) Quality Control 37-3.03A(4)(b)(i) General

Reserved

37-3.03A(4)(b)(ii) Micro-surfacing Emulsions

Take samples from the truck tank at mid load from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer, take two 1-quart wide mouth plastic containers for acceptance testing.

For a micro-surfacing emulsion, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the quality characteristics shown in the following table:

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling location	
Tests on emulsion:				
Saybolt Furol Viscosity, at 25°C (Saybolt Furol seconds) Storage stability, 1 day (max, %) ^a Sieve test (max, %)	AASHTO T 59	Minimum 1 per day per delivery truck	Delivery truck	
Residue by evaporation (min, %)	California Test	Minimum 1 per day	Delivery	
	331	per delivery truck	truck	
Tests on residue from evaporation test:				
Penetration at 25 °C	AASHTO T 49	Minimum 1 per day	Delivery	
Softening point (min, °C)	AASHTO T 53	per delivery truck	truck	
aStorage stability test will be rup if the stor	ago oxooodo 49 hou	150		

Micro-Surfacing Emulsion

^aStorage stability test will be run if the storage exceeds 48 hours

37-3.03A(4)(c) Department Acceptance

For micro-surfacing emulsions, acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Micro-surfacing Emulsion Acceptance Criteria				
Quality characteristic	Test method	Requirement		
Tests on emulsion:				
Saybolt Furol Viscosity at 25 °C	AASHTO T 59	15–90		
(Saybolt Furol seconds)				
Sieve test (%)	AASHTO T 59	0.30		
Storage stability, 1 day (max, %)	AASHTO T 59	0–1		
Settlement ^a , 5 days (max, %)	ASTM D244	5		
Residue by evaporation (min, %)	California Test 331	62		
Tests on residue by evaporation:				
Penetration at 25 °C	AASHTO T 49	40–90		
Softening point (min, °C)	AASHTO T 53	57		

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^aSettlement test on emulsion is not required if used within 48 hours of shipment.

Acceptance of aggregate, except mineral filler, is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

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Quality characteristic	Test method	Requirement		
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211ª	35		
Percent of crushed particles (min, %)	California Test 205	95		
Durability (min)	California Test 229	65		
Sand equivalent (min)	California Test 217			
Type II		65		
Type III		65		

Aggregate Acceptance Criteria

^aCalifornia Test 211 must be performed on the aggregate before crushing. The aggregate supplier must certify that the crushed aggregate being used on the project is manufactured from the source aggregate complying with the LA rattler requirements.

An aggregate sand equivalent test represents 300 tons or 1 day's production, whichever is less.

If the test results for aggregate sand equivalent do not comply with the specifications, you may remove the micro-surfacing represented by the test results or request it remain in place with a payment deduction. If your request is authorized, the Department deducts \$2.00 per ton of micro-surfacing for each noncompliant aggregate sand equivalent test.

37-3.03B Materials

37-3.03B(1) General

Reserved

37-3.03B(2) Micro-surfacing Emulsions

A micro-surfacing emulsion must be a homogeneous mixture of asphalt, an elastomeric polymer and an emulsifier solution.

Add an elastomeric polymer modifier to asphalt or emulsifier solution before emulsification. An elastomeric polymer solid must be a minimum of 3 percent by weight of the micro-surfacing emulsion's residual asphalt.

A micro-surfacing emulsion must comply with the requirements shown in the following table:

Micro-surfacing Emulsion Requirements				
Quality characteristic	Test method	Requirement		
Tests on emulsion:				
Saybolt Furol Viscosity at 25 °C (Saybolt Furol seconds)	AASHTO T 59	15–90		
Sieve test (%)	AASHTO T 59	0.30		
Storage stability, 1 day (max, %)	AASHTO T 59	0–1		
Settlement ^a , 5 days (max, %)	ASTM D244	5		
Residue by evaporation (min, %)	California Test 331	62		
Tests on residue by evaporation:				
Penetration at 25 °C	AASHTO T 49	40–90		
Softening point (min, °C)	AASHTO T 53	57		

^aSettlement test on emulsion is not required if used within 48 hours of shipment.

37-3.03B(3) Aggregate

Aggregate must comply with the quality characteristic requirements shown in the following table:

	• •	
Quality characteristic	Test method	Requirement
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211ª	35
Percent of crushed particles (min, %)	California Test 205	95
Durability (min)	California Test 229	65
Sand equivalent (min)	California Test 217	
Type II		65
Type III		65

Aggregate Requirements

^aCalifornia Test 211 must be performed on the source aggregate before crushing. The aggregate supplier must certify that the crushed aggregate being used on the project is manufactured from the source aggregate complying with the LA rattler requirements.

37-3.03B(4) Mineral Fillers

If a mineral filler is used, it must be type I or type II Portland cement. A mineral filler used during mix design must be used during production.

37-3.03B(5) Micro-Surfacing Mix Designs

The micro-surfacing mix design must have the material proportion limits shown in the following table:

Micro-surfacing Mix Design Proportion Limits		
Material	Proportion limits	
Micro-surfacing emulsion asphalt residual content (%	5.5–10.5	
of dry weight of aggregate)		
Water and additives	As Required	
Mineral filler (% of dry weight of aggregate)	0–3	

Micro-surfacing Mix Design Proportion Limits

The micro-surfacing mix design must comply with the requirements shown in the following table:

Micro-surfacing Mix Design Requirements			
Quality characteristics	Test method ^a	Requirement	
Wet cohesion			
At 30 minutes (set) (min, kg-cm)	Technical Bulletin 139	12	
At 60 minutes (traffic) (min, kg-cm)		20	
Excess asphalt (max, g/m ²)	Technical Bulletin 109	540	
Wet stripping (min, %)	Technical Bulletin 114	90	
Wet track abrasion loss 6-day soak (max, g/m²)	Technical Bulletin 100	810	
Displacement Lateral (max, %) Specific gravity after 1000 cycles of 57 kg (max)	Technical Bulletin 147A	5 2.10	
Classification compatibility (min, grade points)	Technical Bulletin 144	(AAA, BAA) 11	
Mix time at 25 °C (min)	Technical Bulletin 113	Controllable to 120 seconds	

^aTest methods are by the International Slurry Surfacing Association.

37-3.03B(6) Tack Coats

If there is a bid item for tack coat, you must coat the pavement surface with an asphaltic emulsion mixed with additional water before applying a micro-surfacing. The maximum ratio of water to asphaltic emulsion must be 2 to 1. Apply the tack coat at a rate from 0.08 to 0.15 gal/sq yd. The exact rate must be authorized.

You determine the grade of slow-setting or quick setting asphaltic emulsion to be used.

37-3.03C Construction

37-3.03C(1) General

Reserved

37-3.03C(2) Proportioning

Field conditions may require adjustments to the proportions within the authorized mix design during construction.

37-3.03C(3) Mixing and Spreading Equipment

37-3.03C(3)(a) General

Reserved

37-3.03C(3)(b) Scratch Course Boxes

Spread the scratch courses with the same type of spreader box used to spread micro-surfacings except use an adjustable steel strike-off device instead of a final strike-off device.

37-3.03C(3)(c) Wheel Path Depression Boxes

Each wheel path depression box must have adjustable strike-off device between 5 and 6 feet wide to regulate depth. The wheel path depression box must also have devices such as hydraulic augers capable of:

- 1. Moving the mixed material from the rear to the front of the filling chamber
- 2. Guiding larger aggregate into the deeper section of the wheel path depression
- 3. Forcing the finer material towards the outer edges of the spreader box

37-3.03C(4) Test Strips

If micro-surfacing placement will require more than 1 day, you must construct a test strip. The test strip must be:

- 1. From 300 to 450 feet long
- 2. The same as the full production micro-surfacing

- 3. On 1 of the application courses specified at an authorized location
- 4. At the same time of day or night the full production micro-surfacing is to be applied

If multiple application courses are specified, you may construct test strips over 2 days or nights.

The Engineer evaluates the test strip after traffic has used it for 12 hours. If the Engineer determines the mix design or placement procedure is unacceptable, make modifications and construct a new test strip for the Engineer's evaluation.

37-3.03C(5) Placement 37-3.03C(5)(a) General

37-3.03C(5)(a) Gene

Reserved

37-3.03C(5)(b) Repair Wheel Path Depressions

If repairing wheel path depressions is shown in plans, fill wheel path depressions and irregularities with micro-surfacing material before spreading micro-surfacing. If the depressions are less than 0.04 foot deep, fill with a scratch course. If the depressions are 0.04 foot deep or more, fill the depressions using a wheel path depression box.

Spread scratch courses by adjusting the steel strike-off of a scratch course box until it is directly in contact with the pavement surface.

Spread micro-surfacings with a wheel path depression box leaving a slight crown at the surface. Use multiple applications to fill depressions more than 0.12 foot deep. Do not apply more than 0.12 foot in a single application.

Allow traffic to compact each filled wheel path depression for a minimum of 12 hours before placing additional micro-surfacings.

37-3.03C(5)(c) Micro-surfacing Pavement Surfaces

The micro-surfacing spread rates must be within the ranges shown in the following table:

Micro-surfacing type	Application range (lb of dry aggregate/sq yd)
Type II	10–20
Type IIIª	20–32
Type III ^b	30–32

^aOver asphalt concrete pavement

^bOver concrete pavement and concrete bridge decks

Within 2 hours after placement, micro-surfacings must be set enough to allow traffic without pilot cars. Protect the micro-surfacings from damage until it has set and will not adhere or be picked up by vehicle tires. Micro-surfacings must not exhibit distress from traffic such as bleeding, raveling, separation or other distresses.

37-3.03D Payment

The payment quantity for micro-surfacing is the weight determined by combining the weights of the aggregate and micro-surfacing emulsion. The payment quantity for micro-surfacing does not include the weights of added water, mineral filler, and additives.

37-3.04 RUBBERIZED AND MODIFIED SLURRY SEALS

Reserved

37-4 FOG SEALS AND FLUSH COATS

37-4.01 GENERAL

37-4.01A General

37-4.01A(1) Summary

Section 37-4.01 includes general specifications for applying fog seals and flush coats.

37-4.01A(2) Definitions

Reserved

37-4.01A(3) Submittals

At least 15 days before use, submit:

- 1. Sample of asphaltic emulsion in two 1-quart plastic container with lined, sealed lid
- 2. Asphaltic emulsion information and test data as follows:
 - 2.1. Supplier
 - 2.2. Type/Grade of asphalt emulsion
 - 2.3. Copy of the specified test results for asphaltic emulsion

37-4.01B Materials

Not Used

37-4.01C Construction

37-4.01C(1) General

Reserved

37-4.01C(2) Weather Conditions

Only place a fog seal or flush coat if both the pavement and ambient temperatures are at least 50 degrees F and rising. Do not place a fog seal or flush coat within 24 hours of rain or within 24 hours of forecast rain or freezing temperatures.

37-4.01D Payment

Not Used

37-4.02 FOG SEALS

37-4.02A General

37-4.02A(1) Summary

Section 37-4.02 includes specifications for applying fog seals.

Applying a fog seal includes applying a diluted slow-setting or quick setting asphaltic emulsion.

37-4.02A(2) Definitions

Reserved

37-4.02A(3) Submittals

Immediately after sampling, submit two 1-quart plastic container of asphaltic emulsion taken in the presence of the Engineer. Samples must be submitted in insulated shipping container.

37-4.02A(4) Quality Assurance 37-4.02A(4)(a) General Reserved

37-4.02A(4)(b) Quality Control 37-4.02A(4)(b)(i) General

Reserved

37-4.02A(4)(b)(ii) Asphaltic Emulsions

Circulate asphaltic emulsions in the distributor truck before sampling. Take samples from the distributor truck at mid load or from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer, take asphalt emulsion sample in two 1-quart plastic container with lined, sealed lid.

For asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Asphaltic Emulsion				
Quality characteristic	Test Method	Minimum sampling and	Sampling location	
		testing frequency		
Saybolt Furol Viscosity, at				
25 °C (Saybolt Furl seconds)				
Sieve Test (%)	AASHTO T 59	Minimum 1 per day per	Distributor truck	
Storage stability, 1 day (%)	AASHIUI 39	delivery truck	DISTIBUTOR LINCK	
Residue by distillation (%)				
Particle charge ^a				
Tests on Residue from Distillation Test:				
Penetration, 25 °C	AASHTO T 49			
Ductility	AASHTO T 51	Minimum 1 per day per delivery truck	Distributor truck	
Solubility in tricloroethylene	AASHTO T 44			

^aIf the result of the particle charge is inconclusive, the asphaltic emulsion must be tested for pH under ASTM E70. Grade QS1h asphaltic emulsion must have a minimum pH of 7.3. Grade CQS1h asphaltic emulsion must have a maximum pH of 6.7.

37-4.02A(4)(b)(iii) Asphaltic Emulsion Spread Rates

For fog seals, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Fog Seal Quality Control Requirements	Fog Seal	Quality	Control	Requirements
---------------------------------------	----------	---------	---------	--------------

Quality characteristic	Test method	Minimum sampling and testing frequency	Location of sampling
Asphaltic emulsion spread rate (gal/sq yd)	California Test 339	2 per day	Pavement surface

37-4.02A(4)(c) Department Acceptance

Fog seal acceptance is based on:

- 1. Visual inspection for the following:
 - 1.1. Uniform surface texture throughout the work limits
 - 1.2. Flushing consisting of the occurrence of a film of asphaltic material on the surface
 - 1.4 Streaking consisting of alternating longitudinal bands of asphaltic emulsion approximately parallel with the lane line
- 2. The Department's sampling and testing for compliance with the requirements for the quality characteristics specified in section 94 for asphaltic emulsion
- 3. Department's sampling and testing for compliance with the requirements for fog seal shown in the following table:

Fog Seal Acceptance	Criteria
---------------------	----------

Quality Characteristic	Test Method	Requirement
Asphaltic emulsion spread rate (gal/sq yd)	California Test 339	TV ± 10%

37-4.02B Materials

You determine the grade of slow-setting or quick setting asphaltic emulsion to be used.

37-4.02C Construction

Apply asphaltic emulsions for fog seals at a residual asphalt rate from 0.02 to 0.06 gal/sq yd.

If additional water is added to the asphaltic emulsions, the resultant mixture must not be more than 1 part asphaltic emulsion to 1 part water. You determine the dilution rate.

If the fog seals become tacky, sprinkle water as required.

If fog seals and chip seals are on the same project, the joint between the seal coats must be neat and uniform.

37-4.02D Payment

The Department does not adjust the unit price for an increase or decrease in the asphaltic emulsion quantity.

37-4.03 FLUSH COATS

37-4.03A General

37-4.03A(1) Summary

Section 37-4.03 includes specifications for applying flush coats.

Applying a flush coat includes applying a fog seal coat followed by sand.

37-4.03A(2) Definitions

Reserved

37-4.03A(3) Submittals

At least 15 days before use, submit:

- 1. Proposed target X values for sand gradation.
- 2. Gradation test results for sand

Submit quality control test results for sand gradation within 2 business days of sampling.

37-4.03A(4) Quality Assurance

37-4.03A(4)(a) General

Reserved

37-4.03A(4)(b) Quality Control

For sand, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Sand Quality Control

Quality characteristic	Test method	Minimum sampling and testing frequency	Location of sampling
Gradation (% passing by weight)	California Test 202	1 per day	See California Test 125

37-4.03A(4)(c) Department Acceptance

Flush coat acceptance is based on fog seal acceptance and the following:

- 1. Visual inspection for uniform application of sand.
- 2. Sand acceptance is based on the Department's sampling and testing for compliance with the requirements shown in the following table:

Sand Gradation Acceptance Criteria

	-	
Quality characteristic	Test method	Requirement
Gradation (% passing by weight)		
Sieve size:		
3/8"		100
No. 4		93–100
No. 8	California Test 202	61–99
No. 16	California Test 202	X ± 13
No. 30		X ± 12
No. 50		X ± 9
No.100		1–15
No. 200		0–10

NOTE: "X" is the gradation that you propose to furnish for the specific sieve size.

37-4.03B Material

37-4.03B(1) General

Reserved

37-4.03B(2) Sand

Sand must be free from deleterious coatings, clay balls, roots, bark, sticks, rags, and other extraneous material.

Sand for a flush coat must comply with the gradations shown in the following table:

Sand Gradation			
Quality characteristic	Test method	Requirement	
Gradation (% passing by weight)			
Sieve size:			
3/8"		100	
No. 4		93–100	
No. 8	Colifornia Toot 202	61–99	
No. 16	California Test 202	X ± 13	
No. 30		X ± 12	
No. 50		X ± 9	
No.100		1–15	
No. 200		0–10	

NOTE: "X" is the gradation that you propose to furnish for the specific sieve size.

Fine aggregate sizes must be distributed such that the difference between the total percentage passing the No. 16 and No. 30 sieves is from 10 to 40, and the difference between the percentage passing the No. 30 and No. 50 sieves is from 10 to 40.

37-4.03C Construction

37-4.03C(1) General

During flush coat activities, close adjacent lanes to traffic. Do not track asphaltic emulsion on existing pavement surfaces.

Apply sand immediately after applying asphaltic emulsions.

Spread sand aggregate with a mechanical device that spreads sand at a uniform rate over the full width of a traffic lane in a single application. Spread sand at a rate from 2 to 6 lb/sq yd. You determine the application rates for sand and the Engineer authorizes the application rate.

37-4.03C(2) Sweeping

Sweep loose sand material remaining on the surface 24 hours after application.

37-4.03D Payment

The Department does not adjust the unit price for an increase or decrease in the sand cover (seal) quantity.

37-5 PARKING AREA SEALS

37-5.01 GENERAL

37-5.01A Summary

Section 37-5 includes specifications for applying parking area seals. Sealing a parking area consists of spreading a mixture of asphaltic emulsion, aggregate, polymer, and water.

37-5.01B Definitions

Reserved

37-5.01C Submittals

At least 15 days before starting placement, submit a 20 lb sample of the aggregate to be used.

At least 10 days before starting placement, submit:

- 1. Name of the authorized laboratory to perform testing and mix design.
- 2. Laboratory report of test results and a proposed mix design. The report and mix design must include the specific materials to be used and show a comparison of test results and specifications. The mix design report must include the quantity of water allowed to be added at the job site. The authorized laboratory performing the tests must sign the original laboratory report and mix design.
- 3. Manufacturer's data for oil seal primer and polymer.

If the mix design consists of the same materials covered by a previous laboratory report, you may submit the previous laboratory report that must include material testing data performed within the previous 12 months for authorization.

If you request substitute materials, submit a new laboratory report and mix design at least 10 days before starting placement.

Submit a certificate of compliance for the parking area seal material.

Immediately after sampling, submit two 1-quart plastic containers of parking area seal taken in the presence of the Engineer. Samples must be submitted in insulated shipping containers.

37-5.01D Quality Assurance37-5.01D(1) GeneralReserved37-5.01D(2) Quality Control

37-5.01D(2)(a) General Reserved

37-5.01D(2)(b) Asphaltic Emulsions

For an asphaltic emulsion, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Asphaltic Emulsion					
Quality characteristic	Test Method	Minimum sampling	Sampling		
		and testing frequency	location		
Saybolt Furol Viscosity, at 25 °C					
(Saybolt Furol seconds)					
Sieve Test (%)	AASHTO T 59	Minimum 1 per day	Distributor truck		
Storage stability, 1 day (%)	AASHIUI 39	per delivery truck			
Residue by distillation (%)					
Particle charge ^a					
Tests on Residue from Distillation Test					
Penetration, 25 °C	AASHTO T 49	Minimum 1 por dov			
Ductility	AASHTO T 51	Minimum 1 per day per delivery truck	Distributor truck		
Solubility in trichloroethylene	AASHTO T 44				

^aIf the result of the particle char is inconclusive, the asphaltic emulsion must be tested for pH under ASTM E70. Grade QS1h asphaltic emulsion must have a minimum pH of 7.3. Grade CQS1h asphaltic emulsion must have a maximum pH of 6.7.

37-5.01D(2)(c) Sand

For sand, the authorized laboratory must perform sampling and testing at the specified frequency and location for the following quality characteristics:

Sand Quality Control

Quality characteristic	Test method	Minimum sampling and testing frequency	Location of sampling
Gradation (% passing by weight)	California Test 202	One per project	See California Test 125

37-5.01D(2)(d) Parking Area Seals

For a parking area seal, the authorized laboratory must perform quality control sampling and testing at the specified frequency for the following quality characteristics:

Parking Area Seal Requirements

Quality characteristic	Test method	Frequency	
Mass per liter (kg)	ASTM D244		
Cone penetration (mm)	California Test 413		
Nonvolatile (%)	ASTM D2042ª		
Nonvolatile soluble in trichloroethylene (%)	ASTIVI D2042*	One per project	
Wet track abrasion (g/m ²)	ASTM D3910		
Dried film color			
Viscosity (KU) ^b	ASTM D562		

^aWeigh 10 g of homogenous material into a previously tarred, small can. Place in a constant temperature oven at 165 ± 5 °C for 90 ± 3 minutes. Cool, reweigh, and calculate nonvolatile components as a percent of the original weight.

^bKrebs units

37-5.01D(3) Department Acceptance

Parking area seal acceptance is based on:

- 1. Visual inspection for:
 - 1.1. Uniform surface texture throughout the work limits
 - 1.2 Marks in the surface:
 - 1.2.1. Up to 4 marks in the completed parking area seal that are up to 1 inch wide and up to 6 inches long per 1,000 square feet of parking area seal placed.

- 1.2.2. No marks in the completed parking area seal surface that are over 1 inch wide or 6 inches long.
- 1.2. Raveling consisting of the separation of the aggregate from the asphaltic emulsion
- Bleeding consisting of the occurrence of a film of asphaltic material on the surface of the 1.3. parking area seal
- 1.4 Delaminating of the parking area seal from the existing pavement
- 1.5 Rutting or wash-boarding
- 2. The Department's sampling and testing of aggregate for compliance with 100 percent passing no. 16 sieve under California Test 202
- 3. The Department's sampling and testing for compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirement
Mass per liter (min, kg)	ASTM D244	1.1
Cone penetration (mm)	California Test 413	340–700
Nonvolatile (min, %)	ASTM D2042 ^a	50
Nonvolatile soluble in trichloroethylene (%)	ASTIM D2042"	10–35
Wet track abrasion (max, g/m ²)	ASTM D3910	380
Dried film color		Black
Viscosity (min, KU) [♭]	ASTM D562	75

Parking Area Seal Acceptance Criteria

^aWeigh 10 g of homogenous material into a previously tared, small ointment can. Place in a constant temperature oven at 165 ± 5 °C for 90 ± 3 minutes. Cool, reweigh, and calculate nonvolatile components as a percent of the original weight. ^bKrebs units

37-5.02 MATERIALS

37-5.02A General

Aggregate must be clean, hard, durable, uncoated, and free from organic and deleterious substances. One hundred percent of the aggregate must pass the no. 16 sieve.

Asphaltic emulsion must be either Grade SS1h or CSS1h, except the values for penetration at 25 degrees C for tests on residue from distillation must be from 20 to 60.

Polymer must be either neoprene, ethylene vinyl acetate, or a blend of butadiene and styrene.

Oil seal primer must be a quick-drying emulsion with admixtures. Oil seal primer must be manufactured to isolate the parking area seal from pavement with residual oils, petroleum grease, and spilled gasoline.

Crack sealant must comply with section 37-6.

Water must be potable and not separate from the emulsion before the material is placed.

37-5.02B Mix Design

The proposed mix design for a parking area seal must comply with the requirements shown in the following table:

Parking Area Seal Mix Design Requirements				
Quality characteristic	Test method	Requirement		
Mass per liter (min, kg)	ASTM D244	1.1		
Cone penetration (mm)	California Test 413	340–700		
Nonvolatile (min, %)	ASTM D2042 ^a	50		
Nonvolatile soluble in trichloroethylene (%)	ASTIVI DZ042°	10–35		
Wet track abrasion (max, g/m ²)	ASTM D3910	380		
Dried film color		Black		
Viscosity (min, KU) ^b	ASTM D562	75		

^aWeigh 10 g of homogenous material into a previously tarred, small ointment can. Place in a constant temperature oven at 165 ± 5 °C for 90 ± 3 minutes. Cool, reweigh, and calculate nonvolatile components as a percent of the original weight.

^bKrebs units

A parking area seal must contain a minimum of 2 percent polymer by volume of undiluted asphaltic emulsion.

37-5.02C Proportioning

Parking area seal ingredients must be mixed at a central plant. The plant must include mechanical or electronic controls that consistently proportion the ingredients. Mix an asphaltic emulsion with the other ingredients mechanically.

Store the parking area seal in a tank equipped with mixing or agitation devices. Keep stored materials thoroughly mixed. Protect stored materials from freezing conditions.

37-5.03 CONSTRUCTION

37-5.03A General

Request that the Engineer shut off the irrigation control system at least 5 days before placing the seal. Do not water plants adjacent to the seal at least 24 hours before and after the seal coat placement.

37-5.03B Surface Preparations

If cracks in the existing pavement are from 1/4 to 1 inch wide, treat the cracks under section 37-6. Do not place the parking area seals until the Engineer determines that the crack treatments are cured.

If cracks in the existing pavement are greater than 1 inch wide, the Engineer orders the repair. This work is change order work.

After any crack treatment and before placing parking area seals, clean the pavement surface, including removal of oil and grease spots. Do not use solvents.

If cleaning the pavement with detergents, thoroughly rinse with water. Allow all water to dry before placing parking area seals.

You must seal oil and grease spots that remain after cleaning. Use an oil seal primer and comply with the manufacturer's instructions.

If the existing pavement has oil and grease spots that do not come clean and sealing is insufficient, the Engineer orders the repair of the pavement. This work is change order work.

Before placing the parking area seals, dampen the pavement surface using a distributor truck. Place the seal on the damp pavement but do not place it with standing water on the pavement.

37-5.03C Placement

If adding water at the job site based on the manufacturer's instructions for consistency and spreadability. do not exceed 15 percent by volume of undiluted asphaltic emulsion.

Place the parking area seals in 1 or more application. The seals must be uniform and smooth, free of ridges or uncoated areas.

Devision Anno Cool Min Design Descriptores

If placing in multiple applications, allow the last application to thoroughly dry before the subsequent application.

Do not allow traffic on the parking area seals for at least 24 hours after placement.

Do not stripe over the parking area seals until it is dry.

37-5.04 PAYMENT

The payment quantity for parking area seal is the weight determined by combining the weights of the aggregate and asphaltic emulsion. The payment quantity for parking area seal does not include the added water and set-control additive.

37-6 CRACK TREATMENTS

37-6.01 GENERAL

37-6.01A Summary

Section 37-6 includes specifications for treating cracks in asphalt concrete pavement.

37-6.01B Definitions

Reserved

37-6.01C Submittals

If your selected crack treatment material is on the Authorized Material List for flexible pavement crack treatment material, submit a certificate of compliance including:

- 1. Manufacturer's name
- 2. Production location
- 3. Brand or trade name
- 4. Designation
- 5. Batch or lot number
- 6. Crack treatment material type
- 7. Contractor or subcontractor name
- 8. Contract number
- 9. Lot size
- 10. Shipment date
- 11. Manufacturer's signature

If your selected crack treatment material is not on the Authorized Material List for flexible pavement crack treatment material, submit a sample and test results from each batch or lot 20 days before use. Testing must be performed by an authorized laboratory and test results must show compliance with the specifications. Test reports must include the information specified for the certificate of compliance submittal. Each hot-applied crack treatment material sample must be a minimum of 3 lb and submitted in a silicone release container. Each cold-applied crack treatment material sample must be a minimum of 2 quarts and submitted in a plastic container.

At least 10 days before the start of work, submit sand gradation test results under California Test 202.

Submit the following with each delivery of crack treatment material to the job site:

- 1. Manufacturer's heating and application instructions
- 2. Manufacturer's SDS
- 3. Name of the manufacturer's recommended detackifying agent

37-6.01D Quality Assurance

37-6.01D(1) General

Hot-applied crack treatment material must be sampled at least once per project in the Engineer's presence. Collect two 3-pounds-minimum samples of crack treatment material from the dispensing wand into silicone release boxes.

Cold-applied crack treatment material must be sampled at least once per project in the Engineer's presence. Collect 2 samples of crack treatment material from the dispensing wand into 1-quart containers.

37-6.01D(2) Quality Control

Reserved

37-6.01D(3) Department Acceptance

Crack treatment acceptance is based on:

- 1. Visual inspection for uniform filling of cracks throughout the work limits including:
 - 1.2. Crack treatment is not more than a 1/4 inch below the specified level
 - 1.3. Sealant failures
 - 1.4. Crack re-opening
 - 1.5. Crack overbanding is less than 3 inches wide
- 2. The Department's sampling and testing for compliance with the requirements shown in the following table:

Quality characteristic ^a	Test method ^b		F	Requirement		
	Test method-	Type 1	Type 2	Туре 3	Type 4	Type 5
Softening point (min, °C)	ASTM D36	102	96	90	84	84
Cone penetration at 77 °F (max)	ASTM					
	D5329	35	40	50	70	90
Resilience at 77 °F, unaged (%)	ASTM					
	D5329	20–60	25–65	30–70	35–75	40–80
Flexibility (°C) ^c	ASTM					
	D3111	0	0	0	-11	-28
Tensile adhesion (min, %)	ASTM					
	D5329	300	400	400	500	500
Specific gravity (max)	ASTM D70	1.25	1.25	1.25	1.25	1.25
Asphalt compatibility	ASTM					
	D5329	Pass	Pass	Pass	Pass	Pass
Sieve test (% passing)	See note d	100	100	100	100	100

Crack Treatment Acceptance Criteria

^aCold-applied crack treatment material residue collected under ASTM D6943, Method B and sampled under ASTM D140 must comply with the grade specified.

^bExcept for viscosity, cure each specimen at a temperature of 23 ± 2 °C and a relative humidity of 50 \pm 10 percent for 24 \pm 2 hours before testing.

^cFor the flexibility test, the specimen size must be 6.4 ± 0.2 mm thick by 25 ± 0.2 mm wide by 150 ± 0.5 mm long. The test mandrel diameter must be 6.4 ± 0.2 mm. The bend arc must be 180 degrees. The bend rate must be 2 ± 1 seconds. At least 4 of 5 test specimens must pass at the specified test temperature without fracture, crazing, or cracking.

^dFor hot-applied crack treatment, dilute with toluene and sieve through a no. 8 sieve. For coldapplied crack treatment, sieve the material as-received through a no. 8 sieve. If the manufacturer provides a statement that added components passed the no. 16 sieve before blending, this requirement is void.

37-6.02 MATERIALS

37-6.02A General

Reserved

37-6.02B Crack Treatment Material

A crack treatment material must comply with the requirements shown in the following table:

Quality observatoriatioa	Test methodb	Requirement				
Quality characteristic ^a	Test method ^b	Type 1	Type 2	Туре 3	Type 4	Type 5
Softening point (min, °C)	ASTM D36	102	96	90	84	84
Cone penetration at 77 °F (max)	ASTM					
	D5329	35	40	50	70	90
Resilience at 77 °F, unaged (%)	ASTM					
	D5329	20–60	25–65	30–70	35–75	40–80
Flexibility (°C) ^c	ASTM					
	D3111	0	0	0	-11	-28
Tensile adhesion (min, %)	ASTM					
	D5329	300	400	400	500	500
Specific gravity (max)	ASTM D70	1.25	1.25	1.25	1.25	1.25
Asphalt compatibility	ASTM					
	D5329	Pass	Pass	Pass	Pass	Pass
Sieve test (% passing)	See note d	100	100	100	100	100

Crack Treatment Material

^aCold-applied crack treatment material residue collected under ASTM D6943, Method B and sampled under ASTM D140 must comply with the grade specifications.

^bExcept for viscosity, cure each specimen at a temperature of 23 ± 2 °C and a relative humidity of 50 \pm 10 percent for 24 \pm 2 hours before testing.

^cFor the flexibility test, the specimen size must be 6.4 ± 0.2 mm thick by 25 ± 0.2 mm wide by 150 ± 0.5 mm long. The test mandrel diameter must be 6.4 ± 0.2 mm. The bend arc must be 180 degrees. The bend rate must be 2 ± 1 seconds. At least 4 of 5 test specimens must pass at the specified test temperature without fracture, crazing, or cracking.

^dFor hot-applied crack treatment, dilute with toluene and sieve through a no. 8 sieve. For cold-applied crack treatment, sieve the material as-received through a no. 8 sieve. If the manufacturer provides a statement that added components passed the no. 16 sieve before blending, this requirement is void.

A crack treatment material must be delivered to the job site with the information listed below. If crack treatment material is delivered to the job site in containers, each container must be marked with the following information.

- 1. Manufacturer's name
- 2. Production location
- 3. Brand or trade name
- 4. Designation
- 5. Crack treatment trade name
- 6. Batch or lot number
- 7. Maximum heating temperature
- 8. Expiration date for cold application only

Hot-applied crack treatment must be delivered to the job site premixed in cardboard containers with meltable inclusion liners or in a fully meltable package.

Cold-applied crack treatment must have a minimum shelf life of 3 months from the date of manufacture.

37-6.02C Sand

Sand applied to tacky crack treatment material must be clean, free of clay, and comply with the gradation shown in the following table:

Cultu	oradation	
Quality characteristic	Test method	Requirement
Gradation (% passing by weight)		
Sieve size:		
No. 4	California Test 202	100
No. 50		0–30
No. 200		0–5

Sand Gradation

37-6.03 CONSTRUCTION

Treat cracks from 1/4 to 1 inch in width for the entire length of the crack. Fill or repair cracks wider than 1 inch as ordered. Filling cracks wider than 1 inch is change order work.

If treating cracks on a traffic lane adjacent to a shoulder, treat the cracks on the shoulder.

For hot-applied crack treatment material, rout cracks or saw cut to form a reservoir.

Cracks must be clean and dry before treating. Before treating, blast cracks with oil-free compressed air at a pressure of at least 90 psi.

If the pavement temperature is below 40 degrees F or if there is evidence of moisture in the crack, use a hot air lance immediately before applying crack treatment. The hot air lance must not apply flame directly on the pavement.

Heat and apply hot-applied crack treatment material under with the manufacturer's instructions.

Apply cold-applied crack treatment material with a distributor kettle, a piston, or a diaphragm barrel pump that can deliver from 50 to 75 psi. The application line must have a pressure gauge and a filter. The pressure in the application line must not exceed 20 psi. The pressure gauge must have a regulator. Use a high-pressure hose with a 1/2-inch NPT swivel connection and a dispensing wand.

Apply crack treatment with a nozzle inserted into the crack. Fill the crack flush. If after 2 days the crack treatment is more than 1/4 inch below the specified level, the sealant fails, or the crack re-opens, re-treat the crack.

Immediately remove crack treatment material that is spilled or deposited on the pavement surface.

Before opening to traffic, apply sand or the manufacturer's recommended detackifying agent to tacky crack treatment material on the traveled way.

Sweep up excess sand before opening to traffic.

37-6.04 PAYMENT

The payment quantity for crack treatment is the length measured in lane miles along the edge of each paved lane parallel to the pavement's centerline. The payment for a lane includes crack treatment of the adjacent shoulder.

37-7-37-10 RESERVED

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39 ASPHALT CONCRETE

07-15-16

Replace SP-2 at each occurrence in section 39 with:

MS-2

Replace the 3rd paragraph of section 39-2.01A(1) with:

07-15-16

01-15-16

WMA technologies must be on the Authorized Material List for WMA authorized technologies.

Add between the 3rd and 4th paragraphs of section 39-2.01A(1):

04-15-16

For HMA that uses asphalt binder containing crumb rubber modifier, submit a Crumb Rubber Usage Report form monthly and at the end of the project.

Add to the table in the 4th paragraph of section 39-2	
Asphalt Institute MS-2 7th edition (2015	01-15-16 5)
Add to item 8 in the 4th paragraph of section 39-2.01/ , except lime supplier and source	4(3)(b)(i): 07-15-16
Replace the headings and paragraphs of section 39-2.01	
39-2.01A(3)(i) Reserved	01-15-16
Replace the 2nd sentence in the 3rd paragraph of section 39 Submit 3 parts and keep 1 part.	-2.01A(4)(b) with: 01-15-16
Add between single and test in the 7th paragraph of section	39-2.01A(4)(i)(i):
aggregate or HMA	07-15-16
Replace the 1st paragraph of section 39-2.01B(2)(b) with: 07-15-16
If the proposed JMF indicates that the aggregate is being treated with dry lim marination, or the HMA with liquid antistrip, then testing the untreated aggreg and AASHTO T 324 is not required.	
If HMA treatment is required or being used by the Contractor, determine the aggregate blend under California Test 204.	plasticity index of the
Add between aggregate and with dry lime in the 3rd and 4th paragraph	s of section 39-2.01B(2)(b):

07-15-16

blend

Replace the 9th through 11th paragraphs of section 39-2.01B(8)(a) with:

07-15-16

HMA must be produced at the temperatures shown in the following table:

HWA Production Temperatures			
HMA compaction	Temperature (°F)		
HMA			
Density based	≤ 325		
Method	305–325		
HMA with WMA technology			
Density based	240–325		
Method	260–325		

HMA Production Temperatures

04-15-16

Delete the 1st paragraph of section 39-2.01B(11).

Add after the 2nd paragraph of section 39-2.01B(11):

For miscellaneous areas and dikes:

- 1. Choose the aggregate gradation from:
 - 1.1. 3/8-inch Type A HMA aggregate gradation
 - 1.2. 1/2-inch Type A HMA aggregate gradation
 - 1.3. 1/2-inch dike mix aggregate gradation
- 2. Choose asphalt binder Grade PG 64-10, PG 64-16 or PG 70-10.
- 3. Minimum asphalt binder content must be:
 - 3.1. 6.40 percent for 3/8-inch Type A HMA aggregate gradation
 - 3.2. 5.70 percent for 1/2-inch Type A HMA aggregate gradation
 - 3.3. 6.40 percent for 1/2-inch dike mix aggregate gradation

If you request and the Engineer authorizes, you may reduce the minimum asphalt binder content.

Aggregate gradation for 1/2-inch dike mix must be within the TV limits for the specified sieve size shown in the following table:

(Percentage Passing)			
Sieve size	Target value limit	Allowable tolerance	
3/4"	100		
1/2"	90–95	TV ± 5	
No. 4	70–75	TV ± 5	
No. 8	23–25	TV ± 5	
No. 50	15–35	TV ± 5	
No. 200	7.0–13.0	TV ± 2.0	

Aggregate Gradation for 1/2-inch Dike Mix (Percentage Passing)

Replace item 4 in the 2nd paragraph of section 39-2.01C(1) with:

4. For method compaction:

- 4.1. The temperature of the HMA and the HMA produced with WMA water injection technology in the windrow does not fall below 260 degrees F
- 4.2. The temperature of the HMA produced using WMA additive technology in the windrow does not fall below 250 degrees F

Delete item 3 in the 8th paragraph of section 39-2.01C(1).

Replace 39-2.01A(3)(m)(iv) in the 6th paragraph of section 39-2.01C(3)(e) with:

36-3.01C(3)

Replace 2.06 in the 4th paragraph of section 39-2.01C(3)(f) with:

2.05

07-15-16

07-15-16

07-15-16

Add to the end of section 39-2.01C(15)(b):	
The compacted lift thickness must not exceed 0.25 foot.	07-15-16
Add between <i>rectangles</i> and <i>with</i> in the 4th paragraph of section 39-2.01C(16): , half the lane width,	04-15-16
Add between to and the in item 1 of the 4th paragraph of section 39-2.01C(16): and along	04-15-16
Delete <i>coat</i> in the 5th paragraph of section 39-2.01C(16).	07-15-16
Replace 37 in the 5th paragraph of section 39-2.01C(16) with: 37-4.02	07-15-16

Replace section 39-2.02A(3)(b) with:

01-15-16

The JMF must be based on the superpave HMA mix design as described in *MS-2 Asphalt Mix Design Methods* by the Asphalt Institute.

Add between the 1st and 2nd paragraphs of section 39-2.02C:

07-15-16

If the ambient air temperature is below 60 degrees F, cover the loads in trucks with tarpaulins. If the time for HMA discharge to truck at the HMA plant until transfer to paver's hopper is 90 minutes or greater and if the ambient air temperature is below 70 degrees F, cover the loads in trucks with tarpaulins, unless the time from discharging to the truck until transfer to the paver's hopper or the pavement surface is less than 30 minutes. The tarpaulins must completely cover the exposed load until you transfer the mixture to the paver's hopper or the pavement surface.

Replace the table in the 2nd paragraph of section 39-2.02C with:

07-15-16

Lift thickness	Ambient air (°F)		Surface (°F)				
(feet)	Unmodified	Modified asphalt	Unmodified	Modified asphalt			
	asphalt binder	binder	asphalt binder	binder			
Type A HMA and Type A HMA produced with WMA water injection technology							
<0.15	55	50	60	55			
≥0.15	45	45	50	50			
Type A HMA produced with WMA additive technology							
<0.15	45	45	50	45			
≥0.15	40	40	40	40			

Minimum Ambient Air and Surface Temperatures

07-15-16

Delete the 3rd paragraph of section 39-2.02C.

Add between HMA and placed in the 1st sentence of the 4th paragraph of section 39-2.02C:

and Type A HMA produced with WMA water injection technology

Add between the 4th and the 5th paragraphs of section 39-2.02C:

07-15-16

For Type A HMA produced with WMA additive technology placed under method compaction, if the asphalt binder is:

- 1. Unmodified, complete:
 - 1.1 1st coverage of breakdown compaction before the surface temperature drops below 240 degrees F
 - 1.2. Breakdown and intermediate compaction before the surface temperature drops below 190 degrees F
 - 1.3. Finish compaction before the surface temperature drops below 140 degrees F
 - 1.4 You may continue static rolling below 140 degrees F to remove roller marks.
- 2. Modified, complete:
 - 2.1. 1st coverage of breakdown compaction before the surface temperature drops below 230 degrees F
 - 2.2. Breakdown and intermediate compaction before the surface temperature drops below 170 degrees F
 - 2.3. Finish compaction before the surface temperature drops below 130 degrees F
 - 2.4. You may continue static rolling below 130 degrees F to remove roller marks.

Replace the 2nd paragraph of section 39-2.03A(3)(b) with:

01-15-16

The JMF must be based on the superpave HMA mix design as described in *MS-2 Asphalt Mix Design Methods* by the Asphalt Institute.

Replace the requirement in the row for *Voids in mineral aggregate on plant produced HMA* in the 2nd table in section 39-2.03A(4)(e)(i) with:

18.0-23.0

Add before the 1st paragraph of section 39-2.03A(4)(e)(ii)(C):

04-15-16

01-15-16

CRM used must be on the Authorized Materials List for Crumb Rubber Modifier.

CRM must be a ground or granulated combination of scrap tire crumb rubber and high natural scrap tire crumb rubber, CRM must be 75.0 ± 2.0 percent scrap tire crumb rubber and 25.0 ± 2.0 percent high natural scrap tire crumb rubber by total weight of CRM. Scrap tire crumb rubber and high natural scrap tire crumb rubber must be derived from waste tires described in Pub Res Code § 42703.

Replace the row for *Hamburg wheel track* in the table in section 39-2.03B(2) with:

		01-13-10
Hamburg wheel track (min, number of passes at the inflection	AASHTO T 324	
point)	(Modified) ^d	
Binder grade:		
PG 58		10,000
PG 64		12,500
PG 70		15,000
		-,

Replace *RHMA-G* in the 3rd and 5th paragraphs of section 39-2.03C with:

RHMA-G and RHMA-G produced with WMA water injection technology

Add between the 5th and 6th paragraphs of section 39-2.03C:

For RHMA-G produced with WMA additive technology placed under method compaction:

- 1. Complete the 1st coverage of breakdown compaction before the surface temperature drops below 260 degrees F
- Complete breakdown and intermediate compaction before the surface temperature drops below 230 degrees F
- 3. Complete finish compaction before the surface temperature drops below 180 degrees F
- 4. You may continue static rolling below 140 degrees F to remove roller marks

Replace the 6th and 7th paragraphs of section 39-2.04C with:

For HMA-O and HMA-O produced with WMA water injection technology:

- 1. With unmodified asphalt binder:
 - 1.1. Spread and compact only if the atmospheric temperature is at least 55 degrees F and the surface temperature is at least 60 degrees F.
 - 1.2. Complete the 1st coverage using 2 rollers before the surface temperature drops below 240 degrees F.
 - 1.3. Complete all compaction before the surface temperature drops below 200 degrees F.
- 2. With modified asphalt binder, except asphalt rubber binder:
 - 2.1. Spread and compact only if the atmospheric temperature is at least 50 degrees F and the surface temperature is at least 50 degrees F.
 - 2.2. Complete the 1st coverage using 2 rollers before the surface temperature drops below 240 degrees F.
 - 2.3. Complete all compaction before the surface temperature drops below 180 degrees F.

For HMA-O produced with WMA additive technology:

- 1. With unmodified asphalt binder:
 - 1.1. Spread and compact only if the atmospheric temperature is at least 45 degrees F and the surface temperature is at least 50 degrees F.
 - 1.2. Complete the 1st coverage using 2 rollers before the surface temperature drops below 230 degrees F.
 - 1.3. Complete all compaction before the surface temperature drops below 190 degrees F.
- 2. With modified asphalt binder, except asphalt rubber binder:
 - 2.1. Spread and compact only if the atmospheric temperature is at least 40 degrees F and the surface temperature is at least 40 degrees F.
 - 2.2. Complete the 1st coverage using 2 rollers before the surface temperature drops below 230 degrees F.

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<u>01-15-16</u>

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Replace RHMA-O and RHMA-O-HB in the 8th paragraph of section 39-2.04C with: 07-15-16 RHMA-O and RHMA-O produced with WMA water injection technology, and RHMA-O-HB and RHMA-O-HB produced with WMA water injection technology Add between the 8th and 9th paragraphs of section 39-2.04C: 07-15-16 For RHMA-O produced with WMA additive technology and RHMA-O-HB produced with WMA additives technology: 1. Spread and compact if the ambient air temperature is at least 45 degrees F and the surface temperature is at least 50 degrees F Complete the 1st coverage using 2 rollers before the surface temperature drops below 270 degrees F Complete all compaction before the surface temperature drops below 240 degrees F Add to the 2nd paragraph of section 39-2.05A(3)(b): 01-15-16 The material transfer vehicle must receive HMA directly from the truck. Replace Table 6.1 at each occurrence in the table in section 39-2.05B(2) with: 01-15-16 Table 8.1 Replace SP-2 Asphalt Mixture in the 1st footnote in the table in the 2nd paragraph of section 39-2.05B(2)(b) with: 01-15-16 MS-2 Asphalt Mix Design Methods Replace Manual Series No. 2 (MS-2) in the 1st footnote in the table in the 2nd paragraph of section 39-2.05B(2)(b) with: 01-15-16 MS-2 Asphalt Mix Design Methods Replace 39-3.05 in the 1st paragraph of section 39-3.04A with: 01-15-16 39-3.04 Add to the end of section 39-3.04A: 07-15-16 Schedule cold planing activities such that the pavement is cold planed, the HMA is placed, and the area is opened to traffic during the same work shift.

2.3. Complete all compaction before the surface temperature drops below 170 degrees F.

Delete the 2nd sentence of the 1st paragraph in section 39-3.04C(4).

39-3.05

^^^^

DIVISION VI STRUCTURES 47 EARTH RETAINING SYSTEMS

07-15-16

Replace the 6th paragraph in section 47-2.02A with:

Rock for rock slope protection at drain pipe outlets must be small-rock slope protection and must comply with the gradation specified for 7-inch-thick layer in section 72-4.02.

^^^^

49 PILING

07-15-16

Delete the 2nd paragraph of section 49-1.01A.

Replace the 1st sentence in the 5th paragraph of section 49-1.01D(3) with:

Load test and anchor piles must comply with the specifications for piling as described and Class N steel pipe piling.

Add to the list in 7th paragraph of section 49-1.01D(3):

5. Welds that connect the anchor pile and the anchor pile head must be tested under section 49-2.02A(4)(b)(iii)(C)

Replace the 10th paragraph of section 49-1.01D(3) with:

Furnish labor, materials, tools, equipment, and incidentals as required to assist the Department in the transportation, installation, operation, and removal of Department-furnished steel load test beams, jacks, bearing plates, drills, and other test equipment. This is change order work.

Replace the 7th paragraph of section 49-1.01D(4) with:

Piles to be dynamically monitored must:

- 1. Have an additional length of 2 times the pile diameter plus 2 feet.
- 2. Be available to the Department at least 2 business days before driving.
- 3. Be safely supported at least 6 inches off the ground in a horizontal position on at least 2 support blocks. If requested, rotate the piles on the blocks.
- Be positioned such that the Department has safe access to the entire pile length and circumference for the installation of anchorages and control marks for monitoring.

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04-15-16

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Delete <i>business</i> in item 6 in the list in the 8th paragraph of section 49-1.01D(4).	07-15-16			
Add to the list in 9th paragraph of section 49-1.01D(4):				
 Cut pile to the specified cut-off elevation after bearing acceptance criteria is provided by the Department 	07-15-16			
Delete the 3rd paragraph of section 49-1.03.	04-15-16			
Delete the 2nd paragraph of section 49-1.04.	04-15-16			
Delete the 4th paragraph of section 49-2.01C(5).	01-15-16			
Replace item 3 in the list in the 2nd paragraph of section 49-3.01A with:				
3. CISS concrete piles	07-15-16			
Add between undisturbed material and in a dry in the 1st paragraph of section 49-3.01	C:			
, casing, or steel shell	07-15-16			
Replace the 2nd and 3rd paragraphs of section 49-3.01C with:				
Place and secure reinforcement. Securely block the reinforcement to provide the minimum clearal shown between the reinforcing steel cage and the sides of the drilled hole, casing, or steel shell.				
Steel shells, casings, and drilled holes must be clean and free of debris before reinforcement and concrete are placed.				
Replace <i>dewatered</i> in the 4th paragraphs of section 49-3.01C with:				
drilled	07-15-16			
Add to section 49-3.02A(1):				
Permanent steel casing and driven steel shell must comply with section 49-2.02.	07-15-16			
Replace the paragraph of section 49-3.02A(2) with:				
dry hole: A drilled hole that requires no work to keep it free of water.				
dewatered hole: A drilled hole that:				
1 Accumulates no more than 10 inches of water at the bettern during a 1 hour paried without any				

1. Accumulates no more than 12 inches of water at the bottom during a 1 hour period without any pumping from the hole.

- 2. Has no more than 3 inches of water at the bottom immediately before placing concrete.3. Does not require temporary casing to control the groundwater.

 Replace item 8 in the list in the 1st paragraph of section 49-3.02A(3)(b) with: 07-15-10 07-1
Replace <i>1 business day</i> in the paragraph of section 49-3.02A(3)(d) with:
2 business days
Add to section 49-3.02A(3)(d): The log must:
 Show the pile location, tip elevation, cutoff elevation, dates of excavation and concrete placement, total quantity of concrete placed, length and tip elevation of any casing, and details of any hole stabilization method and materials used. Include an 8-1/2 by 11 inch graph of concrete placed versus depth of hole filled as follows: 2.1. Plot the graph continuously throughout concrete placement. Plot the depth of drilled hole filled vertically with the pile tip at the bottom and the quantity of concrete placed horizontally. 2.2. Take readings at each 5 feet of pile depth, and indicate the time of the reading on the graph.
Add after the sentence in the paragraph of section 49-3.02A(3)(e): Allow 10 days for the review.
Replace the 3rd sentence in the paragraph of section 49-3.02A(3)(f) with: Allow 10 days for the review and analysis of this report.
Add after <i>rejected pile</i> in the 1st sentence in the 1st paragraph of section 49-3.02A(3)(g): to be mitigated
Delete the 2nd paragraph of section 49-3.02A(3)(g).
 Replace item 3 in the list in the 3rd paragraph of section 49-3.02A(3)(g) with: ⁰⁷⁻¹⁵⁻¹⁰ Step by step description of the mitigation work to be performed, including drawings if necessary. If the ADSC Standard Mitigation Plan is an acceptable mitigation method, include the most recent version. For the most recent version of the ADSC Standard Mitigation Plan, go to: http://www.dot.ca.gov/hq/esc/geotech/ft/adscmitplan.htm

Replace the 2nd sentence in the paragraph of section 49-3.02A(3)(i) with:

Allow 10 days for the review.

Add to section 49-3.02A(3):

49-3.02A(3)(j) Certifications

If synthetic slurry is used, submit as an informational submittal the names and certifications of your employees who are trained and certified by the synthetic slurry manufacturer.

Add after excavated hole in the 1st sentence in the 3rd paragraph of section 49-3.02A(4)(c):

lined with plastic

Replace the 1st paragraph of section 49-3.02A(4)(d)(i) with:

07-15-16

07-15-16

07-15-16

Section 49-3.02A(4)(d) applies to CIDH concrete piles except for piles (1) less than 24 inches in diameter or (2) constructed in dry or dewatered holes.

Replace gamma-gamma logging in the 2nd paragraph of section 49-3.02A(4)(d)(i) with:

GGL

Replace the 1st sentence in the 3rd paragraph of section 49-3.02A(4)(d)(i) with:

07-15-16

After notification by the Engineer of pile acceptance, fill the inspection pipes and cored holes with grout.

Replace gamma-gamma logging in section 49-3.02A(4)(d)(ii) with:

GGL

Replace the 3rd and 4th paragraphs of section 49-3.02A(4)(d)(iii) with:

07-15-16

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The Department may perform CSL to determine the extent of the anomalies identified by GGL and to further evaluate a rejected pile for the presence of anomalies not identified by GGL. The pile acceptance test report will indicate if the Department intends to perform CSL and when the testing will be performed. Allow the Department 20 additional days for a total of 50 days to perform CSL and to provide supplemental results.

If authorized, you may perform testing on the rejected pile.

Delete the 8th paragraph of section 49-3.02A(4)(d)(iii).

Add to the end of section 49-3.02A(4)(d)(iii):

If the Engineer determines it is not feasible to repair the rejected pile, submit a mitigation plan for replacement or supplementation of the rejected pile.

07-15-16

Add to section 49-3.02A(4):				
49-3.02A(4)(e) Certifications	07-15-16			
If synthetic slurry is used, your employees who will be providing technical assistance in the slurry activities must be trained and certified by the synthetic slurry manufacturer to show their competen perform inspection of slurry operations.	icy to			
Replace section 49-3.02B(4) with:				
49-3.02B(4) Reserved	07-15-16			
Replace <i>near</i> in the 3rd, 4th, and 5th paragraphs of section 49-3.02B(6)(b) with:	07-15-16			
within 2 feet of	07-15-16			
Replace <i>twice per shift</i> in item 2 in the 3rd paragraph of section 49-3.02B(6)(b) with:				
every 4 hours	07-15-16			
Delete the 7th and 9th percercaphe of eastion $40.2.02P(C)(h)$	07-15-16			
Delete the 7th and 8th paragraphs of section 49-3.02B(6)(b).				
	07-15-16			
Delete the 3rd paragraph of section 49-3.02B(6)(c).				
Replace <i>near</i> in item 2 in the 4th paragraph of section 49-3.02B(6)(c) with:				
within 2 feet of	07-15-16			
Replace item 5 in the 4th paragraph of section 49-3.02B(6)(c) with:				
5. After final cleaning and immediately before placing concrete.	07-15-16			
Replace section 49-3.02B(9) with:				
	07-15-16			
49-3.02B(9) Inspection Pipes Inspection pipes must be schedule 40 PVC pipe complying with ASTM D1785 with a nominal pipe	size of			
2 inches.				
Watertight PVC couplers complying with ASTM D2466 are allowed to facilitate pipe lengths in exce those commercially available.	ess of			
Add to the beginning of section 49-3.02C(1):				
07-15-16 Unless otherwise authorized, drilling the hole and placing reinforcement and concrete in the hole must be performed in a continuous operation.				

Replace the 5th paragraph of section 49-3.02C(2) with:

If slurry is used during excavation, maintain the slurry level at a height required to maintain a stable hole, but not less than 10 feet above the piezometric head.

Replace the 1st sentence in the 9th paragraph of section 49-3.02C(2) with:

07-15-16

07-15-16

Remove water that has infiltrated the dewatered hole before placing concrete, as required for dewatered hole.

Replace the 1st sentence in the 10th paragraph of section 49-3.02C(2) with:

07-15-16

If authorized, to control caving or water seepage, you may enlarge portions of the hole, backfill the hole with slurry cement backfill, concrete, or other material, and redrill the hole to the diameter shown.

Replace the 4th paragraph of section 49-3.02C(3) with:

07-15-16

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Remove the temporary casing during concrete placement. Maintain the concrete in the casing at a level required to maintain a stable hole, but not less than 5 feet above the bottom of the casing, to prevent displacement of the concrete by material from outside the casing.

Replace the 5th paragraph of section 49-3.02C(4) with:

For a single CIDH concrete pile supporting a column:

- 1. If the pile and the column share the same reinforcing cage diameter, this cage must be accurately placed as shown
- 2. If the pile reinforcing cage is larger in diameter than the column cage:
 - 2.1. Maintain a clear horizontal distance of at least 3.5 inches between the two cages, if the concrete is placed under dry conditions
 - 2.2. Maintain a clear horizontal distance of at least 5 inches between the two cages if the concrete is placed under slurry
 - 2.3. The offset between the centerlines of the two cages must not exceed 6 inches

Replace the paragraphs in section 49-3.02C(5) with:

- For acceptance testing, install and test vertical inspection pipes as follows:
- 1. Log the location of the inspection pipe couplers with respect to the plane of pile cutoff.
- 2. Cap each inspection pipe at the bottom. Extend the pipe from 3 feet above the pile cutoff to the bottom of the reinforcing cage. Provide a temporary top cap or similar means to keep the pipes clean before testing. If pile cutoff is below the ground surface or working platform, extend inspection pipes to 3 feet above the ground surface or working platform.
- 3. If any changes are made to the pile tip, extend the inspection pipes to the bottom of the reinforcing cage.
- 4. Install inspection pipes in a straight alignment and parallel to the main reinforcement. Securely fasten inspection pipes in place and provide protective measures to prevent misalignment or damage to the inspection pipes during installation of the reinforcement and placement of concrete in the hole. Construct CIDH concrete piles such that the relative distance of inspection pipes to vertical steel reinforcement remains constant.
- 5. After concrete placement is complete, fill inspection pipes with water to prevent debonding of the pipe.
- 6. Provide safe access to the tops of the inspection pipes.

- 7. After placing concrete and before requesting acceptance testing, test each inspection pipe in the Engineer's presence by passing a rigid cylinder through the length of pipe. The rigid cylinder must be 1-1/4-inch diameter by 4.5-foot long, weigh 12 pounds or less, and be able to freely pass down through the entire length of the pipe under its own weight and without the application of force.
- 8. When performing acceptance testing, inspection pipes must provide a 2-inch-diameter clear opening and be completely clean, unobstructed, and either dry or filled with water as authorized.
- 9. After acceptance testing is complete, completely fill the inspection pipes with water.

If the rigid cylinder fails to pass through the inspection pipe:

- 1. Completely fill the inspection pipes in the pile with water immediately.
- 2. Core a nominal 2-inch-diameter hole through the concrete for the entire length of the pile for each inspection pipe that does not pass the rigid cylinder. Coring must not damage the pile reinforcement.
- 3. Locate cored holes as close as possible to the inspection pipes they are replacing and no more than 5 inches clear from the reinforcement.

Core holes using a double wall core barrel system with a split tube type inner barrel. Coring with a solid type inner barrel is not allowed.

Coring methods and equipment must provide intact cores for the entire length of the pile.

Photograph and store concrete cores as specified for rock cores in section 49-1.01D(5).

The coring operation must be logged by an engineering geologist or civil engineer licensed in the State and experienced in core logging. Coring logs must comply with the Department's *Soil and Rock Logging, Classification, and Presentation Manual* for rock cores. Coring logs must include core recovery, rock quality designation of the concrete, locations of breaks, and complete descriptions of inclusions and voids encountered during coring.

The Department evaluates the portion of the pile represented by the cored hole based on the submitted coring logs and concrete cores. If the Department determines a pile is anomalous based on the coring logs and concrete cores, the pile is rejected.

Replace item 2 in the list in the 2nd paragraph of section 49-3.02C(7) with:

2. Extend at least 5 feet below the construction joint. If placing casing into rock or a dry hole, the casing must extend at least 2 feet below the construction joint.

Add to the beginning of section 49-3.02C(9):

49-3.02C(9)(a) General Replace the 2nd sentence of the 3rd paragraph of section 49-3.02C(9) with: 04-15-16 Od-15-16 Add after concrete pump in the 8th paragraph of section 49-3.02C(9): and slurry pump Replace item 3 in the list in the 11th paragraph of section 49-3.02C(9) with:

07-15-16

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3. Maintain the slurry level at a height required to maintain a stable hole, but not less than 10 feet above the piezometric head.

Replace the 13th paragraph of section 49-3.02C(9) with:

Maintain a log of concrete placement for each drilled hole.

Replace 14th and 15th paragraphs of section 49-3.02C(9) with:

If a temporary casing is used, maintain concrete placed under slurry at a level required to maintain a stable hole, but not less than 5 feet above the bottom of the casing. The withdrawal of the casing must not cause contamination of the concrete with slurry.

The equivalent hydrostatic pressure inside the casing must be greater than the hydrostatic pressure on the outside of the casing to prevent intrusion of water, slurry, or soil into the column of freshly placed concrete.

Remove scum, laitance, and slurry-contaminated concrete from the top of the pile.

Add to section 49-3.02C(9):

49-3.02C(9)(b) Mineral Slurry

Remove any caked slurry on the sides or bottom of hole before placing reinforcement.

If concrete is not placed immediately after placing reinforcement, the reinforcement must be removed and cleaned of slurry, the sides of the drilled hole must be cleaned of caked slurry, and the reinforcement again placed in the hole for concrete placement.

49-3.02C(9)(c) Synthetic Slurry

A manufacturer's representative must:

- 1. Provide technical assistance for the use of their material
- 2. Be at the job site before introduction of the synthetic slurry into the drilled hole
- 3. Remain at the job site until released by the Engineer

After the manufacturer's representative has been released by the Engineer, your employee certified by the manufacturer must be present during the construction of the pile under slurry.

Replace the heading of section 49-3.03 with:

CAST-IN-STEEL SHELL CONCRETE PILING

Replace the 1st paragraph of section 49-3.03A(1) with:

07-15-16

Section 49-3.03 includes specifications for constructing CISS concrete piles consisting of driven openended or closed-ended steel shells filled with reinforcement and concrete.

Add to the end of section 49-3.03A(1):

CISS concrete piles include Class 90 Alternative V and Class 140 Alternative V piles.

Add to section 49-3.03A(3):

Submit a Pile and Driving Data Form under section 49-2.01A(3)(a) if specified in the special provisions.

07-15-16

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01-15-16

Replace the paragraph of section 49-3.03D with:

Furnish piling is measured along the longest side of the pile from the specified tip elevation shown to the plane of pile cutoff.

Replace section 49-4.03 with:

49-4.03 CONSTRUCTION

49-4.03A General

Reserved

49-4.03B Drilled Holes

Drill holes for steel soldier piles into natural foundation material. Drilled holes must be accurately located, straight, and true.

Furnish and place temporary casings or tremie seals where necessary to control water or to prevent caving of the hole.

Before placing the steel soldier pile, remove loose materials existing at the bottom of the hole after drilling operations have been completed.

Do not allow surface water to enter the hole. Remove all water in the hole before placing concrete.

If temporary casings are used, they must comply with section 49-3.02C(3).

49-4.03C Steel Soldier Piles

Plumb and align the pile before placing concrete backfill and lean concrete backfill. The pile must be at least 2 inches clear of the sides of the hole for the full length of the hole to be filled with concrete backfill and lean concrete backfill. Ream or enlarge holes that do not provide the clearance around steel piles.

Maintain alignment of the pile in the hole while placing backfill material.

Clean and prepare piles in anticipated heat affected areas before splicing steel piles or welding concrete anchors.

^^^^

50 PRESTRESSING CONCRETE

07-15-16

Add to the end of section 50-1.01C:

50-1.01C(8) Post-tensioning Jack Calibration Chart

Submit the post-tensioning jack calibration plot.

50-1.01C(9) Pretensioning Jack Calibration Chart

For any pretensioning jack calibrated by an authorized laboratory, submit a certified calibration plot.

Replace section 50-1.01D(2)(b) with:

50-1.01D(2)(b) Equipment and Calibration

50-1.01D(2)(b)(i) General

Each jack body must be permanently marked with the ram area.

Each pressure gauge must be fully functional and have an accurately reading, clearly visible dial or display. The dial must be at least 6 inches in diameter and graduated in 100 psi increments or less.

07-15-16

07-15-16

07-15-16

Each load cell must be calibrated and have an indicator that can be used to determine the force in the prestressing steel.

The range of each load cell must be such that the lower 10 percent of the manufacturer's rated capacity is not used in determining the jacking force.

Each jack must be calibrated equipped with its gauges.

Mechanically calibrate the gauges with a dead weight tester or other authorized means before calibration of the jacking equipment.

50-1.01D(2)(b)(ii) Post-tensioning

Equip each hydraulic jack used to tension prestressing steel with 2 pressure gauges or 1 pressure gauge and a load cell. Only 1 pressure gauge must be connected to the jack during stressing.

Each jack used to tension prestressing steel permanently anchored at 25 percent or more of its specified minimum ultimate tensile strength must be calibrated by METS within 1 year of use and after each repair. You must:

- 1. Schedule the calibration of the jacking equipment with METS.
- 2. Verify that the jack and supporting systems are complete, with proper components, and are in good operating condition.
- 3. Provide labor, equipment, and material to (1) install and support the jacking and calibration equipment and (2) remove the equipment after the calibration is complete.
- 4. Plot the calibration results.

Each jack used to tension prestressing steel permanently anchored at less than 25 percent of its specified minimum ultimate tensile strength must be calibrated by an authorized laboratory within 180 days of use and after each repair.

50-1.01D(2)(b)(iii) Pretensioning

Each jack used to pretension prestressing steel must be calibrated, equipped with its gauges, by a laboratory on the Authorized Laboratory List within 1 year of use and after each repair.

Calibrate pretensioning jacks:

- 1. Under ASTM E4 using an authorized laboratory. Certification that the calibration is performed to ASTM accuracy is not required.
- 2. In the presence of the Engineer. Notify the Engineer at least 2 business days before calibrating the jack.
- 3. Using 3 test cycles. Average the forces from each test cycle at each increment.
- 4. To cover the load range used in the work.

Gauges for pretensioning jacks may:

- 1. Be electronic pressure indicators that display either:
 - 1.1. Pressure in 100 psi increments or less
 - 1.2. Load to 1 percent of the maximum sensor/indicator capacity or 2 percent of the maximum load applied, whichever is smaller
- 2. Have a dial less than 6 inches in diameter

Gauges displaying pressure must have been calibrated within 1 year of the jack calibration.

Each hydraulic jack used for pretensioning must be equipped with either 2 gauges or 1 gauge and a load cell or you must have a calibrated standby jack with its gauge present on site during stressing.

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51 CONCRETE STRUCTURES

07-15-16

Add to the list in the 2nd paragraph of section 51-1.01A:

		04-15-16
8.	Pile extensions	01.10.10
9.	Drainage inlets	07-15-16
7.	Add to the list in the 6th paragraph of section 51-1.01A: Drainage inlets	07-15-16
	Add to section 51-1.02I:	07-15-16
	tal frames, covers, grates, and other miscellaneous iron and steel used with drainage inlets mus nply with section 75-2.	st
	Add to section 51-1.03B:	
Υοι	u may use PC drainage inlets as an alternative to CIP drainage inlets.	07-15-16
	Add between the 10th and 11th paragraphs of section 51-1.03C(2)(a):	07-15-16
	drainage inlets, extend the outside forms at least 12 inches below the top of the inlet. You may increte against excavated earth below this depth except:	

- 1. You must use full-depth outside forms or other protection when work activities or unstable earth may cause hazardous conditions or contamination of the concrete.
- 2. You must increase the wall thickness 2 inches if placing concrete against the excavated surface. The interior dimensions must be as shown.

Add to section 51-1.03C(2)(b):

For drainage inlets, remove exterior forms to at least 12 inches below the final ground surface. Exterior forms below this depth may remain if their total thickness is not more than 1 inch.

Add to the list in the 2nd paragraph of section 51-1.03F(2):

4. Interior and top surfaces of drainage inlets

Add to section 51-1.04:

The payment quantity for structural concrete, drainage inlet is the volume determined from the dimensions shown for CIP drainage inlets.

Add to section 51-4.01C(1):

07-15-16

07-15-16

07-15-16

07-15-16

For PC drainage inlets, submit field repair procedures and a patching material test sample before repairs are made. Allow 10 days for the Engineer's review.

Add to section 51-4.01C(2)(a):

For drainage inlets with oval or circular cross sections, submit shop drawings with calculations. Shop drawings and calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State. Allow 15 days for the Engineer's review.

Add to section 51-4.01D(3):

The Engineer may reject PC drainage inlets exhibiting any of the following:

- 1. Cracks more than 1/32 inch wide
- 2. Nonrepairable honeycombed or spalled areas of more than 6 square inches
- 3. Noncompliance with reinforcement tolerances or cross sectional area shown
- 4. Wall, inlet floor, or lid less than minimum thickness
- 5. Internal dimensions less than dimensions shown by 1 percent or 1/2 inch, whichever is greater
- 6. Defects affecting performance or structural integrity

Add to section 51-4.02C:

Materials for PC drainage inlets must comply with the following:

- 1. Preformed flexible joint sealant must be butyl-rubber complying with ASTM C990
- 2. Resilient connectors must comply with ASTM C923
- 3. Sand bedding must comply with section 19-3.02F(2)
- 4. Bonding agents must comply with ASTM C1059/C1059, Type II

Add to section 51-4.02D:

51-4.02D(8) Drainage Inlets

PC units for drainage inlets must be rectangular, round, or oval in cross section, or any combination. Transitions from a rectangular grate opening to a round or oval basin must be made in not less than 8 inches. Provide means for field adjustment to meet final grade, paving, or surfacing.

If oval or circular shape cross-sections are furnished, they must comply with AASHTO LRFD Bridge Design Specifications, Sixth Edition with California Amendments.

Wall and slab thicknesses may be less than the dimensions shown by at most 5 percent or 3/16 inch, whichever is greater.

Reinforcement placement must not vary more than 1/2 inch from the positions shown.

Add to section 51-4.03:

51-4.03H Drainage Inlets

Repair PC drainage inlet sections to correct damage from handling or manufacturing imperfections before installation.

Center pipes in openings to provide a uniform gap. Seal gaps between the pipe and the inlet opening with nonshrink grout under the grout manufacturer's instructions. For systems designated as watertight, seal these gaps with resilient connectors.

Match fit keyed joints to ensure uniform alignment of walls and lids. Keys are not required at the inlet floor level if the floor is precast integrally with the inlet wall. Seal keyed joint locations with preformed butyl rubber joint sealant. You may seal the upper lid and wall joint with nonshrink grout.

07-15-16

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Clean keyed joint surfaces before installing sealant. Joint surfaces must be free of imperfections that may affect the joint. Use a primer if surface moisture is present. Use a sealant size recommended by the sealant manufacturer. Set joints using sealant to create a uniform bearing surface.

Flat drainage inlet floors must have a field-cast topping layer at least 2 inches thick with a slope of 4:1 (horizontal:vertical) toward the outlet. Use a bonding agent when placing the topping layer. Apply the bonding agent under the manufacturer's instructions.

Replace the 2nd paragraph of section 51-7.01A with: 07-15-16 Minor structures include structures described as minor structures. 07-15-16 Delete the 4th paragraph of section 51-7.01B. 07-15-16 Delete the 1st and 3rd paragraphs of section 51-7.01C. 07-15-16 Delete the heading and paragraph of section 51-7.02. 07-15-16

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52 REINFORCEMENT

01-15-16

Replace the 3rd paragraph of section 52-6.03B with:

01-15-16

For uncoated and galvanized reinforcing bars complying with ASTM A615/A615M, Grade 60, ASTM A706/A706M, or ASTM A767/A767M, Class 1, the length of lap splices must be at least:

- 1. 45 diameters of the smaller bar spliced for reinforcing bars no. 8 or smaller
- 2. 60 diameters of the smaller bar spliced for reinforcing bars nos. 9, 10, and 11

For epoxy-coated reinforcing bars and alternatives to epoxy-coated reinforcing bars complying with ASTM A775/A775M, ASTM A934/A934M, ASTM A1035/A1035M, or ASTM A1055/A1055M, the length of lap splices must be at least:

- 1. 65 diameters of the smaller bar spliced for reinforcing bars no. 8 or smaller
- 2. 85 diameters of the smaller bar spliced for reinforcing bars nos. 9, 10, and 11

53 SHOTCRETE

01-15-16

Replace 632 in item 1 in the list in the 3rd paragraph of section 53-1.02 with:

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Replace item 2 in the list in the 3rd paragraph of section 53-1.02 with:

2. You may substitute a maximum of 30 percent coarse aggregate for the fine aggregate. Coarse aggregate must comply with section 90-1, except section 90-1.02C(4)(d) does not apply. The gradation for the coarse aggregate must comply with the gradation specified in section 90-1.02C(4)(b) for the 1/2 inch x No. 4 or the 3/8 inch x No. 8 primary aggregate nominal size.

Replace shotcrete in the 2nd sentence of the 4th paragraph of section 53-1.02 with:

01-15-16

01-15-16

concrete

^^^^

56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES

07-15-16

Replace section 56-1.01 with:

07-15-16

56-1.01 GENERAL

56-1.01A Summary

Section 56-1 includes general specifications for constructing overhead sign structures, standards, and poles.

56-1.01B Definitions

Reserved

56-1.01C Submittals Reserved

56-1.01D Quality Assurance 56-1.01D(1) General Reserved

56-1.01D(2) Quality Control 56-1.01D(2)(a) General Reserved

56-1.01D(2)(b) Nondestructive Testing

56-1.01D(2)(b)(i) General

Perform NDT of steel members under AWS D1.1 and the requirements shown in the following table:

Weld location	Weld type	Minimum required NDT
Circumferential splices around the perimeter of tubular sections, poles, and arms	CJP groove weld with backing ring	100% UT or RT
Longitudinal seam	CJP or PJP groove weld	Random 25% MT
Longitudinal seam within 6 inches of a circumferential splice	CJP groove weld	100% UT or RT
Welds attaching base plates, flange plates, pole plates, or mast arm plates to poles or arm tubes	CJP groove weld with backing ring and reinforcing fillet External (top) fillet weld for socket-type	t≥ 5/16 inch: 100% UT and 100% MT t< 5/16 inch: 100% MT after root weld pass and final weld pass 100% MT
Hand holes and other appurtenances	connections Fillet and PJP welds	MT full length on random 25% of all standards and poles

Nondestructive Testing for Steel Standards and Poles

NOTE: t = pole or arm thickness

Weld location	Weld type	Minimum required NDT
	CJP groove weld	
Base plate to post	with backing ring	100% UT and 100% MT
Dase plate to post	and reinforcing fillet	
Page plate to guaget plate	CJP groove weld	100% UT
Base plate to gusset plate		
Circumferential splices of pipe	CJP groove weld	100% UT or RT
or tubular sections	with backing ring	
Split post filler plate welds	CJP groove weld	100% UT or RT
	with backing bar	
Longitudinal seam weld for	CJP groove weld	t < 1/4 inch: 100% MT
pipe posts		t ≥ 1/4 inch: 100% UT or RT
	PJP groove weld	Random 25% RT
Chord angle splice weld	CJP groove weld	100% UT or RT
	with backing bar	
Truss vertical, diagonal, and	Fillet weld	Random 25% MT
wind angles to chord angles		
Upper junction plate to chord	Fillet weld	Random 25% MT
(cantilever type truss)		
Bolted field splice plates	CJP groove weld	100% UT and 100% MT
(tubular frame type)		
Cross beam connection plates		
(lightweight extinguishable	Fillet weld	Random 25% MT
message sign)		
Arm connection angles		
(lightweight extinguishable	Fillet weld	100% MT
message sign)		
Mast arm to arm plate	CJP groove weld	t ≥ 5/16 inch: 100% UT and 100% MT
(lightweight extinguishable	with backing ring	t < 5/16 inch: 100% MT after root
message sign)		weld pass and final weld pass
Post angle to post (lightweight	Fillet weld	100% MT
extinguishable message sign)		
Hand holes and other	Fillet and PJP	MT full length on random 25% of all
appurtenances	welds	sign structures
NOTE: t = pole or arm thicknes		

Nondestructive Testing for Overhead Sign Structures

NOTE: t = pole or arm thickness

56-1.01D(2)(b)(ii) Ultrasonic Testing

For UT of welded joints with any members less than 5/16 inch thick or tubular sections less than 13 inches in diameter, the acceptance and repair criteria must comply with Clause 6.13.3.1 of AWS D1.1.

For UT of other welded joints, the acceptance and repair criteria must comply with Table 6.3 of AWS D1.1 for cyclically loaded nontubular connections.

After galvanization, perform additional inspection for toe cracks along the full length of all CJP groove welds at tube-to-transverse plate connections using UT.

When performing UT, use an authorized procedure under AWS D1.1, Annex S.

56-1.01D(2)(b)(iii) Radiographic Testing

The acceptance criteria for radiographic or real time image testing must comply with AWS D1.1 for tensile stress welds.

56-1.01D(2)(b)(iv) Longitudinal Seam Welds

The Engineer selects the random locations for NDT.

Grind the cover pass smooth at the locations to be tested.

If repairs are required in a portion of a tested weld, perform NDT on the repaired portion and on percent of the untested portions of the weld. If more repairs are required, perform NDT on the er	
56-1.01D(3) Department Acceptance Reserved	
Replace section 56-2.01D(2)(b) with:	
Reserved	07-15-16
Replace the 2nd sentence of the 1st paragraph of section 56-2.02F with:	
Manufactured pipe posts must comply with one of the following:	07-15-16
Add to the list in the 1st paragraph of section 56-2.02F:	
4. ASTM A1085, Grade A	07-15-16
Replace the 2nd paragraph of section 56-2.02F with:	
You may fabricate pipe posts from structural steel complying with ASTM A36/A36M, ASTM A70 Grade 36, or ASTM A572/A572M, Grades 42 or 50.	07-15-16 9/A709M,
Delete the last sentence in the 1st paragraph of section 56-2.02K(2).	07-15-16
Delete the 3rd paragraph of section 56-2.02K(2).	07-15-16
Replace the 2nd paragraph of section 56-2.02K(4) with:	07.45.46
Safety cable at walkways must not be kinked, knotted, deformed, frayed, or spliced.	07-15-16
Replace the 1st sentence of the paragraph in section 56-2.02K(5) with:	
The edges of handholes and other large post and arm openings must be ground smooth.	07-15-16
Replace the heading of section 56-3 with:	
56-3 STANDARDS, POLES, PEDESTALS, AND POSTS	07-15-16
Replace the paragraph in section 56-3.01A with:	
Section 56-3 includes general specifications for fabricating and installing standards, poles, pede posts.	07-15-16 stals, and

Replace section 56-3.01B(2)(b) with:

Standards with handholes must comply with the following:

- 1. Include a UL-listed lug and 3/16-inch or larger brass or bronze bolt for attaching the bonding jumper for non-slip-base standards.
- 2. Attach a UL-listed lug to the bottom slip base plate with a 3/16-inch or larger brass or bronze bolt for attaching the bonding jumper for slip-base standards.

Replace the 1st sentence of the 3rd paragraph of section 56-3.01C(2)(a) with:

After each standard, pole, pedestal, and post is properly positioned, place mortar under the base plate.

Replace the 2nd sentence of the 4th paragraph of section 56-3.01C(2)(a) with:

The top of the foundation at curbs or sidewalks must be finished to curb or sidewalk grade.

Replace the 10th paragraph of section 56-3.01C(2)(a) with:

Except when located on a structure, construct foundations monolithically.

Replace the 13th paragraph of section 56-3.01C(2)(a) with:

07-15-16

Do not erect standards, poles, pedestals, or posts until the concrete foundation has cured for at least 7 days.

Replace the 14th paragraph in section 56-3.01C(2)(a) with:

07-15-16

The Engineer selects either the plumbing or raking technique for standards, poles, pedestals, and posts. Plumb or rake by adjusting the leveling nuts before tightening nuts. Do not use shims or similar devices. After final adjustments of both top nuts and leveling nuts on anchorage assemblies have been made and each standard, pole, pedestal, and post on the structure is properly positioned, tighten nuts as follows:

- 1. Tighten leveling nuts and top nuts, following a crisscross pattern, until bearing surfaces of all nuts, washers, and base plates are in firm contact.
- 2. Use an indelible marker to mark the top nuts and base plate with lines showing relative alignment of the nut to the base plate.
- 3. Tighten top nuts following a crisscross pattern:
 - 3.1. Additional 1/6 turn for anchor bolts greater than 1-1/2 inches in diameter.
 - 3.2. Additional 1/3 turn for other anchor bolts.
 - 3.3. Tightening tolerance for all top nuts is $\pm 1/8$ turn.

Replace the 1st sentence of the 4th paragraph of section 56-3.01C(2)(b) with:

07-15-16

If shown, use sleeve nuts on Type 1 standards.

Add to section 56-3.01C(2)(b):

07-15-16

Spiral reinforcement must be continuous above the bottom of the anchor bolts. The top termination must be either:

07-15-16

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- 1. 1'-6" lap beyond the end of pitch with a 90-degree hook extending to the opposite side of the cage, or
- 2. 1'-6" lap beyond the end of pitch with 2 evenly spaced authorized mechanical couplers

Replace the 1st sentence of the paragraph in section 56-3.02A(4)(b) with:

For cast slip bases for standards and poles with shaft lengths of 15 feet or more, perform RT on 1 casting from each lot of a maximum of 50 castings under ASTM E94.

Replace the 2nd paragraph of section 56-3.02B(1) with:

Material for push button posts, pedestrian barricades, and guard posts must comply with ASTM A53/A53M or ASTM A500/A500M.

Add to section 56-3.02B(1):

Steel pipe standards and mast arms must be hot dip galvanized after manufacturing. Remove spikes from galvanized surfaces.

Replace the 2nd paragraph of section 56-3.02B(2) with:

HS anchor bolts, nuts, and washers must comply with section 55-1.02D(1) and the following:

- 1. Bolt threads must be rolled
- 2. Hardness of HS anchor bolts must not exceed 34 HRC when tested under ASTM F606
- 3. Galvanization must be by mechanical deposition
- 4. Nuts must be heavy-hex type
- 5. Each lot of nuts must be proof load tested

Replace the 2nd sentence of the 9th paragraph of section 56-3.02B(2) with:

07-15-16

During manufacturing, properly locate the position of the luminaire arm on the arm plate to avoid interference with the cap screw heads.

Add to section 56-3.02B(3)(a):

07-15-16 Steel having a nominal thickness greater than 2 inches that is used for tube-to-transverse plate connections must have a minimum CVN impact value of 20 ft-lb at 20 degrees F when tested under ASTM E23.

Add to section 56-3.02B(3)(c):

The length of telescopic slip-fit splices must be at least 1.5 times the inside diameter of the exposed end of the female section.

For welds connecting reinforced handholes or box-type pole plate connections to a tubular member, the start and stop points must be at points located on a longitudinal axis of symmetry of the tube coinciding with the axis of symmetry of the hand hole or pole plate.

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Replace the table in the 1st paragraph of section 56-3.02C with:

Slip Base Bolt Tightening Requirements

		ginterining interquinerinte
Standard type		Torque (ft-lb)
	15-SB	150
	15-SBF	150
	30	150
	31	200

Replace the 1st sentence of the 2nd paragraph of section 56-3.02C with:

Bolted connections attaching signal or luminaire arms to standards, poles, and posts are considered slip critical.

Add to section 56-3.06B:

Manufacture the mast arm from standard pipe, free from burrs. Each mast arm must have an insulated wire inlet and wood pole mounting brackets for the mast arm and tie-rod cross arm. Manufacture tie rod from structural steel and pipe.

Delete the 2nd paragraph of section 56-3.06C.

Replace the 1st sentence of the 3rd paragraph of section 56-3.06C with:

Mount the mast arm for luminaires to provide a 34-foot mounting height for a 165 W LED luminaire and a 40-foot mounting height for a 235 W LED luminaire.

^^^^

59 STRUCTURAL STEEL COATINGS

07-15-16

Replace *Type* S in the 2nd paragraph of section 59-1.02A with:

Type M or Type S

Add to the list in the 2nd paragraph of section 59-1.02B:

5. Manufactured abrasives.

Replace *Mineral and slag* in the 3rd paragraph of section 59-1.02B with:

Mineral, manufactured, and slag

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Delete the 4th paragraph of section 59-2.01C(1).

^^^^

60 EXISTING STRUCTURES

07-15-16

Delete the 2nd sentence in the 11th paragraph of section 60-3.04B(3)(c).

^^^^

64 PLASTIC PIPE

07-15-16

Replace *Reserved* in section 64-3 with:

07-15-16

64-3.01 GENERAL

64-3.01A Summary

Section 64-3 includes specifications for constructing slotted plastic pipe.

Slotted plastic pipe includes structure excavation, concrete backfill, connecting new pipe to new or existing facilities, concrete collars, reinforcement, and other connecting devices.

64-3.01B Definitions

Reserved

64-3.01C Submittals

If an *or* equal slotted plastic pipe is being considered, it must be submitted 30 days before installation for approval.

If RSC is used for concrete backfill for slotted plastic pipe, submit the concrete mix design and test data from an authorized laboratory 10 days before excavating the pipe trench. The laboratory must specify the cure time required for the concrete mix to attain 2,000 psi compressive strength when tested under California Test 521.

Heel-resistant grates if specified must be submitted 30 days before installation for approval. Anchorage details must be included in the submittal.

64-3.01D Quality Assurance

Reserved

64-3.02 MATERIALS

64-3.02A General

Not Used

64-3.02B Slotted Plastic Pipes

Slotted plastic pipe must be one of the following or equal:

Siotted Flastic Fipe				
12" diameter	18" diameter			
Zurn Z888-12	Zurn Z888-18			
ACO Qmax 350	ACO Qmax 365			
ADS Duraslot-12	ADS Duraslot-18			

Slotted Plastic Pipe

64-3.02C Concrete Backfill

Concrete for concrete backfill for slotted plastic pipe must comply with the specifications for minor concrete. You may use RSC instead of minor concrete for concrete backfill.

If RSC is used for concrete backfill, the RSC must:

- 1. Contain at least 590 pounds of cementitious material per cubic yard
- 2. Comply with section 90-3.02A, except section 90-1 does not apply
- 3. Comply with section 90-2

64-3.02D Heel-Resistant Grates

Heel-resistant grate must:

- 1. Be designed to carry traffic loadings
- 2. Comply with ADA requirements
- 3. Be constructed of steel or cast iron
- 4. Be provided by the same manufacturer of the slotted plastic pipe
- 5. Comply with the manufacturer's instructions

64-3.02E Bar Reinforcement

Bar reinforcement must comply with ASTM A615/A615M, Grade 60 or ASTM A706/A706M, Grade 60.

64-3.02F Miscellaneous Metal

Ductile iron, nuts, bolts, and washers must comply with section 75.

64-3.02G Grout

Grout must be non-shrink grout complying with ASTM C1107/C1107M.

64-3.02H Curing Compound

Non-pigmented curing compound must comply with ASTM C309, Type 1, Class B.

64-3.02I End Caps

End cap must:

- 1. Be provided by the same manufacturer of the slotted plastic pipe
- 2. Prevent concrete backfill from entering the pipe

64-3.03 CONSTRUCTION

64-3.03A General

Cover the grate slots with heavy-duty tape or other authorized covering during paving and concrete backfilling activities to prevent material from entering the slots.

64-3.03B Preparation

Pave adjacent traffic lanes before installing slotted plastic pipes.

Excavation must comply with section 19-3.

64-3.03C Installation

Lay and join slotted plastic pipes under the pipe manufacturer's instructions.

Lay pipes to line and grade with sections closely jointed and adequately secured to prevent separation during placement of the concrete backfill. If the pipes do not have a positive interlocking mechanism like a slot and tongue connection, secure the sections together with nuts, bolts, and washers before backfilling.

The top of slotted plastic pipes must not extend above the completed surface. Position the pipes so that the concrete backfill is flush with the surrounding grade and above the top of the grate from 1/8 to 1/4 inch.

Place channels with the male and female ends facing each other.

Place lateral support bar reinforcement on both sides of the grate slots. The support bar reinforcement must run the full length of the slots.

Anchor heel-resistant grates to the concrete backfill under the manufacturer's instructions.

64-3.03D Concrete Backfill

Wherever minor concrete is used for concrete backfill for slotted plastic pipe, do not allow traffic on top of the backfill within 7 days of placement.

Wherever RSC is used for concrete backfill for slotted plastic pipe, do not allow traffic on top of the backfill before the required cure time of 2,000 psi is achieved.

Place concrete backfill where shown.

Consolidate the concrete backfill with high-frequency internal vibrators.

Texture the concrete backfill surface with a broom or burlap drag to produce a durable skid-resistant surface.

Apply a non-pigmented curing compound to the exposed concrete backfill surface whenever the atmospheric temperature is 90 degrees F or greater after placement.

64-3.03E Transition Fittings

Use transition fittings to connect slotted plastic pipes to drainage inlets. The transition fittings must be supplied by the same pipe manufacturer.

Where welds are required in transition fittings, welds must comply with the pipe manufacturer's instructions. The completed welds must not have visible pinholes. Fill the gaps around the pipes in the inlet structure wall with non-shrink grout where the pipes connect to an existing drainage structure. Install the grout under the pipe manufacturer's instructions.

Cut the pipes as shown after the grout used to seal the transition fitting has cured for at least 24 hours.

64-3.04 PAYMENT

Slotted plastic pipe is measured along the centerline of the pipe and parallel with the slope line. If the pipe is cut to fit a structure or slope, the payment quantity is the length of pipe necessary to be placed before cutting, measured in 2-foot increments.

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DIVISION VII DRAINAGE FACILITIES 71 EXISTING DRAINAGE FACILITIES

01-15-16

Replace items 5 and 6 in the list in the 1st paragraph of section 71-3.01D with:

01-15-16

5. Performing postrehabilitation inspection

Add after the 4th paragraph of section 71-3.01D:

01-15-16

Record the quantity of grout that is installed and submit this quantity. The Department does not pay for grout that leaks through to the inside of the culvert. The Department does not pay for grout material that is wasted, disposed of, or remaining on hand after the completion of the work.

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DIVISION VIII MISCELLANEOUS CONSTRUCTION 72 SLOPE PROTECTION

07-15-16

Replace the 1st and 2nd paragraphs of section 72-2.02B with:

For method A and B placement and the class of RSP described, comply with the rock gradation shown in the following table:

Rock Gradation								
Nominal RSP class by median particle diameter ^b		Nominal median particle	d₁₅c (ir	nches)	d₅₀° (ind	ches)	d ₁₀₀ c (inches)	Placement
Class ^a	Diameter (inches)	weight W ₅₀ c,d	Min	Max	Min	Max	Max	Method
	6	20 lb	3.7	5.2	5.7	6.9	12.0	В
II	9	60 lb	5.5	7.8	8.5	10.5	18.0	В
	12	150 lb	7.3	10.5	11.5	14.0	24.0	В
IV	15	300 lb	9.2	13.0	14.5	17.5	30.0	В
V	18	1/4 ton	11.0	15.5	17.0	20.5	36.0	В
VI	21	3/8 ton	13.0	18.5	20.0	24.0	42.0	A or B
VII	24	1/2 ton	14.5	21.0	23.0	27.5	48.0	A or B
VIII	30	1 ton	18.5	26.0	28.5	34.5	48.0	A or B
IX	36	2 ton	22.0	31.5	34.0	41.5	52.8	A
Х	42	3 ton	25.5	36.5	40.0	48.5	60.5	A
XI	46	4 ton	28.0	39.4	43.7	53.1	66.6	A

^aFor RSP Classes I–VIII, use Class 8 RSP fabric. For RSP Classes IX–XI, use Class 10 RSP fabric. ^bIntermediate or B dimension (i.e., width) where A dimension is length and C dimension is thickness. ^cd%, where % denotes the percentage of the total weight of the graded material.

^dValues shown are based on the minimum and maximum particle diameters shown and an average specific gravity of 2.65. Weight will vary based on specific gravity of rock available for the project.

Replace the table in section 72-2.02C with:

07-15-16

Fabric Class					
Class	Largest rock gradation class used in slope protection				
8	Classes I–VIII				
10	Classes IX–XI				

01-15-16

Replace the table in the 1st paragraph of section 72-3.02C with:

Nominal RSP class by median particle diameter ^b		Nominal median particle	dı	5 ^C	de	20 ^c	d ₁₀₀ c
Class ^a	Size (inches)	weight W ₅₀ c,d Weightª	Min	Мах	Min	Max	Мах
I	6	20 lb	3.7	5.2	5.7	6.9	12.0
II	9	60 lb	5.5	7.8	8.5	10.5	18.0
	12	150 lb	7.3	10.5	11.5	14.0	24.0
V	18	1/4 ton	11.0	15.5	17.0	20.5	36.0
VII	24	1/2 ton	14.5	21.0	23.0	27.5	48.0

Concreted-Rock Gradation

^aUse Class 8 RSP fabric.

^bIntermediate or B dimension (i.e., width) where A dimension is length and C dimension is thickness. ^cd%, where % denotes the percentage of the total weight of the graded material.

^dValues shown are based on the minimum and maximum particle diameters shown and an assumed specific gravity of 2.65. Weight will vary based on specific gravity of rock available for the project.

Replace the table in section 72-3.03E with:

07-15-16

Minimum Concrete Penetration						
		Rock class				
	VII V III II I					
Penetration (inches)	18	14	10	8	6	

^^^^

73 CONCRETE CURBS AND SIDEWALKS

07-15-16 Replace section 73-3.01A with:

07-15-16

Section 73-3 includes specifications for constructing sidewalks, gutter depressions, island paving, curb ramps, and driveways.

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74 PUMPING EQUIPMENT AND CONTROLS

04-15-16

Replace 87-1.03K in the 4th paragraph of section 74-3.03B(2) with:

04-15-16

87

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80 FENCES

07-15-16 Replace section 80-4 with:

80-4 WILDLIFE EXCLUSION FENCES

80-4.01 GENERAL

80-4.01A General

Section 80-4 includes specifications for constructing wildlife exclusion fences.

Constructing a wildlife exclusion fence includes the installation of any signs specified in the special provisions.

80-4.01B Materials

Each T post must:

- 1. Comply with ASTM A702
- 2. Be metal and have an anchor plate
- 3. Be painted black or galvanized

80-4.01C Construction

Not Used

80-4.01D Payment

Not Used

80-4.02 DESERT TORTOISE FENCES

80-4.02A General

Section 80-4.02 includes specifications for constructing desert tortoise fences.

80-4.02B Materials

80-4.02B(1) Permanent Desert Tortoise Fences

80-4.02B(1)(a) General

Each wire tie and hog ring for a permanent desert tortoise fence must comply with section 80-2.02F.

Each hold down pin must:

- 1. Be U-shaped, with 2 minimum 6-inch long legs
- 2. Have pointed ends
- 3. Be at least 11-gauge wire
- 4 Be galvanized
- 5. Be commercial quality

80-4.02B(1)(b) Hardware Cloth

The hardware cloth must:

- 1. Comply with ASTM A740
- 2. Be welded or woven galvanized steel wire fabric
- 3. Be made of at least 14-gauge wire
- 4. Be 36 inches wide

80-4.02B(1)(c) Barbless Wire

The barbless wire must:

- 1. Comply with ASTM A641/A641M
- 2. Be at least 14-gauge wire
- 3. Have a Class 1 zinc coating

80-4.02B(1)(d) Posts

Each post must:

- 1. Comply with ASTM F1083
- 2. Be standard weight, schedule 40 steel pipe with a nominal pipe size of 1 inch
- 3. Be galvanized steel fence post conforming to ASTM A702

80-4.02B(2) Temporary Desert Tortoise Fences

The materials for a temporary desert tortoise fence must comply with section 80-4.02B(1), except the hardware cloth must be made of at least 16-gauge wire.

80-4.02C Construction

80-4.02C(1) General

Extend the hardware cloth a minimum of 24 inches above the ground.

Plumb the posts and pull the hardware cloth taut. Correct any alignment issues.

80-4.02C(2) Permanent Desert Tortoise Fences

Excavate the ground to form a trench before installing the posts and hardware cloth. Embed the posts at maximum 5-foot intervals into the ground. If T posts are used, use 5-foot lengths and embed the posts to match the above-ground height shown for the posts.

Securely fasten the hardware cloth to the posts with wire ties and to barbless wire with hog rings as shown. Pass the wire ties through the hardware cloth. Encircle the posts and barbless wire with the ties and tie them by twisting a minimum of 3 complete turns.

Bend the twisted ends of the ties down to prevent possible snagging. Close hog rings with their ends overlapping.

Bury the hardware cloth a minimum of 12 inches into the ground. Install the cloth in 1 continuous piece. You may cut the cloth into shorter segments if authorized.

Overlap the hardware cloth segments at posts, with a minimum overlap of 6 inches centered at a post. Wire tie the overlapped cloth to posts as shown. Prevent fraying by threading barbless wire along the vertical edges of the hardware cloth on either side of the post or use 3 equally spaced hog rings (6 hog rings per location) along each wire cloth edge.

Where bedrock or caliche substrate is encountered, use the bent hardware cloth detail if authorized. Transitions from buried-to-bent or bent-to-buried configuration must occur at a post location with a minimum 6-inch overlap of the hardware cloth as shown. The maximum spacing for hold down pins is 24 inches on center. Anchor in place with hold down pins the beginning and end corners of the hardware cloth placed on the ground.

Backfill the removed earth material into the trench created to install the hardware cloth and posts. Use an 8 lb or heavier hand tamper to compact the backfill around the posts and hardware cloth. Install a post at each corner of the cloth segments.

If a gate must be installed, attach the hardware cloth to the gate frame such that there is contact along the entire length of the gate between the finished ground surface and the lower edge of the cloth. Install the gate under section 80-10.

80-4.02C(3) Temporary Desert Tortoise Fences

Fold the horizontal edge of the hardware cloth at a 90° angle toward the tortoise habitat area. Ensure the clearance to the ground at the bend is from 0 to 2 inches.

Where the hardware cloth overlaps, secure the bend piece with one of the following:

- 1. Barbless wire threaded along the width of the cloth
- 2. Minimum of 4 hog rings equally spaced along the edge

Fasten the bent piece to the ground with hold down pins pushed completely into the ground.

When the temporary fence is no longer needed, compact soil into post holes with an 8 lb or heavier hand tamper.

80-4.02D Payment

Not Used

80-4.03-80-4.09 RESERVED

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	DIVISION IX TRAFFIC CONTROL DEVICES 83 RAILINGS AND BARRIERS 04-15-16	04-15-16
	Delete <i>to</i> in the 4th paragraph of section 83-1.02B.	
	~~~~~~~	
	84 MARKINGS 07-15-16 Add to the beginning of section 84-8.03A:	
Se	lect the method and equipment for constructing ground-in indentations.	07-15-16
	Replace the 1st paragraph of section 84-8.03A with:	
Do	not construct rumble strips:	07-15-16
2. 3.	On structures, approach slabs, or concrete weigh-in-motion slabs At intersections Bordering two-way left turn lanes, driveways, or other high-volume turning areas Within 6 inches of any concrete pavement joint	
Мо	Add between the 2nd and 3rd paragraphs of section 84-8.03A: odify rumble strip spacing to avoid locating a groove on a concrete pavement joint.	07-15-16
	Replace the 3rd paragraph of section 84-8.03A with:	
Ind	dentations must comply with the dimensions shown and not vary more than:	07-15-16
2. 3.	10 percent in length 0.06 inch in depth 10 percent in width 1 inch in center-to-center spacing between rumble strips	

#### Add to the end of section 84-8.03A:

07-15-16 The noise level created by the combined grinding activities must not exceed 86 dBA when measured at a distance of 50 feet at right angles to the direction of travel. Break rumble strips before and after intersections, driveways, railroad crossings, freeway gore areas, and freeway ramps. Place breaks and break distances as shown. You may adjust breaks and the break distances as needed at low-volume driveways or other locations if authorized. 07-15-16 Delete new in the 1st paragraph of section 84-8.03B. 07-15-16 Add to the end of section 84-8.03B: Remove grinding residue under section 13-4.03E(7). Replace the 1st paragraph of section 84-8.03C with: 07-15-16 Construct rumble strips in the top layer of HMA and asphalt concrete surfacing by the ground-in method. Add between the 2nd and 3rd paragraphs of section 84-8.03C: 07-15-16 Dispose of the removed material. 07-15-16 Delete the 2nd paragraph of section 84-8.03C. Replace 37-2 in the 3rd paragraph of section 84-8.03C with: 07-15-16 37-4.02 **Replace section 84-8.04 with:** 07-15-16 The payment quantity for any type of rumble strip is the length measured by the station along the length of the rumble strip without deductions for gaps between indentations. Replace the 2nd paragraph of section 84-9.03B with: 04-15-16 Completely remove traffic stripes and pavement markings, including any paint in the gaps, by methods that do not remove pavement to a depth of more than 1/8 inch.

#### Add between the 2nd and 3rd paragraphs of section 84-9.03B:

04-15-16

Submit your proposed method for removing traffic stripes and pavement markings at least 7 days before starting the removal work. Allow 2 business days for the review.

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

04-15-16

04-15-16

#### Delete materially in the 1st paragraph of section 84-9.03D.

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# **DIVISION X ELECTRICAL WORK**

**Replace section 86 with:** 

#### **86 GENERAL**

04-15-16

#### 86-1.01 GENERAL

#### 86-1.01A Summary

Section 86 includes general specifications for furnishing electrical equipment and materials.

Electrical equipment and materials must comply with part 4 of the *California MUTCD* and 8 CA Code of Regs, chapter 4, subchapter 5, "Electrical Safety Orders."

Galvanized equipment and materials must comply with section 75-1.02B.

#### 86-1.01B Definitions

accessible pedestrian signal: Accessible pedestrian signal as defined in the California MUTCD.

accessible walk indication: Activated audible and vibrotactile action during the walk interval.

actuation: Actuation as defined in the California MUTCD.

- ambient sound level: Background sound level in dB at a given location.
- **ambient sound sensing microphone:** Microphone that measures the ambient sound level in dB and automatically adjusts the accessible pedestrian signal speaker's volume.
- audible speech walk message: Audible prerecorded message that communicates to pedestrians which street has the walk interval.
- channel: Discrete information path.
- **CALIPER:** Commercially Available LED Product Evaluation and Reporting. A U.S. Department of Energy program that individually tests and provides unbiased information on the performance of commercially available LED luminaires and lights.
- **controller assembly:** Assembly for controlling a system's operations, consisting of a controller unit and auxiliary equipment housed in a waterproof cabinet.
- controller unit: Part of the controller assembly performing the basic timing and logic functions.
- **correlated color temperature:** Absolute temperature in kelvin of a blackbody whose chromaticity most nearly resembles that of the light source.
- detector: Detector as defined in the California MUTCD.

electrolier: Assembly of a lighting standard and luminaire.

flasher: Device for opening and closing signal circuits at a repetitive rate.

**flashing beacon control assembly:** Assembly of switches, circuit breakers, terminal blocks, flasher, wiring, and other necessary electrical components housed in a single enclosure for operating a beacon.

- **house side lumens:** Lumens from a luminaire directed to light up areas between the fixture and the pole, such as sidewalks at intersection or areas off the shoulders on freeways.
- **illuminance gradient:** Ratio of the minimum illuminance on a 1-foot square of sign panel to that on an adjacent 1-foot square of sign panel.
- **inductive loop detector:** Detector capable of being actuated by an inductance change caused by a vehicle passing or standing over the loop. An inductive loop detector includes a loop or group of loops installed in the roadway and a lead-in cable installed and connected inside a controller cabinet.
- **junction temperature:** Temperature of the electronic junction of the LED device. The junction temperature is critical in determining photometric performance, estimating operational life, and preventing catastrophic failure of the LED.
- **L70:** Extrapolated life in hours of the luminaire when the luminous output depreciates 30 percent from the initial values.
- lighting standard: Pole and mast arm supporting the luminaire.
- **LM-79:** Test method from the Illumination Engineering Society of North America specifying the test conditions, measurements, and report format for testing solid state lighting devices, including LED luminaires.
- **LM-80:** Test method from the Illumination Engineering Society of North America specifying the test conditions, measurements, and report format for testing and estimating the long-term performance of LEDs for general lighting purposes.
- luminaire: Assembly that houses the light source and controls the light emitted from the light source.
- **National Voluntary Laboratory Accreditation Program:** U.S. Department of Energy program that accredits independent testing laboratories.
- powder coating: Coating applied electrostatically using exterior-grade, UV-stable, polymer powder.
- power factor: Ratio of the real power component to the complex power component.
- pretimed controller assembly: Assembly operating traffic signals under a predetermined cycle length.
- programming mechanism: Device to program the accessible pedestrian signal operation.
- **pull box:** Box with a cover that is installed in an accessible place in a conduit run to facilitate the pulling in of wires or cables.
- **push button information message:** Push button information message as defined in the *California MUTCD.*
- push button locator tone: Push button locator tone as defined in the California MUTCD.
- signal face: Signal face as defined in the California MUTCD.
- signal head: Signal head as defined in the California MUTCD.
- signal indication: Signal indication as defined in the California MUTCD.
- signal section: Signal section as defined in the California MUTCD.
- signal standard: Pole with or without mast arms carrying 1 or more signal faces.
- **street side lumens:** Lumens from a luminaire directed to light up areas between the fixture and the roadway, such as traveled ways and freeway lanes.
- **surge protection device:** Subsystem or component that protects equipment against short-duration voltage transients in power line.
- **total harmonic distortion:** Ratio of the rms value of the sum of the squared individual harmonic amplitudes to the rms value of the fundamental frequency of a complex waveform.

**traffic-actuated controller assembly:** Assembly for operating traffic signals under the varying demands of traffic as registered by detector actuation.

traffic phase: Traffic phase as defined in the California MUTCD.

vehicle: Vehicle as defined in the California Vehicle Code.

vibrotactile pedestrian device: Vibrotactile pedestrian device as defined in the California MUTCD.

#### 86-1.01C Submittals

#### 86-1.01C(1) General

Within 15 days after Contract approval, submit a list of equipment and materials you propose to install.

Submit the list before shipping equipment and materials to the job site. The list must include:

- 1. Manufacturer's name
- 2. Make and model number
- 3. Month and year of manufacture
- 4. Lot and serial numbers
- 5. Contract number
- 6. Your contact information

Submit confirmation of the vendor's acceptance of the order for the electrical equipment and materials as an informational submittal.

Submit 3 sets of computer-generated, schematic wiring diagrams for each cabinet.

Diagrams, plans, and drawings must be prepared using graphic symbols in IEEE 315, "Graphic Symbols for Electrical and Electronic Diagrams."

Submit a schedule of values within 15 days after Contract approval.

Do not include costs for the traffic control system in the schedule of values.

Submit a manufacturer's maintenance manual or combined maintenance and operation manual as an informational submittal. The manual must have a master item index that includes:

- 1. Specifications
- 2. Design characteristics
- 3. General operation theory
- 4. Function of all controls
- 5. Troubleshooting procedure
- 6. Parts list, descriptions, stock numbers, and settings
- 7. Block circuit diagram
- 8. Layout of components
- 9. Schematic diagrams

#### 86-1.01C(2) Pull Boxes

Submit the manufacturer's installation instructions for pull boxes, including:

- 1. Quantity and size of entries that can be made without degrading the strength of the pull box below the load rating
- 2. Locations where side entries can be made
- 3. Acceptable method for creating the entry

Submit load-rating test reports for pull boxes from a NRTL.

#### 86-1.01C(3) LED Luminaires

Submit for an LED luminaire:

- 1. Maximum power in watts
- 2. Maximum designed junction temperature
- 3. Heat sink area in square inches

- 4. Designed junction-to-ambient thermal resistance calculation with thermal resistance components clearly defined
- 5. L70 in hours when extrapolated for the average nighttime operating temperature
- 6. Life expectancy based on the junction temperature
- 7. Manufacturer's data sheet for the power supply, including the rated life

Submit the manufacturer's QC test data for LED luminaires as an informational submittal.

#### 86-1.01C(4) Low-Pressure Sodium Luminaires

Submit the manufacturer's QC test data for low-pressure sodium luminaires as an informational submittal.

#### 86-1.01C(5) Service Equipment Enclosures

Submit shop drawings for a service equipment enclosure to METS.

#### 86-1.01C(6) Signal Heads

Submit a certificate of compliance and the manufacturer's QC test data for signal heads as an informational submittal.

#### 86-1.01C(7) LED Signal Modules

Submit the manufacturer's QC test data for LED signal modules as an informational submittal.

#### 86-1.01C(8) Visors

Submit a certificate of compliance and the manufacturer's QC test data for visors as an informational submittal.

#### 86-1.01C(9) LED Countdown Pedestrian Signal Face Modules

Submit the manufacturer's QC test data for LED countdown pedestrian signal face modules as an informational submittal.

#### 86-1.01C(10) Accessible Pedestrian Signals

Submit the manufacturer's QC test data for accessible pedestrian signals as an informational submittal.

#### 86-1.01D Quality Assurance

#### 86-1.01D(1) General

Electrical equipment must comply with one or more of the following standards:

- 1. ANSI
- 2. ASTM
- 3. EIA/ECIA
- 4. NEMA
- 5. NETA
- 6. UL/NRTL
- 7. TIA

Materials must comply with:

- 1. FCC rules
- 2. ITE standards
- 3. NEC
- 4. California Electrical Code

#### 86-1.01D(2) Source Quality Control

Service equipment enclosures and cabinets must be inspected and tested at the source.

#### 86-1.01D(3) Department Acceptance

Deliver material and equipment for testing to METS.

Allow 30 days for testing. The Department notifies you when testing is complete.

If the Department accepts the material or equipment, you must pick it up from the test site and deliver it to the job site.

If the Department rejects material or equipment, remove it within 5 business days after you are notified it is rejected. If it is not removed within that period, the Department may remove it and ship it to you and deduct the costs of labor, material and shipping.

Resubmit a new sample and allow 30 days for retesting. The retesting period starts when the replacement material or equipment is delivered to METS.

#### 86-1.02 MATERIALS

#### 86-1.02A General

Anchor bolts, anchor bars or studs, and nuts and washers must comply with section 75-1.02.

Bolt threads must accept galvanized standard nuts without requiring tools or causing removal of protective coatings.

#### 86-1.02B Conduit and Accessories

#### 86-1.02B(1) General

Conduit and fittings must comply with the requirements shown in the following table:

Туре	Requirement				
1	Must be hot-dip galvanized rigid steel complying with UL 6 and ANSI C80.1. The zinc coating must comply with copper sulfate test requirements in UL 6. Fittings must be electrogalvanized and certified under UL 514B.				
2	Must comply with requirements for Type 1 conduit and be coated with PVC or polyethylene. The exterior thermoplastic coating must have a minimum thickness of 35 mils. The internal coating must have a minimum thickness of 2 mils. Coated conduit must comply with NEMA RN 1, or NRTL PVC-001.				
3	Must be Type A, extruded, rigid PVC conduit complying with UL 651 or must be HDPE conduit complying with UL 651A.				
4	Must have an inner, flexible metal core covered by a waterproof, nonmetallic, sunlight- resistant jacket, and must be UL listed for use as a grounding conductor. Fittings must be certified under UL 514B.				
5	Must be intermediate steel complying with UL 1242 and ANSI C80.6. The zinc coating must comply with copper sulfate test requirements specified in UL 1242. Fittings must be electrogalvanized and certified under UL 514B.				

# **Conduit and Fitting Requirements**

Bonding bushings installed on metal conduit must be insulated and either a galvanized or zinc-alloy type.

#### 86-1.02B(2) Structures Accessories

Steel hangers, steel brackets, and other fittings used to support conduit in or on a wall or bridge superstructure must comply with section 75-3.

Precast concrete cradles for conduit must be made of minor concrete and commercial-quality welded wire fabric. The minor concrete must contain a minimum of 590 lb of cementitious material per cubic yard. The cradles must be moist cured for a minimum of 3 days.

#### 86-1.02C Pull Boxes

#### 86-1.02C(1) General

Pull box cover must have a marking on the top that is:

- 1. Clearly defined
- 2. Uniform in depth
- 3. Parallel to either side
- 4. 1 to 3 inches in height

Cover marking must be:

- 1. SERVICE for service circuits between a service point and service disconnect
- 2. SERVICE IRRIGATION for circuits from a service equipment enclosure to an irrigation controller
- 3. SERVICE BOOSTER PUMP for circuits from a service equipment enclosure to the booster pump
- 4. TDC POWER for circuits from a service equipment enclosure to telephone demarcation cabinet
- 5. *LIGHTING* for a lighting system
- 6. SIGN ILLUMINATION for a sign illumination system
- 7. SIGNAL AND LIGHTING for a signal and lighting system
- 8. *RAMP METER* for a ramp metering system
- 9. TMS for a traffic monitoring station
- 10. FLASHING BEACON for a flashing beacon system
- 11. CMS for a changeable message sign system
- 12. *INTERCONNECT* for an interconnect conduit and cable system

The load rating must be stenciled on the inside and outside of the pull box and the cover.

If a transformer or other device must be placed in the pull box, include recesses for a hanger.

The hardware must be stainless steel with 18 percent chromium and 8 percent nickel content.

#### 86-1.02C(2) Nontraffic Pull Boxes

A nontraffic pull box and cover must comply with ANSI/SCTE 77, "Specification for Underground Enclosure Integrity," for Tier 22 load rating and must be gray or brown.

Each new pull box must have a cover with an electronic marker cast inside.

A pull box extension must be made of the same material as the pull box. The extension may be another pull box if the bottom edge of the pull box fits into the opening for the cover.

The bolts, nuts, and washers must be a captive design and galvanized. Captive bolts for securing the cover of nontraffic pull boxes must be capable of withstanding a torque from 55 to 60 ft-lb and a minimum pull-out strength of 750 lb.

#### 86-1.02C(3) Traffic Pull Boxes

A traffic pull box and cover must comply with ASTM C857 for HS20-44 loading.

The frame must be anchored to the box with 2-1/4-inch-long concrete anchors with a 1/4 inch diameter. A no. 3-1/2(T) pull box must have 4 concrete anchors, one placed in each corner. No. 5(T) and no. 6(T) pull boxes must have 6 concrete anchors, one placed in each corner and one near the middle of each of the longer sides.

Nuts must be vibration-resistant, zinc-plated, carbon steel and have a wedge ramp at the root of the thread.

Before galvanizing a steel or cast iron cover, the manufacturer must apply the cover marking by one of the following methods:

- 1. Use a cast iron strip at least 1/4 inch thick with letters raised a minimum of 1/16 inch. Fasten the strip to the cover with 1/4-inch, flathead, stainless steel machine bolts and nuts. Peen the bolts after tightening.
- 2. Use a sheet steel strip at least 0.027 inch thick with letters raised a minimum of 1/16 inch. Fasten the strip to the cover by spot welding, tack welding, or brazing with 1/4-inch stainless steel rivets or 1/4-inch, roundhead, stainless steel machine bolts and nuts. Peen the bolts after tightening.

The steel cover must be countersunk approximately 1/4 inch to accommodate the bolt head. When tightened, the bolt head must be no more than 1/8 inch above the top of the cover.

86-1.02C(4) Reserved 86-1.02D Tapes 86-1.02D(1) General Reserved

#### 86-1.02D(2) Pull Tape

Pull tape must be a flat, woven, lubricated, soft-fiber, polyester tape with a minimum tensile strength of 1,800 lb. The tape must have sequential measurement markings every 3 feet.

86-1.02D(3) Reserved

- 86-1.02E Reserved
- 86-1.02F Conductors and Cables
- 86-1.02F(1) Conductors
- 86-1.02F(1)(a) General

Reserved

86-1.02F(1)(b) Reserved

#### 86-1.02F(1)(c) Copper Conductors

#### 86-1.02F(1)(c)(i) General

Copper wire must comply with ASTM B3 and B8.

Conductor must be clearly and permanently marked the entire length of its outer surface with:

- 1. Manufacturer's name or trademark
- 2. Insulation-type letter designation
- 3. Conductor size
- 4. Voltage
- 5. Temperature rating
- 6. Number of conductors for a cable

The minimum insulation thickness and color code requirements must comply with NEC.

A conductor must be UL listed or NRTL certified and rated for 600 V(ac).

Insulation for no. 14 to no. 4 conductors must be one of the following:

- 1. Type TW PVC under ASTM D2219
- 2. Type THW PVC
- 3. Type USE, RHH, or RHW cross-linked polyethylene

The insulation for no. 2 and larger conductors must be one of the above or THWN.

Conductors must be identified as shown in the following table:

	Cond	ductor Identifica			
			Identification		
	Signal phase or	Insulation	color ^d		
Circuit	function	Base	Stripe ^a	Band symbols	Size
	2, 6	Red, yel, brn	Blk	2, 6	14
	4, 8	Red, yel, brn	Ora	4, 8	14
Signals	1, 5	Red, yel, brn	None	1, 5	14
(vehicle) ^{a, b}	3, 7	Red, yel, brn	Pur	3, 7	14
	Ramp meter 1	Red, yel, brn	None	NBR	14
	Ramp meter 2	Red, yel, brn	Blk	NBR	14
	2p, 6p	Red, brn	Blk	2р, 6р	14
Pedestrian	4p, 8p	Red, brn	Ora	4p, 8p	14
signals	1p, 5p	Red, brn	None	1p, 5p	14
-	3p, 7p	Red, brn	Pur	3р, 7р	14
	2p, 6p	Blu	Blk	P-2, P-6	14
Pedestrian	4p, 8p	Blu	Ora	P-4, P-8	14
push buttons	1p, 5p	Blu	None	P-1, P-5	14
	3p, 7p	Blu	Pur	P-3, P-7	14
Troffic signal	Ungrounded circuit				
Traffic signal controller	conductor	Blk	None	CON-1	6
cabinet	Grounded circuit				
Cabinet	conductor	Wht	None	CON-2	6
Highway	Ungrounded - line 1	Blk	None	NBR	14
lighting pull box	Ungrounded - line 2	Red	None	NBR	14
to luminaire	Grounded	Wht	None	NBR	14
Multiple	Ungrounded - line 1	Blk	None	ML1	10
highway					
lighting	Ungrounded - line 2	Red	None	ML2	10
	Ungrounded - PEU	Blk	None	C1	14
Lighting control	Switching leg from PEU unit or SM transformer	Red	None	C2	14
	Ungrounded - line 1				
Service	(signals)	Blk	None	NBR	6
	Ungrounded - line 2				
	(lighting)	Red	None	NBR	8
Sign lighting	Ungrounded - line 1	Blk	None	SL-1	10
	Ungrounded - line 2	Red	None	SL-2	10
Flashing	Ungrounded between			<b>5</b> 1 0	
beacons	flasher and beacons	Red or yel	None	F-Loc. ^c	14
Grounded circuit conductor	Pedestrian push		DIL	NDD	
	buttons	Wht	Blk	NBR	14
	Signals and multiple	10/64	Nerre		10
	lighting	Wht	None	NBR	10
	Flashing beacons and	Wht	None	NBR	12
	sign lighting	Wht	None	C-3	12
	Lighting control Service	Wht	None	NBR	14
Railroad				אטא	14
preemption		Blk	None	R	14
Spares		Blk	None	NBR	14
NBR = No band i		pelectric unit			17

#### Conductor Identification

NBR = No band required PEU=Photoelectric unit

^aOn overlaps, the insulation is striped for the 1st phase in the designation, e.g., phase (2+3) conductor is striped as for phase 2.

^bBand for overlap and special phases as required

^cFlashing beacons having separate service do not require banding. ^dColor Code: Yel-Yellow, Brn-Brown, Blu-Blue, Blk-Black, Wht-White, Ora-Orange, Pur-Purple

The insulation color must be homogeneous throughout the full depth of the insulation. The identification stripe must be continuous throughout the length of the conductor.

#### 86-1.02F(1)(c)(ii) Bonding Jumpers and Equipment Grounding Conductors

A bonding jumper must be copper wire or copper braid of the same cross-sectional area as a no. 8 conductor or larger.

An equipment grounding conductor may be bare or insulated.

#### 86-1.02F(1)(c)(iii) Inductive Loop Conductors

Inductive loop conductor must comply with the requirements shown in the following table:

Conductor Requirements for Inductive Loop Detectors				
Loop wire	Requirement			
Type 1	Type RHW-USE neoprene-jacketed or Type USE cross-linked polyethylene, insulated, no. 12, stranded copper wire with a minimum 40-mils insulation thickness at any point.			
Type 2	Type THWN or Type XHHW, no. 14, stranded copper wire in a plastic tubing. The plastic tubing must be polyethylene or vinyl rated for use at 105 °C and resistant to oil and gasoline. The outside diameter of the tubing must be at most 0.27 inch with a wall thickness of at least 0.028 inch.			

#### 86-1.02F(1)(d) Reserved

Reserved

86-1.02F(2) Cables 86-1.02F(2)(a) General Reserved

86-1.02F(2)(b) Reserved Reserved

86-1.02F(2)(c) Reserved 86-1.02F(2)(d) Copper Cables

#### 86-1.02F(2)(d)(i) General

The conductor wire size for a detector lead-in cable must comply with the requirements of ASTM B286.

Cable, except a detector lead-in cable, must be clearly and permanently marked the entire length of its outer surface with:

- 1. Manufacturer's name or trademark
- 2. Insulation-type letter designation
- Conductor size
   Voltage
- 5. Temperature rating
- 6. Number of conductors for a cable

#### 86-1.02F(2)(d)(ii) Conductors Signal Cables

A conductors signal cable must have a black polyethylene jacket with an inner polyester binder sheath. The cable jacket must be rated for 600 V(ac) and 75 degrees C. Filler material, if used, must be polyethylene.

The individual conductors in the cable must be solid copper complying with ASTM B286 with Type THWN insulation. The minimum thickness of insulation must comply with NEC for conductor sizes no. 14 to no.10. The minimum thickness of the nylon jacket must be 4 mils.

Cable must comply with the requirements shown in the following table:

Cable typeª	Conductor quantity and	Cable jacket thickness (mils)		Maximum nominal	Conductor color code	
	type	Average	Minimum	outside diameter (inch)		
3CSC	3 no. 14	44	36	0.40	Blue/black, blue/orange, white/black stripe	
5CSC	5 no. 14	44	36	0.50	Red, yellow, brown, black, white	
9CSC	8 no. 14 1 no. 12	60	48	0.65	No. 12 - white, no. 14 - red, yellow, brown, black, and red/black, yellow/black, brown/black, white/black stripe	
12CSC	11 no. 14 1 no. 12	60	48	0.80	No. 12 - white, no. 14 - red, yellow, brown, red/black stripe, yellow/black stripe, brown/black stripe, black/red stripe, black/white stripe, black, red/white stripe, brown/white stripe	
28CSC	27 no. 14 1 no. 10	80	64	0.90	No. 10 - white no. 14 - red/black stripe, yellow/black stripe, brown/black stripe, red/orange stripe, yellow/orange stripe, brown/orange stripe, red/silver stripe, yellow/silver stripe, red/purple stripe, brown/purple stripe, red/2 black stripes, brown/2 black stripes, red/2 orange stripes, red/2 orange stripes, red/2 silver stripes, red/2 silver stripes, red/2 silver stripes, brown/2 silver stripes, brown/2 silver stripes, red/2 purple stripes, brown/2 silver stripes, brown/2 silver stripes, brown/2 blue/silver stripe, blue/silver stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/silver stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/purple stripe, blue/silver stripe, black/red stripe, black	

#### 86-1.02F(2)(d)(iii) Detector Lead-in Cables

Conductors for a loop detector lead-in cable must be two no. 16, 19-by-29, stranded, tinned copper wires with calculated cross-sectional areas complying with ASTM B286, table 1 and must comply with the requirements shown in the following table:

#### **Conductor Requirements for Loop Detector Lead-In Cables**

Lead-in cable	Requirement	
Туре В	Insulated with 20 mils of high-density polyethylene. Conductors must be twisted together with at least 2 turns per foot, and the twisted pair must be protected with a copper or aluminum polyester shield. A minimum no. 20 copper drain wire must be connected to the equipment ground within the cabinet. Cable must have a high-density polyethylene or high-density polypropylene outer jacket with a nominal thickness of 32 mils. Include an amorphous, interior, moisture penetration barrier of nonhydroscopic polyethylene or polypropylene fillers.	
Туре С	Comply with International Municipal Signal Association Specification no. 50-2. A minimum no. 20 copper drain wire must be connected to the equipment ground within the cabinet.	

#### 86-1.02F(2)(d)(iv) Reserved

#### 86-1.02F(2)(d)(v) Signal Interconnect Cables

A signal interconnect cable must be a 6-pair type with stranded, tinned, copper no. 20 conductors. The insulation for each conductor must be color-coded polypropylene with a minimum 13-mils nominal thickness. The conductors must be in color-coded, twisted pairs. Each pair must be wrapped with an aluminum polyester shield and have a no. 22 or larger, stranded, tinned, copper drain wire inside the shielded pair.

The cable jacket must be black HDPE rated for a minimum of 300 V(ac) and 60 degrees C. The jacket must have a minimum nominal wall thickness of 40 mils.

#### 86-1.02F(2)(e) Reserved

#### 86-1.02G Equipment Identification Characters

Equipment identification characters must be 2-1/2 inch, series D lettering, except on wood poles, they must be 3-inch lettering.

The characters must be self-adhesive reflective labels or paint, except on wood poles, they must be embossed on aluminum.

#### 86-1.02H Splicing Materials

Splicing materials include:

- 1. Connectors
- 2. Electrical insulating coating
- 3. PVC electrical tape
- 4. Butyl rubber stretchable tape
- 5. PVC pressure-sensitive adhesive tape
- 6. Heat shrink tubing

Connectors must be C-shaped compression or butt type.

Electrical insulating coating must be a fast drying sealant with low nontoxic fumes.

PVC electrical tape must have a minimum thickness of 80 mils.

Butyl rubber stretchable tape with liner must have a minimum thickness of 120 mils.

PVC pressure-sensitive adhesive electrical tape must have a minimum thickness of 6 mils.

Electrical tapes must be self-fusing, oil- and flame-resistant, synthetic rubber and be UL listed or NRTL certified.

Heat-shrink tubing must be made of irradiated polyolefin tubing with a minimum wall thickness of 40 mils before contraction and an adhesive mastic inner wall. When heated, the inner wall must melt and fill the crevices and interstices of the covered splice area and the outer wall must shrink to form a waterproof insulation.

Heat-shrink tubing must comply with the requirements for extruded, insulating tubing at 600 V(ac) specified in UL Standard 468D and ANSI C119.1 and the requirements shown in the following table:

#### **Heat-Shrink Tubing Requirements**

Quality characteristic	Requirement
Shrinkage ratio of supplied diameter ^a (max, %)	33
Dielectric strength (min, kV/in)	350
Resistivity (min, Ω/in)	25 x 10 ¹³
Tensile strength (min, psi)	2,000
Operating temperature (°C)	-40–90 (135 °C in emergency)
Water absorption (max, %)	0.5

^aWhen heated to 125 °C and allowed to cool to 25 °C

#### 86-1.02I Connectors and Terminals

A connector and terminal must comply with SAE-AS7928 and be a crimp type, rated for 600 V(ac) and either UL listed or NRTL certified.

#### 86-1.02J Standards, Poles, Pedestals, and Posts

Standards for signals, lighting, and flashing beacons, poles for closed circuit television, pedestals for cabinets, posts for extinguishable message sign and posts for pedestrian push button assemblies must comply with section 56-3.

#### 86-1.02K Luminaires

#### 86-1.02K(1) General

Luminaire must be either LED or low-pressure-sodium type.

#### 86-1.02K(2) LED Luminaires

LED luminaire must be on the Authorized Material List for LED luminaires and must:

- 1. Be self-contained, not requiring assembly.
- 2. Comply with UL 1598 for luminaires in wet locations.
- 3. Have a power supply with:
  - 3.1. ANSI/IEC rating of at least IP65.
  - 3.2. 2 leads to accept standard 0-10 V(dc).
  - 3.3. Dimming control compatible with IEC 60929, Annex E. If the control leads are open or the analog control signal is lost, the circuit must default to 100-percent power.
  - 3.4. Case temperature self rise of 77 degrees F or less above ambient temperature in free air with no additional heat sinks.
- 4. Weigh no more than 35 lb.
- 5. Have a minimum operating life of 63,000 hours when operated for an average time of 11.5 hours at an average temperature of 70 degrees F.
- 6. Be designed to operate over a temperature range from -40 to 130 degrees F.
- 7. Be operationally compatible with photoelectric controls.
- 8. Have a correlated color temperature range from 3,500 to 6,500 K and a color rendering index of 65 or greater.
- 9. Have a maximum-effective projected area of 1.4 sq ft when viewed from either side or end.
- 10. Have a housing color that matches a color no. 26152 to 26440, 36231 to 36375, or 36440 of FED-STD-595.
- 11. Have an ANSI C136.41-compliant, locking-type, photocontrol receptacle with dimming connections and a watertight shorting cap.
- 12. Comply with LM-79, LM-80 and California Test 611.

The individual LEDs must be connected such that a catastrophic loss or a failure of 1 LED does not result in the loss of more than 20 percent of the luminous output of the luminaire.

The luminaire must be permanently marked inside the unit and outside of its packaging box. Marking consists of:

1. Manufacturer's name or trademark

- 2. Month and year of manufacture
- 3. Model, serial, and lot numbers
- 4. Rated voltage, wattage, and power in VA

An LED luminaire's onboard circuitry must include a surge protection device to withstand high-repetition noise transients caused by utility line switching, nearby lightning strikes, and other interferences. The device must protect the luminaire from damage and failure due to transient voltages and currents as defined in Tables 1 and 4 of ANSI/IEEE C64.41.2 for location category C-High. The surge protection device must comply with UL 1449 and ANSI/IEEE C62.45 based on ANSI/IEEE C62.41.2 definitions for standard and optional waveforms for location category C-High.

An LED luminaire and its associated onboard circuitry must comply with the Class A emission limits under 47 CFR 15(B) for the emission of electronic noise.

The fluctuations of line voltage must have no visible effect on the luminous output.

The operating voltage may range from 120 to 480 V(ac),  $60 \pm 3$  Hz. Luminaire must operate over the entire voltage range or the voltage range must be selected from one of the following:

- 1. Luminaire must operate over a voltage range from 95 to 277 V(ac). The operating voltages for this option are 120 V(ac) and 240 V(ac).
- 2. Luminaire must operate over a voltage range from 347 to 480 V(ac). The operating voltage for this option is 480 V(ac).

LED luminaire must have a power factor of 0.90 or greater. The total harmonic distortion, current, and voltage induced into a power line by a luminaire must not exceed 20 percent. The L70 of the luminaire must be the minimum operating life or greater. Illuminance measurements must be calibrated to standard photopic calibrations.

The maximum power consumption and maintained illuminance of the LED luminaires must comply with the isofootcandle curves as shown.

LED luminaire must not allow more than 10 percent of the rated lumens to project above 80 degrees from vertical and 2.5 percent of the rated lumens to project above 90 degrees from vertical.

Luminaire must have passive thermal management with enough capacity to ensure proper heat dissipation and functioning of the luminaire over its minimum operating life. The maximum junction temperature for the minimum operating life must not exceed 221 degrees F.

The junction-to-ambient thermal resistance must be 95 degrees F per watt or less. The use of fans or other mechanical devices is not allowed for cooling the luminaire. The heat sink must be made of aluminum or other material of equal or lower thermal resistance. The luminaire must contain circuitry that automatically reduces the power to the LEDs so the maximum junction temperature is not exceeded when the ambient temperature is 100 degrees F or greater.

The luminaire's housing must be fabricated from materials designed to withstand a 3,000-hour salt spray test under ASTM B117. All aluminum used in housings and brackets must be made of a marine-grade alloy with less than 0.2 percent copper. All exposed aluminum must be anodized. A chromate conversion undercoating must be used underneath a thermoplastic polyester powder coat.

The housing must be designed to prevent the buildup of water on its top surface. Exposed heat sink fins must be oriented to allow water to run off the luminaire and carry dust and other accumulated debris away from the unit. The optical assembly of the luminaire must be protected against dust and moisture intrusion to at least an UL 60529 rating of IP66. The power supply enclosure must be protected to at least an UL 60529 rating of IP43.

The housing must have a slip fitter capable of being mounted on a 2-inch-diameter pipe tenon. Slip fitter must:

- 1. Fit on mast arms with outside diameters from 1-5/8 to 2-3/8 inches
- 2. Be adjustable to a minimum of ±5 degrees from the axis of the tenon in a minimum of 5 steps: +5, +2.5, 0, -2.5, -5
- 3. Have clamping brackets that:

- 3.1. Are made of corrosion-resistant materials or treated to prevent galvanic reactions
- 3.2. Do not bottom out on the housing bosses when adjusted within the designed angular range
- 3.3. Do not permanently set in excess of 1/32 inch when tightened

Each refractor or lens must be made of UV-inhibiting high-impact plastic, such as acrylic or polycarbonate, or heat- and impact-resistant glass. The refractor or lens must be resistant to scratching. Polymeric materials, except for the lenses of enclosures containing either the power supply or electronic components of the luminaire, must be made of UL94 V-0 flame-retardant materials.

An LED luminaire and its internal components must be able to withstand mechanical shock and vibration.

If the components are mounted on a down-opening door, the door must be hinged and secured to the luminaire's housing separately from the refractor or flat lens frame. The door must be secured to the housing to prevent accidental opening. A safety cable must mechanically connect the door to the housing.

An LED luminaire must have a barrier-type terminal block secured to the housing to connect field wires. The terminal screws must be captive and equipped with wire grips for conductors up to no. 6.

The conductors and terminals must be identified and marked.

#### 86-1.02K(3) Low-Pressure Sodium Luminaires

A low-pressure sodium luminaire must be an enclosed cutoff or semi-cutoff type and be self-contained, not requiring assembly.

The housing must be either (1) a minimum 1/16-inch-thick, corrosion-resistant, die-cast aluminum sheet and plate with concealed continuous welds or (2) a minimum 3/32-inch-thick, acrylonitrile-butadiene-styrene sheet material on a cast aluminum frame. The housing must provide mounting for all electrical components and a slip fitter. The housing must be divided into optical and power compartments that are individually accessible for service and maintenance.

The painted exterior surface of the luminaire must be finished with a fused coating of electrostatically applied polyester powder paint or other UV-inhibiting film. The color must be aluminum gray.

A sealing ring must be installed in the pipe tenon opening to prevent the entry of water and insects into the power and optical compartments. The ring must be made of high-temperature neoprene or equal material.

The power unit assembly must be accessible through a weather-tight, hinged cover secured to the housing with spring latches or captive screws.

The luminaire's hardware must be stainless steel or cadmium plated. Removable components must be secured with machine screws or bolts instead of sheet metal screws.

A semi-cutoff luminaire or a molded refractor-style cutoff luminaire must include a refractor. Other cutoff luminaires must include a flat lens. The refractor assembly and flat lens assembly must be designed to rigidly maintain their shape and be hinged and secured to the housing with spring latches.

The refractor must be either a 1-piece injection-molded polycarbonate with a minimum thickness of 3/32 inch or a 1-piece injection-molded acrylic with a minimum thickness of 1/8 inch. Alternate methods of manufacturing the refractor may be authorized provided minimum specified thicknesses are maintained.

The flat lens must be a 1-piece polycarbonate with a minimum thickness of 3/32 inch, mounted to a metal frame.

The lamp socket must be made of high-temperature, flame-retardant, thermoset material with self-wiping contacts or an equal. The socket must be rated for 660 W and 1,000 V(ac). The position of the socket and support must maintain the lamp in the correct relationship with the reflector and refractor for the designed light distribution pattern. The reflector may be an integral part of the housing.

The luminaire must comply with the isofootcandle curves as shown.

Low-pressure sodium lamp must:

1. Be a 180 W, single-ended, bayonet-base, tubular, gas-discharge lamp

- 2. Maintain a minimum of 93 percent of its initial lumens over its rated life
- 3. Reach 80 percent of its light output within 10 minutes
- 4. Restrike within 1 minute after a power outage or voltage drop at the lamp socket
- 5. Have ANSI L74/E designation

The lamp operating position must be at ±20 degrees from the horizontal.

Lamp must comply with the minimum performance requirements shown in the following table:

	ce Requirements
Quality characteristic	Requirement
Initial lumens (Im)	33,000
Rated average life at 10 h/start (h)	18,000

#### Minimum Performance Requirements

The low-pressure sodium lamp ballast must be an autotransformer or high-reactance type. The power factor must be not less than 90 percent when the ballast is operated at the nominal line voltage with a nominally-rated reference lamp. The lamp wattage regulation spread must not vary by more than  $\pm 6$  percent for  $\pm 10$  percent input voltage variation from nominal through life.

At the line voltage, the ballast must have a lamp current crest factor not exceeding 1.8 and ballast loss not exceeding 24 percent for a 180 W ballast.

The ballast must include a multi-circuit connector for quick disconnection.

#### 86-1.02K(4) Reserved

#### 86-1.02L Reserved

#### 86-1.02M Photoelectric Controls

Photoelectric control types are as shown in the following table:

	Photoelectric Control Types
Control type	Description
I	Pole-mounted photoelectric unit. Test switch housed in an enclosure.
II	Pole-mounted photoelectric unit. Contactor and test switch located in a service equipment enclosure.
	Pole-mounted photoelectric unit. Contactor and a test switch housed in an enclosure.
IV	A photoelectric unit that plugs into a NEMA twist-lock receptacle, integral with the luminaire.
V	A photoelectric unit, contactor, and test switch located in a service equipment enclosure.

#### **Photoelectric Control Types**

The pole-mounted adaptor for Type I, II, and III photoelectric controls must include a terminal block and cable supports or clamps to support the wires.

The enclosure for Type I and III photoelectric controls must be a NEMA 3R type. The enclosure must have a factory-applied, rust-resistant prime coat and finish coat. The enclosure must be hot-dip galvanized or painted to match the color of the lighting standard.

Photoelectric unit must:

- 1. Have a screen to prevent artificial light from causing cycling.
- 2. Have a rating of 60 Hz, 105-130 V(ac), 210-240 V(ac), or 105-240 V(ac).
- 3. Operate at a temperature range from -20 to 55 degrees C.
- 4. Consume less than 10 W.
- 5. Be a 3-prong, twist-lock type with a NEMA IP 65 rating, ANSI C136.10-compliant
- 6. Have a fail-on state
- 7. Fit into a NEMA-type receptacle

8. Turn on from 1 to 5 footcandles and turn off from 1.5 to 5 times the turn-on level. Measurements must be made by procedures in *EEI-NEMA Standards for Physical and Electrical Interchangeability of Light-Sensitive Control Devices Used in the Control of Roadway Lighting.* 

Type I, II, III, and V photoelectric controls must have a test switch to allow manual operation of the lighting circuit. Switch must be:

- 1. Single-hole mounting, toggle type
- 2. Single pole and single throw
- 3. Labeled *Auto-Test* on a nameplate

Photoelectric control's contactor must be:

- 1. Normally open
- 2. Mechanical-armature type with contacts of fine silver, silver alloy, or equal or better material
- 3. Installed to provide a minimum space of 2-1/2 inches between the contactor terminals and the enclosure's sides

The terminal blocks must be rated at 25 A, 600 V(ac), molded from phenolic or nylon material, and be the barrier type with plated-brass screw terminals and integral marking strips.

#### 86-1.02N Fused Splice Connectors

The fused splice connector for 240 and 480 V(ac) circuits must simultaneously disconnect both ungrounded conductors. The connector must not have exposed metal parts except for the head of the stainless steel assembly screw. The head of the assembly screw must be recessed a minimum of 1/32 inch below the top of the plastic boss that surrounds the head.

The connector must protect the fuse from water or weather damage. Contact between the fuse and fuse holder must be spring loaded.

Fuses must:

- 1. Be standard, midget, ferrule type
- 2. Have a nontime-delay feature
- 3. Be 3/32 by 1-1/2 inches

#### 86-1.020 Grounding Electrodes

Grounding electrode must be:

- 1. 1 piece
- 2. Minimum 10-foot length of one of the following:
  - 2.1. Galvanized steel rod or pipe not less than 3/4 inch in diameter
  - 2.2. Copper clad steel rod not less than 5/8 inch in diameter

#### 86-1.02P Enclosures

#### 86-1.02P(1) General

The enclosures must be rated NEMA 3R and include a dead front panel and a hasp with a 7/16-inchdiameter hole for a padlock.

The enclosure's machine screws and bolts must not protrude outside the cabinet wall.

The fasteners on the exterior of an enclosure must be vandal resistant and not be removable. The exterior screws, nuts, bolts, and washers must be stainless steel.

#### 86-1.02P(2) Service Equipment Enclosures

A service equipment enclosure must be factory wired and manufactured from steel and galvanized or have factory-applied, rust-resistant prime and finish coats, except Types II and III.

Type II and III service equipment enclosures must:

1. Be made of 0.125-inch minimum thickness 5052-H32 aluminum sheet complying with ASTM B209.

- 2. Be manufactured using gas metal arc welding with bare aluminum welding electrodes. The electrodes must comply with AWS A5.10 Class ER5356.
- 3. Be manufactured using welding procedures, welders, and welding operators that comply with the requirements for welding procedures, welders, and welding operators in in AWS B2.1, "Specification for Welding Procedure and Performance Qualification."
- 4. Have full-seal weld exterior seams.
- 5. Exterior welds must be ground smooth and edges filed to a radius of at least 0.03 inch.
- Have a surface finish that complies with MIL-A-8625 for a Type II, Class I coating, except the anodic coating must have a minimum thickness of 0.0007 inch and a minimum coating weight of 0.001 oz/sq in.

If a Type III enclosure houses a transformer of more than 1 kVA, the enclosure must have effective screened ventilation louvers of no less than 50 sq. in for each louver. The framed screen must be stainless no. 304 with a no. 10 size mesh and secured with at least 4 bolts.

The dead front panel on a Type III service equipment enclosure must have a continuous stainless steel or aluminum piano hinge. The panel must be secured with a latch or captive screws. No live part must be mounted on the panel.

The enclosure must be watertight and marked as specified in NEC to warn of potential electric-arc flash hazards.

Internal conductors for the photoelectric control unit must be 600 V(ac), 14 AWG (THHN) stranded machine tool wire. Where subject to flexing, 19 stranded wire must be used.

The meter area must be have a sealable, lockable, weather-tight cover that can be removed without the use of tools.

For Type III-A, III-B, and III-C enclosures, the meter socket must be a 5-clip type, and the landing lug must be suitable for multiple conductors.

For a Type III-D enclosure, the meter socket must be a 7-clip type, and the landing lug must be suitable for multiple conductors. The pedestal must comply with the Electric Utility Service Equipment Requirements Committee drawing no. 308 or 309.

Landing lugs must be (1) sized for the incoming service utility conductors, (2) compatible with either copper or aluminum conductors, and (3) made of copper or tin-plated aluminum. Live parts of the electrical equipment must be guarded against accidental contact.

The main and neutral busses of the enclosure must be made of tin-plated copper, be rated for 125 A, and be suitable for copper or aluminum conductors.

Each service equipment enclosure must have up to 2 main circuit breakers that will simultaneously disconnect ungrounded service-entrance conductors.

Circuit breaker for a service equipment enclosure must:

- 1. Be quick-break on either automatic or manual operation
- 2. Be trip indicating
- 3. Be internal-trip type
- 4. Be UL listed or NRTL certified and comply with UL 489 or equal
- 5. Be clearly marked with the frame size
- 6. Have an operating mechanism that is enclosed and trip-free from the operating handle on overload
- 7. Have the trip rating clearly marked on the operating handle
- 8. Have an interior made of copper

Circuit breakers used as disconnects must have a minimum interrupting capacity of 10,000 A, rms.

The interior of the enclosure must accept plug-in circuit breakers. A minimum of 6 standard single-pole circuit breakers, 3/4" nominal, must be provided for branch circuits.

Identify each circuit breaker and component by description using an engraved phenolic nameplate attached with stainless steel rivets or screws.

Nameplate must be installed:

- 1. Adjacent to the breaker on the dead front panel. The characters must be a minimum of 1/8 inch high.
- 2. Adjacent to the component on the back panel. The characters must be a minimum of 1/8 inch high.
- 3. At the top exterior of the door panel. The nameplate must include the system number, voltage, and number of phases engraved in minimum 3/16-inch-high characters.

A plastic-laminated wiring diagram must be attached inside the enclosure with brass eyelets by a ULlisted or NRTL-certified method.

### 86-1.02P(3) Lighting and Sign Illumination Enclosures

A lighting and sign illumination enclosure must be manufactured from steel and either galvanized, cadmium plated, or powder coated.

### 86-1.02Q Cabinets

### 86-1.02Q(1) General

Cabinets must be factory wired except for battery backup system cabinets.

The fasteners on the exterior of a cabinet, except for battery backup system cabinets, must be removable and vandal resistant. The exterior screws, nuts, bolts, and washers must be stainless steel.

Terminal blocks, circuit breakers, and a power supply must be UL approved.

### 86-1.02Q(2) Department-Furnished Controller Cabinets

A Department-furnished controller assembly consists of a Model 170E or 2070E controller unit, a wired controller cabinet, and all auxiliary equipment required to operate the system. The Department does not furnish anchor bolts.

### 86-1.02Q(3) Controller Cabinets

The controller cabinet must be a Model 334L, comply with TEES, and be on the Authorized Material List for traffic signal control equipment. The cabinet must have 3 drawer shelves. Each shelf must be attached to the tops of 2 supporting angles with 4 screws.

### 86-1.02Q(4) Telephone Demarcation Cabinets

### 86-1.02Q(4)(a) General

The doors of a telephone demarcation cabinet must be attached using continuous stainless steel piano hinges.

### 86-1.02Q(4)(b) Type A Telephone Demarcation Cabinets

Reserved

### 86-1.02Q(4)(c) Type B Telephone Demarcation Cabinets

A Type B telephone demarcation cabinet consists of a mounting panel, outlets, circuit breaker, fan, dead front plates, and fuse.

The mounting panel must be made of 3/4-inch-thick ACX-grade plywood.

The mounting panel must be fastened to the cabinet with nuts, lock washers, and flat washers to 10 welded studs.

The cabinet must be made of 0.125-inch-thick anodized aluminum.

The cabinet door must be hung and secured with drawn latches, lockable with a padlock. The padlock latches must each have a minimum 7/16-inch-diameter hole.

Ventilation louvers must be located on the door.

The fan must be located in a ventilator housing and be controlled thermostatically. The thermostat control must have a range from 80 to 130 degrees F.

The thermostat and fan circuit must be protected with a fuse rated for 175 percent of the motor capacity. The fan capacity must be a minimum 25 cfm.

# 86-1.02Q(4)(d) Type C Telephone Demarcation Cabinets

Reserved

# 86-1.02Q(5) Battery Backup System Cabinets

The cabinet for a battery backup system must comply with TEES and be on the Authorized Material List for traffic signal control equipment.

# 86-1.02R Signal Heads

### 86-1.02R(1) General

A signal head consists of a signal mounting assembly, backplate, and signal face.

The head must have a terminal block attached to the back of one housing. The terminal block must have enough positions to accommodate all indications. Each position must be permanently labeled for the indications used.

The metal signal heads must not fracture or deflect more than half the lens diameter when tested under California Test 666.

The plastic signal heads must not fracture or deflect when tested under California Test 605.

The deflection must not be more than 10 degrees in either the vertical or horizontal plane after the wind load has been removed from the front of the signal face or more than 6 degrees in either the vertical or horizontal plane after the wind load has been removed from the back of the signal face.

### 86-1.02R(2) Signal Mounting Assemblies

Signal mounting assembly must include:

- 1. 1-1/2-inch-diameter steel pipe or galvanized conduit
- 2. Pipe fitting made of ductile iron, galvanized steel, bronze, or aluminum alloy, Type AC-84B, no. 380
- 3. Mast arm and post-top slip fitters and terminal compartments made of cast bronze or hot-dip galvanized ductile iron

The horizontal distance between the vertical centerlines of the terminal compartment or slip fitter and of each signal face must not exceed 11 inches except where required for proper signal face alignment or to allow programming of programmed visibility signal sections.

The mounting assembly must be watertight and free of sharp edges or protrusions that might damage conductor insulation. The assembly must have positive-locking serrated fittings that prevent signal faces from rotating when the fittings are mated with similar fittings on the faces.

Each terminal compartment must be fitted with a terminal block having a minimum of 12 positions, each with 2 screw-type terminals. Each terminal must accommodate at least five no. 14 conductors. The terminal compartment must have a cover for easy access to the terminal block.

### 86-1.02R(3) Backplates

The backplate material must be a homogeneous black color with a lusterless finish.

A metal backplate must be made of a minimum 1/16-inch-thick 3001-14 aluminum.

A plastic backplate must have a minimum thickness of 1/16 inch and be formed from sheet plastic or assembled from extruded, molded, or cast plastic sections. Sections must be factory joined using one of the following:

- 1. Appropriate solvent cement.
- 2. Aluminum rivets and washers painted or permanently colored to match the backplate.
- 3. No. 10 machine screws with flat washers, lock washers, and nuts painted to match the backplate.

Each plastic backplate must be secured to the plastic signal face such that it resists removal or permanent deformation.

### 86-1.02R(4) Signal Faces

Signal face consists of signal sections with signal housings, LED modules, and visors.

Signal face must:

- 1. Be adjustable and allow for 360-degree rotation about the vertical axis
- Comply with ITE publications ST-052-E, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement and ST-054, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement
- 3. Be sealed with a neoprene gasket at the top opening

A metal signal face must have a metal backplate and visor.

A plastic signal face must have a plastic backplate and visor.

If a signal face is supported by a Type MAS slip fitter, spacers are required between the 2 sections. The spacers must be made of the same material as the housing. The vertical dimension of the spacers must allow proper seating of the serrations between the slip fitter and the 2 sections. The 2 sections must be joined with at least two no. 10 minimum machine screws through holes near the front of the housing and the spacers and matching holes in a reinforcing plate installed in the housing.

# 86-1.02R(4)(a) Signal Sections

# 86-1.02R(4)(a)(i) General

Signal section must have:

- 1 Opening at the top and bottom for a 1-1/2-inch pipe
- 2. Maximum height of 10-1/4 inches for an 8-inch section and 14-3/4 inches for a 12-inch section
- 3. Hinge pins, door-latching devices, and other exposed hardware manufactured of Type 304/304L or 305 stainless steel
- 4. Interior screws and fittings manufactured of stainless steel or steel with a corrosion-resistant plating or coating
- 5. Gaskets made of a material that is not degraded if installed in a section with metal or plastic housing

Sections must be capable of being joined together to form a signal face in any combination. This interchangeability is not required between metal and plastic sections.

Each section must be joined to an adjacent section by one of the following:

- 1. Minimum of 3 machine screws for 8-inch sections and 4 machine screws for 12-inch sections, installed through holes near the front and back of the housing. Each screw must be a no. 10 and have a nut, flat washer, and lock washer.
- 2. 2 machine screws, each with a nut, flat washer, and lock washer, installed through holes near the front of the housing and a fastener through the 1-1/2-inch pipe opening. The fastener must have 2 large, flat washers to distribute the load around the pipe's opening and 3 carriage bolts, each with a nut and lock washer. The minimum screw size must be no. 10, and the carriage bolt size must be 1/4 inch.

The holes for the machine screws must be either cast or drilled during signal section fabrication. Each hole must be surrounded by a minimum 1/8-inch-wide boss to allow contact between signal sections about the axis of the hole.

A serrated nylon washer must be inserted between each plastic signal section and the metal mounting assembly. Each serrated nylon washer must be from 3/16 to 1/4 inch thick. The serrations must match those on the signal section and the mounting assembly.

# 86-1.02R(4)(a)(ii) Programmed Visibility Signal Sections

Programmed visibility signal section must have:

- 1. Nominal 12-inch-diameter circular or arrow indication
- 2. Cap visor
- 3. Adjustable connection that:
  - 3.1. Provides incremental tilting from 0 to 10 degrees above or below the horizontal
  - 3.2. Maintains a common vertical axis through couplers and mountings

The terminal connection must allow external adjustment about the mounting axis in 5-degree increments.

The visibility of each signal section must be capable of adjustment or programming within the section.

The adjustment for the section must be preset at 4 degrees below the horizontal.

### 86-1.02R(4)(a)(iii) Signal Housings

The signal housing must:

- 1. Be die-cast aluminum, permanent mold-cast aluminum, or if specified, structural plastic
- Comply with ITE publications ST-052-E, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement and ST-054, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement if made of die-cast or permanent mold-cast aluminum
- 3. Have a 1-piece, hinged, square-shaped door that is:
  - 3.1. Designed to allow access for replacement of modules without the use of tools
  - 3.2. Secured such that it remains closed during loading tests
- 4. Have a watertight module or lens mounted in the door
- 5. Have a terminal block attached to the back, with the terminals permanently labeled for conductors to facilitate field wiring

Each housing must have reinforcement plates. Reinforcement plates must be either sheet aluminum, galvanized steel, or cast aluminum. Each plate must have a minimum thickness of 0.11 inch and a hole concentric with a 1-1/2-inch pipe-mounting hole in the housing. Reinforcement plates must be placed as specified in the following table:

Material	Placement
Chart aluminum	Incide and sutside of housing
Sheet aluminum	Inside and outside of housing
Galvanized steel	Inside of housing
Cast aluminum	Outside of housing

### **Reinforcement Plate Placement**

Reinforcement plates placed outside of the housing must be finished to match the signal housing color and be designed to allow a proper serrated coupling between the signal face and the mounting hardware. A minimum of three no. 10 machine screws must be installed through holes in each plate and matching holes in the housing. Each screw must have a round or binder head, a nut, and a lock washer.

A metal housing must have a metal visor.

Plastic housing must:

- 1. Be molded in a single piece or fabricated from 2 or more pieces joined into a single piece
- 2. Be a black color throughout, including the door, matching color no. 17038, 27038, or 37038 of FED-STD-595
- 3. Have UV stability
- 4. Be self-extinguishing

If reinforcing webs are used to connect the back of the housing to the top, bottom, and sides of the adjacent housing, reinforcement plates are not required.

The exterior of the housing must be painted as specified in sections 78-4.08 and 59.

### 86-1.02R(4)(b) LED Signal Modules

An LED signal module must be on the Authorized Material List for LED traffic signal modules.

An LED signal module must comply with ITE publications ST-052-E, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement and ST-054, Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement, except:

- 1. Maximum module weight must be 4 lb
- 2. Module must be a sealed unit with:

- 2.1. 2 color-coded conductors for the power connection except lane control modules must use 3 color-coded conductors
- 2.2. Printed circuit board that complies with TEES, chapter 1, section 6
- 2.3. Lens that is:
  - 2.3.1. Convex or flat with a smooth outer surface
  - 2.3.2. Made of UV-stabilized plastic or glass
- 2.4. 1-piece EPDM gasket
- 3. Module must include 3-foot-long conductors with attached quick-disconnect terminals
- 4. Identification must include:
  - 4.1. Month and year of manufacture
  - 4.2. 1-inch-diameter symbol of the module type with the module color written adjacent to the symbol in 0.50-inch-high letters
- 5 LED must be the ultra-bright type rated for 100,000 hours of continuous operation
- 6. Module must have an integral power supply

Individual LEDs must be wired such that a loss or failure of 1 LED will not result in a loss of more than 5 percent of the module's light output. Failure of an individual LED in a string must not result in a loss of an entire string or other indication.

The symbol for a 12-inch U-turn section must be a 15/16-inch-wide inverted U with an arrow on the left end.

A lane control section must be a combination module with a red X and green arrow. The conductor function and color code must be as shown in the following table:

Function	Color	
Neutral	White	
Red X	Red	
Green arrow	Brown	

### **Conductor Function and Color Code**

The minimum power consumption for an LED signal module must be 5 W.

The maximum power consumption for an LED signal module must be as shown in the following table:

LED signal module		Power consumption (W)				
-	F	Red	Yell	ow	Gre	een
type	25 °C	74 °C	25 °C	74 °C	25 °C	74 °C
8-inch circular	8	13	13	16	12	12
12-inch circular	11	17	22	25	15	15
12-inch arrow	9	12	10	12	11	11
12-inch U-turn	9	12	10	12	11	11
Bicycle	11	17	22	25	15	15
Programmed visibility	11	17	22	25	15	15
Lane control (X)	9	12				
Lane control (Arrow)					11	11

### Maximum Power Consumption

Red and green LED signal modules operating over a temperature range from -40 to 74 degrees C and yellow LED signal modules operating at 25 degrees C must maintain the minimum illumination values for 48 months as shown in the following tables:

	Intensities (cd)					
	8-inch				12-inch	
Angle (v,h)	Red	Yellow	Green	Red	Yellow	Green
2.5, ±2.5	133	267	267	339	678	678
2.5, ±7.5	97	194	194	251	501	501
2.5, ±12.5	57	113	113	141	283	283
2.5, ±17.5	25	48	48	77	154	154
7.5, ±2.5	101	202	202	226	452	452
7.5, ±7.5	89	178	178	202	404	404
7.5, ±12.5	65	129	129	145	291	291
7.5, ±17.5	41	81	81	89	178	178
7.5, ±22.5	18	37	37	38	77	77
7.5, ±27.5	10	20	20	16	32	32
12.5, ±2.5	37	73	73	50	101	101
12.5, ±7.5	32	65	65	48	97	97
12.5, ±12.5	28	57	57	44	89	89
12.5, ±17.5	20	41	41	34	69	69
12.5, ±22.5	12	25	25	22	44	44
12.5, ±27.5	9	16	16	16	32	32
17.5, ±2.5	16	32	32	22	44	44
17.5, ±7.5	14	28	28	22	44	44
17.5, ±12.5	10	20	20	22	44	44
17.5, ±17.5	9	16	16	22	44	44
17.5, ±22.5	6	12	12	20	41	41
17.5, ±27.5	4	9	9	16	32	32

**Minimum Maintained Intensities for Circular Indications** 

### **Minimum Maintained Luminance for Indications**

Indication type		Luminance (fL	.)
Indication type	Red	Yellow	Green
Arrow	1,610	3,210	3,210
U-turn	1,610	3,210	3,210
Bicycle	1,610	1,610	1,610
Lane control (X)	1,610		
Lane control (Arrow)			1,610

#### Minimum Maintained Luminance for Programmed Visibility Indications

	Luminance (cd)		
Indication type	Red	Yellow	Green
PV at angle v=2.5, h=±2.5	314	314	314

Conductors must be prewired to the terminal block.

# 86-1.02R(4)(c) Visors and Directional Louvers

The visor must be a tunnel type.

The visor must have a downward tilt from 3 to 7 degrees with a minimum length of 9-1/2 inches for nominal 12-inch round lenses and 7 inches for nominal 8-inch round lenses.

A metal visor must be formed from minimum 0.050-inch-thick aluminum alloy sheet.

A plastic visor must be either formed from sheet plastic or blow-molded. The plastic must be a black homogeneous color with a lusterless finish. A visor must withstand a wind load applied to its side for 24

hours without permanent deformation or removal from its door when tested under California Test 605 for plastic visors and California Test 666 for metal visors.

If directional louvers are used, the louvers must fit into full-circular signal visors. Louvers must consist of one of the following:

- 1. Outside cylinder constructed of sheet steel with a minimum nominal thickness of 0.030 inch and vanes constructed of sheet steel with a minimum nominal thickness of 0.016 inch.
- 2. Outside cylinder and vanes constructed of 5052-H32 aluminum alloy of equal thickness.

### 86-1.02S Pedestrian Signal Heads

### 86-1.02S(1) General

A pedestrian signal head consists of a pedestrian signal mounting assembly and a pedestrian signal face comprising of a pedestrian signal housing, an LED countdown pedestrian signal face module, and a front screen.

### 86-1.02S(2) Pedestrian Signal Mounting Assemblies

A pedestrian signal mounting assembly must comply with the specifications for a signal mounting assembly in section 86-1.02R, except mast arm slip fitters are not required.

### 86-1.02S(3) Pedestrian Signal Faces

### 86-1.02S(3)(a) General

Each pedestrian signal face must include a light-duty terminal block rated at 5 A and have 12 positions with no. 6-by-1/8-inch binder head screws. Each position must have 1 screw-type terminal.

The wiring and terminal block must comply with ITE publication ST-055-E, *Pedestrian Traffic Control Signal Indicators: Light Emitting Diode (LED) Signal Modules*.

### 86-1.02S(3)(b) Pedestrian Signal Housings

Pedestrian signal housing must comply with the specifications for a signal housing in 86-1.02R(4)(a)(iii), except the maximum overall dimensions must be 18-1/2 inches wide, 19 inches high, and 11-1/2 inches deep and without:

- 1. Visor
- 2. Watertight module or lens mounted in the door
- 3. Reinforcement plates

The housing must have a terminal block attached to the back. The terminal block must have enough positions to accommodate all indications. Each position must be permanently labeled for the indications used.

### 86-1.02S(3)(c) LED Countdown Pedestrian Signal Face Modules

An LED countdown PSF module must comply with ITE publication ST-055-E, *Pedestrian Traffic Control Signal Indicators: Light Emitting Diode (LED) Signal Modules*, except the material must comply with ASTM D3935 and the module must have:

- 1. Ultra-bright-type LED rated for 100,000 hours of continuous operation.
- 2. Lot number and month and year of manufacture permanently marked on the back of the module
- 3. Prominent and permanent vertical markings for accurate indexing and orientation within the pedestrian signal housing if a specific mounting orientation is required. Markings must be a minimum of 1 inch in height and include an up arrow and the word *up* or *top*.
- 4. Circuit board complying with TEES, chapter 1, section 6.

Individual LEDs must be wired such that a loss or failure of 1 LED will not result in a loss of more than 5 percent of the module's light output. Failure of an individual LED in a string must not result in a loss of an entire string or other indication.

Each symbol must be at least 9 inches high and 5-1/4 inches wide. The 2-digit countdown timer, *Upraised Hand*, and *Walking Person* indications must be electronically isolated from each other. The 3 indications must not share a power supply or interconnect circuitry.

The module must operate over the specified ambient temperature and voltage range and be readable both day and night at distances up to the full width of the area to be crossed. Upon initial testing at 25 degrees C, the module must have at least the luminance values shown in the following table:

PSF module symbol	Luminance			
Upraised hand and 2-	1,094			
digit countdown timer (fL)				
Walking person (fL)	1,547			

#### **Luminance Values**

The module must not exceed the power consumption requirements shown in the following table:

Maximum Power Consumption Requirements				
PSF module display	At 24 °C	At 74 °C		
Upraised Hand	10.0 W	12.0 W		
Walking Person	9.0 W	12.0 W		
2-digit countdown timer	6.0 W	8.0 W		

#### Maximum Power Consumption Requirements

# 86-1.02S(3)(d) Front Screen

Pedestrian signal face must have a front screen that is one of the following types:

- 1. 3/8-inch-thick aluminum honeycomb screen with 0.2-inch-wide cells or a 1/2-inch-thick plastic screen with 3/8-inch-wide squares with 1/16-inch wall thickness that:
  - 1.1. Is installed so it tilts downward at an angle of  $15 \pm 2$  degrees from the top and completely covers the message plate.
  - 1.2. Includes a clear front cover made of either a minimum 1/8-inch-thick acrylic plastic sheet or a minimum 1/16-inch-thick polycarbonate plastic.
  - 1.3. Is held firmly in place, including the cover, with stainless steel or aluminum clips or stainless steel metal screws.
- 2. Polycarbonate screen that:
  - 2.1. Has a nominal thickness of 1/32 inch.
  - 2.2. Is a 1-1/2-inch-deep eggcrate or Z-crate type.
  - 2.3. Is mounted in a frame constructed of aluminum alloy or polycarbonate with a minimum thickness of 0.040 inch.
  - 2.4. Is held in place with stainless steel screws.

The screen and frame of a pedestrian signal face must be made of either (1) plastic that is a flat black color or (2) anodized aluminum that is a flat black color or finished with lusterless, black, exterior-grade latex paint formulated for application to metal surfaces.

# 86-1.02T Accessible Pedestrian Signals

Accessible pedestrian signal must comply with the California MUTCD, chapter 4E, and have:

- 1. Audible speech message that plays when the push button is actuated. The message must include the name of the street to be crossed. The accessible pedestrian signal must have at least 5 audible message options.
- 2. Push button locator tone that clicks or beeps.
- 3. Feature that activates the pedestrian phase during a failure of the audible message, locator tone, or vibrotactile device.

An accessible pedestrian signal must function with the Department-furnished Model 170E/2070E controller assembly.

No part of the accessible pedestrian signal must be installed inside the controller cabinet. Power for the accessible pedestrian signal must be from the pedestrian signal housing terminal block.

The housing for the signal assembly must be made of corrosion-resistant material. Theft-proof bolts used for mounting the housing to the standard must be stainless steel with a content of 17 percent chromium and 8 percent nickel. The housing must be shaped to fit the pole's curvature.

The color of a metallic housing must match color no. 33538 of FED-STD-595.

The color of a plastic housing must match color no. 17038, 27038, or 37038 of FED-STD-595.

Accessible pedestrian signal must:

- 1. Have electronic switches, a potentiometer, or an access port for a device for controlling and programming the volume level and messaging
- 2. Be weatherproof and shockproof

Enclosure for the accessible pedestrian signal must:

- 1. Weigh less than 7 lb
- 2. Measure less than 16 by 6 by 5 inches
- 3. Have a wiring hole with a diameter not exceeding 1-1/8 inches
- 5. Have a switch for a push button
- 6. Have a vibrotactile device on the push button or on the arrow
- 7. Have an internal weatherproof speaker and microphone that senses the ambient sound level

The separation between adjacent holes used for conductors and mounting must be at least twice the diameter of the larger hole.

The speaker grills must be located on the surface of the enclosure. The speakers must not interfere with the housing or its mounting hardware.

The conductor cable between the accessible pedestrian signal assembly and the pedestrian signal head must be a 9 no. 20 conductor cable complying with MIL-W-16878D.

### 86-1.02U Push Button Assemblies

The housing for a push button assembly must be made of die-cast aluminum, permanent mold-cast aluminum, or UV-stabilized self-extinguishing structural plastic. The plastic housing must have a color throughout that matches color no. 17038, 27038, or 37038 of FED-STD-595.

If the push button is to be attached to a pole, the housing must be shaped to fit the pole's curvature.

The assembly must be waterproof and shockproof.

The push button's switch must be a single-pole, double-throw switching unit with screw-type terminals rated 15 A at 125 V(ac).

Switch for the push button must have:

- 1. Plunger actuator and a U frame to allow recessed mounting in the push button housing
- 2. Operating force of 3.5 lb
- 3. Maximum pretravel of 5/64 inch
- 4. Minimum overtravel of 1/32 inch
- 5. Differential travel from 0.002 to 0.04 inch
- 6. Minimum 2-inch diameter actuator

# 86-1.02V Reserved

### 86-1.02W Loop Detector Sealants

### 86-1.02W(1) General

Sealant for filling loop detector slots must be one of the following:

- 1. Asphaltic emulsion
- 2. Elastomeric sealant
- 3. Epoxy sealant for inductive loops
- 4. Hot-melt rubberized asphalt

### 86-1.02W(2) Asphaltic Emulsion Sealant

Asphaltic emulsion sealant must comply with the State Specification 8040-41A-15.

# 86-1.02W(3) Elastomeric Sealant

Elastomeric sealant must be a polyurethane material that cures only in the presence of moisture if used within the stated shelf life. The sealant must be suitable for use in both asphalt concrete and concrete pavement.

The cured elastomeric sealant must comply with the requirements shown in the following table:

Quality characteristic	Test method	Requirement	
Hardness	ASTM D2240 ^a	65–85	
Tensile strength (min, MPa)	ASTM D412 ^b	3.45	
Elongation (min, %)	ASTIM D412*	400	
Flex at -40 °C°		No cracks	
Weathering resistance	ASTM D822 ^d	Slight chalking	
Salt spray resistance:			
Tensile strength (min, MPa)	ASTM B117 ^e	3.45	
Elongation (min, %)		400	
Dielectric constant (%)	ASTM D150 ^f	<25	

### Cured Elastomeric Sealant Requirements

^aIndentation at 25 °C and 50% relative humidity (Rex. Type A, Model 1700 only)

^bDie C pulled at 508 mm/minute

°0.6-mm free film bend (180°) over 13-mm mandrel

^dWeatherometer 350 h, cured 7 days at 25 °C and 50% relative humidity

°28 days at 38 °C with 5% NaCl, Die C, and pulled at 508 mm/minute)

^fChange over a temperature range from -30 to 50 °C

### 86-1.02W(4) Hot-Melt Rubberized Asphalt Sealant

Hot-melt rubberized asphalt sealant must:

- 1. Be in solid form at room temperature and fluid at an application temperature range from 190 to 205 degrees C
- 2. Not produce toxic fumes
- 3. Be suitable for use in both asphalt concrete and concrete pavement
- 4. Be packaged in containers clearly marked *Detector Loop Sealant* with the manufacturer's batch and lot number.

The cured hot-melt rubberized asphalt sealant must comply with the requirements shown in the following table:

Cured Hot-Melt Rubberized Asphalt Sealant Requirements			
Quality characteristic	Test method	Requirement	
Cone penetration (max, 1/10 mm)	ASTM D5329, sec. 6 ^a	35	
Flow (max, mm)	ASTM D5329, sec. 8 ^b	5	
Resilience (min, %)	ASTM D5329, sec. 12 ^c	25	
Softening point (min, °C)	ASTM D36	82	
Ductility (min, cm)	ASTM D113 ^d	30	
Flash point, Cleveland Open Cup (min, °C)	ASTM D92	288	
Viscosity (Pa·s)	ASTM D4402 ^e	2.5–3.5	
$a \wedge t \rightarrow c \rightarrow$			

#### Viscosity (Pa·s) ^aAt 25 °C, 150 g, 5 s ^bAt 60 °C ^cAt 25 °C

^dAt 25 °C, 5 cm/minute

^eBrookfield Thermosel, no. 27 spindle, 20 rpm, 190 °C

# 86-1.02X Reserved

# 86-1.02Y Transformers

A transformer must be single-phase and may be a nonsubmersible or submersible type.

A transformer must be a dry type designed for operation on a 60 Hz supply. The transformer must have a decal showing a connection diagram. The diagram must show either color coding or wire tagging with primary (H1, H2) or secondary (X1, X2) markers and the primary and secondary voltage and volt-ampere rating. A transformer must comply with the electrical requirements shown in the following table:

# **Transformer Electrical Requirements**

Quality characteristic	Requirement
Rating (V(ac))	120/480, 120/240, 240/480, or 480/120
Efficiency (%)	> 95
Secondary voltage regulation and tolerance from half load to full load (%)	±3

Secondary 240 and 480 V(ac) windings must be center tapped.

The transformer must withstand the application of 2,200 V(ac) from core to coils and from coil to coil for a 1-minute period when tested immediately after operation of the transformer at full load for 24 hours.

The external leads for the secondary connections must be no. 10 Type USE rated for 600 V(ac).

The transformer's leads must extend a minimum of 12 inches from the case.

The transformer's insulation must be NEMA 185 C or better.

Each transformer must:

- 1. Include metal half-shell coil protection.
- 2. Have moisture-resistant, synthetic-varnish-impregnated windings.
- 3. Be waterproof and suitable for outdoor operation.

Each submersible transformer must:

- 1. Include a handle and a hanger.
- 2. Be securely encased in a rugged, corrosion-resistant, watertight case.
- 3. Have leads that extend out through 1 or more sealed hubs.
- 4. Be manufactured to withstand a 5-day test with 12-hour on and off periods submerged in 2 feet of salt water that is 2 percent salt by weight. The operating periods must be at full load.

# 86-1.02Z Batteries

Battery must:

- 1. Be deep-cycle, sealed, prismatic, lead-calcium-based, absorbed-glass-mat, valve-regulated, lead-acid type
- 2. Be rated for 12 V
- 3. Be rated for a temperature range from -25 to 60 degrees C
- 4. Be group size 24
- 5. Be commercially available and stocked locally
- 6. Be marked with a date code, maximum recharge data, and recharge cycles
- 7. Be new and fully charged when furnished
- 8. Be free from damage or deformities
- 9. Have a carrying handle
- 10. Have 2 top-mounted, threaded-stud posts that include all washers and nuts
- 11. Include insulating rubber covers for protecting the lugs, posts, and wiring: red for the positive terminal and black for the negative terminal

If a battery is used for a battery backup system, it must accommodate 3/8-inch ring lugs of a Departmentfurnished battery harness.

# 86-1.03 CONSTRUCTION

Not Used

#### **Replace section 87 with:**

04-15-16

# 87 ELECTRICAL SYSTEMS

04-15-16

# 87-1 GENERAL

# 87-1.01 GENERAL

# 87-1.01A Summary

Section 87 includes general specifications for constructing and installing electrical systems.

The Department deducts the cost for maintenance performed by the Department on new or portions of existing systems modified under the Contract.

#### 87-1.01B Definitions

Reserved

87-1.01C Submittals

Reserved

#### 87-1.01D Quality Assurance

87-1.01D(1) General

Reserved

### 87-1.01D(2) Quality Control

Before shipping the material to the job site, submit to METS test samples of:

- 1. Accessible pedestrian signals
- 2. LED countdown pedestrian signal face modules
- 3. LED signal modules
- 4. LED luminaires

Submit a sample size as shown in the following table:

### **Electrical Material Sampling**

Contract quantity	Test sample size
1–8	1
9–15	2
16–25	3
26–90	5
91–150	8
151–280	13
281–500	20
501–1200	32

Before starting operation of an electrical system, perform a conductor test in the presence of the Engineer.

Conductor test consists of testing each conductor and the conductors in cables for:

- 1. Continuity.
- 2. Grounds.
- 3. Insulation resistance at 500 V(dc) between the circuit and ground. The insulation resistance must be a minimum of 10 M $\Omega$  on circuits, except it must be a minimum of 100 M $\Omega$  for inductive loop detector circuits.

Start the operational test of the system on any day except Friday or the day before a holiday. The operational test for signals must start from 9:00 a.m. to 2:00 p.m. Notify the Engineer 48 hours before starting the test.

An operational test consists of a minimum of 5 business days of continuous, satisfactory operation of the system. If the system fails, correct the problem and retest the system. A shutdown of the system caused by traffic, a power interruption, or unsatisfactory performance of Department-furnished materials does not constitute discontinuity of the test.

# 87-1.02 MATERIALS

Not Used

### 87-1.03 CONSTRUCTION

### 87-1.03A General

The Engineer determines the final locations of electrical systems.

Verify the locations of electrical systems and the depths of existing detectors, conduits, and pull boxes.

Notify the Engineer before performing work on the existing system.

You may shut down the system for alteration or removal.

Where an existing Department underground facility is shown within 10 feet of any excavation, locate and field mark the facility before performing work that could damage or interfere with the existing facility.

If an existing facility is within 2 feet of an excavation, determine the exact location of the facility by excavating with hand tools before using any power-operated or power-driven excavating or boring equipment. A vacuum excavator may be used if authorized.

Notify the Engineer immediately if an existing facility is damaged by your activities.

If existing underground conduit is to be incorporated into a new system, clean it with a mandrel or cylindrical wire brush and blow it clean with compressed air.

Limit the shutdown of traffic signal systems to normal working hours. Notify the local traffic enforcement agency before shutting down the signal.

Place temporary W3-1 and R1-1 signs in each direction to direct traffic through the intersection during shutdown of the signal. Place two R1-1 signs for 2-lane approaches. The signs must comply with part 2 of the *California MUTCD*.

Cover signal faces when the system is shut down overnight. Cover temporary W3-1 and R1-1 signs when the system is turned on.

If you work on an existing lighting system and the roadway is to remain open to traffic, ensure the system is in operation by nightfall.

Replace detectors you damage within 72 hours, or the Department replaces them and deducts the cost.

Work performed on an existing system not described is change order work.

Do not use electrical power from existing highway facilities unless authorized.

Maintain a minimum 48-inch clearance for a pedestrian pathway when placing equipment.

Except for service installation or work on service equipment enclosures, do not work above ground until all materials are on hand to complete the electrical work at each location.

Bond all metal components to form a continuous grounded system as specified in NEC.

Ground metallic equipment mounted less than 8 feet above the ground surface on a wood pole.

If you damage any portion of a concrete curb, sidewalk, curb ramp, driveway, or gutter depression, replace the entire section between contraction or expansion joints under section 73.

Apply equipment identification characters.

Orient louvers, visors, and signal faces such that they are clearly visible to approaching traffic from the direction being controlled.

Test loops and the detector lead-in cable circuit for continuity, ground, and insulation resistance at the controller cabinet before connecting detector lead-in cable to the terminal block.

Perform an operational test of the systems.

Before starting the operational test for systems that impact traffic, the system must be ready for operation, and all signs, pavement delineation, and pavement markings must be in place at that location.

#### 87-1.03B Conduit Installation

#### 87-1.03B(1) General

The installation of conduit includes installing caps, bushings, and pull tape and terminating the conduit in pull boxes, foundations, poles, or a structure.

Limit the number of bends in a conduit run to no more than 360 degrees between pull points.

Use conduit to enclose conductors except where they are installed overhead or inside standards or posts.

You may use a larger size conduit than specified for the entire length between termination points. Do not use a reducing coupling.

Extend an existing conduit using the same material. Terminate conduits of different materials in a pull box.

Install 2 conduits between a controller cabinet and the adjacent pull box.

Use a minimum trade size of conduit of:

- 1. 1-1/2 inches from an electrolier to the adjacent pull box
- 2. 1 inch from a pedestrian push button post to the adjacent pull box
- 3. 2 inches from a signal standard to the adjacent pull box
- 4. 3 inches from a controller cabinet to the adjacent pull box
- 5. 2 inches from an overhead sign to the adjacent pull box
- 6. 2 inches from a service equipment enclosure to the adjacent pull box
- 7. 1-1/2 inches if unspecified

Use Type 1 conduit:

- 1. On all exposed surfaces
- 2. In concrete structures
- 3. Between a structure and the nearest pull box

Ream the ends of shop-cut and field-cut conduit to remove burrs and rough edges. Make the cuts square and true. Do not use slip joints and running threads to couple conduit. If a standard coupling cannot be used for metal-type conduit, use a threaded union coupling. Tighten the couplings for metal conduit to maintain a good electrical connection.

Cap the ends of conduit to prevent debris from entering before installing the conductors or cables. Use a plastic cap for Type 1, 2, and 5 conduits and a standard pipe cap for all other types of conduit.

For Type 1, 2, and 5 conduits, use threaded bushings and bond them using a jumper. For other types of conduit, use nonmetallic bushings.

Do not install new conduit through foundations.

Cut Type 2 conduit with pipe cutters; do not use hacksaws. Use standard conduit-threading dies for threading conduit. Tighten conduit into couplings or fittings using strap wrenches or approved groove joint pliers.

Cut Type 3 conduit with tools that do not deform the conduit. Use a solvent weld for connections.

Protect shop-cut threads from corrosion under the standards shown in the following table:

Conduit	Standard	
Types 1 and 2	ANSI C80.1	
Туре 5	ANSI C80.6	

# Shop-Cut Thread Corrosion Protection

Apply 2 coats of unthinned, organic zinc-rich primer to metal conduit before painting. Use a primer on the Authorized Material List for organic zinc-rich primers. Do not use aerosol cans. Do not remove shop-installed conduit couplings.

For conduits, paint:

- 1. All exposed threads
- 2. Field-cut threads, before installing conduit couplings to metal conduit
- 3. Damaged surfaces on metal conduit

If a Type 2 conduit or conduit coupling coating is damaged:

- 1. Clean the conduit or fitting and paint it with 1 coat of rubber-resin-based adhesive under the manufacturer's instructions
- 2. Wrap the damaged coating with at least 1 layer of 2-inch-wide, 20 mils-minimum-thickness, PVC tape under ASTM D1000 with a minimum tape overlap of 1/2 inch

You may repair damaged spots of 1/4 inch or less in diameter in the thermoplastic coating by painting with a brushing-type compound supplied by the conduit manufacturer.

If factory bends are not used, bend the conduit to a radius no less than 6 times its inside diameter without crimping or flattening it. Comply with the bending requirements shown in the following table:

Conduct-Dentaing requirements	
Туре	Requirement
1	Use equipment and methods under the conduit manufacturer's instructions.
2	Use a standard bending tool designed for use on thermoplastic-coated conduit. The conduit must be free of burrs and pits.
3	Use equipment and methods under the conduit manufacturer's instructions. Do not expose the conduit to a direct flame.
5	Use equipment and methods under the conduit manufacturer's instructions.

### **Conduit-Bending Requirements**

Install pull tape with at least 2 feet of slack in each end of the conduit that will remain empty. Attach the tape's ends to the conduit.

Install conduit terminating in a standard or pedestal from 2 to 3 inches above the foundation. Slope the conduit toward the handhole opening.

Terminate conduit installed through the bottom of a nonmetallic pull box 2 inches above the bottom and 2 inches from the wall closest to the direction of the run.

# 87-1.03B(2) Conduit Installation for Structures

# 87-1.03B(2)(a) General

Paint exposed Type 1 conduit the same color as the structure.

Install galvanized steel hangers, steel brackets, and other fittings to support conduit in or on a wall or bridge.

### 87-1.03B(2)(b) New Structures

Seal and make watertight the conduits which lead to soffits, wall-mounted luminaires, other lights, and fixtures located below the pull box grade.

If you place a conduit through the side of a nonmetallic pull box, terminate the conduit 2 inches from the wall and 2 inches above the bottom. Slope the conduit toward the top of the box to facilitate pulling conductors.

For ease of installation and if authorized, you may use Type 4 conduit instead of Type 1 conduit for the final 2 feet of conduit entering a pull box in a reinforced concrete structure.

Install an expansion fitting where a conduit crosses an expansion joint in a structure. Each expansion fitting for metal conduit must include a copper bonding jumper having the ampacity as specified in NEC.

Install an expansion-deflection fitting for an expansion joint with a 1-1/2-inch movement rating. The fitting must be watertight and include a molded neoprene sleeve, a bonding jumper, and 2 silicon bronze or zinc-plated iron hubs.

For an expansion joint with a movement rating greater than 1-1/2 inches, install the expansion-deflection fitting as shown.

For conduit installed inside of bridge structures, you must:

- 1. Install precast concrete cradles made of minor concrete and commercial-quality welded wire fabric. The minor concrete must contain a minimum of 590 lb of cementitious material per cubic yard. The cradles must be moist cured for a minimum of 3 days.
- 2. Bond precast concrete cradles to a wall or bridge superstructure with one of the following:
  - 2.1. Epoxy adhesive for bonding freshly-mixed concrete to hardened concrete.
  - 2.2. Rapid-set epoxy adhesive for pavement markers.
  - 2.3. Standard-set epoxy adhesive for pavement markers.
- 3. Use a pipe sleeve or form an opening for a conduit through a bridge superstructure. The sleeve or opening through a prestressed member or conventionally reinforced precast member must be:
  - 3.1. Oriented transverse to the member.
  - 3.2. Located through the web.
  - 3.3. No more than 4 inches in size.
- 4. Wrap the conduit with 2 layers of asphalt felt building paper and securely tape or wire the paper in place for a conduit passing through a bridge abutment wall. Fill the space around the conduit with mortar under section 51-1, except the proportion of cementitious material to sand must be 1 to 3. Fill the space around the conduits after prestressing is completed.

Thread and cap a conduit installed for future use in structures. Mark the location of the conduit's end in a structure, curb, or wall directly above the conduit with a Y that is 3 inches tall.

### 87-1.03B(2)(c) Existing Structures

Run surface-mounted conduit straight and true, horizontal or vertical on the wall, and parallel to walls on ceilings or similar surfaces. Support the conduit at a maximum of 5-foot intervals where needed to prevent vibration or deflection. Support the conduit using galvanized, malleable-iron, conduit clamps, and clamp backs secured with expansion anchorage devices complying with section 75-3.02C. Use the largest diameter of galvanized, threaded studs that will pass through the mounting hole in the conduit clamp.

### 87-1.03B(3) Conduit Installation Underground

### 87-1.03B(3)(a) General

Install conduit to a depth of:

- 1. 14 inches for the trench-in-pavement method
- 2. 18 inches, minimum, under sidewalk and curbed paved median areas
- 3. 42 inches, minimum, below the bottom of the rail of railroad tracks

4. 30 inches, minimum, everywhere else below grade

Place conduit couplings at a minimum of 6 inches from the face of a foundation.

Place a minimum of 2 inches of sand bedding in a trench before installing Type 2 or Type 3 conduit and 4 inches of sand bedding over the conduit before placing additional backfill material.

If installing conduit within the limits of hazardous locations as specified in NEC for Class I, division 1, install and seal Type 1 or Type 2 conduit with explosion-proof sealing fittings.

#### 87-1.03B(3)(b) Conduit Installation under Paved Surfaces

You may lay conduit on existing pavement within a new curbed median constructed on top.

Install conduit under existing pavement by the jacking or drilling methods. You may use the trench-inpavement method for either of the following conditions:

- 1. If conduit is to be installed behind the curb under the sidewalk
- 2. If the delay to vehicles will be less than 5 minutes

Do not use the trench-in-pavement method for conduit installations under freeway lanes or freeway-tofreeway connector ramps.

### 87-1.03B(3)(c) Reserved

#### 87-1.03B(3)(d) Conduit Installation under Railroad Tracks

Install Type 1 or Type 2 conduit with a minimum diameter of 1-1/2 inches under railroad tracks. If you use the jacking or drilling method to install the conduit, construct the jacking pit a minimum of 13 feet from the tracks' centerline at the near side of the pit. Cover the jacking pit with planking if left overnight.

### 87-1.03B(4) Reserved

#### 87-1.03B(5) Conduit Installation by the Jacking or Drilling Method

Keep the jacking or drilling pit 2 feet away from the pavement's edge. Do not weaken the pavement or soften the subgrade with excessive use of water.

If an obstruction is encountered, obtain authorization to cut small holes in the pavement to locate or remove the obstruction.

You may install Type 2 or Type 3 conduit under the pavement if a hole larger than the conduit's diameter is predrilled. The predrilled hole must be less than one and half the conduit's diameter.

Remove the conduit used for drilling or jacking and install new conduit for the completed work.

### 87-1.03B(6) Conduit Installation by the Trenching-In-Pavement Method

Install conduit by the trenching-in-pavement method using a trench approximately 2 inches wider than the conduit's outside diameter but not exceeding 6 inches in width.

Where additional pavement is to be placed, you must complete the trenching before the final pavement layer is applied.

If the conduit shown is to be installed under the sidewalk, you may install it in the street within 3 feet of and parallel to the face of the curb. Install pull boxes behind the curb.

Cut the trench using a rock-cutting excavator. Minimize the shatter outside the removal area of the trench.

Dig the trench by hand to the required depth at pull boxes.

Place conduit in the trench.

Backfill the trench with minor concrete to the pavement's surface by the end of each work day. If the trench is in asphalt concrete pavement and no additional pavement is to be placed, backfill the top 0.10 foot of the trench with minor HMA within 3 days after trenching.

# 87-1.03C Installation of Pull Boxes 87-1.03C(1) General

Install pull boxes no more than 200 feet apart.

You may install larger pull boxes than specified or shown and additional pull boxes to facilitate the work except in structures.

Install a pull box on a bed of crushed rock and grout it before installing conductors. The grout must be from 0.5 to 1 inch thick and sloped toward the drain hole. Place a layer of roofing paper between the grout and the crushed rock sump. Make a 1-inch drain hole through the grout at the center of the pull box.

Set the pull box such that the top is 1-1/4 inches above the surrounding grade in unpaved areas and leveled with the finished grade in sidewalks and other paved areas.

Place the cover on the box when not working in it.

Grout around conduits that are installed through the sides of the pull box.

Bond and ground the metallic conduit before installing conductors and cables in the conduit.

Bond metallic conduits in a nonmetallic pull box using bonding bushings and bonding jumpers.

Do not install pull boxes in concrete pads, curb ramps, or driveways.

Reconstruct the sump of a pull box if disturbed by your activities. If the sump was grouted, remove and replace the grout.

### 87-1.03C(2) Nontraffic Pull Boxes

If you bury a nontraffic pull box, set the box such that the top is 6 to 8 inches below the surrounding grade. Place a 20-mil-thick plastic sheet made of HDPE or PVC virgin compounds to prevent water from entering the box.

Place mortar between a nontraffic pull box and a pull box extension.

Where a nontraffic pull box is in the vicinity of curb in an unpaved area, place the box adjacent to the back of the curb if practical.

Where a nontraffic pull box is adjacent to a post or standard, place the box within 5 feet upstream from traffic if practical.

If you replace the cover on a nontraffic pull box, anchor it to the box.

### 87-1.03C(3) Traffic Pull Boxes

Place minor concrete around and under a traffic pull box.

Bolt the steel cover to the box when not working in it.

Bond the steel cover to the conduit with a jumper and bolt it down after installing the conductors and cables.

### 87-1.03C(4) Structure Pull Boxes

Bond metallic conduit in a metal pull box in a structure using locknuts, inside and outside of the box, bonding bushings, and bonding jumpers connected to bonding wire running in the conduit system.

### 87-1.03D Reserved

### 87-1.03E Excavating and Backfilling for Electrical Systems

### 87-1.03E(1) General

Notify the Engineer at least 72 hours before starting excavation activities.

Dispose of surplus excavated material.

Restrict closures for excavation on a street or highway to 1 lane at a time unless otherwise specified.

# 87-1.03E(2) Trenching

Dig a trench for the electrical conduits or direct burial cables. Do not excavate until the conduit or direct burial cable will be installed.

Place excavated material in a location that will not interfere with traffic or surface drainage.

After placing the conduit or direct burial cable, backfill the trench with the excavated material. Compact the backfill placed outside the hinge point of slopes and not under pavement to a minimum relative compaction of 90 percent.

Compact the backfill placed within the hinge points and in areas where pavement is to be constructed to a minimum relative compaction of 95 percent.

Restore the sidewalks, pavement, and landscaping at a location before starting excavation at another location.

### 87-1.03E(3) Concrete Pads, Foundations, and Pedestals

Construct foundations for standards, poles, metal pedestals, and posts under section 56-3.

Construct concrete pads, foundations, and pedestals for controller cabinets, telephone demarcation cabinets, and service equipment enclosures on firm ground.

Install anchor bolts using a template to provide proper spacing and alignment. Moisten the forms and ground before placing the concrete. Keep the forms in place until the concrete sets for at least 24 hours to prevent damage to the surface.

Use minor concrete for pads, foundations, and pedestals.

In unpaved areas, place the top of the foundation 6 inches above the surrounding grade, except place the top:

- 1. 1 foot 6 inches above the grade for Type M and 336L cabinets
- 2. 1 foot 8 inches above the grade for Type C telephone demarcation cabinets
- 3. 2 inches above the grade for Type G and Type A cabinets and Type III service equipment enclosures

The pad must be 2 inches above the surrounding grade.

In and adjacent to the sidewalk and other paved areas, place the top of the foundation 4 inches above the surrounding grade, except place the top:

- 1. 1 foot 6 inches above the grade for Type M and 336L cabinets
- 2. 1 foot 8 inches above the grade for Type C telephone demarcation cabinets
- 3. Level with the finished grade for Type G and Type A cabinets and Type III service equipment enclosures

The pad must be level with the finished grade.

Apply an ordinary surface finish under section 51-1.03F.

Allow the foundation to cure for at least 7 days before installing any equipment.

### 87-1.03F Conductors and Cable Installations

### 87-1.03F(1) General

The installation of conductors and cables includes splicing conductors and attaching the terminals and connectors to the conductors.

Clean the conduit and pull all conductors and cables as a unit.

If new conductors or cables are to be added in an existing conduit:

- 1 Remove the content
- 2. Clean the conduit
- 3. Pull both old and new conductors and cables as a unit

Wrap conductors and secure cables to the end of the conduit in a pull box.

Seal the ends of conduits with a sealing compound after installing conductors or cables.

Neatly arrange conductors and cables inside pull boxes and cabinets. Tie the conductors and cables together with self-clinching nylon cable ties or enclose them in a plastic tubing or raceway.

Identify conductors and cables by direct labeling, tags, or bands fastened in such a way that they will not move. Use mechanical methods for labeling.

Provide band symbol identification on each conductor or each group of conductors comprising a signal phase in each pull box and near the end of terminated conductors.

Tape the ends of unused conductors and cables in pull boxes to form a watertight seal.

Do not connect the push-button or accessible pedestrian signal neutral conductor to the signal neutral conductor.

87-1.03F(2) Cables 87-1.03F(2)(a) General Reserved

87-1.03F(2)(b) Reserved 87-1.03F(2)(c) Copper Cables 87-1.03F(2)(c)(i) General Reserved

### 87-1.03F(2)(c)(ii) Detector Lead-in Cables

Install a Type B or C detector lead-in cable in conduit.

Waterproof the ends of the lead-in cable before installing it in the conduit to prevent moisture from entering the cable.

Splice loop conductors for each direction of travel for the same phase, terminating in the same pull box, to a separate lead-in cable running from the pull box adjacent to the loop detector to a sensor unit mounted in the controller cabinet. Install the lead-in cable without splices except at the pull box.

Verify in the presence of the Engineer that the loops are operational before making the final splices between loop conductors and the lead-in cable.

Identify and tag each lead-in cable with the detector designation at the cabinet and pull box adjacent to the loops.

### 87-1.03F(2)(c)(iii) Conductors Signal Cables

Do not splice signal cables except for a 28-conductor cable.

Provide identification at the ends of terminated conductors in a cable as shown.

Provide identification for each cable in each pull box showing the signal standard to which it is connected except for the 28-conductor cable.

Connect conductors in a 12-conductor cable as shown in the following table:

Color code	Termination	Phase	
Red	Red signal	2, 4, 6, or 8	
Yellow	Yellow signal	2, 4, 6, or 8	
Brown	Green signal	2, 4, 6, or 8	
Red/black stripe	Red signal	1, 3, 5, or 7	
Yellow/black stripe	Yellow signal	1, 3, 5, or 7	
Brown/black stripe	Green signal	1, 3, 5, or 7	
Black/red stripe	Spare or as required for red or DONT		
	WALK		
Black/white stripe	Spare or as required for yellow		
Black	Spare or as required for green or WALK		
Red/white stripe	Pedestrian signal DONT WALK		
Brown/white stripe	Pedestrian signal WALK		
White	Terminal block	Neutral	

# **12CSC Color Code and Functional Connection**

Provide identification for each 28-conductor cable C1 or C2 in each pull box. The cable labeled *C1* must be used for signal phases 1, 2, 3, and 4. The cable labeled *C2* must be used for signal phases 5, 6, 7, and 8.

Connect conductors in a 28-conductor cable as shown in the following table:

Color code	Termination	Phase
-		2 or 6
Red/black stripe	Red signal	
Yellow/black stripe	Yellow signal	2 or 6
Brown/black stripe	Green signal	2 or 6
Red/orange stripe	Red signal	4 or 8
Yellow/orange stripe	Yellow signal	4 or 8
Brown/orange stripe	Green signal	4 or 8
Red/silver stripe	Red signal	1 or 5
Yellow/silver stripe	Yellow signal	1 or 5
Brown/silver stripe	Green signal	1 or 5
Red/purple stripe	Red signal	3 or 7
Yellow/purple stripe	Yellow signal	3 or 7
Brown/purple stripe	Green signal	3 or 7
Red/2 black stripes	Pedestrian signal DONT WALK	2 or 6
Brown/2 black stripes	Pedestrian signal WALK	2 or 6
Red/2 orange stripes	Pedestrian signal DONT WALK	4 or 8
Brown/2 orange stripes	Pedestrian signal WALK	4 or 8
Red/2 silver stripes	Overlap A, C	OLAª,
		OLCa
Brown/2 silver stripes	Overlap A, C	OLA ^c , OLC ^c
Red/2 purple stripes	Overlap B, D	OLBª,
		OLDa
Brown/2 purple stripes	Overlap B, D	OLB ^c , OLD ^c
Blue/black stripe	Pedestrian push button	2 or 6
Blue/orange stripe	Pedestrian push button	4 or 8
Blue/silver stripe	Overlap A, C	OLA ^b ,
		OLCb
Blue/purple stripe	Overlap B, D	OLB ^b ,
		OLD ^b
White/black stripe	Pedestrian push button common	
Black/red stripe	Railroad preemption	
Black	Spare	
White	Terminal block	Neutral

#### **28CSC Color Code and Functional Connection**

OL = Overlap; A, B, C, and D = Overlapping phase designation

^aFor red phase designation

^bFor yellow phase designation

^cFor green phase designation

Use the neutral conductor only with the phases associated with that cable. Do not intermix neutral conductors from different cables except at the signal controller.

# 87-1.03F(2)(c)(iv) Signal Interconnect Cable

For a signal interconnect cable, provide a minimum of 6 feet of slack inside each controller cabinet.

Do not splice the cable unless authorized.

If splices are authorized, insulate the conductor splices with heat-shrink tubing and overlap the insulation at least 0.6 inch. Cover the splice area of the cable with heat-shrink tubing and overlap the cable jacket at least 1-1/2 inches. Provide a minimum of 3 feet of slack at each splice.

### 87-1.03F(3) Conductors

### 87-1.03F(3)(a) General

Do not run conductors to a terminal block on a standard unless they are to be connected to a signal head mounted on that standard.

Provide 3 spare conductors in all conduits containing ramp metering and traffic signal conductors.

Install a separate conductor for each terminal of a push button assembly and accessible pedestrian signal.

Provide conductor slack to comply with the requirements shown in the following table:

Location	Slack (feet)	
Signal standard	1	
Lighting standard	1	
Signal and lighting standard	1	
Pull box	3	
Splice	3	
Standards with slip base	0	

### **Conductor Slack Requirements**

### 87-1.03F(3)(b) Reserved

# 87-1.03F(3)(c) Copper Conductors

### 87-1.03F(3)(c)(i) General

Install a minimum no. 8, insulated, grounding copper conductor in conduit and connect it to all-metal components.

Where conductors from different service points occupy the same conduit or standard, enclose the conductors from one of the services in flexible or rigid metal conduit.

### 87-1.03F(3)(c)(ii) Inductive Loop Conductors

Install a Type 1 or 2 inductive loop conductor except use Type 2 for Type E loop detectors.

Install the conductor without splices except at the pull box.

### 87-1.03F(4) Manual Installation Method

Use an inert lubricant for placing conductors and cables in conduit.

Pull the conductors and cables into the conduit by hand using pull tape.

### 87-1.03G Equipment Identification Characters

The Engineer provides you with a list of the equipment identification characters.

Stencil the characters or apply the reflective self-adhesive labels to a clean surface.

Treat the edges of self-adhesive characters with an edge sealant.

Place the characters on the side facing traffic on:

- 1. Front doors of cabinets and service equipment enclosures.
- 2. Wood poles, fastened with 1-1/4-inch aluminum nails, for pole mounted enclosures
- 3. Adjacent bent or abutment at approximately the same station as an illuminated sign or soffit luminaire
- 4. Underside of the structure adjacent to the illuminated sign or soffit luminaire if no bent or abutment exists nearby
- 5. Posts of overhead signs
- 6. Standards

Before placing new characters on existing or relocated equipment, remove the existing characters.

# 87-1.03H Conductor and Cables Splices

### 87-1.03H(1) General

You may splice:

- 1. Grounded conductors in a pull box
- 2. Accessible pedestrian signal and push bottom conductors in a pull box
- 3. Ungrounded signal conductors in a pull box if signals are modified

- 4. Ungrounded signal conductors to a terminal compartment or a signal head on a standard with conductors of the same phase in the pull box adjacent to the standard
- 5. Ungrounded lighting circuit conductors in a pull box if lighting circuits are modified

Solder all splices using the hot iron, pouring, or dipping method. Do not perform open-flame soldering.

### 87-1.03H(2) Splice Insulation Methods

Insulate splices in a multiconductor cable to form a watertight joint and to prevent moisture absorption by the cable.

Use heat-shrink tubing or Method B to insulate a splice.

Use heat-shrink tubing as follows:

- 1. Cover the splice area completely with an electrical insulating coating and allow it to dry.
- 2. Place mastic around each conductor before placing them inside the tubing. Use the type of mastic specified in the tubing manufacturer's instructions.
- 3. Heat the area under the manufacturer's instructions. Do not perform open-flame heating. After contraction, each end of the heat-shrink tubing or the open end of the tubing's end cap must overlap the conductor insulation at least 1-1/2 inches.
- 4. Cover the entire splice with an electrical insulating coating and allow it to dry.

Use Method B as follows:

- 1. Cover the splice area completely with an electrical insulating coating and allow it to dry.
- 2. Apply 3 layers of half-lapped, 80-mils, PVC tape.
- 3. Apply 2 layers of 120-mils, butyl-rubber, stretchable tape with liner.
- 4. Apply 3 layers of half-lapped, 6-mils, PVC, pressure-sensitive, adhesive tape.
- 5. Cover the entire splice with an electrical insulating coating and allow it to dry.

### 87-1.03I Connectors and Terminals

Apply connectors and terminals to cables and conductors using a crimping compression tool under the manufacturer's instructions. The tool must prevent opening of the handles until the crimp is completed.

Install crimp-style terminal lugs on stranded conductors smaller than no. 14.

Solder no. 8 and smaller conductors to connectors and terminal lugs.

#### 87-1.03J Standards, Poles, Pedestals, and Posts

Install standards, poles, pedestals, and posts under section 56-3.

Ground standards with a handhole by attaching a bonding jumper from the bolt or lug inside the standard to a metal conduit or to the grounding wire in the adjacent pull box. The bonding jumper must be visible when the handhole cover is removed.

Ground standards without a handhole or standards with a slip base by attaching a bonding jumper to all anchor bolts using ground clamps and connecting it to a metal conduit or to the grounding wire in the adjacent pull box. The bonding jumper must be visible after mortar has been placed on the foundation.

### 87-1.03K Reserved

# 87-1.03L Utility Service

### 87-1.03L(1) General

Install the service equipment early enough to allow the utility to complete its work before completion of the electrical work.

At least 15 days before permanent electrical and telecommunication service is required, request the service connections for permanent installations. The Department arranges with the utilities for completion of the connections and pays all costs and fees required by the utilities.

# 87-1.03L(2) Electric Service

# 87-1.03L(2)(a) General

If service equipment is to be installed on a utility-owned pole, furnish and install the conduit, conductors, pull boxes, and other necessary material to complete the service installation. The service utility decides the position of the riser and equipment on the pole.

# 87-1.03L(2)(b) Electric Service for Irrigation

Establishing electric service for irrigation includes installing conduit, conductors, and pull boxes and making connections from the service point to the irrigation controllers.

### 87-1.03L(2)(c) Electric Service for Booster Pumps

Establishing electric service for a booster pump includes installing conduit, conductors, and pull boxes and making connections from the service point to the booster pump enclosure.

# 87-1.03L(3) Telecommunications Service

Establishing telecommunication service includes installing conduit, conductors, and pull boxes and making connections from the service point to the telephone demarcation cabinet.

### 87-1.03M Photoelectric Controls

Mount the photoelectric unit on the top of the pole for Type I, II, and III photoelectric controls. Use mounting brackets where pole-top mounting is not possible. Orient the photoelectric unit to face north.

Mount the enclosure at a height of 6 feet above finished grade on the same standard as the photoelectric unit.

Install a minimum 100 VA, 480/120 V(ac) transformer in the contactor enclosure to provide 120 V(ac) for the photoelectric control unit when switching 480 V(ac), 60 Hz circuits.

### 87-1.03N Fused Splice Connectors

Install a fuse splice connector in each ungrounded conductor for luminaires mounted on standards. The connector must be located in the pull box adjacent to the standard.

Crimp the connector terminals onto the ungrounded conductors using a tool under the manufacturer's instructions. Insulate the terminals and make them watertight.

### 87-1.030 Grounding Electrodes

Install a grounding electrode for each cabinet, service equipment enclosure, and transformer.

Attach a grounding conductor from the electrode using either a ground clamp or exothermic weld. Connect the other end of the conductor to the cabinet, service equipment enclosure, and transformer.

### 87-1.03P Service Equipment Enclosures

Installing a service equipment enclosure includes constructing the foundation and pad and installing conduit, adjacent pull boxes, and grounding electrode.

Locate the foundation such that the minimum clearance around the front and back of the enclosure complies with NEC, article 110.26, "Spaces About Electrical Equipment, (600 V, nominal or less)."

Bond and ground metal conduit as specified in NEC and by the service utility except the grounding electrode conductor must be no. 6 or larger.

If circuit breakers and components do not have a description on engraved phenolic nameplates, install them using stainless steel rivets or screws under section 86-1.02P(2).

### 87-1.03Q Cabinets

### 87-1.03Q(1) General

Installing a cabinet includes constructing the foundation and pad and installing conduit, adjacent pull boxes, and grounding electrode.

Apply a mastic or caulking compound before installing the cabinet on the foundation to seal the openings.

Connect the field wiring to the terminal blocks in the cabinet. Neatly arrange and lace or enclose the conductors in plastic tubing or raceway. Terminate the conductors with properly sized captive or spring spade terminals. Apply a crimp-style connector and solder them.

Install and solder a spade-type terminal on no. 12 and smaller field conductors and a spade-type or ringtype terminal on conductors larger than no. 12.

### 87-1.03Q(2) Department-Furnished Controller Cabinets

Arrange for the delivery of Department-furnished controller cabinets.

### 87-1.03Q(3) Reserved

### 87-1.03Q(4) Telephone Demarcation Cabinets

Installing a telephone demarcation cabinet includes installing conduit, cable, and pull boxes to the controller cabinet.

Install the cabinet with the back toward the nearest lane of traffic.

### 87-1.03R Signal Heads

### 87-1.03R(1) General

Installing a signal head includes mounting the heads on standards and mast arms, installing backplates and visors, and wiring conductors to the terminal blocks.

Keep the heads covered or direct them away from traffic until the system is ready for operation.

### 87-1.03R(2) Signal Faces

Use the same brand and material for the signal faces at each location.

Program the programmable visibility signal faces under the manufacturer's instructions. The indication must be visible only in those areas or lanes to be controlled.

### 87-1.03R(3) Backplates

Install backplates using at least six 10-24 or 10-32 self-tapping and locking stainless steel machine screws and flat washers.

If a plastic backplate requires field assembly, attach each joint using at least four no.10 machine screws. Each machine screw must have an integral or captive flat washer, a hexagonal head slotted for a standard screwdriver, and either a locking nut with an integral or captive flat washer or a nut, flat washer, and lock washer. Machine screws, nuts, and washers must be stainless steel or steel with a zinc or black oxide finish.

If a metal backplate has 2 or more sections, fasten the sections with rivets or aluminum bolts peened after assembly to avoid loosening.

Install the backplate such that the background light is not visible between the backplate and the signal face or between sections.

### 87-1.03R(4) Signal Mounting Assemblies

Install a signal mounting assembly such that its members are arranged symmetrically and plumb or level. Orient each mounting assembly to allow maximum horizontal clearance to the adjacent roadway.

For a bracket-mounted assembly, bolt the terminal compartment or pole plate to the pole or standard.

In addition to the terminal compartment mounting, attach the upper pipe fitting of Type SV-1-T with 5 sections or a SV-2-TD to the standard or pole using the mounting detail for signal heads without a terminal compartment.

Use a 4-1/2-inch slip fitter and set screws to mount an assembly on a post top.

After installing the assembly, clean and paint the exposed threads of the galvanized conduit brackets and bracket areas damaged by the wrench or vise jaws. Use a wire brush to clean and apply 2 coats of unthinned, organic zinc-rich primer. Do not use an aerosol can to apply the primer.

Install the conductors in the terminal compartment and secure the cover.

### 87-1.03S Pedestrian Signal Heads

Installing a pedestrian signal head includes mounting the heads on standards and wiring conductors to the terminal blocks.

Install the pedestrian signal mounting assembly under section 87-1.03R(4).

Use the same brand and material for the pedestrian signal faces at each location.

Install a pedestrian signal face such that its members are arranged symmetrically and plumb or level.

# 87-1.03T Accessible Pedestrian Signals

Use the same brand for the accessible pedestrian signals at each location.

Install an accessible pedestrian signal and the R10 series sign on the crosswalk side of the standard.

Attach the accessible pedestrian signal to the standard with self-tapping screws.

Attach the sign to the standard using 2 straps and saddle brackets.

Point the arrow on the accessible pedestrian signal in the same direction as the corresponding crosswalk.

Furnish the equipment and hardware to set up and calibrate the accessible pedestrian signal.

Arrange to have a manufacturer's representative at the job site to program the accessible pedestrian signal with an audible message or tone.

### 87-1.03U Push Button Assemblies

Install the push button assembly and the R10 series sign on the crosswalk side of the standard.

Attach the sign to the assembly for Type B assemblies.

Attach the sign to the standard using 2 straps and saddle brackets for Type C assemblies.

You may use straps and saddle brackets to secure the push button to the standard.

Use a slip fitter to secure the assembly on top of a 2-1/2-inch-diameter post.

# 87-1.03V Detectors

### 87-1.03V(1) General

Installing a detector includes installing inductive loop conductors, sealant, conduit, and pull boxes.

Center the detectors in the traffic lanes.

Do not splice the detector conductor.

# 87-1.03V(2) Inductive Loop Detectors

Mark the location of the inductive loop detectors such that the distance between the side of the loop and a lead-in saw cut from an adjacent detector is at least 2 feet. The distance between lead-in saw cuts must be at least 6 inches.

Saw cut the slots under section 13-4.03E(7). The bottoms of the slots must be smooth with no sharp edges. For Type E detector loops, saw the slots such that the sides are vertical.

Wash the slots clean using water and blow dry them with compressed air to remove all moisture and debris.

Identify the start of the conductor.

Waterproof the ends of a Type 2 loop conductor before installing it in the conduit to prevent moisture from entering the cable.

Install the loop conductor in the slots and lead-in saw cuts using a 3/16- to 1/4-inch-thick wood paddle. Hold the conductors in place at the bottom of the slot with wood paddles during placement of the sealant. Wind adjacent loops on the same sensor unit channel in opposite directions.

Twist the conductors for each loop into a pair consisting of a minimum of 2 turns per foot before placing them in the lead-in saw cut and the conduit leading to the pull box. Do not install more than 2 twisted pairs of conductors per lead-in saw cut.

Provide 5 feet of slack in the pull box.

Test each loop for continuity, circuit resistance, and insulation resistance before filling the slots with sealant.

Remove excess sealant from the adjacent road surface before it sets. Do not use solvents to remove the excess.

Identify the loop conductor pair in the pull box, marking the start with the letter *S* and the end with the letter *F*. Band conductors in pairs by lane in the pull box adjacent to the loops and in the cabinet. Identify each pair with the detector designation and loop number.

Install the conductors in a compacted layer of HMA immediately below the uppermost layer if more than one layer will be placed. Install the loop conductors before placing the uppermost layer of HMA. Fill the slot with a sealant flush to the surface.

Install the conductors in the existing pavement if one layer of HMA is to be placed. Install the loop conductors before placing the layer of HMA. Fill the slot with a sealant flush to the surface.

### 87-1.03V(3) Preformed Inductive Loop Detectors

Construct a preformed inductive loop detector consisting of 4 turns in the loop and a lead-in conductor pair twisted at least 2 turns per foot all encased in conduit and sealed to prevent water penetration. The detector must be 6-foot square unless shown otherwise.

Construct the loop detector using a minimum 3/8-inch Schedule 40 or Schedule 80 PVC or polypropylene conduit and no. 16 or larger conductor with Type THWN or TFFN insulation.

In new roadways, place the detector in the base course with the top of the conduit flush with the top of the base. Cover with HMA or concrete pavement. Protect the detector from damage before and during pavement placement.

In new reinforced concrete bridge decks, secure the detector to the top of the uppermost layer of reinforcing steel using nylon wire ties. Hold the detector parallel to the bridge deck using PVC or polypropylene spacers where necessary. Place conduit for lead-in conductors between the uppermost 2 layers of reinforcing steel.

Do not install detectors in existing bridge decks unless authorized.

Install a detector in existing pavement before placement of concrete or HMA as follows:

- 1. Saw cut slots at least 1-1/4 inches wide into the existing pavement.
- 2. Place the detector in the slots. The top of the conduit must be at least 2 inches below the top of the pavement.
- 3. Test each loop circuit for continuity, circuit resistance, and insulation resistance.
- 4. Fill saw cuts with elastomeric or hot melt rubberized asphalt sealant for asphalt concrete pavement and with epoxy sealant or hot melt rubberized asphalt sealant for concrete pavement.

### 87-1.03W Sealants

### 87-1.03W(1) General

Reserved

### 87-1.03W(2) Elastomeric Sealant

Apply an elastomeric sealant with a pressure feed applicator.

### 87-1.03W(3) Asphaltic Emulsion Sealant

Asphaltic emulsion sealant must:

- 1. Be used for filling slots in asphalt concrete pavement of a maximum width of 5/8 inch
- 2. Not be used on concrete pavement or where the slope causes the material to run from the slot
- 3. Be thinned under the manufacturer's instructions
- 4. Be placed when the air temperature is at least 45 degrees F

# 87-1.03W(4) Hot-Melt Rubberized Asphalt Sealant

Melt the sealant in a jacketed, double-boiler-type, melting unit. The temperature of the heat transfer medium must not exceed 475 degrees F.

Apply the sealant with a pressure feed applicator or a pour pot when the surface temperature of the pavement is greater than 40 degrees F.

### 87-1.03X Reserved

### 87-1.03Y Transformers

Installing a transformer includes placing the transformer inside a pull box, a cabinet, or an enclosure.

Wire the transformer for the appropriate voltage.

Ground the secondary circuit of the transformer as specified in the NEC.

87-1.03Z Reserved

### 87-1.04 PAYMENT

Not Used

### 87-2 LIGHTING SYSTEMS

### 87-2.01 GENERAL

### 87-2.01A Summary

Section 87-2 includes specifications for constructing lighting systems.

Lighting system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Standards
- 6. Luminaires
- 7. Service equipment enclosure
- 8. Photoelectric control
- 9. Fuse splice connectors
- 10. High mast lighting assemblies

The components of a lighting system are shown on the project plans.

### 87-2.01B Definitions

Reserved

### 87-2.01C Submittals

Submit a certificate of compliance and test data for the high mast lighting luminaires.

# 87-2.01D Quality Assurance

Reserved

87-2.02 MATERIALS 87-2.02A General Reserved

# 87-2.02B High Mast Lighting Assemblies

A high mast lighting assembly includes the foundation, pole, lowering device system, luminaires, and control pedestal.

Each luminaire in a high mast lighting assembly must include a housing, an optical system, and a ballast.

The housing must be made of aluminum.

A painted or powder-coated housing for a high mast lighting luminaire must be able to withstand a 1,000-hour salt spray test as specified in ASTM B117.

The optical system, consisting of the reflector, refractor or lens, lamp socket, and lamp, must be in a sealed chamber. The chamber must be sealed by a gasket between the reflector and refractor or lens and a gasket between the reflector and lamp socket. The chamber must have a separate filter or filtering gasket for flow of air.

An asymmetrical luminaire must have a refractor or reflector that is rotatable 360 degrees around a vertical axis to orient the distribution of light.

The luminaire must have a slip fitter for mounting on a 2-inch horizontal pipe tenon and must be adjustable  $\pm 3$  degrees from the axis of the tenon.

The reflector must have a specular surface made of silvered glass or aluminum protected by either an anodized finish or a silicate film. The reflector must be shaped such that a minimum of light is reflected through the arc tube of the lamp.

The refractor and lens must be made of heat-resistant glass.

The lamp socket must be a porcelain-enclosed, mogul-multiple type. The shell must contain integral lamp grips to ensure electrical contact under conditions of normal vibrations. The socket must be rated for 1,500 W, 600 V(ac) and 4,000 V(ac) pulse for a 400 W lamp and 5,000 V(ac) pulse for a 1,000 W lamp.

The luminaire must have a dual fuse holder for 2 fuses rated at 5 A, 480 V(ac). The fuses must be 13/32 inch by 1-1/2 inches, standard midget ferrule type with a nontime-delay feature.

The lamps must be vertical burning, protected from undue vibration, and prevented from backing out of the socket by a stainless steel clamp attached to the luminaire.

A 1,000 W metal halide lamp must have an initial output of 100,000 lumens and an average rated life of 12,000 hours based on 10 hours per start.

A 400 W high-pressure sodium lamp must have an initial output of 50,000 lumens. A 1,000 W high-pressure sodium lamp must have an initial output of 140,000 lumens.

The ballast for the luminaire must be a regulator type and have a core and coils, capacitors, and starting aid.

Ballast must be:

- 1. Mounted within a weatherproof housing that integrally attaches to the top of a luminaire support bracket and lamp support assembly
- 2. Readily removable without removing the luminaire from the bracket arm
- 3. Electrically connected to the optical assembly by a prewired quick disconnect

The ballast for a metal halide luminaire must comply with luminaire manufacturer's specifications.

The wattage regulation spread at any lamp voltage, from nominal through the life of the lamp, must vary no more than 22 percent for a 1,000 W lamp and a  $\pm 10$  percent input voltage variation. The ballast's starting line current must be less than its operating current.

### 87-2.02C Soffit and Wall-Mounted Luminaires

### 87-2.02C(1) General

Soffit and wall-mounted luminaires must be weatherproof and corrosion resistant.

Each luminaire must include a 70 W high-pressure sodium lamp with a minimum average rated life of 24,000 hours. The lamp socket must be positioned such that the light center of the lamp is located within 1/2 inch of the designed light center of the luminaire.

Luminaire wiring must be SFF-2.

Flush-mounted soffit luminaire must have:

- 1. Metal body with two 1-inch-minimum conduit hubs and a means of anchoring the body into the concrete
- 2. Prismatic refractor made of heat-resistant polycarbonate:
  - 2.1. Mounted in a door frame
  - 2.2. With the street side identified
- 3. Aluminum reflector with a specular anodized finish
- 4. Ballast located either within the housing or in a ceiling pull box if shown
- 5. Lamp socket

The door frame assembly must be hinged, gasketed, and secured to the luminaire body with at least 3 machine screws.

A pendant soffit luminaire must be enclosed and gasketed and have an aluminum finish. Luminaire must have:

- 1. Aluminum reflector with a specular anodized finish
- 2. Refractor made of heat-resistant polycarbonate
- 3. Optical assembly that is hinged and latched for lamp access and a device to prevent dropping
- 4. Ballast designed for operation in a raintight enclosure
- 5. Galvanized metal box with a gasketed cover, 2 captive screws, and 2 chains to prevent dropping and for luminaire mounting

Wall-mounted luminaire must have:

- 1. Cast metal body
- 2. Prismatic refractor:
  - 2.1. Made of glass
  - 2.2. Mounted in a door frame
- 3. Aluminum reflector with a specular anodized finish
- 4. Integral ballast
- 5. Lamp socket
- 6. Gasket between the refractor and the body
- 7. At least 2 mounting bolts of minimum 5/16-inch diameter

A cast aluminum body of a luminaire to be cast into or mounted against concrete must have a thick coat of alkali-resistant bituminous paint on all surfaces to be in contact with the concrete.

# 87-2.02C(2) High-Pressure Sodium Lamp Ballasts

### 87-2.02C(2)(a) General

A high-pressure sodium lamp ballast must operate the lamp for its rated wattage.

Starting aids for a ballast must be interchangeable between ballasts of the same wattage and manufacturer without adjustment.

The ballast must be provided with a heat-generating component to serve as a heat sink. The capacitor must be placed at the maximum practicable distance from the heat-generating components or thermally shielded to limit the case temperature to 75 degrees C.

The transformer and inductor must be resin impregnated for protection against moisture. Capacitors, except for those in starting aids, must be metal cased and hermetically sealed.

The ballast must have a power factor of 90 percent or greater.

For the nominal input voltage and lamp voltage, the ballast design center must not vary more than 7.5 percent from the rated lamp wattage.

# 87-2.02C(2)(b) Regulator-Type Ballasts

A regulator-type ballast must be designed such that a capacitance variance of  $\pm 6$  percent does not cause more than  $\pm 8$  percent variation in the lamp wattage regulation.

The ballast must have a current crest factor not exceeding 1.8 for an input voltage variation of ±10 percent.

The lamp wattage regulation spread for a lag-type ballast must not vary by more than 18 percent for  $\pm 10$  percent input voltage variations. The primary and secondary windings must be electrically isolated.

The lamp wattage regulation spread for a constant-wattage, autoregulator, lead-type ballast must not vary by more than 30 percent for  $\pm 10$  percent input voltage variations.

### 87-2.02C(2)(c) Nonregulator-Type Ballasts

A nonregulator-type ballast must have a current crest factor not exceeding 1.8 for an input voltage variation of ±5 percent.

The lamp wattage regulation spread for an autotransformer or high reactance type ballast must not vary by more than 25 percent for ±5 percent input voltage variations.

### 87-2.03 CONSTRUCTION

### 87-2.03A General

Set the foundations for standards such that the mast arm is perpendicular to the centerline of the roadway.

Tighten the cap screws of the luminaire's clamping bracket to 10 ft-lb for LED and low-pressure luminaires.

Label the month and year of the installation inside the luminaire housing's door.

Perform the conductor and operational tests for the system.

### 87-2.03B High Mast Lighting Assemblies

Mount and connect the luminaires to the accessory support ring. Aim the asymmetrical luminaire to orient the distribution of light.

### 87-2.03C Soffit and Wall-Mounted Luminaires

For a flush-mounted soffit luminaire:

- 1. Prevent concrete from getting into the housing during pouring of the concrete for the structure
- 2. Install the luminaire with the axis vertical and the street side of the refractor oriented as indicated
- 3. Locate the luminaire to provide a minimum 2-foot clearance from the inside surface of the girders and 1-foot clearance from the near face of the diaphragm
- 4. Install the bridge soffit and ceiling pull box over the same lane

For a pendant soffit luminaire:

- 1. Cast in place the inserts for the no. 8 pull box during concrete placement for a new structure
- 2. Drill holes for expansion anchors to support the no. 8 pull box on existing structures
- 3. Bond the suspension conduit and luminaire to the pull box

For a wall-mounted luminaire, provide:

- 1. Extension junction box or ring on a new structure
- 2. 4 external mounting taps on an existing structure

Place the soffits or wall-mounted luminaires in operation as soon as practicable after the falsework has been removed from the structure.

If the Engineer orders soffit or wall-mounted luminaires to be activated before permanent power service is available, installing and removing the temporary power service is change order work.

### 87-2.04 PAYMENT

Not Used

### 87-3 SIGN ILLUMINATION SYSTEMS

### 87-3.01 GENERAL

# 87-3.01A Summary

Section 87-3 includes specifications for constructing sign illumination systems.

Sign illumination system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Sign lighting fixtures
- 6. Enclosure for the disconnect circuit breaker
- 7. Service equipment enclosure
- 8. Photoelectric control

The components of a sign illumination system are shown on the project plans.

#### 87-3.01B Definitions

Reserved

#### 87-3.01C Submittals

Submit the manufacturer's test data for the induction sign-lighting fixtures.

### 87-3.01D Quality Assurance

Reserved

### 87-3.02 MATERIALS

An induction sign-lighting fixture must include a housing with a door, reflector, refractor or lens, lamp, socket assembly, power coupler, high-frequency generator, fuse block, and fuses.

The fixture must comply with the isofootcandle curves as shown.

Fixture must weigh no more than 44 lb, be rated for 87 W at 120/240 V(ac), and have a mounting assembly made of one of the following materials:

- 1. Cast aluminum
- 2. Hot-dip galvanized steel plate
- 3. Galvanized steel plate finished with one of the following:
  - 3.1. Polymeric coating
  - 3.2. Same finish used for the housing

Housing must:

- 1. Be corrosion resistant and suitable for wet locations
- 2. Be above the top of the mounting rails at a maximum height of 12 inches
- 3. Have weep holes

Door must:

- 1. Hold a refractor or lens
- 2. Open without the use of special tools
- 3. Have a locking position at 50 degrees minimum from the plane of the door opening
- 4. Be hinged to the housing on the side of the fixture away from the sign panel
- 5. Have 2 captive latch bolts or other latching device

When the door is opened, it must lock in the 50 degrees position when an 85 mph, 3-second wind-gust load strikes the door from either side.

The housing and door must be manufactured of sheet or cast aluminum and have a gray powder coat or polyester paint finish. The sheet aluminum must comply with ASTM B209 or B209M for 5052-H32 aluminum sheet. External bolts, screws, hinges, hinge pins, and door closure devices must be corrosion resistant.

The housing and door must be gasketed. The thickness of the gasket must be a minimum of 1/4 inch.

Reflector must not be attached to the outside of the housing and must be:

- 1. Made of a single piece of aluminum with a specular finish
- 2. Protected with an electrochemically applied anodized finish or a chemically applied silicate film
- 3. Designed to drain condensation away from it
- 4. Secured to the housing with a minimum of 2 screws
- 5. Removable without removing any fixture parts

Refractor or lens must have a smooth exterior and must be manufactured from the materials shown in the following table:

Component	Material
Flat lens	Heat-resistant glass
Convex lens Heat-resistant, high-impact-resistant tempered glass	
Refractor	Borosilicate heat-resistant glass

### **Refractor and Lens Material Requirements**

The refractor and convex lens must be designed or shielded such that no luminance is visible if the fixture is approached directly from the rear and viewed from below. If a shield is used, it must be an integral part of the door casting.

Lamp must:

- 1. Be an 85 W induction type with a fluorescent, phosphor-coated, interior wall
- 2. Have a minimum 70 percent light output of its original lumen output after 60,000 hours of operation
- 3. Have a minimum color-rendering index of 80
- 4. Be rated at a color temperature of 4,000K
- 5. Be removable with common hand tools

The lamp socket must be rated for 1,500 W and 600 V(ac) and be a porcelain-enclosed mogul type with a shell that contains integral lamp grips to ensure electrical contact under normal vibration conditions. The shell and center contact must be made of nickel-plated brass. The center contact must be spring loaded.

The power coupler must be removable with common hand tools.

High-frequency generator must:

- 1. Start and operate lamps at an ambient temperature of -25 degrees C or greater for the rated life of the lamp
- 2. Operate continuously at ambient air temperatures from -25 to 55 degrees C without a reduction in the generator life
- 3. Have a design life of at least 100,000 hours at 55 degrees C
- 4. Have an output frequency of 2.65 MHz ± 10 percent
- 5. Have radio frequency interference that complies with 47 CFR 18 regulations regarding harmful interference
- 6. Have a power factor greater than 90 percent and total harmonic distortion less than 10 percent

The high frequency generator must be mounted such that the fixture can be used as a heat sink and be replaceable with common hand tools.

Each fixture must include a barrier-type fuse block for terminating field connections. Fuse block must:

- 1. Be rated 600 V(ac)
- 2. Have box terminals
- 3. Be secured to the housing and accessible without removal of any fixture parts
- 4. Be mounted to leave a minimum of 1/2 inch of air space from the sidewalls of the housing
- 5. Be designed for easy removal of fuses with a fuse puller

The fixture's fuses must be 13/32-inch-diameter, 1-1/2-inch-long ferrule type and UL listed or NRTL certified. For a 120 V(ac) fixture, only the ungrounded conductor must be fused and a solid connection must be provided between the grounded conductor and the high frequency generator.

The fixture must be permanently marked with the manufacturer's brand name, trademark, model number, serial number, and date of manufacture on the inside and outside on the housing. The same information must be marked on the package.

If a wire guard is used, it must be made of a minimum 1/4-inch-diameter galvanized steel wire. The wires must be spaced to prevent rocks larger than 1-1/2-inch diameter from passing through the guard. The guard must be either hot-dip galvanized or electroplated zinc-coated as specified in ASTM B633, service condition SC4, with a clear chromate dip treatment.

### 87-3.03 CONSTRUCTION

Perform the conductor and operational tests for the system.

### 87-3.04 PAYMENT

Not Used

### 87-4 SIGNAL AND LIGHTING SYSTEMS

### 87-4.01 GENERAL

### 87-4.01A Summary

Section 87-4 includes specifications for constructing signal and lighting systems.

Signal and lighting system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Cables
- 6. Standards
- 7. Signal heads
- 8. Internally illuminated street name signs
- 9. Service equipment enclosure
- 10. Department-furnished controller assembly
- 11. Detectors
- 12. Telephone demarcation cabinet
- 13. Accessible pedestrian signals
- 14. Push button assemblies
- 15. Pedestrian signal heads
- 16. Luminaires
- 17. Photoelectric control
- 18. Fuse splice connectors
- 19. Battery backup system
- 20. Flashing beacons
- 21. Flashing beacon control assembly

The components of a signal and lighting system are shown on the project plans.

### 87-4.01B Definitions

Reserved

#### 87-4.01C Submittals

Submit shop drawings showing the message for each internally illuminated street sign, including the size of letters, symbols, and arrows.

87-4.01D Quality Assurance

87-4.01D(1) General Reserved

87-4.01D(2) Quality Control 87-4.01D(2)(a) General

Reserved

#### 87-4.01D(2)(b) Battery Backup System

Notify the Engineer 48 hours before testing the battery backup system.

Test the system in the presence of the Engineer by turning off the power to the signal system at the service equipment enclosure. The signal system must run continuously for 30 minutes. If the battery backup system fails, correct the problem and retest the system for another 30 minutes. After successful completion of the test, turn the power on for the signal system.

#### 87-4.02 MATERIALS

#### 87-4.02A General

Reserved

#### 87-4.02B Battery Backup System

A battery backup system includes the cabinet, batteries, and the Department-furnished electronics assembly.

The electronics assembly includes the inverter/charger unit, power transfer relay, and the battery harness.

#### 87-4.02C Internally Illuminated Street Name Signs

An internally illuminated street name sign includes housing, brackets, sign panels, gaskets, ballast, lampholder, terminal blocks, conductors, and fuses.

An internally illuminated street sign must be designed and constructed to prevent deformation or failure when subjected to an 85 mph, 3-second wind-gust load as specified in the AASHTO publication, "Standard Specifications for Structural Supports of Highway Signs, Luminaires and Traffic Signals."

Sign must:

- 1. Be Types A or B
- 2. Have galvanized or cadmium-plated ferrous parts
- 3. Have screened weep holes
- 4. Have fasteners, screws, and hardware made of passive stainless steel, Type 302 or 304, or aluminum Type 6060-T6
- 5. Operate at a temperature from -20 to 74 degrees C

Photoelectric unit sockets are not allowed.

The housing must be constructed to resist torsional twist and warp. The housing must be designed such that opening or removing the panels provides access to the interior of the sign for lamp, ballast, and fuse replacement.

The top and bottom of the sign must be manufactured from formed or extruded aluminum and attached to formed or cast aluminum end fittings. The top, bottom, and end fittings must form a sealed housing.

For a Type A sign, both sides of the sign must be hinged at the top to allow installation or removal of the sign panel.

For a Type B sign, the sign panel must be slide mounted into the housing.

The top of the housing must have 2 free-swinging mounting brackets. Each bracket must be vertically adjustable for leveling the sign to either a straight or curved mast arm. The bracket assembly must allow the lighting fixture to swing perpendicular to the sign panel.

The reflectors must be formed aluminum and have an acrylic, baked-white-enamel surface with a minimum reflectance of 0.85.

Sign panel must be translucent, high-impact-resistant, and made of one of the following plastic materials:

- 1. Glass-fiber-reinforced, acrylated resin
- 2. Polycarbonate resin
- 3. Cellulose acetate butyrate

The sign panel must be designed not to crack or shatter if a 1-inch-diameter steel ball weighing 2.4 ounces is dropped from a height of 8.5 feet above the sign panel to any point on the panel. For this test, the sign panel must be lying in a horizontal position and supported within its frame.

The sign panel's surface must be evenly illuminated. The brightness measurements for the letters must be a minimum of 150 foot-lamberts, average. The letter-to-background brightness ratio must be from 10:1 to 20:1. The background luminance must not vary by more than 40 percent from the average background brightness measurement. The luminance of letters, symbols, and arrows must not vary by more than 20 percent from their average brightness measurement.

The sign panel's white or green color must not fade or darken if exposed to an accelerated test of UV light equivalent to 2 years of outdoor exposure.

The sign panel's legend, symbols, arrows, and border on each face must be white on a green background. The background must comply with color no. 14109 of FED-STD-595.

The message must appear on both sides of the sign and be protected from UV radiation. The letters must be 8-inch upper case and 6-inch lower case, series E.

A Type A sign must have a closed-cell, sponge-neoprene gasket installed between the sign panel frame to prevent the entry of water. The gasket must be uniform and even textured.

The sign ballast must be a high-power-factor type for outdoor operation from 110 to 125 V(ac) and 60 Hz and must comply with ANSI C82.1 and C82.2.

The ballast for a Type A sign must be rated at 200 mA. The ballast for a Type B sign must be rated at 430 mA.

Sign lampholder must:

- 1. Be the spring-loaded type
- 2. Have silver-coated contacts and waterproofed entrance leads
- 3. Have a heat-resistant, circular cross section with a partially recessed neoprene ring

Removal of the lamp from the socket must de-energize the primary of the ballast.

The springs for the lampholders must not be a part of the current-carrying circuit.

The sign's wiring connections must terminate on a molded, phenolic, barrier-type, terminal block rated at 15 A, 1,000 V(ac). The connections must have a white, integral, waterproof marking strip. The terminal screws must not be smaller than a no. 10.

The terminal block must be insulated from the fixture to provide protection from the line-to-ground flashover voltage.

A sectionalized terminal block must have an integral barrier on each side and must allow rigid mounting and alignment.

Fixture's conductors must:

1. Be stranded copper wire with a minimum thermoplastic insulation of 28 mils

- 2. Be rated at 1,000 V(ac) and for use up to 90 degrees C
- 3. Be a minimum of no. 16
- 4. Match the color coding of the ballast leads
- 5. Be secured with spring cross straps, installed 12 inches apart or less in the chassis or fixture

Stranded copper conductors connected to screw-type terminals must terminate in crimp-type ring connectors.

No splicing is allowed within the fixture.

The sign's fuse must be the Type 3AG, miniature, slow-blow type.

The fuse holder must be a panel-mounting type with a threaded or bayonet knob that grips the fuse tightly for extraction. Each ballast must have a separate fuse.

#### 87-4.03 CONSTRUCTION

#### 87-4.03A General

Set the foundations for standards such that the mast arm is perpendicular to the centerline of the roadway.

Tighten the cap screws of the luminaire's clamping bracket to 10 ft-lb for LED and low-pressure luminaires.

Label the month and year of the installation inside the luminaire housing's door.

Perform the conductor and operational tests for the system.

#### 87-4.03B Battery Backup System Cabinets

Install the battery backup system cabinet to the right of the Model 332L cabinet.

If installation on the right side is not feasible, obtain authorization for installation on the left side.

Provide access for power conductors between the cabinets using:

- 1. 2" nylon-insulated, steel chase nipple
- 2. 2" steel sealing locknut
- 3. 2" nylon-insulated, steel bushing

Remove the jumper between the terminals labeled *BBS-1* and *BBS-2* in the 5 position terminal block in the controller cabinet before connecting the Department-furnished electronics assembly.

#### 87-4.03C Internally Illuminated Street Name Signs

Mount the internally illuminated street name sign to the signal mast arm using the adjustable brackets. Connect the conductors to the terminal blocks in the signal head mounting terminal block.

#### 87-4.04 PAYMENT

Not Used

#### 87-5 RAMP METERING SYSTEMS

#### 87-5.01 GENERAL

Section 87-5 includes specifications for constructing ramp metering systems.

Ramp metering system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Standards
- 6. Signal heads
- 7. Service equipment enclosure
- 8. Department-furnished controller assembly

- 9. Detectors
- 10. Telephone demarcation cabinet

The components of a ramp metering system are shown on the project plans.

#### 87-5.02 MATERIALS

Not Used

#### 87-5.03 CONSTRUCTION

Connect the field wiring to the terminal blocks in the controller cabinet. The Engineer provides you a list of field conductor terminations for each controller cabinet.

Perform the conductor and operational tests for the system.

#### 87-5.04 PAYMENT

Not Used

#### 87-6 TRAFFIC MONITORING STATION SYSTEMS

#### 87-6.01 GENERAL

Section 87-6 includes specifications for constructing traffic monitoring station systems.

Traffic monitoring station system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Cables
- 5. Conductors
- 6. Service equipment enclosure
- 7. Controller cabinet
- 8. Detectors
- 9. Telephone demarcation cabinet

The components of a traffic monitoring station system are shown on the project plans.

#### 87-6.02 MATERIALS

Not Used

#### 87-6.03 CONSTRUCTION

Connect the field wiring to the terminal blocks in the controller cabinet. The Engineer provides you a list of field conductor terminations for the controller cabinet.

Perform the conductor and operational tests for the system.

#### 87-6.04 PAYMENT

Not Used

#### 87-7 FLASHING BEACON SYSTEMS

#### 87-7.01 GENERAL

Section 87-7 includes specifications for constructing flashing beacon systems.

Flashing beacon system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Standards
- 6. Service equipment enclosure
- 7. Signal heads
- 8. Flashing beacon control assembly

The components of a flashing beacon system are shown on the project plans.

The flash rate for the flashing beacon must comply with chapter 4L, "Flashing Beacons," of the *California MUTCD*.

The flashing beacon must allow alternating flashing wig-wag operation.

The flashing beacon must have a separate flasher unit installed in the flashing beacon control assembly.

#### 87-7.02 MATERIALS

Flashing beacon control assembly must:

- 1. Have a NEMA 3R enclosure with a dead front panel and a hasp with a 7/16-inch hole for a padlock. The enclosure must have one of the following finishes:
  - 1.1. Powder coating.
  - 1.2. Hot-dip galvanized coating.
  - 1.3. Factory-applied, rust-resistant prime coat and finish coat.
- 2. Have barrier-type terminal blocks rated for 25 A, 600 V(ac), made of molded phenolic or nylon material and have plated-brass screw terminals and integral marking strips.
- 3. Include a solid state flasher complying with section 8 of NEMA standards publication no. TS 1 for 10 A, dual circuits.

#### 87-7.03 CONSTRUCTION

Perform the conductor and operational tests for the system.

#### 87-7.04 PAYMENT

Not Used

#### 87-8-87-11 RESERVED

#### 87-12 CHANGEABLE MESSAGE SIGN SYSTEMS

#### 87-12.01 GENERAL

Section 87-12 includes specifications for constructing changeable message sign systems.

Changeable message sign system includes:

- 1. Foundations
- 2. Pull boxes
- 3. Conduit
- 4. Conductors
- 5. Service equipment enclosure
- 6. Department-furnished controller cabinet
- 7. Department-furnished changeable message sign
- 8. Department-furnished wiring harness
- 9. Service equipment enclosure
- 10. Sign disconnect

The components of a changeable message sign system are shown on the project plans.

#### 87-12.02 MATERIALS

Not Used

#### 87-12.03 CONSTRUCTION

Install the changeable message sign.

Connect the field wiring to the terminal blocks in the sign assembly and controller cabinet.

The Engineer provides you a list of field conductor terminations for each sign cabinet and controller cabinet.

The Department maintains the sign assemblies.

#### 87-12.04 PAYMENT

Not Used

#### 87-13-87-17 RESERVED 87-18 INTERCONNECTION CONDUIT AND CABLE

#### 87-18.01 GENERAL

Section 87-18 includes specifications for constructing interconnection conduit and cable.

Interconnection conduit and cable includes:

- 1. Pull boxes
- 2. Conduit
- 3. Signal interconnect cables

The components of an interconnection conduit and cable are shown.

#### 87-18.02 MATERIALS

Not Used

#### 87-18.03 CONSTRUCTION

Test the signal interconnect cable.

Connect the signal interconnect cable to the terminal block in the controller cabinets. The Engineer provides you a list of terminations for each controller cabinet.

#### 87-18.04 PAYMENT

Not Used

#### 87-19 RESERVED

#### 87-20 TEMPORARY ELECTRICAL SYSTEMS

#### 87-20.01 GENERAL

Section 87-20 includes specifications for providing temporary electrical systems.

Obtain the Department's authorization for the type of temporary electrical system and its installation method.

A temporary system must operate on a continuous, 24-hour basis.

#### 87-20.02 MATERIALS

#### 87-20.02A General

Material and equipment may be new or used.

The components of a temporary system are shown on the project plans.

If you use Type UF-B cable, the minimum conductor size must be no. 12.

#### 87-20.02B Temporary Flashing Beacon Systems

A temporary flashing beacon system consists of a flashing beacon system, wood post, generator, and photovoltaic system.

The system must comply with the specifications for a flashing beacon system in section 87-7, except it may be mounted on a wood post or a trailer.

#### 87-20.02C Temporary Lighting Systems

A temporary lighting system consists of a lighting system, generator, and wood poles.

The system must comply with the specifications for a lighting system in section 87-2, except it may be mounted on a wood pole or a trailer.

#### 87-20.02D Temporary Signal Systems

A temporary signal system consists of a signal and lighting system, wood poles and posts, and a generator.

System must comply with the specifications for a signal and lighting system in section 87-4, except:

- 1. Signal heads may be mounted on a wood pole, mast arm, tether wire, or a trailer
- 2. Flashing beacons may be mounted on a wood post, or a trailer

#### 87-20.03 CONSTRUCTION

#### 87-20.03A General

Provide electrical and telecommunication services for temporary systems. Do not use existing services unless authorized.

Provide power for the temporary electrical systems under section 12-3.33, except you may use a photovoltaic system for the temporary flashing beacon system.

Install conductors and cables in a conduit, suspended from wood poles at least 25 feet above the roadway, or use direct burial conductors and cables.

You may saw slots across paved areas for burial conductors and cables.

Install conduit outside the paved area at a minimum of 12 inches below grade for Type 1 and 2 conduit and at a minimum of 18 inches below grade for Type 3 conduit.

Install direct burial conductors and cables outside the paved area at a minimum depth of 24 inches below grade.

Place the portions of the conductors installed on the face of wood poles in either Type 1, 2, or 3 conduit between the point 10 feet above grade at the pole and the pull box. The conduit between the pole and the pull box must be buried at a depth of at least 18 inches below grade.

Place conductors across structures in a Type 1, 2, or 3 conduit. Attach the conduit to the outside face of the railing.

Mount the photoelectric unit at the top of the standard or wood post.

You may abandon in place conductors and cables in sawed slots or in conduit installed below the ground surface.

#### 87-20.03B Temporary Flashing Beacon Systems

Install a fused-splice connector in the pull box adjacent to each flashing beacon. Wherever conductors are run overhead, install the splice connector in the line side outside of the control assembly.

#### 87-20.03C Temporary Lighting Systems

Wherever conductors are run overhead, install the fuse splice connectors in the line side before entering the mast arm.

#### 87-20.03D Temporary Signal Systems

You may splice conductors that run to a terminal compartment or a signal head on a pole to the through conductors of the same phase in a pull box adjacent to the pole. Do not splice conductors or cables except in a pull box or in a NEMA 3R enclosure.

The Department provides the timing for the temporary signal.

Maintain the temporary signal except for the Department-furnished controller assembly.

#### 87-20.04 PAYMENT

Not Used

#### 87-21 EXISTING ELECTRICAL SYSTEMS

#### 87-21.01 GENERAL

Section 87-21 includes general specifications for performing work on existing electrical systems.

#### 87-21.02 MATERIALS

Not Used

#### 87-21.03 CONSTRUCTION

#### 87-21.03A General

You may abandon unused underground conduit after pulling out all conductors and removing conduit terminations from the pull boxes.

If standards are to be salvaged, remove:

- 1. All components
- 2. Mast arms from the standards
- 3. Luminaires, signal heads, and signal mounting assemblies from the standards and mast arms

If the existing material is unsatisfactory for reuse and the Engineer orders you to replace it with new material, replacing the existing material with new material is change order work.

If the removed electrical equipment is to be reinstalled, supply all materials and equipment, including signal mounting assemblies, anchor bolts, nuts, washers, and concrete, needed to complete the new installation.

#### 87-21.03B Maintaining Existing Electrical Systems

#### 87-21.03B(1) General

Maintain the existing electrical system in working order during the progress of the work. Conduct your operations to avoid damage to the elements of the systems.

#### 87-21.03B(2) Maintaining Existing Traffic Management System Elements During Construction

Section 87-21.02B(2) applies if a bid item for maintaining existing traffic management system elements during construction is shown on the Bid Item List.

Traffic management system elements include:

- 1. Ramp metering system
- 2. Traffic monitoring stations
- 3. Microwave vehicle detection system
- 4. Changeable message sign system
- 5. Extinguishable message sign system
- 6. Highway advisory radio system
- 7. Closed circuit television camera system
- 8. Roadway weather information system

Obtain authorization at least 72 hours before interrupting communication between an existing system and the traffic management center.

If the Engineer notifies you that an existing system is not fully operational due to your activities, repair or replace the system within 72 hours. If the system cannot be fixed within 72 hours or it is located on a structure, provide a temporary system within 24 hours until the system can be fixed. Perform a functional test of the system in the presence of the Engineer. If you fail to perform the necessary repair or replacement work, the Department may perform the repair or replacement work and deduct the cost.

If you damage an existing fiber optic cable, install a new cable such that the length of cable slack is the same as before the damage, measured from an original splice point or termination. All splices must be made using the fusion method.

You may interrupt the operation of traffic monitoring stations:

1. For 60 days if another operational traffic monitoring station is located within 3 miles

2. For 15 days if another operational traffic monitoring station is located more than 3 miles away

If a traffic monitoring station must be interrupted for longer periods than specified, provide a temporary detection system. Obtain the Department's authorization for the type of temporary system and its installation method.

#### 87-21.03C Modifying Existing Electrical Systems

Modify electrical systems as shown.

#### 87-21.03D Removing Existing Electrical Systems

The components to be removed are shown on the project plans.

#### 87-21.04 PAYMENT

Not Used

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# DIVISION XI MATERIALS 90 CONCRETE

07-15-16

#### Replace *Method 1* in the 4th paragraph of section 90-1.01D(5)(a) with:

Method 2

07-15-16

#### Replace section 90-9 with:

07-15-16

#### 90-9 RETURNED PLASTIC CONCRETE

#### 90-9.01 GENERAL

#### 90-9.01A Summary

Section 90-9 includes specifications for incorporating returned plastic concrete (RPC) into concrete.

RPC must be used only where the specifications allow its use. Do not use RPC in pavement or structural concrete.

#### 90-9.01B Definitions

returned plastic concrete (RPC): Excess concrete that is returned to a concrete plant in a plastic state and that has not attained initial set.

**hydration stabilizing admixture (HSA):** Extended set retarding admixture that controls and predictably reduces the hydration rate of the cementitious material.

#### 90-9.01C Submittals

Submit the following with the weighmaster certificate:

- 1. Weight or volume of RPC
- 2. Type, brand, and dosage of HSA
- 3. Time of adding HSA
- 4. Copy of the original weighmaster certificate for the RPC
- 5. Temperature of RPC

When requested, submit the HSA manufacturer's instructions, including dosage tables.

#### 90-9.01D Quality Assurance

The material plant producing concrete containing RPC must be authorized under the MPQP.

For volumetric proportioning of RPC:

- 1. The volumetric container must be imprinted with manufacturer's name, model number, serial number, the as-calibrated volume and date of the last calibration. Cross sectional dimensions of the container must remain the same as those during its calibration.
- 2. The device must be re-calibrated monthly and at any time when the container shape has been deformed from its original condition or there is evidence of material build-up on the inside of the device.
- 3. The device must be held in a level condition during filling. Fill the device to the measure or strike-off line. Each measurement must be filled to within 1.0% of the device as-calibrated volume.
- 4. The device interior must be cleaned after each measurement to maintain a zero condition.

For weight proportioning, proportion RPC with a weigh hopper attached to the plant at a position which allows the addition of the RPC to the mixer truck with the conventional PCC ingredients. The plant process controller must control the proportioning of RPC to within 1.0% of its target weight.

#### 90-9.02 MATERIALS

#### 90-9.02A General

The quantity of RPC added to the concrete must not exceed 15 percent.

The cementitious material content of the RPC must be at least that specified for the concrete that allows the use of RPC.

Water must not be added to the RPC after batching, including in the truck mixer.

Use HSA for controlling and reducing the hydration rate of RPC.

Incorporate RPC by mixing into the concrete before arriving at the jobsite.

#### 90-9.02B Returned Plastic Concrete

The RPC must not exceed 100 degrees F at any time.

If HSA is not used, RPC must be incorporated into the concrete before attaining initial set or within 4 hours after batching of RPC, whichever is earlier.

If HSA is used:

- 1. Add HSA to RPC within 4 hours after original batching.
- 2. Measure and record the time, dosage of HSA, and temperature of RPC when HSA is added.
- 3. Mix the RPC under the HSA manufacturer's instructions after adding HSA or at least 30 revolutions, whichever is greater.
- 4. Incorporate RPC into the concrete within 4 hours after adding HSA.

RPC must not contain:

- 1. Accelerating admixture
- 2. Fiber
- 3. Pigment
- 4. Lightweight aggregate
- 5. Previously returned RPC
- 6. Any ingredient incompatible with the resultant concrete

#### 90-9.02C Hydration Stabilizing Admixture

HSA must comply with ASTM C494 admixture Type B or Type D.

HSA must have a proven history of specifically maintaining and extending both plasticity and set.

HSA dosage must comply with the manufacturer's instructions.

#### 90-9.02D Production

Proportion concrete containing RPC under section 90-2.02E.

Proportion RPC by weight or by volume.

90-9.03 CONSTRUCTION Not Used

90-9.04 PAYMENT Not Used

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#### 92 ASPHALT BINDERS

04-15-16

04-15-16

#### Replace the 4th paragraph of section 92-1.02B with:

Crumb rubber modifier used must be on the Authorized Materials List for crumb rubber modifier.

Production equipment for PG modified asphalt binder with crumb rubber modifier must be authorized under the Department's *MPQP*.

Crumb rubber must be derived from waste tires described in Pub Res Code § 42703 and must be free from contaminants including fabric, metal, minerals, and other nonrubber substances.

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#### 96 GEOSYNTHETICS

01-15-16

Replace *product name, manufacturing source, and date of manufacture* in the 2nd sentence of the 1st paragraph of section 96-1.01D with:

manufacturing source code

01-15-16

#### CONTRACTOR REQUEST FOR CLARIFICATION

# PANOCHE ROAD SHOULDER IMPROVEMENTS

# **SR 33 TO SAN BENITO AVENUE**

## FEDERAL PROJECT NO. CML-5942(255)

#### **CONTRACT NUMBER: 17-15-C**

Requests for clarification of the specifications regarding this project shall be submitted on this form. Any change or clarification of the project specifications shall be in the form of a written addendum issued to planholders of record. Contractors requesting clarification shall complete the following:

Fax form to (559) 600-4399 or e-mail to <a href="mailto:DesignServices@co.fresno.ca.us">DesignServices@co.fresno.ca.us</a>

FIRM NAME:				-
SENDER / CONTACT NAME: _				_
MAILING ADDRESS:				_
BUSINESS PHONE: ()	FA	X NUMBER: ()	Zip Code	
Drawing No.:		Spec Sect	tion:	
Question Type or print or	ne question below			
Response				
The following exciting is for t	Country you on the			
The following section is for		Date:		
Response By:				
Included in Addendum No		Date:		
Date Received:	Time Received:	am / pm	RFC Number:	

This form may be removed from the project specifications and/or reproduced as needed.

# **BID BOOK**

# PANOCHE ROAD SHOULDER IMPROVEMENTS

# SR 33 TO SAN BENITO AVENUE

FEDERAL PROJECT NO. CML-5942(255)

BUDGET / ACCOUNT: 4510 / 7370



Department of Public Works and Planning

CONTRACT NUMBER: 17-15-C

**COPY NUMBER:** 

# BID BOOK TABLE OF CONTENTS PANOCHE ROAD SHOULDER IMPROVEMENTS

### CONTRACT NUMBER: 17-15-C

PROPOSAL NUMBER	TITLE
NOT APPLICABLE	INSTRUCTIONS FOR COMPLETING THE BID BOOK
1	PROPOSAL TO THE BOARD OF SUPERVISORS OF THE COUNTY OF FRESNO
2	BID ITEM LIST/BID SHEET
3	EVALUATION OF BID PROPOSAL SHEETS
4	BID SECURITY
5	NON-COLLUSION AFFIDAVIT
6	PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT
7	PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE AND PUBLIC CONTRACT CODE 10232 STATEMENT
8(A) - 8(F)	SUBCONTRACTORS
9	CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS
10	TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29
	DEBARMENT AND SUSPENSION CERTIFICATION
11	NON-LOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS
12(А) — 12(В)	DISCLOSURE OF LOBBYING ACTIVITIES
13(А) — 13(В)	EXHIBIT 15-G LOCAL AGENCY BIDDER DBE COMMITMENT (CONSTRUCTION CONTRACTS)
14(A) – 14(C)	EXHIBIT 15-H DBE INFORMATION — GOOD FAITH EFFORTS
15	OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS
16	GUARANTY

# **INSTRUCTIONS FOR COMPLETING THE BID BOOK FOR FEDERAL AID PROJECTS**

#### General

Complete forms in the Bid book.

Submit your bid:

- 1. Under sealed cover
- 2. Marked as a bid
- 3. Identifying the contract number and the bid opening date

Certain bid forms must be submitted with the bid and properly executed.

Certain other forms and information must be submitted either with the bid or within the prescribed period after bid opening as specified elsewhere in these special provisions.

Failure to submit the forms and information as specified results in a nonresponsive bid.

If an agent other than the authorized corporation officer or a partnership member signs the bid, file a Power of Attorney with the Department either before opening bids or with the bid. Otherwise, the bid may be nonresponsive.

#### **Bid Item List and Bid Comparison**

Submit a bid based on the bid item quantities the Department shows on the Bid Item List. Bids will be evaluated and the low bidder determined as indicated in the *Notice to Bidders*.

#### **Bid Document Completion**

Proposal sheets are identified by title and by the letter "P" followed by the number assigned to the proposal sheet in question. Proposal sheets are included in the *Bid Book.* 

#### Proposal 1 - Proposal to the Board of Supervisors of Fresno County

Provided for information.

#### Proposal 2 - Bid Proposal Sheet

One or more sheet(s) upon which the bidder completes the bid.

Fill out completely including a unit price and total for each unit price-based item and a total for each lump sum item.

Do not make any additions such as "plus tax", "plus freight", or conditions such as "less 2% if paid by 15th".

Use ink or typewriter.

#### **Proposal 3 - Evaluation of Bid Proposal Sheet**

Describes how inconsistences and irregularities are evaluated and corrected when Design Services reviews the Bid Item List.

#### **Proposal 4 - Bid Security and Signature**

Submit one of the following forms of bidder's security equal to at least 10 percent of the bid:

- Cash
- Cashier's check
- Certified check
- Signed bidder's bond by an admitted surety insurer

Indicate type of bid security provided.

- Cash Acceptable but not recommended. Cash is deposited in a clearing account and is returned to bidders by County warrant. This process may take several weeks.
- Cashier's or Certified Checks. This type of security is held until the bid is no longer under consideration. If submitted by a potential awardee, they will be returned when the contract is fully executed by the bidder and bonds and insurance have been approved.
- Bid Bonds Must be signed by the bidder and by the attorney-in-fact for the bonding company. Provide notarized signature of attorney-in-fact accompanied by bonding company's affidavit authorizing attorney-in-fact to execute bonds. An unsigned bid bond will be cause for rejection.

#### Acknowledge Addenda

Provide contractor's license information.

State business name and if business is a:

- Corporation list officers
- Partnership list partners
- Joint Venture list members; if members are corporations or partnerships, list their officers or partners.
- Individual list Owner's name and firm name style

Signature of Bidder - the following lists types of companies and corresponding authorized signers.

- Corporation by an officer
- Partnership by a partner
- Joint Venture by a member
- Individual by the Owner

If signature is by a Branch Manager, Estimator, Agent, etc., the bid must be accompanied by a power of attorney authorizing the individual to sign the bid in question or to sign bids more generally, otherwise the bid may be rejected.

- Business Address Firm's Street Address
- Mailing Address P.O. Box or Street Address
- Complete, sign, and return with bid.

#### Proposal 5 - Non-Collusion Affidavit

Must be completed, signed, and returned with bid.

#### Proposal 6 - Public Contract Code Section 10285.1 Statement

Check "has" or "has not" in accordance with instructions on form, return with completed for with bid. Note that signing the bid constitutes signing this statement.

# Proposal 7 - Public Contract Code Section 10162 Questionnaire and Public Contract Code 10232 Statement

Check: yes" or "no" accordance with instructions on form, include explanation if "yes" is checked. Return completed form with bid. Note that signing the bid constitutes signing this questionnaire and statement.

#### Proposal 8(a) through Proposal 8(f) - Subcontractors

Sheet(s) upon which bidders list subcontractors. List each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

The *Subcontractor List* submitted with the bid must show the name, location of business, work portions to be performed, and the contractor's license number for each subcontractor listed.

- Use subcontractor's business name style as registered with the License Board.
- Specify the city in which the subcontractor's business is located and the state if other than California.
- Description of the work to be performed by the subcontractor. Indicate with bid item numbers from the bid sheet and/or work descriptions similar to those on bid sheet.
- List license number for each subcontractor.

Upon request from Design Services, provide the following additional information within 24 hours of bid opening if not included on the *Subcontractor List* submitted with the bid:

- Complete physical address for each subcontractor listed.
- Percentage of the total bid or dollar amount associated with each subcontractor listed.
- Department of Industrial Relations registration number

#### Proposal 9 - Certification with Regard To The Performance Of Previous Contracts Or Subcontracts Subject To The Equal Opportunity Clause And The Filing Of Required Reports

For a Federal-aid contract, complete, sign, and return with bid.

#### Proposal 10 - Title 49, Code of Federal Regulations, Part 29 Debarment and Suspension Certification

For a Federal-aid contract, complete, sign, and return with bid.

#### Proposal 11 – Non-lobbying Certification for Federal-Aid Contracts

For a Federal-aid contract, complete, sign, and return with bid.

#### Proposal 12(a) through Proposal 12(b) - Disclosure of Lobbying Activities

For a Federal-aid contract, complete, sign, and return with bid.

# Proposal 13(a) through Proposal 13(b) - *Exhibit 15-G Local Agency Bidder DBE Commitment* (Construction Contracts)

For a Federal-aid contract, the apparent low, second-low, and third-low bidders must complete and submit so that it is received by Design Services, no later than 4:00 PM on the fourth business day after the bid opening if not submitted with the bid.

#### Proposal 14(a) through Proposal 14(c) - Exhibit 15-H DBE Information — Good Faith Efforts

For a Federal-aid contract, the apparent low, second-low, and third-low bidders must complete and submit so that it is received by Design Services no later than 4:00 PM on the fourth business day after the bid opening if not submitted with the bid.

#### Proposal 15 - Opt out of payment adjustments for price index fluctuations

You may opt out of the payment adjustments for price index fluctuations specified in section 9-1.07. To opt out, submit a completed *Opt Out of Payment Adjustments for Price Index Fluctuations* form with your bid.

#### Proposal 16 - Guaranty

Does not need to be signed with the bid. Part of the contract which must be signed by the contractor when contract is executed.

hereinafter called the Owner

# PANOCHE ROAD SHOULDER IMPROVEMENTS

## **SR 33 TO SAN BENITO AVENUE**

# FEDERAL PROJECT NO. CML-5942(255)

The work embraced herein shall be done in accordance with the 2015 Standard Specifications and with the 2015 Standard Plans, of the State of California, Department of Transportation insofar as the same may apply and in accordance with these special provisions.

Except to the extent that they may conflict with these special provisions, revised Standard Specifications apply to the extent included in the section entitled "Project Details" of the book entitled "Specifications."

The undersigned, as bidder, declares that the only persons, or parties interested in this proposal as principals are those named herein, that this proposal is made without collusion with any other person, firm or corporation; that he has carefully examined the location of the proposed work, the annexed proposed form of contract, and the plans therein referred to; and he proposes and agrees if this proposal is accepted, that he will contract with the Owner to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the contract in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefor the following unit prices, to-wit:

Proposal 1 Contract Number 17-15-C

3

1

ASE E	BID					
tem No.	Estimated Quantity	Unit of Measure	F,S	Item Description	ltem Price (In Figures)	Total Price (In Figures)
1	A0000	\$		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$ 40,000.00
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	2500-	5,000-
3	1	LS	s	TRAFFIC CONTROL SYSTEM	101,100-	101,000-
4	1	LS		JOB SITE MANAGEMENT	5,700-	5,700-
5	1000	\$		TATE WATER RESOURCES CONTROL BOARD NOTICE OF	\$1.00	\$ 1,000.00
6	1	LS	s	PREPARE STORM WATER POLLUTION PREVENTION PLAN	1,550-	1,550-
7	1	LS	s	STORM WATER A INUAL REPORT	275 -	275-
8	1	LS		CLEARING AND GRUBBING	3,900-	3,900-
9	5149	CY	F	ROADWAY EXCAVATION	19,50	100,40550
10	2090	CY	F	SHOULDER BACKING	162	33,958
11	2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)	3950	82,555-
12	1	LS		FINISHING ROADWAY	6,650-	6,650-
13	3833	CY	F	CLASS 2 AGGREGATE BASE	55-	210,815
14	3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	8420	319,494,50
15	4	TON		TACK COAT	540-	2,1.60-
16	3	EA		ROADSIDE SIGN - ONE POST	3320-	990-
17	1	LS		MOBILIZATION	41,000.20	9N,000.00
			тс	TAL BASE BID (ITEMS 1 THROUGH 17)		956,33.00
F - FINAL PAY ITEM						956,358.02
	S - SPECIALTY	ITEM				

#1

#### COUNTY OF FRESNO DEPARTMENT OF PUBLIC WORKS AND PLANNING PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS FEDERAL PROJECT NO.: CML -5942(255) CONTRACT NO: 17-15-C

ALTERNATIVE BID

. 3

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item No.	Estimated Quantity	Unit of Measure	F,S	Item Description	Item Price (In Figures)		
1	40000	s		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$ 40,000.00	
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	550-	1,005-	
3	1	LS	s	TRAFFIC CONTROL SYSTEM	WI,OW	101,000	
4	1	LS		JOB SITE MANAGEMENT	5,700-	5,200-	
5	1000	s		STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$1.00	\$ 1,000.00	
6	1	LS	S	PREPARE STORM WATER POLLUTION PREVENTION PLAN	1,550-	4550-	
7	1	LS	s	STORM WATER ANNUAL REPORT	275-	275-	
8	1	LS		CLEARING AND GRUBBING	3,905	3,900-	
9	4105	CY	F	ROADWAY EXCAVATION	24-	93,520-	
10	2090	CY	F	SHOULDER BACKING	10-	20,900-	
11	2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)	3650	76,285	
12	1	LS		FINISHING ROADWAY	6.658-	6,65r-	
13	2788	CY	F	CLASS 2 AGGREGATE BASE	53-	147,764-	
14	10455	SY		SUBGRADE ENHANCEMENT GEOGRID (BIAXIAL)	275	28,75725	
15	3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	80-	312,480	
16	4	TON		TACK COAT	540-	2,160-	
17	3	EA		ROADSIDE SIGN - ONE POST	330-	920-	
18	1	LS		MOBILIZATION	41,000,000	41,000.2	
		1	TOTAL	ALTERNATIVE BID (ITEMS 1 THROUGH 18)		880025	

F - FINAL PAY ITEM

S - SPECIALTY ITEM

#### EVALUATION OF BID PROPOSAL SHEETS

Abbreviations used in the bid proposal sheet are identified in Section 1-1.06, "Abbreviations," of these special provisions.

Bids are required for the entire work. Bids will be compared on the basis indicated in the Notice to Bidders. The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

- (a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;
- (b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the Owner's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise, if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items shall be item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the Owner, and that discretion will be exercised in the manner deemed by the Owner to best protect the public interest in the prompt and economical completion of the work. The decision of the Owner respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, shall be final.

If this proposal shall be accepted and the undersigned shall fail to contract, as aforesaid, and to give the two bonds in the sums to be determined as aforesaid, with surety satisfactory to the Owner, within eight (8) days not including Saturdays, Sundays and legal holidays, after the bidder has received notice of award of the contract, the Owner, at its option, may determine that the bidder has abandoned the contract, and thereupon this proposal and the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this proposal shall operate and the same shall be the property of the Owner.

Proposal 3 Contract Number 17-15-C Accompanying this proposal is security (check one only) in amount equal to at least ten percent (10%) of the total amount of the bid:

Bid Bond (X); Certified Check ( ); Cashier's Check ( ); Cash (\$ )

Bidder has and acknowledges the following addenda: 1, 2, 3

The names of all persons interested in the foregoing proposal as principals are as follows:

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if bidder or other interested person is an individual, state first and last name in full.

FIRM NAMECAL VA		
MICHELLE AVILA	PRESIDENT	
JOHN AVILA	VICE PRESIDENT	
TONY STORELLI	SECRETARY	

Licensed in accordance with an act providing for the registration of Contractors, Class 4_____ License No._____873800______ Expires 3-31-2020____

(Furnishing Contractor License information as part of this proposal is optional and is requested to facilitate verification of licensure)

Signature of Bidder SECRETARY

3-15-18 Dated

**NOTE:** If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if bidder is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if bidder is an individual, his signature shall be placed above. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the Owner prior to opening bids or submitted with the bid; otherwise, the bid will be disregarded as irregular and unauthorized.

BUSINESS ADDRESS:	5125 N. GAT	55#102	FRESNO, CA 93722
			Zip Code
MAILING ADDRESS:			
	4		Zip Code
BUSINESS PHONE: (	<b>(</b> 559) 274-0300	_FAX NUMBER: (	(559) 274-0311
EMAIL ADDRESS	sales@calvalleyconstruction.com		

Proposal 4 Contract Number 17-15-C

## MINUTES OF ACTION BY THE DIRECTORS OF CAL VALLEY CONSTRUCTION, INC., A CALIFORNIA CORPORATION WITHOUT A MEETING

The undersigned directors of Cal Valley Construction, Inc., acting by unanimous written consent without a meeting pursuant to Corporations Code §307(b), adopt the following resolution:

1. Authorize the Directors of the Corporation to Sign Documents

WHEREAS, the Corporation relocated its principal place of business on October 17, 2016 and the original resolution dated May 1, 2014 listed the former location, be it:

**RESOLVED**, that any of the Directors of the Corporation are hereby authorized to sign on behalf of the Corporation any contracts or forms for public or private bid documents.

The undersigned hereby certifies that the foregoing is a true record of a resolution duly adopted by the Directors and that said resolution is now in full force and effect without modification or rescission.

Dated: October 31, 2016

MICHELLE A. AVILA, President

JOHIN G. AVILA rce Pres

TONY STOREFLI, Secretary

MICHELLE A. AVILA, Treasurer

General Engineering + Commercial & Residential Certified SB + UDBE + WMBE



Heavy Equipment Rental & Grading & Paving License #873800

CERTIFICATION OF CORPORATE SECRETARY

I, Tony Storelli, certify that I am the secretary of the corporation named herein; that Tony Storelli who signed this CERTIFICATION on behalf of the corporation, was then Secretary of said corporation; that said CERTIFICATION is within the scope of its corporate powers and was duly signed for and on behalf of said corporation by authority of its governing body, as evidenced by the attached true and correct copy of the CERTIFICATE OF CORPORATE RESOLUTION AUTHORIZING DIRECTORS TO SIGN DOCUMENTS.

Cal Valley Cor	nstruction, Inc.
Signature:	17000
Print Name:	TONY STORELLT
Title:	SECRETARY
Date:	MAY 1, 2014
	•

-1-

www.calvalleyconstruction.com

Tel/ 559.274.0300 🔹

FAX/ 559.274.0311

03/15/2018	13:20
2060	PANOCHE RD WIDENING FRESNO CO.
*** Mike Hardy	BID TOTALS

4

<b>Biditem</b>	Description	Quantity	Units	<u>Unit Price</u>	<b>Bid Total</b>
1	Supplemental Work (Oil Index) (Owner Allowance)	40,000.000	\$	1.00	40,000.00
2	Construction Funding Signs	2.000	EA	2,500.00	5,000.00
3	Traffic Control	1.000	LS	101,000.00	101,000.00
4	Jobsite Management	1.000	LS	5,700.00	5,700.00
5	State Water Board NOI (Owner Allowance)	1,000.000	\$	1.00	1,000.00
6	Prepare SWPPP	1.000	LS	1,550.00	1,550.00
7	Storm Water Annual Report	1.000	LS	275.00	275.00
8	Clearing & Grubbing	1.000	LS	3,900.00	3,900.00
9	Roadway Excavation <b>**</b> FINAL <b>**</b>	5,149.000	CY	19.50	100,405.50
10	Shoulder Backing**FINAL**	2,090.000	CY	16.20	33,858.00
11	Import Borrow (Shoulder Backing) **FINAL**	2,090.000	CY	39.50	82,555.00
12	Finish Roadway	1.000	LS	6,650.00	6,650.00
13	Class 2 AB **FINAL**	3,833.000	CY	55.00	210,815.00
14	HMA Type A	3,781.000	TON	84.67	320,137.27
15	Tack Coat	4.000	TON	540.00	2,160.00
16	Roadside Sign (One Post)	3.000	EA	330.00	990.00
17	Mobilization	1.000	LS	41,000.00	41,000.00
	А		>		\$956,995.77

110	Supplemental Work (Oil Index) (Owner Allowance)	40,000.000	\$	1.00	40,000.00
120	Construction Funding Signs	2.000	EA	550.00	1,100.00
130	Traffic Control	1.000	LS	101,000.00	101,000.00
140	Jobsite Management	1.000	LS	5,700.00	5,700.00
150	State Water Board NOI (Owner Allowance)	1,000.000	\$	1.00	1,000.00
160	Prepare SWPPP	1.000	LS	1,550.00	1,550.00
170	Storm Water Annual Report	1.000	LS	275.00	275.00
180	Clearing & Grubbing	1.000	LS	3,900.00	3,900.00
190	Roadway Excavation **FINAL**	4,105.000	CY	24.00	98,520.00
200	Shoulder Backing **FINAL**	2,090.000	CY	10.00	20,900.00
210	Imported Borrow (Shoulder Backing) **FINAL**	2,090.000	CY	36.50	76,285.00
220	Finish Roadway	1.000	LS	6,650.00	6,650.00
230	Class 2 AB **FINAL**	2,788.000	CY	53.00	147,764.00
240	Subgrade Enhancement (Geogrid Biaxial)	10,455.000	SY	2.75	28,751.25
250	HMA Type A	3,781.000	TON	80.00	302,480.00
260	Tack Coat	4.000	TON	540.00	2,160.00
270	Roadside Sign (One Post)	3.000	EA	330.00	990.00
280	Mobilization	1.000	LS	41,000.00	41,000.00

\$880,025.25

Bid Total

____>

____>

\$1,837,021.02

#### Federal Project Number: CML-5942(255)

To the Board of Supervisors, County of Fresno:

## NONCOLLUSION AFFIDAVIT

#### TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID *

TONY STORELLI

(Printed or Typed Name)

being first duly sworn, deposes and says that he or she is

SECRETARY

(Owner, Partner, Corporate Officer (list title), Co-Venturer)

of CAL VALLEY CONSTRUCTION

## (Bidding Entity)

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

SECRETARY (Signature) Y STORELLI

(Title 23 United States Code Section 112)

(Calif Public Contract Code Section 7106; Stats.1988, c. 1548, Section 1.)

* NOTE: Completing, signing, and returning the Non-Collusion Affidavit is a required part of the Proposal. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

<u> 3-15-1名</u> (Dated)

Proposal 5 Contract Number 17-15-C

#### PUBLIC CONTRACT CODE

#### Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ______, has not _X_ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Proposal 6 Contract Number 17-15-C

#### Public Contract Code Section 10162 Questionnaire

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes No X

If the answer is yes, explain the circumstances in the following space.

#### Public Contract Code 10232 Statement

In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Proposal 7 Contract Number 17-15-C CAL VALLEY CONSTRUCTION

# BIDDER: ____

#### SUBCONTRACTORS:

The following named subcontractor(s) will perform with labor, or otherwise render services to the general contractor in or about the construction of the work or improvement in an amount in excess of **one-half of one percent of the total bid presented herewith or \$10,000, whichever is greater.** Please fill out as completely as possible when submitting your bid. Use subcontractor's business name style as registered with the License Board. Submission of subcontractor's name, location of business and description of work, and their contractor's license number is REQUIRED, by Section 4104 of the California Public Contract Code, to be submitted prior to bid opening. (The "location of business" must specify the city in which the subcontractor's business is located, and the state if other than California.) All other requested information shall be submitted, either with the bid or within 24 hours after bid opening.

Please fill out as completely as possible when submitting your bid. Use subcontractor's business name style as registered with the License Board.

#### FAILURE TO LIST SUBCONTRACTORS AS DIRECTED MAY RENDER THE BID NON-RESPONSIVE, OR MAY RESULT IN ASSESSMENT OF A PENALTY AGAINST THE BIDDER IN ACCORDANCE WITH SECTION 4110 OF THE CALIFORNIA PUBLIC CONTRACT CODE.

SUBCONTRACTOR:	MIRAN	22 REVUCIONE	
Business Address: _	3220 W	BELMONT	FRESKS
Class	_License No		DIR Registration No. 1000037947
		MATERIAL H	
Dollar Amount or Pe	rcentage of Tot	tal Bid <u>37, 300</u>	-
Email Address			
SUBCONTRACTOR:	ARSSL (	Construction	
Business Address:	8435 24	5 ST. SACRA	MENTO, OH
Class	_License No	621731	DIR Registration No. 1000002918
Item No. or Description	on of Work:	AC GRINDING	4
Dollar Amount or Per	centage of Tot	al Bid 79,000	5-
Email Address			

Proposal 8(a) Contract Number 17-15-C

BIDDER:
SUBCONTRACTOR:
Business Address:
Class DIR Registration No Item No. or Description of Work:
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address
SUBCONTRACTOR: A SEOCLATIGO TRAFFIC SAFET
Business Address: PORDEX 2221 ATASCADERO (A Class of License No. 962 Mel DIR Registration No. 10500 (3332)
Class <u>H</u> License No. <u>962 Nol</u> DIR Registration No.
Item No. or Description of Work: TRAFFIC CONTINUL
Dollar Amount or Percentage of Total Bid i ジレ, ひつて
Email Address
SUBCONTRACTOR:
Business Address:
ClassLicense NoDIR Registration No
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address
SUBCONTRACTOR:
Business Address:
ClassLicense NoDIR Registration No
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address

Proposal 8(b) Contract Number 17-15-C

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Business Address:	
ClassLicense No	DIR Registration No.
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	DIR Registration No
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	DIR Registration No
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid Email Address	

Proposal 8(c) Contract Number 17-15-C

BIDDER:		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No.	DIR Registration No
Item No. or Descripti	on of Work:	
	rcentage of Total Bid	

Proposal 8(d) Contract Number 17-15-C

. .

BIDDER:		
SUBCONTRACTOR:		
Class	License No	DIR Registration No
Item No. or Descript	tion of Work:	
Dollar Amount or Pe	ercentage of Total Bid _	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descript	tion of Work:	
Dollar Amount or Pe	ercentage of Total Bid _	
Email Address		
SUBCONTRACTOR:		· ·
Business Address:		
Class	_License No	DIR Registration No
Item No. or Descript	ion of Work:	
Dollar Amount or Pe	ercentage of Total Bid _	
Email Address		
SUBCONTRACTOR:		
Business Address:		
		DIR Registration No
Item No. or Descript	ion of Work:	

Proposal 8(e) Contract Number 17-15-C

. .

BIDDER:		
SUBCONTRACTOR:		
Business Address: _		
Class	License No.	DIR Registration No
Item No. or Description	on of Work:	
Dollar Amount or Pere	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No.	DIR Registration No
Item No. or Descriptic	on of Work:	
Dollar Amount or Perc	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descriptio	on of Work:	
Dollar Amount or Perc	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descriptio	n of Work:	

Proposal 8(f) Contract Number 17-15-C

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#### CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS.

The bidder  $X_{,}$  proposed subcontractor __, hereby certifies that he has  $X_{,}$  has not __, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has  $X_{,}$  has not __, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

CAL VALLEY CONSTRUCTION

(Company TONY STORELLI SECRETARY

(Title)

Date: 3-15-18

**NOTE**: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

Proposal 9 Contract Number 17-15-C

#### TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29 DEBARMENT AND SUSPENSION CERTIFICATION

The bidder  $\underline{M}$ , proposed subcontractor __, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;

has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;

does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space:

No Exceptions

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action:

Note: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Proposal. Signing the Proposal on the signature portion thereof shall also constitute signature of this Certification.

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Title 23 United States Code, Section 112 Non-Collusion Affidavit and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Bidder	Subcontractor: CAL VA	ALLEY CONSTRUCTION	
вý: Ç	2 Aul	10	
Date:	3-15-18		
Title:	TONY STORELLI	SECRETARY	
_			

Proposal 10 Contract Number 17-15-C

## NONLOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with awarding of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

Bidde	CAL VALLEY CONSTRUCTION	
By:	BACK	<b>5</b> '
Date:	3-15-2	-018
Title:	TONY STORELLI SECR	ETARY

Proposal 11 Contract Number 17-15-C

Disclosure of Lobbying Activities Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 (See reverse for public burden disclosure)

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. bid/offer/application b. initial award c. post-award		3. Report Type: ▲ a. initial filing b. material change For material change only: Year quarter Date of last report
4. Name and Address of Reporting E Prime Subawardee Tier, if CAL VALLEY CONSTRUCTION 5127 N.GATES # 102 FRESNO, CA 93722			g Entity in No. 4 is Subawardee, and Address of Prime:
<b>Congressional District</b> , <i>if known</i> : 6. Federal Department/Agency:		7. Federal Pro	onal District, if known: gram Name/Description: if applicable:
8. Federal Action Number, if known:		9. Award Amo \$ N[#	ount, if known: 4-
10. a. Name and Address of Lobbying (if individual, last name, first name)		b. Individuals I different from No (last name, fir N ( #	st name, MI):
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		Signature: Print Name: SECF Title: (559) 274- Telephone No.:	DNY STORELLI RETARY 0300 Date: 3-15-18
Federal Use Only		Authorized for L Standard Form -	ocal Reproduction LLL (Rev. 7-97)

Proposal 12(a) Contract Number: 17-15-C

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#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether sub-awardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or sub-award recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Sub-awards include but are not limited to subcontracts, sub-grants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- 7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Proposal 12(b) Contract Number: 17-15-C

Local Assistance Procedures Manual	EXHIBIT 15-G	Construction Contract DBE Commitment

Exhibit 15-G Construction Contract DBE Communent			
1. Local Agency:	FRESNIO COUNTY.	2. Contract DBE Goal:	81/2
3. Project Description	: FANOCHE ROAD SHO	ULVER INITROVEMENTS	
4. Project Location:	MENWOTH (FREENRI	COUNTY)	
5. Bidder's Name:	CAL VALLEY CONSTRUCTION	6. Prime Certified DBE: D 7. Bid An	nount: 45 086,295 -
8. Total Dollar Amour	t for ALL Subcontractors:	9. Total Number of <u>ALL</u> Sub	~ ~ /

10. Bid Item Number	11. Description of Work, Service, or Materials Supplied	12. DBE Certification Number	13. DBE Contact Information (Must be certified on the date bids are opened	14. DBE Dollar Amount
14 BACE	HOMLING	5568	MIRANOA TULICKINSA 3220 W. PELMINT TUESNO 559-275-6250	37,000-
lis Aut	HOUTAUT MATCRIAL	5500	K K	37,000-
9 BASE	ACGRINMING	5270	4456 CONSTRUCTION 84355 24TH ST SACRAMENTO 9116-379-0442	29,00V-
9 Au	AC GRIWING	5270	n ù	29,000-
2945E 3BASE	PRUSEUT SIGNS TRAPPIC CONDEDL	38321	ASSDELATOD TRAPPIC SAPETY POPSX 2221 ATASCHICENS CA	90,500-
RAUT 3AUT	FROJECT SIGNS TRAFAL CONTROL	38321	8105-401-11000 N N	90,500
			BASE	156,500
Local Agenc	y to Complete this Section		· Art	\$156,500
21. Local Agency Contract Number:17-15-C22. Federal-Aid Project Number:CML - 5942 (255)23. Bid Opening Date:03-01-18		15. TOTAL CLAIMED DBE PARTICIPATION	156,500 = 16.3% 4 17.8%	
24. Contract Award Date: Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate.		IMPORTANT: Identify all DBE firms being clain regardless of tier. Names of the First Tier DBE and their respective item(s) of work listed abov consistent, where applicable with the names a work in the "Subcontractor List" submitted with Written confirmation of each listed DBE is requ	ned for credit, Subcontractors ve must be nd items of the h your bid.	
25. Local Agency Representative's Signature TuFong Thao 27. Local Agency Representative's Name Staff Analyst		16: Preparer's Signature TOMY STORELLI (559	-16-18	
29. Local Agency Représentative's Title			20. Preparer's Title	

DISTRIBUTION: 1. Original – Local Agency

2. Copy – Caltrans District Local Assistance Engineer (DLAE). Failure to submit to DLAE within 30 days of contract execution may result in de-obligation of federal funds on contract. Include additional copy with award package.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654 6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

#### Proposal 13(a), Contract Number: 17-15-C

## **DBE INFORMATION - GOOD FAITH EFFORTS**

CML-5942(255) Federal-aid Project No.

Bid Opening Date 3-15-19

established a Disadvantaged Business Enterprise (DBE) goal of County of Fresno The 8 % for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders should submit the following information even if the "Local Agency Bidder DBE Commitment" form indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the "Local Agency Bidder DBE Commitment" form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled "Submission of DBE Commitment" of the Special Provisions:

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

Publications	Dates of Advertisement
	4

B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of DBEs Solicited	Date of Initial Solicitation	Follow Up Me	thods and Dates
MIRANNA TRACKING ASSOCIATED TRAFFIC ASSI CONFETENCIAN	Cannesi	PHONE PHONE PHONE	3-15-18 3-15-13 3-14-18

Proposal 14(a) Contract Number 17-15-C C. The items of work which the bidder made available to DBE firms including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Items of Work	Bidder Normally Performs Item	Breakdown of Items	Amount (\$)	Percentage Of
	(Y/N)		(1)	Contract
TRAFAC CONTROL	1		90,500	a ^{fo}
TRUCKING	N		37,005-	4%
AC GRINIDING	N		29,000	3%

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the reasons for the bidder's rejection of the DBEs:

Names, addresses and phone numbers of firms selected for the work above:

MIRHNOA TRICKING	3220 W. BISLMINT, FRESNS	559-275-6250
ASSACIATED TRAPPICA	FOR RIBOX 2221 ATASCADARA	305-461-1600
APSSL (INSTRUCTION)	3435 24TH ST. SACRAMENTS	916-379.0442

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

Nove	NREVIEN	on	Aziceo	For	 

Proposal 14(b) Contract Number 17-15-C F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

NONE NEEDEN OR ASKED FOR G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.): Name of Agency/Organization Method/Date of Contact Results H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary): - SEC ATTACHED

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

Proposal 14(c) Contract Number 17-15-C

## Triumph Geo-Synthetics, Inc.

Sales Contact: E: sales@triumphgeo.com

1325 N. Blue Gum St. Anaheim, CA 92806 888-775-7545 DBE/WBE #9076, UDBE, SBE #16084, CPUC #12010014

Quote #: Q-03561-1

Bid Date:	3/15/2018	
Project Name:	Panoche Road Shoulder Improvements SR 33 to San Benito Avenue	
Project Location:	CA	
Project Zip Code:		
Project #:	17-15-C	

Material Total	Sales Tax @ 7.9750%	Freight Cost	Total Cost
\$14,068.00	\$1,121.92	\$750.00	\$15,939.92

Γ	#	Product Name	QTY	UOM	Unit Price	Total
ſ		BXG120 Mirafi Geogrid, 13' x 164'	44	Rolls	319.7273	\$14,068.00

#### Fuel charges may apply to freight cost.

Terms and Conditions are attached to this document. Alternatively, the Triumph Terms and Conditions can be accessed at www.triumphgeo.com. This quote will expire 30 days from the date of issue.

Signature: _____ Date: _____

ţ

Name:

ì

## REED & GRAHAM, INC. **GEOSYNTHETICS**

## PLEASE REFER TO THIS QUOTE NUMBER WHEN ORDERING: Quote: 26659

PAGE 1

Date	03/01/2018	Project	PANOCHE ROAD SHOULDER
То	CAL VALLEY CONSTRUCTION, INC.		IMPROVEMENTS
Attn.	MIĶE HARDY	Agency	FRESNO COUNTY PUBLIC WRKS
Phone#	559/274-0300	Contract#	17-15-C
Fax#	559/274-0311 Y	Bid Date	03/08/2018

WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION:

Quantity	UOM	Description	Unit Price	Amount
44	RL	ITEMS OFFERED ARE FOR ALTERNATIVE BID ITEM # 14 DIR - TENSAR BX1200 TYPE 2 BIAXIAL GEOGRID 13.1 [×] 164 [×] , 239.1 SY/ROLL MEETS CALTRANS SECTION 96-1.02P BIAXIAL GRID SPEC QUANTITY BASED ON 10,520 SY, FULL ROLL AMOUNT	\$245.00	\$10,780.00
1	EA	ESTIMATED FREIGHT FOR SHIPPING TENSAR BX1200 DIRECT TO JOBSITE FROM MANUFACTURER	\$2,350.00	\$2,350.00
30	RL	DIR - TENSAR TX130S TRIAX GEOGRID, 13.1 [*] X246 [*] , 358.6 SY/ROLL, ALTERNATE GEOGRID, SUBJECT TO ENGINEERS APPROVAL, QUANTITY BASED ON 10,758 SY, FULL ROLL AMOUNT	\$394.45	\$11,833.50
1	EA	ESTIMATED FREIGHT TO SHIP TENSAR TX130S TO JOBSITE FROM MANUFACTURER	\$1,595.00	\$1,595.00
¢	1	PRICES ARE FOB MANUFACTURERS WAREHOUSE. SALES TAX IS NOT INCLUDED IN BID PRICE CONTRACTOR IS RESPONSIBLE FOR OFFLOADING MATERIAL AND PROVIDING EQUIPMENT AS NEEDED. QUANTITIES QUOTED ARE BASED UPON CUSTOMER PROVIDED DATA OR ENGINEERS ESTIMATE WHEN PROVIDED IN PUBLISHED SOLICITATION. DETERMINATION OF ALL QUANTITIES REQUIRED FOR COMPLETION OF PROJECT IS THE RESPONSIBILITY OF CUSTOMER.		-
Contact Carl S	pringer	for questions regarding this quotation at: 888/381-0800	TOTAL:	\$26,558.50

Total is for product only.

CRYSTAL ROSSMANN - SALES CARL SPRINGER - SALES 3121 EVERGREEN AVE STE 140, WEST SACRAMENTO CA 95691 PHONE: 888/381-0800 or 916/381-9900 FAX: 916/388-1486

Accepted By (Signature)



Prices quoted do not include applicable taxes. Ouotes are 30 days for accentance. 30 days to take delivery

# **COSUPPLY** ON ACCOUNT



025 - Fresno 5780 E. Shields Ave. Fresno, CA, 93727 (559) 294-9000 QUOTE

## 281285

Sold To: 153190000 CAL VALLEY CONSTRUCTION INC 5125 N GATES AVE FRESNO, CA, 93722 559-274-0300

**CONSTRUCTION & INDUSTRIAL** 

WHITE CAP

Ship To :	YARD/CAL VALLEY CONST-153190999,153190999
<b>r</b>	5125 N GATES AVE
	SUITE 102
	FRESNO, CA, 93722
	Job Site Contact: BRANDEN BRUECKNER
	Job Site Phone:
	Map #:

12:28 PM		Ordered By: BRANDEN BRUECKNE	R Contac	t Phone:		
	Quote Number	Quote Date	Valid Unt	il	Sales P	erson
	281285	04/04/2018			Hatch	1, S
	Terms	Shipping Method			Created By	
		2. Our Truck			Hatch, S	
Notes: Par	oche Rd. Shoulder Im	provements - County of Fresno				
LN	Part#	Description	Ord Quantity	U/M	Price	Amount
	H/M			Unit WT	C00	
10	104TP245060	13.12'X164' TENSAR TYPE 2 450 BX1200 239SY/RL	44	RL	\$267.00	\$11,748.00
				135 LBS		

shipped weight

5,940.00 LBS

Sub Total		\$11,748.00
Tax amount		\$936.90
Lumber Tax rate/amount	1.00%	\$0.00
Total		\$12,684.90

Customer acceptance signature:

Date :

ALL ITEMS AND QUANTITIES REQUIRE CUSTOMER REVIEW AND APPROVAL AVAILABILITY AND LEAD TIMES ARE SUBJECT TO CHANGE SPECIAL ORDERED ITEMS ARE SUBJECT TO MANUFACTURER APPROVAL PRIOR TO RETURN. QUOTE IS SUBJECT TO EXPIRATION AS INDICATED IN THE ABOVE DATE.

. 15. 2018 8:50AM	sociated frattic Satety No. //99 P
P.O. Box 22	Atascadero, CA 93423 Phone 805.461.1600 Fax 805.461.1613
TO: Estimator	FROM: Matt Miller
ATTN:	PAGES: 6
FAX:	DATE: March 15, 2018
PHONE:	CC:

## WE ARE CERTIFIED DBE # 38321

,

#### Associated Irattic Satety

## KELLIE AVILA CONSTRUCTION SERVICES, INC.

dba



P.O. Box 2221 Atascadero, CA 93423 • Phone 805.461,1600 • Fax 805.461.1613 Public Works Contractor Registration # 1000013321 DBE Firm ID - 38321 • Contractors License No. 962161

Bid Date 3/15/18

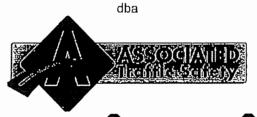
#### PANOCHE ROAD SHOULDER IMPROVEMENTS CONTRACT INFO 17-15-C

## THIS PROPOSAL AND ATTACHED PROVISIONS ARE TO BECOME A BINDING PART OF ANY SUBCONTRACT

ITEM	DESCRIPTION	UNIT	QTY	\$/UNIT	 TOTAL
_	Construction Area Signs	LS	1	LS	\$ 4,500.00
	*Price above includes (6) W20-1, (6) G20-2 & (2) Construction P installed and removed.	roject Funding	Signs furnis	shed,	
	*All signs to be installed with (1) mobilization and removed with ( will be charged at \$1,000.00 per each.	1) mobilization	. Additional	mobilizations	
	* Signs will be covered at installation if required and contractor w needed and recover when not required. Contractor is responsible	•		er when	
	* All signs and posts are to remain the propery of Associated Tra project.	ffic Safety upo	n the compl	etion of the	
	* Associated Traffic Safety will notify USA for its work only at no	extra charge to	the genera	l contractor	
	Traffic Control System	LS	1	L\$	
	* Traffic plan not included in item				
	* See next page for traffic control rates				

Note: 3 addendums acknowledged

#### Mar. 15. 2018 8:51AM Associated Trattic Safety No. 7/99 4. 3/6 KELLIE AVILA CONSTRUCTION SERVICES, INC.



P.O. Box 2221 Atascadero, CA 93423 Phone 805.461.1600 Fax 805.461.1613 DBE Firm ID – 38321 Contractors License No. 962161 DIR 1000013321

## TO: ESTIMATOR PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS (17-15-C) QUOTE DATE: MARCH 15, 2018

#### Traffic Control System - Day

- 1 Traffic Control Personnel for Lane Closures \$950.00 per 8-hour shift
- 2 Traffic Control Personnel for Lane Closures \$1,550.00 per 8-hour shift
- 1 Pilot Vehicle and Driver \$900.00 per 8-hour shift
- 2 Traffic Control Personnel for Flagging \$1,400.00 per 8-hour shift

#### Please add the following amount to any shift price above:

- \$300.00 per shift for rumble strips
- \$700.00 per additional technician w/8-hour shift

### Traffic Control Notes:

- If less than 2 consecutive shifts are performed please add 10% to quoted traffic control rates.
- Cancellations made with less than 8 hours' notice of requested show up time will be charged + 60% of quoted rates, all cancellations MUST be
  received in written form via fax or email.
- Changeable Massage SIgn (CMS), Impact Attenuator Vehicle (IAV) and traffic control crews subject to availability.
- 1 Traffic Control Personnel for lane closures includes fully loaded truck & 1 arrow board (excludes CMS & IAV)
- 2 Traffic Control Personnel for lane closures includes fully loaded truck & 1 arrow board (excludes GMS & IAV)
- 2 Traffic Control Personnel for flagging includes fully loaded truck (excludes Rumble Strips, Light Towers, CMS & IAV)
- Fully loaded truck Includes signage for Caltrans T10, T13 & T14 and up to 200 cones.
- All overtime (8-12 hours) will be charged at \$95.00 per hour per person.
- All double time (over 12 hours) will be charged at \$120.00 per hour per person.
- General Contractor Is responsible for providing required breaks. If lunch break is not given or provided after the 5th hour worked a \$60 fee per person will apply. Any shift worked past 11 hours with no break given or provided will incur a fee of \$120 per person.
- Add \$85.00 per light lower per shift plus fuel if applicable.
- All Saturday traffic control rates multiply by 1.45
- All Sunday Iraffic control rates multiply by 1.85
- We at ATS understand that every traffic control situation is different in its own way, we pride ourselves in keeping the customer happy, if
  additional equipment is needed that is not shown above and ample time is given we will give it our best to provide you with what you need.
  Keep in mind that a 1, 2, or 3 person crow can only do so much. With that being said, understand that there may be times when additional
  crows may be needed to handle the work load that is expected from the prime contractor.

#### Mar. 15. 2018 8:51AM Associated Trattic Satety No. KELLIE AVILA CUNSTRUCTION SERVICES, INC. No. 1199

dba



P.O. Box 2221 Atascadero, CA 93423 🕮 Phone 805.461.1600 📟 Fax 805.461.1613 DBE Firm ID ~ 38321 @ Contractors License No. 962161 @ DIR 1000013321

Portable Light Towers - Rental Only - Subject to Availability

- \$85.00/day: \$300.00/week: \$900.00/month ---
- Deliver and pick-up fees & fuel charges apply, call for details

Changeable Message Signs (CMS) - Rental Only - Subject to Availability

- \$175.00/day: \$450.00/week: \$1000.00/month -
- Deliver and pick-up fees apply, call for details •

Arrow Board Trailer - Rental Only - Subject to Availability

- \$70.00/day : \$225.00/week : \$700.00/month -
- Deliver and pick-up fees apply, call for details -

## Traffic Control Plans per Sheet

- Non Engineered : \$260.00/each _
- With Civil Engineers Stamp and Signature : \$550.00/each
- Other than minor changes will be billed at hourly rate.

## KELLIE AVILA CONSTRUCTION SERVICES, INC.



P.O. Box 2221 Atascadero, CA 93423 🖤 Phone 805.461.1600 🆤 Fax 805.461.1613

DBE Firm ID – 38321 🖤 Contractors License No. 962161 顰 DIR 1000013321

#### ATTACHMENT A

- 1 ASSOCIATED TRAFIC SAFETY is a signatory to the Laborers of Northern California, Construction Laborers of Southern California.
- 2 Unless otherwise noted on quote, all subsistence and travel pay is included in all prices.
- 3 ASSOCIATED TRAFFIC SAFETY is racognized by the Department of Transportation as a Certified Disadvanlaged Business Enterprise (DBE) & (UDBE) Certificate # 38321
- 4 Concrete or asphall coring / palching is <u>NOT</u> included in construction or permanent sign and or marker installation or relocation.
- 5 Unlass noted on bld, traffic control Is NOT included in the installation, removal, or repair of any items.
- 6 ASSOCIATED TRAFFIC SAFETY requires a <u>12 working day written notice in advance</u>, prior to commencement of work, including installation and removal of signs. Additionally, an Executed subcontract or purchase order must be on file with this office prior to the start of the work.
- 7 ASSOCIATED TRAFFRIC SAFETY requires the contractor's schedule for the following days work by 12pm the proceeding day. If notice is not received add 15% to ATS rates.
- 8 This quote shall remain valid for a period of 45 days from the actual date of the bid opening unless otherwise agreed upon.
- 9 Contractor egrees to provide personnel for up to 5-10 minutes per ATS employee for reliaf break periods as needed due to weather and heat conditions to meet CAL. OSHA heat illness prevention requirements.
- 10 Lump Sum price for Construction Area Signs includes: <u>USA NotIfication</u>, installation, removal and <u>INITIAL</u>, dating of any ramp signs. Contractor will be responsible for maintenance and changing dates on signs as required, all construction area signs are considered rental and shall remain property of ASSOCIATED TRAFFIC SAFETY at the conclusion of project. Per ATS standard rental agreement prime contractor will be charged replacement cost for any signs, lumber or barricades missing and or damaged at conclusion of project, this emount must be paid in full within 30 days by the contractor, retention shall not be held on this amount.
- Prior to ASSOCIATED TRAFFIC SAFETY installing any signs prime contractor must have proper agency (i.e. Cellrans, County, City, etc.) mark out all sign locations. Proper agency must also mark out their underground utilities and or pipes that are not located by the USA. Agency will be responsible for line hit that are not marked out by their forces, therefore ASSOCIATED TRAFFIC SAFETY will not be responsible for any damage done to agencies utilities and this will become the responsibilities of the prime contractor and or the representing agency.
- 12 Contractor responsible for any fees associated with traffic control / encroachment permits, Inspection fees and parking meter fees accrued by the City/County and/or State agencies.
- 13 Traffic control plans & traffic control plans prepared by or stamped by a registered engineer are not included.
- 14 All Saturday traffic control rates multiply by 1.45. All Sunday traffic control rates multiply by 1.85. Holiday work is not included.
- 15 Contractor is responsible for tost, stolen or damaged equipment unless ATS is maintaining dally closures.
- 16 ASSOCIATED TRAFFIC SAFETY will not provide performance or payment bonds to the prime contractor.
- 17 Ratention will not be held on traffic control work.
- 18 Compliance with Section 7108.5 of the Business & Professions code pertaining to prompt payment and pay when paid clauses are MANDATORY.
- 19 ASSOCIATED TRAFFIC SAFETY requests an invitation to all pre-job conferences.
- 20 Notification must be given to ASSOCIATED TRAFFIC SAFETY prior to any work performed as EXTRA-WORK of Force Account. If notification is not received, ATS will bill at usual rates and full payment will be the responsibility of the prime contractor.
- 21 Contractors State License # 962161
- 22 Portable Changeable Message Signs are strictly RENTAL, retention will not be held on rental equipment.
- 23 ASSOCIATED TRAFFIC SAFETY maintains Commercial General Liability Insurance with limits of \$1,000,000 each occurrence \$2,000,000 aggregate. Additional Insured and Hold Hamiless are given only in respects to ASSOCIATED TRAFFIC SAFETY work. ASSOCIATED TRAFFIC SAFETY carries \$2,000,000 excess liability. Any additional liability limits or additional endorsement, including Waiver of Subrogation (add \$50.00 per policy period) requested by Prime Contractor and not provided by ASSOCIATED TRAFFIC SAFETY will be charged to and will be the responsibility of the Prime Contractor.
- 24 Sign panels for permanent items supplied by ASSOCIATED TRAFFIC SAFETY must be given 45 days advanced notice prior to being needed.
- 25 Should this quote be accepted by the prime contractor. Attachment A in its entirety shall become part of any and all subcontract agreements and/or Purchase Orders relating to this project.

Submitted by:	Dale:	
Company:	Accepted by:	

x a 5.,5

## Search Returned 1 Records

Wed Mar 14 13:25:50 PDT 2018

Query Criteria Firm ID: 38321 Firm Type: DBE	
Firm ID	38321
Firm/DBA Name	KELLIE AVILA CONSTRUCTION SERVICES, INC
Address Line1	PO BOX 2221
Address Line2	
City	ATASCADERO
State	CA
Zip Code1	93423
Zlp Code2	
Mailing Address Line1	
Mailing Address Line2	
Malling City	
Mailing State	
Malling Zip Code1	
Mailing Zip Code2 Certification Type	DBE
EMall	kellie@associated!rafficsafety.com
Contact Name	KELLIE AVILA
Area Code	(805)
Phone Number	461-1600
Extension	
Alt Area Code	(805)
Alt Phone Number	010-9965
Extension	
Fax Area Code	No. 2014 La 1/ 1805
Fax Phone Number	461-1613
Agency Name	CITY OF FRESNO
Counties	10; 15; 16; 20; 21; 27; 35; 40; 42; 43; 54; 56;
Districts	04; 05; 06; 07;
DBE NAICS	238990; 423380; 423510; 423850; 423990; 484110; 532411; 541611; 541618; 561110; 561990; 562119; 562998;
ACDBE NAICS	
Work Codes	C1290 TEMPORARY RAILING (TYPE K); C9903 CONSTRUCTION CLEAN UP; C9907 CONSTRUCTION EQUIPMENT RENTAL; C8701 BUSINESS ADMINISTRATION; C6770 CONSTRUCTION MANAGEMENT; C0670 PIPE SUPPLIER; C0698 BUILDING MATERIAL SUPPLIER; F5088 TRANSPORTATION EQUIPMENT & SUPPLIES; C0683 GUARD RAILINGS & BARRIERS SUPPLIER; C1522 RESET, ADJUST ROADWAY ITEMS; C5620 ROADSIDE SIGN; C0685 PAVEMENT MARKERS SUPPLIER; C1522 RESET, ADJUST ROADWAY ITEMS; C5620 ROADSIDE SIGN; C0685 PAVEMENT MARKERS SUPPLIER; C1520 Traffic Striping, MarkIng and Traffic Control Materials Supplier; C0621 LANDSCAPING MATERIAL SUPPLIER; C1210 Traffic Count; C0680 FENCING SUPPLIER; C8610 SPEED MONITORING STATION; C8700 CONSULTANT, NON ENGINEERING; C0612 SAFETY EQUIPMENT SUPPLIER; C1200 CONSTRUCTION AREA SIGNS; C1201 TRAFFIC CONTROL SYSTEM; C8320 METAL BEAM GUARD RAILING; C8331 CONCRETE BARRIER; C8609 TRAFFIC COUNT STATION;
Licenses	A General Engineering Contractor; B General Bullding Contractor; C31 Construction Zone Traffic Control Contractor;
Trucks	
Gender	F
Ethnicity	CAUCASIAN
Firm Type	DBE

Back To Query Form

	<b>TRAFFIC SAFETY &amp; SIGNS</b> REG#1000001109 30/2018	Proposal/Quote Statewide - Fresno License # 975518 3049 S Golden St Frontage Fresno, CA 93725-2312 Ph (559) 291-8500 Fax (559) 291-8503	Rd PA PA PR ES	DATE: 03/01/18 NTRACT INFO NOCHE RD SHOUL OPOSAL: 112930 TIMATOR ug Perkins	DER IMPROV
ESTIM	EST ATING DEPARTMENT	PROJECT: PANOCHE COUNTY C MENDOTA	F FRES	ULDER IMPROV NO	
ITEM #	DESCRIPTION	QUANTI	 TY	PRICE	AMOUNT
02	CONSTRUCTION PROJECT FU SPECIFICATIONS: FURNISHED, INSTALLED & REMO		2 EA IF STSSI.	480.000/EA	960.00
103	TRAFFIC CONTROL SYSTEM SPECIFICATIONS: FLAGGING - 2 MEN / DAY (T-13)/N FLAGGING - 2 MEN / DAY (T-13)/IN ADDITIONAL FLAGGER DAY EACH FOLLOW ME CAR / DRIVER - \$775	ICLUDES Rumble Strips 1 - \$650.00/8 HRS		\$1,375.00/8 HRS. \$1,500.00/8 HRS.	
	<ul> <li>Overtime \$95.00/per man</li> <li>Saturday closures multiply above r</li> <li>Time begins upon arrival at jobsite travel time will be charged at \$30.00</li> <li>Traffic control system is a four (4) I charge will be applied to all cancella</li> <li>Contractor must provide each Traffic Tech.</li> <li>NO RETENTION HELD FOR TRAFFICATION CANCELOR CONTRACTOR</li> </ul>	, Rates include travel time up to on per 1/2 hour/man, each direction, hour minimum charge at 75% of ra tions with less than eight (8) hours fic Tech a 30 minute meal period. M	tes, Full rat notice, Ap	te charged after four (4) h ply 30 - 60 minutes for se	ours. The minimum of up and pick up.
	TRAFFIC CONTROL PLAN INCLUE	DED IF USED.			
16	ROADSIDE SIGN - ONE POST		3 EA	400.000/EA	1,200.00
	SPECIFICATIONS: IF USED, MUST BID WITH ITEM 2 &	& CONSTRUCTION AREA SIGNS.			

sr,

JJJ 4JT 0100

ANOCHE RD SHOULDER IMP	OV Proposal/Quo 112930	te		Page 2 02/22/18
TEM # DESCRIPTION	QUA	NTITY	PRICE	AMOUNT
CONSTRUCTION ARE	SIGNS	1LS	1550.000/LS	1,550.00
FURNISHED, INSTALLE	ND ROAD WORK SIGNS ONLY. & REMOVED. TO REMAIN PROPER ALLATION, 40% AFTER REMOVAL.	ty of stssi.		
PORTABLE CHANGEA	LE MESSAGE SIGN	,		
SPECIFICATIONS: DAILY RENTAL RATE WEEKLY RENTAL RATE 4 WEEK RENTAL RATE \$50.00 delivery & \$50.00	nick up each way.NO delivery or pick up	5	\$160.00/DAY \$480.00/1 WEEK \$1,200.00/4 WEEKS performs traffic control.	
PROPOSAL PROVISIO	IS			
pricing. - Lump sum items are bacompensation (standard - Standards for 5 day word project. - Rental equipment furniss Statewide Traffic Safety a - Installed crash cushion day per module. - All Construction Area S and recover if needed. - Construction Area Signant to work. Additional signs - Traffic Control not inclue -Portable equipment will or damaged equipment. If with crash cushions. - Contractor is liable for ke	te, all permits and associated fees are e ad on "working days" listed in the Specia- intal rates) will be applied if working day shift must be established prior to State ed and installed by Statewide Traffic Sa d Signs, Inc. without prior approval. Trays/modules relocated by Contractor s ins to be installed at one time or in stage include one mobilization per stage, addi- equired due to damage, theft, or plan ins- ed in installation, removal, or repair of ar- e delivered and picked up from one loca urricades do not include flashing lights o t or damaged equipment removed or re ind Signs, Inc. shall fully indemnify Cont	al Provisions or wo ys are exceeded. wide Traffic Safety afety and Signs, Ind shall be paid for at es and covered if r adequacies will be ny item. Stand-by to thon. Contractor to or sign panels unle located by Contract	orking days bid for this r and Signs, Inc. starting c. may not be moved by item price or new renta needed at installation. C s \$1,500,00 each, unle billed as extra work. time charged at \$175,0 maintain. Contractor is ss otherwise noted. Pai ctor's forces.	project. Additional g work on the g anyone other than al period of \$3.00 a contractor to uncove ss negotiated prior D/hr. liable for loss and liets are not included

- All sign and marker location/ mark-out to be done prior to Statewide Traffic Safety and Signs, Inc. starting work. If necessary, Statewide Traffic Safety and Signs, Inc. will assist project inspector with location/ mark-out. Statewide Traffic Safety and Signs, Inc. will mark out it's own work area for USA if necessary, but is not responsible for damage to underground facilities not shown on plans or not marked out by other agencies.

- Sign panels for roadside sign items are supplied by others unless purchased through bid items of this quotation. Roadside sign panels will not be received by Statewide Traffic Safety and Signs, Inc. earlier to 15 working days prior to scheduled installation, No storage. 45 working days advance notice for sign panel orders. All sign plan discrepancies are to be resolved before any sign panel orders are placed. Hardware for sign panel items is excluded unless stated otherwise,

CONTRACT INFO PANOCHE RD SHOULDER IMPROV

JJJ 2JJ 0100

Proposal/Quote

112930

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Page 3

02/22/18

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ITEM #	DESCRIPTION	QUANTITY	PRICE	AMOUNT
	<ul> <li>Permanent sign and marker installation: maximum prior to work. 45 working days notice for metal post</li> <li>Removal, relocate, and reset items are to be comp ONE (1) move-in. Additional move-ins \$1,500.00 ea</li> <li>Sign installation does not include coring or breakin</li> <li>All change order work must be approved by agence Signs, Inc.</li> <li>Acceptance of this quote is acceptance of these prior</li> <li>No retention is to be held on Traffic Control and Eco</li> </ul>	orders. Mounting hardware pleted in whole per Special F ich, unless negotiated prior ig. ig. y / owner prior to work being rovisions, which shall prevai	supplied to, and installe Provisions for the project to work. g performed by Statewid	d by Contractor. t, and completed in, le Traffic Safety and
		τοτα	L BID:	\$3,710.00
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Signed:				
Print:				
Dated:				
Title:				
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## jahn engineering, inc.

32 West Southwood Drive Woodland, CA 95695 (916) 599-2379 (916) 596-4075 fax alice@jahnengineeringinc.com

February 26, 2018

#### Re: Quote for SWPPP for Panoche Road Shoulder Improvements, Bidding 03/01/2018

Dear Estimator;

I am pleased to submit a quote to provide stormwater pollution services as a Qualified SWPPP Developer (QSD)/Qualified SWPPP Practitioner (QSP) for the above mentioned project.

Jahn Engineering is a Disadvantaged Business Enterprise (DBE) and State Women Business Enterprise (SWBE) (DBE/SWBE/UDBE # 43169). Our DIR registration number is 1000034705. My QSD/QSP certificate number is 21986 and my California Civil Engineer License is C 60940. We provide professional services only and therefore do not possess a contractor license number.

Please see quotes below for the above referenced project. The SWPPP will be prepared by a QSD and comply with the project specifications.

Α.	Prepare Storm Water Pollution Prevention Plan (SWPPP)	\$1,400
B.	Annual Report (if required)	\$250

Exclusions: Training, meetings, installation and implementation of water pollution control practices, providing a WPC Manager and QSP inspections/testing.

Additional QSD services available at \$115/hour.

#### Timing and deliverables:

The SWPPP will be provided within 7 days of authorization to proceed. The scope includes any revisions that might be required for final approval, an electronic PDF file and 4 hard copy binders. The above quotation is valid for 60 days from bid date. Please call 916-599-2379 if you have any questions.

Thank you for the opportunity to provide a quote on this project.

Sincerely,

#### AUTHORIZATION TO PROCEED

14 h

Alice Ames Jahn, PE, QSD/QSP, President Professional Engineering License #: 60940 QSD/QSP #: 21986 DBE/UDBE/SWBE #: 43169 Annual Revenue under \$1 Million, In Business Since 2015 DIR Registration Number: 1000034705 Name:

Date:

SBE #1229840

DIR Registration #1000001353



2443 Fair Oaks Blvd. #150

Sacramento, CA 95825

Phone: (916) 850-5758

Fax: (888) 840-5935

bidding@veruxinc.com

www.veruxinc.com

#### Project Name: State Highway 59 Multi-Use Pathway Crossing - Merced, CA

Bid Date: March 15, 2018

Bid No: 18-538

## **Storm Water Services Proposal**

#### Prepare Water Pollution Control Program (WPCP) - \$650.00

Provide one (1) electronic copy of Water Pollution Control Plan (WPCP) along with three (3) manuals for the above referenced project. Price includes any revisions that may be required for final approval. ****Recommended when disturbance is less than 1 acre. Check Agency requirements.* 

#### Prepare Storm Water Pollution Prevention Plan (SWPPP) - \$1,650.00

Provide one (1) electronic copy of Storm Water Pollution Prevention Plan (SWPPP) in accordance with new CA General Construction Permit #2009-0009-DWQ along with three (3) manuals for the above referenced project. We will work with your Legally Responsible Person (LRP) to upload the SWPPP and Permit Registration Documents onto SMARTS. Price includes any revisions that may be required for final approval. *** Required when disturbance is greater than 1 acre.

#### Project Site Inspections/REAPs - \$305.00/Each

Evaluate jobsite and overall Best Management Practice (BMP) effectiveness. Recommend adjustments to maintain compliance with the California General Permit (CGP). An electronic copy of inspection report/REAP will be provided. CGP inspection requirements include: Weekly, Pre-storm, Daily During Extended Storms, Post Storm and Quarterly Non-Stormwater inspections. REAPs are only required on Risk level 2 and Risk level 3 projects.

#### Sampling & Analysis Program – \$405.00/Sampling & Analysis Day (If Necessary)

#### Annual Report - \$500.00/Each

Required when project is under new California General Permit (disturbance is greater than 1 acre).

Submitted for Verux, Inc. by Bob Shults:				
	Authorized Signature			
Date	Title			
days. Proposal excludes permits, bonds, licenses, fees, retention and engin	DNS: Price valid only if this proposal is signed and returned to Verux, Inc. within 30 d engineering. Payment is due in full 15 days after work is performed. Accounts 4% per month if not paid within 30 days.			
Client Name	Authorized Signature			
Date	Printed Name/Title			

### ABSL Construction

a ricys

#### DIR#1000002818

8435 24th Ave, Sacramento, Ca. 95826 TE: (916) 379-0442 Fax: (916) 379-0443 Contractors License A 621781 SMBE & DBE Certification CT-005270

## Bid Quotation AC Grinding

Project Name:Panoche Road Shoulder Improvements SR 33 to San Benito AvenueProject Number:17-15-CDate:3/15/18Location:Fresno, California

## Grinder, AC Grinding Daily Minimum Charge \$4500.00

This price is for an 80" inch cold planer machine, *Wirtgen W 2000*. Up to 12 inches dept99h. \$100.00 additional for night work. \$600.00 per hour overtime. \$500.00 additional for Saturday work. \$1000.00 additional for Sunday work.

#### Daily Minimum Charge \$ 5000.00

This price is for an 80" or 88" high horsepower cold planer machine, *Wirtgen W 2100*. Up to 12 inches depth. \$100.00 additional for night work. \$650.00 per hour overtime. \$500.00 additional for Saturday work.

#### Daily Minimum Charge \$ 3500.00

This price is for a 48" cold planer machine, *Wirtgen W 120*. Up to 12 inches depth. \$100.00 additional for night work. \$500.00 per hour overtime. \$500.00 additional for Saturday work. \$1000.00 additional for Sunday work.

#### Mobilization \$500.00 Each Way.

ABSL Construction to cold plane asphalt concrete and load cuttings into trucks provided by the contractor. ABSL may not meet all the specs in spec book.

Portland cement concrete grinding is excluded from this quotation.

ABSL Construction will cold plane as close as possible to existing manholes, water valves, and other obstructions in cutting plane. Handwork and placing temporary asphalt tapers around these objects or at pavement edge for safety requirements are excluded.

Contractor to provide water or water meter and provide traffic control during cold planing operation. All areas to be ground shall be clearly marked by the general or the job inspector.

Anything not specifically included in this price should be considered excluded.

ABSL Construction does not accept back-charges due to machine breakdown during operation above the machine's daily rental fee.

Back charges will only be based on the time the machine is broken and will reflect the cost of the equipment for that time. All others costs due to the equipment breakdown will not be charged to ABSL Construction.

ABSL does not accept force account rates or retention.

This quotation will be part of our contract or purchase order agreement and is valid for one month after the bid date.

If you have any questions regarding the above quote please call me at (916) 379-0442 or fax at (916) 379-0443.

Sincerely, Todd Wheeler (916)284-3598

### **ABSL** Construction

\$ 15 52 4 .

> 8435 24th Ave, Sacramento, Ca. 95826 TE: (916) 379-0442 Fax: (916) 379-0443

Contractors License A 621781 SMBE & DBE Certification CT-005270

#### GRINDING JOB AGREEMENT

The prices set forth above are based on the following assumptions and are subject to change under conditions set forth below.

- All areas to be ground shall be clearly marked by the General Contractor or Inspector before grinding operation starts.
- 2) A minimum daily rate is any part of an 8 hour day and overtime will be charged for work done other than a regular weekday shift.
- A minimum of two weeks notice is requested to schedule move in. Machines are on a first come first served basis subject to availability. A 72 hours notice of change in schedule is requested.
- 4) Modification to the work may require a change in the quote.
- 5) Unless otherwise indicated the unit prices are based on ABSL performing all the work included on the proposal. If ABSL does not receive a contract for all the work, the unit prices are subject to adjustment.
- 6) The unit prices are based on the estimated quantities in the bid proposal. If the quantity of the item changes by 25% or more the unit price is subject to equitable adjustment.
- 7) Prices are good for 30 days of the date of this proposal, after that date the prices are subject to adjustment.
- Downtime for equipment becoming stuck in wet or muddy sub-grade conditions will be charged at a stand-by time rate until removed. Additional equipment required for removal will be charged at a time and materials basis.
- 9) This proposal to be attached and made part of any and all resulting contracts.
- 10) The above price does not include permits, fees, bonding, state or local taxes.
- 11) This is a proposal only for the purpose of establishing a price for work as outlined. In the event ABSL is the low bidder a formal contract or PO suitable to both parties shall be prepared and fully executed.
- 12) Repairs of damage to ABSL equipment due to unmarked or buried obstructions; i.e. valve boxes, manholes covers, concrete, steel fence posts, steel pipe or excessive depth asphalt will be billed at time and material for repairs
- 13) Back-charges to ABSL must be communicated by contractor in a written notice within 72 hours from the time of occurrence for back-charges.
- 14) Unless otherwise agreed to in writing prior to start of work, payment is due and payable within 30 days of billing, and no retention to be withheld on payments.
- 15) Items not specifically included are considered to be excluded. If you have any questions please call.

Thank You,

Todd Wheeler



ANRAK CORPORATION, 5820 Mayhew Road Sacramento, CA 95827 Phone 916-383-5030 Fax 916-383-8090 CA #256390 NV#16211 OR #206159 DIR# 1000002952

Anrak Corporation is a California Certified Small Business NO. 18781

Project Name: County of Fresno -17-15-C - Panoche Road Shoulder Improvements - From SR33 to San Benito Avenue, Fresno Project Bid Date: March 15, 2018

Quantity U/M Unit Price ITEM NO. Description Cold Plane A/C - Rental Item : 3.500 2', 3', 4' Milling Machine 1.0 DY Overtime Per Hour HR 475 5' Milling Machine 1.0 DY 4,100 Overtime Per Hour 550 HR 6'-7' 600 H.P. Milling Machine 1.0 DY 4,500 Overtime Per Hour 600 HR Item : Mobilization ROUND TRIP 900 NITE DIFFERENTIAL \$100 (2' - 5') & \$200 (6' - 7') PER SHIFT SATURDAY ADDITIONAL \$500 PER SHIFT SUNDAY ADDITIONAL \$750 (2' - 5') & \$1,000 (6' - 7') PER SHIFT ADDITIONAL \$500 CHARGE FOR OCIP PROJECTS ANY COST INCURRED FOR PERMITS OR PILOT CARS WILL BE BILLED IN ADDITION TO ABOVE DAILY RATE

#### SPECIAL PROJECT PROVISIONS

- Includes: CUT and LOAD Only (Daily Rental) PER 8 HOUR Shift
- <u>Excludes:</u> Water Source, Traffic Control, PCC Mill, Any and All Hand Work, Ramping, Areas Not Accessible to Milling Machine, Dust/Debris Plan and Maintenance and/or Protection of Work
- <u>Includes:</u> One set of teeth per shift
- Production: Shifts as directed, O/T charged over 8 hour shift
- Require: All Utilities within mill grade are to be located and marked by customer.
- Excludes: Underground Alert Notification
- Anrak Corporation will NOT accept Back Charges of lost time

If you have any questions regarding this quote please call our office directly 916-383-5030. Anrak Corporation greatly appreciates the opportunity to bid & fulfill your asphalt milling needs!

Estimated by: Tom Schmidt

Email: tom@anrak.com

ACCEPTED BY___

DATE



ANRAK CORPORATION, 5820 Mayhew Road Sacramento, CA 95827 Phone 916-383-5030 Fax 916-383-8090 CA #256390 NV#16211 OR #206159 DIR# 1000002952

Anrak Corporation is a California Certified Small Business NO. 18781

## GENERAL PROVISIONS

- Anrak Corporation will COLD PLANE asphalt concrete as directed by contractor, and LOAD grindings into trucks provided by Contractor
- Anrak Corporation will cold plane as closely as possible to existing manholes, water valves or other obstructions in cutting plane.
- No hand work or placing temporary asphalt tapers by Anrak Corporation around these objects or at pavement edge due to safety concerns
- Anrak Corporation will not remove asphalt concrete off gutter pan.
- Contractor to provide water into milling machine
- Contractor must provide a skip loader to assist with clean up
- Contractor to post streets with "No Parking" signs prior to Anrak Corporation's phase of work and provide traffic control during cold planing operation.
- · Areas to be milled must be cleared of all obstructions and accessible to milling machine size
- Anrak Corporation takes no responsibility for dust control due to site conditions.
- Anrak Corporation cannot accept responsibility for any claims due to unraveling material after initial sweep and cones/traffic control are lifted.
- Anrak Corporation cannot guarantee planed surface will meet the surface smoothness specification 15-2.023.
- These prices are for asphalt concrete only
- Modifications to any work may require a change in price
- Anrak Corporation cannot guarantee that all asphalt concrete over PCC will be removed, nor that underlying PCC will be untouched.
- Anrak Corporation cannot grind native cobble rock that may damage milling machine.
- Contractor responsible for any cost that arise due to unsuitables or petromat in material.
- Contractor responsible for all tree trimming and refuse pick up and any other above grade obstacles, Anrak will not grind through any tree limbs
- Contractor to provide any required permits, notifications, or plans.
- Anrak Corporation will not accept back charges of lost time, it's contractor responsibility to manage project
- Any damages to Anrak equipment due to unmarked obstacles, manhole lids, metal boxes, or poles, contractor will be billed for damages
- Anrak Corporation does not accept withholding of retention.
- Contractor responsible for clearing USA prior to cold planing operation
- By accepting this Bid the customer accepts sole responsibility for, and all subsequent liabilities coincident with following the requirements of the California regional notification center law pursuant to Article 2 (commencing with Section 4216) of Chapter 3.1 of Division 5 of Title 1 of the Government Code
- Contractor to pay for bond cost if required
- All items not specifically included are excluded
- The provisions of this quote prevail over any subcontract or purchase order stipulations.
- These prices are good for 30 days after bid date

#### If you have any questions regarding this quote please call our office directly 916-383-5030. Anrak Corporation greatly appreciates the opportunity to bid & fulfill your asphalt milling needs!

ACCEPTED BY_

DATE

#### PROJECT TITLE: PANOCHE ROAD SHOULDER IMPROVEMENTS

#### DATE: 03/15/2018

#### PROPOSAL

Safety Network will supply rental of temporary traffic control devices on the above project, for the applications and/or sections of work described below. Quotes are based on MUTCD requirements for temporary traffic control. Prices are subject to change based on unknown request, requirements, additional city/county specifications or additional equipment added after this bid. Contractor accepts full responsibility for lost and stolen equipment. Delivery/ pick up will be added unless otherwise indicated below. Unless otherwise noted, no sales tax will be added to rental equipment.

1.	Project Funding Signs A. Furnish and Install	\$1500.00		
2.	Traffic Control Plans	\$260.00		
3.	Shoulder Closures (Includes Construction Area Sign A. Install B. Equipment C. Takedown	s) \$1000.00 \$145.00 \$400.00	Per	Day
4.	Changeable Message Sign Boards (2) A. Rental B. Delivery/Pickup	\$1000.00 \$100.00		Month/Per Each Each
5.	Traffic Control Flag A. Two Men and Equipment B. Pilot Car C. Overtime Rate	\$700.00	Per	8 Hour Day 8 Hour Day Man/Per Hour

~END QUOTE~





**2310 N. Larkin, Fresno, CA 93727 ~ 35312 Merle Haggard Dr., Bakersfield, CA 93308** Fresno- (559) 291-8000 Bakersfield- (661) 393-6000

> www.safetynetworkinc.com License #999426 ~ Class: C31/D42 SBE #34573 ~ DIR #1000011657

nc. Proje						
TT AVE. Contra 3722 6250 -6091 1 1		Panoche Road Shoulder Improvements	ulder Impr	ovements		Add 5% Increase
Loc:	County of Fresno	f Fresno				All ITUCK HAUIS
0037947 0037947 647241	Panoche road l	ne road From San Benito to SR 33	o to SR 33			Tonnage Hauls
				Bid Date:	3-15-18	STAND-BY AFTER :
						Loading 101 Unloading
) 105. -OFF SITE						Supers & Bds. 10 Transfers 30
SKEND RATE						1
GIN MATERIAL	QUANITY	BOTTOMS	SUPER 10'S	TRANSFERS	SEMI ENDS DEMO	DELIVERY AREA
ga AB	5,750	9.25				
		8.75				
		7.25				
ga AC	-3,781	9.50	12.00			
		7.50	9.80	9.80		
		8.15	10.75	10.50		
		BY:	Mike Miranda			DATE:

## OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the payment adjustments for price index fluctuations as specified in Section 2-1.29, "OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS," of the special provisions.

You can only elect to opt out of payment adjustments for price index fluctuations of if you complete this form and submit it <u>with your bid</u>. The individual signing this form must be duly authorized to sign a bid.

## By signing this form, I hereby opt out of the payment adjustments for price index fluctuations for the above-named project.

Bidder:	 		
Name (Printed): _	 		
Signature:	 	 	
Title:		 	

Proposal 15 Contract Number: 17-15-C (This guaranty shall be executed by the successful bidder in accordance with instructions in the special provisions. The bidder may execute the guaranty on this page at the time of submitting his bid.)

#### GUARANTY

To the Owner: County of Fresno

## PANOCHE ROAD SHOULDER IMPROVEMENTS

#### CONTRACT NUMBER: 17-15-C

The undersigned guarantees the construction and installation of the following work included in this project:

#### ALL WORK

Should any of the materials or equipment prove defective or should the work as a whole prove defective, due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the specifications, due to any of the above causes, all within twelve (12) months after date on which this contract is accepted by the Owner, the undersigned agrees to reimburse the Owner, upon demand, for its expenses incurred in restoring said work to the condition contemplated in said project, including the cost of any such equipment or materials replaced and the cost of removing and replacing any other work necessary to make such replacement or repairs, or, upon demand by the Owner, to replace any such material and to repair said work completely without cost to the Owner so that said work will function successfully as originally contemplated.

The Owner shall have the unqualified option to make any needed replacement or repairs itself or to have such replacements or repairs done by the undersigned. In the event the Owner elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from the Owner.

27/18 Date:

Contractor: CAL VALLET CONSTRUCTION, INC.

Proposal 16 Contract Number: 17-15-C

#### AGREEMENT

THIS AGREEMENT made at Fresno, in Fresno County, California, by and between <u>Cal Valley Construction</u> hereinafter called the Contractor, and the <u>County of Fresno</u> hereinafter called the Owner.

WITNESSETH: That the Contractor and the Owner, for the consideration hereinafter named, agree as follows:

**ARTICLE I.** The Contractor agrees to furnish all labor and materials, including tools, implements, and appliances required, but excluding such materials as are mentioned in the specifications to be furnished by the Owner, and to perform all the work in a good and workmanlike manner, free from any and all liens and claims of mechanics, materialmen, teamsters, subcontractors, artisans, machinists, and laborers required for:

## PANOCHE ROAD SHOULDER IMPROVEMENTS

### **SR 33 TO SAN BENITO AVENUE**

## FEDERAL PROJECT NO. CML-5942(255)

#### CONTRACT NUMBER: 17-15-C

All in strict compliance with the plans, drawings and specifications therefor prepared by the Owner, and other contract documents relating thereto.

**ARTICLE II.** The Contractor and the Owner agree that the Notice to Bidders and Special Provisions, the Wage Scale (Prevailing Wages), the, the Drawings, Addenda and Bulletins thereto, and the Proposal (the Bid Book) hereto attached, together with this Agreement, form the contract, and they are as fully a part of the contract as if hereto attached or herein repeated.

All portions of the Standard Specifications of the State of California, Department of Transportation, dated 2015, which are not in conflict with this contract shall be deemed a part of the specifications as though fully therein set forth; provided, however, that revisions to the said Standard Specifications shall apply only to the extent, if any, included in the Project Details of these specifications or as otherwise incorporated directly herein. No part of said specifications which is in conflict with any portion of this agreement, or which is not actually descriptive of the work to be done thereunder, or of the manner in which said work is to be executed, shall be considered as any part of this agreement, but shall be utterly null and void.

**ARTICLE III.** The Owner agrees to pay the Contractor in current funds for the performance of the contract the sum of <u>EIGHT HUNDRED EIGHTY THOUSAND TWENTY-FIVE</u> <u>DOLLARS AND 25/100 (\$880,025.25)</u> it being understood that said price is based upon the estimated quantities of materials to be used as set forth in the Proposal, except where provisions are made in the contract documents whereby the estimated quantities shall constitute the final quantity; that upon completion of the project the final contract prices shall be revised by change order, if necessary, to reflect the true quantities used at the stated unit price thereof as contained in the Contractor's Proposal hereto attached. Payments on account thereof will be made as set forth in the special provisions.

**ARTICLE IV.** If the Contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his subcontractors should persistently violate any of the provisions of the contract, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Engineer, then the Owner may, upon certificate of the Engineer when sufficient cause exists to justify such action, serve written notice upon the Contractor and his surety of its intention to terminate the contract, and unless within five days after the serving of such notice, such violations shall cease and satisfactory arrangements for correction thereof be made, the contract shall, upon the expiration of said five days, cease and terminate.

In the event of any such termination, the Owner shall immediately serve written notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and perform the contract, provided, however, that if the surety within ten (10) days after the serving upon it of notice of termination does not give the Owner written notice of its intention to take over and perform the contract or does not commence performance thereof within the ten (10) days stated above from the date of the serving of such notice, the Owner may take over the work and prosecute the same to completion by contract or by any other method it may deem advisable, for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may without liability for so doing, take possession of and utilize in completing the work such materials, appliances, plant and other property belonging to the Contractor as may be on the site of the work and necessary therefor. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expenses of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred by the Owner, as herein provided and damage incurred through the Contractor's default, shall be certified by the Engineer.

**ARTICLE V.** With respect to any work required to be done under this contract, the Contractor will indemnify and hold harmless the COUNTY OF FRESNO, and all other participating public agencies, whether or not said agencies are named herein, who have jurisdiction within the areas in which the work is to be performed, and all officers and employees of the Owner, the County, the State, the United States and said other participating agencies, from any and all costs and expenses, attorney fees and court costs, damages, liabilities, claims and losses occurring or resulting to COUNTY in connection with the performance, or failure to perform, by CONTRACTOR, its officers, agents or employees under this Agreement, and from any and all costs occurring or resulting to any person, firm or corporation who may be injured or damaged by the performance, or failure to perform, of CONTRACTOR, its officers, agents or employees to indemnify COUNTY for Federal, State of California and/or local audit exceptions resulting from non-compliance herein on the part of CONTRACTOR.

CONTRACTOR agrees to indemnify, save, hold harmless, and at COUNTY'S request, defend the COUNTY, its officers, agents, and employees from any and all costs and expenses, damages, liabilities, claims, and losses occurring or resulting to COUNTY in connection with the performance, or failure to perform, by CONTRACTOR, its officers, agents, or employees under this Agreement, and from any and all costs and expenses, damages, liabilities, claims, and losses occurring or resulting to any person, firm, or corporation who may be injured or damaged by the performance, or failure to perform, of CONTRACTOR, its officers, agents, or employees under this Agreement. In the event CONTRACTOR fails to keep in effect at all times insurance coverage as herein provided, the COUNTY may, in addition to other remedies it may have, suspend or terminate this Agreement upon the occurrence of such event.

All policies shall be with admitted insurers licensed to do business in the State of California. Insurance purchased shall be purchased from companies possessing a current A.M. Best, Inc. rating of A and FSC VIII or better.

The Certificate of Insurance shall be issued in duplicate, to the COUNTY OF FRESNO and all other participating agencies, whether or not said agencies are named herein, who contribute to the cost of the work or have jurisdiction over areas in which the work is to be performed and all officers and employees of said agencies while acting within the course and scope of their duties and responsibilities.

In the event CONTRACTOR fails to keep in effect at all times insurance coverage as herein provided, the COUNTY may, in addition to other remedies it may have, suspend or terminate this Agreement upon the occurrence of such event.

All policies shall be with admitted insurers licensed to do business in the State of California. Insurance purchased shall be purchased from companies possessing a current A.M Best Company rating of A FSC VII or better.

Without limiting the COUNTY'S right to obtain indemnification from CONTRACTOR or any third parties, CONTRACTOR, at its sole expense, shall maintain in full force and effect, the following insurance policies or a program of self-insurance, including but not limited to, an insurance pooling arrangement or Joint Powers Agreement (JPA) throughout the term of the Agreement:

#### A. Commercial General Liability

Commercial General Liability Insurance with limits not less than those shown in the following table:

		isulance Requirement	3	
Total bid	For each occurrence ^a	Aggregate for products/completed operation	General aggregate ^b	Umbrella or excess liability ^c
≤ \$1,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$5,000,000
> \$1,000,000				
≤ \$10,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$10,000,000
> \$10,000,000				
≤ \$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$15,000,000
> \$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$25,000,000

#### Liability Insurance Requirements

^aCombined single limit for bodily injury and property damage.

^bThis limit must apply separately to your work under this Contract.

^cThe umbrella or excess policy must contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

This policy shall be issued on a per occurrence basis. COUNTY may require specific coverages including completed operations, products liability, contractual liability, Explosion-Collapse-Underground, fire legal liability, or any other liability insurance deemed necessary because of the of the nature of this contract.

Such Commercial General Liability insurance shall name the County of Fresno, its officers, agents, and employees, individually and collectively, as additional insured, but only insofar as the operations under this Agreement are concerned. Such coverage for additional insured shall apply as primary insurance and any other insurance, or self-insurance, maintained by COUNTY, its officers, agents and employees shall be excess only and not contributing with insurance provided under CONTRACTOR's policies herein. This insurance shall not be cancelled or changed without a minimum of thirty (30) days advance written notice given to COUNTY. CONTRACTOR shall obtain endorsements to the Commercial General Liability insurance policy naming COUNTY as an additional insured and providing for a thirty (30) day prior written notice of cancellation or change in terms or coverage.

Within eight (8) days from date CONTRACTOR executes this Agreement, CONTRACTOR shall provide certificates of insurance and endorsement as stated above for all of the foregoing policies, as required herein, to the County of Fresno stating that such insurance coverages have been obtained and are in full force; that the County of Fresno, its officers, agents and employees will not be responsible for an premiums on the policies; that such Commercial General Liability insurance names the County of Fresno, its officers, agents, and employees, individually and collectively, as additional insured, but only insofar as the operations under this Agreement are concerned; that such coverage for additional insured shall apply as primary insurance an any other insurance, or self- insurance shall not be cancelled or changed without a minimum of thirty (30) days advance, written notice given to COUNTY.

CONTRACTOR shall obtain endorsements to the Commercial General Liability insurance naming the County of Fresno, its officers, agents, and employees, individually and collectively, as additional insured, but only insofar as the operations under this Agreement are concerned. Such coverage for additional insured shall apply as primary insurance and any other insurance, or self-insurance, maintained by COUNTY, its officers, agents, and employees shall be excess only and not contributing with insurance provided under CONTRACTOR'S policies herein. This insurance shall not be cancelled or changed without a minimum or thirty (30) days advance written notice given to COUNTY.

#### B. Automobile Liability

Comprehensive Automobile Liability Insurance with limits of not less than One Million Dollars (\$1,000,000) per accident for bodily injury and property damage. Coverage should include owned and non-owned vehicles used in connection with this Agreement and all applicable endorsements.

#### C. Professional Liability

If CONTRACTOR is a licensed professional or employs professional staff, (e.g., Architect, Engineer, Surveyor, etc.) in providing services, Professional Liability Insurance with limits of not less than One Million Dollars (\$1,000,000.00) per occurrence, Three Million Dollars (\$3,000,000.00) annual aggregate with a provision for 3 year tail coverage.

#### D. Worker's Compensation

A policy of Worker's Compensation insurance as may be required by the California Labor Code.

**ARTICLE VI.** Contractor represents that he has secured the payment of Worker's Compensation in compliance with the provisions of the Labor Code of the State of California and during the performance of the work contemplated herein will continue so to comply with said provisions of said Code. Contractor shall supply the Owner with certificates of insurance, in duplicate, evidencing that Worker's Compensation Insurance is in effect and providing that the Owner will receive ten days notice of cancellation. If Contractor self-insures Worker's Compensation, Certificate of Consent to Self-insure should be provided the Owner.

**ARTICLE VII.** The Contractor shall forthwith furnish in duplicate, a faithful performance bond in an amount equal to 100% of the contract price and a payment bond in an amount equal to 100% of the contract price, both bonds to be written by a surety company acceptable to the Owner and in the form prescribed by law.

The payment bond shall contain provisions such that if the Contractor or his subcontractors shall fail to pay (a) amounts due under the Unemployment Insurance Code with respect to work performed under the contract, or (b) any amounts required to be deducted, withheld and paid over to the Employment Development Department and to the Franchise Tax Board from the wages of the employees of the Contractor and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor, then the surety will pay these amounts. In case suit is brought upon the payment bond, the surety will pay a reasonable attorney's fee to be fixed by the court.

**ARTICLE VIII.** Governing Law – Venue for any action arising out of or relating to this Agreement shall be in Fresno County, California. This Agreement shall be governed by the laws of the State of California.

**ARTICLE IX:** USE OF UNITED STATES FLAG VESSELS: The Contractor agrees:

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment. material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States. a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

This Contract was awarded by the Board of Supervisors on <u>April 17, 2018</u>. It has been reviewed by the Department of Public Works and Planning and is in proper order for signature of the Chairman of the Board of Supervisors.

IN WITNESS WHEREOF, they have executed this Agreement this _	4th	day of
--------------------------------------------------------------	-----	--------

<u>May</u>, 2018

COUNTY OF FRESNO (OWNER)

By Quintero, Chairman, Sal

of the Board of Supervisors of the County of Fresno

(CAL VALLEY CONSTRUCTION, INC. (CONTRACTOR) 20-2403031 (Taxpayer Federal I.D. No.) B١ Title SEC RETAR'

ATTEST: Bernice E. Seidel Clerk to Board of Supervisors County of Fresno, State of California

Susan Deputy Bishop By

#### COUNTY OF FRESNO DEPARTMENT OF PUBLIC WORKS AND PLANNING PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS FEDERAL PROJECT NO .: CML -5942(255) CONTRACT NO: 17-15-C

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ltem No.	Estimated Quantity	Unit of Measure	F,S	Item Description	Item Price (In Figures)	Total Price (In Figures)
1	40000	\$		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$ 40,000.00
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	2500-	5000 -
3	1	LS	s	TRAFFIC CONTROL SYSTEM	101,000-	101,000-
4	1	LS		JOB SITE MANAGEMENT	5,700-	5,700-
5	1000	\$		STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$1.00	\$ 1,000.00
6	1	LS	s	PREPARE STORM WATER POLLUTION PREVENTION PLAN	1,550-	1,550-
7	1	LS	s	STORM WATER ANNUAL REPORT	275 -	275-
8	1	LS		CLEARING AND GRUBBING	3,900-	3,900-
9	5149	СҮ	F	ROADWAY EXCAVATION	19,50	100,40550
10	2090	CY	F	SHOULDER BACKING	163	33,958
11	2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)	3950	82,555-
12	1	LS		FINISHING ROADWAY	6,655-	6,650-
13	3833	CY	F	CLASS 2 AGGREGATE BASE	55-	210,815
14	3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	8450	319,49450
15	4	TON		ТАСК СОАТ	540-	2,1.60-
16	3	EA		ROADSIDE SIGN - ONE POST	3320-	990-
17	1	LS		MOBILIZATION	41,000.20	41,000.00
			то	TAL BASE BID (ITEMS 1 THROUGH 17)		956,353.°
	F - FINAL PAY I	TEM				956,358.00

#1



#### COUNTY OF FRESNO DEPARTMENT OF PUBLIC WORKS AND PLANNING PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS FEDERAL PROJECT NO.: CML -5942(255) CONTRACT NO: 17-15-C

ALTERNATIVE BID

. 3

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item No.	Estimated Quantity	Unit of Measure	F,S	Item Description	Item Price (In Figures)	Total Price (in Figures)
1	40000	s		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$ 40,000.00
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	550-	1,105-
3	1	LS	s	TRAFFIC CONTROL SYSTEM	WI,OW	101,000
4	1	LS		JOB SITE MANAGEMENT	5,700-	5,200-
5	1000	s		STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$1.00	\$ 1,000.00
6	1	LS	S	PREPARE STORM WATER POLLUTION PREVENTION PLAN	1,550-	4550-
7	1	LS	s	STORM WATER ANNUAL REPORT	275-	275-
8	1	LS		CLEARING AND GRUBBING	3,905	3,900-
9	4105	CY	F	ROADWAY EXCAVATION	24-	93,520-
10	2090	CY	F	SHOULDER BACKING	10-	20,900-
11	2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)	3650	76,285
12	1	LS		FINISHING ROADWAY	6.658-	6,65r-
13	2788	CY	F	CLASS 2 AGGREGATE BASE	53-	147,764-
14	10455	SY		SUBGRADE ENHANCEMENT GEOGRID (BIAXIAL)	275	28,75725
15	3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	80-	312,480
16	4	TON		TACK COAT	540-	2,160-
17	3	EA		ROADSIDE SIGN - ONE POST	330-	920-
18	1	LS		MOBILIZATION	41,000,000	41,000.2
		1	TOTAL	ALTERNATIVE BID (ITEMS 1 THROUGH 18)		880025

F - FINAL PAY ITEM

S - SPECIALTY ITEM

#### EVALUATION OF BID PROPOSAL SHEETS

Abbreviations used in the bid proposal sheet are identified in Section 1-1.06, "Abbreviations," of these special provisions.

Bids are required for the entire work. Bids will be compared on the basis indicated in the Notice to Bidders. The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

- (a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;
- (b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the Owner's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise, if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items shall be item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the Owner, and that discretion will be exercised in the manner deemed by the Owner to best protect the public interest in the prompt and economical completion of the work. The decision of the Owner respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, shall be final.

If this proposal shall be accepted and the undersigned shall fail to contract, as aforesaid, and to give the two bonds in the sums to be determined as aforesaid, with surety satisfactory to the Owner, within eight (8) days not including Saturdays, Sundays and legal holidays, after the bidder has received notice of award of the contract, the Owner, at its option, may determine that the bidder has abandoned the contract, and thereupon this proposal and the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this proposal shall operate and the same shall be the property of the Owner.

Proposal 3 Contract Number 17-15-C Accompanying this proposal is security (check one only) in amount equal to at least ten percent (10%) of the total amount of the bid:

Bid Bond (X); Certified Check ( ); Cashier's Check ( ); Cash (\$ )

Bidder has and acknowledges the following addenda: 1, 2, 3

The names of all persons interested in the foregoing proposal as principals are as follows:

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if bidder or other interested person is an individual, state first and last name in full.

FIRM NAMECAL VA	ALLEY CONSTRUCTION		
MICHELLE AVILA	PRESIDENT		
JOHN AVILA	VICE PRESIDENT		
TONY STORELLI	SECRETARY		

Licensed in accordance with an act providing for the registration of Contractors, Class 4_____ License No._____873800______ Expires 3-31-2020____

(Furnishing Contractor License information as part of this proposal is optional and is requested to facilitate verification of licensure)

Signature of Bidder SECRETARY

3-15-18 Dated

**NOTE:** If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if bidder is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if bidder is an individual, his signature shall be placed above. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the Owner prior to opening bids or submitted with the bid; otherwise, the bid will be disregarded as irregular and unauthorized.

BUSINESS ADDRESS:	5125 N. GAT	55#102	FRESNO, CA 93722
			Zip Code
MAILING ADDRESS:			
	4		Zip Code
BUSINESS PHONE: (	<b>(</b> 559) 274-0300	_FAX NUMBER: (	(559) 274-0311
EMAIL ADDRESS	sales@calvalleyconstruction.com		

Proposal 4 Contract Number 17-15-C

#### MINUTES OF ACTION BY THE DIRECTORS OF CAL VALLEY CONSTRUCTION, INC., A CALIFORNIA CORPORATION WITHOUT A MEETING

The undersigned directors of Cal Valley Construction, Inc., acting by unanimous written consent without a meeting pursuant to Corporations Code §307(b), adopt the following resolution:

1. Authorize the Directors of the Corporation to Sign Documents

WHEREAS, the Corporation relocated its principal place of business on October 17, 2016 and the original resolution dated May 1, 2014 listed the former location, be it:

**RESOLVED**, that any of the Directors of the Corporation are hereby authorized to sign on behalf of the Corporation any contracts or forms for public or private bid documents.

The undersigned hereby certifies that the foregoing is a true record of a resolution duly adopted by the Directors and that said resolution is now in full force and effect without modification or rescission.

Dated: October 31, 2016

MICHELLE A. AVILA, President

JOHIN G. AVILA rce Pres

TONY STOREFLI, Secretary

MICHELLE A. AVILA, Treasurer

General Engineering + Commercial & Residential Certified SB + UDBE + WMBE



Heavy Equipment Rental & Grading & Paving License #873800

CERTIFICATION OF CORPORATE SECRETARY

I, Tony Storelli, certify that I am the secretary of the corporation named herein; that Tony Storelli who signed this CERTIFICATION on behalf of the corporation, was then Secretary of said corporation; that said CERTIFICATION is within the scope of its corporate powers and was duly signed for and on behalf of said corporation by authority of its governing body, as evidenced by the attached true and correct copy of the CERTIFICATE OF CORPORATE RESOLUTION AUTHORIZING DIRECTORS TO SIGN DOCUMENTS.

Cal Valley Cor	nstruction, Inc.
Signature:	17000
Print Name:	TONY STORELLT
Title:	SECRETARY
Date:	MAY 1, 2014
	•

-1-

www.calvalleyconstruction.com

Tel/ 559.274.0300 🔹

FAX/ 559.274.0311

03/15/2018	13:20
2060	PANOCHE RD WIDENING FRESNO CO.
*** Mike Hardy	BID TOTALS

4

<b>Biditem</b>	Description	Quantity	Units	<u>Unit Price</u>	<b>Bid Total</b>
1	Supplemental Work (Oil Index) (Owner Allowance)	40,000.000	\$	1.00	40,000.00
2	Construction Funding Signs	2.000	EA	2,500.00	5,000.00
3	Traffic Control	1.000	LS	101,000.00	101,000.00
4	Jobsite Management	1.000	LS	5,700.00	5,700.00
5	State Water Board NOI (Owner Allowance)	1,000.000	\$	1.00	1,000.00
6	Prepare SWPPP	1.000	LS	1,550.00	1,550.00
7	Storm Water Annual Report	1.000	LS	275.00	275.00
8	Clearing & Grubbing	1.000	LS	3,900.00	3,900.00
9	Roadway Excavation <b>**</b> FINAL <b>**</b>	5,149.000	CY	19.50	100,405.50
10	Shoulder Backing**FINAL**	2,090.000	CY	16.20	33,858.00
11	Import Borrow (Shoulder Backing) **FINAL**	2,090.000	CY	39.50	82,555.00
12	Finish Roadway	1.000	LS	6,650.00	6,650.00
13	Class 2 AB **FINAL**	3,833.000	CY	55.00	210,815.00
14	HMA Type A	3,781.000	TON	84.67	320,137.27
15	Tack Coat	4.000	TON	540.00	2,160.00
16	Roadside Sign (One Post)	3.000	EA	330.00	990.00
17	Mobilization	1.000	LS	41,000.00	41,000.00
	А		>		\$956,995.77

110	Supplemental Work (Oil Index) (Owner Allowance)	40,000.000	\$	1.00	40,000.00
120	Construction Funding Signs	2.000	EA	550.00	1,100.00
130	Traffic Control	1.000	LS	101,000.00	101,000.00
140	Jobsite Management	1.000	LS	5,700.00	5,700.00
150	State Water Board NOI (Owner Allowance)	1,000.000	\$	1.00	1,000.00
160	Prepare SWPPP	1.000	LS	1,550.00	1,550.00
170	Storm Water Annual Report	1.000	LS	275.00	275.00
180	Clearing & Grubbing	1.000	LS	3,900.00	3,900.00
190	Roadway Excavation **FINAL**	4,105.000	CY	24.00	98,520.00
200	Shoulder Backing **FINAL**	2,090.000	CY	10.00	20,900.00
210	Imported Borrow (Shoulder Backing) **FINAL**	2,090.000	CY	36.50	76,285.00
220	Finish Roadway	1.000	LS	6,650.00	6,650.00
230	Class 2 AB **FINAL**	2,788.000	CY	53.00	147,764.00
240	Subgrade Enhancement (Geogrid Biaxial)	10,455.000	SY	2.75	28,751.25
250	HMA Type A	3,781.000	TON	80.00	302,480.00
260	Tack Coat	4.000	TON	540.00	2,160.00
270	Roadside Sign (One Post)	3.000	EA	330.00	990.00
280	Mobilization	1.000	LS	41,000.00	41,000.00

\$880,025.25

Bid Total

____>

____>

\$1,837,021.02



5.3

North American Specialty Insurance Company Washington International Insurance Company Westport Insurance Corporation 1450 American Lane, Suite 1100 Schaumburg, IL 60173

## **Bid Bond**

KNOW ALL MEN BY THESE PRESENTS, that	t we Cal Valley Construction, Inc.			
5125 N. Gates Ave. #102 Fresno, CA 93722	2 (full name and address or lega	(full name and address or legal title of Principal)		
as Principal, hereinafter called the Principa	al, and <u>North American Specialty Insurance C</u> (select Suret			
a corporation duly organized under the law	vs of the state of <u>NH</u> as Sure (select state)	ety, hereafter called the Surety, are		
held and firmly bound unto County of Fre	esno 2	220 Tulare Street		
Fresno, CA 93722	(full name and address or legal title of Obligee	)		
as Obligee, hereinafter called the Obligee,	in the sum of Ten Percent of Amount Bid	Dollars (\$10%)		
for the payment of which the Principal and these presents. WHEREAS, the Principal has submitted to	the Surety bind ourselves, our successors and as	ssigns, jointly and severally, firmly by Improvements Federal Project No.		
CML-5942(255)Contract No. 17-15-C	(full name, address and de	~~~~~		
Principal either 1) shall enter into a contract bonds as may be specified in the bidding of difference, not to exceed the amount of thi Obligee may in good faith contract with and and void; otherwise to remain in full force a and Principal to extend the time in which the extension exceeding sixty (60) days in the	bligation is such that if the Obligee shall accept to ct with the Obligee in accordance with the terms or contract documents with good and sufficient su is bond, between the amount specified in said bio other party to perform the work covered by said and effect. The Surety hereby waives any notice he Obligee may accept the bid. Waiver of notice aggregate beyond the time for acceptance of bio Surety's consent for an extension beyond sixty (60	of such bid and gives such bond or urety, or 2) shall pay to the Obligee the d and such larger amount for which bid, then this obligation shall be null of an agreement between the Obligee by the Surety shall not apply to any ds specified in the bid documents, and		
provision in this bond conflicting with said s conforming to such statutory or other legal	uply with a statutory or other legal requirement in statutory or legal requirement shall be deemed d I requirements shall be deemed incorporated her atutory bond and not as a common law bond.	leleted herefrom and provisions		

Signed and sealed this <u>26th</u> day of February 2018

Cal Valley Constru	(Principal)	
By 7	ero	
TONY STORELL	A SECRETA	RY minimum
North American S	pecialty Insuran	ice Considered
// 1	(Surety)	SEAL
By: Name: Gody Lym		A AMPSH
Ngane. Dody Lynn	ro // C	(Attorney) Cac) An
	//	

BY____

BY ____

(Witness)

(Witness)

#### CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

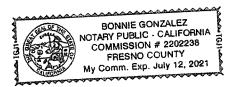
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California ) ) ss County of Fresno )

On 2/2(c) cost, before me, <u>Bonnie Gonzalez</u>, <u>Notary Public</u>, personally appeared <u>Cody Lyman</u>, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



(Seal)

Signature Bonnie Gonzalez, Notary Public

#### SWISS RE CORPORATE SOLUTIONS

## NORTH AMERICAN SPECIALTY INSURANCE COMPANY WASHINGTON INTERNATIONAL INSURANCE COMPANY

#### GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Overland Park, Kansas, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Overland Park, Kansas, each does hereby make, constitute and appoint: <u>Cody Lyman</u>

Principal: Cal Valley Construction, Inc.

Bond Number: Bid Bond

Obligee: County of Fresno

Bond Amount: See Bond Form

Bond Description: Panoche Road Shoulder Improvements Federal Project No. CML-5942(255)Contract No. 17-15-C

Its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of: FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



& Senior Vice President of North American Specialty Insurance Company

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this <u>12th</u> day of <u>October</u>, 20<u>17</u>.

North American Specialty Insurance Company Washington International Insurance Company

State of Illinois County of Cook ss:

On this <u>12th</u> day of <u>October</u>, 20<u>17</u>, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and <u>Michael A. Ito</u>, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



M. Kenny, Notary Public

I, <u>Jeffrey Goldberg</u>, the duly elected <u>Assistant Secretary</u> of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this <u>26th</u> day of <u>February</u>, 2018

Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company & North American Specialty Insurance Company

#### Federal Project Number: CML-5942(255)

To the Board of Supervisors, County of Fresno:

#### NONCOLLUSION AFFIDAVIT

#### TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID *

TONY STORELLI

(Printed or Typed Name)

being first duly sworn, deposes and says that he or she is

SECRETARY

(Owner, Partner, Corporate Officer (list title), Co-Venturer)

of CAL VALLEY CONSTRUCTION

#### (Bidding Entity)

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

SECRETARY (Signature) Y STORELLI

(Title 23 United States Code Section 112)

(Calif Public Contract Code Section 7106; Stats.1988, c. 1548, Section 1.)

* NOTE: Completing, signing, and returning the Non-Collusion Affidavit is a required part of the Proposal. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

<u> 3-15-1名</u> (Dated)

Proposal 5 Contract Number 17-15-C

#### PUBLIC CONTRACT CODE

#### Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ______, has not _X_ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Proposal 6 Contract Number 17-15-C

#### Public Contract Code Section 10162 Questionnaire

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes No X

If the answer is yes, explain the circumstances in the following space.

#### Public Contract Code 10232 Statement

In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Proposal 7 Contract Number 17-15-C CAL VALLEY CONSTRUCTION

## BIDDER: ____

#### SUBCONTRACTORS:

The following named subcontractor(s) will perform with labor, or otherwise render services to the general contractor in or about the construction of the work or improvement in an amount in excess of **one-half of one percent of the total bid presented herewith or \$10,000, whichever is greater.** Please fill out as completely as possible when submitting your bid. Use subcontractor's business name style as registered with the License Board. Submission of subcontractor's name, location of business and description of work, and their contractor's license number is REQUIRED, by Section 4104 of the California Public Contract Code, to be submitted prior to bid opening. (The "location of business" must specify the city in which the subcontractor's business is located, and the state if other than California.) All other requested information shall be submitted, either with the bid or within 24 hours after bid opening.

Please fill out as completely as possible when submitting your bid. Use subcontractor's business name style as registered with the License Board.

#### FAILURE TO LIST SUBCONTRACTORS AS DIRECTED MAY RENDER THE BID NON-RESPONSIVE, OR MAY RESULT IN ASSESSMENT OF A PENALTY AGAINST THE BIDDER IN ACCORDANCE WITH SECTION 4110 OF THE CALIFORNIA PUBLIC CONTRACT CODE.

SUBCONTRACTOR:	MIRAN	22 REVUCIONE	
Business Address: _	3220 W	BELMONT	FRESKS
Class	_License No		DIR Registration No. 1000037947
		MATERIAL H	
Dollar Amount or Pe	rcentage of Tot	tal Bid <u>37, 300</u>	-
Email Address			
SUBCONTRACTOR:	ARSSL (	Construction	
Business Address:	8435 24	5 ST. SACRA	MENTO, OH
Class	_License No	621731	DIR Registration No. 1000002918
Item No. or Descripti	on of Work:	AC GRINDING	4
Dollar Amount or Per	centage of Tot	al Bid 79,000	5-
Email Address			

Proposal 8(a) Contract Number 17-15-C

BIDDER:
SUBCONTRACTOR:
Business Address:
Class DIR Registration No Item No. or Description of Work:
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address
SUBCONTRACTOR: A SEOCLATIGO TRAFFIC SAFET
Business Address: PORDEX 2221 ATASCADERO (A Class of License No. 962 Mel DIR Registration No. 10500 (3332)
Class <u>H</u> License No. <u>962 Nol</u> DIR Registration No.
Item No. or Description of Work: TRAFFIC CONTINUL
Dollar Amount or Percentage of Total Bid i ジレ, ひつて
Email Address
SUBCONTRACTOR:
Business Address:
ClassLicense NoDIR Registration No
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address
SUBCONTRACTOR:
Business Address:
ClassLicense NoDIR Registration No
Item No. or Description of Work:
Dollar Amount or Percentage of Total Bid
Email Address

Proposal 8(b) Contract Number 17-15-C

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*

Business Address:	
ClassLicense No	DIR Registration No.
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	DIR Registration No
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	DIR Registration No
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid	
Email Address	
UBCONTRACTOR:	
Business Address:	
ClassLicense No	
Item No. or Description of Work:	
Dollar Amount or Percentage of Total Bid Email Address	

Proposal 8(c) Contract Number 17-15-C

BIDDER:		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descripti	ion of Work:	
Dollar Amount or Pe	rcentage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address: _		
Class	License No.	DIR Registration No
Item No. or Descripti	on of Work:	
	rcentage of Total Bid	

Proposal 8(d) Contract Number 17-15-C

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BIDDER:	BIDDER:								
SUBCONTRACTOR:									
Class	License No	DIR Registration No							
Item No. or Descript	tion of Work:								
Dollar Amount or Pe	ercentage of Total Bid _								
Email Address									
SUBCONTRACTOR:									
Business Address:									
Class	License No	DIR Registration No							
Item No. or Descript	tion of Work:								
Dollar Amount or Pe	ercentage of Total Bid _								
Email Address									
SUBCONTRACTOR:		· ·							
Business Address:									
Class	_License No	DIR Registration No							
Item No. or Descript	ion of Work:								
Dollar Amount or Pe	ercentage of Total Bid _								
Email Address									
SUBCONTRACTOR:									
Business Address:									
		DIR Registration No							
Item No. or Descript	ion of Work:								

Proposal 8(e) Contract Number 17-15-C

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BIDDER:		
SUBCONTRACTOR:		
Business Address: _		
Class	License No.	DIR Registration No
Item No. or Description	on of Work:	
Dollar Amount or Pere	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No.	DIR Registration No
Item No. or Descriptic	on of Work:	
Dollar Amount or Perc	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descriptio	on of Work:	
Dollar Amount or Perc	centage of Total Bid	
Email Address		
SUBCONTRACTOR:		
Business Address:		
Class	License No	DIR Registration No
Item No. or Descriptio	n of Work:	

Proposal 8(f) Contract Number 17-15-C

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#### CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS.

The bidder  $X_{,}$  proposed subcontractor __, hereby certifies that he has  $X_{,}$  has not __, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has  $X_{,}$  has not __, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

CAL VALLEY CONSTRUCTION

(Company TONY STORELLI SECRETARY

(Title)

Date: 3-15-18

**NOTE**: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

Proposal 9 Contract Number 17-15-C

#### TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29 DEBARMENT AND SUSPENSION CERTIFICATION

The bidder  $\underline{M}$ , proposed subcontractor __, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;

has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;

does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space:

No Exceptions

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action:

Note: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Proposal. Signing the Proposal on the signature portion thereof shall also constitute signature of this Certification.

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Title 23 United States Code, Section 112 Non-Collusion Affidavit and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Bidder	Subcontractor: CAL VA	ALLEY CONSTRUCTION	
вý: Ç	2 Aul	10	
Date:	3-15-18		
Title:	TONY STORELLI	SECRETARY	
_			

Proposal 10 Contract Number 17-15-C

### NONLOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with awarding of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

Bidde	CAL VALLEY CONSTRUCTION	
By:	BACK	<b>5</b> '
Date:	3-15-2	-018
Title:	TONY STORELLI SECR	ETARY

Proposal 11 Contract Number 17-15-C

Disclosure of Lobbying Activities Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 (See reverse for public burden disclosure)

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Fed a. bid/of b. initial c. post-a	fer/application award	3. Report Type: a. initial filing b. material change For material change only: Year quarter Date of last report				
4. Name and Address of Reporting E Prime Subawardee Tier, if CAL VALLEY CONSTRUCTION 5129 N. GATES # 102 FRESNO, CA 93722		<ul> <li>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</li> <li>►↓ ↓ ↓</li> </ul>					
<b>Congressional District</b> , <i>if known</i> : 6. Federal Department/Agency:		Congressional District, if known:         7. Federal Program Name/Description:         CFDA Number, if applicable:					
8. Federal Action Number, if known:		9. Award Amount, if known: \$ N/4					
10. a. Name and Address of Lobbying (if individual, last name, first name) いしん		b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): $H \mid A$					
11. Information requested through this for title 31 U.S.C. section 1352. This disclosur activities is a material representation of fac reliance was placed by the tier above when was made or entered into. This disclosure i pursuant to 31 U.S.C. 1352. This informati to the Congress semi-annually and will be inspection. Any person who fails to file the disclosure shall be subject to a civil penalty \$10,000 and not more than \$100,000 for ea	e of lobbying ct upon which this transaction is required on will be reported available for public required y of not less than	Signature: Print Name: TOMY STORELLI SECRETARY Title:					
Federal Use Only		Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)					

Proposal 12(a) Contract Number: 17-15-C

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#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether sub-awardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or sub-award recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Sub-awards include but are not limited to subcontracts, sub-grants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Proposal 12(b) Contract Number: 17-15-C

#### OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the payment adjustments for price index fluctuations as specified in Section 2-1.29, "OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS," of the special provisions.

You can only elect to opt out of payment adjustments for price index fluctuations of if you complete this form and submit it <u>with your bid</u>. The individual signing this form must be duly authorized to sign a bid.

# By signing this form, I hereby opt out of the payment adjustments for price index fluctuations for the above-named project.

Bidder:	 		
Name (Printed): _	 		
Signature:	 	 	
Title:		 	

Proposal 15 Contract Number: 17-15-C (This guaranty shall be executed by the successful bidder in accordance with instructions in the special provisions. The bidder may execute the guaranty on this page at the time of submitting his bid.)

#### GUARANTY

To the Owner: County of Fresno

## PANOCHE ROAD SHOULDER IMPROVEMENTS

#### CONTRACT NUMBER: 17-15-C

The undersigned guarantees the construction and installation of the following work included in this project:

#### ALL WORK

Should any of the materials or equipment prove defective or should the work as a whole prove defective, due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the specifications, due to any of the above causes, all within twelve (12) months after date on which this contract is accepted by the Owner, the undersigned agrees to reimburse the Owner, upon demand, for its expenses incurred in restoring said work to the condition contemplated in said project, including the cost of any such equipment or materials replaced and the cost of removing and replacing any other work necessary to make such replacement or repairs, or, upon demand by the Owner, to replace any such material and to repair said work completely without cost to the Owner so that said work will function successfully as originally contemplated.

The Owner shall have the unqualified option to make any needed replacement or repairs itself or to have such replacements or repairs done by the undersigned. In the event the Owner elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from the Owner.

Date:

Contractor:

Proposal 16 Contract Number: 17-15-C

Project:		Road Shou		c Works and Planning provements			Bidder		Bidder		Bid Opening: Award Date: Bidder		Bidder		Bidder	
2 3 4	Bidders Cal Valley Cons Emmtt's Excav Avison Constru Teichert Constr Granite Constr	ration, Inc. uction Inc. rruction					Subcontractors for A Miranda Trucking ABSL Construction Associate Traffic Sa	Apparent Low Bidder afety	Subcontractors for 2	2nd Bidder	Subcontractors for :	3rd Bidder	Subcontractors for	4th Bidder	Subcontractors for ABSL Construction APCO Force Traffic Con	
ALTER	NATIVE BID	)		Γ	Engineer's E	stimate		1		2		3		4		5
ITEM NO.	QUANTITY	UNIT OF MEASURE	F, S	ITEM DESCRIPTION	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)
1	40000	\$		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$40,000.00	\$1.00	\$40,000.00	1.00	\$40,000.00	1.00	\$40,000.00	1.00	\$40,000.00	1.00	\$40,000.00
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	\$1,500.00	\$3,000.00	\$550.00	\$1,100.00	1,300.00	\$2,600.00	500.00	\$1,000.00	1,000.00	\$2,000.00	500.00	\$1,000.00
3 4	1 1	LS LS	S	TRAFFIC CONTROL SYSTEM JOB SITE MANAGEMENT	\$50,000.00 \$5,000.00	\$50,000.00 \$5,000.00	\$101,000.00 \$5,700.00	\$101,000.00 \$5,700.00	60,000.00 2,000.00	\$60,000.00 \$2,000.00	54,500.00 2,500.00	\$54,500.00 \$2,500.00	200,000.00 5,500.00	\$200,000.00 \$5,500.00	132,000.00 5,000.00	\$132,000.00 \$5,000.00
5	1000	\$		STATE WATER RESOURCES CONTROL BOARD NOTICE OF INTENT FILING FEE	\$1.00	\$1,000.00	\$1.00	\$1,000.00	1.00	\$1,000.00	1.00	\$1,000.00	1.00	\$1,000.00	1.00	\$1,000.00
6	1	LS	S	PREPARE STORM WATER POLLUTION PREVENTION PLAN	\$5,000.00	\$5,000.00	\$1,550.00	\$1,550.00	1,600.00	\$1,600.00		\$1,500.00	2,250.00	\$2,250.00	1,500.00	\$1,500.00
7	1	LS LS	S	STORM WATER ANNUAL REPORT CLEARING AND GRUBBING	\$1,500.00 \$10,000.00	\$1,500.00 \$10.000.00	\$275.00 \$3.900.00	\$275.00 \$3.900.00	300.00 2.500.00	\$300.00 \$2,500.00	700.50 5.000.00	\$700.50 \$5.000.00	1,000.00	\$1,000.00 \$15.000.00	2,000.00 75.000.00	\$2,000.00 \$75.000.00
9	4105	CY	F	ROADWAY EXCAVATION	\$40.00	\$164,200.00	\$3,900.00	\$98,520.00	2,300.00	\$147,780.00	32.00	\$131,360.00	35.00	\$143,675.00		\$225,775.00
10	2090	CY	F	SHOULDER BACKING	\$10.00	\$20,900.00	\$10.00	\$20,900.00	12.00	\$25,080.00	15.00	\$31,350.00	15.00	\$31,350.00	17.00	\$35,530.00
11	2090	CY	F	IMPORTED BORROW (SHOULDER BACKING MATERIAL)	\$25.00	\$52,250.00	\$36.50	\$76,285.00	36.00	\$75,240.00		\$94,050.00	35.00	\$73,150.00	36.00	\$75,240.00
12 13	1 2788	LS CY	F	FINISHING ROADWAY CLASS 2 AGGREGATE BASE	\$15,000.00 \$50.00	\$15,000.00 \$139,400.00	\$6,650.00 \$53.00	\$6,650.00 \$147,764.00	5,000.00 83.00	\$5,000.00 \$231,404.00	10,000.00 69.00	\$10,000.00 \$192,372.00	40,000.00 70.00	\$40,000.00 \$195,160.00	10,000.00 77.00	\$10,000.00 \$214.676.00
14	10455	SY		SUBGRADE ENHANCEMENT GEOGRID (BIAXIAL)	\$2.50	\$26,137.50	\$2.75	\$28,751.25	4.60	\$48,093.00	2.50	\$26,137.50	3.00	\$31,365.00		\$26,137.50
15	3781	TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM)	\$70.00	\$264,670.00	\$80.00	\$302,480.00	80.00	\$302,480.00		\$340,290.00	100.00	\$378,100.00	93.00	\$351,633.00
16	4	TON		TACK COAT	\$3,000.00 \$450.00	\$12,000.00	\$540.00	\$2,160.00	1,300.00	\$5,200.00		\$2,000.00	2,000.00	\$8,000.00	500.00	\$2,000.00
17 18	3	EA LS		ROADSIDE SIGN - ONE POST MOBILIZATION	\$450.00	\$1,350.00 \$10,000.00	\$330.00 \$41.000.00	\$990.00 \$41,000.00	300.00 28.000.00	\$900.00 \$28,000.00		\$1,200.00 \$48,000.00	400.00	\$1,200.00 \$120,000.00		\$1,200.00 \$130,000.00
	ALTERNAT		EMS 1		\$821,40			0,025.25		9,177.00		2,960.00		88,750.00		9,691.50
BASE E		•		· · · · · · · · · · · · · · · · · · ·	En ala anda E				3		4		5			
					Engineer's E			1	2		1 1					
ITEM NO.	QUANTITY	UNIT OF MEASURE	F, S	ITEM DESCRIPTION	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)	ITEM PRICE (IN FIGURES)	TOTAL PRICE (IN FIGURES)
1	40000	\$		SUPPLEMENTAL WORK (PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS)	\$1.00	\$40,000.00	\$1.00	\$40,000.00	1.00	\$40,000.00	1.00	\$40,000.00	1.00	\$40,000.00	\$1.00	\$40,000.00
2	2	EA		CONSTRUCTION PROJECT FUNDING SIGNS	\$1,500.00	\$3,000.00	\$2,500.00	\$5,000.00	1,300.00	\$2,600.00	500.00	\$1,000.00	1,000.00	\$2,000.00	\$500.00	\$1,000.00
3	1	LS LS	S	TRAFFIC CONTROL SYSTEM JOB SITE MANAGEMENT	\$50,000.00 \$5.000.00	\$50,000.00 \$5,000.00	\$101,000.00 \$5,700.00	\$101,000.00 \$5,700.00	60,000.00 2,000.00	\$60,000.00 \$2,000.00	54,500.00 2,500.00	\$54,500.00 \$2,500.00	210,000.00 7,500.00	\$210,000.00 \$7,500.00	\$132,000.00 \$5,000.00	\$132,000.00 \$5,000.00
5	1000	\$		STATE WATER RESOURCES CONTROL BOARD	\$1.00	\$1,000.00	\$5,700.00	\$1,000.00	2,000.00	\$2,000.00	2,300.00	\$2,300.00	1.00	\$1,000.00	\$3,000.00 1.00	\$1,000.00
6	1	LS	s	PREPARE STORM WATER POLLUTION PREVENTION	\$5,000.00	\$5,000.00	\$1,550.00	\$1,550.00	1,600.00	\$1,600.00	1,500.00	\$1,500.00	2,250.00	\$2,250.00	\$1,500.00	\$1,500.00
7	1	LS	S	PLAN STORM WATER ANNUAL REPORT	\$1,500.00	\$1,500.00	\$275.00	\$275.00	300.00	\$300.00	700.00	\$700.00	1,000.00	\$1,000.00	\$2,000.00	\$2,000.00
8	1	LS	_	CLEARING AND GRUBBING	\$10,000.00	\$10,000.00	\$3,900.00	\$3,900.00	2,500.00	\$2,500.00	5,000.00	\$5,000.00	10,000.00	\$10,000.00	\$75,000.00	\$75,000.00
9 10	5149 2090	CY CY	F	ROADWAY EXCAVATION SHOULDER BACKING	\$40.00 \$10.00	\$205,960.00 \$20,900.00	\$19.50 \$16.20	\$100,405.50 \$33,858.00	37.00 12.00	\$190,513.00 \$25,080.00		\$154,470.00 \$31,350.00	50.00 20.00	\$257,450.00 \$41,800.00		\$180,215.00 \$35,530.00
10	2090	CY	F	SHOULDER BACKING IMPORTED BORROW (SHOULDER BACKING MATERIAL)	\$10.00	\$20,900.00	\$16.20	\$33,858.00	36.00	\$25,080.00	45.00	\$31,350.00	35.00	\$73,150.00		\$35,530.00
12	1	LS		FINISHING ROADWAY	\$15,000.00	\$15,000.00	\$6,655.00	\$6,655.00	5,000.00	\$5,000.00	10,000.00	\$10,000.00	35,000.00	\$35,000.00	\$10,000.00	\$10,000.00
13	3833	CY	F	CLASS 2 AGGREGATE BASE	\$50.00	\$191,650.00	\$55.00	\$210,815.00	83.00	\$318,139.00		\$249,145.00	61.00	\$233,813.00	\$67.00	\$256,811.00
14 15	3781 4	TON TON		HOT MIX ASPHALT (TYPE A, 3/4" MAXIMUM) TACK COAT	\$70.00 \$3,000.00	\$264,670.00 \$12.000.00	\$84.50 \$540.00	\$319,494.50 \$2,160.00	80.00 1,300.00	\$302,480.00 \$5,200.00		\$340,290.00 \$2.000.00	105.00	\$397,005.00 \$7,200.00	\$93.00 \$500.00	\$351,633.00 \$2,000.00
16	3	EA		ROADSIDE SIGN - ONE POST	\$450.00	\$1,350.00	\$330.00	\$990.00	300.00	\$900.00	400.00	\$1,200.00	500.00	\$1,500.00	\$400.00	\$1,200.00
17	1	LS		MOBILIZATION	\$10,000.00	\$10,000.00	\$41,000.00	\$41,000.00	28,000.00	\$28,000.00		\$50,000.00	135,000.00	\$135,000.00		\$130,000.00
TOTAL	BID (ITEMS	5 1 <b>-</b> 17)			\$889,28	0.00	\$950	6,358.00	\$1,06	60,552.00	\$1,03	8,705.00	\$1,4	55,668.00	\$1,30	0,129.00

F - Final Pay Item

S - Specialty Item



## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 04/27/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.									
IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on									
this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).									
PRODUCER LIC #0B29370 1-559-451-3200					CONTACT NAME: Certificates Department				
Edgewood Partners Insurance Center (EPIC)					PHONE 925-244-7700 FAX (A/C, No): 925-901-0671				
[Fresno Branch - Branch ID 15283] 5250 N. Palm Avenue, Suite 220					E-MAIL ADDRESS: EPICcerts@epicbrokers.com				
5250 N. Falm Avenue, Buile 220					INSURER(S) AFFORDING COVERAGE NAIC #				
Fresno, CA 93704					INSURER A: ZURICH AMER INS CO			16535	
INSURED					INSURER B :				
Cal Valley Construction, Inc.					INSURER C :				
FIRE N. Fature Neurona Product 100				INSURER D :					
5125 N. Gates Avenue, Suite 102				INSURER E :					
Fresno, CA 93722-6414					INSURER F :				
COVERAGES CERTIFICATE NUMBER: 52704167					REVISION NUMBER:				
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NA								OLICY PERIOD	
INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.									
INSR LTR TYPE OF INSURANCE	INSE TYPE OF INSURANCE ADDL SUBR TR TYPE OF INSURANCE INSD WVD POLICY NUMBER				POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A X COMMERCIAL GENERAL LIABILITY			GL0110087701		03/01/18	03/01/19		000,000	
CLAIMS-MADE X OCCUR							DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 10	00,000	
							MED EXP (Any one person) \$ 10	0,000	
							PERSONAL & ADV INJURY \$ 1	000,000	
GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 2	000,000		
POLICY X PRO- JECT LOC							PRODUCTS - COMP/OP AGG \$ 2	000,000	
OTHER:							\$		
A AUTOMOBILE LIABILITY	x	x	BAP110087801		03/01/18	03/01/19	COMBINED SINGLE LIMIT \$ 1, (Ea accident)	000,000	
X ANY AUTO					BODILY INJURY (Per person) \$				
OWNED SCHEDULED	OWNED SCHEDULED AUTOS						BODILY INJURY (Per accident) \$		
HIRED NON-OWNED AUTOS ONLY						PROPERTY DAMAGE \$ (Per accident)			
							\$		
UMBRELLA LIAB OCCUR	1	1					EACH OCCURRENCE \$		
	EXCESS LIAB CLAIMS-MADE					AGGREGATE \$			
						S			
			WC110087601		03/01/18	03/01/19	X PER OTH- STATUTE ER		
								000,000	
							E.L. DISEASE - EA EMPLOYEE \$ 1,	000,000	
						E.L. DISEASE - POLICY LIMIT \$ 1,			
		1							
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)									
Contract #17-15-C / Federal Project #CML-5942(255) / RE: Panoche Road Shoulder Improvements /									
County of Fresno, its officers, agents, and employees, individually and collectively, as additional insured, but only i									
sofar as the operations under this agreement are concerned. Such coverage for additional insured shall apply as primary									
insurance, or self-insurance, maintained by County, its officers, agents and employees shall be excess only and not									
contributing with insurance.									
Attached forms will apply when required by written contract.									
CERTIFICATE HOLDER CANCELLATION									
								]	
Country of Process									
County of Fresno Department of Public Works					THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.				
2220 Tulare Street, Sixth Floor					AUTHORIZED REPRESENTATIVE				
Fresno, CA 93721				Bian D. Quim					
USA					Chlan V. Clem				
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ACORD 25 (2016/03) The ACORD name and logo are registered marks of ACORD									

## SUPPLEMENT TO CERTIFICATE OF INSURANCE

NAME OF INSURED: Cal Valley Construction, Inc.

Additional Description of Operations/Remarks from Page 1:

Additional Information:

04/27/2018

DATE



# Additional Insured – Automatic – Owners, Lessees Or Contractors

ſ	Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
	GLO 1100877-01	03/01/2018	03/01/2019		10280000	INCL	

#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named insured: CAL VALLEY CONSTRUCTION, INC.

Address (including ZIP Code):

5125 N. GATES AVE, STE 102

FRESNO, CA 93722

, a , h

This endorsement modifies insurance provided under the:

#### **Commercial General Liability Coverage Part**

- A. Section II Who Is An Insured is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
  - 1. Your acts or omissions; or
  - 2. The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations or "your work" as included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, the insurance afforded to such additional insured:

- 1. Only applies to the extent permitted by law; and
- 2. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.
- B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

- a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

C. The following is added to Paragraph 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section IV – Commercial General Liability Conditions:

The additional insured must see to it that:

- 1. We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
- 2. We receive written notice of a claim or "suit" as soon as practicable; and
- 3. A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.
- D. For the purposes of the coverage provided by this endorsement:
  - 1. The following is added to the Other Insurance Condition of Section IV Commercial General Liability Conditions:

#### Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

- a. The additional insured is a Named Insured under such other insurance; and
- **b.** You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.
- 2. The following paragraph is added to Paragraph 4.b. of the Other Insurance Condition of Section IV Commercial General Liability Conditions:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

- E. This endorsement does not apply to an additional insured which has been added to this policy by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.
- F. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section III Limits Of Insurance:

The most we will pay on behalf of the additional insured is the amount of insurance:

- 1. Required by the written contract or written agreement referenced in Paragraph A. of this endorsement; or
- 2. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.

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### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

# DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

#### SCHEDULE

**Designated Construction Project(s):** A General Aggregate Limit applies to each construction project where the Named Insured is performing operations, however, a General Aggregate Limit does not apply to any construction project where the Named Insured is performing operations that are insured under a wrap up or any other consolidated or similar insurance program.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I Coverage A, and for all medical expenses caused by accidents under Section I Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
  - 1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  - The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "productscompleted operations hazard", and for medical expenses under Coverage C regardless of the number of:
    - a. Insureds;
    - **b.** Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".

- 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
- 4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I Coverage A, and for all medical expenses caused by accidents under Section I Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
  - Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
  - Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of Section III Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

# Waiver Of Subrogation (Blanket) Endorsement

Γ	Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l Prem.	Return Prem.
ſ	GLO110087701	03/01/2018	03/01/2019			\$ INCL	\$

#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

**Commercial General Liability Coverage Part** 

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The following is added to the Transfer Of Rights Of Recovery Against Others To Us Condition:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.



# **Coverage Extension Endorsement**

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP 1100878	-01 03/01/2018	03/01/2019		10280000	INCL	

#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Business Auto Coverage Form Motor Carrier Coverage Form

#### A. Amended Who Is An Insured

1. The following is added to the Who Is An Insured Provision in Section II – Covered Autos Liability Coverage:

The following are also "insureds":

- a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.
- **b.** Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.
- c. Anyone else who furnishes an "auto" referenced in Paragraphs A.1.a. and A.1.b. in this endorsement.
- d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.
- 2. The following is added to the Other Insurance Condition in the Business Auto Coverage Form and the Other Insurance Primary and Excess Insurance Provisions Condition in the Motor Carrier Coverage Form:

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

#### B. Amendment – Supplementary Payments

Paragraphs a.(2) and a.(4) of the Coverage Extensions Provision in Section II – Covered Autos Liability Coverage are replaced by the following:

- (2) Up to \$5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.
- (4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to \$500 a day because of time off from work.

#### C. Fellow Employee Coverage

;# 4. The Fellow Employee Exclusion contained in Section II - Covered Autos Liability Coverage does not apply.

#### D. Driver Safety Program Liability and Physical Damage Coverage

1. The following is added to the Racing Exclusion in Section II – Covered Autos Liability Coverage:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

 The following is added to Paragraph 2. in the Exclusions of Section III – Physical Damage Coverage of the Business Auto Coverage Form and Paragraph 2.b. in the Exclusions of Section IV – Physical Damage Coverage of the Motor Carrier Coverage Form:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

#### E. Lease or Loan Gap Coverage

The following is added to the Coverage Provision of the Physical Damage Coverage Section:

#### Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

- a. Any amount paid under the Physical Damage Coverage Section of the Coverage Form; and
- b. Any:
  - (1) Overdue lease or loan payments at the time of the "loss";
  - (2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;
  - (3) Security deposits not returned by the lessor;
  - (4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and
  - (5) Carry-over balances from previous leases or loans.

#### F. Towing and Labor

Paragraph A.2. of the Physical Damage Coverage Section is replaced by the following:

We will pay up to \$75 for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

#### G. Extended Glass Coverage

The following is added to Paragraph A.3.a. of the Physical Damage Coverage Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

#### H. Hired Auto Physical Damage - Increased Loss of Use Expenses

The Coverage Extension for Loss Of Use Expenses in the Physical Damage Coverage Section is replaced by the following:

#### Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

- Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";
- (2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or
- (3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

However, the most we will pay for any expenses for loss of use is \$100 per day, to a maximum of \$3000.

#### I. Personal Effects Coverage

The following is added to the Coverage Provision of the Physical Damage Coverage Section:

#### Personal Effects Coverage

- a. We will pay up to \$750 for "loss" to personal effects which are:
  - (1) Personal property owned by an "insured"; and
  - (2) In or on a covered "auto".
- b. Subject to Paragraph a. above, the amount to be paid for "loss" to personal effects will be based on the lesser of:
  - (1) The reasonable cost to replace; or
  - (2) The actual cash value.
- c. The coverage provided in Paragraphs a. and b. above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:
  - (1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.
  - (2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.
  - (3) Paintings, statuary and other works of art.
  - (4) Contraband or property in the course of illegal transportation or trade.
  - (5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

#### J. Tapes, Records and Discs Coverage

- The Exclusion in Paragraph B.4.a. of Section III Physical Damage Coverage in the Business Auto Coverage Form and the Exclusion in Paragraph B.2.c. of Section IV – Physical Damage Coverage in the Motor Carrier Coverage Form does not apply.
- 2. The following is added to Paragraph 1.a. Comprehensive Coverage under the Coverage Provision of the Physical Damage Coverage Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

- (a) Are the property of an "insured"; and
- (b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is \$500. The **Physical Damage Coverage Deductible** Provision does not apply to such "loss".

#### K. Airbag Coverage

The Exclusion in Paragraph **B.3.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.4.a.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

#### L. Two or More Deductibles

The following is added to the Deductible Provision of the Physical Damage Coverage Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

- 1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or
- 2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

#### M. Physical Damage - Comprehensive Coverage - Deductible

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

Regardless of the number of covered "autos" damaged or stolen, the maximum deductible that will be applied to Comprehensive Coverage for all "loss" from any one cause is \$5,000 or the deductible shown in the Declarations, whichever is greater.

#### N. Temporary Substitute Autos – Physical Damage

1. The following is added to Section I – Covered Autos:

#### **Temporary Substitute Autos – Physical Damage**

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

- 1. Breakdown;
- 2. Repair;
- 3. Servicing;
- 4. "Loss"; or
- 5. Destruction.
- 2. The following is added to the Paragraph A. Coverage Provision of the Physical Damage Coverage Section:

#### **Temporary Substitute Autos – Physical Damage**

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

#### O. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph a. of the Duties In The Event Of Accident, Claim, Suit Or Loss Condition is replaced by the following:

a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any

agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

- (1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";
- (2) The "insured's" name and address; and
- (3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

#### P. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the Transfer Of Rights Of Recovery Against Others To Us Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

#### Q. Employee Hired Autos – Physical Damage

Paragraph **b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph f. of the **Other Insurance – Primary and Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

- (1) Any covered "auto" you lease, hire, rent or borrow; and
- (2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

#### R. Unintentional Failure to Disclose Hazards

The following is added to the Concealment, Misrepresentation Or Fraud Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

- (1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or
- (2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

#### S. Hired Auto – World Wide Coverage

Paragraph 7a.(5) of the Policy Period, Coverage Territory Condition is replaced by the following:

(5) Anywhere in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

#### T. Bodily Injury Redefined

The definition of "bodily injury" in the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

#### U. Expected Or Intended Injury

. . . . . .

The Expected Or Intended Injury Exclusion in Paragraph B. Exclusions under Section II – Covered Auto Liability Coverage is replaced by the following:

#### Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

#### V. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph A.4.a. of Section III – Physical Damage Coverage is replaced by the following:

#### 4. Coverage Extensions

#### a. Transportation Expenses

We will pay up to \$50 per day to a maximum of \$1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

#### W. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph A. Coverage of the Physical Damage Coverage Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of \$2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

#### X. Return of Stolen Automobile

The following is added to the **Coverage Extension** Provision of the **Physical Damage Coverage** Section:

If a covered "auto" is stolen and recovered, we will pay the cost of transport to return the "auto" to you. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

# WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT— CALIFORNIA

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be **0** % of the California workers' compensation premium otherwise due on such remuneration.

#### Schedule Job Description

Person or Organization ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION



OP ID: GW

DATE (MM/DD/YYYY) 04/27/2018

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Local Assistance Procedures Manual	EXHIBIT 15-G	Construction Contract DBE Commitment

Exhibit 13-G Constituction Contract DBE Communient								
1. Local Agency:	FRESNIO COUNTY.	2. Contract DBE Goal:	81/2					
3. Project Description	: FANOCHE ROAD SHO	ULVER INITROVEMENTS						
4. Project Location:	MENWOTH (FREENRI	COUNTY)						
5. Bidder's Name:	CAL VALLEY CONSTRUCTION	6. Prime Certified DBE: D 7. Bid An	nount: 45 086,295 -					
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10. Bid Item Number	11. Description of Work, Service, or Materials Supplied	12. DBE Certification Number	13. DBE Contact Information (Must be certified on the date bids are opened	14. DBE Dollar Amount	
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RAUT 3AUT	FROJECT SIGNS TRAFAL CONTROL	38321	8105-401-11000 N N	90,500	
			BASE	156,500	
Local Agenc	y to Complete this Section		· Art	\$156,500	
-	ing Date: 03-01-18	55)	15. TOTAL CLAIMED DBE PARTICIPATION	156,500 = 16.3% 4 17.8%	
		IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed above must be consistent, where applicable with the names and items of the work in the "Subcontractor List" submitted with your bid. Written confirmation of each listed DBE is required.			
25. Local Age Tu For 27. Local Age	encyRepresentative's Signature 26. Date ng Thao (559)6 encyRepresentative's Name 28. Phone Analyst	16: Preparer's Signature TOMY STORELLI (559	-16-18		
	ency Représentative's Title	20. Preparer's Title			

DISTRIBUTION: 1. Original – Local Agency

2. Copy – Caltrans District Local Assistance Engineer (DLAE). Failure to submit to DLAE within 30 days of contract execution may result in de-obligation of federal funds on contract. Include additional copy with award package.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654 6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

#### Proposal 13(a), Contract Number: 17-15-C

## **DBE INFORMATION - GOOD FAITH EFFORTS**

CML-5942(255) Federal-aid Project No.

Bid Opening Date 3-15-19

established a Disadvantaged Business Enterprise (DBE) goal of County of Fresno The 8 % for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders should submit the following information even if the "Local Agency Bidder DBE Commitment" form indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the "Local Agency Bidder DBE Commitment" form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled "Submission of DBE Commitment" of the Special Provisions:

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

Publications	Dates of Advertisement
	4

B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of DBEs Solicited	Date of Initial Solicitation	Follow Up Me	llow Up Methods and Dates		
MIRANNA TRACKING ASSOCIATED TRAFFIC ASSI CONFETENCIAN	Cannesi	PHONE PHONE PHONE	3-15-18 3-15-13 3-14-18		

Proposal 14(a) Contract Number 17-15-C C. The items of work which the bidder made available to DBE firms including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Items of Work	Bidder Normally Performs Item	Breakdown of Items	Amount (\$)	Percentage Of
	(Y/N)		(.,	Contract
TRAFAC CONTROL	1		90,500	a ^{fo}
TRUCKING	N		37,005-	4%
AC GRINIDING	N		29,000	3%

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the reasons for the bidder's rejection of the DBEs:

Names, addresses and phone numbers of firms selected for the work above:

MIRHNOA TRICKING	3220 W. BISLMINT, FRESNS	559-275-6250
ASSACIATED TRAPPICA	FOR RIBOX 2221 ATASCADARA	305-461-1600
APSSL (INSTRUCTION)	3435 24TH ST. SACRAMENTS	916-379.0442

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

Nove	NREVIEN	on	Aziceo	For	 

Proposal 14(b) Contract Number 17-15-C F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

NONE NEEDEN OR ASKED FOR G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.): Name of Agency/Organization Method/Date of Contact Results H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary): - SEC ATTACHED

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

Proposal 14(c) Contract Number 17-15-C

# Triumph Geo-Synthetics, Inc.

Sales Contact: E: sales@triumphgeo.com

1325 N. Blue Gum St. Anaheim, CA 92806 888-775-7545 DBE/WBE #9076, UDBE, SBE #16084, CPUC #12010014

Quote #: Q-03561-1

Bid Date:	3/15/2018	
Project Name:	Panoche Road Shoulder Improvements SR 33 to San Benito Avenue	
Project Location:	CA	
Project Zip Code:		
Project #:	17-15-C	

Material Total Sales Tax @ 7.9750%		Freight Cost	Total Cost		
\$14,068.00	\$1,121.92	\$750.00	\$15,939.92		

Γ	#	Product Name	QTY	UOM	Unit Price	Total
ſ		BXG120 Mirafi Geogrid, 13' x 164'	44	Rolls	319.7273	\$14,068.00

#### Fuel charges may apply to freight cost.

Terms and Conditions are attached to this document. Alternatively, the Triumph Terms and Conditions can be accessed at www.triumphgeo.com. This quote will expire 30 days from the date of issue.

Signature: _____ Date: _____

ţ

Name:

ì

# REED & GRAHAM, INC. **GEOSYNTHETICS**

# PLEASE REFER TO THIS QUOTE NUMBER WHEN ORDERING: Quote: 26659

PAGE 1

Date	03/01/2018	Project	PANOCHE ROAD SHOULDER
То	CAL VALLEY CONSTRUCTION, INC.		IMPROVEMENTS
Attn.	MIĶE HARDY	Agency	FRESNO COUNTY PUBLIC WRKS
Phone#	559/274-0300	Contract#	17-15-C
Fax#	559/274-0311 Y	Bid Date	03/08/2018

WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION:

Quantity	UOM	Description	Unit Price	Amount
44	RL	ITEMS OFFERED ARE FOR ALTERNATIVE BID ITEM # 14 DIR - TENSAR BX1200 TYPE 2 BIAXIAL GEOGRID 13.1 [×] 164 [×] , 239.1 SY/ROLL MEETS CALTRANS SECTION 96-1.02P BIAXIAL GRID SPEC QUANTITY BASED ON 10,520 SY, FULL ROLL AMOUNT	\$245.00	\$10,780.00
1	EA	ESTIMATED FREIGHT FOR SHIPPING TENSAR BX1200 DIRECT TO JOBSITE FROM MANUFACTURER	\$2,350.00	\$2,350.00
30	RL	DIR - TENSAR TX130S TRIAX GEOGRID, 13.1 [*] X246 [*] , 358.6 SY/ROLL, ALTERNATE GEOGRID, SUBJECT TO ENGINEERS APPROVAL, QUANTITY BASED ON 10,758 SY, FULL ROLL AMOUNT	\$394.45	\$11,833.50
1	EA	ESTIMATED FREIGHT TO SHIP TENSAR TX130S TO JOBSITE FROM MANUFACTURER	\$1,595.00	\$1,595.00
¢	1	PRICES ARE FOB MANUFACTURERS WAREHOUSE. SALES TAX IS NOT INCLUDED IN BID PRICE CONTRACTOR IS RESPONSIBLE FOR OFFLOADING MATERIAL AND PROVIDING EQUIPMENT AS NEEDED. QUANTITIES QUOTED ARE BASED UPON CUSTOMER PROVIDED DATA OR ENGINEERS ESTIMATE WHEN PROVIDED IN PUBLISHED SOLICITATION. DETERMINATION OF ALL QUANTITIES REQUIRED FOR COMPLETION OF PROJECT IS THE RESPONSIBILITY OF CUSTOMER.		-
Contact Carl S	pringer	for questions regarding this quotation at: 888/381-0800	TOTAL:	\$26,558.50

Total is for product only.

CRYSTAL ROSSMANN - SALES CARL SPRINGER - SALES 3121 EVERGREEN AVE STE 140, WEST SACRAMENTO CA 95691 PHONE: 888/381-0800 or 916/381-9900 FAX: 916/388-1486

Accepted By (Signature)



Prices quoted do not include applicable taxes. Ouotes are 30 days for accentance. 30 days to take delivery

# **COSUPPLY**. ON ACCOUNT



025 - Fresno 5780 E. Shields Ave. Fresno, CA, 93727 (559) 294-9000 QUOTE

## 281285

Sold To: 153190000 CAL VALLEY CONSTRUCTION INC 5125 N GATES AVE FRESNO, CA, 93722 559-274-0300

**CONSTRUCTION & INDUSTRIAL** 

WHITE CAP

Ship To :	YARD/CAL VALLEY CONST-153190999,153190999
<b>r</b>	5125 N GATES AVE
	SUITE 102
	FRESNO, CA, 93722
	Job Site Contact: BRANDEN BRUECKNER
	Job Site Phone:
	Map #:

12:28 PM		Ordered By: BRANDEN BRUECKNE	R Contac	t Phone:		
	Quote Number	Quote Date	Valid Unt	il	Sales P	erson
	281285	04/04/2018			Hatch	1, S
	Terms	Shipping Method			Created By	
		2. Our Truck			Hatch, S	
Notes: Par	oche Rd. Shoulder Im	provements - County of Fresno				
LN	Part#	Description	Ord Quantity	U/M	Price	Amount
	H/M			Unit WT	C00	
10	104TP245060	13.12'X164' TENSAR TYPE 2 450 BX1200 239SY/RL	44	RL	\$267.00	\$11,748.00
				135 LBS		

shipped weight

5,940.00 LBS

Sub Total		\$11,748.00
Tax amount		\$936.90
Lumber Tax rate/amount	1.00%	\$0.00
Total		\$12,684.90

Customer acceptance signature:

Date :

ALL ITEMS AND QUANTITIES REQUIRE CUSTOMER REVIEW AND APPROVAL AVAILABILITY AND LEAD TIMES ARE SUBJECT TO CHANGE SPECIAL ORDERED ITEMS ARE SUBJECT TO MANUFACTURER APPROVAL PRIOR TO RETURN. QUOTE IS SUBJECT TO EXPIRATION AS INDICATED IN THE ABOVE DATE.

. 15. 2018 8:50AM	sociated frattic Satety No. //99 P
P.O. Box 22	Atascadero, CA 93423 Phone 805.461.1600 Fax 805.461.1613
TO: Estimator	FROM: Matt Miller
ATTN:	PAGES: 6
FAX:	DATE: March 15, 2018
PHONE:	CC:

# WE ARE CERTIFIED DBE # 38321

,

#### Associated Irattic Satety

## KELLIE AVILA CONSTRUCTION SERVICES, INC.

dba



P.O. Box 2221 Atascadero, CA 93423 • Phone 805.461,1600 • Fax 805.461.1613 Public Works Contractor Registration # 1000013321 DBE Firm ID - 38321 • Contractors License No. 962161

Bid Date 3/15/18

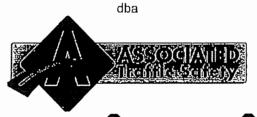
#### PANOCHE ROAD SHOULDER IMPROVEMENTS CONTRACT INFO 17-15-C

# THIS PROPOSAL AND ATTACHED PROVISIONS ARE TO BECOME A BINDING PART OF ANY SUBCONTRACT

ITEM	DESCRIPTION	UNIT	QTY	\$/UNIT		TOTAL
_	Construction Area Signs	LS	1	LS	\$	4,500.00
	*Price above includes (6) W20-1, (6) G20-2 & (2) Construction Project Funding Signs furnished, installed and removed.					
	*All signs to be installed with (1) mobilization and removed with ( will be charged at \$1,000.00 per each.	1) mobilization	. Additional	mobilizations		
	* Signs will be covered at installation if required and contractor will be responsible to uncover when needed and recover when not required. Contractor is responsible for sign maintenance.					
	* All signs and posts are to remain the propery of Associated Traffic Safety upon the completion of the project.					
	* Associated Traffic Safety will notify USA for its work only at no	extra charge to	the genera	l contractor		
	Traffic Control System	LS	1	L\$		
	* Traffic plan not included in item					
	* See next page for traffic control rates					

Note: 3 addendums acknowledged

#### Mar. 15. 2018 8:51AM Associated Trattic Safety No. 7/99 4. 3/6 KELLIE AVILA CONSTRUCTION SERVICES, INC.



P.O. Box 2221 Atascadero, CA 93423 Phone 805.461.1600 Fax 805.461.1613 DBE Firm ID – 38321 Contractors License No. 962161 DIR 1000013321

## TO: ESTIMATOR PROJECT: PANOCHE ROAD SHOULDER IMPROVEMENTS (17-15-C) QUOTE DATE: MARCH 15, 2018

#### Traffic Control System - Day

- 1 Traffic Control Personnel for Lane Closures \$950.00 per 8-hour shift
- 2 Traffic Control Personnel for Lane Closures \$1,550.00 per 8-hour shift
- 1 Pilot Vehicle and Driver \$900.00 per 8-hour shift
- 2 Traffic Control Personnel for Flagging \$1,400.00 per 8-hour shift

#### Please add the following amount to any shift price above:

- \$300.00 per shift for rumble strips
- \$700.00 per additional technician w/8-hour shift

### Traffic Control Notes:

- If less than 2 consecutive shifts are performed please add 10% to quoted traffic control rates.
- Cancellations made with less than 8 hours' notice of requested show up time will be charged + 60% of quoted rates, all cancellations MUST be
  received in written form via fax or email.
- Changeable Massage SIgn (CMS), Impact Attenuator Vehicle (IAV) and traffic control crews subject to availability.
- 1 Traffic Control Personnel for lane closures includes fully loaded truck & 1 arrow board (excludes CMS & IAV)
- 2 Traffic Control Personnel for lane closures includes fully loaded truck & 1 arrow board (excludes GMS & IAV)
- 2 Traffic Control Personnel for flagging includes fully loaded truck (excludes Rumble Strips, Light Towers, CMS & IAV)
- Fully loaded truck Includes signage for Caltrans T10, T13 & T14 and up to 200 cones.
- All overtime (8-12 hours) will be charged at \$95.00 per hour per person.
- All double time (over 12 hours) will be charged at \$120.00 per hour per person.
- General Contractor Is responsible for providing required breaks. If lunch break is not given or provided after the 5th hour worked a \$60 fee per person will apply. Any shift worked past 11 hours with no break given or provided will incur a fee of \$120 per person.
- Add \$85.00 per light lower per shift plus fuel if applicable.
- All Saturday traffic control rates multiply by 1.45
- All Sunday Iraffic control rates multiply by 1.85
- We at ATS understand that every traffic control situation is different in its own way, we pride ourselves in keeping the customer happy, if
  additional equipment is needed that is not shown above and ample time is given we will give it our best to provide you with what you need.
  Keep in mind that a 1, 2, or 3 person crow can only do so much. With that being said, understand that there may be times when additional
  crows may be needed to handle the work load that is expected from the prime contractor.

#### Mar. 15. 2018 8:51AM Associated Trattic Satety No. KELLIE AVILA CUNSTRUCTION SERVICES, INC. No. 1199

dba



P.O. Box 2221 Atascadero, CA 93423 🕮 Phone 805.461.1600 📟 Fax 805.461.1613 DBE Firm ID ~ 38321 @ Contractors License No. 962161 @ DIR 1000013321

Portable Light Towers - Rental Only - Subject to Availability

- \$85.00/day: \$300.00/week: \$900.00/month ---
- Deliver and pick-up fees & fuel charges apply, call for details

Changeable Message Signs (CMS) - Rental Only - Subject to Availability

- \$175.00/day: \$450.00/week: \$1000.00/month -
- Deliver and pick-up fees apply, call for details -

Arrow Board Trailer - Rental Only - Subject to Availability

- \$70.00/day : \$225.00/week : \$700.00/month -
- Deliver and pick-up fees apply, call for details -

# Traffic Control Plans per Sheet

- Non Engineered : \$260.00/each _
- With Civil Engineers Stamp and Signature : \$550.00/each
- Other than minor changes will be billed at hourly rate.

## KELLIE AVILA CONSTRUCTION SERVICES, INC.



P.O. Box 2221 Atascadero, CA 93423 🖤 Phone 805.461.1600 🆤 Fax 805.461.1613

DBE Firm ID – 38321 🖤 Contractors License No. 962161 顰 DIR 1000013321

#### ATTACHMENT A

- 1 ASSOCIATED TRAFIC SAFETY is a signatory to the Laborers of Northern California, Construction Laborers of Southern California.
- 2 Unless otherwise noted on quote, all subsistence and travel pay is included in all prices.
- 3 ASSOCIATED TRAFFIC SAFETY is racognized by the Department of Transportation as a Certified Disadvanlaged Business Enterprise (DBE) & (UDBE) Certificate # 38321
- 4 Concrete or asphall coring / palching is <u>NOT</u> included in construction or permanent sign and or marker installation or relocation.
- 5 Unlass noted on bld, traffic control Is NOT included in the installation, removal, or repair of any items.
- 6 ASSOCIATED TRAFFIC SAFETY requires a <u>12 working day written notice in advance</u>, prior to commencement of work, including installation and removal of signs. Additionally, an Executed subcontract or purchase order must be on file with this office prior to the start of the work.
- 7 ASSOCIATED TRAFFRIC SAFETY requires the contractor's schedule for the following days work by 12pm the proceeding day. If notice is not received add 15% to ATS rates.
- 8 This quote shall remain valid for a period of 45 days from the actual date of the bid opening unless otherwise agreed upon.
- 9 Contractor egrees to provide personnel for up to 5-10 minutes per ATS employee for reliaf break periods as needed due to weather and heat conditions to meet CAL. OSHA heat illness prevention requirements.
- 10 Lump Sum price for Construction Area Signs includes: <u>USA NotIfication</u>, installation, removal and <u>INITIAL</u>, dating of any ramp signs. Contractor will be responsible for maintenance and changing dates on signs as required, all construction area signs are considered rental and shall remain property of ASSOCIATED TRAFFIC SAFETY at the conclusion of project. Per ATS standard rental agreement prime contractor will be charged replacement cost for any signs, lumber or barricades missing and or damaged at conclusion of project, this emount must be paid in full within 30 days by the contractor, retention shall not be held on this amount.
- Prior to ASSOCIATED TRAFFIC SAFETY installing any signs prime contractor must have proper agency (i.e. Cellrans, County, City, etc.) mark out all sign locations. Proper agency must also mark out their underground utilities and or pipes that are not located by the USA. Agency will be responsible for line hit that are not marked out by their forces, therefore ASSOCIATED TRAFFIC SAFETY will not be responsible for any damage done to agencies utilities and this will become the responsibilities of the prime contractor and or the representing agency.
- 12 Contractor responsible for any fees associated with traffic control / encroachment permits, Inspection fees and parking meter fees accrued by the City/County and/or State agencies.
- 13 Traffic control plans & traffic control plans prepared by or stamped by a registered engineer are not included.
- 14 All Saturday traffic control rates multiply by 1.45. All Sunday traffic control rates multiply by 1.85. Holiday work is not included.
- 15 Contractor is responsible for tost, stolen or damaged equipment unless ATS is maintaining dally closures.
- 16 ASSOCIATED TRAFFIC SAFETY will not provide performance or payment bonds to the prime contractor.
- 17 Ratention will not be held on traffic control work.
- 18 Compliance with Section 7108.5 of the Business & Professions code pertaining to prompt payment and pay when paid clauses are MANDATORY.
- 19 ASSOCIATED TRAFFIC SAFETY requests an invitation to all pre-job conferences.
- 20 Notification must be given to ASSOCIATED TRAFFIC SAFETY prior to any work performed as EXTRA-WORK of Force Account. If notification is not received, ATS will bill at usual rates and full payment will be the responsibility of the prime contractor.
- 21 Contractors State License # 962161
- 22 Portable Changeable Message Signs are strictly RENTAL, retention will not be held on rental equipment.
- 23 ASSOCIATED TRAFFIC SAFETY maintains Commercial General Liability Insurance with limits of \$1,000,000 each occurrence \$2,000,000 aggregate. Additional Insured and Hold Hamiless are given only in respects to ASSOCIATED TRAFFIC SAFETY work. ASSOCIATED TRAFFIC SAFETY carries \$2,000,000 excess liability. Any additional liability limits or additional endorsement, including Waiver of Subrogation (add \$50.00 per policy period) requested by Prime Contractor and not provided by ASSOCIATED TRAFFIC SAFETY will be charged to and will be the responsibility of the Prime Contractor.
- 24 Sign panels for permanent items supplied by ASSOCIATED TRAFFIC SAFETY must be given 45 days advanced notice prior to being needed.
- 25 Should this quote be accepted by the prime contractor. Attachment A in its entirety shall become part of any and all subcontract agreements and/or Purchase Orders relating to this project.

Submitted by:	Dale:	
Company:	Accepted by:	

x a 5.,5

# Search Returned 1 Records

Wed Mar 14 13:25:50 PDT 2018

Query Criteria Firm ID: 38321 Firm Type: DBE	
Firm ID	38321
Firm/DBA Name	KELLIE AVILA CONSTRUCTION SERVICES, INC
Address Line1	PO BOX 2221
Address Line2	
City	ATASCADERO
State	CA
Zip Code1	93423
Zlp Code2	
Mailing Address Line1	
Mailing Address Line2	
Malling City	
Mailing State	
Malling Zip Code1	
Mailing Zip Code2	
Certification Type EMall	DBE Initia @nanonialadirafianafah kan
Contact Name	kellie@associated!rafficsafety.com KELLIE AVILA
Area Code	(805)
Phone Number	461-1600
Extension	401-1000
Alt Area Code	(805)
Alt Phone Number	010-9905
Extension	
Fax Area Code	
Fax Phone Number	461-1613
Agency Name	CITY OF FRESNO
Counties	10; 15; 16; 20; 21; 27; 35; 40; 42; 43; 54; 56;
Districts	04; 05; 06; 07;
DBE NAICS	238990; 423380; 423510; 423850; 423990; 484110; 532411; 541611; 541618; 561110; 561990; 562119; 562998;
ACDBE NAICS	
Work Codes	C1290 TEMPORARY RAILING (TYPE K); C9903 CONSTRUCTION CLEAN UP; C0907 CONSTRUCTION EQUIPMENT RENTAL; C8701 BUSINESS ADMINISTRATION; C0770 CONSTRUCTION MANAGEMENT; C0670 PIPE SUPPLIER; C0698 BUILDING MATERIAL SUPPLIER; F5088 TRANSPORTATION EQUIPMENT & SUPPLIES; C0683 GUARD RAILINGS & BARRIERS SUPPLIER; C1522 RESET, ADJUST ROADWAY ITEMS; C5620 ROADSIDE SIGN; C0685 PAVEMENT MARKERS SUPPLIER; C1522 RESET, ADJUST ROADWAY ITEMS; C5620 ROADSIDE SIGN; C0685 PAVEMENT MARKERS SUPPLIER; C1520 Traffic Striping, MarkIng and Traffic Control Materials Supplier; C0621 LANDSCAPING MATERIAL SUPPLIER; C1210 Traffic Count; C0680 FENCING SUPPLIER; C8610 SPEED MONITORING STATION; C8700 CONSULTANT, NON ENGINEERING; C0612 SAFETY EQUIPMENT SUPPLIER; C1200 CONSTRUCTION AREA SIGNS; C1201 TRAFFIC CONTROL SYSTEM; C8320 METAL BEAM GUARD RAILING; C8331 CONCRETE BARRIER; C8609 TRAFFIC COUNT STATION;
Licenses	A General Engineering Contractor; B General Bullding Contractor; C31 Construction Zone Traffic Control Contractor;
Trucks	
Gender	F
Ethnicity	CAUĆASIAN
Firm Type	DBE

Back To Query Form

	<b>TRAFFIC SAFETY &amp; SIGNS</b> REG#1000001109 30/2018	Proposal/Quote Statewide - Fresno License # 975518 3049 S Golden St Frontage Fresno, CA 93725-2312 Ph (559) 291-8500 Fax (559) 291-8503	Rd PAN PRC EST	DATE: 03/01/18 NTRACT INFO NOCHE RD SHOUL PPOSAL: 112930 IMATOR Ig Perkins	DER IMPROV
ESTIM	EST ATING DEPARTMENT	PROJECT: PANOCHE I COUNTY OI MENDOTA,	F FRESN	JLDER IMPROV IO	
ITEM #	DESCRIPTION	QUANTIT	= Υ	PRICE	AMOUNT
02	CONSTRUCTION PROJECT FU SPECIFICATIONS: FURNISHED, INSTALLED & REMO		2 EA = stssi.	480.000/EA	960.00
103	TRAFFIC CONTROL SYSTEM SPECIFICATIONS: FLAGGING - 2 MEN / DAY (T-13)/N FLAGGING - 2 MEN / DAY (T-13)/IN ADDITIONAL FLAGGER DAY EACH FOLLOW ME CAR / DRIVER - \$775	ICLUDES Rumble Strips I - \$650.00/8 HRS		\$1,375.00/8 HRS. \$1,500.00/8 HRS.	
	<ul> <li>Overtime \$95.00/per man</li> <li>Saturday closures multiply above r</li> <li>Time begins upon arrival at jobsite travel time will be charged at \$30.00</li> <li>Traffic control system is a four (4) I charge will be applied to all cancella</li> <li>Contractor must provide each Traffic Tech.</li> <li>NO RETENTION HELD FOR TRAFFIC</li> </ul>	, Rates include travel time up to one per 1/2 hour/man, each direction. hour minimum charge at 75% of rate tions with less than eight (8) hours fic Tech a 30 minute meal period. M	e (1) hour fi es. Full rate notice. App	e charged after four (4) h ly 30 - 60 minutes for se	ours. The minimum t up and pick up.
	TRAFFIC CONTROL PLAN INCLUE	ED IF USED.			
16	ROADSIDE SIGN - ONE POST		3 EA	400.000/EA	1,200.00
	SPECIFICATIONS: IF USED, MUST BID WITH ITEM 2 &	CONSTRUCTION AREA SIGNS.			

sr,

JJJ 4JT 0100

ANOCHE RD	FO SHOULDER IMPROV	Proposal/Quote 112930		Page 2 02/22/18
TEM #	DESCRIPTION	QUANTITY	PRICE	AMOUNT
CON	STRUCTION AREA SIGNS	1LS	1550.000/LS	1,550.00
R( FL	IFICATIONS: DAD WORK AHEAD & END ROAD JRNISHED, INSTALLED & REMO\ 0% BILLED AFTER INSTALLATION	VED. TO REMAIN PROPERTY OF STSSI.		
POR	TABLE CHANGEABLE MES	SAGE SIGN		
D/ W 4 '	IFICATIONS: AILY RENTAL RATE EEKLY RENTAL RATE WEEK RENTAL RATE 50.00 delivery & \$50.00 pick up eac	sh way.NO delivery or pick up charge if STS	\$160.00/DAY \$480.00/1 WEEK \$1,200.00/4 WEEKS SI performs traffic control.	
PRO	POSAL PROVISIONS			
- L pri - L co - S pri - F St - II da - A an - C to - T - P or wi - C - S to - S	icing. Jump sum items are based on "wor impensation (standard rental rates) Standards for 5 day work shift must oject. Rental equipment furnished and ins atewide Traffic Safety and Signs, Ir installed crash cushion arrays/moduly by per module. III Construction Area Signs to be in- id recover if needed. Construction Area Signs include one work. Additional signs required due traffic Control not included in install ortable equipment will be delivered damaged equipment. Barricades d th crash cushions. Contractor is liable for lost or damage Statewide Traffic Safety and Signs, work beginning.	nits and associated fees are excluded from S king days" listed in the Special Provisions of will be applied if working days are exceeded be established prior to Statewide Traffic Sar talled by Statewide Traffic Safety and Signs inc. without prior approval. ules relocated by Contractor shall be paid for stalled at one time or in stages and covered e mobilization per stage, additional mobilizate to damage, theft, or plan inadequacies will lation, removal, or repair of any item. Stand- and picked up from one location. Contracto to not include flashing lights or sign panels u ged equipment removed or relocated by Con Inc. does not accept charges or back charge	r working days bid for this d. fety and Signs, Inc. startin , Inc. may not be moved b r at item price or new rents if needed at installation. ( tions \$1,500.00 each, unle be billed as extra work. by time charged at \$175,0 or to maintain. Contractor is unless otherwise noted. Pa htractor's forces. es of any kind unless agre	project. Additional g work on the y anyone other than al period of \$3.00 a Contractor to uncove ess negotiated prior 0/hr. s liable for loss and illets are not included ed to in writing prior

- All sign and marker location/ mark-out to be done prior to Statewide Traffic Safety and Signs, Inc. starting work. If necessary, Statewide Traffic Safety and Signs, Inc. will assist project inspector with location/ mark-out. Statewide Traffic Safety and Signs, Inc. will mark out it's own work area for USA if necessary, but is not responsible for damage to underground facilities not shown on plans or not marked out by other agencies.

- Sign panels for roadside sign items are supplied by others unless purchased through bid items of this quotation. Roadside sign panels will not be received by Statewide Traffic Safety and Signs, Inc. earlier to 15 working days prior to scheduled installation, No storage. 45 working days advance notice for sign panel orders. All sign plan discrepancies are to be resolved before any sign panel orders are placed. Hardware for sign panel items is excluded unless stated otherwise,

CONTRACT INFO PANOCHE RD SHOULDER IMPROV

JJJ 2JJ 0100

Proposal/Quote

112930

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Page 3

02/22/18

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ITEM #	DESCRIPTION	QUANTITY	PRICE	AMOUNT
	<ul> <li>Permanent sign and marker installation: maximum prior to work. 45 working days notice for metal post</li> <li>Removal, relocate, and reset items are to be componed on the order of the order o</li></ul>	orders. Mounting hardware pleted in whole per Special F ch, unless negotiated prior g. y / owner prior to work being rovisions, which shall prevai	supplied to, and installe Provisions for the projec to work. g performed by Statewid	d by Contractor. t, and completed in, le Traffic Safety and
		τοτα	L BID:	\$3,710.00
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# jahn engineering, inc.

32 West Southwood Drive Woodland, CA 95695 (916) 599-2379 (916) 596-4075 fax alice@jahnengineeringinc.com

February 26, 2018

#### Re: Quote for SWPPP for Panoche Road Shoulder Improvements, Bidding 03/01/2018

Dear Estimator;

I am pleased to submit a quote to provide stormwater pollution services as a Qualified SWPPP Developer (QSD)/Qualified SWPPP Practitioner (QSP) for the above mentioned project.

Jahn Engineering is a Disadvantaged Business Enterprise (DBE) and State Women Business Enterprise (SWBE) (DBE/SWBE/UDBE # 43169). Our DIR registration number is 1000034705. My QSD/QSP certificate number is 21986 and my California Civil Engineer License is C 60940. We provide professional services only and therefore do not possess a contractor license number.

Please see quotes below for the above referenced project. The SWPPP will be prepared by a QSD and comply with the project specifications.

Α.	Prepare Storm Water Pollution Prevention Plan (SWPPP)	\$1,400
B.	Annual Report (if required)	\$250

Exclusions: Training, meetings, installation and implementation of water pollution control practices, providing a WPC Manager and QSP inspections/testing.

Additional QSD services available at \$115/hour.

#### Timing and deliverables:

The SWPPP will be provided within 7 days of authorization to proceed. The scope includes any revisions that might be required for final approval, an electronic PDF file and 4 hard copy binders. The above quotation is valid for 60 days from bid date. Please call 916-599-2379 if you have any questions.

Thank you for the opportunity to provide a quote on this project.

Sincerely,

#### AUTHORIZATION TO PROCEED

14 h

Alice Ames Jahn, PE, QSD/QSP, President Professional Engineering License #: 60940 QSD/QSP #: 21986 DBE/UDBE/SWBE #: 43169 Annual Revenue under \$1 Million, In Business Since 2015 DIR Registration Number: 1000034705 Name:

Date:

SBE #1229840

DIR Registration #1000001353



2443 Fair Oaks Blvd. #150

Sacramento, CA 95825

Phone: (916) 850-5758

Fax: (888) 840-5935

bidding@veruxinc.com

www.veruxinc.com

#### Project Name: State Highway 59 Multi-Use Pathway Crossing - Merced, CA

Bid Date: March 15, 2018

Bid No: 18-538

# **Storm Water Services Proposal**

#### Prepare Water Pollution Control Program (WPCP) - \$650.00

Provide one (1) electronic copy of Water Pollution Control Plan (WPCP) along with three (3) manuals for the above referenced project. Price includes any revisions that may be required for final approval. ****Recommended when disturbance is less than 1 acre. Check Agency requirements.* 

#### Prepare Storm Water Pollution Prevention Plan (SWPPP) - \$1,650.00

Provide one (1) electronic copy of Storm Water Pollution Prevention Plan (SWPPP) in accordance with new CA General Construction Permit #2009-0009-DWQ along with three (3) manuals for the above referenced project. We will work with your Legally Responsible Person (LRP) to upload the SWPPP and Permit Registration Documents onto SMARTS. Price includes any revisions that may be required for final approval. *** Required when disturbance is greater than 1 acre.

#### Project Site Inspections/REAPs - \$305.00/Each

Evaluate jobsite and overall Best Management Practice (BMP) effectiveness. Recommend adjustments to maintain compliance with the California General Permit (CGP). An electronic copy of inspection report/REAP will be provided. CGP inspection requirements include: Weekly, Pre-storm, Daily During Extended Storms, Post Storm and Quarterly Non-Stormwater inspections. REAPs are only required on Risk level 2 and Risk level 3 projects.

#### Sampling & Analysis Program – \$405.00/Sampling & Analysis Day (If Necessary)

#### Annual Report - \$500.00/Each

Required when project is under new California General Permit (disturbance is greater than 1 acre).

Submitted for Verux, Inc. by Bob Shults:			
	Authorized Signature		
Date	Title		
THIS PROPOSAL IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS: Price valid only if this proposal is signed and returned to Verux, Inc. within 30 days. Proposal excludes permits, bonds, licenses, fees, retention and engineering. Payment is due in full 15 days after work is performed. Accounts subject to a late charge of 1 ½% per month if not paid within 30 days.			
Client Name	Authorized Signature		
Date	Printed Name/Title		

## ABSL Construction

a rices

#### DIR#1000002818

8435 24th Ave, Sacramento, Ca. 95826 TE: (916) 379-0442 Fax: (916) 379-0443 Contractors License A 621781 SMBE & DBE Certification CT-005270

# Bid Quotation AC Grinding

Project Name:Panoche Road Shoulder Improvements SR 33 to San Benito AvenueProject Number:17-15-CDate:3/15/18Location:Fresno, California

## Grinder, AC Grinding Daily Minimum Charge \$4500.00

This price is for an 80" inch cold planer machine, *Wirtgen W 2000*. Up to 12 inches dept99h. \$100.00 additional for night work. \$600.00 per hour overtime. \$500.00 additional for Saturday work. \$1000.00 additional for Sunday work.

#### Daily Minimum Charge \$ 5000.00

This price is for an 80" or 88" high horsepower cold planer machine, *Wirtgen W 2100*. Up to 12 inches depth. \$100.00 additional for night work. \$650.00 per hour overtime. \$500.00 additional for Saturday work.

#### Daily Minimum Charge \$ 3500.00

This price is for a 48" cold planer machine, *Wirtgen W 120*. Up to 12 inches depth. \$100.00 additional for night work. \$500.00 per hour overtime. \$500.00 additional for Saturday work. \$1000.00 additional for Sunday work.

#### Mobilization \$500.00 Each Way.

ABSL Construction to cold plane asphalt concrete and load cuttings into trucks provided by the contractor. ABSL may not meet all the specs in spec book.

Portland cement concrete grinding is excluded from this quotation.

ABSL Construction will cold plane as close as possible to existing manholes, water valves, and other obstructions in cutting plane. Handwork and placing temporary asphalt tapers around these objects or at pavement edge for safety requirements are excluded.

Contractor to provide water or water meter and provide traffic control during cold planing operation. All areas to be ground shall be clearly marked by the general or the job inspector.

Anything not specifically included in this price should be considered excluded.

ABSL Construction does not accept back-charges due to machine breakdown during operation above the machine's daily rental fee.

Back charges will only be based on the time the machine is broken and will reflect the cost of the equipment for that time. All others costs due to the equipment breakdown will not be charged to ABSL Construction.

ABSL does not accept force account rates or retention.

This quotation will be part of our contract or purchase order agreement and is valid for one month after the bid date.

If you have any questions regarding the above quote please call me at (916) 379-0442 or fax at (916) 379-0443.

Sincerely, Todd Wheeler (916)284-3598

## **ABSL** Construction

\$ 15 52 4 .

> 8435 24th Ave, Sacramento, Ca. 95826 TE: (916) 379-0442 Fax: (916) 379-0443

Contractors License A 621781 SMBE & DBE Certification CT-005270

#### GRINDING JOB AGREEMENT

The prices set forth above are based on the following assumptions and are subject to change under conditions set forth below.

- All areas to be ground shall be clearly marked by the General Contractor or Inspector before grinding operation starts.
- 2) A minimum daily rate is any part of an 8 hour day and overtime will be charged for work done other than a regular weekday shift.
- A minimum of two weeks notice is requested to schedule move in. Machines are on a first come first served basis subject to availability. A 72 hours notice of change in schedule is requested.
- 4) Modification to the work may require a change in the quote.
- 5) Unless otherwise indicated the unit prices are based on ABSL performing all the work included on the proposal. If ABSL does not receive a contract for all the work, the unit prices are subject to adjustment.
- 6) The unit prices are based on the estimated quantities in the bid proposal. If the quantity of the item changes by 25% or more the unit price is subject to equitable adjustment.
- 7) Prices are good for 30 days of the date of this proposal, after that date the prices are subject to adjustment.
- Downtime for equipment becoming stuck in wet or muddy sub-grade conditions will be charged at a stand-by time rate until removed. Additional equipment required for removal will be charged at a time and materials basis.
- 9) This proposal to be attached and made part of any and all resulting contracts.
- 10) The above price does not include permits, fees, bonding, state or local taxes.
- 11) This is a proposal only for the purpose of establishing a price for work as outlined. In the event ABSL is the low bidder a formal contract or PO suitable to both parties shall be prepared and fully executed.
- 12) Repairs of damage to ABSL equipment due to unmarked or buried obstructions; i.e. valve boxes, manholes covers, concrete, steel fence posts, steel pipe or excessive depth asphalt will be billed at time and material for repairs
- 13) Back-charges to ABSL must be communicated by contractor in a written notice within 72 hours from the time of occurrence for back-charges.
- 14) Unless otherwise agreed to in writing prior to start of work, payment is due and payable within 30 days of billing, and no retention to be withheld on payments.
- 15) Items not specifically included are considered to be excluded. If you have any questions please call.

Thank You,

Todd Wheeler



ANRAK CORPORATION, 5820 Mayhew Road Sacramento, CA 95827 Phone 916-383-5030 Fax 916-383-8090 CA #256390 NV#16211 OR #206159 DIR# 1000002952

Anrak Corporation is a California Certified Small Business NO. 18781

Project Name: County of Fresno -17-15-C - Panoche Road Shoulder Improvements - From SR33 to San Benito Avenue, Fresno Project Bid Date: March 15, 2018

Quantity U/M Unit Price ITEM NO. Description Cold Plane A/C - Rental Item : 3.500 2', 3', 4' Milling Machine 1.0 DY Overtime Per Hour HR 475 5' Milling Machine 1.0 DY 4,100 Overtime Per Hour 550 HR 6'-7' 600 H.P. Milling Machine 1.0 DY 4,500 Overtime Per Hour 600 HR Item : Mobilization ROUND TRIP 900 NITE DIFFERENTIAL \$100 (2' - 5') & \$200 (6' - 7') PER SHIFT SATURDAY ADDITIONAL \$500 PER SHIFT SUNDAY ADDITIONAL \$750 (2' - 5') & \$1,000 (6' - 7') PER SHIFT ADDITIONAL \$500 CHARGE FOR OCIP PROJECTS ANY COST INCURRED FOR PERMITS OR PILOT CARS WILL BE BILLED IN ADDITION TO ABOVE DAILY RATE

#### SPECIAL PROJECT PROVISIONS

- Includes: CUT and LOAD Only (Daily Rental) PER 8 HOUR Shift
- <u>Excludes:</u> Water Source, Traffic Control, PCC Mill, Any and All Hand Work, Ramping, Areas Not Accessible to Milling Machine, Dust/Debris Plan and Maintenance and/or Protection of Work
- <u>Includes:</u> One set of teeth per shift
- Production: Shifts as directed, O/T charged over 8 hour shift
- Require: All Utilities within mill grade are to be located and marked by customer.
- Excludes: Underground Alert Notification
- Anrak Corporation will NOT accept Back Charges of lost time

If you have any questions regarding this quote please call our office directly 916-383-5030. Anrak Corporation greatly appreciates the opportunity to bid & fulfill your asphalt milling needs!

Estimated by: Tom Schmidt

Email: tom@anrak.com

ACCEPTED BY___

DATE



ANRAK CORPORATION, 5820 Mayhew Road Sacramento, CA 95827 Phone 916-383-5030 Fax 916-383-8090 CA #256390 NV#16211 OR #206159 DIR# 1000002952

Anrak Corporation is a California Certified Small Business NO. 18781

# GENERAL PROVISIONS

- Anrak Corporation will COLD PLANE asphalt concrete as directed by contractor, and LOAD grindings into trucks provided by Contractor
- Anrak Corporation will cold plane as closely as possible to existing manholes, water valves or other obstructions in cutting plane.
- No hand work or placing temporary asphalt tapers by Anrak Corporation around these objects or at pavement edge due to safety concerns
- Anrak Corporation will not remove asphalt concrete off gutter pan.
- Contractor to provide water into milling machine
- Contractor must provide a skip loader to assist with clean up
- Contractor to post streets with "No Parking" signs prior to Anrak Corporation's phase of work and provide traffic control during cold planing operation.
- · Areas to be milled must be cleared of all obstructions and accessible to milling machine size
- Anrak Corporation takes no responsibility for dust control due to site conditions.
- Anrak Corporation cannot accept responsibility for any claims due to unraveling material after initial sweep and cones/traffic control are lifted.
- Anrak Corporation cannot guarantee planed surface will meet the surface smoothness specification 15-2.023.
- These prices are for asphalt concrete only
- Modifications to any work may require a change in price
- Anrak Corporation cannot guarantee that all asphalt concrete over PCC will be removed, nor that underlying PCC will be untouched.
- Anrak Corporation cannot grind native cobble rock that may damage milling machine.
- Contractor responsible for any cost that arise due to unsuitables or petromat in material.
- Contractor responsible for all tree trimming and refuse pick up and any other above grade obstacles, Anrak will not grind through any tree limbs
- Contractor to provide any required permits, notifications, or plans.
- Anrak Corporation will not accept back charges of lost time, it's contractor responsibility to manage project
- Any damages to Anrak equipment due to unmarked obstacles, manhole lids, metal boxes, or poles, contractor will be billed for damages
- Anrak Corporation does not accept withholding of retention.
- Contractor responsible for clearing USA prior to cold planing operation
- By accepting this Bid the customer accepts sole responsibility for, and all subsequent liabilities coincident with following the requirements of the California regional notification center law pursuant to Article 2 (commencing with Section 4216) of Chapter 3.1 of Division 5 of Title 1 of the Government Code
- Contractor to pay for bond cost if required
- All items not specifically included are excluded
- The provisions of this quote prevail over any subcontract or purchase order stipulations.
- These prices are good for 30 days after bid date

#### If you have any questions regarding this quote please call our office directly 916-383-5030. Anrak Corporation greatly appreciates the opportunity to bid & fulfill your asphalt milling needs!

ACCEPTED BY_

DATE

## PROJECT TITLE: PANOCHE ROAD SHOULDER IMPROVEMENTS

## DATE: 03/15/2018

#### PROPOSAL

Safety Network will supply rental of temporary traffic control devices on the above project, for the applications and/or sections of work described below. Quotes are based on MUTCD requirements for temporary traffic control. Prices are subject to change based on unknown request, requirements, additional city/county specifications or additional equipment added after this bid. Contractor accepts full responsibility for lost and stolen equipment. Delivery/ pick up will be added unless otherwise indicated below. Unless otherwise noted, no sales tax will be added to rental equipment.

1.	Project Funding Signs A. Furnish and Install	\$1500.00		
2.	Traffic Control Plans	\$260.00		
3.	Shoulder Closures (Includes Construction Area Sign A. Install B. Equipment C. Takedown	s) \$1000.00 \$145.00 \$400.00	Per	Day
4.	Changeable Message Sign Boards (2) A. Rental B. Delivery/Pickup	\$1000.00 \$100.00		Month/Per Each Each
5.	Traffic Control Flag A. Two Men and Equipment B. Pilot Car C. Overtime Rate	\$700.00	Per	8 Hour Day 8 Hour Day Man/Per Hour

~END QUOTE~





**2310 N. Larkin, Fresno, CA 93727 ~ 35312 Merle Haggard Dr., Bakersfield, CA 93308** Fresno- (559) 291-8000 Bakersfield- (661) 393-6000

> www.safetynetworkinc.com License #999426 ~ Class: C31/D42 SBE #34573 ~ DIR #1000011657

<i>Trucking, Inc.</i> <i>Bube</i> <i>BLMONT AVE.</i> <i>CAL 93722</i> <i>CAL 93722</i> <i>CAL 93722</i> <i>CAL 93722</i> <i>CAL 93722</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Contract:</i> <i>Co</i>						
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		8.15	10.75	10.50		
		BY: I	Mike Miranda			DATE:



# County of Fresno

# DEPARTMENT OF PUBLIC WORKS AND PLANNING STEVEN E. WHITE, DIRECTOR

May 7, 2018

Michelle Avila, President Cal Valley Construction 5125 N. Gates #102 Fresno, CA 93722

Subject: NOTICE OF APPROVAL, Panoche Road Shoulder Improvements, Contract No. 17-15-C

The contract between your firm and the County of Fresno for the referenced project became operative on May 4, 2018. Two copies of the executed contract are enclosed.

A "Notice to Proceed" authorizing commencement of the work will be issued by the Construction Engineer.

DIR Project ID 236385 is assigned to Contract No. 17-15-C.

The attached copy of Section 41 of the Charter of the County of Fresno is for your reference and compliance. If you have any questions contact Mitch Araki at <u>maraki@co.fresno.ca.us</u> or (559) 600-4501.

Sincerely,

Mohammad Alimi, Ph.D., P.E. Design Divişion Engineer

Erin Haagenson, () Senior Staff Analyst

Enclosures

cc: Board of Supervisors, Auditor - Controller, Financial Services, Construction Management, Design Division – Design Services

## ATTACHMENT TO NOTICE OF APPROVAL

(Portion of the Charter of the County of Fresno)

SECTION 41. No officer or employee shall be interested directly or indirectly in any contract or transaction with the County or become a surety upon any bond given to the County.

No officer or employee shall receive any commission, money, or thing of value, or derive any profit, benefit or advantage, directly or indirectly, from or by reason of any dealings with, or service for the County, by himself or otherwise, except his lawful compensation as such officer or employee.

As to members of appointive boards and commissions only, the following standards shall apply. No appointive board or commission member shall be financially interested in any contract made by any body or board of which he is a member. The meaning of the terms "financial interest" and "made" shall be consistent with state law. Nothing contained herein shall be construed to apply to a member of a board or commission which is purely advisory.

Any violation of the provisions of this section shall render the contract or transaction involved voidable at the option of the Board of Supervisors. It shall be the duty of every officer and employee who has knowledge of any violation of the provisions of this section immediately to report such violation to the Board of Supervisors. Failing to do so, he may be removed from his office or employment. (Amended June 3, 1980.)

PW 180C Attachment



. 1

North American Specialty Insurance Company Washington International Insurance Company Westport Insurance Corporation 1450 American Lane, Suite 1100 Schaumburg, IL 60173

## **PERFORMANCE BOND**

Premium: \$12,300.00 Bond# 2261329

KNOW ALL BY THESE PRESENTS, that we, Cal Val	ley Construction, Inc. , as Principal, and
North American Specialty Insurance Company	, as Surety, are held and firmly bound unto
County of Fresno	, as Obligee, in the penal sum of
Eight Hundred Eighty Thousand Twenty Five Dollars and 25/100	Dollars (\$ 880,025.25 ) for the payment
whereof said Principal and Surety bind themselves, joint	y and severally, as provided herein.

WHEREAS, Principal has entered into a contract with Obligee dated ______ for Panoche Road Shoulder Improvements SR 33 to SAn Benito Ave

Federal Project No. CML-5942(255)Contract No. 17-15-C("Contract"), which is incorporated herein by reference for the limited purpose of defining the scope of the Construction Work.

NOW, THEREFORE, the condition of this obligation is such that if Principal promptly and faithfully performs the Construction Work, then this obligation shall be null and void; otherwise to remain in full force and effect.

IT IS FURTHER PROVIDED, that:

- 1. The obligation of Surety under this bond ("Bond") shall arise only when all the following conditions have been met:
  - (A) The Obligee has fulfilled its obligations under the Contract; and
  - (B) Principal is, and Obligee has declared Principal to be, in material default under the Contract for failing to perform the Construction Work ("Principal's Default"); and
  - (C) Obligee has terminated the Contract and notified the Surety in writing of Principal's Default and such termination.
- 2. When all the conditions in Section 1 are met, Surety shall have a reasonable period of time to investigate and elect at its sole discretion one of the following remedies:
  - (A) Notify Obligee that Surety elects to complete the performance of the Construction Work through contractor(s) retained by Surety and then commence such performance with reasonable promptness. In this event, that portion of the Contract Balance as may be required to complete the Construction Work or remedy Principal's Default and to reimburse Surety for its expenditures shall be paid to Surety at the times and in the manner as said sums would have been payable under the Contract to Principal had there been no Principal's Default; or
  - (B) Notify Obligee that it elects to arrange for a contract between Obligee and a replacement contractor acceptable to Obligee, such acceptance not to be unreasonably withheld, guaranteed by both contract payment and performance bonds provided by the replacement contractor in the amount of the replacement contract. In this event, Surety shall pay Obligee that portion of the cost of the replacement contractor that is in excess of the Contract Balance. Such payment(s) may be made to Obligee in a lump sum (in the event of a lump sum contract) or periodically as incurred by Obligee; or
  - (C) Request Obligee to complete the Construction Work. In this event, Surety shall pay Obligee that portion of the reasonable cost to complete the Construction Work incurred by Obligee that is in excess of the Contract Balance; or

- (D) Arrange to give assistance, financial or otherwise, to the Principal to assist the Principal with completing the Construction Work. This remedy shall be subject to Obligee's agreement, which shall not be unreasonably withheld. The Obligee shall pay the Contract Balance as directed by Surety. In the event Surety provides financial assistance, Surety, in its sole discretion, may upon written notice to Obligee cease providing such financial assistance at any time, in which event Surety shall immediately make a further election under this Section 2; or
- (E) Notify the Obligee that Surety denies liability. Surety shall cite its reasons for the denial of liability; or
- (F) After investigation, determine the amount for which Surety may be liable to the Obligee and, as soon as reasonably possible after the amount is determined, make payment to the Obligee.
- 3. After Obligee has provided Surety with written notice of Principal's Default, and before the commencement of work under Section 2, subparagraphs (A) or (B), Obligee may, pursuant to its Contract rights, mitigate the damages caused by the Principal's Default. If Obligee performs obligations under the Contract during this period, Obligee shall be entitled to deduct the Mitigation Costs from the Contract Balance. If the Contract Balance is exhausted, and Surety elects to proceed under Section 2, subparagraphs (A), (B), (C) or (D), Surety shall reimburse Obligee for the difference between the Contract Balance and the Mitigation Costs incurred and paid by Obligee.
- 4. If Surety proceeds under Section 2, subparagraphs (A), (B), (C), (D) or (F), Surety may also advise in the notice of its remedy election to Obligee that the Obligee's claim is disputed as to liability and/or amount and Surety is proceeding under and asserting a reservation of all rights, remedies, claims, and defenses. In the event Surety prevails, in whole or in part, with respect to the dispute regarding liability and/or amount of Obligee's claim and Surety paid monies in excess of the funds paid by Obligee to Surety, then Surety shall be entitled to recover the excess from Obligee.
- 5. Surety's aggregate liability under this Bond is limited to the penal sum of this Bond, regardless of whether the liability arises from the actions or inactions of Principal or Surety. The penal sum of this Bond shall be reduced by and to the extent of any and all monies paid by Surety under this Bond in excess of funds paid by Obligee to Surety. If Surety paid monies in excess of the penal sum of this Bond, then Surety shall be entitled to recover the excess monies from Obligee. The Surety waives notice of any change to the Contract.
- 6. Definitions:

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- (A) The phrase "Contract Balance," means the total amount payable by Obligee to Principal under the Contract and any amendments thereto, less the amounts properly paid by Obligee under the Contract.
- (B) The phrase "Mitigation Costs" means the cost actually incurred by Obligee in proper performance of the Construction Work. Such costs shall be at hours and rates not higher than those customarily incurred at the place of the Construction Work unless Surety provides its prior written consent.
- (C) The phrase "Construction Work" means all labor and materials necessary to complete Principal's scope of work under the Contract
- 7. Any suit or action by Obligee under this Bond must be instituted within one (1) year from the earliest of the following dates: (A) the date of substantial completion of the Construction Work; (B) the date Principal ceased performing the Construction Work; or (C) the date of Principal's Default. If the limitation period set forth in this Bond is void or prohibited by law, then the minimum limitation period available to sureties as a defense in the jurisdiction of the suit or action shall apply and shall be deemed to have accrued and commenced to run on the earliest of the dates referenced in this Section 7 (A), (B) and (C). It shall be understood that in no event shall punch list, warranty, or maintenance work constitute Construction Work for the purpose of determining the limitation period for filing a suit or action under this Bond.

- 8. No prejudgment or pre-award interest may be recovered under this Bond. Post judgment interest shall be calculated from the date of the entry of the judgment, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of the judgment.
- 9. The Obligee is the sole beneficiary under this Bond. No right of action shall accrue on this Bond to or for the use of any person other than the Obligee. This Bond is not transferable without the express written consent of Surety, and no successor or assignee of Obligee shall have any rights under this Bond. Any suit or action under this Bond shall be instituted in a State or Federal court of competent jurisdiction in the location in which the Construction Work is situated.
- 10. Notwithstanding anything in this Bond or the Contract to the contrary, Surety shall have no liability to Obligee for: legal fees or costs; any form of consequential, indirect, punitive, or exemplary damages; or any liability of Principal for tortious acts, whether or not said liability is direct or imposed by the Subcontract or otherwise. Nor shall this Bond serve as or be a substitute for or supplemental to any insurance coverage required under the Subcontract.
- 11. Notice or demand given to Surety pursuant to this Bond shall be in writing and delivered to the following mailing address or email address:

Swiss Re Corporate Solutions – Surety Claims 1450 American Lane, Suite 1100 Schaumburg, IL 60173

SuretyClaimsNA_CorporateSolutions@swissre.com

Signed this 27th day of April , 2018.

Cal Valley Construction, Inc.	
by Michelle A. Aule	
Name: Wiltere A AJUA Title: PRESIDENT/CFO	
North American Specialty Insurance Company	
Surety Surety	
by	
Lyn Genito Attorney-in 4 99 * Attorney	

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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

) ) ss

State of California

County of Fresno

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

BONNIE GONZALEZ NOTARY PUBLIC - CALIFORNIA COMMISSION # 2202238 ē FRESNO COUNTY My Comm, Exp. July 12, 2021

(Seal)

Signature: Bonnie Gonzalez, Notary

PAYMENT BOND - PUBLIC WORK SECTIONS 3247 - 3252, CIVIL CODE (CALIFORNIA)

> Bond No. 2261329 Premium: Included in performance

#### KNOW ALL MEN BY THESE PRESENTS:

County of Fresno THAT WHEREAS, The  $_{\rm A}$  has awarded to _. Cal Valley Construction Inc.

as Contractor, a contract for the work described as follows: Panoche Road Shoulder Improvements, SR 33 to San Benito Avenue, Federal Project No. CML-5942(255) Contract Number 17-15-C

AND WHEREAS, Said Contractor is required to furnish a bond in connection with said contract, to secure the payment of claims of laborers, mechanics, materialmen, and other persons as provided by law.

County of Fresno NOW, THEREFORE, We the undersigned Contractor and Surety are held and firmly bound unto the <u>t</u> in the amount required by law, the sum of <u>t</u> for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

## THE CONDITION OF THIS OBLIGATION IS SUCH,

That if said Contractors shall fail to pay (1) Any of the persons named in Civil Code Section 3181, (2) amounts due under the Unemployment Insurance Code for work or labor performed in connection with said contract by any such claimant, or (3) any amounts required to be deducted, withheld and paid over to the Employment Development Department and to the Franchise Tax Board from wages of the employees of Contractor and his sub-contractors with respect to such work and labor, pursuant to Section 13020 of the Unemployment Insurance Code, then the Surety or Sureties herein will pay for the same in an aggregate amount not exceeding the sum specified In this bond, and also in case suit is brought upon the bond, a reasonable attorney's fee, to be fixed by the court, otherwise the above obligation shall be void.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

This bond is executed and filed to comply with the provisions of the act of Legislature of the State of California as designated in Civil Code, Sections 3247 - 3252 inclusive, and all amendments thereto.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this^{27th} day of April, 2018

Cal Valley Construction Inc.	
Muchelle 7	fuile
	Contractor

North American Specialty Insurance Company SURETY COMPANY

By Lyn Genito - Attorney in Fact

*contract amount: Eight Hundred Eighty Thousand Twenty Five Dollars and 25/100 (\$880,025.25) S-2061-B (07-97)

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

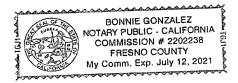
) ) ss

County of Fresno

On <u>MAMM</u>, before me, <u>Bonnie Gonzalez, Notary Public</u>, personally appeared <u>Lyn Genito</u>, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that <u>he/she/they</u> executed the same in <u>his/her/their</u> authorized capacity(ies), and that by <u>his/her/their</u> signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



(Seal)

Signature Bonnie/Gonzalez, Notary Public

#### NAS SURETY GROUP

## NORTH AMERICAN SPECIALTY INSURANCE COMPANY WASHINGTON INTERNATIONAL INSURANCE COMPANY

#### GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Manchester, New Hampshire, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Schaumburg, Illinois, each does hereby make, constitute and appoint:

STEVEN EDWARDS, CODY LYMAN, RALPH BERING BUSCH III,

#### LYN GENITO, and BONNIE GONZALEZ

#### JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

## FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



& Senior Vice President of North American Specialty Insurance Company

#### North American Specialty Insurance Company Washington International Insurance Company

State of Illinois County of Cook ss:

On this <u>14th</u> day of <u>November</u>, 20<u>14</u>, before me, a Notary Public personally appeared <u>Steven P. Anderson</u>, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and <u>Michael A. Ito</u>. Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



M. Kenny, Notary Public

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this U day of

Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company & North American Specialty Insurance Company

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# SURETY VERIFICATION

(Complete and return with Performance and Payment B	Bonds)
PROJECT Panoche Road Shoulder Improvements	
Contract No. <u>17-15-C</u>	
Contractor Cal Valley Construction, Inc.	
Contact Person Kim Wilson	Phone No <u>559-274-0300</u>
SURETY COMPANY (Exact Name Style, Home Office Add	dress)
North American Specialty Insurance Company	
475 N. Martingale Rd	
Shaumburg, IL 60173	
AGENT / BROKER	
Attorney-in-fact <u>Cody Lyman</u>	Phone No <u>559-374-3560</u>
Firm <u>Alliant Insurance Services, Inc.</u>	
Mail Address 9 E. River Park Place East, Suite 300	
City, State, ZIP <u>Fresno, CA 93720</u>	
CA Dept of Insurance License No. <u>0I59045</u> (or attach copy of License)	Expires <u>10</u> / <u>31</u> / <u>2019</u>
Owner's use only	
Received / / By	
Surety admitted / /	
Surety Best's Class Rating	
Comments	

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